



 **Appleton**[®]



EMERSON

TRUST THE ATX LINE OF PRODUCTS TO PROTECT PEOPLE, FACILITIES AND PRODUCTIVITY.

The ATX brand of hazardous location products for IEC and ATEX environments are now part of Appleton – a premier brand of electrical products in the North American market. As one brand under Emerson Industrial Automation, we can now offer a truly global line of premier electrical products that provide protection against harsh environments and the presence of dust, vapors and gas in hazardous locations.

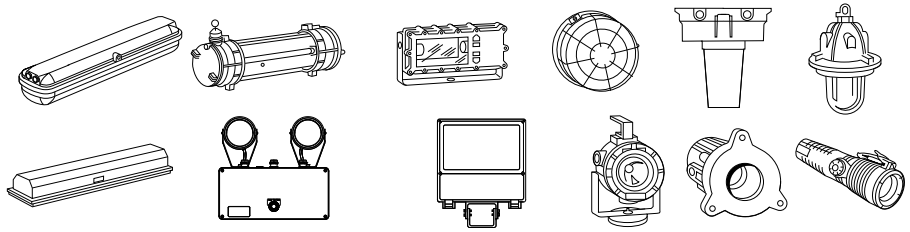
ATX products, like Appleton's, help create peace of mind in the workplace – whether it's a petrochemical plant, a power plant, pulp and paper mills or any industrial location. These products help ensure operations maintain maximum productivity and safety.

Choose from a vast breadth of Flameproof and Increased Safety products that meet rigorous Zone 1–2 and 21–22 ratings – from lighting to plugs and sockets to junction boxes, panelboards, control stations and cable glands. Our engineers have developed innovations across all product lines, making Appleton's ATX the premier provider of electrical products for use in IEC and ATEX locations.



LIGHTING

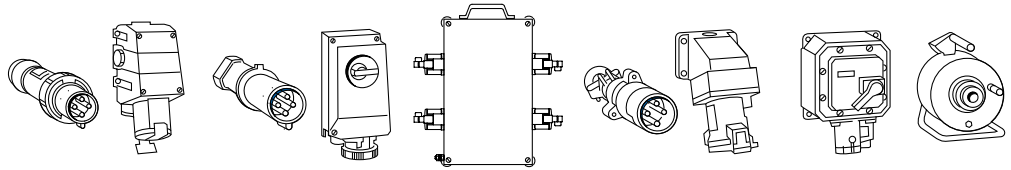
LED
Fluorescent
HID
Handlamps



Lighting

PLUGS AND RECEPTACLES

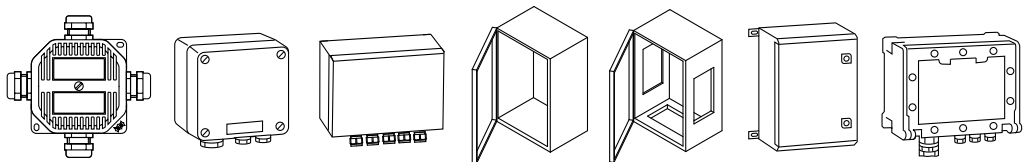
With Switch
Without Switch
16A to 125A
Multiple Sockets Outlets



Plugs and receptacles

ENCLOSURES AND JUNCTION BOXES

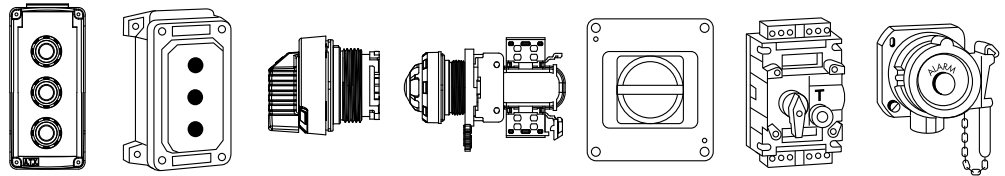
Empty enclosures
Customized enclosures
Flameproof
Increased safety
Differents materials



Enclosures and Junction Boxes

CONTROLS

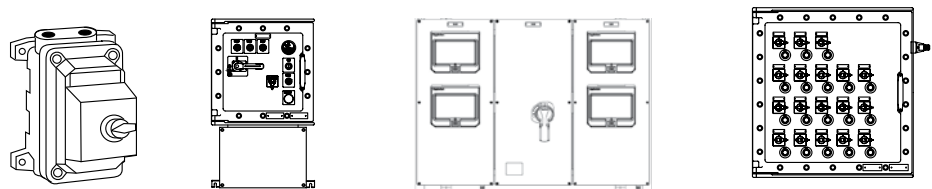
Control stations
Components
"Break Glass" call point
Switches
Motor Starters



Controls

DISTRIBUTION EQUIPMENT

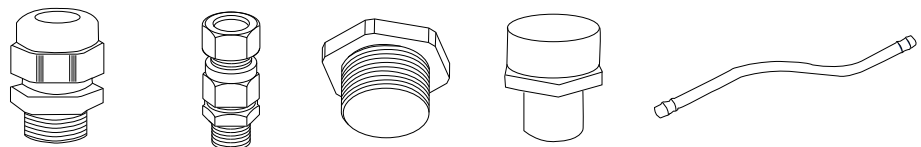
Circuit breakers
Relays
Contactors
Distribution Panelboards



Distribution Equipment

FITTINGS

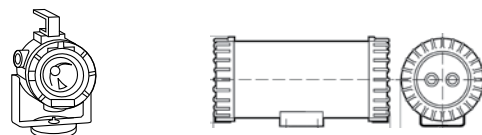
Cable glands
Plug
Reducers / Adaptors
Conduits
Drain / Breathers



Fittings

SPECIALTY PRODUCTS

Enclosures for camera



Specialty Products

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US16330138	398	US16431104	400	US16441205	403
US16330144	398	US16431106	400	US16441207	403
US16330145	398	US16431108	400	US16441211	403
US16330161	398	US16431111	400	US16441212	403
US16330167	398	US16431113	400	US16441219	403
US16330199	398	US16431116	400	US16441224	403
US16331109	398	US16431125	400	US16441229	403
US16331112	398	US16431129	400	US16451110	403
US16331120	398	US16431134	400	US16451235	403
US16331142	398	US16431138	400	USH	395
US16331155	398	US16431159	400	VA1348P	407
US16331171	398	US16431165	401	VA1348R	407
US16331202	398	US16431166	401	VA1548P	407
US16331209	398	US16431167	401	VA1548R	407
US16331210	398	US16431172	401	VA1648P	407
US16331230	399	US16431173	401	VA1648R	407
US1633136	398	US16431174	401	VA5348P	407
US16340146	399	US16431176	401	VA5348R	407
US16340168	399	US16431178	401	VA5548P	407
US16340178	399	US16431179	401	VA5548R	407
US16340181	399	US16431201	401	VA5648P	407
US16340183	399	US16431203	401	VA5648R	407
US16341119	399	US16431206	401	VAW48	407
US16341145	399	US16431208	401	VCB4	548
US16341151	399	US16431213	401	VCB7	548
US16420102	399	US16431215	401	VCBA	550
US16420103	399	US16431217	401	VCBHBA	549
US16420104	399	US16431220	401	VPGLDIFF	34
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LLEDA Viamaster LED



AMLED Areamaster LED



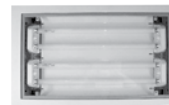
MLEDNA Mercmaster LED



FE



FD



RE



FN Series



FL Series



PB/PC/PL



PN



LDP



LDM



LDB/LDB/LDG/LRD



LN



HBE/HBN



HBD



HBDC



HBDA



HRD



TCH



HLD



PJ

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FDBAES



FDES



FNES



Labels



ELS



SBDO



SBDS



SBDB



SBDC

LLEDA Viamaster™ LED Series Luminaires

For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

Applications

- For use in hazardous locations defined by ATEX/IECEX.
- For use in locations where a high degree of corrosion resistance is required.
- For indoor or outdoor use where protection against dirt, water and moisture is necessary
- Typical applications include:
 - Oil refineries
 - Petrochemical facilities
 - Pulp and paper mills
 - Food processing plants
 - Warehouses
 - Underground tunnels,
 - General manufacturing facilities

Features

- 60,000+ hours LED life for years of maintenance free operation.
- Lightweight design, hinged cover with captive screws, and terminal block wiring for easy installation and maintenance.
- Contemporary, low profile design suitable for tight spaces.
- Field replaceable components are available.
- Industry-leading thermal management for safe, reliable operation over wide temperature range.
- Optional safety cables prevent luminaire from falling.
- Terminal blocks provided for field wiring (1 to 6mm² wire)
- Full range of lumen outputs, with light distribution equivalent to Appleton's FN Series.
- Full range of lumen outputs, with light distribution equivalent to Appleton's FN Series.
- Easy to retrofit in same mounting footprint as Appleton's FN / FE Series fluorescent fixtures.
- (1) M20 plug or (1) M25 plug provided.

Standard Materials

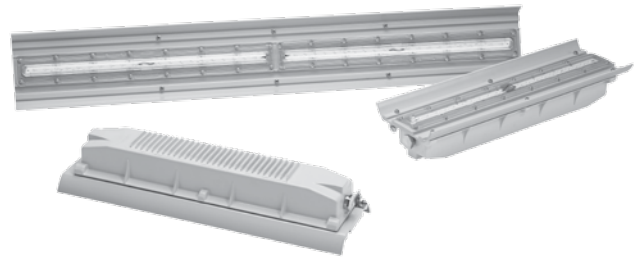
- Housing: copperfree (4/10 of 1% max.) aluminum
- Lens: thermal shock- and impact-resistant polycarbonate lens
- Gasket: silicone rubber, mechanically secured
- Bolts: stainless steel
- Close up plugs: nickel plated brass

Standard Finishes

- Housing: gray RAL 7038 Epoxy

Options

- For optional safety cables, add suffix **-C** to the end of the catalog number.



Certifications and Compliances

◆ATEX/IECEX Certification

• Certification type LLEDA

- Gas: Zone 2
 - Conforming to ATEX 94/9/EC: Ⓢ II 3 G
 - Protection Level: EPL Gc
 - Type of Protection: Ex nA IIC
 - Temperature Class: From T6 to T3 (See *Technical Data table*)
- Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/EC: Ⓢ II 2 D and II 3 D
 - Protection Level: EPL Db and Dc
 - Type of Protection: Ex tb IIIC and Ex tc IIIC
 - Surface Temperature: From +63 °C to +84 °C (See *Technical Data table*)
- EC Declaration of Conformity: 50309
- ATEX Certificate:
 - Zone 21: LCIE 15 ATEX 3006X
 - Zone 2, 22: LCIE 15 ATEX 1003X
- IECEX Certificate:
 - Zone 2, 21 and 22: IECEX LCIE 15.0010X
- Ambient Temperature: -40 °C up to +60 °C or + 65°C (See *Technical Data table*)
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK08

LLEDA Viamaster™ LED Series Luminaires

For Hazardous and Adverse Locations

Lighting

Zones 2 - 22 and 21
Gas (G) and Dust (D)

LED LUMINAIRES

Order using catalog numbering guides below or select catalog number from tables on following pages.

Catalog Numbering Guide – ATEX/IECEx Certified Linear LED

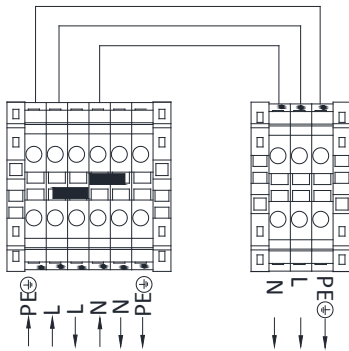
<p>LLEDA</p> <p>LLEDA - Linear LED Series Zones 2 - 21 -22 ATEX/IECEx Certified</p>	<p>A</p> <p>Housing: A - Aluminum</p>	<p>2</p> <p>Size of Cable Entries: 2 - M20 3 - M25</p>	<p>L</p> <p>Termination/Wiring: L - Dual Loop In/Out - Through Wiring (Single phase) (3 entries, 1 at one end and 2 at the other) S - Standard (2 entries on the same side) T - Through Wiring (3 phases) (2 entries, one at each end)</p>	<p>2</p> <p>Lumens [Length of Fixture]: 2 - 2,200 [0.61 m] 5 - 4,400 [0.61 m] 7 - 7,800 [1.22 m]</p>	<p>BU</p> <p>Voltage: BU - Universal Voltages 120-277 Vac, 50/60 Hz</p>	<p>Z2</p> <p>Hazardous Rating: Z1 - Zone 1 ① Z2 - Zone 2 and 21-22</p>	<p>C</p> <p>Options: C - Safety Cables D - Diffused Lens E - 3h Emergency ① H - 90 Minutes Emergency ①</p>
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Termination/Wiring

Version : L

Dual Loop In/Out - Through Wiring (Single phase)

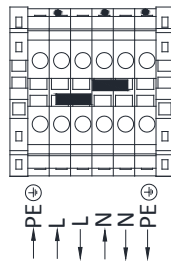
3 entries, 1 at one end and 2 at the other



Version : S

Standard

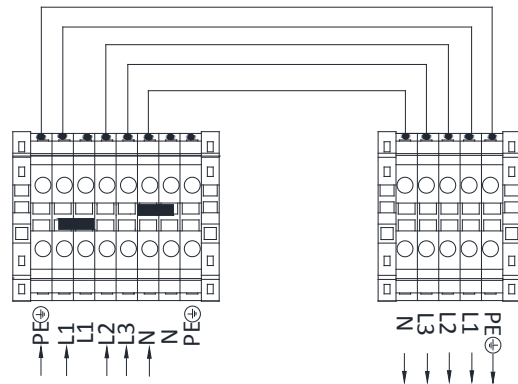
2 entries on the same side



Version : T

Through Wiring (3 phases)

2 entries, one at each end



① Certification in progress

LLEDA Viamaster™ LED Series Luminaires

For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

Technical Data

Lamp					Zone 2 - 22		Zone 21
Lumen Output	Type	Ambient Temperature °C	Supply Wire Temperature °C	Gas Class of Temperature	Dust Surface Temperature	Dust Surface Temperature	
2,200 lm	LED	40 °C	75 °C	T6 (75 °C)	54 °C	54 °C	
		55 °C	75 °C	T5 (90 °C)	69 °C	69 °C	
		60 °C	75 °C	T5 (95 °C)	74 °C	74 °C	
		65 °C	75 °C	T5 (100 °C)	79 °C	79 °C	
4,400 lm	LED	40 °C	75 °C	T4 (129 °C)	64 °C	64 °C	
		55 °C	75 °C	T3 (144 °C)	79 °C	79 °C	
		60 °C	75 °C	T3 (148 °C)	84 °C	84 °C	
7,800 lm	LED	40 °C	75 °C	T4 (130 °C)	64 °C	64 °C	
		55 °C	75 °C	T3 (145 °C)	79 °C	79 °C	
		60 °C	75 °C	T3 (149 °C)	84 °C	84 °C	

Lamp Comparison Chart

Catalog Number (Lamp Data)	Lumens Clear lens	Line Current Amps	Input Power	Power Factor	THD	CRI	Color Temp CCT	Length
LLEDAA2S2BUZ2								
LLEDAA3S2BUZ2								
LLEDAA2T2BUZ2	2,200 lm	0.24 A @ 120 V	22 W	> 0.95	< 20%	70	5650K	0.61 m
LLEDAA3T2BUZ2		0.15 A @ 277 V		> 0.87				
LLEDAA2L2BUZ2								
LLEDAA3L2BUZ2								
LLEDAA2S5BUZ2								
LLEDAA3S5BUZ2								
LLEDAA2T5BUZ2	4,400 lm	0.51 A @ 120 V	45 W	> 0.95	< 20%	70	5650K	0.61 m
LLEDAA3T5BUZ2		0.30 A @ 277 V		> 0.95				
LLEDAA2L5BUZ2								
LLEDAA3L5BUZ2								
LLEDAA2S7BUZ2								
LLEDAA3S7BUZ2								
LLEDAA2T7BUZ2	7,800 lm	0.90 A @ 120 V	81 W	> 0.95	< 20%	70	5650K	1.22 m
LLEDAA3T7BUZ2		0.53 A @ 277 V		> 0.95				
LLEDAA2L7BUZ2								
LLEDAA3L7BUZ2								

LLEDA Viamaster™ LED Series Luminaires

For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

Lighting

LED LUMINAIRES

	Conduit/Cable Entries	Voltage	Weight kg	Catalog Numbers
2,200 Lumens — 0.61 m (2 ft)				
	Standard cable entry provides 2 entries on the same side of the housing.			
	M20 Standard	120-277 Vac, 50/60 Hz	6.21	LLEDAA2S2BUZ2 ④
	M25 Standard	120-277 Vac, 50/60 Hz		LLEDAA3S2BUZ2 ④
	Through Wiring (3 phases) cable entry provides 2 entries, one at each end of the housing.			
	M20 Through Wiring (3 phases)	120-277 Vac, 50/60 Hz	6.21	LLEDAA2T2BUZ2 ④
	M25 Through Wiring (3 phases)	120-277 Vac, 50/60 Hz		LLEDAA3T2BUZ2 ④
	Dual Loop In/Out - T/W (1 phase) cable entry provides 3 entries, 1 at one and 2 at the other end.			
	M20 Loop In/Out - T/W (1 phase)	120-277 Vac, 50/60 Hz	6.21	LLEDAA2L2BUZ2 ④
	M25 Loop In/Out - T/W (1 phase)	120-277 Vac, 50/60 Hz		LLEDAA3L2BUZ2 ④
4,400 Lumens — 0.61 m (2 ft)				
	Standard cable entry provides 2 entries on the same side of the housing.			
	M20 Standard	120-277 Vac, 50/60 Hz	6.35	LLEDAA2S5BUZ2 ④
	M25 Standard	120-277 Vac, 50/60 Hz		LLEDAA3S5BUZ2 ④
	Through Wiring (3 phases) cable entry provides 2 entries, one at each end of the housing.			
	M20 Through Wiring (3 phases)	120-277 Vac, 50/60 Hz	6.35	LLEDAA2T5BUZ2 ④
	M25 Through Wiring (3 phases)	120-277 Vac, 50/60 Hz		LLEDAA3T5BUZ2 ④
	Dual Loop In/Out - T/W (1 phase) cable entry provides 3 entries, 1 at one and 2 at the other end.			
	M20 Loop In/Out - T/W (1 phase)	120-277 Vac, 50/60 Hz	6.35	LLEDAA2L5BUZ2 ④
	M25 Loop In/Out - T/W (1 phase)	120-277 Vac, 50/60 Hz		LLEDAA3L5BUZ2 ④
7,800 Lumens — 1.22 m (4 ft)				
	Standard cable entry provides 2 entries on the same side of the housing.			
	M20 Standard	120-277 Vac, 50/60 Hz	8.69	LLEDAA2S7BUZ2 ④
	M25 Standard	120-277 Vac, 50/60 Hz		LLEDAA3S7BUZ2 ④
	Through Wiring (3 phases) cable entry provides 2 entries, one at each end of the housing.			
	M20 Through Wiring (3 phases)	120-277 Vac, 50/60 Hz	8.69	LLEDAA2T7BUZ2 ④
	M25 Through Wiring (3 phases)	120-277 Vac, 50/60 Hz		LLEDAA3T7BUZ2 ④
	Dual Loop In/Out - T/W (1 phase) cable entry provides 3 entries, 1 at one and 2 at the other end.			
	M20 Loop In/Out - T/W (1 phase)	120-277 Vac, 50/60 Hz	8.69	LLEDAA2L7BUZ2 ④
	M25 Loop In/Out - T/W (1 phase)	120-277 Vac, 50/60 Hz		LLEDAA3L7BUZ2 ④

④ For optional safety cables, add suffix -C to the end of the catalog number.


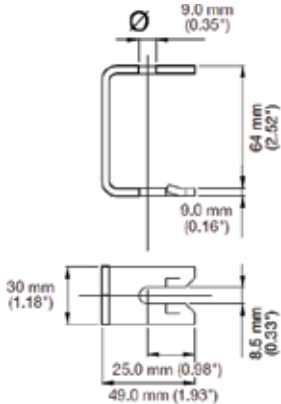

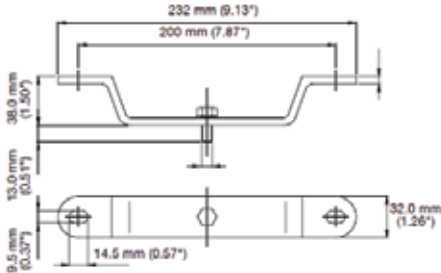

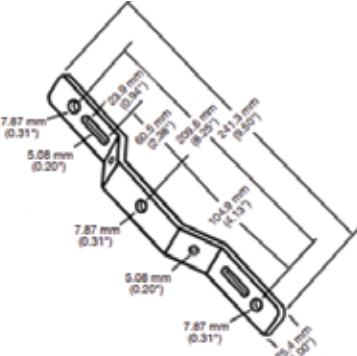

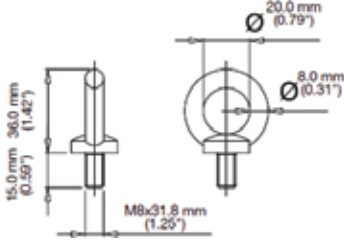
Shaded catalog numbers are normally stocked items. All other items are made to order.

LLEDA Viamaster™ LED Series Luminaires

For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

Accessories and Replacement Parts

	Description	Catalog Number
Mounting Brackets – Set of Two		
 	Fixing Brackets for Surface Installation Zinc plated steel 316 stainless steel	FEFBZ FEFBS
 	Surface Mounting Aluminium (gray painted) 316 stainless steel	FESBA FESBS
 	Surface Mounting Stainless steel <i>(Do not retrofit in same mounting footprint as Appleton's FN / FE Series)</i>	FVSM
 	M8 Ring Bolts Zinc plated steel – For use with optional safety chain (not provided)	FERBM8Z

Shaded catalog numbers are normally stocked items. All other items are made to order.

LLEDA Viamaster™ LED Series Luminaires

For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

Lighting

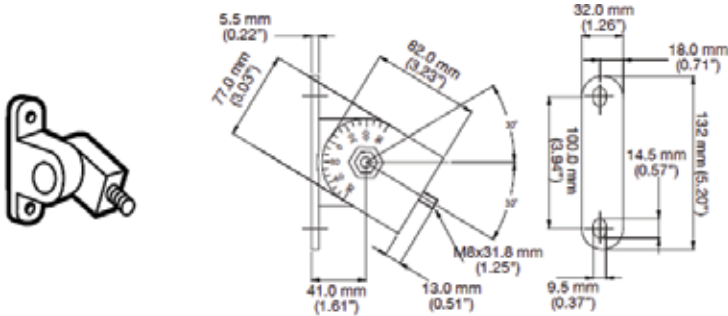
LED LUMINAIRES

Accessories and Replacement Parts

	Description	Catalog Number
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Mounting Brackets – Set of Two

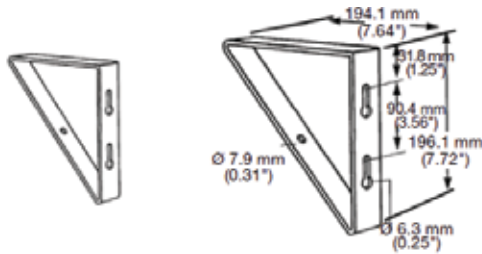
Hinged Brackets for Adjusting Luminaire



Aluminium

FEHBA

Fixed 45° Wall Mount



1/8" stainless steel
(Do not retrofit in same mounting footprint as Appleton's FN / FE Series)

FWWFM

Half Clamp Brackets for Pole Mounting

For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube)

Zinc plated steel

FEHC49Z

316 stainless steel

FEHC49S

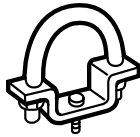
For 60 mm pole (2" tube)

Zinc plated steel

FEHC60Z

316 stainless steel

FEHC60S



Retrofit Brackets – Set of Two

Adapts mounting holes for 4 foot fixture to 700 mm mounting centers

LLEDRB

Fall Prevention Kit

Safety Cables – Attached to fixtures to guard against them falling when the primary method of attachment fails.

LLEDSC

Replacement Lens

Clear polycarbonate lens with an integral gasket

LLEDCPL

Diffused lens with an integral gasket

LLEDDPL

Replacement Driver

120-277 Vac driver

LLEDBU2

Shaded catalog numbers are normally stocked items. All other items are made to order.

LLEDA Viamaster™ LED Series Luminaires

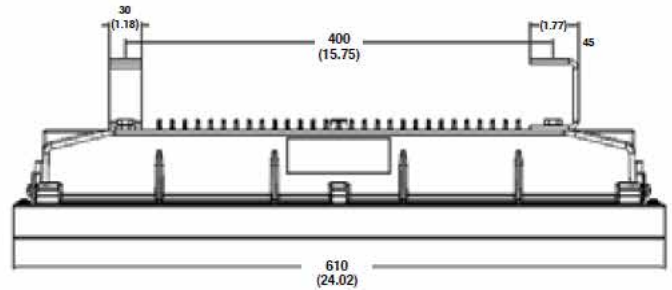
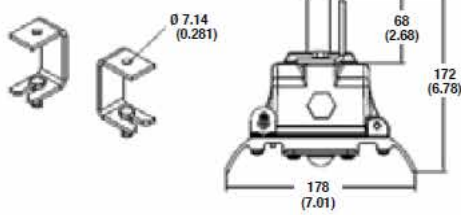
For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

Mounting Options Dimensions in Millimeters (Inches)

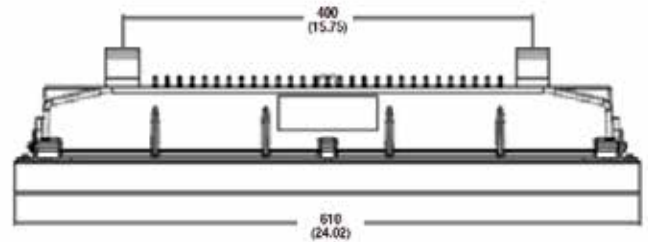
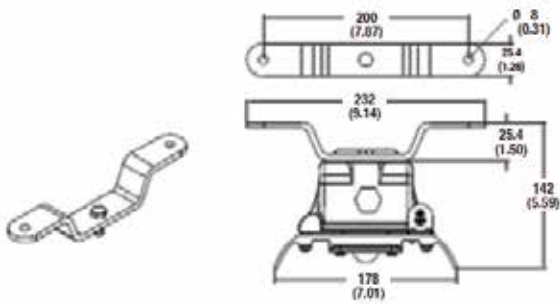
FEFBS

Ceiling/Surface Mount



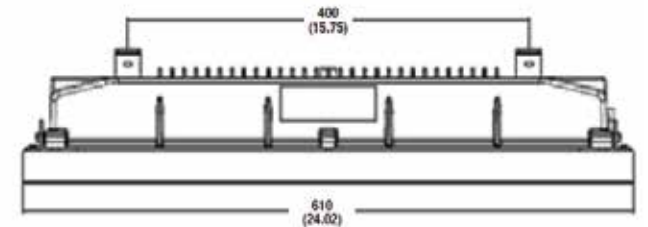
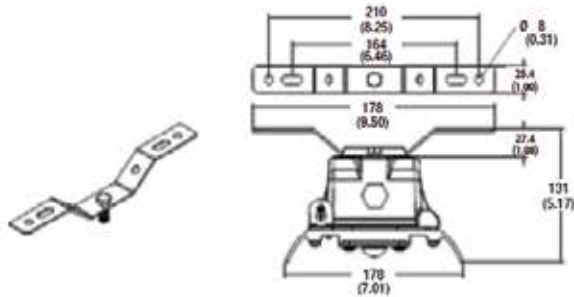
FESBA / FESBS

Ceiling/Surface Mount



FVSM

Ceiling/Surface Mount



LLEDA Viamaster™ LED Series Luminaires

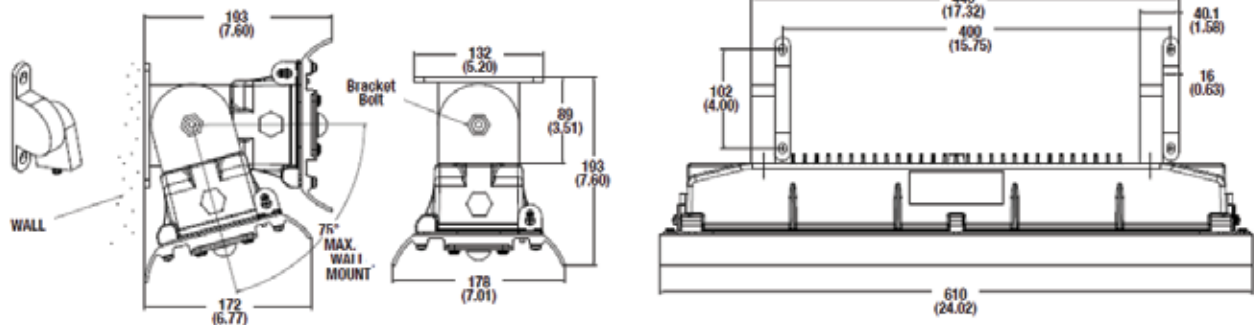
For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

Mounting Options (continued) Dimensions in Millimeters (Inches)

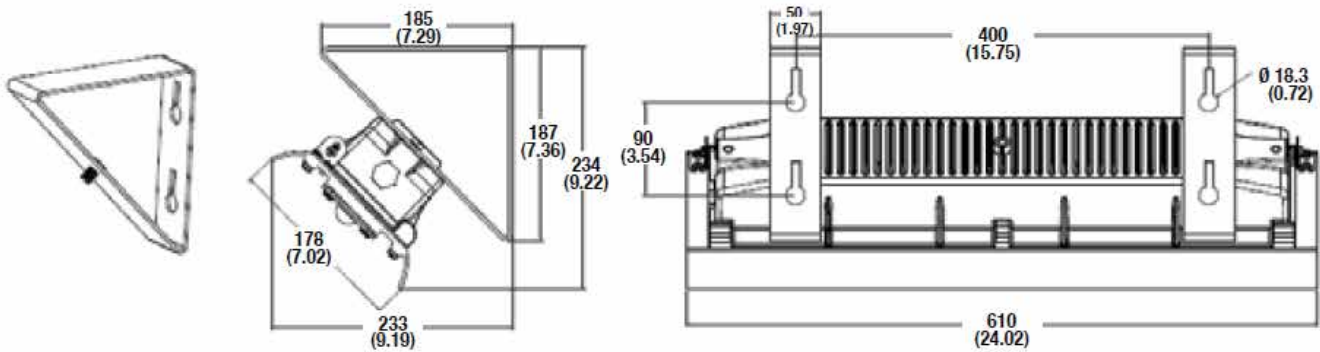
FEHBA

Wall/Hinged Mount



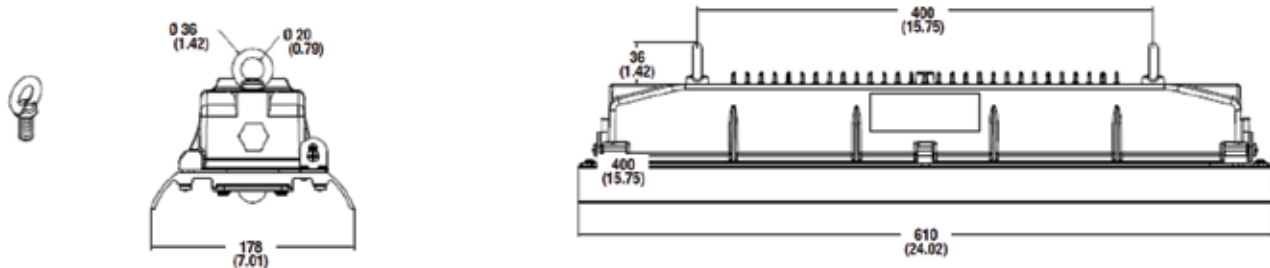
FWFM

Wall/Fixed 45° Mount



FERBM8Z

Ceiling/Chain Mount

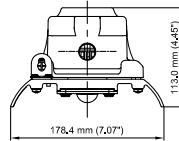


LLEDA Viamaster™ LED Series Luminaires

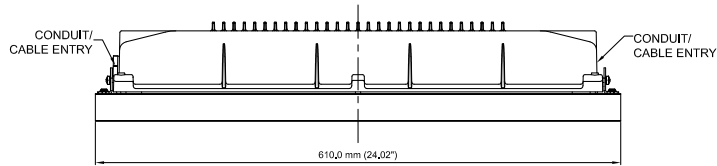
For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

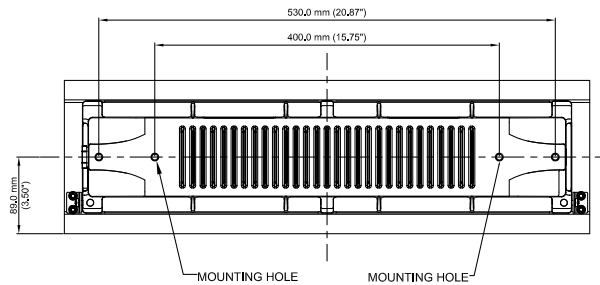
Dimensions in Millimeters (Inches)



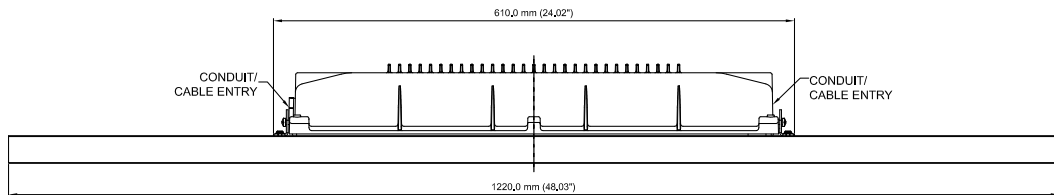
End View — 0.61 m (2 ft) and 1.22 m (4 ft) Versions



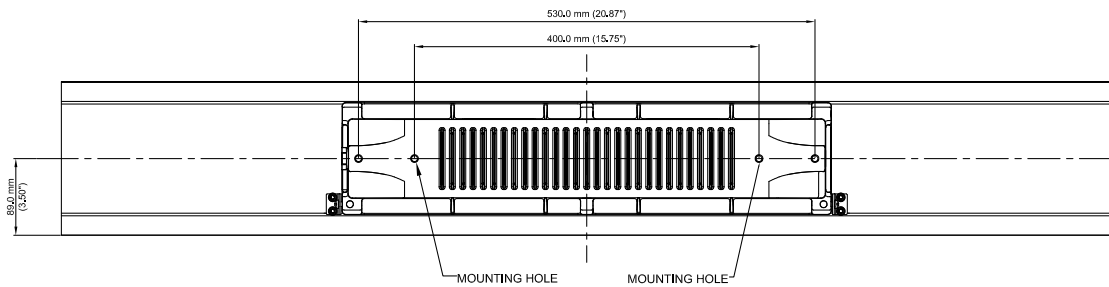
Side View — 0.61 m (2 ft) Versions



Top (Mounting) View — 0.61 m (2 ft) Versions



Side View — 1.22 m (4 ft) Version



Top (Mounting) View — 1.22 m (4 ft) Version

LLEDA Viamaster™ LED Series Luminaires

For Hazardous and Adverse Locations

Lighting

Zones 2 - 22 and 21
Gas (G) and Dust (D)

LED LUMINAIRES

Photometric Data – DATA SHOWN IS ABSOLUTE

REPORT NUMBER: **ID140031A**

Catalog Number: LLEDA12BU2

Lamps: linear LED fixture, one LED board for a total of 10 LEDs, aluminum LED reflector is curved painted gray, 609.6 millimeters (24 inches) long x 177.8 millimeters (7 Inches) wide, with lexan 163R polycarbonate lens.

Candela Distribution

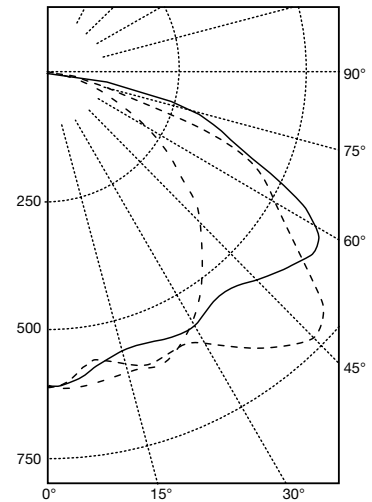
	0.0	22.5	45.0	67.5	90.0	Flux
0	613	613	613	613	613	
5	596	594	599	613	616	57
15	588	578	560	585	603	164
25	594	591	567	520	589	263
35	657	624	548	475	513	351
45	727	698	570	438	408	437
55	592	634	620	355	291	456
65	447	450	485	288	171	378
75	122	145	278	315	67	223
85	4	5	29	104	8	49
90	0	0	1	6	3	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	484	20.3
0-40	835	35.1
0-60	1728	72.6
0-90	2379	100.0

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.7	1.3



REPORT NUMBER: **ID140011A**

Catalog Number: LLEDA15BU2

Lamps: linear LED fixture, two LED boards for a total of 20 LEDs, aluminum LED reflector is curved painted gray, 609.6 millimeters (24 inches) long x 177.8 millimeters (7 Inches) wide, with lexan 163R polycarbonate lens.

Candela Distribution

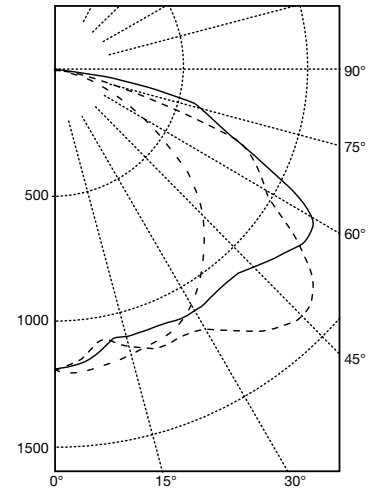
	0.0	22.5	45.0	67.5	90.0	Flux
0	1190	1190	1190	1190	1190	
5	1152	1162	1169	1178	1204	110
15	1145	1127	1096	1120	1171	319
25	1173	1163	1111	1018	1129	514
35	1266	1210	1190	916	1007	685
45	1392	1348	1115	851	827	853
55	1174	1246	1209	706	576	897
65	875	868	965	560	343	745
75	300	391	601	594	145	480
85	12	15	69	257	32	115
90	0	1	14	35	16	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	943	19.9
0-40	1628	34.4
0-60	3378	71.5
0-90	4718	99.8

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.7	1.3



LLEDA Viamaster™ LED Series Luminaires

For Hazardous and Adverse Locations

Zones 2 - 22 and 21
Gas (G) and Dust (D)

Photometric Data – DATA SHOWN IS ABSOLUTE

REPORT NUMBER: **ID140021A**

Catalog Number: LLEDA17BU2

Lamps: linear LED fixture, four LEDs board for a total of 36 LEDs, aluminum LED reflector is curved painted gray, 1219.2 millimeters (48 inches) long x 177.8 millimeters (7 Inches) wide, with lexan 163R polycarbonate lens.

Candela Distribution

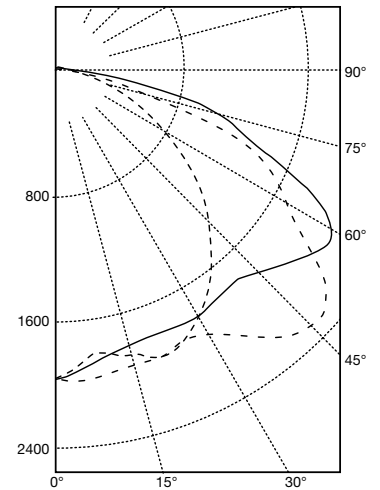
	0.0	22.5	45.0	67.5	90.0	Flux
0	1966	1966	1966	1966	1966	
5	1884	1904	1914	1941	1979	182
15	1874	1864	1812	1876	1942	529
25	1810	1904	1813	1677	1906	845
35	2076	1997	1770	1525	1681	1128
45	2309	2252	1827	1409	1366	1411
55	1952	2100	2032	1162	971	1501
65	1474	1512	967	944	579	1270
75	427	507	91	1064	225	768
85	13	15	8	390	32	173
90	0	1	6	28	13	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1555	19.9
0-40	2683	34.3
0-60	5596	71.6
0-90	7806	99.9

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.7	1.3



FDLED Series Luminaires

Flameproof

Zones 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Can be installed in hazardous areas designated as Zone 1 and 2 – 21 and 22.
- For use in locations where a high degree of corrosion resistance is required.
- For indoor/outdoor use where protection against dirt, water and moisture is necessary.
- Typical applications include:
 - Oil refineries
 - Petrochemical facilities
 - Pulp and paper, mills
 - Painting, sewage and water treatment facilities
 - Warehouses
 - Underground tunnels
 - General manufacturing facilities.

Features

- Impact resistant borosilicate glass sealed tube.
- Easy access to LED array through gray painted aluminum threaded entry cap.
- Supplied with O-ring for improved ingress protection.
- Corrosion-resistant gray painted aluminum.
- Supplied with energy efficient electronic driver on a removable gear tray.
- Supplied with external and internal ground/earth connection.
- Fixture supplied with one M20 blanking plug.
- Easy connection to wire and disconnect with plug-in terminal blocks.

Standard Materials

- End caps and cover: aluminum.
- Glass tube: tempered borosilicate glass.
- O-ring gasket: Nitrile (NBR).
- Internal reflector: white powder coated galvanized steel (400 lm version) or aluminium (2400/4725 lm versions).
- Mounting accessories: several accessories in different material such as zinc plated steel, galvanized steel or 316 stainless steel.

Options

- Diffused polycarbonate lens (2400/4725 lm versions only)
- Ta -50 °C IP66 (without gasket)
- Ta -40 °C IP66/68 (with EPDM70)

Certifications and Compliances

◆ATEX/IECEX Certification

- **Certification Type: FDLED**
 - Gas: Zone 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection:
 - Ex d IIB (4725 lm version)
 - Ex d IIB+H₂ (2400 lm version)
 - Ex d IIC (400 lm version)
 - Temperature Class: T6
 - Dust: Zone 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 D
 - Type of Protection: Ex tb IIIC
 - Surface Temperature:
 - +75 °C (400 lm version)
 - +80 °C (2400 and 4725 lm version)
 - Ambient Temperature: -30 °C to 60 °C
 - CE Declaration of Conformity: 50312
 - ATEX Certificate: INERIS 15 ATEX 0042X



4725 lm (IIB)



2400 lm (IIB+H2)



400 lm (IIC)

- IECEx Certificate: IECEx INE 15.0046X
- Index of Protection according EN/IEC 60529: IP66/68
- Impact Resistance (shock):
 - IK09 (400 and 2400 lm version)
 - IK08 (4725 lm version)
- Internal Volume: > 2 dm³ - 2 liters

◆EURASEC Certification

- Not yet available (around Mid-2016)

◆Others Certification

- Not yet available (around Mid-2016)

FDLED Series Luminaires

Flameproof

Zones 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide – FD LED Series Luminaires

FDLED
Series: FDLED
Zone 1 and 2 -
21 and 22
ATEX/IECEX Certified

04
LED Power (lm):
04 - 400 lm
25 - 2400 lm
50 - 4725 lm

AD
Voltage :
AD - 48/110/220V DC
230V - 50Hz AC ①
BU - 110V to 254V,
50/60 Hz ②

1
Cable Entry:
1 - NPT 3/4"
2 - Metric M20
3 - Metric M25

X
Options:
(Options must be
listed alphabetically)
D - Diffused
Polycarbonate Lens ②

Technical Data

Lumen Output	Type	P	I _e	Gas group	Ambient Temperature °C	Class of Temperature	Surface Temperature
400 lm	LED	6 W	0.03 A	IIC	-30 °C to + 60°C	T6	75 °C
2400 lm	LED	23 W	0.21 A	IIB+H2	-30 °C to + 60°C	T6	80 °C
4725 lm	LED	46 W	0.42 A	IIB	-30 °C to + 60°C	T6	80 °C

Led Power (lm)	Voltage	Cable Entry	Weight kg	Volume dm ³	Catalog Number
400 lm	48/110/220V DC 230V - 50Hz AC	M20	7.8	36.0	FDLED04AD2
2400 lm	110V to 254V, 50/60 Hz	M20	8.1	37.1	FDLED25BU2
4725 lm	110V to 254V, 50/60 Hz	M20	9.0	58.0	FDLED50BU2

① Only 400 lm version

② Only 2400 and 4725 lm version


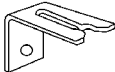
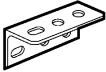

Shaded catalog numbers are normally stocked items. All other items are made to order.

FDLED Series Luminaires

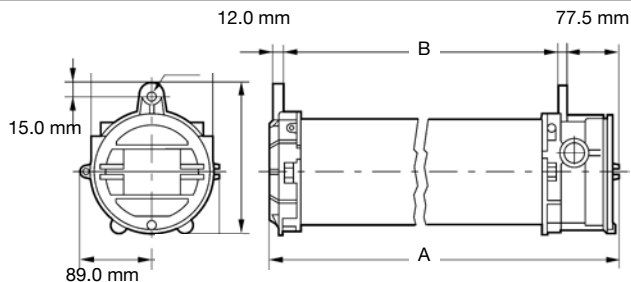
Flameproof

Zones 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Accessories and Replacement Parts

Description		Catalog Number
Protective Guard – Zinc Plated Steel		
	Model 0.3 (for 400 lm)	FDPG1Z
	Model 0,4 (for 2400 lm)	FDPG5Z
	Model 0.6 (for 4725 lm)	FDPG2Z
Fixing Brackets for Ease of Surface Installation – Set of Two		
	Zinc plated steel	FDFBZ
	316 stainless steel	FDFBS
Surface Mounting Brackets – Set of Two		
	Zinc plated steel	FDSBZ
	316 stainless steel	FDSBS
Half Clamp Brackets for Pole Mounting – Set of Two		
	For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube)	
	Zinc plated steel	FDHC49Z
	316 stainless steel	FDHC49S
	For 60 mm pole (2" tube)	
	Zinc plated steel	FDHC60Z
	316 stainless steel	FDHC60S
Fall Prevention Kit		
	1.20 meter stainless steel chain	FDSCS

Dimensions in Millimeters



Model	A	B
0.3 (400 lm)	430	335
0,4 (2400 lm)	470	375
0.6 (4725 lm)	745	650

Shaded catalog numbers are normally stocked items. All other items are made to order.

DEMULED LED Series Luminaires

Flameproof

Zones 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Provides adequate lighting and/or visual indication of access on exit routes during an evacuation in a hazardous environment.
- Can be installed in hazardous areas designated as Zone 1 and 2 – 21 and 22.
- Typical applications include oil refineries, petrochemical plants, pulp and paper mills.

Features

All versions:

- Power supply 230 Vac, 50 Hz.
- 1 hour duration (emergency).
- Threaded access cover with O-ring seal.
- Battery pack :
Escape route lighting: 2.4 V - 0,8 Ah (2 cells - Nicd)
Space lighting: 6 V - 1,6 Ah (6 cells - Nicd)
- Charge indicator by 1 green LED (life time over 10 years).
- Operates in any position.
- Connection to plug-in terminal block via 5 x 2.5 mm² terminals.
- Supplied with two fixing brackets (zinc plated steel)
- Automatic built-in self-test system (SATI) with memorization of tests indicated by LEDs.
- Using a microprocessor and an internal clock, the unit will carry out automatic tests.
- Escape route lighting: 45 lumens, 0.50 wattage.
Space lighting: 400 lumens, 0.95 wattage.

Addressable versions:

- Operates without additional control lines. Communication between units and the control system is realized via mains borne signals that utilize the existing electrical wiring.
- Standard control system capacity: one control system for up to 200 emergency lighting units.
- Optional increased control system capacity: booster (repeater unit) is used to increase the length of the network allowing up to 1000 emergency lighting units to be on one control system. This allows for the use of a single computer to centralize the management of the facilities emergency lighting system. For more information, please contact your local sales representative

Standard Materials

- End caps and cover: aluminum
- O-ring seal: Nitrile
- Lens: tempered borosilicate glass tube
- Fixing brackets: zinc plated steel or 316 stainless steel
- Accessories: white painted galvanized steel
- Guard: zinc plated steel

Options

- Ta -40°C (with EPDM70)
- Addressable monitoring software, please consult your local sales representative.



Certifications and Compliances

◆ ATEX/IECEx Certification

• Certification Type: DEMULED

- Gas: Zone 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature Class: T6
- Dust: Zone 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tb IIC
 - Surface Temperature: +75 °C
 - Ambient Temperature: -30 °C to 55 °C ①
 - CE Declaration of Conformity: 50314
 - ATEX Certificate: INERIS 15ATEX0056X
 - IECEx Certificate: IECEx INE 15.0052X
 - Index of Protection according EN/IEC 60529: IP66/68 (10m/1h)
 - Impact Resistance (shock): IK09
 - Internal Volume: > 2 dm³ - 2 liters
 - Conforming to NF AEAS

◆ EURASEC Certification

- Not yet available (around Mid-2016)

◆ Others Certification

- Not yet available (around Mid-2016)

Related Products

- For labels see *Labels for Emergency Lighting Units, ATX Self-Adhesive Signaling Labels for Emergency Lighting Units.*

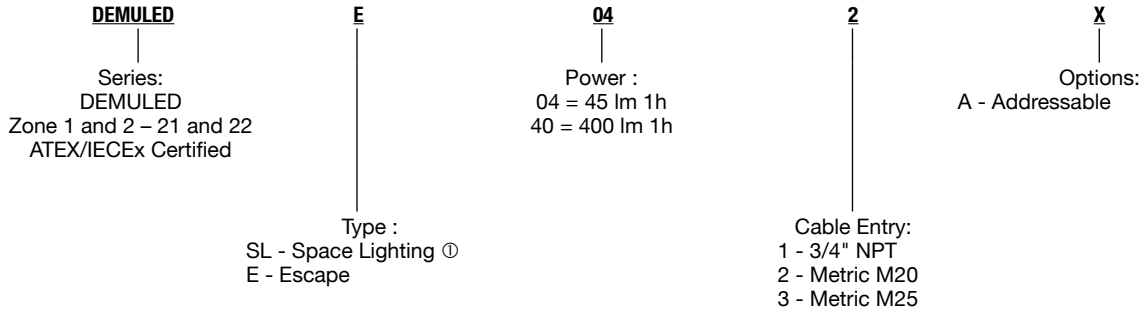
① Optimum operating temperature for battery is -5 °C to +30 °C

DEMULED LED Series Luminaires

Flameproof





Zones 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide



Type	Lamp	Lumen Output	Cable Entries	Weight kg	Volume dm ³	Option	Catalog Number
Escape	LED	45 lm	M20	7.8	36	SATI	DEMULEDE042
Escape	LED	45 lm	M20	7.8	36	Adressable	DEMULEDE042A

Accessories and Replacement Parts

	Description	Catalog Number
	Protective Guard Zinc plated steel	FDPG1Z
	Fixing Brackets: Set of two for ease of surface installation Zinc plated steel 316 stainless steel	FDFBZ FDFBS
	Surface Mounting Brackets: Set of two Zinc plated steel 316 stainless steel	FDSBZ FDSBS
	Half Clamps: Set of two Zinc plated steel versions: For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube) For 60 mm pole (2" tube) 316 stainless steel versions: For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube) For 60 mm pole (2" tube)	FDHC49Z FDHC60Z FDHC49S FDHC60S
	Fall Prevention Kit 1.20 m stainless steel chain	FDFSCS

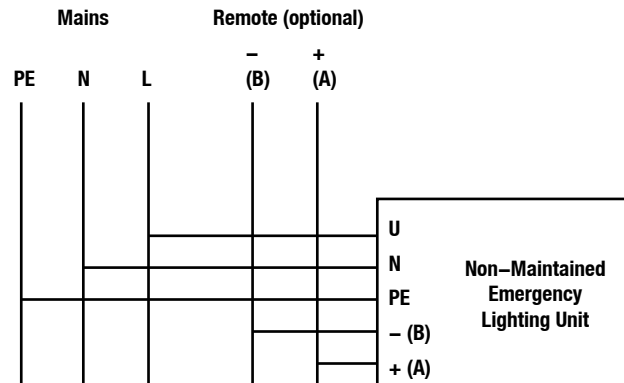
① Under certification process

DEMULED LED Series Luminaires

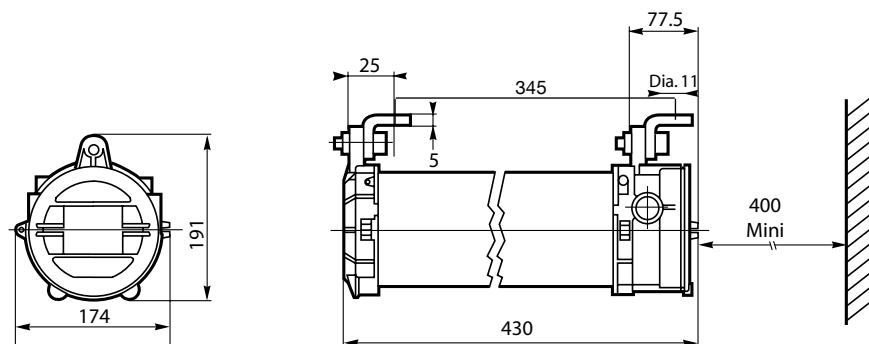
Flameproof

Zones 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Electrical Wiring Diagram



Dimensions in Millimeters



AMLED Areamaster™ LED Flood/High Bay Luminaires

For Hazardous Locations. 8300, 13200 and 19000 lumens

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Typical applications include:
 - Pulp and paper mills
 - Processing plants
 - Chemical plants
 - Oil refineries
 - Foundries
 - Food processing plants
 - Storage areas
 - Waste and sewage treatment
 - Parking garages
 - Other areas where water, dirt and rough usage are a problem

Features

- Compact in size, attractively styled contemporary design, rugged and dependable.
- Easy to install and service.
- One-piece housing.
- One-piece lens in hinged cover. Secured by four M6 captive stainless steel slotted hex-head bolts.
- Thermal shock- and impact-resistant glass lens standard.
- Diffused polycarbonate lens available as an option.
- Heavy duty, high temperature silicone rubber gasket, mechanically secured.
- Universal design for flood and high bay mounting.
- Floodlight Mounting:
 - Yoke mount, zinc plated steel yoke with architectural bronze polyester finish.
- High Bay Mounting:
 - One Conduit entry on back of luminaire with locking set screw.
 - Rotate yoke up or remove.
- Chain Mounting:
 - Mounts via eyebolts threaded into the corners of the fixture.
 - Available with chain mounting, or as an accessory.
 - Rotate yoke up or remove.
- Cool operating temperatures translate into long luminaire life.
- Three 3/4" NPT threaded Entries with two 3/4" NPT aluminum close up plugs provided.
- Electrical:
 - 120-277 Vac, 50/60 Hz
- Terminal block (screw type for secure connection) can accept 0.2 - 4 mm².

Standard Materials

- Housing and lens door: copperfree (4/10 of 1% max.) aluminum
- Gasket: silicone rubber
- Reflector: metallized high reflectance finish
- Yoke mount: zinc plated steel
- Bolts: stainless steel
- Close up plugs: (2) aluminum provided

Standard Finishes

- Housing, lens cover and yoke mount: architectural bronze polyester



Floodlight



High Bay

Certifications and Compliances

◆ ATEX/IECEx Certification

- Certification Type AMLED
 - Gas: Zone 2
 - Conforming to ATEX 94/9/EC: Ⓢ II 3 G
 - Protection Level: EPL Gc
 - Type of Protection: Ex nA IIC
 - Temperature class: See Table on following page
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/EC: Ⓢ II 2 D and II 3D
 - Protection Level: EPL Db and Dc
 - Type of Protection: Ex tb IIIC and Ex tc IIIC
 - Temperature class: See Table on following page
 - EC Declaration of Conformity: 50307
 - ATEX Certificate:
 - Zone 2/22: LCIE 14 ATEX 1016X
 - Zone 21: LCIE 14 ATEX 3049X
 - IECEx Certificate: IECEx LCIE 14.0030X
 - Ambient Temperature: -40 °C to +55 °C
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK08

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

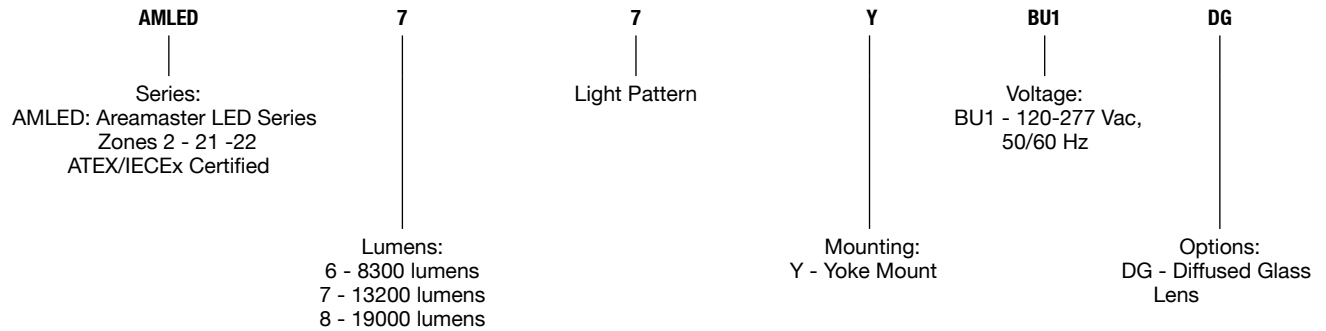
AMLED Areamaster™ LED Flood/High Bay Luminaires

For Hazardous Locations. 8300, 13200 and 19000 lumens

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Order using catalog numbering guide below or select catalog number from tables on following pages.

Catalog Numbering Guide — ATEX/IECEX Certified Areamaster LED



AMLED Areamaster™ LED Flood/High Bay Luminaires

For Hazardous Locations. 8300, 13200 and 19000 lumens


Zone 2 - 21 and 22
Gas (G) and Dust (D)

Technical Data – Ambient Temperature Ta °C

Lighting Position Ta	GAS (Zone 2) Temperature Class / Cable T°						DUST (Zones 21–22) Surface Temperature					
	Downward		Wall Mounting		Upward		Downward		Wall Mounting		Upward	
	+40°C	+55°C	+40°C	+55°C	+40°C	+55°C	+40°C	+55°C	+40°C	+55°C	+40°C	+55°C
AMLED67YBU1	T4 114°C	T4 129°C	T4 109°C	T4 124°C	T4 117°C	T3 132°C	68°C	83°C	67°C	82°C	70°C	85°C
AMLED77YBU1	T3 144°C	T3 159°C	T3 146°C	T3 161°C	T3 150°C	T3 165°C	75°C	90°C	74°C	89°C	77°C	92°C
AMLED87YBU1	T3 178°C	T3 193°C	T3 176°C	T3 191°C	T3 183°C	T2 198°C	83°C	98°C	82°C	97°C	87°C	102°C

Electrical Specifications – Flood Mount

Catalog Number	Voltage Range	Frequency (Hz)	Watts Input Power (Nom.)	Input Amps (Max.)	Total Harmonic Distortion	Power Factor
AMLED67YBU1	120-277 Vac	50/60 Hz	76/74 W	0.64 - 0.32 A	0.5	> 0.98
AMLED77YBU1	120-277 Vac	50/60 Hz	125/121 W	1.10 - .047 A	0.5	> 0.98
AMLED87YBU1	120-277 Vac	50/60 Hz	174/169 W	1.60 - 0.70 A	0.5	> 0.98






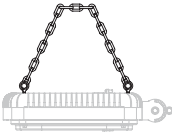
	Line Voltage	Catalog Number
	120-277 Vac, 50/60 Hz	AMLED67YBU1
	120-277 Vac, 50/60 Hz	AMLED77YBU1
	120-277 Vac, 50/60 Hz	AMLED87YBU1

Shaded catalog numbers are normally stocked items. All other items are made to order.

AMLED Areamaster™ LED Flood/High Bay Luminaires

For Hazardous Locations. 8300, 13200 and 19000 lumens

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Accessories and Replacement Parts		
	Description	Catalog Number
Crossarm Mounting Bracket		
	Has 180° horizontal adjustment — degree marked. Facilitates mounting floodlight to crossarm or other flat surface, or to G-AM-8-WB. Includes floodlight yoke bolts. Malleable iron, zinc plated, chromate sealed, architectural bronze polyester finish.	GAM8CA
Pipe or Wall Mount Bracket		
	Used with G-AM-8-CA. Clamps to 1" to 2-1/2" pipe, vertical or horizontal, or mounts on flat surfaces. Includes U-bolt and crossarm bracket bolts. Malleable iron, zinc plated, chromate sealed, with architectural bronze polyester finish.	GAM8WB
Poletop Slip-Fitter		
	Slip-fits 1-1/2" or 2" pipe size poletop tenons. Includes floodlight yoke bolts, 3 locking bolts, and cord grip. Body is malleable iron-zinc plated, chromate sealed, with cast aluminum cap. Assembly has architectural bronze polyester finish.	GSF20
	Slip-fits 1" or 1-1/2" pipe size poletop tenons. Includes floodlight yoke bolts, 3 locking bolts, and cord grip. Body is malleable iron-zinc plated, chromate sealed, with cast aluminum cap. Assembly has architectural bronze polyester finish.	AMLEDSF1
Poletop Slip-Fitter		
	Slip-fits 2" or 2-1/2" poletop tenons. Includes floodlight yoke bolts, 3 locking bolts, and cord grip. Malleable iron, zinc plated, chromate sealed, with architectural bronze polyester finish.	GAM8SF
Chain		
	Chain mount assembly comes with two (2) 914.4 mm long chains, four (4) eye bolts, four (4) hex bolts, four (4) lock washers, four (4) hex nuts, eight (8) plain washers and an instruction sheet for complete assembly and mounting. Chains are galvanized steel, eye bolts are zinc plated steel, all other hardware is stainless steel.	AMLEDCM
	Description	Catalog Number
LED Array		
	With White LED's for the AMLED67	AMLED67AW
	With White LED's for the AMLED77	AMLED77AW
	With White LED's for the AMLED87	AMLED87AW
Drivers		
	120 - 277 Vac — BU1 Version — AMLED87: Left Side — AMLED67, AMLED77	AMLEDDBU1L
	120 - 277 Vac — BU1 Version — AMLED87: Right Side	AMLEDDBU1R
Door Assembly		
	With a Glass Lens, Pins	AMLEDMDOOR

AMLED Areamaster™ LED Flood/High Bay Luminaires

For Hazardous Locations. 8300, 13200 and 19000 lumens

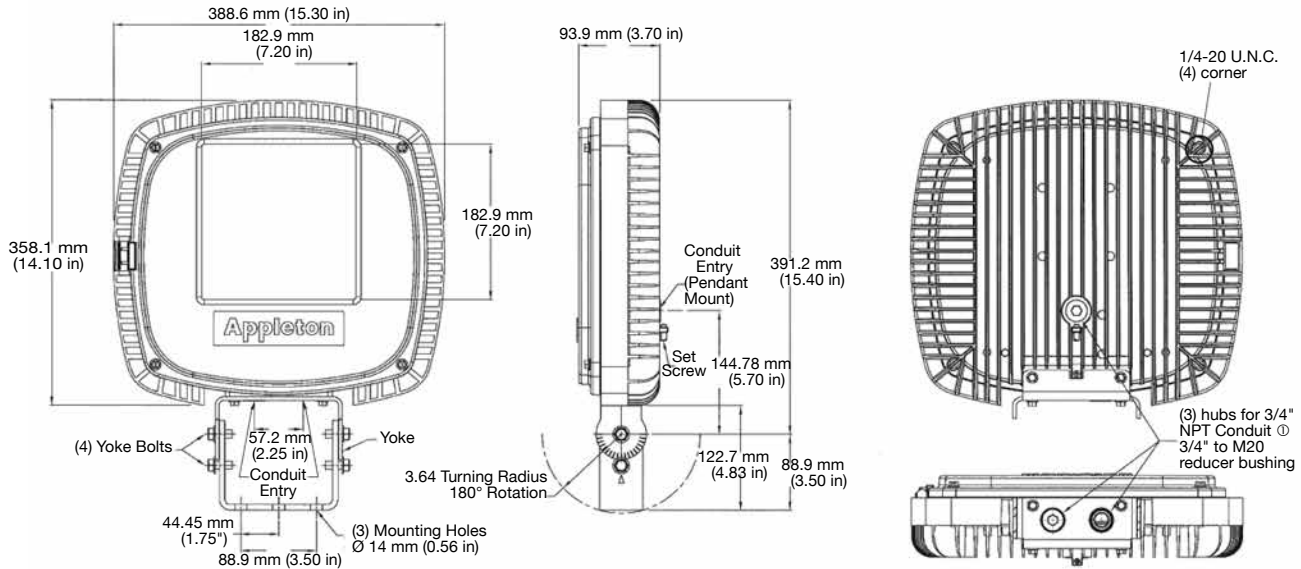
Zone 2 - 21 and 22
Gas (G) and Dust (D)

Lighting

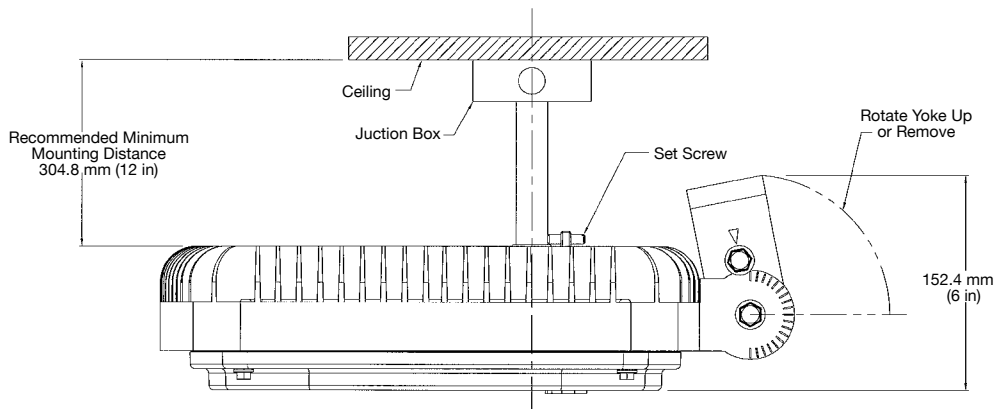
LED LUMINAIRES

Dimensions in Millimeters (Inches)

Floodlight



High Bay Pendant Mount



① 3/4" NPT/M20 adapter supplied for ATEX version.

AMLED Areamaster™ LED Flood/High Bay Luminaires

For Hazardous Locations. 8300, 13200 and 19000 lumens

Zone 2 - 21 and 22
Gas (G) and Dust (D)

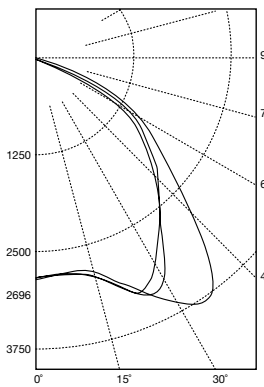
Photometric Data – DATA SHOWN IS ABSOLUTE

REPORT NUMBER: AMLED67YBU1_FLOOD

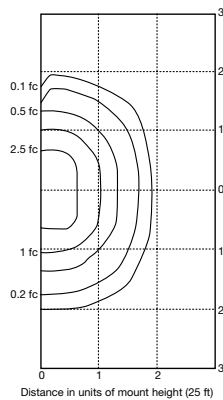
Lamps: Areamaster, High Bay Mount, LED Board 39 LEDs, Specular Reflector 6–1/2 X 6–1/2 Tapered To 3–1/2 X 3–1/2, Lens Clear

Luminaire Lumens 8238

POLAR CANDELA DISTRIBUTION



ISOCANDELA CURVES



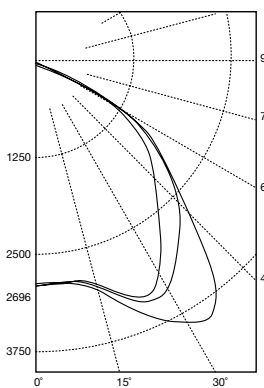
Zonal Lumen and Percentage at 25 °C (77 °F)

Zone	Lumens	% Lamp	% Fixture
0-10	245.6	N.A.	3.0
10-20	771.8	N.A.	9.4
20-30	1431	N.A.	17.4
30-40	1842	N.A.	22.4
40-50	1785	N.A.	21.7
50-60	1448	N.A.	17.6
60-70	667.1	N.A.	8.1
70-80	43.8	N.A.	0.5
80-90	4.5	N.A.	0.1

REPORT NUMBER: AMLED67YBU1_HIGHBAY

Lamps: Areamaster, High Bay Mount, LED Board 39 LEDs, Specular Reflector 6–1/2 X 6–1/2 Tapered To 3–1/2 X 3–1/2, Lens Clear

POLAR CANDELA DISTRIBUTION



Zonal Lumen Summary and Percentage at 25 °C (77 °F)

Zone	Lumens	% Lamp	% Fixture
0-30	2434	N.A.	29.2
0-40	4283	N.A.	51.6
0-60	7553	N.A.	90.6
60-90	780	N.A.	9.4
0-90	8333	N.A.	100.0
90-180	0	N.A.	0
0-180	8333	N.A.	100.0

Zonal Lumen and Percentage at 25 °C (77 °F)

Zone	Lumens	% Lamp	% Fixture
0-10	244.8	N.A.	2.9
10-20	764.2	N.A.	9.2
20-30	1425	N.A.	17.1
30-40	1849	N.A.	22.2
40-50	1787	N.A.	21.4
50-60	1483	N.A.	17.8
60-70	731.0	N.A.	8.8
70-80	46.7	N.A.	0.6
80-90	2.4	N.A.	0.0

AMLED Areamaster™ LED Flood/High Bay Luminaires

For Hazardous Locations. 8300, 13200 and 19000 lumens

Lighting

Zone 2 - 21 and 22
Gas (G) and Dust (D)

LED LUMINAIRES

Photometric Data — DATA SHOWN IS ABSOLUTE

REPORT NUMBER: AMLED77YBU1_FLOOD

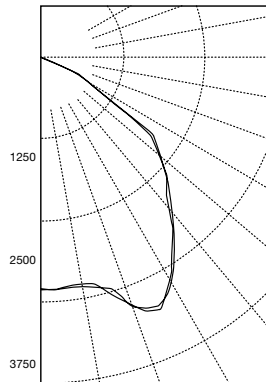
Lamps: Areamaster, High Bay Mount, LED Board 56 LEDs, Specular Reflector 6–1/2 X 6–1/2 Tapered To 3–1/2 X 3–1/2, Lens Clear

Characteristics: Maximum Candela: 5818; Maximum Candela Angle: 22.5 H 25.5 V; Horizontal Beam Angle (50%): 97.0; Vertical Beam Angle (50%): 102; Horizontal Field Angle (10%): 134; Vertical Field Angle (10%): 134; Beam Lumens 10414; Field Lumens 12967; Luminaire Lumens 13157

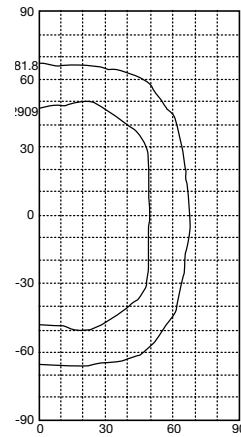
AXIAL CANDELA

DEG.	HOR.	VERT.
90.0	0	0
85.0	21	2
75.0	26	5
65.0	700	733
55.0	2400	2341
47.5	3023	2976
42.5	3375	3307
37.5	3838	3826
33.0	4312	4319
29.0	4670	4719
25.5	4964	4898
22.5	4910	4857
19.5	4700	4660
17.0	4456	4343
15.0	4273	4249
13.0	4184	4165
11.0	4154	4123
9.0	4139	4105
7.0	4124	4119
5.0	4127	4133
3.0	4138	4150
1.0	4149	4153
0.0	4149	4149

AXIAL CANDELA DISPLAY



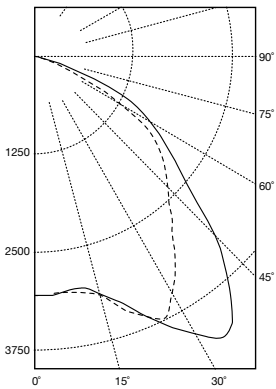
ISOCANDELA CURVES



CIE Type – Direct

Plane	Spacing Criteria
0 Deg	1.5
90 Deg	1.5

Zone	Lumens
0-5	98
5-10	290
10-15	485
15-20	711
20-25	993
25-30	1264
30-35	1440
35-40	1517
40-45	1471
45-50	1392
50-55	1283
55-60	1086
60-65	764
65-70	340
70-75	37
75-80	4
80-85	2
85-90	1



REPORT NUMBER: AMLED77YBU1_HIGHBAY

Lamps: Areamaster, High Bay Mount, LED Board 56 LEDs, Specular Reflector 6–1/2 X 6–1/2 Tapered To 3–1/2 X 3–1/2, Lens Clear

Coefficients of Utilization – Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

% Ceiling Rcc	Effective Floor Cavity Reflectance 0.20																			
	80					70					50					30				
% Walls Rw	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	102	100
1	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88		
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76		
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65		
4	86	75	67	61	84	74	66	60	71	65	59	69	63	59	67	62	58	56		
5	79	67	59	52	77	66	58	52	64	57	52	62	56	51	60	55	50	48		
6	73	60	52	46	71	59	51	45	58	50	45	56	50	45	54	49	44	42		
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37		
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33		
9	58	45	37	32	57	45	37	32	44	37	32	43	36	31	42	36	31	30		
10	55	42	34	29	53	41	34	29	40	33	29	39	33	28	38	32	28	27		

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture	Zone	Lumens	% Lamp	% Fixture
0-30	3841	N.A.	29.1	90-130	2	N.A.	0.0
0-40	6798	N.A.	51.5	90-150	6	N.A.	0.0
0-60	12029	N.A.	91.1	90-180	7	N.A.	0.1
0-90	13177	N.A.	99.8	0-180	13199	N.A.	100
90-120	1	N.A.	0.0				

AMLED Areamaster™ LED High Bay Luminaires

For Hazardous Locations. 8300, 13200 and 19000 lumens

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Photometric Data — DATA SHOWN IS ABSOLUTE

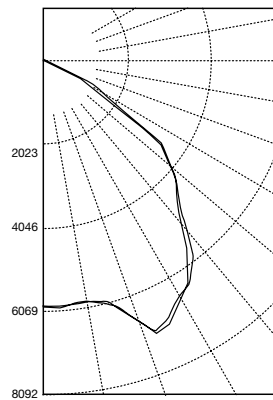
REPORT NUMBER: AMLED87YBU1_FLOOD

Lamps: Areamaster, Pendant Mount, LED Board 20 LEDs, Specular Reflector 6-1/2 X 6-1/2 Tapered To 3-1/2 X 3-1/2, Lens Clear

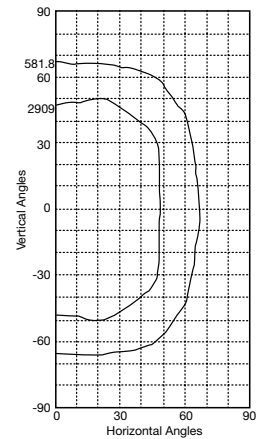
Characteristics: NEMA Type: 7Hx7V; Maximum Candela: 8092; Maximum Candela Angle: 25.5H 25.5V; Horizontal Beam Angle (50%): 97.3; Vertical Beam Angle (50%): 103; Horizontal Field Angle (10%): 137; Vertical Field Angle (10%): 136; Beam Lumens 14933; Field Lumens 18585; Luminaire Lumens 18842

AXIAL CANDELA		
DEG.	HOR.	VERT.
90	0	0
85	31	5
75	36	8
65	1239	938
55	3463	3477
47.5	4393	4345
42.5	4921	4831
37.5	5955	5752
33	6455	6392
29	6656	6778
25.5	6998	7087
22.5	7109	7158
19.5	6665	6664
17	6302	6222
15	6059	6108
13	6027	6044
11	5931	5942
9	5914	5938
7	5933	5956
5	5974	5975
3	6003	5995
1	6002	6004
0	5999	5999

AXIAL CANDELA DISPLAY



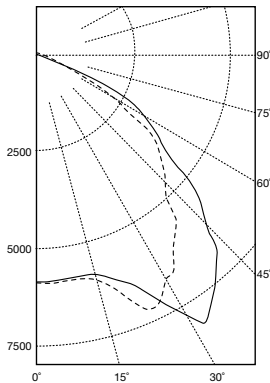
ISOCANDELA CURVES



CIE Type – Direct

Plane	Spacing Criteria
0-180	1.54
90-270	1.54

Zone	Lumens
0- 5	141
5- 10	419
10- 15	697
15- 20	1004
20- 25	1408
25- 30	1794
30- 35	2079
35- 40	2151
40- 45	2143
45- 50	2011
50- 55	1834
55- 60	1567
60- 65	1118
65- 70	514
70- 75	62
75- 80	3
80- 85	2
85- 90	1



REPORT NUMBER: AMLED87YBU1_HIGHBAY

Lamps: Areamaster, High Bay Mount, LED Board 20 LEDs, Specular Reflector 6-1/2 X 6-1/2 Tapered To 3-1/2 X 3-1/2, Lens Clear

Coefficients of Utilization – Zonal Cavity Method Effective Floor Cavity Reflectance 0.20

% Ceiling % Walls	Rcc Rw	80		70		50		30		10		0						
		70	50	30	10	70	50	30	10	50	30	10	50	30	10	0		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	103	100	108	105	101	99	100	98	95	97	95	93	93	91	90	88
2	102	95	89	84	99	93	88	83	89	85	81	86	83	79	83	80	77	75
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65
4	86	75	67	60	84	73	66	60	71	64	59	69	63	58	67	62	58	56
5	79	67	58	52	77	66	58	52	64	57	51	62	56	51	60	55	50	48
6	73	60	52	45	71	59	51	45	57	50	45	56	49	45	54	49	44	42
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9	58	45	37	32	57	45	37	32	43	36	31	42	36	31	41	35	31	29
10	54	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	26

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture	Zone	Lumens	% Lamp	% Fixture
0-30	5462	N.A.	28.8	90-130	3	N.A.	0
0-40	9692	N.A.	51.2	90-150	5	N.A.	0
0-60	17247	N.A.	91.1	90-180	7	N.A.	0
0-90	18946	N.A.	100.1	0-180	18933	N.A.	100
90-120	2	N.A.	0				

MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

Zone 2 - 22
Gas (G) and Dust (D)

Applications

- Enclosed and gasketed fixtures suitable for use in:
 - Marine and wet locations
 - A wide range of industrial, chemical processing and other areas where flammable gases and vapors are present
 - Areas of low clearance, low ceiling heights or where fixture weights must be minimized
 - Non-hazardous locations where severe weather conditions, excessive moisture, dirt, dust, corrosive atmosphere or high ambient temperatures are encountered
- Typical applications include:
 - Pulp and paper mills
 - Processing plants
 - Chemical plants
 - Oil refineries
 - Foundries
 - Manufacturing plants
 - Storage areas
 - Waste and sewage treatment
 - Parking garages
 - Other areas where dust, water, dirt and rough usage are a problem

Features

- Compact light weight low profile design is suited for low mounting heights.
- Modular design allows scores of fixture component combinations to meet installation needs. Uses same mounting hoods as Mercmaster III.
- Fixture housing and mounting hoods are copperfree cast aluminum with baked epoxy finish. All exposed hardware is stainless steel.
- Accommodates a wide range of voltages.
- Ambient temperatures:
 - 70 W to 175 W equivalent: -40 °C to +55 °C
 - 250 W equivalent: -40 °C to +50 °C
- Electrical: 120-277 Vac, 50/60 Hz.
- Pole terminal block: 1 x 0.75 to 6 mm².
- Hinge has high lip for added safety during installation and servicing. Hinge and bolt construction assures 360° compression at all points on ballast housing gasket for positive sealing. Swing away design of captive bolt and nut simplifies servicing.
- All Mercmaster mounting hoods have provision for easy field installation of fuses in fixtures (see Fixture Unit — Electrical Specification).
- NPT and metric threads standard.
- NEMA Type V light distribution is standard.
 - Type V distribution is required in areas where sufficient, evenly distributed light is necessary. It produces a circular distribution that has the same intensity at all angles.
- Ballast bodies and mounting hoods must be purchased separately.



Standard Materials

- Mounting hoods and bodies: cast copperfree (4/10 of 1% max.) aluminum
- All hardware and catch assemblies: stainless steel
- Globe: polycarbonate

Standard Finishes

- Mounting hoods, bodies and guards: baked gray epoxy-clad finish, electrostatically applied for complete uniform protection

MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

Zone 2 - 22
Gas (G) and Dust (D)

Certifications and Compliances

◆ATEX/IECEX Certification

- **Certification Type MLEDNA****
- ATEX
 - Gas: Zone 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 G
 - Type of Protection: Ex nA IIC Gc
 - Temperature class:
 - 70 W and 100 W equivalent: T4 [+40 °C], T4 [+55 °C], T3 [+65 °C]
 - 150 W to 175 W equivalent: T4 [+40 °C], T4 [+ 55 °C]
 - 250 W equivalent: T4 [+40 °C], T4 [+50 °C]
 - Dust: Zone 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 D
 - Type of Protection: Ex tc IIIC Dc
 - Surface Temperature:
 - 70 W and 175 W equivalent: T92 °C
 - 250 W equivalent: T79 °C
 - Ambient Temperature:
 - 70 W and 100 W equivalent: -40 °C to +65 °C
 - 150 W to 175 W equivalent: -40 °C to +55 °C
 - 250 W equivalent: -40 °C to +50 °C
 - ATEX Certificate: LCIE 11 ATEX 1008, LCIE 14 ATEX 3063
 - IECEX Certificate: IECEX LCI 11.0058
 - Index of Protection according EN/IEC 60529: IP66
- IECEX
 - Gas: Zone 2
 - Type of Protection: Ex nA IIC Gc
 - Temperature class:
 - 70 W to 175 W equivalent: T4 [+40 °C], T4 [+ 55 °C]
 - 250 W equivalent: T4 [+40 °C], T4 [+50 °C]
 - Dust: Zone 22
 - Type of Protection: Ex tc IIIC Dc
 - Surface Temperature:
 - 70 W and 175 W equivalent: T92 °C
 - 250 W equivalent: T79 °C
 - Ambient Temperature:
 - 70 W and 175 W equivalent: -40 °C to +55 °C
 - 250 W equivalent: -40 °C to +50 °C
 - IECEX Certificate: IECEX LCI 11.0058
 - Index of Protection according EN/IEC 60529: IP66

◆EURASEC Certification

– EURASEC N° TC RU C-FR. гб 05.B.00912

◆Others certification

– INMETRO Certificate: BVC12.1522 ①

DesignLights™ Consortium (for the following models):

- MLEDN15
- MLEDN17
- MLEDN25

① Inmetro certification available on special request only. Contact your local sales for more information

MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

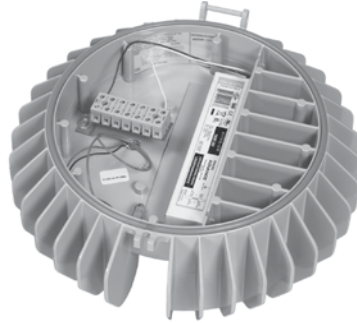
Zone 2 - 22
Gas (G) and Dust (D)

Illustrated Features



Heatsink

Reliable heat transfer via the cast, epoxy powder coat aluminum body. Provides maximum heat dissipation from the LED assembly to the outside environment.



Driver Assembly

Utilizing non-sparking components avoiding the ignition of gases or vapors that may be present (nA).

Modular Plug between LED and driver.

Terminal Blocks (Zone 2)

A seven-point terminal block is provided to facilitate wiring. Terminal block accommodates wire size ranging from 0.75 to 6 mm²

Epoxy Finish

Ballast housing, hoods and guards are copperfree aluminum with epoxy powder coat finish.

Electrical Protection

Ground wire provided to bond mounting hood to ballast housing.

Safety

Rounded heatsink edges prevent possible injury during installation.

"Safety" High Hinge

Extra-high hinge provides additional protection against accidental ballast housing disengagement during installation or maintenance.

Stainless Steel Latch Assembly

Captive, stainless steel latch assembly bolt and nut closes securely. Resists attack of corrosive atmospheres. Swing-away design simplifies servicing.



LED Chamber

Protected by polycarbonate lens, allows for easy maintenance access.



Cooler Operating Cone Hood

Larger sloped surface sheds dusts, dirt and combustible fibers providing better heat dissipation.

Mounting Hood and Globe Gaskets







Silicone rubber gaskets seals out moisture, dirt and dust. Stays flexible, withstands high temperatures. Closure design assures uniform gasket compression.




MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

Zone 2 - 22
Gas (G) and Dust (D)

Wall Mount 	Pendant Mount 	Pendant Cone Mount 	Ceiling Mount 																																
<table border="1"> <thead> <tr> <th>Description</th> <th>Catalog Number</th> </tr> </thead> <tbody> <tr> <td>3/4"</td> <td>KPWB75</td> </tr> <tr> <td>1"</td> <td>KPWB100</td> </tr> <tr> <td>M20</td> <td>KPWB20</td> </tr> </tbody> </table>	Description	Catalog Number	3/4"	KPWB75	1"	KPWB100	M20	KPWB20	<table border="1"> <thead> <tr> <th>Hub Size</th> <th>Catalog Number</th> </tr> </thead> <tbody> <tr> <td>3/4"</td> <td>KPA75</td> </tr> <tr> <td>1"</td> <td>KPA100</td> </tr> <tr> <td>M20</td> <td>KPAM20</td> </tr> </tbody> </table>	Hub Size	Catalog Number	3/4"	KPA75	1"	KPA100	M20	KPAM20	<table border="1"> <thead> <tr> <th>Hub Size)</th> <th>Catalog Number</th> </tr> </thead> <tbody> <tr> <td>3/4"</td> <td>KPCH75</td> </tr> <tr> <td>1"</td> <td>KPCH100</td> </tr> <tr> <td>M20</td> <td>KPCHM20</td> </tr> </tbody> </table>	Hub Size)	Catalog Number	3/4"	KPCH75	1"	KPCH100	M20	KPCHM20	<table border="1"> <thead> <tr> <th>Hub Size</th> <th>Catalog Number</th> </tr> </thead> <tbody> <tr> <td>3/4"</td> <td>KPC75</td> </tr> <tr> <td>1"</td> <td>KPC100</td> </tr> <tr> <td>M20</td> <td>KPCM20</td> </tr> </tbody> </table>	Hub Size	Catalog Number	3/4"	KPC75	1"	KPC100	M20	KPCM20
Description	Catalog Number																																		
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1-1/4"	KPST125																																		
1-1/2"	KPST150																																		

Ballast Bodies		
		
LED Wattage	Light Level Equivalent	Ballast Bodies
ATEX/IECEX Certified Ballast Bodies ①		120-277 Vac, 50/60 Hz
35/33 W	70 W Metal Halide	MLEDNA70P5BU
47.5/46 W	100 W Metal Halide	MLEDNA10P5BU
61/62 W	150 W Metal Halide	MLEDNA15P5BU
74/72 W	175 W Metal Halide	MLEDNA17P5BU
95.5/92 W	250 W Metal Halide	MLEDNA25P5BU

Clear GLOBE

Supplied as standard

Diffused GLOBE

Option : add "D"

Order using catalog numbering guides below or select catalog number from tables on following pages.

Catalog Numbering Guide for Ballast Bodies — ATEX/IECEX Certified Mercmaster LED ①

MLEDNA
MLEDNA -
Mercmaster LED Series
Zones 2 - 22
ATEX/IECEX Certified

17
Light Level Equivalent:
70 - 70 W Metal Halide (2300 lm)
10 - 100 W Metal Halide (3450 lm)
15 - 150 W Metal Halide (4850 lm)
17 - 175 W Metal Halide (6076 lm)
25 - 250 W Metal Halide (9455 lm)

P
Optical Assembly:
P - Polycarbonate
Globe

5

BU
Voltage:
BU - Universal
Voltages
120-277 Vac,
50/60 Hz

D

Options:
D - Diffused Globe

① Ballast bodies and mounting hoods must be purchased separately.

MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

Lighting

Zone 2 - 22
Gas (G) and Dust (D)

LED LUMINAIRES

Technical Data

Lamp		Ambient Temperature °C	Supply Wire Temperature °C	Gas Class of Temperature	Dust Surface Temperature
Light Level Equivalent to HID	Type				
70 Watt NEMA Type V	LED	40°C	60°C	T4	T92°C
		55°C	75°C	T4	
		65°C	90°C	T4	
100 Watt NEMA Type V	LED	40°C	60°C	T4	T92°C
		55°C	75°C	T4	
		65°C	90°C	T4	
150 Watt NEMA Type V	LED	40°C	60°C	T6	T92°C
		55°C	75°C	T6	
175 Watt NEMA Type V	LED	40°C	60°C	T6	T92°C
		55°C	75°C	T6	
250 Watt NEMA Type V	LED	40°C	60°C	T4	T79°C
		50°C	75°C	T4	

Lamp Comparison Chart

Lamp Data	Line Current Amps	Input Power	Lumens	CRI	Lamp Life (Hours)	Color Temp CCT
NEMA Type V						
MLEDN70	0.31 A @ 120 V	35 W	2300 lm	70	60,000+	5650
	0.17 A @ 277 V	33 W				
	0.24 A @ 347 V	34 W				
	0.11 A @ 480 V	32 W				
MLEDN100	0.41 A @ 120 V	47.5 W	3450 lm	70	60,000+	5650
	0.20 A @ 277 V	46 W				
	0.25 A @ 347 V	42 W				
	0.12 A @ 480 V	44 W				
MLEDN150	0.53 A @ 120 V	61 W	4850 lm	70	60,000+	5650
	0.25 A @ 277 V	62 W				
	0.29 A @ 347 V	62 W				
	0.14 A @ 480 V	64 W				
MLEDN175	0.63 A @ 120 V	74 W	6076 lm	70	60,000+	5650
	0.28 A @ 277 V	72 W				
	0.25 A @ 347 V	86 W				
	0.16 A @ 480 V	88 W				
MLEDN250	0.83 A @ 120 V	95.5 W	9455 lm	70	60,000+	5650
	0.36 A @ 277 V	92 W				
	0.45 A @ 347 V	96 W				
	0.31 A @ 480 V	95 W				


MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

Zone 2 - 22
Gas (G) and Dust (D)







Ballast bodies

Ballast bodies and mounting hoods must be purchased separately

	LED Wattage BU	Light Level Equivalent	Current Draw	Voltage Range	Weight kg	Ballast bodies Catalog Number
	35/33 W	70 W HPS	120 Vac @ .31 Amps 277 Vac @ .17 Amps	120-277 Vac, 50/60 Hz	8.8	MLEDNA70P5BU
	47.5/46 W	100 W HPS	120 Vac @ .41 Amps 277 Vac @ .20 Amps	120-277 Vac, 50/60 Hz	8.8	MLEDNA10P5BU
	61/62 W	150 W HPS	120 Vac @ .53 Amps 277 Vac @ .25 Amps	120-277 Vac, 50/60 Hz	8.8	MLEDNA15P5BU
	74/72 W	175 W PSMH	120 Vac @ .63 Amps 277 Vac @ .28 Amps	120-277 Vac, 50/60 Hz	8.8	MLEDNA17P5BU
	95.5/92 W	250 W HPS/PSMH	120 Vac @ .83 Amps 277 Vac @ .36 Amps	120-277 Vac, 50/60 Hz	8.8	MLEDNA25P5BU

Mounting Hoods

Ballast bodies and mounting hoods must be purchased separately

	Description	Hub Size	Weight kg	Mounting Hoods Catalog Number	
Pendant		One Hub, Rigid Mounting	3/4	1.0	KPA75
			1	1.0	KPA100
			M20	1.0	KPAM20
Pendant Cone		One Hub, Rigid Mounting	3/4	1.1	KPCH75
			1	1.1	KPCH100
			M20	1.1	KPCHM20
Ceiling		Five Hubs, Four Close-Up Plugs	3/4	1.4	KPC75
			1	1.4	KPC100
			M20	1.4	KPCM20
Wall		Five Hubs, Four Close-Up Plugs	3/4	1.8	KPWB75
			1	1.8	KPWB100
			M20	1.8	KPWBM20
25° Stanchion		One Hub	1-1/4	1.5	KPS125
			1-1/2	1.5	KPS150
90° Stanchion		One Hub	1-1/4	1.7	KPST125
			1-1/2	1.7	KPST150




Shaded catalog numbers are normally stocked items. All other items are made to order.

MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

Zone 2 - 22
Gas (G) and Dust (D)

Replacement Parts

	Description	Catalog Number
Globes and Gaskets		
	Clear Globe	VPGLLED
	Diffused Globe	VPGLDIFF
	Globe Gasket — Silicone Rubber	KRFGK

Description	Catalog Number
LED Array	
70 Watt LED Array Assembly, Type V, White LED's	MLEDN70A5W
100 Watt LED Array Assembly, Type V, White LED's	MLEDN10A5W
150 Watt LED Array Assembly, Type V, White LED's	MLEDN15A5W
175 Watt LED Array Assembly, Type V, White LED's	MLEDN17A5W
250 Watt LED Array Assembly, Type V, White LED's	MLEDN25A5W

Drivers

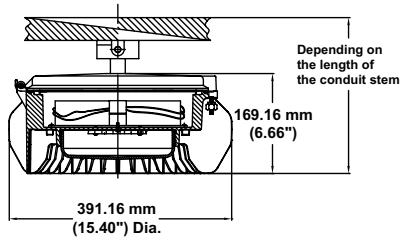
120-277 V Driver (70 W thru 250 W only)	MLEDNDBU
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MLEDNA Mercmaster™ LED Series Luminaires

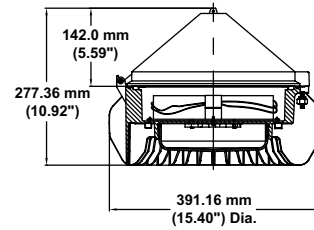
Enclosed and Gasketed Fixtures

Zone 2 - 22
Gas (G) and Dust (D)

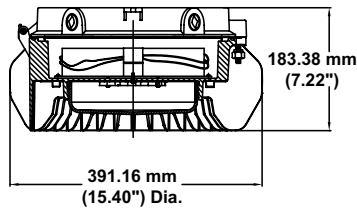
Dimensions in Millimeters (Inches)



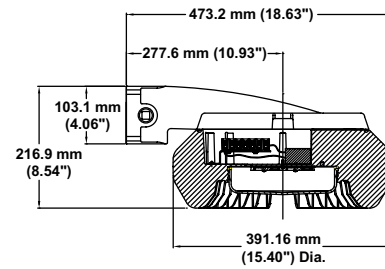
Pendant Mount



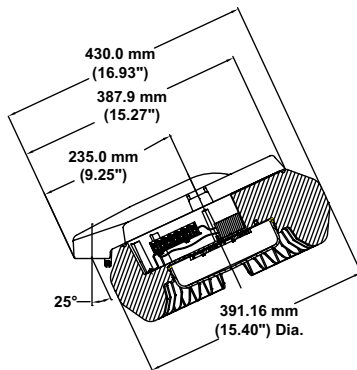
Pendant Cone Mount



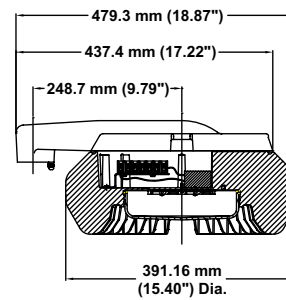
Ceiling Mount



Wall Mount



25° Stanchion Mount



90° Stanchion Mount

MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

Lighting

Zone 2 - 22
Gas (G) and Dust (D)

LED LUMINAIRES

Photometric Data – DATA SHOWN IS ABSOLUTE

REPORT NUMBER: **MLEDN70P5BU**

Lamps: Mercmaster LED, Polycarbonate Optic

Candela Distribution

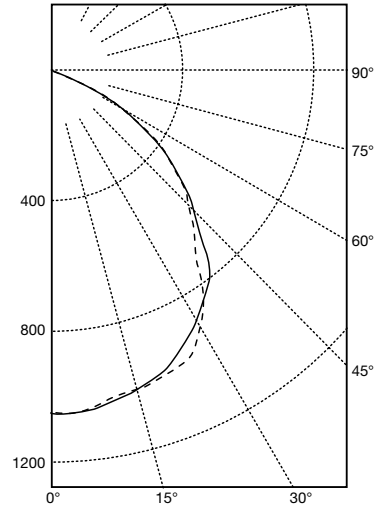
	0.0	22.5	45.0	67.5	90.0	Flux
0	1054	1054	1054	1054	1054	
5	1048	1047	1051	1047	1048	100
15	1016	1014	1016	1014	1016	287
25	977	961	941	961	977	442
35	805	779	824	779	805	497
45	583	607	603	607	583	465
55	408	425	411	425	408	358
65	185	146	139	146	185	133
75	5	5	4	5	5	9
85	1	0	0	0	1	1
90	0	0	0	0	0	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	829	36.1
0-40	1326	57.7
0-60	2149	93.5
0-90	2292	99.7

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.3	1.3



REPORT NUMBER: **MLEDN10P5BU**

Lamps: Mercmaster LED, Polycarbonate Optic

Candela Distribution

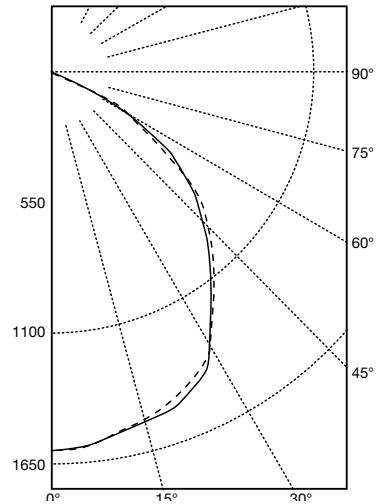
	0.0	22.5	45.0	67.5	90.0	Flux
0	1580	1580	1580	1580	1580	
5	1569	1568	1568	1568	1569	149
15	1509	1510	1513	1510	1509	427
25	1412	1414	1437	1414	1412	655
35	1177	1215	1171	1215	1177	748
45	934	915	893	915	934	707
55	577	588	632	588	577	527
65	228	218	195	218	228	209
75	6	7	6	7	6	13
85	0	0	0	0	0	1
90	0	0	0	0	0	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1231	35.8
0-40	1980	57.6
0-60	3213	93.5
0-90	3438	100.0

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.2	1.2



MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

Zone 2 - 22
Gas (G) and Dust (D)

Photometric Data – DATA SHOWN IS ABSOLUTE

REPORT NUMBER: **MLEDN15P5BU**

Lamps: Mercmaster LED, Polycarbonate Optic

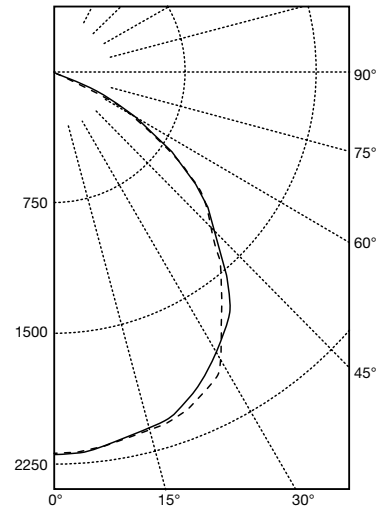
Candela Distribution						
	0.0	22.5	45.0	67.5	90.0	Flux
0	2208	2208	2208	2208	2208	
5	2202	2195	2197	2195	2202	209
15	2137	2131	2127	2131	2137	603
25	2045	2003	1977	2003	2045	926
35	1669	1658	1735	1658	1669	1051
45	1252	1282	1297	1282	1252	988
55	836	850	838	850	834	746
65	276	307	333	307	276	298
75	16	12	11	12	16	22
85	2	1	1	1	2	2
90	1	0	0	0	1	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1738	35.8
0-40	2789	57.5
0-60	4523	93.3
0-90	4844	99.9

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.2	1.2



REPORT NUMBER: **MLEDN17P5BU**

Lamps: Mercmaster LED, Polycarbonate Optic

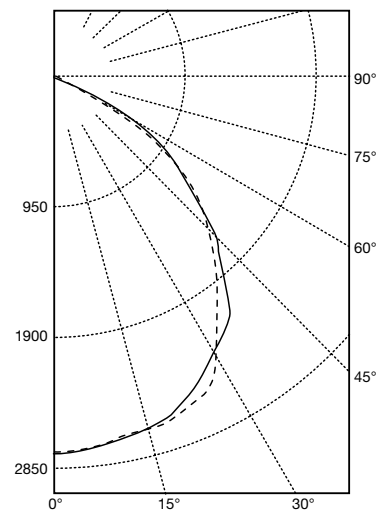
Candela Distribution						
	0.0	22.5	45.0	67.5	90.0	Flux
0	2739	2739	2739	2739	2739	
5	2724	2724	2725	2724	2724	259
15	2660	2658	2655	2658	2660	752
25	2553	2508	2462	2508	2553	1156
35	2069	2062	2201	2062	2069	1312
45	1580	1614	1655	1614	1580	1243
55	1047	1093	1046	1093	1047	943
65	353	380	391	380	353	378
75	19	15	16	15	19	28
85	2	1	1	1	2	2
90	1	0	0	0	1	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	2167	35.7
0-40	3478	57.2
0-60	5664	93.2
0-90	6072	99.9

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.2	1.2



MLEDNA Mercmaster™ LED Series Luminaires**Enclosed and Gasketed Fixtures**

Zone 2 - 22
Gas (G) and Dust (D)

Photometric Data – DATA SHOWN IS ABSOLUTE

REPORT NUMBER: **MLEDN250P5BU** ①

Lamps: Mercmaster LED, Polycarbonate Optic

Candela Distribution

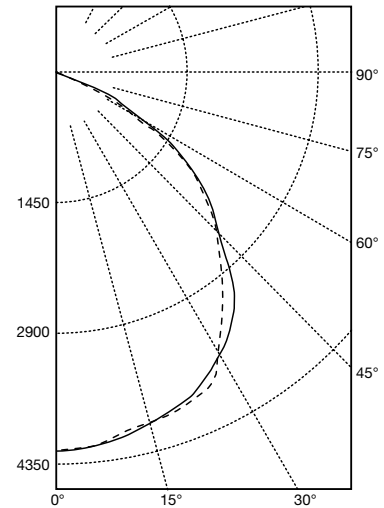
	0.0	22.5	45.0	67.5	90.0	Flux
0	4206	4206	4206	4206	4206	
5	4170	4182	4177	4182	4170	397
15	4035	4046	4038	4046	4035	1145
25	3913	3888	3829	3888	3913	1784
35	3211	3233	3380	3233	3211	2046
45	2484	2524	2532	2524	2484	1942
55	1710	1763	1708	1763	1710	1530
65	682	564	606	564	682	568
75	20	18	17	18	20	31
85	2	1	1	1	2	2
90	1	1	0	1	1	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	3326	35.2
0-40	5372	56.8
0-60	8844	93.5
0-90	9445	99.9

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.2	1.2



FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Can be installed in hazardous areas designated as Zone 1 and 2 – 21 and 22.
- For use in locations where a high degree of corrosion resistance is required.
- For indoor/outdoor use where protection against dirt, water and moisture is necessary.
- Typical applications include oil refineries, petrochemical facilities, pulp and paper mills, food processing plants, warehouses, underground tunnels and general manufacturing facilities, FPSO, FLNG, ...

Features

- Corrosion-resistant fiberglass reinforced polyester body and hinged polycarbonate lens.
- High impact resistance housing (20 Joules – IK10) from -40°C to +55 °C ambient temperature and wind profile for use in extreme offshore and onshore environments.
- Latch assembly and elastomer gasket seals against water and dust ingress, IP66/67.
- Easily accessed for maintenance using Allen key or straight blade screwdriver.
- Central opening with unique patented release system to prevent damage.
- Can be horizontally or vertically mounted.
- Hinged parabolic reflector for high lumen output efficiency.
- Vibration resistant spring loaded lampholders for bi-pin (G13).
- Positive safety switch disconnects power to lamps and ballast to allow maintenance in hazardous locations.
- Electronic multi-tap ballast 110 to 254 Vac/Vdc +/- 10% 50/60 Hz, for global applications. High power factor electronic ballast (>0.95). EOL (End Of Life) protection in accordance to the latest EN/IEC 60079-7 standard.
- Two channel ballast prevents dark areas by allowing one lamp to remain lit if one fails.
- Ballast plug-in with Ex e connector for quick and error-free maintenance.
- Available in 3 hour or 90 minute emergency versions, including multi-tap ballast with built-in monthly self test. Test results through multi-colored LED.
- Ex e battery with plug-in connector.

Standard Materials

- Fiberglass reinforced polyester housing
- Polycarbonate lens
- Elastomer gasket
- Highly reflective white polycarbonate internal reflector
- Mounting accessories available in different materials such as gray painted aluminum, zinc plated steel, galvanized steel or 316 stainless steel

Options

- Silicone coating for added protection in H₂S hydrogen sulfide environments.
- Available without safety switch.
- Level gauge light fitting.
- 316 stainless steel fixing inserts.



2 x 58 W



2 x 36 W



2 x 18 W

Certifications and Compliances

◆ ATEX/IECEx Certification

• Certification Type: FLe

- Gas: Zones 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex de IIC or Ex demb IIC (emergency version)
 - Temperature Class: T5 Ⓜ to T4
- Dust: Zone 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex t IIIC Db
 - Surface Temperature: +75 °C
- Ambient Temperature: -40 °C to +55 °C
- CE Declaration of Conformity: 50201
- ATEX Certificate: LCIE 07 ATEX 6017
- IECEx Certificate: IECEx LCI 04.0017
- Index of Protection according EN/IEC 60529: IP66/67
- Impact Resistance (shock): IK10

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00910

◆ Others Certification

- INMETRO Certificate: BVC11.0276 ①

① Inmetro certification available on special request only. Contact your local sales for more information .

② With ceiling position use at +40 °C ambient temperature.

FE Series Non-Metallic Fluorescent Luminaires

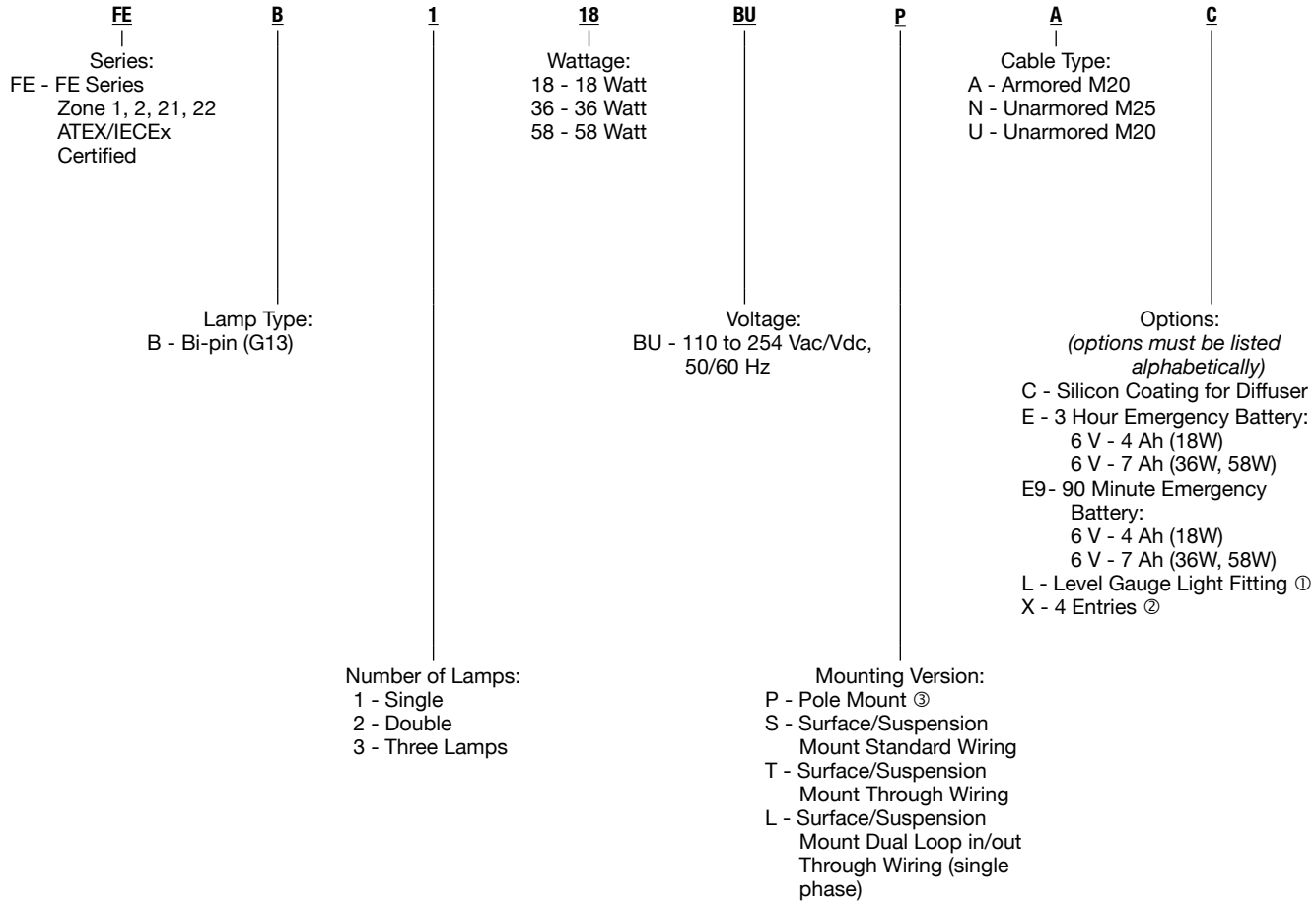
Standard and Emergency Battery Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

FLUORESCENT LUMINAIRES

Order using catalog numbering guide below or select catalog number from tables on following pages.

Catalog Numbering Guide — FE Non-Metallic Fluorescent Lighting Fixtures



① Only for single standard versions.

② Only for S, T and L mounting versions.

③ Only 2 x 18 W and 2 x 36 W with M25 entry versions.

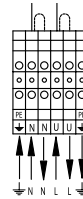
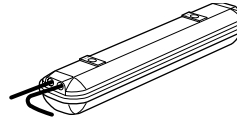
FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Surface/Suspension Mounting and Standard Wiring Version

Connection via 1 x 6 terminals.
Capacity (flexible/solid): 4 mm²/6 mm².



Unarmored Version - Bi-pin (G13)

Three M25 threaded entries, two at one end and one at opposite end, supplied with one M25 polyamide cable gland — 8 to 18.5 mm diameter — and two M25 polyamide plugs.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
1	18	G13	110/254	5.5	32.3	FEB118BUSN
2	18	G13	110/254	5.5	32.3	FEB218BUSN
1	36	G13	110/254	7.9	54.2	FEB136BUSN
2	36	G13	110/254	7.9	54.2	FEB236BUSN
3	36	G13	110/254	9.9	54.2	FEB336BUSN
1	58	G13	110/254	9.0	65.0	FEB158BUSN
2	58	G13	110/254	9.0	65.0	FEB258BUSN
3	58	G13	110/254	11.0	65.0	FEB358BUSN

Armored Version - Bi-pin (G13)

Two M20 threaded entries with brass earth continuity plate at one end and one M20 plugged clearance entry, supplied with two M20 polyamide plugs.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
1	18	G13	110/254	5.5	32.3	FEB118BUSA
2	18	G13	110/254	5.5	32.3	FEB218BUSA
1	36	G13	110/254	7.9	54.2	FEB136BUSA
2	36	G13	110/254	7.9	54.2	FEB236BUSA
3	36	G13	110/254	9.9	54.2	FEB336BUSA
1	58	G13	110/254	9.0	65.0	FEB158BUSA
2	58	G13	110/254	9.0	65.0	FEB258BUSA
3	58	G13	110/254	11.0	65.0	FEB358BUSA

Shaded catalog numbers are normally stocked items. All other items are made to order.

FE Series Non-Metallic Fluorescent Luminaires

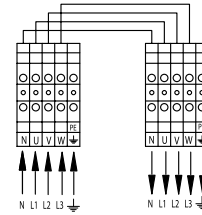
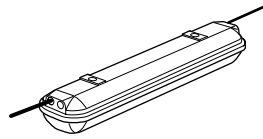
Standard and Emergency Battery Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Surface/Suspension Mounting and Through Wiring

Version (three phase)

Connection via 2 x 5 terminals.
Capacity (flexible/solid): 4 mm²/6 mm².



Unarmored Version - Bi-pin (G13)

Three M25 threaded entries, two at one end and one at opposite end, supplied with two M25 polyamide cable glands — 8 to 18.5 mm diameter — and one M25 polyamide plug.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
2	18	G13	110/254	5.5	32.3	FEB218BUTN
2	36	G13	110/254	7.9	54.2	FEB236BUTN
2	58	G13	110/254	9.0	65.0	FEB258BUTN

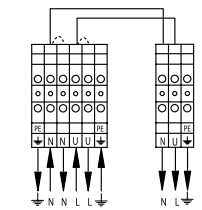
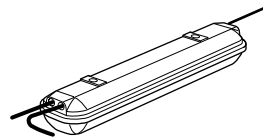
Armored Version - Bi-pin (G13)

Two M20 threaded entries with brass earth continuity plate at one end and one M20 threaded entry with brass earth continuity plate at opposite end, supplied with one M20 polyamide plug.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
2	18	G13	110/254	5.5	32.3	FEB218BUTA
2	36	G13	110/254	7.9	54.2	FEB236BUTA
2	58	G13	110/254	9.0	65.0	FEB258BUTA

Surface/Suspension Mounting and Dual Loop In/Out Through Wiring Version (single phase):

Connection via 1 x 6 terminals and 1 x 3 terminals.
Capacity (flexible/solid): 4 mm²/6 mm².



Unarmored Version - Bi-pin (G13)

Three M25 entries, two at one end and one at opposite end, supplied with two M25 polyamide cable glands — 8 to 18.5 mm diameter — and one M25 polyamide plug.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
2	18	G13	110/254	5.5	32.3	FEB218BULN
2	36	G13	110/254	7.9	54.2	FEB236BULN
2	58	G13	110/254	9.0	65.0	FEB258BULN

Armored Version - Bi-pin (G13)

Two M20 threaded entries with brass earth continuity plate at one end and one M20 threaded entry with brass earth continuity plate at opposite end, supplied with one M20 polyamide plug.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
2	18	G13	110/254	5.5	32.3	FEB218BULA
2	36	G13	110/254	7.9	54.2	FEB236BULA
2	58	G13	110/254	9.0	65.0	FEB258BULA

Shaded catalog numbers are normally stocked items. All other items are made to order.

FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

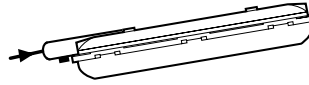
Pole Mounting Version

Connection via 1 x 3 terminals.

Capacity (flexible/solid): 4 mm²/6 mm².

For mounting on 42 mm diameter pole or tubular wall-mounting support.

Supplied with one integrated M25 polyamide cable gland — 8 to 18.5 mm diameter.



Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
2	18	G13	110/254	6.2	34.1	FEB218BUPN
2	36	G13	110/254	8.7	54.2	FEB236BUPN

Level Gauge Tank Light -

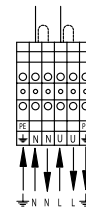
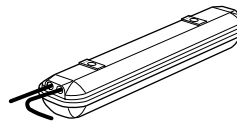
Surface/Suspension Mounting with Standard Wiring

Connection via 1 x 6 terminals.

Capacity (flexible/solid): 4 mm²/6 mm².

Unarmored Version - Bi-pin (G13)

Three M25 entries, two at one end and one at opposite end, supplied with one M25 polyamide cable gland — 8 to 18.5 mm diameter — and two M25 polyamide plugs.



Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
1	18	G13	110/254	5.5	32.3	FEB118BUSNL
1	36	G13	110/254	7.9	54.2	FEB136BUSNL
1	58	G13	110/254	9.0	65.0	FEB158BUSNL

Shaded catalog numbers are normally stocked items. All other items are made to order.

FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

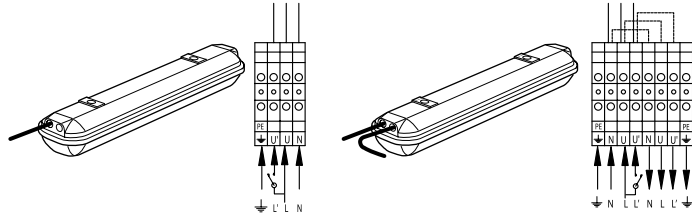
Emergency Battery Backup

Surface/Suspension Mounting and Standard Wiring

Connection via 1 x 4 terminals for 18 W version.

Connection via 1 x 8 terminals for 36 W and 58 W versions.

Capacity (flexible/solid): 4 mm²/6 mm².



Unarmored Version - Bi-pin (G13)

Three M25 entries, two at one end and one at opposite end, supplied with one M25 polyamide cable gland — 8 to 18.5 mm diameter — and two M25 polyamide plugs.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	G13	110/254	7.3	32.3	3 H	4Ah	FEB218BUSNE
2	36	G13	110/254	9.6	54.2	3 H	7Ah	FEB236BUSNE
3	36	G13	110/254	11.6	54.2	3 H	7Ah	FEB336BUSNE
2	58	G13	110/254	10.7	65.0	3 H	7Ah	FEB258BUSNE
3	58	G13	110/254	12.7	65.0	3 H	7Ah	FEB358BUSNE

Armored Version - Bi-pin (G13)

Two M20 threaded entries with brass earth continuity plate at one end and one M20 plugged clearance entry, supplied with two M20 polyamide plugs.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	G13	110/254	7.3	32.3	3 H	4Ah	FEB218BUSAE
2	36	G13	110/254	9.6	54.2	3 H	7Ah	FEB236BUSAE
3	36	G13	110/254	11.6	54.2	3 H	7Ah	FEB336BUSAE
2	58	G13	110/254	10.7	65.0	3 H	7Ah	FEB258BUSAE
3	58	G13	110/254	12.7	65.0	3 H	7Ah	FEB358BUSAE

Shaded catalog numbers are normally stocked items. All other items are made to order.

FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

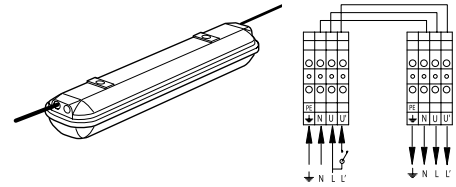
Emergency Battery Backup

Surface/Suspension Mounting and Through Wiring Version

Connection via 2 x 4 terminals.
Capacity (flexible/solid): 4 mm²/6 mm².

Unarmored Version - Bi-pin (G13):

Three M25 entries, two at one end and one at opposite end, supplied with two M25 polyamide cable glands — 8 to 18.5 mm diameter — and one M25 polyamide plug.



Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	Bi-pin	110/254	7.3	32.3	3 H	4Ah	FEB218BUTNE
2	36	Bi-pin	110/254	9.6	54.2	3 H	7Ah	FEB236BUTNE
2	58	Bi-pin	110/254	10.7	65.0	3 H	7Ah	FEB258BUTNE

Armored Version - Bi-pin (G13):

Two M20 threaded entries with brass earth continuity plate at one end and one M20 threaded entry with brass earth continuity plate at opposite end, supplied with one M20 polyamide plug.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	Bi-pin	110/254	7.3	32.3	3 H	4Ah	FEB218BUTAE
2	36	Bi-pin	110/254	9.6	54.2	3 H	7Ah	FEB236BUTAE
2	58	Bi-pin	110/254	10.7	65.0	3 H	7Ah	FEB258BUTAE

Shaded catalog numbers are normally stocked items. All other items are made to order.

FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

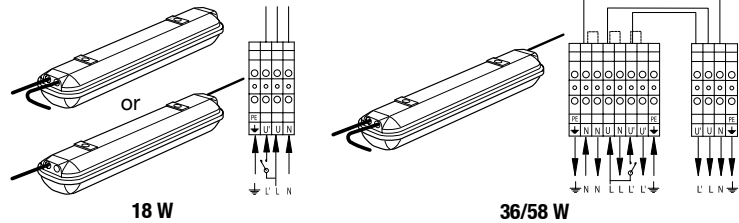
Emergency Battery Backup

Surface/Suspension Mounting and Dual Loop In/Out Through Wiring Version (single phase)

Connection via 1 x 4 double deck terminals for 18 W version.

Connection via 1 x 8 terminals and 1 x 4 terminals for 36 W and 58 W versions.

Capacity (flexible/solid):
4 mm²/6 mm²



Unarmored Version - Bi-pin (G13)

Three M25 entries, two at one end and one at opposite end, supplied with two M25 polyamide cable glands — 8 to 18.5 mm diameter — and one M25 polyamide plug.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	Bi-pin	110/254	7.6	32.3	3 H	4Ah	FEB218BULNE
2	36	Bi-pin	110/254	9.9	54.2	3 H	7Ah	FEB236BULNE
2	58	Bi-pin	110/254	10.7	65.0	3 H	7Ah	FEB258BULNE

Armored Version - Bi-pin (G13)

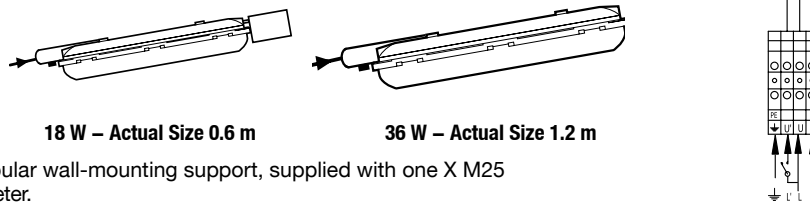
Two M20 threaded entries with brass earth continuity plate at one end and one M20 threaded entry with brass earth continuity plate at opposite end, supplied with one M20 polyamide plug.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	Bi-pin	110/254	7.6	32.3	3 H	4Ah	FEB218BULAE
2	36	Bi-pin	110/254	9.9	54.2	3 H	7Ah	FEB236BULAE
2	58	Bi-pin	110/254	10.7	65.0	3 H	7Ah	FEB258BULAE

Pole Mounting Version

Connection via 1 x 4 terminals.

Capacity (flexible/solid):
4 mm²/6 mm².



For mounting on diameter 42 mm pole or tubular wall-mounting support, supplied with one X M25 polyamide cable gland — 8 to 18.5 mm diameter.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	Bi-pin	110/254	10.0	54.2	3 H	4Ah	FEB218BUPNE ①
2	36	Bi-pin	110/254	10.4	54.2	3 H	7Ah	FEB236BUPNE







① 2 x 18 W is supplied with external battery pack (see dimensional data).

Shaded catalog numbers are normally stocked items. All other items are made to order.

FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Accessories and Replacement Parts		
	Description	Catalog Number
Fixing Brackets		
	Set of two brackets for surface installation	
	Zinc plated steel	FEFBZ
	316 stainless steel	FEFBS
Brackets for Surface Mounting		
	Set of two	
	Aluminium (gray painted)	FESBA
	316 stainless steel	FESBS
M8 Ring Bolts		
	Set of two	
	Zinc plated steel	FERBM8Z
Half Clamps Brackets for Pole Mounting		
	Set of two	
	For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube)	
	Zinc plated steel	FEHC49Z
	316 stainless steel	FEHC49S
	For 60 mm pole (2" tube)	
	Zinc plated steel	FEHC60Z
	316 stainless steel	FEHC60S
Wall Mounting Adaptor		
	For pole mounting version	
	Diameter 42mm	
	Galvanized steel	FEWMG
Hinged Brackets		
	Set of two brackets for adjusting luminaire	
	Aluminium	FEHBA
	316 stainless steel	FEHBS
Fall Prevention Kit		
	Safety chain retains fixture temporarily to ease installation	
	For M25 cable entry	FESCM25
	For M20 cable entry	FESCM20

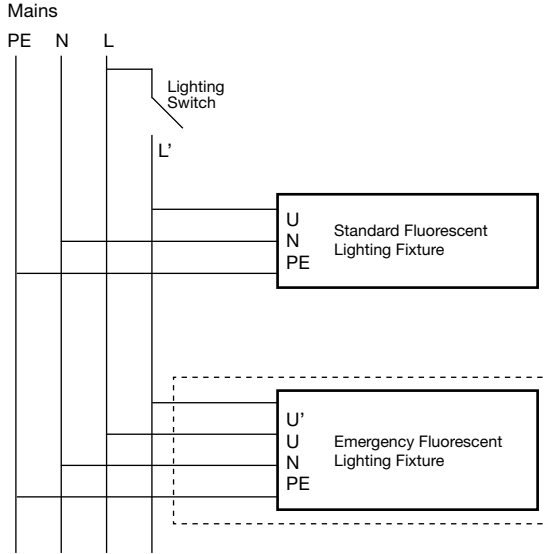
Shaded catalog numbers are normally stocked items. All other items are made to order.

FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

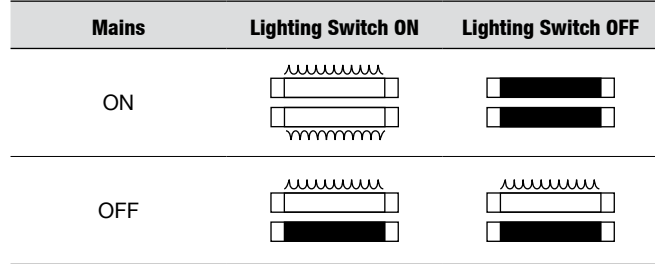
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Wiring Diagram

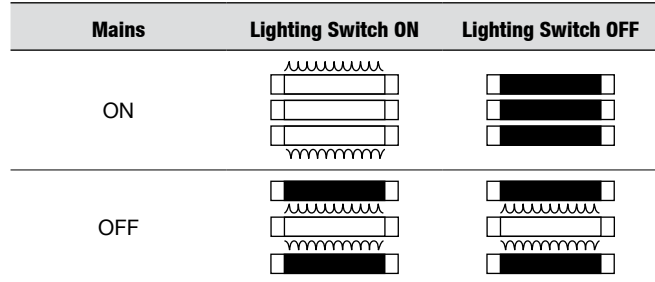


Emergency Function Diagram

Two Lamp Version



Three Lamp Version



LED Status

Color	Indication	Function
Green	LED Blinking	Mains good – Battery charging
	LED Continuous	Mains good – Battery charged
Red	LED Blinking	No battery connected <i>OR</i> Something is defective
	LED Continuous	Mains faulty – Output ON
	LED Flashing	Mains faulty – Battery empty <i>OR</i> Lamp is defective
Yellow	LED Blinking	Mains good – Performing self test
	LED Continuous	Self test was not okay
None (Off)	No Light Emitted	No mains – Battery completely empty

Emergency Light Duration

Version	Battery Capacity	Duration	Light Output
2 x 18 W	4 Ah – 6 V	90 minute	80%
	4 Ah – 6 V	3 hour	40%
2 x 36 W	7 Ah – 6 V	90 minute	45%
	7 Ah – 6 V	3 hour	25%
2 x 58 W	7 Ah – 6 V	90 minute	30%
	7 Ah – 6 V	3 hour	15%

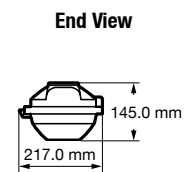
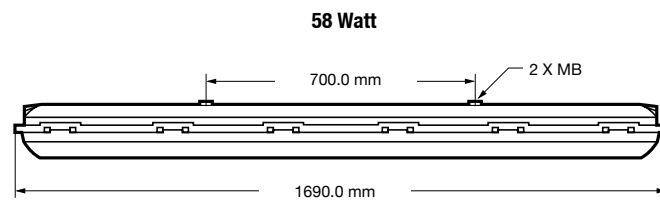
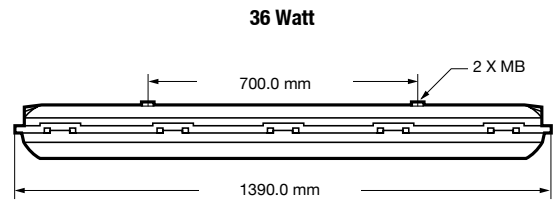
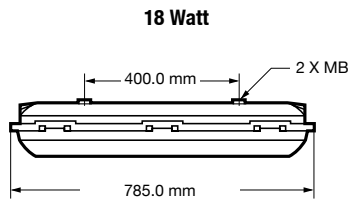
FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

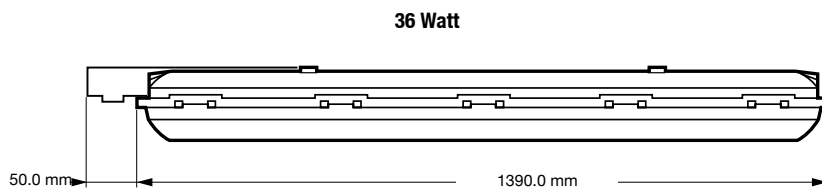
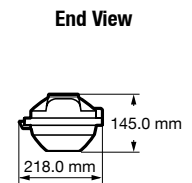
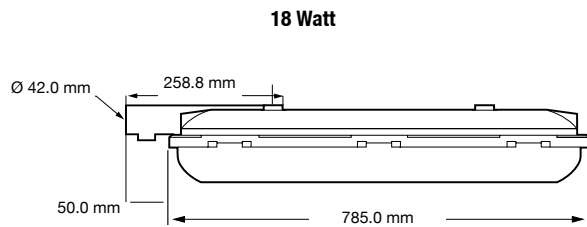
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Dimensions in Millimeters

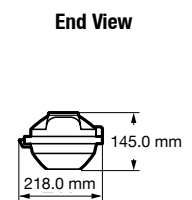
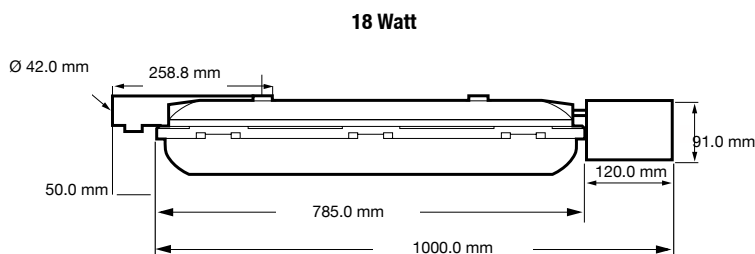
Surface/Suspension Mounting



Pole Mounting



Emergency Pole Mounting



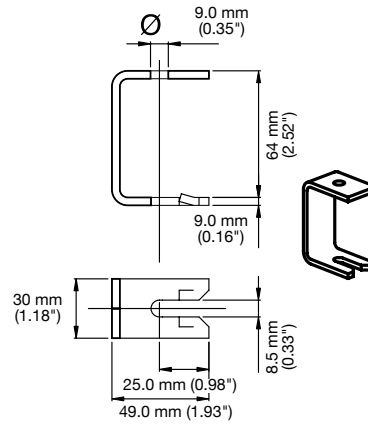
FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

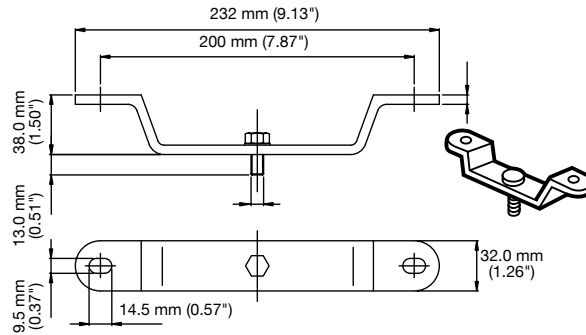
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Mounting Data

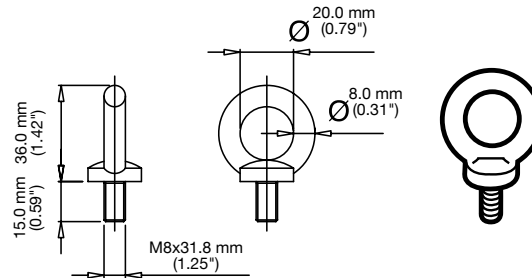
FEFBZ: zinc plated steel — Set of two quick fixing brackets for ease of surface mounting



FESBS: 316 stainless steel — Set of two brackets for surface mounting



FERBM8Z: zinc plated steel — Set of two ring bolts



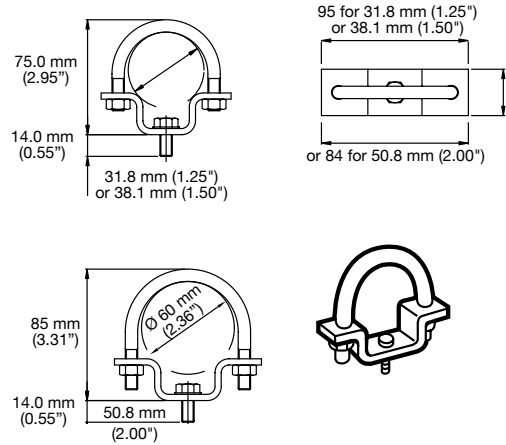
FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

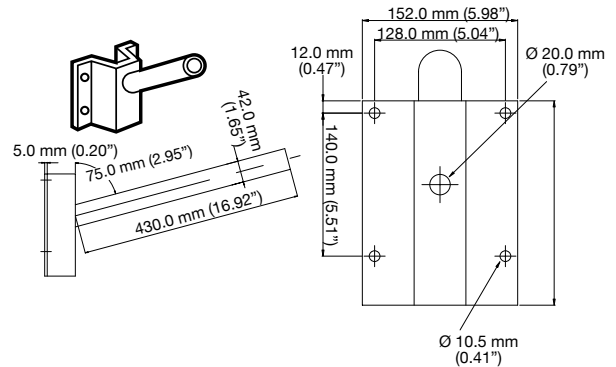
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Mounting Data

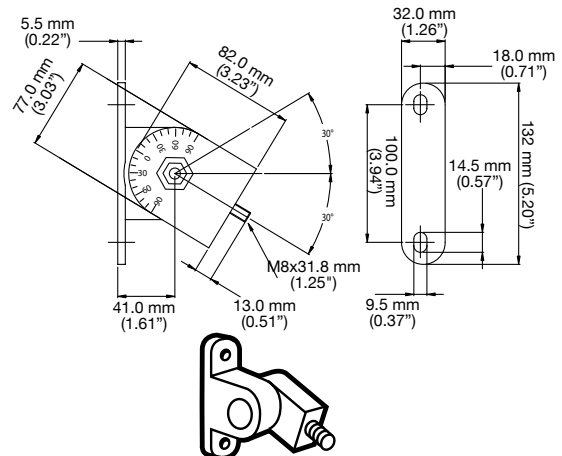
FEHC49Z: zinc plated steel or FEHC49S: 316 stainless steel — Set of two clamps for pole diameter 42 mm to 49 mm (for 1-1/4" to 1-1/2" pole).
FEHC60Z: zinc plated steel or FEHC60S: 316 stainless steel — Set of two clamps for pole diameter 60 mm (for 2" pole).



FEWMG: galvanized steel — Wall mounting pole diameter 42 mm (1-1/4")



FEHBA: aluminum or FEHBS: 316 stainless steel — Set of two hinged brackets for adjusting luminaire.



FE Series Non-Metallic Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Photometric Data

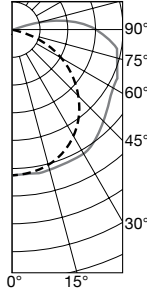
Polar curves for a 1000 lm flux, according to NF C 71-120
Luminaire symbol according to NF C 71-121

--- Longitudinal
— Transverse

1 x 18 Watt
TOTAL LUMINAIRE EFFICIENCY = 94.8%
NF C 71-121: 0.86 H + 0.09 T

CANDELA DISTRIBUTION

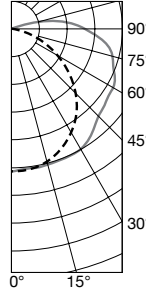
	0-180	90-270
0	215	215
5	214	214
10	211	215
15	207	213
20	200	211
25	191	209
30	181	208
35	169	202
40	155	196
45	139	187
50	122	181
55	103	175
60	83	174
65	62	173
70	42	165



1 x 36 W
Efficiency 89.3%
NF C 71-121: 0.81 H + 0.08 T

CANDELA DISTRIBUTION

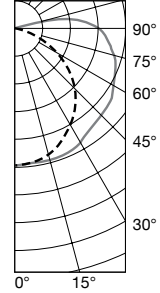
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0	205	205
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10	202	203
15	197	202
20	191	201
25	182	201
30	173	200
35	161	192
40	148	183
45	133	177
50	117	173
55	99	168
60	80	168
65	61	163
70	41	154



1 x 58 W
Efficiency 87.5%
NF C 71-121: 0.80 H + 0.07 T

CANDELA DISTRIBUTION

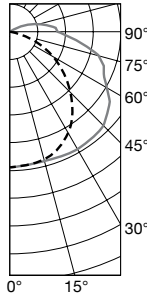
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10	194	198
15	190	197
20	184	195
25	176	194
30	166	193
35	155	187
40	142	180
45	128	174
50	113	170
55	96	167
60	78	163
65	59	157
70	41	151



2 x 18 W
Efficiency 85.1%
NF C 71-121: 0.78 H + 0.08 T

CANDELA DISTRIBUTION

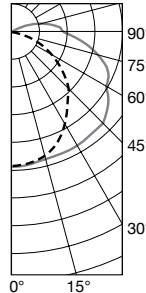
	0-180	90-270
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10	192	192
15	187	192
20	181	193
25	173	194
30	163	194
35	152	193
40	138	192
45	124	191
50	108	183
55	91	176
60	73	163
65	55	150
70	37	145



2 x 36 W
Efficiency 80.5%
NF C 71-121: 0.73 H + 0.07 T

CANDELA DISTRIBUTION

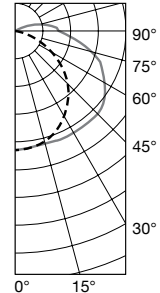
	0-180	90-270
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5	185	184
10	182	182
15	178	181
20	172	183
25	164	183
30	154	183
35	143	183
40	131	183
45	117	179
50	102	173
55	85	166
60	68	155
65	51	145
70	35	141



2 x 58 W
Efficiency 76.9%
NF C 71-121: 0.70 H + 0.07 T

CANDELA DISTRIBUTION

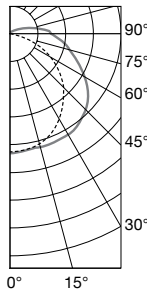
	0-180	90-270
0	173	173
5	172	173
10	170	171
15	166	169
20	161	172
25	154	172
30	145	172
35	135	171
40	123	172
45	111	170
50	97	165
55	82	157
60	66	148
65	50	139
70	34	133



3 x 18 W
Efficiency 68.1%
NF C 71-121: 0.63 G + 0.05 T

CANDELA DISTRIBUTION

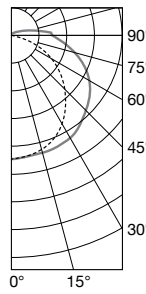
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10	169	170
15	135	169
20	160	169
25	153	168
30	144	167
35	135	162
40	123	158
45	110	153
50	96	146
55	82	136
60	66	123
65	50	111
70	34	100



3 x 36 W
Efficiency 68.1%
NF C 71-121: 0.63 G + 0.07 T

CANDELA DISTRIBUTION

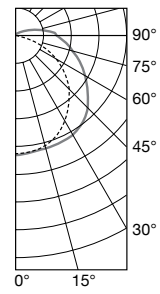
	0-180	90-270
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5	174	174
10	171	173
15	167	171
20	162	171
25	155	170
30	146	168
35	136	163
40	125	159
45	112	153
50	98	145
55	83	135
60	67	123
65	51	110
70	35	100



3 x 58 W
Efficiency 65.6%
NF C 71-121: 0.61 H + 0.04 T

CANDELA DISTRIBUTION

	0-180	90-270
0	170	170
5	170	170
10	167	168
15	163	169
20	158	167
25	151	167
30	143	163
35	133	159
40	122	155
45	109	149
50	95	140
55	81	129
60	65	116
65	49	105
70	33	96



FD Series Cylindrical Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Can be installed in hazardous areas designated as Zone 1 and 2 – 21 and 22.
- For use in locations where a high degree of corrosion resistance is required.
- For indoor/outdoor use where protection against dirt, water and moisture is necessary.
- Typical applications include:
 - Oil refineries
 - Petrochemical facilities
 - Pulp and paper, mills
 - Painting, sewage and water treatment facilities
 - Warehouses
 - Underground tunnels
 - General manufacturing facilities

Features

- Impact resistant borosilicate glass sealed tube.
- Easy access to lamps through gray painted aluminum threaded entry cap.
- Supplied with O-ring for improved ingress protection.
- Corrosion-resistant gray painted aluminum.
- Supplied with energy efficient and self induction ferromagnetic ballast on a removable gear tray.
- Quick and easy installation of fluorescent lighting fixtures with 2G11 and G13 lamp holders.
- Supplied with external and internal ground/earth connection.
- Fixture supplied with one M20 blanking plug.
- Easy connection to wire and disconnect with plug-in terminal blocks.
- Bi-pin (G13) 18 and 36 W magnetic ballast versions operate at 70 °C ambient temperature with T4 rating.
- Magnetic ballast versions 230 V 50 Hz or 240 V 50 Hz or 220 V 60 Hz or 230 V 60 Hz.
- Electronic ballast versions 110 to 254 Vac/Vdc, 50/60 Hz.
- 3 hour emergency version with automatic self test every month
- Plug in battery pack (6 V 4 Ah) is easy to remove for maintenance.

Standard Materials

- End caps and cover: aluminum
- Glass tube: borosilicate glass
- O-ring gasket: Nitrile (NBR)
- Internal reflector: white powder coated galvanized steel
- Mounting accessories: several accessories in different material such as zinc plated steel, galvanized steel or 316 stainless steel

Options

- 8 W fluorescent (Bi-pin G5) available, see section HBDC series.

Certifications and Compliances

◆ATEX/IECEx Certification

- **Certification Type: FLd**
 - Gas: Zone 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIB, Ex d IIB+H₂, Ex d IIC
 - Temperature Class: See Table on following page



2 x 58 W



2 x 36 W



2 x 18 W

- Dust: Zone 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: See Table on following page
- Ambient Temperature: -20 °C to 55 °C
- CE Declaration of Conformity: 50203
- ATEX Certificate: LCIE 97 ATEX 6012
- IECEx Certificate: IECEx LCI 04.0018
- Index of Protection according EN/IEC 60529: IP66/68
- Impact Resistance (shock): IK08
- Internal Volume: > 2 dm³ - 2 liters

◆EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00910

◆Others Certification

- INMETRO Certificate: BVC11.0492 ①

Related Products

- For labels see *Labels for Emergency Lighting Units, ATX Self-Adhesive Signaling Labels for Emergency Lighting Units.*

① Inmetro certification available on special request only. Contact your local sales for more information

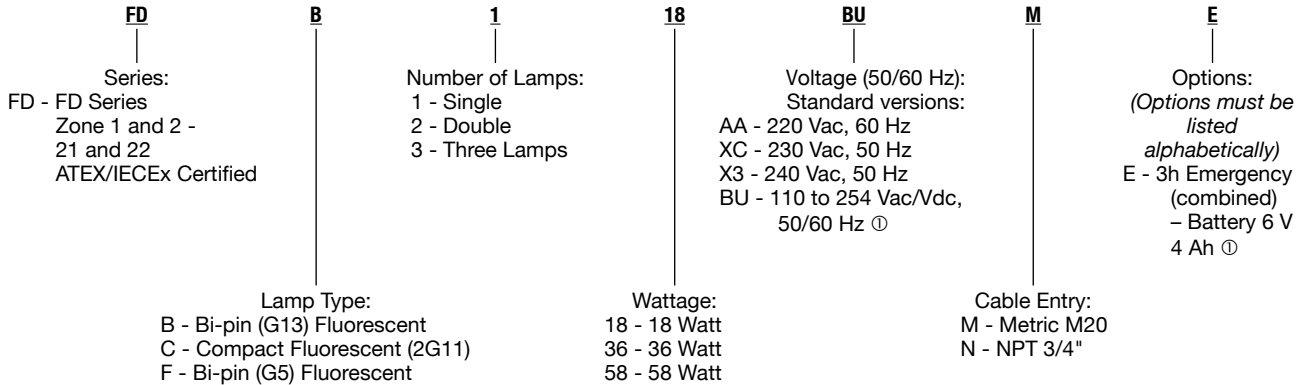
FD Series Cylindrical Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Order using catalog numbering guide below or select catalog number from tables on following pages.

Catalog Numbering Guide — FD Series Cylindrical Fluorescent Luminaires



T Rating (Gas) and Surface Temperature (Dust) Table

Model	Lamp Type	Gas – T Rating				Dust – Surface Temperature		
		Without External Reflector			With External Reflector		Without External Reflector	With External Reflector
		Ta = 40 °C	Ta = 55 °C	Ta = 70 °C	Ta = 40 °C	Ta = 55 °C		
0.3	Compact Fluorescent 2G11 18 W max.	T6	T5	N.A.	T5	T4	95 °C	130 °C
	a) Fluorescent G13 Magnetic Ballast 1 x 18 W/2 x 18 W	T6	T5	T4	T6	T5	97 °C	95 °C
0.6	b) Fluorescent G13 Electronic Ballast 1 x 18 W/2 x 18 W/3 x 18 W	T6	T6	N.A.	T6	T5	78 °C	95 °C
	c) Compact Fluorescent 2G11 1 x 36 W 2 x 36 W	T6	T5	N.A.	T6 T5	T4	95 °C	130 °C
1.2	a) Fluorescent G13 Magnetic Ballast 1 x 36 W/2 x 36 W/3 x 36 W	T6	T5	T4	T6	T5	110 °C	95 °C
	b) Fluorescent G13 Electronic Ballast 1 x 36 W/2 x 36 W/3 x 36 W	T6	T6	N.A.	T6	T6	78 °C	80 °C
1.5	a) Fluorescent G13 Magnetic Ballast 1 x 58 W/2 x 58 W	T6	T6	N.A.	T6	T5	80 °C	95 °C
	b) Fluorescent G13 Electronic Ballast 1 x 58 W/2 x 58 W/3 x 58 W	T6	T5	N.A.	T6	T5	84 °C	95 °C

① The 3 hour emergency version is only available on fluorescent, 2 lamp fixtures with BU voltage - 110 to 254 Vac/Vdc, 50/60 Hz.

FD Series Cylindrical Fluorescent Luminares

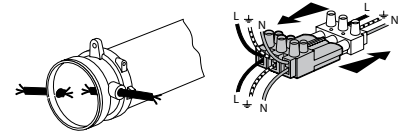
Standard and Emergency Battery Back-Up. Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Ordering Information – Standard Versions

Two M20 threaded entries, supplied with one M20 aluminum blanking plug.
Connection via 1 x 3 double deck terminals.
Capacity (flexible/solid): 0.75 mm² to 2.5 mm².

For Bi-pin (G13) Fluorescent Lamps - T8, 26 mm or T12, 38 mm



Wattage (W)	No. of Lamps	Gas Group	Model	Weight kg	Volume dm ³	Catalog Number
230 V - 50 Hz – Magnetic Ballast – Starter Ignition						
Compensated power supply – power factor > 0.9						
18W	1	IIC	0.6	9.0	58	FDB118XCM
	2	IIC	0.6	9.7	58	FDB218XCM
36W	1	IIB+H ₂	1.2	14.7	99	FDB136XCM
	2	IIB+H ₂	1.2	15.3	99	FDB236XCM
58W	1	IIB	1.5	17.0	119	FDB158XCM
	2	IIB	1.5	18.2	119	FDB258XCM
240 V - 50 Hz – Magnetic Ballast – Starter Ignition						
Compensated power supply – power factor > 0.9						
18W	1	IIC	0.6	9.0	58	FDB118X3M
	2	IIC	0.6	9.7	58	FDB218X3M
36W	1	IIB+H ₂	1.2	14.7	99	FDB136X3M
	2	IIB+H ₂	1.2	15.3	99	FDB236X3M
58W	1	IIB	1.5	17.0	119	FDB158X3M
	2	IIB	1.5	18.2	119	FDB258X3M
220 V - 60 Hz – Magnetic Ballast – Starter Ignition						
Compensated power supply – power factor > 0.9						
18W	2	IIC	0.6	9.7	58	FDB218AAM
36W	2	IIB+H ₂	1.2	15.3	99	FDB236AAM
58W	2	IIB	1.5	18.2	119	FDB258AAM

Shaded catalog numbers are normally stocked items. All other items are made to order.

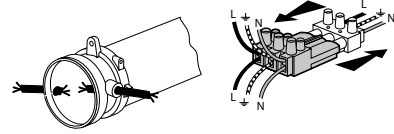
FD Series Cylindrical Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Ordering Information – Standard Versions – Continued

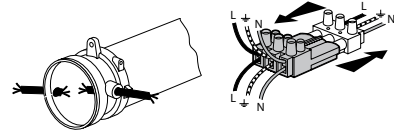
Two M20 threaded entries, supplied with one M20 aluminum blanking plug.
Connection via 1 x 3 double deck terminals.
Capacity (flexible/solid): 0.75 mm² to 2.5 mm².



Wattage (W)	No. of Lamps	Gas Group	Model	Weight kg	Volume dm ³	Catalog Number
For Bi-pin (G13) Fluorescent Lamps - T8, 26 mm or T12, 38 mm 110 to 254 Vac/Vdc, 50/60 Hz – Electronic Ballast Power factor > 0.95						
18W	2	IIC	0.6	9.7	58	FDB218BUM
36W	2	IIB	1.2	15.3	99	FDB236BUM
	3	IIB	1.2	16.3	99	FDB336BUM
58W	1	IIB	1.5	17.0	119	FDB158BUM
	2	IIB	1.5	18.2	119	FDB258BUM
	3	IIB	1.5	19.2	119	FDB358BUM
For 2G11 Compact Fluorescent Lamps – TC-L 230 V - 50 Hz – Magnetic Ballast – Starter Ignition Compensated power supply – power factor > 0.9 – Lamps supplied						
18W	1	IIC	0.3	9.0	58	FDC118XCM
	2	IIC	0.3	9.7	58	FDC218XCM
36W	1	IIB+H ₂	0.6	14.7	99	FDC136XCM
	2	IIB+H ₂	0.6	15.3	99	FDC236XCM

Emergency Versions

Two M20 threaded entries, supplied with one M20 aluminum blanking plug.
Connection via 1 x 4 double deck terminals.
Capacity (flexible/solid): 0.75 mm² to 2.5 mm².





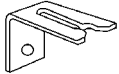
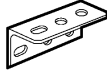

Wattage (W)	No. of Lamps	Gas Group	Model	Line Output	Weight kg	Volume dm ³	Catalog Number
For Bi-pin (G13) Fluorescent Lamps – T8, 26 mm or T12, 38 mm 110 to 254 Vac/Vdc, 50/60 Hz – Electronic Ballast 3 hour duration - battery pack 6 V 4 Ah - Power factor > 0.95 - Self test every month.							
18W	2	IIC	0.6	29%	11.6	58	FDB218BUME
36W	2	IIB	1.2	16%	17.2	99	FDB236BUME
58W	2	IIB	1.5	11%	20.2	119	FDB258BUME

Shaded catalog numbers are normally stocked items. All other items are made to order.

FD Series Cylindrical Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Accessories and Replacement Parts		
Description		Catalog Number
External Reflector – White Painted Galvanized Steel		
	Model 0.3	FDER1G
	Model 0.6	FDER2G
	Model 1.2	FDER3G
	Model 1.5	FDER4G
Protective Guard – Zinc Plated Steel		
	Model 0.3	FDPG1Z
	Model 0.6	FDPG2Z
	Model 1.2	FDPG3Z
	Model 1.5	FDPG4Z
Fixing Brackets for Ease of Surface Installation – Set of Two		
	Zinc plated steel	FDFBZ
	316 stainless steel	FDFBS
Surface Mounting Brackets – Set of Two		
	Zinc plated steel	FDSBZ
	316 stainless steel	FDSBS
Half Clamp Brackets for Pole Mounting – Set of Two		
	Pole diameter 42 to 49 mm	
	Zinc plated steel	FDHC49Z
	316 stainless steel	FDHC49S
	Pole diameter 60 mm	
	Zinc plated steel	FDHC60Z
	316 stainless steel	FDHC60S
Fall Prevention Kit		
	1.20 meter stainless steel chain	FDSCS

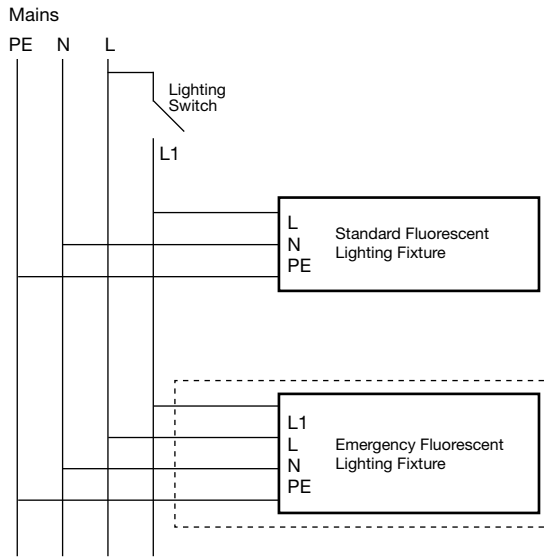
Shaded catalog numbers are normally stocked items. All other items are made to order.

FD Series Cylindrical Fluorescent Luminaires

Standard and Emergency Battery Back-Up. Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Wiring Diagram



Emergency Function Diagram

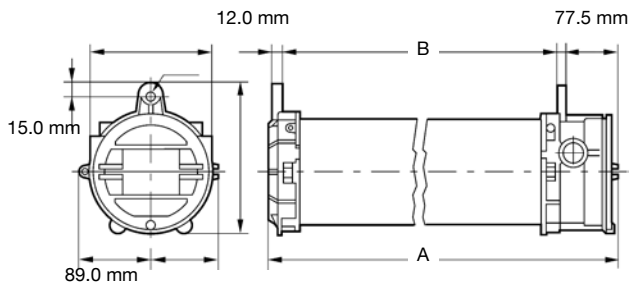
Two Lamp Version

Mains	Lighting Switch ON	Lighting Switch OFF
ON		
OFF		

LED Status

Color	Indication	Function
Green	Blinking 1:1	Mains ok, Batteries are connected, charging
	ON	Mains ok, Batteries are charged
Red	Blinking 1:1	Batteries are not connected or defective
	Flashing 1:1	Batteries are charging and discharging during automatic cycle
	ON	Mains faulty, output ON
	OFF	No mains, Battery empty
Yellow	Blinking 1:1	Mains ok, Performing Self test
	ON	Self test was not ok

Dimensions in Millimeters



Model	A	B
0.3	430	335
0.6	745	650
1.2	1365	1260
1.5	1655	1560

FD Series Cylindrical Fluorescent Luminares

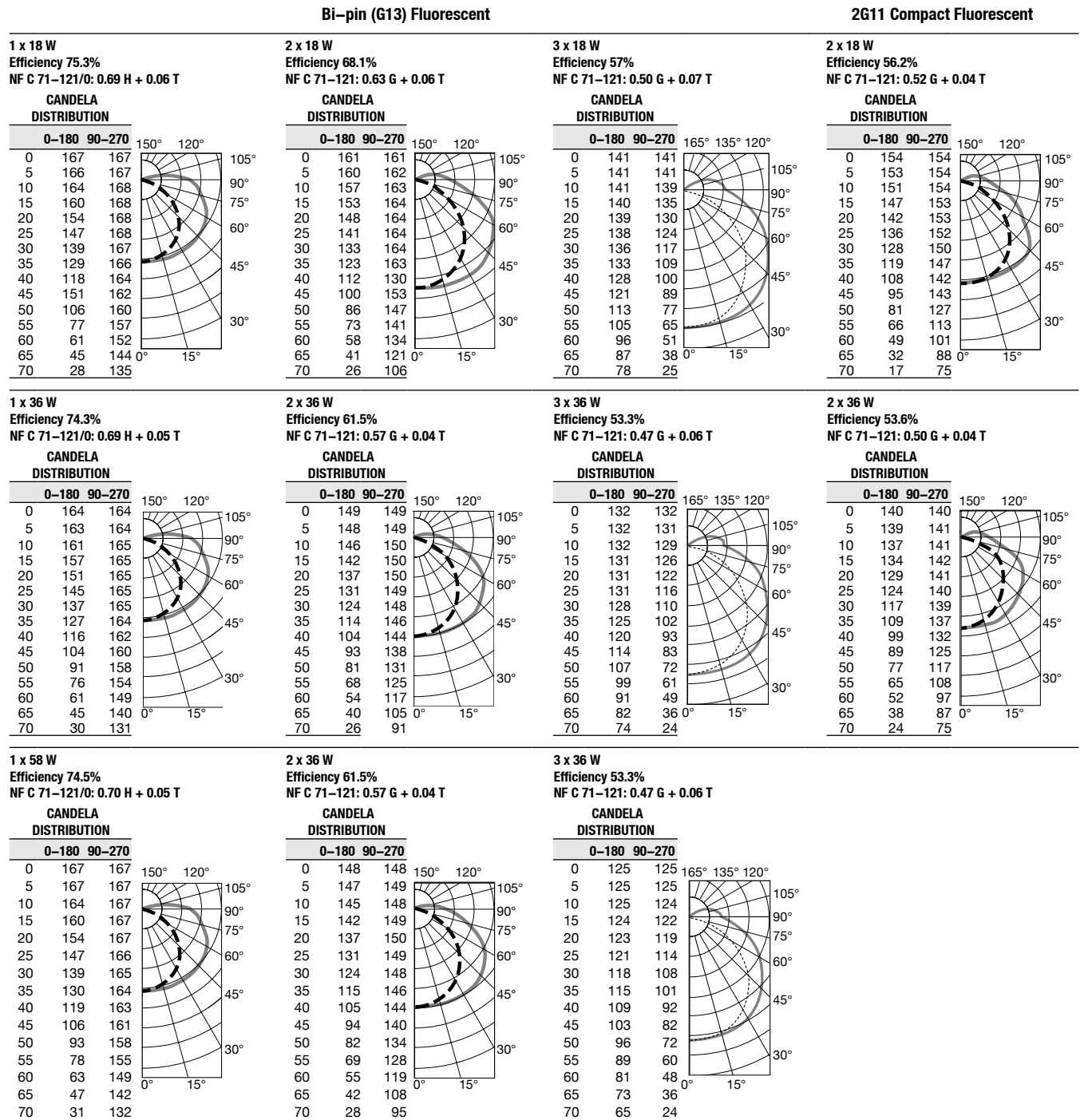
Standard and Emergency Battery Back-Up. Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Photometric Data

Polar curves for a 1000 lm flux, according to NF C 71-120
Luminaire symbol according to NF C 71-121

--- Longitudinal
— Transverse



RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Designed for flush or surface mounting; most specifically clean room environments where a seamless smooth ceiling is mandatory.
- Typical applications include: the food industry, chemical plants, pharmaceuticals and delicate electronic manufacturing such as the aerospace industry.
- Ideal for use in rigorous corrosive environments, involving water, dust and extreme temperature variations.
- Can be installed in hazardous areas designated as Zone 1 and 2 – 21 and 22.

Features

- One piece welded steel housing with integral frame to seal out contaminants.
- Allows recessed mounting in permanent ceilings from 55 mm to 130 mm.
- Frameless tempered 5 mm thick lens. Lens secured to housing by internal metallic hinges and secured with captive 316L stainless steel screws, allowing for easy lamp replacement and fixture maintenance.
- Positive safety switch and Ex e battery with plug-in connector for safety and easy maintenance in hazardous locations.
- Designed for ease of installation and maintenance.
- Bi-pin G13 lampholder.
- Also available as surface mounting version.
- New ballast:
 - EOL (End Of Life) protection in accordance to the latest EN 60079-7 standard
 - Multi-tap 110 to 254 Vac/Vdc +/-10% 50/60 Hz
 - Two channel standard ballast (if one lamp fails the second lamp remains in operation)
 - Ex e plug-in connector for rapid and error free maintenance
 - Self test on 3 hours duration emergency version
 - High power factor electronic ballast (>0.95)
- Cable entries:
 - Three clearance holes for M20 cable gland supplied with M20 polyamide cable gland — cable diameter 6.5 to 14.5 mm — and M20 polyamide blanking plug. See *Standard Cable Entry Accessories on following pages.*
 - One M6 earth stud.

Standard Materials

- Housing and integral frame: one piece, welded steel
- Safety lens: 5 mm thick tempered
- Gasket: silicone, 4 lips, completely sealed and contained in the fixture
- Internal reflector: white polycarbonate multi-parabolic
- Cable gland and blanking plug: polyamide

Standard Finishes

- Housing and integral frame: white powder epoxy paint

Options

- 3 hours emergency version - Battery 6 V - 4 Ah. Add suffix **-E**.
- 1 hour 30 emergency (combined) - Battery 6 V - 7 Ah. Add suffix **-E1**.
- 3H Emergency (combined) - Battery 6 V - 7 Ah. . Add suffix **-E7**.
- White painted steel internal reflector. Add suffix **-P**.
- 316L stainless steel housing and integral frame, natural finish. Add suffix **-S**.



4 x 18 W Surface Mounting



2 x 36 W Recessed

Certifications and Compliances

◆ ATEX/IECEx Certification

- **Certification Type: RE**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II2 G
 - Type of Protection: Ex de IIC/ Ex demb IIC (emergency version)
 - Temperature class: T6 to T4 (See *Table on following page*)
 - Dust: Zone 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T75 °C
 - Ambient Temperature: -20 °C ≤ Ta ≤ 55 °C
 - CE Declaration of Conformity: 50276
 - ATEX Certificate: LCIE 07 ATEX 6104
 - IECEx Certificate: IECEx LCI 07.0019
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK09 or IK10 depending on version

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

◆ Others Certification

- INMETRO Certificate: BVC13.2672 ^①

^① Inmetro certification available on special request only. Contact your local sales for more information

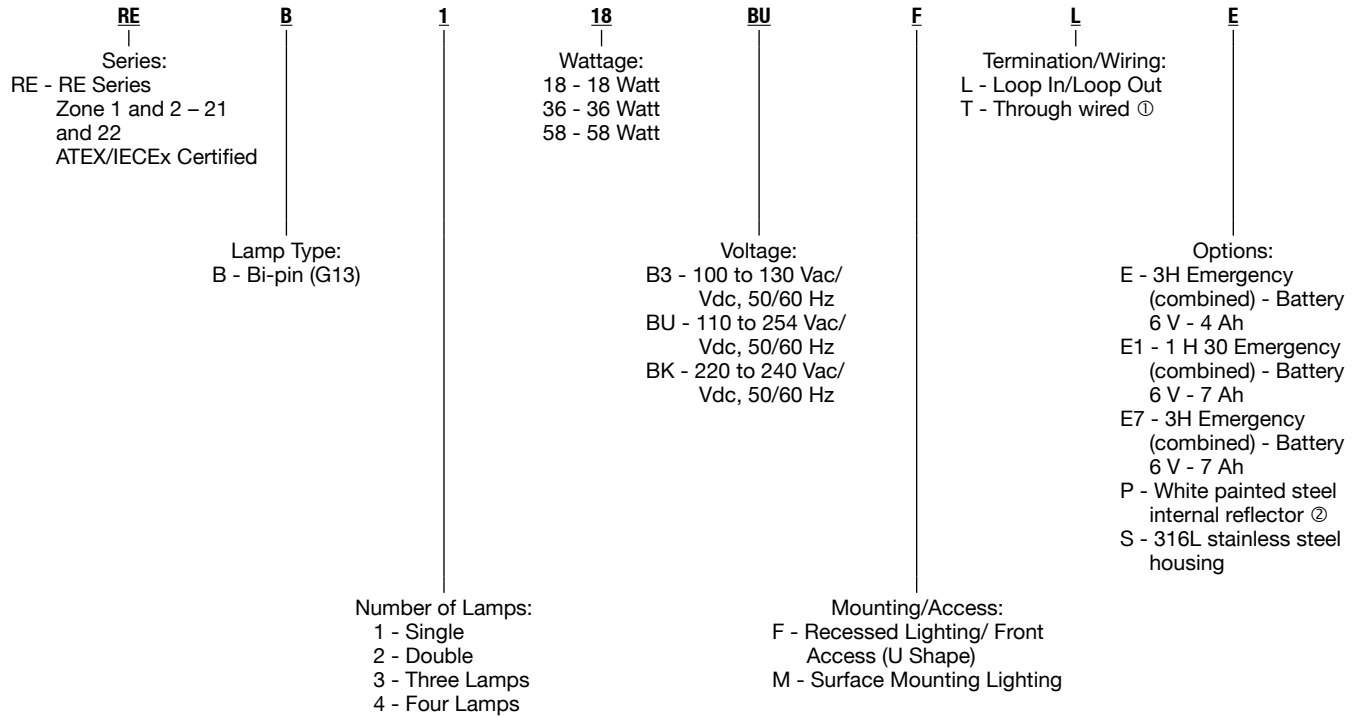
RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Order using catalog numbering guide below or select catalog number from tables on following pages.

Catalog Numbering Guide — RE Series Recessed Fluorescent Luminaires



① T/W and Loop in/Loop out - 3 cores (single phase).

② As standard for 18 W emergency version and 4 lamp version.

RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

T Ratings

Version	Ambient Temperature					
	Ceiling Position			Wall Position		
	40 °C	50 °C	55 °C	40 °C	50 °C	55 °C
2 x 18 W ①	T6	T5	T5	T5	T5	T4
2 x 18 W Emergency ①	T5	T4	T4	T5	T5	T4
3 x 18 W	T5	T4	T4	T4	T4	T4
4 x 18 W	T5	T4	T4	T5	T4	T4
2 x 36 W ①	T5	T4	T4	T5	T4	T4
2 x 36 W Emergency ①	T5	T4	T4	T5	T4	T4
3 x 36 W	T4	T4	T4	T4	T4	T4
4 x 36 W	T5	T4	T4	T5	T4	T4
2 x 58 W ①	T4	T4	T4	T4	T4	T4
2 x 58 W Emergency ①	T4	T4	T4	T4	T4	T4
3 x 58 W	T4	T4	T4	T4	T4	T4
4 x 58 W	T4	T4	T4	T4	T4	T4

Termination and Wiring

- Terminal capacity: 4 mm² flexible or 6 mm² solid.
- Loop in/Loop out: One terminal block ②
 - Standard version:
2 (L) + 2 (N) + 2 (PE)
 - Emergency version:
2 (LP) + 2 (L) + 2 (N) + 2 (PE)
- Through wired: Two terminal blocks (one at each end) ②
 - Standard version:
2 (L) + 2 (N) + 2 (PE)
1 (L) + 1 (N) + 1 (PE)
 - Emergency version:
2 (LP) + 2 (L) + 2 (N) + 2 (PE)
1 (LP) + 1 (L) + 1 (N) + 1 (PE)

Standard Cable Entry Accessories

Version	Cable Gland	Blanking Plug	Nickel Plated Brass Locknut
Loop	1	1	3
Through	2	1	3

① T Rating for single lamp version is the same as twin lamp version.

② PE: Earth; N: Neutral. L: Live. LP: Permanent Live for emergency version.

RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Recessed — 110/254 Vac/Vdc, 50/60 Hz — Front Access — White Painted Steel Housing					
Version	Reflector	Wiring	Weight kg	Volume dm ³	Catalog Number ①②③④⑤⑥⑦
Standard Version — Bi-pin Lamps (G13)					
2 x 18 W	Polycarbonate	Loop	14	64	REB218BUFL
		Through	14	64	REB218BUFT
4 x 18 W	White Painted Steel	Loop	21	93	REB418BUFLP
		Through	21	93	REB418BUFTP
2 x 36 W	Polycarbonate	Loop	19	108	REB236BUFL
		Through	19	108	REB236BUFT
4 x 36 W	White Painted Steel	Loop	29	158	REB436BUFLP
		Through	29	158	REB436BUFTP
2 x 58 W	Polycarbonate	Loop	22	130	REB258BUFL
		Through	22	130	REB258BUFT
4 x 58 W	White Painted Steel	Loop	32	190	REB458BUFLP
		Through	32	190	REB458BUFTP
3 Hours Emergency Version — Bi-pin Lamps (G13)					
2 x 18 W	White Painted Steel	Loop	14	64	REB218BUFLEP
		Through	14	64	REB218BUFTPE
4 x 18 W	White Painted Steel	Loop	21	93	REB418BUFLEP
		Through	21	93	REB418BUFTPE
2 x 36 W	Polycarbonate	Loop	19	108	REB236BUFLE
		Through	19	108	REB236BUFTE
4 x 36 W	White Painted Steel	Loop	29	158	REB436BUFLEP
		Through	29	158	REB436BUFTPE
2 x 58 W	Polycarbonate	Loop	22	130	REB258BUFLE
		Through	22	130	REB258BUFTE
4 x 58 W	White Painted Steel	Loop	32	190	REB458BUFLEP
		Through	32	190	REB458BUFTPE


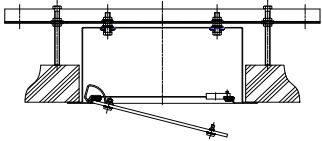

① For surface mounting lighting, replace letter **F** with letter **M** in the 9th position; example: REB218BUML.
 ② For 3 hours emergency version - Battery 6 V - 4 Ah, add suffix **E** to the end of the catalog number; example: REB218BUFLE.
 ③ For 1 hour 30 emergency (combined) - Battery 6 V - 7 Ah, add suffix **E1** to the end of the catalog number; example: REB218BUFLE1.
 ④ For 3H Emergency (combined) - Battery 6 V - 7 Ah, add suffix **E7** to the end of the catalog number; example: REB218BUFLE7.
 ⑤ For fixture without a safety switch, add suffix **N** to the end of the catalog number; example: REB218BUFLN.
 ⑥ For fixture with a white painted steel internal reflector, add suffix **P** to the end of the catalog number; example: REB218BUFLP.
 ⑦ For fixture with 316L stainless steel housing and integral frame and natural finish, add suffix **S** to the end of the catalog number; example: REB218BUFLS.

RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Accessories and Replacement Parts

	Description	Weight kg	Catalog Number
Fixing Brackets - Set of four			
	Zinc plated steel	0.60	REFBST
	316 stainless steel	0.60	REFBSS
Ceiling Mounting Brackets - Set of two			
	Zinc plated steel	2.00	RECMST
	316 stainless steel	2.0	RECMSS
M8 Eye Bolts - Set of four			
	Zinc plated steel	0.25	REEBST
	316 stainless steel	0.25	REEBSS

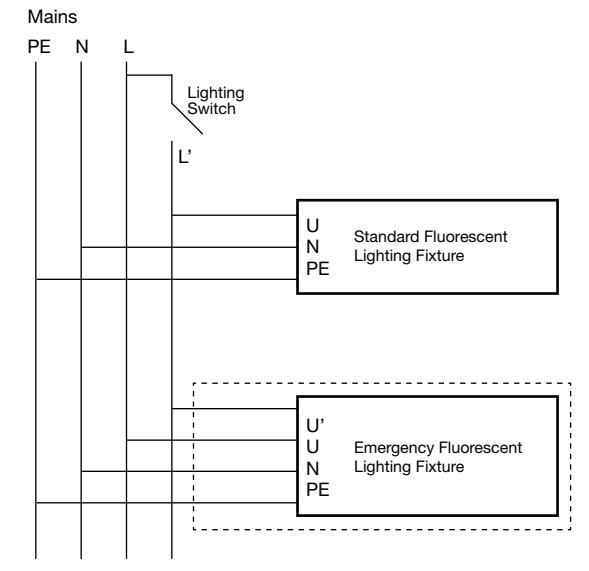
Shaded catalog numbers are normally stocked items. All other items are made to order.

RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Wiring Diagram



Emergency Function Diagram

Two Lamp Version

Mains	Lighting Switch ON	Lighting Switch OFF
ON		
OFF		

Three Lamp Version

Mains	Lighting Switch ON	Lighting Switch OFF
ON		
OFF		

LED Status

Color	Indication	Function
Green	LED Blinking	Mains good – Battery charging
	LED Continuous	Mains good – Battery charged
Red	LED Blinking	No battery connected <i>OR</i> Something is defective
	LED Continuous	Mains faulty – Output ON
	LED Flashing	Mains faulty – Battery empty <i>OR</i> Lamp is defective
Yellow	LED Blinking	Mains good – Performing self test
	LED Continuous	Self test was not okay
None (Off)	No Light Emitted	No mains – Battery completely empty

Emergency Light Duration

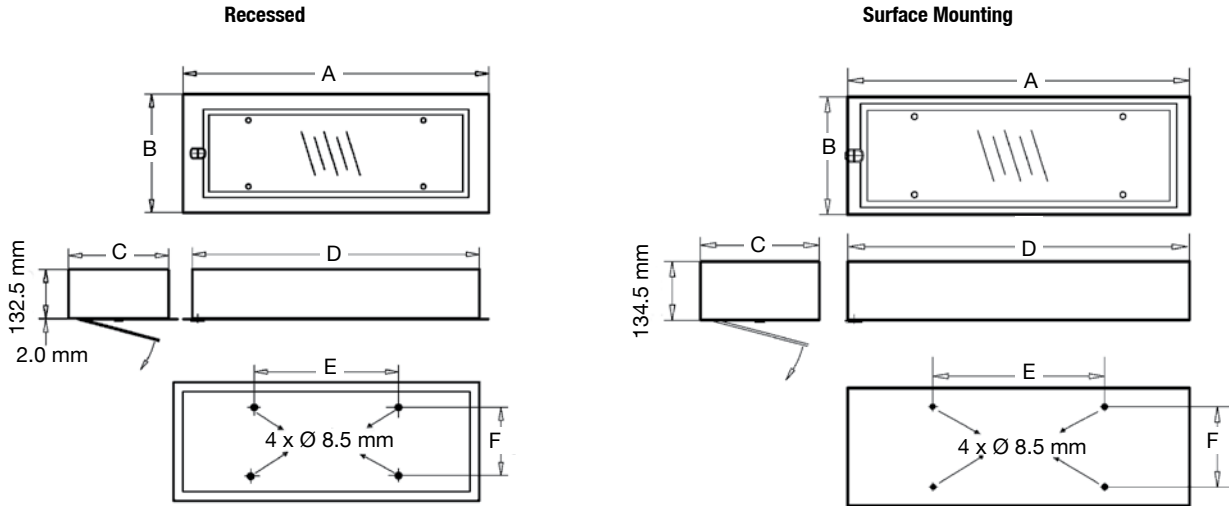
Version	Battery Capacity	Duration	Light Output
2 x 18 W	4 Ah – 6 V	90 minute	80%
	4 Ah – 6 V	3 hour	40%
2 x 36 W	7 Ah – 6 V	90 minute	45%
	7 Ah – 6 V	3 hour	25%
2 x 58 W	7 Ah – 6 V	90 minute	30%
	7 Ah – 6 V	3 hour	15%

RE Series Recessed and Surface Mounting Fluorescent Luminaires

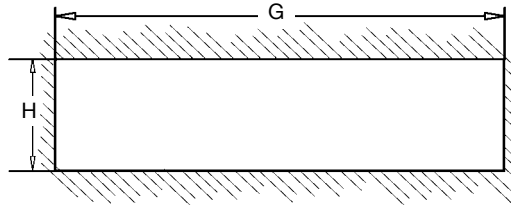
Standard and Emergency Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Dimensions in Millimeters



Ceiling Cut-out



Versions	A	B	C	D	E	F	G	H
18 W (1, 2, 3 lamps)	826	320	270	776	390	184	786	280
18 W (4 lamps)	826	490	440	776	390	354	786	450
36 W (1, 2, 3 lamps)	1436	320	270	1386	1000	184	1396	280
36 W (4 lamps)	1436	490	440	1386	1000	354	1396	450
58 W (1, 2, 3 lamps)	1736	320	270	1686	1300	184	1696	280
58 W (4 lamps)	1736	490	440	1686	1300	354	1696	450

RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Photometric Data

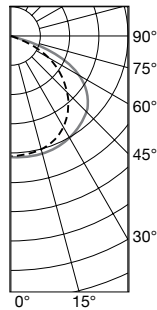
Polar curves for a 1000 lm flux, according to NF C 71-120
Luminaire symbol according to NF C 71-121

--- Longitudinal
— Transverse

1 x 18 W
Efficiency 67.1%
NF C 71-121: 0.67 E

CANDELA DISTRIBUTION

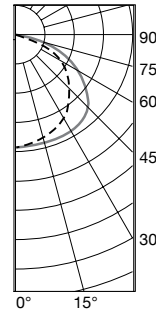
	0-180	90-270
0	209	209
5	208	208
10	205	208
15	201	207
20	194	205
25	186	203
30	176	201
35	164	197
40	151	192
45	136	185
50	120	177
55	102	164
60	83	141
65	63	115
70	43	77



2 x 18 W
Efficiency 62%
NF C 71-121: 0.62 E

CANDELA DISTRIBUTION

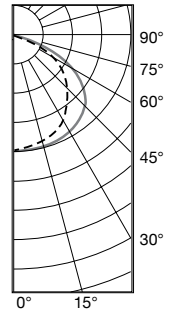
	0-180	90-270
0	205	205
5	204	203
10	202	203
15	197	202
20	191	201
25	182	201
30	173	200
35	161	192
40	148	183
45	133	177
50	117	173
55	99	168
60	80	168
65	61	163
70	41	154



3 x 18 W
Efficiency 61.2%
NF C 71-121: 0.61 E

CANDELA DISTRIBUTION

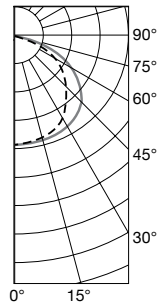
	0-180	90-270
0	201	201
5	200	201
10	197	201
15	193	200
20	187	197
25	179	195
30	169	192
35	158	189
40	145	181
45	131	170
50	115	155
55	98	132
60	80	107
65	61	80
70	41	53



2 x 18 W
Efficiency 60.5%
NF C 71-121: 0.60 F

CANDELA DISTRIBUTION

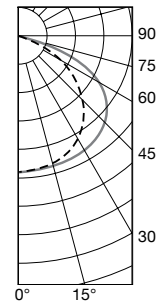
	0-180	90-270
0	196	196
5	195	196
10	193	195
15	189	195
20	183	193
25	175	191
30	166	187
35	155	182
40	143	174
45	129	162
50	114	147
55	98	131
60	79	109
65	60	85
70	40	62



4 x 18 W
Efficiency 63.7%
NF C 71-121: 0.63 E

CANDELA DISTRIBUTION

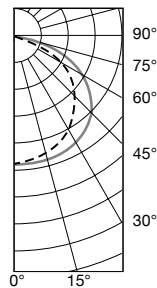
	0-180	90-270
0	194	194
5	193	194
10	191	195
15	186	195
20	181	193
25	173	192
30	164	190
35	153	185
40	141	179
45	128	171
50	113	160
55	96	146
60	78	127
65	60	106
70	40	82



4 x 36 W
Efficiency 61.5%
NF C 71-121: 0.61 E

CANDELA DISTRIBUTION

	0-180	90-270
0	190	190
5	289	190
10	287	190
15	183	189
20	177	188
25	170	186
30	162	182
35	151	178
40	139	172
45	126	163
50	111	152
55	96	138
60	78	121
65	60	102
70	42	80



RE Series Recessed and Surface Mounting Fluorescent Luminaires

Standard and Emergency Back-Up. Increased Safety

Lighting

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

FLUORESCENT LUMINAIRES

Photometric Data

Polar curves for a 1000 lm flux, according to NF C 71-120
Luminaire symbol according to NF C 71-121

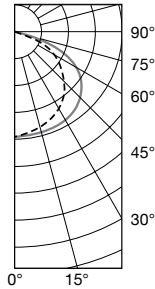
--- Longitudinal
— Transverse

1 x 36 W
Efficiency 64.4%
NF C 71-121: 0.64 E

CANDELA DISTRIBUTION

0-180 90-270

0	196	196
5	195	196
10	192	196
15	188	194
20	182	192
25	174	189
30	165	188
35	154	185
40	152	181
45	129	176
50	114	170
55	97	159
60	80	143
65	61	116
70	43	76

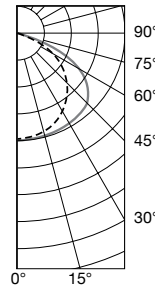


2 x 36 W
Efficiency 64.8%
NF C 71-121: 0.64 E

CANDELA DISTRIBUTION

0-180 90-270

0	198	198
5	197	198
10	194	198
15	190	197
20	184	196
25	176	195
30	167	195
35	156	194
40	144	191
45	130	184
50	115	172
55	98	154
60	80	129
65	62	101
70	43	72

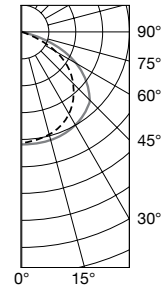


3 x 36 W
Efficiency 63.7%
NF C 71-121: 0.63 F

CANDELA DISTRIBUTION

0-180 90-270

0	207	207
5	207	208
10	204	208
15	199	206
20	193	204
25	185	202
30	175	200
35	164	196
40	151	189
45	136	178
50	120	162
55	103	139
60	84	112
65	65	83
70	45	55

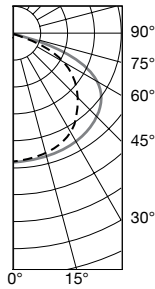


1 x 58 W
Efficiency 64.9%
NF C 71-121: 0.65 E

CANDELA DISTRIBUTION

0-180 90-270

0	189	189
5	188	189
10	187	188
15	184	187
20	181	186
25	176	185
30	170	185
35	162	184
40	150	180
45	136	175
50	119	169
55	102	162
60	83	146
65	63	122
70	43	85

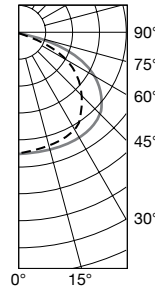


2 x 58 W
Efficiency 61.8%
NF C 71-121: 0.62 E

CANDELA DISTRIBUTION

0-180 90-270

0	182	182
5	182	183
10	181	183
15	178	182
20	174	182
25	170	182
30	164	181
35	156	181
40	145	178
45	131	172
50	116	162
55	99	148
60	81	126
65	52	99
70	43	70

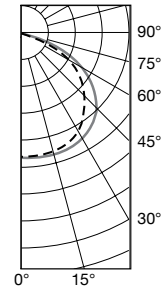


3 x 58 W
Efficiency 57.8%
NF C 71-121: 0.58 E

CANDELA DISTRIBUTION

0-180 90-270

0	185	185
5	185	185
10	183	185
15	181	184
20	177	182
25	172	180
30	166	178
35	159	174
40	147	168
45	133	158
50	118	144
55	100	125
60	82	101
65	63	75
70	43	49



FN Series Heavy Duty Non-Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 - 21 & 22

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Can be installed in hazardous areas designated as Zone 2, 21 and 22.
- For use in locations where a high degree of corrosion resistance is required.
- For indoor/outdoor use where protection against dirt, water and moisture is necessary.
- Typical applications include oil refineries, petrochemical facilities, pulp and paper mills, food processing plants, warehouses, underground tunnels and general manufacturing facilities.

Features

- Corrosion-resistant fiberglass reinforced polyester body and hinged polycarbonate lens.
- High impact resistance housing (20 Joules - IK10) from -40°C to +55 °C ambient temperature and wind profile for use in extreme offshore and onshore environments.
- Latch assembly and elastomer gasket seals against water and dust ingress, IP66/67.
- Easily accessed for maintenance using Allen key or straight blade screw driver.
- Central opening with unique patented release system to prevent damage.
- Hinged parabolic reflector for high lumen output efficiency.
- Vibration resistant spring loaded lampholders for Bi-pin (G13) or mono-pin (Fa6) versions.
- Electronic multi-tap ballast 110 to 254 Vac/Vdc +/- 10% 50/60 Hz, for global applications. High power factor electronic ballast (>0.95). EOL (End Of Life) protection in accordance to the latest EN/IEC 60079-7 standard.
- Also available with electronic ballast 220/240 Vac/Vdc +/- 10% 50/60 Hz. High power factor electronic ballast (>0.95). EOL.
- Available in 3 hours emergency version, including multi-tap ballast with built-in monthly self test. Test results through multi-color LED.

Standard Material

- Fiberglass reinforced polyester housing
- Polycarbonate lens
- Elastomer gasket
- Highly reflective white polycarbonate internal reflector
- Mounting accessories available in different materials such as gray painted aluminum, zinc plated steel, galvanized steel or 316L stainless steel

Options

- Silicone coating for added protection in H₂S hydrogen sulfide environments.
- Without safety switch.
- Level gauge light fitting.
- 316L stainless steel fixing inserts.



2 x 58 W



2 x 36 W



2 x 18 W

Certifications and Compliances

◆ ATEX or ATEX/IECEx Certification

• Certification Type: FLn

- Gas: Zone 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 G
 - Type of Protection 'nA': Ex nA IIC T6 Gc
 - Type of Protection 'nR': Ex nR IIC T4 Gc
 - Temperature class: T6 (nA) or T4 (nR)
 - Ambient Temperature: -20 °C to +55 °C
- Dust: Zone 21
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T75 °C
 - Ambient Temperature: -40 °C to +55 °C ①
- Dust: Zone 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 D
 - Type of Protection: Ex t IIIIC Dc
 - Surface Temperature: T75 °C
 - Ambient Temperature: -20 °C to +55 °C ①
- CE Declaration of Conformity: 50212
- ATEX Certificate:
 - Zone 2-22: LCIE 03 ATEX 6072
 - Zone 21: LCIE 02 ATEX 6067
- IECEx Certificate:
 - Zone 2-22: IECEx LCI 04.0021
- Index of Protection according EN/IEC 60529: IP66/67
- Impact Resistance (shock): IK10

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

◆ Others Certification

- INMETRO Certificate: BVC11.0815 ①

① Inmetro certification available on special request only. Contact your local sales for more information

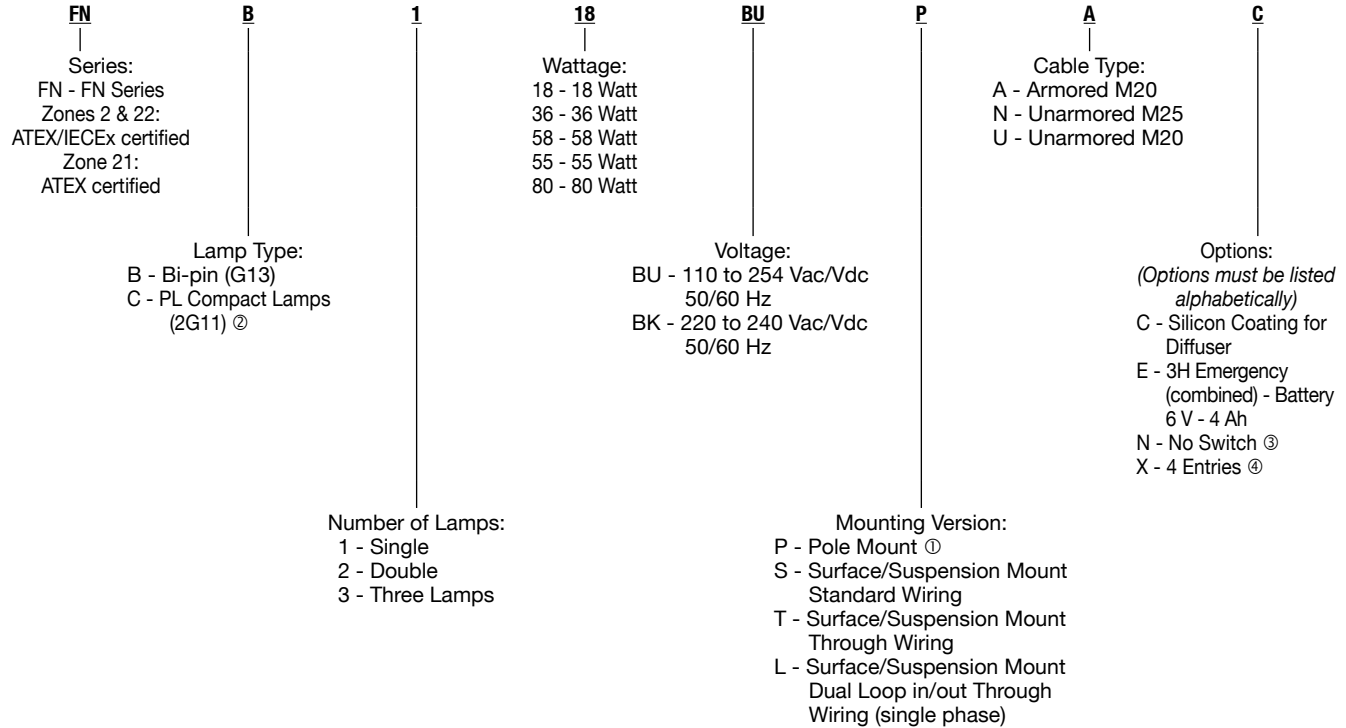
FN Series Heavy Duty Non-Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 - 21 & 22

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Order using catalog numbering guide below or select catalog number from tables on following pages.

Catalog Numbering Guide For FN Non-Metallic Fluorescent Lighting Fixtures



① Only 2 x 18 W and 2 x 36 W with M25 entry versions.

② Only 55 W and 80 W standard versions.

③ Only for standard versions.

④ Only for S, T and L mounting versions.

FN Series Heavy Duty Non-Metallic Fluorescent Luminaires

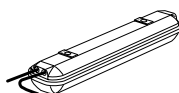
Standard and Emergency Back-Up. Zone 2 - 21 & 22

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Standard Version

Surface/Suspension Mounting and Standard Wiring Version

Connection via 1 x 6 terminals.
Capacity (flexible/solid): 4 mm²/6 mm².



Unarmored Version - Bi-pin (G13)

Three M25 threaded entries, two at one end and one at opposite end, supplied with one M25 polyamide cable gland (dia. 8 to 18.5 mm) and two M25 polyamide blanking plugs.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg (lb)	Volume dm ³	Catalog Number
2	18	G13	220/240	5.5	32.3	FNB218BKSNN
2	18	G13	110/254	5.5	32.3	FNB218BUSNN
2	36	G13	220/240	7.9	54.2	FNB236BKSNN
2	36	G13	110/254	7.9	54.2	FNB236BUSNN
2	58	G13	220/240	9	65	FNB258BKSNN
2	58	G13	110/254	11	65	FNB258BUSNN

Armored Version - Bi-pin (G13)

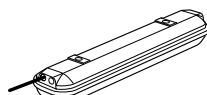
Two M20 threaded entries with brass earth continuity plate at one end and one M20 plugged clearance entry, supplied with two M20 polyamide plugs.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Catalog Number
2	18	G13	220/240	5.5	32.3	FNB218BKSAN
2	18	G13	110/254	5.5	32.3	FNB218BUSAN
2	36	G13	220/240	7.9	54.2	FNB236BKSAN
2	36	G13	110/254	7.9	54.2	FNB236BUSAN
2	58	G13	220/240	9	65	FNB258BKSAN
2	58	G13	110/254	11	65	FNB258BUSAN

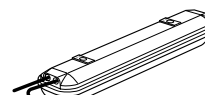
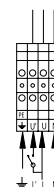
Emergency Version

Surface/Suspension Mounting and Standard Wiring

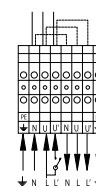
Connection via 1 x 4 terminals for 18 W version.
Connection via 1 x 8 terminals for 36 W & 58 W versions.
Capacity (flexible/solid): 4 mm²/6 mm².



18 W



36/58 W



Unarmored Version - Bi-pin (G13)

Three M25 entries, two at one end and one at opposite end, supplied with one M25 polyamide cable gland (dia. 8 to 18.5 mm) and two M25 polyamide blanking plugs.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	G13	110/254	7.3	32.3	3 H	4 Ah	FNB218BUSNEN
2	36	G13	110/254	9.6	54.2	3 H	4 Ah	FNB236BUSNEN
2	58	G13	110/254	10.7	65	3 H	4 Ah	FNB258BUSNEN

Armored Version - Bi-pin (G13)

Two M20 threaded entries with brass earth continuity plate at one end and one M20 plugged clearance entry, supplied with two M20 polyamide plugs.

Number of Lamps	Power (W)	Lamp Type	Voltage (V)	Weight kg	Volume dm ³	Duration (Hours)	Battery Capacity	Catalog Number
2	18	G13	110/254	7.3	32.3	3 H	4 Ah	FNB218BUSAEEN
2	36	G13	110/254	9.6	54.2	3 H	4 Ah	FNB236BUSAEEN
2	58	G13	110/254	10.7	65	3 H	4 Ah	FNB258BUSAEEN


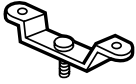


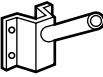

Shaded catalog numbers are normally stocked items. All other items are made to order.

FN Series Heavy Duty Non-Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 - 21 & 22

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Accessories and Replacement Parts

	Description	Catalog Number
Fixing Brackets		
	Set of two brackets for surface installation	
	Zinc plated steel	FEFBZ
	316 stainless steel	FEFBS
Brackets for Surface Mounting		
	Set of two	
	Aluminium (gray painted)	FESBA
	316 stainless steel	FESBS
M8 Ring Bolts		
	Set of two	
	Zinc plated steel	FERBM8Z
Half Clamps Brackets for Pole Mounting		
	Set of two	
	For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube)	
	Zinc plated steel	FEHC49Z
	316 stainless steel	FEHC49S
	For 60 mm pole (2" tube)	
	Zinc plated steel	FEHC60Z
	316 stainless steel	FEHC60S
Wall Mounting Adaptor		
	For pole mounting version	
	Diameter 42mm	
	Galvanized steel	FEWMG
Hinged Brackets		
	Set of two brackets for adjusting luminaire	
	Aluminium	FEHBA
	316 stainless steel	FEHBS
Fall Prevention Kit		
	Safety chain retains fixture temporarily to ease installation	
	For M25 cable entry	FESCM25
	For M20 cable entry	FESCM20

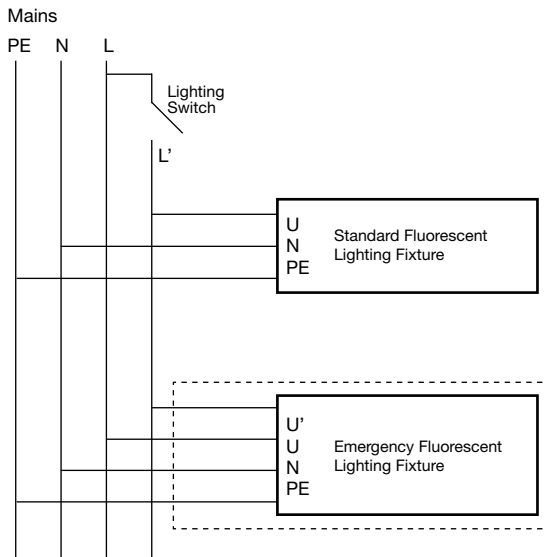
Shaded catalog numbers are normally stocked items. All other items are made to order.

FN Series Heavy Duty Non-Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 - 21 & 22

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Wiring Diagram



Emergency Function Diagram

Two Lamp Version

Mains	Lighting Switch ON	Lighting Switch OFF
ON		
OFF		

Three Lamp Version

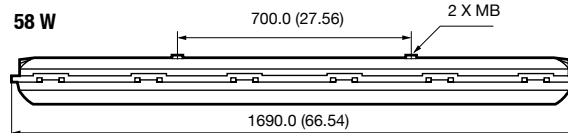
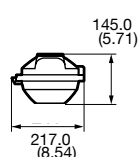
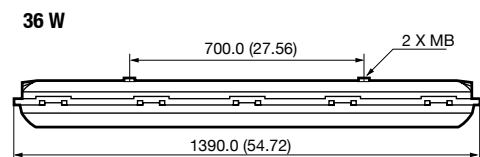
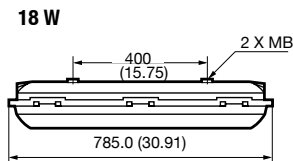
Mains	Lighting Switch ON	Lighting Switch OFF
ON		
OFF		

LED Status

Color	Indication	Function
Green	LED Blinking 1:1	Mains ok, Batteries are iconnected, charging
	LED ON	Mains ok, Batteries are charged
Red	LED Blinking 1:1	Batteries are not connected or defective
	LED Flash	Batteries are charging and discharging during automatic cycle
	No Light emitted	No mains, Battery empty
Yellow	LED Blinking 1:1	Mains ok, Performing Self test
	LED ON	Self test was not ok

Dimensions in Millimeters (Inches)

Surface/Suspension Mounting



FN Series Heavy Duty Non-Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 - 21 & 22

Lighting

Zone 2 - 21 and 22
Gas (G) and Dust (D)

FLUORESCENT LUMINAIRES

Photometric Data

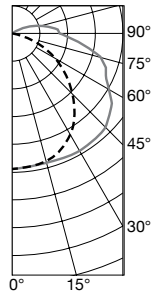
Polar curves for a 1000 lm flux, according to NF C 71-120
Luminaire symbol according to NF C 71-121

--- Longitudinal
— Transverse

2 x 18 W
Efficiency 85.1%
NF C 71-121: 0.78 H + 0.08 T

CANDELA DISTRIBUTION
0-180 90-270

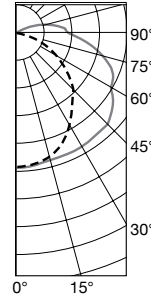
0	195	195
5	195	194
10	192	192
15	187	192
20	181	193
25	173	194
30	163	194
35	152	193
40	138	192
45	124	191
50	108	182
55	91	176
60	73	163
65	55	150
70	37	145



2 x 36 W
Efficiency 80.5%
NF C 71-121: 0.73 H + 0.07 T

CANDELA DISTRIBUTION
0-180 90-270

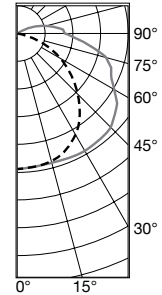
0	185	185
5	185	184
10	182	182
15	178	181
20	172	183
25	164	183
30	154	183
35	143	183
40	131	183
45	117	179
50	102	173
55	85	166
60	68	155
65	51	145
70	35	141



2 x 58 W
Efficiency 76.9%
NF C 71-121: 0.70 H + 0.07 T

CANDELA DISTRIBUTION
0-180 90-270

0	173	173
5	172	173
10	170	171
15	166	169
20	161	172
25	154	172
30	145	172
35	135	171
40	123	172
45	111	170
50	97	165
55	82	157
60	66	148
65	50	139
70	34	133



FL Series Light Duty Non–Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 & 22

Zone 2 and 22
Gas (G) and Dust (D)

Applications

- Light duty luminaire ideal for commercial and light industrial locations including hazardous areas designated as Zone 2 or 22 environments.
- Typical applications include oil refineries petrochemical plants, pulp and paper mills, tunnels and other light duty manufacturing locations.

Features

- Utilizes two 26 mm (T8) bi-pin fluorescent lamps.
- Fiberglass reinforced polyester housing.
- Instant start 95% power factor ballast.
- Available in various lengths and wattages ranging from 18 to 58. Pre-impregnated fiberglass reinforced white polyester housing.
- Closing system using stainless steel clips.
- Electrostatically applied white powder painted steel reflector provides optimal lighting distribution.
- Poured-in-place elastomer gasket secures IP65 / 67 ingress protection.

Standard Material

- Fiberglass reinforced polyester (FRP) housing
- Polycarbonate lens
- White powder painted sheet steel reflector
- Elastomer gasket
- Polycarbonate lampholders
- Mounting accessories available in different materials such as gray painted aluminum, zinc plated steel, galvanized steel or 316 stainless steel

Options

- Available in 3 hours emergency version, including multi-tap ballast with built-in monthly self test. Test results through multi-colored LED.
- Plug-in battery pack is easy to remove for maintenance.
- Battery voltage is 6 volts and 4 Ah capacity.
- One fluorescent tube remains lit for up to 3 hours and up to 29% light intensity for 18 Watt, 15% for 36 Watt and 9% for 58 Watt.
- All emergency units supplied with cut off switch to battery when fixture is opened.



2 x 58 W



2 x 18 W

Certifications and Compliances

◆ATEX Certification

- **Certification Type: EFn (Standard Version) / EFn-EM (Emergency Version)**
 - Gas: Zone 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 G
 - Type of Protection: Ex nR II or Ex nA II
 - T Rating: T4 for nA protection mode. (T3 for 2x58W Version)
See temperature chart for nR protection mode
 - Dust: Zone 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 D
 - Type of Protection: Ex tD A22
 - Surface Temperature: See *Table on following page*
 - Ambient Temperature: -20 °C to +55 °C
 - CE Declaration of Conformity: 50213/50219
 - ATEX Certificate:
 - EFn (Standard Version): LCIE 08.6005X
 - EFn-EM (Emergency Version): LCIE 08.6063X
 - Index of Protection (solid & liquid): IP65 / 67

◆EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

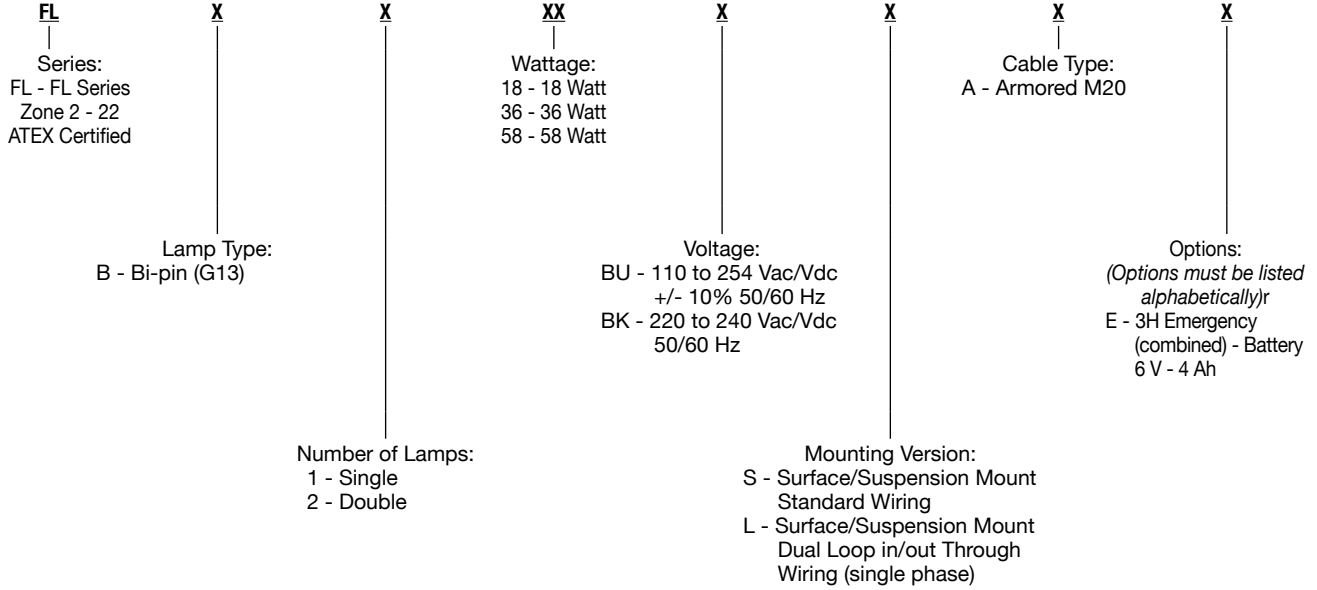
FL Series Light Duty Non-Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 & 22

Zone 2 and 22
Gas (G) and Dust (D)

Order using catalog numbering guide below or select catalog number from tables on following pages.

Catalog Numbering Guide For FL Non-Metallic Fluorescent Lighting Fixtures



Temperature Chart

Version	Dust		Gas	
	Surface Temp. for Ta = +55° C	T Rating for Ta = 40° C	T Rating for Ta = 50°C	T Rating for Ta = 55°C
1 x 18 W	75°C	T6	T6	T6
2 x 18 W		T6	T5	T5
1 x 36 W	83°C	T6	T6	T5
2 x 36 W		T6	T6	T5
1 x 58 W	91°C	T5	T5	T5
2 x 58 W		T5	T5	T5

FL Series Light Duty Non–Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 & 22

Zone 2 and 22
Gas (G) and Dust (D)

Standard Version for Armored and Unarmored Cable

Supplied with one M20 cable entry at each end plus two locknuts, two earth continuity and one blanking plug.
Also supplied with one 2 x (3 x 2.5 mm²) max. flexible or rigid connection terminal block.

Number of Lamps	Watts	Voltage (V)	Weight kg	Volume dm ³	Pack.	Catalog Number
1	18	220/240	2.3	22.3	1	FLB118BKSA
2	18	220/240	2.3	22.3	1	FLB218BKSA
2	18	110/254	2.3	22.3	1	FLB218BUSA
1	36	220/240	2.8	38	1	FLB136BKSA
1	36	110/254	2.8	38	1	FLB136BUSA
2	36	220/240	3.6	38)	1	FLB236BKSA
2	36	110/254	3.6	38	1	FLB236BUSA
1	58	220/240	3.4	45	1	FLB158BKSA
1	58	110/254	3.4	45	1	FLB158BUSA
2	58	220/240	4.4	45	1	FLB258BKSA
2	58	110/254	4.4	45	1	FLB258BUSA

Emergency Version for Armored and Unarmored Cable

Supplied with one M20 entries with earth continuity at each end. Also supplied with two M20 locknuts and one blanking plug.
Equipped with one 2 x (5 x 2.5 mm²) max. flexible or rigid connection terminal block

Number of Lamps	Watts	Voltage (V)	Weight kg	Volume dm ³	Pack.	Catalog Number
2	18	110/254	4.5	22.3	1	FLB218BUSAE
2	36	110/254	7.0	38	1	FLB236BUSAE
2	58	110/254	7.5	45	1	FLB258BUSAE

Shaded catalog numbers are normally stocked items. All other items are made to order.


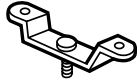



FL Series Light Duty Non-Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 & 22

Zone 2 and 22
Gas (G) and Dust (D)

FLUORESCENT LUMINAIRES

Accessories and Replacement Parts

	Description	Catalog Number
Fixing Brackets		
	Set of two brackets for surface installation	
	Zinc plated steel	FEFBZ
	316 stainless steel	FEFBS
Brackets for Surface Mounting		
	Set of two	
	Aluminium (gray painted)	FESBA
	316 stainless steel	FESBS
M8 Ring Bolts		
	Set of two	
	Zinc plated steel	FERBM8Z
Half Clamps Brackets for Pole Mounting		
	Set of two	
	For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube)	
	Zinc plated steel	FEHC49Z
	316 stainless steel	FEHC49S
	For 60 mm pole (2" tube)	
	Zinc plated steel	FEHC60Z
	316 stainless steel	FEHC60S
Hinged Brackets		
	Set of two brackets for adjusting luminaire	
	Aluminium	FEHBA
	316 stainless steel	FEHBS
Fall Prevention Kit		
	Safety chain retains fixture temporarily to ease installation	
	For M20 cable entry	FESCM20

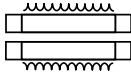
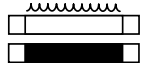

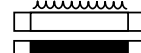
Shaded catalog numbers are normally stocked items. All other items are made to order.

FL Series Light Duty Non-Metallic Fluorescent Luminaires

Standard and Emergency Back-Up. Zone 2 & 22

Zone 2 and 22
Gas (G) and Dust (D)

Emergency Function Diagram – Emergency Function 2 Tubes

Mains	Lighting Switch ON	Lighting Switch OFF
Fluorescent Luminaire ON		
Fluorescent Luminaire OFF		

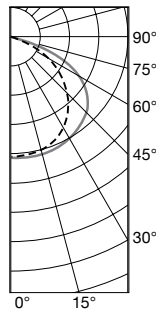
Photometric Data

Polar curves for a 1000 lm flux, according to NF C 71-120
Luminaire symbol according to NF C 71-121

--- Longitudinal
— Transverse

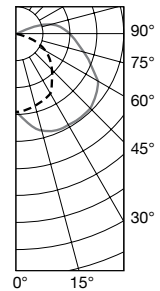
1 x 18 W
Efficiency 67.8%
NF C 71-121: 0.58 H + 0.09 T

	CANDELA DISTRIBUTION	
	0-180	90-270
0	142	142
5	142	142
10	139	140
15	135	135
20	130	132
25	123	128
30	113	126
35	102	128
40	90	132
45	78	136
50	66	134
55	54	131
60	43	129
65	33	119
70	23	110



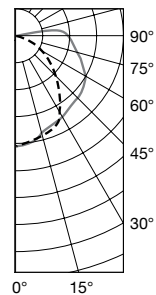
2 x 18 W
Efficiency 68.9%
NF C 71-121: 0.60 H + 0.09 T

	CANDELA DISTRIBUTION	
	0-180	90-270
0	116	116
5	115	119
10	113	133
15	110	150
20	105	156
25	100	157
30	94	158
35	88	159
40	81	158
45	74	157
50	65	152
55	55	145
60	45	137
65	35	128
70	25	114



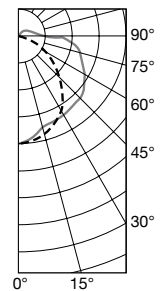
2 x 36 W
Efficiency 64.1%
NF C 71-121: 0.57 H + 0.07 T

	CANDELA DISTRIBUTION	
	0-180	90-270
0	163	163
5	162	162
10	160	159
15	155	145
20	149	140
25	142	139
30	132	139
35	120	138
40	104	134
45	80	133
50	60	129
55	50	125
60	40	120
65	31	108
70	23	95



2 x 58 W
Efficiency 63.6%
NF C 71-121: 0.56 H + 0.07 T

	CANDELA DISTRIBUTION	
	0-180	90-270
0	160	160
5	159	160
10	157	157
15	153	146
20	148	140
25	141	139
30	132	139
35	121	138
40	107	134
45	85	132
50	68	127
55	56	122
60	45	117
65	35	107
70	24	90



PB Series Floodlights IIB

Flameproof. Metal Halide, Sodium, Mercury Vapor, Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Designed for large area lighting in industrial outdoor and indoor hazardous areas.
- Ideal for use in Zones 1 and 2 and 21 and 22 in the oil and gas industry. In locations such as: refineries, pipelines, warehouses, offshore platforms and drilling rigs.

Features

- Gray epoxy painted light marine grade aluminum housing and door.
- Fast and easy lamp replacement via threaded cover on the side of the fixture. The cover is fitted with a short safety chain.
- Lampholder can be easily field-adjustable for either a narrow or wide beam.
- Fixtures operate safely in high ambient temperatures up to +55 °C and in low ambient temperature up to -20 °C.
- Electrical components (ballast, ignitor and capacitor) are thermally separated from the lighting compartment with a bulkhead, providing extended life.
- Easy and efficient wiring due to separate Ex e terminal box with wiring onto 2 captive terminals 2 x 6 mm²; 2 internal earth terminals capacity 6 mm² and 1 external earth terminal capacity 4 mm².
- 2 x M20 clearance holes throughwire cable entries supplied with:
 - One Ex e unarmored cable gland — sealing diameter 6.5 mm to 14.5 mm
 - One blanking plug
 - Two M20 locknuts
- For use with either tubular or ellipsoidal shape lamps. See ordering information for details.
- Choice of mounting with galvanized hinged bracket fixed mounting or tube/pole mounting with galvanized brackets.
- Thermoshock and impact-resistant glass factory sealed into the cover frame.
- Operates in any position.
- Reversible hinge allows for fixture access from either side.
- E40 or H3 lampholders for the 2 x 70 W Vac/Vdc halogen version.
- Internal symmetric reflector.

Standard Materials

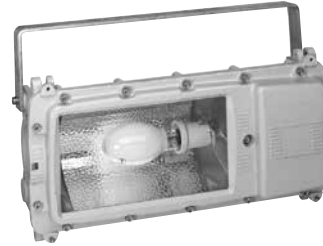
- Housing and door: copperfree marine-grade aluminum alloy
- Lens: toughened safety glass
- Reflector: bright highly polished aluminum
- Bolts: stainless steel bolt
- Cable gland and blanking plug: polyamide
- Locknut: nickel plated brass

Standard Finishes

- Housing and door: gray epoxy powder paint

Options

- Other voltages, please contact your sales representative.
- Terminal block with 2 more terminals for wiring with 3 phases plus Neutral in 380/415 V (loop in/loop out wiring possible): add suffix **-T** at the end of the catalog number.
- Asymmetrical light distribution is available, add suffix **-A** to end of catalog number.
- Screwed-on overhead diffuser out of galvanized steel with black painting (see accessories).
- Screwed-on zinc-coated protection guard (see accessories).



Certifications and Compliances

◆ ATEX/IECEX Certification

- **Certification Type: Pjd**
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIB
 - Temperature class: See Table on following page
 - Dust: Zone 21 - 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: See Table on following page
 - Ambient Temperature: -20 °C ≤ Ta ≤ +55 °C
 - CE Declaration of Conformity: 50207
 - ATEX Certificate: LCIE 99 ATEX 6002
 - IECEx Certificate: IECEx LCI 04.0020
 - Index of Protection according EN/IEC 60529: IP66 (Type PB)
 - Impact Resistance (shock): IK10

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

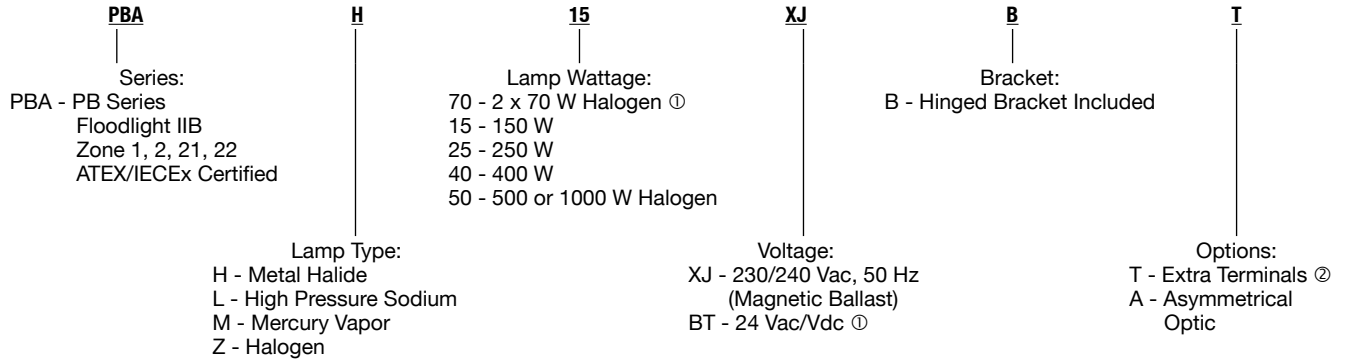
PB Series Floodlights IIB

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Order using catalog numbering guide below or select catalog number from the following pages.

Catalog Numbering Guide – PB Series Floodlights



T Rating (Gas) and Surface Temperature (Dust) Table

Lamp Type and Wattage	Gas Temperature Rating According to Ta			Dust Surface Temperature °C
	+40 °C	+50 °C	+55 °C	
2 x 70 W - H3 ①	T4	T4	T4	+130 °C
150 W High Pressure Sodium	T4	T3	T3	+145 °C
250 W High Pressure Sodium	T3	T3	T3	+195 °C
250 W Metal Halide	T3	T3	T3	+197 °C
250 W Mercury Vapor	T3	T3	T3	+194 °C
400 W High Pressure Sodium	T3	T3	T3	+189 °C
400 W Metal Halide	T3	T3	T3	+193 °C
400 W Mercury Vapor	T3	T3	T3	+195 °C
600 W High Pressure Sodium	T2	T2	T2	+257 °C
500 W Halogen	T2	T2	T2	+267 °C
1000 W Halogen	T1	T1	T1	+378 °C

① 2 x 70 W Halogen 24 Vac/Vdc.
② 3 Phase + Neutral.

PB Series Floodlights IIB

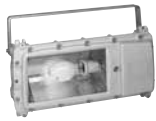
Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

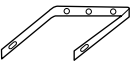


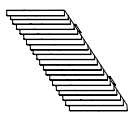
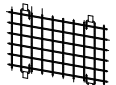
Ordering Information – IIB Versions

Floodlights supplied with hinged mounting bracket, 1 plug, 1 M20 cable gland — 6.5 mm to 14.5 mm diameter. Lamps are not included

Lamp Wattages	Lampholder	Voltage (+/-10%)	Lamp Type		Weight kg	Volume dm ³	Catalog Number ② ③
			Ellipsoidal	Tubular			
High Pressure Sodium							
150	E40	230/240 V, 50 Hz	x	x	29.3	79.4	PBAL15XJB
250	E40	230/240 V, 50 Hz	x	x	30.3	79.4	PBAL25XJB
400	E40	230/240 V, 50 Hz	–	x	31.8	79.4	PBAL40XJB
Mercury Vapor							
250	E40	230/240 V, 50 Hz	x	x	29.3	79.4	PBAM25XJB
400	E40	230/240 V, 50 Hz	–	x	29.8	79.4	PBAM40XJB
Metal Halide							
250	E40	230/240 V, 50 Hz	x	x	30.3	79.4	PBAH25XJB
400	E40	230/240 V, 50 Hz	–	x	31.8	79.4	PBAH40XJB
Halogen							
500/1000	E40	–	–	x	26.3	79.4	PBAZ50B
2 x 70	H3	24 Vac/Vdc, 50 Hz	–	–	27.3	79.4	PBAZ70BTB ①



Accessories

	Catalog Number
Galvanized Steel Hinged Brackets	
	PBHBG
Pole/Tube Mounting Galvanized Steel Brackets	
	1-1/4" to 1-1/2" PNHC49G
	2" PNHC60G
Flat Surface Mounting Galvanized Steel Brackets	
	PNSBG
Screwed-on Overhead Diffuser	
	PBGDG
Screwed-on Protective Guard	
	PBPGZ

① Supplied with 2 x 70 W H3 bulbs, 24 Vac/Vdc.

② Terminal block with 2 more terminals for wiring with 3 phases plus Neutral in 380/415 V: add suffix **-T** at the end of the catalog number.

③ Asymmetrical light distribution is available, add suffix **-A** to end of catalog number.

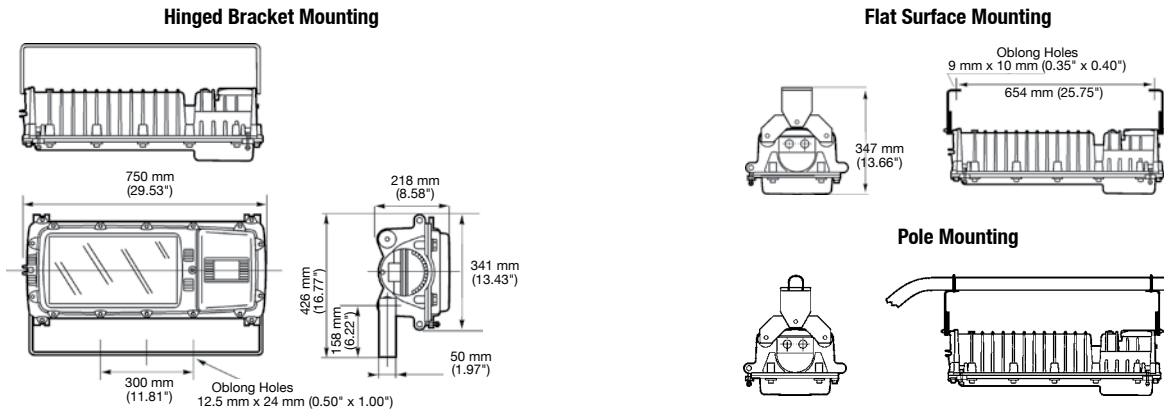
Shaded catalog numbers are normally stocked items. All other items are made to order.

PB Series Floodlights IIB

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Dimensions in Millimeters (Inches)



Photometrics

Polar curves for a 1000 lm flux, according to NF C 71-120
Luminaire symbol according to NF C 71-121

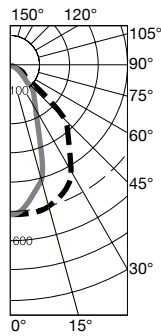
--- Longitudinal
— Transverse

Narrow beam Metal Halide 250 W
Efficiency 68.3%
NF C 71-121: 0.68B

CANDELA DISTRIBUTION

0-180 90-270

0	505	505
5	515	499
10	512	469
15	501	403
20	476	312
25	453	248
30	427	190
35	394	146
40	368	117
45	290	97
50	160	12
55	51	7
60	34	4
65	15	4
70	6	4

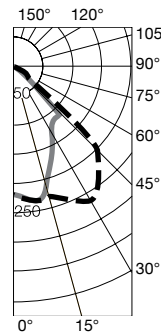


Narrow beam Metal Halide 400 W ①
Efficiency 49.3%
NF C 71-121: 0.49C

CANDELA DISTRIBUTION

0-180 90-270

0	217	217
5	210	219
10	218	231
15	223	205
20	238	193
25	255	148
30	266	132
35	263	130
40	244	116
45	201	104
50	136	37
55	85	15
60	51	8
65	28	6
70	5	4

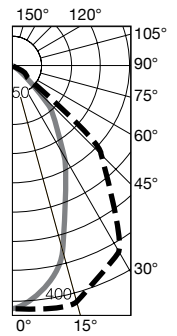


Narrow beam Halogen 1000 W
Efficiency 59.2%
NF C 71-121: 0.59B

CANDELA DISTRIBUTION

0-180 90-270

0	417	417
5	406	418
10	419	399
15	419	330
20	408	266
25	398	218
30	371	177
35	344	142
40	295	115
45	213	98
50	135	12
55	68	7
60	34	4
65	16	3
70	5	3

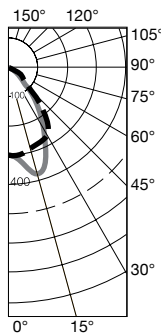


Wide beam Metal Halide 250 W
Efficiency 67.9%
NF C 71-121: 0.68C

CANDELA DISTRIBUTION

0-180 90-270

0	301	301
5	303	318
10	299	342
15	294	387
20	287	382
25	286	306
30	271	237
35	231	208
40	172	186
45	133	140
50	83	104
55	48	18
60	34	8
65	23	6
70	6	6

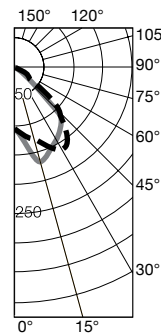


Wide beam Metal Halide 400 W ①
Efficiency 46.7%
NF C 71-121: 0.46C

CANDELA DISTRIBUTION

0-180 90-270

0	105	105
5	104	106
10	108	130
15	124	165
20	148	177
25	167	183
30	165	147
35	142	127
40	116	113
45	74	115
50	52	103
55	48	40
60	44	13
65	34	9
70	18	6

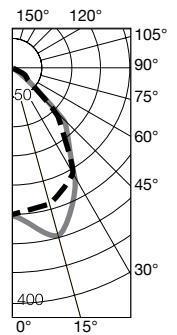


Wide beam Halogen 1000 W
Efficiency 57.7%
NF C 71-121: 0.57C

CANDELA DISTRIBUTION

0-180 90-270

0	251	251
5	244	255
10	247	272
15	245	293
20	237	306
25	229	262
30	213	213
35	194	188
40	163	161
45	120	133
50	82	105
55	52	18
60	35	8
65	20	5
70	8	5



① 400 W Metal Halide: Efficiency rate lower than 250 W due to thermal deflector between glass and lamp, requested for T3.

PC Series Floodlights IIC

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Designed for large area lighting in industrial outdoor and indoor hazardous areas.
- Ideal for use in Zones 1 and 2 and 21 and 22 in the oil and gas industry. In locations such as: refineries, pipelines, warehouses, offshore platforms and drilling rigs.

Features

- Gray epoxy painted light marine grade aluminum housing and door.
- Fast and easy lamp replacement via threaded cover on the side of the fixture. The cover is fitted with a short safety chain.
- Lampholder can be easily field-adjusted for either a narrow or wide beam.
- Fixtures operate safely in high ambient temperatures up to +55 °C and in low ambient temperature up to -25 °C.
- Electrical components (ballast, ignitor and capacitor) are thermally separated from the lighting compartment with an insulating protection, providing extended life.
- Easy and efficient wiring due to separate Ex e terminal box with wiring onto 2 captive terminals 2 x 6 mm²; 2 internal earth terminals capacity 6 mm² and 1 external earth terminal capacity 4 mm².
- 2 x M20 clearance holes throughwire cable entries supplied with:
 - One Ex e unarmored cable gland — sealing diameter 6.5 mm to 14.5 mm
 - One blanking plug
 - Two M20 locknuts
- For use with either tubular or ellipsoidal shape lamps. See ordering information for details.
- Choice of mounting with galvanized hinged bracket fixed mounting or tube/pole mounting with galvanized brackets.
- Thermoshock and impact-resistant glass factory sealed into the floodlight body.
- Operates in any position.
- Reversible hinge allows for fixture access from either side.
- Internal symmetric reflector.

Standard Materials

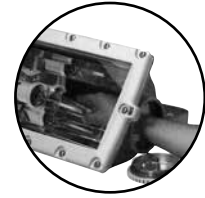
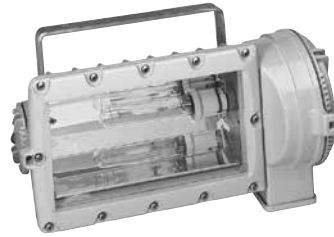
- Housing and door: copperfree marine-grade aluminum alloy
- Lens: toughened safety glass
- Reflector: bright highly polished aluminum
- Bolts: stainless steel bolt
- Cable gland and blanking plug: polyamide
- Locknut: nickel plated brass

Standard Finishes

- Housing and door: gray epoxy powder paint

Options

- Other voltages, please contact your sales representative.
- Terminal block with 2 more terminals for wiring with 3 phases plus Neutral in 380/415 V (loop in/loop out wiring possible): add suffix **-T** at the end of the catalog number.
- Asymmetrical light distribution is available, add suffix **-A** to end of catalog number.
- Screwed-on overhead diffuser out of galvanized steel with black painting (see accessories).
- Screwed-on zinc-coated protection guard (see accessories).



Certifications and Compliances

◆ATEX/IECEX Certification

- **Certification Type: PJD**
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC
 - Temperature class: See Table on following page
 - Dust: Zone 21 - 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: See Table on following page
 - Ambient Temperature: standard fixture: -20 °C ≤ Ta ≤ +55 °C ; with asymmetrical optic "C": -25 °C
 - CE Declaration of Conformity: 50207
 - ATEX Certificate: LCIE 99/ ATEX 6002
 - IECEx Certificate: IECEx LCI 04.0020
 - Index of Protection according EN/IEC 60529: IP66/67
 - Impact Resistance (shock): IK10

◆EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

◆Others Certification

- INMETRO Certificate: BVC12.2098^①

^① Inmetro certification available on special request only. Contact your local sales for more information

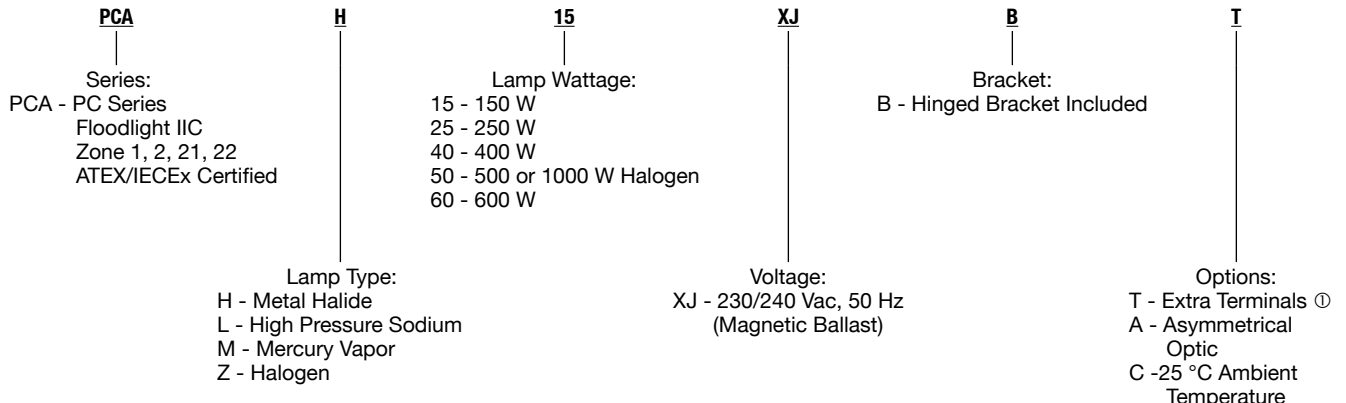
PC Series Floodlights IIC

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Order using catalog numbering guide below or select catalog number from the following pages.

Catalog Numbering Guide – PC Series Floodlights



T Rating (Gas) and Surface Temperature (Dust) Table

Lamp Type and Wattage	Gas Temperature Rating According to Ta			Dust Surface Temperature °C
	+40 °C	+50 °C	+55 °C	
150 W High Pressure Sodium	T4	T3	T3	+145 °C
250 W High Pressure Sodium	T3	T3	T3	+195 °C
250 W Metal Halide	T3	T3	T3	+197 °C
250 W Mercury Vapor	T3	T3	T3	+194 °C
400 W High Pressure Sodium	T3	T3	T3	+189 °C
400 W Metal Halide	T3	T3	T3	+193 °C
400 W Mercury Vapor	T3	T3	T3	+195 °C
600 W High Pressure Sodium	T2	T2	T2	+257 °C
500 W Halogen	T2	T2	T2	+267 °C
1000 W Halogen	T1	T1	T1	+378 °C

① 3 Phase + Neutral.

PC Series Floodlights IIC

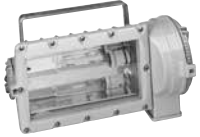
Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Ordering Information – IIC Versions

Floodlights supplied with hinged mounting bracket, 1 plug, 1 M20 cable gland — 6.5 mm to 14.5 mm diameter. Lamps are not included.

Lamp Wattages	Lampholder	Voltage (+/-10%)	Lamp Type		Weight kg	Volume dm ³	Catalog Number ①②
High Pressure Sodium							
150	E40	230/240 V, 50 Hz	x	x	29.0	104.4	PCAL15XJB
250	E40	230/240 V, 50 Hz	x	x	30.0	104.4	PCAL25XJB
400	E40	230/240 V, 50 Hz	—	x	32.0	104.4	PCAL40XJB
600	E40	230/240 V, 50 Hz	—	x	35.0	104.4	PCAL60XJB
Mercury Vapor							
250	E40	230/240 V, 50 Hz	x	x	30.0	104.4	PCAM25XJB
400	E40	230/240 V, 50 Hz	—	x	30.5	104.4	PCAM40XJB
Metal Halide							
250	E40	230/240 V, 50 Hz	x	x	30.0	104.4	PCAH25XJB
400	E40	230/240 V, 50 Hz	—	x	32.0	104.4	PCAH40XJB
Halogen							
500/1000	E40	—	—	x	27.0	104.4	PCAZ50B



① Terminal block with 2 more terminals for wiring with 3 phases plus Neutral in 380/415 V: add suffix **-T** at the end of the catalog number.

② Asymmetrical light distribution is available, add suffix **-A** to end of catalog number.

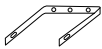



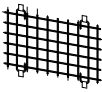
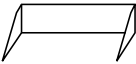
Shaded catalog numbers are normally stocked items. All other items are made to order.

PC Series Floodlights IIC

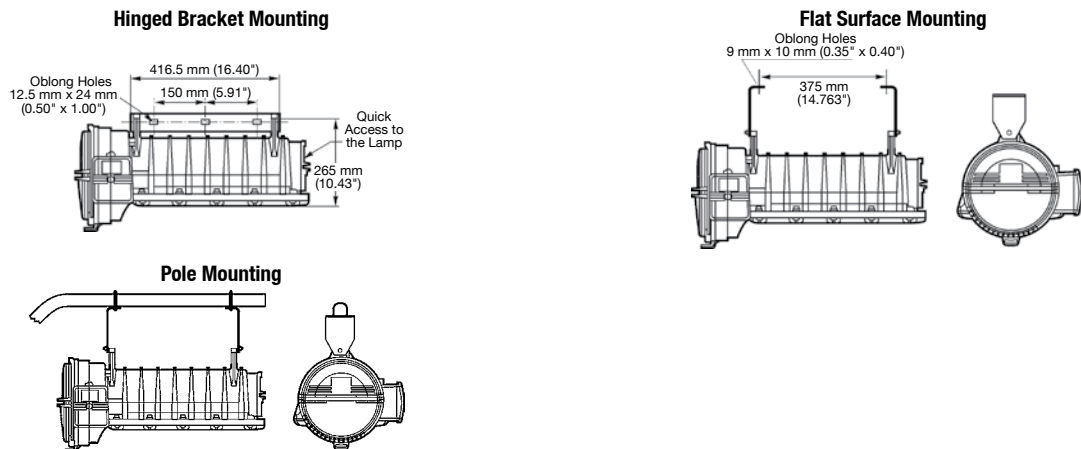
Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Accessories

		Catalog Number
Standard Galvanized Steel Hinged Mounting Bracket Replacement Part		
		PCHBG
Optional Galvanized Steel Mounting Brackets		
		Pole/Tube Mounting
		1-1/4" to 1-1/2"
Pole/Tube	Flat Surface	Flat Surface Mounting
		2"
		PCHC49G
		PCHC60G
		PCSBG
Screwed-on Overhead Diffuser		
		PCGDG
Screwed-on Protective Guard		
		PCPGZ
Visor – Secured With 2 Screws		
		PCVG

Dimensions in Millimeters (Inches)



PC Series Floodlights IIC

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Photometrics

Polar curves for a 1000 lm flux, according to NF C 71-120
Luminaire symbol according to NF C 71-121

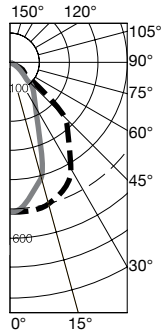
--- Longitudinal
— Transverse

Narrow beam Metal Halide 250 W
Efficiency 68.3%
NF C 71-121: 0.68B

CANDELA DISTRIBUTION

0-180 90-270

0	505	505
5	515	499
10	512	469
15	501	403
20	476	312
25	453	248
30	427	190
35	394	146
40	368	117
45	290	97
50	160	12
55	51	7
60	34	4
65	15	4
70	6	4

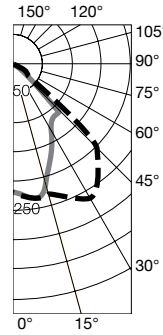


Narrow beam Metal Halide 400 W ①
Efficiency 49.3%
NF C 71-121: 0.49C

CANDELA DISTRIBUTION

0-180 90-270

0	217	217
5	210	219
10	218	231
15	223	205
20	238	193
25	255	148
30	266	132
35	263	130
40	244	116
45	201	104
50	136	37
55	85	15
60	51	8
65	28	6
70	5	4

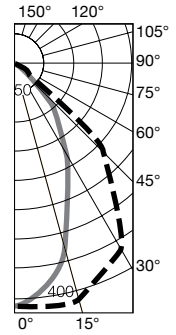


Narrow beam Halogen 1000 W
Efficiency 59.2%
NF C 71-121: 0.59B

CANDELA DISTRIBUTION

0-180 90-270

0	417	417
5	406	418
10	419	399
15	419	330
20	408	266
25	398	218
30	371	177
35	344	142
40	295	115
45	213	98
50	135	12
55	68	7
60	34	4
65	16	3
70	5	3

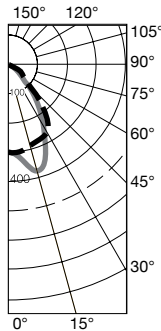


Wide beam Metal Halide 250 W
Efficiency 67.9%
NF C 71-121: 0.68C

CANDELA DISTRIBUTION

0-180 90-270

0	301	301
5	303	318
10	299	342
15	294	387
20	287	382
25	286	306
30	271	237
35	231	208
40	172	186
45	133	140
50	83	104
55	48	18
60	34	8
65	23	6
70	6	6

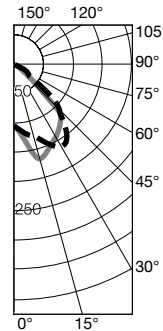


Wide beam Metal Halide 400 W ①
Efficiency 46.7%
NF C 71-121: 0.46C

CANDELA DISTRIBUTION

0-180 90-270

0	105	105
5	104	106
10	108	130
15	124	165
20	148	177
25	167	183
30	165	147
35	142	127
40	116	113
45	74	115
50	52	103
55	48	40
60	44	13
65	34	9
70	18	6

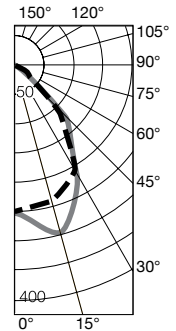


Wide beam Halogen 1000 W
Efficiency 57.7%
NF C 71-121: 0.57C

CANDELA DISTRIBUTION

0-180 90-270

0	251	251
5	244	255
10	247	272
15	245	293
20	237	306
25	229	262
30	213	213
35	194	188
40	163	161
45	120	133
50	82	105
55	52	18
60	35	8
65	20	5
70	8	5



① 400 W Metal Halide: Efficiency rate lower than 250 W due to thermal deflector between glass and lamp, requested for T3.

PL Series Floodlights IIB Low temperature

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen Δ

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Designed for large area lighting in industrial outdoor and indoor hazardous areas.
- Ideal for use in Zones 1 and 2 and 21 and 22 in the oil and gas industry. In locations such as: refineries, pipelines, warehouses, offshore platforms and drilling rigs.

Features

- Gray epoxy painted light marine grade aluminum housing and door.
- The cover is fitted with a short safety chain.
- Lampholder can be easily field-adjustable for either a narrow or wide beam.
- Fixtures operate safely in high ambient temperatures up to +55 °C and in low ambient temperature up to -40 °C .
- Electrical components (ballast, ignitor and capacitor) are thermally separated from the lighting compartment with an insulating protection, providing extended life.
- Easy and efficient wiring due to separate Ex e terminal box with wiring onto 2 captive terminals 2 x 6 mm²; 2 internal earth terminals capacity 6 mm² and 1 external earth terminal capacity 4 mm².
- 2 x 20 mm clearance holes throughwire cable entries supplied with:
 - One Ex e unarmored cable gland – 6.5 mm to 14.5 mm sealing diameter.
 - One blanking plug.
 - Two M20 locknuts.
- For use with either tubular or ellipsoidal shape lamps. See ordering information for details.
- Choice of mounting with galvanized hinged bracket fixed mounting or tube/pole mounting with galvanized brackets.
- Thermoshock and impact-resistant glass factory sealed into the cover frame.
- Operates in wall-mounting or down lighting applications.
- Reversible hinge allows for fixture access from either side.
- E40 or H3 lampholders for the 2 x 70 W Vac/Vdc halogen version.
- Internal symmetric reflector.

Standard Materials

- Housing and door: copperfree marine-grade aluminum alloy
- Lens: toughened safety glass
- Reflector: bright highly polished aluminum
- Bolts: stainless steel bolt
- Cable gland and blanking plug: polyamide
- Locknut: nickel plated brass

Standard Finishes

- Housing and door: gray epoxy powder paint

Options

- 1000 W HP Sodium with separate Ex d housing for ballast.
- Other voltages, please contact your sales representative.
- Terminal block with 2 more terminals for wiring with 3 phases plus Neutral in 380/415 V (loop in/loop out wiring possible): add suffix **-T** at the end of the catalog number.
- Asymmetrical light distribution is available, add suffix **-A** to end of catalog number.
- Screwed-on overhead diffuser out of galvanized steel with black painting (see accessories).
- Screwed-on zinc-coated protection guard (see accessories).



ATEX/IECEX Certifications and Compliances

• Certification Type: PJD

- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ex II 2 G
 - Type of Protection: Ex de IIB
 - Temperature Class: See *Table on following page*
- Dust: Zone 21 - 22
 - Conforming to ATEX 94/9/CE: Ex II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: See *Table on following page*
- Ambient Temperature: $-40\text{ }^{\circ}\text{C} \leq T_a \leq +55\text{ }^{\circ}\text{C}$
- CE Declaration of Conformity: 50207
- ATEX Certificate: LCIE 99/ ATEX 6002
- IECEx Certificate: IECEx LCI 04.0020
- Index of Protection according EN/IEC 60529: IP66/67
- Impact Resistance (shock): IK10

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

◆ Others Certification

- INMETRO Certificate: BVC12.2098^①

^① Inmetro certification available on special request only. Contact your local sales for more information

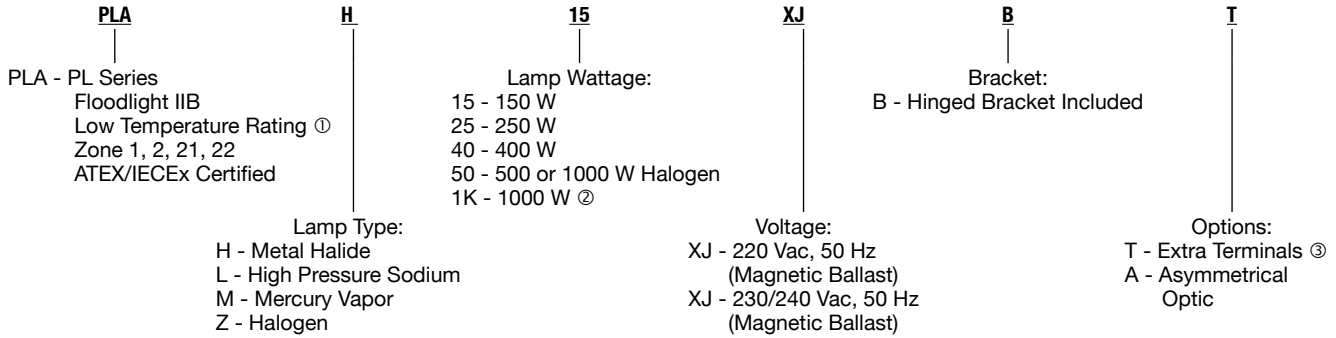
PL Series Floodlights IIB Low temperature

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Order using catalog numbering guide below or select catalog number from the following pages.

Catalog Numbering Guide — PL Series Floodlights



T Rating (Gas) and Surface Temperature (Dust) Table

Lamp Type and Wattage	Gas Temperature Rating According to Ta			Dust Surface Temperature °C
	+40 °C	+50 °C	+55 °C	
150 W High Pressure Sodium	T4	T3	T3	+145 °C
250 W High Pressure Sodium	T4	T3	T3	+145 °C
250 W Metal Halide	T3	T3	T3	+197 °C
250 W Mercury Vapor	T3	T3	T3	+194 °C
400 W High Pressure Sodium	T4	T3	T3	+144 °C
400 W Metal Halide	T3	T3	T3	+193 °C
400 W Mercury Vapor	T3	T3	T3	+195 °C
600 W High Pressure Sodium	T2	T2	T2	+257 °C
500 W Halogen	T2	T2	T2	+267 °C
1000 W Halogen	T1	T1	T1	+378 °C

① Only for 250 W and 400 W Versions.

② Available for High Pressure Sodium Lamp Only + Separate Gear Box.

③ 3 Phase + Neutral.

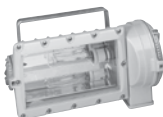
PL Series Floodlights IIB Low temperature

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

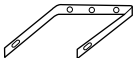


Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Ordering Information – IIB Low Temperature Versions

Floodlights supplied with hinged mounting bracket, 1 plug, 1 M20 cable gland – 6.5 mm to 14.5 mm diameter. Lamps are not included

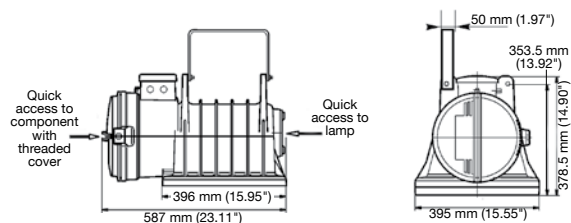
	Lamp Wattages	Lampholder	Voltage (+/-10%)	Lamp Type		Weight kg	Volume dm ³	Catalog Number ① ② ③
				Ellipsoidal	Tubular			
High Pressure Sodium								
	250	E40	230/240 V 50 Hz	x	x	37.5	104.4	PLAL25XJB
	400	E40	220 V 50 Hz	x	x	37.5	104.4	PLAL40XAB
Halogen								
	500/1000	E40		–	x	34.0	104.4	PLAZ50B

Accessories and Replacement Parts

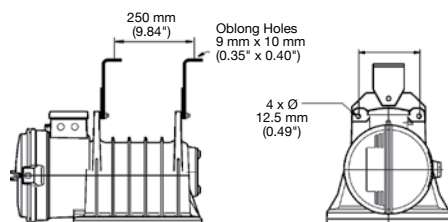
			Catalog Number
Galvanized Steel Hinged Brackets			
			PLHBG
Galvanized Steel Brackets			
		Pole/Tube Mounting	1-1/4" to 1-1/2"
			2"
Pole/Tube	Flat Surface	Flat Surface Mounting	PNSBG

Dimensions in Millimeters (Inches)

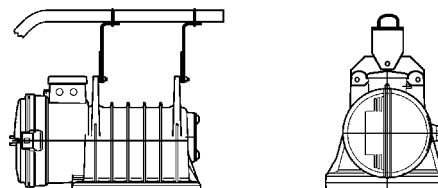
Hinged Bracket Mounting



Flat Surface Mounting



Pole Mounting



① Hinged bracket available: add suffix **-B** at the end of the catalog number.

② Terminal block with 2 more terminals for wiring with 3 phases plus Neutral in 380/415 V: add suffix **-T** at the end of the catalog number.

③ Asymmetrical light distribution is available, add suffix **-A** to end of catalog number.

PL Series Floodlights IIB Low temperature

Flameproof. Metal Halide, High Pressure Sodium, Mercury Vapor, Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

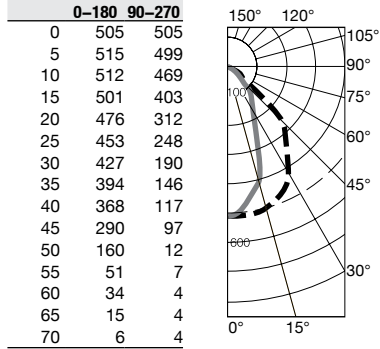
Photometric Data

Polar curves for a 1000 lm flux, according to NF C 71-120
Luminaire symbol according to NF C 71-121

--- Longitudinal
— Transverse

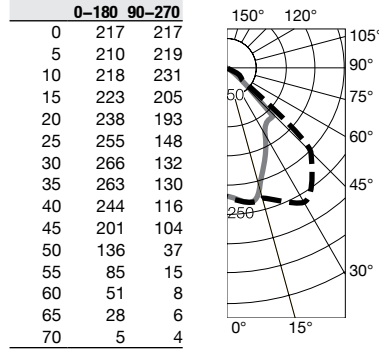
Narrow beam Metal Halide 250 W
Efficiency 68.3%
NF C 71-121: 0.68B

CANDELA DISTRIBUTION



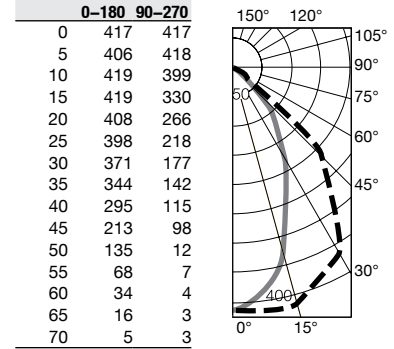
Narrow beam Metal Halide 400 W ①
Efficiency 49.3%
NF C 71-121: 0.49C

CANDELA DISTRIBUTION



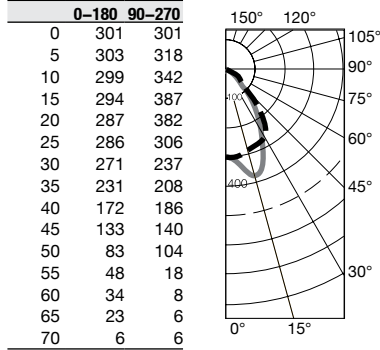
Narrow beam Halogen 1000 W
Efficiency 59.2%
NF C 71-121: 0.59B

CANDELA DISTRIBUTION



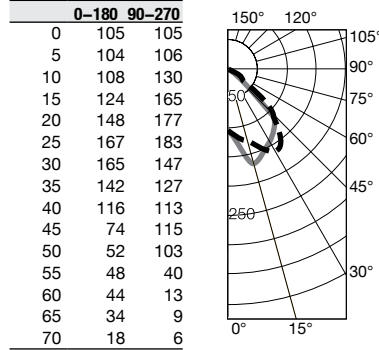
Wide beam Metal Halide 250 W
Efficiency 67.9%
NF C 71-121: 0.68C

CANDELA DISTRIBUTION



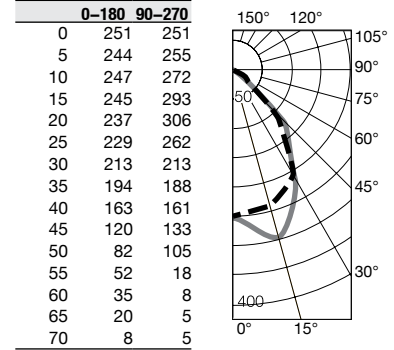
Wide beam Metal Halide 400 W ①
Efficiency 46.7%
NF C 71-121: 0.46C

CANDELA DISTRIBUTION



Wide beam Halogen 1000 W
Efficiency 57.7%
NF C 71-121: 0.57C

CANDELA DISTRIBUTION



① 400 W Metal Halide: Efficiency rate lower than 250 W due to thermal deflector between glass and lamp, requested for T3.

PN Areamaster Series Floodlights

Zone 2 – 21 and 22. Metal Halide, High Pressure Sodium, Mercury Vapor

Listed for simultaneous exposure to gas, combustible dusts and flammable gases or vapors.

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Powerful, efficient floodlights for large areas such as industrial complexes and ship loading areas.
- Rated for use in hazardous areas.

Features

- Highly efficient, integrally ballasted floodlight. Has compact, lightweight, yet rugged die cast aluminum construction.
- Simple installation and maintenance.
- Integral ballast: 230/240 V, 50 Hz
- One piece lens cover.
- Heavy duty, high temperature silicone rubber gasket, firmly seated.
- Socket: E40 (E27 for 70 W HPS version).
- Reflectors: double segment compound parabolic with finish for maximum efficiency.
- Mounting: yoke mount.
- 2 x M20 clearance entries with one plug

Standard Materials

- Ballast housing and lens door: copperfree (4/10 of 1% max.) aluminum
- Gasket: silicone rubber
- Socket: heavy duty porcelain with heavy gauge brass shell
- Reflector: finished aluminum
- Yoke mount: zinc plated steel
- Bolts: stainless steel

Standard Finishes

- Ballast housing, lens cover, yoke and pole mount: architectural bronze polyester
- Socket: porcelain

Certifications and Compliances

◆ATEX or ATEX//IECEx Certification

- **Certification Type: Pjn**
 - Gas: Zone 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 G
 - Type of Protection: Ex nR IIC Gc
 - Temperature Class: T2 to T4
 - Ambient Temperature: -40 °C to +55 °C (-40 °C to +50 °C for body size L)
 - ATEX Certificate: LCIE 08 ATEX 6035X
 - IECEx Certificate: IECEx LCI 04.0015
 - Dust: Zone 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 D
 - Type of Protection: Ex t IIIC Dc
 - Surface Temperature: T117 °C to T228 °C
 - Ambient Temperature: -40 °C to +55 °C (-40 °C to +50 °C for body size L)
 - ATEX Certificate: LCIE 08 ATEX 6035X
 - IECEx Certificate: IECEx LCI 04.0015
 - Dust: Zone 21
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T65 °C to T182 °C
 - Ambient Temperature: -20 °C to +40 °C
 - CE Declaration of Conformity: 50274
 - ATEX Certificate: LCIE 02 ATEX 6246X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK07 with glass diffuser, IK08 with polycarbonate diffuser



◆EURASEC Certification

– EURASEC N° TC RU C-FR.Г505.B.00912

◆Others Certification

- **Size M - Certification Type: Pjn**
 - INMETRO Certificate: BVC 11.0394-X^①

^① Inmetro certification available on special request only. Contact your local sales for more information

PN Areamaster Series Floodlights

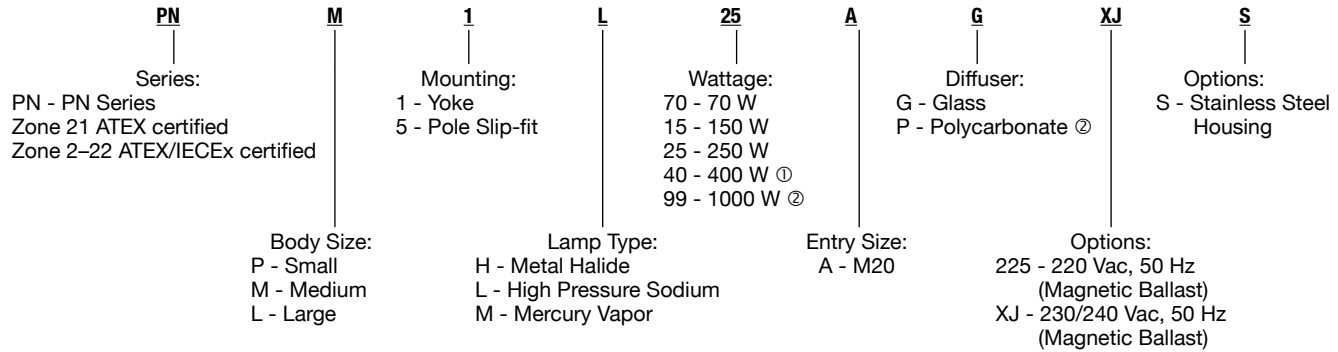
Zone 2 – 21 and 22. Metal Halide, High Pressure Sodium, Mercury Vapor

Listed for simultaneous exposure to gas, combustible dusts and flammable gases or vapors.

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Order using catalog numbering guide below or select catalog number from tables on following pages.

Catalog Numbering Guide – Areamaster ATEX PN Series Floodlights



① 400 Watt is rated for Zones 21-22 and 1000 Watt is rated for Zones 2-22 when used with large body. Select glass diffuser.

② Polycarbonate diffuser is not rated for use in Zones 2-22.

PN Areamaster Series Floodlights

Zone 2 – 21 and 22. Metal Halide, High Pressure Sodium, Mercury Vapor

Listed for simultaneous exposure to gas, combustible dusts and flammable gases or vapors.

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Zone 21 (Dust)

Operating Position		Dust Surface Temperatures for Ta = +40 °C		Time Before Opening in Minutes
		Glass Diffuser	Polycarbonate Diffuser	
Lamp Type and Wattage				
Body Size: M	70 W High Pressure Sodium	+75 °C	+65 °C	50
	150 W High Pressure Sodium	+101 °C	+91 °C	25
	250 W High Pressure Sodium	+127 °C	+117 °C	15
	250 W Metal Halide	+123 °C	+113 °C	15
	250 W Mercury	+136 °C	+131 °C	15
Body Size: L	400 W High Pressure Sodium	+126 °C	+121 °C	30
	1000 W High Pressure Sodium	+177 °C	-	30
	1000 W Metal Halide	+182 °C	-	30

Zone 2 (Gas)

Lamp Type and Wattage	T° Class for Ta = +40 °C	T° Class for Ta = +50 °C	T° Class for Ta = +55 °C
70 W High Pressure Sodium	T4	T4	T4
150 W High Pressure Sodium	T4	T4	T4
150 W Metal Halide	T4	T4	T4
Body Size: M	250 W High Pressure Sodium	T3	T3 – Cable T° = +82 °C
	250 W Metal Halide	T3	T3
	250 W Mercury	T3	T3 – Cable T° = +81 °C
	400 W High Pressure Sodium	T3	T3 – Cable T° = +87 °C
400 W Metal Halide	T2	T2 – Cable T° = +84 °C	T2 – Cable T° = +92 °C
400 W Mercury	T2	T2 – Cable T° = +84 °C	T2 – Cable T° = +89 °C
Body Size: L	1000 W High Pressure Sodium	T3	T3
	1000 W Metal Halide	T3	T3

Zone 22 (Dust)

Lamp Type and Wattage	Surface T° for Ta = +55 °C	Spreading cable for Ta = +50 °C	Spreading cable for Ta = +55 °C
70 W High Pressure Sodium	+117 °C	-	-
150 W High Pressure Sodium	+130 °C	-	-
150 W Metal Halide	+128 °C	-	-
Body Size: M	250 W High Pressure Sodium	+160 °C	-
	250 W Metal Halide	+175 °C	-
	250 W Mercury	+181 °C	-
	400 W High Pressure Sodium	+198 °C	Cable T° = +87 °C
400 W Metal Halide	+228 °C	Cable T° = +84 °C	Cable T° = +89 °C
400 W Mercury	+227 °C	Cable T° = +84 °C	Cable T° = +89 °C
Body Size: L	1000 W High Pressure Sodium	+187 °C for Ta = +50 °C	Cable T° = +90 °C
	1000 W Metal Halide	+192 °C for Ta = +50 °C	Cable T° = +90 °C

PN Aremaster Series Floodlights

Zone 2 – 21 and 22. Metal Halide, High Pressure Sodium, Mercury Vapor

Listed for simultaneous exposure to gas, combustible dusts and flammable gases or vapors.

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Lamp Type and Wattage	Weight kg	Volume dm ³	Permissible lamps (not supplied)	Socket	Body Size	Catalog Number ^③
Standard with Lamp Glass Sealed on Frame						
70 W HPS	12.1	62.5	Ovoid/Tubular	E27	Medium	PNM1L70AGXJ
150 W HPS	12.9	62.5	Ovoid/Tubular	E40	Medium	PNM1L15AGXJ
250 W HPS	14.3	62.5	Ovoid/Tubular	E40	Medium	PNM1L25AGXJ
400 W HPS	16.0	62.5	Ovoid/Tubular	E40	Medium	PNM1L40AGXJ ^①
400 W HPS	–	–	Ovoid/Tubular	E40	Large	PNL1L40AGXJ ^①
150 W MH	12.9	62.5	Ovoid/Tubular	E40	Medium	PNM1H15AGXJ
250 W MH	14.3	62.5	Ovoid/Tubular	E40	Medium	PNM1H25AGXJ
400 W MH	16.0	62.5	Tubular	E40	Medium	PNM1H40AGXJ ^①
400 W MH	–	–	Ovoid/Tubular	E40	Large	PNL1H40AGXJ ^①
250 W MV	12.9	62.5	Ovoid	E40	Medium	PNM1M25AGXJ
400 W MV	13.8	62.5	Ovoid/Tubular	E40	Medium	PNM1M40AGXJ ^①
With External Polycarbonate Weatherproof Protection ^②						
70 W HPS	13.2	62.5	Ovoid/Tubular	E40	Medium	PNM1L70APXJ
150 W HPS	14.0	62.5	Ovoid/Tubular	E40	Medium	PNM1L15APXJ
250 W HPS	15.4	62.5	Ovoid/Tubular	E40	Medium	PNM1L25APXJ
400 W HPS	–	–	Ovoid/Tubular	E40	Large	PNL1L40APXJ ^①
150 W MH	14.0	62.5	Ovoid/Tubular	E40	Medium	PNM1H15APXJ
250 W MH	15.4	62.5	Ovoid/Tubular	E40	Medium	PNM1H25APXJ
400 W MH	–	–	Ovoid/Tubular	E40	Large	PNL1H40APXJ
250 W MV	14.0	62.5	Ovoid	E40	Medium	PNM1M25APXJ ^①

^① 400 Watt is rated for Zones 21-22 and 1000 Watt is rated for Zones 2-22 when used with large body. Select glass diffuser.

^② Polycarbonate diffuser is not rated for use in Zones 2-22.

^③ For a 220 Vac, 50 Hz, magnetic ballast, replace the letters **XJ** in the 10th and 11th positions with the letters **225**; example: PNP1L70AG225.

Shaded catalog numbers are normally stocked items. All other items are made to order.



PN Areamaster Series Floodlights

Zone 2 – 21 and 22. Metal Halide, High Pressure Sodium, Mercury Vapor

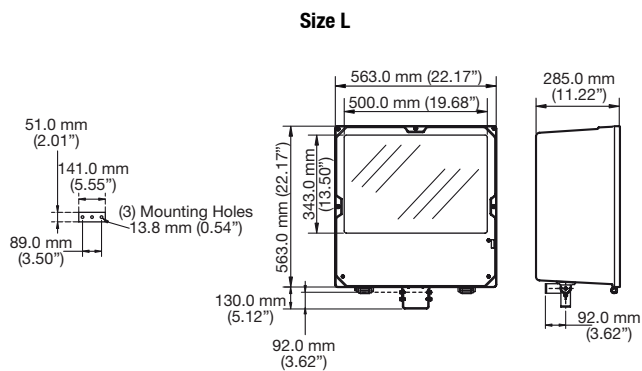
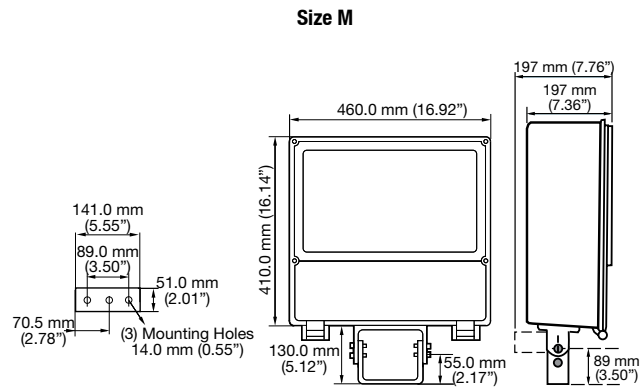
Listed for simultaneous exposure to gas, combustible dusts and flammable gases or vapors.

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Accessories

Description	Catalog Number
Fall Prevention Kit 1.2 m stainless steel chain for M20 cable entry	FESCM20
 Slip-Fitter Adapter — fits medium body (Size M)	GSF20
 Slip-Fitter Adapter — fits large body/1000 Watt floodlight (Size L)	GAM8SF

Dimensions in Millimeters (Inches)



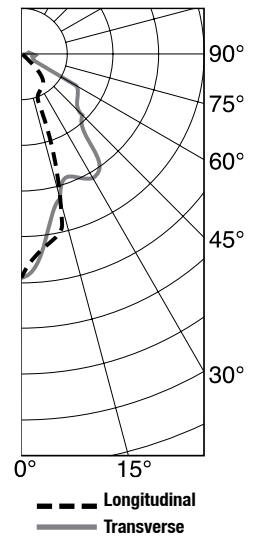
Photometric Data

Lamps: 70 W High Pressure Sodium

Polar curves for a 1000 lm flux, according to NF C 71-120
Luminaire symbol according to NF C 71-121

Degrees	Candelas	
	(0-180)	(90-270)
0	487	487
5	439	461
10	416	387
15	372	324
20	208	290
25	129	294
30	116	319
35	111	318
40	101	289
45	86	193
50	70	150
55	84	141
60	62	132
65	22	88
70	9	15

Total Luminaire Efficiency = 74.6%



LDP Series Wellglass Luminaires

Flameproof. Compact Fluorescent, Halogen, Incandescent, Mixed

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- For use in hazardous locations such as plants where plastics, paints, thinners and petrochemicals are manufactured.
- Ideal for street lighting on refinery sites or oil depots and for tank lighting purposes.

Features

- Permissible lamps (not supplied):
 - 18 to 25 W compact fluorescent lamps
 - 70 to 150 W halogen lamps
 - Up to 200 W incandescent lamps
 - Up to 160 W mixed lamps
- E27 lamp holder.
- Threaded flame path.
- Connection to lampholder:
 - 2 x 2.5 mm² or to terminal block
 - 2 x 2.5 mm² supplied for through-wiring application.
- Suspension via integrated eye bolt for side cable entry versions.
- Supplied with one blanking plug for side cable entry versions.

Standard Materials

- Body and bezel: gray painted marine grade aluminum alloy
- Internal reflector: aluminum

Certifications and Compliances

◆ATEX Certification

- **Certification Type: AB14**
 - Gas: Zone 1 - 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature Class: See Table
 - Dust: Zone 21 - 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: See Table
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 50231
 - ATEX Certificate: LCIE 02 ATEX 6053
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK08
 - Internal Volume: > 2 dm³ - 2 liters



Side Cable Entry Version

◆EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

Lamp Type and Wattage	Temperature Class for Gas				Surface Temperature for Dust	
	Ambient Temperature Ta = +40 °C		Ambient Temperature Ta = +50 °C		Ambient Temperature Ta = +50 °C	
	Temperature Class	Cable Entry Temperature	Temperature Class	Cable Entry Temperature	Surface Temperature	Cable Entry Temperature
18 W Compact Fluorescent	T6	–	T5	–	+85°C	–
20 W Compact Fluorescent	T6	–	T5	–	+85°C	–
25 W Compact Fluorescent	T6	–	T5	–	+85°C	–
70 W Halogen	T4	–	T3	+90°C	+130°C	+90°C
150 W Halogen	T4	+85°C	T3	+95°C	+145°C	+95°C
160 W Mixed	T4	+115°C	T3	+125°C	+145°C	+125°C
100 W Incandescent	T4	+115°C	T3	+125°C	+145°C	+125°C
200 W Incandescent	T4	+115°C	T3	+125°C	+145°C	+125°C

LDP Series Wellglass Luminaires



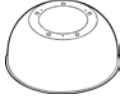
Flameproof. Compact Fluorescent, Halogen, Incandescent, Mixed

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Flameproof Wellglass Luminaires for Hazardous Areas – Ex d IIC – LDP Series

Cable Entries	Weight kg	Volume dm ³	Catalog Number
2 x M20 side entries	5	35.5	LDP2M20
2 x 3/4" NPT side entries	5	35.5	LDP2075
1 x 3/4" NPT top entry	5	35.5	LDP1075

Accessories

Description	Weight kg)	Volume dm ³	Catalog Number
Protective Guard			
 Zinc plated steel protective guard	0.4	97	LDPG3Z
Hinged Bracket			
 Zinc plated steel hinged bracket for installation on flat surface	1.4	3.5	LDPHBZ
External Reflector			
 External white polyester reflector	3.2	97	LDER1P

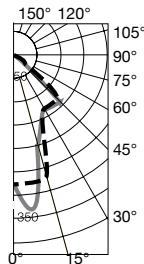
Photometric Data

Polar curves for a 1000 lm flux, according to NF C 71-120.
Luminaire symbol according to NF C 71-121.

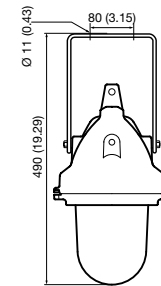
200 W incandescent
Efficiency 66.5%
NF C 71-121: 0.60 H + 0.06 T

CANDELA DISTRIBUTION

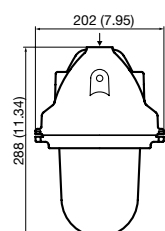
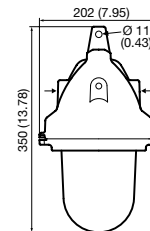
0-180	90-270
0	274
5	318
10	328
15	268
20	130
25	104
30	85
35	123
40	104
45	99
50	94
55	93
60	94
65	99
70	91



Dimensions in Millimeters (Inches)



Side Cable Entries with Hinged Bracket



Side Cable Entries

Top Cable Entry

Shaded catalog numbers are normally stocked items. All other items are made to order.

LDM Series Wellglass Luminaires

Flameproof. HID, Compact Fluorescent, Halogen, Incandescent, Mixed

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- For use in hazardous locations such as plants where plastics, paints, thinners and petrochemicals are manufactured.
- Ideal for street lighting on refinery sites or oil depots and for tank lighting purposes.

Features

- E27 or E40 lamp holder.
- High temperature internal wiring.
- Threaded flame path.
- Stainless steel fastenings.
- Closed by screwing on bezel.
- Operates in any position.
- Easy and efficient wiring due to separate Ex e terminal box with wiring onto two captive terminals capacity 2 x 6 mm².
- External earth terminal capacity 4 mm².
- 2 x M20 clearance holes through-wire cable entries supplied with one Ex e unarmored cable gland — sealing diameter 6.5 to 14.5 mm — and one blanking plug and two M20 locknuts.

Standard Materials

- Body and bezel: gray painted marine grade aluminum alloy
- Internal reflector: aluminum

Certifications and Compliances

◆ ATEX/IECEX Certification

- **Certification Type: LTd (Model LT1d)**
 - Gas: Zone 1 - 2
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex de IIC
 - Temperature Class: *See Table on following page*
 - Dust: Zone 21 - 22
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: *See Table on following page*
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 50246
 - ATEX Certificate: LCIE 02 ATEX 6165
 - IECEx Certificate: IECEx LCI Ex 04.0019
 - Index of Protection according EN/IEC 60529: IP66/67
 - Impact Resistance (shock): IK08

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.В.00912



LDM Version



LDM Version with Guard

LDM Series Wellglass Luminaires

Flameproof. HID, Compact Fluorescent, Halogen, Incandescent, Mixed

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

T Rating for Gas

Lamp Type and Wattage	Ambient Temperature					
	Lighting Downward			Lighting Upward		
	Ta = +40 °C	Ta = +50 °C	Ta = +55 °C	Ta = +40 °C	Ta = +50 °C	Ta = +55 °C
18 W Compact Fluorescent	T6	T6	T6	T6	T5	T5
150 W Halogen	T4	T4	T4	T4	T3	T3
70 W High Pressure Sodium	T5	T4	T4	T4	T4	T4
100 W High Pressure Sodium	T3	T3	T3	T3	T3	T3
150 W High Pressure Sodium	T3	T3	T3	T3	T3	T3
80 W Mercury	T4	T4	T4	T4	T4	T4
125 W Mercury	T3	T3	T3	T3	T3	T3
160 W Mixed	T3	T3	T3	T3	T3	T3
100 and 200 W Incandescent	T4	T3	T3	T3	T3	T3

Surface Temperature for Dust

Lamp Type and Wattage	Ambient Temperature for Ta = +55 °C	
	Lighting Downward	Lighting Upward
18 W Compact Fluorescent	+80 °C	+95 °C
150 W Halogen	+130 °C	+195 °C
70 W High Pressure Sodium	+130 °C	+130 °C
100 W High Pressure Sodium	+184 °C	+184 °C
150 W High Pressure Sodium	+184 °C	+184 °C
80 W Mercury	+130 °C	+130 °C
125 W Mercury	+195 °C	+195 °C
160 W Mixed	+195 °C	+195 °C
100 and 200 W Incandescent	+195 °C	+195 °C

Flameproof Wellglass Luminaires for Hazardous Areas – Ex de IIC – LDM Series

Supplied with 1 x M20 Ex e cable gland in polyamide diameter 6.5 to 14.5 mm and 1 x M20 blanking plug. Lamps are not supplied.

Lamp Wattages	Voltage (+/- 10%)	Lamp Type ④		Weight kg	Volume dm³	Catalog Number
		Ellipsoidal	Tubular			
High Pressure Sodium						
70 W ①②	230/240 Vac, 50 Hz	X	X	9	30	LDML70AG1XJ
100 W ①	230/240 Vac, 50 Hz	X	X	9	30	LDML10AG1XJ
150 W ①	230/240 Vac, 50 Hz	X	X	9	30	LDML15AG1XJ
Metal Halide						
100 W ①	230/240 Vac, 50 Hz	X	X	9	30	LDMH10AG1XJ
150 W ①	230/240 Vac, 50 Hz	X	X	9	30	LDMH15AG1XJ
Mercury Vapor						
80 W ①	230/240 Vac, 50 Hz	–	–	9	30	LDMM80AG1XJ
125 W ①	230/240 Vac, 50 Hz	–	–	9	30	LDMM12AG1XJ
Compact Fluorescent						
18 W	–	–	–	7.5	30	LDMF18AG1
Incandescent						
200 W max. ③	–	–	–	7.5	30	LDMI20AG1






① Ballast supplied. ② For lamp with built-in ignitor. ③ 150 W halogen or 160 W mixed lamps can be used. ④ Only with lamp operating in any position.

LDM Series Wellglass Luminaires

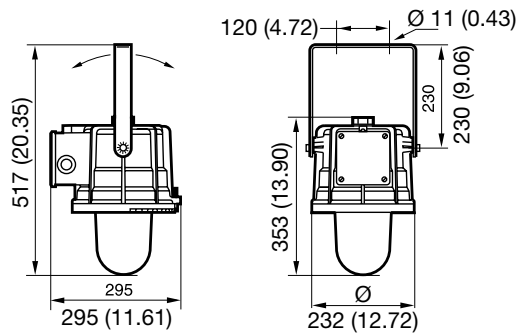
Flameproof. HID, Compact Fluorescent, Halogen, Incandescent, Mixed

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Accessories

	Description	Weight kg	Volume dm ³	Catalog Number
Protective Guard				
	Zinc plated steel protective guard	0.4	9	LDPG1Z
External Reflector				
	External white polyester reflector	3.2	97	LDER1P
Hinged Bracket				
	Zinc plated steel hinged bracket for installation on flat surface	3.4	3	LDMHBZ
Eyebolt				
	Zinc plated steel M10 eyebolt for suspension	0.4	0.2	LDRBM10Z
Mounting Strap				
	Gray painted aluminum	0.9	0.6	LDMSBA

Dimensions in Millimeters (Inches) – LDM Version with Hinged Bracket



Shaded catalog numbers are normally stocked items. All other items are made to order.

LDM Series Wellglass Luminaires

Flameproof. HID, Compact Fluorescent, Halogen, Incandescent, Mixed

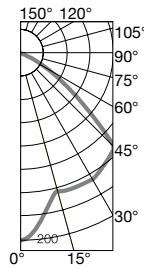
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Photometric Data

Polar curves for a 1000 lm flux, according to NF C 71-120.
Luminaire symbol according to NF C 71-121.

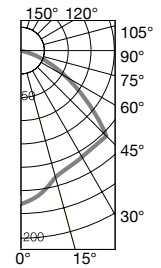
70 W High Pressure Sodium
Efficiency 54.4%
NF C 71-121: 0.54 F

CANDELA DISTRIBUTION		
	90-270	0-180
0	195	195
5	179	179
10	166	166
15	151	151
20	149	149
25	153	153
30	156	156
35	157	157
40	158	158
45	159	159
50	148	148
55	116	116
60	77	77
65	54	54
70	37	37



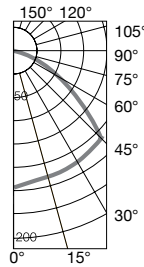
80 W Mercury
Efficiency 46.8%
NF C 71-121: 0.47 F

CANDELA DISTRIBUTION		
	90-270	0-180
0	158	158
5	154	154
10	145	145
15	138	138
20	136	136
25	135	135
30	134	134
35	133	133
40	133	133
45	133	133
50	125	125
55	98	98
60	67	67
65	45	45
70	31	31



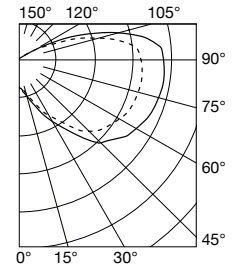
125 W Mercury
Efficiency 48%
NF C 71-121: 0.48 F

CANDELA DISTRIBUTION		
	90-270	0-180
0	147	147
5	143	143
10	138	138
15	133	133
20	133	133
25	136	136
30	138	138
35	137	137
40	136	136
45	134	134
50	126	126
55	104	104
60	74	74
65	50	50
70	32	32



150 W High Pressure Sodium
Efficiency 59.3%
NF C 71-121: 0.59 D

CANDELA DISTRIBUTION		
	90-270	0-180
0	19.72	19.72
5	18.82	17.47
10	21.50	19.13
15	25.63	23.75
20	32.78	30.06
25	40.19	36.76
30	47.77	43.14
35	55.50	48.77
40	67.88	59.97
45	77.18	66.78
50	81.09	71.22
55	87.05	74.58
60	90.17	77.82
65	92.66	79.70
70	94.77	81.16
75	95.68	82.02
80	96.17	82.11
85	96.18	81.94
90	95.10	80.31



LDB, LDG and LDR Series Wellglass Luminaires

Flameproof. High Pressure High Pressure Sodium, Mercury, Metal Halide, Mixed, Incandescent, Induction

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- For use in hazardous locations such as plants where plastics, paints, thinners and petrochemicals are manufactured.
- Ideal for street lighting on refinery sites or oil depots and for tank lighting purposes.

Features

- Compensated power supply.
- Power factor ≥ 0.9
- Flat joint for IIB version, threaded joint for IIC version.
- E40 lamp holder with lock thread.
- High temperature internal wiring.
- Operates in any position subject to lamp type.
- Easy and efficient wiring due to separate Ex e terminal box with wiring onto two captive terminals capacity 6 mm² and two internal earth terminals capacity 6 mm².
- External earth terminal capacity 4 mm².
- 2 x M20 clearance holes through-wire cable entries supplied with one Ex e unarmored cable gland — sealing diameter 6.5 to 14.5 mm — and one blanking plug and two M20 locknuts.

Standard Materials

- Body and bezel: gray painted marine grade aluminum alloy
- Internal reflector: aluminum
- External reflector: white painted zinc plated steel

Certifications and Compliances

◆ ATEX/IECEX Certification

- **Certification Type: LTd (Model LT2d)**
 - Gas: Zone 1 - 2
 - Conforming to ATEX 94/9/CE: Ex II 2 G
 - Type of Protection: Ex de IIB (LDB series); Ex de IIC (LDG and LDR series)
 - Temperature Class: *See Table on following page*
 - Dust: Zone 21 - 22
 - Conforming to ATEX 94/9/CE: Ex II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: *See Table on following page*
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 50246
 - ATEX Certificate: LCIE 02 ATEX 6165
 - IECEx Certificate: IECEx LCI Ex 04.0019
 - Index of Protection according EN/IEC 60529: IP66/67
 - Impact Resistance (shock): IK08

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912



LDB Version



LDB Version with Guard

LDB, LDG and LDR Series Wellglass Luminaires

Flameproof. High Pressure High Pressure Sodium, Mercury, Metal Halide, Mixed, Incandescent, Induction

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

T Rating for Gas

Lamp Type and Wattage	Ambient Temperature			
	Lighting Downward		Lighting Upward	
	Ta = +40 °C	Ta = +55 °C	Ta = +40 °C	Ta = +55 °C
85 W Induction	T6	T6	T6	T5
100 W High Pressure Sodium	T6	T5	T5	T4
150 W High Pressure Sodium	T6	T5	T4	T4
250 W High Pressure Sodium	T4	T4	T3	T3
250 W Metal Halide	T4	T4	T4	T3
250 W Mercury	T4	T4	T3	T3
250 W Mixes	T4	T4	T3	T3
300 W Incandescent	T5	T4	T3	T3
500 W Incandescent	T3	T3	T3	T2
400 W High Pressure Sodium	T4	T3	Not Available	Not Available
400 W Metal Halide	T4	T3	Not Available	Not Available

Surface Temperature for Dust

Lamp Type and Wattage	Lighting Downward	Lighting Upward
	°C	°C
85 W Induction	+80	+95
100 W High Pressure Sodium	+95	+130
150 W High Pressure Sodium	+95	+130
250 W High Pressure Sodium	+130	+195
250 W Metal Halide	+130	+195
250 W Mercury	+130	+195
250 W Mixes	+130	+195
300 W Incandescent	+130	+195
500 W Incandescent	+195	+290
400 W High Pressure Sodium	+134	Not Available
400 W Metal Halide	+134	Not Available

LDB, LDG and LDR Series Wellglass Luminaires

Flameproof. High Pressure High Pressure Sodium, Mercury, Metal Halide, Mixed, Incandescent, Induction

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Supplied with 1 x M20 Ex e cable gland in polyamide— 6.5 to 14.5 mm diameter — and 1 x M20 blanking plug. Lamps are not supplied, except for Induction version.

Lamp Wattages	Voltage (+/- 10%)	Lamp Type		Weight kg	Volume dm ³	Catalog Number
		Ellipsoidal	Tubular			
Flameproof Wellglass Luminaires for Hazardous Areas – Ex de IIB – LDB Series						
Electro Magnetic Induction ②						
85 W ①	230/240 Vac, 50/60 Hz	—	—	22.0	86.7	LDBQ85AG2BJ
High Pressure Sodium						
100 W ①④	230/240 Vac, 50 Hz	X	X	22.0	86.7	LDL10AG2XJ
150 W ①④	230/240 Vac, 50 Hz	X	X	22.5	86.7	LDL15AG2XJ
250 W ①	230/240 Vac, 50 Hz	X	X	22.5	86.7	LDL25AG2XJ
Metal Halide						
250 W ①	230/240 Vac, 50 Hz	X	X	22.5	86.7	LDBH25AG2XJ
Mercury Vapor						
250 W ①	230/240 Vac, 50 Hz	—	—	22.5	86.7	LDBM25AG2XJ
Incandescent						
300 W to 500 W ③	—	—	—	19.0	86.7	LDBI30AG2
Flameproof Wellglass Luminaires for Hazardous Areas – Ex de IIC – LDG series						
Electro Magnetic Induction ②						
85 W (1)	230/240 Vac, 50/60 Hz	—	—	22.0	86.7	LDGQ85AG2BJ
High Pressure Sodium						
100 W ①	230/240 Vac, 50 Hz	X	X	22.0	86.7	LDGL10AG2XJ
150 W ①	230/240 Vac, 50 Hz	X	X	22.5	86.7	LDGL15AG2XJ
250 W ①	230/240 Vac, 50 Hz	X	X	22.5	86.7	LDGL25AG2XJ
Metal Halide						
250 W ①	230/240 Vac, 50 Hz	X	X	22.5	86.7	LDGH25AG2XJ
Mercury Vapor						
250 W ①	230/240 Vac, 50 Hz	—	—	22.5	86.7	LDGM25AG2XJ
Incandescent						
300 W to 500 W ③	—	—	—	19.0	86.7	LDGI30AG2
Flameproof Wellglass Luminaires for Hazardous Areas – Ex de IIC – LDR Series						
High Pressure Sodium						
400 W ①	220/230/240 Vac, 50 Hz	X	X	31.0	144	LDRL40AG2XJ
Metal Halide						
400 W ①	220/230/240 Vac, 50 Hz	X	X	31.0	144	LDRH40AG2XJ

① Ballast supplied.

② Service life 60,000 hours.

③ 250 W mixed lamps can be used.










④ Also available in LDM Series

LDB, LDG and LDR Series Wellglass Luminaires

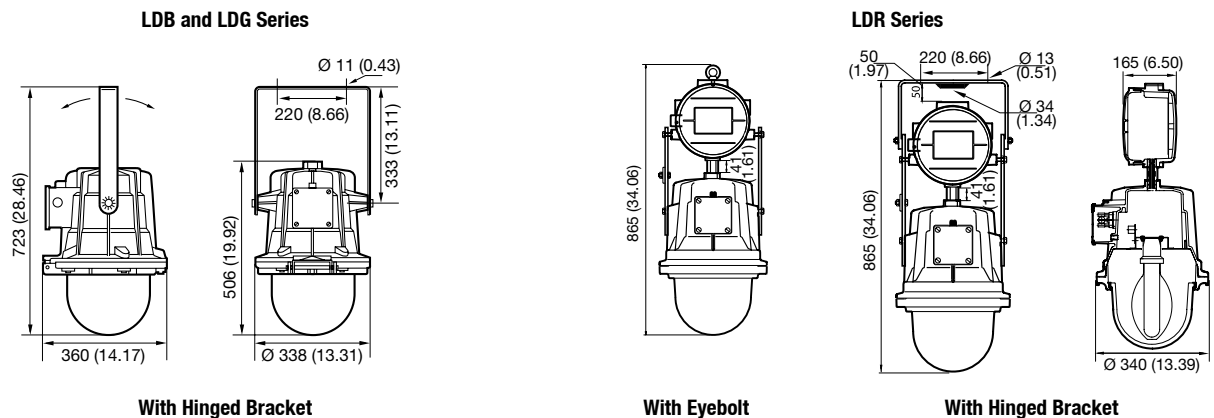
Flameproof. High Pressure Sodium, Mercury, Metal Halide, Mixed, Incandescent, Induction

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Accessories

Description	Weight kg	Volume dm ³	Catalog Number
Protective Guard			
 Zinc plated steel protective guard	1.2	27	LDPG2Z
External Reflector			
 White painted steel	3.4	108	LDER2Z
 White polyester	2.5	108	LDER2P
Hinged Bracket – Zinc plated steel hinged bracket for installation on flat surface			
 For LDB or LDG Series	3.4	8	LDGHBZ
 For LDR Series	3.4	8	LDRHBZ
Eyebolt – Zinc plated steel eyebolt for suspension			
 M10 – For LDB or LDG Series	0.1	0.2	LDRBM10Z
 M16 – For LDR Series	0.1	0.2	LDRBM16Z
Mounting Strap – Zinc plated steel mounting straps			
 For LDB or LDG Series	0.9	0.6	LDGSBZ
 For LDR Series	0.9	0.6	LDRSBZ

Dimensions in Millimeters (Inches)



LDB, LDG and LDR Series Wellglass Luminaires

Flameproof. High Pressure Sodium, Mercury, Metal Halide, Mixed, Incandescent, Induction

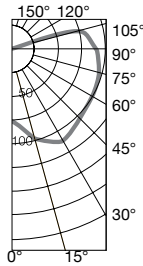
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Photometric Data

Polar curves for a 1000 lm flux, according to NF C 71-120.
Luminaire symbol according to NF C 71-121.

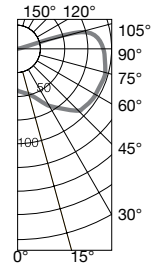
85 W Induction
Efficiency 85.9%
NF C 71-121: 0.62 J + 0.24 T

CANDELA DISTRIBUTION		
	90-270	0-180
0	75	75
5	80	80
10	89	89
15	98	98
20	105	105
25	114	114
30	117	117
35	116	116
40	112	112
45	107	107
50	102	102
55	99	99
60	97	97
65	94	94
70	92	92



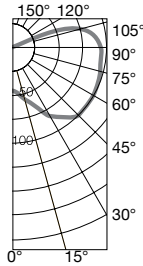
150 W High Pressure Sodium
Efficiency 70.6%
NF C 71-121: 0.50 J + 0.20 T

CANDELA DISTRIBUTION		
	90-270	0-180
0	33	33
5	36	36
10	42	42
15	48	48
20	55	55
25	62	62
30	70	70
35	78	78
40	84	84
45	87	87
50	89	89
55	88	88
60	88	88
65	87	87
70	87	87



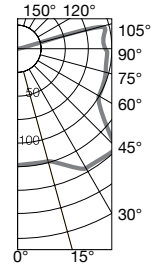
250 W High Pressure Sodium
Efficiency 79.3%
NF C 71-121: 0.56 J + 0.23 T

CANDELA DISTRIBUTION		
	90-270	0-180
0	40	40
5	43	43
10	49	49
15	57	57
20	64	64
25	72	72
30	80	80
35	89	89
40	95	95
45	97	97
50	98	98
55	97	97
60	96	96
65	95	95
70	94	94



500 W Incandescent
Efficiency 98%
NF C 71-121: 0.71 H + 0.28 T

CANDELA DISTRIBUTION		
	90-270	0-180
0	147	147
5	128	128
10	133	133
15	149	149
20	159	159
25	159	159
30	173	173
35	166	166
40	157	157
45	136	136
50	120	120
55	104	104
60	99	99
65	91	91
70	92	92



LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22

Zone 2 and 22
Gas (G) and Dust (D)

Applications

- Enclosed and gasketed fixtures suitable for use in:
 - Marine and wet locations
 - Areas where flammable gases, vapors or combustible dusts are present under conditions defined by the IEC as Zone 2 and 22
 - Applications where energy efficient, high lumen output is required
 - Non-hazardous locations where severe weather conditions, excessive moisture, dirt, dust, corrosive atmosphere or high ambient temperatures are encountered
- Typical applications include:
 - Pulp and paper mills
 - Processing plants
 - Chemical plants
 - Oil refineries
 - Foundries
 - Manufacturing plants
 - Storage areas
 - Waste and sewage treatment
 - Other areas where dust, water, dirt and rough usage are a problem

Features

- Power supply 230/240 V (+6% - 10%) 50 Hz.
- Instant relighting with auxiliary halogen lamps, depending on model (lamps not supplied).
- Fast relighting for 70 W and 150 W high pressure sodium: 5 to 30 seconds depending on the duration of the mains power supply failure.
- Connection via terminal block — 2 x 4 mm² maximum.
- Superior corrosion-resistance: copperfree die-cast mounting hoods, ballast housing and guards have a gray epoxy powder coat, electrostatically applied for complete and uniform protection.
- Wide choice of light sources: high pressure sodium, metal halide, mercury vapor and incandescent.
- Six mounting arrangements to suit any lighting layout – pendant, ceiling, wall bracket, angled or straight stanchion and pendant cone (for dust applications).
- Hinge has high lip for added safety during installation and servicing. Hinge and bolt construction assures 360° compression at all points on ballast housing gasket for positive sealing. Swing away design of captive bolt and nut simplifies servicing.
- All fixtures designed to perform in a -40 °C ambient temperature up to +55 °C.
- Standard dome or 30° angle reflectors made of fiberglass reinforced white polyester. Highly resistant to corrosive atmospheres and vented to improve fixture cooling characteristics.
- Fixture housing mounting hoods and guards are die-cast copperfree aluminum with epoxy powder coat finish.
- All exposed hardware is stainless steel and captive. Stainless thread inserts in the ballast bodies prevent “freezing” of the screws that affix guards and reflectors, simplifying removal for service.
- One piece ballast housing for each component provides even heat dissipation for cooler operation and longer ballast life.
- Fixture bodies are provided with two silicone rubber O-Ring style gaskets that will stay flexible and assure even compression around their circumference. They easily withstand high temperatures, moisture, dirt and dust for worry free operation.



Low Profile Ceiling Mount with Prismatic Globe and Optional Guard



50-200 Watt 25° Stanchion Mount with Prismatic Globe



50-200 Watt 90° Stanchion Mount with Prismatic Globe and Optional Guard



400 Watt Straight Stanchion Mount with Prismatic Glass Globe and Optional Guard

Standard Materials

- Mounting hoods and ballast bodies: die-cast copperfree (4/10 of 1% max.) aluminum
- Hardware and catch assemblies: stainless steel
- Globe: heat and impact resistant internally fluted glass
- Gasket: high temperature silicon
- Reflector: fiberglass reinforced polyester
- Guards: polyester powder coat finished cast copperfree aluminum (LN1 and LN2 sizes) or stainless steel (LN3 and LN4 sizes)

Standard Finishes

- Mounting hoods, ballast bodies and guards: epoxy powder coat finish, electrostatically applied for complete, uniform surface protection
- Reflectors: white polyester finish

LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22

Zone 2 and 22
Gas (G) and Dust (D)

Lighting

WELLGLASS LUMINAIRES

Certifications and Compliances

◆ ATEX/IECEX Certification

• Certification Type: LN

- Gas: Zone 2
- Conforming to ATEX 94/9/CE: Ⓢ II 3 G
- Type of Protection: Ex nR IIC Gc
- Dust: Zone 22
- Conforming to ATEX 94/9/CE: Ⓢ II 3 D
- Type of Protection: Ex tc IIIC Dc
- Ambient Temperature: +40 °C to +55 °C
- CE Declaration of Conformity: 50217
- ATEX Certificate: LCIE 08 ATEX 6036X
- IECEX Certificate: IECEX LCI 10.0041X
- Index of Protection according EN/IEC 60529: IP66

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

Order using catalog numbering guide below or select catalog number from tables on following pages.

Catalog Numbering Guide for LN Series Luminaires

LN Series: LN - LN Series Zone 2 and 22 ATEX/IECEX Certified	1 Body Size: 1 - Size 1 (MLBG) 2 - Size 2 (KPB) 3 - Size 3 (KPBR) 4 - Size 4 (KPB400)	A Mounting: A - Pendant (Rigid Mounting) C - Ceiling D - Pendant Cone F - Pendant (Flexible Mounting) R - Straight Stanchion S - 25° Stanchion W - Wall	H Lamp Type: H - Metal Halide L - High Pressure Sodium M - Mercury Vapor Q - Induction Z - Halogen/ Incandescent	70 Lamp Wattage: 70 - 70 W 80 - 80 W 85 - 85 W Induction only 10 - 100 W 12 - 125 W 15 - 150 W 25 - 250 W 40 - 400 W	A Hub Size: A - M20 2 - 3/4" NPT 3 - 1" NPT 4 - 1-1/4" NPT 5 - 1-1/2" NPT	G2 Globe: G2 - Glass Globe VPGL-2HR G4 - Glass Globe VPGL-4HR	XA Voltage (Magnetic Ballast): XA - 220 Vac, 50 Hz XJ - 230/240 Vac, 50 Hz	P Options: P - PTFE Coating
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LN Mercmaster Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22

Zone 2 and 22
Gas (G) and Dust (D)

T Rating

	Gas			Dust		
	Zone 2 T Rating according Ambient Temperatures			Zone 22 Surface Temperature for Ambient T° = +55 °C		
		+40 °C	+50 °C	+55 °C	Dust Surface	Cable
70 W HPS	T Rating	T4	T4	T4	+113 °C	–
100 W HPS	T Rating	T4	T3	T3	+143 °C	–
100 W Incandescent	T Rating	T4	T3	T3	+143 °C	–
100 W Halogen	T Rating	T4	T3	T3	+143 °C	–
125 W Mercury	T Rating	T4	T3	T3	+143 °C	–
150 W HPS	T Rating	T4	T3	T3	+143 °C	–
150 W Halide	T Rating	T4	T3	T3	+143 °C	–
150 W Incandescent	T Rating	T4	T3	T3	+143 °C	–
150 W Halogen	T Rating	T4	T3	T3	+143 °C	–
250 W HPS	T Rating	T4	T4	T3	+137 °C	–
250 W Halide	T Rating	T4	T3	T3	+143 °C	–
250 W Mercury	T Rating	T4	T3	T3	+143 °C	–
400 W HPS	T Rating	T3	T3	T3	+167 °C	+89 °C
	Cable T°	–	+84 °C	+89 °C		
400 W Halide	T Rating	T3	T3	T3	+171 °C	+87 °C
	Cable T°	–	+82 °C	+87 °C		
400 W Mercury	T Rating	T3	T3	T3	+171 °C	+89 °C
	Cable T°	–	+84 °C	+89 °C		

LN Mercmaster™ ATEX Series Wellglass Luminaires







Zone 2 and 22. High Pressure Sodium

Zone 2 and 22
Gas (G) and Dust (D)

Lighting

WELLGLASS LUMINAIRES

Version : High Pressure Sodium







	Lamp Type	Cable Entry	Lamp Watts	Lampholder	Weight kg	Volume dm ³	Catalog Number
Pendant							
	HPS	1 x 3/4" NPT	70 W	E27	7.4	39	LN1AL702G2XJ
			100 W	E40	9.0	55	LN2AL102G2XJ
			150 W	E40	9.0	55	LN2AL152G2XJ
			250 W	E40	16.0	70	LN3AL252G4XJ
			400 W	E40	19.0	85.2	LN4AL402G4XJ
Pendant Cone							
	HPS	1 x 3/4" NPT	70 W	E27	7.4	39	LN1DL702G2XJ
			100 W	E40	9.0	55	LN2DL102G2XJ
			150 W	E40	9.0	55	LN2DL152G2XJ
			250 W	E40	16.0	70	LN3DL252G4XJ
			400 W	E40	19.0	85.2	LN4DL402G4XJ
Ceiling							
	HPS	5 x 1" NPT with: - 4 x 1" NPT fitted plugs - 2 x 1" NPT-M20 adaptors - 2 x M20 plugs	70 W	E27	7.4	39	LN1CL70AG2XJ
			100 W	E40	9.0	55	LN2CL10AG2XJ
			150 W	E40	9.0	55	LN2CL15AG2XJ
			250 W	E40	16.0	70	LN3CL25AG4XJ
			400 W	E40	19.0	85.2	LN4CL40AG4XJ
Wall							
	HPS	5 x 1" NPT with: - 4 x 1" NPT fitted plugs - 2 x 1" NPT-M20 adaptors - 2 x M20 plugs	70 W	E27	7.4	39	LN1WL70AG2XJ
			100 W	E40	9.0	55	LN2WL10AG2XJ
			150 W	E40	9.0	55	LN2WL15AG2XJ
			250 W	E40	16.0	70	LN3WL25AG4XJ
			400 W	E40	19.0	85.2	LN4WL40AG4XJ
25° Angled Stanchion							
	HPS	1 x 1- 1/4" NPT	70 W	E27	7.4	39	LN1SL704G2XJ
			100 W	E40	9.0	55	LN2SL104G2XJ
			150 W	E40	9.0	55	LN2SL154G2XJ
			250 W	E40	16.0	70	LN3SL254G4XJ
			400 W	E40	19.0	85.2	LN4SL404G4XJ
Straight Stanchion							
	HPS	1 x 1- 1/4" NPT	70 W	E27	7.4	39	LN1RL704G2XJ
			100 W	E40	9.0	55	LN2RL104G2XJ
			150 W	E40	9.0	55	LN2RL154G2XJ
			250 W	E40	16.0	70	LN3RL254G4XJ
			400 W	E40	19.0	85.2	LN4RL404G4XJ

LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22. Incandescent/Halogen

Zone 2 and 22
Gas (G) and Dust (D)

Version : Halogen/Incandescent







	Lamp Type	Cable Entry	Lamp Watts	Lampholder	Weight kg	Volume dm ³	Catalog Number
Pendant							
	Inc./ Halogen	1 x 3/4" NPT	100 W	E27	7.4	39	LN1AZ102G2
			150 W	E27	7.4	39	LN1AZ152G2
Pendant Cone							
	Inc./ Halogen	1 x 3/4" NPT	100 W	E27	7.4	39	LN1DZ102G2
			150 W	E27	7.4	39	LN1DZ152G2
Ceiling							
	Inc./ Halogen	5 x 1" NPT with: - 4 x 1" NPT fitted plugs - 2 x 1" NPT-M20 adaptors - 2 x M20 plugs	100 W	E27	7.4	39	LN1CZ10AG2
			150 W	E27	7.4	39	LN1CZ15AG2
Wall							
	Inc./ Halogen	5 x 1" NPT with: - 4 x 1" NPT fitted plugs - 2 x 1" NPT-M20 adaptors - 2 x M20 plugs	100 W	E27	7.4	39	LN1WZ10AG2
			150 W	E27	7.4	39	LN1WZ15AG2
25° Angled Stanchion							
	Inc./ Halogen	1 x 1-1/4" NPT	100 W	E27	7.4	39	LN1SZ104G2
			150 W	E27	7.4	39	LN1SZ154G2
Straight Stanchion							
	Inc./ Halogen	1 x 1-1/4" NPT	100 W	E27	7.4	39	LN1RZ104G2
			150 W	E27	7.4	39	LN1RZ154G2

LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22. Mercury Vapor

Zone 2 and 22
Gas (G) and Dust (D)

Version : Mercury Vapor







	Lamp Type	Cable Entry	Lamp Watts	Lampholder	Weight kg	Volume dm ³	Catalog Number
Pendant							
	MV	1 x 3/4" NPT	150 W	E27	7.4	39	LN1AM122G2XJ
			250 W	E40	14.0	70	LN3AM252G4XJ
			400 W	E40	19.0	85.2	LN4AM402G4XJ
Pendant Cone							
	MV	1 x 3/4" NPT	150 W	E27	7.4	39	LN1DM122G2XJ
			250 W	E40	14.0	70	LN3DM252G4XJ
			400 W	E40	19.0	85.2	LN4DM402G4XJ
Ceiling							
	MV	5 x 1" NPT with: - 4 x 1" NPT fitted plugs - 2 x 1" NPT-M20 adaptors - 2 x M20 plugs	150 W	E27	7.4	39	LN1CM12AG2XJ
			250 W	E40	14.0	70	LN3CM25AG4XJ
			400 W	E40	19.0	85.2	LN4CM40AG4XJ
Wall							
	MV	5 x 1" NPT with: - 4 x 1" NPT fitted plugs - 2 x 1" NPT-M20 adaptors - 2 x M20 plugs	150 W	E27	7.4	39	LN1WM12AG2XJ
			250 W	E40	14.0	70	LN3WM25AG4XJ
			400 W	E40	19.0	85.2	LN4WM40AG4XJ
25° Angled Stanchion							
	MV	1 x 1-1/4" NPT	150 W	E27	7.4	39	LN1SM124G2XJ
			250 W	E40	14.0	70	LN3SM254G4XJ
			400 W	E40	19.0	85.2	LN4SM404G4XJ
Straight Stanchion							
	MV	1 x 1-1/4" NPT	150 W	E27	7.4	39	LN1RM124G2XJ
			250 W	E40	14.0	70	LN3RM254G4XJ
			400 W	E40	19.0	85.2	LN4RM404G4XJ

LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22. Metal Halide

Zone 2 and 22
Gas (G) and Dust (D)

Version : Metal Halide

	Lamp Type	Cable Entry	Lamp Watts	Lampholder	Weight kg	Volume dm ³	Catalog Number
Pendant							
	MH	1 x 3/4" NPT	150 W	E40	9.0	55	LN2AH152G2XJ
			250 W	E40	16.0	70	LN3AH252G4XJ
			400 W	E40	19.0	85.2	LN4AH402G4XJ
Pendant Cone							
	MH	1 x 3/4" NPT	150 W	E40	9.0	55	LN2DH152G2XJ
			250 W	E40	16.0	70	LN3DH252G4XJ
			400 W	E40	19.0	85.2	LN4DH402G4XJ
Ceiling							
	MH	5 x 1" NPT with: - 4 x 1" NPT fitted plugs - 2 x 1" NPT-M20 adaptors - 2 x M20 plugs	150 W	E40	9.0	55	LN2CH15AG2XJ
			250 W	E40	16.0	70	LN3CH25AG4XJ
			400 W	E40	19.0	85.2	LN4CH40AG4XJ
Wall							
	MH	5 x 1" NPT with: - 4 x 1" NPT fitted plugs - 2 x 1" NPT-M20 adaptors - 2 x M20 plugs	150 W	E40	9.0	55	LN2WH15AG2XJ
			250 W	E40	16.0	70	LN3WH25AG4XJ
			400 W	E40	19.0	85.2	LN4WH40AG4XJ
25° Angled Stanchion							
	MH	1 x 1-1/4" NPT	150 W	E40	9.0	55	LN2SH154G2XJ
			250 W	E40	16.0	70	LN3SH254G4XJ
			400 W	E40	19.0	85.2	LN4SH404G4XJ
Straight Stanchion							
	MH	1 x 1-1/4" NPT	150 W	E40	9.0	55	LN2RH154G2XJ
			250 W	E40	16.0	70	LN3RH254G4XJ
			400 W	E40	19.0	85.2	LN4RH404G4XJ





LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22

Zone 2 and 22
Gas (G) and Dust (D)

Lighting

WELLGLASS LUMINAIRES

Item	Description	Catalog Number
White Polyester Reflectors		
For Globe Fixtures – LN1 and LN2 sizes		
	Standard Dome	KR2ST
	30° Angle	KR2AN
For Glass Refractor Fixtures – LN3 and LN4 sizes		
	Standard Dome	CMR4ST
	30° Angle	CMR4AN
Guards		
For Globe Fixtures – LN1 and LN2 sizes		
	Aluminium	KRGU2
		
For Glass Refractor Fixtures – LN3 and LN4 sizes		
	Stainless Steel	KPGU400

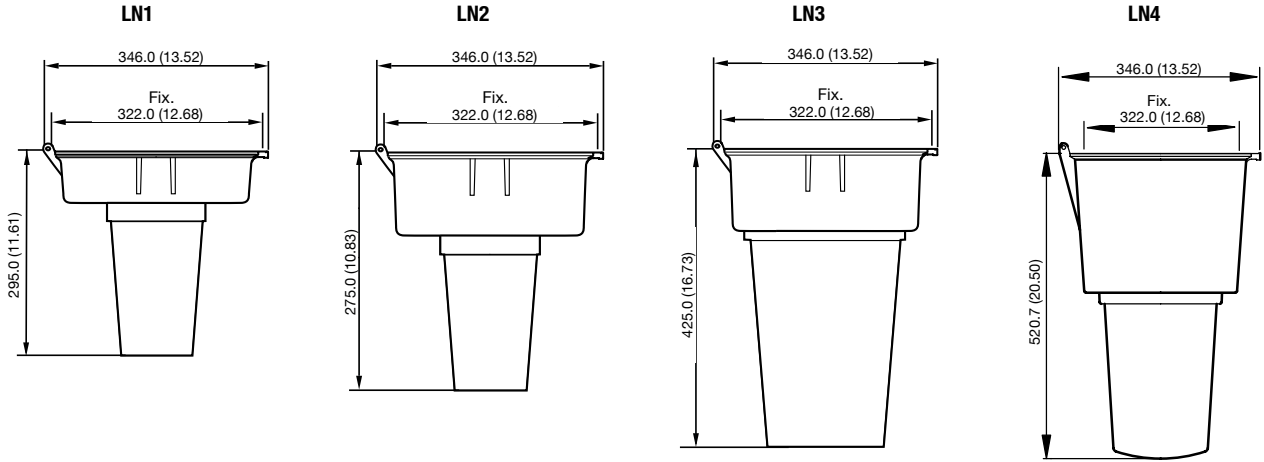
LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22

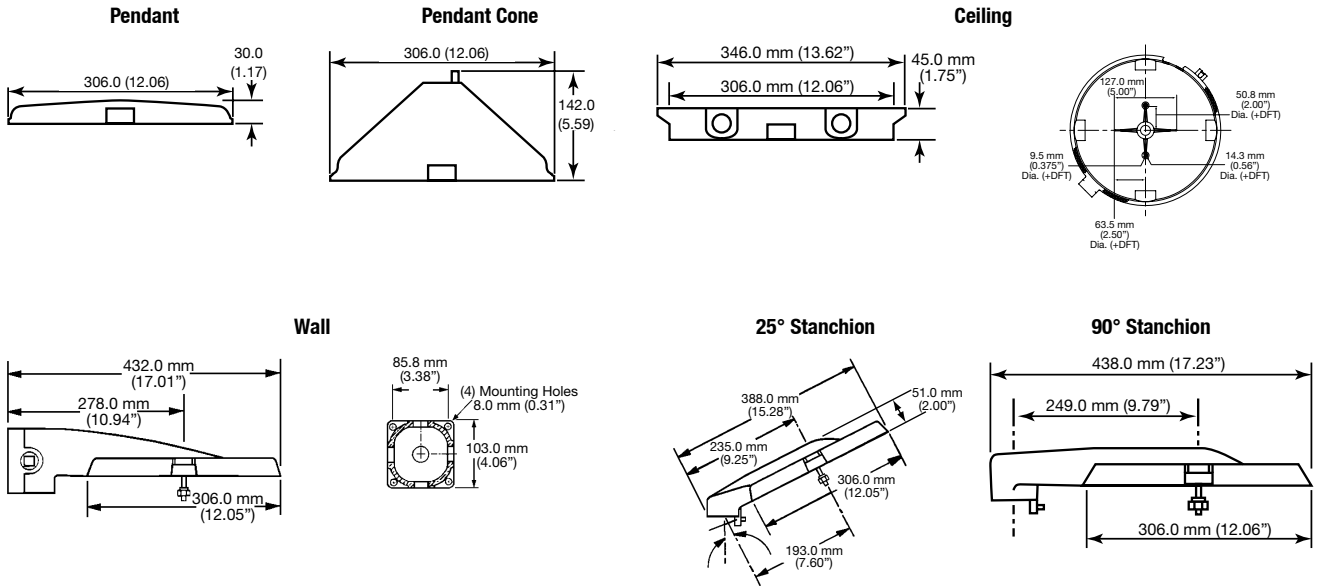
Zone 2 and 22
Gas (G) and Dust (D)

Dimensions in Millimeters (Inches)

Ballast Body with Globe



Mounting Hoods



LN Mercmaster™ ATEX Series Wellglass Luminaires

Zone 2 and 22

Zone 2 and 22
Gas (G) and Dust (D)

Lighting

WELLGLASS LUMINAIRES

Photometric Data

Polar curves for a 1000 lm flux, according to NF C 71-120
Luminaire symbol according to NF C 71-121

--- Longitudinal
— Transverse

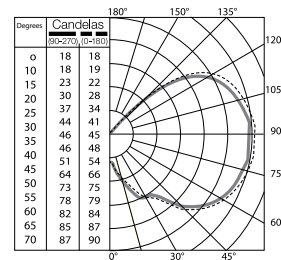
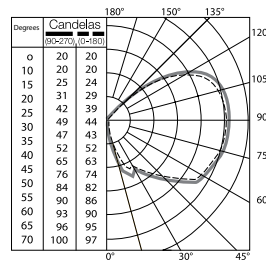
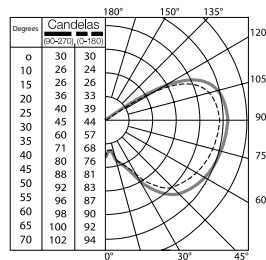
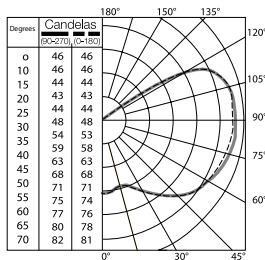
High Pressure Sodium

70 W HP Sodium — Efficiency 74.6%

150 W HP Sodium — Efficiency 87.3%

250 W HP Sodium — Efficiency 89.1%

400 W HP Sodium — Efficiency 82.3%

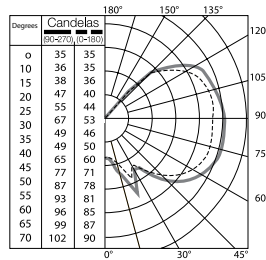
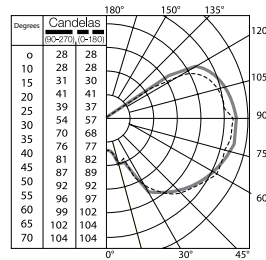
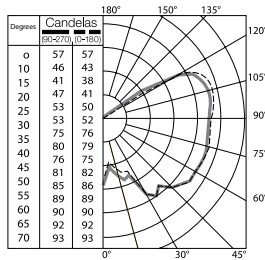


Metal Halide

150 W Metal Halide — Efficiency 82.4%

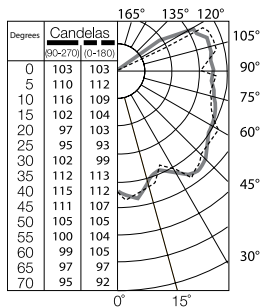
250 W Metal Halide — Efficiency 96.2%

400 W Metal Halide — Efficiency 89.8%



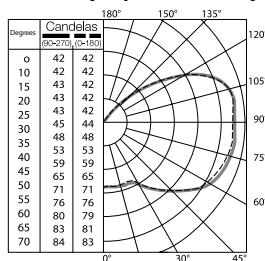
Incandescent or Halogen

150 W HP Incandescent Halogen — Efficiency 90.6%



Mercury Vapor

250 W Mercury Vapor — Efficiency 76%



HBE Series Round Bulkhead Luminaires

Increased Safety. Incandescent

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Suitable for use in:
 - Stairways
 - Small areas
 - Emergency exit

Features

- For incandescent lamps 60 W to 150 W maximum, mixed lamp 100 W maximum. Lamps not supplied.
- E27 lampholder.
- Screw locking mechanism.
- Operates in all positions.
- Connection to lampholder via two 2 x 2.5 mm² terminals.
- Internal earth two terminals 2 x 2.5 mm². External earth 1 x 4 mm².
- Three M20 entries in "T" formation. Supplied with one M20 cable gland [6.5 to 14.5 mm diameter] and two M20 blanking plugs.

Standard Materials

- Body: gray painted aluminum alloy
- Diffuser: glass
- Sealing gasket: silicone
- Guard: zinc plated steel
- Cable gland and blanking plug: polyamide

Certifications and Compliances

◆ATEX Certification

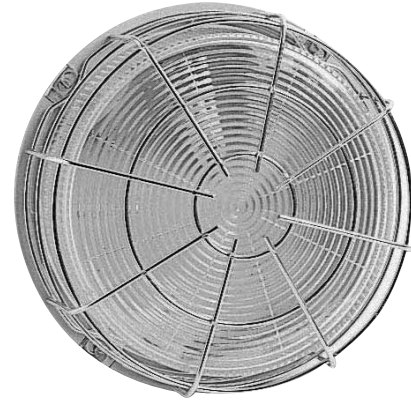
- **HBRD - Certification HBe150**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex e II
 - Temperature Class: *See Table on following page*
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T102 °C to T137 °C
 - Ambient Temperature: -40 °C to +50 °C
 - CE Declaration of Conformity: 50244
 - ATEX Certificate: LCIE 02 ATEX 6228X
 - Index of Protection according EN/IEC 60529: IP65

◆EURASEC Certification

- EURASEC N° TC RU C-FR.r605.B.00912

◆Others Certification

- INMETRO Certificate: BVC 11.0494-X ^①



HBERI15 and HBEPGZ

^① Inmetro certification available on special request only. Contact your local sales for more information


HBE Series Round Bulkhead Luminaires

Increased Safety. Incandescent

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Lighting











BULKHEAD LUMINAIRES

	Weight kg	Volume dm ³	Catalog Number
	3	15	HBER15

Accessories

	Catalog Number
Protective Guard	HBEPGZ
Spare Lamp Glass	HBEGD

T Rating (Gas) and Surface Temperature (Dust) Table

Lamp Type and Wattage			Gas				Dust
Wattage	Type	Operating Positions	For Ta = +40° C		For Ta = +50° C		Surface T° for Ta = +50° C
			T Rating	T° at Cable Entry	T Rating	T° at Cable Entry	
60	Incandescent	Any Position	T2	⓪	T2	⓪	+102 °C
			T3	⓪	T3	⓪	
			T4	⓪	T4	⓪	
75	Incandescent	Any Position	T2	⓪	T2	⓪	+107 °C
			T3	⓪	T3	⓪	
			T4	⓪	T4	⓪	
100	Mercury	Any Position	T2	⓪	T2	+83 °C	+117 °C
			T3	⓪	T3	+83 °C	
			T3	⓪	T3	⓪	
100	Incandescent	Any Position	T1	+90 °C	T1	+100 °C	+137 °C
			T3	+90 °C	T2	+100 °C	
			T3	⓪	T3	⓪	
150	Mixed	Any Position	T2	+82 °C	T2	+92 °C	+130 °C
			T3	+82 °C	T3	+92 °C	
			T3	⓪	T3	⓪	

⓪ Not Applicable, no need for high temperature cable for cable entry temperature less than +80 °C.

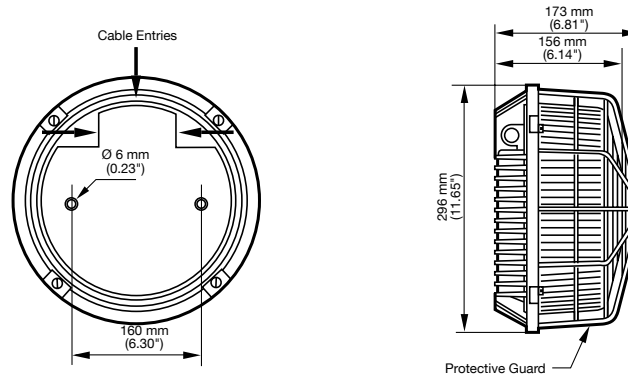
Shaded catalog numbers are normally stocked items. All other items are made to order.

HBE Series Round Bulkhead Luminaires

Increased Safety. Incandescent

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

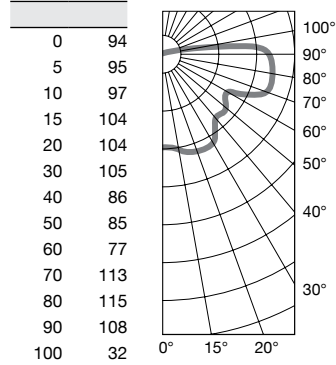
Dimensions in Millimeters (Inches)



Photometric Data ①

150 W Incandescent
NF C 71-120: .062 J + 0.10 T

CANDELA DISTRIBUTION



① Polar curves for a 1000 lm flux, according to NF C 71-120. Luminaire symbol according to NF C 71-121.

HBN Series Round Bulkhead Luminaires

Flameproof. Incandescent

Zone 2 and 22
Gas (G) and Dust (D)

Applications

- Suitable for use in:
 - Stairways
 - Small areas
 - Emergency exit

Features

- For incandescent lamps 60 W to 150 W maximum, mixed lamp 100 W maximum, mercury 80 W maximum (remote mercury ballast not supplied). Lamps not supplied.
- E27 lampholder.
- Screw locking mechanism.
- Operates in all positions.
- Connection to lampholder via two 2 x 2.5 mm² terminals.
- Internal earth two terminals 2 x 2.5 mm². External earth 1 x 4 mm².
- Three M20 entries in "T" formation. Supplied with one M20 cable gland [6.5 to 14.5 mm diameter] and two M20 blanking plugs.

Standard Materials

- Body: gray painted aluminum alloy
- Diffuser: glass
- Sealing gasket: silicone
- Guard: zinc plated steel
- Cable gland and blanking plug: polyamide

Certifications and Compliances

◆ATEX Certification

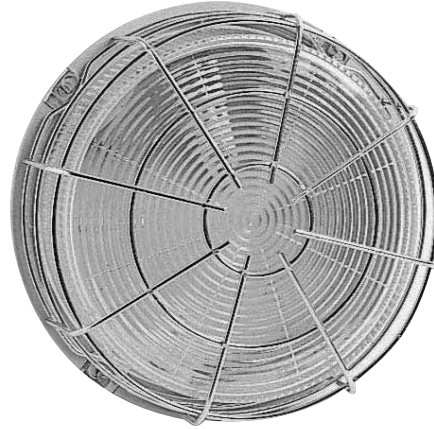
- **Certification Type: HBn150**
 - Gas: Zone 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 G
 - Type of Protection: Ex nR II
 - T Rating: *See Table on following page*
 - Dust: Zone 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 D
 - Type of Protection: Ex tD A22
 - Surface Temperature: *See Table on following page*
 - Ambient Temperature: -20 °C ≤ Ta ≤ +50 °C
(-20 °C ≤ Ta ≤ +40 °C for 80 W Mercury)
 - CE Declaration of Conformity: 50220
 - ATEX Certificate: LCIE 03 ATEX 6167X
 - Index of Protection according EN/IEC 60529: IP65

◆EURASEC Certification

- EURASEC N° TC RU C-FR.ГБ.05.B.00912

◆Others Certification

- INMETRO Certificate: BVC 11.0462-X ^①




HBnR15 and HBEPGZ

^① Inmetro certification available on special request only. Contact your local sales for more information

HBN Series Round Bulkhead Luminaires

Flameproof. Incandescent

Zone 2 and 22
Gas (G) and Dust (D)

	Weight kg	Volume dm ³	Catalog Number
	3	15	HBNR115

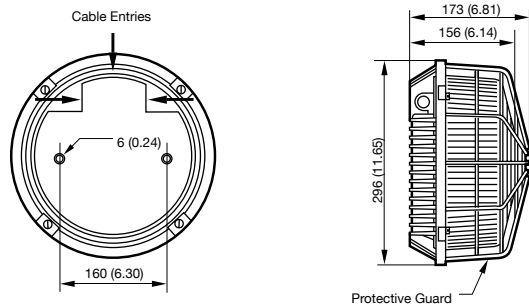
Accessories

	Catalog Number
Protective Guard	HBEPGZ
Spare Lampglass	HBEGD

T Rating (Gas) and Surface Temperature (Dust) Table

Lamp Type and Wattage		T Rating for Ta = +40 °C	Gas T Rating for Ta = +50 °C	T° at Cable Input	Dust Surface T° for Ta = +50 °C
Wattage	Type				
60	Incandescent	T5	T4	—	+101 °C
75	Incandescent	T5	T4	—	+104 °C
80	Mercury	T3	—	—	+131 °C Ta = +40 °C
100	Incandescent	T4	T4	+83 °C	+114 °C
100	Mixed	T4	T4	+100 °C	+125 °C
150	Incandescent	T4	T4	+92 °C	+120 °C

Dimensions in Millimeters (Inches)

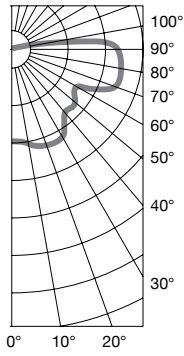


Photometric Data ①

Incandescent
NF C 71-120: .062 J + 0.10 T

CANDELA DISTRIBUTION

Beam Angle	Candela
0	185
5	178
10	171
15	156
20	132
30	110
40	97
50	87
60	90
70	100
80	96
90	58
100	58



① Polar curves for a 1000 lm output according to NF C 71-120. Luminaire symbol according to NF C 71-121.

Shaded catalog numbers are normally stocked items. All other items are made to order.

HBD Series Bulkhead Luminaires

Flameproof. Incandescent, Compact Fluorescent, Mixed

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Suitable for use in:
 - Stairways
 - Small areas
 - Emergency exit

Features

- HBDR
 - Lamps (not supplied)
 - Incandescent 200 W maximum
 - Compact Fluorescent 23 W maximum
 - Mixed 160 W maximum
 - Threaded flameproof joint.
 - Operates on ceiling and wall.
- HBDO
 - Incandescent 60 W to 100 W maximum
 - Compact fluorescent 15 W maximum
 - Operates in any position.
 - For incandescent 60 W and 100 W a high temperature cable 106 °C is required.
- Lamps are not supplied.
- E27 lampholder.
- Fixing by two integrated brackets.
- Connection to lampholder via two terminals 2.5 mm².
- Internal earth two terminals 2.5 mm²
- External earth one 4 mm².
- 3 x M20 threaded entries in “T” formation.
- Supplied with two blanking plugs M20.
- Supplied with Protective Guard

Standard Materials

- Body and bezel: gray painted aluminum
- Glass: sealed toughened lamp glass
- Protective guard: zinc plated steel

Certifications and Compliances

◆ ATEX Certification

- **HBRD - Certification Type HBRd**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature Class: *See Table on following page*
- Dust: Zones 21 and 22
- Conforming to ATEX 94/9/CE: Ⓢ II 2 D
- Type of Protection: Ex tD A21
- Ambient Temperature: -40 °C to +55 °C
- CE Declaration of Conformity: 50242
- ATEX Certificate: LCIE 02 ATEX 6163
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK08
- Internal Volume: > 2 dm³ -2 liters
- **HBDO - Certification Type HBOD**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature Class: *See Table on following page*
- Dust: Zones 21 and 22
- Conforming to ATEX 94/9/CE: Ⓢ II 2 D
- Type of Protection: Ex tD A21
- Ambient Temperature: -20 °C to + 40 °C

- CE Declaration of Conformity: 50234
- ATEX Certificate: LCIE 02 ATEX 6162
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK08
- Internal Volume: > 2 dm³ -2 liters

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

◆ Others Certification

- **HBDO - Certification Type HBOD**
 - INMETRO Certificate: BVC11.0597 ①



HBDR
Round Bulkhead (supplied with Protective Guard)




HBDO
Oval Bulkhead (supplied with Protective Guard)

① Inmetro certification available on special request only. Contact your local sales for more information

HBDR Series Bulkhead Luminaires

Flameproof. Incandescent, Compact Fluorescent, Mixed

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

	Weight kg	Volume dm ³	Catalog Number
	7.5	23.4	HBDR

Spare Parts

	Catalog Number
Protective Guard	HBDRPGZ

T Rating for Gas ①

Lamp Type and Wattage			Operating Positions					
			Ceiling			Wall		
Wattage	Type	Ambient Temperature	+40° C	+50° C	+55° C	+40° C	+50° C	+55° C
8	Compact Fluorescent	T Rating	T6	T6	T6	T6	T6	T6
15	Compact Fluorescent	T Rating	T6	T6	T6	T6	T6	T6
23	Compact Fluorescent	T Rating	T6	T6	T6	T5	T5	T4
100	Incandescent	T Rating	T5	T4	T4	T5	T4	T4
200	Incandescent	T Rating	T4	T4	T4	T4	T4	T4
		T° at cable entry	—	+84° C	+89° C	—	+84° C	+89° C
100	Mixed	T Rating	T4	T4	T4	T4	T4	T4
180	Mixed	T Rating	T3	T3	T3	T3	T3	T3
		T° at cable entry	—	+87 C	+92° C	—	+87 C	+92° C

Surface Temperature for Dust ①

Lamp Type and Wattage		Operating Positions			
		Ceiling		Wall	
Wattage	Type	Surface T° for Ta = +55 °C	T° at Cable Entry Ta= +55 °C	Surface T° for Ta= +55 °C	T° at Cable Entry Ta= +55 °C
8	Compact Fluorescent	+60 °C	—	+70 °C	—
15	Compact Fluorescent	+64 °C	—	+76 °C	—
23	Compact Fluorescent	+69 °C	—	+96 °C	—
100	Incandescent	+105 °C	—	+105 °C	—
200	Incandescent	+130 °C	+89 °C	+130 °C	+89 °C
100	Mixed	+130 °C	—	+130 °C	—
160	Mixed	+149 °C	+92 °C	+149 °C	+92 °C


① No need for high temperature cable for cable entry temperature less than +80 °C .

Shaded catalog numbers are normally stocked items. All other items are made to order.

HBDO Series Bulkhead Luminaires

Flameproof. Incandescent, Compact Fluorescent

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

	Weight kg	Volume dm ³	Catalog Number
	3	9	HBDO

Spare Parts

	Catalog Number
Protective Guard	HBDOPGZ
Terminal block For through wiring 2 x 2.5 mm ² with high temperature sleeve	094784

T Rating for Gas ①

Lamp Type and Wattage		Temperature Class for Ta = +40 °C	T° at Cable Input for Ta = +40 °C
Wattage	Type		
7	Compact Fluorescent	T6	—
11	Compact Fluorescent	T6	—
15	Compact Fluorescent	T6	—
60	Incandescent	T4	+106 °C
100	Incandescent	T4	+106 °C

T Rating for Dust ①

Lamp Type and Wattage		Temperature Class for Ta = +40 °C
Wattage	Type	
7	Compact Fluorescent	+76 °C
11	Compact Fluorescent	+76 °C
15	Compact Fluorescent	+76 °C
60	Incandescent	+119 °C
100	Incandescent	+119 °C

① No need for high temperature cable for cable entry temperature less than +80 °C .

Shaded catalog numbers are normally stocked items. All other items are made to order.

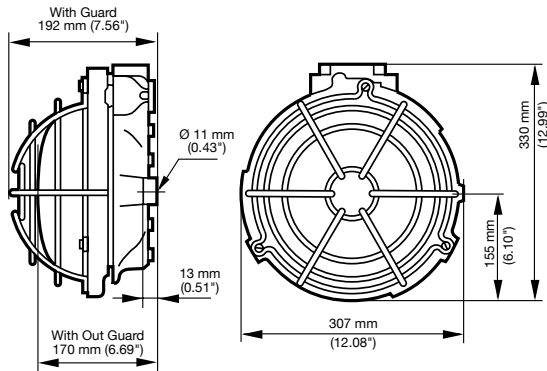
HBD Series Bulkhead Luminaires

Flameproof. Incandescent, Compact Fluorescent, Mixed

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

HBDR Series Bulkhead Luminaires — Incandescent, Compact Fluorescent, Mixed

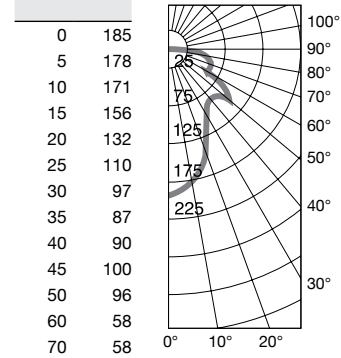
Dimensions in Millimeters (Inches)



Photometric Data ①

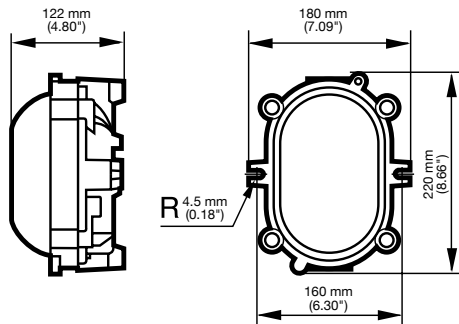
Incandescent
NF C 71-120: .068 G + 0.01 T

CANDELA DISTRIBUTION



HBDO Series Bulkhead Luminaires — Incandescent, Compact Fluorescent

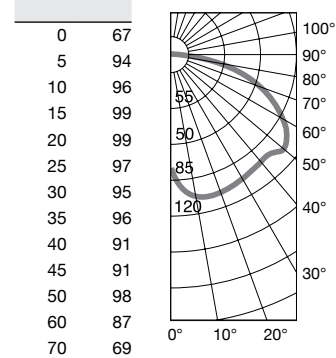
Dimensions in Millimeters (Inches)



Photometric Data ①

Incandescent
NF C 71-120: .068 H

CANDELA DISTRIBUTION



① Polar curves for a 1000 lm output according to NF C 71-120. Luminaire symbol according to NF C 71-121.

HBDC Series Cylindrical Bulkhead Luminaires

Flameproof. Incandescent, Fluorescent, High Pressure Sodium

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- For illumination of:
 - Stairways
 - Small areas
 - Emergency exit

Features

- For lamps:
 - 70 W high pressure sodium (ovoid type E27 lampholder)
 - 18/20 W compact fluorescent lamp (E27 lampholder)
 - 2 x 40 W incandescent lamp (E27 lampholder)
 - 8 W fluorescent bulb (G5 lampholder) (lamp supplied)
- HPS version: compensated power supply (+/-10%) with power factor 0.9:
 - 230/240 V, 50 Hz
- Connection to plug-in terminal block via 2 x 3 terminals 2.5 mm²
- Operates in any position.
- Threaded access cover with O-ring seal.
- Two integrated mounting lugs.
- 1 external earth via 4 mm² bracket.
- 2 x M20 threaded cable entries.
- Supplied with 1 plug M20 (cable gland not supplied).

Standard Materials

- End cap and cover: Zamak, anticorrosion treated and painted gray
- Sealed tube: toughened glass
- External reflector: galvanized steel painted white
- Protective guard: zinc plated steel
- Lamps are not supplied except for 8 W fluorescent bulb

Options

- Fixing accessories available in 316 stainless steel or zinc plated steel.
- Fall prevention fixing kit in stainless steel.

Certifications and Compliances

◆ ATEX/IECEX Certification

• Certification Type: FLd

- Gas: Zone 1 - 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIB/IIC
 - Temperature Class: See Table on following page
- Dust: Zone 21 - 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: See Table on following page
- Ambient Temperature: -20 °C ≤ Ta ≤ +50 °C ;
for 70 W HPS: -40 °C ≤ Ta ≤ +50 °C
- CE Declaration of Conformity: 50203
- ATEX Certificate: LCIE 97 ATEX 6012
- IECEx Certificate: IECEx LCI 04.0018
- Index of Protection according EN/IEC 60529: IP66/68 (10 m)
- Impact Resistance (shock): IK08
- Internal Volume: > 2 dm³ - 2 liters



70 W High Pressure Sodium Version



Compact Fluorescent Version

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г605.B.00912

◆ Others Certification

- INMETRO Certificate: BVC11.0492 ^①

Related Products

- For labels see *Labels for Emergency Lighting Units, ATX Self-Adhesive Signaling Labels for Emergency Lighting Units.*

^① Inmetro certification available on special request only. Contact your local sales for more information

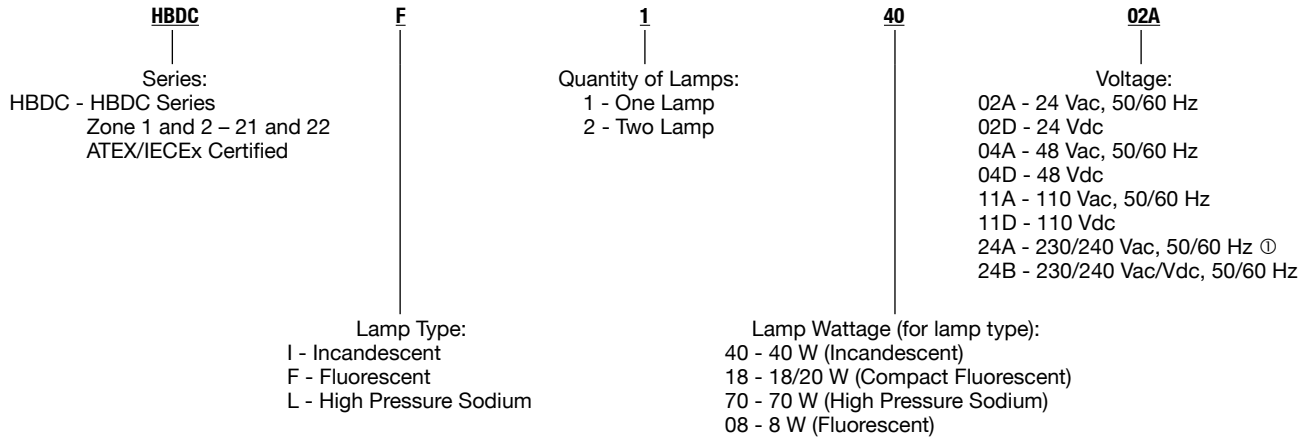
HBDC Series Cylindrical Bulkhead Luminaires

Flameproof. Incandescent, Fluorescent, High Pressure Sodium

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Order using catalog numbering guide below to decipher the catalog number logic on the following page.

Catalog Numbering Guide – HBDC Series Cylindrical Bulkhead Luminaires



T Rating (Gas) and Surface Temperature (Dust) Table

Versions	Gas T Rating				Dust Surface Temperature	
	Without External Reflector		With External Reflector		Without External Reflector °C	With External Reflector °C
	Ta = +40 °C	Ta = +55 °C	Ta = +40 °C	Ta = +55 °C		
Incandescent lamp (2 x 40 W) ②	T5	T5	T5	T5	+95°C	+95°C
Compact Fluorescent lamp (20 W max)	T6	T5	T5	T4	+95°C	+130°C
Fluorescent (8 W - G5 lampholder)	T6	T5	T5	T4	+95°C	+130°C
High Pressure Sodium Lamp (70 W ovoid) ②	T4 for Ta = +50 °C		-	-	+122°C	-

① 50 Hz only for the 70 W HPS Version.












② Lamp not supplied.

HBDC Series Cylindrical Bulkhead Luminaires

Flameproof. Incandescent, Fluorescent, High Pressure Sodium

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Lamp	Lampholder	Voltage	Weight kgs	Volume dm ³	Catalog Number
2x40 W Incandescent ①	E27	—	7.1	31	HBDCI240
70 W High Pressure Sodium ①	E27	230/240 Vac, 50 Hz	7.1	33	HBDCI17024A
1 x 8 W Fluorescent	G5	24 Vdc	8.3	31	HBDCF10802D
1 x 8 W Fluorescent	G5	48 Vdc	8.3	31	HBDCF10804D
1 x 8 W Fluorescent	G5	110 Vdc	8.3	31	HBDCF10811D
1 x 8 W Fluorescent	G5	230/240 Vac, 50/60 Hz 198/254 Vdc	8.3	31	HBDCF10824B
2 x 8 W Fluorescent	G5	230/240 Vac, 50/60 Hz 198/254 Vdc	8.3	31	HBDCF20824B
1 x 18/20 W Compact Fluorescent ①	E27	—	7.1	33	HBDCF118

	Description	Catalog Number
	External reflector in galvanized steel (painted white) (not compatible with 70 W HPS version)	FDER1G
	Protective guard in zinc plated steel	FDPG1Z
	Protective guard in zinc plated steel for 70 W HPS version	FDPG5Z
	Quick one-hand fixing (Set of 2 brackets) in zinc plated steel	FDFBZ
	Quick one-hand fixing (Set of 2 brackets) in 316 stainless steel	FDFBS
	Fixing unit on flat surface (Set of 2 brackets) in zinc plated steel	FDSBZ
	Fixing unit on flat surface (Set of 2 brackets) in 316 stainless steel	FDSBS
	Fixing unit in zinc plated steel for 1-1/2" tube [49 mm diameter] or for 1-1/4" tube [42 mm diameter]	FDHC49Z
	Fixing unit in 316 stainless steel for 1-1/2" tube [49 mm diameter] or for 1-1/4" tube [42 mm diameter]	FDHC49S
	Fixing unit in zinc plated steel for 2" tube [60 mm diameter]	FDHC60Z
	Fixing unit in stainless steel for 2" tube [60 mm diameter]	FDHC60S
	Fall prevention fixing kit in stainless steel [1.2 m chain]	FDSCS

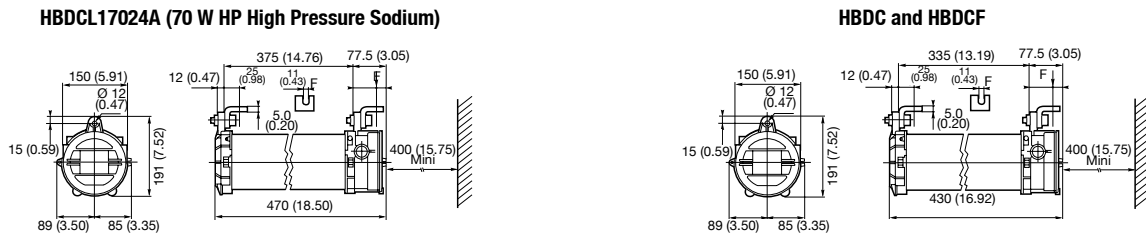
① Lamp not supplied.

HBDC Series Cylindrical Bulkhead Luminaires

Flameproof. Incandescent, Fluorescent, High Pressure Sodium

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Dimensions in Millimeters (Inches)



Photometric Data

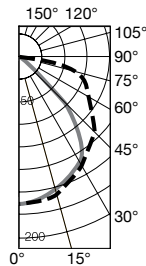
Polar curves for a 1000 lm flux, according to NF C 71-120.
Luminaire symbol according to NF C 71-121.

--- Longitudinal
— Transverse

70 W HP High Pressure Sodium
Efficiency 59.4%
NF C 71-121: 0.56G + 0.04T

CANDELA DISTRIBUTION

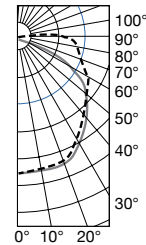
	0-180	90-270
0	166	166
5	167	165
10	164	162
15	162	156
20	158	151
25	155	143
30	151	133
35	146	122
40	141	110
45	135	95
50	128	81
55	120	66
60	111	52
65	101	39
70	90	27



2x40 W Incandescent
Efficiency: 75.6%
NFC 71-121: 0.74G + 0.02T

CANDELA DISTRIBUTION

	0-180	90-270
0	196	196
5	197	198
10	196	196
15	193	194
20	189	190
25	181	185
30	176	179
35	170	172
40	163	164
45	155	153
50	145	128
60	123	91
70	99	43



HBDA Series Rectangular Bulkhead Luminaires

Flameproof. Compact Fluorescent, Incandescent

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- For illumination of:
 - Stairways
 - Small areas
 - Emergency exit

Features

- Lamps (not supplied):
 - Incandescent 2 x 40 W
 - Compact fluorescent 1 x 18/20 W
- E27 lampholder.
- Operates in any position.
- Fixing by 2 brackets.
- Connection on two terminals 1 x 4 mm².
- Internal earth 1 x 4 mm².
- External earth 1 x 4 mm².
- Two M20 threaded entries.
 - Supplied with one aluminum blanking plug.

Standard Materials of Fixtures

- Body: gray painted cast aluminum
- Lens: sealed toughened lamp glass

Certifications and Compliances

◆ ATEX Certification

- Certification Type: **BRI40**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIB+H2
 - Temperatur Class:
 - T4 Incandescent
 - T6 Compact Fluorescent
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature:
 - T135 °C Incandescent,
 - T85 °C Compact Fluorescent
 - Ambient Temperature: -20 °C to +40 °C
 - CE Declaration of Conformity: 50252
 - ATEX Certificate: LCIE 03 ATEX 6098X
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK09
 - Internal Volume: > 2 dm³ - 2 liters

Related Products

- For labels see *Labels for Emergency Lighting Units, ATX Self-Adhesive Signaling Labels for Emergency Lighting Units.*



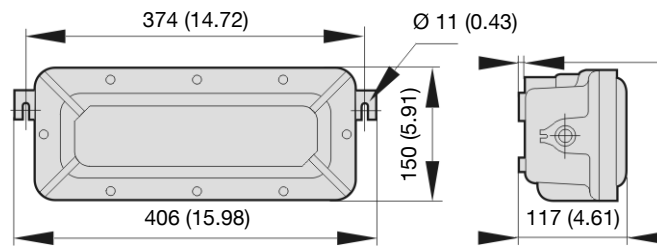
HBDA Series Rectangular Bulkhead Luminaires

Flameproof. Compact Fluorescent, Incandescent

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Number of Lamps (not supplied)	Lamp Type and Wattage	Cable Entries	Weight kg	Volume dm ³	Catalog Number
1	18/20 W Compact Fluorescent	M20	5.7	9	HBDAF118
2	40 W Incandescent	M20	5.7	9	HBDAI240

Dimensions in Millimeters (Inches)

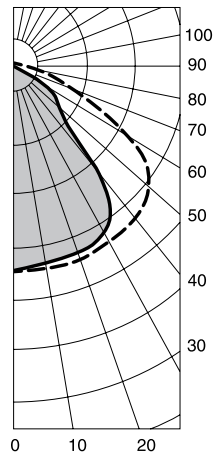


Photometric Data

Polar curves for a 1000 lm flux, according to NF C 71-120.
Luminaire symbol according to NF C 71-121.

--- Longitudinal
— Transverse

Degree	Candela Distribution	
	(0-180)	(90-270)
0	134	134
5	129	133
10	127	135
15	126	136
20	125	135
25	119	131
30	109	127
35	89	122
40	69	119
45	51	114
50	39	105
60	26	84
70	11	35



HRD Series Tank Inspection Lights

Flameproof. Incandescent, Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Designed to illuminate the interiors of boilers, tanks, bunkers, silos, mixers, separators, pipelines and other vessels or reactors that are normally closed.
- For use in hazardous areas where ignitable vapors, gases or highly combustible dusts are present.
- For installation in chemical and petrochemical plants, refineries and other process industries.

Features

- Type IIB version:
 - 40 W to 100 W incandescent or 50 W halogen lamp (lamp not supplied).
 - Internal aluminum reflector.
 - Operates in any position.
 - E27 lampholder.
 - Terminals: 2.5 mm².
 - Internal and external earth: 2.5 mm².
 - High temperature cable to be used.
 - Fixing by three integrated lugs.
 - One M20 threaded cable entry.
- Type IIC version:
 - 20 W to 50 W halogen lamp (lamp supplied).
 - Internal aluminum reflector.
 - Operates in any position.
 - G4 lampholder for 20 W and BA 15d for 50 W.
 - Power supply: 230 V 50/60 Hz.
 - Fitted with transformer 230/12 V for 12 V halogen lamp.
 - Terminals: 2.5 mm² terminals.
 - Internal earth: 2.5 mm².
 - External earth: 4 mm².
 - Supplied with a set of rocker hinges for mounting with DN 50 to DN 150 sightglass fittings (according to DIN 28 120).
 - One M20 threaded cable entry (via increased safety "e" box).

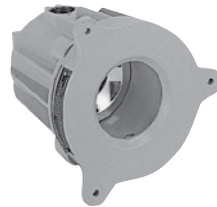
Standard Materials

- Body and bezel: gray painted marine grade aluminum alloy
- Lens: toughened sealed lamp glass
- Reflector: internal aluminum

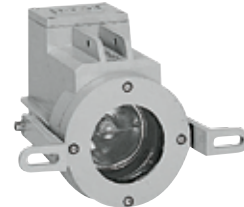
Certifications and Compliances

◆ ATEX Certification

- **IIB Version - Certification Type: HRCd**
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature class: T4 to T3
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T130 °C to T195 °C
 - Ambient Temperature: -40 °C to +40 °C
 - CE Declaration of Conformity: 50241
 - ATEX Certificate: LCIE 02 ATEX 6232
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK08
 - Internal Volume: > 2 dm³ -2 liters



IIB Version



IIC Version (50 W)



IIC Version (20 W)



IIB Version Fitted with
DN Model Sightglass Fitting

- **IIC Version - Certification Type: HRC 20WH (20W), HRC 50 (50W)**
 - Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T4 (20W), T3 (50W)
 - Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: 20 W: T130 °C, 50 W: T195 °C
 - Ambient Temperature: -20 °C to +40 °C
 - CE Declaration of Conformity: 50260 (20W), 50661 (50W)
 - ATEX Certificate: LCIE 03 ATEX 6110 (20W), LCIE 03 ATEX 6109 (50W)
 - Index of Protection according EN/IEC 60529: IP65

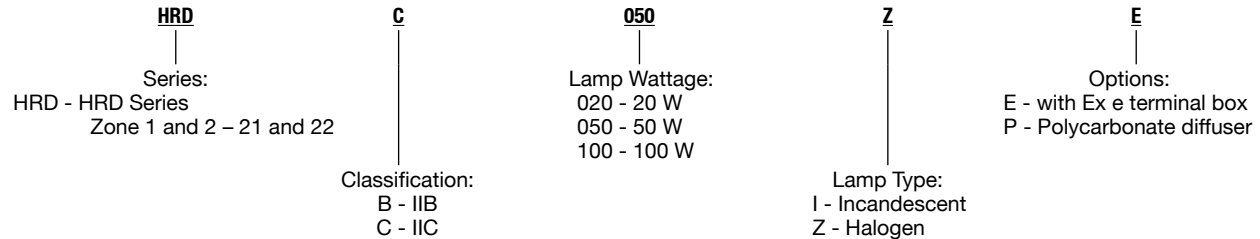
HRD Series Tank Inspection Lights

Flameproof. Incandescent, Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Order using catalog numbering guide below or select catalog number from table below

Catalog Numbering Guide – HRD Series Tank Inspection Lights



Description	Type	Weight kg	Volume dm ³	Catalog Number
40 W to 100 W incandescent or 50 W halogen ①	IIB	2.90	8.10	HRDB100I
20 W halogen ② 230 V, 50/60 Hz	IIC	2.30	3.00	HRDC020ZE
50 W halogen ② 230 V, 50/60 Hz	IIC	4.00	3.60	HRDC050ZE

Technical Data

Catalog Number	Version	Lamp Type and Wattage	T Rating	Ambient Temperature = +40 °C	
				Gas Cable Temperature	Dust Surface Temperature
HRDB100I (lamp not supplied)	IIB	40 W Incandescent	T4	N.A.	+130 °C
		60 W Incandescent	T3	+87 °C	+137 °C
		100 W Incandescent	T3	+107 °C	+195 °C
		50 W Halogen	T3	+82 °C	+149 °C

① Can also be used with compact fluorescent lamp.

② Lamp supplied.

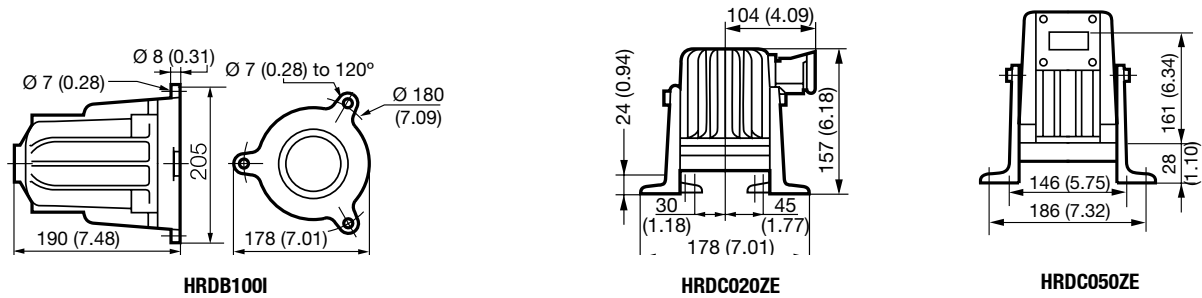
Shaded catalog numbers are normally stocked items. All other items are made to order.

HRD Series Tank Inspection Lights

Flameproof. Incandescent, Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Dimensions in Millimeters (Inches)



Photometric Data

IIC Versions

ISOLUX CURVE		20 W Version		Illuminance E (lux)				
Height (m)	Position	Distance (cm)	0	10	20	30	40	
1	L		3000	1000	125	-	-	
	H		3000	900	75	-	-	
2	L		1150	750	300	100	50	
	H		1150	750	300	100	50	

50 W Version		Illuminance E (lux)					
Height (m)	Position	Distance (cm)	0	10	20	30	40
1	L		12000	2300	375	50	-
	H		12000	2700	250	50	-
2	L		2550	1550	600	200	-
	H		2550	1800	800	200	-

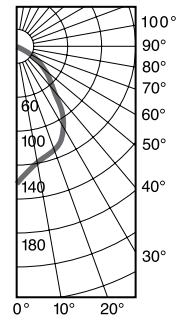
IIB Versions

Polar curves for a lumen output of 1000 lm flux,
according to NF C 71-120
Luminaire symbol as per NF C 71-121

100 W Incandescent

CANDELA DISTRIBUTION

Degree	Candelas
0	155
5	145
10	136
15	135
20	133
25	127
30	112
35	90
40	66
45	54
50	46
60	29
70	11



TCH Series Safety Flashlights

Increased Safety. Halogen, Incandescent

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- To provide maintenance staff with task specific portable lighting in Zone 1 hazardous areas.
- Ideal for persons requiring task specific portable lighting in refineries, oil and gas process and chemical plants, FPSO, FLNG, ...

Features

- Type TCH1:
 - Luminescent switch facilitates locating flashlight in dark.
 - Can be used to transmit a Morse code.
 - Halogen version provides twice the lumen output of incandescent lamps.
 - Hook for hands free operation.
 - Uses R20 or LR20 batteries (not included).
 - Supplied with 1 lamp.
- Type TCH2:
 - Dual optics (one at the end and one on the side) permitting:
 - Focused beam for safe movement.
 - Wide angle side beam for task specific focused lighting.
 - Ergonomic design permits easy manipulation: User can select one of the two beams with one hand.
 - Two beams can be switched on separately and not simultaneously.
 - Should one lamp fail, the second lamp will still provide illumination.
 - Flashlight is stable when placed upright on a horizontal surface.
 - Pocket clip allows for hands free work.
 - Luminescent ring allows easy locating of flashlight in dark.
 - Suspension hook for hands free use.
 - Uses 2 R20 or LR20 batteries (not included).
 - Supplied with one halogen lamp for main beam and one incandescent lamp for side beam.
 - Supplied with one special opening tool.

Standard Materials

- Type TCH1:
 - Housing: shockproof and antistatic polyamide
 - Internal reflector: polished
 - Lens: polycarbonate
 - Hardware: stainless steel
 - Switch: luminescent
- Type TCH2:
 - Housing: black polycarbonate
 - Internal reflector: polished
 - Lens: polycarbonate
 - Hardware: stainless steel
 - Ring: luminescent

Certifications and Compliances

◆ ATEX Certification

- **Certification Type: TCH1**
 - Gas: Zones 1–2
 - Conforming to ATEX 94/9/CE: II 2 G
 - Type of Protection: Ex eib IIC
 - Temperature Class: T4
- Dust: Zone 21-22
 - Conforming to ATEX 94/9/CE: II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: +95 °C



TCH1



TCH2

- Ambient Temperature: $-20\text{ °C} \leq T_a \leq +40\text{ °C}$
- CE Declaration of Conformity: 50259
- ATEX Certificate: LCIE 03 ATEX 6064
- Index of Protection according EN/IEC 60529: IP66

• Certification Type: TCH2

- Gas: Zones 1–2
 - Conforming to ATEX 94/9/CE: II 2 G
 - Type of Protection: Ex eib IIC
 - Temperature Class:
 - Incandescent PR6: T4 (+55°C)
 - Krypton PR102: T4 (+55°C)
 - Halogen HPR52: T4 (+40°C) - T3 (+55°C)
 - Halogen HPR01: T4 (+55°C)
- Dust: Zone 21-22
 - Conforming to ATEX 94/9/CE: II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: +130 °C
- Ambient Temperature: $-20\text{ °C} \leq T_a \leq +55\text{ °C}$
- CE Declaration of Conformity: 50238
- ATEX Certificate: LCIE 02 ATEX 6229
- Index of Protection according EN/IEC 60529: IP66/68 (25m)

◆ Others Certification

- **Certification Type: TCH1 / TCH2**
 - INMETRO Certificate: BVC11.0419 (TCH1) and BVC11.0420 (TCH2) ^①

^① Inmetro certification available on special request only. Contact your local sales for more information

TCH Series Safety Flashlights

Increased Safety. Halogen, Incandescent

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Ordering Information:

Number of lamps (included)	Type of Lamps (not included)	Number of Battery Cells	Weight kgs	Volume dm ³	Catalog Number
1	Incandescent — 2.5 V – 0.3 A	2	0.4	3.4	TCH12C
1	Incandescent — 3.7 V – 0.3 A	3	0.4	3.4	TCH13C
1	Halogen — 2.8 V – 0.5 A	2	0.4	3.4	TCH12H
2	Incandescent — 2.5 V – 0.3 A	2	0.4	1.9	TCH22M
	Halogen — 2.8 V – 0.5 A				

Spare Lamps for Replacement (Lamp Holder P13, 5S)

Lamp Type	Rating	Catalog Number
Incandescent (PR6)	2.5 V – 0.3 A	TCHL25C
Incandescent (PR7)	3.7 V – 0.3 A	TCHL37C
Halogen (HPR01)	2.8 V – 0.5 A	TCHL28H

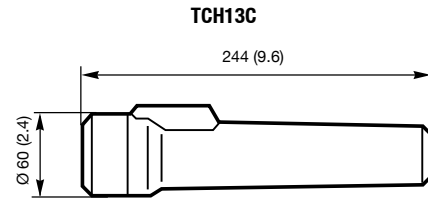
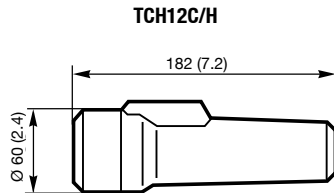
Shaded catalog numbers are normally stocked items. All other items are made to order.

TCH Series Safety Flashlights

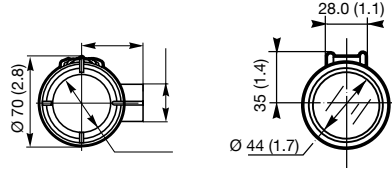
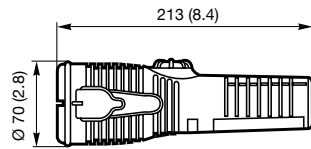
Increased Safety. Halogen, Incandescent

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

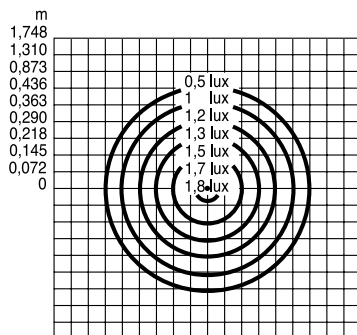
Dimensions in Millimeters (Inches)



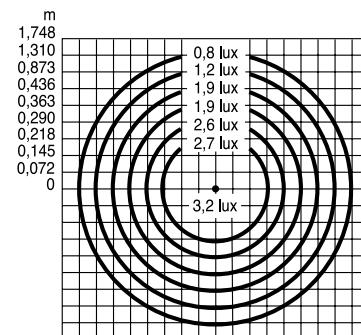
TCH22M



Photometric Data



Catalog Number TCH12C (at 25 meters) Incandescent



Catalog Number TCH13C (at 25 meters) Incandescent

HLD Series Handlamps

Flameproof. Incandescent, Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- To provide maintenance staff with task specific portable lighting in Zone 1 hazardous locations.
- Ideal for persons requiring task specific portable lighting in refineries, oil and gas process and chemical plants.

Features

- To be supplied with SELV (Service Extra Low Voltage) 24 Vac or 30 Vdc.
- 75 W maximum for incandescent lamp.
- 70 W maximum for halogen lamp.
- E27 lamp holder for incandescent lamp (not supplied).
- PK22S lamp holder for H3 lamp (supplied).
- Connection via two terminals — 1 x 2.5 mm².
- One M20 threaded entry.
- Protective guard.
- Fitted with suspension hook.

Standard Materials

- Body and bezel: gray painted aluminum alloy
- Lamp glass: sealed borosilicate glass
- Protective guard: white zinc plated steel

Certifications and Compliances

◆ ATEX Certification

- **Certification Type: BLd**
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature Class: T3 to T5 [See Table]
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T110 °C to T138 °C [See Table]

- Ambient Temperature: -20 °C to +55 °C
- CE Declaration of Conformity: 50240
- ATEX Certificate: LCIE 02 ATEX 6164
- Index of Protection according EN/IEC 60529: IP66
- Internal Volume: < 2 dm³ - 2 liters



T Rating (Gas) and Surface Temperature (Dust) Table

Type	Ambient T°	Gas				Dust Surface Temperature
		Lamp glass facing up		Lamp glass facing down		
		Ta = +40 °C	Ta = +55 °C	Ta = +40 °C	Ta = +55 °C	
40 W Incandescent	T Rating	T5	T4	T5	T4	+110 °C
	Cable T°	+56 °C	+71 °C	+66 °C	+81 °C	N.A.
60 W Incandescent	T Rating	T4	T4	T4	T4	+130 °C
	Cable T°	+61 °C	+76 °C	+73 °C	+88 °C	N.A.
75 W Incandescent	T Rating	T4	T3	T4	T4	+138 °C
	Cable T°	+67 °C	+82 °C	+79 °C	+94 °C	N.A.
55 W Halogen	T Rating	T4	T4	T4	T4	+122 °C
	Cable T°	+67 °C	+82 °C	+79 °C	+94 °C	N.A.
70 W Halogen	T Rating	T4	T4	T4	T4	+122 °C
	Cable T°	+67 °C	+82 °C	+79 °C	+94 °C	N.A.

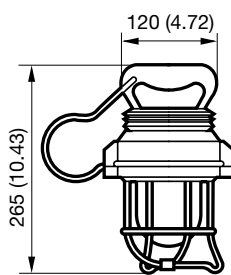
HLD Series Handlamps

Flameproof. Incandescent, Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Lamp Type, Wattage and Voltage	Weight kg	Volume dm ³	Catalog Number
75 W Maximum for Incandescent Lamp	2.8	13	HLD7502B
55 W Halogen 12 Vac/Vdc ^①	2.8	13	HLD5501B
70 W Halogen 24 Vac/Vdc ^①	2.8	13	HLD7002B

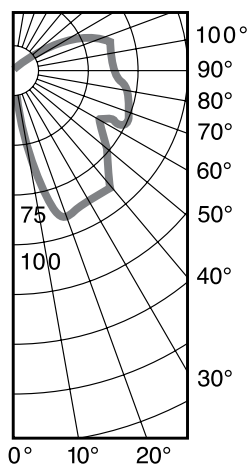
Dimensions in Millimeters (Inches)



Photometric Data

Polar curves for a 1000 lm output, according to NF C 71-120
Luminaire symbol according to NF C 71-121

Degrees	Candelas
0	23
5	37
10	51
15	68
20	83
25	82
30	82
35	82
40	82
45	77
50	72
60	61
70	73



^① Lamp supplied.

Shaded catalog numbers are normally stocked items. All other items are made to order.

PJ Series Portable Floodlights

Flameproof. Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Typical applications include aircraft manufacturing and maintenance facilities, refineries, chemical and petrochemical plants and where the permanent mounting of a fixture is not practical.

Features

- 55-70 W H3 halogen lamp.
- PK22S lamp holder.
- Connection via two terminals 1 x 2.5 mm².
- Internal earth connection 1 x 2.5 mm².
- External earth connection 1 x 4 mm².
- One M20 threaded rear entry.
- Operates in any position.
- Installed on cradle to allow horizontal and vertical adjustment.
- Lamp supplied

Standard Materials

- Body and bezel: gray painted aluminum alloy
- Lamp glass: sealed toughened glass
- Carrying handle: plastic covering

Certifications and Compliances

◆ ATEX Certification

• Certification Type: PJ70

- Gas: Zones 1 - 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature Class: T3 to T4 See Table
- Dust: Zone 21 - 22
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T120 °C to T142 °C See Table

- Ambient Temperature: -40 °C to +55 °C
- CE Declaration of Conformity: 50239
- ATEX Certificate: LCIE 02 ATEX 6227
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10
- Internal Volume: < 2 dm³ - 2 liters



T Rating (Gas) and Surface Temperature (Dust) Table

Lamp Type and Wattage	Position	Gas Temperature Rating			Dust Surface Temp at Ta = +55 °C
		Ta = +40 °C	Ta = +50 °C	Ta = +55 °C	
55 and 70 Watt Halogen		T4	T3	T3	+142 °C
		T4	T4	T3	+135 °C
		T4	T4	T4	+120 °C

PJ Series Portable Floodlights

Flameproof. Halogen

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Catalog Number Logic

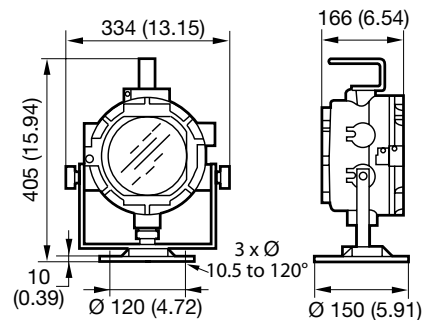
PJ
Series:
PJ - PJ Series
Zone 1 and 2 - 21 and 22
ATEX Certified

55
Lamp Type:
55 - 55 Watt Halogen
70 - 70 Watt Halogen

01B
Supply Voltage:
01B - 12 Vac/Vdc
02B - 24 Vac/Vdc
11A - 110 Vac, 50/60 Hz
23A - 230 Vac, 50/60 Hz

Lamp Type, Wattage and Voltage (Lamp supplied)	Weight kg	Volume dm ³	Catalog Number
55 W Halogen 12 Vac/Vdc	8	27	PJ5501B
70 W Halogen 24 Vac/Vdc	8	27	PJ7002B
70 W Halogen 110 V, 50/60 Hz ①	8	27	PJ7011A
70 W Halogen 230 V, 50/60 Hz ②	8	27	PJ7023A

Dimensions in Millimeters (Inches)



① With transformer 110/24 V (+6% -10%)

② With transformer 230/24 V (+6% -10%)

Shaded catalog numbers are normally stocked items. All other items are made to order.

FDBAES LED Series Self-Contained Emergency Lighting Units

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Provides adequate lighting and/or visual indication of access on exit routes during an evacuation in a hazardous environment.
- Can be installed in hazardous areas designated as Zone 1 and 2 - 21 and 22.
- Typical applications include oil refineries, petrochemical plants, pulp and paper mills.

Features

All versions:

- Power supply 230 Vac, 50/60 Hz.
- 1 hour duration (emergency).
- Threaded access cover with O-ring seal.
- Can be maintained in hazardous areas as an internal switch cuts off battery supply automatically once the cover is unscrewed and opened.
- Battery pack.
- Escape route lighting: 2.4 V - 1.5 Ah (2 cells - Nicd)
Space lighting: 7.2 V - 2.2 Ah (6 cells - NiMh) - Flameproof
- Padlockable switch is available on switched models which individually cuts off power supply and remote control.
- Charge indicator by 1 green LED (life time over 10 years).
- Operates in any position.
- Connection to plug-in terminal block via 2 x 5 x 2.5 mm² terminals.
- Supplied with two fixing lugs.
- Automatic built-in self-test system (SATI) with memorization of tests indicated by LEDs.
- Using a microprocessor and an internal clock, the unit will carry out automatic tests.
- Weekly test: Lamp check during 6 seconds.
- Quarterly test: Emergency operation and lamp check for 1 hour.
- Can be remotely controlled and checked without switching the mains off with remote control unit from Legrand (Catalog Number 03901) or URA (Catalog Number 095448 and 095450) manufacturers.
- The remote control unit installed in a safe area or inside a flameproof box allows manual ignition of all the units (maximum 300 units) for visual inspection of their operation.
- Escape route lighting: 55 lumens, 0.50 wattage.
Space lighting: 540 lumens, 0.95 wattage.

Addressable versions:

- Operates without additional control lines. Communication between units and the control system is realized via mains borne signals that utilize the existing electrical wiring.
- Standard control system capacity: one control system for up to 200 emergency lighting units.
- Optional increased control system capacity: booster (repeater unit) is used to increase the length of the network allowing up to 1000 emergency lighting units to be on one control system. This allows for the use of a single computer to centralize the management of the facilities emergency lighting system. For more information, please contact your local sales representative.

Standard Materials

- End caps and cover: aluminum
- O-ring seal: Nitrile
- Lens: tempered borosilicate glass
- Fixing brackets: zinc plated steel or 316 stainless steel
- Accessories: white painted galvanized steel
- Guard: zinc plated steel



FDBAESLEDEM

Options

- Addressable monitoring software, please consult your local sales representative.
- Low temperature application, please consult your local sales representative.

Certifications and Compliances

◆ATEX/IECEx Certification

- **Certification Type: FLd**
 - Gas: Zone 1 - 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T6
 - Dust: Zone 21 - 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C
 - Ambient Temperature: -40 °C to +55 °C ①
 - CE Declaration of Conformity: 50203
 - ATEX Certificate: LCIE 97 ATEX 6012
 - IECEx Certificate: IECEx LCI 04.0018
 - Index of Protection according EN/IEC 60529: IP66/68
 - Impact Resistance (shock): IK08
 - Internal Volume: > 2 dm³ (2 liters)
 - Conforming to NF AEAS

◆EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

◆Others Certification

- INMETRO Certificate: BVC 11.0492 ②

Related Products

- For labels see *Labels for Emergency Lighting Units, ATX Self-Adhesive Signaling Labels for Emergency Lighting Units.*

① Optimum operating temperature for battery is -5 °C to +30 °C

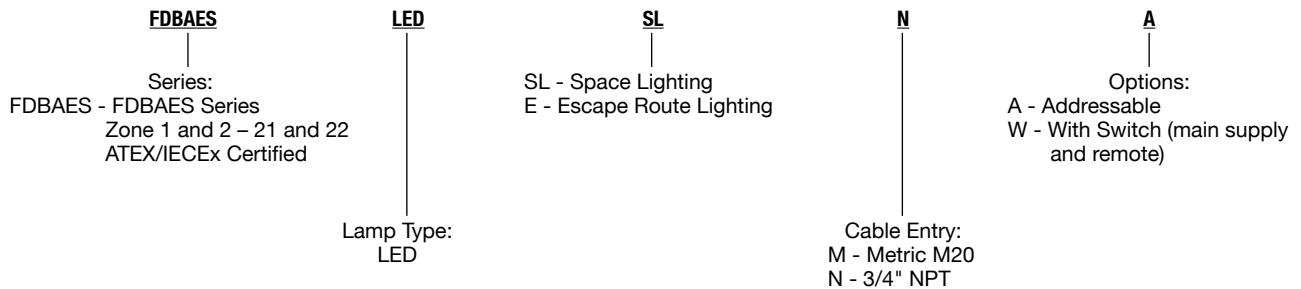
② Inmetro certification available on special request only. Contact your local sales for more information

FDBAES LED Series Self-Contained Emergency Lighting Units

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide



Type	Lamp	Lumen Output	Cable Entries	Weight kg	Volume dm ³	Catalog Number
Unswitched Version – 1 hour duration – Non-maintained – Two threaded cable entries with one blanking plug						
Space Lighting	LED Array	540 lm ①	M20	8.1	37.1	FDBAESLEDSLM
			3/4" NPT	8.1	37.1	FDBAESLEDSLN
Escape Route Lighting	LED Array	55 lm ②	M20	8.1	37.1	FDBAESLEDEM
			3/4" NPT	8.1	37.1	FDBAESLEDEN
Switched Version – 1 hour duration – Non-maintained – One threaded cable entry						
Space Lighting	LED Array	540 lm	M20	10	40.4	FDBAESLEDSLMW
			3/4" NPT	10	40.4	FDBAESLEDSLNW
Escape Route Lighting	LED Array	55 lm	M20	10	40.4	FDBAESLEDEMW
			3/4" NPT	10	40.4	FDBAESLEDENW
Addressable and Unswitched Version – 1 hour duration – Non-maintained – Two threaded cable entries with one blanking plug						
Space Lighting	LED Array	540 lm	M20	8.1	37.1	FDBAESLEDSLMA
			3/4" NPT	8.1	37.1	FDBAESLEDSLNA
Escape Route Lighting	LED Array	55 lm	M20	8.1	37.1	FDBAESLEDEMA
			3/4" NPT	8.1	37.1	FDBAESLEDENA
Addressable and Switched Version – 1 hour duration – Non-maintained – One threaded cable entry						
Space Lighting	LED Array	540 lm	M20	10	40.4	FDBAESLEDSLMAW
Escape Route Lighting	LED Array	55 lm	M20	10	40.4	FDBAESLEDEMAW

① Value measured after 1 hour duration - required value by standard is 400 lm.

② Value measured after 1 hour duration - required value by standard is 45 lm.

Shaded catalog numbers are normally stocked items. All other items are made to order.


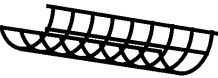
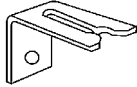
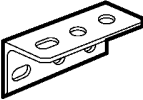
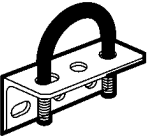
FDBAES LED Series Self-Contained Emergency Lighting Units

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Lighting

EMERGENCY

Accessories		
	Description	Catalog Number
	Reflector White painted galvanized steel	FDER5G
	Protective Guard Zinc plated steel	FDPG5Z
	Fixing Brackets – set of two brackets for ease of surface installation Zinc plated steel	FDFBZ
	316 stainless steel	FDFBS
	Surface Mounting Brackets – set of two brackets for ease of installation Zinc plated steel	FDSBZ
	316 stainless steel	FDSBS
	Half Clamps – set of two Zinc plated steel versions:	
	For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube)	FDHC49Z
	For 60 mm pole (2" tube)	FDHC60Z
	316 stainless steel versions:	
For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube)	FDHC49S	
For 60 mm pole (2" tube)	FDHC60S	
	Fall Prevention Kit 1.20 m stainless steel chain	FDSCS

Shaded catalog numbers are normally stocked items. All other items are made to order.

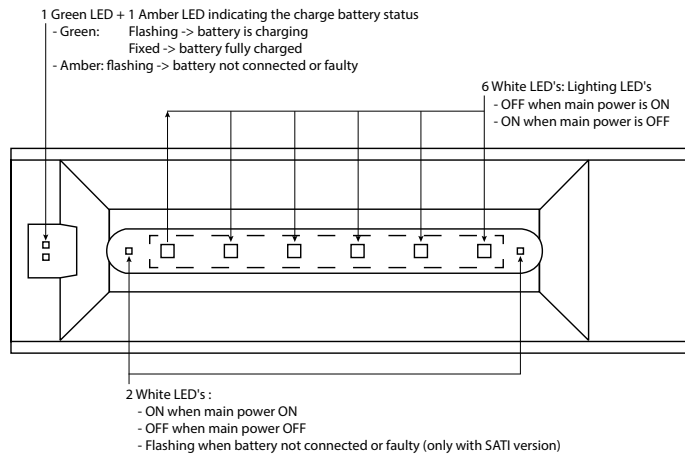
FDBAES LED Series Self-Contained Emergency Lighting Units

Flameproof

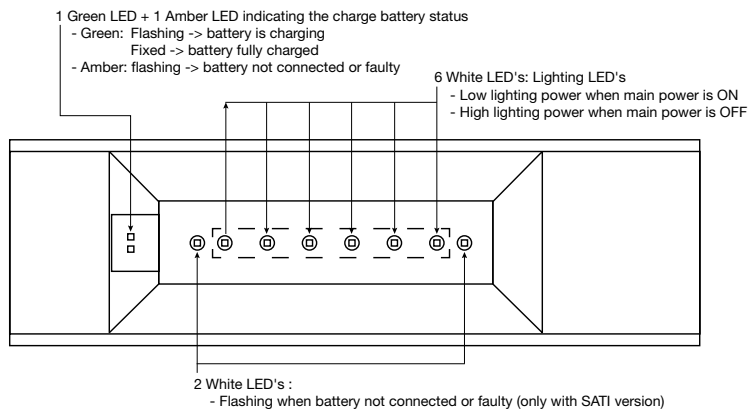
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

LED Indicator

Space Lighting — Replaces Fluorescent Version



Escape Lighting — Replaces Incandescent Version



Main Status	Non Maintained	
	Space Lighting	Escape Route Lighting
Switched On	☀ ● ● ● ● ● ● ☀	● ✕ ✕ ✕ ✕ ✕ ●
Switched Off	● ☀ ☀ ☀ ☀ ☀ ●	● ☀ ☀ ☀ ☀ ☀ ●

- OFF
- ☀ ON (high lighting power)
- ✕ ON (low lighting power)

Battery not Connected or Faulty	Main Power ON	
	Space or Escape Route Lighting	
SATI	⚠	⚠ ● ● ● ● ● ● ⚠
Addressable	⚠	● ● ● ● ● ● ● ●

- OFF
- ⚠ ON — Flashing — White LED
- ⚠ ON — Flashing — Amber LED

FDBAES LED Series Self-Contained Emergency Lighting Units

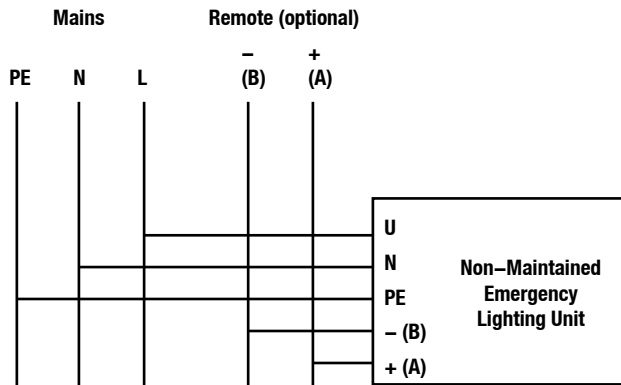
Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Lighting

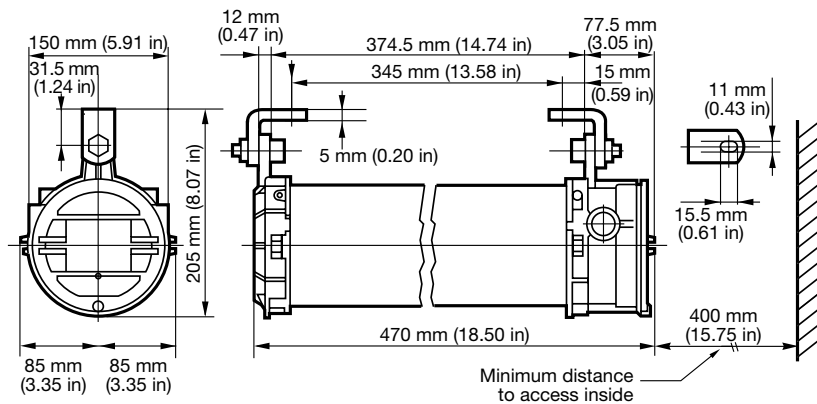
EMERGENCY

Electrical Wiring Diagram

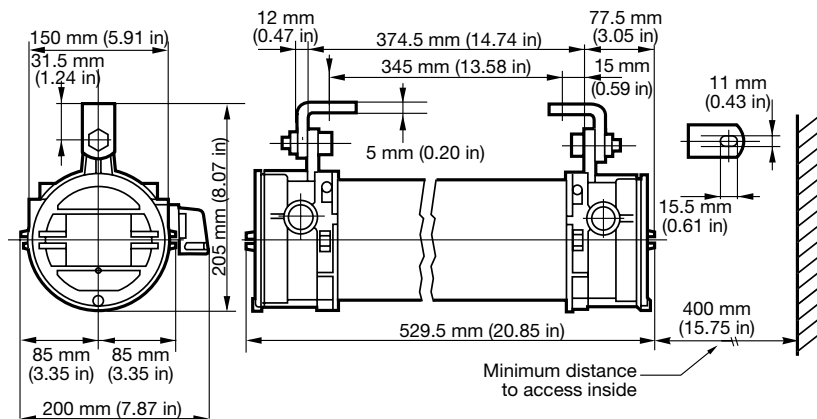


Dimensions in Millimeters (Inches)

Unswitched Versions



Switched Versions



FDES Series Self-Contained Emergency Lighting Units

Flameproof. Fluorescent

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Provides adequate lighting and/or visual indication of access on exit routes during an emergency evacuation in a hazardous environment.
- Can be installed in hazardous areas designated as Zone 1 and 2 – 21 and 22.
- Typical applications include oil refineries, petrochemical plants, pulp and paper mills.

Features

- Power supply from 110 to 240 Vac 50/60 Hz versions.
- 3-hour duration.
- Threaded access cover with O-ring seal.
- Operates in any position.
- 8 W Fluorescent (1 or 2 lamps supplied).
- Charge indicator by 1 red LED (life time over 10 years).
- Termination 3 or 4 x 2.5 mm² terminals.
- Supplied with two fixing lugs.

Standard Materials

- End caps and cover: aluminum
- O-ring seal: Nitrile
- Lens: tempered borosilicate glass
- Fixing brackets: zinc plated steel or 316 stainless steel
- Accessories: white painted galvanized steel
- Guard: zinc plated steel

Certifications and Compliances

◆ ATEX/IECEX Certification

- **Certification Type: FLd**
 - Gas: Zone 1 - 2
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T6
 - Dust: Zone 21 - 22
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 50203
 - ATEX Certificate: LCIE 97 ATEX 6012
 - IECEx Certificate: IECEx LCI 04.0018
 - Index of Protection according EN/IEC 60529: IP66/68
 - Impact Resistance (shock): IK08
 - Internal Volume: > 2 dm³- 2 liters



2 x 8 W Fluorescent Sustained

◆ EURASEC Certification

– EURASEC N° TC RU C-FR.Г505.B.00912

◆ Others Certification

– INMETRO Certificate: BVC11.0492 ^①

^① Inmetro certification available on special request only. Contact your local sales for more information

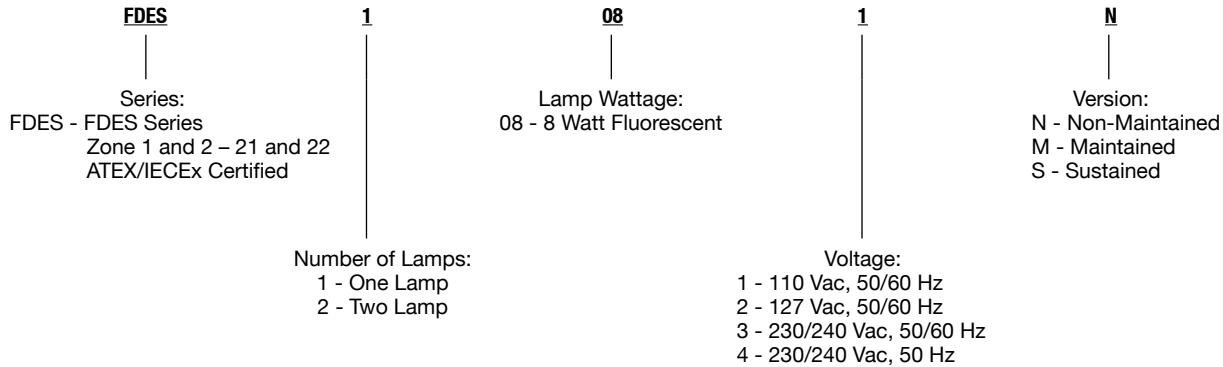
FDES Series Self-Contained Emergency Lighting Units

Flameproof. Fluorescent

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Order using catalog numbering guide below or select catalog number from tables on following pages.

Catalog Numbering Guide – FDES Series Self-Contained Emergency Units



3 Hour Duration – Two M20 Threaded Cable Entries With One M20 Blanking Plug







Type	Lumen Output	Voltage	Frequency	Weight kg	Volume dm ³	Catalog Number
1 x 8 W Fluorescent Non-Maintained	230 lm	230/240 Vac	50/60 Hz	7.8	36	FDES1083N
		127 Vac	50/60 Hz			FDES1082N
		110 Vac	50/60 Hz			FDES1081N
1 x 8 W Fluorescent Maintained	180 lm	230/240 Vac	50/60 Hz	7.8	36	FDES1084M
2 x 8 W Fluorescent Sustained	230 lm	230/240 Vac	50 Hz	7.8	36	FDES2084S

Shaded catalog numbers are normally stocked items. All other items are made to order.

FDES Series Self-Contained Emergency Lighting Units

Flameproof. Fluorescent

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Accessories and Replacement Parts		
	Description	Catalog Number
	Reflector White painted galvanized steel	FDER1G
	Protective Guard Zinc plated steel	FDPG1Z
	Fixing Brackets: Set of two for ease of surface installation Zinc plated steel 316 stainless steel	FDFBZ FDFBS
	Surface Mounting Brackets: Set of two Zinc plated steel 316 stainless steel	FDSBZ FDSBS
	Half Clamps: Set of two Zinc plated steel versions: Diameter for 1-1/4 to 1-1/2" pole: 42 mm to 49 mm Diameter for 2" pole: 60 mm 316 stainless steel versions: Diameter for 1-1/4 to 1-1/2" pole: 42 mm to 49 mm Diameter for 2" pole: 60 mm	FDHC49Z FDHC60Z FDHC49S FDHC60S
	Spare Lamps 8 W fluorescent G5	LF008G5
	Fall Prevention Kit 1.20 m stainless steel chain	FDSCS

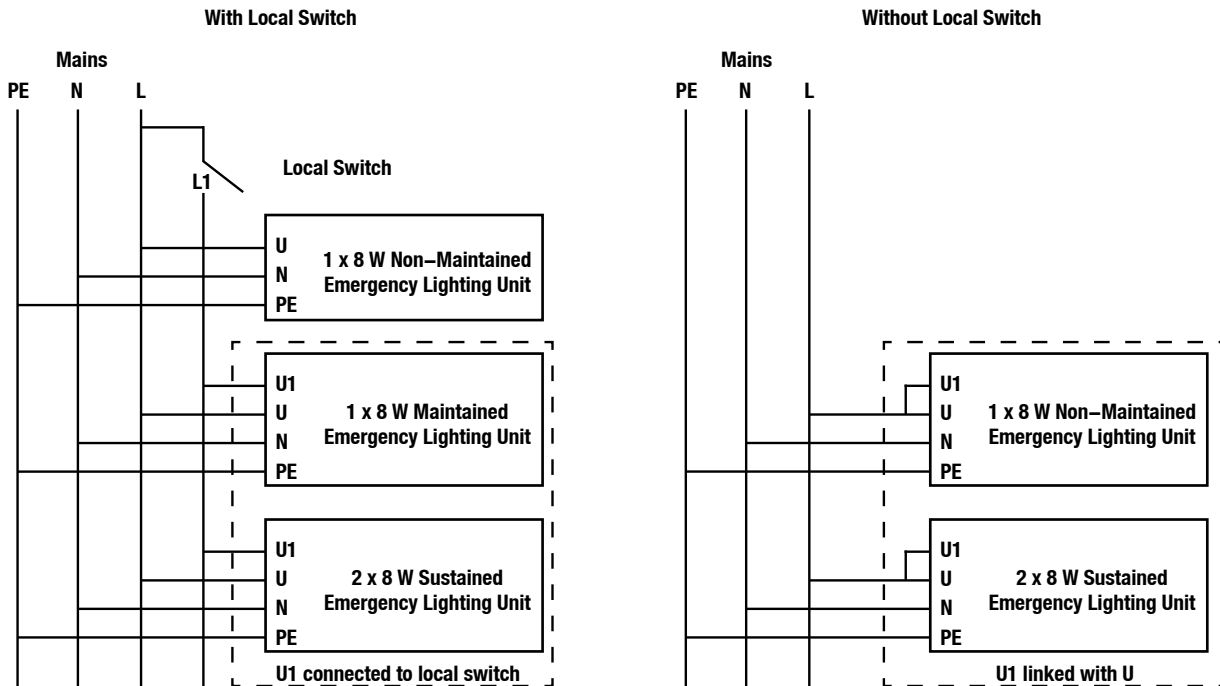
Shaded catalog numbers are normally stocked items. All other items are made to order.

FDES Series Self-Contained Emergency Lighting Units

Flameproof. Fluorescent

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

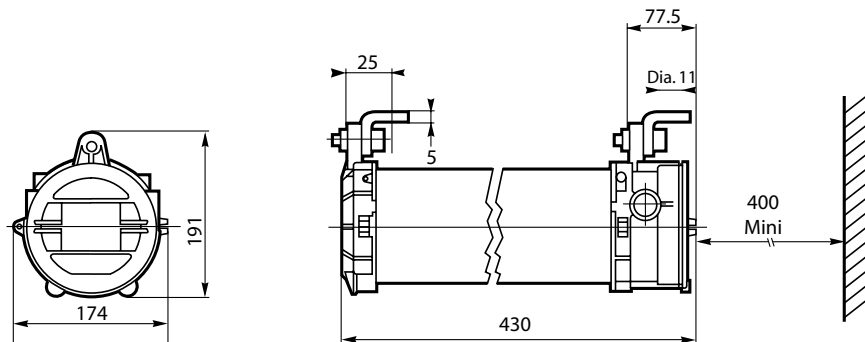
Electrical Wiring Diagram



Emergency Function Diagram

Mains	1 x 8 W Maintained			2 x 8 W Sustained	
	1 x 8 W Non-Maintained	Local Switch OFF or No Link	Local Switch ON or Link Present	Local Switch OFF or No Link	Local Switch ON or Link Present
Switched ON					
Switched OFF					

Dimensions in Millimeters (Inches)



FNES LED Series Self-Contained Emergency Lighting with Self-Test System

Zone 2 - 21 and 22

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Provides adequate lighting and/or visual indication of access and exit routes during an evacuation in a hazardous environment.
- Can be installed in hazardous areas designated as Zone 2 – 21 and 22.
- Typical applications include oil refineries, petrochemical plants, pulp, paper mills and silos.

Features

- Power supply 230 Vac, 50/60 Hz.
- 1 hour duration (emergency).
- Non-maintained.
- Operates in any position.
- Battery pack.
 - Escape route lighting: 2.4 V - 1.5 Ah (2 cells - Nicd).
 - Space lighting: 7.2 V - 2.2 Ah (6 cells - NiMh) - Flameproof.
- Open and close using an Allen key (size 10) or a 6 mm flat screwdriver.
- Connection to plug-in terminal block via 2 x 5 x 2.5 mm² terminals.
- Two M20 clearance holes supplied with one cable gland – diameter 6.5 to 14.5 mm one blanking plug and two locknuts.
- Charge indicator by green LED (lifetime over 10 years).
- Automatic built-in self-test system (SATI) with memorization of tests indicated by LEDs .
- Using a microprocessor and an internal clock, the unit will carry out automatic tests.
- Weekly test: Lamp check duration 6 seconds.
- Quarterly test: Emergency operation and lamp check for 1 hour.
- Can be remotely controlled and checked without switching the mains off with remote control unit from Legrand (Catalog Number 03901) or URA (Catalog Number 095448 and 095450) manufacturers.
- The remote control unit installed in a safe area or inside a flameproof box allows manual ignition of all the units (max. 300 units) for visual inspection of their operation.
- Escape route lighting: 55 lumens, 0.50 wattage.
- Space lighting: 540 lumens, 0.95 wattage.

Standard Materials

- Body: fiberglass reinforced polyester
- Diffuser (hinged to body): polycarbonate
- Gasket: elastomer
- Fixing brackets: zinc plated steel, gray painted aluminum or 316 stainless steel
- Cable gland and blanking plug: polyamide
- Locknut: nickel-plated brass

Options

- Addressable versions:
 - Operates without additional control lines. Communication between units and the control system is realized via mains borne signals that utilize the existing electrical wiring.
 - Standard control system capacity: one control system for up to 200 emergency lighting units.



FNES LED

- Optional increased control system capacity: booster (repeater unit) is used to increase the length of the network allowing up to 1000 emergency lighting units to be on one control system. This allows for the use of a single computer to centralize the management of the facilities emergency lighting system. For more information, please contact your local sales representative.
- Addressable monitoring software is available, please consult your local sales representative.
- Low temperature application, please consult your local sales representative.

Certifications and Compliances

◆ATEX or ATEX/IECEx Certification

- **Certification Type: FLn**
 - Gas: Zone 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 G
 - Type of Protection 'nA' : Ex nA IIC T6 Gc
 - Type of Protection 'nR' : Ex nR IIC T4 Gc
 - Temperature class: T6 (nA) or T4 (nR)
 - Ambient Temperature: -20 °C to +55 °C ①
 - Dust: Zone 21
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T75 °C
 - Ambient Temperature: -40 °C to +55 °C ①
 - Dust: Zone 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 D
 - Type of Protection: Ex t IIIC Dc
 - Surface Temperature: T75 °C
 - Ambient Temperature: -20 °C to +55 °C ①
- CE Declaration of Conformity: 50212
- ATEX Certificate:
 - Zone 2-22: LCIE 03 ATEX 6072
 - Zone 21: LCIE 02 ATEX 6067
- IECEx Certificate:
 - Zone 2-22: IECEx LCI 04.0021
- Index of Protection according EN/IEC 60529: IP66/67
- Impact Resistance (shock): IK10
- Conforming to NF AEAS

◆EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

◆Others Certification

- INMETRO Certificate: BVC11.0815 ②

Related Products

- For labels see *Labels for Emergency Lighting Units, ATX Self-Adhesive Signaling Labels for Emergency Lighting Units.*

① Optimum operating temperature for battery is -5 °C to +30 °C

② Inmetro certification available on special request only. Contact your local sales for more information

FNES LED Series Self-Contained Emergency Lighting with Self-Test System

Zone 2 - 21 and 22

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide

FNES
Series:
FNES - FNES Series
Zone 2 and 22: ATEX/IECEx
Certified
Zone 21: ATEX Certified

LED
Lamp Type:
LED

SL
SL - Space Lighting
E - Escape Route Lighting




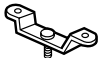

U
Cable Entry:
A - Armored M20
U - Unarmored M20
N - Unarmored M25

A
Options:
A - Addressable
W - With Switch
(Automatic mains cut-off)

Unswitched Version – 1 hour duration - Non-maintained - Two Unarmored M20 clearance entries

Type	Lamp Type	Lumen Output	Weight kg	Volume dm ³	Catalog Number
Space Lighting	LED Array	540 lm	7.2	32.3	FNESLEDSLU
Escape Route Lighting		55 lm	7.2	32.3	FNESLEDEU

Accessories

	Description	Catalog Number
	Half Clamps Brackets - Set of Two	
	For 42 mm to 49 mm pole (1-1/4 to 1-1/2" tube)	
	Zinc plated steel	FEHC49Z
	316 stainless steel	FEHC49S
	M8 Ring Bolts - Set of Two	
	For 60 mm pole (2" tube)	
	Zinc plated steel	FEHC60Z
	316 stainless steel	FEHC60S
	Hinged Brackets - Set of two brackets for adjusting luminaire when wall-mounted	
	Aluminium (gray painted)	FEHBA
	316 stainless steel	FEHBS
	Brackets for Surface Mounting - Set of two	
	Aluminium (gray painted)	FESBA
	316 stainless steel	FESBS
	Fixing Brackets - Set of two brackets for ease of surface installation	
	Zinc plated steel	FEFBZ
	316 stainless steel	FEFBS

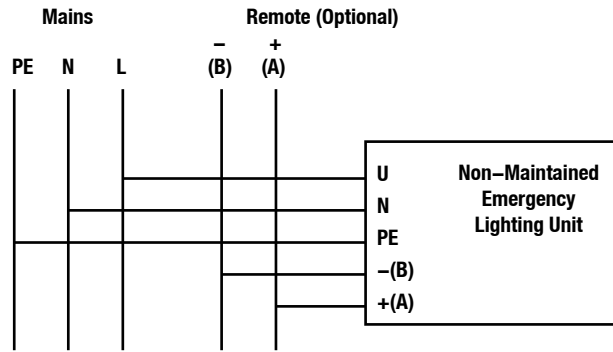
Shaded catalog numbers are normally stocked items. All other items are made to order.

FNES LED Series Self-Contained Emergency Lighting with Self-Test System

Zone 2 - 21 and 22

Zone 2 - 21 and 22
Gas (G) and Dust (D)

Electrical Wiring Diagram

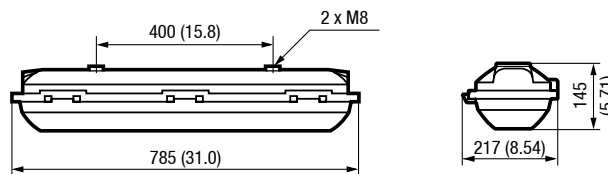


LED Indicator

Main Status	Non Maintained		Battery not Connected or Faulty	Main Power ON
	Space Lighting	Escape Route Lighting		
Switched On	☀ ● ● ● ● ● ☀	● ☒ ☒ ☒ ☒ ☒ ●	SATI	⦿ ☒ ● ● ● ● ● ☒
Switched Off	● ☀ ☀ ☀ ☀ ☀ ●	● ☀ ☀ ☀ ☀ ☀ ●	Addressable	⦿ ● ● ● ● ● ● ●

● OFF	● OFF
☀ ON (high lighting power)	⦿ ON — Flashing — White LED
☒ ON (low lighting power)	⦿ ON — Flashing — Amber LED

Dimensions in Millimeters (Inches)



Self-Adhesive Signaling Labels for Emergency Lighting Units

For use on Appleton/ATX emergency lighting luminaires: FDBAES, FDES and FNES Series

















EMERGENCY

Features

- Select styles available in French, English, Spanish, Portuguese and version which conform to Directive CEE 77-576.

Standard Materials

- Plastic coated
- White lettering.
- Green background.

	Length mm	Width mm	Units per Pack	Catalog Number
French				
	237	53	10	094904
	237	53	10	094905
	237	109	10	094906
	172 + 57	57	10	094907
	237	109	5	094908
	237	109	5	094909
	237	109	5	094910
English				
	230	45	5	094915
	230	90	5	094916
	230	45)	5	094917
Spanish				
	237	109	5	094919
	175 + 57	57	5	094918
Portuguese				
	237	109	5	094913
	175 + 57	57	5	094914
Conforming to Directive CEE 77-576				
	237	109	5	094911
	237	109	5	094912

ELS Series Self-Contained Emergency Lighting Unit Incandescent

Zone 2 and 22
Gas (G) and Dust (D)

Applications

- Enclosed and gasketed, non-metallic emergency lighting system suitable for use where flammable gases, vapors or dusts may become present due to abnormal conditions defined as Zone 2 and 22.
- Typical applications include manufacturing plants, refineries, petrochemical and chemical plants, waste and sewage treatment facilities, food processing facilities and other industrial manufacturing or process facilities subject to wet or corrosive conditions.

Features

- Provides 90 minutes of emergency lighting.
- The electronics consists of a solid state charger, transfer circuit and low voltage disconnect circuit.
- A LED pilot light indicates the presence of AC line voltage, and a test switch is provided for testing transfer operation.
- Upon restoration of normal power, the charger will begin a recharge cycle. It will bring the battery to full capacity.
- 6 A fuse provided as standard.
- 12 Vdc, 10 W or 21 W incandescent lamps.
- Lamp base BA15D.
- Battery capacity 7 A/h.
- Connections on 2.5 mm² terminals.

Standard Materials

- Fiberglass reinforced polyester housing, carbon loaded for low resistivity
- Aluminium glass sealed spotlight

Certifications and Compliances

◆ATEX Certification

• Certification Type: ELS

- Gas: Zone 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 G
 - Type of Protection: Ex nAR II
 - Temperature class: T2
- Dust: Zone 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 D
 - Type of Protection: Ex tD A22
 - Surface Temperature: T121 °C
- Ambient Temperature: -20 °C to +55 °C
- CE Declaration of Conformity: 50282
- ATEX Certificate: LCIE 02 ATEX 6046
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10 (housing)

◆Others Certification

- INMETRO Certificate: BVC11.0643-X ①



2 Lamp Version — ELS 2100712A

① Inmetro certification available on special request only. Contact your local sales for more information

ELS Series Self-Contained Emergency Lighting Unit

Incandescent

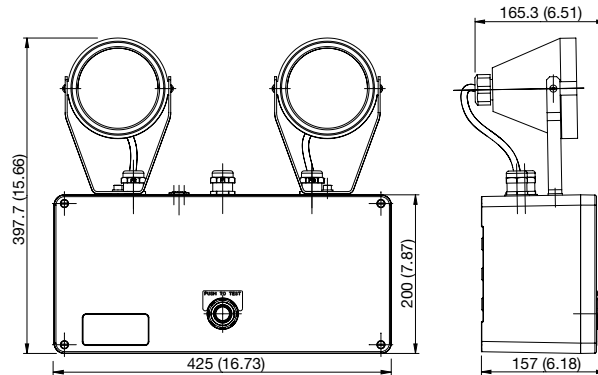
Zone 2 and 22
Gas (G) and Dust (D)

EMERGENCY

2 x M20 entries at the top, supplied with one M20 polyamide cable gland [cable diameter 6.5 to 14.5 mm] and one M20 blanking plug.

Number of Lamps	Wattage W	Weight kg	Volume dm ³	Catalog Number	
				205–254 Vac, 50/60 Hz	110 – 120 Vac, 50/60 Hz
1	10 W	8.50	4.55	ELS1100712A	ELS1100712B
2	10 W	7.70	4.80	ELS2100712A	ELS2100712B
1	21 W	8.50	4.55	ELS1210712A	ELS1210712B
2	21 W	7.70	4.80	ELS2210712A	ELS2210712B

Dimensions in Millimeters (Inches)



SBDO Series Signaling and Lighting Bulkheads

Flameproof. Compact Fluorescent, Incandescent

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- For lighting and signaling.

Features

- For 7, 11, 15 Watt compact fluorescent or up to 100 Watt (maximum) incandescent (lamps not supplied).
- E27 lampholder.
- Operating in any position.
- Fixing by 2 integrated brackets.
- Connection to lampholder via two terminals 1 x 2.5 mm².
- Internal earth two terminals 2.5 mm², external earth 1 x 4 mm².
- Two M20 entries through feed.
- Supplied with 1 blanking plug M20.

Standard Materials

- Body and bezel: gray painted aluminum
- Sealed toughened lamp glass
- Guard: zinc plated steel

Certifications and Compliances

◆ ATEX/IECEx Certification

- **Certification Type: HBOd**
 - Zone 1 - 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature Class:
 - Incandescent: T4,
 - Compact Fluorescent: T6
 - Zone 21 - 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature:
 - Incandescent: T119 °C,
 - Compact Fluorescent: T76 °C
 - Ambient Temperature: -20 °C to +40 °C
 - CE Declaration of Conformity: 50234
 - ATEX Certificate: LCIE 02 ATEX 6162
 - IECEx Certificate: IECEx LCI Ex 12.0006
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK08
 - Internal Volume: ≤ 2 dm³ – 2 liters

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

◆ Others Certification

- INMETRO Certificate: BVC11.0597 ^①



Compact Fluorescent
Painted Glass Version

^① Inmetro certification available on special request only. Contact your local sales for more information

SBD0 Series Signaling and Lighting Bulkheads

Flameproof. Compact Fluorescent, Incandescent

Lighting

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

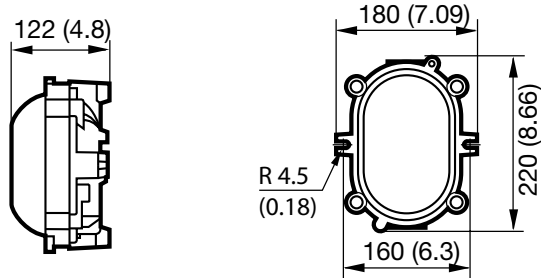
SIGNALING

Color (Painted Glass)	Weight kg	Volume dm ³	Catalog Number
7 W to 15 W Compact Fluorescent or up to 60 W Incandescent			
Red	3	9	SBDOSR
Green	3	9	SBDOSG

Accessories and Replacement Parts

Description	Catalog Number
Zinc Plated Steel Protective Guard	HBDOPGZ
Terminal block for through wiring 2 x 2.5 mm ² with high temperature sleeve	094784

Dimensions in Millimeters (Inches)



SBDS Series Beacon Lighting Units

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- For use in hazardous locations in a wide range of plants.
- In areas where audible signals cannot be heard.

Features

- Fixtures operate in any position.
- Suspension via integral bolt.
- Threaded flame path.
- Internal earth terminal 2 x 4 mm².
- External earth terminal 1 x 4 mm².
- Two M20 threaded entries with one blanking plug.
- Globe available in four colors: red, amber, green and clear (to be ordered separately).
- Static Beacon:
 - E27 lamp holder.
 - Permissible lamps not supplied:
 - 100 W incandescent max.
 - 18/20/25 W compact fluorescent
 - Connection to lamp holder via two terminals 1 x 2.5 mm² or 2 x 4 mm² terminal block supplied.
- Rotating Beacon:
 - E14 lamp holder.
 - 40 W incandescent lamp supplied.
 - Rotating speed: approximately 170 rotations per minute.
 - Beaten mirror to reinforce bright effect.
 - Connection via two terminals 2 x 4 mm².

Standard Materials

- Body and bezel: gray painted marine aluminum
- Glass: colorless sealed shock resistant
- Reflector for static beacon: internal aluminum
- Globe: colored polymethacrylate
- Protective guard: zinc plated steel
- Mounting bracket: zinc plated steel

Certifications and Compliances

◆ ATEX Certification

- **Certification Type: AB14**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓔ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature Class: See Table below



Static Beacon with Red Globe



Rotating Beacon

- Dust: Zone 21 and 22
- Conforming to ATEX 94/9/CE: Ⓔ II 2 D
- Type of Protection: Ex tD A21
- Surface Temperature: See Table on following page
- Ambient Temperature:
 - Static: -40 °C to +50 °C
 - Rotating: -20 °C to +50 °C
- CE Declaration of Conformity: 50231
- ATEX Certificate: LCIE 02 ATEX 6053
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK08
- Internal Volume: ≤ 2 dm³ (2 liters)

◆ Others Certification

- INMETRO Certificate: BVC11.0480 ①

T Rating (Gas) and Surface Temperature (Dust) Table

Lamp Type and Wattage	T Rating for Gas				Surface Temperature for Dust	
	Ta = +40 °C		Ta = +50 °C		Ta = +50 °C	
	T Rating	Cable Entry Temperature	T Rating	Cable Entry Temperature	Surface Temperature	Cable Entry Temperature
18 W Compact Fluorescent	T6	–	T5	–	+85 °C	–
20 W Compact Fluorescent	T6	–	T5	–	+85 °C	–
25 W Compact Fluorescent	T6	–	T5	–	+85 °C	–
100 W Incandescent	T4	+115 °C	T3	+125 °C	+145 °C	+125 °C
40 W Rotating	T5	–	T4	–	+110 °C	–

① Inmetro certification available on special request only. Contact your local sales for more information



SBDS Series Beacon Lighting Units

Flameproof




Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Lighting

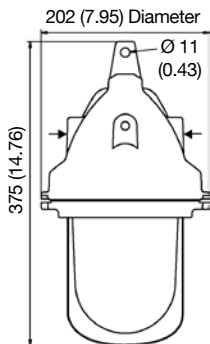
SIGNALING

Lamp Type and Wattage	Supply	Frequency (Hz)	Rating (Amps)	Weight kg	Volume dm ³	Catalog Number
Clear Static Beacon						
	100 W maximum	—	—	7.5	30	SBDSSC
Clear Rotating Beacon						
	40 W Incandescent	48 V ±10%	50/60 Hz	1 A	8.5	SBDSRC4004A
	40 W Incandescent	48 Vdc ±10%	—	1 A	8.5	SBDSRC4004D
	40 W Incandescent	110 V ±10%	50/60 Hz	0.5 A	8.5	SBDSRC4011A
	40 W Incandescent	230/240 V ±10%	50/60 Hz	0.23 A	8.5	SBDSRC4024A

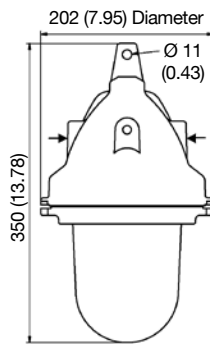
Accessories and Replacement Parts

Type	Catalog Number
Polymethacrylate Globe	
 Red	SBDGR
Green	SBDGG
Amber	SBDGA
Clear	SBDGC
Zinc Plated Steel Protective Guard	
 Not to be used if a colored globe is used.	LDPG3Z
Zinc Plated Steel Hinged Bracket	
 For installation on flat surface	LDPHBZ

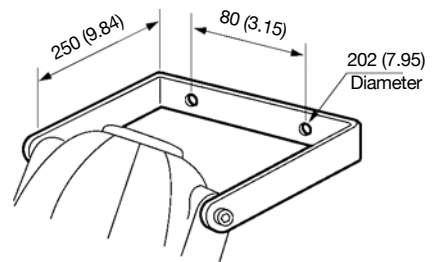
Dimensions in Millimeters (Inches)



Lighting Unit with Globe



Lighting Unit



LDPHBZ Mounting Bracket

Shaded catalog numbers are normally stocked items. All other items are made to order.

SBDB Series Beacon and Strobe Lighting Units

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- For use in hazardous locations in a wide range of plants.
- In areas where audible signals cannot be heard.
- To warn of unsafe conditions and other communication needs.

Features

- Fixtures operate in any position.
- Mounting strap for surface mounting supplied.
- High temperature internal wiring.
- Threaded flame path.
- Stainless steel fastenings.
- Closed by screwing on bezel.
- Connection through an increased safety Exe compartment with terminal block
 - Two 2 x 6 mm² and two earth terminal 1 x 4 mm².
- External earth terminal 1 x 4 mm².
- Two side M20 threaded entries supplied with:
 - 1 x M20 plastic cable-gland for unarmored cable — 6.5 to 14.5 mm sealing diameter.
 - 1 x M20 blanking plug.
- Static Beacon:
 - E27 lamp holder.
 - Permissible lamps not supplied:
 - 100 W incandescent max.
 - 18 W compact fluorescent.
 - Globe available in four colors:
 - Red, amber, green and clear (to be ordered separately).
- Rotating Beacon:
 - E14 lamp holder.
 - 40 W incandescent lamp supplied.
 - Rotating speed: approximately 170 rotations per minute.
 - Beaten mirror to reinforce bright effect.
 - Globe available in four colors:
 - Red, amber, green and clear (to be ordered separately).
- 5 Joules Strobe Beacon:
 - Xenon lamp supplied.
 - Instantaneous illuminance: 50,000 candles.
 - Strobe 60 flashes per minute.
 - Operating factor 100%.
 - Life duration: 70% efficiency after 8 million flashes.
 - Internal red colored lens supplied as standard.
 - Other lenses available in five colors:
 - Amber, blue, green, yellow and clear (factory installed).

Standard Material of Fixtures

- Body and bezel: gray painted marine aluminum
- Lens: colorless sealed shock resistant glass
- Internal reflector for static beacon: aluminum
- Mounting strap: gray painted aluminum

Standard Material of Accessories

- Globe: colored Polymethacrylate
- Protective guard: zinc plated steel

Options

- Other lens colors for strobe beacon



Strobe Lighting

Beacon Lighting

Certifications and Compliances

◆ ATEX/IECEX Certification

- **Certification Type: LTd (model (LT1d))**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC
 - Temperature Class: See Table on following page
 - Dust: Zone 21-22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: See Table on following page
 - Ambient Temperature:
 - Strobe: -40 °C to +55 °C
 - Rotating Beacon: -20 °C to +50 °C
 - CE Declaration of Conformity: 50246
 - ATEX Certificate: LCIE 02 ATEX 6165
 - IECEx Certificate: IECEx LCI Ex 04.0019
 - Index of Protection according EN/IEC 60529: IP66/67
 - Impact Resistance (shock): IK08

◆ Others Certification

- INMETRO Certificate: BVC11.0417 ①

① Inmetro certification available on special request only. Contact your local sales for more information

SBDB Series Beacon and Strobe Lighting Units

Flameproof

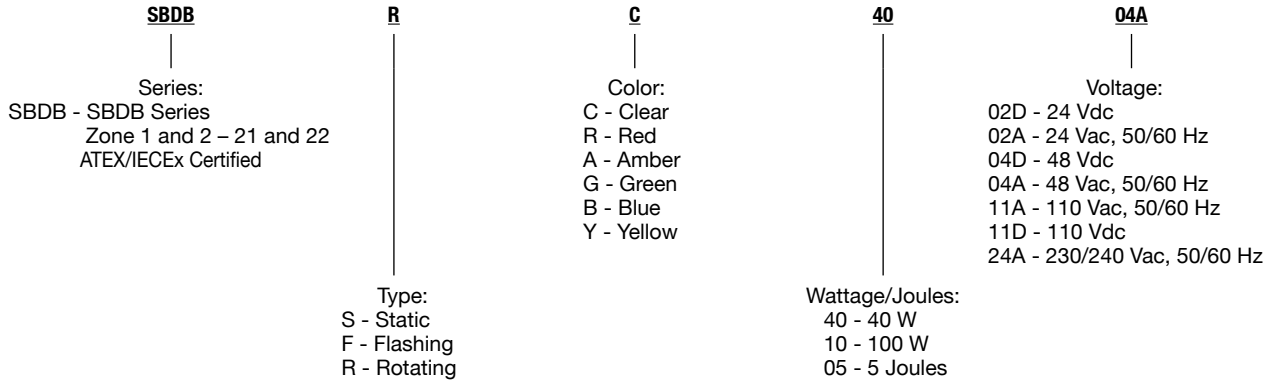
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Lighting

SIGNALING

Order using catalog numbering guide below or select catalog number from the following pages.

Catalog Numbering Guide – SBDB Series Beacon and Strobe Lighting Units



Temperature Class – Gas

Lamp Type and Wattage	Positions					
	Lighting Downwards			Lighting Upwards		
	Ta =+40 °C	Ta =+50 °C	Ta =+55 °C	Ta =+40 °C	Ta =+50 °C	Ta =+55 °C
18 W Fluorescent Compact	T6	T6	T6	T6	T5	T5
100 W Incandescent	T4	T3	T3	T3	T3	T3
40 W Rotating	T5	T4	T4	T5	T4	T4
Strobe 5 Joules	T6	T6	T6	T6	T6	T6

Temperature Rating – Dust

Lamp Type and Wattage	Positions	
	Lighting Downwards Ta =+55 °C	Lighting Upwards Ta =+55 °C
18 W Fluorescent Compact	T80 °C	T95 °C
100 W Incandescent	T195 °C	T195 °C
40 W Rotating	T130 °C	T130 °C
Strobe 5 Joules	T80 °C	T80 °C





SBDB Series Beacon and Strobe Lighting Units

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Type	Supply			Rating (Amps)	Weight kg	Volume dm ³	Catalog Number
Clear Static Beacon							
100 W Maximum	—	—	—	—	7.5	30	SBDBSC
Clear Rotating Beacon							
40 W	48 Vac	+ -10%	50/60 Hz	1A	8.5	30	SBDBRC4004A
40 W	48 Vdc	+ -10%	—	1A	8.5	30	SBDBRC4004D
40 W	110 Vac	+ -10%	50/60 Hz	0.5A	8.5	30	SBDBRC4011A
40 W	230/240 Vac	+ -10%	50/60 Hz	0.23A	8.5	30	SBDBRC4024A
Red Strobe Beacon							
5 joules	24 Vac	20-30 V	50/60 Hz	220 mA	8.5	30	SBDBFR0502A
5 joules	24 Vdc	18-35 V	—	230 mA	8.5	30	SBDBFR0502D
5 joules	48 Vac	40-54 V	50/60 Hz	180 mA	8.5	30	SBDBFR0504A
5 joules	48 Vdc	40-60 V	—	150 mA	8.5	30	SBDBFR0504D
5 joules	110 Vac	90-135 V	50/60 Hz	110 mA	8.5	30	SBDBFR0511A
5 joules	110 Vdc	88-132 V	—	90 mA	8.5	30	SBDBFR0511D
5 joules	230/240 Vac	185-255 V	50/60 Hz	55 mA	8.5	30	SBDBFR0523A

Accessories and Replacement Parts

	Description	Catalog Number
Polymethacrylate Globe		
	Red	SBDGR
	Green	SBDGG
	Amber	SBDGA
	Clear	SBDGC
Zinc Plated Steel Protective Guard		
	Using without colored globe	LDPG1Z
Zinc Plated Steel Hinged Bracket		
	Bracket for installation on flat surface	LDMHBZ
Zinc Plated Steel M10 Eyebolt		
	Eyebolt for suspension	LDRBM10Z

SBDB Series Beacon and Strobe Lighting Units

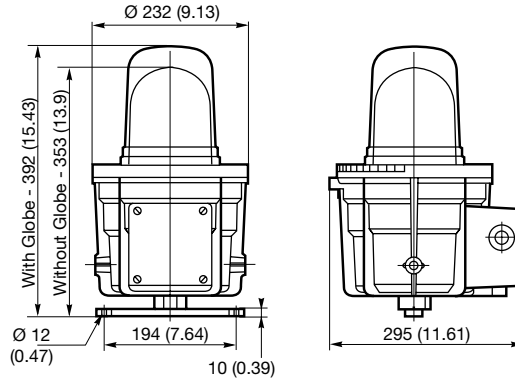
Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Lighting

SIGNALING

Dimensions in Millimeters (Inches)



SBDC Series Strobe Lighting and Static Triple Indicator

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- For use in hazardous locations in a wide range of plants.
- In areas where audible signals cannot be heard.
- To warn of unsafe conditions and other communication needs.

Features

- Threaded access cover with O-ring seal.
- Supplied with two external fixing lugs.
- Fixtures operate in any position.
- External earth terminal 1 x 4 mm².
- Two side M20 threaded entries supplied with 1 x M20 blanking plug.
- 15 Joules Strobe Beacon:
 - Xenon lamp supplied.
 - Instantaneous illuminance: 150,000 candelas.
 - Strobe 45 flashes per minute.
 - Operating factor: 10 min. stop after one hour operation.
 - Life duration: 70% efficiency after 8 million flashes.
 - Internal red colored lens supplied as standard.
 - Other lenses available in five colors:
 - Amber, blue, green, yellow and clear (factory installed).
 - Connection to plug-in terminal block via 2 x 3 x 2.5 mm² terminal.
- Static Triple Indicator Unit:
 - Ba15d lamp holders.
 - Permissible lamps not supplied:
 - 7 W incandescent or multi LED lamps.
 - Operating factor 100%.
 - Supplied with three colored interchangeable modules:
 - Red, yellow and green.
 - Each module is controlled separately.
 - Possibility of coupling two modules for simultaneous operation.
 - Connection to plug-in terminal block via 2 x 5 x 2.5 mm² terminal.

Standard Materials

- End caps and cover: anti-corrosive gray painted Zamak
- O-ring seal: Nitrile
- Sealed toughened glass.
- Fixing lug: zinc plated steel
- Protective guard: zinc plated steel

Options

- Other colored module for static triple indicator unit.
- Other lens colors available for strobe lighting



Strobe Lighting



Multiple Static Indicator

Certifications and Compliances

◆ ATEX/IECEX Certification

- **Certification Type: FLd**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature Class: See Table on following page
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: See Table on following page
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 50203
 - ATEX Certificate: LCIE 97 ATEX 6012
 - IECEx Certificate: IECEx LCI 04.0018
 - Index of Protection according EN/IEC 60529: IP66/68 (10 meters)
 - Impact Resistance (shock): IK08
 - Internal Volume: ≤ 2 dm³ – 2 liters

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00912

◆ Others Certification

- INMETRO Certificate: BVC11.0492 ^①

Related Products

- For labels see *Labels for Emergency Lighting Units, ATX Self-Adhesive Signaling Labels for Emergency Lighting Units.*

T Rating (Gas) and Surface Temperature (Dust) Table

Ambient Temperature	Gas		Dust
	Ta = +40 °C	Ta = +55 °C	Ta = +55 °C
Strobe 15 Joules	T6	T5	T95 °C
Static Indicator	T6	T6	T80 °C

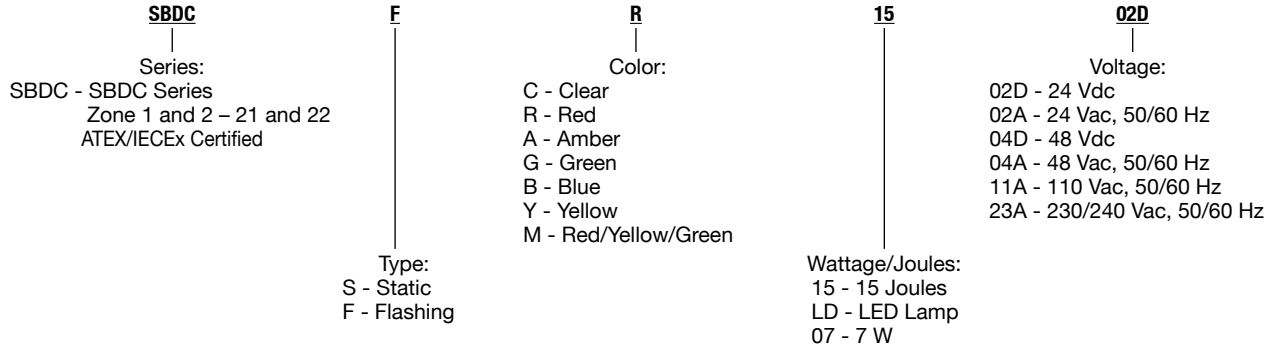
^① Inmetro certification available on special request only. Contact your local sales for more information

SBDC Series Strobe Lighting and Static Triple Indicator


Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)


Catalog Numbering Guide



Red Strobe Beacon

Type	Supply	Rating (Amps)	Weight kg	Volume dm ³	Catalog Number ①②		
 15 joules	24 Vdc	18-30 V	—	700 mA	6.8	31	SBDCFR1502D
15 joules	48 Vdc	40-60 V	—	350 mA	6.8	31	SBDCFR1504D
15 joules	110 Vac	95-127 V	50/60 Hz	350 mA	6.8	31	SBDCFR1511A
15 joules	230 Vac	185-255 V	50/60 Hz	190 mA	6.8	31	SBDCFR1523A

Triple Static Indicator

Type	Lamp Holder	Wattage	Weight kg	Volume dm ³	Catalog Number ②
 Red, yellow and green 230 Vac, 50/60 Hz	Ba15d	7 W	6.8	31	SBDCSM0723A

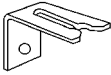
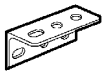


① For lens color other than Red on the IECEx certified product change the replace the letter **R** in the 5th position to the appropriate option: **C** for Clear, **A** for Amber, **G** for Green, **B** for Blue or **Y** for Yellow. Example for clear lens: SBDCFC1502D.

② For LED lamp on the IECEx certified product change the replace the letters **15** or **07** with the letters **LD** in the 7th and 8th positions. Example: SBDCFRLD02D.

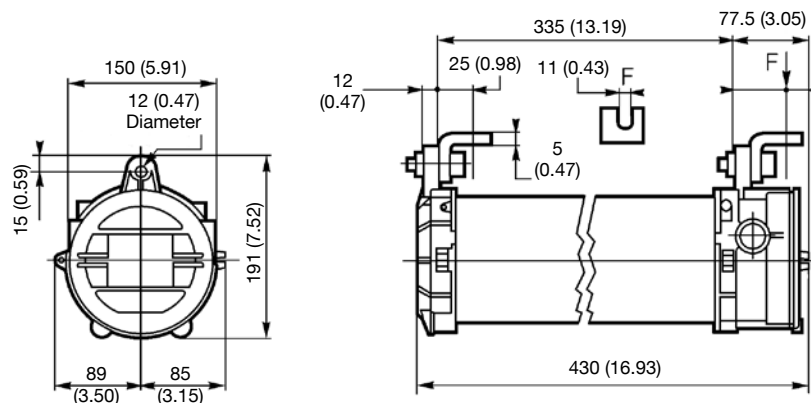
SBDC Series Strobe Lighting and Static Triple Indicator Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Accessories and Replacement Parts

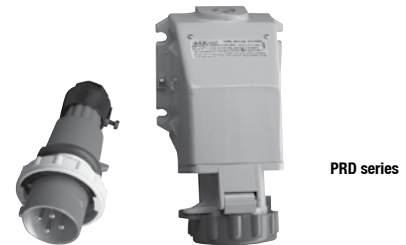
Type	Weight kg	Volume dm ³	Catalog Number	
Mounting Brackets – Quick One Hand Fixings: Set of Two				
 Zinc plated steel	0.40	0.7	FDFBZ	
Stainless steel			FDFBS	
Surface Mounting Brackets: Set of Two				
 Zinc plated steel	0.55	0.5	FDSBZ	
Stainless steel			FDSBS	
Half Clamps – Set of Two – Zinc Plated Steel				
	42 mm to 49 mm	0.80	0.5	FDHC49Z
	60 mm			FDHC60Z
Protective Guard				
 Zinc plated steel	0.55	8.0	FDPG1Z	

Dimensions in Millimeters (Inches)



Plugs and Receptacles

Description	Page
Increased Safety Ex e	
UPR Series 16 Amp Plugs and Switched Sockets	174
UPR Series 32 Amp Plugs and Switched Sockets	179
PRE Series 16 Amp Plugs and Receptacles	183
PRE Series 32 Amp Plugs and Receptacles	188
PRE Series 63 Amp Plugs and Receptacles	192
PRE Series 125 Amp Plugs and Receptacles	197
MRE Series 16 and 32 Amp Multiple Socket Outlets	202
Flameproof Ex d	
PRD Series 16, 32, 80 and 125 Amp Plugs and Sockets	210



UPR Series 16 Amps Plugs and Switched Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Plugs and Receptacles

INCREASED SAFETY EX E

Applications

- Plugs and receptacles are used with portable or stationery electrical equipment such as:
 - Lighting systems
 - Conveyors
 - Heaters
 - Motor generators
 - Air conditioning equipment
 - Compressors
 - Pumps
- For use in corrosive atmospheres and installations in Zone 1 and 2 and 21 and 22 of the oil and gas industry; such as:
 - Refineries
 - Chemical and petrochemical plants
 - Pipelines
 - Loading docks
 - Onshore and offshore drilling platforms

Features

- Plug and socket system is designed with a mechanical interlock to insure disengagement cannot occur while energized.
- Large ON/OFF actuator on the receptacle gives clear, visible indication of the receptacle status for maximum hazardous location protection.
- LV receptacle can be locked in 0 (Off) and 1 (On) positions.
- Different voltages are color coded for easy identification.
- The receptacles are keyed to accept UPR plugs of the proper voltage.
- Receptacle explosion proof switch.
- UPR plugs can be used in non-hazardous IEC 60309-2 sockets.
- Operating temperature of -20 °C to +55 °C

Standard Materials

- Wall Socket: Polyamide
- Plug: Polyamide

Certifications and Compliances

◆ ATEX/IECEx Certification

- **Certification Type UPR**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex db eb IIB
 - Temperature class: T6 for $T_a \leq +40$ °C and T5 for +55 °C
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex tb IIIB
 - Surface Temperature: T79 °C ($T_a +40$ °C); T94 °C ($T_a +55$ °C)
- Ambient Temperature: -20 °C $\leq T_a \leq +55$ °C
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK09
- CE Declaration of Conformity: 50311
- ATEX Certificate: LCIE 15 ATEX 3054X
- IECEx Certificate: IECEx LCIE 15.0044X



Technical Data

	Breaking Capacity	
	AC1	16 Amp
AC3	8 Amp	500 Vac
	4 Amp	690 Vac
AC15	16 Amp	690 Vac
	16 Amp	415 Vac
DC1	10 Amp	24 Vdc
	6 Amp	50 vdc

Short Circuit Withstand (ICC) : 10kA

UPR Series 16 Amps Plugs and Switched Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)



Wall Mounting Socket (LV)

- Two M25 threaded entries on the bottom or top upon request.
- Supplied with one M25 cable gland – Ø 8 to Ø 18.5 mm and one M25 blanking plug.
- Terminal capacity 2 x 2.5 to 4 mm². Can be through-wired up to 4 mm².
- Fitted with two linked earth terminals.



Plug (LV)

- Integrated cable clamp – Ø 9.2 to Ø 17 mm.
- Terminal capacity 2.5 to 4 mm².

LV: Low Voltage

Yellow	Blue	Red	Black
100/130 Vac	200/250 Vac	380/415 Vac	480/500 Vac 600/690 Vac

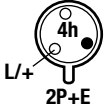
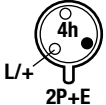
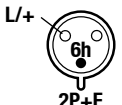

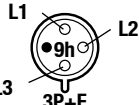
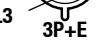
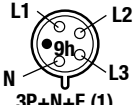
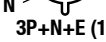
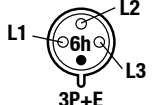

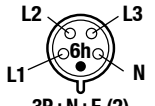

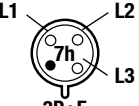

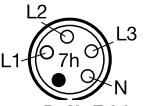

UPR Series 16 Amps Plugs and Switched Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Plugs and Receptacles

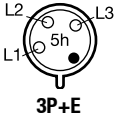
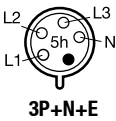
INCREASED SAFETY EX E

Description	Pin Configuration	Weight kg	Volume dm ³	Color	Catalog Number
Low Voltage: LV					
100/130 Vac 50/60 Hz - Yellow					
Wall Socket		1.29	11.3	Yellow	UPR316RY4
Plug		0.31	2.4	Yellow	UPR316PY4
200/250 Vac 50/60 Hz - Blue					
Wall Socket		1.29	11.3	Blue	UPR316RB6
Plug		0.31	2.4	Blue	UPR316PB6
Wall Socket		1.39	11.3	Blue	UPR416RB9
Plug		0.38	2.4	Blue	UPR416PB9
Wall Socket		1.43	11.3	Blue	UPR516RB9
Plug		0.41	2.4	Blue	UPR516PB9
<i>(1) 120/208 V - 144/250 Vac 50/60 Hz</i>					
380/415 Vac 50/60 Hz - Red					
Wall Socket		1.39	11.3	Red	UPR416RR6
Plug		0.38	2.4	Red	UPR416PR6
Wall Socket		1.43	11.3	Red	UPR516RR6
Plug		0.41	2.4	Red	UPR516PR6
<i>(2) 200/346 V - 240/415 Vac 50/60 Hz</i>					
480/500 Vac 50/60 Hz - Black					
Wall Socket		1.39	11.3	Black	UPR416RN7
Plug		0.38	2.4	Black	UPR416PN7
Wall Socket		1.43	11.3	Black	UPR516RN7
Plug		0.41	2.4	Black	UPR516PN7
<i>(3) 277/480-288/500 Vac 50/60Hz</i>					

UPR Series 16 Amps Plugs and Switched Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Description	Pin Configuration	Weight kg	Volume dm ³	Color	Catalog Number
Low Voltage: LV					
600/690 Vac 50/60 Hz - Black					
Wall Socket		1.39	11.3	Black	UPR416RN5
Plug		0.38	2.4	Black	UPR416PN5
Wall Socket		1.43	11.3	Black	UPR516RN5
Plug		0.41	2.4	Black	UPR516PN5

UPR Series 16 Amps Plugs and Switched Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

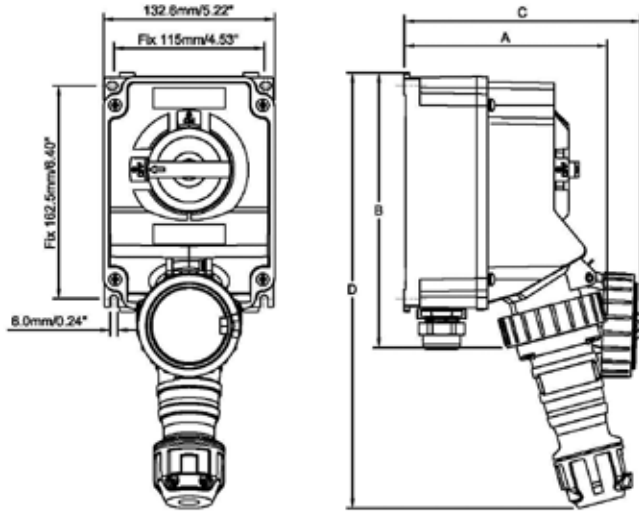
Plugs and Receptacles

INCREASED SAFETY EX E

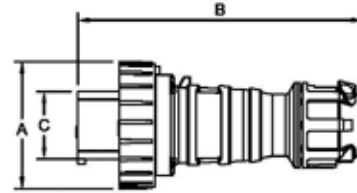
Dimensions

16A LV – 2P+E – 3P+E – 3P+N+E Versions

Wall Mounting Sockets



Plugs



	Dimensions in Millimeters			
	A	B	C	D
2 P + E	157	211	183.5	335
3 P + E	161	215	193	335
3 P + N + E	163	215	193	335

	Dimensions in Millimeters		
	A	B	C
2 P + E	81	183	44
3 P + E	89	183	49
3 P + N + E	93.5	183	56

UPR Series 32 Amps Plugs and Switched Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Plugs and receptacles are used with portable or stationery electrical equipment such as:
 - Lighting systems
 - Conveyors
 - Heaters
 - Motor generators
 - Air conditioning equipment
 - Compressors
 - Pumps
- For use in corrosive atmospheres and installations in Zone 1 and 2 and 21 and 22 of the oil and gas industry; such as:
 - Refineries
 - Chemical and petrochemical plants
 - Pipelines
 - Loading docks
 - Onshore and offshore drilling platforms

Features

- Plug and socket system is designed with a mechanical interlock to insure disengagement cannot occur while energized.
- Large ON/OFF actuator on the receptacle gives clear, visible indication of the receptacle status for maximum hazardous location protection.
- LV receptacle can be locked in 0 (Off) and 1 (On) positions.
- Different voltages are color coded for easy identification.
- The receptacles are keyed to accept UPR plugs of the proper voltage.
- Receptacle explosion proof switch.
- UPR plugs can be used in non-hazardous IEC 60309-2 sockets.
- Operating temperature of -20 °C to +55 °C.

Standard Materials

- Wall Socket: Polyamide
- Plug: Polyamide

Certifications and Compliances

◆ATEX/IECEx Certification

- **Certification Type UPR**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex db eb IIB
 - Temperature class: T6 for $T_a \leq +40$ °C and T5 for +55 °C
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tb IIIB
 - Surface Temperature: T79 °C ($T_a +40$ °C); T94 °C ($T_a +55$ °C)
 - Ambient Temperature: -20 °C $\leq T_a \leq +55$ °C
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK09
 - CE Declaration of Conformity: 50311
 - ATEX Certificate: LCIE 15 ATEX 3054X
 - IECEx Certificate: IECEx LCIE 15.0044X



Technical Data

Breaking Capacity		
AC3	32 Amp	690 Vac
AC22	32 Amp	690 Vac

Short Circuit Withstand (ICC) : 10kA

UPR Series 32 Amps Plugs and Switched Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Plugs and Receptacles

INCREASED SAFETY EX E



Wall Mounting Socket

- Two M32 threaded entries on the bottom or top upon request.
- Supplied with one M32 cable gland – Ø 10 to Ø 25 mm and two M32 blanking plugs.
- Terminal capacity 2 x 6 to 10 mm². Can be through-wired up to 6mm².
- Fitted with two linked earth terminals.



Plug

- One integrated cable clamp – Ø 14.1 to Ø 29.1 mm for 3P+N+E versions.
- Terminal capacity 6 to 10 mm².

LV - Low Voltage

Yellow	Blue	Red	Black
100/130 Vac	200/250 Vac	380/415 Vac	480/500 Vac
			600/690 Vac

UPR Series 32 Amps Plugs and Switched Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Description	Pin Configuration	Weight kg	Volume dm ³	Color	Catalog Number
100/130 Vac 50/60 Hz - Yellow					
Wall Socket		1.71	11.3	Yellow	UPR332RY4
Plug		0.46	2.4	Yellow	UPR332PY4
200/250 Vac 50/60 Hz - Blue					
Wall Socket		1.71	11.3	Blue	UPR332RB6
Plug		0.46	2.4	Blue	UPR332PB6
Wall Socket		1.85	11.3	Blue	UPR432RB9
Plug		0.49	2.4	Blue	UPR432PB9
Wall Socket		1.91	11.3	Blue	UPR532RB9
Plug		0.54	2.4	Blue	UPR532PB9
	(1) 120/208 V - 144/250 Vac 50/60 Hz				
380/415 Vac 50/60 Hz - Red					
Wall Socket		1.85	11.3	Red	UPR432RR6
Plug		0.49	2.4	Red	UPR432PR6
Wall Socket		1.91	11.3	Red	UPR532RR6
Plug		0.54	2.4	Red	UPR532PR6
	(2) 200/346 V - 240/415 Vac 50/60 Hz				
480/500 Vac 50/60 Hz - Black					
Wall Socket		1.85	11.3	Black	UPR432RN7
Plug		0.49	2.1	Black	UPR432PN7
Wall Socket		1.91	11.3	Black	UPR532RN7
Plug		0.54	2.4	Black	UPR532PN7
600/690 Vac 50/60 Hz -Black					
Wall Socket		1.85	11.3	Black	UPR432RN5
Plug		0.49	2.4	Black	UPR432PN5

UPR Series 32 Amps Plugs and Switched Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

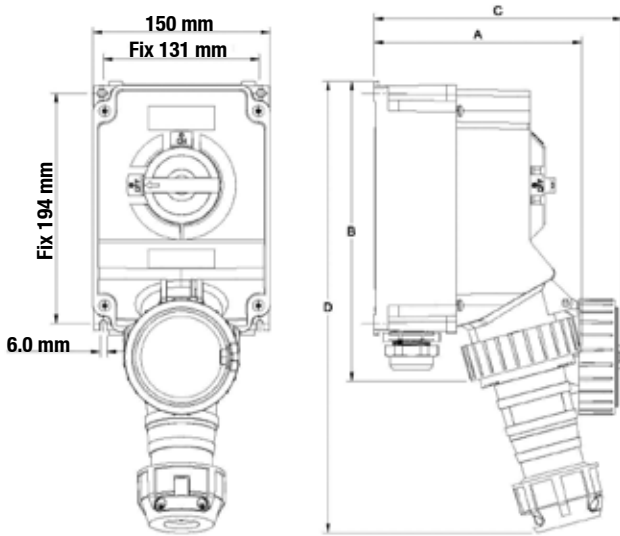
Plugs and Receptacles

INCREASED SAFETY EX E

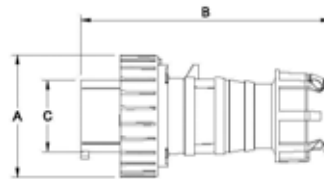
Dimensions

32A — 2P+E — 3P+E — 3P+N+E Versions

Wall Mounting Sockets



Plugs



	Dimensions in Millimeters			
	A	B	C	D
2 P + E	175	250	210	380
3 P + E	175	250	210	380
3 P + N + E	177	250	210	380

	Dimensions in Millimeters		
	A	B	C
2 P + E	98	200	57
3 P + E	98	200	57
3 P + N + E	102	200	63

PRE Series 16 Amp Plugs and Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Plugs and receptacles are used with portable or stationery electrical equipment such as:
 - Lighting systems
 - Conveyors
 - Heaters
 - Motor generators
 - Air conditioning equipment
 - Compressors
 - Pumps.
- For use in corrosive atmospheres and installations in Zone 1 and 2 and 21 and 22 of the oil and gas industry; such as:
 - Refineries
 - Chemical and petrochemical plants
 - Pipelines
 - Loading docks
 - Onshore and offshore drilling platforms
 - LNG Trains
 - Gas Compressor Stations.

Features

- Plug and socket system is designed with a safe disconnect mechanism to insure maximum hazardous location protection:
 - The contact separation is in a flameproof chamber
 - The automatic electrical disconnection of each phase is contained in a second flameproof chamber
- Short circuit protection is 20 kA, while normal reference is 10 kA.
- Different voltages are color coded for easy identification.
- The receptacles are keyed to accept only ATX plugs (other plugs can not be inserted).
- Operating temperature of -40 °C to +55 °C.

Standard Materials

- Wall Socket for 2P, 2P+ E, 3P: high impact resistance polycarbonate.
- Wall Socket for 3P+E, 3P+N+E: high impact resistance fiberglass reinforced polyester.
- Plug, mobile socket and flush socket: polyamide.

Certifications and Compliances

◆ ATEX/IECEx Certification

- Certification Type PCX (Plug, socket and mobile socket)**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC
 - Temperature class: T6 for $T_a \leq +40$ °C and T5 for +55 °C
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex td A21
 - Surface Temperature: T68 °C
 - Ambient Temperature: -40 °C $\leq T_a \leq +55$ °C
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10 (Polyester) and IK09 (Polyamide)
 - CE Declaration of Conformity: 50228
 - ATEX Certificate: LCIE 02 ATEX 6068
 - IECEx Certificate: IECEx LCI 04.0014



Technical Data

Breaking Capacity	
AC 3	4 kW – 220 V
	4.3 kW – 240 V
	7.5 kW – 380 V
	8.2 kW – 415 V
ICC	20 kA

• Certification Type PCX/EN (Flush socket)

- Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC
 - Temperature class: T6 for $T_a \leq +40$ °C and T5 for +55 °C
- Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex td A21
 - Surface Temperature: T68 °C
- Ambient Temperature: -40 °C $\leq T_a \leq +55$ °C
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK09 (Polyamide)
- CE Declaration of Conformity: 5C214
- ATEX Certificate: LCIE 02 ATEX 0001U
- IECEx Certificate: IECEx LCI 07.0012U

◆ EURASEC Certification

- Certification Type PCX (Plug, socket and mobile socket)**
 - EURASEC N° TC RU C-FR.Г505.B.00910
- Certification Type PCX/EN (Flush socket)**
 - EURASEC N° TC RU C-FR.Г505.B.00910

◆ Others Certification

- Certification Type PCX (Plug, socket and mobile socket)**
 - Inmetro Certificate: BVC11.0639 ^①
- Certification Type PCX/EN (Flush socket)**
 - Inmetro Certificate: BVC11.0598-U ^①

^① Inmetro certification available on special request only. Contact your local sales for more information

PRE Series 16 Amp Plugs and Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Plugs and Receptacles

INCREASED SAFETY EX E



Wall Mounting Socket

- Three M20 threaded entries (one on the top and two on the bottom).
- Supplied with one M20 cable gland – Ø 6.5 to Ø 14.5 mm and two M20 blanking plugs.
- Terminal capacity 2 x 4 mm². Can be through-wired.
- Fitted with three linked earth terminals.



Plug

- One PG16 integrated cable gland – Ø 6.5 to Ø 14.5 mm.
- Terminal capacity 2.5 mm².



Mobile Socket

- One PG16 integrated cable gland – Ø 6.5 to Ø 14.5 mm.
- Terminal capacity 2 x 4 mm².



Flush Socket

- Terminal capacity 2 x 4 mm².

Catalog Numbering Guide - Plugs and Receptacles

PRE
PRE Series
Zone 1, 2, 21 and 22

2
Pin Configuration:
2 - 2P
3 - 2P+E
4 - 3P+E
5 - 3P+N+E
6 - 3P

16
Amps:
16 - 16A

R
Equipment:
P - Plug
R - Receptacle
(Wall Mounting)
M - Mobile Socket
F - Flush Socket

P
Voltage:
P - 20 - 25 Vac 50/60 Hz
W1 - 20 - 50 Vdc
W - 40 - 50 Vac 50/60 Hz
Y - 100 - 130 Vac 50/60 Hz
R - 380 - 415 Vac 50/60 Hz
B - 200 - 250 Vac 50/60 Hz
N - 480 - 500 Vac 50/60 Hz
G - 50 - 500 Vac 300 to 500 Hz

ELV: Extra Low Voltage

Purple (P)	White (W1)	White (W)
20/25 Vac	20/50 Vdc	40/50 Vac




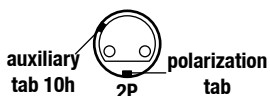




LV: Low Voltage

Yellow (Y)	Blue (B)	Red (R)	Black (N)	Green (G)
100/130 Vac	200/250 Vac	380/415 Vac	480/500 Vac	50/500 Vac (300 to 500 Hz)

PRE Series 16 Amp Extra Low Voltage and Low Voltage Plugs and Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Description	Pin Configuration	Weight kg	Volume dm ³	Catalog Number
Extra Low Voltage: ELV				
20/25 Vac 50/60 Hz – Purple				
Wall Socket	 <p>2P polarization tab</p>	0.6	3.8	PRE216RP
Plug		0.2	0.6	PRE216PP
Mobile Socket		0.4	1.3	PRE216MP
Flush Socket		0.2	1.3	PRE216FP
Wall Socket	 <p>10h 2P+E</p>	0.6	3.8	PRE316RP
Plug		0.2	0.6	PRE316PP
Mobile Socket		0.4	1.3	PRE316MP
Flush Socket		0.2	1.3	PRE316FP
Wall Socket	 <p>3P polarization tab</p>	0.6	3.8	PRE616RP
Plug		0.2	0.6	PRE616PP
Mobile Socket		0.4	1.3	PRE616MP
Flush Socket		0.2	1.3	PRE616FP
20/50 Vdc – White				
Wall Socket	 <p>auxiliary tab 10h 2P polarization tab</p>	0.6	3.8	PRE216RW1
Plug		0.2	0.6	PRE216PW1
Mobile Socket		0.4	1.3	PRE216MW1
Flush Socket		0.2	1.3	PRE216FW1
40/50 Vac 50/60 Hz – White				
Wall Socket	 <p>2P polarization tab</p>	0.6	3.8	PRE216RW
Plug		0.2	0.6	PRE216PW
Mobile Socket		0.4	1.3	PRE216MW
Flush Socket		0.2	1.3	PRE216FW
Wall Socket	 <p>auxiliary pin 12h 3P polarization tab</p>	0.6	3.8	PRE616RW
Plug		0.2	0.6	PRE616PW
Mobile Socket		0.4	1.3	PRE616MW
Flush Socket		0.2	1.3	PRE616FW
Low Voltage: LV				
100/130 Vac 50/60 Hz – Yellow				
Wall Socket	 <p>L/+ 4h 2P+E</p>	0.6	3.8	PRE316RY
Plug		0.2	0.6	PRE316PY
Mobile Socket		0.4	1.3	PRE316MY
Flush Socket		0.2	1.3	PRE316FY
200/250 Vac 50/60 Hz – Blue				
Wall Socket	 <p>L/+ 6h 2P+E</p>	0.6	3.8	PRE316RB
Plug		0.2	0.6	PRE316PB
Mobile Socket		0.4	1.3	PRE316MB
Flush Socket		0.2	1.3	PRE316FB

Shaded catalog numbers are normally stocked items. All other items are made to order.

PRE Series 16 Amp Low Voltage Plugs and Sockets and Accessories

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Plugs and Receptacles

INCREASED SAFETY EX E

Description	Pin Configuration	Weight kg	Volume dm ³	Catalog Number
Low Voltage: LV				
200/250 Vac 50/60 Hz — Blue				
Wall Socket		1.5	4.7	PRE416RB
Plug		0.6	0.6	PRE416PB
Mobile Socket		0.6	4.0	PRE416MB
Flush Socket		0.2	1.3	PRE416FB
Wall Socket		1.6	4.7	PRE516RB
Plug		0.3	1.3	PRE516PB
Mobile Socket		0.6	4.0	PRE516MB
Flush Socket		(1) 120/208 V - 144/250 Vac 50/60 Hz	0.2	1.3
380/415 Vac 50/60 Hz — Red				
Wall Socket		1.5	4.7	PRE416RR
Plug		0.2	0.6	PRE416PR
Mobile Socket		0.6	4.0	PRE416MR
Flush Socket		0.3	1.3	PRE416FR
Wall Socket		1.6	4.7	PRE516RR
Plug		0.3	1.3	PRE516PR
Mobile Socket		0.6	4.0	PRE516MR
Flush Socket		(2) 200/346 V - 240/415 Vac 50/60 Hz	0.3	1.3
480/500 Vac 50/60 Hz — Black				
Wall Socket		1.5	4.7	PRE416RN
Plug		0.2	0.6	PRE416PN
Mobile Socket		0.6	4.0	PRE416MN
Flush Socket		0.3	1.3	PRE416FN
50/500 Vac 300/500 Hz — Green				
Wall Socket		1.6	4.7	PRE516RG
Plug		0.2	0.6	PRE516PG
Mobile Socket		0.6	4.0	PRE516MG
Flush Socket		0.3	1.3	PRE516FG

Accessories

Description	Catalog Number
<p>M5 earth stud with black neoprene sealing washer and green/yellow earth conductor, length 300 mm Certification type BVE : Exe - IP66 - 03 ATEX 0011 U - IECEx LCI 04.0027U</p>	PREESTM20
<p>M20 earth continuity adaptor with black neoprene sealing washer and green/yellow earth conductor, length 300 mm Certification type ACC : Exe - IP66 - 03 ATEX 0020 U</p>	PREECAM20

Shaded catalog numbers are normally stocked items. All other items are made to order.

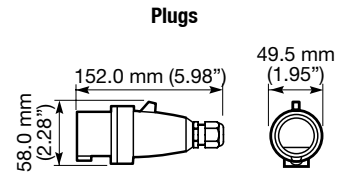
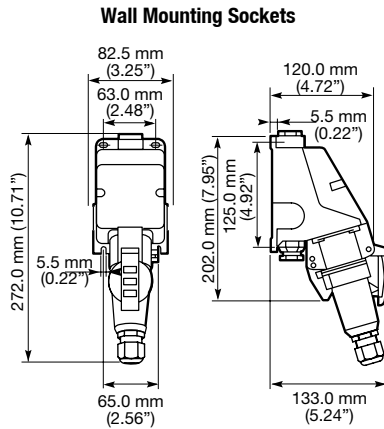
PRE Series 16 Amp Plug and Socket Dimensions

Increased Safety

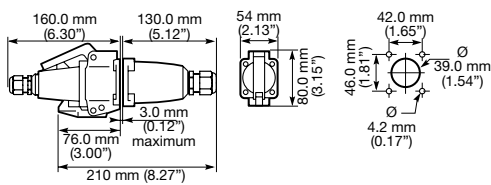
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Dimensions

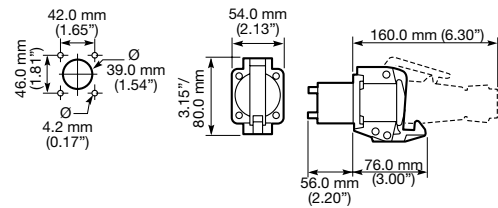
16A – 2P – 2P+E – 3P Versions



Mobile Sockets
Can be mounted on panel - 0.12"/3.0 mm thickness maximum

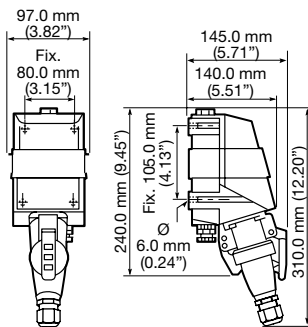


Flush Sockets

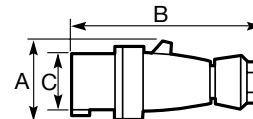


16A – 3P+E – 3P+N+E Versions

Wall Mounting Sockets

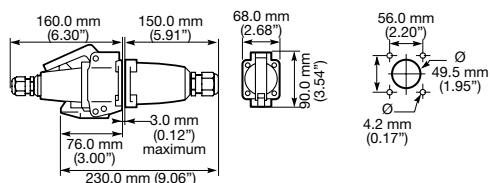


Plugs

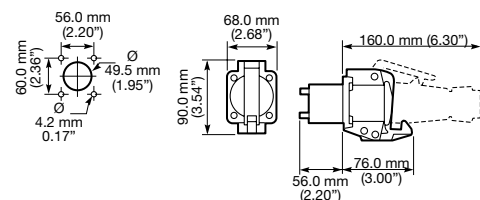


Dimensions in Millimeters			
	A	B	C
3 P + E	66.0	154.0	55.5
3 P + N + E	73.0	166.0	62.0

Mobile Sockets
Can be mounted on panel - 3.0 mm thickness maximum



Flush Sockets



PRE Series 32 Amp Plugs and Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Plugs and Receptacles

INCREASED SAFETY EX E

Applications

- Plugs and sockets are used with portable or stationery electrical equipment such as:
 - Lighting systems
 - Conveyors
 - Heaters
 - Motor generators
 - Air conditioning equipment
 - Compressors
 - Pumps
- For use in corrosive atmospheres and installations in Zone 1 and 2 and 21 and 22 of the oil and gas industry, such as:
 - Refineries
 - Chemical and petrochemical plants
 - Pipelines
 - Loading docks
 - Onshore and offshore drilling platforms
 - LNG Trains
 - Gas Compressor Stations

Features

- Plug and socket system is designed with a safe disconnect mechanism to insure maximum hazardous location protection:
 - The contact separation is in a flameproof chamber
 - The automatic electrical disconnection of each phase is contained in a second flameproof chamber
- Short circuit protection is 20 kA, while normal reference is 10 kA.
- Different voltages are color coded for easy identification.
- The sockets are keyed to accept only ATX plugs (other plugs can not be inserted).
- ATX plugs can be used in non-hazardous sockets.

Standard Materials

- Wall Socket: high impact resistance fiberglass reinforced polyester
- Plug, mobile socket and flush socket: polyamide

Certifications and Compliances

◆ ATEX/IECEX Certification

- Certification Type PCX (Plug, socket and mobile socket)**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC
 - Temperature class: T6 for $T_a \leq +40^\circ\text{C}$ and T5 for $+55^\circ\text{C}$
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex td A21
 - Surface Temperature: T68 °C
 - Ambient Temperature: $-40^\circ\text{C} \leq T_a \leq +55^\circ\text{C}$
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10 (Polyester) and IK09 (Polyamide)
 - CE Declaration of Conformity: 50228
 - ATEX Certificate: LCIE 02 ATEX 6068
 - IECEX Certificate: IECEX LCI 04.0014



Technical Data

Breaking Capacity	
AC 1	32 A – 500 V
	11 kW – 220 V
	12 kW – 240 V
AC 22	19 kW – 380 V
	20.7 kW – 415 V
ICC	20 kA

• Certification Type PCX/EN (Flush socket)

- Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC
 - Temperature class: T6 for $T_a \leq +40^\circ\text{C}$ and T5 for $+55^\circ\text{C}$
- Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex td A21
 - Surface Temperature: T68 °C
- Ambient Temperature: $-40^\circ\text{C} \leq T_a \leq +55^\circ\text{C}$
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK09 (Polyamide)
- CE Declaration of Conformity: 5C214
- ATEX Certificate: LCIE 02 ATEX 0001U
- IECEX Certificate: IECEX LCI 07.0012U

◆ EURASEC Certification

- Certification Type PCX (Plug, socket and mobile socket)**
 - EURASEC N° TC RU C-FR.Г505.B.00910
- Certification Type PCX/EN (Flush socket)**
 - EURASEC N° TC RU C-FR.Г505.B.00910

◆ Others Certification

- Certification Type PCX (Plug, socket and mobile socket)**
 - Inmetro Certificate: BVC11.0639 ①
- Certification Type PCX/EN (Flush socket)**
 - Inmetro Certificate: BVC11.0598-U ①

PRE Series 32 Amp Plugs and Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)



Wall Mounting Socket

- Three M25 threaded entries (one on the top and two on the bottom).
- Supplied with one M25 cable gland – Ø 8 to Ø 18.5 mm and two M25 blanking plugs.
- Terminal capacity 2 x 6 mm².
- Fitted with three linked earth terminals.



Plug

- One PG21 integrated cable gland – Ø 8 to Ø 18.5 mm for 3P+N+E versions.
- Terminal capacity 6 mm².



Mobile Socket

- One PG21 integrated cable gland – Ø 8 to Ø 18.5 mm for 2P+E and 3P+E versions.
- One PG29 integrated cable gland – Ø 18 to Ø 25 mm for 3P+N+E versions.
- Terminal capacity 2 x 6 mm².



Flush Socket

- Terminal capacity 2 x 6 mm².

Catalog Numbering Guide – Plugs and Receptacles

PRE
PRE Series
Zone 1, 2, 21 and 22
ATEX / IECEx

3
Pin Configuration:
3 - 2P+E
4 - 3P+E
5 - 3P+N+E

32
Amps:
32 - 32A

R
Equipment:
P - Plug
R - Receptacle
(Wall Mounting)
M - Mobile Socket
F - Flush Socket

P
Voltage:
Y - 100 - 130 Vac 50/60 Hz
B - 200 - 250 Vac 50/60 Hz
R - 380 - 415 Vac 50/60 Hz
N - 480 - 500 Vac 50/60 Hz

LV: Low Voltage

Yellow (Y)	Blue (B)	Red (R)	Black (N)
100/130 Vac	200/250 Vac	380/415 Vac	480/500 Vac

① Inmetro certification available on special request only. Contact your local sales for more information

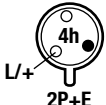
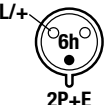
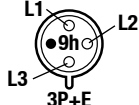
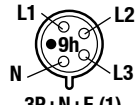
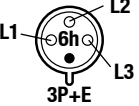
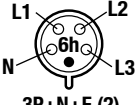

PRE Series 32 Amp Low Voltage Plugs and Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Plugs and Receptacles

INCREASED SAFETY EX E

Description	Pin Configuration	Weight kg	Volume dm ³	Catalog Number
100/130 Vac 50/60 Hz — Yellow				
Wall Socket		1.9	7.0	PRE332RY
Plug		0.5	4.0	PRE332PY
Mobile Socket		0.8	3.2	PRE332MY
Flush Socket		0.6	2.7	PRE332FY
200/250 Vac 50/60 Hz — Blue				
Wall Socket		1.9	7.0	PRE332RB
Plug		0.5	4.0	PRE332PB
Mobile Socket		0.8	3.2	PRE332MB
Flush Socket		0.6	2.7	PRE332FB
Wall Socket		1.9	7.0	PRE432RB
Plug		0.5	4.0	PRE432PB
Mobile Socket		0.8	3.2	PRE432MB
Flush Socket		0.6	2.7	PRE432FB
Wall Socket		1.9	7.0	PRE532RB
Plug		0.5	4.0	PRE532PB
Mobile Socket		1.0	4.0	PRE532MB
Flush Socket		(1) 120/208 V - 144/250 Vac 50/60 Hz	0.6	2.7
380/415 Vac 50/60 Hz — Red				
Wall Socket		2.0	7.0	PRE432RR
Plug		0.4	4.0	PRE432PR
Mobile Socket		0.8	3.2	PRE432MR
Flush Socket		0.6	2.7	PRE432FR
Wall Socket		2.0	7.0	PRE532RR
Plug		0.5	4.0	PRE532PR
Mobile Socket				
Flush Socket		(2) 200/346 V - 240/415 Vac 50/60 Hz	0.6	2.7
480/500 Vac 50/60 Hz — Black				
Wall Socket		2.0	7.0	PRE432RN
Plug		0.4	4.0	PRE432PN
Mobile Socket		1.0	4.0	PRE432MN
Flush Socket		0.6	2.7	PRE432FN



Shaded catalog numbers are normally stocked items. All other items are made to order.

PRE Series 32 Amp Low Voltage Plug and Socket Accessories and Dimensions

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

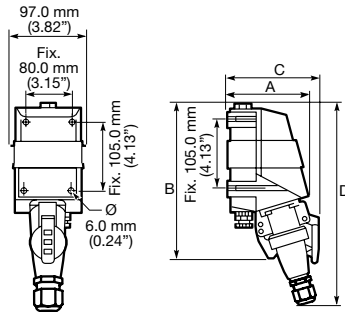
Accessories

	Description	Catalog Number
	M5 earth stud with black neoprene sealing washer and green/yellow earth conductor, length 300 mm Certification type BVE : Exe - IP66 - 03 ATEX 0011 U - IECEx LCI 04.0027U	PREESTM25
	M25 earth continuity adaptor with black neoprene sealing washer and green/yellow earth conductor, length 300 mm Certification type ACC : Exe - IP66 - 03 ATEX 0020 U	PREECAM25

Dimensions

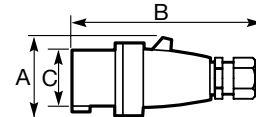
32A — 2P+E — 3P+E — 3P+N+E Versions

Wall Mounting Sockets



	Dimensions in Millimeters			
	A	B	C	D
2 P + E	140.0	275.0	155.0	370.0
3 P + E	140.0	275.0	155.0	370.0
3 P + N + E	140.0	275.0	165.0	375.0

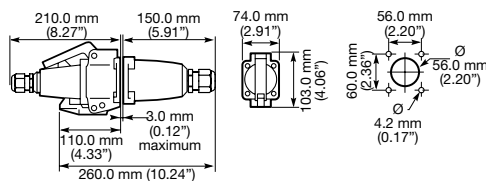
Plugs



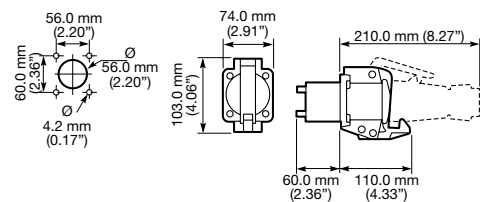
	Dimensions in Millimeters		
	A	B	C
2 P + E	80.0	170.0	67.0
3 P + E	80.0	170.0	67.0
3 P + N + E	80.0	195.0	74.0

Mobile Sockets

Can be mounted on panel - 3.0 mm thickness maximum



Flush Sockets



PRE Series 63 Amp Plugs and Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Plugs and Receptacles

INCREASED SAFETY EX E

Applications

- Plugs and sockets are used with stationary or portable electrically operated devices such as:
 - Welding devices
 - Lighting systems
 - Conveyors
 - Heaters
 - Motor generator sets
 - Air conditionings
 - Compressors
 - Pumps
- For use in corrosive atmospheres and installations in Zones 1, and 2 and 21 and 22 of oil and gas industry, such as
 - Refineries
 - Chemical and petrochemical plants
 - Pipelines
 - Onshore and offshore drilling platforms
 - LNG Trains
 - Gas Compressor Stations



Plug



Wall Mounting Socket



Wall Mounting Socket Through-Wired

Features

- Positive polarization: only ATX plugs of same style, number of poles and ampere rating may be used with these sockets.
- Interlocked 3-pole or 4-pole Ex de disconnecting on-load switch, with auxiliary early break contact (capacity 2.5 mm² max).
- Plug is mechanically locked in socket when switch is ON.
- Switch operating handle can be padlocked in OFF position (max 4 padlocks).
- Plug cannot be inserted or removed unless switch is in OFF position.

Standard Materials

- Socket: high impact resistance fiberglass reinforced polyester.
- Flap cover and plug: polyamide

Certifications and Compliances

◆ ATEX/IECEx Certification

- **Certification Type PC63X**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC
 - Temperature class: T6 for Ta ≤ +40 °C and T5 for +55 °C
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex td A21
 - Surface Temperature: T90 °C
 - Ambient Temperature: -30 °C to +55 °C
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10
 - CE Declaration of Conformity: 50208
 - ATEX Certificate: LCIE 99 ATEX 6004
 - IECEx Certificate: IECEx LCIE 13.0010

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.ГБ05.B.00910

◆ Others Certification

- Inmetro Certificate: BVC11.0595 ①

① Inmetro certification available on special request only. Contact your local sales for more information

PRE Series 63 Amp Plugs and Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)



Wall Mounting Socket

- Standard versions:
 - Supplied with one M50 cable gland for unarmored cable – Ø 28 to Ø 42 mm and one M25 blanking plug.
 - Terminal capacity 1 x 25 mm².

- Through-wired versions:
 - Supplied with two M50 cable glands for unarmored cable – Ø 28 to Ø 42 mm and one M25 blanking plug.
 - Terminal capacity 2 x 25 mm².



Plug

- One integrated cable entry for unarmored flexible cable – Ø 17.5 to Ø 29 mm for 3P + E versions; Ø 17.5 to Ø 32 mm for 3P + N + E versions.
- Terminals capacity 16 mm².

63 Amps		
Main Contacts		
Rated Insulation Voltage	690 Vac	
Rated Operating Voltage	690 Vac	
Rated Operating Current	63 Amp	
Rated Surge Voltage	6 KV	
Switching Capacity		
AC 21 A / AC 22 A	63 Amp	230 Volt to 690 Volt
	15 kW	230 Volt
AC 23 A	22 kW	400 Volt
	30 kW	500 Volt
	18.5 kW	690 Volt
	11 kW	230 Volt
AC 3	18.5 kW	400 Volt
	22 kW	500 Volt
	15 KW	690 Volt
DC 21		-
DC 22		-
DC 23		-
Auxiliary Contacts		
Rated Insulation Voltage	400 Volt	
Rated Operating Voltage	400 Volt	
Rated Operating Current	10 Amp	
Switching Capacity: AC 15	6 Amp	230 Volt
	4 Amp	400 Volt
Others		
Termination (flexible/solid)	25 mm ²	

PRE Series 63 Amp Plugs and Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Plugs and Receptacles

INCREASED SAFETY EX E

Catalog Numbering Guide — Plugs and Receptacles

PRE

PRE Series
Zone 1, 2, 21 and 22
ATEX/IECEx certified

4

Pin Configuration:
4 - 3P+E
5 - 3P+N+E

63

Amps:
63 - 63A

R

Equipment:
P - Plug
R - Receptacle
(Wall Mounting)

B

Voltage:
B - 200 - 250 Vac
50/60 Hz
R - 380 - 415 Vac
50/60 Hz
N - 480 - 500 Vac
50/60 Hz
R1 - 440 - 460 Vac
60 Hz
N1 - 600 - 690 Vac
50/60 Hz

A

Cable Type:
A - Armored
U - Unarmored

3

Cable Entry Size: ①
3 - M32
4 - M40
5 - M50
6 - M63

S

Options:
S - 316L Stainless Steel
T - Through-wired

LV: Low Voltage

Blue (B)	Red (R)	Black (N)	Red (R1)	Black (N1)
200/250 Vac	380/415 Vac	480/500 Vac	440/460 Vac	600/690 Vac

① With one M25 plugged entry.

PRE Series 63 Amp Plugs and Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Standard Versions

Description	Pin Configuration	Weight kg	Volume dm ³	Catalog Number
200/250 Vac 50/60 Hz — Blue				
Wall Socket		8.0	26.0	PRE463RBU5
Plug		1.0	7.0	PRE463PB
380/415 Vac 50/60 Hz — Red				
Wall Socket		8.0	26.0	PRE463RRU5
Plug		1.0	7.0	PRE463PR
Wall Socket		8.0	26.0	PRE563RRU5
Plug		1.0	7.0	PRE563PR
<i>(1) 200/346 V – 240/415 Vac 50/60 Hz</i>				
440/460 Vac 60 Hz — Red				
Wall Socket		8.0	26.0	PRE463RR1U5
Plug		1.0	7.0	PRE463PR1
Wall Socket		8.0	26.0	PRE563RR1U5
Plug		1.0	7.0	PRE563PR1
<i>(2) 250/440 V – 265/460 Vac 60 Hz</i>				
480/500 Vac 50/60 Hz — Black				
Wall Socket		8.0	26.0	PRE463RNU5
Plug		1.0	7.0	PRE463PN
Wall Socket		8.0	26.0	PRE563RNU5
Plug		1.0	7.0	PRE563PN
<i>(3) 277/480 V – 288/500 Vac 50/60 Hz</i>				
600/690 Vac 50/60 Hz — Black				
Wall Socket		8.0	26.0	PRE463RN1U5
Plug		1.0	7.0	PRE463PN1
Wall Socket		8.0	26.0	PRE563RN1U5
Plug		1.0	7.0	PRE563PN1
<i>(4) 347/600 V – 400/690 Vac 50/60 Hz</i>				

Shaded catalog numbers are normally stocked items. All other items are made to order.

PRE Series 63 Amp Plugs and Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Plugs and Receptacles

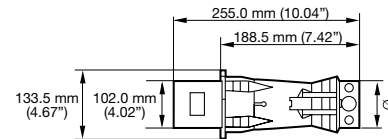
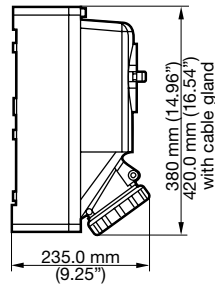
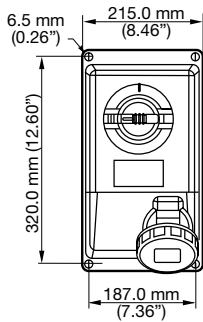
INCREASED SAFETY EX E

Through-wired Versions

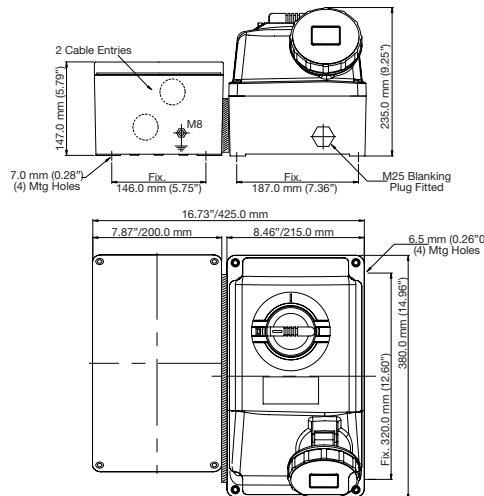
Description	Pin Configuration	Weight kg	Volume dm ³	Catalog Number
380/415 Vac 50/60 Hz — Red				
Wall Socket		16.0	110.0	PRE463RRU5T
Wall Socket		16.0	110.0	PRE563RRU5T
(1) 200/346 V – 240/415 Vac 50/60 Hz				

Dimensions

Standard Version



Through-Wired Version



PRE Series 125 Amp Plugs and Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Plugs and sockets are used with stationary or portable electrically operated devices such as:
 - Welding devices
 - Lighting systems
 - Conveyors
 - Heaters
 - Motor generator sets
 - Air conditioning
 - Compressors
 - Pumps
- For use in corrosive atmospheres and installations in Zones 1, and 2 and 21 and 22 of oil and gas industry, such as:
 - Refineries
 - Chemical and petrochemical plants
 - Pipelines
 - Onshore and offshore drilling platforms
 - LNG Trains
 - Gas Compressor Stations

Features

- Positive polarization: only ATX plugs of same style, number of poles and ampere rating may be used with these sockets.
- Interlocked 3-pole or 4-pole Ex de disconnecting on-load switch, with auxiliary early break contact – capacity 2.5 mm² maximum.
- Plug is mechanically locked in socket when switch is ON.
- Switch operating handle can be padlocked in OFF position (max 4 padlocks).
- Plug cannot be inserted or removed unless switch is in OFF position.

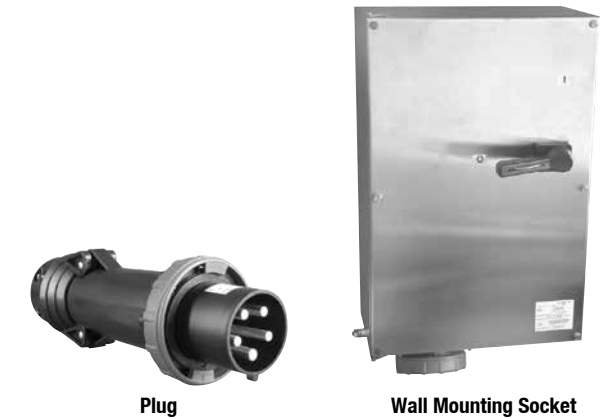
Standard Materials

- Socket: 316L stainless steel
- Flap cover and plug: polyamide

Certifications and Compliances

◆ ATEX Certification

- **Certification Type PC125X**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC
 - Temperature class: T6 for Ta ≤ +40 °C and T5 for +55 °C
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T90 °C
 - Ambient Temperature: -30 °C to +55 °C
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10
 - CE Declaration of Conformity: 50218
 - ATEX Certificate: LCIE 99 ATEX 6031



Plug

Wall Mounting Socket

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00910

◆ Others Certification

- INMETRO Certificate: BVC11.0596 ^①

^① Inmetro certification available on special request only. Contact your local sales for more information

PRE Series 125 Amp Plugs and Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Plugs and Receptacles

INCREASED SAFETY EX E



Wall Mounting Socket

- One M63 cable gland for unarmored cable – Ø 36 to Ø 44 mm and one M25 blanking plug.
- Terminal capacity 120 mm².



Plug

- One integrated cable entry for unarmored flexible cable – Ø 30 to Ø 48 mm.
- Terminals capacity 50 mm².

160 Amps

Main Contacts

Rated Insulation Voltage	690 Vac
Rated Operating Voltage	690 Vac
Rated Operating Current	125 Amp
Rated Surge Voltage	8 KV

Switching Capacity

AC 21 A / AC 22 A	125 Amp	400 Volt to 690 Volt
AC 23 A	80 kW	400 Volt
	110 kW	500 Volt
	55 kW	690 Volt
AC 3	90 kW	400 Volt
	70 kW	500 Volt
DC 21	125 Amp	220 Volt ①
	125 Amp	440 Volt ①
DC 22	125 Amp	220 Volt ①
	100 Amp	440 Volt ①
DC 23	125 Amp	220 Volt ①
	63 Amp	440 Volt ①

Auxiliary Contacts

Rated Insulation Voltage	230 Volt
Rated Operating Voltage	230 Volt
Rated Operating Current	10 Amp
Switching Capacity: AC 15	6 Amp 230 Volt

Others

Termination (flexible/solid)	120 mm ²
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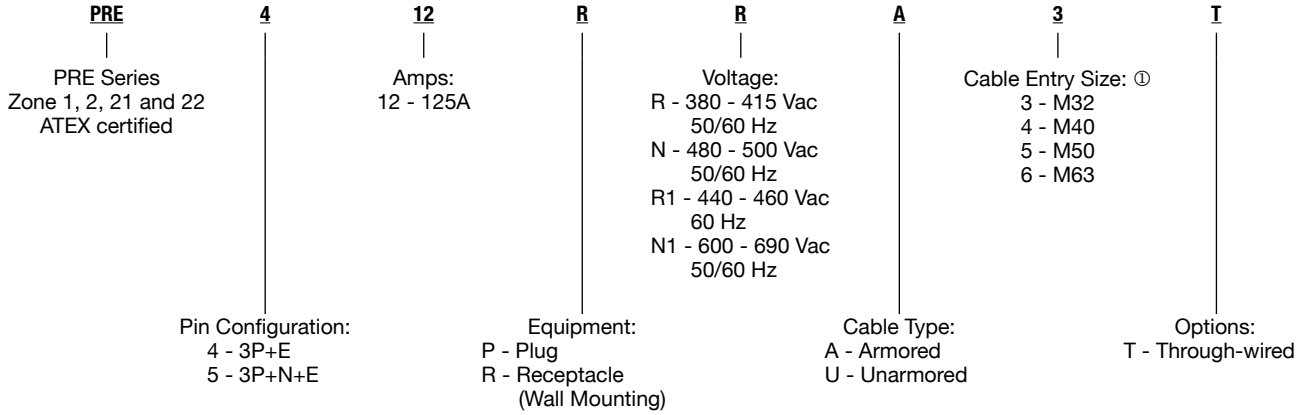
① 2 contacts connected in series per pole.

PRE Series 125 Amp Plugs and Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide



Plugs and Receptacles

INCREASED SAFETY EX E

LV: Low Voltage

Red (R)	Black (N)	Red (R1)	Black (N1)
380/415 Vac	480/500 Vac	440/460 Vac	600/690 Vac

① With one M25 plugged entry.

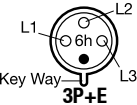
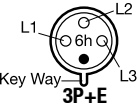
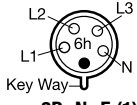
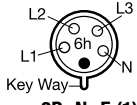




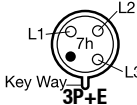
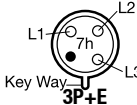
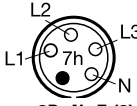
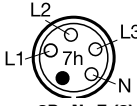
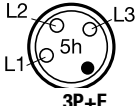
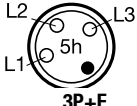
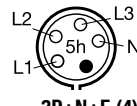
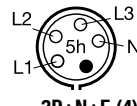
PRE Series 125 Amp Plugs and Sockets

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Plugs and Receptacles

INCREASED SAFETY EX E

Description	Pin Configuration	Weight kg	Volume dm ³	Catalog Number
380/415 Vac 50/60Hz – Red				
Wall Socket		16.0	70.0	PRE412RRU6
Plug		1.1	13.0	PRE412PR
Wall Socket		16.0	70.0	PRE512RRU6
Plug	 3P+N+E (1) <i>(1) 200/346 V – 240/415 Vac 50/60 Hz</i>	1.1	13.0	PRE512PR
440/460 Vac 60 Hz – Red				
Wall Socket		16.0	70.0	PRE412RR1U6
Plug		1.1	13.0	PRE412PR1
Wall Socket		16.0	70.0	PRE512RR1U6
Plug	 3P+N+E (2) <i>(2) 250/440 V – 265/460 Vac 60 Hz</i>	1.1	13.0	PRE512PR1
480/500 Vac 50/60 Hz – Black				
Wall Socket		16.0	70.0	PRE412RNU6
Plug		1.1	13.0	PRE412PN
Wall Socket		16.0	70.0	PRE512RNU6
Plug	 3P+N+E (3) <i>(3) 277/480 V – 288/500 Vac 50/60 Hz</i>	1.1	13.0	PRE512PN
600/690 Vac 50/60 Hz – Black				
Wall Socket		16.0	70.0	PRE412RN1U6
Plug		1.1	13.0	PRE412PN1
Wall Socket		16.0	70.0	PRE512RN1U6
Plug	 3P+N+E (4) <i>(4) 347/600 V – 400/690 Vac 50/60 Hz</i>	1.1	13.0	PRE512PN1

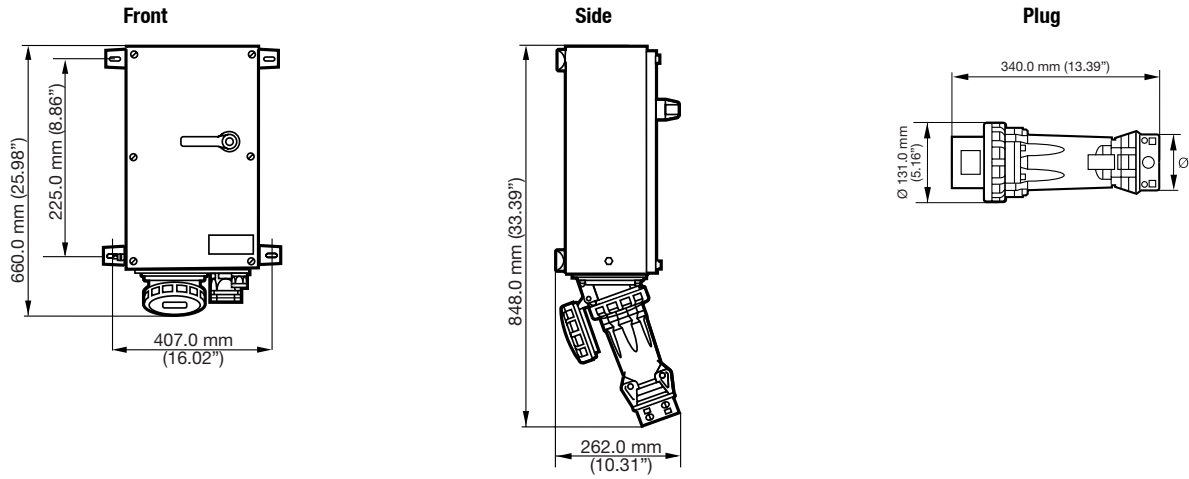
Shaded catalog numbers are normally stocked items. All other items are made to order.

PRE Series 125 Amp Plug and Socket

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Dimensions



MRE Series 16 and 32 Amp Multiple Socket Outlets

Stationary and Portable. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Plugs and Receptacles

INCREASED SAFETY EX E

Applications

- Plugs and sockets are used with portable or stationary electrical equipment such as:
 - Lighting systems
 - Conveyors
 - Heaters
 - Motor generators
 - Air conditioning equipment
 - Compressors
 - Pumps
- For use in corrosive atmospheres and installations in Zone 1 and 2 and 21 and 22 of the oil and gas industry such as:
 - Refineries
 - Chemical plants
 - Petrochemical plants
 - Pipelines
 - Loading docks
 - Onshore and offshore drilling platforms
 - LNG Trains
 - Gas Compressor Stations

Features

- Plug and socket assembly is equipped with a patented silver plated linear switch which allows a total disconnection of power when plug is removed.
- The high voltage contact separation is in a flameproof chamber.
- The automatic electrical disconnection of each phase is contained in a second flameproof chamber.
- Short circuit protection is 20 kA, while normal reference is 10 kA.
- Different voltages are color coded for easy identification.
- The sockets are keyed to accept only ATX plugs (other plugs can not be inserted).
- ATX plugs can be used in non-hazardous sockets.

Standard Materials

- Housing: high impact resistance fiberglass reinforced polyester or 316L stainless steel
- Flush sockets: polyamide

Options

- Customized multiple socket outlets.
Please contact your local sales representative.



Customized Version



Two Socket Outlet Version



Four Socket Outlet Version



Cable Reel

MRE Series 16 and 32 Amp Multiple Socket Outlets

Stationary and Portable. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Certifications and Compliances

◆ ATEX or IECEx Certification

- **Certification Type PCX/EN (Flush Socket)**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC
 - Temperature class: T6 for Ta ≤ +40 °C and T5 for +55 °C
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T68 °C
 - Service Temperature: -40 °C to +55 °C
 - Impact Resistance (shock): IK09
 - Index of Protection according EN/IEC 60529: IP66
 - CE Declaration of Conformity: 5C214
 - ATEX Certificate: LCIE 02 ATEX 0001U
 - IECEx Certificate: IECEx LCI 07.0012U
- **Certification Type CSPe (Housing)**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex e II
 - Temperature class: T6
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T75 °C
 - Ambient Temperature: -55 °C to +60 °C (empty house)
 - Impact Resistance (shock): IK10
 - Index of Protection according EN/IEC 60529: IP66
 - CE Declaration of Conformity: 50284
 - ATEX Certificate: LCIE 09 ATEX 3032X
 - IECEx Certificate: IECEx LCI 09.0016X
- **Certification Type CAe (Housing)**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex e II
 - Temperature class: T6 to T3
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C to T95 °C
 - Ambient Temperature: -40 °C to +55 °C (empty house)
 - Impact Resistance (shock): IK10
 - Index of Protection according EN/IEC 60529: IP66
 - CE Declaration of Conformity: 50235
 - ATEX Certificate: LCIE 02 ATEX 6248X
 - IECEx Certificate: IECEx LCI 04.0016

- **Certification Type JBe (Housing)**

- Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex e II
 - Temperature class: T6 to T2
- Dust Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C to T290 °C
- Ambient Temperature: -50 °C to +70 °C (empty house)
- Impact Resistance (shock): IK10
- Index of Protection according EN/IEC 60529: IP66
- CE Declaration of Conformity: 50232
- ATEX Certificate: LCIE 02 ATEX 6118X
- IECEx Certificate: IECEx LCI 11.0008X

The ambient temperature for complete assembly is determined according all the components used.

◆ EURASEC Certification

- **Certification Type (Flush Socket) PCX/EN**
 - EURASEC N° TC RU C-FR.Г505.B.00910
- **Certification Type (Housing) CSPe**
 - EURASEC N° TC RU C-FR.Г505.B.00911
- **Certification Type (Housing) CAe**
 - EURASEC N° TC RU C-FR.Г505.B.00911
- **Certification Type (Housing) JBe**
 - EURASEC N° TC RU C-FR.Г505.B.00911

◆ Others Certification

- **Certification Type (Flush Socket) PCX/EN**
 - Inmetro Certificate: BR230598-U ^①
- **Certification Type (Housing) CSPe**
 - Inmetro Certificate: BR230637-X ^①
- **Certification Type (Housing) CAe**
 - Inmetro Certificate: BR230421-X ^①
- **Certification Type (Housing) JBe**
 - Inmetro Certificate: BR230418-X ^①

^① Inmetro certification available on special request only. Contact your local sales for more information

MRE Series 16 and 32 Amp Multiple Socket Outlets

Stationary and Portable. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Plugs and Receptacles

INCREASED SAFETY EX E

Catalog Numbering Guide

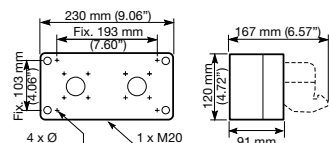
MRE	P	1	2	16	P	T0	K	#
MRE Series Zone 1, 2, 21 and 22 ATEX or ATEX/IECEX certified	Enclosure Material: P - Polyester S - 316L Stainless Steel	Socket Outlets Quantity: 0 1 2 3 4 5 6 7 8	Pin Configuration: 2 - 2P 3 - 2P+E 6 - 3P 4 - 3P+E 5 - 3P+N+E F - Drilling for Socket 2P-3P-2P+E 16A G - Drilling for Socket 3P+E - 3P+N+E 16A J - Drilling for Socket 3P+E - 3P+N+E 32A	Amps: 16 - 16 A 32 - 32 A	Voltage: P - 20-25 Vac 50/60 Hz Y - 100-130 Vac 50/60 Hz B - 200-250 Vac 50/60 Hz R - 380-415 Vac 50/60 Hz	Transformer Power: T0 - None T1 - 100 VA T2 - 160 VA T3 - 250 VA T4 - 400 VA	Primary/ Secondary Voltage: K - 230-400 V / 24 V L - 240-415 V / 24 V M - 230-400 V / 110 V	Options: <i>Options must be listed alphabetically</i> H - Portable Unit with Handle: Only available with SS 316L enclosure # - Customized Multiple Socket 6 digit number will be assigned at time of order placement.

Description	Type	Weight kg	Volume dm ³	Catalog Number
-------------	------	-----------	------------------------	----------------

Pre-drilled Multiple Sockets in Polyester for 2 Flush Sockets 16 A – Ex de IIC T5 -40 °C to +55 °C (ATEX/IECEX)

Supplied with:
1 x Terminal block 2P+E 6 mm²;
1 x M20 plastic cable gland for unarmored cable – diameter 6.5 to 14.5 mm.

Layout 1



Pre-drilled enclosure for 2 flush
sockets (not supplied)
PRE Series 2P or 2P+E – 16A

CSPe3

PCX/EN

1.3

7

MREP2F

Shaded catalog numbers are normally stocked items. All other items are made to order.

MRE Series 16 and 32 Amp Multiple Socket Outlets

Stationary and Portable. Increased Safety

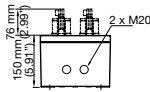
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Description	Type	Weight kg	Volume dm ³	Catalog Number
-------------	------	-----------	------------------------	----------------

Pre-drilled Multiple Sockets in Polyester for 4 Flush Sockets 16A – Ex de IIC T5 -40 °C to +55 °C (ATEX/IECEX)

Supplied with:
1 x Distribution block 4 poles 12 x 4 mm with cable clamps – 2 x 10 mm² max.;
1 x M20 plastic cable gland for unarmored cable – diameter 6.5 to 14.5 mm;
1 x M20 plastic blanking plug.

Layout 2



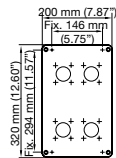
Pre-drilled enclosure for 4 flush sockets (not supplied)
PRE Series 2P or 2P+E – 16A

CAe2
PCX/EN

4

15

MREP4F



Pre-drilled enclosure for 4 flush sockets (not supplied)
PRE Series 3P+E or 3P+N+E – 16A

CAe2
PCX/EN

4

15

MREP4G



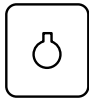
Mounting adaptor to install 2P or 2P+E – 16A flush sockets with pre-drilled enclosure MREP4G

—

0.1

0.7

096496



Blanking plate to install Unicode2 Series component diameter 30 mm (Push button, Pilot light or blanking plug) on 096496

—

0.1

0.7

097494



Blanking plug diameter 30 mm

—

0.1

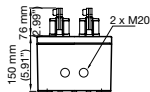
0.18

UBP

Combined Units in Polyester with 4 Flush Sockets 16A – Ex de IIC T5 -40 °C to +55 °C (ATEX/IECEX)

Supplied with:
1 x Distribution block 4 poles 12 x 4 mm with cable clamps – 2 x 10 mm² max.;
1 x M20 plastic cable gland for unarmored cable – diameter 6.5 to 14.5 mm;
1 x M20 plastic blanking plug.

Layout 3



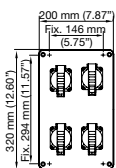
4 flush sockets 2P+E 16 A
20/25 Vac

CAe2
PCX/EN

5

25

MREP4316P



4 flush sockets 2P+E 16 A
200/250 Vac

CAe2
PCX/EN

5

25

MREP4316B

MRE Series 16 and 32 Amp Multiple Socket Outlets

Stationary and Portable. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Plugs and Receptacles

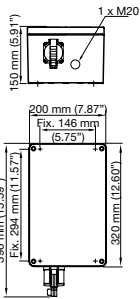
INCREASED SAFETY EX E

Description	Type	Weight kg	Volume dm ³	Catalog Number
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Combined Units in Polyester with 1 Flush Socket 16 A – Ex de IIC T3 -20 °C to +55 °C (ATEX)

Supplied with:
 1 x Transformer 230-400 V / 24 V 250 VA;
 2 x Fuse carriers 14 x 51 for primary protection;
 2 x Fuse carriers 14 x 51 for secondary protection;
 1 x Flush socket 2P+E 16 A 24 Vac (PRE316FP);
 1 x M20 plastic cable gland for unarmored cable – diameter 6.5 to 14.5 mm.

Layout 4



1 flush socket 2P+E 16 A 20/25 Vac
and transformer 230-400 V/24 V
250 VA

CAe2
PCX/EN

12

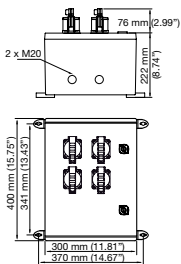
25

MREP1316PT3K

Combined Units in Polyester with 4 Flush Sockets 16 A – Ex de IIC T3 -20 °C to +55 °C (ATEX)

Supplied with:
 1 x Transformer 230-400 V / 24 V 400 VA;
 2 x Fuse carriers 14 x 51 for primary protection;
 2 x Fuse carriers 14 x 51 for secondary protection;
 4 x Flush sockets 2P+E 16 A 24 Vac (PRE316FP);
 1 x M20 plastic cable gland for unarmored cable – diameter 6.5 to 14.5 mm;
 1 x M20 plastic blanking plug.

Layout 5



4 flush sockets 2P+E 16 A 20/25 Vac
and transformer 230-400 V/24 V
400 VA

CAe6
PCX/EN

15

36

MREP4316PT4K

MRE Series 16 and 32 Amp Multiple Socket Outlets

Stationary and Portable. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

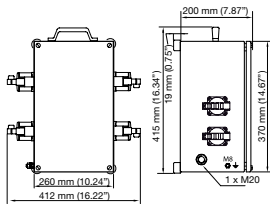
Description	Type	Weight kg	Volume dm ³	Catalog Number
-------------	------	-----------	------------------------	----------------

Portable Combined Units in 316L Stainless Steel with 4 Flush Sockets 16 A – Ex de IIC T3/T2 -20 °C to +55 °C (ATEX)

Supplied with:

- 1 x Transformer 230-400 V / 24 V (250 or 400 VA);
- 2 x Fuse carriers 14 x 51 for primary protection;
- 2 x Fuse carriers 14 x 51 for secondary protection;
- 4 x Flush sockets 2P+E 16 A 24 V (PRE316FP);
- 1 x M20 cable gland for unarmored cable – diameter 6.5 to 14.5 mm.

Layout 6 mm (in)



250 VA Portable Unit:

Ex de IIC T3 -20 °C to +55 °C
4 flush sockets 2P+E 16 A
20/25 Vac and transformer
230-400 V / 24 V 250 VA

JBe47

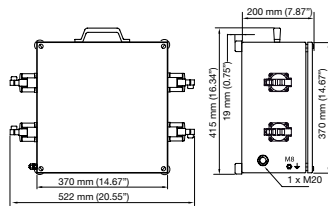
19

30

MRES4316PT3KH

PCX/EN

Layout 7 mm (in)



400 VA Portable Unit:

Ex de IIC T2 -20 °C to +55 °C
or
Ex de IIC T3 -20 °C to +40 °C
4 flush sockets 2P+E 16 A
20/25 Vac and transformer
230-400 V/24 V 400 VA

JBe55

23

42

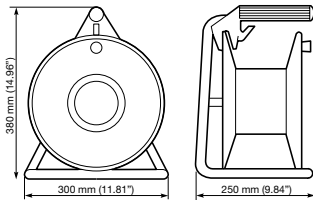
MRES4316PT4KH

PCX/EN

Cable Reel

Polyamide reel: Reel capacity: 40 meters of 3 x 2.5 mm² flexible cable; Handle with drum brake

Layout 8 mm (in)



Cable reel

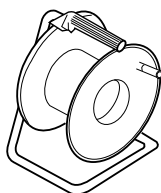
2.5

32

097499

Cable reel is used for carrying and storing of the electrical lead.
The electrical lead must be completely removed from the cable reel before use.

Cable Reel



Electrical lead (not supplied)



Mobile Socket

Plug

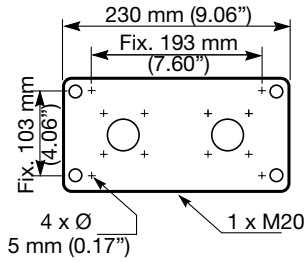
MRE Series 16 and 32 Amp Multiple Socket Outlet

Stationary and Portable. Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

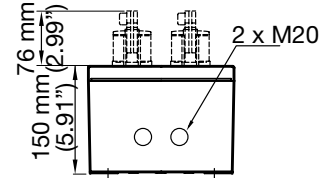
Polyester Enclosure Dimensions in Millimeters

Layout 1

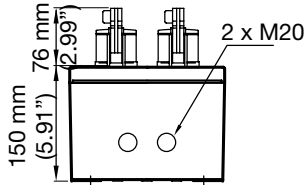


Layout 2

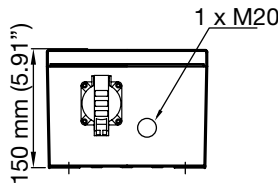
(Flush Sockets Not Supplied)



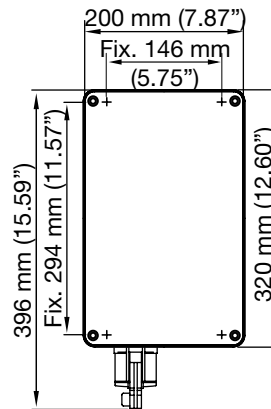
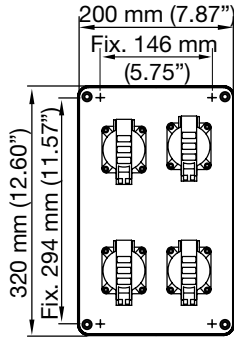
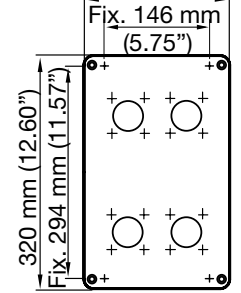
Layout 3



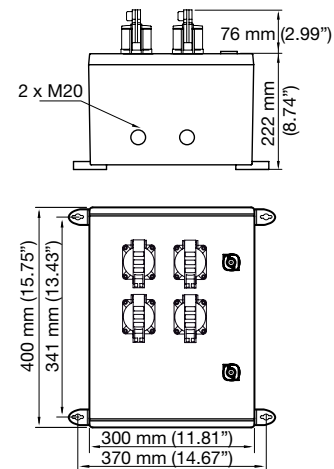
Layout 4



200 mm (7.87")



Layout 5



INCREASED SAFETY EX E

Plugs and Receptacles

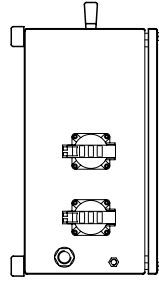
MRE Series 16 and 32 Amp Multiple Socket Outlet

Stationary and Portable. Increased Safety

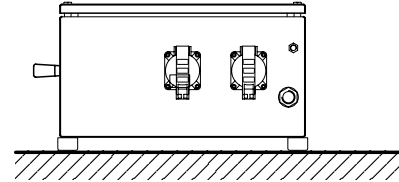
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

316L Stainless Steel Enclosure Dimensions in Millimeters

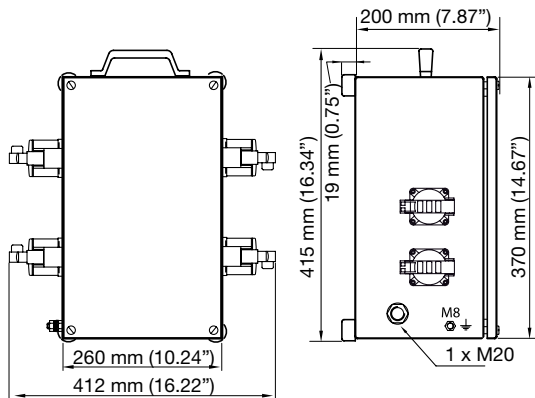
Position for Transportation



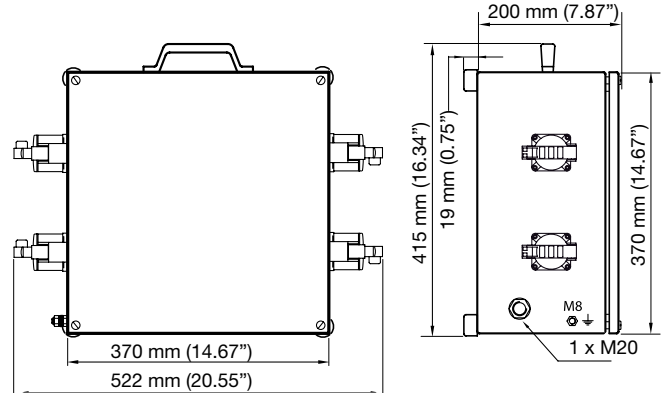
Position for Use



Layout 6

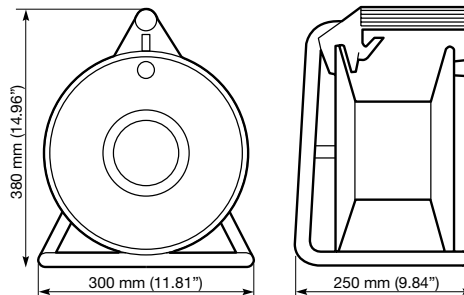


Layout 7



Cable Reel Dimensions in Millimeters

Layout 8



Plugs and Receptacles

INCREASED SAFETY EX E

PRD Series 16, 32, 80 and 125 Amp Plugs and Sockets

Flameproof

16A and 32A :
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

80A and 125A :
Zone 1 and 2
Gas (G)

Applications

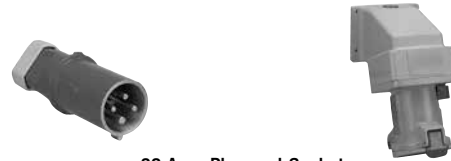
- Hazardous areas where plugs and sockets are used with portable or stationary electrical equipment such as lighting and heating systems, conveyors, motor starters, air-conditioning appliances, compressors and pumps.
- Ideal for hazardous areas where weatherproof and robust equipment is required.
- Ideal for hazardous areas in the oil and gas industry; such as refineries, pipelines and offshore sea-rigs.

Features

- General — 16 A:
 - Flameproof seal with cylindrical spigot joint.
 - Automatic disconnection of the poles by patented dual-safety device, which ensures the following once the plug is removed from the socket outlet:
 - Automatic and simultaneous disconnection of each phase in a flameproof chamber
 - Disconnection, once power is off, of the pins in the second flameproof chamber
 - Cover can be padlocked – padlock diameter 5 mm, length 45 mm.
 - Wall sockets and flush sockets incorporate a safety device that only accepts plugging of ATX plugs which are certified for use in hazardous areas.
 - Plugs can be used with IEC 60309-2 compliant industrial pin socket outlets in non-hazardous areas.
- General — 32 A:
 - Flameproof seal with cylindrical spigot joint.
 - Mechanical interlocking device ensures:
 - Disconnection takes place within the flameproof chamber before the plug is removed from the socket outlet
 - The plug cannot be removed when energized
 - Straight handle placed on the plug for use with IEC 60309-2 compliant industrial pin socket outlets in non-hazardous areas.
- General — 80 A and 125 A:
 - Interlocking mechanical device which prevents:
 - The switch from closing until the plug is fully inserted into the wall socket
 - The plug from being removed until the switch is off
 - Socket outlet supplied with a load break isolating switch ensuring disconnection with power on.
 - Switch handle can be padlocked in the “off” position (3 padlocks).
- Wall Sockets — 16 A:
 - 2 x M20 threaded cable entries (1 at the top, 1 at bottom).
 - Supplied with one M20 plug.
 - Connection on 2 x 4 mm² terminals.
 - Earth terminals: internal and external, with 4 mm diameter screws.
- Wall Sockets — 32 A:
 - 2 x M25 threaded cable entries (1 at the top, 1 at bottom).
 - Supplied with one M25 plug.
 - Connection on 10 mm² terminals.
 - Earth terminals: internal and external with 6 mm diameter screws.
- Wall Sockets — 80 A:
 - 1 x M32 threaded cable entry (on the top side).
 - Connection via 8 mm diameter lug terminals (not supplied).
 - Internal earth through 35 mm² connection and external earth through 6 mm diameter screws.



16 Amp Plug and Socket



32 Amp Plug and Socket



80 Amp and 125 Amp Plug and Socket

- Wall Sockets — 125 A:
 - 1 x M50 threaded entry (on the top side).
 - Connection via 8 mm diameter lug terminals (not supplied).
 - Internal earth through 35 mm² connection and external earth through 6 mm diameter screws.
- Plugs — 16 A:
 - 1 cable entry through integrated M25 cable gland
 - 9 to 12 mm diameter for the 2P+E plug
 - 12 to 15 mm diameter for the 3P+E plug
 - 15 to 17 mm diameter for the 3P+N+E plug
 - Connection on 2.5 mm² maximum terminals.
- Plugs — 32 A:
 - 1 cable entry via integrated cable gland diameter 17 to 22 mm.
 - Connection on 6 mm² maximum terminals.
- Plugs — 80 A:
 - 1 cable entry via supplied cable gland diameter 18 to 28 mm.
 - Connection on 16 mm² maximum terminals.
- Plugs — 125 A:
 - 1 cable entry via supplied cable gland diameter 30 to 36 mm.
 - Connection on 35 mm² maximum terminals.

Standard Materials

- 16 A socket outlet body and socket: gray painted marine grade aluminum alloy
- 32 A socket outlet body: gray painted marine grade aluminum alloy body
- 32 A socket outlet flush socket: cast iron
- 80 and 125 A socket outlet body and socket: painted cast iron with marine anti-corrosion treatment
- Plugs: RAL 7038 gray painted marine grade aluminum alloy

PRD Series 16, 32, 80 and 125 Amp Plugs and Sockets

Flameproof

16A and 32A :
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

80A and 125A :
Zone 1 and 2
Gas (G)

Certifications and Compliances

16 A and 32 A

◆ATEX Certification

- **Certification Type (16 A Plugs and Wall Sockets) PCX 16d**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T6 for Ta ≤ +40 °C and T5 for +55 °C
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T95 °C
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 50243
 - ATEX Certificate: LCIE 02 ATEX 6234
 - Index of Protection according EN/IEC 60529: IP66
- **Certification Type (16 A Flush Sockets) PCXd/EN**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 5C227
 - ATEX Certificate: LCIE 03 ATEX 0022U
 - Index of Protection according EN/IEC 60529: IP66
- **Certification Type (32 A Plugs and Wall Sockets) PCX 32d**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T6 for Ta ≤ +40 °C and T5 for +55 °C
 - Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T95 °C
 - Ambient Temperature: -40 °C to 55 °C
 - CE Declaration of Conformity: 50258
 - ATEX Certificate: LCIE 03 ATEX 6134X
 - Index of Protection according EN/IEC 60529: IP66

◆EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00910

80 A and 125 A

◆ATEX Certification

- **Certification Type (80 A Plugs and Wall Sockets) PCX 80d**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature class: T6 for Ta ≤ +40 °C and T5 for +55 °C
 - Ambient Temperature: -40 °C to 55 °C
 - CE Declaration of Conformity: 50262
 - ATEX Certificate: LCIE 03 ATEX 6149X
 - Internal Volume: < 2 dm³ (2 liters)
 - Index of Protection according EN/IEC 60529: IP66
- **Certification Type (125 A Plugs and Wall Sockets) PCX 125d**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature class: T5
 - Ambient Temperature: -40 °C to 55 °C
 - CE Declaration of Conformity: 50263
 - ATEX Certificate: LCIE 03 ATEX 6148X
 - Internal Volume: < 2 dm³ (2 liters)
 - Index of Protection according EN/IEC 60529: IP66

◆EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00910

PRD Series 16, 32, 80 and 125 Amp Plugs and Sockets

Flameproof

16A and 32A :
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

80A and 125A :
Zone 1 and 2
Gas (G)

Plugs and Receptacles

FLAMEPROOF EX D

Equipment	Pin Configuration	Weight kg	Volume dm ³	Catalog Number
Extra Low Voltage				
16 A – 20/25 Vac 50/60 Hz – Purple				
Wall Socket		1.7	5	PRD316RP
Plug		0.5	4	PRD316PP
Low Voltage				
16 A – 100/130 Vac 50/60 Hz – Yellow				
Wall Socket		1.7	5	PRD316RY
Plug		0.5	4	PRD316PY
16 A – 200/250 Vac 50/60 Hz – Blue				
Wall Socket		1.7	5	PRD316RB
Plug		0.5	4	PRD316PB
16 A – 380/415 Vac 50/60 Hz – Red				
Wall Socket		1.8	5	PRD416RR
Plug		0.5	4	PRD416PR
Wall Socket		1.9	5	PRD516RR
Plug		0.5	4	PRD516PR
32 A – 380/415 Vac 50/60 Hz – Red				
Wall Socket		10.4	17	PRD432RR
Plug		1.5	4	PRD432PR
80 A – 380/415 Vac 50/60 Hz – Red				
Wall Socket		44.6	69	PRD480RR
Plug		3.4	6	PRD480PR
125 A – 380/415 Vac 50/60 Hz – Red				
Wall Socket		47	69	PRD412RR
Plug		5.9	7	PRD412PR

Ⓢ 200/346 V – 240/415 Vac 50/60 Hz.


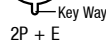
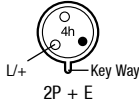
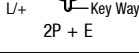
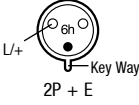
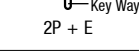
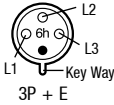
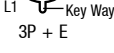
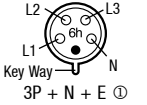
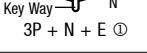
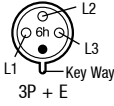
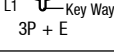
Shaded catalog numbers are normally stocked items. All other items are made to order.

PRD Series 16, 32, 80 and 125 Amp Plugs and Sockets

Flameproof

16A and 32A :
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

80A and 125A :
Zone 1 and 2
Gas (G)

Gas Group	Pin Configuration	Weight kg	Volume dm ³	Catalog Number
Flush Sockets for Mounting on Ex d IIB or Ex d IIC Enclosures				
16 A – 20/25 Vac 50/60 Hz – Purple				
Ex d IIC		1.7	5	PRD316FPC
Ex d IIB		1.5	5	PRD316FPB
16 A – 100/130 Vac 50/60 Hz – Yellow				
Ex d IIC		1.7	5	PRD316FYC
Ex d IIB		1.5	5	PRD316FYB
16 A – 200/250 Vac 50/60 Hz – Blue				
Ex d IIC		1.7	5	PRD316FBC
Ex d IIB		1.7	5	PRD316FBB
16 A – 380/415 Vac 50/60 Hz – Red				
Ex d IIC		1.8	5	PRD416FRC
Ex d IIB		1.6	5	PRD416FRB
Ex d IIC		1.9	5	PRD516FRC
Ex d IIB		1.7	5	PRD516FRB
32 A – 380/415 Vac 50/60 Hz – Red				
Ex d IIC		9.5	17	PRD432FRC
Ex d IIB		9.2	17	PRD432FRB

© 200/346 V – 240/415 Vac 50/60 Hz.

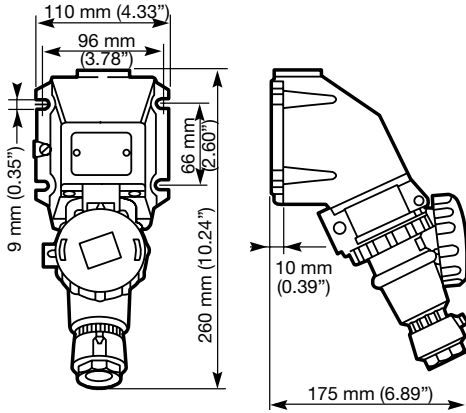
PRD Series 16, 32, 80 and 125 Amp Plug and Socket Flameproof

16A and 32A :
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

80A and 125A :
Zone 1 and 2
Gas (G)

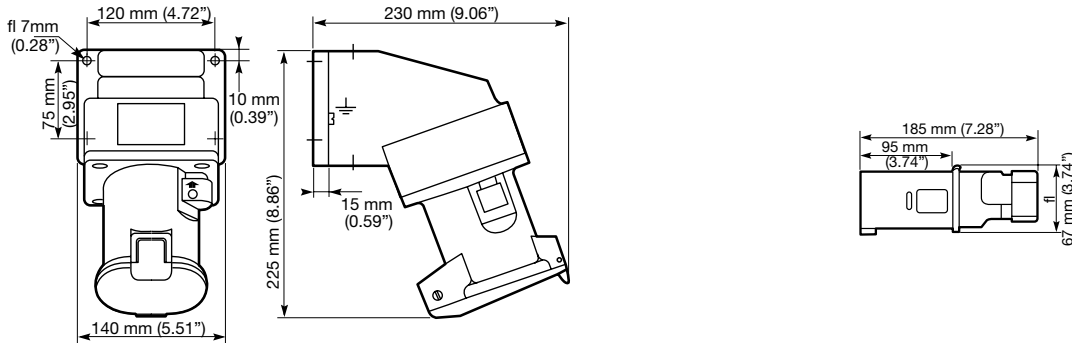
FLAMEPROOF EX D
Plugs and Receptacles

16 Amp Plug and Wall Socket Dimensions in Millimeters (Inches)

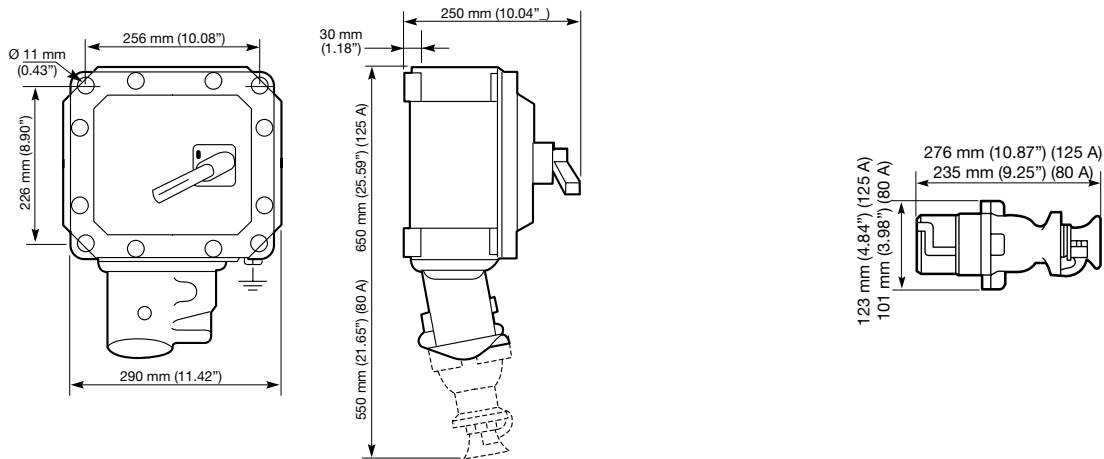


	A
2 P + E	70
3 P + E	78
3 P + N + E	85

32 Amp Plug and Wall Socket Dimensions in Millimeters (Inches)



80 and 125 Amp Plug and Wall Socket Dimensions in Millimeters (Inches)

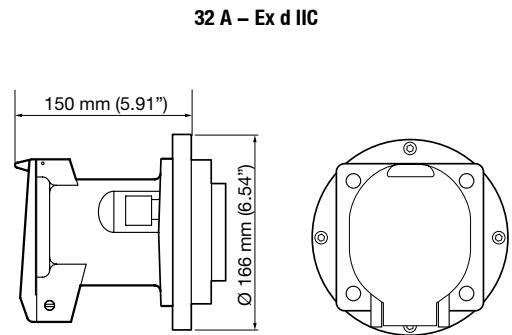
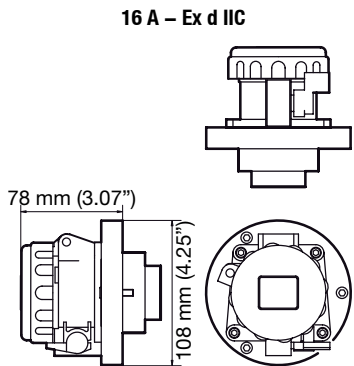
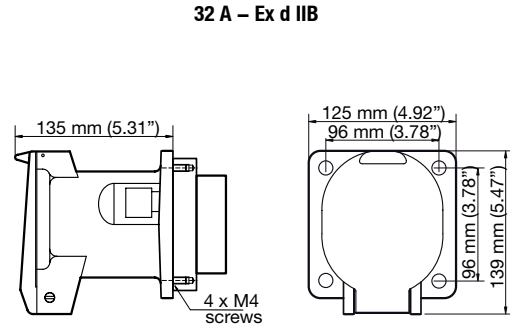
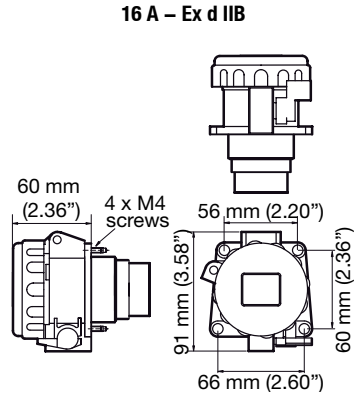


PRD Series 16, 32, 80 and 125 Amp Plug and Socket Flameproof

16A and 32A :
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

80A and 125A :
Zone 1 and 2
Gas (G)

16 and 32 Amp Flush Socket Dimensions in Millimeters (Inches)



Notes

Enclosures and Junction Boxes

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JBEL



Instrumentation JBEP



Electrical/Power JBEP



JBEA



JBES and ECES



JBEA/ECEA



JBDR



JBDA



JBDA



ECDX



AJBEW

JBEL Series Polycarbonate Junction Boxes

Increased Safety

Furnished complete with Terminals.

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Applications

- Small terminal junction boxes designed to facilitate electrical connections in hazardous areas.
- Designed for use in Zone 1 or 2 areas, where flammable gases or vapors are present either continuously or intermittently such as:
 - Petroleum
 - Chemical
 - Refineries
 - Other industrial process facilities
- Ideal for wet or corrosive atmospheres.
- Designed for use in Zone 21 or 22 areas where flammable dusts are present either continuously or intermittently such as:
 - Food processing
 - Dairy
 - Brewing
 - Other commercial facilities

Features

- Pillar type terminal block for easy connection.
- Available in two sizes:
 - 4 mm²
 - 10 mm²
- Unarmored or armored versions with earth continuity brass device.
- Operating temperature: -40 °C to +55 °C

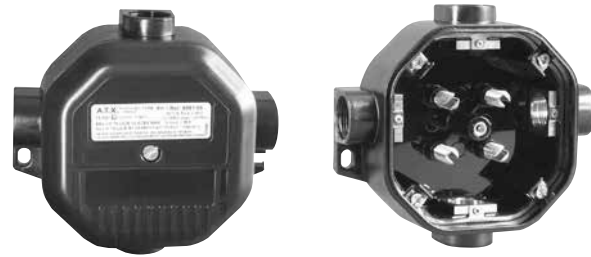
Standard Materials

- Enclosure: static and impact resistant polycarbonate
- Cover gasket: polyurethane
- Hardware: stainless steel

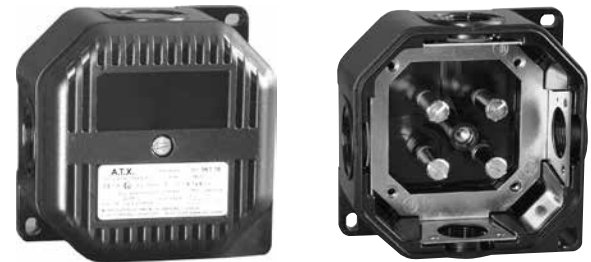
Certifications and Compliances

◆ ATEX Certification

- **Certification Type BJe1**
 - Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex e II
 - Temperature class: T6
 - Dust, Zones 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T75 °C
 - CE Declaration of Conformity: 50226
 - ATEX Certificate: LCIE 02 ATEX 6069
 - Ambient Temperature: -40 °C to +55 °C
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10
- **Certification Type BJe2**
 - Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex e II
 - Temperature class: T6
 - Dust, Zones 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C
 - CE Declaration of Conformity: 50209
 - ATEX Certificate: LCIE 99 ATEX 6003
 - Ambient Temperature: -40 °C to +55 °C
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10



For Unarmored Cable



For Armored Cable

◆ EURASEC Certification

- **Certification Type: BJe1**
 - EURASEC N° TC RU C-FR.Г505.B.00911
- **Certification Type: BJe2**
 - EURASEC N° TC RU C-FR.Г505.B.00911

◆ Others Certification

- **Certification Type: BJe1**
 - INMETRO Certificate: BVC 11.0479 ①
- **Certification Type: BJe2**
 - INMETRO Certificate: BVC 11.0402-X ①

Related Products

- Cable glands for use with armored and unarmored cable are available, see *Fittings: Cable Glands*.











① Inmetro certification available on special request only. Contact your local sales for more information

JBEL Series Polycarbonate Junction Boxes

Increased Safety

Furnished complete with Terminals.

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Equipment	Rating (Amps)	Weight kg	Volume dm ³	Catalog Number
For Unarmored Cables 2.5/4 mm² 660 V – Certification Type BJe1				
<i>Supplied with 4 connection terminals. Maximum capacity per terminal: 4 x 2.5 mm² or 2 x 4 mm² + 2 x 2.5 mm² and 4 interconnected earth terminals. Maximum capacity per earth terminal: 1 x 4 mm²</i>				
 4 x PG16 entries with knock-out caps ① 4 x Integrated cable glands for unarmored cable; 8 to 16 mm diameter <i>Important: Cables must be secured to structure close to box entries</i>	28 A/2.5 mm ² 38 A/4 mm ²	0.4	1.7	JBEL1N4P16G
For Armored Cables 2.5/4 mm² 660 V – Certification Type BJe1				
<i>Supplied with 4 connection terminals. Maximum capacity per terminal: 4 x 2.5 mm² or 2 x 4 mm² + 2 x 2.5 mm² and 4 interconnected earth terminals. Maximum capacity per earth terminal: 1 x 4 mm²</i>				
 4 x M20 entries with earth brass continuity device 2 x blanking plugs	28 A/2.5 mm ² 38 A/4 mm ²	0.4	1.7	JBEL1A4M20
For Unarmored Cables 6/10 mm² 690 V – Certification Type BJe2				
<i>Supplied with 4 connection terminals. Maximum capacity per terminal: 4 x 6 mm² or 3 x 10 mm² + 4 mm² and 4 interconnected earth terminals. Maximum capacity per earth terminal: 1 x 10 mm²</i>				
 3 x M20 entries 3 x cable glands for unarmored cable; 6.5 to 14.5 mm diameter		0.7	4.5	JBEL2N3M20G
 4 x M20 entries 4 x cable glands for unarmored cable; 6.5 to 14.5 mm diameter	42 A/10 mm ² 30 A/6 mm ²	0.7	4.5	JBEL2N4M20G
 3 x M25 entries 3 x cable glands for unarmored cable; 8 to 18.5 mm diameter	18 A/4 mm ²	0.7	4.5	JBEL2N3M25G
 4 x M25 entries 4 x cable glands for unarmored cable; 8 to 18.5 mm diameter		0.7	4.5	JBEL2N4M25G
For Armored Cables 6/10 mm² 690 V – Certification Type BJe2				
<i>Supplied with 4 connection terminals. Maximum capacity per terminal: 4 x 6 mm² or 3 x 10 mm² + 4 mm² and 4 interconnected earth terminals. Maximum capacity per earth terminal: 1 x 10 mm²</i>				
 4 x M20 entries with earth brass continuity device. 2 x M20 blanking plugs		0.7	4.5	JBEL2A4M20
 4 x M25 entries with earth brass continuity device. 2 x M25 blanking plugs	42 A/10 mm ² 30 A/6 mm ²	0.7	4.5	JBEL2A4M25
 2 x M25 + 2 x M20 entries with earth brass continuity device. 1 x M25 + 1 x M20 blanking plugs	18 A/4 mm ²	0.7	4.5	JBEL2A4M05
 3 x M25 + 1 x M20 entries with earth brass continuity device. 1 x M25 + 1 x M20 blanking plugs		0.7	4.5	JBEL2A4M06

① Knock-out caps can be used as plugs.

Shaded catalog numbers are normally stocked items. All other items are made to order.

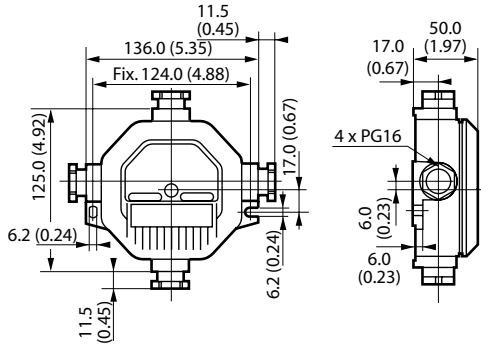
JBEL Series Polycarbonate Junction Boxes

Increased Safety

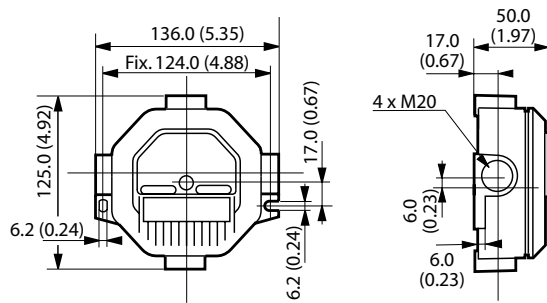
Furnished complete with Terminals.

Dimensions in Millimeters

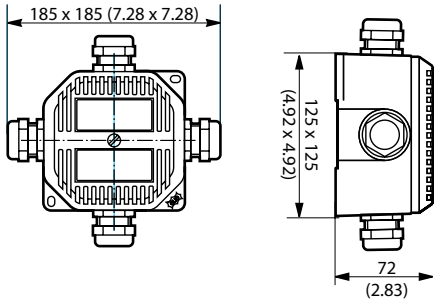
BJe1 with Cable Glands for Unarmored Cables



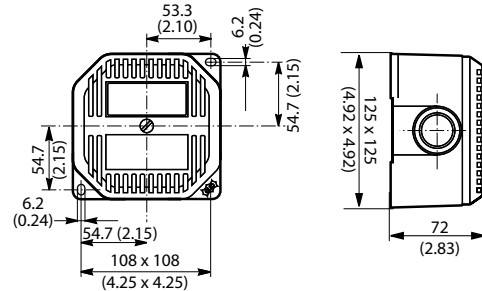
BJe1 without Cable Glands for Armored Cables



BJe2 with Cable Glands for Unarmored Cables



BJe2 without Cable Glands for Armored Cables



Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED JUNCTION BOXES

JBEP Series Undrilled and Predrilled, Empty Fiberglass Reinforced Polyester Junction Boxes

Increased Safety. For Field Drilling and Customization

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Applications

- Designed for Zones 1 or 2 areas, where flammable gases or vapors are present either continuously, often or accidentally such as:
 - Petroleum
 - Chemical
 - Refineries
 - Other industrial process facilities
- Ideal for indoor/outdoor use with wet or corrosive atmospheres.
- Designed for use in Zones 21 or 22 areas where flammables dusts (conductive and non conductive) are present either continuously, often or accidentally such as:
 - Food processing
 - Dairy
 - Brewing
 - Other industrial process facilities
- Designed for Zone 0 and Zone 20 Intrinsically Safe applications when used with rated terminals.

Features

- Available in a wide range of sizes:
 - For armored, unarmored or armored lead sheathed cable
 - For use with Mantle Clamping (Pillar Terminals) for use as instrumentation, electrical or power terminals
 - For use with a variety of connection and earth terminals
- Optional external hinged enclosures:
 - Reversible door opening 120°.
 - Door with double bar lock.
 - Key locking facility.
- Refer to the technical guide to determine permitted and sizes of terminals and cables entries for self arrangement.

Standard materials

- Enclosures: Static resistant carbon filled fiberglass reinforced polyester (FRP)
- Hardware: stainless steel
- Gasket for sizes 85 x 85, 120 x 120: silicone
- Gasket for other sizes: EPDM (ethylene propylene diene monomer rubber)

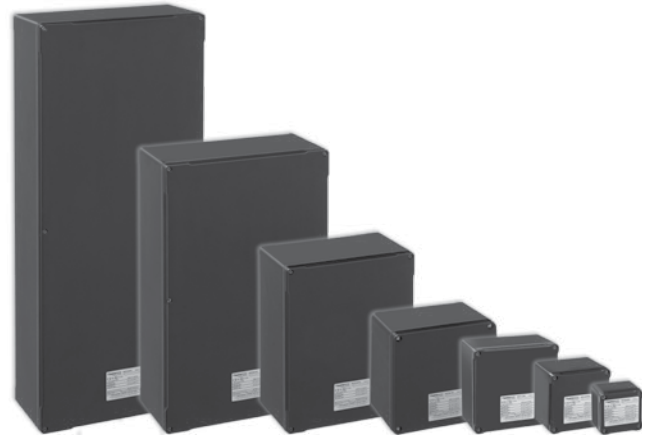
Options

- External hinges are available on the following sizes:
 - 500 x 320 x 150 mm
 - 500 x 320 x 230 mm
 - 750 x 320 x 150 mm
 - 750 x 320 x 230 mm
- Silicone gasket available for sizes 170 x 170 and 200 x 215
- Removable glands plates
- Nameplates
- Mounting pan
- Terminal rail
- Inside pocket for document
- Consult factory for custom drilling and assembly requirements.

Certifications and Compliances

◆ ATEX/IECEx Certification

- **Type : JBEP**
 - Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/EC: Ⓢ II G
 - Conforming to IECEx : EPL Gb
 - Type of Protection: Ex eb IIC, Ex eb ia IIC, Ex eb ib IIC, Ex ib IIC



- Temperature class:
 - T6 for $T_a \leq +40\text{ °C}$, T5 for $T_a \leq +60\text{ °C}$
 - T3 for $T_a \leq +90\text{ °C}$ for sizes 85 x 85, 120 x 120
- Dust, Zones 21 and 22:
 - Conforming to ATEX: Ⓢ II D
 - Conforming to IECEx: EPL Db
 - Type of Protection: Ex tb IIC
 - Surface Temperature :
 - T60 °C for $T_a \leq +40\text{ °C}$, T90 °C for $T_a \leq +60\text{ °C}$
 - T110 °C for $T_a \leq +90\text{ °C}$ for sizes 85 x 85, 120 x 120
- Gas, Zone 0:
 - Conforming to ATEX 94/9/EC: Ⓢ II 1G
 - Conforming to IECEx : EPL Ga
 - Type of Protection: Ex ia IIC
 - Temperature class:
 - T6 for $T_a \leq +40\text{ °C}$, T5 for $T_a \leq +60\text{ °C}$
 - T3 for $T_a \leq +90\text{ °C}$ for sizes 85 x 85, 120 x 120
- Dust, Zone 20:
 - Conforming to ATEX: Ⓢ II 1D
 - Conforming to IECEx: EPL Da
 - Type of Protection: Ex ia III C
 - Surface Temperature :
 - T60 °C for $T_a \leq +40\text{ °C}$, T90 °C for $T_a \leq +60\text{ °C}$
 - T110 °C for $T_a \leq +90\text{ °C}$ for sizes 85 x 85, 120 x 120
- Ambient Temperatures :
 - 55 °C $\leq T_a \leq +60\text{ °C}$ (EPDM gasket)
 - 55 °C $\leq T_a \leq +90\text{ °C}$ (silicone gasket)
- ATEX Certificate : LCIE 12 ATEX 3037X
- EC Declaration of Conformity : 50291
- IECEx Certificate : IECEx LCIE 13.0003X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance: IK10

JBEP Series Undrilled and Predrilled, Empty Fiberglass Reinforced Polyester

Junction Boxes

Increased Safety. For Field Drilling and Customization

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

◆EURASEC Certification

– EURASEC N° TC RU C-FR.Г505.B.00911

◆Others Certification

– INMETRO Certificate: BVC 13.3238 - X ^①

Related Products

- Cable glands for use with armored and unarmored cable are available, see *Fittings: Cable Glands*.

Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED JUNCTION BOXES

Catalog Numbering Guide - JBEP Undrilled and Predrilled, Empty Junction Boxes

<p>JBE</p> <p>Series: JBE - ATEX/IECEX Certified Junction Box</p>	<p>P</p> <p>Material: P - Polyester</p>	<p>08</p> <p>Dimensions Height: 08 - 85 mm 12 - 120 mm 17 - 170 mm 20 - 200 mm 21 - 215 mm 23 - 230 mm 25 - 250 mm 32 - 320 mm 50 - 500 mm 75 - 750 mm</p>	<p>08</p> <p>Dimensions Width: 08 - 85 mm 12 - 120 mm 17 - 170 mm 20 - 200 mm 21 - 215 mm 25 - 250 mm 32 - 320 mm 50 - 500 mm 75 - 750 mm</p>	<p>06</p> <p>Dimensions Depth: 06 - 61 mm 07 - 66 mm 09 - 91 mm 09S - 91 mm 11 - 116 mm 15 - 150 mm 23 - 230 mm</p>	<p>0</p> <p>Gland Plates <i>(for location see chart below):</i> 0 - No Gland Plate 1 - Bottom, Plastic 2 - Top and Bottom, Plastic 3 - Bottom and Sides, Plastic 4 - All Sides Plastic, 5 - Bottom, Brass 6 - Top and Bottom, Brass 7 - Bottom and Sides, Brass 8 - All Sides, Brass</p>	<p>G</p> <p>Options: <i>(Options must be listed alphabetically)</i> A - Earth continuity Brass Plate G - Cable Glands M - Mounting Pan H - Hinges for sizes : 500 or 750 x 320 x 150 or 230 HR - Horizontal DIN-Rail VR - Vertical DIN-Rail # - Customized at Factory</p>
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^① Inmetro certification available on special request only. Contact your local sales for more information

JBEP Series Undrilled and Predrilled, Empty Fiberglass Reinforced Polyester Junction Boxes

Increased Safety. For Field Drilling and Customization

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Gland Plate Location Chart ①

Height x Width x Depth Dimensions in Millimeters					
250 x 320 x 150	500 x 320 x 150 500 x 320 x 230	750 x 320 x 150 750 x 320 x 230	320 x 500 x 150 320 x 500 x 230	320 x 750 x 150 320 x 750 x 230	
Bottom					
Top and Bottom					
Bottom and Sides					
N/A					
All Sides					
N/A					

Spare Removable Gland Plate — Supplied with Gasket and Hardware

	Description	Size	Weight – kg	Volume – dm ³	Size – mm	Catalog Number
	Plastic	A	0.5	0.8	127 X 268	JBEPGPPA
	Plastic	B	0.51	0.6	127 X 203	JBEPGPPB
	Brass	A	1.5	0.8	127 X 268	JBEPGPBA
	Brass	B	1.30	0.6	127 X 203	JBEPGPBB

① A = 127 x 268
B = 127 x 203





JBEP Series Undrilled, Empty Fiberglass Reinforced Polyester Junction Boxes

Increased Safety. For Field Drilling and Customization

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Ex eb IIC Polyester Enclosures

For use with Ex certified terminals only (not supplied). DIN-Rail not supplied.
For DIN Rail dimensions, see DIN Rail Sizes chart on following page.

	Dimension – H x W x D – mm	Enclosure Weight – kg	Enclosure Volume – dm ³	Shipping Carton Volume – dm ³	Catalog Number ①
	85 x 85 x 60	0.38	0.43	1.35	JBEP0808060 ②
	120 x 120 x 91	0.75	1.31	1.98	JBEP121209S0
	170 x 170 x 91	1.32	2.63	4.04	JBEP1717090
	200 x 215 x 95	2.06	4.09	9.54	JBEP2021100
	200 x 215 x 150	2.67	6.45	9.54	JBEP2021150
	250 x 320 x 150	3.90	12.00	19.35	JBEP2532150
	500 x 320 x 150	6.39	24.00	71.63	JBEP5032150
	750 x 320 x 150	8.69	36.00	46.41	JBEP7532150
	320 x 250 x 150	3.90	12.00	19.35	JBEP3225150
	320 x 500 x 150	6.39	24.00	71.63	JBEP3250150
	320 x 750 x 150	8.69	36.00	46.41	JBEP3275150
	500 x 320 x 230	8.02	36.80	71.63	JBEP5032230
	750 x 320 x 230	11.54	55.20	82.13	JBEP7532230
	320 x 500 x 230	8.02	36.80	71.63	JBEP3250230
	320 x 750 x 230	11.54	55.20	82.13	JBEP3275230

① To order enclosure fitted with removable gland plate as standard, replace last digit of the catalog number 0 with 1 to 8; example: JBEP3275238.

② Due to the small size of the JBEP0808060, the optional Laminated Plastic Nameplate for Engraving is not recommended for this enclosure.

The 85 x 85 x 60 mm dimensions do not allow for mounting space beyond the factory adhered product label.

Shaded catalog numbers are normally stocked items. All other items are made to order.

JBEP Series Predrilled, Empty Fiberglass Reinforced Polyester Junction Boxes

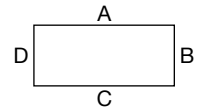
Increased Safety. For Field Drilling and Customization

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes Equipped with One horizontal Symmetrical Zinc Plated Rail, Yellow Laminated Plastic Label with Black Lettering, Internal earth terminal, and Earth Continuity Device.

For use with Ex terminals only (not supplied).
Cable glands and plugs ordered separately.



Enclosure Type	Rail Length Capacity (mm)	Entry Layout	Clearance Holes Per Side				Weight kg	Volume dm ³	Dimensions H x W x D – mm	Catalog Number
			A	B	C	D				
JBEP080806	41		—	1 x M20	1 x M20	1 x M20	0.42	0.44	85 x 85 x 60	JBEP080806003 ①
JBEP080806	41		1 x M20	1 x M20	1 x M20	1 x M20	0.42	0.44	85 x 85 x 60	JBEP080806004 ①
JBEP121209S	73		—	1 x M20	1 x M20	1 x M20	0.85	1.31	120 x 120 x 91	JBEP121209003
JBEP121209S	73		1 x M20	1 x M20	1 x M20	1 x M20	0.85	1.31	120 x 120 x 91	JBEP121209004
JBEP171709	122		1 x M20	1 x M20	1 x M20	1 x M20	1.54	2.65	170 x 170 x 91	JBEP171709004
JBEP171709	122		—	2 x M20	2 x M20	2 x M20	1.54	2.65	170 x 170 x 91	JBEP171709006
JBEP171709	122		1 x M25	1 x M25	1 x M25	1 x M25	1.54	2.65	170 x 170 x 91	JBEP171709014
JBEP171709	122		—	2 x M25	2 x M25	2 x M25	1.54	2.65	170 x 170 x 91	JBEP171709016

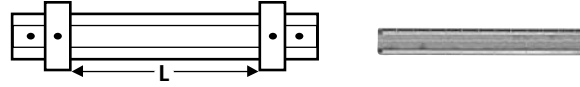
① Due to the small size of the JBEP0808060, the optional Laminated Plastic Nameplate for Engraving is not recommended for this enclosure. The 85 x 85 x 60 mm dimensions do not allow for mounting space beyond the factory adhered product label.
















JBEP Series Undrilled and Predrilled, Empty Fiberglass Reinforced Polyester Junction Boxes Horizontal Din Rail

Increased Safety. For Field Drilling and Customization

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Rail size for JBEP080806 15 x 5.5 mm. All other rail sizes are 35 x 15 mm or 35 x 7.5 mm.
Terminal block WDU used for all sizes.



Enclosure Catalog Number	Horizontal Terminal Rail Overall Length	Horizontal Terminal Rail			Number of Terminals of the same pitch per rail — Nominal cross section (mm ²)/pitch (mm)										Earthing Bar
		L	Max. Qty	2.5 / 5.1	4 / 6.1	6 / 7.9	10 / 9.9	16 / 11.9	35 / 16	50 / 18.5	70 / 20.5	95/120 / 27			
JBEP0808060		70	41	1	6	4	4	0	0	0	0	0	0	0	N/A
JBEP121209S0		94	73	1	14	12	0	0	0	0	0	0	0	0	N/A
JBEP1717090		150	122	1	24	20	15	12	9	0	0	0	0	90	
JBEP2021100		190	165	1	32	27	20	16	13	9	0	0	0	195	
JBEP2021150		199	165	1	32	27	20	16	13	9	0	0	0	155	
JBEP2532150		296	245	2	96	80	34	27	22	16	0	0	0	230	
JBEP3225150		223	199	2	78	66	50	40	32	12	10	9	0	160	
JBEP3250150		476	450	2	176	146	114	90	74	27	23	21	0	470	
JBEP3250230		476	450	2	176	146	114	90	74	27	23	21	0	470	
JBEP3275150		728	700	2	274	228	176	140	116	43	37	33	0	720	
JBEP3275230		728	700	2	274	228	176	140	116	43	37	33	0	720	
JBEP5032150		296	270	4	198	168	100	79	66	32	14	12	9	230	
JBEP5032230		296	270	4	198	168	100	79	66	32	14	12	9	230	
JBEP7532150		296	270	6	318	264	168	133	88	46	28	24	9	230	
JBEP7532230		296	270	6	318	264	168	133	88	46	28	24	9	230	

Enclosures and Junction Boxes

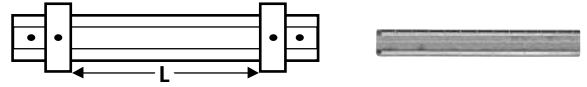
INCREASED SAFETY EX E ZONE 1 RATED JUNCTION BOXES

JBEP Series Undrilled and Predrilled, Empty Fiberglass Reinforced Polyester Junction Boxes Vertical Din Rail

Increased Safety. For Field Drilling and Customization

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Rail size for JBEP080806 15 x 5.5 mm. All other rail sizes are 35 x 15 mm or 35 x 7.5 mm.
Terminal block WDU used for all sizes.



Enclosure Catalog Number	Vertical Terminal Rail			Number of Terminals of the same pitch per rail — Nominal cross section (mm ²) and pitch (mm)										Earthing Bar
	Length	L	Max. Qty	2.5 / 5.1	4 / 6.1	6 / 7.9	10 / 9.9	16 / 11.9	35 / 16	50 / 18.5	70 / 20.5	95/120 / 27		
JBEP0808060	I	70	41	1	6	4	4	0	0	0	0	0	0	N/A
JBEP121209S0	I	94	73	1	14	12	0	0	0	0	0	0	0	N/A
JBEP1717090	I	150	122	1	24	20	15	12	9	0	0	0	0	128
JBEP2021100	I	178	149	1	29	24	18	15	11	8	0	0	0	155
JBEP2021150	I	178	149	1	29	24	18	15	11	8	0	0	0	195
JBEP2532150	II	223	199	2	78	66	50	40	32	12	10	9	0	160
JBEP3225150	II	296	245	2	96	80	34	27	22	16	0	0	0	230
JBEP3250150	III	296	270	4	198	168	100	79	64	32	14	12	9	230
JBEP3250230	III	296	270	4	198	168	100	79	64	32	14	12	9	230
JBEP3275150	IIII	296	270	6	318	264	168	133	88	46	28	24	9	230
JBEP3275230	IIII	296	270	6	318	264	168	133	88	46	28	24	9	230
JBEP5032150	III	476	450	2	176	146	114	90	74	27	23	21	0	470
JBEP5032230	III	476	450	2	176	146	114	90	74	27	23	21	0	470
JBEP7532150	III	728	700	2	274	228	176	140	116	43	37	33	9	720
JBEP7532230	III	728	700	2	274	228	176	140	116	43	37	33	9	720

Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED JUNCTION BOXES

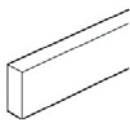
JBEP Series Undrilled and Predrilled, Empty Fiberglass Reinforced Polyester Junction Boxes

Increased Safety. Factory Drilled and Equipped


Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Solid Copper Bar – Available in 1 Meter Length Pieces


Enclosure Catalog Number	Horizontal Bar Length – mm	Vertical Bar Length – mm	Catalog Number
For 10 x 3 mm length is 1 meter			CB1M
JBEP1717090	128	90	
JBEP2021100	195	97	
JBEP2021150	195	97	
JBEP2532150	300	230	
JBEP3225150	230	300	
JBEP3250150	480	305	
JBEP3250230	480	305	
JBEP3275150	730	300	
JBEP3275230	730	300	
JBEP5032150	305	480	
JBEP5032230	305	480	
JBEP7532150	300	730	
JBEP7532230	300	730	



Cable Clamp for Copper Bar – Pack of 10 – 10 x 3 mm

	Flexible	Solid	Catalog Number
	0.5 to 4 mm ²	6 mm ²	CC6MM
	2.5 to 16 mm ²	16 mm ²	CC16MM
	16 to 35 mm ²	50 mm ²	CC50MM

Spacer for Copper Bar – Supplied with Mounting Inserts

Description	Height – mm	Catalog Number
	Insulated	50 JBEPCBI
	Non-Insulated	50 JBEPCBNI

Mounting Pan – Solid Galvanized Steel – Supplied with Screws

Enclosure Catalog Number	Dimensions – mm Height x Width x Thickness	Catalog Number
JBEP0808060	46 x 75 x 1	JBEP0407
JBEP121209S0	100 x 80 x 1	JBEP1008
JBEP1717090	152 x 150 x 1	JBEP1515
JBEP2021100, JBEP2021150	185 x 170 x 1.5	JBEP1518
JBEP3225150, JBEP2532150	260 x 230 x 2	JBEP2623
JBEP3250150, JBEP3250230, JBEP5032150, JBEP5032230	480 x 260 x 2	JBEP4826
JBEP3275150, JBEP3275230, JBEP7532150, JBEP7532230	730 x 260 x 2	JBEP7326



JBEP Series Undrilled and Predrilled, Empty Fiberglass Reinforced Polyester Junction Boxes

Increased Safety. Factory Drilled and Equipped


Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Earth Continuity Brass Plate – Thickness: 3.00 mm

Enclosure Catalog Number	Side – mm	Catalog Number	Bottom – mm	Catalog Number
JBEP121209S0	58 x 44	JBEP02S	72 x 44	JBEP02B
JBEP1717090	105 x 65	JBEP05S	127 x 65	JBEP05B
JBEP2021100	105 x 65	JBEP06S	150 x 65	JBEP06B
JBEP2021150	105 x 105	JBEP07S	150 x 105	JBEP07B
JBEP2532150	150 x 116	JBEP08S	250 x 116	JBEP08B
JBEP3225150	250 x 116	JBEP10S	150 x 116	JBEP10B
JBEP3250150	250 x 116	JBEP11S	180 x 116	JBEP11B
JBEP3250230	250 x 196	JBEP16S	180 x 196	JBEP16B
JBEP3275150	250 x 116	JBEP12S	305 x 116	JBEP12B
JBEP3275230	250 x 196	JBEP17S	305 x 196	JBEP17B
JBEP5032150	180 x 116	JBEP09S	250 x 116	JBEP09B
JBEP5032230	180 x 196	JBEP13S	250 x 196	JBEP13B
JBEP7532150	305 x 116	JBEP14S	250 x 116	JBEP14B
JBEP7532230	305 x 196	JBEP15S	250 x 196	JBEP15B



Mounting Screws – Self Tapping – Used for Mounting DIN Rails and Mounting Pan – Pack of 50

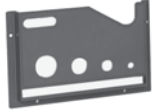
Description	Catalog Number
 Sheet metal screw with a drill point and a Phillips pan head	JBEPMS8

JBEP Series Undrilled and Predrilled, Empty Fiberglass Reinforced Polyester Junction Boxes

Increased Safety. Factory Drilled and Equipped

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)


Self Adhesive Pocket for Drawings — Set of 5, A4 Size

	External Dimension – mm	Internal Dimensions – mm	Catalog Number
	260 x 165	230 x 130 x 18	JBEPSAP


Set of 5 — Self adhesive plastic protective sleeve, Size A4.

JBEPSAPS

Laminated Plastic Nameplate for Engraving ②

	Description	Size – mm	Catalog Number
	White color with black lettering, two (2) mounting rivets included	65 x 18	NPW
	Yellow color with black lettering, two (2) mounting rivets included	65 x 18	NPY

Feed-Thru Earth/Ground Terminal

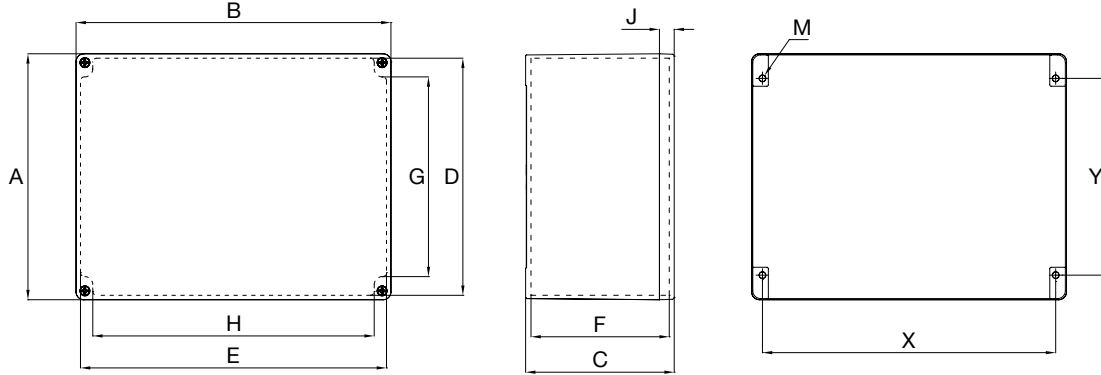
	Description	Size	Catalog Number
	Stainless steel, complete with gasket washer, lock washers, nuts for internal and external cable connections	M8	JBEPET
	Set of 10 — Press fit, brass expansion insert	M5	JBPEPEXI

② Due to the size of JBEP0808060, optional Laminated Plastic Nameplate for Engraving is not recommended for this enclosure. The 85 x 85 x 60 mm dimensions do not allow for mounting space beyond the factory adhered product label.

JBEP Series Undrilled and Predrilled, Empty Fiberglass Reinforced Polyester Junction Boxes

Increased Safety. For Field Drilling and Customization

Dimensions in Millimeters ①



Enclosure Catalog Number	External Dimension			Internal Dimensions					Cover J	Body Thickness	Wall Fixing		
	A	B	C	D	E	F	G	H			X	Y	M ②
JBEP0808060	85	85	61	76.7	76.7	47	41	51	15	3.5	69	49	M4
JBEP1212070	120	120	66	109.5	109.5	50.7	63	85	15	4.5	103	83	M5
JBEP1212090	120	120	91	109.5	109.5	75	63	85	40	4.5	103	83	M5
JBEP121209S0	120	120	91	108.6	108.6	75	63	85	15	4.5	103	83	M5
JBEP1717090	170	170	91	158.5	158.5	72	112.5	137	15	4.5	153	131	M5
JBEP1712090	170	120	91	159.5	109.5	75	107.3	87	40	4.5	103	131	M5
JBEP2021100	200	215	95	185.8	200.8	76	116	159	20	6.1	189	146	M6
JBEP2021150	200	215	145	185.8	200.8	122.5	114.8	159	20	6.1	189	146	M6
JBEP2532150	250	320	150	241	311	133.5	171	267	15	4.5	200	298	M6
JBEP3225150	320	250	150	311	241	133.5	267	171	15	4.5	298	200	M6
JBEP3250150	320	500	150	311	491	133.5	267	421	15	4.5	298	447	M6
JBEP3250230	320	500	230	311	491	213.5	267	421	15	4.5	298	447	M6
JBEP3275150	320	750	150	311	741	133.5	267	671	15	4.5	298	698	M6
JBEP3275230	320	750	230	311	741	213.5	267	671	15	4.5	298	698	M6
JBEP5032150	500	320	150	491	311	133.5	421	267	15	4.5	447	298	M6
JBEP5032230	500	320	230	491	311	213.5	421	267	15	4.5	447	298	M6
JBEP7532150	750	320	150	741	311	133.5	671	267	15	4.5	298	698	M6
JBEP7532230	750	320	230	741	311	213.5	671	267	15	4.5	698	298	M6

① Wall fixing screw diameter 5 mm . Wall fixing screw hole 6 mm.

② Screw to be used for mounting box.

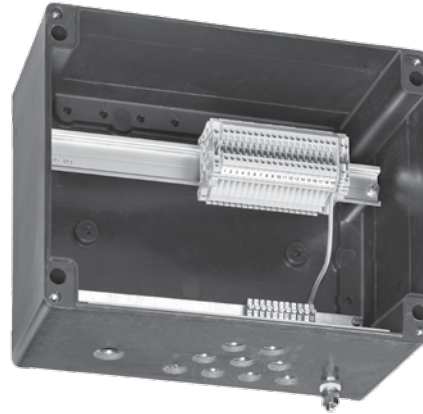
JBEP Series Fiberglass Reinforced Polyester Terminal Junction Boxes for Instrumentation Applications

Increased Safety. Factory Drilled and Equipped

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Applications

- Instrumentation junction boxes are used to run process or remote information to control room.
- For use in intrinsic safety or non intrinsic safety systems.
- Designed for Zones 1 or 2 areas, where flammable gases or vapors are present either continuously, often or accidentally such as:
 - Petroleum
 - Chemical
 - Refineries
 - Other industrial process facilities
- Ideal for indoor/outdoor use with wet or corrosive atmospheres.
- Designed for use in Zones 21 or 22 areas where flammables (conductive and non conductive) are present either continuously, often or accidentally such as:
 - Food processing
 - Dairy
 - Brewing
 - Other industrial process facilities
- Designed for Zone 0 and Zone 20 Intrinsically Safe applications when used with rated terminals .



Cable Glands are available as an Option.

Features

- Available in a wide range of sizes:
 - For armored, unarmored or armored lead sheathed cable
 - For use with a variety of connection and earth terminals
- Optional external hinged enclosures:
 - Reversible door opening 120°.
 - Door with double bar lock.
 - Key locking facility.
- Terminal blocks on DIN rail.

Standard materials

- Enclosures: Static resistant carbon filled fiberglass reinforced polyester (FRP)
- Hardware: stainless steel
- Gasket for other sizes: EPDM (ethylene propylene diene monomer rubber)

Options

- External hinges are available on the following sizes:
 - 500 x 320 x 150 mm
 - 500 x 320 x 230 mm
 - 750 x 320 x 150 mm
 - 750 x 320 x 230 mm
- Removable glands plates
- Nameplates
- Mounting pan
- Inside pocket for document
- Consult factory for custom drilling, assembly requirements and other ambient temperatures.

Certifications and Compliances ②

◆ ATEX/IECEx Certification

- Type : JBEP
 - Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/EC: Ⓜ II 2G
 - Conforming to IECEx : EPL Gb
 - Type of Protection: Ex eb IIC, Ex eb ia IIC, Ex eb ib IIC, Ex ib IIC
 - Temperature class: T6 for $T_a \leq +40^\circ\text{C}$ and T5 for $T_a \leq +60^\circ\text{C}$

① Inmetro certification available on special request only. Contact your local sales for more information

② The ambient temperature for complete assembly is equal to the lowest ambient temperature of the components used.

- Dust, Zones 21 and 22:
 - Conforming to ATEX: Ⓜ II 2D
 - Conforming to IECEx: EPL Db
 - Type of Protection: Ex tb IIC
 - Surface Temperature:
 - T60 °C for $T_a \leq +40^\circ\text{C}$, T90 °C for $T_a \leq +60^\circ\text{C}$
- Gas, Zone 0:
 - Conforming to ATEX 94/9/EC: Ⓜ II 1G
 - Conforming to IECEx : EPL Ga
 - Type of Protection: Ex ia IIC
 - Temperature class: T6 for $T_a \leq +40^\circ\text{C}$ and T5 for $T_a \leq +60^\circ\text{C}$
- Dust, Zone 20:
 - Conforming to ATEX: Ⓜ II 1D
 - Conforming to IECEx: EPL Da
 - Type of Protection: Ex ta IIC
 - Surface Temperature:
 - T60 °C for $T_a \leq +40^\circ\text{C}$, T90 °C for $T_a \leq +60^\circ\text{C}$
- Ambient Temperatures : $-55^\circ\text{C} \leq T_a \leq +60^\circ\text{C}$
- ATEX Certificate : LCIE 12 ATEX 3037X
- EC Declaration of Conformity : 50291
- IECEx Certificate : IECEx LCIE 13.0003X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance: IK10

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.1605.B.00911

◆ Others Certification

- INMETRO Certificate: BVC 13.3238 - X ①

JBEP Series Fiberglass Reinforced Polyester Terminal Junction Boxes for Instrumentation Applications

Increased Safety. Factory Drilled and Equipped

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

◆ Components ambient temperature

- Type : Bve (plastic close up plug)
– Ambient Temperatures : -40 °C to +55 °C
- Type : 757 (nickel plated close up plug)
– Ambient Temperatures : -60 °C to +100 °C
- Type : EEXe (plastic cable gland)
– Ambient Temperatures : -20 °C to +55 °C
- Type : E1FX, E2FX, E1FW, E2FW, T3, A2F (metal cable gland)
– Ambient Temperatures : -60 °C to +130 °C
- Type : PX, PX2K (metal cable gland)
– Ambient Temperatures : -60 °C to +100 °C
- Type : DBE (drain/breather)
– Ambient Temperatures : -50 °C to +85 °C
- Type : WDU, WFF (terminal)
– Ambient Temperatures : -50 °C to +120 °C
- Type : SAK, AKZ (terminal)
– Ambient Temperatures : -50 °C to +100 °C

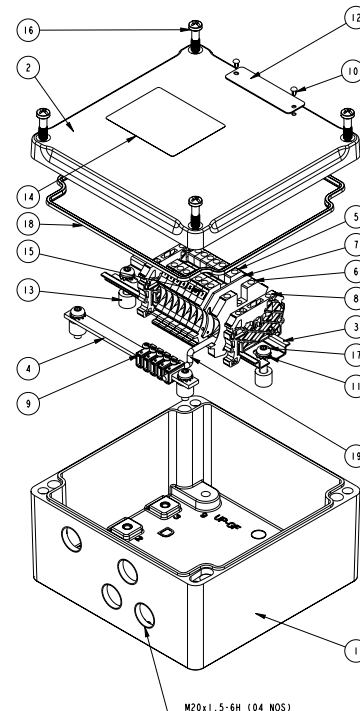
The ambient temperature for complete assembly is equal to the lowest ambient temperature of the components used.

Related Products

- For a complete offering of cable glands for use with armored and unarmored cable, see *Fittings: Cable Glands*.

Illustrated Features – Sample of JBEP171709NI01

	Description
1	Body Of Polyester Box 170 x 170 x 90
2	Cover Of Polyester Box 170 x 170 x 91
3	DIN Rail
4	Copper Bar 10 x 3
5	Terminal Block - ATEX/IECEX: WDU 2.5; NBR IEC: Ex e
6	Terminal Block - ATEX/IECEX: WPE 2.5; NBR IEC: Ground
7	Plate - ATEX/IECEX: WAP 2.5/10; NBR IEC: Plate
8	End Bracket
9	Cable Clamp 2.5 mm ² - Capacity
10	Stainless Steel Rivet 2.5 x 5
11	Serrated Washer 5
12	Label Gravoply - Yellow
13	Nylons Spacer Lg. 10 Mm
14	Label 54 x 68
15	Terminal Marker
16	Screw M6 x 20 x 10
17	Screw M5 x 20
18	Gasket For Polyester Box 170 x 170 x 91
19	G/Y Cable 2.5 mm ²



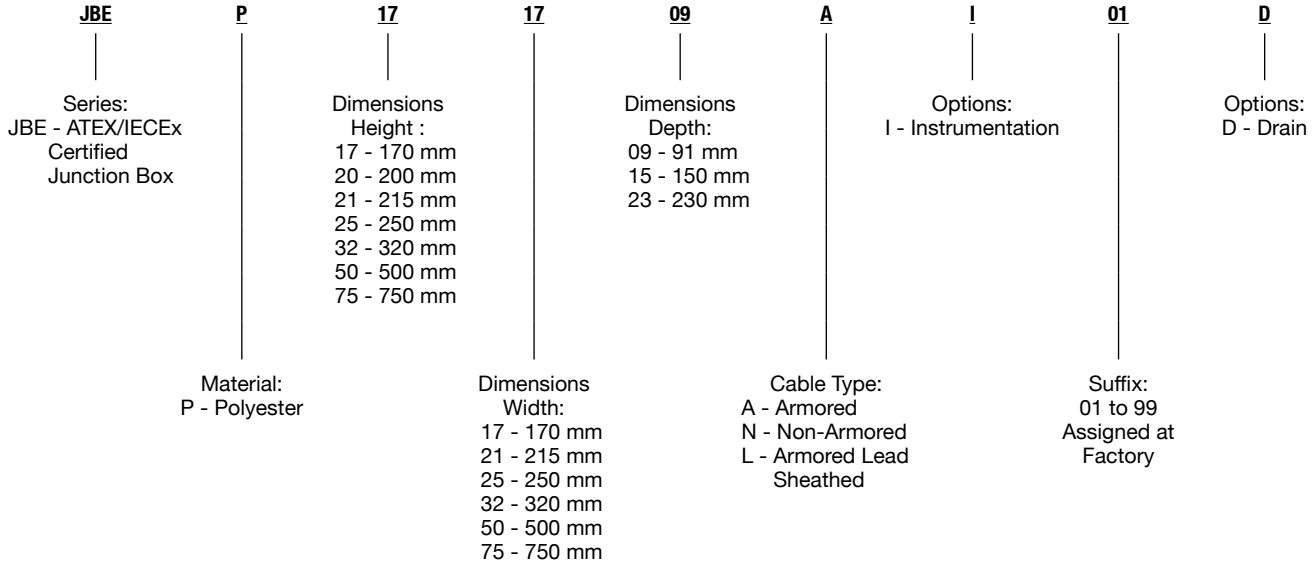
JBEP Series Fiberglass Reinforced Polyester Terminal Junction Boxes for Instrumentation Applications

Increased Safety. Factory Drilled and Equipped

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

The Catalog Numbering Guide is a reference tool to explain the make-up of the catalog number. It is not to be used to create a custom product for ordering.

Catalog Numbering Guide - JBEP Polyester Junction Boxes for Instrumentation Applications



Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED JUNCTION BOXES

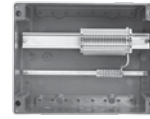
JBEP Series Fiberglass Reinforced Polyester Terminal Junction Boxes for Instrumentation Applications

Increased Safety. Factory Drilled and Equipped

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes Equipped with Terminals for Instrumentation Applications with Unarmored Cables

Fitted with: Horizontal beige terminal block. Copper bar with cable clamps or continuity shields.
Yellow laminated plastic label with black lettering. M16 to M32 threaded entries. M40 to M50 clearance holes. Cable glands and plugs ordered separately.



Unarmored Cables

For Cable	Terminal Block	Earth Terminal	Copper Bar	Cable Clamp	Multi-Cable	Single Cable	Catalog
U1000	0.5/2.5 mm ² Qty.	0.5/2.5 mm ² Qty.	10 x 3 mm Qty.	0.5/2.5 mm ² Qty.	Cable	Entries	Number ①
R02V					Entry Qty. 1	M20 Qty.	
07G1.5	7	1	1	5	M20	3	JBEP171709NI01
12G1.5	12	1	1	8	M25	6	JBEP202115NI02
19G1.5	19	1	1	11	M25	9	JBEP253215NI03
24G1.5	24	1	1	14	M32	12	JBEP253215NI04
27G1.5	27	1	1	15	M32	13	JBEP253215NI05
37G1.5	37	1	1	20	M32	18	JBEP253215NI06
07G2.5	7	1	1	5	M20	3	JBEP171709NI07
12G2.5	12	1	1	8	M25	6	JBEP202115NI08
19G2.5	19	1	1	11	M32	9	JBEP253215NI09
24G2.5	24	1	1	14	M32	12	JBEP253215NI10
27G2.5	27	1	1	15	M32	13	JBEP253215NI11
37G2.5	37	1	1	20	M40	18	JBEP253215NI12

For Cable	Terminal Block	Continuity	Multi-Cable	Single Cable	Catalog
EGSF	0.5/2.5 mm ² Qty.	Shield Qty.	Cable	Entries	Number ①
			Entry Qty. 1	M16 Qty.	
07IP05	14	7	M20	7	JBEP202115NI21
07IT05	21	7	M20	7	JBEP202115NI22
12IP05	24	12	M25	12	JBEP253215NI23
12IT05	36	12	M25	12	JBEP253215NI24
19IP05	38	19	M32	19	JBEP253215NI25
27IP05	54	27	M32	27	JBEP325015NI26
07IP09	14	7	M25	7	JBEP202115NI27
07IT09	21	7	M25	7	JBEP202115NI28
12IP09	24	12	M32	12	JBEP253215NI29
12IT09	36	12	M32	12	JBEP253215NI30
19IP09	38	19	M32	19	JBEP253215NI31
27IP09	54	27	M40	27	JBEP325015NI32

For Cable	Terminal Block	Continuity	Multi-Cable	Single Cable	Catalog
EISF	0.5/2.5 mm ² Qty.	Shield Qty.	Cable	Entries	Number ①
			Entry Qty. 1	M16 Qty.	
07IP05	15	8	M25	7	JBEP202115NI41
07IT05	22	8	M32	7	JBEP202115NI42
12IP05	25	13	M32	12	JBEP253215NI43
12IT05	37	13	M32	12	JBEP253215NI44
19IP05	39	20	M40	19	JBEP253215NI45
27IP05	55	28	M40	27	JBEP325015NI46
07IP09	15	8	M32	7	JBEP202115NI47
07IT09	22	8	M32	7	JBEP202115NI48
12IP09	25	13	M40	12	JBEP253215NI49
12IT09	37	13	M40	12	JBEP253215NI50
19IP09	39	20	M50	19	JBEP253215NI51
27IP09	55	28	M50	27	JBEP325015NI52

① For JBEP terminal junction box with a drain, add suffix **D** to the end of the catalog number; example: JBEP171709NI01D.

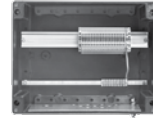
JBEP Series Fiberglass Reinforced Polyester Terminal Junction Boxes for Instrumentation Applications

Increased Safety. Factory Drilled and Equipped

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes Equipped with Terminals for Instrumentation Applications with Armored Cables

Fitted with: Horizontal beige terminal block. Copper bar with cable clamps or continuity shields.
Yellow laminated plastic label with black lettering. Earth continuity brass plate. M8 external earth crossing terminal. M20 to M32 threaded entries. M40 to M50 clearance holes. Cable glands and plugs ordered separately.



Armored Cables

For Cable	Terminal Block	Earth Terminal	Copper Bar	Cable Clamp	Multi-Cable	Single Cable	Catalog
U1000	0.5/2.5 mm ² Qty.	0.5/2.5 mm ² Qty.	10 x 3 mm Qty.	0.5/2.5 mm ² Qty.	Cable	Entries	Number ①
RVFV					Entry Qty. 1	M20 Qty.	
07G1.5	7	1	1	5	M20	3	JBEP171709AI01
12G1.5	12	1	1	8	M20	6	JBEP202115AI02
19G1.5	19	1	1	11	M25	9	JBEP253215AI03
24G1.5	24	1	1	14	M25	12	JBEP253215AI04
27G1.5	27	1	1	15	M25	13	JBEP253215AI05
37G1.5	37	1	1	20	M32	18	JBEP253215AI06
07G2.5	7	1	1	5	M20	3	JBEP171709AI07
12G2.5	12	1	1	8	M25	6	JBEP202115AI08
19G2.5	19	1	1	11	M25	9	JBEP253215AI09
24G2.5	24	1	1	14	M32	12	JBEP253215AI10
27G2.5	27	1	1	15	M32	13	JBEP253215AI11
37G2.5	37	1	1	20	M32	18	JBEP253215AI12
For Cable	Terminal Block	Continuity			Multi-Cable	Single Cable	Catalog
EGFA	0.5/2.5 mm ² Qty.	Shield Qty.			Cable	Entries	Number ①
					Entry Qty. 1	M20 Qty.	
07IP05	14	7			M20	7	JBEP202115AI21
07IT05	21	7			M20	7	JBEP202115AI22
12IP05	24	12			M25	12	JBEP253215AI23
12IT05	36	12			M25	12	JBEP253215AI24
19IP05	38	19			M25	19	JBEP253215AI25
27IP05	54	27			M32	27	JBEP325015AI26
07IP09	14	7			M25	7	JBEP202115AI27
07IT09	21	7			M25	7	JBEP202115AI28
12IP09	24	12			M25	12	JBEP253215AI29
12IT09	36	12			M32	12	JBEP253215AI30
19IP09	38	19			M32	19	JBEP253215AI31
27IP09	54	27			M40	27	JBEP325015AI32
For Cable	Terminal Block	Continuity			Multi-Cable	Single Cable	Catalog
EIFA	0.5/2.5 mm ² Qty.	Shield Qty.			Cable	Entries	Number ①
					Entry Qty. 1	M20 Qty.	
07IP05	15	8			M25	7	JBEP202115AI41
07IT05	22	8			M25	7	JBEP202115AI42
12IP05	25	13			M32	12	JBEP253215AI43
12IT05	37	13			M32	12	JBEP253215AI44
19IP05	39	20			M32	19	JBEP253215AI45
27IP05	55	28			M40	27	JBEP325015AI46
07IP09	15	8			M32	7	JBEP202115AI47
07IT09	22	8			M32	7	JBEP202115AI48
12IP09	25	13			M40	12	JBEP253215AI49
12IT09	37	13			M40	12	JBEP253215AI50
19IP09	39	20			M40	19	JBEP253215AI51
27IP09	55	28			M50	27	JBEP325015AI52

① For JBEP terminal junction box with a drain, add suffix **D** to the end of the catalog number; example: JBEP171709NI01D.

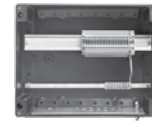
Shaded catalog numbers are normally stocked items. All other items are made to order.

JBEP Series Fiberglass Reinforced Polyester Terminal Junction Boxes for Instrumentation Applications

Increased Safety. Factory Drilled and Equipped

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Example IIC Factory Drilled JBEP Polyester Junction Boxes Equipped with Terminals for Instrumentation Applications with Lead Sheath Armored Cables
Fitted with: Horizontal beige terminal block. Copper bar with cable clamps or continuity shields. Yellow laminated plastic label with black lettering. Earth continuity brass plate. M8 external earth crossing terminal. M20 to M32 threaded entries. M40 to M50 clearance holes. Cable glands and plugs ordered separately.



Armored Cables
With lead sheath

For Cable U1000 RGPFV	Terminal Block 0.5/2.5 mm ² Qty.	Earth Terminal 0.5/2.5 mm ² Qty.	Copper Bar 10 x 3 mm Qty.	Cable Clamp 0.5/2.5 mm ² Qty.	Multi-Cable Cable Entry Qty. 1	Single Cable Entries M20 Qty.	Catalog Number ①
07G1.5	7	1	1	5	M20	3	JBEP171709LI01
12G1.5	12	1	1	8	M25	6	JBEP202115LI02
19G1.5	19	1	1	11	M25	9	JBEP253215LI03
24G1.5	24	1	1	14	M32	12	JBEP253215LI04
27G1.5	27	1	1	15	M32	13	JBEP253215LI05
37G1.5	37	1	1	20	M32	18	JBEP253215LI06
07G2.5	7	1	1	5	M20	3	JBEP171709LI07
12G2.5	12	1	1	8	M25	6	JBEP202115LI08
19G2.5	19	1	1	11	M32	9	JBEP253215LI09
24G2.5	24	1	1	14	M32	12	JBEP253215LI10
27G2.5	27	1	1	15	M32	13	JBEP253215LI11
37G2.5	37	1	1	20	M40	18	JBEP253215LI12

For Cable EGPF	Terminal Block 0.5/2.5 mm ² Qty.	Continuity Shield Qty.	Multi-Cable Cable Entry Qty. 1	Single Cable Entries M20 Qty.	Catalog Number ①
07IP05	14	7	M20	7	JBEP202115LI21
07IT05	21	7	M20	7	JBEP202115LI22
12IP05	24	12	M25	12	JBEP253215LI23
12IT05	36	12	M25	12	JBEP253215LI24
19IP05	38	19	M25	19	JBEP253215LI25
27IP05	54	27	M32	27	JBEP325015LI26
07IP09	14	7	M25	7	JBEP202115LI27
07IT09	21	7	M25	7	JBEP202115LI28
12IP09	24	12	M32	12	JBEP253215LI29
12IT09	36	12	M32	12	JBEP253215LI30
19IP09	38	19	M40	19	JBEP253215LI31
27IP09	54	27	M40	27	JBEP325015LI32

For Cable EIPF	Terminal Block 0.5/2.5 mm ² Qty.	Continuity Shield Qty.	Multi-Cable Cable Entry Qty. 1	Single Cable Entries M20 Qty.	Catalog Number ①
07IP05	15	8	M25	7	JBEP202115LI41
07IT05	22	8	M32	7	JBEP202115LI42
12IP05	25	13	M32	12	JBEP253215LI43
12IT05	37	13	M32	12	JBEP253215LI44
19IP05	39	20	M40	19	JBEP253215LI45
27IP05	55	28	M50	27	JBEP325015LI46
07IP09	15	8	M32	7	JBEP202115LI47
07IT09	22	8	M32	7	JBEP202115LI48
12IP09	25	13	M40	12	JBEP253215LI49
12IT09	37	13	M40	12	JBEP253215LI50
19IP09	39	20	M50	19	JBEP253215LI51
27IP09	55	28	M50	27	JBEP325015LI52

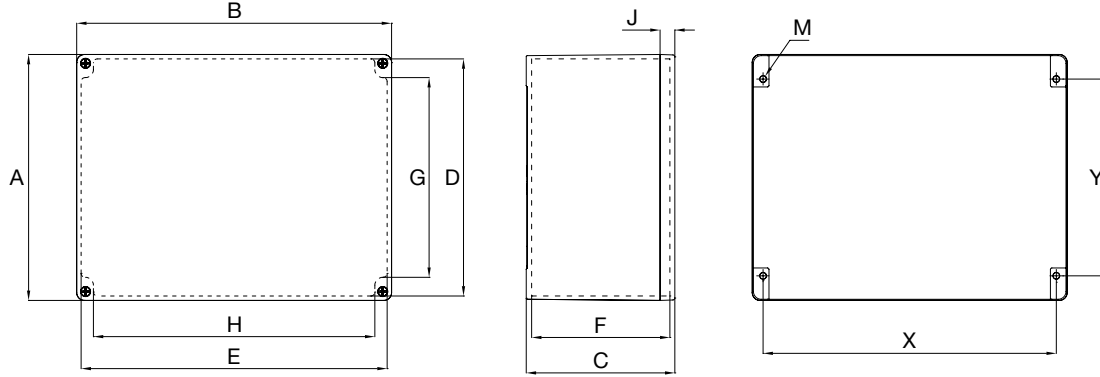
① For JBEP terminal junction box with a drain, add suffix **D** to the end of the catalog number; example: JBEP171709NI01D.

JBEP Series Fiberglass Reinforced Polyester Terminal Junction Boxes for Instrumentation Applications

Increased Safety. Factory Drilled and Equipped

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Dimensions in Millimeters ①



Enclosure Catalog Number	External Dimension			Internal Dimensions					Cover J	Body Thickness	Wall Fixing		
	A	B	C	D	E	F	G	H			X	Y	M ②
JBEP1717090	170	170	91	158.5	158.5	72	112.5	137	15	4.5	153	131	M5
JBEP2021150	200	215	145	185.8	200.8	122.5	114.8	159	20	6.1	189	146	M6
JBEP2532150	250	320	150	241	311	133.5	171	267	15	4.5	200	298	M6
JBEP3250150	320	500	150	311	491	133.5	267	421	15	4.5	298	447	M6

① Wall fixing screw diameter 5 mm . Wall fixing screw hole 6 mm .

② Screw to be used for mounting box.

JBEP Series Fiberglass Reinforced Polyester Terminal Junction Boxes for Electrical and Power Applications

Increased Safety. Factory Drilled and Equipped

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Applications

- Electrical junction boxes are used to distribute power to lighting and to other Power and control circuits.
- Power junction boxes are used to connect cables together to supply main lighting circuits, motors, service receptacles and other equipment.
- Designed for Zones 1 or 2 areas, where flammable gases or vapors are present either continuously, often or accidentally such as:
 - Petroleum
 - Chemical
 - Refineries
 - Other industrial process facilities
- Ideal for indoor/outdoor use with wet or corrosive atmospheres.
- Designed for use in Zones 21 or 22 areas where flammables dusts (conductive and non conductive) are present either continuously, often or accidentally such as:
 - Food processing
 - Dairy
 - Brewing
 - Other industrial process facilities

Features

- Available in multiple terminal configurations.
- Supplied with terminals Size 2.5 mm² through 240 mm².
- Optional external hinged enclosures:
 - Reversible door opening 120°.
 - Door with double bar lock.
 - Key locking facility.

Standard materials

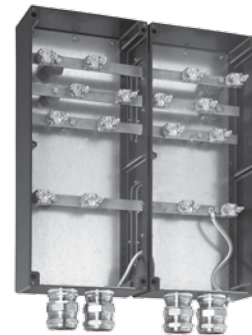
- Enclosures: Static resistant carbon filled fiberglass reinforced polyester (FRP)
- Hardware: stainless steel
- Gasket for sizes 85 x 85, 120 x 120: silicone
- Gasket for other sizes: EPDM (ethylene propylene diene monomer rubber)

Options

- External hinges are available on the following sizes:
 - 500 x 320 x 150 mm
 - 500 x 320 x 230 mm
 - 750 x 320 x 150 mm
 - 750 x 320 x 230 mm
- Removable glands plates
- Nameplates
- Mounting pan
- Inside pocket for document
- Consult factory for custom drilling, assembly requirements and other ambient temperatures.



Un-Armored Cable Glands are Supplied as Standard.
Armored Cable Glands are available as an Option.



Sample of 2 x JBEP753215

Certifications and compliances ①

◆ATEX/IECEx Certification

- **Type : JBEP**
 - Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/EC: Ⓜ II 2G
 - Conforming to IECEx : EPL Gb
 - Type of Protection: Ex eb IIC
 - Temperature class:
 - T6 for Ta ≤ +40 °C , T5 for Ta ≤ +60 °C
 - Dust Zones 21 and 22:
 - Conforming to ATEX: Ⓜ II 2D
 - Conforming to IECEx: EPL Db
 - Type of Protection: Ex tb IIC
 - Surface Temperature :
 - T60 °C for Ta ≤ +40 °C , T90 °C for Ta ≤ +60 °C
 - Ambient Temperatures : -55 °C ≤ Ta ≤ +60 °C
 - ATEX Certificate : LCIE 12 ATEX 3037X
 - EC Declaration of Conformity : 50291
 - IECEx Certificate : IECEx LCIE 13.0003X
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance: IK10

① The ambient temperature for complete assembly is equal to the lowest ambient temperature of the components used.

JBEP Series Fiberglass Reinforced Polyester Terminal Junction Boxes for Electrical and Power Applications

Increased Safety. Factory Drilled and Equipped

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

◆ Components ambient temperature

- Type : Bve (plastic close up plug)
 - Ambient Temperatures : -40 °C to +55 °C
- Type : 757 (nickel plated close up plug)
 - Ambient Temperatures : -60 °C to +100 °C
- Type : EEXe (plastic cable gland)
 - Ambient Temperatures : -20 °C to +55 °C
- Type : E1FX, E2FX, E1FW, E2FW, T3, A2F (metal cable gland)
 - Ambient Temperatures : -60 °C to +130 °C
- Type : PX, PX2K (metal cable gland)
 - Ambient Temperatures : -60 °C to +100 °C
- Type : DBE (drain/breather)
 - Ambient Temperatures : -50 °C to +85 °C
- Type : WDU, WFF (terminal)
 - Ambient Temperatures : -50 °C to +120 °C
- Type : SAK, AKZ (terminal)
 - Ambient Temperatures : -50 °C to +100 °C

◆ EURASEC Certification

- Type : JBEP
 - EURASEC N° TC RU C-FR.1505.B.00911

◆ Others Certification

- Type : JBEP
 - INMETRO Certificate: BVC 13.3238-X^①

Related Products

- For a complete offering of cable glands for use with armored and unarmored cable, see *Fittings: Cable Glands*.

Illustrated Features – Sample of JBEP080806NE04T

	Description	
1	Screw M5 X 6	
2	JBEP0808060 - Base Holes: 3 x Ø 20.5	
3	Cover Of Polyester Box Type (85 x 85 x 60)	
4	Hood Terminals Compact Set	
8	Nameplate	
9	Gasket Box Type 85 x 85 x 60	
10	Pan Head Screw M4 X 7	
11	Entry Thread Seal M20	
12	Nickel-Plated Brass Locknuts M20 X 1.5	
13	EEx e M20 Cable Gland	
15	Screw M6 X 20 X 10	
16	Hood Term Cover	
17	Earth Plate	

^① Inmetro certification available on special request only. Contact your local sales for more information

JBEP Series Fiberglass Reinforced Polyester Terminal Junction Boxes for Electrical and Power Applications

Increased Safety. Factory Drilled and Equipped

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

The Catalog Numbering Guide is a reference tool to explain the make-up of the catalog number. It is not to be used to create a custom product for ordering.

Catalog Numbering Guide - JBEP Polyester Junction Boxes for Electrical and Power Applications

JBE	P	08	08	06	A	E	01	T
Series: JBE - ATEX/IECEX Certified Junction Box	Material: P - Polyester	Dimensions Height: 08 - 85 mm 12 - 120 mm 17 - 170 mm 20 - 200 mm 25 - 250 mm 32 - 320 mm 50 - 500 mm 75 - 750 mm	Dimensions Width: 08 - 85 mm 12 - 120 mm 17 - 170 mm 21 - 215 mm 25 - 250 mm 32 - 320 mm 50 - 500 mm 75 - 750 mm	Dimensions Depth: 06 - 60 mm 09 - 91 mm 09S - 91 mm 10 - 95 mm 15 - 150 mm 23 - 230 mm	Cable Type: A - Armored N - Non-Armored	Options: <i>(Options must be listed alphabetically)</i> E - Electrical: 2.5 mm ² x 10 mm ² P - Power: 16 mm ² to 240 mm ²	Suffix: 01 to 99 Assigned at Factory	Other Suffix: T - Mantle Clamping (Pillar Terminals)

Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED JUNCTION BOXES

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 4 x 2.5 mm² or 2 x 4 mm² + 2 x 2.5 mm²; 4 x 6 mm² or 3 x 10 mm² + 4 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP080806NE04T

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes Equipped with 4 Live Mantle Clamping (Pillar Terminals) and 1 Earth Terminal Per Way

Maximum capacity per terminal:

- 4 x 2.5 mm² or 2 x 4 mm² + 2 x 2.5 mm², 550 Volts

Maximum capacity per earth terminal:

- 1 x 4 mm²

Rating (Amps):

- 28 Amps for 2.5 mm², 38 Amps for 4 mm²

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Catalog Number
JBEP080806	3 x M20 with earth continuity sheet		0.42	0.44	85 x 85 x 61	JBEP080806AE03T
JBEP080806	3 x M20 with three cable glands for unarmored cable – diameter 6.5 to 14.5 mm		0.45	0.44	85 x 85 x 61	JBEP080806NE03T
JBEP080806	4 x M20 with earth continuity sheet		0.43	0.44	85 x 85 x 61	JBEP080806AE04T
JBEP080806	4 x M20 with four cable glands for unarmored cable – diameter 6.5 to 14.5 mm		0.48	0.44	85 x 85 x 61	JBEP080806NE04T

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes Equipped with 5 Live Mantle Clamping (Pillar Terminals) and 1 Earth Terminal Per Way

Maximum capacity per terminal:

- 4 x 6 mm² or 3 x 10 mm² + 4 mm², 690 Volts

Maximum capacity per earth terminal:

- 1 x 10 mm²

Rating (Amps):

- 28 Amps for 2.5 mm², 38 Amps for 4 mm², 42 Amps for 10 mm²

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Catalog Number
JBEP121209S	3 x M20 with earth continuity sheet		0.85	1.31	120 x 120 x 91	JBEP121209AE03T
JBEP121209S	3 x M25 with three cable glands for unarmored cable – diameter 8 to 17 mm ☉		0.9	1.31	120 x 120 x 91	JBEP121209NE13T
JBEP121209S	4 x M20 with earth continuity sheet		0.88	1.31	120 x 120 x 91	JBEP121209AE04T
JBEP121209S	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm ☉		0.95	1.31	120 x 120 x 91	JBEP121209NE14T

Shaded catalog numbers are normally stocked items. All other items are made to order.

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 4 x 6 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes Equipped with 8 Live Mantle Clamping (Pillar Terminals) and 1 Earth Terminal Per Way

Maximum capacity per terminal:









- 4 x 6 mm² or 3 x 10 mm² + 4 mm², 690 Volts

Maximum capacity per earth terminal:

- 1 x 10 mm²

Rating (Amps):

- 28 Amps for 2.5 mm², 38 Amps for 4 mm², 42 Amps for 10 mm²

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Catalog Number
JBEP171709	4 x M20 with earth continuity sheet		1.63	2.63	170 x 170 x 91	JBEP171709AE04T
JBEP171709	4 x M20 with three cable glands for unarmored cable – diameter 6.5 to 14.5 mm		1.55	2.63	170 x 170 x 91	JBEP171709NE04T
JBEP171709	6 x M20 with earth continuity sheet		1.55	2.63	170 x 170 x 91	JBEP171709AE06T
JBEP171709	6 x M20 with three cable glands for unarmored cable – diameter 6.5 to 14.5 mm		1.65	2.63	170 x 170 x 91	JBEP171709NE06T
JBEP171709	4 x M25 with earth continuity sheet		1.62	2.63	170 x 170 x 91	JBEP171709AE14T
JBEP171709	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		1.60	2.63	170 x 170 x 91	JBEP171709NE14T
JBEP171709	6 x M25 with earth continuity sheet		1.55	2.63	170 x 170 x 91	JBEP171709AE16T
JBEP171709	6 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		1.65	2.63	170 x 170 x 91	JBEP171709NE16T

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 2 x 4 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP080806AE05

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with 4 Screw Terminals and 2 Earth Terminals

- 2 x 4 mm² terminals (MBK3), Rating 24 Amps, 275 Volts
MBK3/E-Z and MSLKG2.5

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: P + N (1PE + 2L + 2N + 1PE)						
JBEP080806	3 x M20 with earth continuity device		0.40	0.44	85 x 85 x 61	JBEP080806AE03
JBEP080806	3 x M20 with four cable glands for unarmored cable – diameter 6.5 to 14.5 mm		0.42	0.44	85 x 85 x 61	JBEP080806NE03
JBEP080806	4 x M20 with earth continuity device		0.40	0.44	85 x 85 x 61	JBEP080806AE05
JBEP080806	4 x M20 with four cable glands for unarmored cable – diameter 6.5 to 14.5 mm		0.45	0.44	85 x 85 x 61	JBEP080806NE05

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with 4 Screw Terminals and 2 Earth Terminals

- 2 x 4 mm² terminals (MBK3)
MBK3/E-Z and MSLKG2.5

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Catalog Number
Configuration: P + N (1PE + 1 + 2 + 3 + 4 + 1PE)						
JBEP080806	2 x M20 with earth continuity device, rated Ex eb IIC		0.40	0.44	85 x 85 x 60	JBEP080806AE22
JBEP080806	2 x M20 with earth continuity device, rated Ex ia IIC		0.45	0.44	85 x 85 x 60	JBEP080806AE23

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with 6 Screw Terminals and 2 Earth Terminals

- 2 x 4 mm² terminals (MBK3), Rating 24 Amps, 275 Volts
MBK3/E-Z and MSLKG2.5

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Catalog Number
Configuration: P + N (1PE + 1 + 2 + 3 + 4 + 5 + 6 + 1PE)						
JBEP080806	4 x M20 with earth continuity device, rated Ex eb IIC		0.40	0.44	85 x 85 x 60	JBEP080806AE24
JBEP080806	4 x M20 with earth continuity device, rated Ex ia IIC		0.45	0.44	85 x 85 x 60	JBEP080806AE25

Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED JUNCTION BOXES

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 2 x 4 mm²; 2 x 6 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP121209AE05

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with 4 Screw Terminals and 2 Earth Terminals

- 2 x 4 mm² terminals (WDU4N), Rating 27 Amps, 275 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: P + N (1PE + 2L + 2N + 1PE)						
JBEP121209S	4 x M20 with earth continuity device		0.89	1.31	120 x 120 x 91	JBEP121209AE07
JBEP121209S	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		0.93	1.31	120 x 120 x 91	JBEP121209NE08

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with 4 Screw Terminals and 2 Earth Terminals

- 2 x 6 mm² terminals (WDU6), Rating 36 Amps, 550 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: P + N (1PE + 2L + 2N + 1PE)						
JBEP121209S	4 x M20 with earth continuity device		1.00	1.31	120 x 120 x 91	JBEP121209AE45
JBEP121209S	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		1.00	1.31	120 x 120 x 91	JBEP121209NE46
JBEP121209S	4 x M20 with earth continuity device		0.96	1.31	120 x 120 x 91	JBEP121209AE47
JBEP121209S	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		1.00	1.31	120 x 120 x 91	JBEP121209NE48

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 2 x 4 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP121209NE26

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with 6 Screw Terminals and 2 Earth Terminals

- 2 x 4 mm² terminals (MBK3/E-Z and MSLKG2.5), Rating 24 Amps, 275 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: TP (1PE + 2L1 + 2L2 + 2L3 + 1PE)						
JBEP121209	4 x M20 with earth continuity device		0.88	1.31	120 x 120 x 91	JBEP121209AE25
JBEP121209	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		0.87	1.31	120 x 120 x 91	JBEP121209NE26
JBEP121209	4 x M20 with earth continuity device		0.84	1.31	120 x 120 x 91	JBEP121209AE27
JBEP121209	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		0.88	1.31	120 x 120 x 91	JBEP121209NE28

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with 12 Screw Terminals and Earth Terminals

- 4 mm² terminals (WDU4), Rating 22 Amps, 690 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: TP + N (1PE + 3L1 + 3L2 + 3L3 + 3N + 1PE)						
JBEP171709	4 x M25 with earth continuity device		1.54	2.63	170 x 170 x 91	JBEP171709AE46
JBEP171709	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		1.54	2.63	170 x 170 x 91	JBEP171709NE46
Configuration: TP + N (1PE + 3L1 + 3L2 + 3L3 + 3N + 2PE)						
JBEP171709	6 x M20 with earth continuity device		1.54	2.63	170 x 170 x 91	JBEP171709AE47
JBEP171709	6 x M20 with four cable glands for unarmored cable – diameter 6.5 to 14.5 mm		1.54	2.63	170 x 170 x 91	JBEP171709NE47
JBEP171709	6 x M25 with earth continuity device		1.54	2.63	170 x 170 x 91	JBEP171709AE48
JBEP171709	6 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		1.54	2.63	170 x 170 x 91	JBEP171709NE48

Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED JUNCTION BOXES

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 6 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP171709AE06

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals and Earth Terminals

- 6 mm² terminals (WDU6) and earth terminals (WPE6), Rating 32 Amps, 550 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped
						Catalog Number
Configuration: P + N (1PE + 2L + 2N + 1PE)						
JBEP171709	3 x M20 with earth continuity device		1.54	2.63	170 x 170 x 91	JBEP171709AE01
JBEP171709	3 x M25 with three cable glands for unarmored cable – diameter 8 to 17 mm		1.54	2.63	170 x 170 x 91	JBEP171709NE01
JBEP171709	4 x M20 with earth continuity device		1.54	2.63	170 x 170 x 91	JBEP171709AE02
JBEP171709	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		1.54	2.63	170 x 170 x 91	JBEP171709NE02
JBEP171709	4 x M20 with earth continuity device		1.54	2.63	170 x 170 x 91	JBEP171709AE03
JBEP171709	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		1.54	2.63	170 x 170 x 91	JBEP171709NE03
Configuration: P + N (1PE + 3L + 3N + 2PE)						
JBEP171709	6 x M20 with earth continuity device		1.54	2.63	170 x 170 x 91	JBEP171709AE04
JBEP171709	6 x M25 with six cable glands for unarmored cable – diameter 8 to 17 mm		1.54	2.63	170 x 170 x 91	JBEP171709NE04
Configuration: TP (1PE + 2L1 + 2L2 + 2L3 + 1PE)						
JBEP171709	3 x M20 with earth continuity device		1.54	2.63	170 x 170 x 91	JBEP171709AE05
JBEP171709	3 x M25 with three cable glands for unarmored cable – diameter 8 to 17 mm		1.54	2.63	170 x 170 x 91	JBEP171709NE05
JBEP171709	4 x M20 with earth continuity device		1.54	2.63	170 x 170 x 91	JBEP171709AE06
JBEP171709	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		1.54	2.63	170 x 170 x 91	JBEP171709NE06
JBEP171709	4 x M20 with earth continuity device		1.54	2.63	170 x 170 x 91	JBEP171709AE07
JBEP171709	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		1.54	2.63	170 x 170 x 91	JBEP171709NE07

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 6 mm²

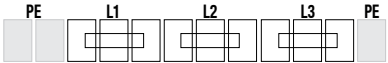
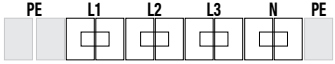
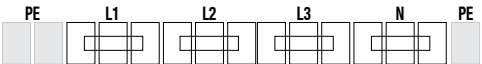
Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP171709AE06

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals and Earth Terminals

- 6 mm² terminals (WDU6) and earth terminals (WPE6), Rating 32 Amps, 550 Volts

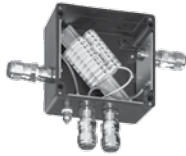
Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: TP (2PE + 3L1 + 3L2 + 3L3 + 1PE) 						
JBEP171709	6 x M20 with earth continuity device		1.54	2.63	170 x 170 x 91	JBEP171709AE08
JBEP171709	6 x M25 with six cable glands for unarmored cable – diameter 8 to 17 mm		1.54	2.63	170 x 170 x 91	JBEP171709NE08
Configuration: TP + N (2PE + 2L1 + 2L2 + 2L3 + 2N + 1PE) 						
JBEP171709	3 x M20 with earth continuity device		1.54	2.63	170 x 170 x 91	JBEP171709AE09
JBEP171709	3 x M25 with three cable glands for unarmored cable – diameter 8 to 17 mm		1.54	2.63	170 x 170 x 91	JBEP171709NE09
JBEP171709	4 x M20 with earth continuity device		1.54	2.63	170 x 170 x 91	JBEP171709AE10
JBEP171709	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		1.54	2.63	170 x 170 x 91	JBEP171709NE10
JBEP171709	4 x M20 with earth continuity device		1.54	2.63	170 x 170 x 91	JBEP171709AE11
JBEP171709	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		1.54	2.63	170 x 170 x 91	JBEP171709NE11
Configuration: TP + N (2PE + 3L1 + 3L2 + 3L3 + 3N + 1PE) 						
JBEP202110	6 x M20 with earth continuity device		2.04	4.09	200 x 215 x 95	JBEP202110AE12
JBEP202110	6 x M25 with six cable glands for unarmored cable – diameter 8 to 17 mm		2.04	4.09	200 x 215 x 95	JBEP202110NE12

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 10 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP171709AE06

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals and Earth Terminals

- 10 mm² terminals (WDU10) and earth terminals (WPE10), Rating 50 Amps, 550 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: P + N (1PE + 2L + 2N + 1PE)						
JBEP171709	3 x M20 with earth continuity device		2.04	2.63	170 x 170 x 91	JBEP171709AE51
JBEP171709	3 x M25 with three cable glands for unarmored cable – diameter 8 to 17 mm		2.04	2.63	170 x 170 x 91	JBEP171709NE51
JBEP171709	4 x M20 with earth continuity device		2.04	2.63	170 x 170 x 91	JBEP171709AE52
JBEP171709	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		2.04	2.63	170 x 170 x 91	JBEP171709NE52
JBEP171709	4 x M20 with earth continuity device		2.04	2.63	170 x 170 x 91	JBEP171709AE53
JBEP171709	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		2.04	2.63	170 x 170 x 91	JBEP171709NE53

Enclosures and Junction Boxes

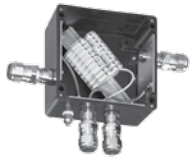
INCREASED SAFETY EX E ZONE 1 RATED JUNCTION BOXES

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 10 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP171709AE06

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals and Earth Terminals

- 10 mm² terminals (WDU10) and earth terminals (WPE10), Rating 47 Amps, 550 Volts

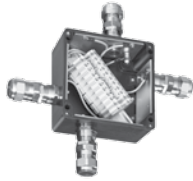
Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: P + N (2PE + 3L + 3N + 1PE)						
JBEP171709	6 x M20 with earth continuity device		2.04	2.63	170 x 170 x 91	JBEP171709AE54
JBEP171709	6 x M25 with six cable glands for unarmored cable – diameter 8 to 17 mm		2.04	2.63	170 x 170 x 91	JBEP171709NE54
Configuration: TP (1PE + 2L1 + 2L2 + 2L3 + 1PE)						
JBEP171709	3 x M25 with earth continuity device		2.04	2.63	170 x 170 x 91	JBEP171709AE55
JBEP171709	3 x M25 with three cable glands for unarmored cable – diameter 8 to 17 mm		2.04	2.63	170 x 170 x 91	JBEP171709NE55
JBEP171709	4 x M25 with earth continuity device		2.04	2.63	170 x 170 x 91	JBEP171709AE56
JBEP171709	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		2.04	2.63	170 x 170 x 91	JBEP171709NE56
JBEP171709	4 x M25 with earth continuity device		2.04	2.63	170 x 170 x 91	JBEP171709AE57
JBEP171709	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		2.04	2.63	170 x 170 x 91	JBEP171709NE57

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 10 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP171709AE61

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals and Earth Terminals

- 10 mm² terminals (WDU10) and earth terminals (WPE10), Rating 37 Amps, 550 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: TP (2PE + 3L1 + 3L2 + 3L3 + 1PE)						
JBEP171709	6 x M25 with earth continuity device		1.60	2.63	170 x 170 x 91	JBEP171709AE58
JBEP171709	6 x M25 with six cable glands for unarmored cable – diameter 8 to 17 mm		1.60	2.63	170 x 170 x 91	JBEP171709NE58

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals and Earth Terminals

- 10 mm² terminals (WDU10) and earth terminals (WPE10), Rating 40 Amps, 550 Volts

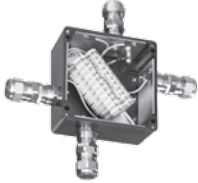
Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: TP + N (2PE + 2L1 + 2L2 + 2L3 + 2N + 1PE)						
JBEP171709	3 x M25 with earth continuity device		1.60	2.63	170 x 170 x 91	JBEP171709AE59
JBEP171709	3 x M32 with three cable glands for unarmored cable – diameter 10 to 25 mm		1.60	2.63	170 x 170 x 91	JBEP171709NE59
JBEP171709	4 x M25 with earth continuity device		1.60	2.63	170 x 170 x 91	JBEP171709AE60
JBEP171709	4 x M32 with four cable glands for unarmored cable – diameter 10 to 25 mm		1.60	2.63	170 x 170 x 91	JBEP171709NE60
JBEP171709	4 x M25 with earth continuity device		1.60	2.63	170 x 170 x 91	JBEP171709AE61
JBEP171709	4 x M32 with four cable glands for unarmored cable – diameter 10 to 25 mm		1.60	2.63	170 x 170 x 91	JBEP171709NE61

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 10 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP171709AE61

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals and Earth Terminals

- 10 mm² terminals (WDU10) and earth terminals (WPE10), Rating 40 Amps, 550 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number						
						PE	L1	L2	L3	N	PE	
Configuration: TP + N (2PE + 3L1 + 3L2 + 3L3 + 3N + 1PE)												
JBEP202110	6 x M25 with earth continuity device		2.10	4.09	200 x 215 x 95	JBEP202110AE62						
JBEP202110	6 x M32 with six cable glands for unarmored cable – diameter 10 to 25 mm		2.10	4.09	200 x 215 x 95	JBEP202110NE62						

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 16 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP202115AP06

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 16 mm² terminals (WDU16) and earth terminals (WPE16), Rating 60 Amps, 690 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number				
						PE	L	N	PE	
Configuration: P + N (1PE + 2L + 2N + 2PE)										
JBEP202115	3 x M25 with earth continuity device 1 x M8 Earth Stud		4.00	6.45	200 x 215 x 145	JBEP202115AP01				
JBEP202115	3 x M25 with three cable glands for unarmored cable – diameter 8 to 17 mm		4.00	6.45	200 x 215 x 145	JBEP202115NP01				
JBEP202115	4 x M25 with earth continuity device 1 x M8 Earth Stud		4.00	6.45	200 x 215 x 145	JBEP202115AP02				
JBEP202115	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		4.00	6.45	200 x 215 x 145	JBEP202115NP02				
JBEP202115	4 x M25 with earth continuity device 1 x M8 Earth Stud		4.00	6.45	200 x 215 x 145	JBEP202115AP03				
JBEP202115	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		4.00	6.45	200 x 215 x 145	JBEP202115NP03				
JBEP202115	4 x M25 with earth continuity device 1 x M8 Earth Stud		4.00	6.45	200 x 215 x 145	JBEP202115AP04				
JBEP202115	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		4.00	6.45	200 x 215 x 145	JBEP202115NP04				

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 16 mm² terminals (WDU16) and earth terminals (WPE16), Rating 55 Amps, 690 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number				
						PE	L1	N	PE	
Configuration: P + N (2PE + 3L + 3N + 2PE)										
JBEP202115	6 x M25 with earth continuity device 1 x M8 Earth Stud		4.00	6.45	200 x 215 x 145	JBEP202115AP05				
JBEP202115	6 x M25 with six cable glands for unarmored cable – diameter 8 to 17 mm		4.00	6.45	200 x 215 x 145	JBEP202115NP05				
JBEP202115	6 x M25 with earth continuity device 1 x M8 Earth Stud		4.00	6.45	200 x 215 x 145	JBEP202115AP06				
JBEP202115	6 x M25 with six cable glands for unarmored cable – diameter 8 to 17 mm		4.00	6.45	200 x 215 x 145	JBEP202115NP06				

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 16 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP202115AP06

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 16 mm² terminals (WDU16) and earth terminals (WPE16), Rating 55 Amps, 690 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: TP (1PE + 2L1 + 2L2 + 2L3 + 2PE)						
JBEP202115	3 x M25 with earth continuity device 1 x M8 Earth Stud		4.00	6.45	200 x 215 x 145	JBEP202115AP07
JBEP202115	3 x M25 with three cable glands for unarmored cable – diameter 8 to 17 mm		4.00	6.45	200 x 215 x 145	JBEP202115NP07
JBEP202115	4 x M25 with earth continuity device 1 x M8 Earth Stud		4.00	6.45	200 x 215 x 145	JBEP202115AP08
JBEP202115	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		4.00	6.45	200 x 215 x 145	JBEP202115NP08
JBEP202115	4 x M25 with earth continuity device 1 x M8 Earth Stud		4.00	6.45	200 x 215 x 145	JBEP202115AP09
JBEP202115	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		4.00	6.45	200 x 215 x 145	JBEP202115NP09
JBEP202115	4 x M25 with earth continuity device 1 x M8 Earth Stud		4.00	6.45	200 x 215 x 145	JBEP202115AP10
JBEP202115	4 x M25 with four cable glands for unarmored cable – diameter 8 to 17 mm		4.00	6.45	200 x 215 x 145	JBEP202115NP10

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 16 mm² terminals (WDU16) and earth terminals (WPE16), Rating 43 Amps, 690 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: TP (2PE + 3L1 + 3L2 + 3L3 + 2PE)						
JBEP202115	6 x M25 with earth continuity device 1 x M8 Earth Stud		4.00	6.45	200 x 215 x 145	JBEP202115AP11
JBEP202115	6 x M25 with six cable glands for unarmored cable – diameter 8 to 17 mm		4.00	6.45	200 x 215 x 145	JBEP202115NP11
JBEP202115	6 x M25 with earth continuity device 1 x M8 Earth Stud		4.00	6.45	200 x 215 x 145	JBEP202115AP12
JBEP202115	6 x M25 with six cable glands for unarmored cable – diameter 8 to 17 mm		4.00	6.45	200 x 215 x 145	JBEP202115NP12

Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED JUNCTION BOXES

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 16 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP202115AP06

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 16 mm² terminals (WDU16) and earth terminals (WPE16), Rating 45 Amps, 690 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number					
						PE	L1	L2	L3	N	PE
Configuration: TP + N (2PE + 2L1 + 2L2 + 2L3 + 2N + PE)											
JBEP202115	3 x M25 with earth continuity device 1 x M8 Earth Stud		4.00	6.45	200 x 215 x 145	JBEP202115AP13					
JBEP202115	3 x M32 with three cable glands for unarmored cable – diameter 10 to 25 mm		4.00	6.45	200 x 215 x 145	JBEP202115NP13					
JBEP202115	4 x M25 with earth continuity device 1 x M8 Earth Stud		4.00	6.45	200 x 215 x 145	JBEP202115AP14					
JBEP202115	4 x M32 with four cable glands for unarmored cable – diameter 10 to 25 mm		4.00	6.45	200 x 215 x 145	JBEP202115NP14					
JBEP202115	4 x M25 with earth continuity device 1 x M8 Earth Stud		4.00	6.45	200 x 215 x 145	JBEP202115AP15					
JBEP202115	4 x M32 with four cable glands for unarmored cable – diameter 10 to 25 mm		4.00	6.45	200 x 215 x 145	JBEP202115NP15					
JBEP202115	4 x M25 with earth continuity device 1 x M8 Earth Stud		4.00	6.45	200 x 215 x 145	JBEP202115AP16					
JBEP202115	4 x M32 with four cable glands for unarmored cable – diameter 10 to 25 mm		4.00	6.45	200 x 215 x 145	JBEP202115NP16					

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 16 mm² terminals (WDU16) and earth terminals (WPE16), Rating 40 Amps, 690 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number					
						PE	L1	L2	L3	N	PE
Configuration: TP + N (2PE + 3L1 + 3L2 + 3L3 + 3N + 2PE)											
JBEP253215	6 x M25 with earth continuity device 1 x M8 Earth Stud		8.20	12.00	250 x 320 x 150	JBEP253215AP17					
JBEP253215	6 x M32 with six cable glands for unarmored cable – diameter 10 to 25 mm		8.20	12.00	250 x 320 x 150	JBEP253215NP17					
JBEP253215	6 x M25 with earth continuity device 1 x M8 Earth Stud		8.20	12.00	250 x 320 x 150	JBEP253215AP18					
JBEP253215	6 x M32 with six cable glands for unarmored cable – diameter 10 to 25 mm		8.20	12.00	250 x 320 x 150	JBEP253215NP18					

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 25/35 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP253215NP02

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 25 mm² terminals (WDU35) and earth terminals (WPE35), Rating 80 Amps, 690 Volts
- 35 mm² terminals (WDU35) and earth terminals (WPE35), Rating 98 Amps, 690 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: TP (1PE + 2L1 + 2L2 + 2L3 + 2PE)						
JBEP253215	4 x M32 with earth continuity device 1 x M8 Earth Stud		8.20	12.00	250 x 320 x 151	JBEP253215AP01
JBEP253215	4 x M32 with four cable glands for unarmored cable – diameter 10 to 25 mm		8.20	12.00	250 x 320 x 151	JBEP253215NP01

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 25 mm² terminals (WDU35) and earth terminals (WPE35), Rating 70 Amps, 690 Volts
- 35 mm² terminals (WDU35) and earth terminals (WPE35), Rating 80 Amps, 690 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: TP (2PE + 3L1 + 3L2 + 3L3 + 2PE)						
JBEP253215	6 x M32 with earth continuity device 1 x M8 Earth Stud		8.20	12.00	250 x 320 x 151	JBEP253215AP02
JBEP253215	6 x M32 with six cable glands for unarmored cable – diameter 10 to 25 mm		8.20	12.00	250 x 320 x 151	JBEP253215NP02

Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED JUNCTION BOXES

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 25/35 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP253215NP02

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 25 mm² terminals (WDU35) and earth terminals (WPE35), Rating 75 Amps, 690 Volts
- 35 mm² terminals (WDU35) and earth terminals (WPE35), Rating 85 Amps, 690 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: TP + N (2PE + 2L1 + 2L2 + 2L3 + 2N + PE)						
JBEP253215	4 x M32 with earth continuity device 1 x M8 Earth Stud		8.20	12.00	250 x 320 x 150	JBEP253215AP03
JBEP253215	4 x M32 with four cable glands for unarmored cable – diameter 10 to 25 mm		8.20	12.00	250 x 320 x 150	JBEP253215NP03

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 25 mm² terminals (WDU35) and earth terminals (WPE35), Rating 58 Amps, 690 Volts
- 35 mm² terminals (WDU35) and earth terminals (WPE35), Rating 68 Amps, 690 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: TP + N (2PE + 3L1 + 3L2 + 3L3 + 3N + 2PE)						
JBEP253215	6 x M32 with earth continuity device 1 x M8 Earth Stud		8.20	12.00	250 x 320 x 150	JBEP253215AP04
JBEP253215	6 x M40 with six cable glands for unarmored cable – diameter 24 to 34 mm		8.20	12.00	250 x 320 x 150	JBEP253215NP04

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 10 mm² to 50 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP503215AP24

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 10 mm² to 50 mm² terminals (WDU50N) and earth terminals (WPE35), Rating 125 Amps, 550 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: TP (1PE + 2L1 + 2L2 + 2L3 + 2PE)						
JBEP503215	4 x M40 with earth continuity device 1 x M8 Earth Stud		8.50	24.00	500 x 320 x 150	JBEP503215AP01
JBEP503215	4 x M40 with four cable glands for unarmored cable – diameter 24 to 34 mm		8.50	24.00	500 x 320 x 150	JBEP503215NP01

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 10 mm² to 50 mm² terminals (WDU50N) and earth terminals (WPE35), Rating 125 Amps, 550 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: TP (2PE + 3L1 + 3L2 + 3L3 + 2PE)						
JBEP503215	6 x M40 with earth continuity device 1 x M8 Earth Stud		8.50	24.00	500 x 320 x 150	JBEP503215AP02
JBEP503215	6 x M40 with six cable glands for unarmored cable – diameter 24 to 34 mm		8.50	24.00	500 x 320 x 150	JBEP503215NP02

Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED JUNCTION BOXES

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 10 mm² to 50 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP503215AP24

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 10 mm² to 50 mm² terminals (WDU50N) and earth terminals (WPE35), Rating 125 Amps, 550 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number						
						PE	L1	L2	L3	N	PE	
Configuration: TP + N (2PE + 2L1 + 2L2 + 2L3 + 2N + PE)												
JBEP503215	4 x M40 with earth continuity device 1 x M8 Earth Stud		8.50	24.00	500 x 320 x 150	JBEP503215AP03						
JBEP503215	4 x M40 with four cable glands for unarmored cable – diameter 24 to 34 mm		8.50	24.00	500 x 320 x 150	JBEP503215NP03						

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 10 mm² to 50 mm² terminals (WDU50N) and earth terminals (WPE35), Rating 100 Amps, 550 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number						
						PE	L1	L2	L3	N	PE	
Configuration: TP + N (2PE + 3L1 + 3L2 + 3L3 + 3N + 2PE)												
JBEP503215	6 x M40 with earth continuity device 1 x M8 Earth Stud		9.30	24.00	500 x 320 x 150	JBEP503215AP04						
JBEP503223	6 x M50 with six cable glands for unarmored cable – diameter 28 to 42 mm		10.30	36.80	500 x 320 x 230	JBEP503223NP04						

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 10 mm² to 70 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP503215AP24

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 10 mm² to 70 mm² terminals (WDU70N) and earth terminals (WPE35), Rating 160 Amps, 550 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: TP (1PE + 2L1 + 2L2 + 2L3 + 2PE)						
JBEP503215	4 x M40 with earth continuity device 1 x M8 Earth Stud		9.30	24.00	500 x 320 x 150	JBEP503215AP21
JBEP503215	4 x M40 with four cable glands for unarmored cable – diameter 24 to 34 mm		9.30	24.00	500 x 320 x 150	JBEP503215NP21

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 10 mm² to 70 mm² terminals (WDU70N) and earth terminals (WPE35), Rating 140 Amps, 550 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
Configuration: TP (2PE + 3L1 + 3L2 + 3L3 + 2PE)						
JBEP503215	6 x M40 with earth continuity device 1 x M8 Earth Stud		9.30	24.00	500 x 320 x 150	JBEP503215AP22
JBEP503215	6 x M40 with six cable glands for unarmored cable – diameter 24 to 34 mm		9.30	24.00	500 x 320 x 150	JBEP503215NP22

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 10 mm² to 70 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



JBEP503215AP24

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 10 mm² to 70 mm² terminals (WDU70N) and earth terminals (WPE35), Rating 150 Amps, 550 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number						
						PE	L1	L2	L3	N	PE	
Configuration: TP + N (2PE + 2L1 + 2L2 + 2L3 + 2N + PE)												
JBEP503215	4 x M40 with earth continuity device 1 x M8 Earth Stud		9.30	24.00	500 x 320 x 150	JBEP503215AP23						
JBEP503215	4 x M40 with four cable glands for unarmored cable – diameter 24 to 34 mm		9.30	24.00	500 x 320 x 150	JBEP503215NP23						

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Terminals and M8 Earth Stud

- 10 mm² to 70 mm² terminals (WDU70N) and earth terminals (WPE35), Rating 125 Amps, 550 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number						
						PE	L1	L2	L3	N	PE	
Configuration: TP + N (2PE + 3L1 + 3L2 + 3L3 + 3N + 2PE)												
JBEP503215	6 x M40 with earth continuity device 1 x M8 Earth Stud		9.30	24.00	500 x 320 x 150	JBEP503215AP24						
JBEP503223	6 x M50 with six cable glands for unarmored cable – diameter 28 to 42 mm		10.30	36.80	500 x 320 x 230	JBEP503223NP24						

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

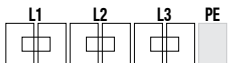


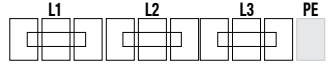


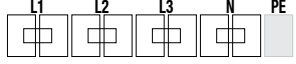


Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 120 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Screw Terminals, Earth Bar and M10 Earth Stud

- 10 mm² to 120 mm² terminals (WDU95N/120N) and earth copper bar, Rating 200 Amps, 690 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Terminal Jumped Catalog Number
						
Earth Copper Bar PE						
Configuration: TP (2L1 + 2L2 + 2L3 + 1PE)						
JBEP753223	4 x M50 with earth continuity device 1 x M10 Earth Stud		10.80	55.20	750 x 320 x 230	JBEP753223AP01
JBEP753215	4 x M50 with four cable glands for unarmored cable – diameter 28 to 42 mm		9.75	36.00	750 x 320 x 150	JBEP753215NP01
						
Earth Copper Bar PE						
Configuration: TP (3L1 + 3L2 + 3L3 + 1PE)						
JBEP753223	6 x M50 with earth continuity device 1 x M10 Earth Stud		10.80	55.20	750 x 320 x 230	JBEP753223AP02
JBEP753223	6 x M50 with six cable glands for unarmored cable – diameter 28 to 42 mm		10.80	55.20	750 x 320 x 230	JBEP753223NP02
						
Earth Copper Bar PE						
Configuration: TP + N (2L1 + 2L2 + 2L3 + 2N + 1PE)						
JBEP753223	4 x M50 with earth continuity device 1 x M10 Earth Stud		10.80	55.20	750 x 320 x 230	JBEP753223AP03
JBEP753215	4 x M50 with four cable glands for unarmored cable – diameter 28 to 42 mm		9.75	36.00	750 x 320 x 150	JBEP753215NP03

Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED JUNCTION BOXES

JBEP Series FRP Terminal Junction Boxes for Electrical/Power Applications

Increased Safety. Factory Drilled and Equipped

Maximum Capacity Per Terminal: 240 mm²

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)



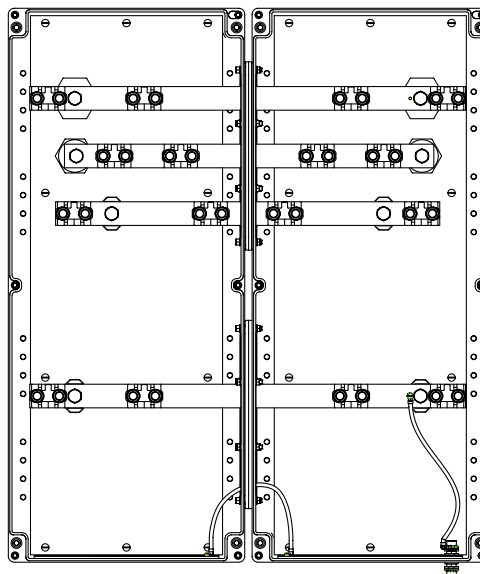
JBEP753223AP72

Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes - Equipped with Clamping Terminals and M10 Earth Stud

- 35/240 mm² clamping terminals on a bus bar and earth terminal (Earth Bus), Rating 400 Amps, 1100 Volts

Enclosure Type	Equipment	Entry Layout	Weight kg	Volume dm ³	Dimensions mm	Standard Bus Bar Catalog Number
Configuration: (L1 + L2 + L3 + PE All Copper Bars)						
2 x JBEP753223	3 x M50 with earth continuity device, 3 Clamping terminals per bar 1 x M10 Earth Stud		40.50	114.13	750 x 650 x 230	JBEP753223AP61
2 x JBEP753223	4 x M50 with earth continuity device, 4 Clamping terminals per bar 1 x M10 Earth Stud		40.50	114.13	750 x 650 x 230	JBEP753223AP62
2 x JBEP753223	3 x M63 with earth continuity device, 3 Clamping terminals per bar 1 x M10 Earth Stud		40.50	114.13	750 x 650 x 230	JBEP753223AP71
2 x JBEP753223	4 x M63 with earth continuity device, 4 Clamping terminals per bar 1 x M10 Earth Stud		40.50	114.13	750 x 650 x 230	JBEP753223AP72

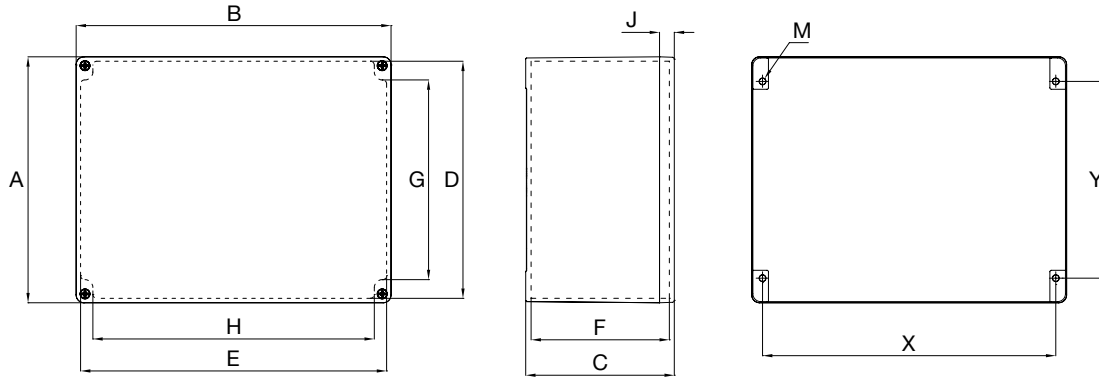
Example of Two JBEP753223 Enclosures Coupled



JBEP Series Fiberglass Reinforced Polyester Terminal Junction Boxes for Electrical and Power Applications

Increased Safety. Factory Drilled and Equipped

Dimensions in Millimeters ①



Enclosure Catalog Number	External Dimension			Internal Dimensions					Cover J	Body Thickness	Wall Fixing		
	A	B	C	D	E	F	G	H			X	Y	M ②
JBEP0808060	85	85	61	76.7	76.7	47	41	51	15	3.5	69	49	M4
JBEP1212090	120	120	91	109.5	109.5	75	63	85	40	4.5	103	83	M5
JBEP121209S0	120	120	91	108.6	108.6	75	63	85	15	4.5	103	83	M5
JBEP1717090	170	170	91	158.5	158.5	72	112.5	137	15	4.5	153	131	M5
JBEP2021100	200	215	95	185.8	200.8	76	116	159	20	6.1	189	146	M6
JBEP2021150	200	215	145	185.8	200.8	122.5	114.8	159	20	6.1	189	146	M6
JBEP2532150	250	320	150	241	311	133.5	171	267	15	4.5	200	298	M6
JBEP3225150	320	250	150	311	241	133.5	267	171	15	4.5	298	200	M6
JBEP3250150	320	500	150	311	491	133.5	267	421	15	4.5	298	447	M6
JBEP3250230	320	500	230	311	491	213.5	267	421	15	4.5	298	447	M6
JBEP3275150	320	750	150	311	741	133.5	267	671	15	4.5	298	698	M6
JBEP3275230	320	750	230	311	741	213.5	267	671	15	4.5	298	698	M6

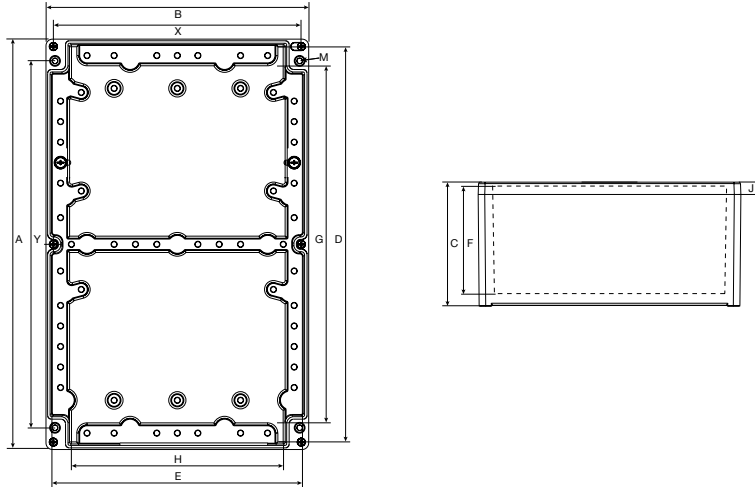
① Wall fixing screw diameter 5 mm. Wall fixing screw hole 6 mm.

② Screw to be used for mounting box.

JBEP Series Fiberglass Reinforced Polyester Terminal Junction Boxes for Electrical and Power Applications

Increased Safety. Factory Drilled and Equipped

Dimensions in Millimeters ①



Enclosure Catalog Number	External Dimension			Internal Dimensions					Cover J	Body Thickness	Wall Fixing		
	A	B	C	D	E	F	G	H			X	Y	M ②
JBEP5032150	500	320	150	491	311	133.5	421	267	15	4.5	447	298	M6
JBEP5032230	500	320	230	491	311	213.5	421	267	15	4.5	447	298	M6
JBEP7532150	750	320	150	741	311	133.5	671	267	15	4.5	298	698	M6
JBEP7532230	750	320	230	741	311	213.5	671	267	15	4.5	698	298	M6

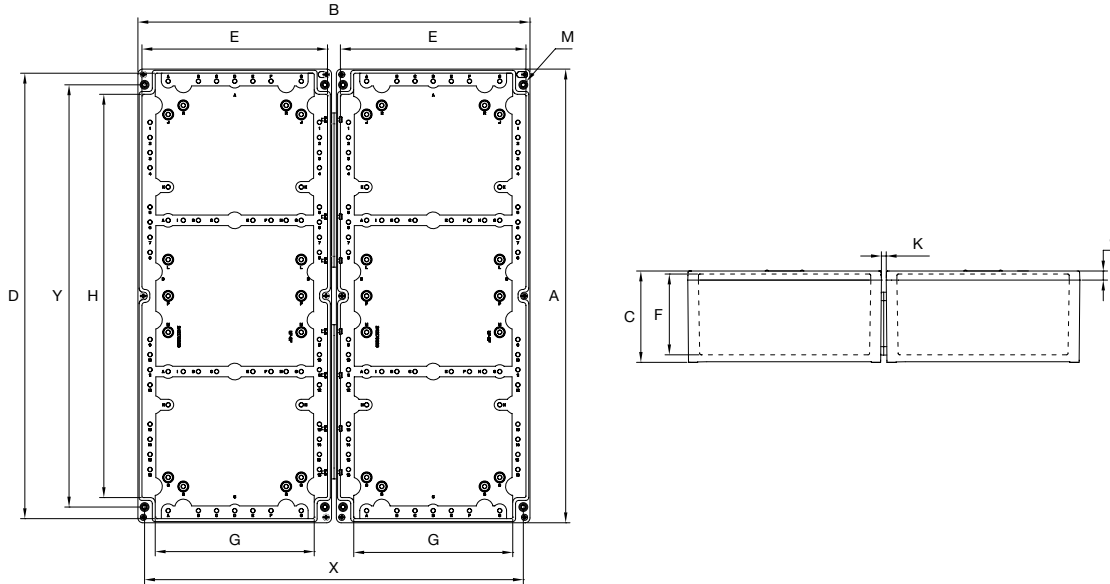
① Wall fixing screw diameter 5 mm. Wall fixing screw hole 6 mm.

② Screw to be used for mounting box.

JBEP Series Fiberglass Reinforced Polyester Terminal Junction Boxes for Electrical and Power Applications

Increased Safety. Factory Drilled and Equipped

Dimensions in Millimeters ①



Enclosure Catalog Number	External Dimension			Internal Dimensions						Cover	Body	Wall Fixing		
	A	B	C	D	E (x2)	F	G (x2)	H	K	J	Thickness	X	Y	M ②
2 X JBEP7532150	750	648	150	741	311	133.5	267	671	8	15	5	626	698	M6

① Wall fixing screw diameter 5 mm. Wall fixing screw hole 6 mm.

② Screw to be used for mounting box.

JBEA Series Pre-Drilled Aluminum Junction Box

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Applications

- Terminal junction boxes to facilitate electrical connections in hazardous areas.
- Designed for use in Zone 1 or 2 areas, where flammable gases or vapors are present either continuously or intermittently.
- Ideal for wet or corrosive atmospheres.
- Petroleum, chemical, refineries and other industrial process facilities.
- Designed for use in Zone 21 or 22 areas where flammable dusts are present either continuously or intermittently.
- Food processing, dairy, brewing, silos and other facilities.

Features

- For use only with Ex certified terminal blocks.
- Stainless steel hardware.
- Yellow laminated plastic label with black lettering.
- Factory drilled and equipped.

Standard Materials

- Enclosure: gray painted grade marine aluminum alloy
- Hardware: stainless steel

Options

- For use with equipment other than Ex terminal blocks, see ECEA series enclosures and controls.

Certifications and Compliances

◆ ATEX or IECEx Certification

- **Certification Type PCe**
 - Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex e II, Ex eia IIC, Ex eib IIC
 - Temperature class: T6
 - Dust, Zones 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C



Without Terminals



Equipped with Terminals

- Ambient Temperature: -55 °C to +60 °C
- CE Declaration of Conformity: 50221
- ATEX Certificate: LCIE 00 ATEX 6047
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

• Certification Type CAe

- Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex e II, Ex eia IIC, Ex eib IIC
 - Temperature class: T6 for Ta ≤ +40 °C , T5 for ≤ +55 °C
- Dust, Zones 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C to T96 °C
- Ambient Temperature: -40 °C to +55 °C
- CE Declaration of Conformity: 50325
- ATEX Certificate: LCIE 02 ATEX 6248X
- IECEx Certificate: IECEx LCI 04.0016X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00911

Catalog Numbering Guide – JBEA Series Aluminum Junction Box

JBEA JB Series ATEX or ATEX/IECEx Certified Junction Box	E Method of Protection: E - Increased Safety I - Intrinsic Safety	A Material: A - Aluminum	12 Length Dimensions mm: 12 - 120 17 - 170) 21 - 215	11 Width Dimensions mm: 11 - 110 20 - 205 38 - 380	09 Depth Dimensions mm: 09 - 91 13 - 130 19 - 190	D1 Options: <i>(options must be listed alphabetically)</i> As per Drilling Detail Table D1 - 5 x M20 D2 - 4 x M20 + 1 x M25 D3 - 7 x M20 + 1 x M25 D5 - 7 x M20 + 1 x M25 D6 - 12 x M20 + 1 x M32 D7 - 19 x M20 + 1 x M32 D8 - 27 x M20 + 1 x M40 P-- - Unarmored Cable A-- - Armored Cable L-- - Lead Sheath Armored Cable E - Earth Continuity Brass Plate # - Customized Enclosure (<i>Digit number will be assigned at time of order placement</i>)
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JBEA Series Pre-Drilled Aluminum Junction Box

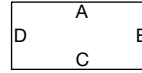
Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Factory Drilled Ex e II Aluminum Junction Boxes

Fitted with:

- One Yellow laminated plastic label with black lettering.
 - One horizontal symmetrical zinc plated rail. For use with Ex terminals only (not supplied).
 - One Internal earth terminal.
 - One M5 external earth screw.
- Cable glands and plugs ordered separately.

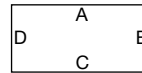


Type	Dimensions L x W x D mm	Rail Length Maximum mm	Threaded Holes Per Side				Weight kg	Volume dm ³	Catalog Number
			A	B	C	D			
PCe1	120 x 110 x 95	62	1 x M20	1 x M20	2 x M20	1 x M20	1.0	2.2	JBEA121109D1
PCe2	170 x 110 x 95	112	—	1 x M20	2 x M20 1 x M25	1 x M20	1.3	2.7	JBEA171109D2
PCe3	230 x 110 x 95	172	—	2 x M20	3 x M20 1 x M25	2 x M20	1.6	5.2	JBEA231109D3

Factory Drilled Exe II Aluminum Junction Boxes for Instrumentation Applications

Fitted with:

- One Yellow laminated plastic label with black lettering.
 - Set of two insulated side supports (096115).
 - One horizontal symmetrical zinc plated rail. For use with Ex terminals only (not supplied).
 - One M8 external earth crossing terminal.
- Cable glands and plugs ordered separately.
Also available for use with copper bar 12 x 2 mm or 12 x 4 mm.



Type	Dimensions L x W x D mm	Cable	Rail Length Maximum mm	Threaded Holes Side C		Weight kg	Volume dm ³	Catalog Number
CAe1	215 x 205 x 130	7 Pairs	221/105	1 x M25	7 x M20	4	13	JBEA212013D5
CAe2	320 x 205 x 130	12 Pairs	403/206	1 x M32	12 x M20	5	23	JBEA322013D6
CAe3	425 x 205 x 130	19 Pairs	590/310	1 x M32	19 x M20	6	33	JBEA422013D7
CAe5	480 x 380 x 190	27 Pairs	599/315	1 x M40	27 x M20	11	53	JBEA483819D8

Factory Assembled Ex Terminal Block for Junction Boxes Shown Above

Screwed/Screwed Terminal Block Fitted with Continuity Shield.



For Junction Boxes	Cable	Terminals 0.5/2.5 mm ² Qty.	Continuity Shield Qty.	Weight kg	Volume dm ³	Catalog Number
215 x 205 x 130	7 Pairs	14	7	0.3	0.5	096039
320 x 205 x 130	12 Pairs	24	12	0.4	1.1	096041
425 x 205 x 130	19 Pairs	38	19	0.5	1.3	096043
480 x 380 x 190	27 Pairs	54	27	0.6	1.7	096044

JBEA Series Pre-Drilled Aluminum Junction Box

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Factory Drilled and Equipped with Terminals Ex e II Aluminum Junction Boxes for Instrumentation Applications with Unarmored Cables

Fitted with: Horizontal beige terminal block. Copper bar with cable clamps or continuity shields. Yellow laminated plastic label with black lettering. M16 to M50 threaded entries. Cable glands and plugs ordered separately.



Type	Terminal Block 0.5/2.5 mm ² Qty.	Earth Terminal 0.5/2.5 mm ² Qty.	Copper Bar 10 x 3 mm Qty.	Cable Clamp 0.5/2.5 mm ² Qty.	Multi-cable Cable Entry Qty. 1	Single Cable Entries Qty.	Catalog Number
Cable U1000 RO2V – Single Cable Entries M20							
CAe1	07G1.5	7	1	5	M20	3	JBEA212013P01
CAe1	12G1.5	12	1	8	M25	6	JBEA212013P02
CAe2	19G1.5	19	1	11	M25	9	JBEA322013P03
CAe2	24G1.5	24	1	14	M32	12	JBEA322013P04
CAe2	27G1.5	27	1	15	M32	13	JBEA322013P05
CAe3	37G1.5	37	1	20	M32	18	JBEA422013P06
CAe1	07G2.5	7	1	5	M20	3	JBEA212013P07
CAe1	12G2.5	12	1	8	M25	6	JBEA212013P08
CAe2	19G2.5	19	1	11	M32	9	JBEA322013P09
CAe2	24G2.5	24	1	14	M32	12	JBEA322013P10
CAe2	27G2.5	27	1	15	M32	13	JBEA322013P11
CAe3	37G2.5	37	1	20	M40	18	JBEA422013P12
Type	Terminal Block 0.5/2.5 mm ² Qty.	Continuity Shield Qty.			Multi-cable Cable Entry Qty. 1	Single Cable Entries Qty.	Catalog Number
Cable EGSF – Single Cable Entries M16							
CAe1	07IP05	14	7		M20	7	JBEA212013P21
CAe1	07IT05	21	7		M20	7	JBEA212013P22
CAe2	12IP05	24	12		M25	12	JBEA322013P23
CAe2	12IT05	36	12		M25	12	JBEA322013P24
CAe3	19IP05	38	19		M32	19	JBEA422013P25
CAe5	27IP05	54	27		M32	27	JBEA483819P26
CAe1	07IP09	14	7		M25	7	JBEA212013P27
CAe1	07IT09	21	7		M25	7	JBEA212013P28
CAe2	12IP09	24	12		M32	12	JBEA322013P29
CAe2	12IT09	36	12		M32	12	JBEA322013P30
CAe3	19IP09	38	19		M32	19	JBEA422013P31
CAe5	27IP09	54	27		M40	27	JBEA483819P32
Cable EISF – Single Cable Entries M16							
CAe1	07IP05	15	8		M25	7	JBEA212013P41
CAe1	07IT05	22	8		M32	7	JBEA212013P42
CAe2	12IP05	25	13		M32	12	JBEA322013P43
CAe2	12IT05	37	13		M32	12	JBEA322013P44
CAe3	19IP05	39	20		M40	19	JBEA422013P45
CAe5	27IP05	55	28		M40	27	JBEA483819P46
CAe1	07IP09	15	8		M32	7	JBEA212013P47
CAe1	07IT09	22	8		M32	7	JBEA212013P48
CAe2	12IP09	25	13		M40	12	JBEA322013P49
CAe2	12IT09	37	13		M40	12	JBEA322013P50
CAe3	19IP09	29	20		M50	19	JBEA422013P51
CAe5	27IP09	55	28		M50	27	JBEA483819P52

Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED ENCLOSURES & JUNCTION BOXES

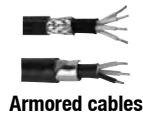
JBEA Series Pre-Drilled Aluminum Junction Box

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Factory Drilled and Equipped with Terminals Ex e II Aluminum Junction Boxes for Instrumentation Applications with Armored Cables

Fitted with: Horizontal beige terminal block. Copper bar with cable clamps or continuity shields. Yellow laminated plastic label with black lettering. Earth continuity brass plate. M8 external earth crossing terminal. M20 to M50 threaded entries. Cable glands and plugs ordered separately.



Armored cables



Type		Terminal Block 0.5/2.5 mm ² Qty.	Earth Terminal 0.5/2.5 mm ² Qty.	Copper Bar 10 x 3 mm Qty.	Cable Clamp 0.5/2.5 mm ² Qty.	Multi-cable Cable Entry Qty. 1	Single Cable Entries Qty.	Catalog Number
Cable U1000 RVFV – Single Cable Entries M20								
CAe1	07G1.5	7	1	1	5	M20	3	JBEA212013A01
CAe1	12G1.5	12	1	1	8	M20	6	JBEA212013A02
CAe2	19G1.5	19	1	1	11	M25	9	JBEA322013A03
CAe2	24G1.5	24	1	1	14	M25	12	JBEA322013A04
CAe2	27G1.5	27	1	1	15	M25	13	JBEA322013A05
CAe3	37G1.5	37	1	1	20	M32	18	JBEA422013A06
CAe1	07G2.5	7	1	1	5	M20	3	JBEA212013A07
CAe1	12G2.5	12	1	1	8	M25	6	JBEA212013A08
CAe2	19G2.5	19	1	1	11	M25	9	JBEA322013A09
CAe2	24G2.5	24	1	1	14	M32	12	JBEA322013A10
CAe2	27G2.5	27	1	1	15	M32	13	JBEA322013A11
CAe3	37G2.5	37	1	1	20	M32	18	JBEA422013A12
Type		Terminal Block 0.5/2.5 mm ² Qty.	Continuity Shield Qty.			Multi-cable Cable Entry Qty. 1	Single Cable Entries Qty.	Catalog Number
Cable EGFA – Single Cable Entries M20								
CAe1	07IP05	14	7			M20	7	JBEA212013A21
CAe1	07IT05	21	7			M20	7	JBEA212013A22
CAe2	12IP05	24	12			M25	12	JBEA322013A23
CAe2	12IT05	36	12			M25	12	JBEA322013A24
CAe3	19IP05	38	19			M25	19	JBEA422013A25
CAe5	27IP05	54	27			M32	27	JBEA483819A26
CAe1	07IP09	14	7			M25	7	JBEA212013A27
CAe1	07IT09	21	7			M25	7	JBEA212013A28
CAe2	12IP09	24	12			M25	12	JBEA322013A29
CAe2	12IT09	36	12			M32	12	JBEA322013A30
CAe3	19IP09	38	19			M32	19	JBEA422013A31
CAe5	27IP09	54	27			M40	27	JBEA483819A32
Cable EIFA – Single Cable Entries M20								
CAe1	07IP05	15	8			M25	7	JBEA212013A41
CAe1	07IT05	22	8			M25	7	JBEA212013A42
CAe2	12IP05	25	13			M32	12	JBEA322013A43
CAe2	12IT05	37	13			M32	12	JBEA322013A44
CAe3	19IP05	39	20			M32	19	JBEA422013A45
CAe5	27IP05	55	28			M40	27	JBEA483819A46
CAe1	07IP09	15	8			M32	7	JBEA212013A47
CAe1	07IT09	22	8			M32	7	JBEA212013A48
CAe2	12IP09	25	13			M40	12	JBEA322013A49
CAe2	12IT09	37	13			M40	12	JBEA322013A50
CAe3	19IP09	39	20			M40	19	JBEA422013A51
CAe5	27IP09	55	28			M50	27	JBEA483819A52

Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED ENCLOSURES & JUNCTION BOXES

JBEA Series Pre-Drilled Aluminum Junction Box

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Factory Drilled and Equipped with Terminals Ex e II Aluminum Junction Boxes for Instrumentation Applications with Lead Sheath Armored Cables

Fitted with: Horizontal beige terminal block. Copper bar with cable clamps or continuity shields. Yellow laminated plastic label with black lettering. Earth continuity brass plate. M8 external earth crossing terminal. M20 to M50 threaded entries. Cable glands and plugs ordered separately.



Type		Terminal Block 0.5/2.5 mm ² Qty.	Earth Terminal 0.5/2.5 mm ² Qty.	Copper Bar 10 x 3 mm Qty.	Cable Clamp 0.5/2.5 mm ² Qty.	Multi-cable Cable Entry Qty. 1	Single Cable Entries Qty.	Catalog Number
U1000 RGPV – Single Cable Entries M20								
CAe1	07 x 1.5	7	1	1	5	M20	3	JBEA212013L01
CAe1	12 x 1.5	12	1	1	8	M25	6	JBEA212013L02
CAe2	19 x 1.5	19	1	1	11	M25	9	JBEA322013L03
CAe2	24 x 1.5	24	1	1	14	M32	12	JBEA322013L04
CAe2	27 x 1.5	27	1	1	15	M32	13	JBEA322013L05
CAe3	37 x 1.5	37	1	1	20	M32	18	JBEA422013L06
CAe1	07 x 2.5	7	1	1	5	M20	3	JBEA212013L07
CAe1	12 x 2.5	12	1	1	8	M25	6	JBEA212013L08
CAe2	19 x 2.5	19	1	1	11	M32	9	JBEA322013L09
CAe2	24 x 2.5	24	1	1	14	M32	12	JBEA322013L10
CAe2	27 x 2.5	27	1	1	15	M32	13	JBEA322013L11
CAe3	37 x 2.5	37	1	1	20	M40	18	JBEA422013L12
Type		Terminal Block 0.5/2.5 mm ² Qty.	Continuity Shield Qty.			Multi-cable Cable Entry Qty. 1	Single Cable Entries Qty.	Catalog Number
Cable EGPV – Single Cable Entries M20								
CAe1	07IP05	14	7			M20	7	JBEA212013L21
CAe1	07IT05	21	7			M20	7	JBEA212013L22
CAe2	12IP05	24	12			M25	12	JBEA322013L23
CAe2	12IT05	36	12			M25	12	JBEA322013L24
CAe3	19IP05	38	19			M25	19	JBEA422013L25
CAe5	27IP05	54	27			M32	27	JBEA483819L26
CAe1	07IP09	14	7			M25	7	JBEA212013L27
CAe1	07IT09	21	7			M25	7	JBEA212013L28
CAe2	12IP09	24	12			M32	12	JBEA322013L29
CAe2	12IT09	36	12			M32	12	JBEA322013L30
CAe3	19IP09	38	19			M40	19	JBEA422013L31
CAe5	27IP09	54	27			M40	27	JBEA483819L32
Cable EIPV – Single Cable Entries M20								
CAe1	07IP05	15	8			M25	7	JBEA212013L41
CAe1	07IT05	22	8			M32	7	JBEA212013L42
CAe2	12IP05	25	13			M32	12	JBEA322013L43
CAe2	12IT05	37	13			M32	12	JBEA322013L44
CAe3	19IP05	39	20			M40	19	JBEA422013L45
CAe5	27IP05	55	28			M50	27	JBEA483819L46
CAe1	07IP09	15	8			M32	7	JBEA212013L47
CAe1	07IT09	22	8			M32	7	JBEA212013L48
CAe2	12IP09	25	13			M40	12	JBEA322013L49
CAe2	12IT09	37	13			M40	12	JBEA322013L50
CAe3	19IP09	39	20			M50	19	JBEA422013L51
CAe5	27IP09	55	28			M50	27	JBEA483819L52

Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED ENCLOSURES & JUNCTION BOXES

JBEA Series Pre-Drilled Aluminum Junction Box

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Defining maximum terminal block quantity according to power dissipation:

- Junction boxes used for instrumentation applications have very low current levels. Therefore there is no risk of overheating whatever the number of terminals inside the box.
- For applications other than instrumentation, the following tables allow you to define your junction box depending on the number of terminals and the maximum authorized current being carried.

For other terminal block configurations, please consult our drilling guide available online at: www.appletonelec.com

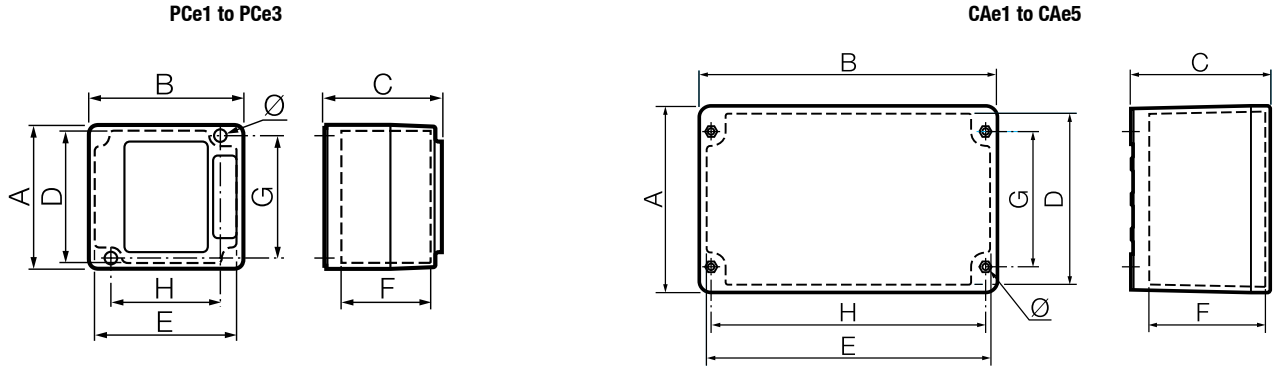
T Rating: T6		Type		
		PCe1 120 x 110 x 95 mm	PCe2 170 x 110 x 95 mm	PCe3 230 x 110 x 95 mm
2.5 mm ²	Quantity	12	22	33
	I Maximum	15 A	13 A	12 A
4 mm ²	Quantity	10	18	28
	I Maximum	20 A	19 A	16 A
6 mm ²	Quantity	7	14	21
	I Maximum	32 A	27 A	24 A
10 mm ²	Quantity	4	6	8
	I Maximum	50 A	50 A	50 A

T Rating: T6 @ Ta 40 °C T5 @ Ta 55° C		Type			
		CAe1 215 x 205 x 130 mm	CAe2 320 x 205 x 130 mm	CAe3 425 x 205 x 130 mm	CAe5 480 x 380 x 190 mm
2.5 mm ²	Quantity	20	21	23	38
	I Maximum	16 A	16 A	16 A	16 A
4 mm ²	Quantity	19	20	23	38
	I Maximum	20 A	20 A	20 A	20 A
6 mm ²	Quantity	12	13	14	23
	I Maximum	32 A	32 A	32 A	32 A
10 mm ²	Quantity	10	11	18	30
	I Maximum	40 A	40 A	32 A	32 A
16 mm ²	Quantity	8	10	13	22
	I Maximum	28 A	27 A	25 A	26 A
25 mm ²	Quantity	8	8	10	20
	I Maximum	67 A	73 A	69 A	60 A
35 mm ²	Quantity	8	8	10	12
	I Maximum	79 A	86 A	80 A	100 A

JBEA Series Pre-Drilled Aluminum Junction Box Dimensions

Increased Safety

Dimensions in Millimeters



Type	External Dimensions			Internal Dimensions			Fixings			
	A	B	C	D	E	F	G	H	Thick	Ø
PCe1	110	120	95	100	110	70	94	84	20	5
PCe2	110	170	95	100	160	70	94	134	20	5
PCe3	110	230	95	100	220	70	94	194	20	5
CAe1	205	215	130	190	200	105	146	186	10	7
CAe2	205	320	130	190	305	105	146	290	10	7
CAe3	205	425	130	190	410	105	146	398	10	7
CAe5	480	380	190	378	279	132	385	285	13	7

Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED ENCLOSURES & JUNCTION BOXES

JBEA and ECEA Series Aluminum Enclosures

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Applications

- Designed for use in Zone 1 or 2 areas where flammable gases or vapors are present either continuously or intermittently.
- Ideal for use in wet or corrosive atmospheres.
- Petroleum, chemical, refineries and other industrial process facilities.
- Designed for use in Zone 21 or 22 areas where flammable dusts are present either continuously or intermittently.
- Food processing, dairy, brewing and other commercial facilities.
- JBEA Series:
 - Terminal junction boxes for electrical low voltage and instrumentation connections in hazardous areas.
 - Refer to technical data to define permitted number of terminal blocks and cable entries on selected junction boxes.
- ECEA Series:
 - Enclosure for distribution and control applications can be customized at our workshop to house a large range of components; i.e. control units, switches, breakers, transformers, meters, etc.

Features

- Operating temperature:
 - PCe type: -55 °C to +60 °C
 - CAe type: -40 °C to +55 °C
- Rail mounting.
- Refer to technical data to define permitted number and size of terminals and cable entries.

Standard Materials

- Enclosure: gray painted grade marine aluminum alloy
- Hardware: stainless steel

Options

- Nameplates.
- Consult your local sales representative for:
 - Enclosures custom drilled and assembled at our factory.
 - Empty enclosure with Ex “U” component marking for re-certification by notified body for CAe type.

Certifications and Compliances

◆ ATEX or IECEx Certification

- **Certification Type PCe**
 - Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex e II, Ex ia IIC, Ex ib IIC, Ex de IIC
 - Temperature class: T6 for Ta ≤ +40 °C, T5 for Ta ≤ +60 °C
 - Dust, Zones 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex td A21
 - Surface Temperature: T80 °C to T95 °C
 - Ambient Temperature: -55 °C to +60 °C
 - CE Declaration of Conformity: 50221
 - ATEX Certificate: LCIE 00 ATEX 6047
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10



PCe Type



CAe Type

• Certification Type CAe

- Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex e II, Ex ia IIC, Ex ib IIC, Ex de IIC
 - Temperature class T6 to T2
- Dust, Zones 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex td A21
 - Surface Temperature: T80 °C to T290 °C
 - CE Declaration of Conformity: 50325
 - ATEX Certificate: LCIE 02 ATEX 6248X
 - IECEx Certificate: IECEx LCI 04.0016X
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10

• Certification Type CAe U

- Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex e II
- Dust, Zones 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex td A21
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 5C241
 - ATEX Certificate: LCIE 09 ATEX 3036 U
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10

◆ EURASEC Certification

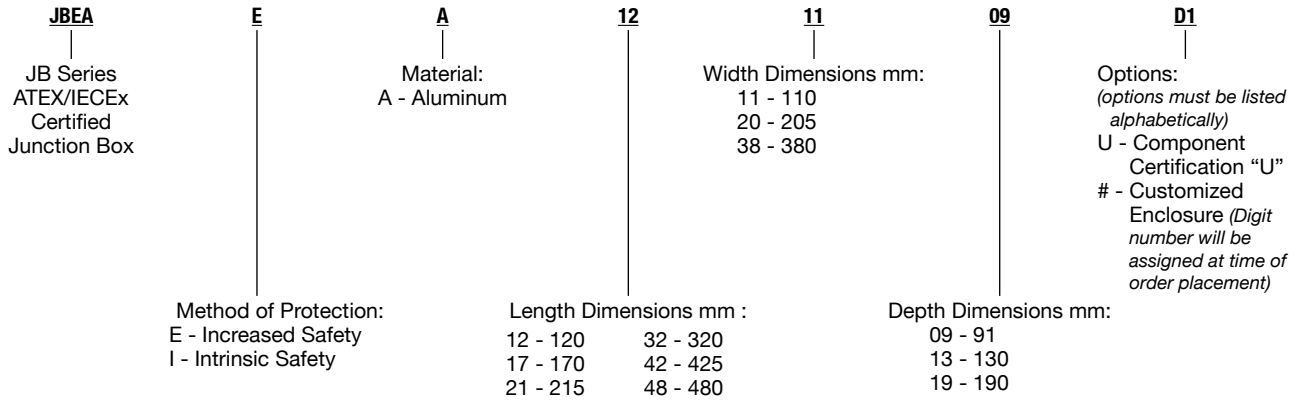
- **Certification Type PCe**
 - EURASEC N° TC RU C-FR.ГБ05.В.00911
- **Certification Type CAe**
 - EURASEC N° TC RU C-FR.ГБ05.В.00911

JBEA and ECEA Series Aluminum Enclosures

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Catalog Numbering Guide — JBEA Series Aluminum Junction Box



JBEA Series: Ex e II Aluminum Junction Boxes

For use with Ex certified terminals only (not supplied).
Mounting rails supplied.
Yellow laminated plastic label with black lettering.



ECEA Series: Aluminum Enclosure for Distribution and Control Applications

Designed to house a large range of components; i.e. control units, switches, breakers, transformers, meters, etc.
Must be customized at our workshop with the following Catalog Number:
Replace JB with EC, and add last digits and “#” for customized boxes. Example: ECEA 212013 #




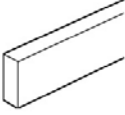


Type	Dimensions L x W x D mm	Rail Length Maximum Width mm	Weight kg	Volume dm ³	Catalog Number	
					JBEA Series	ECEA Series
PCe1	120 x 110 x 95	94	1.0	2.2	JBEA121109	ECEA121109#
PCe2	170 x 110 x 95	144	1.3	2.7	JBEA171109	ECEA171109#
PCe3	230 x 110 x 95	204	1.6	5.2	JBEA231109	ECEA231109#
CAe1	215 x 205 x 130	191	4.0	13	JBEA212013	ECEA212013#
CAe2	320 x 205 x 130	293	5.0	23	JBEA322013	ECEA322013#
CAe3	425 x 205 x 130	400	6.0	33	JBEA422013	ECEA422013#
CAe5	480 x 380 x 190	335	11.0	53	JBEA483819	ECEA483819#

JBEA and ECEA Series Aluminum Enclosures

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Accessories

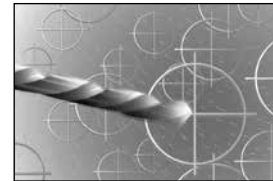
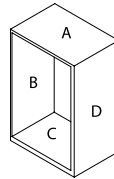
		Enclosure Type	Rail Length mm	Catalog Number	Pack
	Zinc Plated Symmetrical Steel Rail	CAe1	191	JBEPDR215	1
	<i>For direct fixing. Set of two 60 mm height spacers supplied.</i>	CAe2	293	JBEPDR320	1
		CAe3	400	JBEPDR425	1
	Copper Bar – 12 x 4 mm		Bar Length mm	Catalog Number	Pack
	<i>Copper bar not perforated for cable clamps.</i>		160	097270	1
			200	097271	1
			310	097272	1
			500	097273	1
			690	097274	1
	Cable Clamp for Copper Bar – 12 x 4 mm			097203	1
	1.5 mm ² to 4 mm ² capacity. 6 mm ² to 16 mm ² capacity.			097204	1
	Insulated Side Support – Set of Two			096115	1
	<i>For mounting symmetrical, asymmetrical rails and copper bar 12 x 2 mm or 12 x 4 mm. See dimensional data page for more details.</i>				

JBEA Series for Junction Box Application Only.

The size of the junction box needed to meet your requirements can be selected based on the table shown below. We also offer you the possibility to drill and equip, please consult our drilling guide available online at: www.appletonelec.com

1. Define maximum cable entries according to number of modules available per side.

Cable Entry Metric Thread	Number of Modules
M20	1
M25	1
M32	1
M40	2
M50	3



Type	Length	Dimensions mm			Number of Modules		Allowable Max. Size	Terminal Dim. H — mm
		Width	Depth	A/C	B/B			
PCe1	120	110	95	2	2	M25	110	
PCe2	170	110	95	2	3	M32	110	
PCe3	230	110	95	2	4	M32	110	
CAe1	215	205	130	11	8	M50	205	
CAe2	320	205	130	18	8	M50	205	
CAe3	425	205	130	26	8	M50	205	
CAe5	575	380	190	34	25	M50	380	

2. Maximum Rail Arrangement According to Physical Dimensions — Maximum Quantity of Horizontal Rails

Type	Terminal Capacity mm ²						
	2.5	4	6	10	16	35	50
PCe1/2/3	1	1	1	1	0	0	0
CAe1/2/3	1	1	1	1	1	1	0
CAe5	3	3	2	2	2	1	1

JBEA and ECEA Series Aluminum Enclosures

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

3. Defining maximum terminal block quantity according to power dissipation:

- Junction boxes used for instrumentation applications have very low current levels, therefore there is no risk of overheating whatever the number of terminals inside the box.
- For applications other than instrumentation, the following tables allow you to define your junction box depending on the number of terminals and the maximum authorized current being carried with feed-through terminals.
- For single feed terminals using cross connection, please consult your local representative for a calculation.

For other terminal block configurations, please consult our drilling guide available online at: www.appletonelec.com

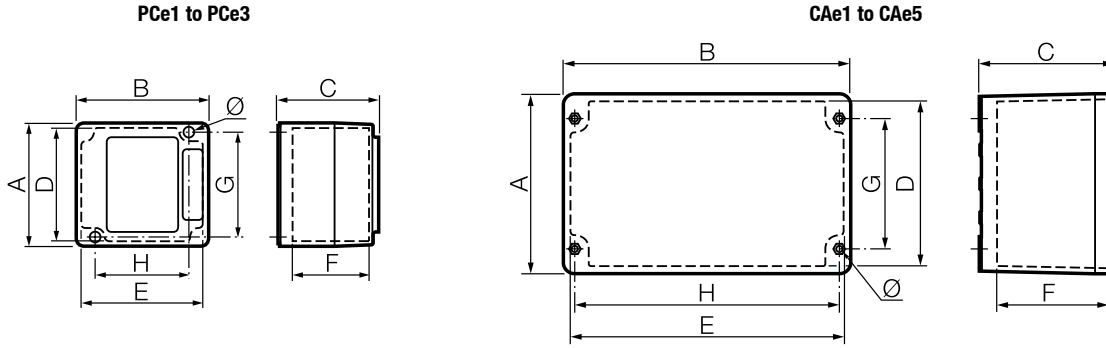
	T Rating: T6	Type		
		CSPe1 120 x 120 x 91 mm	CSPe2 120 x 170 x 91 mm	CSPe3 120 x 230 x 91 mm
2.5 mm ²	Quantity	12	22	33
	I Maximum	15 A	13 A	12 A
4 mm ²	Quantity	10	18	28
	I Maximum	20 A	19 A	16 A
6 mm ²	Quantity	7	14	21
	I Maximum	32 A	27 A	24 A
10 mm ²	Quantity	4	6	8
	I Maximum	50 A	50 A	50 A

	T Rating: T6 @ Ta +40 °C T5 @ Ta +55° C	Type			
		CAe1 200 x 215 x 150 mm	CAe2 200 x 320 x 150 mm	CAe3 200 x 425 x 150 mm	CAe4 200 x 575 x 150 mm
2.5 mm ²	Quantity	20	21	23	38
	I Maximum	16 A	16 A	16 A	16 A
4 mm ²	Quantity	19	20	23	38
	I Maximum	20 A	20 A	20 A	20 A
6 mm ²	Quantity	12	13	14	23
	I Maximum	32 A	32 A	32 A	32 A
10 mm ²	Quantity	10	11	18	30
	I Maximum	40 A	40 A	32 A	32 A
16 mm ²	Quantity	8	10	13	22
	I Maximum	28 A	27 A	25 A	26 A
25 mm ²	Quantity	8	8	10	20
	I Maximum	67 A	73 A	69 A	60 A
35 mm ²	Quantity	8	8	10	12
	I Maximum	79 A	86 A	80 A	100 A

JBEA and ECEA Series Aluminum Enclosure Dimensions

Increased Safety

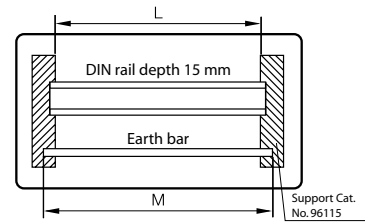
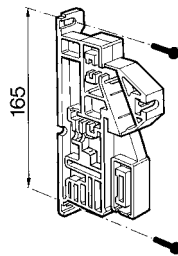
Dimensions in Millimeters



Type	External			Internal			Fixings			
	A	B	C	D	E	F	G	H	Thick	Ø
PCe1	110	120	95	100	110	70	94	84	20	5.0
PCe2	110	170	95	100	160	70	94	134	20	5.0
PCe3	110	230	95	100	220	70	94	194	20	5.0
CAe1	205	215	130	190	200	105	146	186	10	6.5
CAe2	205	320	130	190	305	105	146	290	10	6.5
CAe3	205	425	130	190	410	105	146	398	10	6.5
CAe5	480	380	190	378	279	132	385	285	13	7.0

Insulated Side Support (Rail Holder) 096115

Type	Equipment Capacity	
	L	M
CAe1	105	129
CAe2	206	234
CAe3	310	339
CAe5	315	345



INCREASED SAFETY EX E ZONE 1 RATED ENCLOSURES & JUNCTION BOXES

Enclosures and Junction Boxes

JBES Series Pre-Drilled 316L Stainless Steel Junction Boxes

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Applications

- Terminal junction boxes designed to facilitate electrical connections in hazardous areas.
- Designed for use in Zone 1 or 2 areas, where flammable gases or vapors are present either continuously or intermittently such as:
 - Petroleum
 - Chemical
 - Refineries
 - Other industrial process facilities
- Ideal for wet or corrosive atmospheres.
- Designed for use in Zone 21 or 22 areas, where flammable dusts are present either continuously or intermittently, such as:
 - Food processing
 - Dairy
 - Brewing
 - Pharmaceutical industry
 - Silos and other facilities

Features

- Smooth, continuously welded seams.
- Hinges supplied on all boxes from 370 mm x 260 mm sizes.
- Poured-in-place polyurethane door gasket.
- Earth crossing terminal.
- Factory drilled and equipped.

Standard Material

- Enclosure: 316L chrome plated molybdenum stainless steel with natural burnished finish
- Hardware: 316L stainless steel

Options

- For use with equipment other than Ex terminal blocks, see ECES series enclosures and controls.

Certifications and Compliances

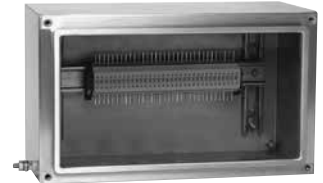
◆ ATEX/IECEx Certification

- **Certification Type JBe**
 - Gas, Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex e II, Ex ia IIC, Ex ib IIC,
 - Temperature class: T6 to T5
 - Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C to T95 °C
 - Ambient Temperature: -50 °C to +70 °C
 - CE Declaration of Conformity: 50232
 - ATEX Certificate: LCIE 02 ATEX 6118X
 - IECEx Certificate: IECEx LCI 11.0008X
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10

JBe10 — Without Terminals



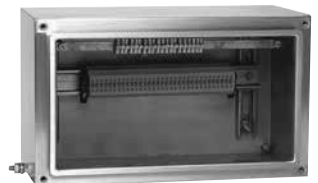
JBe46 — Equipped with Terminals



JBe46 — Equipped with Terminals



JBe46 — Equipped with Terminals



Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED ENCLOSURES & JUNCTION BOXES

◆ EURASEC Certification

- **Certification Type JBe**
 - EURASEC N° TC RU C-FR.Г505.B.00911

◆ Others Certification

- **Certification Type JBe**
 - INMETRO Certificate: BVC 11.0418-X ①

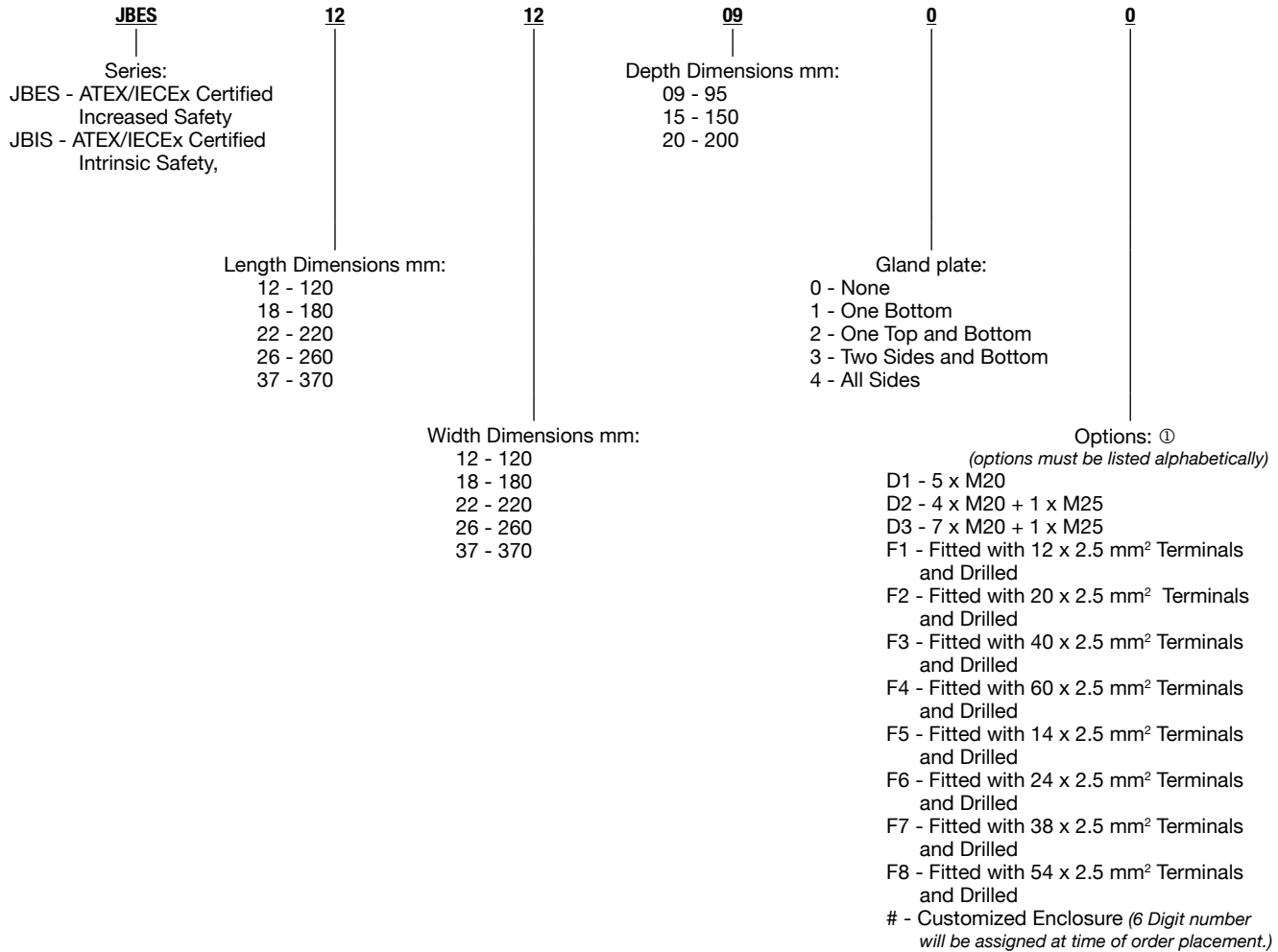
① Inmetro certification available on special request only. Contact your local sales for more information

JBES Series Pre-Drilled 316L Stainless Steel Junction Boxes

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Catalog Numbering Guide - JBES Pre-Drilled Stainless Steel Junction Boxes



Maximum Rail Arrangement According to Physical Dimensions

Type	Protection	Terminal Size mm ²	Quantity	Max. Amps
JBe10	T6 @ Ta = +55° C	2.5	10	16A
		4.0	8	25A
		6.0	6	32A
JBe20	T6 @ Ta = +55° C	2.5	21	16A
		4.0	18	25A
		6.0	13	32A

① For other terminal block configurations, consult our drilling guide available online at our website www.appletonelec.com.

JBES Series Pre-Drilled 316L Stainless Steel Junction Boxes

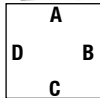
Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Type	Dimensions L x W x D mm	Rail Length Capacity mm	Clearance Holes Per Side				Weight kg	Volume dm ³	Catalog Number
			A	B	C	D			

Factory Drilled Ex e II 316L Stainless Steel Junction Boxes Fitted with:

One horizontal symmetrical zinc plated rail. For use only with Ex terminals (not supplied). M6 external earth crossing terminal.

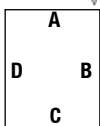


JBES1212090D1	120 x 120 x 95	100	1 x M20	1 x M20	2 x M20	1 x M20	1.0	1.4	JBES1212090D1
JBES1218090D2	120 x 120 x 95	160	–	1 x M20	2 x M20 1 x M25	1 x M20	1.5	2.0	JBES1218090D2
JBES1218090D3	120 x 120 x 95	160	–	2 x M20	3 x M20 1 x M25	2 x M20	1.5	2.0	JBES1218090D3

Type	Dimensions L x W x D mm (in)	Terminals 2.5 mm ²	Insulated Connectors	Clearance Holes Per Side			Weight kg	Volume dm ³	Catalog Number
				B	C	D			

Factory Drilled and Equipped with Terminals Ex e II 316L Stainless Steel Instrumentation Junction Boxes Fitted with:

Vertical beige Exe terminal block. Insulated copper bar with connectors. White laminated plastic tag with black lettering. M8 external earth crossing terminal. Cable glands and plugs to be ordered separately.



JBES1812090F1	180 x 120 x 95	12 (6 Pairs)	8	3 x M20	1 x M25 1 x M20	3 x M20	2.5	2.0	JBES1812090F1
JBES2622150F2	260 x 220 x 150	20 (10 Pairs)	12	5 x M20	1 x M32 1 x M20	5 x M20	4.0	8.6	JBES2622150F2
JBES372220F3	370 x 220 x 200	40 (20 Pairs)	22	10 x M20	1 x M40 1 x M20	10 x M20	9.0	16.3	JBES372220F3
JBES3726200F4	370 x 260 x 200	60 (30 pairs)	32	15 x M20	1 x M50 1 x M20	15 x M20	24.25	19.3	JBES3726200F4

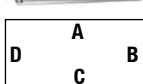
Ex ia IIC Version: Replace Third Digit "E" with "I" (Example: JBES1812090F1 becomes JBIS1812090F1) Fitted with:

Vertical blue terminal block. Insulated copper bar with connectors. Blue laminated plastic tag with white lettering. M8 external earth crossing terminal. Cable glands and plugs to be ordered separately.

Type	Dimensions L x W x D mm	Terminals 2.5 mm ²	Continuity Shield	Clearance Holes Per Side		Weight kg	Volume dm ³	Catalog Number
				C				

Factory Drilled and Equipped with Terminals Ex e II 316L Stainless Steel Instrumentation Junction Boxes Fitted with:

Horizontal beige Exe terminal block. Continuity shield. White laminated plastic tag with black lettering. M8 External earth crossing terminal. Cable glands and plugs to be ordered separately.



JBES2226150F5	220 x 260 x 150	14 (7 Pairs)	7	1 x M25	7 x M20	4.0	8.6	JBES2226150F5
JBES2226150F6	220 x 260 x 150	24 (12 pairs)	12	1 x M32	12 x M20	4.0	8.6	JBES2226150F6
JBES2237200F7	220 x 370 x 200	38 (19 pairs)	19	1 x M32	19 x M20	9.0	16.3	JBES2237200F7
JBES2237200F8	220 x 370 x 200	54 (27 pairs)	27	1 x M40	27 x M20	9.0	16.3	JBES2237200F8

Ex ia IIC Version: Replace Third Digit "E" with "I" (Example: JBES2226150F5 becomes JBIS2226150F5) Fitted with:

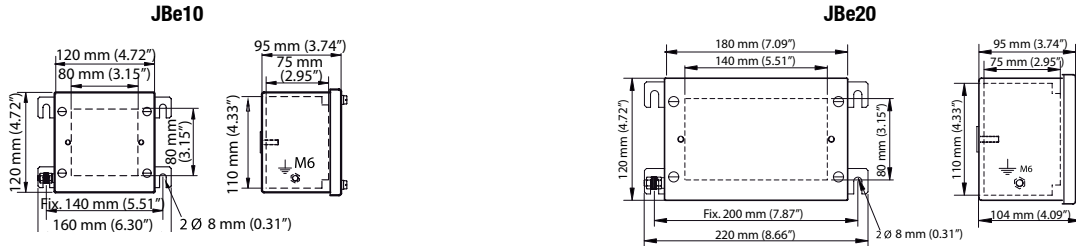
Horizontal blue terminal block. Continuity shield. Blue laminated plastic tag with white lettering. M8 external earth crossing terminal. Cable glands and plugs to be ordered separately.

JBES Series Pre-Drilled 316L Stainless Steel Junction Box Dimensions

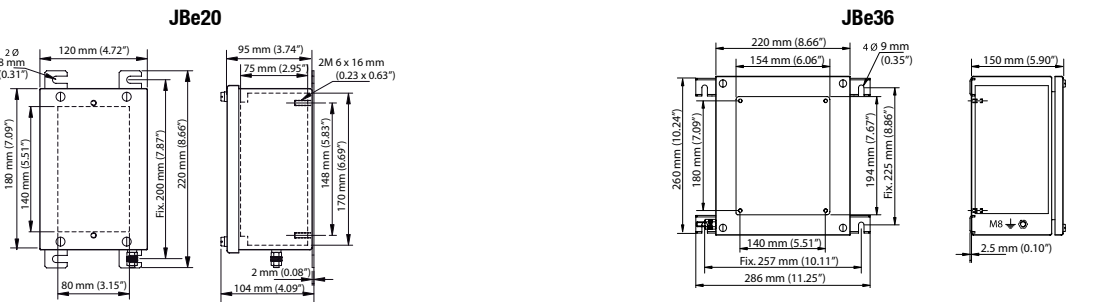
Increased Safety

Dimensions in Millimeters

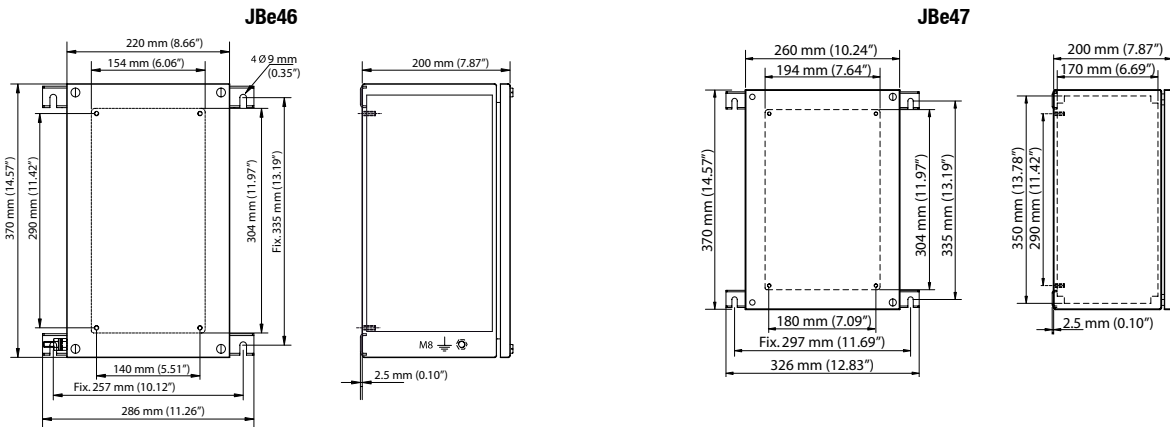
Factory Drilled without Terminal Block (DIN rail supplied)



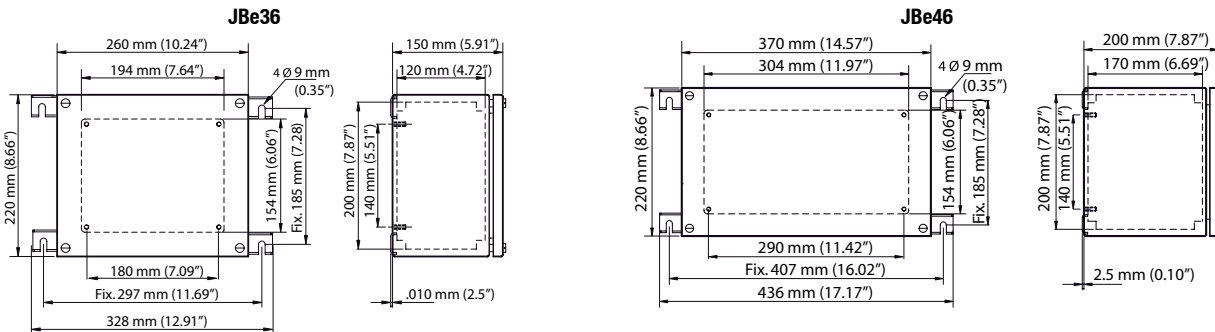
Factory Drilled and Equipped with Vertical Terminal Block



Factory Drilled and Equipped with Vertical Terminal Block



Factory Drilled and Equipped with Horizontal Terminal Block



Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED ENCLOSURES & JUNCTION BOXES

JBES and ECES Series 316L Stainless Steel Enclosures

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Applications

- Designed for use in Zone 1 or 2 areas where flammable gases or vapors are present either continuously or intermittently.
- Ideal for use in wet or corrosive atmospheres such as:
 - Petroleum
 - Chemical
 - Refineries
 - Other industrial process facilities
- Designed for use in Zone 21 or 22 areas where flammable dusts are present either continuously or intermittently such as:
 - Food processing
 - Dairy
 - Brewing
 - Pharmaceutical industry
 - Other commercial facilities
- JBES Series
 - Terminal junction box for electrical low voltage and instrumentation connections for use in hazardous areas.
 - Refer to technical data to define permitted number of terminal blocks and cable entries on selected junction boxes.
- ECES Series
 - Enclosure for distribution and control applications must be customized at our workshop to house a large range of components such as control units, switches, breakers, transformers, meters, etc.

Features

- Smooth, continuously welded seams.
- Available in a wide range of sizes.
- Operating temperature:
 - JBES Series: -50 °C to +70 °C
 - ECES Series: -50 °C to +55 °C
- Can be supplied with 1, 2, 3 or even 4 neoprene sealed gland plates for ease of cable installation.
- Hinges standard on all sizes above 370.0 mm x 260.0 mm.
- Poured-in-place polyurethane door gasket.
- Feed-thru earth grounding stud.
- Reversible door, opens 210 degrees, from any location top; bottom, left or right, by means of removable hinges that can be installed in any position.
- Reversible anti-vibration mounting brackets can be mounted on the top, bottom or side positions.
- Optional removable padlocking device.

Standard Materials

- Enclosure: 316L chrome plated stainless steel
- Hardware: 316L stainless steel

Standard Finishes

- Natural brushed finish

Accessories

- Mounting pan
- Rail mounting
- Padlocking device
- Door locking bracket for easy access
- Inside pocket
- Refer to technical data to define permitted number of terminals and cable entries acceptance

Options

- Removable gland plates.
- Nameplate.

JBES Series



ECES Series



Closed



Open

- Factory drilled and assembled, contact your local representative for information.
- Medium voltage application (11 kV max.), contact your local representative for information.
- Intrinsic safety version (JBIS) available with the use of intrinsic terminals.

Certifications and Compliances

◆ATEX or IECEx Certification

- **Certification Type JBe**
 - Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex e II, Ex ia IIC, Ex ib IIC, Ex de IIC, Ex demb IIC
 - Temperature class: T6 to T4
 - Dust, Zones 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C to T130 °C.
 - Ambient Temperature: -50 °C to +70 °C.
 - CE Declaration of Conformity: 50232
 - ATEX Certificate : LCIE 02 ATEX 6118X
 - IECEx Certificate: IECEx LCI 11.0008X
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10
- **Certification Type JBe U**
 - Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex e II
 - Dust, Zones 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Ambient Temperature: -40 °C to +70 °C.
 - CE Declaration of Conformity: 5C240
 - ATEX Certificate: LCIE 09 ATEX 3025U
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10

JBES and ECES Series 316L Stainless Steel Enclosures

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

◆EURASEC Certification

- Certification Type JBe
 - EURASEC N° TC RU C-FR.Г505.B.00911

◆Others Certification

- Certification Type JBe
 - INMETRO Certificate: BVC 11.0418-X ^①

Illustrated Features



Optional removable locking device.
Part Number 097209



Reversible antivibration mounting brackets, can be mounted in top, side or bottom positions.



M8 feed-thru earth/ground terminal.



Polyurethane poured in place door gasket and stainless steel captive screws.



Reversible door. Opens to 210°, top, bottom, left or right, by moving the location of the hinges



Optional removable gland plate.

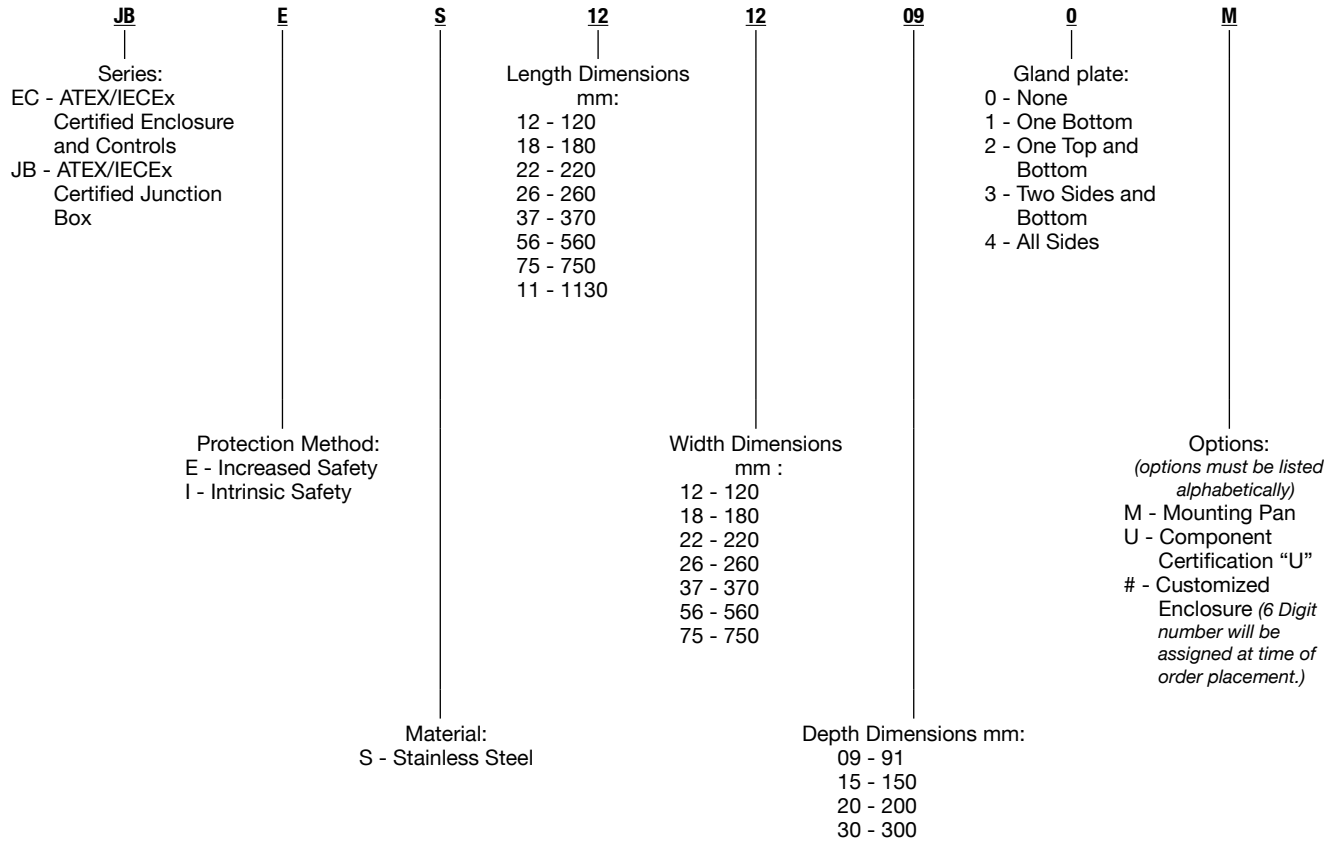
^① Inmetro certification available on special request only. Contact your local sales for more information

JBES and ECES Series 316L Stainless Steel Enclosures

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Catalog Numbering Guide — JBES and ECES 316L Stainless Steel Enclosures



Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED ENCLOSURES & JUNCTION BOXES

JBES and ECES Series 316L Stainless Steel Enclosures

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

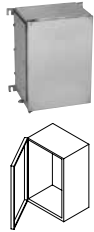
JBES Series

Type	Dimensions L x W x D mm	Hinged Door ②	Vertical Orientation Rail Length mm	Horizontal Orientation Rail Length mm	Weight kg	Volume dm ³	Catalog Number
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Ex e II 316L Stainless Steel Junction Boxes without Gland Plate

For use only with Ex terminals (not supplied). External earth crossing terminal. (M6 for JBe10/20/30 and M8 for other boxes). Mounting pan and rails to be ordered separately.

JBe10	120 x 120 x 95	N	–	100	1.0	1.4	JBES1212090
JBe20	120 x 180 x 95	N	–	160	1.5	2.0	JBES1218090
JBe30	180 x 180 x 95	N	–	160	1.8	3.0	JBES1818090
JBe36	220 x 260 x 150	R	170	210	5.0	8.6	JBES2226150
JBe36	260 x 220 x 150	R	210	170	5.0	8.6	JBES2622150
JBe46	220 x 370 x 200 ①	R	170	320	8.5	16.3	JBES2237200
JBe47	260 x 370 x 200 ①	Y	210	320	9.0	19.3	JBES2637200
JBe46	370 x 220 x 200 ①	R	320	170	8.5	16.6	JBES3722200
JBe47	370 x 260 x 200 ①	Y	320	210	9.0	19.3	JBES3726200
JBe55	370 x 370 x 200 ①	Y	320	320	13.0	27.4	JBES3737200
JBe65	370 x 560 x 200 ①	Y	320	510	19.0	41.5	JBES3756200
JBe75	370 x 750 x 200 ①	Y	320	700	24.0	55.5	JBES3775200
JBe65	560 x 370 x 200 ①	Y	510	320	19.0	41.5	JBES5637200
JBe77	560 x 560 x 200 ①	Y	510	510	28.0	62.8	JBES5656200
JBe79	560 x 750 x 200 ①	Y	510	700	33.0	84.0	JBES5675200
JBe75	750 x 370 x 200 ①	Y	700	320	24.0	55.5	JBES7537200
JBe79	750 x 560 x 200 ①	Y	700	510	33.0	84.0	JBES7556200
JBe86	1130 x 750 x 300	Y	1080	700	50.0	235.0	JBES1175300



Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED ENCLOSURES & JUNCTION BOXES

① 200 mm depth enclosure available with 300 mm depth – replace digit 2 with 3 – Example: JBES3737304.





② N: Not Available, R: On request or separate accessories, Y: Supplied.

JBES and ECES Series 316L Stainless Steel Enclosures

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

JBES Series

Type	Dimensions L x W x D mm	Hinged Door ②	One Gland Plate Catalog Number	Two Gland Plates Catalog Number	Three Gland Plate Catalog Number	Four Gland Plates Catalog Number	
Ex e II 316L Stainless Steel Terminal Junction Boxes with Gland Plates 3 mm Thick							
<i>For use only with Ex terminals (not supplied). M8 External earth crossing terminal. Mounting pan and rails to be ordered separately.</i>							
	JBe36	220 x 260 x 150	R	JBES2226151	JBES2226152	JBES2226153	JBES2226154
	JBe36	220 x 260 x 150	R	JBES2622151	JBES2622152	JBES2622153	JBES2622154
 One Gland Plate	JBe46	220 x 370 x 200①	R	JBES2237201	JBES2237202	JBES2237203	JBES2237204
	JBe47	260 x 370 x 200①	Y	JBES2637201	JBES2637202	JBES2637203	JBES2637204
	JBe46	370 x 220 x 200①	R	JBES3722201	JBES3722202	JBES3722203	JBES3722204
 Two Gland Plate	JBe47	370 x 260 x 200①	Y	JBES3726201	JBES3726202	JBES3726203	JBES3726204
	JBe55	370 x 370 x 200①	Y	JBES3737201	JBES3737202	JBES3737203	JBES3737204
	JBe65	370 x 560 x 200①	Y	JBES3756201	JBES3756202	JBES3756203	JBES3756204
 Gland Plate Three	JBe75	370 x 750 x 200①	Y	JBES3775201	JBES3775202	JBES3775203	JBES3775204
	JBe65	560 x 370 x 200①	Y	JBES5637201	JBES5637202	JBES5637203	JBES5637204
	JBe77	560 x 560 x 200①	Y	JBES5656201	JBES5656202	JBES5656203	JBES5656204
 Four Gland Plate	JBe79	560 x 750 x 200①	Y	JBES5675201	JBES5675202	JBES5675203	JBES5675204
	JBe75	750 x 370 x 200①	Y	JBES7537201	JBES7537202	JBES7537203	JBES7537204
	JBe79	750 x 560 x 200①	Y	JBES7556201	JBES7556202	JBES7556203	JBES7556204
	JBe86	1130 x 750 x 300	Y	JBES1175301	JBES1175302	JBES1175303	JBES1175304

① 200 mm depth enclosure available with 300 mm depth – replace digit 2 with 3 – Example: JBES3737304.

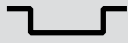
② N: Not Available, R: On request or separate accessories, Y: Supplied.

JBES and ECES Series 316L Stainless Steel Enclosure Accessories

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Mounting Accessories

Enclosure Length mm	Rail Length mm	Catalog Number	
		 Symmetrical Depth = 15 mm Catalog Number	 Asymmetrical Catalog Number

Zinc Plated Steel Rail

For fixing onto uprights with clip nut supplied.



Symmetrical

120

100

097246

—

180

160

097247

—

220

170

097240

097250

260

210

097241

097251

370

320

097242

097252

560

510

097243

097253

750

700

097244

097254

1130

1080

097245

097255

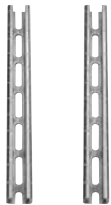


Asymmetrical

Enclosure Length mm	Bar Length mm	Catalog Number
------------------------	------------------	----------------

Zinc Plated Steel Uprights

Set of two.



220

160

097230

260

200

097231

370

310

097232

560

500

097233

750

690

097234

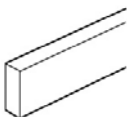
1130

1070

097235

Copper Bar – 12 x 4 mm

Copper bar not perforated for cable clamps.



220

160

097270

260

200

097271

370

310

097272

560

500

097273

750

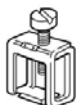
690

097274

1130

1070

097275



Cable Clamp for Copper Bar – 12 x 4 mm

1.5 mm² to 4 mm² Capacity

097203

6 mm² to 16 mm² Capacity








097204

JBES and ECES Series 316L Stainless Steel Enclosure Accessories

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Mounting Accessories - Continued:

	Enclosure Dimensions mm		Mounting Pan Dimensions mm	Catalog Number
	Height	Width		
Mounting Pan – Zinc Plated Steel				
	120	120	100 x 100	097277
	120	180	100 x 160	097278
	180	180	160 x 160	097279
	220	260	160 x 200	097280
	220	370	160 x 310	097281
	260	370	200 x 310	097282
	370	370	310 x 310	097283
	370	560	310 x 500	097284
	370	750	310 x 690	097285
	560	560	500 x 500	097286
	560	750	500 x 690	097287
	1130	750	690 x 1070	097288
Spacers for Mounting at Back of Box <i>Set of two insulated pillars for copper bar 12 x 4 mm.</i>				
	Height = 100 mm			097206
	Height = 50 mm			097207
Conversion Kit – Door to Cover <i>Must be used to remove hinges.</i>				
				097202
Spare Hinges				
	Set of Two			097201
Spare Mounting Brackets – Set of Two				
	One left and one right.			097200
Self Adhesive Pocket for Drawings				
	External dimensions: 260 x 165 mm Internal dimensions: 230 x 130 x 18 mm			097263
	External dimensions: 340 x 235 mm Internal dimensions: 310 x 200 x 18 mm			097264
Additional Door Padlocking Device				
	Padlock not supplied.			097209
Locking Bracket				
	Locks door in open position during wiring			097265

Enclosures and Junction Boxes


INCREASED SAFETY EX E ZONE 1 RATED ENCLOSURES & JUNCTION BOXES

JBES and ECES Series 316L Stainless Steel Enclosure Accessories

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Mounting Accessories - Continued:

	Dimensions mm			Gland Plate/Coupling Flange Dimensions mm	Catalog Number
	Enclosure Width	Height			
Spare Gland Plate					
	220	150	B/D	170 x 120	JBESGP221B
	260	150	A/C	250 x 120	JBESGP261A
	260	200	A/C	250 x 170	JBESGP262A
	260	200	B/D	210 x 170	JBESGP262B
	370	200	A/C	360 x 170	JBESGP372A
	370	200	B/D	320 x 170	JBESGP372B
	560	200	A/C	550 x 170	JBESGP562A
	560	200	B/D	510 x 170	JBESGP562B
	750	200	A/C	740 x 170	JBESGP752A
	750	200	B/D	700 x 170	JBESGP752B
	260	300	A/C	250 x 270	JBESGP263A
	370	300	A/C	360 x 270	JBESGP373A
	370	300	B/D	320 x 270	JBESGP373B
	560	300	A/C	550 x 270	JBESGP563A
	560	300	B/D	510 x 270	JBESGP563B
	750	300	A/C	740 x 270	JBESGP753A
	750	300	B/D	700 x 270	JBESGP753B
Coupling Flange					
	260	200	A/C	250 x 120	JBESCF262A
	370	200	A/C	360 x 170	JBESCF372A
	370	200	B/D	320 x 170	JBESCF372B
	560	200	A/C	550 x 170	JBESCF562A
	560	200	B/D	510 x 170	JBESCF562B
	750	200	A/C	740 x 170	JBESCF752A
	750	200	B/D	700 x 170	JBESCF752B
	370	300	A/C	360 x 270	JBESCF373A
	370	300	B/D	320 x 270	JBESCF373B
	560	300	A/C	550 x 270	JBESCF563A
	560	300	B/D	510 x 270	JBESCF563B
	750	300	A/C	740 x 270	JBESCF753A
	750	300	B/D	700 x 270	JBESCF753B



Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED ENCLOSURES & JUNCTION BOXES

JBES and ECES Series 316L Stainless Steel Enclosures

Increased Safety

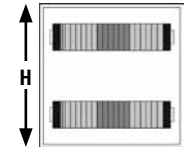
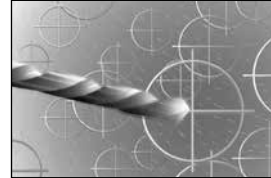
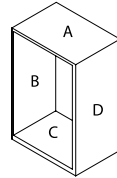
Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

JBES Series for Terminal Junction Box Application Only.

Use the table shown below to select the proper size junction box based upon your requirements.
Custom drilled and equipped boxes can be configured using our drilling guide available online at www.appletonelec.com.

1. Define maximum cable entries according to number of modules available per side.

Cable Entry Metric Thread	Number of Modules
M20	1
M25	1
M32	1
M40	2
M50	3



Type	Dimensions mm			Number of Modules		Number of Modules ^①		Terminal Dim. H — mm
	Height	Width	Depth	A/C	B/D	A'/C'	B'/D'	
JBe10	120	120	95	5	5	—	—	220
JBe20	120	180	95	9	5	—	—	220
JBe30	180	180	95	9	9	—	—	220
JBe36	220	260	150	11	7	9	5	220
JBe36	260	220	150	7	11	5	9	260
JBe46	220	370	200	31	16	19	7	260
JBe46	370	220	200	16	31	7	9	370
JBe47	370	260	200	20	31	14	20	370
JBe47	260	370	200	31	20	19	10	260
JBe55	370	370	200	31	31	19	18	370
JBe65	560	370	200	31	49	19	31	560
JBe65	370	560	200	49	31	34	18	370
JBe75	750	370	200	31	66	19	47	750
JBe75	370	750	200	66	31	49	18	370
JBe77	560	560	200	49	49	34	31	560
JBe79	750	560	200	49	66	34	45	750
JBe79	560	750	200	66	49	49	31	560
JBe86	1130	750	300	102	—	82	—	1130

2. Maximum rail arrangement according to physical dimensions.

Terminal Capacity mm ²	Maximum Quantity of Horizontal Rails Per Type of terminal							
	2.5	4	6	10	16	35	50	70
JBe10/20/30/36	1	1	1	1	1	1	0	0
JBe36/46/47	2	2	2	1	1	1	0	0
JBe46/47/55/65/75	3	3	2	2	2	2	1	1
JBe65/77/79	5	5	4	4	4	3	2	2
JBe75/79	7	7	6	6	5	4	3	2
JBe86	10	10	9	9	8	6	4	4

^① Enclosure with gland plate.

JBES and ECES Series 316L Stainless Steel Enclosures

Increased Safety

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

3. Defining maximum terminal block quantity according to power dissipation:

- Junction boxes used for instrumentation applications carry very low current levels. Therefore there is no risk of overheating whatever the number of terminals inside the box.
- For applications other than instrumentation, the following tables allow you to define your junction box depending on the number of terminals and the maximum authorized current being carried with feed-through terminals.
- For single feed terminals using cross connection, consult factory for calculation.

For other terminal block configurations, please consult our drilling guide available online at www.appletonelec.com.

	T Rating: T6 @ Ta +55° C	Type		
		JBe10 120 x 120 x 95 mm	JBe20 120 x 180 x 95 mm	JBe30 180 x 180 x 95 mm
2.5 mm ²	Quantity	10	21	21
	I Maximum	16 A	16 A	16 A
4 mm ²	Quantity	8	17	16
	I Maximum	25 A	25 A	25 A
6 mm ²	Quantity	6	13	13
	I Maximum	32 A	32 A	32 A
10 mm ²	Quantity	5	10	9
	I Maximum	50 A	50 A	50 A

	T Rating: T6 @ Ta +55° C	Type			
		JBe36 220 x 260 x 150 mm	JBe46 220 x 370 x 200 mm	JBe47 260 x 370 x 200 mm	JBe55 370 x 370 x 200 mm
2.5 mm ²	Quantity	33	50	70	110
	I Maximum	16 A	14 A	12 A	10 A
4 mm ²	Quantity	21	38	62	80
	I Maximum	25 A	20 A	16 A	15 A
6 mm ²	Quantity	19	22	23	26
	I Maximum	32 A	32 A	32 A	32 A
10 mm ²	Quantity	12	14	15	20
	I Maximum	50 A	50 A	50 A	45 A
16 mm ²	Quantity	8	10	17	20
	I Maximum	63 A	63 A	50 A	50 A
25 mm ²	Quantity	12	14	16	20
	I Maximum	80 A	80 A	76 A	76 A
35 mm ²	Quantity	9	11	12	16
	I Maximum	100 A	100 A	100 A	93 A

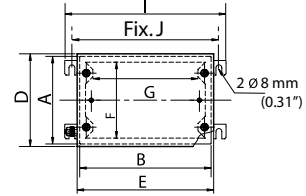
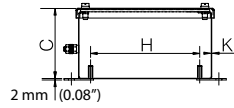
	T Rating: T6 @ Ta +40 °C T6 @ Ta +55° C	Type			
		JBe65 560 x 370 x 200 mm	JBe75 750 x 370 x 200 mm	JBe77 560 x 560 x 200 mm	JBe79 560 x 750 x 200 mm
35 mm ²	Quantity	15	16	18	—
	I Maximum	100 A	99 A	100 A	—
50 mm ²	Quantity	12	16	—	—
	I Maximum	125 A	108 A	—	—
70 mm ²	Quantity	12	16	16	16
	I Maximum	150 A	135 A	144 A	150 A
95 mm ²	Quantity	9	12	12	16
	I Maximum	200 A	178 A	190 A	173 A
120 mm ²	Quantity	—	6	—	12
	I Maximum	—	250 A	—	225 A
150 mm ²	Quantity	—	9	—	12
	I Maximum	—	250 A	—	250 A

JBES and ECES Series 316L Stainless Steel Enclosure Dimensions

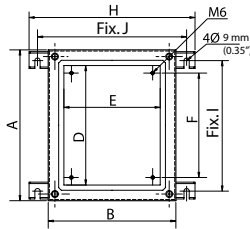
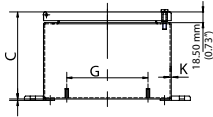
Increased Safety

Dimensions in Millimeters

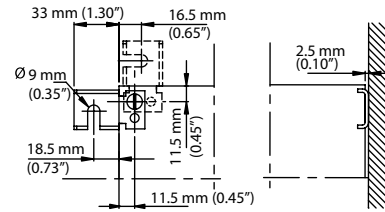
Box 95 Depth



Box 200 or 300 Depth



Mounting Bracket



L x W x D mm	A	B	C	D	E	F	G	H	I	J	K
Box Depth 95											
120 x 120 x 95	120	120	95	127	127	104	84	88	160	140	1.5
120 x 180 x 95	120	180	95	127	187	104	144	148	220	200	1.5
180 x 180 x 95	180	180	95	187	187	164	144	148	220	200	1.5
Box Depth 200											
220 x 370 x 200	220	370	200	166	316	140	290	436	185	407	1.5
370 x 260 x 200	370	260	200	316	206	290	180	326	335	297	1.5
370 x 370 x 200	370	370	200	316	316	290	290	436	335	407	2
560 x 370 x 200	560	370	200	506	316	480	290	436	525	407	2
750 x 370 x 200	750	370	200	695	316	670	290	436	715	407	2
560 x 560 x 200	560	560	200	506	506	480	480	626	525	597	2
750 x 560 x 200	750	560	200	696	506	670	480	626	715	597	2
Box Depth 300											
370 x 370 x 300	370	370	300	316	316	290	290	436	335	407	2
560 x 370 x 300	560	370	300	506	316	480	290	436	525	407	2
750 x 370 x 300	750	370	300	695	316	670	290	436	715	407	2
560 x 560 x 300	560	560	300	506	506	480	480	626	525	597	2
750 x 560 x 300	750	560	300	696	506	670	480	626	715	597	2
1130 x 750 x 300	1130	750	300	1076	506	1050	670	816	1095	787	2

JBDR Series Pre-Drilled Round Junction Boxes

Flameproof

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Applications

- Small terminal junction boxes designed to facilitate electrical connections in hazardous areas.
- Designed for use in Zone 1 or 2 areas, where flammable gases or vapors are present either continuously or intermittently.
- Ideal for use in wet or corrosive atmospheres such as:
 - Petroleum refineries
 - Chemical refineries
 - Other industrial process facilities
- Designed for use in Zone 21 or 22 areas, where flammable dusts are present either continuously or intermittently such as:
 - Food processing
 - Dairy
 - Brewing
 - Silos
 - Other facilities

Features

- IK10 (20 Joules) high impact resistant box.
- Pillar type terminal block (4 x terminals) for easy connection.
- Terminal capacity: 4 x 4 mm² or 2 x 6 mm².
- Internal Earth: ground plate with 4 x M4 screws for connection to 4 mm diameter lugs.
- External Earth: M5 screw.
- Back plate supplied.
- Operating temperature -40 °C to +55 °C.
- Housing: gray painted marine grade aluminum
- Hardware: stainless steel

Certifications and Compliances

◆ ATEX Certification

- **Certification Type BR1d**
 - Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T6 to T4
 - Dust, Zones 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T95 °C.
 - Ambient Temperature: -40 °C to +55 °C.
 - CE Declaration of Conformity: 50230
 - ATEX Certificate: LCIE 02 ATEX 6056
 - Index of Protection according EN/IEC 60529: IP66
 - Internal Volume: ≤ 2dm³ (2 liters)
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10

◆ EURASEC Certification

- **Certification Type BR1d**
 - EURASEC N° TC RU C-FR.Г505.B.00911

2 Entry Version with Cable Glands



3 Entry Version



4 Entry Version

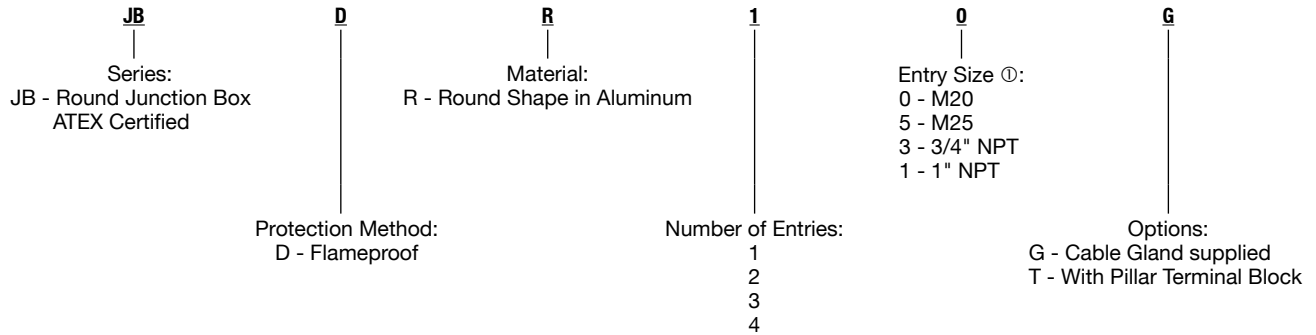





JBDR Series Pre-Drilled Round Junction Boxes

Flameproof

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Catalog Numbering Guide — JBDR Series Pre-Drilled Round Junction Boxes



Equipment	Weight kg	Volume dm ³	Catalog Number	
 2 Entry	Threaded Entries with M25 Integrated Cable Gland: For unarmored cable: – sealed Ø: 9 to 15 mm (093496)			
	2 x M25 entries (feed through) 2 integrated cable glands supplied	0.8	2	JBDR25G
	3 x M25 entries (in a “T”) 3 integrated cable glands supplied	0.8	2	JBDR35G
	4 x M25 entries (in a cross) 4 integrated cable glands supplied	0.9	2	JBDR45G
 3 Entry	Threaded Entries for M20 Cable Gland – Not Supplied			
	2 x M20 entries (feed through)	0.7	2	JBDR20
	3 x M20 entries (in a “T”) 4 x M20 entries (in a cross)	0.7 0.8	2 2	JBDR30 JBDR40
 4 Entry	Threaded Entries for NPT 3/4” Cable Gland – Not Supplied			
	2 x 3/4” NPT entries (feed through)	0.7	2	JBDR23
	3 x 3/4” NPT entries (in a “T”) 4 x 3/4” NPT entries (in a cross)	0.7 0.8	2 2	JBDR33 JBDR43
	Threaded Entries for NPT 1” Cable Gland – Not Supplied			
4 x 1” NPT entries (in a cross)	0.8	2	JBDR41	

Accessories

Description	Weight kg	Volume dm ³	Catalog Number
Pillar Terminal Block			
4 terminals 4 x 4 mm ² or 2 x 6 mm ² cables	0.1	0.4	TBP44
M25 Integrated Cable Gland			
for unarmored cables — dia. 9 to 15 mm	0.6	0.9	093496

① For other entry size, use adaptor.

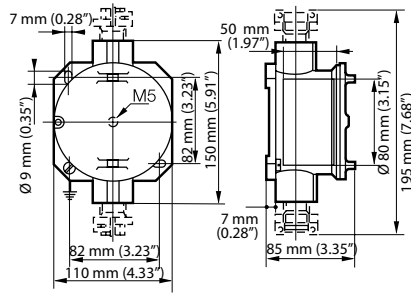
Shaded catalog numbers are normally stocked items. All other items are made to order.

JBDR Series Pre-Drilled Round Junction Box Dimensions

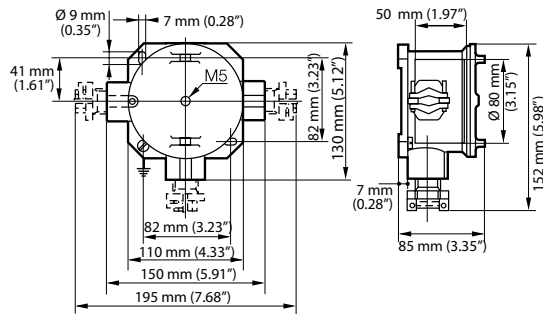
Flameproof

Dimensions in Millimeters

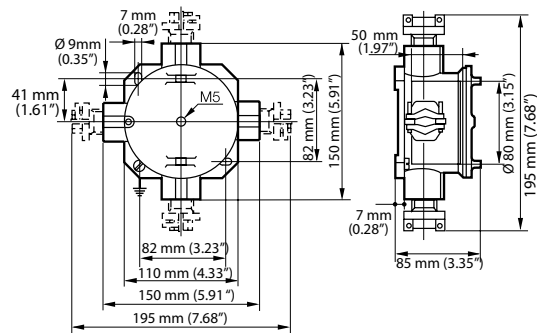
2 Entry Version



3 Entry Version



4 Entry Version



JBD Series Pre-drilled Terminal Junction Boxes

Flameproof

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Applications

- Terminal junction boxes to facilitate electrical connections in hazardous areas.
- Ideal for use in wet or corrosive atmospheres.
- Designed for use in Zone 1 or 2 areas, where flammable gases or vapors are present either continuously or intermittently, such as:
 - Petroleum plants
 - Chemical plants
 - Refineries
 - Other industrial process facilities
- Designed for use in Zone 21 or 22 areas where flammable dusts are present either continuously or intermittently, such as:
 - Food processing
 - Dairy
 - Brewing
 - Silos

Features

- Flanged flameproof joint for square enclosures.
- Screwed flameproof joint for round enclosure.
- External earth crossing terminal.
- Supplied with one symmetrical zinc plated rail.
- Terminal block not supplied.
- Yellow laminated plastic nameplate with black lettering.
- Pre-drilled entries.
- Operating temperature -40 °C to +55 °C.

Standard Materials

- Enclosure housing: gray painted cast iron and marine grade aluminum alloy
- Hardware: stainless steel

Certifications and Compliances

◆ ATEX or IECEx Certification

- **Certification Type CF2/A/B/C**
 - Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature class: T6 for $T_a \leq +40\text{ °C}$, T5 for $T_a \leq +55\text{ °C}$
 - Dust, Zones 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T95 °C
 - CE Declaration of Conformity: 50254
 - ATEX Certificate: LCIE 03 ATEX 6061X
- **Certification Type CF1F**
 - Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T6 for $T_a \leq +40\text{ °C}$, T5 for $T_a \leq +55\text{ °C}$
 - Dust, Zones 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T95 °C
 - CE Declaration of Conformity: 50257
 - ATEX Certificate: LCIE 03 ATEX 6044X
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10
 - Internal Volume: > 2dm³ (2 liters)

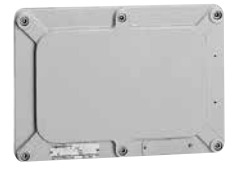
JBDAB – Aluminum Version



JBDFC – Cast Iron Version



JBDFB – Cast Iron Version



- **Certification Type CF20B**
 - Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - ATEX/IEC Protection: Ex d IIB
 - Temperature class: T6
 - Dust, Zones 21 and 22:
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 50229
 - ATEX Certificate: LCIE 02 ATEX 6057X
 - IECEx Certificate: IECEx LCI 08.0023X
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10
 - Internal Volume: > 2dm³ (2 liters)

◆ EURASEC Certification

- **Certification Type CF2/A/B/C**
 - EURASEC N° TC RU C-FR.1605.B.00911
- **Certification Type CF1F**
 - EURASEC N° TC RU C-FR.1605.B.00911

Options

- For use with equipment other than terminal blocks, please consult your local sales representative.

JBD Series Pre-drilled Terminal Junction Boxes

Flameproof

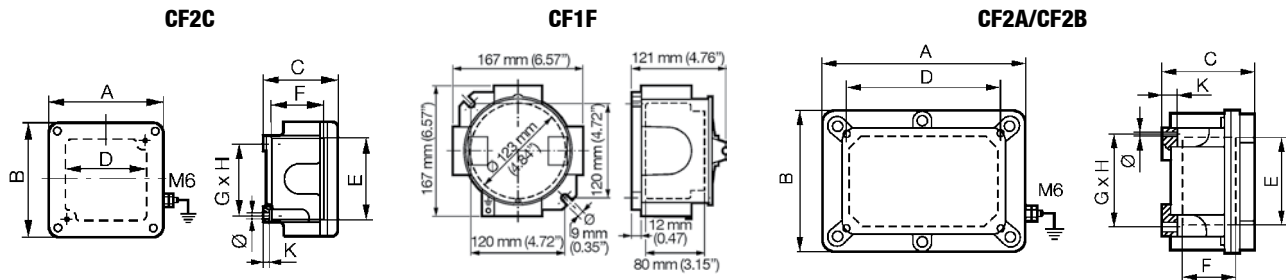
Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Enclosures and Junction Boxes

FLAMEPROOF EX D ZONE 1 RATED JUNCTION BOXES

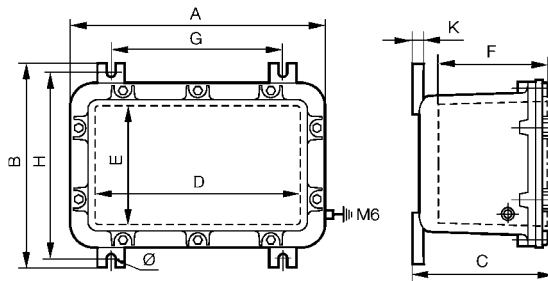
Type	Dimensions mm	Threaded Entry Per Side				Rail Length Capacity mm	Weight kg	Volume dm ³	Catalog Number	Pack
		A	B	C	D					
Ex d IIB Enclosure in Cast Iron										
CF2C	130 x 130 x 90	1 x M20	1 x M20	2 x M20	1 x M20	64	4	3	JBDFB131309D1	1
CF2A	205 x 145 x 127	2 x M20	1 x M20	3 x M20	1 x M20	120	9.4	3	JBDFB201413D2	1
CF2B	270 x 190 x 120	—	2 x M20 1 x M25	3 x M20	2 x M20	162	12.6	7	JBDFB271912D3	1
Ex d IIB Enclosure in Aluminum										
CF20B	370 x 270 x 208	—	3 x M20	5 x M20 1 x M32	3 x M20	260	12.8	24	JBDAB372720D4	1
Ex d IIC Enclosure in Cast Iron										
CF1F	167 x 167 x 126	1 x M32	1 x M32	1 x M32	1 x M32	100	6.7	13	JBDFC161612D5	1
CF1F	167 x 167 x 126	1 x 1"NPT	1 x 1"NPT	1 x 1"NPT	1 x 1"NPT	100	6.7	13	JBDFC161612D6	1

Cast Iron Version Dimensions in Millimeters



Type	External			Internal			Fixings			
	A	B	C	D	E	F	G	H	K	Ø
CF2C	130	130	90	90	90	65	86	86	10	7
CF2A	202	144	127	155	95	65	156	98	12	7
CF2B	267	187	120	200	120	78	202	122	12	7

Aluminum Version Dimensions in Millimeters



Type	External			Internal			Fixings			
	A	B	C	D	E	F	G	H	K	Ø
CF20B	370	270	208	300	175	159	250	245	15	11

JBDA and JBDF – ECDA and ECDF Series Customized Enclosures

Flameproof

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Applications

- Designed for use in Zones 1, 2, 21 and 22 in the oil and gas industry such as:
 - Petroleum
 - Chemical
 - Refineries
 - Other industrial process facilities
- Junction box applications:
 - JBD series enclosures may be customized to house terminal blocks.
- Enclosure and control applications:
 - ECD series enclosures may be customized to house a large range of components such as:
 - Control units
 - Breakers
 - Starters
 - Relays
 - Meters
 - Etc.

Features

- Enclosures are available in a wide range of sizes.
- Precision machined flameproof joint between body and cover.
- Wall thickness suitable for all sizes of cable entries.
- External fixing lugs.
- Internal mounting pan.
- Square and round windows available in a wide range of sizes.
- Machining and drilling must be completed in our workshops.
- Power dissipated calculation including cables must be completed according to each size of certified enclosure.

Standard Materials

- Enclosures: gray painted cast iron or marine grade aluminum alloy
- Hardware: stainless steel

Options

- Indirect cable entries available through Ex e connection enclosure.
- Factory assembled and wired.
- Empty enclosure with Ex "U" component marking for re-certification by notified body (CF10B to CF70B).

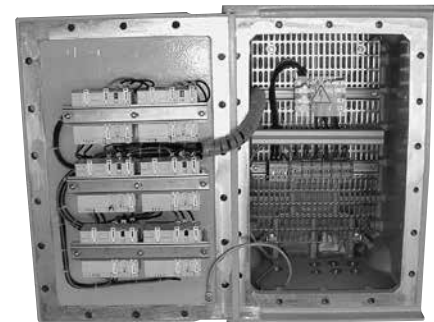
Certifications and Compliances

◆ ATEX or ATEX/IECEx Certification

- **Certification Type CF2/A/B/C**
 - Gas, Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature class: T6 to T2
 - Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T95 °C to T290 °C
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 50254
 - ATEX Certificate: LCIE 03 ATEX 6061X
 - Internal Volume: ≤ 2dm³ (2 liters)
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10



Customized Enclosures



- **Certification Type CF10B to CF70B, CF10C to CF70C**
 - Gas, Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection CF10B to CF70B: Ex d IIB
 - Type of Protection CF10C to CF70C: Ex d IIC
 - Temperature class: T6 to T4
 - Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C to T130 °C
 - Ambient Temperature
 - CF30B, CF70B, CF70C: -20 °C to +55 °C
 - CF10B, CF20B, CF40B, CF50B, CF10C, CF30C, CF50C: -40 °C to +55 °C
 - CF60B: -50 °C to +55 °C
 - CE Declaration of Conformity: 50229
 - ATEX Certificate: LCIE 02 ATEX 6057X
 - IECEx Certificate: IECEx LCI 08.0023X
 - Internal Volume: > 2dm³ (2 liters)
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10

JBDA and JBDF – ECDA and ECDF Series Customized Enclosures

Flameproof

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Enclosures and Junction Boxes

FLAMEPROOF EX D ZONE 1 RATED JUNCTION BOXES

- **Certification Type CF1A/B/D/E**

- Gas: Zones 1 and 2
- Conforming to ATEX 94/9/CE: Ⓢ II 2 G
- Type of Protection: Ex d IIC
- Temperature class: T6 to T2
- Dust: Zones 21 and 22
- Conforming to ATEX 94/9/CE: Ⓢ II2 D
- Type of Protection: Ex tD A21
- Surface Temperature: T95 °C to T290 °C
- Ambient Temperature: -40 °C to +55 °C
- CE Declaration of Conformity: 50257
- ATEX Certificate: LCIE 03 ATEX 6044X
- IEC Certificate: LCIE Ex 03.003X
- Internal Volume CF1A/B/D/E: > 2dm³ (2 liters)
- Internal Volume CF1E: ≤ 2dm³ (2 liters)
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

- **Certification Type CF10BU to CF70BU**

- Gas: Zones 1 and 2
- Conforming to ATEX 94/9/CE: Ⓢ II 2 G
- Type of Protection: Ex d IIB
- Dust: Zones 21 and 22
- Conforming to ATEX 94/9/CE: Ⓢ II2 D
- Type of Protection: Ex tD A21
- Ambient Temperature
- CF30BU, CF60BU, CF70BU:
-20 °C to +55 °C,
- CF10BU, CF20BU, CF40BU, CF50BU:
-40 °C to +55 °C
- CE Declaration of Conformity: 5C238
- ATEX Certificate: LCIE 07 ATEX 0005U
- Internal Volume: > 2dm³ (2 liters)
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

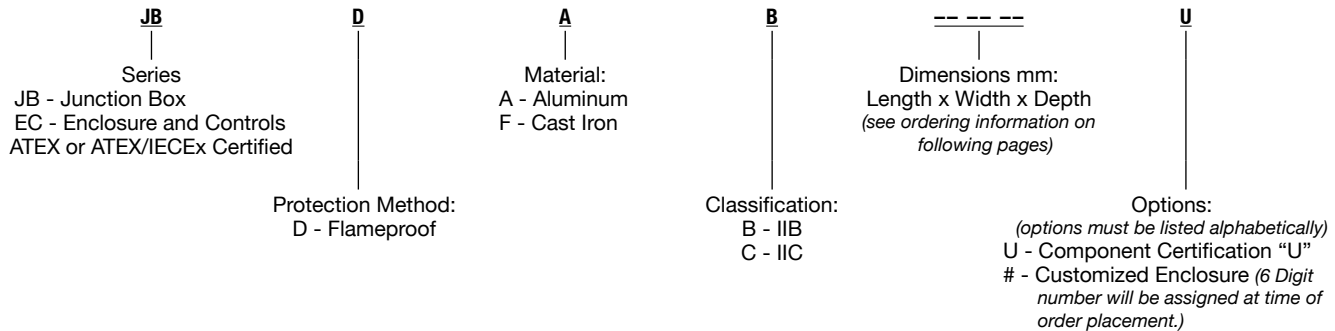
- **Certification Type JBEW**

- Gas: Zones 1 and 2
- Conforming to ATEX 94/9/CE: Ⓢ II 2 G
- Type of Protection: Ex d IIB + H₂
- Temperature class: T6 to T4
- Dust: Zones 21 and 22
- Conforming to ATEX 94/9/CE: Ⓢ II2 D
- Type of Protection: Ex tD A21
- Surface Temperature: T80 °C to T130 °C
- Ambient Temperature: -40 °C to +55 °C
- CE Declaration of Conformity: 50279
- ATEX Certificate: LCIE 07 ATEX 6069X
- Internal Volume: > 2dm³ (2 liters)
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

- ◆ **EURASEC Certification**

- **Certification Type CF2/A/B/C**
– EURASEC N° TC RU C-FR.Г505.B.00911
- **Certification Type CF10B to CF70B, CF10C to CF70C**
– EURASEC N° TC RU C-FR.Г505.B.00911
- **Certification Type CF1A/B/D/E**
– EURASEC N° TC RU C-FR.Г505.B.00911





Catalog Numbering Guide – JBDA and JBDF – ECDA and ECDF Series Customized Enclosures



JBDA and JBDF – ECDA and ECDF Series Customized Enclosures

Flameproof

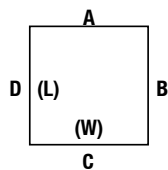
Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

	Type	Dimensions mm L x W x D	Hinged Door	Weight kg	Volume dm ³	Catalog Number ①	
						JBD Series	ECD Series
Ex d IIB Enclosure in Cast Iron with Flanged Flameproof Joint							
	CF2C	130 x 130 x 90	–	4	3	JBDFB131309	ECDFB131309
	CF2A	205 x 145 x 127	–	9.4	3	JBDFB201413	ECDFB201413
	CF2B	270 x 190 x 120	–	12.6	7	JBDFB271912	ECDFB271912
Ex d IIB Enclosure in Cast Aluminum with Flanged Flameproof Joint							
	CF10B	260 x 270 x 208	–	9	17	JBDAB262720	ECDAB262720
	CF20B	370 x 270 x 208	–	13	24	JBDAB372720	ECDAB372720
	CF30B	340 x 320 x 230	Yes	29	68	JBDAB343223	ECDAB343223
	CF40B	455 x 320 x 347	Yes	50	126	JBDAB453234	ECDAB453234
	CF50B	455 x 440 x 347	Yes	65	240	JBDAB454434	ECDAB454434
	CF60B	680 x 440 x 413	Yes	106	378	JBDAB684441	ECDAB684441
	CF70B	680 x 640 x 413	Yes	130	382	JBDAB686441	ECDAB686441
Ex d IIC Enclosure in Cast Aluminum with Spigot Flameproof Joint							
	CF1E	140 x 162 x 100	–	1.5	2.2	JBDAC141610	ECDAC141610
	CF1B	210 x 230 x 125	–	4.8	5.5	JBDAC212312	ECDAC212312
	CF1A	295 x 265 x 195	–	10	9.6	JBDAC292619	ECDAC292619
	CF1D	360 x 335 x 200	–	10	14.6	JBDAC363320	ECDAC363320
Ex d IIC Enclosure in Cast Aluminum with Screwed Flameproof Joint							
	CF10C	230 x 215 x 238	–	12	16	JBDAC232124	ECDAC232124
	CF30C	320 x 340 x 234	–	28	68	JBDAC323423	ECDAC323423
	CF50C	440 x 455 x 345	–	64	245	JBDAC444534	ECDAC444534
Ex d IIC Enclosure in Cast Iron with Screwed Flameproof Joint							
	CF70C	680 x 640 x 450	Yes	310	382	JBDFC686445	ECDFC686445

① Options: Component Certification "U" and/or Customized Enclosure # add digits as per examples: JBDAB2627203 #, JBDAB2627203U #.

JBDA and JBDF – ECDA and ECDF Series Customized Enclosure Dimensions

Flameproof



Type	Dimensions mm L x W x D	Maximum Quantity of Threaded Entries Per Side				Max. Size ①	Rail Length Capacity for Terminal Block mm	
		A M20	B M20	C M20	D M20		(L)	(W)
Ex d IIB Enclosure in Cast Iron								
CF2C	130 x 130 x 90	1	2	1	2	M25	–	64
CF2A	205 x 145 x 127	1	3	1	1	M32	–	120
CF2B	270 x 190 x 120	2	4	2	4	M50	–	162
Ex d IIB Enclosure in Cast Aluminum								
CF10B	260 x 270 x 208	8	6	8	6	M75	155	148
CF20B	370 x 270 x 208	6	12	6	12	M75	260	148
CF30B	340 x 320 x 230	8	8	8	8	M75	260	218
CF40B	455 x 320 x 347	16	28	16	28	M75	330	200
CF50B	455 x 440 x 347	26	26	26	26	M75	295	330
CF60B	680 x 440 x 413	26	51	26	51	M100	540	300
CF70B	680 x 640 x 413	38	42	38	42	M100	530	530
Ex d IIC Enclosure in Cast Iron								
CF1E	140 x 162 x 100	1	2	1	2	M32	–	99
CF1B	210 x 230 x 125	1	3	2	3	M32	–	155
CF1A	295 x 265 x 195	6	6	5	6	M63	190	190
CF1D	360 x 335 x 200	16	17	15	17	M63	180	250
Ex d IIC Enclosure in Cast Aluminum								
CF10C	230 x 215 x 238	5	5	5	5	M75	120	105
CF30C	320 x 340 x 234	8	8	8	8	M75	260	215
CF50C	440 x 455 x 345	26	26	26	26	M75	295	330

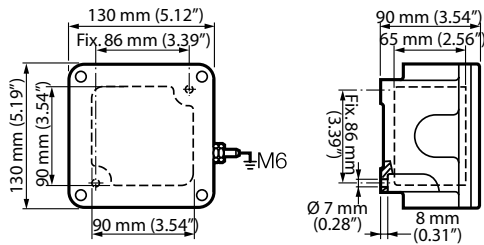
① Consult your local sales representative for quantity.

JBDA and JBDF – ECDA and ECDF Series Customized Enclosure Dimensions

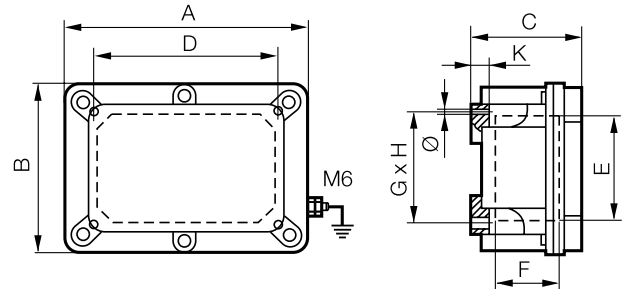
Flameproof

Dimension in Millimeters

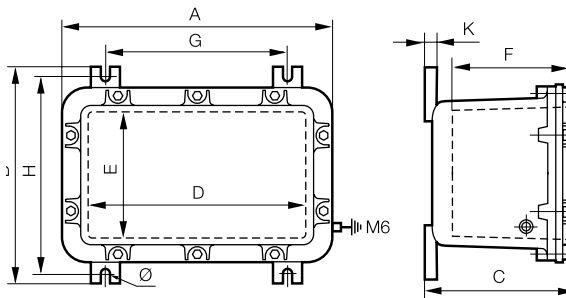
JBDF and ECDF: CF2C Type



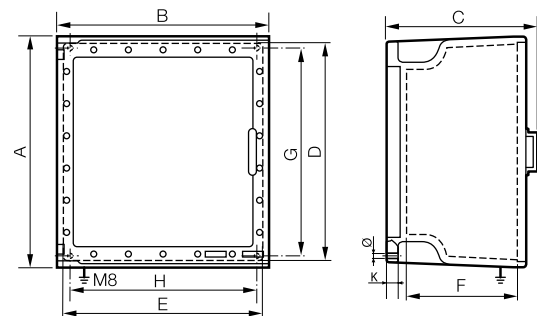
JBDF and ECDF: CF2A and CF2B Type



JBDA and ECDA: CF10B and CF20B Type



JBDA and ECDA: CF30B and CF70B Type



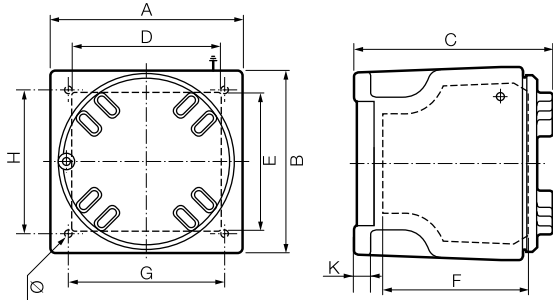
Type	A	B	C	D	E	F	G	H	K	Ø
JBDF and ECDF: CF2A and CF2B Type										
CF2A	202	144	96	156	154	65.5	98	156	10	7
CF2B	267	187	115	202	200	81	122	202	12	7
JBDA and ECDA: CF10B and CF20B Type										
CF10B	259	270	207	190	175	161	140	245	15	11
CF20B	369	270	207	300	175	161	250	245	15	11
JBDA and ECDA: CF30B and CF70B Type										
CF30B	340	320	238	285	265	161	298	278	20	9
CF40B	455	320	377	395	265	253	391	256	25	11
CF50B	455	440	380	400	376	253	391	376	25	11
CF60B	680	440	445	610	376	292	616	376	25	14
CF70B	680	640	445	610	576	292	616	576	25	14

JBDA and JBDF – ECDA and ECDF Series Customized Enclosure Dimensions

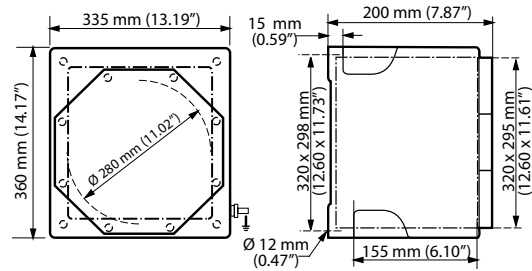
Flameproof

Dimension in Millimeters

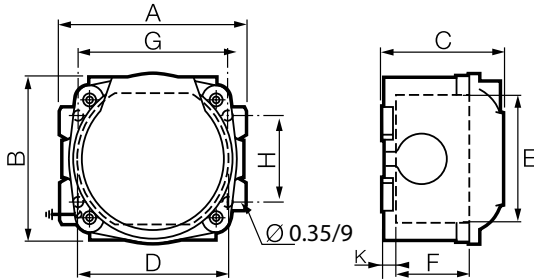
**JBDA and ECDA CF10C to CF50C
JBDF and ECDF: CF70C Type**



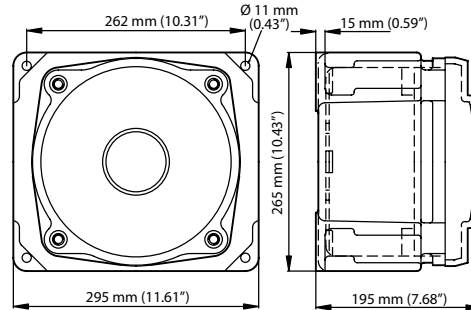
JBDA and ECDA: CF1D Type



JBDA and ECDA: CF1B and CF1E Type



JBDA and ECDA: CF1A Type



Enclosures and Junction Boxes

FLAMEPROOF EX D ZONE 1 RATED JUNCTION BOXES

Type	A	B	C	D	E	F	G	H	K	Ø
JBDA and ECDA CF10C to CF50C JBDF and ECDF: CF70C Type										
CF10C	230	215	238	180	165	175	188	173	20	9
CF30C	320	340	234	271	290	154	278	298	20	9
CF50C	440	455	345	386	401	241	376	391	25	11
CF70C	680	640	450	616	576	290	616	576	25	14
JBDA and ECDA: CF1B and CF1E Type										
CF1B	230	210	125	175	175	90	210	100	15	9
CF1E	140	162	121	120	120	80	120	120	12	9

ECDX Series Customized Welded Steel Enclosures

Flameproof

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Applications

- Designed for use in Zones 1, 2, 21 and 22 in the oil and gas industry; i.e. petroleum, chemical, refineries, and other industrial process facilities.
- Enclosures may be customized to house terminal blocks, and a large range of components; i.e. control units, breakers, starters, relays, meters, etc.

Features

- Enclosures are available in a wide range of sizes.
- Precision machined flameproof joint between body and cover.
- Hinged door.
- External fixing lugs.
- Internal mounting pan.
- Square and round windows available in a wide range of sizes.
- Machining and drilling must be done at our factory.
- Power dissipated calculation including cables must be completed according to each size of certified enclosure.

Standard Materials

- Gray painted mechanically welded steel enclosure
- Stainless steel hardware

Options

- Indirect cable entries available through Ex e connection enclosure.
- Factory assembled and wired.
- Switch rack assembly.
- Empty enclosure with Ex “U” component marking for recertification by notified body (CMS3-4-5-6-7-40-43-44U).

Certifications and Compliances

◆ ATEX/IECEX or ATEX Certification

- **Certification Type CMS**
 - Gas, Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature class: T6 to T4
 - Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex tD
 - Surface Temperature: T80 °C to T130 °C
 - Ambient Temperature: -20 °C to +55 °C
 - CE Declaration of Conformity: 50236
 - ATEX Certificate: LCIE 02 ATEX 6247X

Catalog Numbering Guide – ECDX Customized Enclosures

ECDX
Series:
ECDX - ATEX or ATEX/IECEX Certified Enclosure

B
Classification:
B - IIB

S
Options:
S - 316L Stainless Steel
U - Component Certification U
- Customized Enclosures
(6 digit number will be assigned at time of order placement)

Internal Dimensions mm:
Length x Width x Depth
(see ordering information on following page)

ECDX Series



Example of Customized Enclosure



- IECEX Certificate: IECEX LCI 080024X
- Internal Volume: > 2 dm³ (2 liters)
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10
- **Certification Type CMS 3U-4U-5U-6U-7U-40U-43U**
 - Gas, Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex d IIB
 - Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex tD
 - Ambient Temperature: -20 °C to +55 °C
 - CE Declaration of Conformity: 5C235
 - ATEX Certificate: LCIE 07 ATEX 0008U
 - Internal Volume: > 2 dm³ (2 liters)
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10

◆ EURASEC Certification

- **Certification Type CMS**
 - EURASEC N° TC RU C-FR.Г505.B.00911

◆ Others Certification

- **Certification Type CMS**
 - INMETRO Certificate: BVC 11.0641-X^①

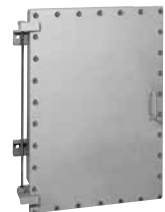
^① Inmetro certification available on special request only. Contact your local sales for more information

ECDX Series Customized Welded Steel Enclosures

Flameproof

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Type	Dimensions — L x W x D mm	Weight kg	Volume dm ³	Catalog Number
Ex d IIB Enclosure in Welded Steel ①				
CMS3	300 x 270 x 180	92	234	ECDXB302718
CMS4	415 x 260 x 280	152	234	ECDXB412628
CMS5	415 x 385 x 280	180	369	ECDXB413828
CMS6	635 x 375 x 340	336	647	ECDXB633734
CMS7	635 x 575 x 340	384	647	ECDXB635734
CMS47	700 x 500 x 295	268	698	ECDXB705029
CMS43	700 x 600 x 295	298	698	ECDXB706029
CMS46	700 x 700 x 295	318	698	ECDXB707029
CMS44	800 x 500 x 295	298	698	ECDXB805029
CMS40	800 x 600 x 295	318	698	ECDXB806029
CMS42	800 x 700 x 295	308	698	ECDXB807029
CMS45	900 x 500 x 295	348	698	ECDXB905029
CMS41	900 x 600 x 295	348	698	ECDXB906029
CMS57	1000 x 550 x 295	395	1144	ECDXB105529
CMS52	1000 x 630 x 295	430	1144	ECDXB106329
CMS55	1000 x 700 x 295	452	1144	ECDXB107029
CMS53	1200 x 550 x 295	445	1144	ECDXB125529
CMS50	1200 x 630 x 295	485	1144	ECDXB126329
CMS54	1200 x 700 x 295	515	1144	ECDXB127029
CMS56	1400 x 550 x 295	495	1144	ECDXB145529
CMS51	1400 x 630 x 295	540	1144	ECDXB146329
Ex d IIB Enclosure in 316L Stainless Steel ②				
CMS3	300 x 270 x 180	92	234	ECDXB302718S
CMS4	415 x 260 x 280	152	234	ECDXB412628S
CMS5	415 x 385 x 280	180	369	ECDXB413828S
CMS6	635 x 375 x 340	336	647	ECDXB633734S
CMS7	635 x 575 x 340	384	647	ECDXB635734S
CMS47	700 x 500 x 295	268	698	ECDXB705029S
CMS43	700 x 600 x 295	298	698	ECDXB706029S
CMS46	700 x 700 x 295	318	698	ECDXB707029S
CMS44	800 x 500 x 295	298	698	ECDXB805029S
CMS40	800 x 600 x 295	318	698	ECDXB806029S
CMS42	800 x 700 x 295	308	698	ECDXB807029S
CMS45	900 x 500 x 295	348	698	ECDXB905029S
CMS41	900 x 600 x 295	348	698	ECDXB906029S
CMS57	1000 x 550 x 295	395	1144	ECDXB105529S
CMS52	1000 x 630 x 295	430	1144	ECDXB106329S
CMS55	1000 x 700 x 295	452	1144	ECDXB107029S
CMS53	1200 x 550 x 295	445	1144	ECDXB125529S
CMS50	1200 x 630 x 295	485	1144	ECDXB126329S
CMS54	1200 x 700 x 295	515	1144	ECDXB127029S
CMS56	1400 x 550 x 295	495	1144	ECDXB145529S
CMS51	1400 x 630 x 295	540	1144	ECDXB146329S



Enclosures and Junction Boxes

FLAMEPROOF EX D ZONE 1 RATED JUNCTION BOXES

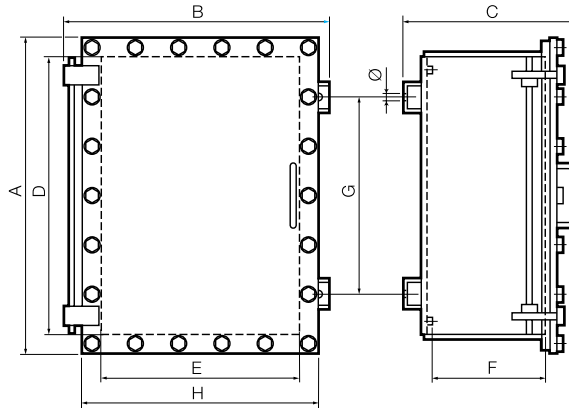
① For component certification and/or customized enclosure add digits as per examples: ECDXB302718# or ECDXB302718U#.

② For component certification and/or customized enclosure add digits as per example: ECDXB302718S# or ECDXB302718SU#.

ECDX Series Customized Welded Steel Enclosures

Flameproof

Dimensions in Millimeters



Type	External			Internal			Fixings Lug Thick			
	A	B	C	D	E	F	G	H	mm	Ø
CMS3	396	449	313	300	270	180	200	370	7	16
CMS4	511	439	413	415	260	280	315	360	7	16
CMS5	511	564	413	415	385	280	315	485	7	16
CMS6	731	554	473	635	375	340	455	475	7	16
CMS7	731	756	475	635	575	340	470	675	7	16
CMS47	796	679	443	700	500	295	500	600	7	18
CMS43	796	779	443	700	600	295	500	700	7	18
CMS46	796	879	443	700	700	295	500	800	7	18
CMS44	896	679	443	800	500	295	600	600	7	18
CMS40	896	779	448	800	600	295	600	700	7	18
CMS42	896	879	448	800	700	295	600	800	7	18
CMS45	996	679	443	900	500	295	600	600	7	18
CMS41	996	779	448	900	600	295	600	700	7	18
CMS57	1125	776	450	1000	550	295	700	660	7	22
CMS52	1125	856	450	1000	630	295	700	740	7	22
CMS55	1125	926	450	1000	700	295	700	810	7	22
CMS53	1325	776	450	1200	550	295	900	660	7	22
CMS50	1325	856	450	1200	630	295	900	740	7	22
CMS54	1325	926	450	1200	700	295	900	810	7	22
CMS56	1525	776	450	1400	550	295	1100	660	7	22
CMS51	1525	856	450	1400	630	295	1100	740	7	22

AJBEW Cast Junction Boxes

Explosionproof, Dust-Ignitionproof

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Application

- Explosionproof junction boxes are used where hazardous materials are handled or stored. These enclosures may be used for:
 - Terminals
 - Splicing wires
 - Pull boxes
 - Bus boxes

Features

- Precision machined flame path between box and cover.
- Bolt on stainless steel slotted mounting feet for horizontal or vertical mounting.
- Flexible hinge mounting either left or right side is standard on all boxes 12 x 12 x 06 and larger.
- External flange maximizes internal space.
- Wall thickness suitable for minimum of five full threads.
- Provision for mounting pan.
- Wide range of drilled and tapped outlets.
- Ground lug package and installation instructions for termination of ground wires enclosed.
- O-ring gasket insures watertight integrity.

Standard Materials

- Bodies and covers: sand cast copperfree (4/10 of 1% max.) aluminum
- Cover bolts: stainless steel
- O-ring: neoprene
- Hinges: stainless steel
- Mounting pan: galvanized steel

Standard Finishes

- Bodies and covers: shot blast finish standard

Options

- Custom drilling and tapping.
- ATEX U component certification add suffix **-XU**.

Certifications and Compliances

◆ATEX/IECEX Certification

- **Certification Type JBEW**
 - Gas, Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIB+H2 Gb
 - Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex t Db
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 5C239
 - ATEX Certificate: LCIE 07 ATEX 6069X
 - IECEx Certificate: IECEx LCI 07.0018X
 - Internal Volume: > 2 dm³ (2 liters)
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10

◆EURASEC Certification

- **Certification Type JBEW**
 - EURASEC N° TC RU C-FR.Г505.B.00911



AJBEW Cast Junction Boxes

Explosionproof, Dust-Ignitionproof

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

Catalog Number	Dimensions in Millimeters												Ship Weight kg
	Overall Dimensions			Mounting Dimensions				Inside Dimensions					
	F	E	G	A	AA	B	BB	W	H	Db	Dc	K	
AJBEW101006X	376.2	376.2	231.9	165.1	273.8	330.2	114.3	260.4	260.4	146.1	38.1	85.9	20.00
AJBEW101408X	368.3	469.9	244.6	N/A	330.2	N/A	270	254.0	355.6	196.9	19.1	112.8	27.2
AJBEW141408X	492.3	492.3	293.6	247.7	450.9	450.9	247.7	374.7	374.7	196.9	35.1	101.6	47.6
AJBEW161812X	543.1	593.9	382.5	304.8	482.6	533.4	355.6	412.8	463.6	301.8	9.7	177.8	68.0
AJBEW181808X	593.9	593.9	303.3	330.2	552.5	552.5	330.2	463.6	463.6	196.9	38.1	114.3	89.8
AJBEW182410X	608.1	762.0	360.2	409.7	552.5	704.9	466.9	463.6	614.4	247.7	38.1	146.1	106.6
AJBEW183610X	596.9	1060.5	363.5	279.4	552.5	1003.3	736.6	463.6	927.1	247.7	38.1	139.7	122.5
AJBEW242408X	746.3	746.3	312.7	466.9	711.2	711.2	466.9	622.3	622.3	196.9	38.1	127.0	102.1
AJBEW243610X	781.1	1092.2	382.5	463.6	711.2	1016.0	736.6	616.0	920.8	247.7	41.4	152.4	204.1
AJBEW303808X	914.4	1117.6	349.3	N/A	889.0	N/A	736.6	762.0	965.2	196.9	50.8	155.7	272.2

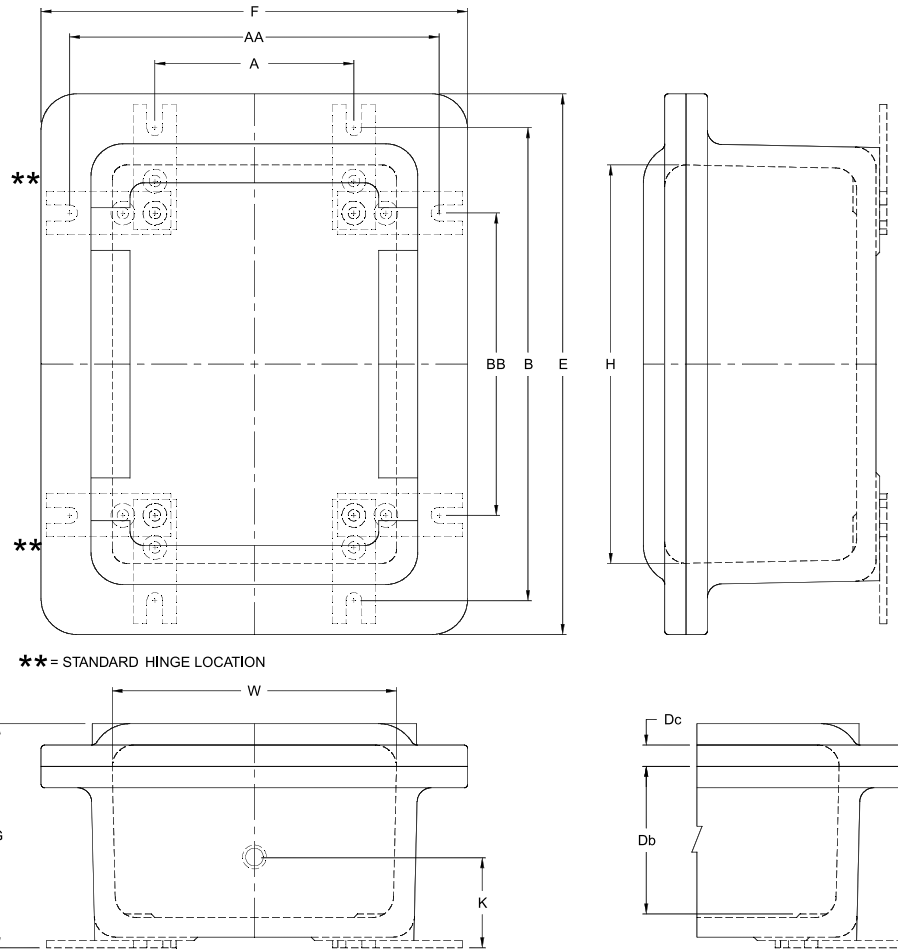
Mounting Pans

Mounting Pan Catalog Number	Junction Box Catalog Number	Overall Dimensions in Millimeters	
		W	H
AZ-10104/6	AJBEW101006X	190.5	190.5
AZ-10146/8	AJBEW101408X	228.6	330.2
AZ-14146/8	AJBEW141408X	311.2	311.2
AZ-161812	AJBEW161812X	381.0	406.4
AZ-18186/8	AJBEW181808X	406.4	406.4
AZ-18248/10	AJBEW182410 X	406.4	558.8
AZ-18368/10	AJBEW183610X	431.8	882.7
AZ-24248/10	AJBEW242408X	558.8	558.8
AZ-24368/10	AJBEW243610X	558.8	863.6
AZ-30388	AJBEW303808X	711.2	914.4

AJBEW Cast Junction Box Dimensions and Drilling and Tapping Guidelines

Explosionproof, Dust-Ignitionproof

Dimensions — See Catalog Number Tables



Enclosures and Junction Boxes

FLAMEPROOF EX D ZONE 1 RATED JUNCTION BOXES

Notes

Notes

Controls

Description	Page
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KL Series Audio Signaling Devices	446
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ATX MS Series Motor Starters	450



Polyester
Unicode® 2 Stock, Customized, Pre-Drilled



Stainless Steel
Unicode® 2 Stock, Customized, Pre-Drilled



Unicode® 2 Aluminium



Unicode® 2 Polyamide



V Series Ammeter



FU40 Fuse Carrier



TRE Control Transformers



D Series Aluminum Control Stations



D Series Pre-Drilled Control Stations



D Series Components



RSI Series Relays



FAS Call Points



SWE Call Points



SWD Call Points



KL Series Signaling Devices



DM



MS

Controls

CONTROLS

Unicode® 2 Series Polyamide Control Stations

Increased Safety

Polyamide

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- For use in IEC governed hazardous areas.
- Local control stations and motor control stations for use in hazardous areas covering the broadest possible range of applications.
- Control of equipment at:
 - Power plants
 - Chemical and petrochemical plants
 - Petroleum refineries
 - Reverse osmosis plants
 - Pulp and paper processing plants
 - Various industrial applications
- Push buttons and selector switches are used in conjunction with contactors or magnetic starters for remote control of motors in hazardous locations. They provide circuit control and/or selection.
- Pilot lights provide visual assurance that an electrical function is being performed at a remote or hazardous location.
- For use in washdown areas.

Features

- Employs Ex de method of protection which eliminates the need for external seals.
- Operators include push buttons, illuminated push buttons, selector switches, control and load break switches and LED pilot lights.
- Pilot light employs high intensity single LED with lifetime of 100,000 hours that can be used at:
 - 12 Vac to 254 Vac 50/60 Hz
 - 12 Vdc to 60 Vdc
- Up to 3 contact blocks per actuator can be used.
- Contact block technical data:
 - IEC rated operating voltage (Ue): 500 Vac – 110 Vdc
 - IEC switching capacity:
 - AC12: 16 Amp/400 Vac
 - AC14: 10 Amp/400 Vac
 - AC15: 6 Amp/500 Vac
 - DC13: 2 Amp/24 Vdc and 1 Amp/110 Vdc
- Selector switch technical data:
 - IEC rated operating voltage: 690 Vac
 - IEC rated operating current: maximum 16 Amp
 - IEC switching capacity:
 - AC1: 16 Amp/690 Vac
 - AC15: 16 Amp/415 Vac
 - AC3: 8 Amp/500 Vac
 - AC3: 4 Amp/690 Vac
 - AC3: 16 Amp/690 Vac
 - DC1: 10 Amp/24 Vdc
 - DC1: 6 Amp/60 Vdc
 - DC1: 6 Amp/110 Vdc (2 contacts wired in series)
 - DC1: 6 Amp/220 Vdc (3 contacts in series)
- Enclosures are rated for IP66 with firmly secured gasket.
- Operators and contact blocks are spaced so as to have easy and ample space for wiring.
- Wide selection of termination methods available.
- Choice of DIN rail mounted high performance contact block suitable for low intensity (less than 5mA).
- TS35 rail mounted components held securely in place during operation and easily removed for service.



U43W2 VA13A5A9



U42W2 A5A9

- Brass Inserts are provided for TS35 DIN rails or mounting plate to be installed inside the enclosure.
- Captive, corrosion resistant stainless steel cover screws.

Standard Materials

- Body, cover, cable gland and blanking plug: polyamide, black finish
- Cover screws: stainless steel
- Optional nameplates: stainless steel

Accessories

- Key for changing actuator blocks.
- Guard for mushroom head actuator.
- Padlockable guard.
- M5 earth stud.
- Combination drain and breather available in brass, polyamide and stainless steel.

Options

- Nameplates: Lamacoid with different color combinations.
- Padlocking facility at left, center, right or any position on selector switches.
- Padlocking facility for momentary and maintained push buttons.
- Special contact arrangements available, see *Unicode 2 Series Customized Control Stations*.

Unicode® 2 Series Polyamide Control Stations

Increased Safety

Polyamide

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Certification and Compliances

◆ ATEX Certification

• Certification Type PCe

- Gas: Zone 1 and 2
- Conforming to ATEX 94/9/CE: Ⓢ II 2 G
- Type of Protection: Ex de IIC / Ex demb IIC (depending of the actuator)
- Temperature class: T6
- Dust: Zone 21 and 22
- Conforming to ATEX 94/9/CE: Ⓢ II 2 D
- Type of Protection: Ex tD A21
- Surface Temperature: T75 °C
- Ambient Temperature: -20 °C to +55 °C
- CE Declaration of Conformity: 50221
- ATEX Certificate: LCIE 00 ATEX 6047
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK09

◆ EURASEC Certification

- EURASEC RU C-FR Г5.05.B.00911

◆ Others Certification ①

- INMETRO Certificate: BVC 11.0640-X

① Inmetro certification available on special request only. Contact your local sales for more information.

Unicode® 2 Series Polyamide Control Stations

Increased Safety

Polyamide

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 1 Polyamide Control Station:

Included: 1 white self-adhesive laminated plastic nameplate, 2 x M20 bottom clearance entries, 1 blanking plug, 1 cable gland in polyamide [Ø 6.5 mm to 14.5 mm], 2 locknuts.



Description/Function	Diagram	Bottom Entries	Weight kg	Volume dm ³	Catalog Number
Momentary Push Button					
Green insert 'I' + red insert 'O' with 1NO + 1NC momentary contacts		2 x M20	0.48	2.5	U41W2A3
1x green push button "I" with 1NO momentary contact		2 x M20	0.48	2.5	U41W2A5
1x red push button "O" with 1NC momentary contact		2 x M20	0.48	2.5	U41W2A9
Emergency Stop					
Red mushroom head push-pull 1NC maintained contact		2 x M20	0.48	2.5	U41W2D9
Red mushroom head push-pull 1NO + 1NC maintained contacts		2 x M20	0.48	2.5	U41W2D3
Red mushroom head key release 1NC maintained contact		2 x M20	0.48	2.5	U41W2C9
Red mushroom head key release 1NO + 1NC maintained contacts		2 x M20	0.48	2.5	U41W2C3
Mushroom Head Push Button					
Black mushroom head push button 1NO + 1NC momentary contacts		2 x M20	0.48	2.5	U41W2B3
Red mushroom head push button 1NC momentary contact		2 x M20	0.48	2.5	U41W2R9
Key Push Button					
With key removable in both positions 1NO + 1NC maintained contacts		2 x M20	0.48	2.5	U41W2E3

Shaded catalog numbers are normally stocked items. All other items are made to order.

Unicode® 2 Series Polyamide Control Stations

Increased Safety




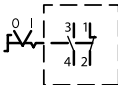
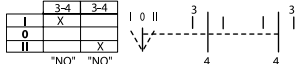


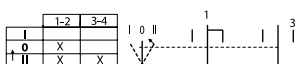
Polyamide

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 1 Polyamide Control Station:

Included: 1 white self-adhesive laminated plastic nameplate, 2 x M20 bottom clearance entries, 1 blanking plug, 1 cable gland in polyamide [Ø 6.5 mm to 14.5 mm], 2 locknuts.

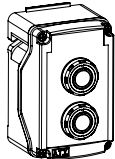

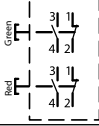


Description/Function	Diagram	Bottom Entries	Weight kg	Volume dm³	Catalog Number
Pilot Light					
1x red pilot light ①		2 x M20	0.48	2.5	U41W2PR
 1x green pilot light ①		2 x M20	0.48	2.5	U41W2PG
1x blue pilot light ①		2 x M20	0.48	2.5	U41W2PB
1x yellow pilot light ①		2 x M20	0.48	2.5	U41W2PY
1x white pilot light ①		2 x M20	0.48	2.5	U41W2PW
2-Position Selector Switch					
 2 fixed positions '0 - I' 1NO + 1NC contacts		2 x M20	0.48	2.5	U41W2H3
3-Position Selector Switch					
3 fixed positions 'I - 0 - II' 2NO contact		2 x M20	0.48	2.5	U41W2J1
 3 positions 'I - 0 - II' With spring return from I to 0 1NO + 1NC contacts		2 x M20	0.48	2.5	U41W2N3
3 positions 'I - 0 - II' With spring return from II to 0 1NO + 1NC contacts		2 x M20	0.48	2.5	U41W2M3

Size 2 Polyamide Control Station:

Included: 1 white self-adhesive laminated plastic nameplate, 2 x M20 bottom clearance entries, 1 blanking plug, 1 cable gland in polyamide [Ø 6.5 mm to 14.5 mm], 2 locknuts.



Description/Function	Diagram	Bottom Entries	Weight kg	Volume dm³	Catalog Number
Twin Push Button					
 1x green push button 'I' with 1NO contact 1x red push button 'O' with 1NC contact Momentary contacts		2 x M20	0.62	2.5	U42W2A5A9
1x green push button 'I' with 1NO + 1NC contacts 1x red push button 'O' with 1NO + 1NC contacts Momentary contacts		2 x M20	0.62	2.5	U42W2A3A3

① 12 Vac to 254 Vac 50/60 Hz - 12 Vdc to 60 Vdc.

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Unicode® 2 Series Polyamide Control Stations

Increased Safety

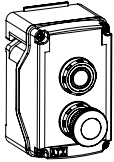
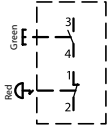
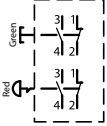
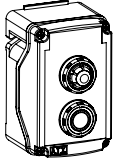
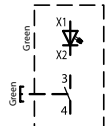
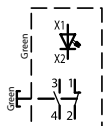
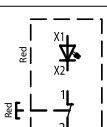
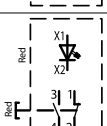

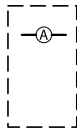
Polyamide

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 2 Polyamide Control Station:

Included: 1 white self-adhesive laminated plastic nameplate, 2 x M20 bottom clearance entries, 1 blanking plug, 1 cable gland in polyamide [Ø 6.5 mm to 14.5 mm], 2 locknuts.



Description/Function	Diagram	Bottom Entries	Weight Kg	Volume dm³	Catalog Number
Push Button + Push-Pull Emergency Stop					
 <p>1x green push button 'I' with 1NO momentary contact 1x red mushroom head push-pull with 1NC maintained contact</p>		2 x M20	0.62	2.5	U42W2A5D9
		2 x M20	0.62	2.5	U42W2A3D3
Push Button + Push-Pull Emergency Stop					
	<p>1x green light ① 1x green push button 'I' with 1NO momentary contact</p> 	2 x M20	0.62	2.5	U42W2PGA5
	<p>1x green light ① 1x green push button 'I' with 1NO + 1NC momentary contacts</p> 	2 x M20	0.62	2.5	U42W2PGA3
	<p>1x red light ① 1x red push button 'O' with 1NC momentary contact</p> 	2 x M20	0.62	2.5	U42W2PRA9
	<p>1x red light ① 1x red push button 'O' with 1NO + 1NC momentary contacts</p> 	2 x M20	0.62	2.5	U42W2PRA3
Ammeter					
 <p>1x ammeter 48 x 48 mm, 1A C.T., 3 F.L.C., with 0 - 1 - 3 scale</p>		2 x M20	0.56	2.5	U42W2VA13

① 12 Vac to 254 Vac 50/60 Hz - 12 Vdc to 60 Vdc.

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Unicode® 2 Series Polyamide Control Stations

Increased Safety

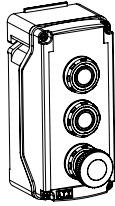
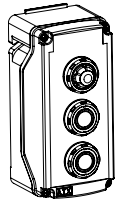
Polyamide

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 3 Polyamide Control Station:

Included: 1 white self-adhesive laminated plastic nameplate, 2 x M20 bottom clearance entries, 1 blanking plug, 1 cable gland in polyamide [Ø 6.5 mm to 14.5 mm], 2 locknuts.



Description/Function	Diagram	Bottom Entries	Weight kg	Volume dm³	Catalog Number
Twin Push Buttons + Push-Pull Emergency Stop					
 <p>1x green push button 'I' with 1NO contacts 1x red push button 'O' with 1NC contact Momentary contacts 1x red mushroom head push-pull emergency button with 1NO + 1NC maintained contacts</p>		2 x M20	0.78	2.5	U43W2A5A9D3
		2 x M20	0.78	2.5	U43W2A3A3D3
Pilot Light + Twin Push Buttons					
 <p>1x green light ① 1x green push button 'I' with 1NO contact 1x red push button 'O' with 1NC contact Momentary contacts</p> <p>1x red light ① 1x green push button 'I' with 1NO contact 1x red push button 'O' with 1NO contact Momentary contacts</p> <p>1x green light ① 1x green push button 'I' with 1NO + 1NC contacts 1x red push button 'O' with 1NO + 1NC contacts Momentary contacts</p> <p>1x red light ① 1x green push button 'I' with 1NO + 1NC contacts 1x red push button 'O' with 1NO + 1NC contacts Momentary contacts</p>		2 x M20	0.78	2.5	U43W2PGA5A9
		2 x M20	0.78	2.5	U43W2PRA5A9
		2 x M20	0.78	2.5	U43W2PGA3A3
		2 x M20	0.78	2.5	U43W2PRA3A3

① 12 Vac to 254 Vac 50/60 Hz - 12 Vdc to 60 Vdc.

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Unicode® 2 Series Polyamide Control Stations

Increased Safety

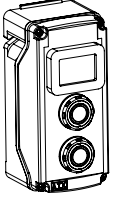
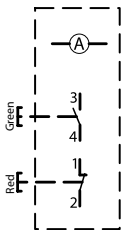
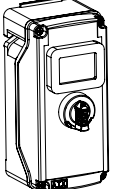
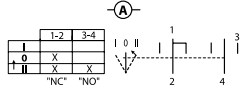


Polyamide

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 3 Polyamide Control Station:

Included: 1 white self-adhesive laminated plastic nameplate, 2 x M20 bottom clearance entries, 1 blanking plug, 1 cable gland in polyamide [Ø 6.5 mm to 14.5 mm], 2 locknuts.



Description/Function	Diagram	Bottom Entries	Weight kg	Volume dm ³	Catalog Number
Ammeter + Twin Push Button					
 <p>1x ammeter 48 x 48 mm, 1A C.T., 3 F.L.C., with 0 - 1 - 3 scale 1x green push button 'I' with 1NO contact 1x red push button 'O' with 1NC contact Momentary contacts</p>		2 x M20	0.80	2.5	U43W2VA13A5A9
Ammeter + 3-Position Selector Switch					
 <p>1x ammeter 48 x 48 mm, 1A C.T., 3 F.L.C., with 0 - 1 - 3 scale 1x 3-position selector switch 'I - 0 - II' with spring return from II to 0 1NO + 1NC contacts</p>		2 x M20	0.80	2.5	U43W2VA13M3
Special Accessories for Polyamide Enclosure					
 <p>Brass Earthing Plate for 2 x M20</p> <p>Equipped with 2 earth connections</p>					098661
 <p>Tube or Frame Fixing</p> <p>FOR SIZE 1 ONLY For all tube diameter ≥ 80 mm Using a metal strip (not supplied) maximum width 22 mm</p>					098656

Unicode® 2 Series Polyamide Control Stations

Increased Safety

Polyamide

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Nameplates – Set of 10

Blank self-adhesive, laminated plastic 58 mm x 18 mm.

Color	Catalog Number	Pack
White (black letters)	UNPW	1
Yellow (black letters)	UNPY	1
Red (white letters)	UNPR	1
Blue (white letters)	UNPB	1
Black (white letters)	UNPN	1
Green (white letters)	UNPG	1

Inserts for Push Button – Set of 5

Marking	Color	Catalog Number	Pack
(unmarked)	Green	UIAG	1
(unmarked)	Red	UIAR	1
(unmarked)	Yellow	UIAY	1
(unmarked)	White	UIAW	1
(unmarked)	Blue	UIAB	1
(unmarked)	Black	UIAN	1
ON	Green	UIA01	1
OFF	Red	UIA02	1
START	Green	UIA03	1
STOP	Red	UIA04	1
MARCHE	Green	UIA05	1
ARRET	Red	UIA06	1
I	Green	UIA07	1
O	Red	UIA08	1

Inserts for Illuminated Push Button – Set of 5

Marking	Color	Catalog Number	Pack
(unmarked)	Green	UILG	1
(unmarked)	Red	UILR	1
(unmarked)	Yellow	UILY	1
(unmarked)	White	UILW	1
(unmarked)	Blue	UILB	1
ON	Green	UIL01	1
OFF	Red	UIL02	1
START	Green	UIL03	1
STOP	Red	UIL04	1
MARCHE	Green	UIL05	1
ARRET	Red	UIL06	1
I	Green	UIL07	1
O	Red	UIL08	1

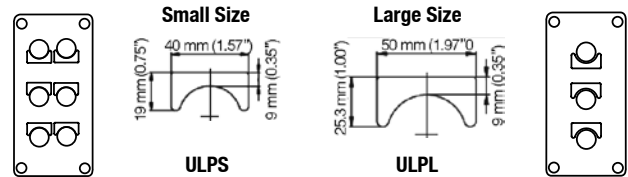
Spare Key

For all key-operated buttons.

Description	Catalog Number	Pack
Spare key type 4 A 185	SK4A185	1

Standard Legend Plates

Two sizes available. Self-adhesive yellow laminated plastic (black lettering).





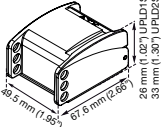




Text	Catalog Number		Pack
	Small	Large	
Blank (set of 10)	ULPS	ULPL	1
ON	ULPSA01	ULPLA01	1
OFF	ULPSA02	ULPLA02	1
FORWARD	ULPSA03	ULPLA03	1
REVERSE	ULPSA04	ULPLA04	1
JOG	ULPSA05	ULPLA05	1
RUN	ULPSA06	ULPLA06	1
START	ULPSA07	ULPLA07	1
STOP	ULPSA08	ULPLA08	1
UP	ULPSA09	ULPLA09	1
DOWN	ULPSA10	ULPLA10	1
FAST	ULPSA11	ULPLA11	1
SLOW	ULPSA12	ULPLA12	1
RAISE	ULPSA13	ULPLA13	1
LOWER	ULPSA14	ULPLA14	1
OPEN	ULPSA15	ULPLA15	1
CLOSE	ULPSA16	ULPLA16	1
LOW	ULPSA17	ULPLA17	1
HIGH	ULPSA18	ULPLA18	1
TEST	ULPSA19	ULPLA19	1
RESET	ULPSA20	ULPLA20	1
EMERGENCY STOP	ULPSA21	ULPLA21	1
MARCHE	ULPSA22	ULPLA22	1
ARRET	ULPSA23	ULPLA23	1
ARRET D'URGENCE	ULPSA24	ULPLA24	1
HAUT	ULPSA25	ULPLA25	1
BAS	ULPSA26	ULPLA26	1
O - I	ULPSH01	ULPLH01	1
ON - OFF	ULPSH02	ULPLH02	1
START - STOP	ULPSH03	ULPLH03	1
STOP - START	ULPSH04	ULPLH04	1
HAND - AUTO	ULPSH05	ULPLH05	1
MANU - AUTO	ULPSH06	ULPLH06	1
FORWARD - REVERSE	ULPSH07	ULPLH07	1
REMOTE - LOCAL	ULPSH08	ULPLH08	1
MARCHE - ARRET	ULPSH09	ULPLH09	1
I - O - II	ULPSJ01	ULPLJ01	1
OFF - O - ON	ULPSJ02	ULPLJ02	1
START - NORMAL - STOP	ULPSJ03	ULPLJ03	1
HAND - OFF - AUTO	ULPSJ04	ULPLJ04	1
MANU - O - AUTO	ULPSJ05	ULPLJ05	1
FORWARD - OFF - REVERSE	ULPSJ06	ULPLJ06	1
LOCAL - REMOTE - AUTO	ULPSJ07	ULPLJ07	1
LOCAL - O - REMOTE	ULPSJ08	ULPLJ08	1
MARCHE - NORMAL - ARRET	ULPSJ09	ULPLJ09	1

Unicode® 2 Series Polyamide Control Stations

Increased Safety

Polyamide

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

	Description	Catalog Number
	<p>Additional Contacts</p> <p>Each actuator is capable of activating 3 contacts. Exception: Illuminated push button and all actuators with key: 2 contacts maximum</p> <p>1NO contact</p> <p>1NC contact</p>	<p>UCB5R</p> <p>UCB9R</p>
	<p>Yellow Guard</p> <p>Mushroom head protection for emergency stop</p>	<p>098657</p>
	<p>Padlockable Guard</p> <p>Stainless steel and plastic cover, capacity: 3 padlocks diameter 6 mm maximum (not supplied)</p> <p>For push button and rotary actuator</p> <p>For mushroom head actuator</p>	<p>UPLD1S</p> <p>UPLD2S</p>
	<p>Cable Gland Exe</p> <p>For unarmored cable Exe - IP66 - in polyamide entry thread seal</p> <p>M20 (capacity 6.5-14.5 mm)</p>	<p>095605</p>
	<p>For armored cable Exe/Exd - IP66 - in nickel plated brass (without entry thread seal)</p> <p>Braid and Tape type:</p> <p>M20 (inner: 6.4-14.0/outer: 12.5-20.9 mm)</p> <p>Single Wired Armor (SWA):</p> <p>M20 (inner: 6.4-14.0/outer: 12.5-20.9 mm)</p>	<p>20E1FX5</p> <p>20E1FW5</p>
	<p>Adaptors</p> <p>Exd/Exe - IP66 in nickel plated brass (without entry thread seal)</p> <p>Male M20 - Female 1/2" NPT</p> <p>Male M20 - Female 3/4" NPT</p>	<p>737DM2T15</p> <p>737DM2T25</p>
	<p>Entry Thread Seal</p> <p>M20 (in white nylon)</p>	<p>20ETS2</p>
	<p>Combination Drain and Breather</p> <p>Exe - IP66 - supplied with entry thread seal and locknut</p> <p>M20 male thread in Polyamide</p> <p>M20 male thread in Brass</p> <p>M20 male thread in Stainless Steel</p>	<p>DBE20P</p> <p>DBE20B</p> <p>DBE20S</p>
	<p>Feed-Thru Earth Stud Terminal</p> <p>Exe - IP66 - supplied with weatherproof seal and green/yellow earth conductor — 300 mm length</p> <p>M20 with M5 earth and 2.5 mm² conductor</p>	<p>PREESTM20</p>

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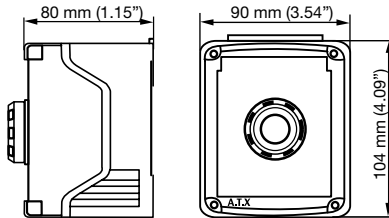
Unicode® 2 Series Polyamide Control Stations

Increased Safety

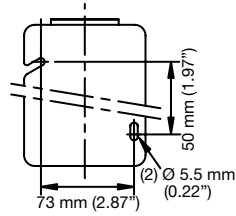
Polyamide

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

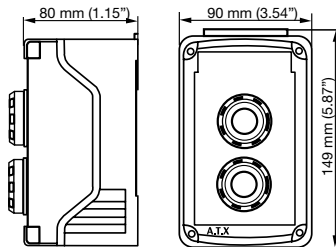
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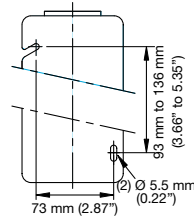
Size 1 Enclosure



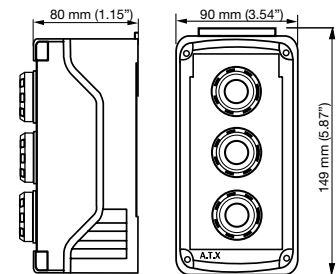
Size 1 Mounting/Fixing Details



Size 2 Enclosure



Size 2 and 3 Mounting/Fixing Details



Size 3 Enclosure

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Unicode® 2 Series Polyester Control Stations and Switches

Increased Safety

Fiberglass Reinforced Polyester

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- Local control stations and motor control stations for use in hazardous areas covering the broadest possible range of applications.
- Control of equipment at:
 - Power plants
 - Chemical and petrochemical plants
 - Petroleum refineries
 - Reverse osmosis plants
 - Pulp and paper processing plants
 - Various industrial applications
- Push buttons and selector switches are used in conjunction with contactors or magnetic starters for remote control of motors in hazardous locations. They provide circuit control and/or selection.
- Pilot lights provide visual assurance that an electrical function is being performed at a remote or hazardous location.
- For use in washdown areas.

Features

- Employs Ex de method of protection which eliminates the need for external seals.
- Operators include push buttons, illuminated push buttons, selector switches, control and load break switches and LED pilot lights.
- Pilot light employs high intensity single LED with lifetime of 100,000 hours that can be used at:
 - 12 Vac to 254 Vac 50/60 Hz
 - 12 Vdc to 60 Vdc
- Up to 3 contact blocks per actuator can be used.
- Contact block technical data:
 - IEC rated operating voltage (Ue): 500 Vac – 110 Vdc
 - IEC switching capacity:
 - AC12: 16 Amp/400 Vac
 - AC14: 10 Amp/400 Vac
 - AC15: 6 Amp/500 Vac
 - DC13: 2 Amp/24 Vdc and 1 Amp/110 Vdc
- Selector switch technical data:
 - IEC rated operating voltage: 690 Vac
 - IEC rated operating current: maximum 16 Amp
 - IEC switching capacity:
 - AC1: 16 Amp/690 Vac
 - AC15: 16 Amp/415 Vac
 - AC3: 8 Amp/500 Vac
 - AC3: 4 Amp/690 Vac
 - AC3: 16 Amp/690 Vac
 - DC1: 10 Amp/24 Vdc
 - DC1: 6 Amp/60 Vdc
 - DC1: 6 Amp/110 Vdc (2 contacts wired in series)
 - DC1: 6 Amp/220 Vdc (3 contacts in series)
- Enclosures are rated for IP66 with firmly secured gasket.
- Operators and contact blocks are spaced so as to have easy and ample space for wiring.
- Wide selection of termination methods available.
- Choice of DIN rail mounted high performance contact block suitable for low intensity (less than 5mA).
- TS35 rail mounted components held securely in place during operation and easily removed for service.
- Brass Inserts are provided for TS35 DIN rails or mounting plate to be installed inside the enclosure.
- Captive, corrosion resistant stainless steel cover screws.



U22W2 PGA5
Fiberglass Reinforced Polyester

Materials

- Body and cover: choice of fiberglass reinforced polyester (FRP) with black finish
- Cover screws for fiberglass reinforced polyester body: 316 stainless steel

Accessories

- Key for changing actuator blocks.
- Guard for mushroom head actuator.
- Padlockable guard.
- M5 and M6 earth stud.
- Combination drain and breather available in brass, polyamide and stainless steel.

Options

- Nameplates: stainless steel or Lamacoid with different color combinations.
- Padlocking facility at left, center, right or any position on selector switches.
- Padlocking facility for momentary and maintained push buttons.
- Special contact arrangements available, see *Unicode 2 Series Customized Control Stations*.

Unicode® 2 Series Polyester Control Stations and Switches

Increased Safety

Fiberglass Reinforced Polyester

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Certification and Compliances

◆ ATEX / IECEx Certification

- Certification Type CSPe (Fiberglass Reinforced Polyester [FRP])
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC or Ex demb IIC (depending of the actuator)
 - Temperature class: T6
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T75 °C
 - Ambient Temperature: -55 °C to +60 °C (empty enclosure)
-20°C or -25°C to +55°C or +60°C depending of the actuator
 - CE Declaration of Conformity: 52084
 - ATEX Certificate: LCIE 00 ATEX 3032X
 - IECEx Certificate: IECEx LCI 09.0016X
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10

◆ EURASEC Certification

- EURASEC RU C-FR ГБ05.В.00911

◆ Others Certification ①

- INMETRO Certificate: BVC 11.0637-X

① Inmetro certification available on special request only. Contact your local sales for more information.

Unicode® 2 Series Polyester Control Stations and Switches

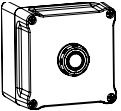
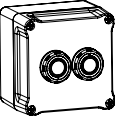
Increased Safety

Fiberglass Reinforced Polyester

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 1 Polyester Control Station

Included: 1 white self-adhesive laminated plastic nameplate, 1 brass earth continuity plate, 1 blanking plug, 1 cable gland.

Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Polyester Catalog Number
Momentary Push Button					
1x push buton (with Green insert 'I' + red insert 'O') with 1NO + 1NC momentary contact		2 x M20	1.0	4.0	U21W2A3
		2 x M25	1.0	4.0	U21W4A3
 1x green push button 'I' with 1NO momentary contact		2 x M20 2 x M25	1.0 1.0	4.0 4.0	U21W2A5 U21W4A5
1x red push button 'O' with 1NC momentary contact		2 x M20 2 x M25	1.0 1.0	4.0 4.0	U21W2A9 U21W4A9
Twin Momentary Push Buttons					
 1x green push button 'I' with 1NO contact 1x red push button 'O' with 1NC contact Momentary contacts		2 x M20	1.1	4.0	U21W2A5A9
		2 x M25	1.1	4.0	U21W4A5A9
1x green push button 'I' with 1NO + 1NC contact 1x red push button 'O' with 1NO + 1NC contact Momentary contacts		2 x M20	1.1	4.0	U21W2A3A3
		2 x M25	1.1	4.0	U21W4A3A3

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.

Unicode® 2 Series Polyester Control Stations and Switches

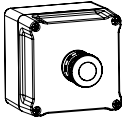
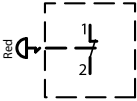
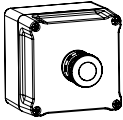
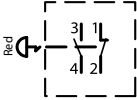
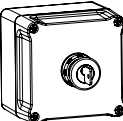
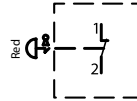
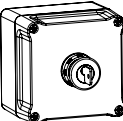
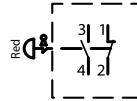
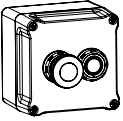
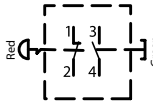
Increased Safety

Fiberglass Reinforced Polyester

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 1 Polyester Control Station

Included: 1 white self-adhesive laminated plastic nameplate, 1 brass earth continuity plate, 1 blanking plug, 1 cable gland.

Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Polyester Catalog Number
Emergency Stop					
 Red mushroom head push-pull 1NC maintained contact		2 x M20	1.0	4.0	U21W2D9
		2 x M25	1.0	4.0	U21W4D9
 Red mushroom head push-pull 1NO + 1NC maintained contact		2 x M20	1.0	4.0	U21W2D3
		2 x M25	1.0	4.0	U21W4D3
 Red mushroom head key release 1NC maintained contact		2 x M20	1.0	4.0	U21W2C9
		2 x M25	1.0	4.0	U21W4C9
 Red mushroom head key release 1NO + 1NC maintained contact		2 x M20	1.0	4.0	U21W2C3
		2 x M25	1.0	4.0	U21W4C3
Push Pull Emergency Stop + Push Button					
 1x red mushroom head push-pull with 1NC maintained contact 1x green push button 'I' with 1NO momentary contact		2 x M20	1.1	4.0	U21W2D9A5
		2 x M25	1.1	4.0	U21W4D9A5

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.

Shaded catalog numbers are normally stocked items. All other items are made to order.

Unicode® 2 Series Polyester Control Stations and Switches

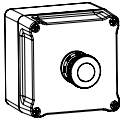
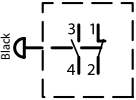
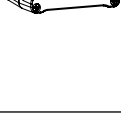
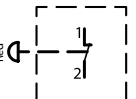

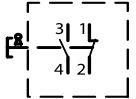

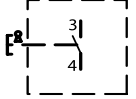

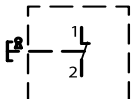
Increased Safety

Fiberglass Reinforced Polyester

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 1 Polyester Control Station

Included: 1 white self-adhesive laminated plastic nameplate, 1 brass earth continuity plate, 1 blanking plug, 1 cable gland.

Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Polyester Catalog Number
Mushroom Head Push Button					
 Black mushroom head push button 1NO + 1NC momentary contact		2 x M20	1.0	4.0	U21W2B3
		2 x M25	1.0	4.0	U21W4B3
 Red mushroom head push button 1NC momentary contact		2 x M20	1.0	4.0	U21W2R9
		2 x M25	1.0	4.0	U21W4R9
Key Push Button					
 With key removable in both positions 1NO + 1NC maintained contact		2 x M20	1.0	4.0	U21W2E3
		2 x M25	1.0	4.0	U21W4E3
 With key removable in both positions 1NO maintained contact		2 x M20	1.0	4.0	U21W2E5
		2 x M25	1.0	4.0	U21W4E5
 With key removable in both positions 1NC maintained contact		2 x M20	1.0	4.0	U21W2E9
		2 x M25	1.0	4.0	U21W4E9

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.

Unicode® 2 Series Polyester Control Stations and Switches






Increased Safety

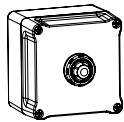
Fiberglass Reinforced Polyester

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 1 Polyester Control Station

Included: 1 white self-adhesive laminated plastic nameplate, 1 brass earth continuity plate , 1 blanking plug , 1 cable gland .

Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Polyester Catalog Number
Pilot Light					
1x red pilot light ①		2 x M20	1.0	4.0	U21W2PR
		2 x M25	1.0	4.0	U21W4PR
1x green pilot light ①		2 x M20	1.0	4.0	U21W2PG
		2 x M25	1.0	4.0	U21W4PG
1x blue pilot light ①		2 x M20	1.0	4.0	U21W2PB
		2 x M25	1.0	4.0	U21W4PB
1x yellow pilot light ①		2 x M20	1.0	4.0	U21W2PY
		2 x M25	1.0	4.0	U21W4PY
1x white pilot light ①		2 x M20	1.0	4.0	U21W2PW
		2 x M25	1.0	4.0	U21W4PW



Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.
① 12 Vac to 254 Vac 50/60 Hz - 12 Vdc to 60 Vdc.

Unicode® 2 Series Polyester Control Stations and Switches

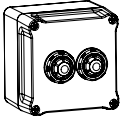
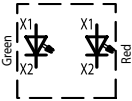
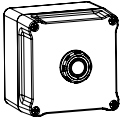
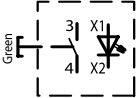
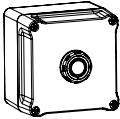
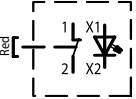
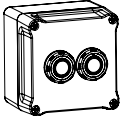

Increased Safety

Fiberglass Reinforced Polyester

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 1 Polyester Control Station

Included: 1 white self-adhesive laminated plastic nameplate, 1 brass earth continuity plate, 1 blanking plug, 1 cable gland.

Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Polyester Catalog Number
Twin Pilot Light					
 <p>1x green pilot light ① 1x red pilot light ①</p>		2 x M20	1.1	4.0	U21W2PGPR
		2 x M25	1.1	4.0	U21W4PGPR
Illuminated Push Button					
 <p>1x green illuminated ① push button with 1NO momentary contact</p>		2 x M20	1.0	4.0	U21W2LG5
		2 x M25	1.0	4.0	U21W4LG5
 <p>1x red illuminated ① push button with 1NC momentary contact</p>		2 x M20	1.0	4.0	U21W2LR9
		2 x M25	1.0	4.0	U21W4LR9
Twin Illuminated Push Buttons					
 <p>1x green illuminated ① push button with 1NO contact 1x red illuminated ① push button with 1NC contact Momentary contacts</p>		2 x M20	1.0	4.0	U21W2LG5LR9
		2 x M25	1.0	4.0	U21W4LG5LR9

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section
① 12 Vac to 254 Vac 50/60 Hz - 12 Vdc to 60 Vdc.

Unicode® 2 Series Polyester Control Stations and Switches

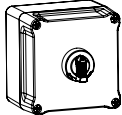
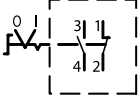
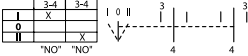
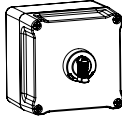
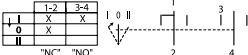
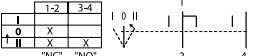
Increased Safety

Fiberglass Reinforced Polyester

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 1 Polyester Control Station

Included: 1 white self-adhesive laminated plastic nameplate, 1 brass earth continuity plate, 1 blanking plug, 1 cable gland.

Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Polyester Catalog Number
2-Position Selector Switch					
 <p>2 fixed positions '0 - I' 1NO + 1NC contact</p>		2 x M20	1.0	4.0	U21W2H3
		2 x M25	1.0	4.0	U21W4H3
3-Position Selector Switch					
<p>3 fixed positions 'I - 0 - II' 2NO contact</p>		2 x M20	1.0	4.0	U21W2J1
		2 x M25	1.0	4.0	U21W4J1
 <p>3 positions 'I - 0 - II' with spring return from I to 0 1NO + 1NC contact</p>		2 x M20	1.0	4.0	U21W2N3
		2 x M25	1.0	4.0	U21W4N3
<p>3 positions 'I - 0 - II' with spring return from II to 0 1NO + 1NC contact</p>		2 x M20	1.0	4.0	U21W2M3
		2 x M25	1.0	4.0	U21W4M3

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.

Unicode® 2 Series Polyester Control Stations and Switches

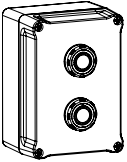

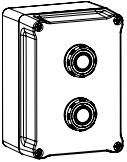
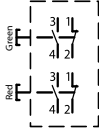
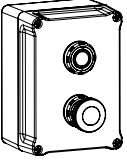
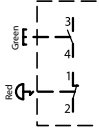
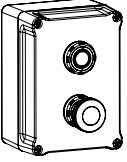
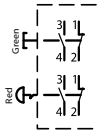
Increased Safety

Fiberglass Reinforced Polyester

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 2 Polyester Control Station

Included: 1 white self-adhesive laminated plastic nameplate, 1 brass earth continuity plate, 1 blanking plug, 1 cable gland.

Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm³	Polyester Catalog Number
Twin Push Buttons					
 <p>1x green push button 'I' with 1NO contact 1x red push button 'O' with 1NC contact Momentary contacts</p>		2 x M20	1.2	4.0	U22W2A5A9
		2 x M25	1.2	4.0	U22W4A5A9
 <p>1x green push button 'I' with 1NO + 1NC contact 1x red push button 'O' with 1NO + 1NC contact Momentary contacts</p>		2 x M20	1.2	4.0	U22W2A3A3
		2 x M25	1.2	4.0	U22W4A3A3
Push Button + Push-Pull Emergency Stop					
 <p>1x green push button 'I' with 1NO momentary contact 1x red mushroom head push-pull with 1NC maintained contact</p>		2 x M20	1.2	4.0	U22W2A5D9
		2 x M25	1.2	4.0	U22W4A5D9
 <p>1x green push button 'I' with 1NO + 1NC momentary contact 1x red mushroom head push-pull with 1NO + 1NC maintained contact</p>		2 x M20	1.2	4.0	U22W2A3D3
		2 x M25	1.2	4.0	U22W4A3D3

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.

Unicode® 2 Series Polyester Control Stations and Switches

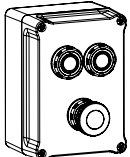
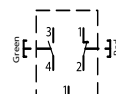
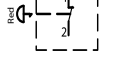
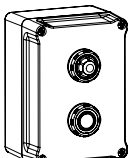
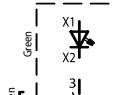
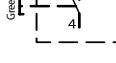
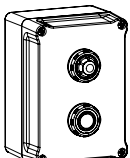
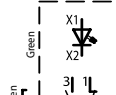
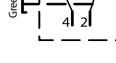
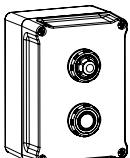
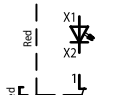
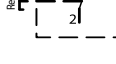
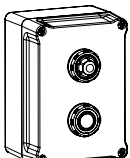
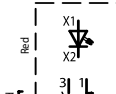
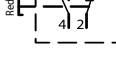
Increased Safety

Fiberglass Reinforced Polyester

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 2 Polyester Control Station

Included: 1 white self-adhesive laminated plastic nameplate, 1 brass earth continuity plate, 1 blanking plug, 1 cable gland.

Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Polyester Catalog Number
Twin Push Buttons + Push-Pull Emergency Stop					
 <p>1x green push button 'I' with 1NO contacts 1x red push button 'O' with 1NC contacts Momentary contacts 1x red mushroom head push-pull with 1x NC maintained contact</p>		2 x M20	1.3	4.0	U22W2A5A9D9
		2 x M25	1.3	4.0	U22W4A5A9D9
Pilot Light + Push Button					
 <p>1x green light ① 1x green push button 'I' with 1NO Momentary contact</p>		2 x M20	1.2	4.0	U22W2PGA5
		2 x M25	1.2	4.0	U22W4PGA5
 <p>1x green light ① 1x green push button 'I' with 1NO+ 1NC Momentary contacts</p>		2 x M20	1.2	4.0	U22W2PGA3
		2 x M25	1.2	4.0	U22W4PGA3
 <p>1x red light ① 1x red push button 'O' with 1NC Momentary contact</p>		2 x M20	1.2	4.0	U22W2PRA9
		2 x M25	1.2	4.0	U22W4PRA9
 <p>1x red light ① 1x red push button 'O' with 1NO + 1NC Momentary contact</p>		2 x M20	1.2	4.0	U22W2PRA3
		2 x M25	1.2	4.0	U22W4PRA3

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.
① 12 Vac to 254 Vac 50/60 Hz - 12 Vdc to 60 Vdc.

Unicode® 2 Series Polyester Control Stations and Switches

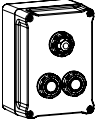
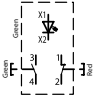
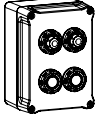
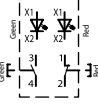
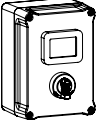
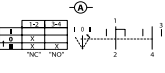
Increased Safety

Fiberglass Reinforced Polyester

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 2 Polyester Control Station

Included: 1 white self-adhesive laminated plastic nameplate, 1 brass earth continuity plate, 1 blanking plug, 1 cable gland.

Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Polyester Catalog Number
Pilot Light + Twin Push Buttons ④					
 <p>1x green light ④ 1x green push button 'I' with 1NO 1x red push button 'O' with 1NC Momentary contacts</p>		2 x M20	1.3	4.0	U22W2PGA5A9
		2 x M25	1.3	4.0	U22W4PGA5A9
Twin Pilot Lights + Twin Push Buttons					
 <p>1x green light ① 1x red light ① 1x green push button 'I' with 1NO 1x red push button 'O' with 1NC Momentary contacts</p>		2 x M20	1.3	4.0	U22W2PGPRA5A9
		2 x M25	1.3	4.0	U22W4PGPRA5A9
Ammeter + 3-Position Selector Switch					
 <p>1x ammeter 48 x 48 mm, 1A C.T., 3 F.L.C., with 0 - 1 - 3 scale 1x switch 3 positions 'I - 0 - II' with spring return from II to 0 1NO + 1NC contact</p>		2 x M20	1.2	4.0	U22W2VA13M3
		2 x M25	1.2	4.0	U22W4VA13M3

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.

① 12 Vac to 254 Vac 50/60 Hz - 12 Vdc to 60 Vdc.

Unicode® 2 Series Polyester Control Stations and Switches

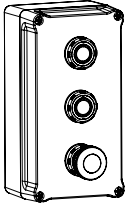
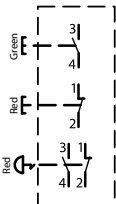
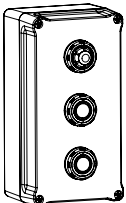
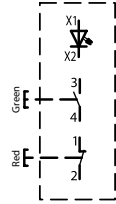
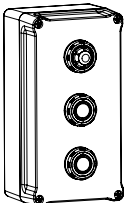
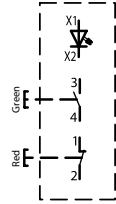
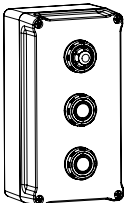
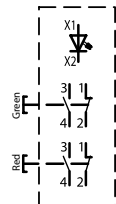
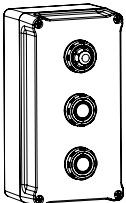
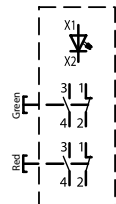
Increased Safety

Fiberglass Reinforced Polyester

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 3 Polyester Control Station

Included: 1 white self-adhesive laminated plastic nameplate, 1 brass earth continuity plate, 1 blanking plug, 1 cable gland.

Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Polyester Catalog Number
Twin Push Buttons + Push-Pull Emergency Stop					
 <p>1x green push button 'I' with 1NO contact 1x red push button 'O' with 1NC contact Momentary contacts 1x red mushroom head push-pull Emergency button with 1NO + 1NC Maintained contacts</p>		2 x M20	1.4	6.0	U23W2A5A9D3
		2 x M25	1.4	6.0	U23W4A5A9D3
Pilot Light + Twin Push Buttons					
 <p>1x green light ① 1x green push button 'I' with 1NO contact 1x red push button 'O' with 1NC contact Momentary contacts</p>		2 x M20	1.4	6.0	U23W2PGA5A9
		2 x M25	1.4	6.0	U23W4PGA5A9
 <p>1x red light ① 1x green push button 'I' with 1NO contact 1x red push button 'O' with 1NC contact Momentary contacts</p>		2 x M20	1.4	6.0	U23W2PRA5A9
		2 x M25	1.4	6.0	U23W4PRA5A9
 <p>1x green light ① 1x green push button 'I' with 1NO + 1NC contact 1x red push button 'O' with 1NO + 1NC contact Momentary contacts</p>		2 x M20	1.4	6.0	U23W2PGA3A3
		2 x M25	1.4	6.0	U23W4PGA3A3
 <p>1x red light ① 1x green push button 'I' with 1NO + 1NC contact 1x red push button 'O' with 1NO + 1NC contact Momentary contacts</p>		2 x M20	1.4	6.0	U23W2PRA3A3
		2 x M25	1.4	6.0	U23W4PRA3A3

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.
① 12 Vac to 254 Vac 50/60 Hz - 12 Vdc to 60 Vdc.

Unicode® 2 Series Polyester Control Stations and Switches

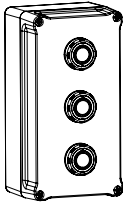
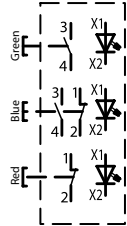
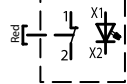
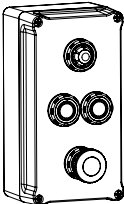
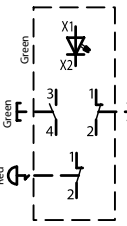
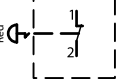
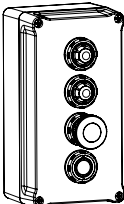
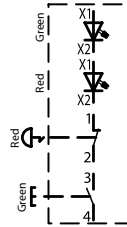
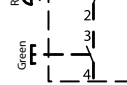
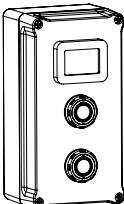
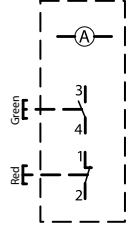
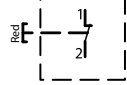
Increased Safety

Fiberglass Reinforced Polyester

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 3 Polyester Control Station

Included: 1 white self-adhesive laminated plastic nameplate, 1 brass earth continuity plate, 1 blanking plug, 1 cable gland.

Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Polyester Catalog Number
Triple Illuminated Push Buttons					
 <p>1x green illuminated push button with 1NO contact ① 1x blue illuminated push button with 1NO + 1NC contact ① 1x red illuminated push button with NC contact ① Momentary contacts</p>		2 x M20	1.4	6.0	U23W2LG5LB3LR9
		2 x M25	1.4	6.0	U23W4LG5LB3LR9
Pilot Light + Twin Push Buttons + Push-Pull Emergency Stop					
 <p>1x green light ① 1x green push button 'I' with 1NO contact 1x red push button 'O' with 1NC contact Momentary contacts 1x red mushroom head push-pull with 1x NC maintained contact</p>		2 x M20	1.4	6.0	U23W2PGA5A9D9
		2 x M25	1.4	6.0	U23W4PGA5A9D9
Twin Pilot Lights + Push-Pull Emergency Stop + Push Button					
 <p>1x green light ① 1x red light ① 1x red mushroom head push-pull with 1x NC maintained contact 1x green push button 'I' with 1NO momentary contact</p>		2 x M20	1.4	6.0	U23W2PGPRD9A5
		2 x M25	1.4	6.0	U23W4PGPRD9A5
Ammeter + Twin Push Buttons					
 <p>1x ammeter 48 x 48 mm, 1A C.T., 3 F.L.C., with 0 - 1 - 3 scale 1x green push button 'I' with 1NO contact 1x red push button 'O' with 1NC contact Momentary contacts</p>		2 x M20	1.4	6.0	U23W2VA13A5A9
		2 x M25	1.4	6.0	U23W4VA13A5A9

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.
① 12 Vac to 254 Vac 50/60 Hz - 12 Vdc to 60 Vdc.

Unicode® 2 Series Polyester Control Stations and Switches

Increased Safety

Fiberglass Reinforced Polyester

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Nameplates – Set of 10

Blank self-adhesive, laminated plastic 58 mm x 18 mm.

Color	Catalog Number
White (black letters)	UNPW
Yellow (black letters)	UNPY
Red (white letters)	UNPR
Blue (white letters)	UNPB
Black (white letters)	UNPN
Green (white letters)	UNPG

Inserts for Push Button – Set of 5

Marking	Color	Catalog Number
(unmarked)	Green	UIAG
(unmarked)	Red	UIAR
(unmarked)	Yellow	UIAY
(unmarked)	White	UIAW
(unmarked)	Blue	UIAB
(unmarked)	Black	UIAN
ON	Green	UIA01
OFF	Red	UIA02
START	Green	UIA03
STOP	Red	UIA04
MARCHE	Green	UIA05
ARRET	Red	UIA06
I	Green	UIA07
O	Red	UIA08

Inserts for Illuminated Push Button – Set of 5

Marking	Color	Catalog Number
(unmarked)	Green	UILG
(unmarked)	Red	UILR
(unmarked)	Yellow	UILY
(unmarked)	White	UILW
(unmarked)	Blue	UILB
ON	Green	UIL01
OFF	Red	UIL02
START	Green	UIL03
STOP	Red	UIL04
MARCHE	Green	UIL05
ARRET	Red	UIL06
I	Green	UIL07
O	Red	UIL08

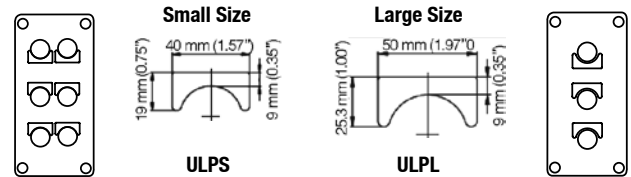
Spare Key

For all key-operated buttons.

Description	Catalog Number
Spare key type 4 A 185	SK4A185

Standard Legend Plates

Two sizes available. Self-adhesive yellow laminated plastic (black lettering).



Text	Catalog Number	
	Small	Large
Blank (set of 10)	ULPS	ULPL
ON	ULPSA01	ULPLA01
OFF	ULPSA02	ULPLA02
FORWARD	ULPSA03	ULPLA03
REVERSE	ULPSA04	ULPLA04
JOG	ULPSA05	ULPLA05
RUN	ULPSA06	ULPLA06
START	ULPSA07	ULPLA07
STOP	ULPSA08	ULPLA08
UP	ULPSA09	ULPLA09
DOWN	ULPSA10	ULPLA10
FAST	ULPSA11	ULPLA11
SLOW	ULPSA12	ULPLA12
RAISE	ULPSA13	ULPLA13
LOWER	ULPSA14	ULPLA14
OPEN	ULPSA15	ULPLA15
CLOSE	ULPSA16	ULPLA16
LOW	ULPSA17	ULPLA17
HIGH	ULPSA18	ULPLA18
TEST	ULPSA19	ULPLA19
RESET	ULPSA20	ULPLA20
EMERGENCY STOP	ULPSA21	ULPLA21
MARCHE	ULPSA22	ULPLA22
ARRET	ULPSA23	ULPLA23
ARRET D'URGENCE	ULPSA24	ULPLA24
HAUT	ULPSA25	ULPLA25
BAS	ULPSA26	ULPLA26
O—I	ULPSH01	ULPLH01
ON—OFF	ULPSH02	ULPLH02
START—STOP	ULPSH03	ULPLH03
STOP—START	ULPSH04	ULPLH04
HAND—AUTO	ULPSH05	ULPLH05
MANU—AUTO	ULPSH06	ULPLH06
FORWARD—REVERSE	ULPSH07	ULPLH07
REMOTE—LOCAL	ULPSH08	ULPLH08
MARCHE—ARRET	ULPSH09	ULPLH09
I—O—II	ULPSJ01	ULPLJ01
OFF—O—ON	ULPSJ02	ULPLJ02
START—NORMAL—STOP	ULPSJ03	ULPLJ03
HAND—OFF—AUTO	ULPSJ04	ULPLJ04
MANU—O—AUTO	ULPSJ05	ULPLJ05
FORWARD—OFF—REVERSE	ULPSJ06	ULPLJ06
LOCAL—REMOTE—AUTO	ULPSJ07	ULPLJ07
LOCAL—O—REMOTE	ULPSJ08	ULPLJ08
MARCHE—NORMAL—ARRET	ULPSJ09	ULPLJ09



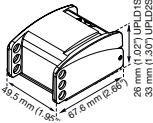





Unicode® 2 Series Polyester Control Stations and Switches

Increased Safety

Fiberglass Reinforced Polyester

Zone 1 and 2 – 21 and 22

Gas (G) and Dust (D)

	Description	Catalog Number
	<p>Additional Contacts</p> <p>Each actuator is capable of activating 3 contacts. Exception: Illuminated push button and all actuators with key: 2 contacts maximum</p> <p>1NO contact</p> <p>1NC contact</p>	<p>UCB5R</p> <p>UCB9R</p>
	<p>Yellow Guard</p> <p>Mushroom head protection for emergency stop</p>	098657
	<p>Padlockable Guard</p> <p>Stainless steel and plastic cover, capacity: 3 padlocks diameter 6 mm maximum (not supplied)</p> <p>For push button and rotary actuator</p> <p>For mushroom head actuator</p>	<p>UPLD1S</p> <p>UPLD2S</p>
	<p>Cable Gland Exe</p> <p>For unarmored cable Exe - IP66 - in polyamide entry thread seal</p> <p>M20 (capacity 6.5-14.5 mm)</p>	095605
	<p>For armored cable Exe/Exd - IP66 - in nickel plated brass (without entry thread seal)</p> <p>Braid and Tape type:</p> <p>M20 (inner: 6.4-14.0/outer: 12.5-20.9 mm)</p> <p>Single Wired Armor (SWA):</p> <p>M20 (inner: 6.4-14.0/outer: 12.5-20.9 mm)</p>	<p>20E1FX5</p> <p>20E1FW5</p>
	<p>Adaptors</p> <p>Exd/Exe - IP66 in nickel plated brass (without entry thread seal)</p> <p>Male M20 - Female 1/2" NPT</p> <p>Male M20 - Female 3/4" NPT</p>	<p>737DM2T15</p> <p>737DM2T25</p>
	<p>Entry Thread Seal</p> <p>M20 (in white nylon)</p>	20ETS2
	<p>Combination Drain and Breather</p> <p>Exe - IP66 - supplied with entry thread seal and locknut</p> <p>M20 male thread in Polyamide</p> <p>M20 male thread in Brass</p> <p>M20 male thread in Stainless Steel</p>	<p>DBE20P</p> <p>DBE20B</p> <p>DBE20S</p>
	<p>Feed-Thru Earth Stud Terminal</p> <p>Exe - IP66 – supplied with weatherproof seal and green/yellow earth conductor – 300 mm length</p> <p>M20 with M5 earth and 2.5 mm² conductor</p>	PREESTM20

Shaded catalog numbers are normally stocked items. All other items are made to order.

Unicode® 2 Series Polyester Control Stations and Switches

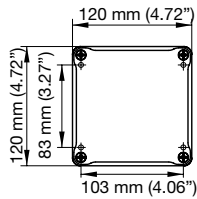
Increased Safety

Fiberglass Reinforced Polyester

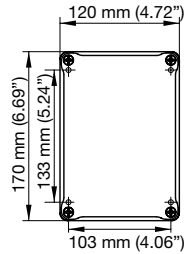
Zone 1 and 2 – 21 and 22

Gas (G) and Dust (D)

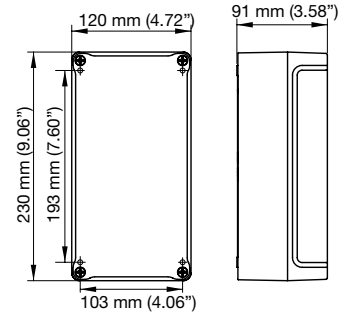
Dimensions in Millimeters



Size 1 Box



Size 2 Box



Size 3 Box

Mounting/Fixing Details for Above Boxes: Four Holes Ø 5 mm

Unicode® 2 Series Stainless steel Control Stations and Switches

Increased Safety

316L Stainless Steel

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- Local control stations and motor control stations for use in hazardous areas covering the broadest possible range of applications.
- Control of equipment at:
 - Power plants
 - Chemical and petrochemical plants
 - Petroleum refineries
 - Reverse osmosis plants
 - Pulp and paper processing plants
 - Various industrial applications
- Push buttons and selector switches are used in conjunction with contactors or magnetic starters for remote control of motors in hazardous locations. They provide circuit control and/or selection.
- Pilot lights provide visual assurance that an electrical function is being performed at a remote or hazardous location.
- For use in washdown areas.

Features

- Employs Ex de method of protection which eliminates the need for external seals.
- Operators include push buttons, illuminated push buttons, selector switches, control and load break switches and LED pilot lights.
- Pilot light employs high intensity single LED with lifetime of 100,000 hours that can be used at:
 - 12 Vac to 254 Vac 50/60 Hz
 - 12 Vdc to 60 Vdc
- Up to 3 contact blocks per actuator can be used.
- Contact block technical data:
 - IEC rated operating voltage (Ue): 500 Vac – 110 Vdc
 - IEC switching capacity:
 - AC12: 16 Amp/400 Vac
 - AC14: 10 Amp/400 Vac
 - AC15: 6 Amp/500 Vac
 - DC13: 2 Amp/24 Vdc and 1 Amp/110 Vdc
- Selector switch technical data:
 - IEC rated operating voltage: 690 Vac
 - IEC rated operating current: maximum 16 Amp
 - IEC switching capacity:
 - AC1: 16 Amp/690 Vac
 - AC15: 16 Amp/415 Vac
 - AC3: 8 Amp/500 Vac
 - AC3: 4 Amp/690 Vac
 - AC3: 16 Amp/690 Vac
 - DC1: 10 Amp/24 Vdc
 - DC1: 6 Amp/60 Vdc
 - DC1: 6 Amp/110 Vdc (2 contacts wired in series)
 - DC1: 6 Amp/220 Vdc (3 contacts in series)
- Enclosures are rated for IP66 with firmly secured gasket.
- Operators and contact blocks are spaced so as to have easy and ample space for wiring.
- Wide selection of termination methods available.
- Choice of DIN rail mounted high performance contact block suitable for low intensity (less than 5mA).
- TS35 rail mounted components held securely in place during operation and easily removed for service.
- Brass Inserts are provided for TS35 DIN rails or mounting plate to be installed inside the enclosure.
- Captive, corrosion resistant stainless steel cover screws.



U62W2 PRA5A9
316 Stainless Steel

Standard Materials

- Body and cover : 316L stainless steel with natural finish
- Cover screws : 304 stainless steel

Accessories

- Key for changing actuator blocks.
- Guard for mushroom head actuator.
- Padlockable guard.
- M5 and M6 earth stud.
- Combination drain and breather available in brass, polyamide and stainless steel.

Options

- Nameplates: stainless steel or Lamacoid with different color combinations.
- Padlocking facility at left, center, right or any position on selector switches.
- Padlocking facility for momentary and maintained push buttons.
- Special contact arrangements available, see *Unicode 2 Series Customized Control Stations*.

Unicode® 2 Series Stainless steel Control Stations and Switches

Increased Safety

316L Stainless Steel

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Certification and Compliances

◆ ATEX or IECEx Certification

• Certification Type JBe (Stainless Steel)

- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II2 G
 - Type of Protection: Ex de IIC or Ex demb IIC (depending of the actuator)
 - Temperature Class: T5 to T6
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C to T95 °C
- Ambient Temperature: -50 °C to +70 °C (empty enclosure)
-20°C or -25°C to +55°C or +60°C depending of the actuator
- CE Declaration of Conformity: 50232
- ATEX Certificate: LCIE 02 ATEX 6118X
- IECEx Certificate: LCI 11.0008X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

◆ EURASEC Certification

- EURASEC RU C-FR Г5 05.B.00911

◆ Others Certification ①

- INMETRO Certificate: BVC 11.0418-X

① Inmetro certification available on special request only. Contact your local sales for more information.

Unicode® 2 Series Stainless steel Control Stations and Switches

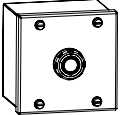
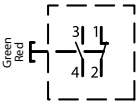
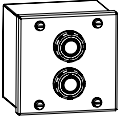
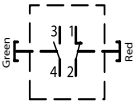
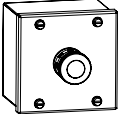
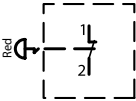
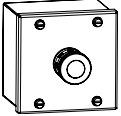
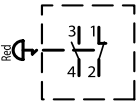

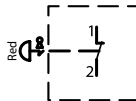
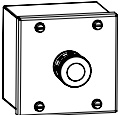
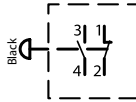
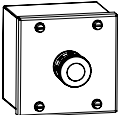
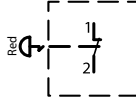
Increased Safety

316L Stainless Steel

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 1 316 L Control Station

Included: 1 white self-adhesive laminated plastic nameplate, 2x M20 bottom clearance entries, 1 blanking plug, 1 cable gland in polyamide, 2 locknuts.

Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Catalog Number
Momentary Push Button					
 <p>Green insert 'I' + red insert 'O' with 1NO + 1NC momentary contact</p>		2 x M20	1.2	4.3	U61W2A3
Twin Momentary Push Buttons					
 <p>1x green push button 'I' with 1NO contact 1x red push button 'O' with 1NC contact Momentary contacts</p>		2 x M20	1.3	4.3	U61W2A5A9
Emergency Stop					
 <p>Red mushroom head push-pull 1NC maintained contact</p>		2 x M20	1.2	4.3	U61W2D9
 <p>Red mushroom head push-pull 1NO + 1NC maintained contact</p>		2 x M20	1.2	4.3	U61W2D3
Emergency Stop					
 <p>Red mushroom head key release 1NC maintained contact</p>		2 x M20	1.2	4.3	U61W2C9
Mushroom Head Push Button					
 <p>Black mushroom head push button 1NO+1NC momentary contacts</p>		2 x M20	1.2	4.3	U61W2B3
 <p>Red mushroom head push button 1NC momentary contact</p>		2 x M20	1.2	4.3	U61W2R9

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.

Unicode® 2 Series Stainless steel Control Stations and Switches

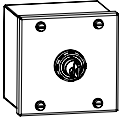
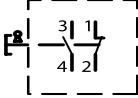
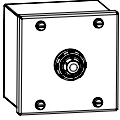
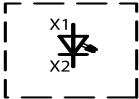
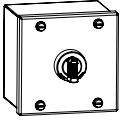
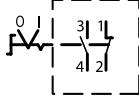
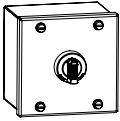
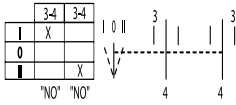
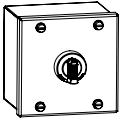
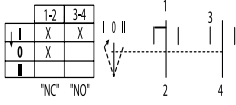
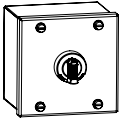
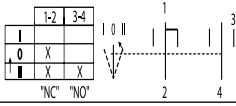
Increased Safety

316L Stainless Steel

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 1 316L Control Station

Included: 1 white self-adhesive laminated plastic nameplate, 2x M20 bottom clearance entries, 1 blanking plug, 1 cable gland in polyamide, 2 locknuts.

Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Catalog Number
Key Push Button					
 <p>With key removable in both positions 1NO+1NC maintained contact</p>		2 x M20	1.0	4.0	U61W2E3
Pilot Light					
 <p>1x red pilot light ①</p>		2 x M20	1.2	4.3	U61W2PR
1x green pilot light ①		2 x M20	1.2	4.3	U61W2PG
1x blue pilot light ①		2 x M20	1.2	4.3	U61W2PB
1x yellow pilot light ①		2 x M20	1.2	4.3	U61W2PY
1x white pilot light ①		2 x M20	1.2	4.3	U61W2PW
2-Position Selector Switch					
 <p>2 fixed positions '0 - I' 1NO + 1 NC contacts</p>		2 x M20	1.2	4.3	U61W2H3
3-Position Selector Switch					
 <p>3 fixed positions 'I - 0 - II' 2NO contacts</p>		2 x M20	1.2	4.3	U61W2J1
 <p>3 fixed positions 'I - 0 - II' With spring return from I to 0 1NO + 1NC contacts</p>		2 x M20	1.2	4.3	U61W2N3
 <p>3 positions 'I - 0 - II' With spring return from II to 0 1NO + 1NC contacts</p>		2 x M20	1.2	4.3	U61W2M3

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.
① 12 Vac to 254 Vac 50/60 Hz - 12 Vdc to 60 Vdc

Unicode® 2 Series Stainless steel Control Stations and Switches

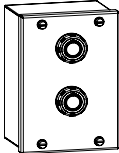
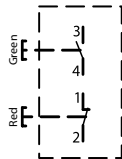
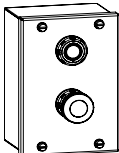
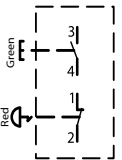
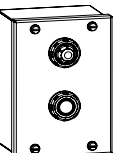
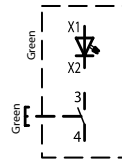

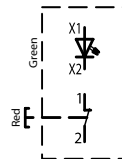
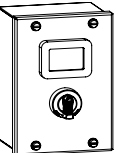
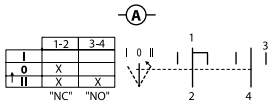
Increased Safety

316L Stainless Steel

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 2 316L Control Station

Included: 1 white self-adhesive laminated plastic nameplate, 2x M20 bottom clearance entries, 1 blanking plug, 1 cable gland in polyamide, 2 locknuts.

Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Catalog Number
Twin Push Button					
 <p>1 x green push button 'I' with 1NO contact 1 x red push button 'O' with 1NC contact Momentary contacts</p>		2 x M20	1.8	4.3	U62W2A5A9
Push Button + Push-Pull Emergency Stop					
 <p>1 x green push button 'I' with 1NO momentary contact 1 x red mushroom head push-pull emergency button with 1NC maintained contact</p>		2 x M20	1.8	4.3	U62W2A5D9
Pilot Light + Push Button					
 <p>1 x green light ① 1 x green push button 'I' with 1NO momentary contact</p>		2 x M20	1.8	4.3	U62W2PGA5
 <p>1 x red light ① 1 x red push button 'O' with 1NC momentary contact</p>		2 x M20	1.8	4.3	U62W2PRA9
Ammeter + 3-Position Selector Switch					
 <p>1 x ammeter 48 x 48 mm, 1A C.T., 3 F.L.C., with 0-1-3 scale 1 x 3-position selector switch 'I - O - II' With spring return from II to 0 1NO + 1NC contacts</p>		2 x M20	1.8	4.3	U62W2VA13M3

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.
① 12 Vac to 254 Vac 50/60 Hz - 12 Vdc to 60 Vdc

Unicode® 2 Series Stainless steel Control Stations and Switches

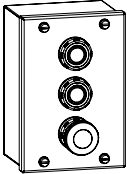
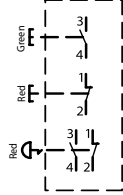
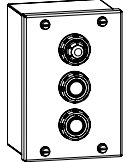
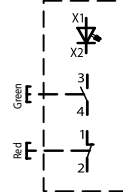
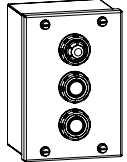
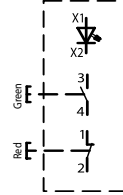
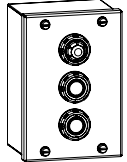
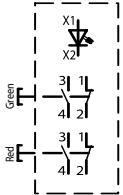
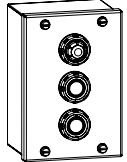
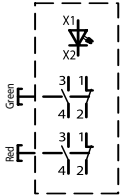
Increased Safety

316L Stainless Steel

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 2 316L Control Station

Included: 1 white self-adhesive laminated plastic nameplate, 2x M20 bottom clearance entries, 1 blanking plug, 1 cable gland in polyamide, 2 locknuts.

Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Catalog Number
Twin Push Buttons + Push-Pull Emergency Stop					
 <p>1 x green push button 'I' with 1NO contact 1 x red push button 'O' with 1NC contact Momentary contacts 1 x red mushroom head push-pull emergency button with 1NO + 1NC contacts</p>		2 x M20	1.8	4.3	U62W2A5A9D3
Pilot Light + Twin Push Buttons					
 <p>1x green pilot light ① 1 x green push button 'I' with 1NO contact 1 x red push button 'O' with 1NC contact Momentary contacts</p>		2 x M20	1.8	4.3	U62W2PGA5A9
 <p>1 x red pilot light ① 1 x green push button 'I' with 1NO contact 1 x red push button 'O' with 1NC contact Momentary contact</p>		2 x M20	1.8	4.3	U62W2PRA5A9
 <p>1 x green pilot light ① 1 x green push button 'I' with 1NO + 1NC contacts 1 x red push button 'O' with 1NO + 1NC contacts Momentary contacts</p>		2 x M20	1.8	4.3	U62W2PGA3A3
 <p>1x red pilot light ① 1 x green push button 'I' with 1NO + 1NC contacts 1 x red push button 'O' with 1NO + 1NC contacts Momentary contacts</p>		2 x M20	1.8	4.3	U62W2PRA3A3

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.
① 12 Vac to 254 Vac 50/60 Hz - 12 Vdc to 60 Vdc.

Unicode® 2 Series Stainless steel Control Stations and Switches

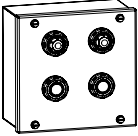


Increased Safety

316L Stainless Steel

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 3 316L Control Station

Included: 1 white self-adhesive laminated plastic nameplate, 2x M20 bottom clearance entries, 1 blanking plug, 1 cable gland in polyamide, 2 locknuts.

Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Catalog Number
Twin Pilot Lights + Twin Push Buttons					
 <ul style="list-style-type: none"> 1 x green pilot light ① 1 x red pilot light ① 1 x green push button 'I' with 1NO contact 1 x red push button 'O' with 1NC contact Momentary contacts 		2 x M20	2.1	10.5	U63W2PGPRA5A9
		2 x M25	2.1	10.5	U63W4PGPRA5A9

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section
① 12 Vac to 254 Vac 50/60 Hz - 12 Vdc to 60 Vdc.

Unicode® 2 Series Stainless steel Control Stations and Switches

Increased Safety

316L Stainless Steel

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Nameplates – Set of 10

Blank self-adhesive, laminated plastic 58 mm x 18 mm.

Color	Catalog Number
White (black letters)	UNPW
Yellow (black letters)	UNPY
Red (white letters)	UNPR
Blue (white letters)	UNPB
Black (white letters)	UNPN
Green (white letters)	UNPG

Inserts for Push Button – Set of 5

Marking	Color	Catalog Number
(unmarked)	Green	UIAG
(unmarked)	Red	UIAR
(unmarked)	Yellow	UIAY
(unmarked)	White	UIAW
(unmarked)	Blue	UIAB
(unmarked)	Black	UIAN
ON	Green	UIA01
OFF	Red	UIA02
START	Green	UIA03
STOP	Red	UIA04
MARCHE	Green	UIA05
ARRET	Red	UIA06
I	Green	UIA07
O	Red	UIA08

Inserts for Illuminated Push Button – Set of 5

Marking	Color	Catalog Number
(unmarked)	Green	UILG
(unmarked)	Red	UILR
(unmarked)	Yellow	UILY
(unmarked)	White	UILW
(unmarked)	Blue	UILB
ON	Green	UIL01
OFF	Red	UIL02
START	Green	UIL03
STOP	Red	UIL04
MARCHE	Green	UIL05
ARRET	Red	UIL06
I	Green	UIL07
O	Red	UIL08

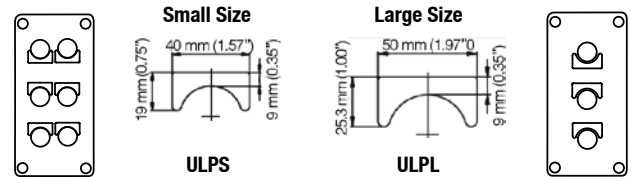
Spare Key

For all key-operated buttons.

Description	Catalog Number
Spare key type 4 A 185	SK4A185

Standard Legend Plates

Two sizes available. Self-adhesive yellow laminated plastic (black lettering).



Text	Catalog Number	
	Small	Large
Blank (set of 10)	ULPS	ULPL
ON	ULPSA01	ULPLA01
OFF	ULPSA02	ULPLA02
FORWARD	ULPSA03	ULPLA03
REVERSE	ULPSA04	ULPLA04
JOG	ULPSA05	ULPLA05
RUN	ULPSA06	ULPLA06
START	ULPSA07	ULPLA07
STOP	ULPSA08	ULPLA08
UP	ULPSA09	ULPLA09
DOWN	ULPSA10	ULPLA10
FAST	ULPSA11	ULPLA11
SLOW	ULPSA12	ULPLA12
RAISE	ULPSA13	ULPLA13
LOWER	ULPSA14	ULPLA14
OPEN	ULPSA15	ULPLA15
CLOSE	ULPSA16	ULPLA16
LOW	ULPSA17	ULPLA17
HIGH	ULPSA18	ULPLA18
TEST	ULPSA19	ULPLA19
RESET	ULPSA20	ULPLA20
EMERGENCY STOP	ULPSA21	ULPLA21
MARCHE	ULPSA22	ULPLA22
ARRET	ULPSA23	ULPLA23
ARRET D'URGENCE	ULPSA24	ULPLA24
HAUT	ULPSA25	ULPLA25
BAS	ULPSA26	ULPLA26
O—I	ULPSH01	ULPLH01
ON—OFF	ULPSH02	ULPLH02
START—STOP	ULPSH03	ULPLH03
STOP—START	ULPSH04	ULPLH04
HAND—AUTO	ULPSH05	ULPLH05
MANU—AUTO	ULPSH06	ULPLH06
FORWARD—REVERSE	ULPSH07	ULPLH07
REMOTE—LOCAL	ULPSH08	ULPLH08
MARCHE—ARRET	ULPSH09	ULPLH09
I—O—II	ULPSJ01	ULPLJ01
OFF—O—ON	ULPSJ02	ULPLJ02
START—NORMAL—STOP	ULPSJ03	ULPLJ03
HAND—OFF—AUTO	ULPSJ04	ULPLJ04
MANU—O—AUTO	ULPSJ05	ULPLJ05
FORWARD—OFF—REVERSE	ULPSJ06	ULPLJ06
LOCAL—REMOTE—AUTO	ULPSJ07	ULPLJ07
LOCAL—O—REMOTE	ULPSJ08	ULPLJ08
MARCHE—NORMAL—ARRET	ULPSJ09	ULPLJ09

Unicode® 2 Series Stainless steel Control Stations and Switches

Increased Safety

316L Stainless Steel

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

	Description	Catalog Number
	<p>Additional Contacts</p> <p>Each actuator is capable of activating 3 contacts. Exception: Illuminated push button and all actuators with key: 2 contacts maximum</p> <p>1NO contact</p> <p>1NC contact</p>	<p>UCB5R</p> <p>UCB9R</p>
	<p>Yellow Guard</p> <p>Mushroom head protection for emergency stop</p>	098657
	<p>Padlockable Guard</p> <p>Stainless steel and plastic cover, capacity: 3 padlocks diameter 6 mm maximum (not supplied)</p> <p>For push button and rotary actuator</p> <p>For mushroom head actuator</p>	<p>UPLD1S</p> <p>UPLD2S</p>
	<p>Cable Gland Exe</p> <p>For unarmored cable Exe - IP66 - in polyamide entry thread seal</p> <p>M20 (capacity 6.5-14.5 mm)</p>	095605
	<p>For armored cable Exe/Exd - IP66 - in nickel plated brass (without entry thread seal)</p> <p>Braid and Tape type:</p> <p>M20 (inner: 6.4-14.0/outer: 12.5-20.9 mm)</p> <p>Single Wired Armor (SWA):</p> <p>M20 (inner: 6.4-14.0/outer: 12.5-20.9 mm)</p>	<p>20E1FX5</p> <p>20E1FW5</p>
	<p>Adaptors</p> <p>Exd/Exe - IP66 in nickel plated brass (without entry thread seal)</p> <p>Male M20 - Female 1/2" NPT</p> <p>Male M20 - Female 3/4" NPT</p>	<p>737DM2T15</p> <p>737DM2T25</p>
	<p>Entry Thread Seal</p> <p>M20 (in white nylon)</p>	20ETS2
	<p>Combination Drain and Breather</p> <p>Exe - IP66 - supplied with entry thread seal and locknut</p> <p>M20 male thread in Polyamide</p> <p>M20 male thread in Brass</p> <p>M20 male thread in Stainless Steel</p>	<p>DBE20P</p> <p>DBE20B</p> <p>DBE20S</p>
	<p>Feed-Thru Earth Stud Terminal</p> <p>Exe - IP66 - supplied with weatherproof seal and green/yellow earth conductor - 300 mm length</p> <p>M20 with M5 earth and 2.5 mm² conductor</p>	PREESTM20

Shaded catalog numbers are normally stocked items. All other items are made to order.

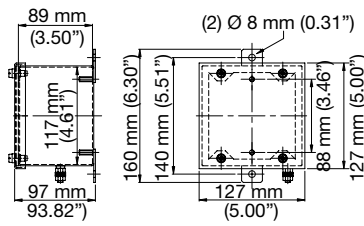
Unicode® 2 Series Stainless steel Control Stations and Switches

Increased Safety

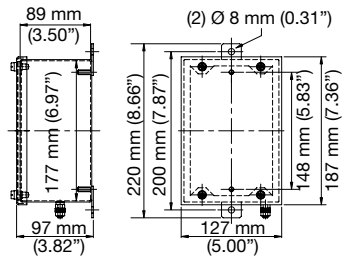
316L Stainless Steel

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

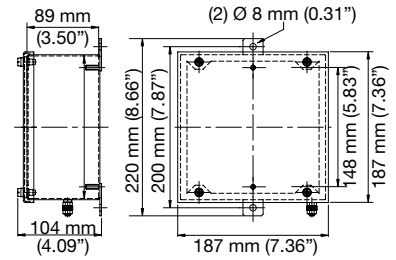
Dimensions in Millimeters



Size 1 Box



Size 2 Box



Size 3 Box

Unicode® 2 Series Aluminium Control Stations and Switches

Increased Safety

Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- Local control stations and motor control stations for use in hazardous areas covering the broadest possible range of applications.
- Control of equipment at:
 - Power plants
 - Chemical and petrochemical plants
 - Petroleum refineries
 - Reverse osmosis plants
 - Pulp and paper processing plants
 - Various industrial applications
- Push buttons and selector switches are used in conjunction with contactors or magnetic starters for remote control of motors in hazardous locations. They provide circuit control and/or selection.
- Pilot lights provide visual assurance that an electrical function is being performed at a remote or hazardous location.
- For use in washdown areas.

Features

- Employs Ex de method of protection which eliminates the need for external seals.
- Operators include push buttons, illuminated push buttons, selector switches, control and load break switches and LED pilot lights.
- Pilot light employs high intensity single LED with lifetime of 100,000 hours that can be used at:
 - 12 Vac to 254 Vac 50/60 Hz
 - 12 Vdc to 60 Vdc
- Up to 3 contact blocks per actuator can be used.
- Contact block technical data:
 - IEC rated operating voltage (Ue): 500 Vac – 110 Vdc
 - IEC switching capacity:
 - AC12: 16 Amp/400 Vac
 - AC14: 10 Amp/400 Vac
 - AC15: 6 Amp/500 Vac
 - DC13: 2 Amp/24 Vdc and 1 Amp/110 Vdc
- Selector switch technical data:
 - IEC rated operating voltage: 690 Vac
 - IEC rated operating current: maximum 16 Amp
 - IEC switching capacity:
 - AC1: 16 Amp/690 Vac
 - AC15: 16 Amp/415 Vac
 - AC3: 8 Amp/500 Vac
 - AC3: 4 Amp/690 Vac
 - AC3: 16 Amp/690 Vac
 - DC1: 10 Amp/24 Vdc
 - DC1: 6 Amp/60 Vdc
 - DC1: 6 Amp/110 Vdc (2 contacts wired in series)
 - DC1: 6 Amp/220 Vdc (3 contacts in series)
- Enclosures are rated for IP66 with firmly secured gasket.
- Operators and contact blocks are spaced so as to have easy and ample space for wiring.
- Wide selection of termination methods available.
- Choice of DIN rail mounted high performance contact block suitable for low intensity (less than 5mA).
- TS35 rail mounted components held securely in place during operation and easily removed for service.
- Brass Inserts are provided for TS35 DIN rails or mounting plate to be installed inside the enclosure.
- Captive, corrosion resistant stainless steel cover screws.



U83W2 PRA5A9
Aluminum

Standard Materials

- Body and cover: aluminum with gray epoxy powder coating RAL7038
- Cover screws for 316L stainless steel or aluminum body: 304 stainless steel
- Cover screws for fiberglass reinforced polyester body: 316 stainless steel

Accessories

- Key for changing actuator blocks.
- Guard for mushroom head actuator.
- Padlockable guard.
- M5 and M6 earth stud.
- Combination drain and breather available in brass, polyamide and stainless steel.

Options

- Nameplates: stainless steel or Lamacoid with different color combinations.
- Padlocking facility at left, center, right or any position on selector switches.
- Padlocking facility for momentary and maintained push buttons.
- Special contact arrangements available, see *Unicode 2 Series Customized Control Stations*.

Unicode® 2 Series Aluminium Control Stations and Switches

Increased Safety

Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Certification and Compliances

◆ATEX Certification

• Certification Type PCe (Aluminum)

- Gas: Zone 1 and 2
- Conforming to ATEX 94/9/CE: Ⓢ II2 G
- Type of Protection: Ex de IIC or Ex demb IIC (depending of the actuator)
- Temperature class: T6
- Dust: Zone 21 and 22
- Conforming to ATEX 94/9/CE: Ⓢ II2 D
- Type of Protection: Ex tD A21
- Surface Temperature: T80 °C
- Ambient Temperature: -55 °C to +60 °C (empty enclosure)
- -20°C or -25°C to +55°C or +60°C depending of the actuator
- CE Declaration of Conformity: 50221
- ATEX Certificate: LCIE 02 ATEX 6047
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

◆EURASEC Certification

• Certification Type PCe (Aluminum)

- EURASEC RU C-FR Г5.05.B.00911

Unicode® 2 Series Aluminium Control Stations and Switches

Increased Safety


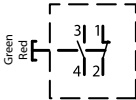

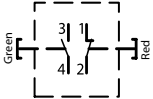

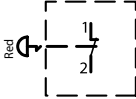
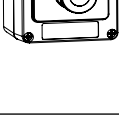
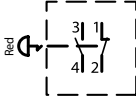

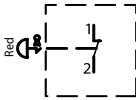
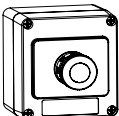
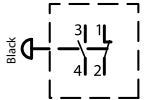
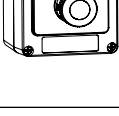
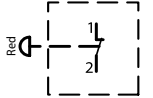

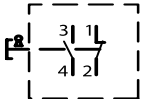
Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 1 Aluminum Control Station

Standard equipment: 1 white self-adhesive laminated plastic nameplate, 2 x M20 bottom clearance entries, 1 blanking plug, 1 cable gland in polyamide, 2 locknuts.



Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Catalog Number
Impulse Push Button					
 <p>Green insert 'I' + red insert 'O' with 1NO + 1NC momentary contact</p>		2 x M20	1	2.7	U81W2A3
Twin Impulse Push Buttons					
 <p>1x green push button 'I' with 1NO momentary contact 1 x red push button 'O' with 1NC contact momentary contact</p>		2 x M20	1.1	2.7	U81W2A5A9
Emergency Stop					
 <p>Red mushroom head push-pull 1NC maintained contact</p>		2 x M20	1	2.7	U81W2D9
 <p>Red mushroom head push-pull 1NO + 1NC maintained contacts</p>		2 x M20	1	2.7	U81W2D3
 <p>Red mushroom head key release 1NC maintained contact</p>		2 x M20	1	2.7	U81W2C9
Mushroom Head Push Button					
 <p>Black mushroom head push button 1NO + 1NC momentary contacts</p>		2 x M20	1	2.7	U81W2B3
 <p>Red mushroom head push button 1NC momentary contacts</p>		2 x M20	1	2.7	U81W2R9
Key Push Button					
 <p>With key removable in both positions 1NO + 1NC momentary contacts</p>		2 x M20	1	2.7	U81W2E3

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.

Unicode® 2 Series Aluminium Control Stations and Switches

Increased Safety


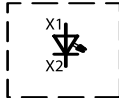

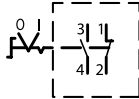

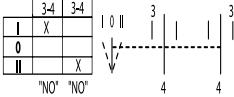

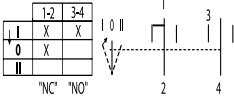

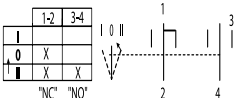
Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 1 Aluminum Control Station

Standard equipment: 1 white self-adhesive laminated plastic nameplate, 2 x M20 bottom clearance entries, 1 blanking plug, 1 cable gland in polyamide, 2 locknuts.



Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Catalog Number
Pilot Light					
 1 x red pilot light ①		2 x M20	1	2.7	U81W2PR
1 x green pilot light ①		2 x M20	1	2.7	U81W2PG
1 x blue pilot light ①		2 x M20	1	2.7	U81W2PB
1 x yellow pilot light ①		2 x M20	1	2.7	U81W2PY
1 x white pilot light ①		2 x M20	1	2.7	U81W2PW
2-Position Selector Switch					
 2 fixed positions '0 - I' 1NO + 1NC contacts		2 x M20	1	2.7	U81W2H3
3-Position Selector Switch					
 3 fixed positions 'I - 0 - II' 2NO contacts		2 x M20	1	2.7	U81W2J1
 3 positions 'I - 0 - II' with spring return from I to 0 1NO + 1NC contacts		2 x M20	1	2.7	U81W2N3
 3 positions 'I - 0 - II' with spring return from II to 0 1NO + 1NC contacts		2 x M20	1	2.7	U81W2M3

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.
① 12 Vac to 254 Vac 50/60 Hz - 12 Vdc to 60 Vdc

Unicode® 2 Series Aluminium Control Stations and Switches

Increased Safety

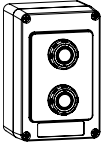

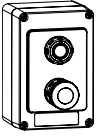
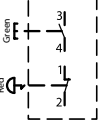
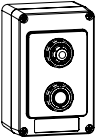
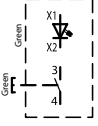
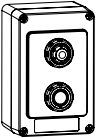
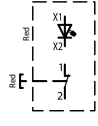
Aluminium

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 2 Aluminum Control Station

Standard equipment: 1 white self-adhesive laminated plastic nameplate, 2 x M20 bottom clearance entries, 1 blanking plug, 1 cable gland in polyamide, 2 locknuts.



Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Catalog Number
Twin Push Buttons					
 <p>1x green push button 'I' with 1NO contact 1x red push button 'O' with 1NC contact Momentary contacts</p>		2 x M20	1.3	2.7	U82W2A5A9
Push Button + Push-Pull Emergency Stop					
 <p>1x green push button 'I' with 1NO momentary contact 1x red mushroom head push-pull emergency button with 1NC maintained contact</p>		2 x M20	1.3	2.7	U82W2A5D9
Pilot Light + Push Button					
 <p>1x green pilot light ① 1x green push button 'I' with 1NO Momentary contact</p>		2 x M20	1.3	2.7	U82W2GA5
 <p>1x red pilot light ① 1x red push button 'O' with 1NC Momentary contact</p>		2 x M20	1.3	2.7	U82W2PRA9

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.
① 12 Vac to 254 Vac 50/60 Hz - 12 Vdc to 60 Vdc

Unicode® 2 Series Aluminium Control Stations and Switches

Increased Safety

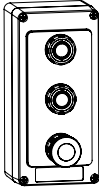
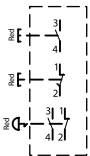
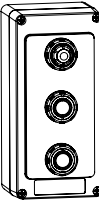
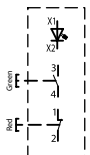
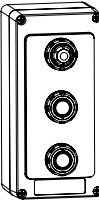
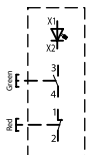
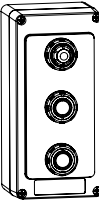
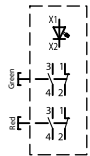
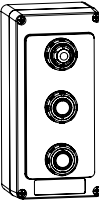
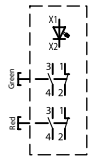
Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Size 3 Aluminum Control Station

Standard equipment: 1 white self-adhesive laminated plastic nameplate, 2 x M20 bottom clearance entries, 1 blanking plug, 1 cable gland in polyamide, 2 locknuts.



Description/Function	Diagram	Bottom Entry	Weight kg	Volume dm ³	Catalog Number
Twin Push Buttons + Push-Pull Emergency Stop					
 <p>1x green push button 'I' with 1NO contact 1 x red push button 'O' with 1NC contact Momentary contacts 1 red mushroom head push-pull emergency button with 1NO + 1NC maintained contacts</p>		2 x M20	1.6	4.2	U83W2A5A9D3
		2 x M25	1.6	4.2	U83W4A5A9D3
Pilot Light + Twin Push Buttons					
 <p>1x green pilot light ① 1 x green push button 'I' with 1NO contact 1 x red push button 'O' with 1NC contact Momentary contacts</p>		2 x M20	1.6	4.2	U83W2PGA5A9
		2 x M25	1.6	4.2	U83W4PGA5A9
 <p>1x red pilot light ① 1 x green push button 'I' with 1NO contact 1 x red push button 'O' with 1NC contact Momentary contacts</p>		2 x M20	1.6	4.2	U83W2PRA5A9
		2 x M25	1.6	4.2	U83W4PRA5A9
 <p>1x green pilot light ① 1 x green push button 'I' with 1NO + 1NC contacts 1 x red push button 'O' with 1NO + 1NC contacts Momentary contacts</p>		2 x M20	1.6	4.2	U83W2PGA3A3
		2 x M25	1.6	4.2	U83W4PGA3A3
 <p>1x red pilot light ① 1 x green push button 'I' with 1NO + 1NC contacts 1 x red push button 'O' with 1NO + 1NC contacts Momentary contacts</p>		2 x M20	1.6	4.2	U83W2PRA3A3
		2 x M25	1.6	4.2	U83W4PRA3A3

Additional combinations available, please refer to Unicode 2 Series - Customized Control Stations section.
① 12 Vac to 254 Vac 50/60 Hz - 12 Vdc to 60 Vdc.

Unicode® 2 Series Aluminium Control Stations and Switches

Increased Safety

Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Nameplates – Set of 10

Blank self-adhesive, laminated plastic 58 mm x 18 mm.

Color	Catalog Number
White (black letters)	UNPW
Yellow (black letters)	UNPY
Red (white letters)	UNPR
Blue (white letters)	UNPB
Black (white letters)	UNPN
Green (white letters)	UNPG

Inserts for Push Button – Set of 5

Marking	Color	Catalog Number
(unmarked)	Green	UIAG
(unmarked)	Red	UIAR
(unmarked)	Yellow	UIAY
(unmarked)	White	UIAW
(unmarked)	Blue	UIAB
(unmarked)	Black	UIAN
ON	Green	UIA01
OFF	Red	UIA02
START	Green	UIA03
STOP	Red	UIA04
MARCHE	Green	UIA05
ARRET	Red	UIA06
I	Green	UIA07
O	Red	UIA08

Inserts for Illuminated Push Button – Set of 5

Marking	Color	Catalog Number
(unmarked)	Green	UILG
(unmarked)	Red	UILR
(unmarked)	Yellow	UILY
(unmarked)	White	UILW
(unmarked)	Blue	UILB
ON	Green	UIL01
OFF	Red	UIL02
START	Green	UIL03
STOP	Red	UIL04
MARCHE	Green	UIL05
ARRET	Red	UIL06
I	Green	UIL07
O	Red	UIL08

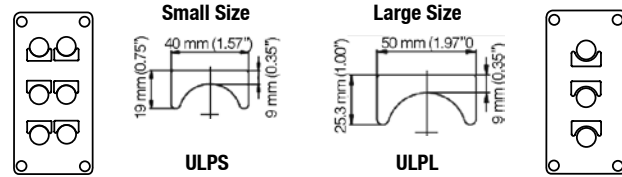
Spare Key

For all key-operated buttons.

Description	Catalog Number
Spare key type 4 A 185	SK4A185

Standard Legend Plates

Two sizes available. Self-adhesive yellow laminated plastic (black lettering).



Text	Catalog Number	
	Small	Large
Blank (set of 10)	ULPS	ULPL
ON	ULPSA01	ULPLA01
OFF	ULPSA02	ULPLA02
FORWARD	ULPSA03	ULPLA03
REVERSE	ULPSA04	ULPLA04
JOG	ULPSA05	ULPLA05
RUN	ULPSA06	ULPLA06
START	ULPSA07	ULPLA07
STOP	ULPSA08	ULPLA08
UP	ULPSA09	ULPLA09
DOWN	ULPSA10	ULPLA10
FAST	ULPSA11	ULPLA11
SLOW	ULPSA12	ULPLA12
RAISE	ULPSA13	ULPLA13
LOWER	ULPSA14	ULPLA14
OPEN	ULPSA15	ULPLA15
CLOSE	ULPSA16	ULPLA16
LOW	ULPSA17	ULPLA17
HIGH	ULPSA18	ULPLA18
TEST	ULPSA19	ULPLA19
RESET	ULPSA20	ULPLA20
EMERGENCY STOP	ULPSA21	ULPLA21
MARCHE	ULPSA22	ULPLA22
ARRET	ULPSA23	ULPLA23
ARRET D'URGENCE	ULPSA24	ULPLA24
HAUT	ULPSA25	ULPLA25
BAS	ULPSA26	ULPLA26
O—I	ULPSH01	ULPLH01
ON—OFF	ULPSH02	ULPLH02
START—STOP	ULPSH03	ULPLH03
STOP—START	ULPSH04	ULPLH04
HAND—AUTO	ULPSH05	ULPLH05
MANU—AUTO	ULPSH06	ULPLH06
FORWARD—REVERSE	ULPSH07	ULPLH07
REMOTE—LOCAL	ULPSH08	ULPLH08
MARCHE—ARRET	ULPSH09	ULPLH09
I—O—II	ULPSJ01	ULPLJ01
OFF—O—ON	ULPSJ02	ULPLJ02
START—NORMAL—STOP	ULPSJ03	ULPLJ03
HAND—OFF—AUTO	ULPSJ04	ULPLJ04
MANU—O—AUTO	ULPSJ05	ULPLJ05
FORWARD—OFF—REVERSE	ULPSJ06	ULPLJ06
LOCAL—REMOTE—AUTO	ULPSJ07	ULPLJ07
LOCAL—O—REMOTE	ULPSJ08	ULPLJ08
MARCHE—NORMAL—ARRET	ULPSJ09	ULPLJ09

Controls



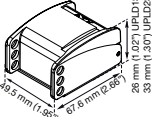




CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Unicode® 2 Series Aluminium Control Stations and Switches

Increased Safety

Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

	Description	Catalog Number
	<p>Additional Contacts</p> <p>Each actuator is capable of activating 3 contacts. Exception: Illuminated push button and all actuators with key: 2 contacts maximum</p> <p>1NO contact</p> <p>1NC contact</p>	<p>UCB5R</p> <p>UCB9R</p>
	<p>Yellow Guard</p> <p>Mushroom head protection for emergency stop</p>	098657
	<p>Padlockable Guard</p> <p>Stainless steel and plastic cover, capacity: 3 padlocks diameter 6 mm maximum (not supplied)</p> <p>For push button and rotary actuator</p> <p>For mushroom head actuator</p>	<p>UPLD1S</p> <p>UPLD2S</p>
	<p>Cable Gland Exe</p> <p>For unarmored cable Exe - IP66 - in polyamide entry thread seal</p> <p>M20 (capacity 6.5-14.5 mm)</p>	095605
	<p>For armored cable Exe/Exd - IP66 - in nickel plated brass (without entry thread seal)</p> <p>Braid and Tape type:</p> <p>M20 (inner: 6.4-14.0/outer: 12.5-20.9 mm)</p> <p>Single Wired Armor (SWA):</p> <p>M20 (inner: 6.4-14.0/outer: 12.5-20.9 mm)</p>	<p>20E1FX5</p> <p>20E1FW5</p>
	<p>Adaptors</p> <p>Exd/Exe - IP66 in nickel plated brass (without entry thread seal)</p> <p>Male M20 - Female 1/2" NPT</p> <p>Male M20 - Female 3/4" NPT</p>	<p>737DM2T15</p> <p>737DM2T25</p>
	<p>Entry Thread Seal</p> <p>M20 (in white nylon)</p>	20ETS2
	<p>Combination Drain and Breather</p> <p>Exe - IP66 - supplied with entry thread seal and locknut</p> <p>M20 male thread in Polyamide</p> <p>M20 male thread in Brass</p> <p>M20 male thread in Stainless Steel</p>	<p>DBE20P</p> <p>DBE20B</p> <p>DBE20S</p>

Shaded catalog numbers are normally stocked items. All other items are made to order.

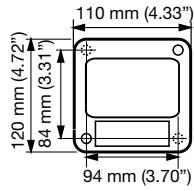
Unicode® 2 Series Aluminium Control Stations and Switches

Increased Safety

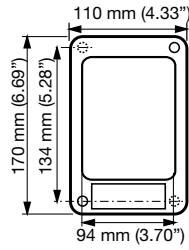
Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

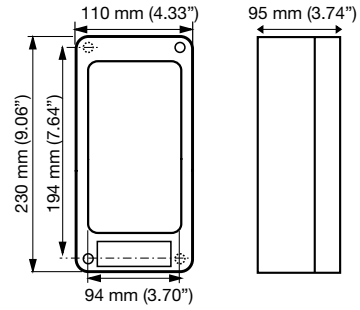
Dimensions in Millimeters



Size 1 Box



Size 2 Box



Size 3 Box

Mounting/Fixing Details for above Boxes: Two Holes Ø 5 mm

Unicode® 2 Series Customized Control Stations

Increased Safety

Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- Local control stations and motor control stations for use in hazardous areas covering the broadest possible range of applications.
- Control of equipment at:
 - Power plants
 - Chemical and petrochemical plants
 - Petroleum refineries
 - Reverse osmosis plants
 - Pulp and paper processing plants
 - Various industrial applications
- Push buttons and selector switches are used in conjunction with contactors or magnetic starters for remote control of motors in hazardous locations. They provide circuit control and/or selection.
- Pilot lights provide visual assurance that an electrical function is being performed at a remote or hazardous location.
- For use in washdown areas.

Features

- Employs Ex de method of protection which eliminates the need for external seals.
- Operators include push buttons, illuminated push buttons, selector switches, control and load break switches and LED pilot lights.
- Pilot light employs high intensity single LED with lifetime of 100,000 hours that can be used at:
 - 12 Vac to 254 Vac 50/60 Hz
 - 12 Vdc to 60 Vdc
- Up to 3 contact blocks per actuator can be used.
- Contact block technical data:
 - IEC rated operating voltage (Ue): 500 Vac – 110 Vdc
 - IEC switching capacity:
 - AC 12: 16 Amps/400 Vac
 - AC 14: 10 Amps/400 Vac
 - AC 15: 6 Amps/500 Vac
 - DC 13: 2 Amps/24 Vdc and 1 Amp/110 Vdc
- Selector switch technical data:
 - IEC rated operating voltage: 690 Vac
 - IEC rated operating current: maximum 16 Amps
 - IEC switching capacity:
 - AC1: 16 Amps/690 Vac
 - AC15: 16 Amps/415 Vac
 - AC3: 8 Amps/500 Vac
 - AC3: 4 Amps/690 Vac
 - AC3: 16 Amps/690 Vac
 - DC1: 10 Amps/24 Vdc
 - DC1: 6 Amps/60 Vdc
 - DC1: 6 Amp/110 Vdc (2 contacts wired in series)
 - DC1: 6 Amp/220 Vdc (3 contacts in series)
- Enclosures are rated for IP66 with firmly secured gasket.
- Operators and contact blocks are spaced so as to have easy and ample space for wiring.
- Wide selection of termination methods available.
- Choice of DIN rail mounted high performance contact block suitable for low intensity (less than 5mA).
- TS35 rail mounted components held securely in place during operation and easily removed for service.
- Brass Inserts are provided for TS35 DIN rails or mounting plate to be installed inside the enclosure.
- Captive, corrosion resistant stainless steel cover screws.



Polyester



Polyamide



Stainless Steel



Aluminum

Standard Materials

- Polyamide
 - Body, cover, cable gland and blanking plug: polyamide, black finish
- Fiberglass Reinforced Polyester (FRP)
 - Body and cover: fiberglass reinforced polyester, black finish
- Stainless Steel
 - Body, cover and cover screws: 316L stainless steel, natural finish
- Aluminum
 - Body and cover: aluminum with gray epoxy powder coating.
- Cable gland and blanking plug: polyamide
- Cover screws for 316L stainless steel or aluminum body: 304 stainless steel
- Cover screws for fiberglass reinforced polyester body: 316 stainless steel
- Optional nameplates: stainless steel

Accessories

- Key for changing actuator blocks.
- Guard for mushroom head actuator.
- Padlockable guard.
- M5 and M6 earth stud.
- Combination drain and breather available in brass, polyamide and stainless steel.

Options

- Nameplates: Lamacoid with different color combinations.
- Padlocking facility at left, center, right or any position on selector switches.
- Padlocking facility for momentary and maintained push buttons.

Unicode® 2 Series Customized Control Stations

Increased Safety

Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Certifications and Compliances

◆ATEX or IECEx Certification

• Certification Type PCe (Polyamide)

- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC/Ex demb IIC
 - Temperature class: T6
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T167 °C to T75 °C
- Ambient Temperature: -20 °C to +55 °C
- CE Declaration of Conformity: 50221
- ATEX Certificate: LCIE 00 ATEX 6047
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK09

• Certification Type CSPe (Fiberglass Reinforced Polyester)

- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC/Ex demb IIC
 - Temperature class: T6
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T75 °C
- Ambient Temperature: -55 °C to +60 °C (empty enclosure, temperature to be determine according actuator)
- CE Declaration of Conformity: 52084
- ATEX Certificate: LCIE 00 ATEX 3032X
- IECEx Certificate: IECEx LCI 09.0016X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

• Certification Type JBe (Stainless Steel)

- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC/Ex demb IIC
 - Temperature class: T5 to T6
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C to T95 °C
- Ambient Temperature: -50 °C to +70 °C (empty enclosure, temperature to be determine according actuator)
- CE Declaration of Conformity: 50232
- ATEX Certificate: LCIE 02 ATEX 6118X
- IECEx Certificate: LCI 11.0008X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

• Certification Type PCe (Aluminum)

- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC/Ex demb IIC
 - Temperature class: T6
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T75 °C
- Ambient Temperature: -55 °C to +60 °C (empty enclosure, temperature to be determine according actuator)
- CE Declaration of Conformity: 50221
- ATEX Certificate: LCIE 02 ATEX 6047
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

◆EURASEC Certification

• Certification Type PCe (Polyamide)

- EURASEC RU C-FR Г5.05.В.00911

• Certification Type CSPe (Fiberglass Reinforced Polyester)

- EURASEC RU C-FR Г5.05.В.00911

• Certification Type JBe (Stainless Steel)

- EURASEC RU C-FR Г5.05.В.00911

◆Others Certification ①

• Certification Type PCe (Polyamide)

- INMETRO Certificate: BVC 11.0640-X

• Certification Type CSPe (Fiberglass Reinforced Polyester)

- INMETRO Certificate: BVC 11.0637-X

• Certification Type JBe (Stainless Steel)

- INMETRO Certificate: BVC 11.0418-X

① Inmetro certification available on special request only. Contact your local sales for more information.

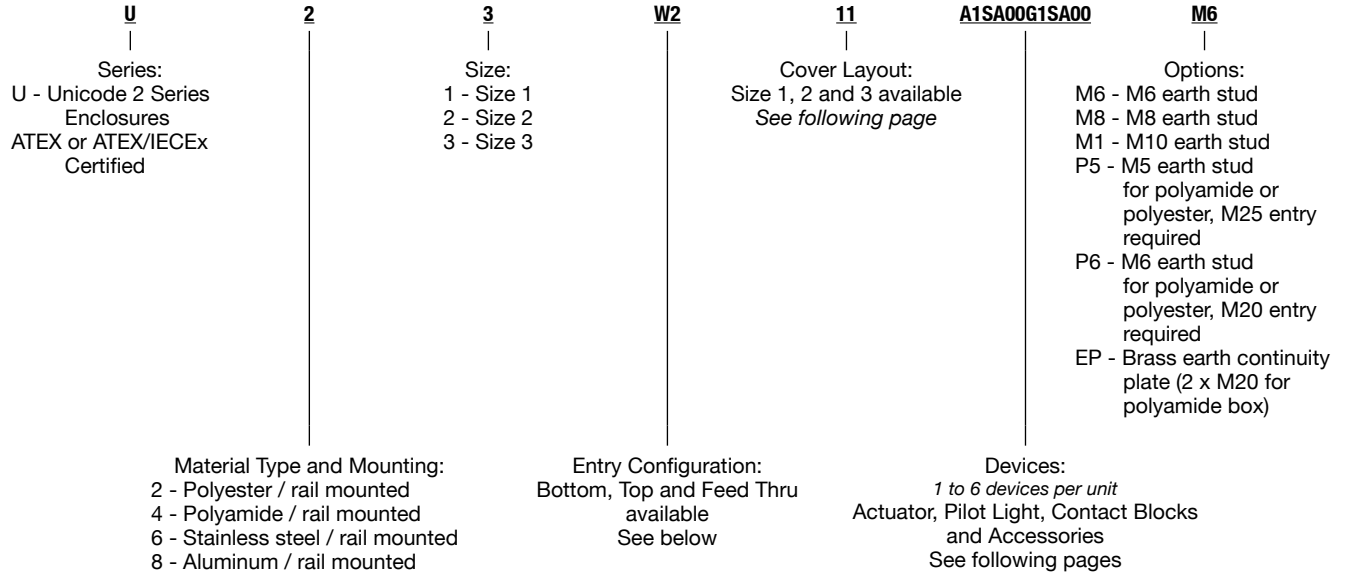
Unicode® 2 Series Customized Control Stations

Increased Safety

Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide - Unicode 2 Enclosures



Entry Configuration

	NPT					Metric			
	1/2"	2 x 1/2"	3/4"	2 x 3/4"	1"	M20	2 x M20 ②	M25	2 x M25
Bottom	Z1	Z2	Z3	Z4	Z5	W1	W2	W3	W4
Top	Y1	Y2	Y3	Y4	Y5	V1	V2	V3	V4
Feed Thru	X1	X2	X3	X4	X5	U1	U2	U3	U4

② Polyamide versions: Only 2 x M20 available at bottom.

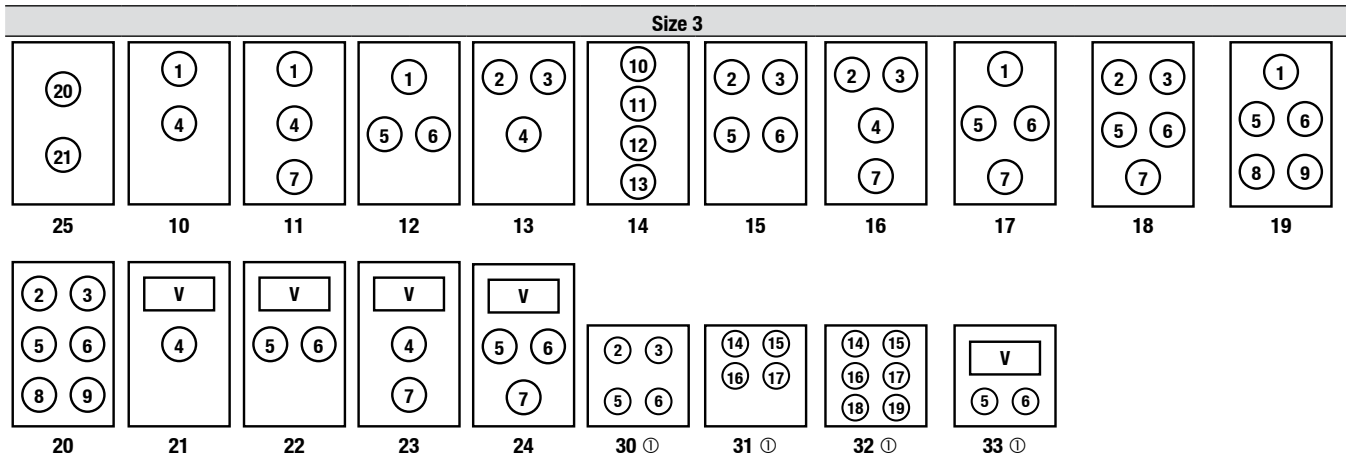
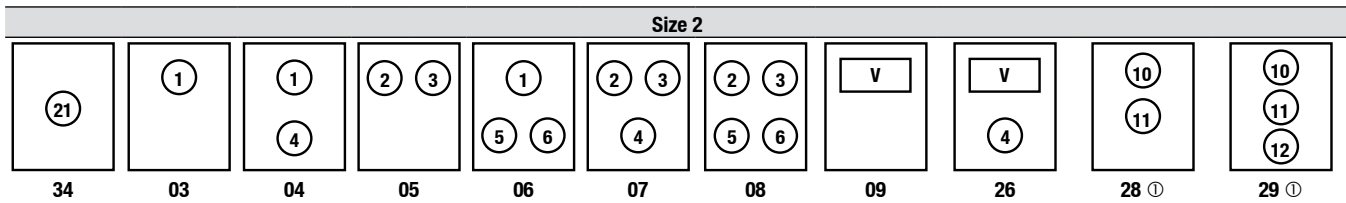
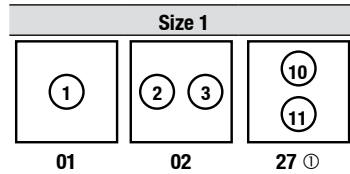
Unicode® 2 Series Customized Control Stations

Increased Safety

Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Drilled Cover Layout



Device Examples with Options

Description	
Push button with 1 NO contact and green (unmarked) insert	A5G
Push button with 1 NC contact, padlocking device and red (unmarked) insert	A92R
Push button with 2 NO contacts and START green insert	A103
Push button with 2 NO contacts, padlocking device and START green insert	A1203
Push button with 2 NO contacts, padlocking device, START green insert and DOWN small legend plate	A1203SA10
Red push-pull emergency stop mushroom head with 2 NC contacts and padlocking device	D23
Red push-pull emergency stop mushroom head with 1 NO + 1 NC contacts and protective guard	D31
Red push-pull emergency stop mushroom head with 1 NO + 1 NC contacts and padlocking device	D33
Green illuminated push button with 1 NO contact	LG5
Green illuminated push button with 2 NO contacts, padlocking device and START green insert	LG1203

Description	
Green pilot light	PG
Red pilot light with STOP large legend plate	PRLA08
2-position rotary actuator with 2 NO contacts and padlocking device	H12
2-position rotary actuator with 2 NO contacts and HAND—AUTO small legend plate	H1SH05
3-position I—O—II rotary actuator (I + II maintained) with 2 NO contacts	J1
3-position I—O—II rotary actuator (I + II maintained) with 2 NO contacts and FORWARD—OFF—REVERSE large legend plate	J1LJ06
2-position 2-pole switch	S32
2-position 2-pole switch with 0—I large legend plate	S32 LH01
2-position 4-pole switch	S35
2-position 4-pole switch with 0—I large legend plate	S35LH01
2 position 2-pole selector switch with STOP—START large legend plate	S30LH04
3 position 2-pole selector switch with OFF—0—ON large legend plate	S31LJ02

① Stainless steel version only.

Unicode® 2 Series Customized Control Station

Increased Safety

Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Devices	
Push Buttons, Momentary Contacts (3 maximum)	
With 2 NO momentary contacts	A1
With 2 NC momentary contacts	A2
With 1 NO + 1 NC momentary contacts	A3
With 2 NO + 1 NC momentary contacts	A4
With 1 NO momentary contact	A5
With 1 NO + 2 NC momentary contacts	A6
With 3 NO momentary contacts	A7
With 3 NC momentary contacts	A8
With 1 NC momentary contact	A9
Guard and Padlocking Devices	
Guard for mushroom head push button	1
Padlocking device for push button and rotary actuator	2
Padlocking device for mushroom head push button	3
Inserts for Push Buttons and Illuminated Push Buttons	
Green (unmarked)	G
Red (unmarked)	R
Yellow (unmarked)	Y
White (unmarked)	W
Blue (unmarked)	B
Black (unmarked)	N
ON (green)	01
OFF (red)	02
START (green)	03
STOP (red)	04
MARCHE (green)	05
ARRET (red)	06
I (green)	07
O (red)	08

Legend Plates		
Legend Plates for Push Buttons and Pilot Lights <i>(Located Above Device)</i>		
Text	Small	Large
Blank	SA00	LA00
ON	SA01	LA01
OFF	SA02	LA02
FORWARD	SA03	LA03
REVERSE	SA04	LA04
JOG	SA05	LA05
RUN	SA06	LA06
START	SA07	LA07
STOP	SA08	LA08
UP	SA09	LA09
DOWN	SA10	LA10
FAST	SA11	LA11
SLOW	SA12	LA12
RAISE	SA13	LA13
LOWER	SA14	LA14
OPEN	SA15	LA15
CLOSE	SA16	LA16
LOW	SA17	LA17
HIGH	SA18	LA18
TEST	SA19	LA19
RESET	SA20	LA20

Legend Plates (Continued)		
Legend Plates for Push Buttons and Pilot Lights <i>(Located Above Device)</i>		
EMERGENCY STOP	SA21	LA21
MARCHE	SA22	LA22
ARRET	SA23	LA23
ARRET D'URGENCE	SA24	LA24
HAUT	SA25	LA25
BAS	SA26	LA26

Devices	
Illuminated Push Buttons, Momentary Contacts (2 maximum)	
Green with 2 NO momentary contacts	LG1
Green with 2 NC momentary contacts	LG2
Green with 1 NO + 1 NC momentary contacts	LG3
Green with 1 NO momentary contacts	LG5
Green with 1 NC momentary contacts	LG9
Red with 2 NO momentary contacts	LR1
Red with 2 NC momentary contacts	LR2
Red with 1 NO + 1 NC momentary contacts	LR3
Red with 1 NO momentary contacts	LR5
Red with 1 NC momentary contacts	LR9
<i>For other colors replace 2nd letter to B for Blue, W for White and Y for Yellow. Example: Blue — LB1</i>	

Device Options	
Push buttons complete with key removable in both positions (2 contacts maximum)	
With 2 NO contacts	E1
With 2 NC contacts	E2
With 1 NO + 1 NC contacts	E3
With 1 NO contact	E5
With 1 NC contact	E9
Push buttons complete with key removable in ON position (2 contacts maximum)	
With 2 NO contacts	F1
With 2 NC contacts	F2
With 1 NO + 1 NC contacts	F3
With 1 NO contact	F5
With 1 NC contact	F9
Push buttons complete with key removable in OFF position (2 contacts maximum)	
With 2 NO contacts	G1
With 2 NC contacts	G2
With 1 NO + 1 NC contacts	G3
With 1 NO contact	G5
With 1 NC contact	G9

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Unicode® 2 Series Customized Control Station

Increased Safety

Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Device Options	
Black Mushroom Head Push Buttons, Momentary Contacts (3 maximum)	
With 2 NO momentary contacts	B1
With 2 NC momentary contacts	B2
With 1 NO + 1 NC momentary contacts	B3
With 2 NO + 1 NC momentary contacts	B4
With 1 NO momentary contact	B5
With 1 NO + 2 NC momentary contacts	B6
With 3 NO momentary contacts	B7
With 3 NC momentary contacts	B8
With 1 NC momentary contact	B9

Devices	
Red Mushroom Head Push Buttons, Momentary Contacts (3 maximum)	
With 2 NO momentary contacts	R1
With 2 NC momentary contacts	R2
With 1 NO + 1 NC momentary contacts	R3
With 2 NO + 1 NC momentary contacts	R4
With 1 NO momentary contact	R5
With 1 NO + 2 NC momentary contacts	R6
With 3 NO momentary contacts	R7
With 3 NC momentary contacts	R8
With 1 NC momentary contact	R9

Red Mushroom Head Emergency Stop Buttons, Maintained (3 contacts maximum)	
Push-pull version with 2 NO maintained contacts	D1
Push-pull version with 2 NC maintained contacts	D2
Push-pull version with 1 NO + 1 NC maintained contacts	D3
Push-pull version with 2 NO + 1 NC maintained contacts	D4
Push-pull version with 1 NO maintained contact	D5
Push-pull version with 1 NO + 2 NC maintained contacts	D6
Push-pull version with 3 NO maintained contacts	D7
Push-pull version with 3 NC maintained contacts	D8
Push-pull version with 1 NC maintained contact	D9

Red Mushroom Head Emergency Stop Buttons, Maintained Contacts (2 maximum)	
Key to release with 2 NO maintained contacts	C1
Key to release with 2 NC maintained contacts	C2
Key to release with 1 NO + 1 NC maintained contacts	C3
Key to release with 1 NO maintained contact	C5
Key to release with 1 NC maintained contact	C9

LED Pilot Lights	
Blue color	PB
Green color	PG
Red color	PR
White color	PW
Yellow color	PY

Devices	
2 Positions O-I Rotary Actuator (O and I Maintained)	
With 2 NO maintained contacts	H1
With 2 NC maintained contacts	H2
With 1 NO + 1 NC maintained contacts	H3
With 2 NO + 1 NC maintained contacts	H4
With 1 NO maintained contact	H5
With 1 NO + 2 NC maintained contacts	H6
With 3 NO maintained contacts	H7
With 3 NC maintained contacts	H8
With 1 NC maintained contact	H9

Legend Plates for 2-Position Selector Switches (Located Above Device)			
Text	Small	Large	
O-I	SH01	LH01	
ON-OFF	SH02	LH02	
START-STOP	SH03	LH03	
STOP-START	SH04	LH04	
HAND-AUTO	SH05	LH05	
MANU-AUTO	SH06	LH06	
FORWARD-REVERSE	SH07	LH07	
REMOTE-LOCAL	SH08	LH08	
MARCHE-ARRET	SH09	LH09	

3 Positions I-O-II Rotary Actuator (I and II maintained)	
With 2 NO maintained contacts	J1
With 2 NC maintained contacts	J2
With 1 NO + 1 NC maintained contacts	J3
With 2 NO + 1 NC maintained contacts	J4
With 1 NO + 2 NC maintained contacts	J6
With 3 NO maintained contacts	J7
With 3 NC maintained contacts	J8

3 Positions I-O-II Rotary Actuator (I and II spring-return to O)	
With 2 NO contacts	K1
With 2 NC contacts	K2
With 1 NO + 1 NC contacts	K3
With 2 NO + 1 NC contacts	K4
With 1 NO + 2 NC contacts	K6
With 3 NO contacts	K7
With 3 NC contacts	K8

3 Positions I-O-II Rotary Actuator (I Maintained and II Spring-Return to O)	
With 2 NO contacts	M1
With 2 NC contacts	M2
With 1 NO + 1 NC contacts	M3
With 2 NO + 1 NC contacts	M4
With 1 NO + 2 NC contacts	M6
With 3 NO contacts	M7
With 3 NC contacts	M8

3 Positions I-O-II Rotary Actuator (I Spring-Return to O + II Maintained)	
With 2 NO contacts	N1
With 2 NC contacts	N2
With 1 NO + 1 NC contacts	N3
With 2 NO + 1 NC contacts	N4
With 1 NO + 2 NC contacts	N6
With 3 NO contacts	N7
With 3 NC contacts	N8

Unicode® 2 Series Customized Control Station

Increased Safety

Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Devices		Devices	
16A Selector Switches ①		Ammeters 48 x 48 mm	
<i>Other contact arrangements are available, contact your local sales representative.</i>		1A C.T. and 3 F.L.C. with 0-1-3 scale	VA13
2 position 2-pole Selector switch		1A C.T. and 5 F.L.C. with 0-1-5 scale	VA15
3 position 2-pole Selector switch		1A C.T. and 6 F.L.C. with 0-1-6 scale	VA16
2 position 2-pole switch		5A C.T. and 3 F.L.C. with 0-1-3 scale	VA53
3 position 2-pole Selector switch with spring return from 135° to 90°		5A C.T. and 5 F.L.C. with 0-1-5 scale	VA55
3 position 2-pole Selector switch with spring return from 45° to 90°		5A C.T. and 6 F.L.C. with 0-1-6 scale	VA56
2 position 4-pole switch		Box Options	
3 position 4-pole Selector switch		Earth Stud	
2 position 4-pole Selector switch		M6 earth stud	M6
3 position 3-pole Selector switch with spring return from 45° to 90°		M8 earth stud	M8
3 position 3-pole Selector switch with spring return from 135° to 90°		M10 earth stud	M1
		M5 earth stud for polyamide or polyester, M20 entry required	P5
		M6 earth stud for polyamide or polyester, M25 entry required	P6
		Earth Continuity Plate	
		Brass	EP
		Plug	
		Cover blanking plug	BP
Legend Plates for 3-Position Selector Switches (Located Above Device)			
Text	Small	Large	
I—O—II	SJ01	LJ01	
OFF—O—ON	SJ02	LJ02	
START—NORMAL—STOP	SJ03	LJ03	
HAND—OFF—AUTO	SJ04	LJ04	
MANUAL—O—AUTO	SJ05	LJ05	
FORWARD—OFF—REVERSE	SJ06	LJ06	
LOCAL—REMOTE—AUTO	SJ07	LJ07	
LOCAL—O—REMOTE	SJ08	LJ08	
MARCHE—NORMAL—ARRET	SJ09	LJ09	

① Additional configurations available. See Unicode 2 Series 16 Amp Switches in the Component and Accessories section. Choose the contact arrangement, then add the last four digits of the switch part number in the custom configured control station catalog number.

Unicode® 2 Series Customized Control Station

Increased Safety

Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Ordering Example:



Polyester Customized Control Station Specifications – Type U2

Polyester Customized Control Station Specifications — Type: U4

Company Name: _____ Address: _____
 Contact: _____
 Phone/Fax: _____
 Email: _____ Project: _____

Box Definition

Size 1

01 02

Size 2

03* 04 05* 06 07 08 09* 26

Size 3

25 10* 11 12* 13* 14 15* 16 17 18 19 20 21* 22* 23 24

* Terminal block available as option. (maximum: 10 x terminals 2.5mm2)

Entry Position

Entries (clearance hole)

M20
 M25
 3/4" NPT (via hub)
 Earth Continuity Plate
 Brass Earth Plate as Standard
 Stainless Steel Earth Plate

Earth Stud (At Bottom)

Without
 M6 Stainless Steel Earth Stud
 M8 Stainless Steel Earth Stud
 Location
 A B C D A, B, C, D

Cable Glands

Without
 Type: _____ Quantity: _____

Plugs

Without
 Type: _____ Quantity: _____

Nameplate

Option	Type	Color
<input type="checkbox"/> Without	<input checked="" type="checkbox"/> 58 x 18 Self-Adhesive Laminated Plastic	<input checked="" type="checkbox"/> White (black letters) <input type="checkbox"/> Blue (white letters)
<input type="checkbox"/> With (complete Type and color)	<input type="checkbox"/> 65 x 18 Screw On Laminated Plastic <input type="checkbox"/> 65 x 18 Screw On in Stainless steel (available with black lettering only)	<input type="checkbox"/> Yellow (black letters) <input type="checkbox"/> Black (white letters)
	Text (1 line): _____	<input type="checkbox"/> Red (white letters) <input type="checkbox"/> Green (white letters)

Functions

Position	Actuator	Contacts	Insert	Legend Plate	Guard
1	PG	0	0	0	0
4	A	1	03	0	0
7	D	2	0	0	0

* Terminal Blocks (optional) Type _____ Quantity (10 maximum) _____
 Option for Box No. 03-05-09-10-12-13-15-21-22 only 2.5 mm ²

Additional Instructions: _____

Polyester Control Station

- Size 3 with 3 vertical actuators.
- 2 x M20 entries at bottom with brass earth continuity plate.
- Without earth stud.
- Without cable glands and plugs.
- White self-adhesive nameplate with black lettering.
- Text: MOTOR 4
- Position 1: Green pilot light without legend plate.
- Position 2: Green start push button with 2 x NO contacts.
- Green start insert without legend plate and guard.
- Position 7: Emergency stop push-pull mushroom head with 2 x NC contacts without legend plate and guard.

Part No.:
U23W211 PG A103 D2

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

The following inquiry forms should be filled out and sent to your local Appleton/ATX Representative.

Unicode® 2 Series Customized Control Station

Increased Safety

Polyamide

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)





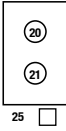
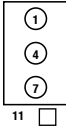
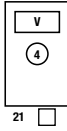

Polyamide Customized Control Station Specifications – Type: U4

Company Name: _____
 Contact: _____
 Phone/Fax: _____
 Email: _____

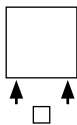
Address: _____

 Project: _____

Box Definition

Size 1	Size 2			Size 3			
							
01 <input type="checkbox"/>	34 <input type="checkbox"/>	04 <input type="checkbox"/>	09 <input type="checkbox"/>	25 <input type="checkbox"/>	11 <input type="checkbox"/>	21 <input type="checkbox"/>	23 <input type="checkbox"/>

Entry Position



Entries – Clearance Hole

M20

Earth Continuity Plate

- Brass Earth Plate
 Stainless Steel Earth Plate

Earth Stud – At Bottom

- Without
 M6 Stainless Steel Earth Stud (via M20 entry)

Cable Glands

- Without
 Type: _____ Quantity: _____

Plugs

- Without
 Type: _____ Quantity: _____

Nameplate

Option	Type
<input type="checkbox"/> Without	<input type="checkbox"/> 58 x 18 mm
<input type="checkbox"/> With (complete Type and color)	Self-Adhesive Laminated Plastic
	Text (1 line): _____

Color	
<input type="checkbox"/> White (black letters)	<input type="checkbox"/> Blue (white letters)
<input type="checkbox"/> Yellow (black letters)	<input type="checkbox"/> Black (white letters)
<input type="checkbox"/> Red (white letters)	<input type="checkbox"/> Green (white letters)

Functions

Position	Actuator	Contacts	Insert	Legend Plate	Guard

Additional Instructions: _____

Unicode® 2 Series Customized Control Station

Increased Safety

Fiberglass Reinforced Polyester

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

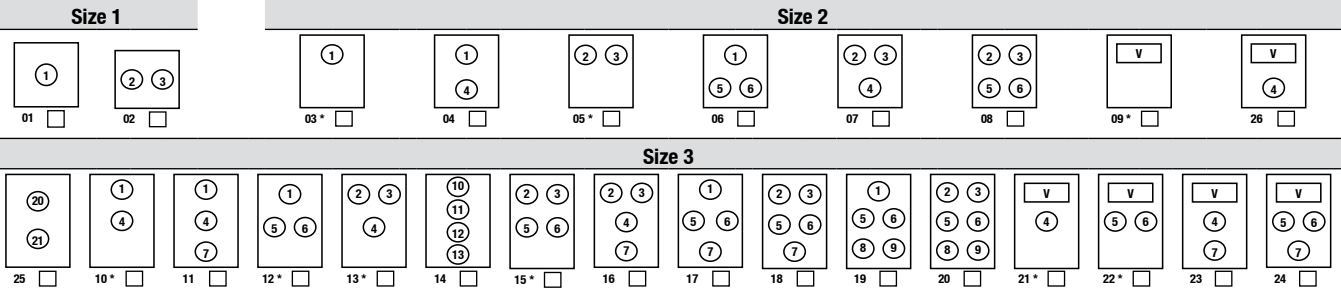
Polyester Customized Control Station Specifications – Type: U4

Company Name: _____
 Contact: _____
 Phone/Fax: _____
 Email: _____

Address: _____

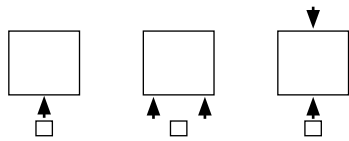
 Project: _____

Box Definition



* Terminal block available as option. (maximum: 10 x terminals 2.5 mm²)

Entry Position



Entries – Clearance Hole

- M20
- M25
- 3/4" NPT (via hub)

Earth Continuity Plate

- Brass Earth Plate as Standard
- Stainless Steel Earth Plate

Earth Stud – At Bottom

- Without
- M6 Stainless Steel Earth Stud
- M8 Stainless Steel Earth Stud

Location

- A B C D A, B, C, D

Cable Glands

- Without
 - Type: _____
- Quantity: _____

Plugs

- Without
 - Type: _____
- Quantity: _____

Nameplate

Option	Type	Color	
<input type="checkbox"/> Without	<input type="checkbox"/> 58 x 18 mm Self-Adhesive Laminated Plastic	<input type="checkbox"/> White (black letters)	<input type="checkbox"/> Blue (white letters)
<input type="checkbox"/> With	<input type="checkbox"/> 65 x 18 mm Screw On Laminated Plastic	<input type="checkbox"/> Yellow (black letters)	<input type="checkbox"/> Black (white letters)
(complete Type and color)	<input type="checkbox"/> 65 x 18 mm Screw On in Stainless steel (available with black lettering only)	<input type="checkbox"/> Red (white letters)	<input type="checkbox"/> Green (white letters)
	Text (1 line): _____		

Functions

Position	Actuator	Contacts	Insert	Legend Plate	Guard

* Terminal Blocks (optional)

Option for Box No. 03-05-09-10-12-13-15-21-22 only

Type

2.5 mm²

Quantity (10 maximum)

Additional Instructions:

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Unicode® 2 Series Customized Control Station

Increased Safety

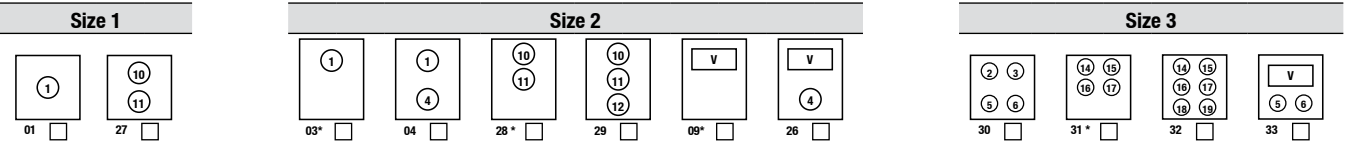
316L Stainless Steel

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Stainless Steel Customized Control Station Specifications – Type: U6

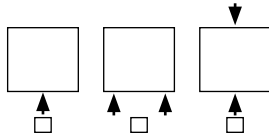
Company Name: _____ Address: _____
 Contact: _____
 Phone/Fax: _____
 Email: _____ Project: _____

Box Definition



* Terminal block available as option. (maximum: 10 x terminals 2.5 mm²)

Entry Position



Entries – Clearance Hole

- M20
- M25
- 3/4" NPT (via hub)

Earth Stud – At Bottom

- M6 Stainless Steel Earth Stud as Standard
- M8 Stainless Steel Earth Stud

Location

- A B C D A, B, C, D

Cable Glands

- Without
- Type: _____ Quantity: _____

Plugs

- Without
- Type: _____ Quantity: _____

Nameplate

Option	Type	Color	
<input type="checkbox"/> Without	<input type="checkbox"/> 58 x 18 mm Self-Adhesive Laminated Plastic	<input type="checkbox"/> White (black letters)	<input type="checkbox"/> Blue (white letters)
<input type="checkbox"/> With	<input type="checkbox"/> 65 x 18 mm Screw On Laminated Plastic	<input type="checkbox"/> Yellow (black letters)	<input type="checkbox"/> Black (white letters)
(complete Type and color)	<input type="checkbox"/> 65 x 18 mm Screw On in Stainless steel (available with black lettering only)	<input type="checkbox"/> Red (white letters)	<input type="checkbox"/> Green (white letters)
	Text (1 line): _____		

Functions

Position	Actuator	Contacts	Insert	Legend Plate	Guard

* Terminal Blocks (optional)

Option for Box No. 03-09-28-31 only

Type

2.5 mm²

Quantity (10 maximum)

Additional Instructions:

Unicode® 2 Series Customized Control Station

Increased Safety

Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

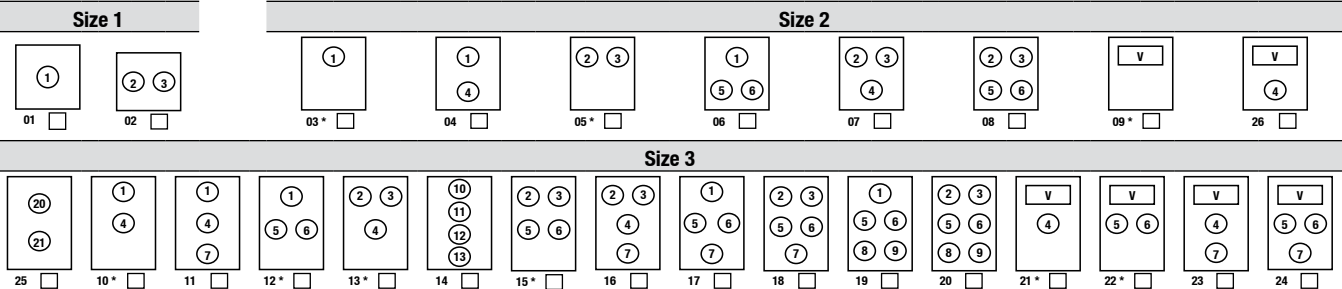
Aluminum Customized Control Station Specifications – Type: U8

Company Name: _____
 Contact: _____
 Phone/Fax: _____
 Email: _____

Address: _____

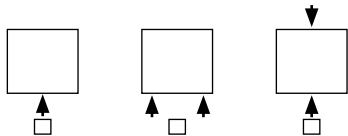
 Project: _____

Box Definition



* Terminal block available as option. (maximum: 10 x terminals 2.5 mm²)

Entry Position



Entries – Clearance Hole

- M20
- M25
- 3/4" NPT (via hub)

Earth Stud – At Bottom

- M5 External Earth Stud as Standard
- M6 Stainless Steel Earth Stud
- M8 Stainless Steel Earth Stud

Location

- A B C D A, B, C, D

Cable Glands

- Without
 - Type: _____
- Quantity: _____

Plugs

- Without
 - Type: _____
- Quantity: _____

Nameplate

- | Option | Type |
|----------------------------------|---|
| <input type="checkbox"/> Without | <input type="checkbox"/> 58 x 18 mm Self-Adhesive Laminated Plastic |
| <input type="checkbox"/> With | <input type="checkbox"/> 65 x 18 mm Screw On Laminated Plastic |
| (complete Type and color) | <input type="checkbox"/> 65 x 18 mm Screw On in Stainless steel (available with black lettering only) |
- Text (1 line): _____

- | Color | |
|---|--|
| <input type="checkbox"/> White (black letters) | <input type="checkbox"/> Blue (white letters) |
| <input type="checkbox"/> Yellow (black letters) | <input type="checkbox"/> Black (white letters) |
| <input type="checkbox"/> Red (white letters) | <input type="checkbox"/> Green (white letters) |

Functions

Position	Actuator	Contacts	Insert	Legend Plate	Guard

* Terminal Blocks (optional)

Option for Box No. 03-05-09-10-12-13-15-21-22 only Type: 2.5 mm² Quantity (10 maximum)

Additional Instructions:

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Unicode® 2 Series Pre-Drilled Control Stations

Increased Safety

Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- Local control stations and motor control stations for use in hazardous areas covering the broadest possible range of applications.
- Control of equipment at:
 - Power plants
 - Chemical and petrochemical plants
 - Petroleum refineries
 - Reverse osmosis plants
 - Pulp and paper processing plants
 - Various industrial applications
- For use in washdown areas.

Features

- Enclosures are rated for IP66 with firmly secured gasket.
- Captive, corrosion resistant stainless steel cover screws.

Standard Materials

- Polyamide
 - Body, cover, cable gland and blanking plug: polyamide, black finish
- Polyester
 - Body and cover: fiberglass reinforced polyester, black finish.
- Stainless Steel
 - Body, cover and cover screws: 316L stainless steel, natural finish
- Aluminum
 - Body and cover: aluminum with gray epoxy powder coating.
- Cable gland and blanking plug: polyamide
- Cover screws for 316L stainless steel or aluminum body: 304 stainless steel
- Cover screws for fiberglass reinforced polyester body: 316 stainless steel
- Nameplate: white self-adhesive laminated plastic

Certifications and Compliances

◆ATEX or IECEx Certification

• Certification Type PCe (Polyamide)

- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC or Ex demb IIC
 - Temperature class: T6
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T167 °C to T75 °C
 - Ambient Temperature: -20 °C to +55 °C
 - CE Declaration of Conformity: 50221
 - ATEX Certificate: LCIE 00 ATEX 6047
 - IEC Certificate: LCIE Ex 00.017
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK09

• Certification Type CSPe (Polyester)

- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC or Ex demb IIC
 - Temperature class: T6
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T75 °C
 - Ambient Temperature: -55 °C to +70 °C
 - CE Declaration of Conformity: 52084



Polyester U23W211



Polyamide U43W211



Stainless Steel U62W229



Aluminum U83W211

- ATEX Certificate: LCIE 00 ATEX 3032X
- IECEx Certificate: IECEx LCI 09.0016X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

• Certification Type JBe (Stainless Steel)

- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC or Ex demb IIC
 - Temperature class: T5 to T6
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C to T95 °C
 - Ambient Temperature: -50 °C to +70 °C
 - CE Declaration of Conformity: 50232
 - ATEX Certificate: LCIE 02 ATEX 6118X
 - IECEx Certificate: LCI 11.0008X
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10

• Certification Type PCe (Aluminum)

- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC or Ex demb IIC
 - Temperature class: T6
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T75 °C
 - CE Declaration of Conformity: 50221
 - ATEX Certificate: LCIE 02 ATEX 6047
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10

Unicode® 2 Series Pre-Drilled Control Stations

Increased Safety

Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

◆EURASEC Certification

- **Certification Type PCe (Polyamide)**
 - EURASEC RU C-FR ГБ 05.B.00911
- **Certification Type CSPe (Polyester)**
 - EURASEC RU C-FR ГБ 05.B.00911
- **Certification Type JBe (Stainless Steel)**
 - EURASEC RU C-FR ГБ 05.B.00911

◆Others Certification ①

- **Certification Type PCe (Polyamide)**
 - INMETRO Certificate: BVC 11.0640-X
- **Certification Type CSPe (Polyester)**
 - INMETRO Certificate: BVC 11.0637-X
- **Certification Type JBe (Stainless Steel)**
 - INMETRO Certificate: BVC 11.0418-X

① Inmetro certification available on special request only. Contact your local sales for more information.
Aluminum Unicode® 2 Series Control Stations and Switches are not recognized for use in any NBR IEC Brazilian governed areas.

Unicode® 2 Series Pre-Drilled Control Stations

Increased Safety

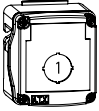
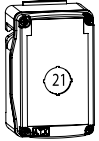
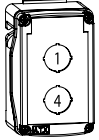
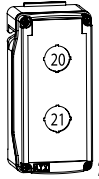
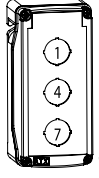
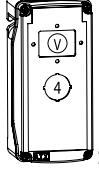
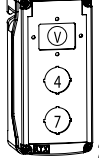
Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Polyamide Pre-drilled Boxes for Control Stations

Included: 1 white self-adhesive laminated plastic nameplate (black lettering),
2 clearance entries at bottom.



	Description/ Function	Entries	Weight kg	Volume dm ³	Catalog Number 2 Bottom
Size 1 Pre-Drilled Enclosures					
 01	For 1 actuator 1 vertical rail	M20	0.7	2.5	U41W201
Size 2 Pre-Drilled Enclosures					
 34	For 1 actuator 1 vertical rail	M20	0.9	2.5	U42W234
 04	For 2 actuators 1 vertical rail	M20	0.9	2.5	U42W204
Size 3 Pre-Drilled Enclosures					
 25	For 2 actuators 1 vertical rail	M20	1.0	2.5	U43W225
 11	For 3 actuators 1 vertical rail	M20	1.0	2.5	U43W211
 21	For 1 ammeter 48 x 48 + 1 actuator 1 vertical rail	M20	1.0	2.5	U43W221
 23	For 1 ammeter 48 x 48 + 2 actuators 1 vertical rail	M20	1.0	2.5	U43W223

Shaded catalog numbers are normally stocked items. All other items are made to order.

Unicode® 2 Series Pre-Drilled Control Stations

Increased Safety

Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Polyester Pre-Drilled Boxes for Control Stations

Included: 1 white self-adhesive laminated plastic nameplate (black lettering), 1 earth continuity brass plate, threaded entries.



Description/ Function	Entries	Weight kg	Volume dm ³	Catalog Number 1 Bottom	Catalog Number 2 Bottom	Catalog Number Feed-Thru	
Size 1 Pre-Drilled Enclosures							
 01	For 1 actuator 1 horizontal rail	M20	0.8	2.7	U21W101	U21W201	U21U101
		M25	0.8	2.7	U21W301	U21W401	U21U301
 02	For 2 actuators 1 horizontal rail	M20	0.8	2.7	U21W102	U21W202	U21U102
		M25	0.8	2.7	U21W302	U21W402	U21U302
Size 2 Pre-Drilled Enclosures							
 04	For 2 actuators 1 vertical rail	M20	1.0	4.2	U22W104	U22W204	U22U104
		M25	1.0	4.2	U22W304	U22W404	U22U304
 06	For 3 actuators 2 horizontal rails	M20	1.0	4.2	U22W106	U22W206	U22U106
		M25	1.0	4.2	U22W306	U22W406	U22U306
 08	For 4 actuators 2 horizontal rails	M20	1.0	4.2	U22W108	U22W208	U22U108
		M25	1.0	4.2	U22W308	U22W408	U22U308
 26	For 1 ammeter 48x48 +1 actuator 1 vertical rail	M20	1.0	4.2	U22W126	U22W226	U22U126
		M25	1.0	4.2	U22W326	U22W426	U22U326

Unicode® 2 Series Pre-Drilled Control Stations

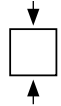
Increased Safety

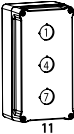
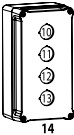
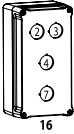
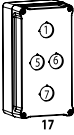
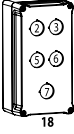
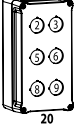
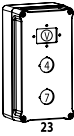
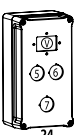
Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Polyester Pre-Drilled Boxes for Control Stations

Included: 1 white self-adhesive laminated plastic nameplate (black lettering), 1 earth continuity brass plate, threaded entries.



Description/ Function	Entries	Weight kg	Volume dm ³	Catalog Number 1 Bottom	Catalog Number 2 Bottom	Catalog Number Feed-Thru
Size 3 Pre-Drilled Enclosures – 230 mm x 120 mm x 91 mm						
 11 For 3 actuators 1 vertical rail	M20	1.1	4.2	U23W111	U23W211	U23U111
	M25	1.1	4.2	U23W311	U23W411	U23U311
 14 For 4 actuators 1 vertical rail	M20	1.1	4.2	U23W114	U23W214	U23U114
	M25	1.1	4.2	U23W314	U23W414	U23U314
 16 For 4 actuators 3 horizontal rails	M20	1.1	4.2	U23W116	U23W216	U23U116
	M25	1.1	4.2	U23W316	U23W416	U23U316
 17 For 4 actuators 3 horizontal rails	M20	1.1	4.2	U23W117	U23W217	U23U117
	M25	1.1	4.2	U23W317	U23W417	U23U317
 18 For 5 actuators 3 horizontal rails	M20	1.1	4.2	U23W118	U23W218	U23U118
	M25	1.1	4.2	U23W318	U23W418	U23U318
 20 For 6 actuators 3 horizontal rails	M20	1.1	4.2	U23W120	U23W220	U23U120
	M25	1.1	4.2	U23W320	U23W420	U23U320
 23 For 1 ammeter 48x48 + 2 actuators 1 vertical rail	M20	1.1	4.2	U23W123	U23W223	U23U123
	M25	1.1	4.2	U23W323	U23W423	U23U323
 24 For 1 ammeter 48x48 + 3 actuators 1 vertical rail (V) 2 horizontal rails (5-6-7)	M20	11.1	4.2	U23W124	U23W224	U23U124
	M25	11.1	4.2	U23W324	U23W424	U23U324

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Unicode® 2 Series Pre-Drilled Control Stations

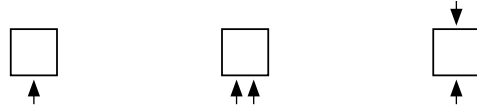
Increased Safety

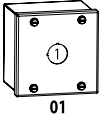
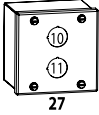
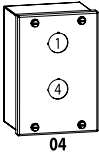
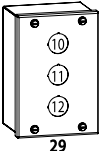
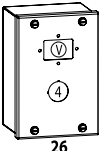
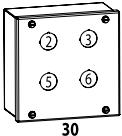
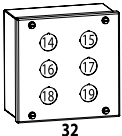
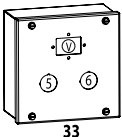
Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Stainless Steel Pre-drilled Boxes for Control Stations

Included: 1 white self-adhesive laminated plastic nameplate (black lettering), clearance entries.



Description/ Function	Entries	Weight kg	Volume dm ³	Catalog Number 1 Bottom	Catalog Number 2 Bottom	Catalog Number Feed-Thru
Size 1 Pre-Drilled Enclosures						
 01 For 1 actuator 1 vertical rail	M20	1.0	2.7	U61W101	U61W201	U61U101
	M25	1.0	2.7	U61W301	U61W401	U61U301
 27 For 2 actuators 1 vertical rail	M20	1.0	2.7	U61W127	U61W227	U61U127
	M25	1.0	2.7	U61W327	U61W427	U61U327
Size 2 Pre-Drilled Enclosures						
 04 For 2 actuators 1 vertical rail	M20	1.5	3.6	U62W104	U62W204	U62U104
	M25	1.5	3.6	U62W304	U62W404	U62U304
 29 For 3 actuators 1 vertical rail	M20	1.5	3.6	U62W129	U62W229	U62U129
	M25	1.5	3.6	U62W329	U62W429	U62U329
 26 For 1 ammeter 48x48 + 1 actuator 1 vertical rail	M20	1.5	3.6	U62W126	U62W226	U62U126
	M25	1.5	3.6	U62W326	U62W426	U62U326
Size 3 Pre-Drilled Enclosures						
 30 For 4 actuators 2 vertical rails	M20	1.8	5.3	U63W130	U63W230	U63U130
	M25	1.8	5.3	U63W330	U63W430	U63U330
 32 For 6 actuators 2 vertical rails	M20	1.8	5.3	U63W132	U63W232	U63U132
	M25	1.8	5.3	U63W332	U63W432	U63U332
 33 For 1 ammeter 48 x 48 + 2 actuators 1 vertical rail (V) 1 horizontal rail (5-6)	M20	1.8	5.3	U63W133	U63W233	U63U133
	M25	1.8	5.3	U63W333	U63W433	U63U333

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

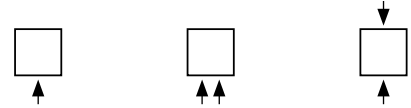
Unicode® 2 Series Pre-Drilled Control Stations

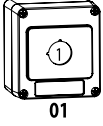
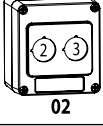
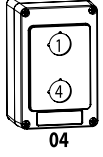
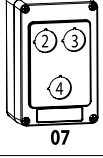
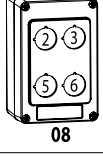
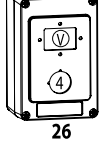
Increased Safety

Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Aluminum Pre-drilled boxes for Control Stations
Included: 1 white self-adhesive laminated plastic nameplate
(black lettering), clearance entries.



Description/Function	Entries	Weight kg	Volume dm ³	Catalog Number 1 Bottom	Catalog Number 2 Bottom	Catalog Number Feed-Thru
Size 1 Pre-Drilled Enclosures						
 01	For 1 actuator 1 horizontal rail	M20	1.0	2.7	U81W101	U81W201 U81U101
 02	For 2 actuators 1 horizontal rail	M20	1.0	2.7	U81W102	U81W202 U81U102
Size 2 Pre-Drilled Enclosures						
 04	For 2 actuators 1 vertical rail	M20	1.5	2.7	U82W104	U82W204 U82U104
 07	For 3 actuators 2 horizontal rails	M20	1.5	2.7	U82W107	U82W207 U82U107
 08	For 4 actuators 2 horizontal rails	M20	1.5	2.7	U82W108	U82W208 U82U108
 26	For 1 Ammeter 48x48 + 1 actuator 1 vertical rail	M20	1.5	2.7	U82W126	U82W226 U82U126

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Unicode® 2 Series Pre-Drilled Control Stations

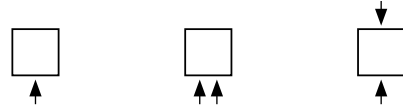
Increased Safety

Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Aluminum Pre-drilled boxes for Control Stations

Included: 1 white self-adhesive laminated plastic nameplate (black lettering), clearance entries.



Description/Function	Entries	Weight kg	Volume dm ³	Catalog Number 1 Bottom	Catalog Number 2 Bottom	Catalog Number Feed-Thru	
Size 3 Pre-Drilled Enclosures – 230 mm x 110 mm x 95 mm							
 11	For 3 actuators 1 vertical rail	M20	1.8	4.2	U83W111	U83W211	U83U111
		M25	1.8	4.2	U83W311	U83W411	U83U311
 16	For 4 actuators 3 horizontal rails	M20	1.8	4.2	U83W116	U83W216	U83U116
		M25	1.8	4.2	U83W316	U83W416	U83U316
 17	For 4 actuators 3 horizontal rails	M20	1.8	4.2	U83W117	U83W217	U83U117
		M25	1.8	4.2	U83W317	U83W417	U83U317
 18	For 5 actuators 3 horizontal rails	M20	1.8	4.2	U83W118	U83W218	U83U118
		M25	1.8	4.2	U83W318	U83W418	U83U318
 20	For 6 actuators 3 horizontal rails	M20	1.8	4.2	U83W120	U83W220	U83U120
		M25	1.8	4.2	U83W320	U83W420	U83U320
 23	For 1 ammeter 48x48 + 2 actuators 1 vertical rail	M20	1.8	4.2	U83W123	U83W223	U83U123
		M25	1.8	4.2	U83W323	U83W423	U83U323
 24	For 1 ammeter 48x48 + 3 actuators 1 vertical rail (V) 2 horizontal rails (5-6-7)	M20	1.8	4.2	U83W124	U83W224	U83U124
		M25	1.8	4.2	U83W324	U83W424	U83U324

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Unicode® 2 Series Pre-Drilled Control Stations

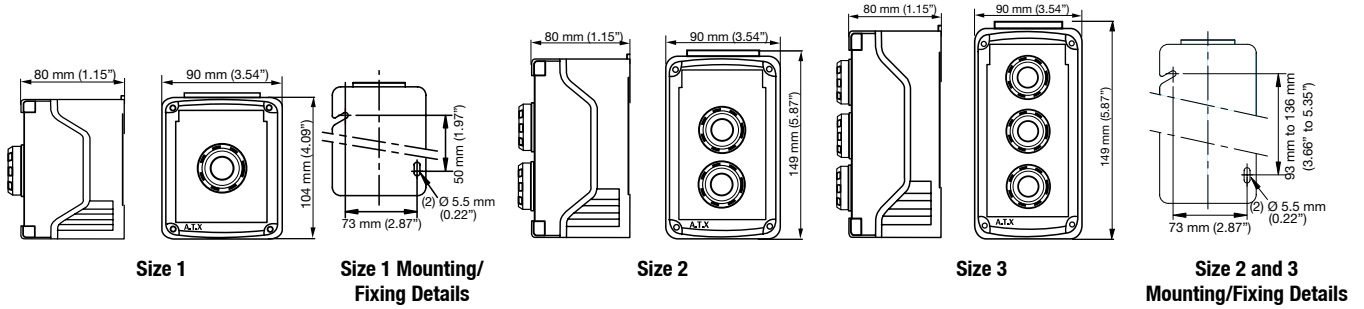
Increased Safety

Polyamide, Fiberglass Reinforced Polyester, 316L Stainless Steel, Aluminum

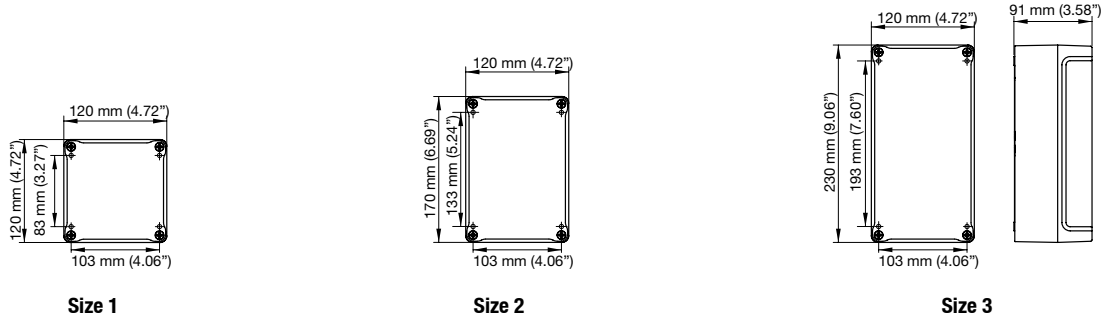
Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Dimensions

Polyamide

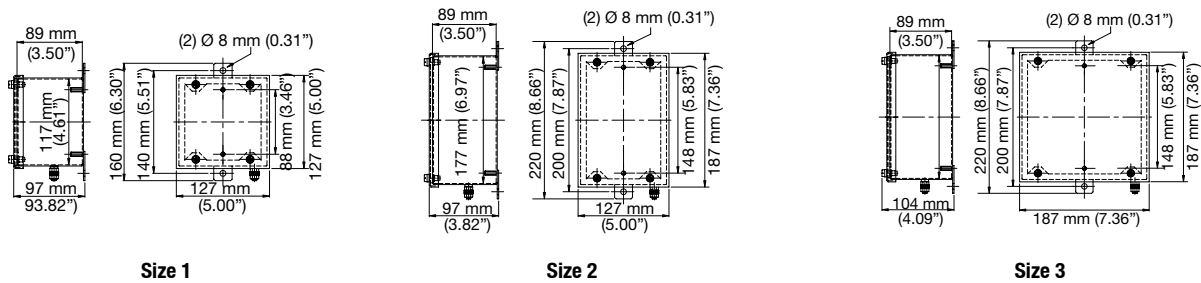


Fiberglass Reinforced Polyester

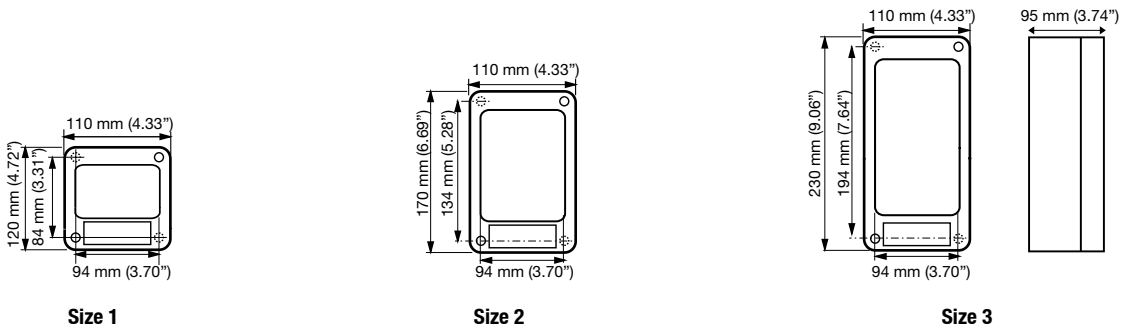


Mounting/Fixing Details for Above Boxes: Four Holes Ø 5 mm

316L Stainless Steel



Aluminum



Mounting/Fixing Details for above Boxes: Two Holes Ø 5 mm

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Unicode® 2 Series Accessories : Push Buttons

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Features

- Can be equipped with up to 3 Unicode 2 Contact Blocks (UCB) Series contact blocks.
- ATEX and IECEx certified.
- TS35 rail mounted.
- Panel mounted.

Standard Materials

- Body: polyamide
- Seal: ethylene propylene diene Monomer (M-class) rubber (EPDM)

Certifications and Compliances

◆ ATEX/ IECEx Certification

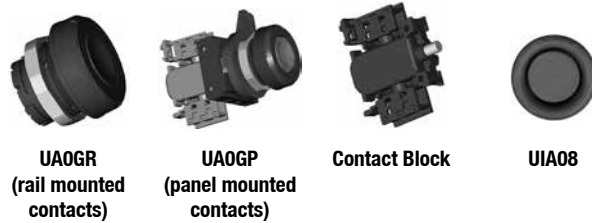
- Certification Type TCe
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex e IIC Gb
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex tb IIIC Db
 - Surface Temperature: -40 °C to +60 °C
 - CE Declaration of Conformity: 5C242
 - ATEX Certificate: LCIE 09 ATEX 3010U
 - IECEx Certificate: IECEx LCI 09.0011U
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10

◆ EURASEC Certification

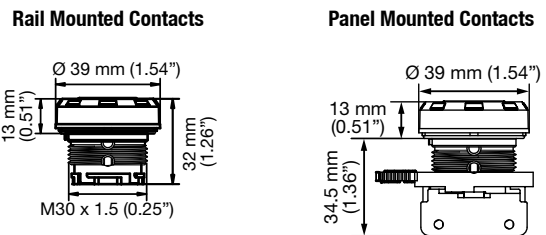
- EURASEC RU C-FR. Г5 05.B00909

◆ Others Certification ①

- INMETRO Certificate: BVC 10.0044-U



Dimensions in Millimeters



① Inmetro certification available on special request only. Contact your local sales for more information.

Unicode® 2 Series Accessories : Push Buttons

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

	Weight in Kilograms		Volume dm ³		Pack	Catalog Number	
	Rail Mounted	Panel Mounted	Rail Mounted	Panel Mounted		Rail Mounted	Panel Mounted
Spring Return - Push Button (contact block to be ordered separately) <i>Legend plates, guards, blanking plugs (see Accessories page).</i>							
Red + Green	0.03	0.05	0.06	0.17	1	UA0RGR	UA0RGP
Green	0.03	0.05	0.06	0.17	1	UA0GR	UA0GP
Red	0.03	0.05	0.06	0.17	1	UA0RR	UA0RP
White	0.03	0.05	0.06	0.17	1	UA0WR	UA0WP
Blue	0.03	0.05	0.06	0.17	1	UA0BR	UA0BP
Yellow	0.03	0.05	0.06	0.17	1	UA0YR	UA0YP
1-Pole Contact Blocks							
1 x NO						UCB5R	UCB5P
1 x NC	0.032		0.06		1	UCB9R	UCB9P
Spare Parts							
Rail to panel mounted conversion adaptor	0.02		0.08		1		UPMA

Marking	Color	Weight kg	Volume dm ³	Pack	Catalog Number	
Set of Five Spare Inserts						
(unmarked)	Green	0.01	0.01	1		UIAG
(unmarked)	Red	0.01	0.01	1		UIAR
(unmarked)	Yellow	0.01	0.01	1		UIAY
(unmarked)	White	0.01	0.01	1		UIAW
(unmarked)	Blue	0.01	0.01	1		UIAB
(unmarked)	Black	0.01	0.01	1		UIAN
ON	Green	0.01	0.01	1		UIA01
OFF	Red	0.01	0.01	1		UIA02
START	Green	0.01	0.01	1		UIA03
STOP	Red	0.01	0.01	1		UIA04
MARCHE	Green	0.01	0.01	1		UIA05
ARRET	Red	0.01	0.01	1		UIA06
I	Green	0.01	0.01	1		UIA07
O	Red	0.01	0.01	1		UIA08

Shaded catalog numbers are normally stocked items. All other items are made to order.

Unicode® 2 Series Accessories : Mushroom Push Buttons

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Features

- Can be equipped with up to 3 UCB Series Contact Blocks contact blocks.
- ATEX and IECEx certified.
- TS35 rail mounted.
- Panel mounted.

Standard Materials

- Body: polyamide
- Seal: ethylene propylene diene Monomer (M-class) rubber (EPDM)

Certifications and Compliances

◆ ATEX/ IECEx Certification

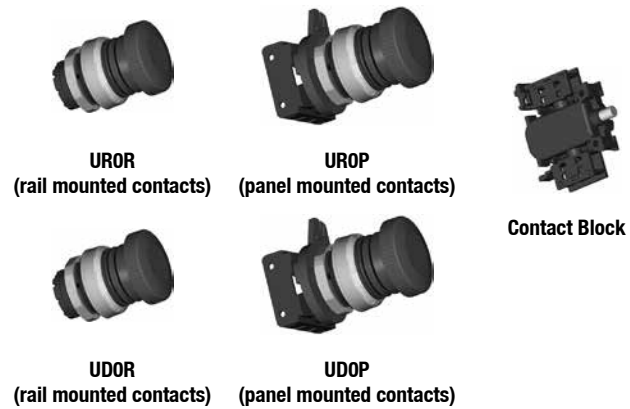
- Certification Type TCe
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex e IIC Gb
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex tb IIIC Db
 - Surface Temperature: -40 °C to +60 °C
 - CE Declaration of Conformity: 5C242
 - ATEX Certificate: LCIE 09 ATEX 3010U
 - IECEx Certificate: IECEx LCI 09.0011U
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10

◆ EURASEC Certification

- EURASEC RU C-FR. ГБ 05.B00909

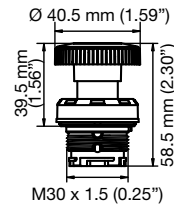
◆ Others Certification ①

- INMETRO Certificate: BVC 10.0044-U

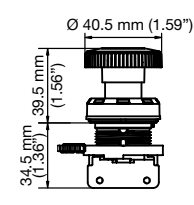


Dimensions in Millimeters

Rail Mounted Contacts



Panel Mounted Contacts



Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

	Weight kg		Volume dm ³			Catalog Number	
	Rail Mounted	Panel Mounted	Rail Mounted	Panel Mounted	Pack	Rail Mounted	Panel Mounted
Spring Return Mushroom Head Push Button (contact block to be ordered separately)							
<i>Legend plates, guards, blanking plugs (see Accessories page).</i>							
Red	0.045	0.06	0.26	0.12	1	UR0R	UR0P
Black	0.045	0.06	0.26	0.12	1	UB0R	UB0P
Push-Pull Mushroom Head Push Button (contact block to be ordered separately)							
<i>Legend plates, guards, blanking plugs (see Accessories page).</i>							
Red Emergency Stop	0.045	0.06	0.12	0.26	1	UD0R	UD0P
1-Pole Contact Blocks							
1 x NO						UCB5R	UCB5P
1 x NC		0.032		0.06	1	UCB9R	UCB9P
Spare Parts							
Rail to panel mounted conversion adaptor		0.02		0.08	1		UPMA

① Inmetro certification available on special request only. Contact your local sales for more information.

Shaded catalog numbers are normally stocked items. All other items are made to order.

Unicode® 2 Series Accessories : Key Release Mushroom Push Buttons

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Features

- Can be equipped with up to 2 Unicode 2 Contact Blocks (UCB) Series contact blocks.
- ATEX certified.
- TS35 rail mounted.
- Panel mounted.

Standard Materials

- Body: thermosetting plastic
- Seal: ethylene propylene diene Monomer (M-class) rubber (EPDM)

Certifications and Compliances

◆ ATEX Certification

- Certification Type AUX
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex e II
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: -20 °C to +70 °C
 - CE Declaration of Conformity: 5C206
 - ATEX Certificate: LCIE 00 ATEX 0002U
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): 7 Joules

◆ EURASEC Certification

- EURASEC RU C-FR.ГБ 05.B00909

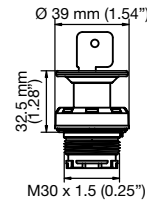
◆ Others Certification ①

- INMETRO Certificate: BVC 11.0644-U

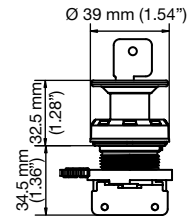


Dimensions in Millimeters

Rail Mounted Contacts



Panel Mounted Contacts



	Weight kg		Volume dm ³		Pack	Catalog Number	
	Rail Mounted	Panel Mounted	Rail Mounted	Panel Mounted		Rail Mounted	Panel Mounted
Key Release Mushroom Head Push Button (contact block to be ordered separately)							
<i>Legend plates, guards, blanking plugs (see Accessories page).</i>							
Red	0.085	0.096	0.09	0.25	1	UC0R	UC0P
1-Pole Contact Blocks							
1 x NO						UCB5R	UCB5P
1 x NC	0.032		0.06		1	UCB9R	UCB9P
Spare Parts							
Spare key (type 4A 185)		–		–	1	SK4A185	SK4A185
Rail to panel mounted conversion adaptor	0.02		0.08		1		UPMA

① Inmetro certification available on special request only. Contact your local sales for more information.

Shaded catalog numbers are normally stocked items. All other items are made to order.

Unicode® 2 Series Accessories : Key Momentary Push Buttons

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Features

- Can be equipped with up to 2 Unicode 2 Contact Blocks (UCB) Series contact blocks.
- ATEX certified.
- TS35 rail mounted.
- Panel mounted.

Standard Materials

- Body: thermosetting plastic
- Seal: ethylene propylene diene Monomer (M-class) rubber (EPDM)

Certifications and Compliances

◆ ATEX Certification

- Certification Type AUX
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex e II
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: -20 °C to +70 °C
 - CE Declaration of Conformity: 5C206
 - ATEX Certificate: LCIE 00 ATEX 0002U
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): 7 Joules

◆ EURASEC Certification

- EURASEC RU C-FR.ГБ 05.B00909

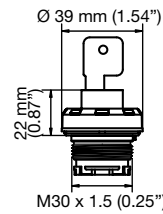
◆ Others Certification ①

- INMETRO Certificate: BVC 11.0644-U

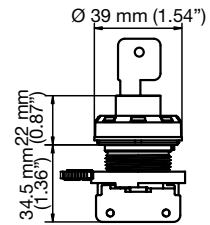


Dimensions in Millimeters (Inches)

Rail Mounted Contacts



Panel Mounted Contacts



Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

	Weight kg		Volume dm ³			Catalog Number	
	Rail Mounted	Panel Mounted	Rail Mounted	Panel Mounted	Pack	Rail Mounted	Panel Mounted
Key Momentary Push Button (contact block to be ordered separately)							
<i>Legend plates, guards, blanking plugs (see Accessories page).</i>							
Key removable in both positions	0.080	0.093	0.08	0.20	1	UE0R	UE0P
Key removable in ON positions	0.080	0.093	0.08	0.20	1	UF0R	UF0P
Key removable in OFF positions	0.080	0.093	0.08	0.20	1	UG0R	UG0P
1-Pole Contact Blocks							
1 x NO						UCB5R	UCB5P
1 x NC	0.032			0.06	1	UCB9R	UCB9P
Spare Parts							
Spare key (type 4A 185)		—		—	1	SK4A185	SK4A185
Rail to panel mounted conversion adaptor	0.02			0.08	1		UPMA

① Inmetro certification available on special request only. Contact your local sales for more information.

Shaded catalog numbers are normally stocked items. All other items are made to order.

Unicode® 2 Series Accessories : Rotary Actuators

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Features

- Can be equipped with up to 2 Unicode 3 Contact Blocks (UCB) Series contact blocks.
- ATEX and IECEx certified.
- TS35 rail mounted.
- Panel mounted.

Standard Materials

- Body: thermosetting plastic
- Seal: ethylene propylene diene Monomer (M-class) rubber (EPDM)

Certifications and Compliances

◆ ATEX/ IECEx Certification

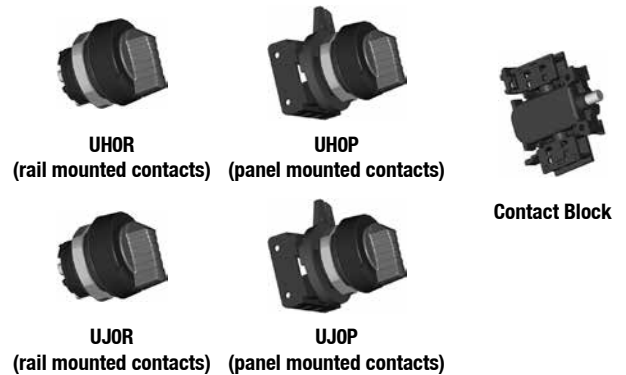
- Certification Type TCe
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex e IIC Gb
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex tb IIIC Db
 - Surface Temperature: -40 °C to +60 °C
 - CE Declaration of Conformity: 5C242
 - ATEX Certificate: LCIE 09 ATEX 3010U
 - IECEx Certificate: IECEx LCI 09.0011U
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10

◆ EURASEC Certification

- EURASEC RU C-FR. ГБ 05.B00909

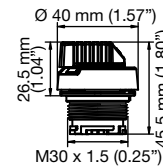
◆ Others Certification ①

- INMETRO Certificate: BVC 11.0644-U

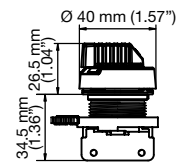


Dimensions in Millimeters

Rail Mounted Contacts



Panel Mounted Contacts



① Inmetro certification available on special request only. Contact your local sales for more information.

Unicode® 2 Series Accessories : Rotary Actuators

Components for Increased Safety Enclosures

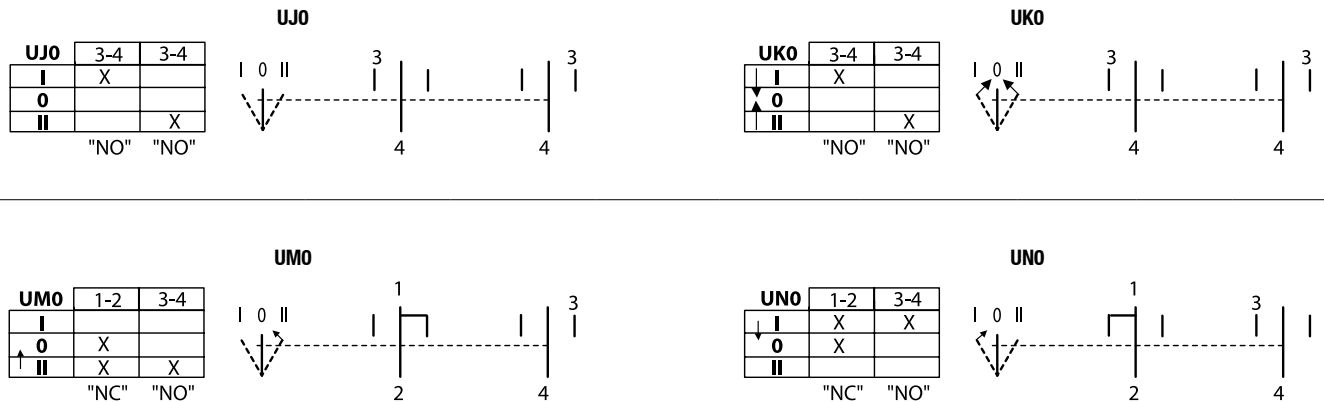
Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

	Weight kg		Volume dm ³		Pack	Catalog Number	
	Rail Mounted	Panel Mounted	Rail Mounted	Panel Mounted		Rail Mounted	Panel Mounted
	2-Position Rotary Actuator (contact block to be ordered separately) <i>Legend plates, guards, blanking plugs (see Accessories page).</i>						
2-Positions Selector Switch (O-I), 2 maintained positions	0.038	0.051	0.09	0.22	1	UH0R	UH0P
3-Position Rotary Actuator (contact block to be ordered separately) <i>Legend plates, guards, blanking plugs (see Accessories page).</i>							
3-Position Selector Switch, I and II position maintained (I-O-II)	0.038	0.051	0.09	0.22	1	UJ0R	UJ0P
3-Position Selector Switch, I and II spring return to O (I->O<-II)	0.038	0.051	0.09	0.22	1	UK0R	UK0P
3-Position Selector Switch, I maintained, II spring return to O (I-O<-II)	0.038	0.051	0.09	0.22	1	UM0R	UM0P
3-Position Selector Switch, I spring return to O, II maintained (I->O-II)	0.038	0.051	0.09	0.22	1	UN0R	UN0P
1-Pole Contact Blocks							
1 x NO		0.032		0.06	1	UCB5R	UCB5P
1 x NC						UCB9R	UCB9P
Spare Parts							
Rail to panel mounted conversion adaptor		0.02		0.08	1	—	UPMA

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Wiring Diagrams



Shaded catalog numbers are normally stocked items. All other items are made to order.

Unicode® 2 Series Accessories : Illuminated Push Buttons

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Features

- Can be equipped with up to 2 Unicode 2 Contact Blocks (UCB) Series contact blocks — not supplied.
- ATEX and IECEx certified.
- TS35 rail mounted.
- High intensity single LED light.
- Long lifetime over 100,000 hours.
- Panel mounted.
- Rated operating voltage (U_e): 12 Vac to 254 Vac, 50/60 Hz and 12 Vdc to 60 Vdc.
- Terminal connection: 2.5 mm²
- Operational life: 100,000 hours.

Standard Materials

- Body: polyamide
- Lens: polycarbonate
- Seal: ethylene propylene diene Monomer (M-class) rubber (EPDM)

Certifications and Compliances

◆ ATEX/ IECEx Certification

• Certification Type TCe (Actuator and Lens).

- Gas: Zone 1 and 2
- Conforming to ATEX 94/9/CE: Ⓢ II 2 G
- Type of Protection: Ex e IIC Gb
- Dust: Zone 21 and 22
- Conforming to ATEX 94/9/CE: Ⓢ II 2 D
- Type of Protection: Ex tb IIIC Db
- Surface Temperature: -40 °C to +60 °C
- CE Declaration of Conformity: 5C242
- ATEX Certificate: LCIE 09 ATEX 3010U
- IECEx Certificate: IECEx LCI 09.0011U
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

• Certification Type CVe (Contact Block and Pilot Light)

- Gas: Zone 1 and 2
- Conforming to ATEX 94/9/CE: Ⓢ II 2 G
- Type of Protection: Ex e IIC
- Dust: Zone 21 and 22
- Conforming to ATEX 94/9/CE: Ⓢ II 2 D
- Type of Protection: Ex tD A21
- Surface Temperature: -40 °C to +75 °C
- CE Declaration of Conformity: 5C243
- ATEX Certificate: LCIE 09 ATEX 3001U
- IECEx Certificate: IECEx LCI 09.0002U



ULG0H
(rail mounted contacts)



ULG0P
(panel mounted contacts)



Contact Block



UIL08

◆ EURASEC Certification

• Certification Type TCe (Actuator and Lens).

- EURASEC RU C-FR. Г5 05.B00909

• Certification Type CVe (Contact Block and Pilot Light)

- EURASEC RU C-FR. Г5 05.B00909

◆ Others Certification ①

• Certification Type TCe (Actuator and Lens).

- INMETRO Certificate: BVC 10.0044-U

• Certification Type CVe (Contact Block and Pilot Light)

- INMETRO Certificate: BVC 10.0047-U

① Inmetro certification available on special request only. Contact your local sales for more information.

Unicode® 2 Series Accessories : Illuminated Push Buttons

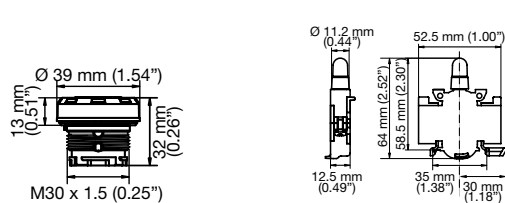
Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

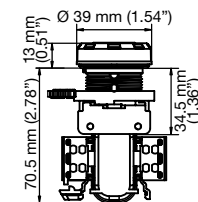
	Weight kg		Volume dm ³		Pack	Catalog Number	
	Rail Mounted	Panel Mounted	Rail Mounted	Panel Mounted		Rail Mounted	Panel Mounted
	Spring Return Illuminated Push Button (contact block to be ordered separately) <i>Legend plates, guards, blanking plugs (see Accessories page).</i>						
Green	0.062	0.075	0.26	0.28	1	ULG0R	ULG0P
Red	0.062	0.075	0.26	0.28	1	ULR0R	ULR0P
White	0.062	0.075	0.26	0.28	1	ULW0R	ULW0P
Blue	0.062	0.075	0.26	0.28	1	ULB0R	ULB0P
Yellow	0.062	0.075	0.26	0.28	1	ULY0R	ULY0P
1-Pole Contact Blocks							
1 x NO						UCB5R	UCB5P
1 x NC	0.032		0.06		1	UCB9R	UCB9P
Spare Parts							
Rail to panel mounted conversion adaptor	0.02		0.08		1	—	UPMA

Marking	Color	Weight kg	Volume dm ³	Pack	Catalog Number
Set of Five Spare Inserts					
(unmarked)	Green	0.01	0.01	1	UIAG
(unmarked)	Red	0.01	0.01	1	UIAR
(unmarked)	Yellow	0.01	0.01	1	UIAY
(unmarked)	White	0.01	0.01	1	UIAW
(unmarked)	Blue	0.01	0.01	1	UIAB
(unmarked)	Black	0.01	0.01	1	UIAN
ON	Green	0.01	0.01	1	UIA01
OFF	Red	0.01	0.01	1	UIA02
START	Green	0.01	0.01	1	UIA03
STOP	Red	0.01	0.01	1	UIA04
MARCHE	Green	0.01	0.01	1	UIA05
ARRET	Red	0.01	0.01	1	UIA06
I	Green	0.01	0.01	1	UIA07
O	Red	0.01	0.01	1	UIA08

Dimensions in Millimeters



Rail Mounted Contacts



Panel Mounted Contacts

Wiring Diagram



Shaded catalog numbers are normally stocked items. All other items are made to order.

Unicode® 2 Series Accessories : Pilot Lights

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Features

- ATEX and IEC certified.
- TS35 rail mounted.
- High intensity single LED light.
- Long lifetime over 100,000 hours.
- Rated operating voltage (Ue): 12 Vac to 254 Vac, 50/60 Hz and 12 Vdc to 60 Vdc.
- Terminal connection: 2.5 mm²
- Operational life: 100,000 hours.

Standard Materials

- Body: polyamide
- Lens: polycarbonate
- Seal: ethylene propylene diene Monomer (M-class) rubber (EPDM)

Certifications and Compliances

◆ ATEX/ IECEx Certification

• Certification Type TCe (Actuator and Lens)

- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex e IIC Gb
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tb IIIC Db
- Surface Temperature: -40 °C to +60 °C
- CE Declaration of Conformity: 5C242
- ATEX Certificate: LCIE 09 ATEX 3010U
- IECEx Certificate: IECEx LCI 09.0011U
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

• Certification Type CVe (Contact Block and Pilot Light)

- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex e IIC
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
- Surface Temperature: -40 °C to +75 °C
- CE Declaration of Conformity: 5C243
- ATEX Certificate: LCIE 09 ATEX 3001U
- IECEx Certificate: IECEx LCI 09.0002U



UPGOR
(rail mounted contacts)



UPGOP
(panel mounted contacts)

◆ EURASEC Certification

• Certification Type TCe (Actuator and Lens).

- EURASEC RU C-FR. ГБ 05.B00909

• Certification Type CVe (Contact Block and Pilot Light)

- EURASEC RU C-FR. ГБ 05.B00909

◆ Others Certification ①

• Certification Type TCe (Actuator and Lens).

- INMETRO Certificate: BVC 10.0044-U

• Certification Type CVe (Contact Block and Pilot Light)

- INMETRO Certificate: BVC 10.0047-U

① Inmetro certification available on special request only. Contact your local sales for more information.

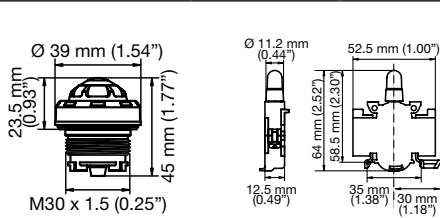
Unicode® 2 Series Accessories : Pilot Lights

Components for Increased Safety Enclosures

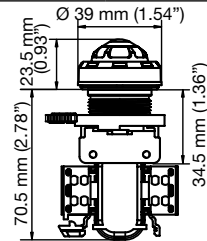
Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

	Weight kg		Volume dm ³		Pack	Catalog Number	
	Rail Mounted	Panel Mounted	Rail Mounted	Panel Mounted		Rail Mounted	Panel Mounted
Pilot Light: 12 Vac to 254, Vac 50/60 Hz, 12 Vdc to 60 Vdc <i>Legend plates, guards, blanking plugs (see Accessories page).</i>							
Green	0.056	0.069	0.29	0.31	1	UPG0R	UPG0P
Red	0.056	0.069	0.29	0.31	1	UPR0R	UPR0P
White	0.056	0.069	0.29	0.31	1	UPW0R	UPW0P
Blue	0.056	0.069	0.29	0.31	1	UPB0R	UPB0P
Yellow	0.056	0.069	0.29	0.31	1	UPY0R	UPY0P
Spare Parts							
Rail to panel mounted conversion adaptor		0.02		0.08	1		UPMA
Spare Lenses							
Green		0.03		0.06	1	UPGL	UPGL
Red		0.03		0.06	1	UPRL	UPRL
White		0.03		0.06	1	UPWL	UPWL
Blue		0.03		0.06	1	UPBL	UPBL
Yellow		0.03		0.06	1	UPYL	UPYL

Dimensions in Millimeters



Rail Mounted Contacts



Panel Mounted Contacts

Wiring Diagram



Shaded catalog numbers are normally stocked items. All other items are made to order.

Unicode® 2 Series Accessories : 1-Pole Contact Block

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Features

- ATEX and IECEx certified.
- TS35 rail mounted.
- Panel mounted.
- High performance contact block suitable for low intensity (less than 5mA).
- Rated operating voltage (Ue): 500 Vac – 110 Vdc
- Switching capacity:
 - AC12: 16 Amp/400 Vac
 - AC14: 10 Amp/400 Vac
 - AC15: 6 Amp/500 Vac
 - DC13: 2 Amp/24 Vdc and 1 Amp/110 Vdc
- Terminal connection: 2.5 mm²
- Operational life: 100,000 hours.

Standard Materials

- Body: polyamide
- Contact: silver alloy

Certifications and Compliances

◆ATEX/ IECEx Certification

• Certification Type CVe

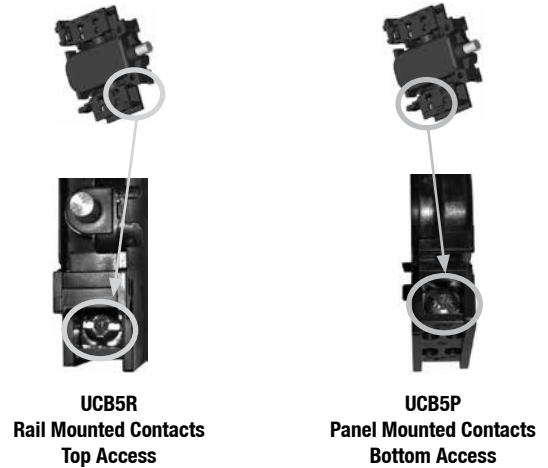
- Gas: Zone 1 and 2
- Conforming to ATEX 94/9/CE: Ⓜ II 2 G
- Type of Protection: Ex e IIC
- Dust: Zone 21 and 22
- Conforming to ATEX 94/9/CE: Ⓜ II 2 D
- Type of Protection: Ex tD A21
- Surface Temperature: -40 °C to +75 °C
- CE Declaration of Conformity: 5C243
- ATEX Certificate: LCIE 09 ATEX 3001U
- IECEx Certificate: IECEx LCI 09.0002U

◆EURASEC Certification

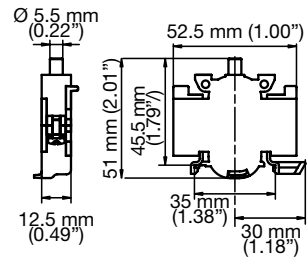
- EURASEC RU C-FR. ГБ 05.B00909

◆Others Certification ①

- INMETRO Certificate: BVC 10.0047-U



Dimensions in Millimeters



Wiring Diagram



	Weight kg	Volume dm ³	Pack	Catalog Number	
				Rail Mounted	Panel Mounted
1-Pole Contact Blocks					
1 x NO	0.032	0.06	1	UCB5R	UCB5P
1 x NC	0.032	0.06	1	UCB9R	UCB9P

① Inmetro certification available on special request only. Contact your local sales for more information.

Shaded catalog numbers are normally stocked items. All other items are made to order.

Unicode® 2 Series Accessories : 16 Amp Switches

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Features

- 2, 3, 4, 6 or 8-pole switches
 - TS35 rail mounted.
 - Panel mounted.
 - Padlockable.
 - Can be equipped with switch and changeover switch contact blocks.
- Switching capacity:
 - AC 1, 16 Amp, 690 Vac
 - AC 3, 8 Amp, 500 Vac
 - AC 3, 4 Amp, 690 Vac
 - AC 15, 16 Amp, 415 Vac
 - DC 1, 10 Amp, 24 Vdc
 - DC 1, 6 Amp, 60 Vdc
 - DC 1: 6 Amp/110 Vdc (2 contacts wired in series)
 - DC 1: 6 Amp/220 Vdc (3 contacts in series)
- Terminal connection: 1.5 mm² - 2.5 mm² (stranded), 1.5 mm² - 4 mm² (solid)
- Operational life: 10,000 cycles.

Standard Materials

- Body: polyamide
- Contact: silver

Certifications and Compliances ①

◆ ATEX/ IECEx Certification

- **Certification Type SW16 (Switches)**
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex db eb IIC
 - Dust: Zone 21 and 22
 - Must be used in an approved dustproof enclosure
 - Operating Temperature: -55 °C to +80 °C
 - CE Declaration of Conformity: 5C249
 - ATEX Certificate: LCIE 12 ATEX 3068U
 - IEC Certificate: IECEx LCIE 12.0021U
- **Certification Type AUXe (Handles) ②**
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex e II
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - IP66 IK10
 - Ambient Temperature: -20 °C to +55 °C
 - CE Declaration of Conformity: 5C221
 - ATEX Certificate: LCIE 03 ATEX 0012U

◆ EURASEC Certification

- **Certification Type SW16 (Switches)**
 - EURASEC RU C-FR. Г5 05.B00909



US30R
(rail mounted switch)



US30P
(panel mounted switch)



USH ②
(switch handle)

① These products are certified only when used as components in factory assembled panels.

② USH handle is ATEX certified it is not for use in IECEx explosive atmospheres.

Unicode® 2 Series Accessories : 16 Amp Switches

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

	Diagram Number	Wiring Diagram	Catalog Number	
			Rail Mounted	Panel Mounted
Two Pole Selector Switches (handle to be ordered separately)				
2 position 2-pole selector switch	002		US16220002R <i>(old p/n: US32R)</i>	US16220002P <i>(old p/n: US32P)</i>
2 position 2-pole selector switch	016		US16220016R <i>(old p/n: US30R)</i>	US16220016P <i>(old p/n: US30P)</i>
3 position 2-pole selector switch	027		US16230027R <i>(old p/n: US31R)</i>	US16230027P <i>(old p/n: US31P)</i>
3 position 2-pole selector switch with spring return from 135° to 90°	038		US16230038R <i>(old p/n: US33R)</i>	US16230038P <i>(old p/n: US33P)</i>
3 position 2-pole selector switch with spring return from 45° to 90°	048		US16230048R <i>(old p/n: US34R)</i>	US16230048P <i>(old p/n: US34P)</i>
Three or Four Pole Selector Switches (handle to be ordered separately)				
2 position 4-pole selector switch	102		US16420102R <i>(old p/n: US35R)</i>	US16420102P <i>(old p/n: US35P)</i>
3 position 4-pole selector switch	119		US16430119R <i>(old p/n: US36R)</i>	US16430119P <i>(old p/n: US36P)</i>
2 position 4-pole selector switch	106		US16420106R <i>(old p/n: US37R)</i>	US16420106P <i>(old p/n: US37P)</i>
3 position 3-pole — Late break, early make selector switch with spring return from 45° to 90°	138		US16330138R <i>(old p/n: US38R)</i>	US16330138P <i>(old p/n: US38P)</i>
Padlockable handle for all selector switches			USH ①	

① USH handle is ATEX Certified, it is not for use in IECEx explosive atmospheres.

Shaded catalog numbers are normally stocked items. All other items are made to order.

Unicode® 2 Series Accessories : 16 Amp Switches

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Switch Units - Add P for Panel Mounted or R for DIN Rail Mounted - Example US1612-0056R

Wiring Diagram	Catalog Number	Wiring Diagram	Catalog Number
1-pole 2 position			
	US16120056_		US16120061_
2-pole 2 position			
	US16220002_		US16220015_
	US16220003_		US16220016_
	US16220004_		US16220017_
	US16220005_		US16220018_
	US16220007_		US16220019_
	US16220008_		US16220020_
	US16220009_		US16220021_
	US16220010_		US16220043_
	US16220011_		US16220045_
	US16220012_		US16220053_
	US16220013_		US16220073_
	US16220014_		US16220074_
2-pole 3 position			
	US16230022_		US16230025_
	US16230023_		US16230026_
	US16230024_		US16230027_

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Unicode® 2 Series Accessories : 16 Amp Switches

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Switch Units - Add P for Panel Mounted or R for DIN Rail Mounted - Example US1612-0056R

Wiring Diagram	Catalog Number	Wiring Diagram	Catalog Number
2-pole 3 position			
	US16230028		US16230050
	US16230029		US16230051
	US16230030		US16230052
	US16230031		US16230054
	US16230032		US16230055
	US16230038		US16230059
	US16230039		US16230068
	US16230040		US16230070
	US16230041		US16230071
	US16230042		US16230072
	US16230046		US16230075
	US16230047		US16230076
	US16230048		US16230087
	US16230049		US16239002

Unicode® 2 Series Accessories : 16 Amp Switches

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Switch Units - Add P for Panel Mounted or R for DIN Rail Mounted - Example US1612-0056R

Wiring Diagram	Catalog Number	Wiring Diagram	Catalog Number
2-pole 4 position			
	US16240044_		US16240062_
	US16240057_		US16240065_
	US16240058_		US16240084_
2-pole 8 position			
	US16280036_	—	—
3-pole 2 position			
	US16320122_		US16321153_
3-pole 3 position			
	US16330136_		US16331112_
	US16330138_		US16331120_
	US16330144_		US16331142_
	US16330145_		US16331155_
	US16330161_		US16331171_
	US16330167_		US16331202_
	US16330199_		US16331209_
	US16331109_		US16331210_

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Unicode® 2 Series Accessories : 16 Amp Switches

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Switch Units - Add P for Panel Mounted or R for DIN Rail Mounted - Example US1612-0056R

Wiring Diagram	Catalog Number	Wiring Diagram	Catalog Number
3-pole 3 position			
	US16331230_	—	—
3-pole 4 position			
	US16340146_		US16340183_
	US16340168_		US16341119_
	US16340178_		US16341145_
	US16340181_		US16341151_
4-pole 2 position			
	US16420102_		US16420137_
	US16420103_		US16420152_
	US16420104_		US16420154_
	US16420105_		US16420173_
	US16420106_		US16421105_
	US16420107_		US16421122_
	US16420116_		US16421147_
	US16420134_		US16421162_
	US16420135_		US16421234_
4-pole 3 position			
	US16430111_		US16430113_
	US16430112_		US16430114_

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Unicode® 2 Series Accessories : 16 Amp Switches

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Switch Units - Add P for Panel Mounted or R for DIN Rail Mounted - Example US1612-0056R

Wiring Diagram	Catalog Number	Wiring Diagram	Catalog Number
	US16430118_		US16430169_
	US16430119_		US16430170_
	US16430120_		US16430175_
	US16430121_		US16430176_
	US16430127_		US16430180_
	US16430129_		US16431103_
	US16430131_		US16431104_
	US16430132_		US16431106_
	US16430133_		US16431108_
	US16430139_		US16431111_
	US16430140_		US16431113_
	US16430153_		US16431116_
	US16430157_		US16431125_
	US16430158_		US16431129_
	US16430159_		US16431134_
	US16430160_		US16431138_
	US16430162_		US16431159_

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Unicode® 2 Series Accessories : 16 Amp Switches

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Switch Units - Add P for Panel Mounted or R for DIN Rail Mounted - Example US1612-0056R

Wiring Diagram	Catalog Number	Wiring Diagram	Catalog Number
4-pole 3 position			
	US16431165_		US16431206_
	US16431166_		US16431208_
	US16431167_		US16431213_
	US16431172_		US16431215_
	US16431173_		US16431217_
	US16431174_		US16431220_
	US16431176_		US16431222_
	US16431178_		US16431225_
	US16431179_		US16431226_
	US16431201_		US16431232_
	US16431203_		US16439001_
4-pole 4 position			
	US16440110_		US16440147
	US16440123_		US16440148_
	US16440130_		US16440150_
	US16440143_		US16440151_

Unicode® 2 Series Accessories : 16 Amp Switches

Components for Increased Safety Enclosures

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Switch Units - Add P for Panel Mounted or R for DIN Rail Mounted - Example US1612-0056R

Wiring Diagram	Catalog Number	Wiring Diagram	Catalog Number
4-pole 4 position			
	US16440155_		US16441128_
	US16440156_		US16441132_
	US16440164_		US16441133_
	US16440171_		US16441136_
	US16440198_		US16441139_
	US16440608_		US16441143_
	US16440611_		US16441144_
	US16440614_		US16441146_
	US16441102_		US16441154_
	US16441114_		US16441156_
	US16441115_		US16441163_
	US16441124_		US16441164_
	US16441127_		US16441168_

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Unicode® 2 Series Accessories : 16 Amp Switches

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Switch Units - Add P for Panel Mounted or R for DIN Rail Mounted - Example US1612-0056R

Wiring Diagram	Catalog Number	Wiring Diagram	Catalog Number
4-pole 4 position			
	US16441169_		US16441211_
	US16441180_		US16441212_
	US16441204_		US16441219_
	US16441205_		US16441224_
	US16441207_		US16441229_
4-pole 5 position			
	US16451110_		US16451235_

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

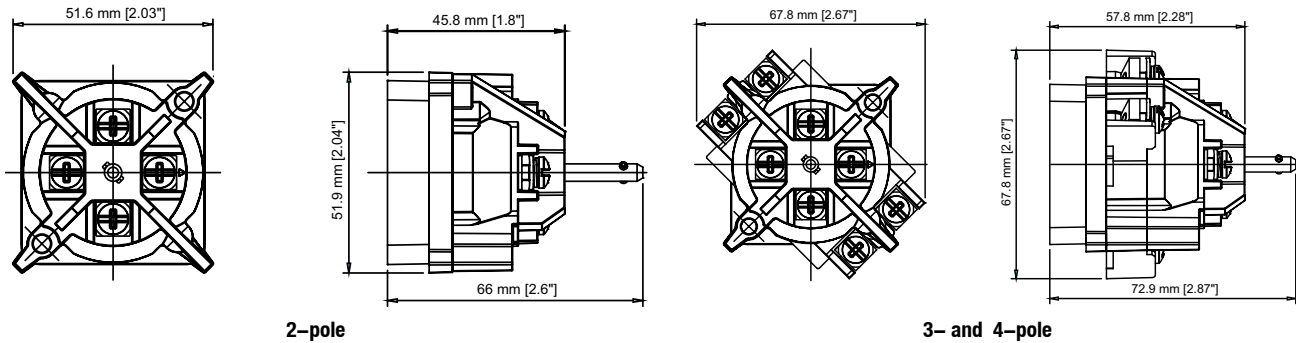
Unicode® 2 Series Accessories : 16 Amp Switches

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

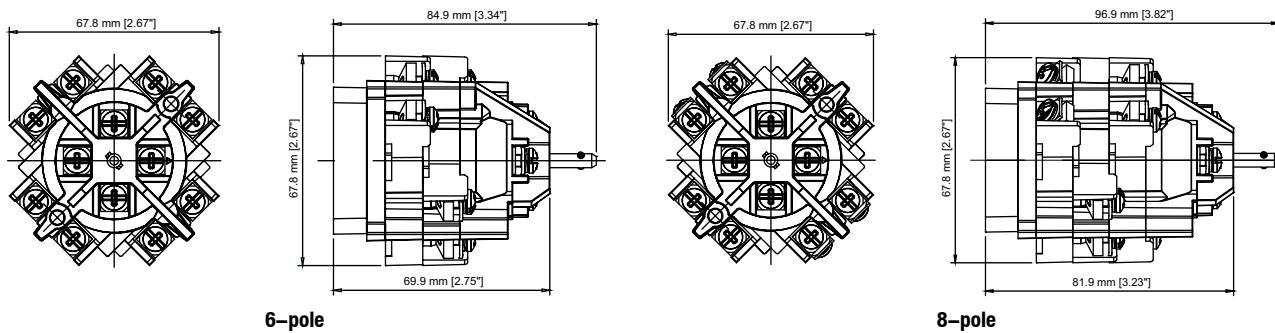
Dimensions in Millimeters

16 Amp Switches



2-pole

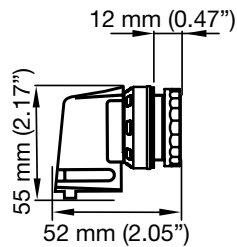
3- and 4-pole



6-pole

8-pole

USH Handle ①



① USH handle is ATEX Certified, it is not for use in IECEx explosive atmospheres.

Unicode® 2 Series Accessories

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Nameplates – Set of 10

Blank self-adhesive, laminated plastic 58 mm x 18 mm.

Color	Catalog Number
White (black letters)	UNPW
Yellow (black letters)	UNPY
Red (white letters)	UNPR
Blue (white letters)	UNPB
Black (white letters)	UNPN
Green (white letters)	UNPG

Inserts for Push Button – Set of 5

Marking	Color	Catalog Number
(unmarked)	Green	UIAG
(unmarked)	Red	UIAR
(unmarked)	Yellow	UIAY
(unmarked)	White	UIAW
(unmarked)	Blue	UIAB
(unmarked)	Black	UIAN
ON	Green	UIA01
OFF	Red	UIA02
START	Green	UIA03
STOP	Red	UIA04
MARCHE	Green	UIA05
ARRET	Red	UIA06
I	Green	UIA07
O	Red	UIA08

Inserts for Illuminated Push Button – Set of 5

Marking	Color	Catalog Number
(unmarked)	Green	UILG
(unmarked)	Red	UILR
(unmarked)	Yellow	UILY
(unmarked)	White	UILW
(unmarked)	Blue	UILB
ON	Green	UIL01
OFF	Red	UIL02
START	Green	UIL03
STOP	Red	UIL04
MARCHE	Green	UIL05
ARRET	Red	UIL06
I	Green	UIL07
O	Red	UIL08

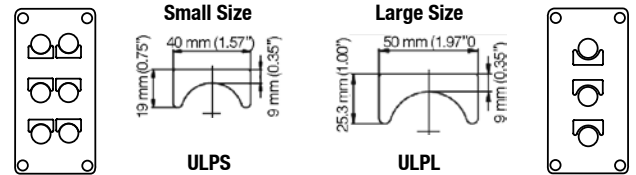
Spare Key

For all key-operated buttons.

Description	Catalog Number
Spare key type 4 A 185	SK4A185

Standard Legend Plates

Two sizes available. Self-adhesive yellow laminated plastic (black lettering).


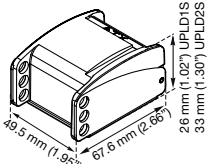




Text	Catalog Number	
	Small	Large
Blank (set of 10)	ULPS	ULPL
ON	ULPSA01	ULPLA01
OFF	ULPSA02	ULPLA02
FORWARD	ULPSA03	ULPLA03
REVERSE	ULPSA04	ULPLA04
JOG	ULPSA05	ULPLA05
RUN	ULPSA06	ULPLA06
START	ULPSA07	ULPLA07
STOP	ULPSA08	ULPLA08
UP	ULPSA09	ULPLA09
DOWN	ULPSA10	ULPLA10
FAST	ULPSA11	ULPLA11
SLOW	ULPSA12	ULPLA12
RAISE	ULPSA13	ULPLA13
LOWER	ULPSA14	ULPLA14
OPEN	ULPSA15	ULPLA15
CLOSE	ULPSA16	ULPLA16
LOW	ULPSA17	ULPLA17
HIGH	ULPSA18	ULPLA18
TEST	ULPSA19	ULPLA19
RESET	ULPSA20	ULPLA20
EMERGENCY STOP	ULPSA21	ULPLA21
MARCHE	ULPSA22	ULPLA22
ARRET	ULPSA23	ULPLA23
ARRET D'URGENCE	ULPSA24	ULPLA24
HAUT	ULPSA25	ULPLA25
BAS	ULPSA26	ULPLA26
O—I	ULPSH01	ULPLH01
ON—OFF	ULPSH02	ULPLH02
START—STOP	ULPSH03	ULPLH03
STOP—START	ULPSH04	ULPLH04
HAND—AUTO	ULPSH05	ULPLH05
MANU—AUTO	ULPSH06	ULPLH06
FORWARD—REVERSE	ULPSH07	ULPLH07
REMOTE—LOCAL	ULPSH08	ULPLH08
MARCHE—ARRET	ULPSH09	ULPLH09
I—O—II	ULPSJ01	ULPLJ01
OFF—O—ON	ULPSJ02	ULPLJ02
START—NORMAL—STOP	ULPSJ03	ULPLJ03
HAND—OFF—AUTO	ULPSJ04	ULPLJ04
MANU—O—AUTO	ULPSJ05	ULPLJ05
FORWARD—OFF—REVERSE	ULPSJ06	ULPLJ06
LOCAL—REMOTE—AUTO	ULPSJ07	ULPLJ07
LOCAL—O—REMOTE	ULPSJ08	ULPLJ08
MARCHE—NORMAL—ARRET	ULPSJ09	ULPLJ09

Unicode® 2 Series Accessories

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

	Description	Catalog Number
	Yellow Guard Mushroom head protection for emergency stop	098657
	Padlockable Guard Stainless steel and plastic cover, capacity: 3 padlocks, 6 mm maximum diameter (not supplied) For push button and rotary actuator	UPLD1S
	For mushroom head actuator	UPLD2S
	Cover Blanking Plug For cover drilling — 30.5 mm diameter	UBP
	Device Adaptor Rail to panel mounted conversion adaptor	UPMA

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Shaded catalog numbers are normally stocked items. All other items are made to order.

V Series AC Ammeter

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- Suitable for use with certified Ex e enclosures for control equipment in industrial processes.

Features

- DIN rail mounted (TS35) and panel mounted versions.

Technical Data

- Rated Voltage: 500 V
- Frequency: 25 to 100 Hz
- Consumption: 0.7 VA
- Permanent overload: 1.2 In
- Instantaneous overload: 10 In/5s
- Terminal connections: M5 Terminals for lugs

Certifications and Compliances

◆ATEX Certification

• Certification Type C48D

- Gas: Zone 1 and 2
- Conforming to ATEX 94/9/CE: Ⓜ II 2 G
- Type of Protection: Ex em II
- Dust: Zone 21 and 22
- Conforming to ATEX 94/9/CE: Ⓜ
- Type of Protection: Authorized to be used with an approved dustproof Enclosure
- Service Temperature: -25 °C to +55 °C
- Declaration of Conformity: 5C215
- ATEX Certificate: LCIE 02 ATEX 0006U



AC Ammeter

AC Ammeter — 48 mm x 48 mm

Connection on current transformer — Deflection 90° — Red adjustable index — Accuracy class 1.5 — Round barrel

Description	Weight kg	Volume dm ³	Catalog Number
Rail Mounted			
1A C.T. 3 x F.L.C. with 0-1-3 Scale	0.1	0.4	VA1348R
1A C.T. 5 x F.L.C. with 0-1-5 Scale	0.1	0.4	VA1548R
1A C.T. 6 x F.L.C. with 0-1-6 Scale	0.1	0.4	VA1648R
5A C.T. 3 x F.L.C. with 0-1-3 Scale	0.1	0.4	VA5348R
5A C.T. 5 x F.L.C. with 0-1-5 Scale	0.1	0.4	VA5548R
5A C.T. 6 x F.L.C. with 0-1-6 Scale	0.1	0.4	VA5648R
Panel Mounted			
1A C.T. 3 x F.L.C. with 0-1-3 Scale	0.1	0.4	VA1348P
1A C.T. 5 x F.L.C. with 0-1-5 Scale	0.1	0.4	VA1548P
1A C.T. 6 x F.L.C. with 0-1-6 Scale	0.1	0.4	VA1648P
5A C.T. 3 x F.L.C. with 0-1-3 Scale	0.1	0.4	VA5348P
5A C.T. 5 x F.L.C. with 0-1-5 Scale	0.1	0.4	VA5548P
5A C.T. 6 x F.L.C. with 0-1-6 Scale	0.1	0.4	VA5648P
Window for Ammeter 48 mm x 48 mm			
	0.1	0.4	VAW48

Shaded catalog numbers are normally stocked items. All other items are made to order.

V Series AC Ammeter

Components for Increased Safety Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Interchangeable Dials for V Series AC Ammeter

Scale			Catalog Number	
1 A Current Transformer 3 x F.L.C.				
0	-	5	A	DA135
0	-	10	A	DA1310
0	-	15	A	DA1315
0	-	20	A	DA1320
0	-	30	A	DA1330
0	-	40	A	DA1340
0	-	50	A	DA1350
0	-	60	A	DA1360
0	-	75	A	DA1375
0	-	100	A	DA13100
0	-	125	A	DA13125
0	-	150	A	DA13150
0	-	200	A	DA13200
0	-	250	A	DA13250

Scale			Catalog Number	
1 A Current Transformer 5 x F.L.C.				
0	-	5	A	DA155
0	-	10	A	DA1510
0	-	15	A	DA1515
0	-	20	A	DA1520
0	-	30	A	DA1530
0	-	40	A	DA1540
0	-	50	A	DA1550
0	-	60	A	DA1560
0	-	75	A	DA1575
0	-	100	A	DA15100
0	-	125	A	DA15125
0	-	150	A	DA15150
0	-	200	A	DA15200
0	-	250	A	DA15250

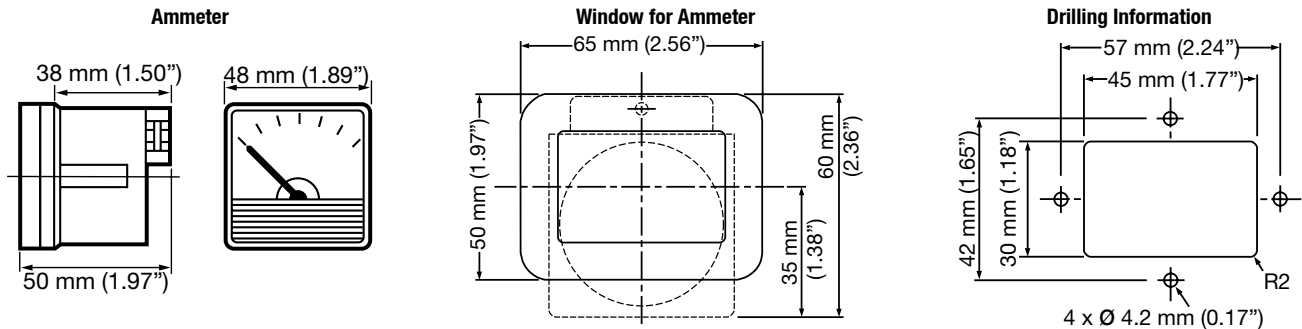
Scale			Catalog Number	
1 A Current Transformer 6 x F.L.C.				
0	-	5	A	DA165
0	-	10	A	DA1610
0	-	15	A	DA1615
0	-	20	A	DA1620
0	-	30	A	DA1630
0	-	40	A	DA1640
0	-	50	A	DA1650
0	-	60	A	DA1660
0	-	75	A	DA1675
0	-	100	A	DA16100
0	-	125	A	DA16125
0	-	150	A	DA16150
0	-	200	A	DA16200
0	-	250	A	DA16250

Scale			Catalog Number	
5 A Current Transformer 3 x F.L.C.				
0	-	5	A	DA535
0	-	10	A	DA5310
0	-	15	A	DA5315
0	-	20	A	DA5320
0	-	30	A	DA5330
0	-	40	A	DA5340
0	-	50	A	DA5350
0	-	60	A	DA5360
0	-	75	A	DA5375
0	-	100	A	DA53100
0	-	125	A	DA53125
0	-	150	A	DA53150
0	-	200	A	DA53200
0	-	250	A	DA53250

Scale			Catalog Number	
5 A Current Transformer 5 x F.L.C.				
0	-	5	A	DA555
0	-	10	A	DA5510
0	-	15	A	DA5515
0	-	20	A	DA5520
0	-	30	A	DA5530
0	-	40	A	DA5540
0	-	50	A	DA5550
0	-	60	A	DA5560
0	-	75	A	DA5575
0	-	100	A	DA55100
0	-	125	A	DA55125
0	-	150	A	DA55150
0	-	200	A	DA55200
0	-	250	A	DA55250

Scale			Catalog Number	
5 A Current Transformer 6 x F.L.C.				
0	-	5	A	DA565
0	-	10	A	DA5610
0	-	15	A	DA5615
0	-	20	A	DA5620
0	-	30	A	DA5630
0	-	40	A	DA5640
0	-	50	A	DA5650
0	-	60	A	DA5660
0	-	75	A	DA5675
0	-	100	A	DA56100
0	-	125	A	DA56125
0	-	150	A	DA56150
0	-	200	A	DA56200
0	-	250	A	DA56250

Dimensions in Millimeters and Drilling Information



Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

FU40 Series Fuse Carrier

Components for Increased Safety Enclosures

Zone 1 and 2
Gas (G)

Applications

- Useful as back-up fuse protection or as main fuse protection for hazardous locations.
- Shall be used in an increased safety Ex e or in a flameproof Ex d enclosure.

Features

- For 14 mm x 51 mm cylindrical cartridge fuse 40A max (classes gG and aM).
- Un: 690V max.
- Adaptor which clips onto EN 50 022 and EN 50 035 rail.
- Connection capacities from 2.5 mm² to 16 mm² for rigid or flexible cables.

Standard Material

- Polyamide

Certifications and Compliances

◆ ATEX/IECEX Certification

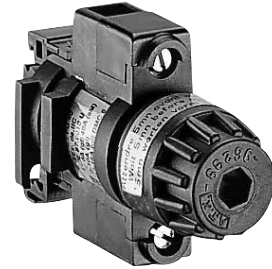
• Certification Type FU40

- Gas, Zones 1 and 2
- Conforming to ATEX 94/9/CE: Ⓜ II 2 G
- Type of Protection: Ex db eb IIC or Ex d e IIC Gb
- Service Temperature: -40 °C to +80 °C
- CE Declaration of Conformity: 5C258
- ATEX Certificate: LCIE 15 ATEX 3014U
- IECEx Certificate: IECEx LCIE 15.0007U

◆ Others Certification ①

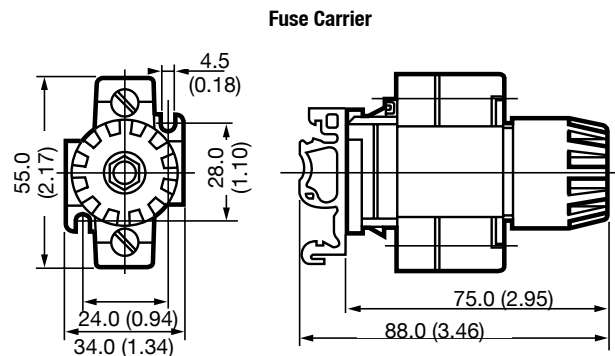
• Certification Type FU40

- INMETRO Certificate: BVC 11.0593-U



Weight kg	Volume dm ³	Fuse Size mm	In max.	Un max.	Catalog Number
0.1	0.4	14 x 51	40A	690V	FU40

Dimensions in Millimeters



① Inmetro certification available on special request only. Contact your local sales for more information.

Shaded catalog numbers are normally stocked items. All other items are made to order.

TRE Series Ex e Transformers

Increased Safety

Zone 1 and 2
Gas (G)

Applications

- Equipment transformers are useful where the available voltage must be changed to accommodate the voltage required by the load and safety voltage.
- Suitable for use in certified increased safety enclosures and OEM increased safety applications.
- Requires primary and secondary protection by fuses or Branch Circuit Breaker.

Features

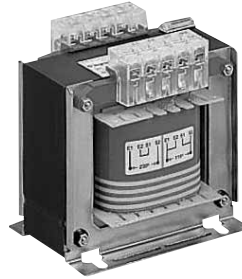
- Single phase 50/60 Hz.
- Class I.
- Primary voltages are with tolerance +/- 15V.
- Circuit insulation voltage between:
 - 4500 V between windings.
 - 2300 V between primary winding and earth.
 - 1800 V between secondary winding and earth.
- Ex e Terminals capacity 4 mm².

Standard Materials

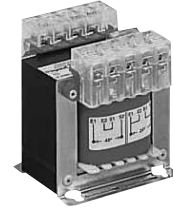
- Copper windings
- Insulation Class F

Certifications and Compliances

- ◆ ATEX/IECEx Certification
- Certification Type TRE
 - Gas, Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex eb IIC
 - Service Temperature: -20 °C to +90 °C
 - CE Declaration of Conformity: 5C259
 - ATEX Certificate: LCIE 15 ATEX 3042U
 - IECEx Certificate : IECEx LCIE 15.0034U



400 VA



100 VA

Controls

CONTROL STATIONS AND SWITCHES - INCREASED SAFETY

Catalog Numbering Guide

TRE
|
Series
TRE - ATEX/IECEx Certified
Transformer

100
|
Power:
100 - 100 VA
160 - 160 VA
250 - 250 VA
400 - 400 VA

A
|
Primary Voltage:
A - 230/400 V
B - 240/415 V

2
|
Secondary Voltage:
2 - 24/48 V
3 - 2 x 110 V

TRE Series Ex e Transformers

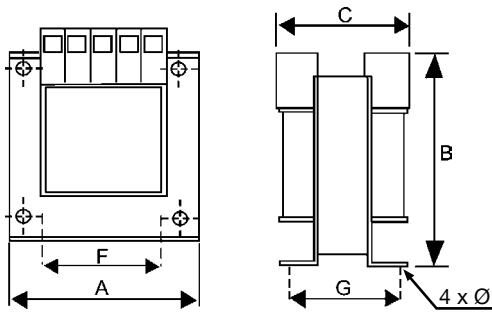
Increased Safety

Zone 1 and 2
Gas (G)

Primary	Secondary	Power	Weight kg	Volume dm ³	Certified Type	Catalog Number
230/400 V	24/48 V	100 VA	2.7	4	TRE	TRE100A2
		160 VA	4.9	4	TRE	TRE160A2
		250 VA	5.4	7	TRE	TRE250A2
		400 VA	6.9	7	TRE	TRE400A2
	2x110 V	100 VA	2.7	4	TRE	TRE100A3
		160 VA	4.9	4	TRE	TRE160A3
		250 VA	5.4	7	TRE	TRE250A3
		400 VA	6.9	7	TRE	TRE400A3
240/415 V	24/48 V	100 VA	2.7	4	TRE	TRE100B2
		160 VA	4.9	4	TRE	TRE160B2
		250 VA	5.4	7	TRE	TRE250B2
		400 VA	6.9	7	TRE	TRE400B2

Dimensions in Millimeters

Power	A	B	C	F	Fixing G	Ø	Weight kg
100 VA	94	91	91	64	66	4.8	1.8
160 VA	96	102	96	84	78	5.8	3.2
150 VA	108	110	100	84	82	5.8	4.4
400 VA	126	126	115	90	99	6.5	6.0



Overcurrent Protection

Power	Power Loss	Primary Overcurrent Protection						Secondary Overcurrent Protection					
		Fuses		MCB Curve C		MCB Curve D		Fuses			MCB Curve C		
		230/240 V	400/415 V	230/240 V	400/415 V	230/240 V	400/415 V	24 V	48 V	110 V	24 V	48 V	110 V
100 VA	6 W	1A aM	1A aM	3 A	1 A	2 A	1 A	4 A gG	2 A gG	1 A gG	4 A	2 A	1 A
160 VA	10 W	2A aM	1A aM	6 A	2 A	2 A	1 A	8 A gG	4 A gG	1 A gG	6 A	4 A	2 A
250 VA	15 W	2A aM	2A aM	6 A	3 A	3 A	2 A	10 A gG	6 A gG	2 A gG	10 A	6 A	2 A
400 VA	25 W	4A aM	2A aM	10 A	6 A	6 A	2 A	16 A gG	8 A gG	4 A gG	16 A	4 A	4 A

Shaded catalog numbers are normally stocked items. All other items are made to order.

D Series Aluminum Control Stations

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- Local control stations for use in hazardous areas.
- Control of electrical equipment at power plants, chemical and petrochemical plants, petroleum- refineries, pulp and paper processing plants and various industrial applications.

Features

- 1 and 2 Function Ex d IIC:
 - Supplied with actuators, contact blocks and pilot lights.
 - TS35 rail mounted contact blocks.
 - Threaded flameproof joint.
 - Connection: 2 x 2.5 mm² maximum.
 - Internal earth: 2 x 4 mm².
 - External ground: M5
 - 1 x M20 or M25 threaded entry at bottom.
 - Cable glands and plugs to be ordered separately.
- 2 and 3 Function Exd IIB:
 - Supplied with actuators and rail mounting pilot lights and contact blocks.
 - Flanged flameproof joint.
 - Yellow laminated plastic legend plate with black lettering.
 - Connection : 2 x 2.5 mm² maximum.
 - Internal earth: 2 x 4 mm² .
 - External earth: M6 screw.
 - 2 x M20 threaded entries at the bottom.
 - Cable glands and plugs to be ordered separately.

1 Function



2 Function



2 Function



3 Function



Standard Materials

- Box: gray painted marine grade aluminum alloy

Options

- For other configurations, see pre-drilled control stations or consult factory.

Certifications and Compliances

◆ATEX Certification

- **Certification Type BR1d**
 - Gas, Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T6 for Ta = +40 °C, T5 for Ta = +55 °C
- Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T95 °C
- Ambient Temperature: -40 °C to +55 °C
- CE Declaration of Conformity: 20530
- ATEX Certificate: LCIE 02 ATEX 6056
- **Certification Type CF2D**
 - Gas, Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature class: T6 for Ta ≤ +40 °C, T5 for +40 °C < Ta ≤ +55 °C

- Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T95 °C
- Ambient Temperature: -40 °C to +55 °C
- CE Declaration of Conformity: 50254
- ATEX Certificate: LCIE 03 ATEX 6061X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10
- Internal Volume: ≤ 2 dm³ (2 liters)

◆EURASEC Certification

- EURASEC RU C-FR. ГБ 05.B.00911

◆Others Certification ①






- INMETRO Certificate: BVC 11.0482

① Inmetro certification available on special request only. Contact your local sales for more information.

D Series Aluminum Control Stations

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Type	Description/Function	Bottom Entries	Weight kg	Volume dm ³	Catalog Number	
1 Function Ex d IIC Control Stations						
Spring Return Push Button						
	BR1d	1x black spring return push button with 1NO + 1NC momentary contacts	1 x M20	1.0	3.75	DA1W1T101
	BR1d	1x black spring return push button with 1NO + 1NC momentary contacts	1 x M25	1.0	3.75	DA1W3T101
Mushroom Head Push Button						
	BR1d	1x red mushroom head push-pull with 1NO + 1NC maintained contacts Padlockable in both positions	1 x M20	1.2	3.75	DA1W1T102
	BR1d	1x red mushroom head push-pull with 1NO + 1NC maintained contacts Padlockable in both positions	1 x M25	1.2	3.75	DA1W3T102
	BR1d	Red mushroom head key release with 1NO + 1NC maintained contact Unlocked with key (MS1)	1 x M20	1.2	3.75	DA1W1T104
	BR1d	Red mushroom head key release with 1NO + 1NC maintained contact Unlocked with key (MS1)	1 x M25	1.2	3.75	DA1W3T104
Time Delayed Push Button 230 V 50/60 Hz						
	BR1d	1x time delayed black impulse push button adjustable from 25s to 15mn For 1000 W incandescent or 400 W fluorescent max.	1 x M20	1.2	3.75	DA1W1T103
	BR1d	1x time delayed black impulse push button adjustable from 25 s to 15 mn For 1000 W incandescent or 400 W fluorescent max.	1 x M25	1.2	3.75	DA1W3T103
Twin Push Buttons						
	BR1d	1x green spring return 'I' push button with 1NO momentary contact 1x red spring return 'O' push button with 1NC momentary contact	1 x M20	1.2	3.75	DA1W1T201
	BR1d	1x green spring return 'I' push button with 1NO momentary contact 1x red spring return 'O' push button with 1NC momentary contact	1 x M25	1.2	3.75	DA1W3T201
2 Function Ex d IIB Control Stations						
Twin Push Buttons						
	CF2D	1x green spring return 'I' push button with 1NO momentary contact 1x red spring return 'O' push button with 1NC momentary contact	2 x M20	2.5	7.00	DA4W2T201
	CF2D	1x green spring return 'I' push button with 1NO momentary contact 1x red mushroom head push-pull with 1NO+1NC maintained contacts	2 x M20	2.5	7.00	DA4W2T202

Controls

CONTROL STATIONS AND SWITCHES - FLAMEPROOF

D Series Aluminum Control Stations

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Type	Description/Function	Bottom Entries	Weight kg	Volume dm ³	Catalog Number
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3 Function Ex d IIB Control Stations

Pilot Light and Twin Push Buttons



CF2D	1x red/green LED light 85 to 264 Vac 1x green spring return 'I' push button with 1NO momentary contact 1x red spring return 'O' push button with 1NC momentary contact	2 x M20	3.3	9.00	DA5W2T301
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Ammeter and Twin Push Buttons

CF2D	1x ammeter 48 x 48 CT1A 3 x FLC 0-1-3A 1x green spring return 'I' push button with 1NO momentary contact 1x red spring return 'O' push button with 1NC momentary contact	2 x M20	3.3	9.00	DA5W2T302
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Ex d IIC Limit Switch ①

Limit Switch

Stainless steel roller control perpendicular for surface fixing. 1/4 turn fixing (may be modified by end user).



BR1d	1x roller plunger - travel 7 mm max. - Force 22 newtons with 1NO+1NC momentary contacts	1 x M20	1.0	4.60	DA1W1L001
BR1d	1x roller plunger - travel 7 mm max. - Force 22 newtons with 1NO+1NC momentary contacts	1 x M25	1.0	4.60	DA1W3L001

Technical Data

Contact Block		LED Pilot Light	
Insulation Voltage (Ui)	500 V	Rated Voltage	85 Vac to 264 Vac, 50/60 Hz
Switching Capacity		Rating	5-15 mA
AC 15	4 A/115 V, 4 A/230 V, 2 A/500 V	Max. Power	0.33 W
DC 13	3 A/24 V, 1.7 A/42 V, 1.2 A/60 V, 0.8 A/110 V, 0.3 A/220 V	Operation life	Average 100,000 Hours at +25 °C
Terminal connections	0.75 to 2.5 mm ²		
Operation life	>5,000,000 Operations		
Light Switch			
Insulation Voltage (Ui)	500 V		
Switching Capacity			
AC 15	450 W/48 V, 900 W/110 V, 1900 W/230 V		
DC 13	100 W/48 V, 100 W/110 V, 95 W/230 V		
Terminal connections	0.75 to 2.5 mm ²		
Operation life	> 1,000,000 Operations		

Controls

CONTROL STATIONS AND SWITCHES - FLAMEPROOF

D Series Aluminum Control Stations

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Electrical Diagrams

NO Contact Block



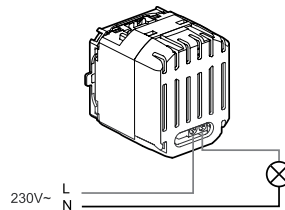
NC Contact Block



LED Pilot Light

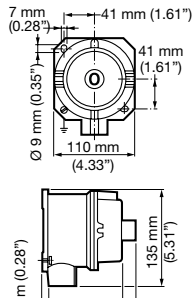


Time Delayed Push Button

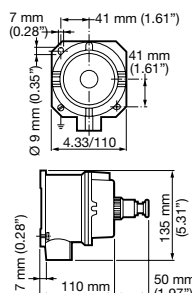


Dimensions in Millimeters

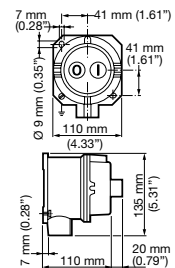
1 Function



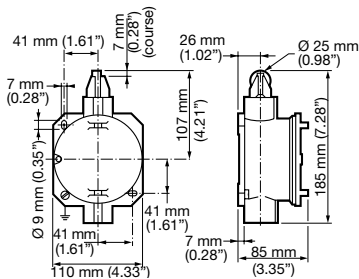
1 Function Emergency Stop



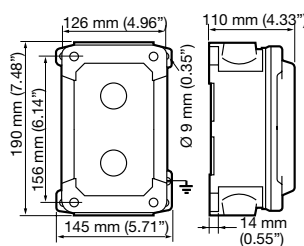
2 Functions



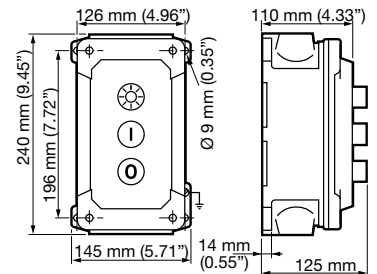
Limit Switch



2 Functions



3 Functions



D Series Pre-Drilled Control Stations

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- Local control stations for use in hazardous areas.
- Control of equipment at power plants, chemical and petrochemical plants, petroleum refineries, pulp and paper processing plants and various industrial applications.

Features

- 1 and 2 Function Ex d IIC:
 - For TS35 rail mounted contact block.
 - Actuators and contact blocks to be ordered separately.
 - Up to 3 contacts per function.
 - Threaded flameproof joint.
 - Internal earth terminal 2 x 4 mm².
 - External ground terminal: M5.
 - 1 x M20 or M25 threaded entry at bottom.
 - Cable glands and plugs to be ordered separately.
- 2 to 6 Function Ex d IIB:
 - For TS35 rail mounted contact block.
 - Actuators and contact blocks to be ordered separately.
 - Up to 3 contacts per function.
 - Flanged flameproof joint.
 - Yellow laminated plastic legend plate with black lettering.
 - Internal earth terminal: 2 x 4 mm².
 - External earth terminal: M6 screw and M8 earth stud (CF2B type).
 - 2 x M20 threaded entries at the bottom.
 - Cable glands and plugs to be ordered separately.

Standard Materials

- Box: gray painted marine grade aluminum alloy
- CF2B box: gray painted cast iron for CF2B

Certifications and Compliances

◆ ATEX Certification

• Certification Type BR1d

- Gas, Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T6 for Ta = +40 °C, T5 for Ta = +55 °C
- Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T95 °C
 - Ambient Temperature: -40 °C to +55 °C
 - Impact Resistance (shock): IK10
 - CE Declaration of Conformity: 20530
 - ATEX Certificate: LCIE 02 ATEX 6056
 - Index of Protection according EN/IEC 60529: IP66

• Certification Type CF2D

- Gas, Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature class: T6 for Ta = +40 °C, T5 for Ta = +55 °C
- Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T95 °C
 - Ambient Temperature: -40 °C to +55 °C
 - Impact Resistance (shock): IK10
 - CE Declaration of Conformity: 50254
 - ATEX Certificate: LCIE 03 ATEX 6061X
 - Index of Protection according EN/IEC 60529: IP66

1 Function



2 Function



2 Function



3 Function



6 Function



• Certification Type BR2d

- Gas, Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T6
- Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C
 - Ambient Temperature: -40 °C to +55 °C
 - Impact Resistance (shock): IK09
 - CE Declaration of Conformity: 50256
 - ATEX Certificate: LCIE 03 ATEX 6062
 - Index of Protection according EN/IEC 60529: IP66

• Certification Type CF2B

- Gas, Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T6 for Ta ≤ +40 °C, T5 for +40 °C < Ta ≤ +55 °C
- Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T95 °C
 - Ambient Temperature: -40 °C to +55 °C
 - Impact Resistance (shock): IK10
 - CE Declaration of Conformity: 50254
 - ATEX Certificate: LCIE 03 ATEX 6061X
 - Index of Protection according EN/IEC 60529: IP66
- Internal Volume: ≤2 dm³ (2 liters)

◆ EURASEC Certification

- EURASEC RU C-FR. ГБ 05.B.00911

◆ Others Certification ①










- INMETRO: BR 230482-Be1D

① Inmetro certification available on special request only. Contact your local sales for more information.

D Series Pre-Drilled Control Stations

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

For TS35 Rail Mounted Actuators						
Type	Description/Function	Bottom Entries	Weight kg	Volume dm ³	Catalog Number	
1 Function Ex d IIC Control Stations:						
	BR1d	For push button, pilot light or selector switch	1 x M20	0.9	2	DA1W1E101
	BR1d	For push button, pilot light or selector switch	1 x M25	0.9	2	DA1W3E101
2 Function Ex d IIC Pre-drilled Box:						
	BR1d	For push button (non-mushroom type) 2 contacts maximum for each function	1 x M20	0.9	2	DA1W1E201
	BR1d	For push button (non-mushroom type) 2 contacts maximum for each function	1 x M25	0.9	2	DA1W3E201
2 Function Ex d IIB Pre-drilled Box:						
	CF2D	For push button, pilot light or selector switch	2 x M20	2.3	7	DA4W2E202
3 Function Ex d IIB Pre-drilled Box:						
	CF2D	For push button, pilot light or selector switch (2 switches maximum)	2 x M20	3	7	DA5W2E301
	CF2D	For push button, pilot light and ammeter 48 x 48 mm (ammeter with round barrel)	2 x M20	3	7	DA5W2E302
4 Function Ex d IIB Pre-drilled Box:						
	CF2D	For push button, pilot light and ammeter 48 x 48 mm (ammeter with round barrel)	2 x M20	3	7	DA5W2E401
6 Function Ex d IIB Pre-drilled Box:						
	CF2D	For push button and pilot light 2 Contacts maximum for each function	2 x M20	3	7	DA5W2E601
	CF2B	For push button, pilot light or selector switch (3 switches maximum)	2 x M20	13	13	DA3W2E601
1 Meter Ex d IIC Pre-drilled Box:						
	BR2d	For indicator 72 x 72 mm or 96 x 96 mm with round barrel Mounting plate for indicator diameter. 67 mm	2 x M20	4	11	DA2W2E102

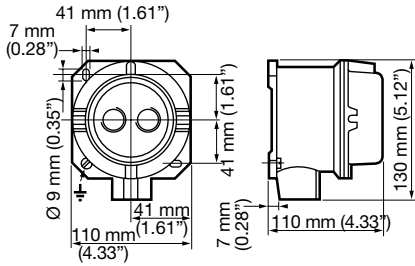
D Series Pre-Drilled Control Stations

Flameproof

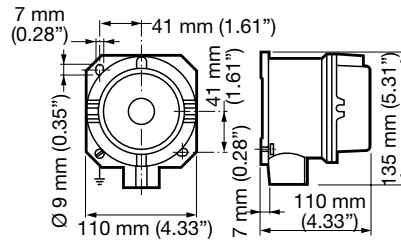
Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Dimensions in Millimeters for TS35 Rail Mounted Operators

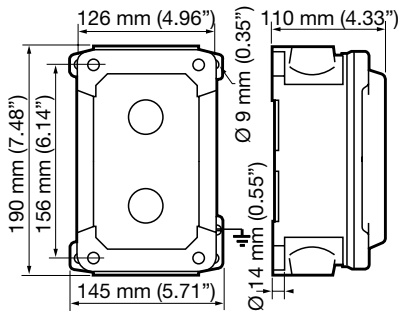
BR1d (1 Function)



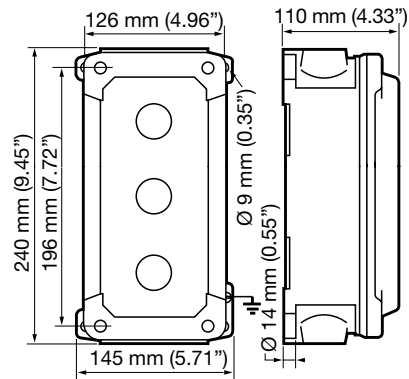
BR1d (2 Functions)



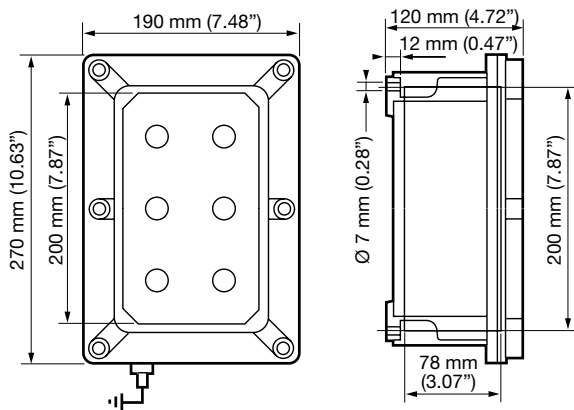
CF2D (2 Functions)



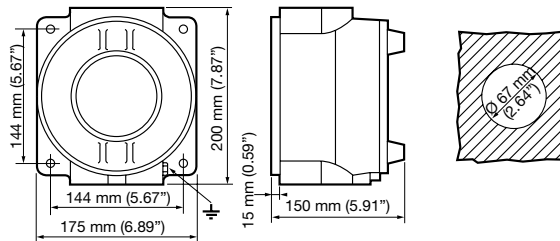
CF2D (3–4–6 Functions)



CF2B (6 Functions)



BR2d



Controls

CONTROL STATIONS AND SWITCHES - FLAMEPROOF

D Series Actuators, Pilot Lights, Contact Blocks, Switches and Accessories Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- Suitable for use with certified flameproof Ex d enclosures for control equipment.

Features

- DIN rail mounted (TS35) and panel mounted versions.
- Large range of M22 x 1.5 mm screwed actuator operators including, push buttons, rotary actuators, pilot lights, ammeters and selector switches.
- Fully supplied with actuator, shaft, contact block and yellow laminated plastic legend plate with black lettering 60 x 50 mm.

Standard Materials

- Box: gray painted marine grade aluminum alloy
- CF2B box: gray painted cast iron for CF2B

Certifications and Compliances

◆ ATEX Certification

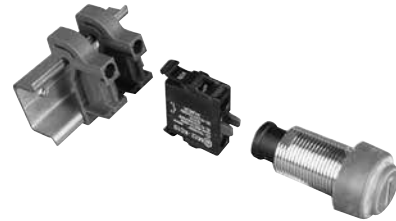
◆ Certification Type TCD

- Gas, Zones 1 and 2
- Conforming to ATEX 94/9/CE: Ⓢ II 2 G
- Type of Protection: Ex d IIC
- Dust, Zones 21 and 22
- Conforming to ATEX 94/9/CE: Ⓢ II 2 D
- Type of Protection: Ex tD A21
- Surface Temperature: -40 °C to +60 °C
- CE Declaration of Conformity: 5C213
- ATEX Certificate: LCIE 02 ATEX 0036 U
- IECEx Certificate: IECEx LCI 10.0022U
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

◆ EURASEC Certification

- EURASEC RU C-FR. ГБ 05.B.00909

Rail Mounted Version










Panel Mounted Version



D Series TS35 Rail Mounted Actuators and Contact Blocks

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)








Description/Function		Weight kg	Volume dm ³	Catalog Number ①
	Spring Return Push Button			
	Green spring return 'I' push button with 1NO momentary contact	0.2	0.4	DA5GR
	Red spring return 'O' push button with 1NC momentary contact	0.2	0.4	DA9RR
	Mushroom Head Push Button			
	Red mushroom head spring return with 1NC momentary contact Padlockable in both positions	0.2	0.4	DR9R
	Red mushroom head push pull with 1NC maintained contact Padlockable in both positions	0.2	0.4	DD9R
	Red mushroom head key release with 1NC maintained contact Unlocked with key (MS1)	0.2	0.4	DC9R
	Rotary Actuator			
	2 maintained positions with 1NO maintained contact	0.2	0.4	DH5R
	2 maintained positions key operated with 1NO maintained contact key removable in both positions (MS1)	0.2	0.4	DG5R
	Additional Contacts			
	1 x NO contact	0.1	0.2	DCB5R
	1 x NC contact	0.1	0.2	DCB9R
	LED Pilot Lights			
	Red 12 to 30 Vac/Vdc	0.1	0.4	DPR12R
	Green 12 to 30 Vac/Vdc	0.1	0.4	DPG12R
	White 12 to 30 Vac/Vdc	0.1	0.4	DPW12R
	Blue 12 to 30 Vac/Vdc	0.1	0.4	DPB12R
	Yellow 12 to 30 Vac/Vdc	0.1	0.4	DPY12R
	Red 48 to 60 Vac/Vdc	0.1	0.4	DPR48R
	Green 48 to 60 Vac/Vdc	0.1	0.4	DPG48R
	White 48 to 60 Vac/Vdc	0.1	0.4	DPW48R
	Blue 48 to 60 Vac/Vdc	0.1	0.4	DPB48R
	Yellow 48 to 60 Vac/Vdc	0.1	0.4	DPY48R
	Red 85 to 264 Vac	0.1	0.4	DPR85R
	Green 85 to 264 Vac	0.1	0.4	DPG85R
	White 85 to 264 Vac	0.1	0.4	DPW85R
	Blue 85 to 264 Vac	0.1	0.4	DPB85R
Yellow 85 to 264 Vac	0.1	0.4	DPY85R	
	Transfer Kit			
	To be used when replacing old range of contacts 094057 and 094058 and old range of indicators 093990-093991 and 094090-094091	0.2	0.4	093958
	16 A Switches			
	1-pole switch with non-padlockable handle "0-1"	0.3	0.5	DS116R
	2-pole switch with non-padlockable handle "0-1"	0.3	0.5	DS216R
	3-pole switch with non-padlockable handle "0-1"	0.3	0.5	DS316R
	4-pole switch with non-padlockable handle "0-1"	0.3	0.5	DS416R
	2 way 1-pole selector switch with non-padlockable handle "1-2"	0.3	0.5	DS21601R
	3 way 1-pole selector switch with non-padlockable handle "1-0-2"	0.3	0.5	DS21602R

① Legend Plate Supplied.

D Series Panel Mounted Actuators and Contacts Blocks

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)






	Description/Function	Weight kg	Volume dm ³	Catalog Number ①
	Spring Return Push Button			
	Green spring return 'I' push button with 1NO momentary contact	0.2	0.4	DA5GP
	Red spring return 'O' push button with 1NC momentary contact	0.2	0.4	DA9RP
	Mushroom Head Push Button			
	Red mushroom head spring return with 1NC momentary contact Padlockable in both positions	0.2	0.4	DR9P
	Red mushroom head push pull with 1NC maintained contact Padlockable in both positions	0.2	0.4	DD9P
	Red mushroom head key release with 1NC maintained contact Unlocked with key (MS1)	0.2	0.4	DC9P
	Rotary Actuator			
	2 maintained positions with 1NO maintained contact	0.2	0.4	DH5P
	2 maintained positions key operated with 1NO maintained contact key removable in both positions (MS1)	0.2	0.4	DG5P
	Additional Contacts			
	1 x NO contact	0.1	0.2	DCB5P
	1 x NC contact	0.1	0.2	DCB9P
	LED Pilot Lights			
	Red 12 to 30 Vac/Vdc	0.1	0.4	DPR12P
	Green 12 to 30 Vac/Vdc	0.1	0.4	DPG12P
	White 12 to 30 Vac/Vdc	0.1	0.4	DPW12P
	Blue 12 to 30 Vac/Vdc	0.1	0.4	DPB12P
	Yellow 12 to 30 Vac/Vdc	0.1	0.4	DPY12P
	Red 48 to 60 Vac/Vdc	0.1	0.4	DPR48P
	Green 48 to 60 Vac/Vdc	0.1	0.4	DPG48P
	White 48 to 60 Vac/Vdc	0.1	0.4	DPW48P
	Blue 48 to 60 Vac/Vdc	0.1	0.4	DPB48P
	Yellow 48 to 60 Vac/Vdc	0.1	0.4	DPY48P
	Red 85 to 264 Vac	0.1	0.4	DPR85P
	Green 85 to 264 Vac	0.1	0.4	DPG85P
	White 85 to 264 Vac	0.1	0.4	DPW85P
	Blue 85 to 264 Vac	0.1	0.4	DPB85P
	Yellow 85 to 264 Vac	0.1	0.4	DPY85P
	Transfer Kit			
	To be used when replacing old range of contacts 094055 and 094056 and old range of indicators 093992-093993 and 094092-094093	0.2	0.4	093959
	16 A Switches			
	1-pole switch with non-padlockable handle "0-1"	0.3	0.5	DS116P
	2-pole switch with non-padlockable handle "0-1"	0.3	0.5	DS216P
	3-pole switch with non-padlockable handle "0-1"	0.3	0.5	DS316P
	4-pole switch with non-padlockable handle "0-1"	0.3	0.5	DS416P
	2 way 1-pole selector switch with non-padlockable handle "1-2"	0.3	0.5	DS21601P
	3 way 1-pole selector switch with non-padlockable handle "1-0-2"	0.3	0.5	DS21602P
	2 way 2-pole selector switch with non-padlockable handle "1-2"	0.3	0.5	DS41601P
	3 way 2-pole selector switch with non-padlockable handle "1-0-2"	0.3	0.5	DS41602P

① Legend Plate Supplied.

D Series Accessories

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

	Description/Function	Weight kg	Volume dm ³	Catalog Number
	Spare Shrouds for Spring Return Push Buttons			
	Green shroud marked "I"	0.1	0.2	DSG
	Red shroud marked "O"	0.1	0.2	DSR
	Green shroud marked "start"	0.1	0.2	DSS
	Red shroud marked "A Réarmement"	0.1	0.2	DSA
	Black shroud (unmarked)	0.1	0.2	DSN
	Blue shroud (unmarked)	0.1	0.2	DSB
	Aluminum Guard Painted Red			
	Mushroom head actuator protection			DGD1A
	Stainless Steel Padlocking Devices			
	For spring return push button			DPLD1S
	For rotary actuator, red mushroom head spring return or push-pull			DPLD2S
	Spare Lenses for Pilot Lights			
	Red	0.1	0.2	DPRENS
	Green	0.1	0.2	DPGLENS
	White	0.1	0.2	DPWLENS
	Blue	0.1	0.2	DPBLENS
	Yellow	0.1	0.2	DPYLENS
	Spare Handle for Switches			
	Non-padlockable handle	0.2	0.2	DSNP
	Padlockable handle — 48 mm x 48 mm	0.06	0.3	DSPH
	Laminated Plastic Legend Plate with Black Lettering			
	Large size — 60 mm x 50 mm			DLP00
	Small size — 45 mm x 31.2 mm			DLP01
	Blanking Plug			
	Used to close-up unused openings on cover M22 x 1.5 mm	0.2	0.2	747DAM2B5

Controls

CONTROL STATIONS AND SWITCHES - FLAMEPROOF

D Series AC Ammeter

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

48 mm x 48 mm – Connection on Current Transformer – Deflection 90° – Class 1.5 – Round Barrel

Description/Function	Weight kg	Volume dm ³	Catalog Number
Rail Mounted			
1A C.T. 3 x F.L.C. with 0-1-3 Scale	0.1	0.4	DMA1348R
1A C.T. 5 x F.L.C. with 0-1-5 Scale	0.1	0.4	DMA1548R
1A C.T. 6 x F.L.C. with 0-1-6 Scale	0.1	0.4	DMA1648R
5A C.T. 3 x F.L.C. with 0-1-3 Scale	0.1	0.4	DMA5348R
5A C.T. 5 x F.L.C. with 0-1-5 Scale	0.1	0.4	DMA5548R
5A C.T. 6 x F.L.C. with 0-1-6 Scale	0.1	0.4	DMA5648R
Panel Mounted			
1A C.T. 3 x F.L.C. with 0-1-3 Scale	0.1	0.4	DMA1348P
1A C.T. 5 x F.L.C. with 0-1-5 Scale	0.1	0.4	DMA1548P
1A C.T. 6 x F.L.C. with 0-1-6 Scale	0.1	0.4	DMA1648P
5A C.T. 3 x F.L.C. with 0-1-3 Scale	0.1	0.4	DMA5348P
5A C.T. 5 x F.L.C. with 0-1-5 Scale	0.1	0.4	DMA5548P
5A C.T. 6 x F.L.C. with 0-1-6 Scale	0.1	0.4	DMA5648P
AC Ammeter Accessory			
Red Adjustable Index			DM48A



Interchangeable Dials for Above Ammeter

Scale	Number	Catalog Number	Scale	Number	Catalog Number	Scale	Number	Catalog Number
For 1 A Current Transformer 3 x F.L.C.			For 1 A Current Transformer 6 x F.L.C.			For 5 A Current Transformer 5 x F.L.C.		
0 - 5 - 15	A	DA135	0 - 5 - 30	A	DA165	0 - 5 - 25	A	DA555
0 - 10 - 30	A	DA1310	0 - 10 - 60	A	DA1610	0 - 10 - 50	A	DA5510
0 - 15 - 45	A	DA1315	0 - 15 - 90	A	DA1615	0 - 15 - 75	A	DA5515
0 - 20 - 60	A	DA1320	0 - 20 - 120	A	DA1620	0 - 20 - 100	A	DA5520
0 - 30 - 90	A	DA1330	0 - 30 - 180	A	DA1630	0 - 30 - 150	A	DA5530
0 - 40 - 120	A	DA1340	0 - 40 - 240	A	DA1640	0 - 40 - 200	A	DA5540
0 - 50 - 150	A	DA1350	0 - 50 - 300	A	DA1650	0 - 50 - 250	A	DA5550
0 - 60 - 180	A	DA1360	0 - 60 - 360	A	DA1660	0 - 60 - 300	A	DA5560
0 - 75 - 225	A	DA1375	0 - 75 - 450	A	DA1675	0 - 75 - 375	A	DA5575
0 - 100 - 300	A	DA13100	0 - 100 - 600	A	DA16100	0 - 100 - 500	A	DA55100
0 - 125 - 375	A	DA13125	0 - 125 - 750	A	DA16125	0 - 125 - 625	A	DA55125
0 - 150 - 450	A	DA13150	0 - 150 - 900	A	DA16150	0 - 150 - 750	A	DA55150
0 - 200 - 600	A	DA13200	0 - 200 - 1200	A	DA16200	0 - 200 - 1000	A	DA55200
0 - 250 - 750	A	DA13250	0 - 250 - 1500	A	DA16250	0 - 250 - 1250	A	DA55250
For 1 A Current Transformer 5 x F.L.C.			For 5 A Current Transformer 3 x F.L.C.			For 5 A Current Transformer 6 x F.L.C.		
0 - 5 - 25	A	DA155	0 - 5 - 15	A	DA535	0 - 5 - 30	A	DA565
0 - 10 - 50	A	DA1510	0 - 10 - 30	A	DA5310	0 - 10 - 60	A	DA5610
0 - 15 - 75	A	DA1515	0 - 15 - 45	A	DA5315	0 - 15 - 90	A	DA5615
0 - 20 - 100	A	DA1520	0 - 20 - 60	A	DA5320	0 - 20 - 120	A	DA5620
0 - 30 - 150	A	DA1530	0 - 30 - 90	A	DA5330	0 - 30 - 180	A	DA5630
0 - 40 - 200	A	DA1540	0 - 40 - 120	A	DA5340	0 - 40 - 240	A	DA5640
0 - 50 - 250	A	DA1550	0 - 50 - 150	A	DA5350	0 - 50 - 300	A	DA5650
0 - 60 - 300	A	DA1560	0 - 60 - 180	A	DA5360	0 - 60 - 360	A	DA5660
0 - 75 - 375	A	DA1575	0 - 75 - 225	A	DA5375	0 - 75 - 450	A	DA5675
0 - 100 - 500	A	DA15100	0 - 100 - 300	A	DA53100	0 - 100 - 600	A	DA56100
0 - 125 - 625	A	DA15125	0 - 125 - 375	A	DA53125	0 - 125 - 750	A	DA56125
0 - 150 - 750	A	DA15150	0 - 150 - 450	A	DA53150	0 - 150 - 900	A	DA56150
0 - 200 - 1000	A	DA15200	0 - 200 - 600	A	DA53200	0 - 200 - 1200	A	DA56200
0 - 250 - 1250	A	DA15250	0 - 250 - 750	A	DA53250	0 - 250 - 1500	A	DA56250

D Series Actuators, Pilot Lights, Contact Blocks, Switches and Accessories

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Technical Data

Contact Block



NO Contact Block



NC Contact Block

Insulation Voltage (Ui)	500 V
Switching Capacity	
AC 15	4 A/115 V, 4 A/230 V, 2 A/500 V
DC 13	3 A/24 V, 1.7 A/42 V, 1.2 A/60 V, 0.3 A/220 V
Terminal connections	0.75 mm ² to 2.5 mm ²
Operation life	>5,000,000 Operations

LED Pilot Light



Rated Voltage	85-264 Vac, 50/60 Hz
Rating	5-15mA
Max. Power	0.33 W
Operation life	Average 100,000 Hours at +25 °C

16 A Selector Switch

Rated insulation voltage	690 V	
Thermal rating	20 A	
	AC 21	16 A
	AC 15	6 A
	AC 23	3 x 230 V 4 KW 3 x 400 V 7.5 KW 3 x 500 V 5.5 KW 3 x 690 V 4 KW
	AC 3	3 x 230 V 3 KW 3 x 400 V 4 KW 3 x 500 V 5.5 KW 3 x 690 V 3 KW
Flexible Terminal connections	2.5 mm ²	
Solid Terminal connections	4 mm ²	

16 A Selector Switch Positions — X = Contact Closed

DS116

Positions	Contacts	
	1-2	
0		
1	X	

DS216

Positions	Contacts	
	1-2	3-4
0		
1	X	X

DS316

Positions	Contacts		
	1-2	3-4	5-6
0			
1	X	X	X

DS416

Positions	Contacts			
	1-2	3-4	5-6	7-8
0				
1	X	X	X	X

DS21601

Positions	Contacts	
	1-2	3-4
1	X	
2		X

DS21602

Positions	Contacts	
	1-2	3-4
1	X	
0		
2		X

DS41601

Positions	Contacts			
	1-2	3-4	5-6	7-8
1	X		X	
2		X		X

DS41602

Positions	Contacts			
	1-2	3-4	5-6	7-8
1	X		X	
0				
2		X		X

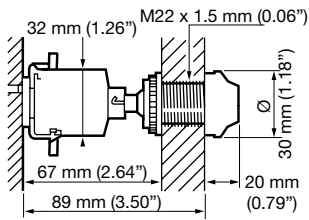
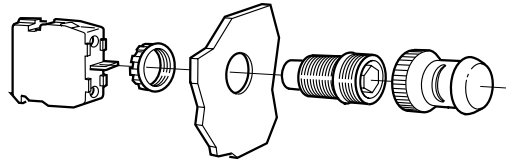
D Series Actuators, Pilot Lights, Contact Blocks, Switches and Accessories

Flameproof

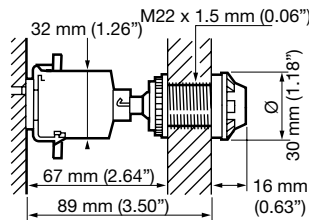
Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Dimensions in Millimeters

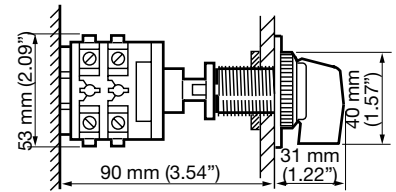
Rail Mounted



Rail Mounted Push Button

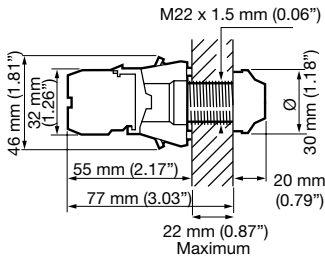
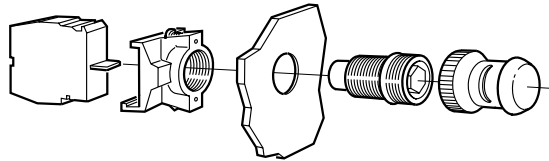


Rail Mounted Pilot Light

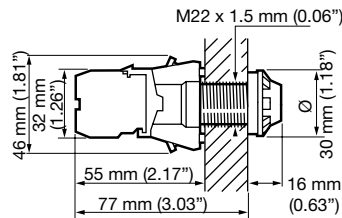


Back Mounted Switch

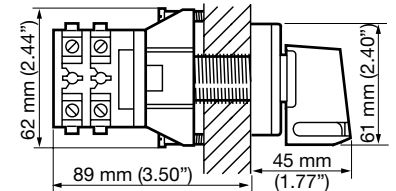
Panel Mounted



Panel Mounted Push Button

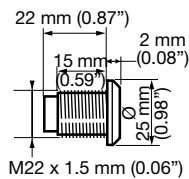


Panel Mounted Pilot Light

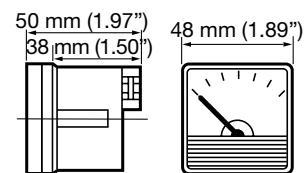


Panel Mounted Switch

Accessories



Blanking Plug



Ammeter

RSI Series Intrinsic Safety Relays for Safe Areas For Flameproof Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- Single Channel Relay:
 - For installation in a safe area (NIS area) or Exd box.
- 2-Channel Relay:
 - For installation in a safe area (NIS area).

Features

- Single and 2-Channel Relay:
 - Provides galvanic isolation of the circuits between the IS area and the NIS area.
 - Mounting on EN 50 022 rail.
 - Input signal (from hazardous area) selected by jumpers:
 - 2-wire NAMUR proximity switch.
 - Volt-free contact (switched current 8.2. V, 8 mA).
 - Direct or reverse repeater selected by jumper.
 - Connection: 2-conductor cable, dielectric strength 500 V, cross-section 2.5 mm², distance between cables: 8 mm.
 - Connection: 2.5 mm² maximum
- Single Channel Relay:
 - Transmits to the safe (NIS) area one signal received from the hazardous (IS) area.
 - Relay can be supplied with 24-28 Vdc, 110-140 V, 200-240 V.
 - Output signal (safe area) - electromagnetic relay, 1 changeover switch:
 - 6 A maximum (at 24 V)
 - Maximum: 5a, 250 V, 10 Hz (switching frequency)
- 2-Channel Relay:
 - Transmits to the safe (NIS) area two signals received from the hazardous (IS) area.
 - Relay can be supplied with 24-48 Vdc, 110-140 V, 200-240 V.
 - Output signal (safe area) – electromagnetic relay, 2 changeover switches:
 - 6 A maximum (at 24 V)
 - Maximum: 5 A, 250 V, 10 Hz (switching frequency)

1-Channel Relay



2-Channel Relay



Certifications and Compliances

◆ ATEX Certification

• Certification Type RDN

- Gas, Zones 1 and 2
- Conforming to ATEX 94/9/CE: Ⓢ II 1 G
- Dust, Zones 21 and 22
- Conforming to ATEX 94/9/CE: Ⓢ II 1 D
- Type of Protection: Ex ia IIC
- Surface Temperature: -10 °C to +60 °C
- CE Declaration of Conformity: 50270

◆ Others Certification

- SIL 2

RSI Series Intrinsic Safety Relays for Safe Areas

For Flameproof Enclosures

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide

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Series:
ATEX Certified

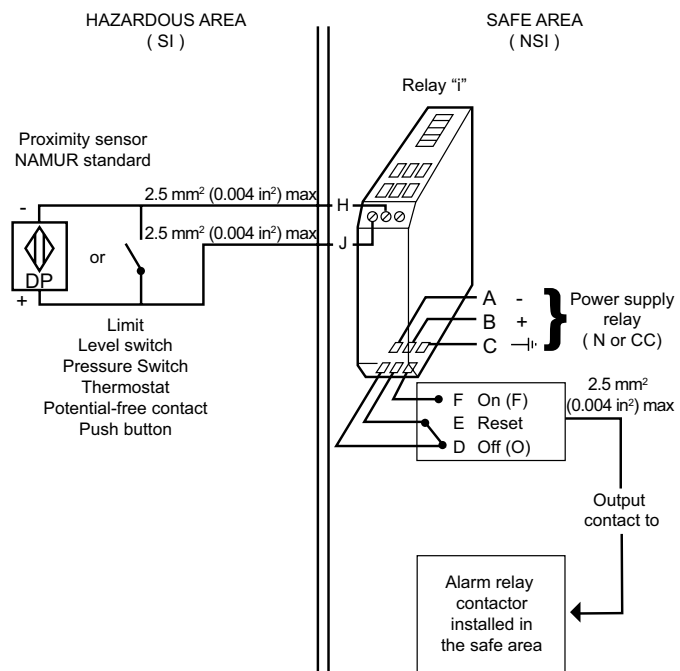
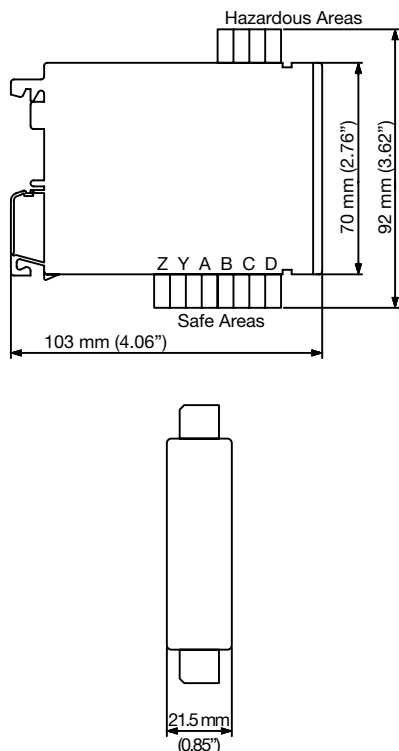
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Channel Number:
1 - Single channel
2 - Two channel

11
|
Voltage:
04D - 24 - 48 Vdc
14A - 110 - 140 Vac 50/60 Hz
24A - 200 - 240 Vac 50/60 Hz

Relays

Description	Catalog Number
Single Channel Relay	
200 - 240 V - 50/60 Hz	RSI124A
110 - 140 V - 50/60 Hz	RSI114A
24 - 48 V - 50/60 Hz	RSI104D
2-Channel Relay	
200 - 240 V - 50/60 Hz	RSI224A
110 - 140 V - 50/60 Hz	RSI214A
24 - 48 V - 50/60 Hz	RSI204D

Dimensions in Millimeters



Controls

CONTROL STATIONS AND SWITCHES - FLAMEPROOF

FAS Series “Break Glass” Call Points

Increased Safety and Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- Located on exit routes, in particular on the floor landings of staircases and at all exits to the open air.
- For use in hazardous areas where ignitable vapors, gases or highly combustible dusts are present.
- For installation in chemical and petrochemical plants, refineries and other process industries.

Features

- Type PCe (increased safety version):
 - Hammer and stainless steel chain.
 - NO+NC contacts with 2.5 mm² terminals.
 - Earth termination: 2 x 4 mm² – internal and external.
 - 2 x M20 bottom entries supplied with polyamide cable gland – 6.5 to 14.5 mm diameter and polyamide blanking plug.
- Type BR1d (flameproof version):
 - Hammer and stainless steel chain.
 - NO+NC contacts with 2.5 mm² terminals.
 - Earth termination: 2 x 4 mm² – internal and external.
 - 2 x M20 entries (1 top and 1 bottom) supplied with one aluminum blanking plug.

Standard Materials

- Type PCe
 - Box: red painted aluminum alloy
 - Cover: red painted steel
 - Chain: stainless steel
- Type BR1d
 - Box: painted marine grade aluminum alloy (gray painted body and red painted cover)
 - Chain: stainless steel

Options

- Special options available - consult factory for details.

Certifications and Compliances

◆ ATEX Certification

- **Certification Type: PCe**
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC
 - Temperature class: T6
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C
 - Ambient Temperature: -55 °C to +60 °C
 - CE Declaration of Conformity: 50221
 - ATEX Certificate: LCIE 00 ATEX 6047
 - Index of Protection according EN/IEC 60529: IP66



Ex de IIC Version
(PCe Type)

Ex d IIC Version
(BR1d Type)

• Certification Type: BR1d

- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T6 for Ta = +40 °C; T5 for Ta = +55 °C
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T95 °C
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 50230
 - ATEX Certificate: LCIE 02 ATEX 605
 - Index of Protection according EN/IEC 60529: IP66

◆ Others Certification ①

- **Certification Type: PCe**
 - EURASEC RU C-FR.ГБ 05.B.00911
- **Certification Type: BR1d**
 - EURASEC RU C-FR.ГБ 05.B.00911

① Inmetro certification available on special request only. Contact your local sales for more information.

FAS Series "Break Glass" Call Points

Increased Safety and Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide

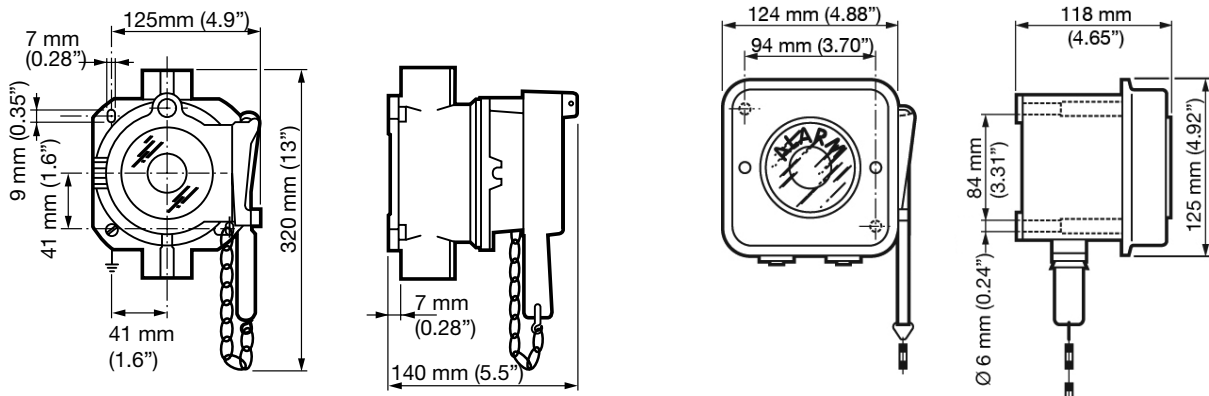
FAS
|
Series:
FAS
Zone 1 and 2 - 21 and 22
ATEX Certified

D
|
D - Ex d
E - Ex e

A
|
A - Automatic
M - Manual

Description	Weight kg	Volume dm ³	Catalog Number	Pack
Increased Safety Ex de IIC Version - Type PCe:				
Manual breaking of the circuit after breaking the glass. Momentary NO+NC contacts	1.2	5	FASEM	1
Automatic breaking of the circuit as soon as glass is broken. Momentary NO+NC contacts	1.2	5	FASEA	1
Flameproof Ex d IIC Version - Type BR1d:				
Automatic breaking of the circuit as soon as glass is broken. Momentary NO+NC contacts	1.2	3.8	FASDA ①	1

Dimensions in Millimeters



① Please check your cable entry as FASDA is M20 and not M25 as the old catalog number 093818.

Shaded catalog numbers are normally stocked items. All other items are made to order.

SWE Series 16 and 20 Amp Switches

Increased Safety

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- Designed to prevent operation in explosive atmospheres during connect and disconnect operation of lighting and light power loads.
- For use in hazardous areas where ignitable vapors, gases or highly combustible dusts are present.
- For installation in chemical and petrochemical plants, refineries and other process industries.

Features

- Available up to 690 Volts, and up to 20 Amps
- 16 Amp version:
 - Two bottom M20 clearance holes.
 - Switch mechanism fixed at the bottom of the box.
 - Termination:
 - Type 1: 2.5 mm²
 - Type 2: 2.5 mm² flexible, 4 mm² solid
 - Internal earth:
 - 2 x 2.5 mm² terminals
 - Supplied with:
 - 1 x white self-adhesive laminated plastic label with black lettering – 58 mm x 18 mm
- 20 Amp version:
 - Two M20 threaded entries on the bottom of the box.
 - Switch mechanism fixed on the bottom of the box.
 - Padlockable handle in position 0 using maximum 4 padlocks
 - maximum handle diameter 8 mm and minimum 15 mm length.
 - Termination:
 - 2.5 mm² flexible/4 mm² solid
 - Internal earth:
 - 2 x 4 mm² terminals
 - Supplied with:
 - 1 x yellow self-adhesive laminated plastic label with black lettering – 65 mm x 18 mm



16 A Version – Type 1



16 A Version – Type 2



20 A Version

◆EURASEC Certification

- Certification Type PCe
 - EURASEC RU C-FR. ГБ 05.B.00911

◆Others Certification ①

- Certification Type PCe
 - INMETRO Certificate: BVC 11.0640-X

Standard Materials

- 16 Amp version:
 - Polyamide box.
 - A2 stainless steel coarse pitch screws (1 and a half turn).
 - Polyamide cable glands.
 - Nickel plated brass locknuts.
- 20 Amp version:
 - Polyester box
 - A2 stainless steel captive screws.
 - Polyamide cable glands.

Certifications and Compliances

◆ATEX Certification

- Certification Type PCe
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC
 - Temperature class: T6
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C
 - Ambient Temperature: -20 °C to +40 °C
 - CE Declaration of Conformity: 50221
 - ATEX Certificate: LCIE 00 ATEX 60472
 - Index of Protection according EN/IEC 60529: IP66

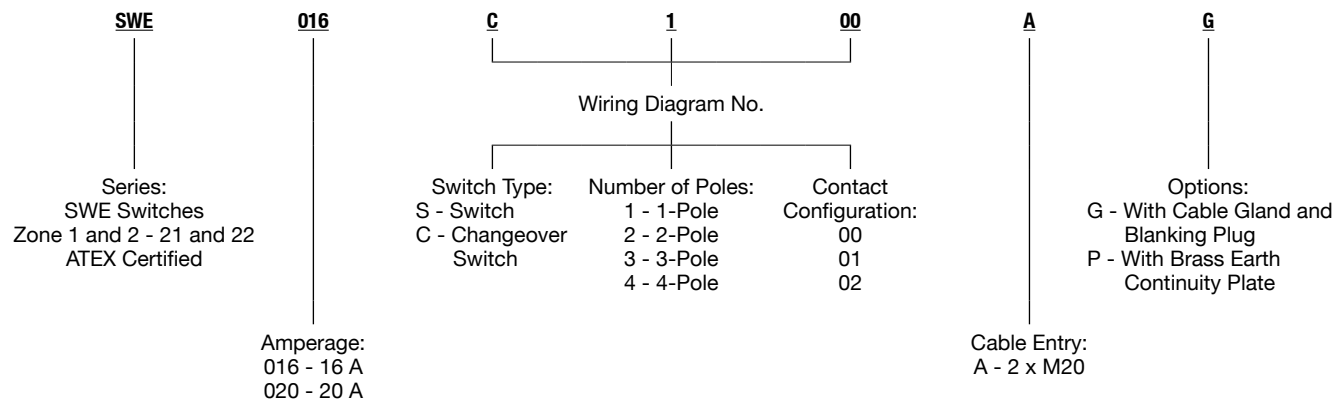
① Inmetro certification available on special request only. Contact your local sales for more information.

SWE Series 16 and 20 Amp Switches

Increased Safety

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide



Switch Type	Wiring Diagram No.	Type	Weight kg	Volume dm ³	Catalog Number
16 Amp Switch – Type 1 – Padlockable handle – Two M20 polyamide cable glands (cable dia. 6.5 to 14.5 mm) on the bottom					
Changeover switch	C101	1	0.53	2	SWE016C101AG
2-pole	S201	1	0.53	2	SWE016S201AG
16 Amp Twist Button - Type 2 – Non-padlockable handle – Two M20 clearance holes on the bottom					
Changeover switch	C100	2	0.50	2	SWE016C100A
2-pole	S200	2	0.50	2	SWE016S200A
20 Amp Switch – Padlockable handle – Two M20 polyamide cable glands (cable dia. 6.5 to 14.5 mm) on the bottom					
Changeover switch	C100	–	1	2	SWE020C100AG
2-pole	S202	–	1	2	SWE020S202AG
3-pole	S301	–	1	2	SWE020S301AG
4-pole	S401	–	1	2	SWE020S401AG

Shaded catalog numbers are normally stocked items. All other items are made to order

SWE Series 16 and 20 Amp Switches

Increased Safety

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Main Contacts	16 Amps Type 1	16 Amps Type 2	20 Amps
Rated Insulation Voltage	750 V	500 V	500 V
Rated Operating Voltage	690 Vac/110 Vdc	500 V	500 V
Rated Operating Current	16 Amp	16 Amp	20 Amp

Switching Capacity

AC 1	16 Amp, 690 V	16 Amp, 500 V	—
AC 12	—	16 Amp, 400 V	—
AC 14	—	10 Amp, 400 V	—
AC 15	16 Amp, 415 V	6 Amp, 500 V	—
AC 21	—	—	16 Amp, 500 V
AC 23	—	—	16 Amp, 400 V
AC 3	08 Amp, 500 V	—	—
AC 3	04 Amp, 690 V	—	—
DC 1	10 Amp, 24 V	—	—
DC 1	06 Amp, 60 V	—	—
DC 1	06 Amp, 110 V ①	—	—
DC 13	—	1 Amp, 110 V	—
DC 13	—	2 Amp, 24 V	—
Termination (flexible/solid)	2.5 mm ² /4 mm ²	2.5 mm ²	2.5 mm ² /4 mm ²

Switching Arrangement X Denotes "Closed Contact"

16 Amp Switch C101

Positions	Contacts	
	11–12	23–24
0	X	
1		X

S201

Positions	Contacts	
	13–14	23–24
0		
1	X	X

16 Amp Twist Button C100

Positions	Contacts	
	1–2	3–4
0	X	
1		X

S200

Positions	Contacts	
	3–4	3–4
0		
1	X	X

20 Amp Switch C100

Positions	Contacts	
	1–2	3–4
0	X	
1		X

S202

Positions	Contacts	
	1–2	3–4
0		
1	X	X

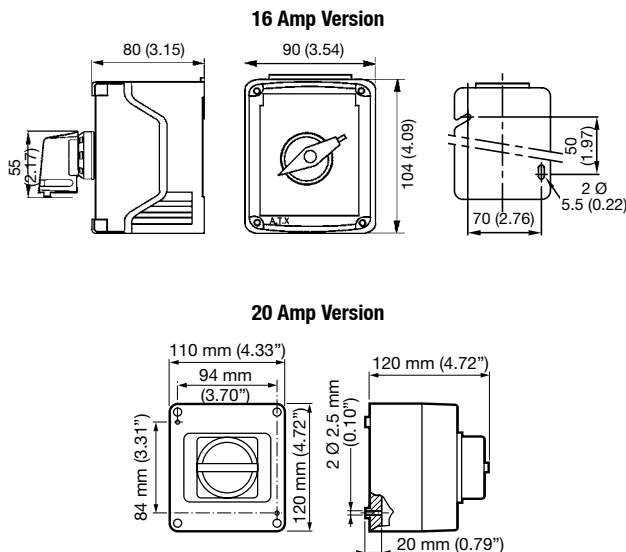
S301

Positions	Contacts		
	1–2	3–4	5–6
0			
1	X	X	X

S401

Positions	Contacts			
	1–2	3–4	5–6	7–8
0				
1	X	X	X	X

Dimensions in Millimeters



① 2 contacts connected in series.

SWE Series 40, 63 and 160 Amp Switches

Increased Safety

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- Designed to prevent operation in explosive atmospheres during connect and disconnect operation of power loads.
- For use in hazardous areas where ignitable vapors, gases or highly combustible dusts are present.
- For installation in chemical and petrochemical plants, refineries and other process industries.

Features

- Available up to 690 Volts, and up to 160 Amps
- 63 Amp version:
 - Padlockable handle in position “O” using max. 4 padlocks [maximum handle diameter 8 mm and minimum 15 mm length].
 - 3 or 4-pole switch mechanism with one ‘NO’ early break auxiliary contact.
 - Main contact termination: 35 mm².
 - Auxiliary contact termination: 2.5 mm².
 - Supplied with:
 - Cable entries:
 - 1 x M32 clearance on top
 - 1 x M32 and 1 x M20 clearance on bottom
 - Supplied with:
 - 2 x M32 polyamide cable glands – cable 10 mm to 25 mm.
 - 1 x M20 blanking plug
 - 1 x yellow self-adhesive laminated plastic label with black lettering – 65 mm to 18 mm.
- 160 Amp version:
 - Hinged door.
 - Closed with plastic double bar locks (key supplied).
 - Supplied with 4 fixing lugs.
 - Padlockable handle in position “O”.
 - 3 or 4-pole switch mechanism with one ‘NO’ early break auxiliary contact.
 - Main contact termination: 120 mm².
 - Auxiliary contact termination: 2.5 mm².
 - Supplied with:
 - Cable entries:
 - 1 x M63 clearance on top
 - 1 x M63 and 1 x M25 clearance on bottom
 - Supplied with:
 - 2 x M63 polyamide cable glands – cable 36 mm to 44 mm.
 - 1 x M25 blanking plug

Standard Materials

- Polyester (GRP) box.
- 316L stainless steel box.
- A2 stainless steel captive screws.
- Polyamide cable glands and blanking plugs.
- Nickel plated brass locknut.

Certifications and Compliances

◆ATEX/ IECEx Certification

- **Certification Type: CAe (Polyester box)**
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex de IIC
 - Temperature class: T5 at +40 °C, T4 at +55 °C.



40 A/63 Amp Version



160 Amp Version

- Dust: Zone 21 and 22
- Conforming to ATEX 94/9/CE: Ⓢ II 2 D
- Type of Protection: Ex tD A21
- Surface Temperature: T95 °C at +40 °C, T130 °C at +55 °C.
- Ambient Temperature:
 - 20 °C to +55 °C (40 A and 63 A)
 - 30 °C to +55 °C (160 A)
- CE Declaration of Conformity: 50235
- ATEX Certificate: LCIE 02 ATEX 6248X
- IECEx Certificate: IECEx LCI 04.0016X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

• Certification Type: JBe (Stainless steel box)

- Gas: Zone 1 and 2
- Conforming to ATEX 94/9/CE: Ⓢ II 2 G
- Type of Protection: Ex de IIC
- Temperature class: T5 at +40 °C, T4 at +55 °C
- Dust: Zone 21 and 22
- Conforming to ATEX 94/9/CE: Ⓢ II 2 D
- Type of Protection: Ex tD A21
- Surface Temperature: T95 °C at +40 °C, T130 °C at +55 °C
- Ambient Temperature:
 - 20 °C to +55 °C (40 A and 63 A)
 - 30 °C to +55 °C (160 A)
- CE Declaration of Conformity: 50232
- ATEX Certificate: LCIE 02 ATEX 6118X
- IECEx Certificate: IECEx LCI 11.0008X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

◆EURASEC Certification

- **Certification Type: CAe (Polyester box)**
 - EURASEC RU C-FR. ГБ 05.B.00911
- **Certification Type: JBe (Stainless steel box)**
 - EURASEC RU C-FR. ГБ 05.B.00911

◆Others Certification ①

- **Certification Type: CAe (Polyester box)**
 - INMETRO Certificate: BVC 12.0421-X

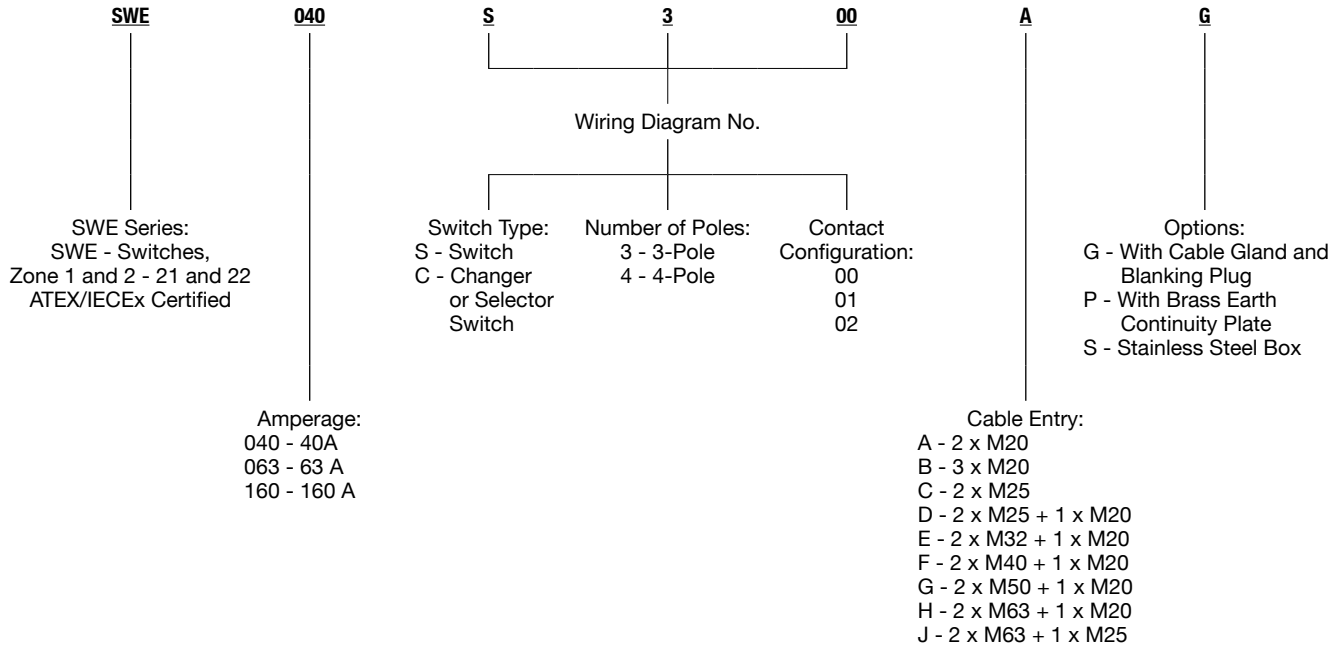
① Inmetro certification available on special request only. Contact your local sales for more information.

SWE Series 40, 63 and 160 Amp Switches

Increased Safety

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide



CALL POINTS STATIONS AND AUDIO SIGNALING DEVICES - INCREASED SAFETY

Switch Type	Wiring Diagram No.	Weight kg	Volume dm ³	Catalog Number
63 A Switch – 2 x M32 + 1 x M20 – Polyester Box				
3-pole switch	S302	8	14.5	SWE063S302EG
4 Pole Switch	S402	8	14.5	SWE063S402EG
160 A Switch – 2 x M63 + 1 x M25 – Polyester Box				
3-pole switch	S302	16	75	SWE160S302JG
4 Pole Switch	S402	16	75	SWE160S402JG
160 A Switch – 2 x M63 + 1 x M25 – Stainless Steel Box				
4-pole switch	S402	25	75	SWE160S402JS

Switching Arrangement – X Denotes "Closed Contact"

S302

Positions	Aux	Contacts		
		1	2	3
0				
1	X	X	X	X

S402

Positions	Aux	Contacts			
		1	2	3	4
0					
1	X	X	X	X	X

SWE Series 40, 63 and 160 Amp Switches

Increased Safety

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Main Contacts	63 Amps	160 Amps
Rated Insulation Voltage	690 Vac	690 Vac
Rated Operating Voltage	690 Vac	690 Vac
Rated Operating Current	63 Amp	160 Amp
Rated Surge Voltage	6 KV	8 KV
Switching Capacity		
AC 21 A/AC 22 A	63 Amp, 230 V to 690 V	160 Amp, 400 V to 690 V
	15 kW, 230 V	
AC 23 A	22 kW, 400 V	80 kW, 400 V
	30 kW, 500 V	110 kW, 500 V
	18.5 kW, 690 V	55 kW, 690 V
AC 3	11 kW, 230 V	
	18.5 kW, 400 V	90 kW, 400 V
	22 kW, 500 V	70 kW, 500 V
	15 kW, 690 V	
DC 21	–	160 Amp, 220 V ①
		160 Amp, 440 V ①
DC 22	–	160 Amp, 220 V ①
		100 Amp, 440 V ①
DC 23	–	160 Amp, 220 V ①
		63 Amp, 440 V ①
Auxiliary Contacts		
Rated Insulation Voltage	400 V	230 V
Rated Operating Voltage	400 V	230 V
Rated Operating Current	10 Amp	10 Amp
Switching Capacity		
AC 15	6 Amp, 230 V	6 Amp, 230 V
	4 Amp, 400 V	
Others		
Termination (flexible/solid)	35 mm ²	120 mm ²

① 2 contacts connected in series per pole.

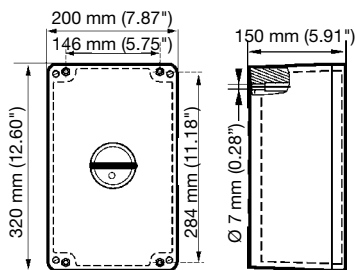
SWE Series 40, 63 and 160 Amp Switches

Increased Safety

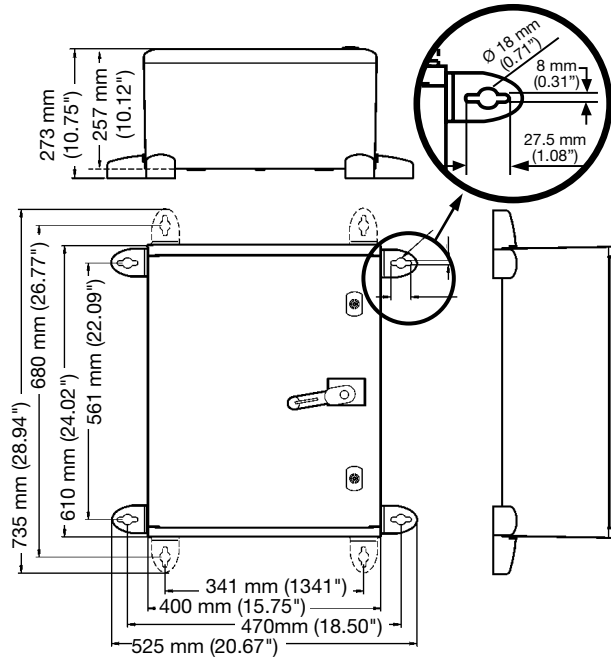
Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Dimensions in Millimeters

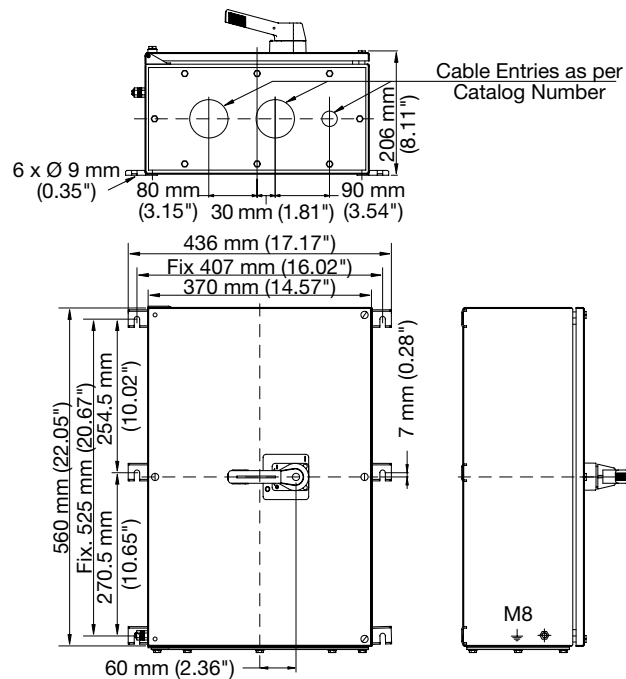
40 Amp/63 Amp Polyester Version



160 Amp Polyester Version



160 Amp Stainless Steel Version



SWD Series 16 and 32 Amp Switches

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- Designed to prevent operation in explosive atmospheres during connect and disconnect operation of lighting and light power loads.
- For use in hazardous areas where ignitable vapors, gases or highly combustible dusts are present.
- For installation in chemical and petrochemical plants, refineries and other process industries.

Features

- Available up to 690 Volts, and up to 32 Amps
- Two threaded entries (one top and one bottom) M20 or M25.
- Switch mechanism fixed at the bottom of the box.
- Padlockable handle.
- Termination:
 - 16 Amp 4 mm² terminals
 - 32 Amp 6 mm² terminals
- Internal earth:
 - 2 x 4 mm² terminals
- External earth:
 - M5 for 16 Amps
 - M6 for 32 Amps

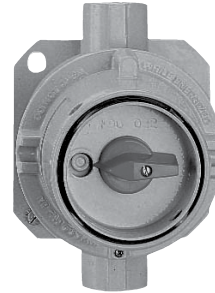
Standard Materials

- Gray painted marine grade aluminum alloy box.
- A2 stainless steel captive screws.

Certifications and Compliances

◆ATEX Certification

- **16 Amp Version. Certification Type: BR1d (16A)**
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T6 for Ta = +40 °C, T5 for Ta = +55 °C
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T95 °C
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 50230
 - ATEX Certificate: LCIE 02 ATEX 6056
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10
- **32 Amp Version. Certification Type: CF1E (32A)**
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T6 for Ta ≤ +40 °C, T5 for +40 °C < Ta ≤ +55 °C
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T95 °C
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 50257
 - ATEX Certificate: LCIE 03 ATEX 6044X
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10



16 Amp Version



32 Amp Version

◆EURASEC Certification

- **16 Amp Version. Certification Type: BR1d (16A)**
 - EURASEC RU C-FR. ГБ 05.B.00911
- **32 Amp Version. Certification Type: CF1E (32A)**
 - EURASEC RU C-FR. ГБ 05.B.00911

Controls

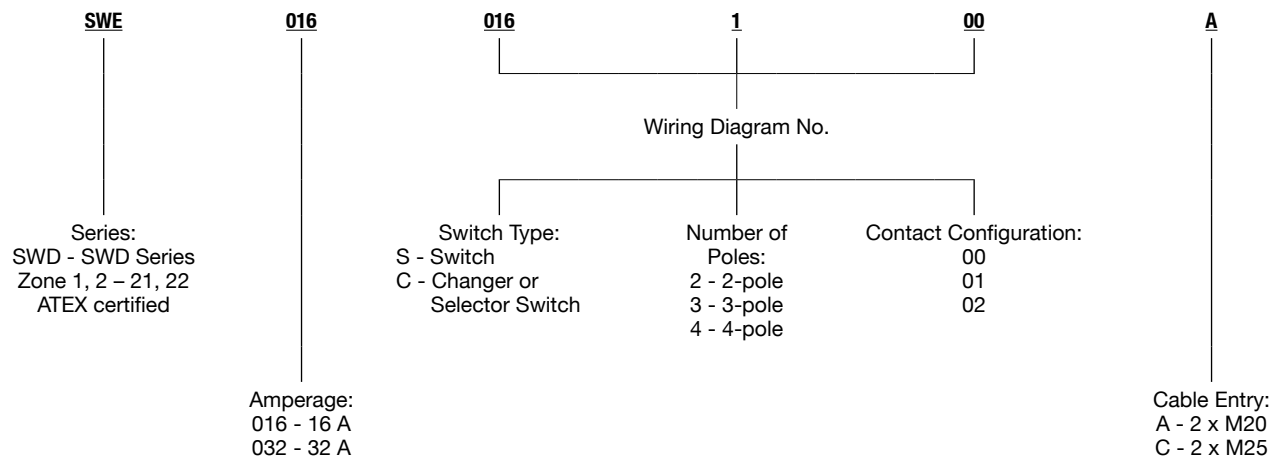
CALL POINTS STATIONS AND AUDIO SIGNALING DEVICES - INCREASED SAFETY

SWD Series 16 and 32 Amp Switches

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide



Switch Type	Wiring Diagram No.	Entries	Weight kg	Volume dm ³	Catalog Number
16 Amp Switch					
1-pole changeover	C100	2 x M20	1.1	3.8	SWD016C100A
		2 x M25			SWD016C100C
2-pole switch	S200	2 x M20	1.1	3.8	SWD016S200A
		2 x M25			SWD016S200C
3-pole switch	S300	2 x M20	1.1	3.8	SWD016S300A
		2 x M25			SWD016S300C
4-pole switch	S400	2 x M20	1.1	3.8	SWD016S400A
		2 x M25			SWD016S400C
32 Amp Switch					
2-pole switch	S200	2 x M20	2.7	8.0	SWD032S200A
		2 x M25			SWD032S200C
3-pole switch	S300	2 x M20	2.7	8.0	SWD032S300A
		2 x M25			SWD032S300C
4-pole switch	S400	2 x M20	2.7	8.0	SWD032S400A
		2 x M25			SWD032S400C

Switching Arrangement – X Denotes "Closed Contact"

C100			C200			S300				S400				
Positions	Contacts		Positions	Contacts		Positions	Contacts			Positions	Contacts			
	1-2	3-4		1-2	3-4		1-2	3-4	5-6		1-2	3-4	5-6	7-8
0	X		0			0				0				
1		X	1	X	X	1	X	X	X	1	X	X	X	X

Shaded catalog numbers are normally stocked items. All other items are made to order.

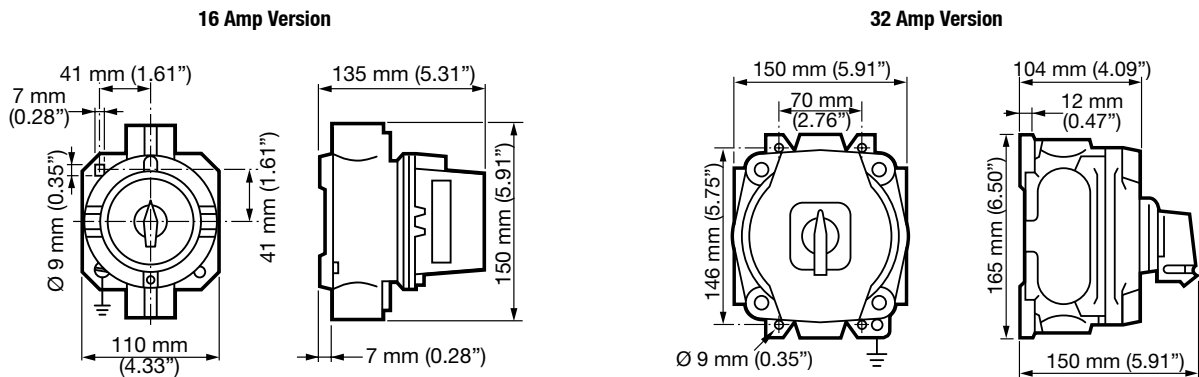
SWD Series 16 and 32 Amp Switches

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Main Contacts	16 Amps	32 Amps
Rated insulation voltage (Ui)	690 V	690 V
Rated Operating Current (Ie)	20 A	40 A
AC 21 A	16 A	32 A
AC 15	6 A	12 A
AC 23 A	3 x 230 V	4 KW
	3 x 400 V	7.5 KW
	3 x 500 V	5.5 KW
	3 x 690 V	4 KW
AC 3 A	3 x 230 V	3 KW
	3 x 400 V	4 KW
	3 x 500 V	5.5 KW
	3 x 690 V	3 KW
Flexible Termination	2.5 mm ²	6 mm ²
Solid Termination	4 mm ²	6 mm ²

Dimensions in Millimeters



Controls

CALL POINTS STATIONS AND AUDIO SIGNALING DEVICES - INCREASED SAFETY

SWD Series 20, 32, 63, 100, 125, 160 and 250 Amp Isolator Switches

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- Designed to prevent operation in explosive atmospheres during connect and disconnect operation of power loads.
- For use in hazardous areas where ignitable vapors, gases or highly combustible dusts are present.
- For installation in chemical and petrochemical plants, refineries and other process industries.

Features

- Available up to 690 Volts, and up to 250 Amps
- Padlockable handle in position “O”.
- 3 or 4-pole switch mechanism.
- “NO-NC” early break auxiliary contact.
- Main contact termination:
Up to 85 mm².
- Auxiliary contact termination: 2.5 mm².
- Threaded cable entries:
two at bottom and one at top – M20 to M63
- Supplied with:
1 x M20 blanking plug
1 x M8 earth stud

Standard Materials

- Box: marine grade aluminum alloy
- Captive screws: A2 stainless steel

Standard Finishes

- Box: gray paint RAL 7038

Options

- Visible break assembly including a window to view power connection (only for 32 A to 160 A versions).

Certifications and Compliances

◆ATEX or ATEX/IECEX Certification

- **Certification Type: CF2D**
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature class: T6 for $T_a \leq +40\text{ }^\circ\text{C}$; T5 for $+40\text{ }^\circ\text{C} < T_a \leq +55\text{ }^\circ\text{C}$.
- Dust: Zone 21 and 22
- Conforming to ATEX 94/9/CE: Ⓢ II 2 D
- Type of Protection: Ex tD A21
- Surface Temperature: T95 °C.
- Ambient Temperature: -40 °C to +55 °C.
- CE Declaration of Conformity: 50254
- ATEX Certificate: LCIE 02 ATEX 6061X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10
- Internal Volume: >2 dm³ (2 liters)



63Amp with visible breaking



63 Amp Version

• Certification Type: CF

- Gas: Zone 1 and 2
- Conforming to ATEX 94/9/CE: Ⓢ II 2 G
- ATEX/IEC Protection: Ex d IIB
- Temperature class: T6
- Dust: Zone 21 and 22
- Conforming to ATEX 94/9/CE: Ⓢ II 2 D
- Type of Protection: Ex tD A21
- Surface Temperature: T80 °C.
- Ambient Temperature: -40 °C to +55 °C;
CF10B is -20 °C to +55 °C.
- CE Declaration of Conformity: 50229
- ATEX Certificate: LCIE 02 ATEX 6057X
- IECEx Certificate: LCI.08 0023X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10
- Internal Volume: >2 dm³ (2 liters)

◆EURASEC Certification

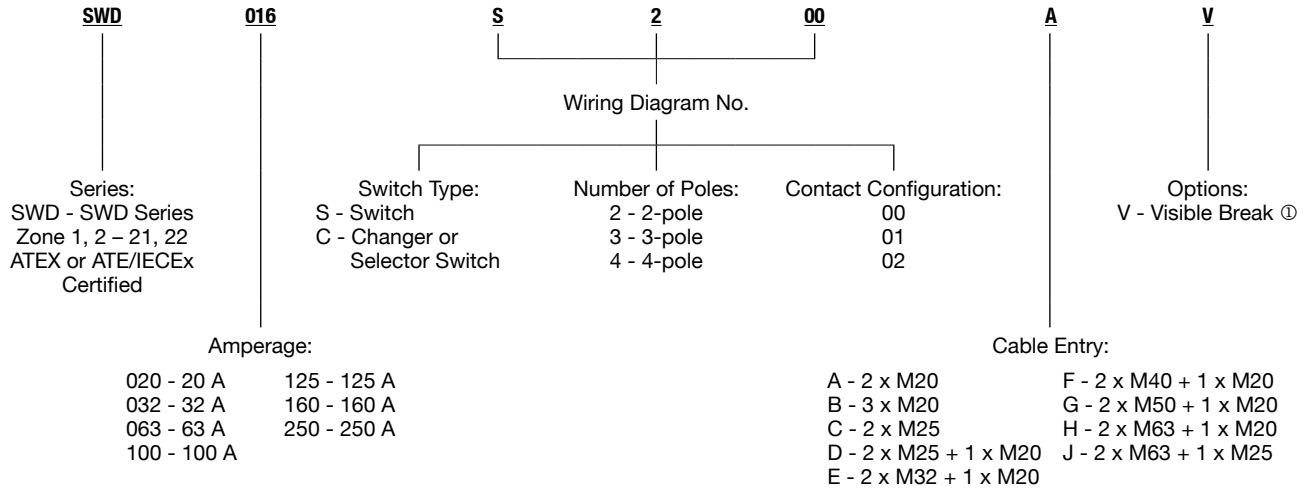
- **Certification Type: CF2D**
 - EURASEC RU C-FR. ГБ 05.B.00911
- **Certification Type: CF**
 - EURASEC RU C-FR. ГБ 05.B.00911

SWD Series 20, 32, 63, 100, 125, 160 and 250 Amp Isolator Switches

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide



Switching Arrangement – X Denotes "Closed Contact"

S300

Positions	Contacts		
	1-2	3-4	5-6
0			
1	X	X	X

S400

Positions	Contacts			
	1-2	3-4	5-6	7-8
0				
1	X	X	X	X

① For 32 to 160 Amp versions only.

SWD Series 20, 32, 63, 100, 125, 160 and 250 Amp Isolator Switches

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Switch Type	Wiring Diagram No.	Certified Type	Weight kg	Volume dm ³	Catalog Number
20 A – 3 x M20 threaded entries (1 Top and 2 Bottom)					
3-pole switch	S300	CF2D	3.8	11	SWD020S300B
4-pole switch	S400	CF2D	3.8	11	SWD020S400B
32 A – Bottom entries: 1 x M25 + 1 x M20 – Top entries: 1 x M25					
3-pole switch	S300	CF2D	3.8	11	SWD032S300D
3-pole switch + visible breaking	S300	CF20B	15	24.5	SWD032S300DV
4-pole switch	S400	CF10B	11	19.6	SWD032S400D
4-pole switch + visible breaking	S400	CF20B	15	24.5	SWD032S400DV
63 A – Bottom entries: 1 x M32 + 1 x M20 – Top entries: 1 x M32					
3-pole switch	S300	CF10B	11	19.6	SWD063S300E
3-pole switch + visible breaking	S300	CF20B	15	24.5	SWD063S300EV
4-pole switch	S400	CF10B	11	19.6	SWD063S400E
4-pole switch + visible breaking	S400	CF20B	15	24.5	SWD063S400EV
100 A – Bottom entries: 1 x M40 + 1 x M20 – Top entries: 1 x M40					
3-pole switch	S300	CF20B	13	24.5	SWD100S300F
4-pole switch	S400	CF20B	13	24.5	SWD100S400F
125 A – Bottom entries: 1 x M50 + 1 x M20 – Top entries: 1 x M50					
3-pole switch	S300	CF20B	13	24.5	SWD125S300G
3-pole switch + visible breaking	S300	CF40B	52	235.2	SWD125S300GV
4-pole switch	S400	CF20B	13	24.5	SWD125S400G
4-pole switch + visible breaking	S400	CF40B	52	235.2	SWD125S400GV
160 A – Bottom entries: 1 x M50 + 1 x M20 – Top entries: 1 x M50					
3-pole switch	S300	CF40B	50.5	235.2	SWD160S300G
3-pole switch + visible breaking	S300	CF40B	52	235.2	SWD160S300GV
4-pole switch	S400	CF40B	50.5	235.2	SWD160S400G
4-pole switch + visible breaking	S400	CF40B	52	235.2	SWD160S400GV
250 A – Bottom entries: 1 x M63 + 1 x M20 – Top entries: 1 x M63					
3-pole switch	S300	CF60B	112	646.6	SWD250S300H
4-pole switch	S400	CF60B	112	646.6	SWD250S400H

Controls

CALL POINTS STATIONS AND AUDIO SIGNALING DEVICES - INCREASED SAFETY

SWD Series 20, 32, 63, 100, 125, 160 and 250 Amp Isolator Switches, Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Technical Data								
Main Contacts		20 Amps	32 Amps	63 Amps	100 Amps	125 Amps	160 Amps	250 Amps
Rated Insulation Voltage (Ui)		800 V	800 V	800 V	800 V	800 V	800 V	800 V
Rated Operating Voltage (Ue)		415 V/500 V/ 690 V	415 V/500 V/ 690 V	415 V/500 V/ 690 V	415 V/500 V/ 690 V	415 V/500 V/ 690 V	415 V/500 V/ 690 V	415 V/500 V/ 690 V
Rated Operating Current (Ie)		25 A	32 A/32 A/ 25 A	63 A/63 A/ 40 A	100 A	125 A	160 A/160 A/ 125 A	250 A/250 A/ 200 A
Rated Surge Voltage (Uimp)		8 kV	8 kV	8 kV	8 kV	8 kV	8 kV	8 kV
Short Circuit Resistance		50 kA (with fuse)	50 kA (with fuse)	50 kA (with fuse)	100 kA (with fuse)	63 kA (with fuse)	80 kA (with fuse)	50 kA (with fuse)
Switching Capacity								
AC 21 A	415 V	25 A	32 A	63 A	100 A	125 A	160 A	250 A
	500 V	25 A	32 A	63 A	100 A	125 A	160 A	250 A
	690 V	25 A	32 A	63 A	100 A	125 A	160 A	200 A
AC 22 A	415 V	25 A	32 A	63 A	100 A	125 A	160 A	250 A
	500 V	25 A	32 A	63 A	100 A	125 A	125 A	250 A
	690 V	25 A	32 A	63 A	63 A	80 A	100 A	125 A
AC 23 A	230 V	25 A	–	–	–	–	–	–
	415 V	25 A	32 A	63 A	100 A	125 A	125 A	250 A
	500 V	25 A	25 A	63 A	80 A	100 A	100 A	200 A
	690 V	25 A	25 A	40 A	63 A	80 A	80 A	100 A
AC 23 A Motor Power (kW)	230 V	–	–	–	–	–	–	–
	415 V	11 kW	15 kW	30 kW	45 kW	55 kW	75 kW	132 kW
	500 V	11 kW	15 kW	30 kW	45 kW	55 kW	75 kW	140 kW
	690 V	15 kW	18.5 kW	30 kW	45 kW	75 kW	75 kW	90 kW
DC 21	24/48 V, 25 A ①	–	–	–	–	–	–	220 V, 250 A ①
	–	–	–	–	–	800 V, 125 A ①	800 V, 125 A ①	440 V, 200 A ①
	–	–	–	–	–	–	–	500 V, 200 A ①
DC 22	–	–	–	–	–	–	–	220 V, 250 A ①
	–	–	–	–	–	–	–	440 V, 200 A ①
	–	–	–	–	–	–	–	500 V, 200 A ①
DC 23	–	–	–	–	–	–	–	220 V, 250 A ①
	–	–	–	–	–	–	–	440 V, 200 A ①
	–	–	–	–	–	–	–	500 V, 200 A ①
Flexible Termination		0.75 to 6 mm ²	16 mm ²	4 to 35 mm ²	4 to 50 mm ²	4 to 50 mm ²	4 to 50 mm ²	95 mm ²
Solid Termination		10 mm ²	16 mm ²	50 mm ²	70 mm ²	70 mm ²	70 mm ²	150 mm ²
Auxiliary Contacts								
Rated Operating Voltage (Ue)		230 V/400 V	250 V	250 V	250 V	250 V	250 V	230 V/400 V
Rated Operating Current (Ie)		6 A/4 A	5 A	5 A	5 A	5 A	5 A	4 A/3 A
Switching Capacity								
AC 15		6 A/230 V	5 A/250 V	5 A/250 V	5 A/250 V	5 A/250 V	5 A/250 V	4 A/230 V - 3 A/400 V
DC 14		–	–	–	–	–	–	1 A/24 V - 0.2 A/48 V
Flexible Termination		2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²

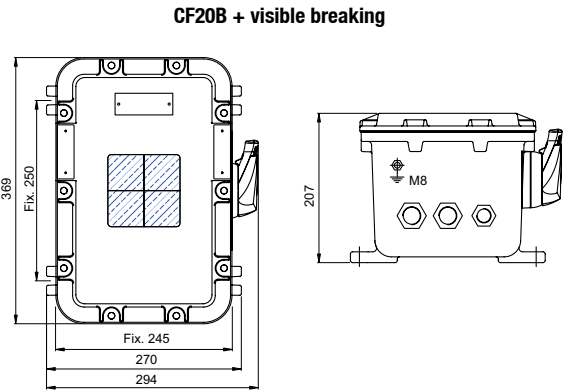
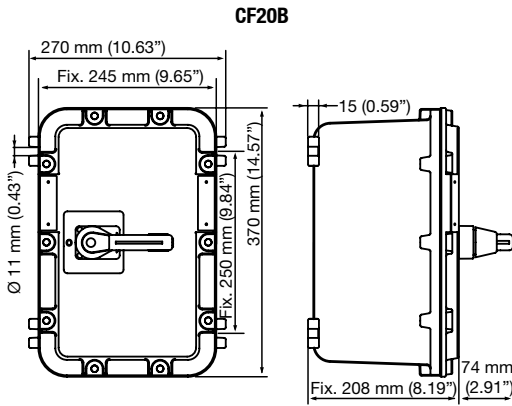
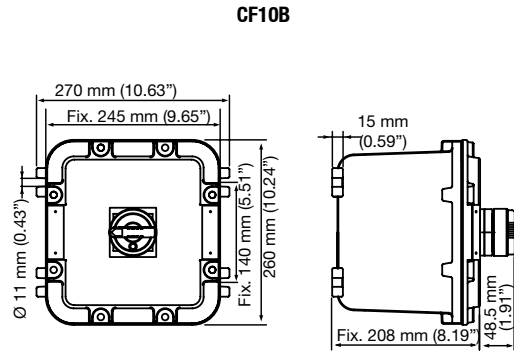
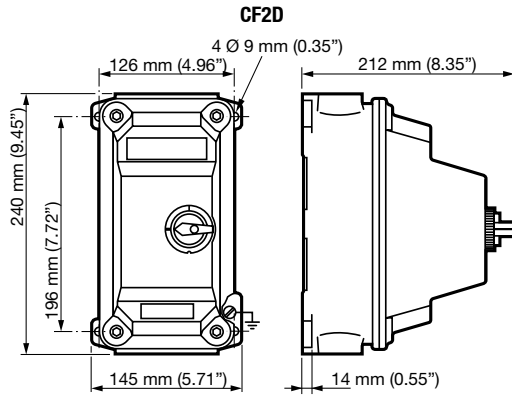
① Two contacts connected in series.

SWD Series 20, 32, 63, 100, 125, 160 and 250 Amp Isolator Switches

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Dimensions in Millimeters



Controls

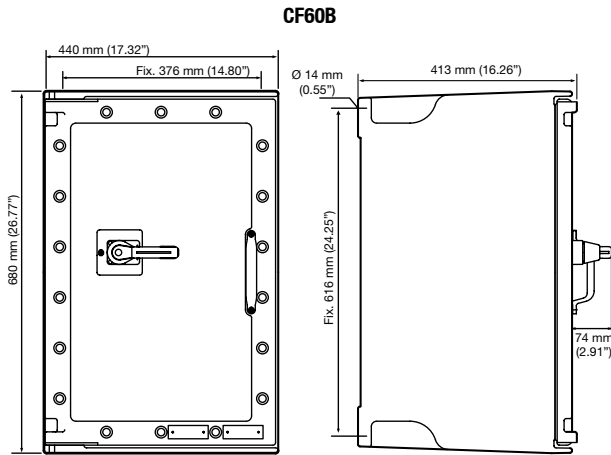
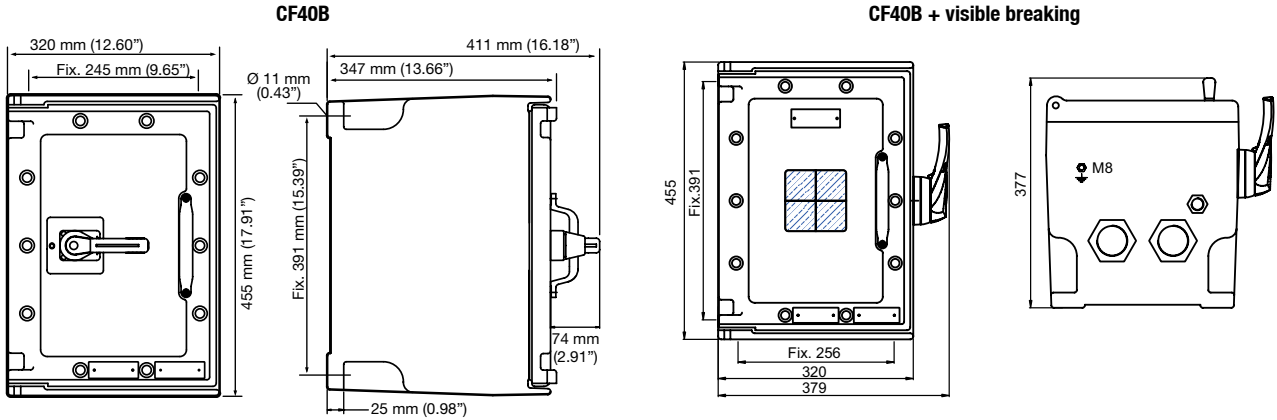
CALL POINTS STATIONS AND AUDIO SIGNALING DEVICES - INCREASED SAFETY

SWD Series 20, 32, 63, 100, 125, 160 and 250 Amp Isolator Switches

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Dimensions in Millimeters



Controls

CALL POINTS STATIONS AND AUDIO SIGNALING DEVICES - INCREASED SAFETY

KL Series Audio Signaling Devices

Flameproof

Zone 1 and 2
Gas (G)

Applications

- Audio alarm to signal an evacuation due to fire, gas or other dangers.

Features

- Klaxon type warning horn.
- Flameproof enclosure.
- Operation:
 - Operating cycle: 5 minutes maximum
 - Pause cycle: 15 minutes minimum
 - Maximum 5 consecutive cycles
 - Predicts temporary pause cycles
- One M20 bottom cable entry.
- M6 earth stud.

Standard Materials

- Enclosure: marine grade aluminum

Standard Finishes

- Enclosure: gray paint

Certifications and Compliances

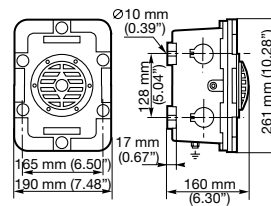
◆ATEX Certification

- **Certification Type: KL1X**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature class: T6
 - Ambient Temperature: -20 °C to +40 °C
 - CE Declaration of Conformity: 50216
 - ATEX Certificate: LCIE 00 ATEX 6018
 - Index of Protection according EN/IEC 60529: IP55
 - Impact Resistance (shock): IK10
 - Internal Volume: ≤ 2 dm³ (2 liters)



Horn

Dimensions in Millimeters



Controls

CALL POINTS STATIONS AND AUDIO SIGNALING DEVICES - INCREASED SAFETY

Catalog Numbering Guide

KL
|
KL Series
Horn
Zone 1 and 2
ATEX Certified

C02D
|
Voltage:
02D - 24 Vdc
02A - 24 Vac
04D - 48 Vdc
04A - 48 Vac
11A - 110 Vac
23A - 220-230 Vac

E
|
Option:
E - Electronic

Series	Voltage	Frequency	Sound Volume at 2m	Sound Frequency (Hz)	Amp Rating	Weight kg	Volume dm ³	Catalog Number
KL	24 Vdc	0 Hz	80 dB mini	420	0.75	5.2	13	KL02D
KL	24 Vac	50/60 Hz	80 dB mini	420	0.75	5.2	13	KL02A
KL	48 Vdc	0 Hz	80 dB mini	420	0.75	5.2	13	KL04D
KL	48 Vac	50 Hz	80 dB mini	420	0.75	5.2	13	KL04A
KL	110 Vac	50/60 Hz	80 dB mini	420	0.13	5.2	13	KL11A
KL	220/230 Vac	50/60 Hz	80 dB mini	420	0.13	5.2	13	KL23A

Shaded catalog numbers are normally stocked items. All other items are made to order.

DM Series Motor Starters

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- DM Series motor starters are used in areas where hazardous materials are handled or stored.
- These units provide disconnecting means and thermal overload protection.

Features

- Three pole contactor.
- Thermal overload relay with stop/reset push button.
- Start push button.
- Rated voltage 400/415 Vac, 50/60 Hz AC-3 category.
- Yellow laminated plastic legend plate with black lettering.
- Internal earth terminal: 2 x 4 mm².
- External ground terminal: M5 for Ex d IIB version.
- Earth crossing terminal: M8 for Ex d IIC version.
- 1 x M20 entry on top.
- 2 x M20 entries at bottom with one blanking plug.

Standard Materials

- Housing: gray painted marine grade aluminum alloy (RAL7038).
- Cover bolts: stainless steel

Certifications and Compliances

◆ ATEX Certification

- **Certification Type CF2D**
 - Gas: Zone 1 and 2,
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature class: T4 (ta +40 °C) or T3 (ta +55 °C)
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T195 °C
 - Ambient Temperature: -20 °C to +55 °C
 - CE Declaration of Conformity: 50254
 - ATEX Certificate: LCIE 03 ATEX 6061X
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10
 - Internal Volume: > 2 dm³ (2 liters)
- **Certification Type CF1B**
 - Gas: Zone 1 and 2,
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T4 (ta +40 °C) or T3 (ta +55 °C)
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T195 °C
 - Ambient Temperature: -20 °C to +55 °C
 - CE Declaration of Conformity: 50257
 - ATEX Certificate: LCIE 03 ATEX 6044X
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10
 - Internal Volume: > 2 dm³ (2 liters)



Ex d IIB Version – Type CF2D



Ex d IIC Version – Type CF1B

◆ EURASEC Certification

- **Certification Type CF2D**
 - EURASEC RU C-FR. ГБ 05.В.0091
- **Certification Type CF1B**
 - EURASEC RU C-FR. ГБ 05.В.00911

Related Products

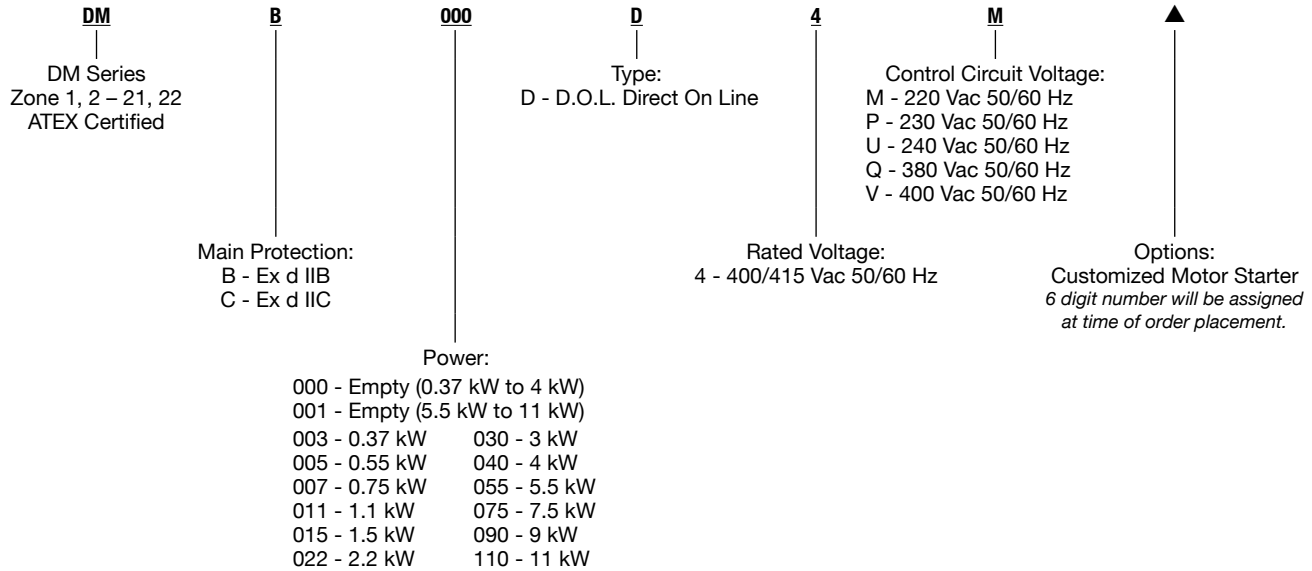
- Cable glands must be ordered separately. See *Fittings Section*.

DM Series Motor Starters

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide



Controls

FLAMEPROOF Ex d ZONE 1 RATED MOTOR STARTERS

Type	Protection	Description	Weight kg	Volume dm ³	Catalog Number
Enclosure for Housing Contactor with Overload Relay up to 11 kW Ex d IIB T4 (for Ta +40 °C) or T3 (for Ta+55 °C)					
CF2D	IIB	For 0.37kW to 4 kW (9 Amp, 400/415 Vac max.) contactor and thermal overload relay not supplied <i>(LC1D09 and LRD – from Schneider Electric ①)</i>	4.0	14	DMB000D
CF2D	IIB	For 5.5kW to 11 kW (25 Amp, 400/415 Vac max.) contactor and thermal overload relay not supplied <i>(LC1D25 and LRD – from Schneider Electric ①)</i>	4.0	14	DMB001D
Enclosure Fitted and Prewired with Contactor and Thermal Overload Relay					
CF2D	IIB	For 5.5 kW 400/415 Vac Motor Coil 230 Vac <i>Fitted with contactor LC1-D25 P7 and thermal overload relay LRD-16</i>	4.5	14	DMB055D4P
Enclosure for Housing Contactor with Overload Relay up to 11 kW Ex d IIC T4 (for Ta +40 °C) or T3 (for Ta +55 °C)					
CF1B	IIC	For 0.37kW to 4 kW (9 Amp, 400/415 Vac max.) contactor and thermal overload relay not supplied <i>(LC1D09 and LRD – from Schneider Electric ①)</i>	4.0	14	DMC000D
CF1B	IIC	For 5.5kW to 11 kW (25 Amp, 400/415 Vac max.) contactor and thermal overload relay not supplied <i>(LC1D25 and LRD – from Schneider Electric ①)</i>	4.0	14	DMC001D
Enclosure Fitted and Prewired with Contactor and Thermal Overload Relay					
CF1B	IIC	For 5.5 kW 400/415 Vac Motor Coil 230 Vac <i>Fitted with contactor LC1-D25 P7 and thermal overload relay LRD-16</i>	4.5	14	DMC055D4P

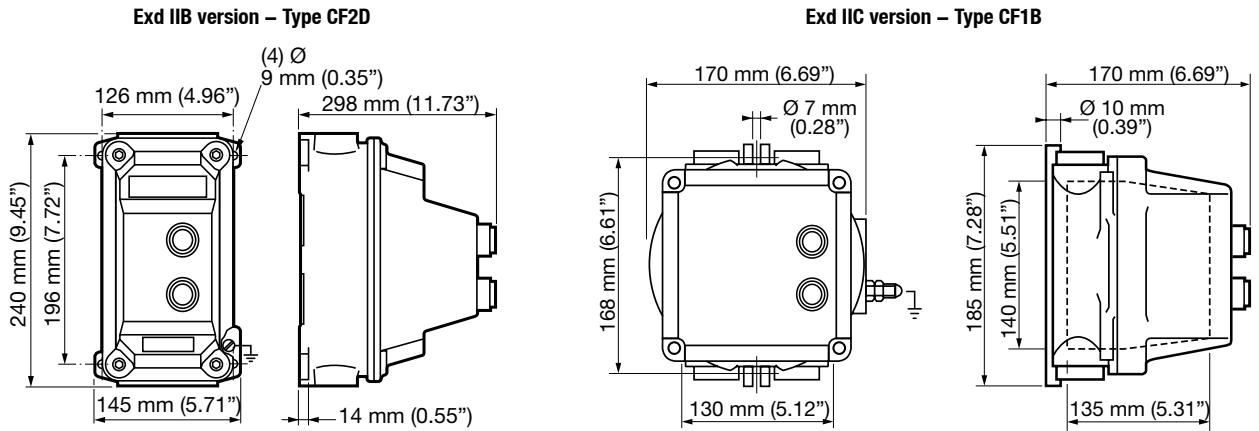
① Schneider Electric is a registered trademark Schneider Electric SA.

DM Series Motor Starter Dimensions

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Dimensions in Millimeters



Controls

FLAMEPROOF Ex d ZONE 1 RATED MOTOR STARTERS

MS Series Motor Starters

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Applications

- These motor starters are used in areas where hazardous material are handled or stored. These units provide:
 - Disconnecting means
 - Undervoltage protection
 - Circuit protection
 - Motor running protection
 - Thermal time delay overload protection

Features

- Magnetic circuit breaker protects equipment and personnel and eliminates replacement of fuses.
- Three pole contactor.
- Thermal overload relay with manual reset push button.
- Green pilot light “Running/ON”.
- Rated voltage 400/415 Vac 50/60 Hz AC-3 category.
- Control circuit supplied via a transformer fed between phases.
- Direct entries or indirect entries with Ex e box allows use of cable gland with elastomer seal.
- Type 2 coordinated protection (IEC 60947-4-1) has the following benefits:
 - Safety - limiting the energy delivered to the short circuit ensures the safest applications for personnel, facilities and equipment.
 - Reduced costs - preventing short circuit damage to components minimizes labor and replacement costs.
 - Increased productivity - as component replacement due to short circuits is minimized, so are interruptions to production.
- Direct ammeter for 0.37 kW to 2.2 kW versions. Ammeter with current transformer for 3 kW to 75 kW versions.

Standard Materials

- Body and cover:
 - Gray painted marine grade aluminum alloy (RAL 7038)
 - Cover bolts: stainless steel
 - Hinges: stainless steel
- Ex e box for indirect entries:
 - Gray (RAL 7038) painted aluminum alloy (size 2 and 6) or stainless steel (size 8 and 11)
 - Cover bolts: stainless steel

Standard Finish

- Corrosion resistant gray powder coat epoxy

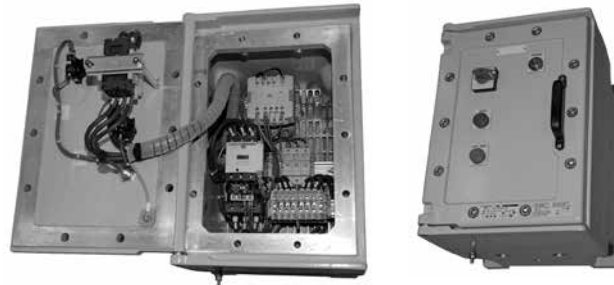
Options

- Available up to 300 kW - contact your local representative.

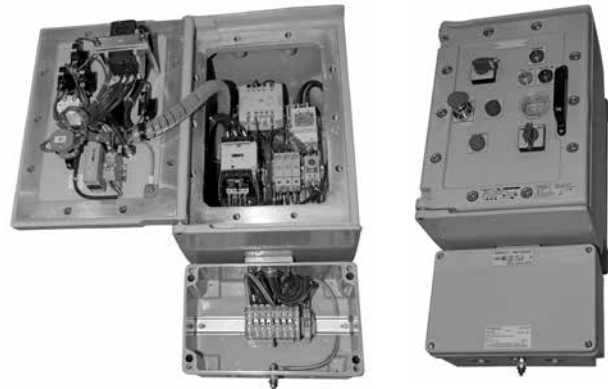
Certifications and Compliances

◆ ATEX/ IECEx Certification

- **Certification Type CF**
 - Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature class: T6
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C



Ex d Version



Ex de Version

- Ambient Temperature:
 - CF 60: -50 °C to +55 °C
 - CF 20, 40, 50: -40 °C to +55 °C
 - CF 30: -20 °C to +55 °C
- CE Declaration of Conformity: 50229
- ATEX Certificate: LCIE 02 ATEX 6057X
- IECEx Certificate: IECEx LCI 08.0023X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10
- Internal Volume: > 2 dm³ (2 liters)

◆ EURASEC Certification

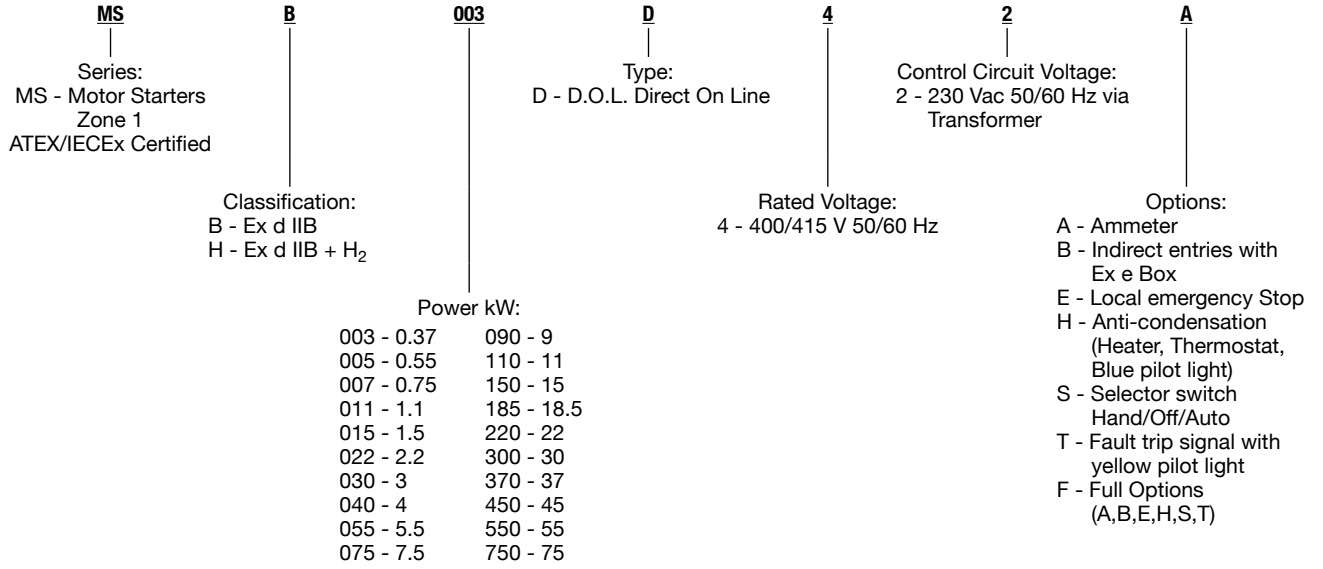
- EURASEC RU C-FR. ГБ 05.B.00911

MS Series Motor Starters

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide



Controls

FLAMEPROOF Ex d ZONE 1 RATED MOTOR STARTERS

MS Series Motor Starters

Flameproof

Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Motor Capacity AC-3 to 415 Vac	Size	Terminals Cross Section mm ²	Cable Entries at Bottom	Weight kg	Volume dm ³	Catalog Number
Standard Version						
<i>Fitted with magnetic circuit breaker, contactor with overload relay, Start/Stop buttons and green pilot light. (1 x M20 plugged).</i>						
0.37 kW	1	2.5	2 x M20 + 1 M20	16	25	MSB003D42
0.55 kW	1	2.5	2 x M20 + 1 M20	16	25	MSB005D42
0.75 kW	1	2.5	2 x M20 + 1 M20	16	25	MSB007D42
1.1 kW	1	2.5	2 x M20 + 1 M20	16	25	MSB011D42
1.5 kW	1	2.5	2 x M20 + 1 M20	16	25	MSB015D42
2.2 kW	1	2.5	2 x M20 + 1 M20	16	25	MSB022D42
3 kW	1	2.5	2 x M20 + 1 M20	16	25	MSB030D42
4 kW	1	2.5	2 x M20 + 1 M20	16	25	MSB040D42
5.5 kW	5	4.0	2 x M25 + 1 M20	56	126	MSB055D42
7.5 kW	5	6.0	2 x M25 + 1 M20	56	126	MSB075D42
9 kW	5	10.0	2 x M25 + 1 M20	56	126	MSB090D42
11 kW	5	10.0	2 x M25 + 1 M20	56	126	MSB110D42
15 kW	5	16.0	2 x M32 + 1 M20	56	126	MSB150D42
18.5 kW	7	25.0	2 x M32 + 1 M20	72	236	MSB185D42
22 kW	7	25.0	2 x M32 + 1 M20	72	236	MSB220D42
30 kW	7	35.0	2 x M40 + 1 M20	72	236	MSB300D42
37 kW	9	50.0	2 x M40 + 1 M20	132	370	MSB370D42
45 kW	9	70.0	2 x M50 + 1 M20	132	370	MSB450D42
55 kW	9	95.0	2 x M50 + 1 M20	132	370	MSB550D42
75 kW	9	120.0	2 x M63 + 1 M20	132	370	MSB750D42
Full Options Version						
<i>Standard version + HOA selector switch, local emergency stop, fault trip signal, ammeter, anti-condensation and indirect entries. (1 x M20 plugged).</i>						
0.37 kW	4	2.5	2 x M20 + 1 x M20	51	700	MSB003D42F
0.55 kW	4	2.5	2 x M20 + 1 x M20	51	700	MSB005D42F
0.75 kW	4	2.5	2 x M20 + 1 x M20	51	700	MSB007D42F
1.1 kW	4	2.5	2 x M20 + 1 x M20	51	700	MSB011D42F
1.5 kW	4	2.5	2 x M20 + 1 x M20	51	700	MSB015D42F
2.2 kW	4	2.5	2 x M20 + 1 x M20	51	700	MSB022D42F
3 kW	4	2.5	2 x M20 + 1 x M20	51	700	MSB030D42F
4 kW	4	2.5	2 x M20 + 1 x M20	51	700	MSB040D42F
5.5 kW	6	4.0	2 x M25 + 1 x M20	62	700	MSB055D42F
7.5 kW	6	6.0	2 x M25 + 1 x M20	62	700	MSB075D42F
9 kW	6	10.0	2 x M25 + 1 x M20	62	700	MSB090D42F
11 kW	6	10.0	2 x M25 + 1 x M20	62	700	MSB110D42F
15 kW	6	16.0	2 x M32 + 1 x M20	62	700	MSB150D42F
18.5 kW	8	25.0	2 x M32 + 1 x M20	81	700	MSB185D42F
22 kW	8	25.0	2 x M32 + 1 x M20	81	700	MSB220D42F
30 kW	8	35.0	2 x M40 + 1 x M20	81	700	MSB300D42F
37 kW	10	50.0	2 x M40 + 1 x M20	145	700	MSB370D42F
45 kW	10	70.0	2 x M50 + 1 x M20	145	700	MSB450D42F
55 kW	10	95.0	2 x M50 + 1 x M20	145	700	MSB550D42F
75 kW	10	120.0	2 x M63 + 1 x M20	145	700	MSB750D42F

Controls

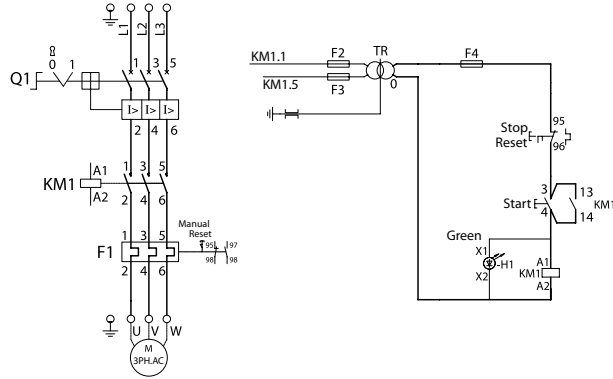
FLAMEPROOF Ex d ZONE 1 RATED MOTOR STARTERS

MS Series Motor Starter Wiring Diagram and Dimensions

Flameproof

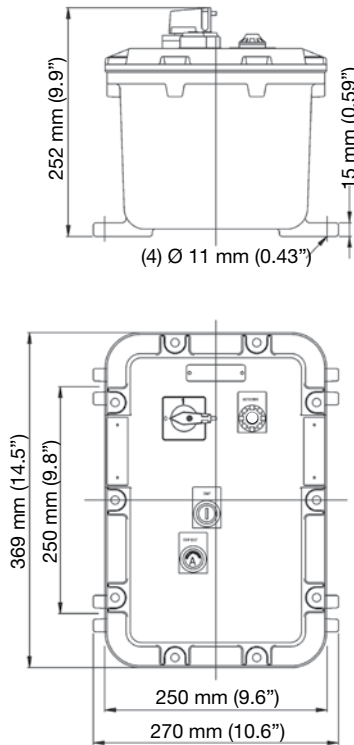
Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Wiring Diagram

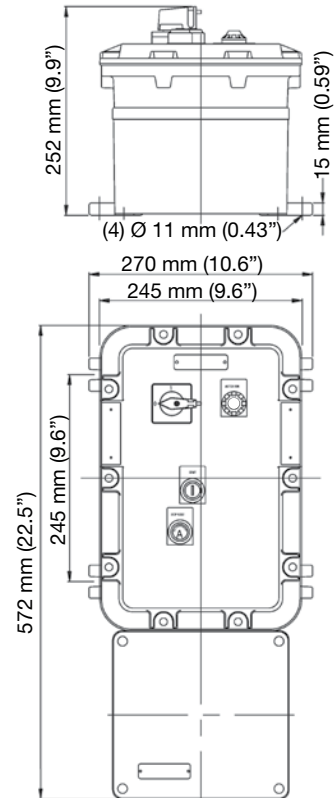


Dimensions in Millimeters

Size 1: CF20B



Size 2: CF20B + CAe1



Controls

FLAMEPROOF Ex d ZONE 1 RATED MOTOR STARTERS

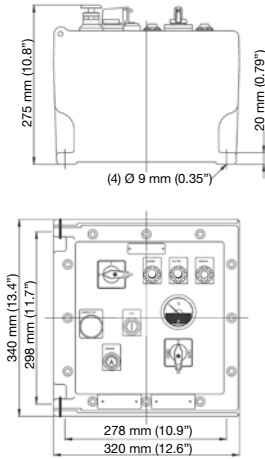
MS Series Motor Starter Dimensions

Flameproof

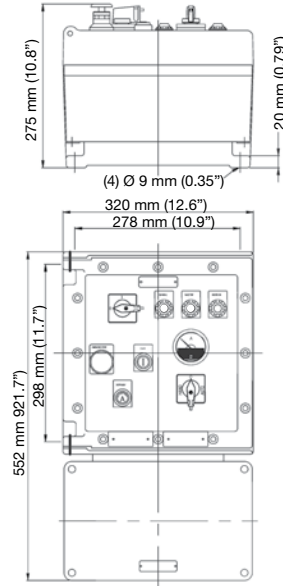
Zone 1 and 2 – 21 and 22
Gas (G) and Dust (D)

Dimensions in Millimeters

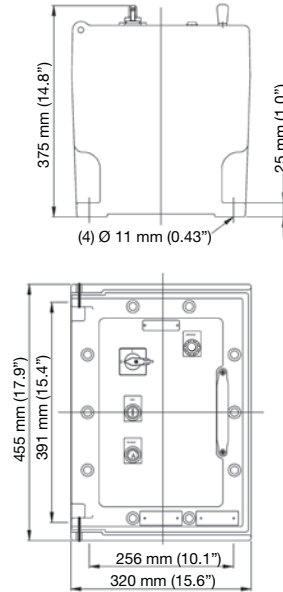
Size 3: CF30B



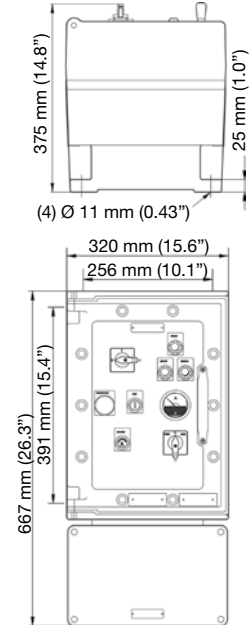
Size 4: CF30B + CAe2



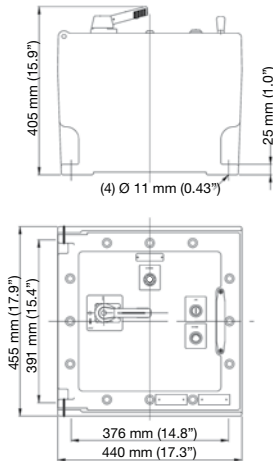
Size 5: CF40B



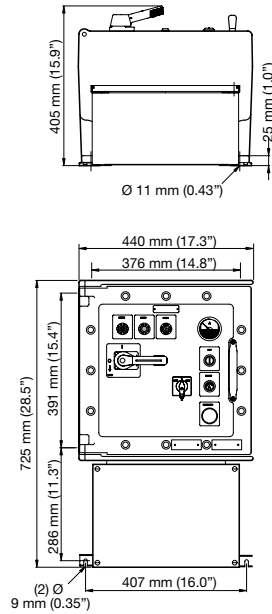
Size 6: CF40B + CAe2



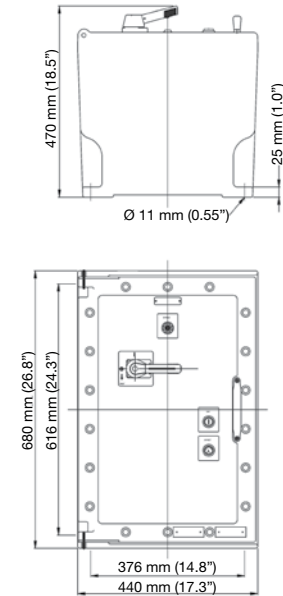
Size 7: CF50B



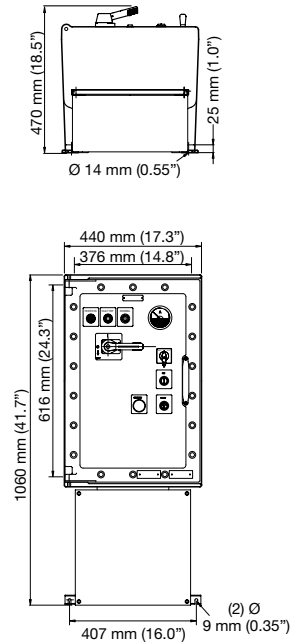
Size 8: CF50B + JBe47



Size 9: CF60B



Size 10: CF60B + JBe55



Controls

FLAMEPROOF Ex d ZONE 1 RATED MOTOR STARTERS

Notes

Notes

Distribution Equipment

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CBU/SWU Circuit Breakers



CBD Circuit Breakers



P Series Distribution Panelboards



DPD Distribution Panelboards



Custom Switchracks

CBU, SWU and RCU Series Branch Circuit Breakers, Switches, Relays and Contactors For Increased Safety Enclosures

Zone 1 and 2
Gas (G)

Applications

- Useful as back-up circuit breaker protection or as main circuit breaker protection for hazardous areas.
- To be fitted inside increased safety Ex e enclosures.

Features

- Up to 40 A for 2-pole circuit breaker versions.
- Up to 63 A for 2-pole with GFI, 3-pole and 4-pole circuit breaker versions.
- Up to 63 A for switch versions.
- Breaking capacity 10 kA – 400 V according to EN/IEC 60947-2 standard.
- Breaking capacity 6 kA - 400 V according to EN/IEC 60898 standard.
- Supplied with front rotary control handle padlockable in OFF position.
- Terminal capacity: 1 x 25 mm².
- Mounting in polyester (ECEP series) or in 316L stainless steel (ECES series) enclosures. Can be fixed either on the door or at the back of the enclosure.

Standard Materials

- Housing: polyamide

Certifications and Compliances

◆ ATEX/IECEx Certification

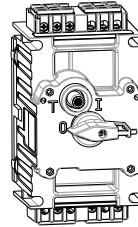
- **Certification Type IT40U (2-pole versions)**
 - Gas: Zones 1 and 2 (Authorized to be used in an approved dustproof enclosure)
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection Ex de IIC
 - Service Temperature: -20 °C to +100 °C
 - CE Declaration of Conformity: 5C216
 - ATEX Certificate: LCIE 02 ATEX 0035U
 - IECEx Certificate: IECEx LCI 04.0033U
- **Certification Type CBU (2-pole GFI, 3 and 4-pole versions)**
 - Gas: Zones 1 and 2 (Authorized to be used in an approved dustproof enclosure)
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection Ex de IIC
 - Service Temperature: -20 °C to +100 °C
 - CE Declaration of Conformity: 5C244
 - ATEX Certificate: LCIE 09 ATEX 3068U
 - IECEx Certificate: IECEx LCI 09.0023L

◆ EURASEC Certification

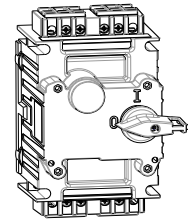
- **Certification Type IT40U (2-pole versions)**
 - EURASEC N° TC RU C-FR.1505.B.00909
- **Certification Type CBU (2-pole GFI, 3 and 4-pole versions)**
 - EURASEC N° TC RU C-FR.1505.B.00909

◆ Others Certification ①

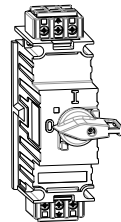
- **Certification Type IT40U (2-pole versions)**
 - Inmetro Certificate: BVC 11.0594-U
- **Certification Type CBU (2-pole GFI, 3 and 4-pole versions)**
 - Inmetro Certificate: BVC 10.0011-U



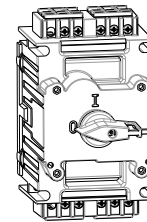
2-Pole Circuit Breaker with GFI



4-Pole Circuit Breaker



2-Pole Circuit Breaker



4-Pole Switch

① Inmetro certification available on special request only. Contact your local sales for more information.

CBU, SWU and RCU Series Branch Circuit Breakers, Switches, Relays and Contactors

For Increased Safety Enclosures

Zone 1 and 2
Gas (G)

Catalog Numbering Guide — ATEX/IECEX Certified Branch Circuit Breakers, Switches, Relays and Contactors

CBU	1	01	B	R1	5
<p>Circuit Breaker Series: CBU - Circuit Breaker 2P, 3P and 4P</p> <p>CBUN - Circuit Breaker 2P+GFI version</p> <p>Switch Series: SWU - Switch ①</p>	<p>Number of Poles: 1 - 1-Pole 2 - 2-Poles 3 - 3-Poles 4 - 4-Poles 9 - 1-Pole + Neutral</p>	<p>Intensity: ①</p> <p>01 - 1 A 02 - 2 A 03 - 3 A 04 - 4 A 06 - 6 A 10 - 10 A 16 - 16 A 20 - 20 A 25 - 25 A 32 - 32 A 40 - 40 A 50 - 50 A 63 - 63 A</p>	<p>Curve Type: B - Curve B C - Curve C D - Curve D</p>	<p>GFI: R1 - 30 mA R2 - 300 mA</p>	<p>Options:</p> <p>5 - 440 Vac 6 - 480 Vac F3 - 1 NO/NC Fault Indication Contact F5 - NO Fault Indication Contact F9 - NC Fault Indication Contact S3 - 1 NO/NC Auxiliary Contact S5 - 2 NO Auxiliary Contact S9 - 2 NC Auxiliary Contact M - 15 kA Breaking Capacity P - 25 kA Breaking Capacity</p>

RCU	1	01	B	R1
<p>RCU : Relay and Contactor</p>	<p>Number of Poles: 2 - 2-Poles 3 - 3-Poles 4 - 4-Poles</p>	<p>Intensity:</p> <p>20 - 20 A 24 - 24 A 40 - 40 A</p>	<p>Number of contacts: - For 20 Amps only: 20 - 2NO 02 - 2NC 11 - 1NO+1NC - For 24 Amps only: 40 - 4NO 04 - 4NC 13 - 1NO+3NC 22 - 2NO+2NC 31 - 3NO+1NC - For 40 Amps only: 40 - 4NO 22 - 2NO+2NC 31 - 3NO+1NC</p>	<p>Coil voltage: 24 - 24VAC (for 20,24,40 Amps only) 23 - 230VAC (for 20,24,40 Amp)</p>

① SWU Series Switches: Up to 40 Amps for 2-pole version. Up to 63 Amps for 3- and 4-pole versions. Example: 3-pole, 25 Amp switch – SWU325.

CBU, SWU and RCU Series Branch Circuit Breakers, Switches, Relays and Contactors

For Increased Safety Enclosures

Zone 1 and 2
Gas (G)

Circuit Breakers – CBU Series

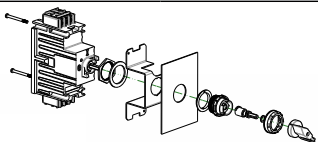
	Weight kg	Volume dm ³	Certified Type	Catalog Number
2-Pole Branch Circuit Breaker – 230/240 Vac – Tripping Curve C				
2 x 6 A	1.9	1.1	IT40U	CBU206C
2 x 10 A	1.9	1.1	IT40U	CBU210C
2 x 16 A	1.9	1.1	IT40U	CBU216C
2 x 20 A	1.9	1.1	IT40U	CBU220C
2 x 25 A	1.9	1.1	IT40U	CBU225C
2 x 32 A	1.9	1.1	IT40U	CBU232C
2-Pole GFI Branch Circuit Breaker – 230/240 Vac – Tripping Curve C				
2 x 10 A/30 mA	1.9	3.1	CBU	CBUN210CR1
2 x 16 A/30 mA	1.9	3.1	CBU	CBUN216CR1
2 x 20 A/30 mA	1.9	3.1	CBU	CBUN220CR1
2 x 10 A/300 mA	1.9	3.1	CBU	CBUN210CR2
2 x 16 A/300 mA	1.9	3.1	CBU	CBUN216CR2
2 x 20 A/300 mA	1.9	3.1	CBU	CBUN220CR2
3-Pole Branch Circuit Breaker – 380/415 Vac – Tripping Curve C				
3 x 6 A	1.9	3.1	CBU	CBU306C
3 x 10 A	1.9	3.1	CBU	CBU310C
3 x 16 A	1.9	3.1	CBU	CBU316C
3 x 20 A	1.9	3.1	CBU	CBU320C
3 x 25 A	1.9	3.1	CBU	CBU325C
3 x 32 A	1.9	3.1	CBU	CBU332C
4-Pole Branch Circuit Breaker – 380/415 Vac – Tripping Curve C				
4 x 6 A	1.9	3.1	CBU	CBU406C
4 x 10 A	1.9	3.1	CBU	CBU410C
4 x 16 A	1.9	3.1	CBU	CBU416C
4 x 20 A	1.9	3.1	CBU	CBU420C
4 x 25 A	1.9	3.1	CBU	CBU425C
4 x 32 A	1.9	3.1	CBU	CBU432C

Relays and Contactors – RCU Series

2 and 4-pole versions:

- Rated current: 20 A, 24 A, 40 A and 63 A.
- Rated voltage: Up to 415 V - 50/60 Hz.
- Coil voltage: Up to 240 V - 50/60 Hz.
- Consult factory for further details.

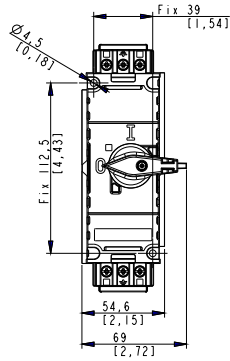
CBU and SWU Bracket

Description	Catalog Number
 <p>Bracket for door fixing for 2-pole MCB</p>	096650

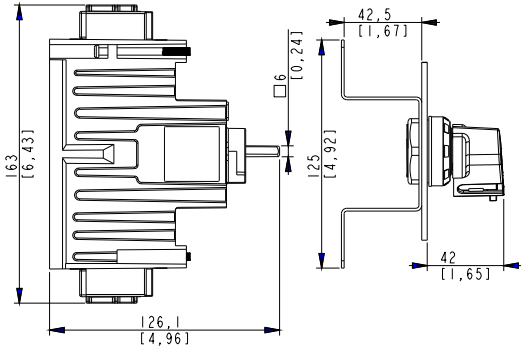
CBU, SWU and RCU Series Branch Circuit Breakers, Switches, Relays and Contactors For Increased Safety Enclosures

Zone 1 and 2
Gas (G)

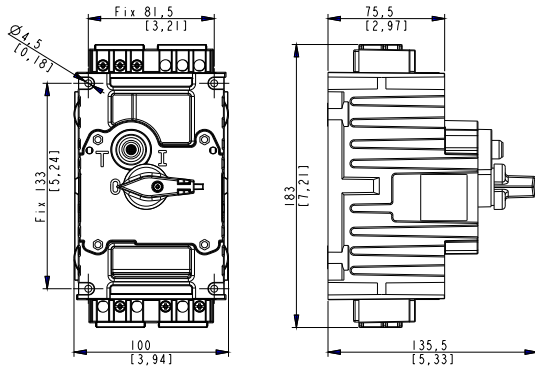
Dimension in Millimeters



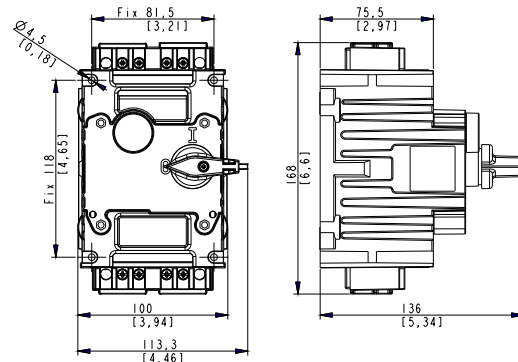
1 / 2 Poles Circuit Breaker
1 Pole + Aux. Circuit Breaker



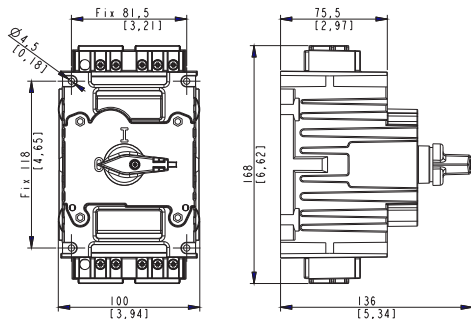
With fixing kit 2 Poles 096650



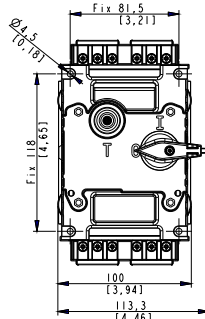
2 Poles Circuit breaker with GFI
2 Poles + Aux Circuit Breaker with GFI



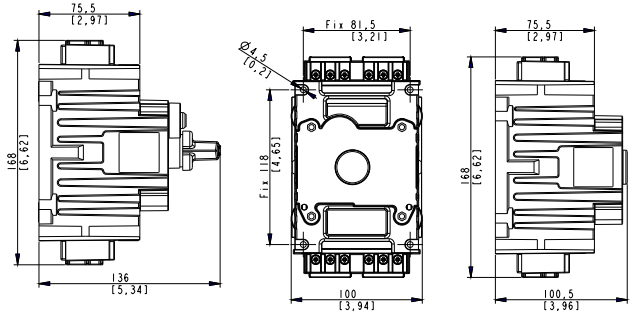
2 / 3 / 4 Poles + Aux. Circuit Breaker
3 / 4 Poles Circuit Breaker



3 / 4 Poles Switch Breaker
3 / 4 Poles + Aux. Switch Breaker



4 Poles Switch with Earth Leakage
4 Poles + Aux. Switch with Earth Leakage



2 / 3 / 4 Poles Contactor

Distribution Equipment

CIRCUIT BREAKERS

CBD Series Circuit Breakers

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Circuit breakers are used in areas where hazardous materials are handled or stored.
- These units provide thermal-magnetic protection and residual current devices.

Features

- Supplied with front rotary control switch handle.
- Padlockable in stop position — 3 x dia. 5 mm.
- RCBOs supplied with test push button.
- Yellow laminated plastic legend plate with black lettering.
- Internal earth terminal 2 x 4 mm².
- External ground terminal: M5 for Ex d IIB version.
- Earth crossing terminal M8 for Ex d IIC version.
- 1 x M20 entry on top.
- 2 x M20 entries at bottom with one blanking plug.
- Cable glands to be ordered separately.

Standard Materials

- Gray painted marine grade aluminum alloy housing (RAL7038).
- Stainless steel cover bolts.

Certifications and Compliances

◆ATEX Certification

• Certification Type: CF2D

- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIB
 - Temperature class: T3
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex td A21
 - Surface Temperature: T195 °C
- Ambient Temperature:
 - -5 °C / -20°C / -25°C to +55 °C (according components)
- CE Declaration of Conformity: 50254
- ATEX Certificate: LCIE 02 ATEX 6061X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

• Certification Type: CF1C

- Gas: Zone 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T5
- Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓢ II2 D
 - Type of Protection: Ex td A21
 - Surface Temperature: T95 °C
- Ambient Temperature:
 - -5 °C / -20°C / -25°C to +55 °C (according components)
- CE Declaration of Conformity: 50257
- ATEX Certificate: LCIE 03 ATEX 6044X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK10

◆EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.В.00910



Ex d IIB Version



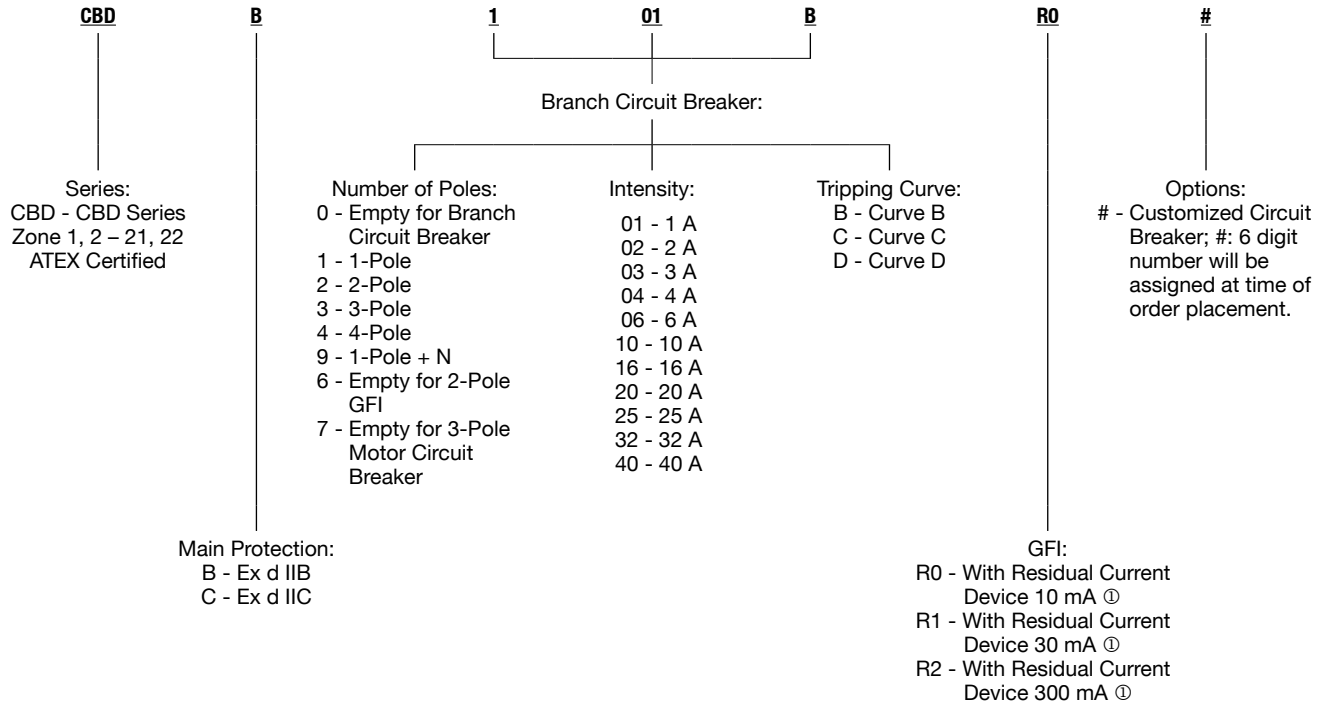
Ex d IIC Version

CBD Series Circuit Breakers

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide



① For Branch Circuit Breaker 2-Poles maximum.

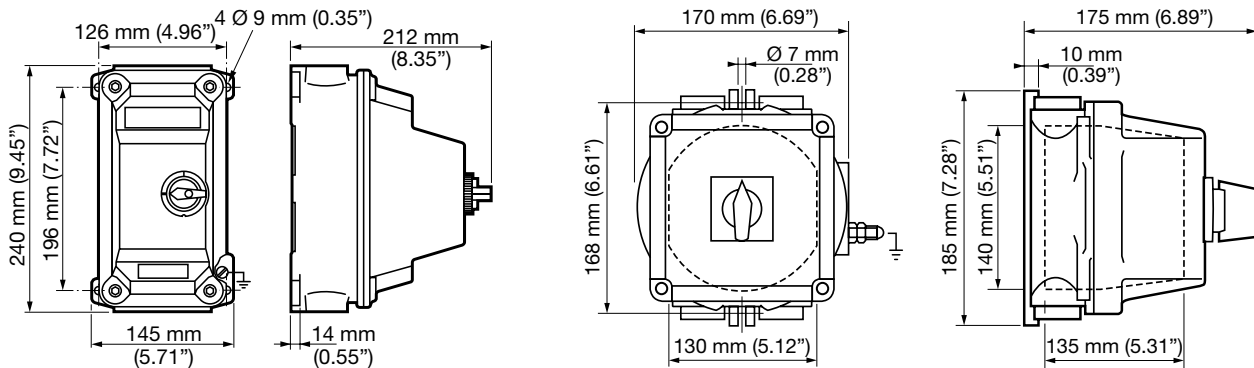
CBD Series Circuit Breakers

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Type	Description	Weight kg	Volume dm ³	Catalog Number
Enclosure for Housing Branch Circuit Breaker up to 40 A — Ex d IIB T3				
CF2D	40 A maximum For 2-pole, 3-pole and 4-pole Branch Circuit Breaker (S200 from ABB) not supplied Ambient Temperature: -25 °C to +55 °C	4	14	CBDB0
CF2D	25 A maximum For 2-pole + GFI Branch Circuit Breaker (iC60 + VIGI iC60 from Schneider Electric) not supplied Ambient Temperature: -25 °C / -5 °C to +55 °C	4	14	CBDB6
CF2D	32 A maximum For 3-pole Motor Circuit Breaker (GV2-P or GV2-L from Schneider Electric) not supplied Ambient Temperature: -20 °C to +55 °C	4	14	CBDB7
Enclosure for Housing Branch Circuit Breaker up to 32 A — Ex d IIC T5				
CF1C	25 A maximum For 2-pole, 3-pole and 4-pole Branch Circuit Breaker (S200 from ABB) not supplied Ambient Temperature: -25 °C to +55 °C	4	14	CBDC0
CF1C	25 A maximum For 2-pole + GFI Branch Circuit Breaker (iC60 + VIGI iC60 from Schneider Electric) not supplied Ambient Temperature: -25 °C / -5 °C to +55 °C	4	14	CBDC6
CF1C	32 A maximum For 3-pole Motor Circuit Breaker (GV2-P or GV2-L from Schneider Electric) not supplied Ambient Temperature: -20 °C to +55 °C	4	14	CBDC7

Dimensions in Millimeters



Ex d IIB Version

Ex d IIC Version

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- The P Series PlexPower panelboard provides indoor and outdoor protection and control of electrical circuits in hazardous environments such as:
 - Petroleum plants
 - Chemical plants
 - Refineries
 - Other process facilities
- Ideal for placement in wet, corrosive environments or where flammable gases or vapors are likely to be present.
- Suitable for use on lighting, heat trace and power circuits.

Features

- No external conduit or cable seals required thus making installations faster, easier, and less costly.
- Limitless flexibility through horizontal and vertical coupling options.
- The PlexPower panelboard features a ground-breaking design that uses individual breaker housings to minimize the downtime and costs associated with servicing circuit breakers in hazardous locations.
- The lighter weight panelboard enclosure can be quickly opened in the field for easier servicing.
- Supplied as standard:
 - Bottom entries with brass earth plate
 - Pre-drilled supplied with non Ex certified temporary plastic plugs
 - Standard hard wired, copper cables
 - Color coded wiring for phases; neutral (blue) and ground (yellow/green)
 - Internal actuators
 - Internal wiring duct
 - Phenolic nameplate (specify legend)
- Optional gland plate at the bottom of enclosure can be easily field punched or drilled for cable or conduit entries. *See options.*
- 1 circuit to 72 circuit panelboard configurations are standard, with or without main breaker.
- Schneider ① breakers are supplied as standard, making replacements readily available.
- PlexPower breakers accommodate ABB ② breakers. For a custom panelboard designed with ABB breakers, contact your local sales representative.
- Branch circuit breakers available in 1-, 2- 3- and 4-pole. Current ratings on branch breakers:
 - 1-pole: 120, 240 Volts, 63 Amps maximum.
 - 2-, 3- and 4-pole: 240 and 415 Volts, 63 Amps maximum.
- Branch breakers are labeled with numbers:
 - Odd numbers for line side
 - Even numbers for load side.
 - Labeled with inside breaker details
- Main circuit breaker:
 - 40 to 250 Amps, 2-, 3- or 4-pole.
- Branch and main breakers can be padlocked in either the “On” or “Off” position.
- Breaker modules supplied with captive bolts.
- Ground bar provided as standard.
- External ground lug provided as standard.



- 240/415 Volt breaker module 8-pole terminal wire range 2.5 mm² through 10 mm² (standard), 16 mm² with special lug.
- 600 Volt main breaker module 4-pole terminal wire range 16 mm² through 150 mm².
- Ambient temperature ratings:
 - Standard model: -25 °C to +55 °C.
 - Standard model without switching: -40 °C

Standard Materials

- Enclosure: fiberglass reinforced polyester (FRP)
- Hardware: stainless steel
- Bus bar: hard drawn copper
- Chassis: hot dip galvanized for wall mounting use

Options

Must be listed in alphanumeric sequence at the end of the catalog number.

- Drain, add suffix —**D**.
- Drain/breather, add suffix —**DV**.
- Gland plate bottom only, specify suffix —**GPP** = plastic gland plate, —**GPB** = brass gland plate.
- Stainless steel legend plate (specify legend), add suffix —**SP**.
- Voltmeter, add suffix —**VM** ③.
- Ammeter, add suffix —**AM** ③.
- Cable glands installed, add suffix —**CG**; (cable details to be provided by customer).
- For Ex de IIC, add suffix —**IIC**.
- Optional frame (structure) for floor mounting, self standing with and without canopy, contact your local sales representative for additional information.

① Schneider is a registered trademark of Schneider Electric.

② ABB Asea Brown Boveri Ltd is registered with the commercial register of Zurich, Switzerland.

③ Please contact your local sales representative for Voltmeter and Ammeter options.

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Certifications and Compliances

◆ ATEX/IECEx Certification

• Certification type PlexPower

- Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/EC: Ⓢ II2G
 - Equipment Protection Level: EPL Gb
 - Type of Protection: Ex db eb IIB+H₂
 - Temperature class: T5 for Ta ≤ +40 °C and T4 for +55 °C
- Dust: Zones 21 and 22
 - Conforming to ATEX: Ⓢ II2D
 - Equipment protection level: EPL Db
 - Type of Protection: Ex tb IIIC
 - Surface Temperature: 95°C for Ta ≤ +40 °C and 130 °C for Ta ≤ +55 °C
- Ambient Temperatures:
 - Standard model: -25 °C to +55 °C
 - Standard model without switching: -40 °C to +55 °C
- EC Declaration of Conformity : 50304
- ATEX Certificate: LCIE 13 ATEX 3083X
- IECEx Certificate: IECEx LCIE 13.0073X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance: IK10

◆ EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00911

◆ Others Certification ①

- Inmetro Certificate: BVC 14.3755-X

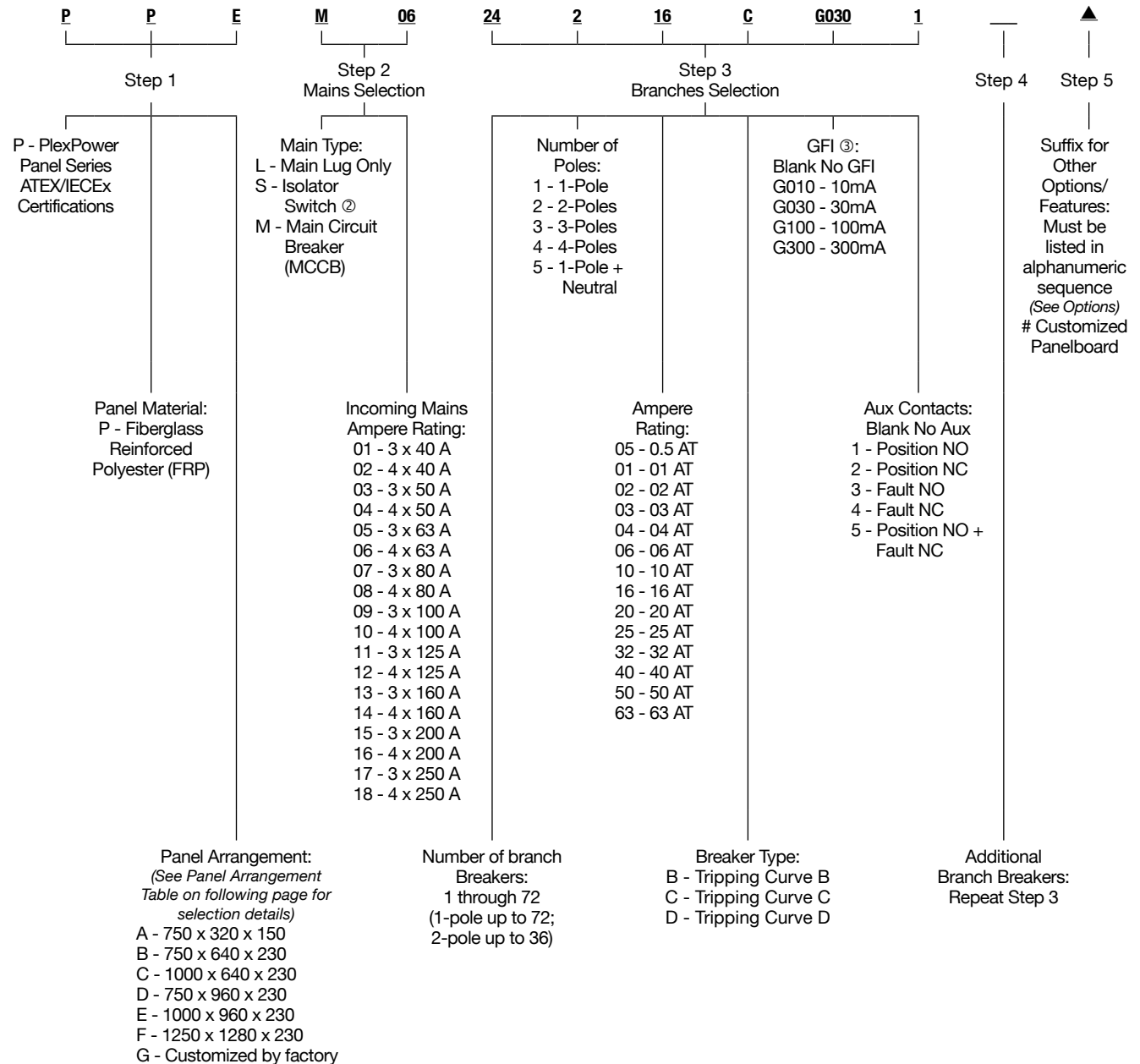
① Inmetro certification available on special request only. Contact your local sales for more information.

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide ①



① Please use step by step catalog number on next page.

② Isolators are molded case Switches (MCS).

③ For detailed information see table "Vigi iC60 Add-On Residual Current Devices (RCD or GFI)" on following pages.

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Steps to Creating Catalog Number:

To create a complete catalog number, refer to the Catalog Numbering Guide on previous page. Product selection information is available within the Guide.

P	P	E	M	06	12	2	16	C	G030	1	▲	—
Step 1			Step 2		Step 3						Step 4	Step 5

Step 1: Series is P

Material is P

Choose panel arrangement (A, B, C, D, E or F; see drawing at the end of the section for number of circuits).

Step 2: Choose either main lug (L), isolator switch (S) or main circuit breaker (M)

Choose the ampere rating of incoming mains (3 or 4 poles plus ampere: 40, 50, 63, 80, 100, 125, 160, 200, 250)

If a main breaker is desired indicate amperage rating; Example: PPEM06 – 4-pole 63 Amp main breaker.

Step 3: Choose the number of branch breakers

Choose the number of poles

Choose the ampere rating

Choose the breaker type

Choose OPTIONAL GFI

Choose OPTIONAL auxiliary contacts

First digit is the number of branch breakers, second digit is the number of poles, third number is the ampere rating, fourth number is the breaker type and the fifth and six are optional GFI and/or auxiliary contacts; Example: 12216CG0301 is a 2-pole 16 Amp breaker 30 mA GFI with one auxiliary position contact with tripping curve C

Step 4: Repeat Step 3 for as many breaker types are required (please refer to standard configurations)

Step 5: Panel options: Add options in alphanumeric order as listed Options in the Catalog Numbering Guide or Options in the introductory section.

To be Noted When Selecting Panelboards

Entries for Mains Lugs, Isolator Switch, Main Circuit Breaker and Branch circuit breakers are based on rated Amps.

Entries

Incoming Rating	Terminal Size mm ²	AWG	Wire Range mm ²	AWG	Entry Sizes
40 Amp	10	8	1.5 - 16	16-6	M25
50 Amp	16	6	1.5 - 25	14-6	M32
63 Amp	35	2	2.5 - 50	12-2	M32
80 Amp	35	2	2.5 - 50	12-2	M32
100 Amp	50	1/0	10 - 70	10-1/0	M32/M40
125 Amp	50	1/0	10 - 70	10-1/0	M40/M50
160 Amp	70	2/0	10 - 95	8-2/0	M50/M63
200 Amp	120	4/0	16 - 150	4-4/0	M63/M75
250 Amp	120	4/0	16 - 150	4-4/0	M63/M75

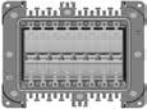
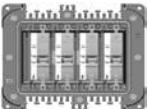
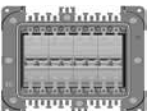
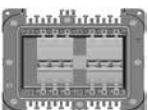
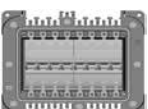

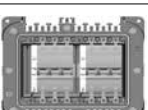
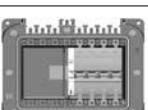
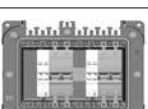
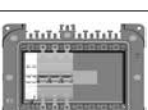
Outgoing Branches ①	Terminal Size mm ²	AWG	Wire Range mm ²	AWG	Entry Sizes
20 Amp	6	8	1.5 - 10	22-8	M20
32 Amp	6	8	1.5 - 10	22-8	M25
40 Amp	10	8	1.5 - 16	16-8	M25
50 Amp	16	6	1.5 - 25	14-6	M32
63 Amp	16	6	2.5 - 50	14-6	M32

① All outgoing entries must match respective cable sizes based on outgoing ratings.

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Panel Arrangement Size Selection Guide				
Bus Amps	Volts	Branch Breakers	Circuit configurations	
			8 Pole Module	Maximum no of circuit breaker per 8 Pole Module
63 to 250 A	220/240 V 380/415 V 440 V	1 Pole		8
		1 Poles + Aux (NO or NC)		4
		2 Poles		4
		3 Poles		2
		4 Poles		2
		2 Poles + Aux (NO or NC)		2
		3 Poles + Aux (NO or NC)		2
		4 Poles + Aux (NO or NC)		1
		2 Poles + Aux (NO + NC)		2
		3 Poles + Aux (NO + NC)		1

Distribution Equipment

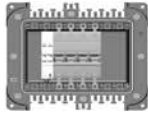
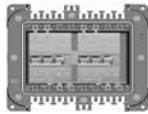
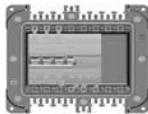
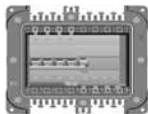
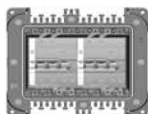
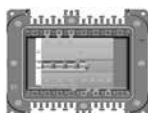
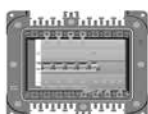
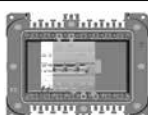
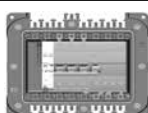
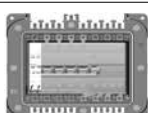
DISTRIBUTION PANELBOARDS

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Panel Arrangement Size Selection Guide (continued)

Bus Amps	Volts	Branch Breakers	Circuit configurations	
			8 Pole Module	Maximum no of circuit breaker per 8 Pole Module
63 to 250 A	220/240 V 380/415 V 440 V ②	4 Poles + Aux (NO + NC)		1
		2 Poles + GFI		2
		3 Poles + GFI		1
		4 Poles + GFI		1
		2 Poles + GFI + Aux (NO or NC)		2
		3 Poles + GFI + Aux (NO or NC)		1
		4 Poles + GFI + Aux (NO or NC)		1
		2 Poles + GFI + Aux (NO + NC)		1
		3 Poles + GFI + Aux (NO + NC)		1
		4 Poles + GFI + Aux (NO + NC) ①		1

① Up to 25 Amps only.
② 440 V without GFI.

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Schneider Mains Circuit Breaker (MCCB) Specifications

Common Characteristics

Rated Voltages	Insulation voltage (V)	Ui	800 V	
	Impulse withstand voltage (kV)	Uimp	8 kV	
	Operational voltage (V)	Ue	690 V	AC 50/60 Hz
Compliances	Suitability for isolation		Yes	IEC/EN 60947-2
	Utilisation category		A	
	Pollution degree		3	IEC 60664-1

Breaking Capacity

Circuit Breakers	NSX100						NSX160						NSX250																	
	B	F	N	H	S	L	R	HB1 ②	HB2	B	F	N	H	S	L	B	F	N	H	S	L	R	HB1 ②	HB2						
Rated current (A) In	100 A						100 A						160 A						250 A						250 A					
Number of poles	2 ③, 3, 4						2 ③, 3, 4						2 ③, 3, 4						2 ③, 3, 4						2 ③, 3, 4					
Breaking capacity (kA rms)																														
Icu AC 50/60 Hz	220/240 V	40	85	90	100	120	150	200	-	-	40	85	90	100	120	150	40	85	90	100	120	150	200	-	-					
	380/415 V	25	36	50	70	100	150	200	-	-	25	36	50	70	100	150	25	36	50	70	100	150	200	-	-					
	440 V	20	35	50	65	90	130	200	-	-	20	35	50	65	90	130	20	35	50	65	90	130	200	-	-					
	500 V	15	25	36	50	65	70	80	85	100	15	30	36	50	65	70	15	30	36	50	65	70	80	85	100					
	525 V	-	22	35	35	40	50	65	80	100	-	22	35	35	40	50	-	22	35	35	40	50	65	80	100					
	660/690 V	-	8	10	10	15	20	45	75	100	-	8	10	10	15	20	-	8	10	10	15	20	45	75	100					
Service breaking capacity (kA rms)																														
Ics AC 50/60 Hz	220/240 V	40	85	90	100	120	150	200	-	-	40	85	90	100	120	150	40	85	90	100	120	150	200	-	-					
	380/415 V	25	36	50	70	100	150	200	-	-	25	36	50	70	100	150	25	36	50	70	100	150	200	-	-					
	440 V	20	35	50	65	90	130	200	-	-	20	35	50	65	90	130	20	35	50	65	90	130	200	-	-					
	500 V	7.5	12.5	36	50	65	70	80	85	100	15	30	36	50	65	70	15	30	36	50	65	70	80	85	100					
	525 V	-	11	35	35	40	50	65	80	100	-	22	35	35	40	50	-	22	35	35	40	50	65	80	100					
	660/690 V	-	4	10	10	15	20	45	75	100	-	8	10	10	15	20	-	8	10	10	15	20	45	75	100					

① Electrical characteristics as per IEC 60947-2.

② There is no 160 A frame, use 250 A frame with lower amperage trip units for R, HB1, HB2.

③ 2P circuit breaker in 3P case for B and F types, only with thermal-magnetic trip unit.

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Schneider Branch Circuit Breaker Specifications

iC60N Circuit Breakers – Standard Offering – Curve B, C, D

Alternating current (AC) 50/60 Hz – Breaking capacity (Icu)

		Voltage (Ue) ①				Voltage (Ue) ②		Service Breaking Capacity (Ics)
		12 to 133 V	220 to 240 V	380 to 415 V	440 V	400 V	230 V	
	Ph/Ph (2P, 3P, 4P)	12 to 133 V	220 to 240 V	380 to 415 V	440 V	400 V	100% of Icu	
	Ph/N (1P, 1P+N)	12 to 60 V	100 to 133 V	220 to 240 V	—	230 V		
Rating (In)	0.5 to 4 A	50 kA	50 kA	50 kA	25 kA	6 kA	100% of Icu	
	6 to 63 A	36 kA	20 kA	10 kA	6 kA	6 kA	75% of Icu	

iC60H Circuit Breakers – Optional Offering – Curve B, C, D

Alternating current (AC) 50/60 Hz – Breaking capacity (Icu)

		Voltage (Ue) ①				Voltage (Ue) ②		Service Breaking Capacity (Ics)
		12 to 133 V	220 to 240 V	380 to 415 V	440 V	400 V	230 V	
	Ph/Ph (2P, 3P, 4P)	12 to 133 V	220 to 240 V	380 to 415 V	440 V	400 V	100% of Icu	
	Ph/N (1P, 1P+N)	12 to 60 V	100 to 133 V	220 to 240 V	—	230 V		
Rating (In)	0.5 to 4 A	70 kA	70 kA	70 kA	50 kA	10 kA	100% of Icu	
	6 to 63 A	42 kA	30 kA	15 kA	10 kA	10 kA	50% of Icu	

iC60L Circuit Breakers – Optional Offering – Curve B, C, K, Z

Alternating current (AC) 50/60 Hz – Breaking capacity (Icu) according to IEC/EN 60947-2

		Voltage (Ue) ①				Voltage (Ue) ②		Service Breaking Capacity (Ics)
		12 to 133 V	220 to 240 V	380 to 415 V	440 V	400 V	230 V	
	Ph/Ph (2P, 3P, 4P)	12 to 133 V	220 to 240 V	380 to 415 V	440 V	400 V	100% of Icu	
	Ph/N (1P)	12 to 60 V	100 to 133 V	220 to 240 V	—	230 V		
Rating (In)	0.5 to 4 A	100 kA	100 kA	100 kA	70 kA	15 kA	100% of Icu	
	6 to 25 A	70 kA	50 kA	25 kA	20 kA	15 kA	50% of Icu	
	32 to 40 A	70 kA	36 kA	20 kA	15 kA	15 kA	50% of Icu	
	50 to 63 A	70 kA	30 kA	15 kA	10 kA	—	50% of Icu	

① Breaking capacity (Icu) according to IEC/EN 60947-2.

② Breaking capacity (Icn) according to IEC/EN 60898-1.

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Schneider Branch Circuit Breaker Specifications (continued)

Vigi iC60 Add-On Residual Current Devices (RCD or GFI) – Optional

Voltage rating (Ue): 230 - 240 V, 400 - 415 V
Operating frequency: 50/60 Hz

	Amps	Sensitivity			
		10 mA	30 mA	300 mA	100 mA
2P	0.5 to 25 A	X	X	X	X
	32 to 40 A	—	X	X	—
	50 to 63 A	—	X	X	X
3P	0.5 to 25 A	—	X	X	—
	32 to 40 A	—	X	X	—
	50 to 63 A	—	X	X	—
4P	0.5 to 25 A	—	X	X	X
	32 to 40 A	—	X	X	—
	50 to 63 A	—	X	X	X

Auxiliary Contact

Maximum	Terminal Size		Wire Range	
	mm ²	AWG	mm ²	AWG
6 Amp	2.5	12	1.5 - 4	26 - 12

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Cascading — Panelboard Short Circuit Ratings

Upstream: NSX100 — Downstream: iC60 — Ue: 380-415 V (Ph/N 220-240 V)

Upstream			NSX100 NSX100B	NSX100F	NSX100N	NSX100H	NSX100S	NSX100L
Breaking capacity (kA)			25 kA	36 kA	50 kA	70 kA	100 kA	150 kA
Downstream			Reinforced breaking capacity (kA)					
In Max (A)	Icu (kA)							
iC60N	63 A	10 kA	20 kA	25 kA	30 kA	30 kA	30 kA	30 kA
iC60H	40 A	15 kA	25 kA	36 kA	40 kA	40 kA	40 kA	40 kA
	63 A	15 kA	25 kA	36 kA	36 kA	36 kA	36 kA	36 kA
iC60L	25 A	25 kA	—	36 kA	40 kA	40 kA	40 kA	40 kA
	40 A	20 kA	25 kA	36 kA	40 kA	40 kA	40 kA	40 kA
	63 A	15 kA	25 kA	36 kA	36 kA	36 kA	36 kA	36 kA

Upstream: NSX160 — Downstream: C60 — Ue: 380-415 V (Ph/N 220-240 V)

Upstream			NSX160 NSX160B	NSX160F	NSX160N	NSX160H	NSX160S	NSX160L
Breaking capacity (kA)			25 kA	36 kA	50 kA	70 kA	100 kA	150 kA
Downstream			Reinforced breaking capacity (kA)					
In Max (A)	Icu (kA)							
iC60N	63 A	10 kA	20 kA	25 kA	30 kA	30 kA	30 kA	30 kA
iC60H	40 A	15 kA	25 kA	36 kA	40 kA	40 kA	40 kA	40 kA
	63 A	15 kA	25 kA	30 kA	30 kA	30 kA	30 kA	30 kA
iC60L	25 A	25 kA	—	36 kA	40 kA	40 kA	40 kA	40 kA
	40 A	20 kA	25 kA	36 kA	40 kA	40 kA	40 kA	40 kA
	63 A	15 kA	25 kA	30 kA	36 kA	36 kA	36 kA	36 kA

Upstream: NSX250 — Downstream: iC60 — Ue: 380-415 V (Ph/N 220-240 V)

Upstream			NSX250 NSX250B	NSX250F	NSX250N	NSX250H	NSX250S	NSX250L
Breaking capacity (kA)			25 kA	36 kA	50 kA	70 kA	100 kA	150 kA
Downstream			Reinforced breaking capacity (kA)					
In Max (A)	Icu (kA)							
iC60N	40 A	10 kA	20 kA	25 kA	30 kA	30 kA	30 kA	30 kA
	63 A	10 kA	20 kA	25 kA	25 kA	25 kA	25 kA	25 kA
iC60H	40 A	15 kA	25 kA	30 kA	30 kA	30 kA	30 kA	30 kA
	63 A	15 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
iC60L	25 A	25 kA	—	30 kA	30 kA	30 kA	30 kA	30 kA
	40 A	20 kA	25 kA	30 kA	30 kA	30 kA	30 kA	30 kA
	63 A	15 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA

Distribution Equipment

DISTRIBUTION PANELBOARDS

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Cascading — Panelboard Short Circuit Ratings (continued)

Upstream: NSX100 — Downstream: iC60 — Ue: 440 V

Upstream			NSX100	NSX100F	NSX100N	NSX100H	NSX100S	NSX100L
			NSX100B					
Breaking capacity (kA)			20 kA	35 kA	50 kA	65 kA	90 kA	130 kA
Downstream Breaking Capacity (kA)			Reinforced breaking capacity (kA)					
iC60N	6 kA		15 kA	15 kA	20 kA	20 kA	20 kA	20 kA
iC60H	10 kA		20 kA	20 kA	25 kA	25 kA	25 kA	25 kA
iC60L	≤ 25 A	20 kA	—	—	25 kA	25 kA	25 kA	25 kA
	32-40 A	15 kA	20 kA	20 kA	25 kA	25 kA	25 kA	25 kA
	50-63 A	10 kA	—	—	—	—	—	—

Upstream: NSX160 — Downstream: iC60 — Ue: 440 V

Upstream			NSX160	NSX160F	NSX160N	NSX160H	NSX160S	NSX160L
			NSX160B					
Breaking capacity (kA)			20 kA	35 kA	50 kA	65 kA	90 kA	130 kA
Downstream Breaking Capacity (kA)			Reinforced breaking capacity (kA)					
iC60N	6 kA		15 kA	15 kA	20 kA	20 kA	20 kA	20 kA
iC60H	10 kA		20 kA	20 kA	25 kA	25 kA	25 kA	25 kA
iC60L	≤ 25 A	20 kA	—	—	25 kA	25 kA	25 kA	25 kA
	32-40 A	15 kA	20 kA	20 kA	25 kA	25 kA	25 kA	25 kA
	50-63 A	10 kA	—	—	—	—	—	—

Distribution Equipment

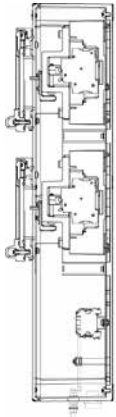
DISTRIBUTION PANELBOARDS

P Series PlexPower™ Distribution Panelboards

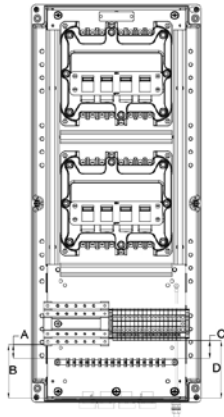
Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

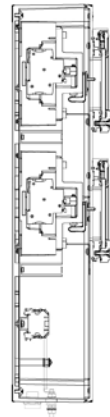
Panel Arrangement A



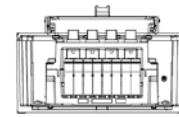
Left Internal View



Front Internal View



Right Internal View



Top Internal View

Dimension in Millimeters	
A	26
B	102
C	33
D	109

Breaker Curve C	Branch Breakers				Main Lugs Only	Armored Entries			Non-Armored Entries		
	30mA GFI	1 Position Contact "NO"	1 Trip Contact "NC"	Circuit Breaker Qty		Incoming	Outgoing	Auxiliary	Incoming	Outgoing	Auxiliary
2-Poles 16 Amp	—	—	—	8	4 x 63 Amp	1x M32	8x M20	—	1x M40	8x M20	—
2-Poles 16 Amp	—	X	—	4	4 x 63 Amp	1x M32	4x M20	1x M20	1x M40	4x M20	1x M25
2-Poles 16 Amp	—	—	X	4	4 x 63 Amp	1x M32	4x M20	1x M20	1x M40	4x M20	1x M25
2-Poles 16 Amp	—	X	X	4	4 x 63 Amp	1x M32	4x M20	1x M25	1x M40	4x M20	1x M25
2-Poles 16 Amp	X	—	—	4	4 x 63 Amp	1x M32	4x M20	—	1x M40	4x M20	—
2-Poles 16 Amp	X	X	—	4	4 x 63 Amp	1x M32	4x M20	1x M20	1x M40	4x M20	1x M25
2-Poles 16 Amp	X	—	X	4	4 x 63 Amp	1x M32	4x M20	1x M20	1x M40	4x M20	1x M25
2-Poles 16 Amp	X	X	X	2	4 x 63 Amp	1x M32	2x M20	1x M25	1x M40	2x M20	1x M25
3-Poles 16 Amp	—	—	—	4	3 x 63 Amp	1x M32	4x M20	—	1x M40	4x M20	—
3-Poles 16 Amp	—	X	—	4	3 x 63 Amp	1x M32	4x M20	1x M20	1x M40	4x M20	1x M25
3-Poles 16 Amp	—	—	X	4	3 x 63 Amp	1x M32	4x M20	1x M20	1x M40	4x M20	1x M25
3-Poles 16 Amp	—	X	X	2	3 x 63 Amp	1x M32	2x M20	1x M25	1x M40	2x M20	1x M25
3-Poles 16 Amp	X	—	—	2	3 x 63 Amp	1x M32	2x M20	—	1x M40	2x M20	—
3-Poles 16 Amp	X	X	—	2	3 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25
3-Poles 16 Amp	X	—	X	2	3 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25
3-Poles 16 Amp	X	X	X	2	3 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25
4-Poles 16 Amp	—	—	—	4	4 x 63 Amp	1x M32	4x M20	—	1x M40	4x M20	—
4-Poles 16 Amp	—	X	—	2	4 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25
4-Poles 16 Amp	—	—	X	2	4 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25
4-Poles 16 Amp	—	X	X	2	4 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25
4-Poles 16 Amp	X	—	—	2	4 x 63 Amp	1x M32	2x M20	—	1x M40	2x M20	—
4-Poles 16 Amp	X	X	—	2	4 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25
4-Poles 16 Amp	X	—	X	2	4 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25
4-Poles 16 Amp	X	X	X	2	4 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25

Distribution Equipment

DISTRIBUTION PANELBOARDS

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Panel Arrangement A

Technical Information			
Panel A Size	750 x 320 x 150 mm		
Panel Weight	40 kg		
Max. No. of Circuits	See Panel Arrangement Size Selection Table		
Voltage	220/240 V, 380/415 V, 440 V		
Wiring	See Wiring Diagram Table		
Breaking Capacity in kA			
	Ratings in Amps	380/415 V	440 V ⑥
Mains	63 A	-	-
Bus-bar	100 A	-	-
Branch Breakers ⑦	0.5 to 4 A	50 kA	25 kA
Branch Breakers ⑦	6 to 63 A	10 kA	6 kA
Panel Arrangement	100 A, 3 Ph, 5 W	-	-

Terminals ①							Non-Armored ⑥	
Incoming		Outgoing		"NO" Position	"NC" Fault		Complete Catalog No	Ordering Catalog No
Qty ②	Size	Qty ③	Size	Qty ④	Qty ⑤	Size		
4	35 mm ²	16	6 mm ²	—	—	—	PPAL068216C	PPAL068216C10N
4	35 mm ²	8	6 mm ²	8	—	2.5 mm ²	PPAL064216C1	PPAL064216C20N
4	35 mm ²	8	6 mm ²	—	2	2.5 mm ²	PPAL064216C4	PPAL064216C30N
4	35 mm ²	8	6 mm ²	8	2	2.5 mm ²	PPAL064216C5	PPAL064216C40N
4	35 mm ²	8	6 mm ²	—	—	—	PPAL064216CG030	PPAL064216C50N
4	35 mm ²	8	6 mm ²	8	—	2.5 mm ²	PPAL064216C1G030	PPAL064216C60N
4	35 mm ²	8	6 mm ²	—	2	2.5 mm ²	PPAL064216C4G030	PPAL064216C70N
4	35 mm ²	4	6 mm ²	8	2	2.5 mm ²	PPAL062216C5G030	PPAL062216C80N
3	35 mm ²	12	6 mm ²	—	—	—	PPAL054316C	PPAL054316C10N
3	35 mm ²	12	6 mm ²	8	—	2.5 mm ²	PPAL054316C1	PPAL054316C20N
3	35 mm ²	12	6 mm ²	—	2	2.5 mm ²	PPAL054316C4	PPAL054316C30N
3	35 mm ²	6	6 mm ²	8	2	2.5 mm ²	PPAL052316C5	PPAL052316C40N
3	35 mm ²	6	6 mm ²	—	—	—	PPAL052316CG030	PPAL052316C50N
3	35 mm ²	6	6 mm ²	4	—	2.5 mm ²	PPAL052316C1G030	PPAL052316C60N
3	35 mm ²	6	6 mm ²	—	2	2.5 mm ²	PPAL052316C4G030	PPAL052316C70N
3	35 mm ²	6	6 mm ²	4	2	2.5 mm ²	PPAL052316C5G030	PPAL052316C80N
4	35 mm ²	16	6 mm ²	—	—	—	PPAL064416C	PPAL064416C10N
4	35 mm ²	8	6 mm ²	4	—	2.5 mm ²	PPAL062416C1	PPAL062416C20N
4	35 mm ²	8	6 mm ²	—	2	2.5 mm ²	PPAL062416C4	PPAL062416C30N
4	35 mm ²	8	6 mm ²	4	2	2.5 mm ²	PPAL062416C5	PPAL062416C40N
4	35 mm ²	8	6 mm ²	—	—	—	PPAL062416CG030	PPAL062416C50N
4	35 mm ²	8	6 mm ²	4	—	2.5 mm ²	PPAL062416C1G030	PPAL062416C60N
4	35 mm ²	8	6 mm ²	—	2	2.5 mm ²	PPAL062416C4G030	PPAL062416C70N
4	35 mm ²	8	6 mm ²	4	2	2.5 mm ²	PPAL062416C5G030	PPAL062416C80N

① Ground bar supplied for each connection.

② Incoming cables terminates directly to the main breaker.

③ Outgoing terminal blocks for branch breakers (provided).

④ Each "NO" position contact are individually terminate on the terminal blocks and in pairs.

⑤ All "NC" trip contacts must be wired in series and terminated on terminal blocks as one pair only.

⑥ For armored version, replace the letter **A** with the letter **N**, in the last position of the Ordering Catalog Number; example: PPBL048216C10A.

⑦ For higher kA rating please consult your local sales representative.

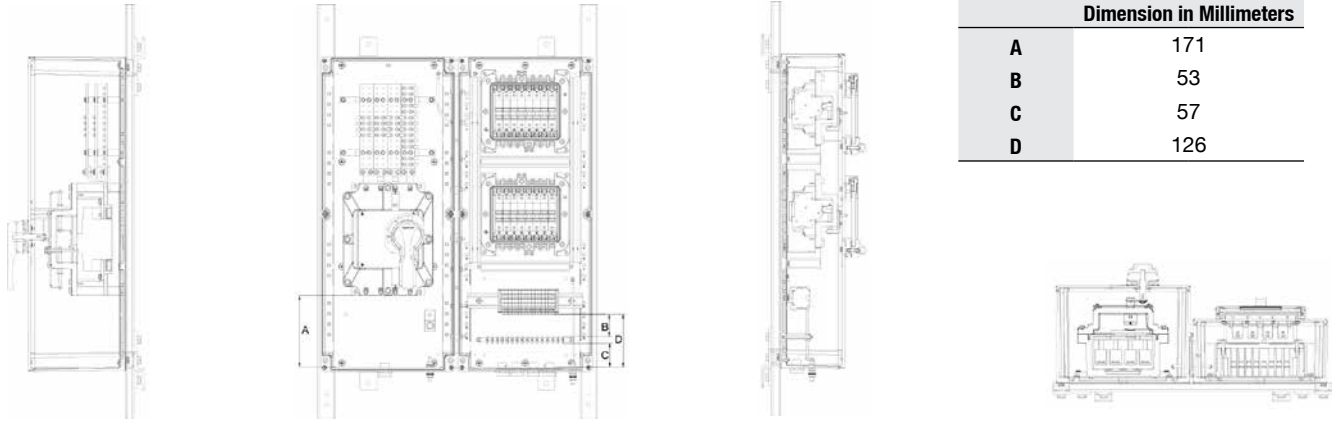
⑧ Without GFI.

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Panel Arrangement B



Dimension in Millimeters	
A	171
B	53
C	57
D	126

Left Internal View

Front Internal View

Right Internal View

Top Internal View

Breaker Curve C	Branch Breakers				Main Breaker Size	Armored Entries			Non-Armored Entries		
	30mA GFI	1 Position Contact "NO"	1 Trip Contact "NC"	Circuit Breaker Qty		Incoming	Outgoing	Auxiliary	Incoming	Outgoing	Auxiliary
2-Poles 16 Amp	—	—	—	8	4 x 63 Amp	1x M32	8x M20	—	1x M40	8x M20	—
2-Poles 16 Amp	—	X	—	4	4 x 63 Amp	1x M32	4x M20	1x M20	1x M40	4x M20	1x M25
2-Poles 16 Amp	—	—	X	4	4 x 63 Amp	1x M32	4x M20	1x M20	1x M40	4x M20	1x M25
2-Poles 16 Amp	—	X	X	4	4 x 63 Amp	1x M32	4x M20	1x M25	1x M40	4x M20	1x M25
2-Poles 16 Amp	X	—	—	4	4 x 63 Amp	1x M32	4x M20	—	1x M40	4x M20	—
2-Poles 16 Amp	X	X	—	4	4 x 63 Amp	1x M32	4x M20	1x M20	1x M40	4x M20	1x M25
2-Poles 16 Amp	X	—	X	4	4 x 63 Amp	1x M32	4x M20	1x M20	1x M40	4x M20	1x M25
2-Poles 16 Amp	X	X	X	2	4 x 63 Amp	1x M32	2x M20	1x M25	1x M40	2x M20	1x M25
3-Poles 16 Amp	—	—	—	4	3 x 63 Amp	1x M32	4x M20	—	1x M40	4x M20	—
3-Poles 16 Amp	—	X	—	4	3 x 63 Amp	1x M32	4x M20	1x M20	1x M40	4x M20	1x M25
3-Poles 16 Amp	—	—	X	4	3 x 63 Amp	1x M32	4x M20	1x M20	1x M40	4x M20	1x M25
3-Poles 16 Amp	—	X	X	2	3 x 63 Amp	1x M32	2x M20	1x M25	1x M40	2x M20	1x M25
3-Poles 16 Amp	X	—	—	2	3 x 63 Amp	1x M32	2x M20	—	1x M40	2x M20	—
3-Poles 16 Amp	X	X	—	2	3 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25
3-Poles 16 Amp	X	—	X	2	3 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25
3-Poles 16 Amp	X	X	X	2	3 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25
4-Poles 16 Amp	—	—	—	4	4 x 63 Amp	1x M32	4x M20	—	1x M40	4x M20	—
4-Poles 16 Amp	—	X	—	2	4 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25
4-Poles 16 Amp	—	—	X	2	4 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25
4-Poles 16 Amp	—	X	X	2	4 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25
4-Poles 16 Amp	X	—	—	2	4 x 63 Amp	1x M32	2x M20	—	1x M40	2x M20	—
4-Poles 16 Amp	X	X	—	2	4 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25
4-Poles 16 Amp	X	—	X	2	4 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25
4-Poles 16 Amp	X	X	X	2	4 x 63 Amp	1x M32	2x M20	1x M20	1x M40	2x M20	1x M25

Distribution Equipment

DISTRIBUTION PANELBOARDS

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Panel Arrangement B

Technical Information			
Panel B Size	990 x 666 x 230 mm		
Panel Weight	70 kg		
Max. No. of Circuits	See Panel Arrangement Size Selection Table		
Voltage	220/240 V, 380/415 V, 440 V		
Wiring	See Wiring Diagram Table		
Breaking Capacity in kA			
	Ratings in Amps	380/415 V	440 V ⑧
Mains	100 A	25 kA	20 kA
Bus-bar	125 A	50 kA	50 kA
Branch Breakers ⑦	0.5 to 4 A	50 kA	25 kA
Branch Breakers ⑦	6 to 63 A	10 kA	6 kA
Panel Arrangement	100 A, 3 Ph, 5 W	20 kA	15 kA

Terminals ①							Non-Armored ⑥	
Incoming		Outgoing		"NO" Position	"NC" Fault	Size	Complete Catalog No	Ordering Catalog No
Qty ②	Size	Qty ③	Size	Qty ④	Qty ⑤			
4	35 mm ²	16	6 mm ²	—	—	—	PPBM068216C	PPBM068216C10N
4	35 mm ²	8	6 mm ²	8	—	2.5 mm ²	PPBM064216C1	PPBM064216C20N
4	35 mm ²	8	6 mm ²	—	2	2.5 mm ²	PPBM064216C4	PPBM064216C30N
4	35 mm ²	8	6 mm ²	8	2	2.5 mm ²	PPBM064216C5	PPBM064216C40N
4	35 mm ²	8	6 mm ²	—	—	—	PPBM064216CG030	PPBM064216C50N
4	35 mm ²	8	6 mm ²	8	—	2.5 mm ²	PPBM064216C1G030	PPBM064216C60N
4	35 mm ²	8	6 mm ²	—	2	2.5 mm ²	PPBM064216C4G030	PPBM064216C70N
4	35 mm ²	4	6 mm ²	8	2	2.5 mm ²	PPBM062216C5G030	PPBM062216C80N
3	35 mm ²	12	6 mm ²	—	—	—	PPBM054316C	PPBM054316C10N
3	35 mm ²	12	6 mm ²	8	—	2.5 mm ²	PPBM054316C1	PPBM054316C20N
3	35 mm ²	12	6 mm ²	—	2	2.5 mm ²	PPBM054316C4	PPBM054316C30N
3	35 mm ²	6	6 mm ²	8	2	2.5 mm ²	PPBM052316C5	PPBM052316C40N
3	35 mm ²	6	6 mm ²	—	—	—	PPBM052316CG030	PPBM052316C50N
3	35 mm ²	6	6 mm ²	4	—	2.5 mm ²	PPBM052316C1G030	PPBM052316C60N
3	35 mm ²	6	6 mm ²	—	2	2.5 mm ²	PPBM052316C4G030	PPBM052316C70N
3	35 mm ²	6	6 mm ²	4	2	2.5 mm ²	PPBM052316C5G030	PPBM052316C80N
4	35 mm ²	16	6 mm ²	—	—	—	PPBM064416C	PPBM064416C10N
4	35 mm ²	8	6 mm ²	4	—	2.5 mm ²	PPBM062416C1	PPBM062416C20N
4	35 mm ²	8	6 mm ²	—	2	2.5 mm ²	PPBM062416C4	PPBM062416C30N
4	35 mm ²	8	6 mm ²	4	2	2.5 mm ²	PPBM062416C5	PPBM062416C40N
4	35 mm ²	8	6 mm ²	—	—	—	PPBM062416CG030	PPBM062416C50N
4	35 mm ²	8	6 mm ²	4	—	2.5 mm ²	PPBM062416C1G030	PPBM062416C60N
4	35 mm ²	8	6 mm ²	—	2	2.5 mm ²	PPBM062416C4G030	PPBM062416C70N
4	35 mm ²	8	6 mm ²	4	2	2.5 mm ²	PPBM062416C5G030	PPBM062416C80N

① Ground bar supplied for each connection.

② Incoming cables terminate directly to the main breaker.

③ Outgoing terminal blocks for branch breakers (provided).

④ Each "NO" position contact are individually terminate on the terminal blocks and in pairs.

⑤ All "NC" trip contacts must be wired in series and terminated on terminal blocks as one pair only.

⑥ For armored version, replace the letter **A** with the letter **N**, in the last position of the Ordering Catalog Number; example: PPBM048216C10A.

⑦ For higher kA rating please consult your local sales representative.

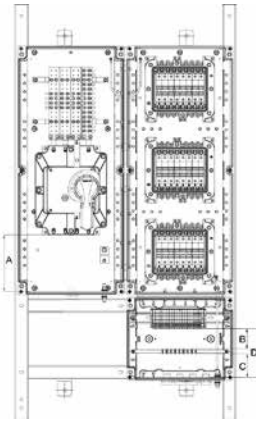
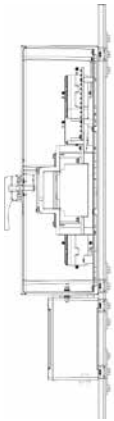
⑧ Without GFI.

P Series PlexPower™ Distribution Panelboards

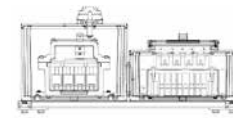
Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Panel Arrangement C



Dimension in Millimeters	
A	170
B	61
C	70
D	147



Left Internal View

Front Internal View

Right Internal View

Top Internal View

Breaker Curve C	Branch Breakers				Main Breaker Size	Armored Entries			Non-Armored Entries		
	30mA GFI	1 Position Contact "NO"	1 Trip Contact "NC"	Circuit Breaker Qty		Incoming	Outgoing	Auxiliary	Incoming	Outgoing	Auxiliary
2-Poles 16 Amp	—	—	—	12	4 x 125 Amp	1x M40	12 xM20	—	1x M40	12 xM20	—
2-Poles 16 Amp	—	X	—	6	4 x 63 Amp	1x M32	6 xM20	1x M25	1x M40	6 xM20	1x M25
2-Poles 16 Amp	—	—	X	6	4 x 63 Amp	1x M32	6 xM20	1x M20	1x M40	6 xM20	1x M25
2-Poles 16 Amp	—	X	X	6	4 x 63 Amp	1x M32	6 xM20	1x M25	1x M40	6 xM20	1x M25
2-Poles 16 Amp	X	—	—	6	4 x 63 Amp	1x M32	6 xM20	—	1x M40	6 xM20	—
2-Poles 16 Amp	X	X	—	6	4 x 63 Amp	1x M32	6 xM20	1x M20	1x M40	6 xM20	1x M25
2-Poles 16 Amp	X	—	X	6	4 x 63 Amp	1x M32	6 xM20	1x M20	1x M40	6 xM20	1x M25
2-Poles 16 Amp	X	X	X	3	4 x 63 Amp	1x M32	3 xM20	1x M20	1x M40	3 xM20	1x M25
3-Poles 16 Amp	—	—	—	6	3 x 63 Amp	1x M32	6 xM20	—	1x M40	6 xM20	—
3-Poles 16 Amp	—	X	—	6	3 x 63 Amp	1x M32	6 xM20	1x M25	1x M40	6 xM20	1x M25
3-Poles 16 Amp	—	—	X	6	3 x 63 Amp	1x M32	6 xM20	1x M20	1x M40	6 xM20	1x M25
3-Poles 16 Amp	—	X	X	3	3 x 63 Amp	1x M32	3 xM20	1x M20	1x M40	3 xM20	1x M25
3-Poles 16 Amp	X	—	—	3	3 x 63 Amp	1x M32	3 xM20	—	1x M40	3 xM20	—
3-Poles 16 Amp	X	X	—	3	3 x 63 Amp	1x M32	3 xM20	1x M20	1x M40	3 xM20	1x M25
3-Poles 16 Amp	X	—	X	3	3 x 63 Amp	1x M32	3 xM20	1x M20	1x M40	3 xM20	1x M25
3-Poles 16 Amp	X	X	X	3	3 x 63 Amp	1x M32	3 xM20	1x M20	1x M40	3 xM20	1x M25
4-Poles 16 Amp	—	—	—	6	4 x 63 Amp	1x M32	6 xM20	—	1x M40	6 xM20	—
4-Poles 16 Amp	—	X	—	3	4 x 63 Amp	1x M32	3 xM20	1x M20	1x M40	3 xM20	1x M25
4-Poles 16 Amp	—	—	X	3	4 x 63 Amp	1x M32	3 xM20	1x M20	1x M40	3 xM20	1x M25
4-Poles 16 Amp	—	X	X	3	4 x 63 Amp	1x M32	3 xM20	1x M20	1x M40	3 xM20	1x M25
4-Poles 16 Amp	X	—	—	3	4 x 63 Amp	1x M32	3 xM20	—	1x M40	3 xM20	—
4-Poles 16 Amp	X	X	—	3	4 x 63 Amp	1x M32	3 xM20	1x M20	1x M40	3 xM20	1x M25
4-Poles 16 Amp	X	—	X	3	4 x 63 Amp	1x M32	3 xM20	1x M20	1x M40	3 xM20	1x M25
4-Poles 16 Amp	X	X	X	3	4 x 63 Amp	1x M32	3 xM20	1x M20	1x M40	3 xM20	1x M25

Distribution Equipment

DISTRIBUTION PANELBOARDS

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Panel Arrangement C			
Technical Information			
Panel C Size	1250 x 666 x 230 mm		
Panel Weight	80 kg		
Max. No. of Circuits	See Panel Arrangement Size Selection Table		
Voltage	220/240 V, 380/415 V, 440 V		
Wiring	See Wiring Diagram Table		
Breaking Capacity in kA			
	Ratings in Amps	380/415 V	440 V ⑧
Mains	125 A	25 kA	20 kA
Bus-bar	125 A	50 kA	50 kA
Branch Breakers ⑦	0.5 to 4 A	50 kA	25 kA
Branch Breakers ⑦	6 to 63 A	10 kA	6 kA
Panel Arrangement	125 A, 3 Ph, 5 W	20 kA	15 kA

Terminals ①							Non-Armored ⑥	
Incoming		Outgoing		"NO" Position	"NC" Fault		Complete Catalog No	Ordering Catalog No
Qty ②	Size	Qty ③	Size	Qty ④	Qty ⑤	Size		
4	50 mm ²	24	6 mm ²	—	—	—	PPCM1212216C	PPCM1212216C10N
4	35 mm ²	12	6 mm ²	12	—	2.5 mm ²	PPCM066216C1	PPCM066216C20N
4	35 mm ²	12	6 mm ²	—	2	2.5 mm ²	PPCM066216C4	PPCM066216C30N
4	35 mm ²	12	6 mm ²	12	2	2.5 mm ²	PPCM066216C5	PPCM066216C40N
4	35 mm ²	12	6 mm ²	—	—	—	PPCM066216CG030	PPCM066216C50N
4	35 mm ²	12	6 mm ²	12	—	2.5 mm ²	PPCM066216C1G030	PPCM066216C60N
4	35 mm ²	12	6 mm ²	—	2	2.5 mm ²	PPCM066216C4G030	PPCM066216C70N
4	35 mm ²	6	6 mm ²	12	2	2.5 mm ²	PPCM063216C5G030	PPCM063216C80N
3	35 mm ²	18	6 mm ²	—	—	—	PPCM056316C	PPCM056316C10N
3	35 mm ²	18	6 mm ²	12	—	2.5 mm ²	PPCM056316C1	PPCM056316C20N
3	35 mm ²	18	6 mm ²	—	2	2.5 mm ²	PPCM056316C4	PPCM056316C30N
3	35 mm ²	9	6 mm ²	6	2	2.5 mm ²	PPCM053316C5	PPCM053316C40N
3	35 mm ²	9	6 mm ²	—	—	—	PPCM053316CG030	PPCM053316C50N
3	35 mm ²	9	6 mm ²	6	—	2.5 mm ²	PPCM053316C1G030	PPCM053316C60N
3	35 mm ²	9	6 mm ²	—	2	2.5 mm ²	PPCM053316C4G030	PPCM053316C70N
3	35 mm ²	9	6 mm ²	6	2	2.5 mm ²	PPCM053316C5G030	PPCM053316C80N
4	35 mm ²	24	6 mm ²	—	—	—	PPCM066416C	PPCM066416C10N
4	35 mm ²	12	6 mm ²	6	—	2.5 mm ²	PPCM063416C1	PPCM063416C20N
4	35 mm ²	12	6 mm ²	—	2	2.5 mm ²	PPCM063416C4	PPCM063416C30N
4	35 mm ²	12	6 mm ²	6	2	2.5 mm ²	PPCM063416C5	PPCM063416C40N
4	35 mm ²	12	6 mm ²	—	—	—	PPCM063416CG030	PPCM063416C50N
4	35 mm ²	12	6 mm ²	6	—	2.5 mm ²	PPCM063416C1G030	PPCM063416C60N
4	35 mm ²	12	6 mm ²	—	2	2.5 mm ²	PPCM063416C4G030	PPCM063416C70N
4	35 mm ²	12	6 mm ²	6	2	2.5 mm ²	PPCM063416C5G030	PPCM063416C80N

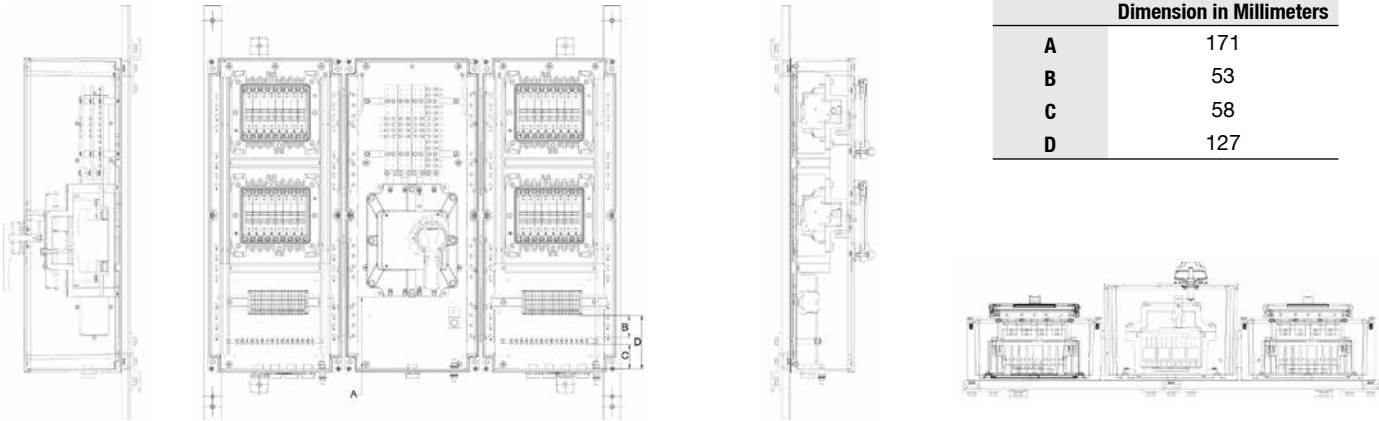
- ① Ground bar supplied for each connection.
 ② Incoming cables terminate directly to the main breaker.
 ③ Outgoing terminal blocks for branch breakers (provided).
 ④ Each "NO" position contact are individually terminate on the terminal blocks and in pairs.
 ⑤ All "NC" trip contacts must be wired in series and terminated on terminal blocks as one pair only.
 ⑥ For armored version, replace the letter **A** with the letter **N**, in the last position of the Ordering Catalog Number; example: PPCM0812216C10A.
 ⑦ For higher kA rating please consult your local sales representative.
 ⑧ Without GFI.

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Panel Arrangement D



Left Internal View

Front Internal View

Right Internal View

Top Internal View

Breaker Curve C	Branch Breakers				Main Breaker Size	Armored Entries			Non-Armored Entries		
	30mA GFI	1 Position Contact "NO"	1 Trip Contact "NC"	Circuit Breaker Qty		Incoming	Outgoing	Auxiliary	Incoming	Outgoing	Auxiliary
2-Poles 16 Amp	—	—	—	16	4 x 160 Amp	1x M50	16 xM20	—	1x M50	16 xM20	—
2-Poles 16 Amp	—	X	—	8	4 x 100 Amp	1x M40	8 xM20	1x M25	1x M40	8 xM20	1x M25
2-Poles 16 Amp	—	—	X	8	4 x 100 Amp	1x M40	8 xM20	1x M20	1x M40	8 xM20	1x M25
2-Poles 16 Amp	—	X	X	8	4 x 100 Amp	1x M40	8 xM20	1x M25	1x M40	8 xM20	1x M25
2-Poles 16 Amp	X	—	—	8	4 x 100 Amp	1x M40	8 xM20	—	1x M40	8 xM20	—
2-Poles 16 Amp	X	X	—	8	4 x 100 Amp	1x M40	8 xM20	1x M25	1x M40	8 xM20	1x M25
2-Poles 16 Amp	X	—	X	8	4 x 100 Amp	1x M40	8 xM20	1x M20	1x M40	8 xM20	1x M25
2-Poles 16 Amp	X	X	X	4	4 x 63 Amp	1x M32	4 xM20	1x M25	1x M40	4 xM20	1x M25
3-Poles 16 Amp	—	—	—	8	3 x 100 Amp	1x M40	8 xM20	—	1x M40	8 xM20	—
3-Poles 16 Amp	—	X	—	8	3 x 100 Amp	1x M40	8 xM20	1x M25	1x M40	8 xM20	1x M25
3-Poles 16 Amp	—	—	X	8	3 x 100 Amp	1x M40	8 xM20	1x M20	1x M40	8 xM20	1x M25
3-Poles 16 Amp	—	X	X	4	3 x 63 Amp	1x M32	4 xM20	1x M25	1x M40	4 xM20	1x M25
3-Poles 16 Amp	X	—	—	4	3 x 63 Amp	1x M32	4 xM20	—	1x M40	4 xM20	—
3-Poles 16 Amp	X	X	—	4	3 x 63 Amp	1x M32	4 xM20	1x M20	1x M40	4 xM20	1x M25
3-Poles 16 Amp	X	—	X	4	3 x 63 Amp	1x M32	4 xM20	1x M20	1x M40	4 xM20	1x M25
3-Poles 16 Amp	X	X	X	4	3 x 63 Amp	1x M32	4 xM20	1x M25	1x M40	4 xM20	1x M25
4-Poles 16 Amp	—	—	—	8	4 x 63 Amp	1x M32	8 xM20	—	1x M40	8 xM20	—
4-Poles 16 Amp	—	X	—	4	4 x 63 Amp	1x M32	4 xM20	1x M20	1x M40	4 xM20	1x M25
4-Poles 16 Amp	—	—	X	4	4 x 63 Amp	1x M32	4 xM20	1x M20	1x M40	4 xM20	1x M25
4-Poles 16 Amp	—	X	X	4	4 x 63 Amp	1x M32	4 xM20	1x M25	1x M40	4 xM20	1x M25
4-Poles 16 Amp	X	—	—	4	4 x 63 Amp	1x M32	4 xM20	—	1x M40	4 xM20	—
4-Poles 16 Amp	X	X	—	4	4 x 63 Amp	1x M32	4 xM20	1x M20	1x M40	4 xM20	1x M25
4-Poles 16 Amp	X	—	X	4	4 x 63 Amp	1x M32	4 xM20	1x M20	1x M40	4 xM20	1x M25
4-Poles 16 Amp	X	X	X	4	4 x 63 Amp	1x M32	4 xM20	1x M25	1x M40	4 xM20	1x M25

Distribution Equipment

DISTRIBUTION PANELBOARDS

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Panel Arrangement D

Technical Information			
Panel D Size	990 x 994 x 230 mm		
Panel Weight	120 kg		
Max. No. of Circuits	See Panel Arrangement Size Selection Table		
Voltage	220/240 V, 380/415 V, 440 V		
Wiring	See Wiring Diagram Table		
Breaking Capacity in kA			
	Ratings in Amps	380/415 V	440 V ⑧
Mains	160 A	25 kA	20 kA
Bus-bar	160 A	50 kA	50 kA
Branch Breakers ⑦	0.5 to 4 A	50 kA	25 kA
Branch Breakers ⑦	6 to 63 A	10 kA	6 kA
Panel Arrangement	160 A, 3 Ph, 5 W	20 kA	15 kA

Incoming		Outgoing		"NO" Position	"NC" Fault	Non-Armored ⑥		
Qty ②	Size	Qty ③	Size	Qty ④	Qty ⑤	Size	Complete Catalog No	Ordering Catalog No
4	70 mm ²	32	6 mm ²	—	—	—	PPDM1416216C	PPDM1416216C10N
4	50 mm ²	16	6 mm ²	16	—	2.5 mm ²	PPDM108216C1	PPDM108216C20N
4	50 mm ²	16	6 mm ²	—	2	2.5 mm ²	PPDM108216C4	PPDM108216C30N
4	50 mm ²	16	6 mm ²	16	2	2.5 mm ²	PPDM108216C5	PPDM108216C40N
4	50 mm ²	16	6 mm ²	—	—	—	PPDM108216CG030	PPDM108216C50N
4	50 mm ²	16	6 mm ²	16	—	2.5 mm ²	PPDM108216C1G030	PPDM108216C60N
4	50 mm ²	16	6 mm ²	—	2	2.5 mm ²	PPDM108216C4G030	PPDM108216C70N
4	35 mm ²	8	6 mm ²	8	2	2.5 mm ²	PPDM064216C5G030	PPDM064216C80N
3	50 mm ²	24	6 mm ²	—	—	—	PPDM098316C	PPDM098316C10N
3	50 mm ²	24	6 mm ²	16	—	2.5 mm ²	PPDM098316C1	PPDM098316C20N
3	50 mm ²	24	6 mm ²	—	2	2.5 mm ²	PPDM098316C4	PPDM098316C30N
3	35 mm ²	12	6 mm ²	8	2	2.5 mm ²	PPDM054316C5	PPDM054316C40N
3	35 mm ²	12	6 mm ²	—	—	—	PPDM054316CG030	PPDM054316C50N
3	35 mm ²	12	6 mm ²	8	—	2.5 mm ²	PPDM054316C1G030	PPDM054316C60N
3	35 mm ²	12	6 mm ²	—	2	2.5 mm ²	PPDM054316C4G030	PPDM054316C70N
3	35 mm ²	12	6 mm ²	8	2	2.5 mm ²	PPDM054316C5G030	PPDM054316C80N
4	35 mm ²	32	6 mm ²	—	—	—	PPDM068416C	PPDM068416C10N
4	35 mm ²	16	6 mm ²	8	—	2.5 mm ²	PPDM064416C1	PPDM064416C20N
4	35 mm ²	16	6 mm ²	—	2	2.5 mm ²	PPDM064416C4	PPDM064416C30N
4	35 mm ²	16	6 mm ²	8	2	2.5 mm ²	PPDM064416C5	PPDM064416C40N
4	35 mm ²	16	6 mm ²	—	—	—	PPDM064416CG030	PPDM064416C50N
4	35 mm ²	16	6 mm ²	8	—	2.5 mm ²	PPDM064416C1G030	PPDM064416C60N
4	35 mm ²	16	6 mm ²	—	2	2.5 mm ²	PPDM064416C4G030	PPDM064416C70N
4	35 mm ²	16	6 mm ²	8	2	2.5 mm ²	PPDM064416C5G030	PPDM064416C80N

① Ground bar supplied for each connection.

② Incoming cables terminate directly to the main breaker.

③ Outgoing terminal blocks for branch breakers (provided).

④ Each "NO" position contact are individually terminate on the terminal blocks and in pairs.

⑤ All "NC" trip contacts must be wired in series and terminated on terminal blocks as one pair only.

⑥ For armored version, replace the letter **A** with the letter **N**, in the last position of the Ordering Catalog Number; example: PPDM1016216C10A.

⑦ For higher kA rating please consult your local sales representative.

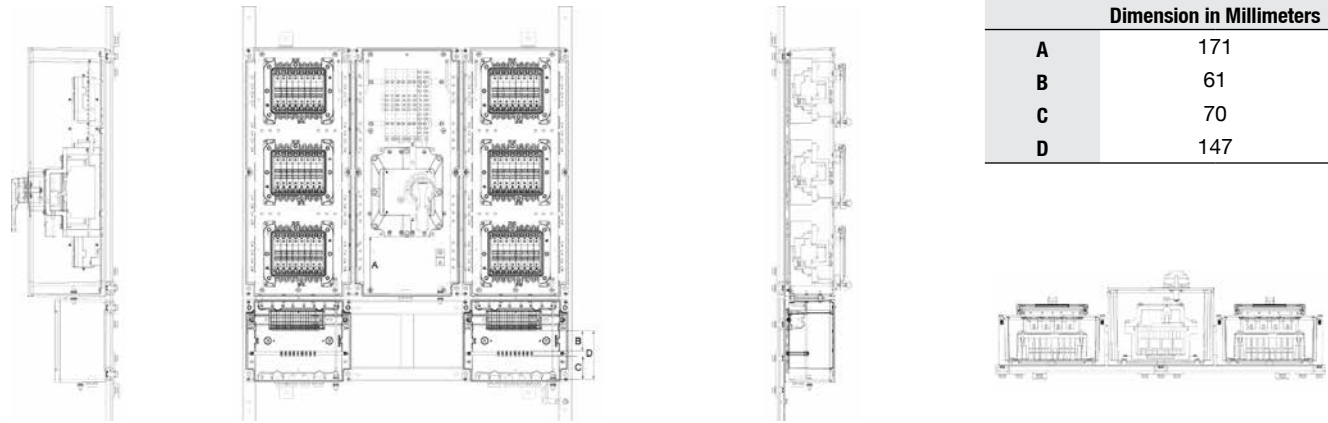
⑧ Without GFI.

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Panel Arrangement E



Left Internal View

Front Internal View

Right Internal View

Top Internal View

Breaker Curve C	30mA GFI	Branch Breakers			Main Breaker Size	Armored Entries			Non-Armored Entries		
		1 Position Contact "NO"	1 Trip Contact "NC"	Circuit Breaker Qty		Incoming	Outgoing	Auxiliary	Incoming	Outgoing	Auxiliary
2-Poles 16 Amp	—	—	—	24	4 x 200 Amp	1x M63	24x M20	—	1x M63	24x M20	—
2-Poles 16 Amp	—	X	—	12	4 x 125 Amp	1x M40	12x M20	1x M32	1x M40	12x M20	1x M32
2-Poles 16 Amp	—	—	X	12	4 x 125 Amp	1x M40	12x M20	1x M20	1x M40	12x M20	1x M25
2-Poles 16 Amp	—	X	X	12	4 x 125 Amp	1x M40	12x M20	1x M32	1x M40	12x M20	1x M32
2-Poles 16 Amp	X	—	—	12	4 x 125 Amp	1x M40	12x M20	—	1x M40	12x M20	—
2-Poles 16 Amp	X	X	—	12	4 x 125 Amp	1x M40	12x M20	1x M32	1x M40	12x M20	1x M32
2-Poles 16 Amp	X	—	X	12	4 x 125 Amp	1x M40	12x M20	1x M20	1x M40	12x M20	1x M25
2-Poles 16 Amp	X	X	X	6	4 x 63 Amp	1x M32	6x M20	1x M25	1x M40	6x M20	1x M25
3-Poles 16 Amp	—	—	—	12	3 x 125 Amp	1x M40	12x M20	—	1x M40	12x M20	—
3-Poles 16 Amp	—	X	—	12	3 x 125 Amp	1x M40	12x M20	1x M32	1x M40	12x M20	1x M32
3-Poles 16 Amp	—	—	X	12	3 x 125 Amp	1x M40	12x M20	1x M20	1x M40	12x M20	1x M25
3-Poles 16 Amp	—	X	X	6	3 x 63 Amp	1x M32	6x M20	1x M25	1x M40	6x M20	1x M25
3-Poles 16 Amp	X	—	—	6	3 x 63 Amp	1x M32	6x M20	—	1x M40	6x M20	—
3-Poles 16 Amp	X	X	—	6	3 x 63 Amp	1x M32	6x M20	1x M25	1x M40	6x M20	1x M25
3-Poles 16 Amp	X	—	X	6	3 x 63 Amp	1x M32	6x M20	1x M20	1x M40	6x M20	1x M25
3-Poles 16 Amp	X	X	X	6	3 x 63 Amp	1x M32	6x M20	1x M25	1x M40	6x M20	1x M25
4-Poles 16 Amp	—	—	—	12	4 x 63 Amp	1x M32	12x M20	—	1x M40	12x M20	—
4-Poles 16 Amp	—	X	—	6	4 x 63 Amp	1x M32	6x M20	1x M25	1x M40	6x M20	1x M25
4-Poles 16 Amp	—	—	X	6	4 x 63 Amp	1x M32	6x M20	1x M20	1x M40	6x M20	1x M25
4-Poles 16 Amp	—	X	X	6	4 x 63 Amp	1x M32	6x M20	1x M25	1x M40	6x M20	1x M25
4-Poles 16 Amp	X	—	—	6	4 x 63 Amp	1x M32	6x M20	—	1x M40	6x M20	—
4-Poles 16 Amp	X	X	—	6	4 x 63 Amp	1x M32	6x M20	1x M25	1x M40	6x M20	1x M25
4-Poles 16 Amp	X	—	X	6	4 x 63 Amp	1x M32	6x M20	1x M20	1x M40	6x M20	1x M25
4-Poles 16 Amp	X	X	X	6	4 x 63 Amp	1x M32	6x M20	1x M25	1x M40	6x M20	1x M25

Distribution Equipment

DISTRIBUTION PANELBOARDS

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Panel Arrangement E

Technical Information			
Panel E Size	1250 x 994 x 230 mm		
Panel Weight	145 kg		
Max. No. of Circuits	See Panel Arrangement Size Selection Table		
Voltage	220/240 V, 380/415 V, 440 V		
Wiring	See Wiring Diagram Table		
Breaking Capacity in kA			
	Ratings in Amps	380/415 V	440 V ⑧
Mains	200 A	25 kA	20 kA
Bus-bar	250 A	50 kA	50 kA
Branch Breakers ⑦	0.5 to 4 A	50 kA	25 kA
Branch Breakers ⑦	6 to 63 A	10 kA	6 kA
Panel Arrangement	200 A, 3 Ph, 5 W	20 kA	-

Terminals ①							Non-Armored ⑥	
Incoming		Outgoing		"NO" Position	"NC" Fault		Complete Catalog No	Ordering Catalog No
Qty ②	Size	Qty ③	Size	Qty ④	Qty ⑤	Size		
4	120 mm ²	48	6 mm ²	—	—	—	PPEM1624216C	PPEM1624216C10N
4	50 mm ²	24	6 mm ²	24	—	2.5 mm ²	PPEM1212216C1	PPEM1212216C20N
4	50 mm ²	24	6 mm ²	—	2	2.5 mm ²	PPEM1212216C4	PPEM1212216C30N
4	50 mm ²	24	6 mm ²	24	2	2.5 mm ²	PPEM1212216C5	PPEM1212216C40N
4	50 mm ²	24	6 mm ²	—	—	—	PPEM1212216CG030	PPEM1212216C50N
4	50 mm ²	24	6 mm ²	24	—	2.5 mm ²	PPEM1212216C1G030	PPEM1212216C60N
4	50 mm ²	24	6 mm ²	—	2	2.5 mm ²	PPEM1212216C4G030	PPEM1212216C70N
4	35 mm ²	12	6 mm ²	12	2	2.5 mm ²	PPEM066216C5G030	PPEM066216C80N
3	50 mm ²	24	6 mm ²	—	—	—	PPEM1112316C	PPEM1112316C10N
3	50 mm ²	24	6 mm ²	24	—	2.5 mm ²	PPEM1112316C1	PPEM1112316C20N
3	50 mm ²	24	6 mm ²	—	2	2.5 mm ²	PPEM1112316C4	PPEM1112316C30N
3	35 mm ²	18	6 mm ²	12	2	2.5 mm ²	PPEM056316C5	PPEM056316C40N
3	35 mm ²	18	6 mm ²	—	—	—	PPEM056316CG030	PPEM056316C50N
3	35 mm ²	18	6 mm ²	12	—	2.5 mm ²	PPEM056316C1G030	PPEM056316C60N
3	35 mm ²	18	6 mm ²	—	2	2.5 mm ²	PPEM056316C4G030	PPEM056316C70N
3	35 mm ²	18	6 mm ²	12	2	2.5 mm ²	PPEM056316C5G030	PPEM056316C80N
4	35 mm ²	48	6 mm ²	—	—	—	PPEM0612416C	PPEM0612416C10N
4	35 mm ²	24	6 mm ²	12	—	2.5 mm ²	PPEM066416C1	PPEM066416C20N
4	35 mm ²	24	6 mm ²	—	2	2.5 mm ²	PPEM066416C4	PPEM066416C30N
4	35 mm ²	24	6 mm ²	12	2	2.5 mm ²	PPEM066416C5	PPEM066416C40N
4	35 mm ²	24	6 mm ²	—	—	—	PPEM066416CG030	PPEM066416C50N
4	35 mm ²	24	6 mm ²	12	—	2.5 mm ²	PPEM066416C1G030	PPEM066416C60N
4	35 mm ²	24	6 mm ²	—	2	2.5 mm ²	PPEM066416C4G030	PPEM066416C70N
4	35 mm ²	24	6 mm ²	12	2	2.5 mm ²	PPEM066416C5G030	PPEM066416C80N

① Ground bar supplied for each connection.

② Incoming cables terminate directly to the main breaker.

③ Outgoing terminal blocks for branch breakers (provided).

④ Each "NO" position contact are individually terminate on the terminal blocks and in pairs.

⑤ All "NC" trip contacts must be wired in series and terminated on terminal blocks as one pair only.

⑥ For armored version, replace the letter **A** with the letter **N**, in the last position of the Ordering Catalog Number; example: PPEM1224216C10A.

⑦ For higher kA rating please consult your local sales representative.

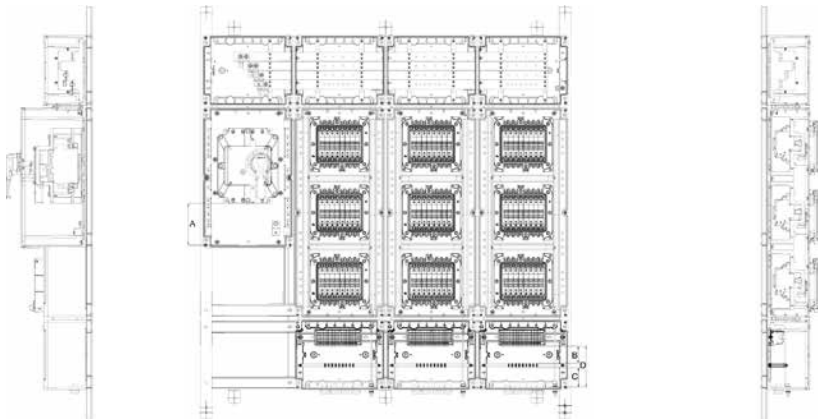
⑧ Without GFI.

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Panel Arrangement F



Dimension in Millimeters	
A	150
B	61
C	70
D	147



Left Internal View

Front Internal View

Right Internal View

Top Internal View

Breaker Curve C	30mA GFI	Branch Breakers			Main Breaker Size	Armored Entries			Non-Armored Entries		
		1 Position Contact "NO"	1 Trip Contact "NC"	Circuit Breaker Qty		Incoming	Outgoing	Auxiliary	Incoming	Outgoing	Auxiliary
2-Poles 16 Amp	—	—	—	36	4 x 250 Amp	1x M63	36 xM20	—	1x M63	36 xM20	—
2-Poles 16 Amp	—	X	—	18	4 x 200 Amp	1x M63	18 xM20	1x M32	1x M63	18 xM20	1x M40
2-Poles 16 Amp	—	—	X	18	4 x 200 Amp	1x M63	18 xM20	1x M20	1x M63	18 xM20	1x M25
2-Poles 16 Amp	—	X	X	18	4 x 200 Amp	1x M63	18 xM20	1x M32	1x M63	18 xM20	1x M40
2-Poles 16 Amp	X	—	—	18	4 x 200 Amp	1x M63	18 xM20	—	1x M63	18 xM20	—
2-Poles 16 Amp	X	X	—	18	4 x 200 Amp	1x M63	18 xM20	1x M32	1x M63	18 xM20	1x M40
2-Poles 16 Amp	X	—	X	18	4 x 200 Amp	1x M63	18 xM20	1x M20	1x M63	18 xM20	1x M25
2-Poles 16 Amp	X	X	X	9	4 x 100 Amp	1x M40	9 xM20	1x M32	1x M40	9 xM20	1x M25
3-Poles 16 Amp	—	—	—	18	3 x 200 Amp	1x M63	18 xM20	—	1x M63	18 xM20	—
3-Poles 16 Amp	—	X	—	18	3 x 200 Amp	1x M63	18 xM20	1x M32	1x M63	18 xM20	1x M40
3-Poles 16 Amp	—	—	X	18	3 x 200 Amp	1x M63	18 xM20	1x M20	1x M63	18 xM20	1x M25
3-Poles 16 Amp	—	X	X	9	3 x 100 Amp	1x M40	9 xM20	1x M32	1x M40	9 xM20	1x M25
3-Poles 16 Amp	X	—	—	9	3 x 100 Amp	1x M40	9 xM20	—	1x M40	9 xM20	—
3-Poles 16 Amp	X	X	—	9	3 x 100 Amp	1x M40	9 xM20	1x M25	1x M40	9 xM20	1x M25
3-Poles 16 Amp	X	—	X	9	3 x 100 Amp	1x M40	9 xM20	1x M20	1x M40	9 xM20	1x M25
3-Poles 16 Amp	X	X	X	9	3 x 100 Amp	1x M40	9 xM20	1x M32	1x M40	9 xM20	1x M25
4-Poles 16 Amp	—	—	—	18	4 x 200 Amp	1x M63	18 xM20	—	1x M63	18 xM20	—
4-Poles 16 Amp	—	X	—	9	4 x 100 Amp	1x M40	9 xM20	1x M25	1x M40	9 xM20	1x M25
4-Poles 16 Amp	—	—	X	9	4 x 100 Amp	1x M40	9 xM20	1x M20	1x M40	9 xM20	1x M25
4-Poles 16 Amp	—	X	X	9	4 x 100 Amp	1x M40	9 xM20	1x M32	1x M40	9 xM20	1x M25
4-Poles 16 Amp	X	—	—	9	4 x 100 Amp	1x M40	9 xM20	—	1x M40	9 xM20	—
4-Poles 16 Amp	X	X	—	9	4 x 100 Amp	1x M40	9 xM20	1x M25	1x M40	9 xM20	1x M25
4-Poles 16 Amp	X	—	X	9	4 x 100 Amp	1x M40	9 xM20	1x M20	1x M40	9 xM20	1x M25
4-Poles 16 Amp	X	X	X	9	4 x 100 Amp	1x M40	9 xM20	1x M32	1x M40	9 xM20	1x M25

Distribution Equipment

DISTRIBUTION PANELBOARDS

P Series PlexPower™ Distribution Panelboards

Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Panel Arrangement F

Technical Information			
Panel A Size	1470 x 1323 x 230 mm		
Panel Weight	200 kg		
Max. No. of Circuits	See Panel Arrangement Size Selection Table		
Voltage	220/240 V, 380/415 V, 440 V		
Wiring	See Wiring Diagram Table		
Breaking Capacity in kA			
	Ratings in Amps	380/415 V	440 V ⑧
Mains	250 A	25 kA	20 kA
Bus-bar	250 A	50 kA	50 kA
Branch Breakers ⑦	0.5 to 4 A	50 kA	25 kA
Branch Breakers ⑦	6 to 63 A	10 kA	6 kA
Panel Arrangement	250 A, 3 Ph, 5 W	20 kA	-

Terminals ①							Non-Armored ⑥	
Incoming		Outgoing		"NO" Position	"NC" Fault	Size	Complete Catalog No	Ordering Catalog No
Qty ②	Size	Qty ③	Size	Qty ④	Qty ⑤			
4	120 mm ²	72	6 mm ²	—	—	—	PPFM1836216C	PPFM1836216C10N
4	120 mm ²	36	6 mm ²	36	—	2.5 mm ²	PPFM1618216C1	PPFM1618216C20N
4	120 mm ²	36	6 mm ²	—	2	2.5 mm ²	PPFM1618216C4	PPFM1618216C30N
4	120 mm ²	36	6 mm ²	36	2	2.5 mm ²	PPFM1618216C5	PPFM1618216C40N
4	120 mm ²	36	6 mm ²	—	—	—	PPFM1618216CG030	PPFM1618216C50N
4	120 mm ²	36	6 mm ²	36	—	2.5 mm ²	PPFM1618216C1G030	PPFM1618216C60N
4	120 mm ²	36	6 mm ²	—	2	2.5 mm ²	PPFM1618216C4G030	PPFM1618216C70N
4	50 mm ²	18	6 mm ²	18	2	2.5 mm ²	PPFM109216C5G030	PPFM109216C80N
3	120 mm ²	36	6 mm ²	—	—	—	PPFM1518316C	PPFM1518316C10N
3	120 mm ²	36	6 mm ²	36	—	2.5 mm ²	PPFM1518316C1	PPFM1518316C20N
3	120 mm ²	36	6 mm ²	—	2	2.5 mm ²	PPFM1518316C4	PPFM1518316C30N
3	50 mm ²	18	6 mm ²	18	2	2.5 mm ²	PPFM099316C5	PPFM099316C40N
3	50 mm ²	18	6 mm ²	—	—	—	PPFM099316CG030	PPFM099316C50N
3	50 mm ²	18	6 mm ²	18	—	2.5 mm ²	PPFM099316C1G030	PPFM099316C60N
3	50 mm ²	18	6 mm ²	—	2	2.5 mm ²	PPFM099316C4G030	PPFM099316C70N
3	50 mm ²	18	6 mm ²	18	2	2.5 mm ²	PPFM099316C5G030	PPFM099316C80N
4	120 mm ²	36	6 mm ²	—	—	—	PPFM1618416C	PPFM1618416C10N
4	50 mm ²	18	6 mm ²	18	—	2.5 mm ²	PPFM109416C1	PPFM109416C20N
4	50 mm ²	18	6 mm ²	—	2	2.5 mm ²	PPFM109416C4	PPFM109416C30N
4	50 mm ²	18	6 mm ²	18	2	2.5 mm ²	PPFM109416C5	PPFM109416C40N
4	50 mm ²	18	6 mm ²	—	—	—	PPFM109416CG030	PPFM109416C50N
4	50 mm ²	18	6 mm ²	18	—	2.5 mm ²	PPFM109416C1G030	PPFM109416C60N
4	50 mm ²	18	6 mm ²	—	2	2.5 mm ²	PPFM109416C4G030	PPFM109416C70N
4	50 mm ²	18	6 mm ²	18	2	2.5 mm ²	PPFM109416C5G030	PPFM109416C80N

① Ground bar supplied for each connection.

② Incoming cables terminate directly to the main breaker.

③ Outgoing terminal blocks for branch breakers (provided).

④ Each "NO" position contact are individually terminate on the terminal blocks and in pairs.

⑤ All "NC" trip contacts must be wired in series and terminated on terminal blocks as one pair only.

⑥ For armored version, replace the letter **A** with the letter **N**, in the last position of the Ordering Catalog Number; example: PPFM1436216C10A.

⑦ For higher kA rating please consult your local sales representative.

⑧ Without GFI.

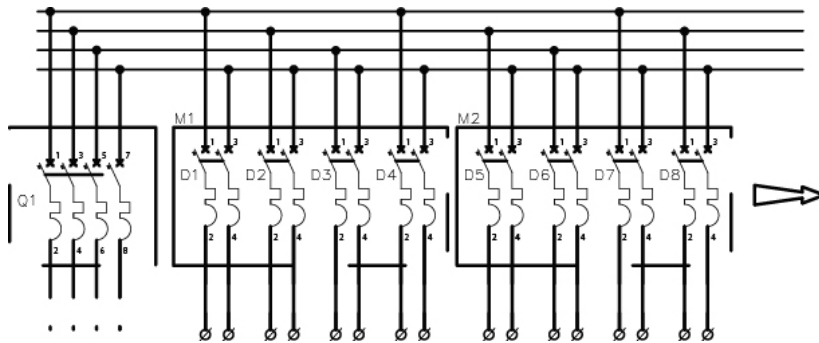
P Series PlexPower™ Distribution Panelboards

Increased Safety

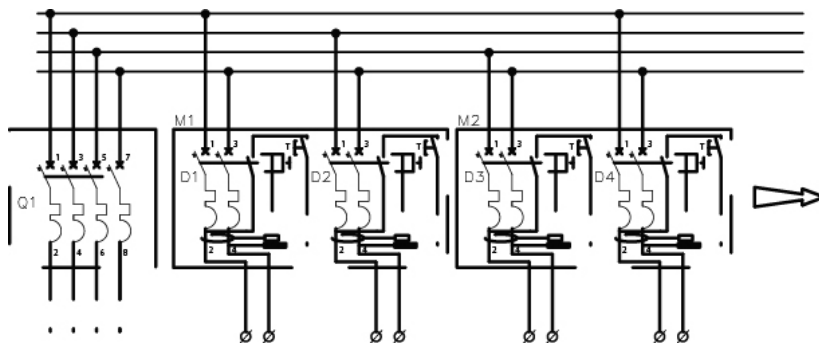
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Wiring Diagrams — Panel Arrangements B, C, D, E, F — For Panel Arrangement A, Remove Main Breaker from Wiring Diagrams

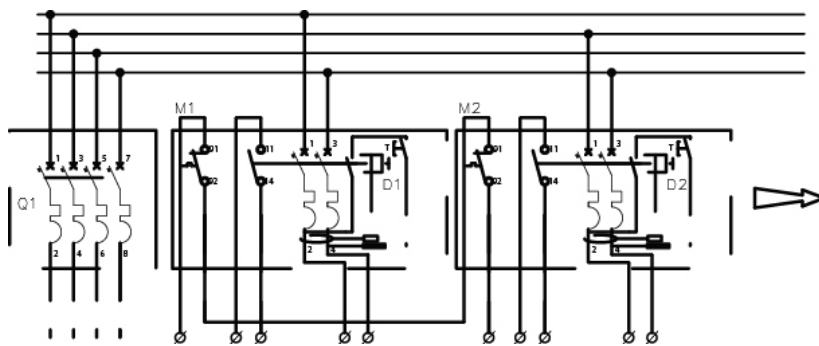
Q1: Main Breaker
M1-M8: Module Housing
D1-▲: MCB



2-Pole



2-Pole + GFI



2-Pole + GFI + AUX NO + AUX NC

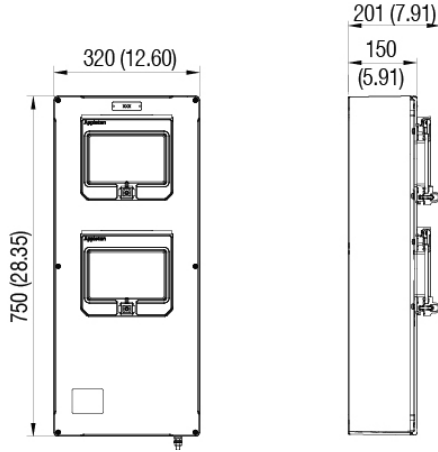
▲ Number of branch circuit breakers will depend on the number of module housing.

P Series PlexPower™ Distribution Panelboards

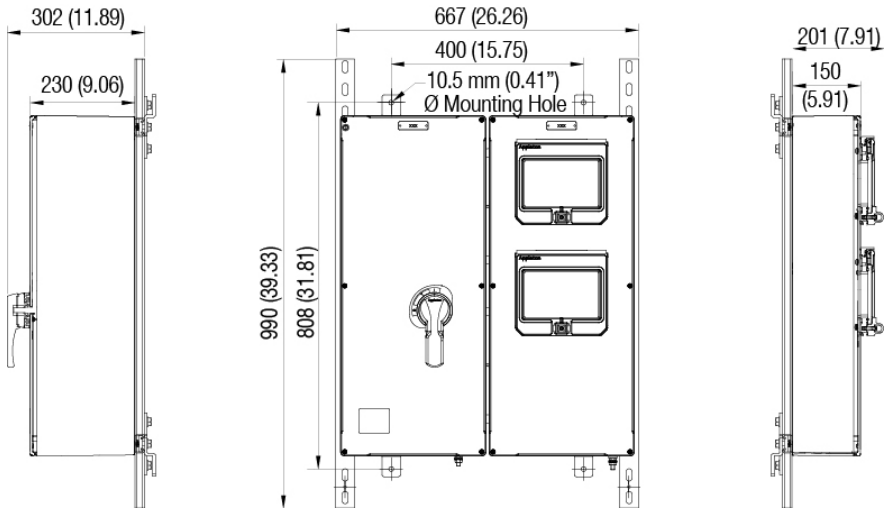
Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Standard Panel Arrangement Layout — Dimensions in Millimeters



Panel Arrangement A



Panel Arrangement B

Distribution Equipment

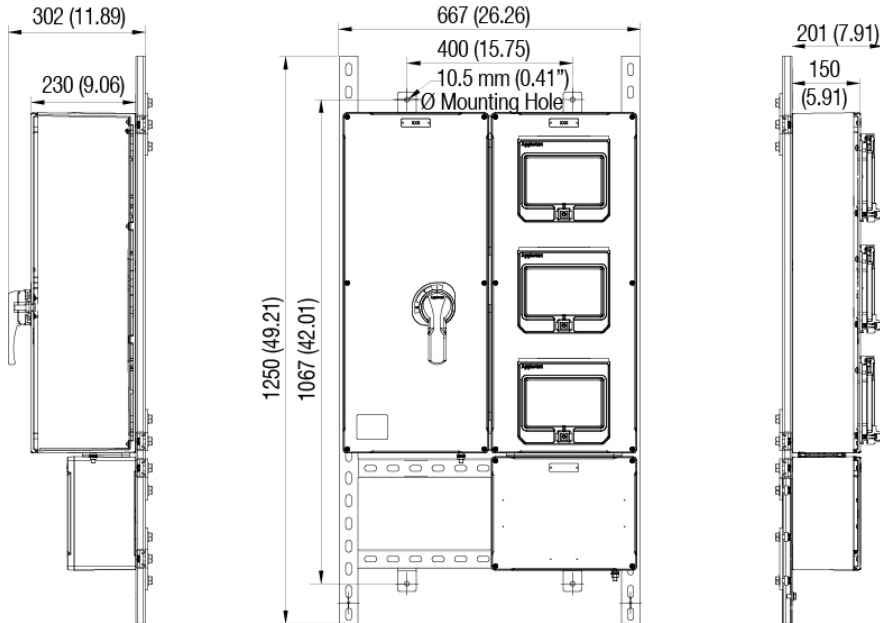
DISTRIBUTION PANELBOARDS

P Series PlexPower™ Distribution Panelboards

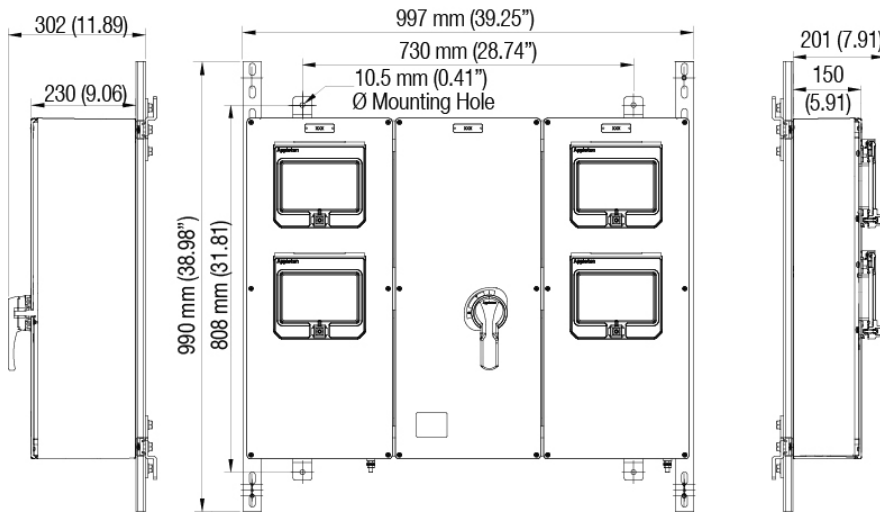
Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Standard Panel Arrangement Layout — Dimensions in Millimeters



Panel Arrangement C



Panel Arrangement D

Distribution Equipment

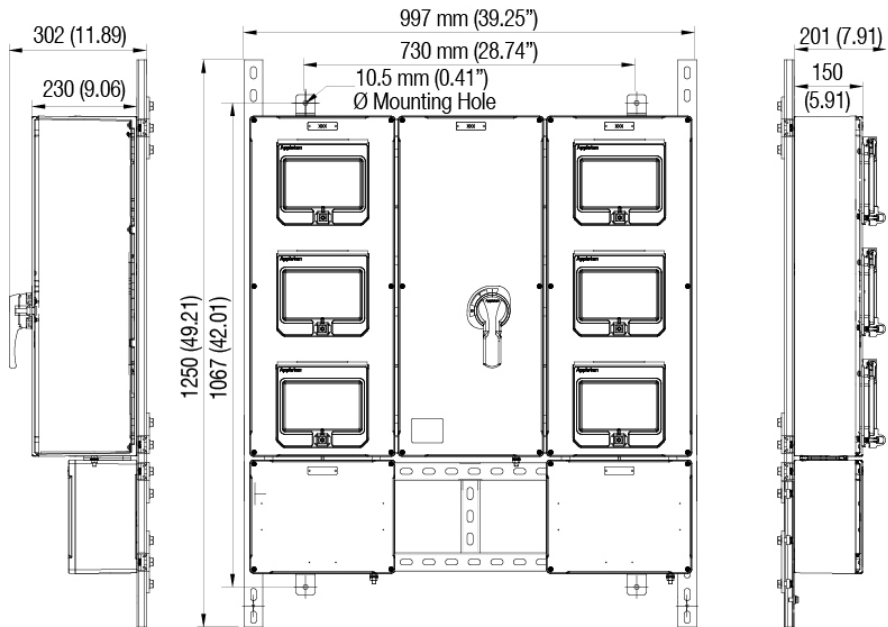
DISTRIBUTION PANELBOARDS

P Series PlexPower™ Distribution Panelboards

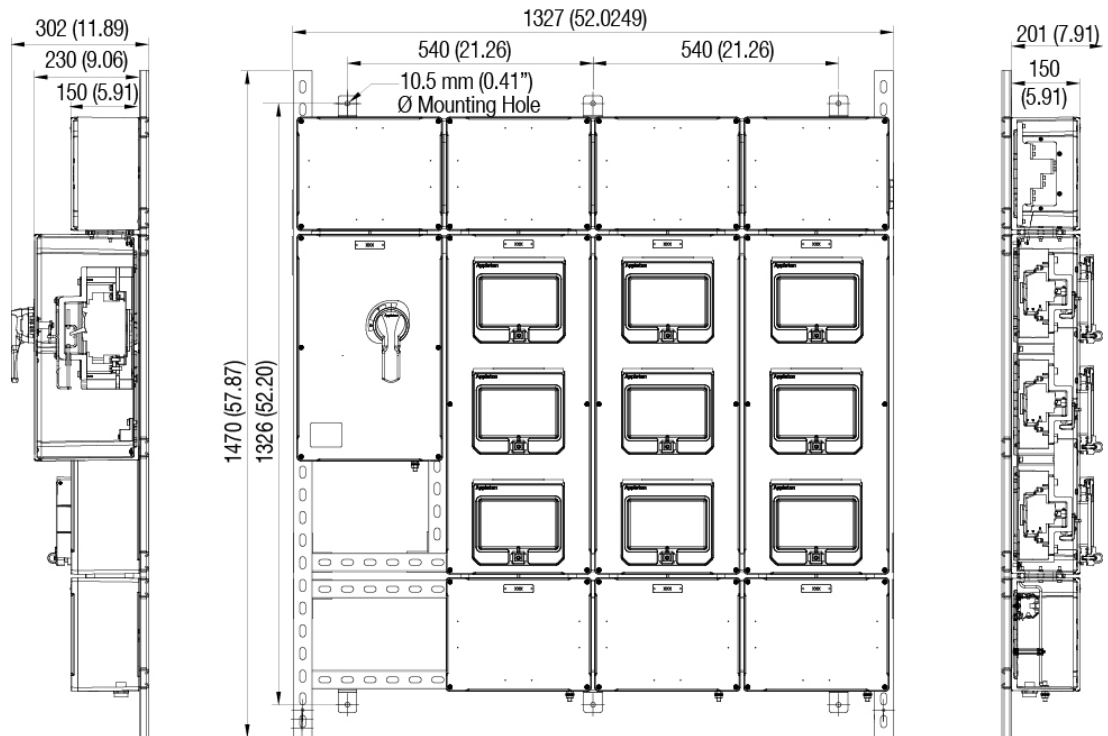
Increased Safety

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Standard Panel Arrangement Layout — Dimensions in Millimeters



Panel Arrangement E



Panel Arrangement F

Distribution Equipment

DISTRIBUTION PANELBOARDS

DPD Series Distribution Panelboards

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Protection and control of electrical equipment in hazardous areas where ignitable vapors, gases or highly combustible dusts are present.
- For installation in:
 - Chemical plants
 - Petrochemical plants
 - Refineries
 - Other process industries in Zone 1 and 2 , Zone 21 and 22
- These compact units provide a centrally controlled switching system
- Lighting panelboards are available in 6, 12, 18 and 24 circuits.
- Heat tracing panelboards are available in 6, 12, 18 and 20 circuits.

Features

- Available versions:
- 3- or 4-Pole isolator switch or main breaker.
 - 1, 2, 3, 4 and 1+N poles branch circuit breakers.
 - Branch circuit breaker available with B, C or D tripping curve.
 - GFI branch circuit breaker available with B, C or D tripping curves except for 1+N poles.
 - Isolator and breaker handles included as standard, can be padlocked in OFF position.
 - Copper bus bar as standard.
 - Fully prewired on outgoing terminal block.
 - M8 earth-crossing terminal.
 - Hinged door.
 - 4 fixing lugs.
 - Cable glands and plugs to be ordered separately.

Standard Materials

- Housing: gray marine grade aluminum alloy
- Hardware: stainless steel
- Bus bar: copper

Options

- Other rating and tripping curves.
- Other voltage.
- Indirect cable entries available through Ex e connection enclosure.
- Switch rack assembly.

Certifications and Compliances

◆ ATEX/IECEX Certification

- **Certification Type CF**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex de IIB
 - Temperature class: T6 to T4
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C to T130 °C
 - Ambient Temperature:
 - CF70B: -20 °C to +55 °C
 - CF50B: -40 °C to +55 °C
 - CF60B: -50 °C to +55 °C
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10
 - Internal Volume: > 2 dm³ (2 liters)
 - CE Declaration of Conformity: 50229

◆ EURASEC Certification

- ATEX Certificate: LCIE 02 ATEX 6057X
- IECEX Certificate: IECEX LCI 08.023X
- EURASEC N° TC RU C-FR.Г505.B.00911



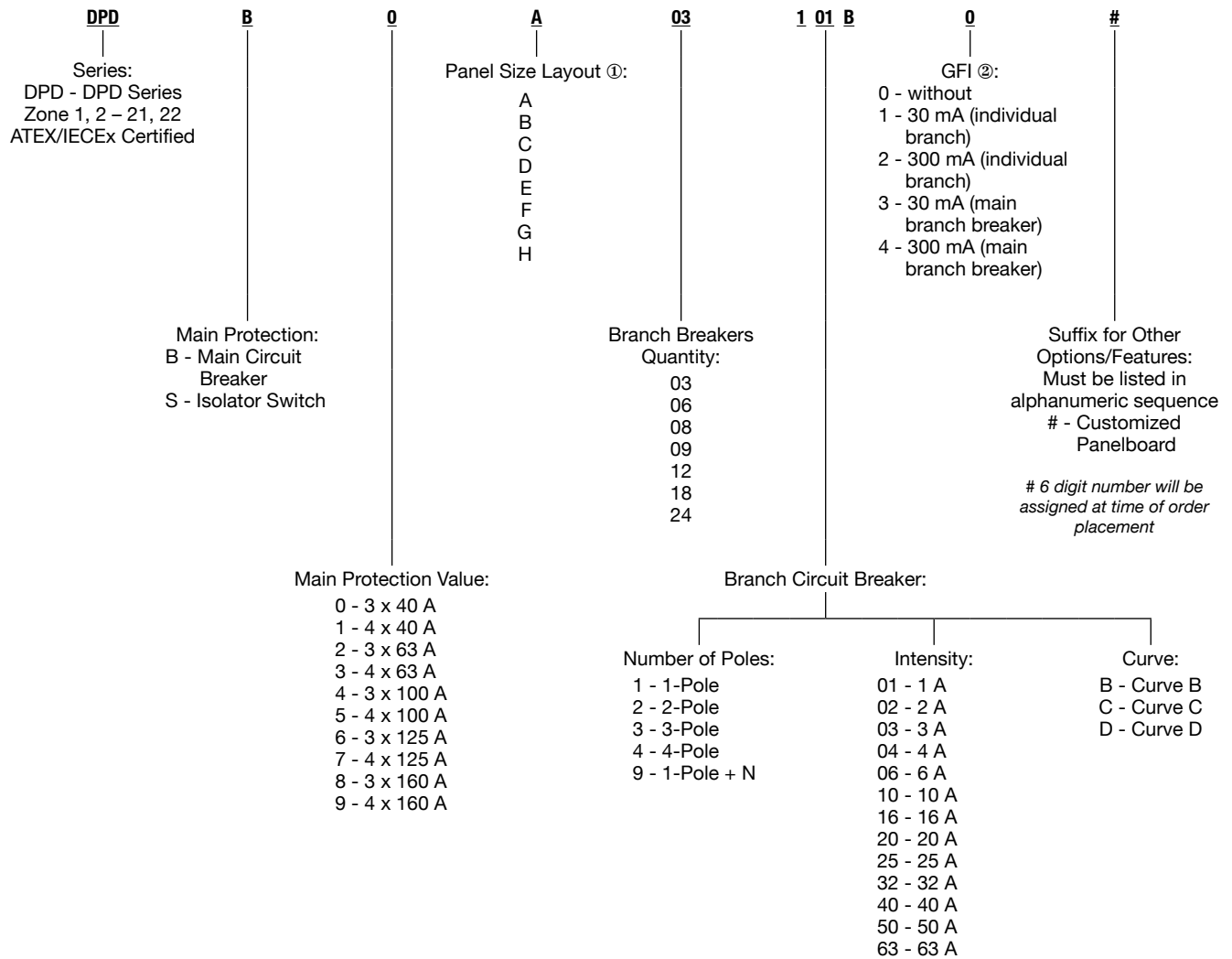
8 Circuit Panelboard

DPD Series Distribution Panelboards

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Catalog Numbering Guide



① See DPD Series Distribution Panelboard Dimensions page for panel size dimensions.
② 1+N pole is not for use with GFI.

DPD Series Distribution Panelboards

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Distribution Panelboard with Branch Circuit Breakers (for Lighting Circuits, etc.)

4-pole main isolator switch and 2-pole Branch Circuit Breakers Tripping Curve C wired on terminals.

Type	Main Switch	Branch Circuit Breakers 2P – Curve C		Layout Panel	Cable Entries	Volume dm ³	Weight kg	Catalog Number
		Quantity	Rating					
CF50B	4 x 63 A	6	2P 16 A	A	1 x M32 - 6 x M20	100	240	DPDS3A06216C0
CF60B	4 x 63 A	12	2P 16 A	B	1 x M32 - 12 x M20	150	378	DPDS3B12216C0
CF70B	4 x 125 A	18	2P 16 A	C	1 x M40 - 18 x M20	180	382	DPDS7C18216C0
CF70B	4 x 160 A	24	2P 16 A	D	1 x M50 - 24 x M20	180	382	DPDS9D24216C0

Distribution Panelboard with GFI Branch Circuit Breakers (for Heat Tracing Circuits, etc.)

4-pole main isolator switch and 2-poles (P+N) branch circuit breakers with GFI Branch Circuit Breakers Tripping Curve C wired on terminals.

Type	Main Switch	Branch Circuit Breakers 2-Poles – Curve C		Layout Panel	Cable Entries	Volume dm ³	Weight kg	Catalog Number
		Quantity	Rating					
CF50B	4 x 63 A	6	16 A/30 mA	E	1 x M32 - 6 x M20	100	240	DPDS3E06916C1
CF60B	4 x 63 A	12	16 A/30 mA	F	1 x M32 - 12 x M20	150	378	DPDS3F12916C1
CF70B	4 x 125 A	18	16 A/30 mA	G	1 x M40 - 18 x M20	180	382	DPDS7G18916C1
CF70B	4 x 160 A	20	16 A/30 mA	H	1 x M50 - 20 x M20	180	382	DPDS9H20916C1

Distribution Panelboard with GFI Branch Circuit Breakers (for Heat Tracing Circuits, etc.)

4-pole main isolator switch and 2-pole (P+N) branch circuit breakers with GFI Branch Circuit Breakers Tripping Curve B wired on terminals.

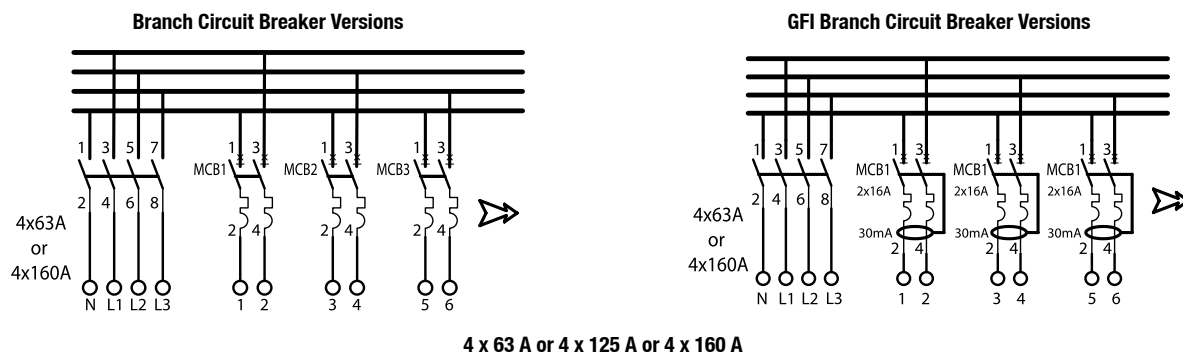
Type	Main Switch	Branch Circuit Breakers 2-Poles – Curve B		Layout Panel	Cable Entries	Volume dm ³	Weight kg	Catalog Number
		Quantity	Rating					
CF50B	4 x 63 A	6	16 A/30 mA	E	1 x M32 - 6 x M20	100	240	DPDS3E06916B1
CF60B	4 x 63 A	12	16 A/30 mA	F	1 x M32 - 12 x M20	150	378	DPDS3F12916B1
CF70B	4 x 125 A	18	16 A/30 mA	G	1 x M40 - 18 x M20	180	382	DPDS7G18916B1
CF70B	4 x 160 A	20	16 A/30 mA	H	1 x M50 - 20 x M20	180	382	DPDS9H20916B1

DPD Series Distribution Panelboard Wiring Diagram and Technical Data

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Wiring Diagram



Technical Data

Main Contacts	Incoming			GFI Branch Circuit Breaker	
	63 Amps	125 Amps	160 Amps	Outgoing	
Rated Insulation Voltage (Ui)	690 V	800 V	800 V	400 Vac	
Rated Operating Voltage (Ue)	415 V/500 V/690 V	415 V/500 V/690 V	415 V/500 V/690 V	230/400 Vac	
Rated Operating Current (Ie)	63 A/63 A/40 A	125 A	160 A/160 A/125 A	16 A/30 mA	
Rated Surge Voltage (Uimp)	8 kV	8 kV	8 kV	4 kV	
Short Circuit Resistance (Icu)	50 kA (with fuse)	63 kA (with fuse)	80 kA (with fuse)	10 kA/400 V IEC 947.2	
Switching Capacity AC 21 A	415 V	63 A	125 A	160 A	—
	500 V	63 A	125 A	160 A	—
	690 V	63 A	125 A	160 A	—
Switching Capacity AC 22 A	415 V	63 A	125 A	160 A	—
	500 V	63 A	125 A	125 A	—
	690 V	40 A	80 A	100 A	—
Switching Capacity AC 23 A	415 V	63 A/30 kW	125 A/55 kW	125 A/75 kW	—
	500 V	63 A/30 kW	100 A/55 kW	100 A/75 kW	—
	690 V	40 A/30 kW	80 A/75 kW	80 A/75 kW	—
Termination (Flexible)	4 to 35 mm ²	4 to 50 mm ²	4 to 50 mm ²	0.5 to 4 mm ²	
Termination (Solid)	50 mm ²	70 mm ²	70 mm ²	1.5 to 6 mm ²	

Distribution Equipment

DISTRIBUTION PANELBOARDS

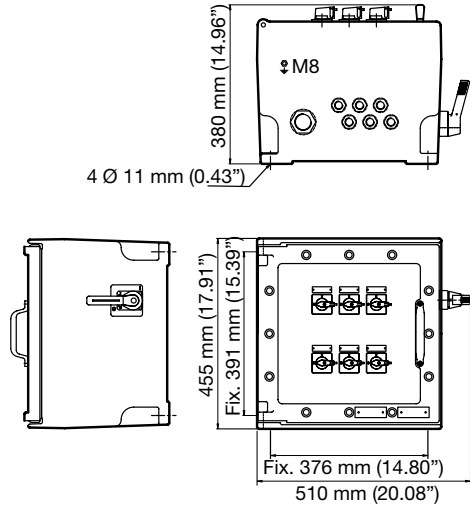
DPD Series Distribution Panelboard Dimensions

Flameproof

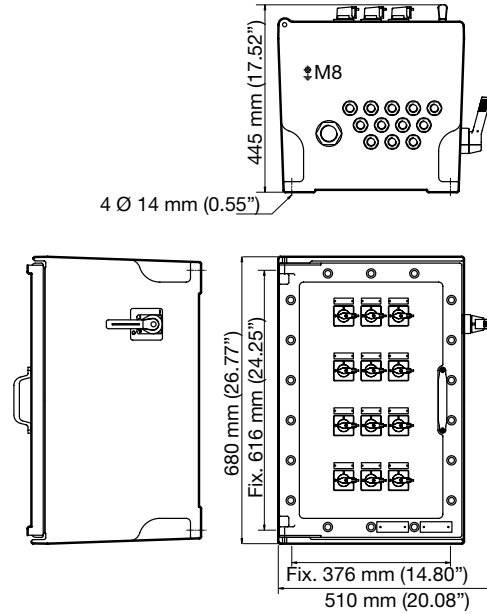
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Branch Circuit Breaker Version Dimensions

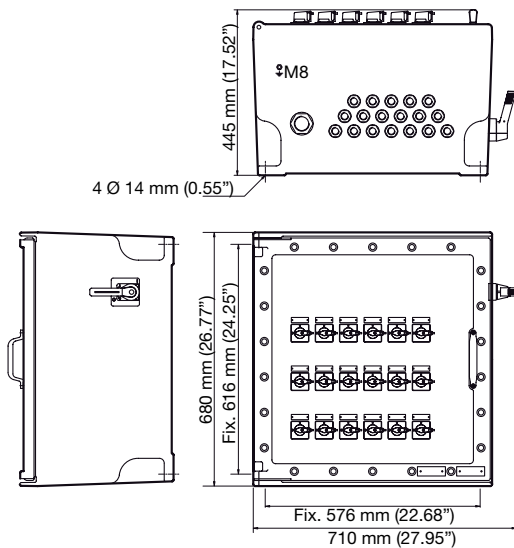
Layout Panel A



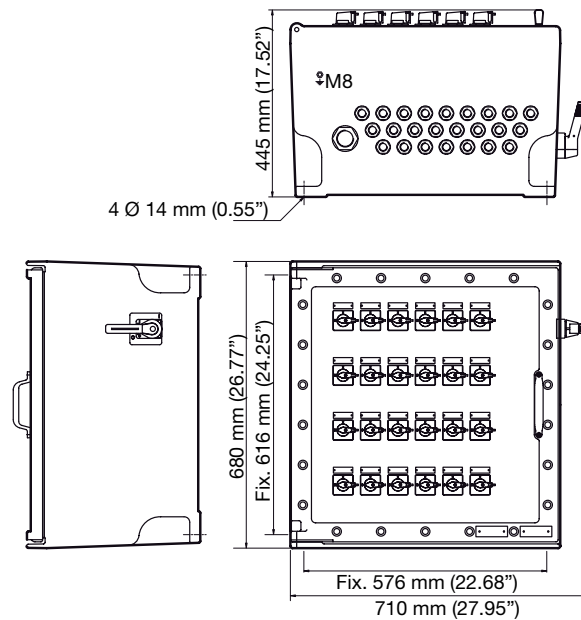
Layout Panel B



Layout Panel C



Layout Panel D



Distribution Equipment

DISTRIBUTION PANELBOARDS

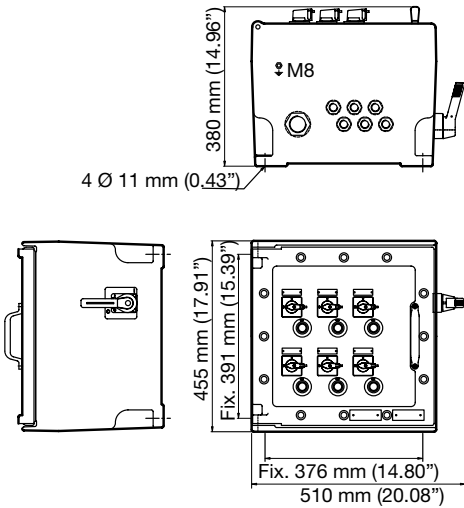
DPD Series Distribution Panelboard Dimensions

Flameproof

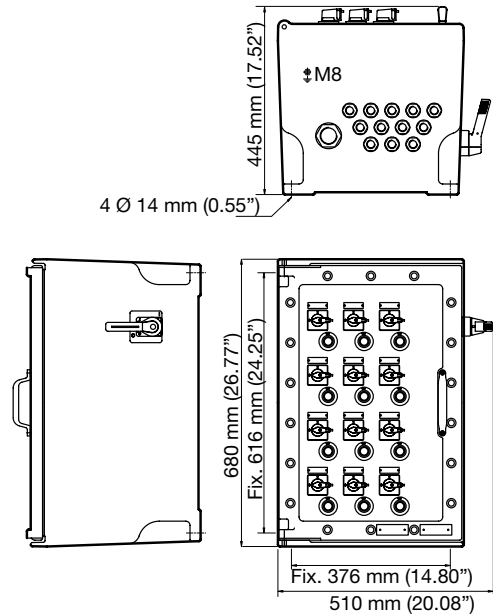
Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

GFI Branch Circuit Breaker Version Dimensions

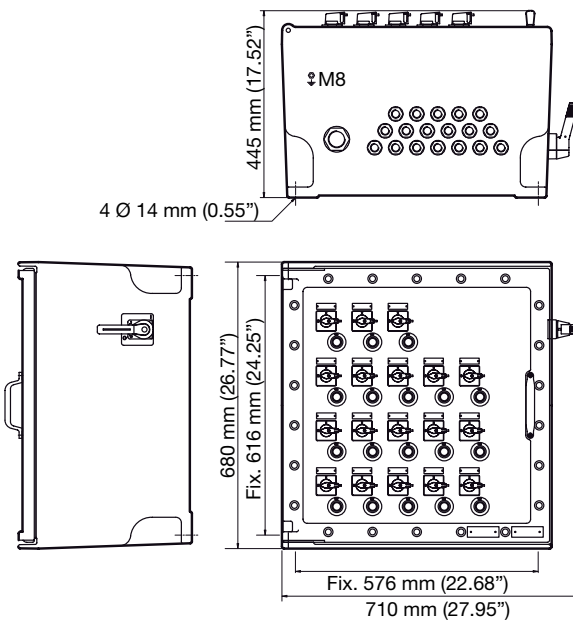
Layout Panel E



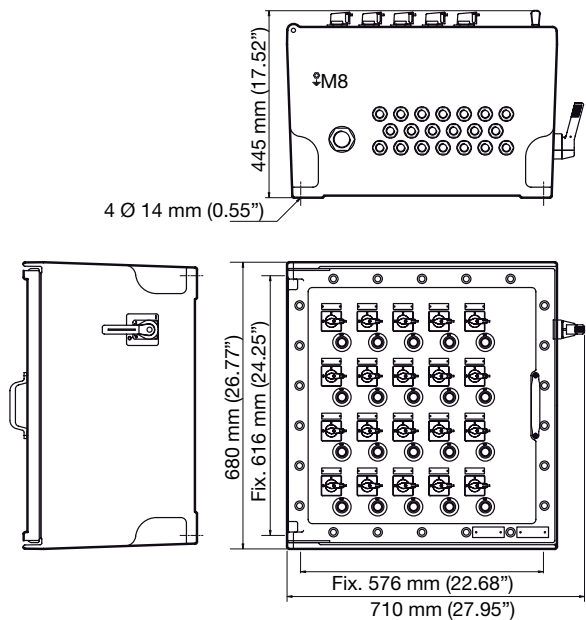
Layout Panel F



Layout Panel G



Layout Panel H



Distribution Equipment

DISTRIBUTION PANELBOARDS

Custom Switchracks:

Built to Comply with ATEX/IEC Standards and Certifications

From Design to Installation, Manufactured Switchracks to Your Specifications

Designed for safety and performance and built to customer specifications. Every switchrack offers an innovative, unique solution to the challenges of complex motor control localization. Both important European directives concerning electrical equipment for potentially explosive atmospheres.

We have developed our capabilities with attention to the customer's key concerns:

- Custom Design
- Quality Components
- Turnkey Fabrication
- Guaranteed Satisfaction

Customer Design

- The demands of your application are unique. Your switchrack should be too. That's why our engineers use your specifications and engineering drawings as well as all applicable codes and standards to design your custom switchrack solution. It's the only way to guarantee the switchrack will meet your needs today... and tomorrow.
- Through experience, we have learned the value of staying on the cutting edge of design technology. The company's AutoCad workstations allow design files to be shared with your in-house engineers for quick revisions. This saves time and money and it means your switchrack will be up and running faster.

Quality Components

- Appleton/ATX stocks one of the most extensive lines of adverse environment enclosures and accessories in the electrical industry to ensure prompt turnaround of every switchrack order.
- Rigid quality standards mean our components stand up to the harshest applications. Only the highest grade steel and aluminum is used in construction. Testing prior to installation guarantees the quality you expect.

Turnkey Fabrication

- Every switchrack is engineered, fabricated and assembled in-house by qualified technicians. This single-source approach allows us complete control over the manufacturing process.
- Following a series of rugged performance examinations, each switchrack is shipped via Exclusive Use Carrier for immediate field installation.

Guaranteed Satisfaction

- Appleton's involvement doesn't end with the purchase order. The company backs its switchracks with an exclusive factory warranty. Should any Appleton/ATX component fail due to mechanical or electrical defect, we will replace the part for up to one year following installation, or 18 months after shipment.

Application

- Appleton/ATX switchracks provide complete motor control assemblies in one integrated package. Choose the necessary components to fit the rating, electrical switching and controlling requirements.
- Appleton/ATX switchracks are available for Zones 1 and 2 , 21 and 22 gas and dust environments. Built for indoor and/or outdoor locations.
- Determine hazardous areas
- Defining Zone boundaries - volumes
 - If necessary, delimiting Zones
- Know the characteristics of flammable substances present on the site
- Defining the temperature class and the explosion group of the equipment



- Choose equipment depending on :
 - the temperature class and the explosion group,
 - environmental constraints specific to the site - corrosion, exposure to UV, mechanical strength,
 - protection indexes

Features

- Single source responsibility, including engineering, designing, wiring and testing of all components.
- Fabricated and wired to custom specifications.
- Only job site requirements are connection of incoming power to the main bus and load side connections.

Optional Components

- Circuit breakers
- Motor starters
- Contactors
- Junction boxes
- Control stations
- Meter/instrument enclosures
- Ground detection
- Panelboards
- Receptacles
- Photo cells
- Light fixtures
- Transformers

Standard Finishes

- Structure: steel-painted, steel-galvanized or aluminum.
- Bus duct/conduit: steel-painted, galvanized aluminum or stainless steel.
- Canopy/roof: steel-galvanized or aluminum.

Custom Switchracks:

Built to Comply with ATEX/IEC Standards and Certifications

From Design to Installation, Manufactured Switchracks to Your Specifications

Customer Information

Date: _____ Quote Number: _____
 Customer: _____ Revision: _____
 Location: _____ Project Name: _____

Area Classification						
Zone	<input type="checkbox"/> Zone 1	<input type="checkbox"/> Zone 2	<input type="checkbox"/> Zone 21	<input type="checkbox"/> Zone 22		
Group	<input type="checkbox"/> Group IIA	<input type="checkbox"/> Group IIB	<input type="checkbox"/> Group IIC			
Certifications						
Certifications	<input type="checkbox"/> IEC	<input type="checkbox"/> IECEX	<input type="checkbox"/> ATEX			
Power Source						
Voltage	<input type="checkbox"/> 120 Vac	<input type="checkbox"/> 240 Vac	<input type="checkbox"/> 380 Vac	<input type="checkbox"/> 480 Vac	<input type="checkbox"/> 575 Vac	<input type="checkbox"/> 600 Vac
Phase	<input type="checkbox"/> Single	<input type="checkbox"/> Three	Hertz		<input type="checkbox"/> 50 Hz	<input type="checkbox"/> 60 Hz
Structure						
Material	<input type="checkbox"/> Steel-Painted	<input type="checkbox"/> Aluminum				
Design	<input type="checkbox"/> Single Sided	<input type="checkbox"/> Double Sided	<input type="checkbox"/> Single Row	<input type="checkbox"/> Double Row		
Bus Ducts						<input type="checkbox"/> Required <input type="checkbox"/> Not Required
Material	<input type="checkbox"/> Steel-Painted	<input type="checkbox"/> Steel-Galvanized	<input type="checkbox"/> Aluminum	<input type="checkbox"/> Stainless Steel		
Certification	<input type="checkbox"/> IEC	<input type="checkbox"/> IECEX	<input type="checkbox"/> ATEX			
Type	<input type="checkbox"/> Single Access	<input type="checkbox"/> Dual Access				
Cooper Bus Plating	<input type="checkbox"/> Silver	<input type="checkbox"/> Tin				
Bracing	<input type="checkbox"/> 14,000 AIC	<input type="checkbox"/> 22,000 AIC	<input type="checkbox"/> 25,000 AIC	<input type="checkbox"/> 42,000 AIC	<input type="checkbox"/> 65,000 AIC	<input type="checkbox"/> 100,000 AIC
Options	<input type="checkbox"/> Insulated	<input type="checkbox"/> Silver Plated	<input type="checkbox"/> Tin Plated	<input type="checkbox"/> PEM Inserts	<input type="checkbox"/> Glyptol	<input type="checkbox"/> Weep Holess
	<input type="checkbox"/> Space Heater	<input type="checkbox"/> Thermostat	<input type="checkbox"/> Drains			
Corrugated Canopy Material						<input type="checkbox"/> Required <input type="checkbox"/> Not Required
	<input type="checkbox"/> Steel-Galvanized	<input type="checkbox"/> Aluminum	<input type="checkbox"/> Fiberglass Reinforced Polyester (FRP)			
Conduit and Fittings						
	<input type="checkbox"/> Galvanized	<input type="checkbox"/> Aluminum	<input type="checkbox"/> PVC Coated	<input type="checkbox"/> Drain Seals		
Wire Type — Copper, +90 °C						
Insulation	<input type="checkbox"/> XLPE	<input type="checkbox"/> EPR	<input type="checkbox"/> PVC			
Component Requirements						
Manufacturer	<input type="checkbox"/> General Electric	<input type="checkbox"/> Square D	<input type="checkbox"/> Cutler-Hammer	<input type="checkbox"/> Allen-Bradley	<input type="checkbox"/> Other	
Circuit Breaker	<input type="checkbox"/> Thermal-Mag	<input type="checkbox"/> Mag-Only	<input type="checkbox"/> Non-Auto	<input type="checkbox"/> Other		

Distribution Equipment

CUSTOM SWITCHRACKS

Custom Switchracks:

Built to Comply with ATEX/IEC Standards and Certifications

From Design to Installation, Manufactured Switchracks to Your Specifications

Component Accessories						
<input type="checkbox"/> Fuses	<input type="checkbox"/> Thermal Board	<input type="checkbox"/> Relays	<input type="checkbox"/> Breather/Drain	<input type="checkbox"/> Stop Push Button	<input type="checkbox"/> Start Push Button	<input type="checkbox"/> HOA Switch
<input type="checkbox"/> Name Plate	<input type="checkbox"/> Red Light	<input type="checkbox"/> Green Light	<input type="checkbox"/> CPT	<input type="checkbox"/> 100 Vac Extra	<input type="checkbox"/> Ring Terminal	<input type="checkbox"/> Wire Markers
<input type="checkbox"/> AUX. Contact N.O., N.C.	<input type="checkbox"/> Space Heater	<input type="checkbox"/> Copper Lugs	<input type="checkbox"/> Surge Protector	<input type="checkbox"/> Hi-Break Circuit Breaker		

Optional Components

Please provide a list of items (including your company's specifications) that the rack will support including quantities and sizes:

Motor Starters: _____

Lighting: _____

Breakers: _____

Transformers: _____

Receptacles: _____

Ground Indicators: _____

Panelboards: _____

Control Stations: _____

Disconnect Switches: _____

Distribution Equipment

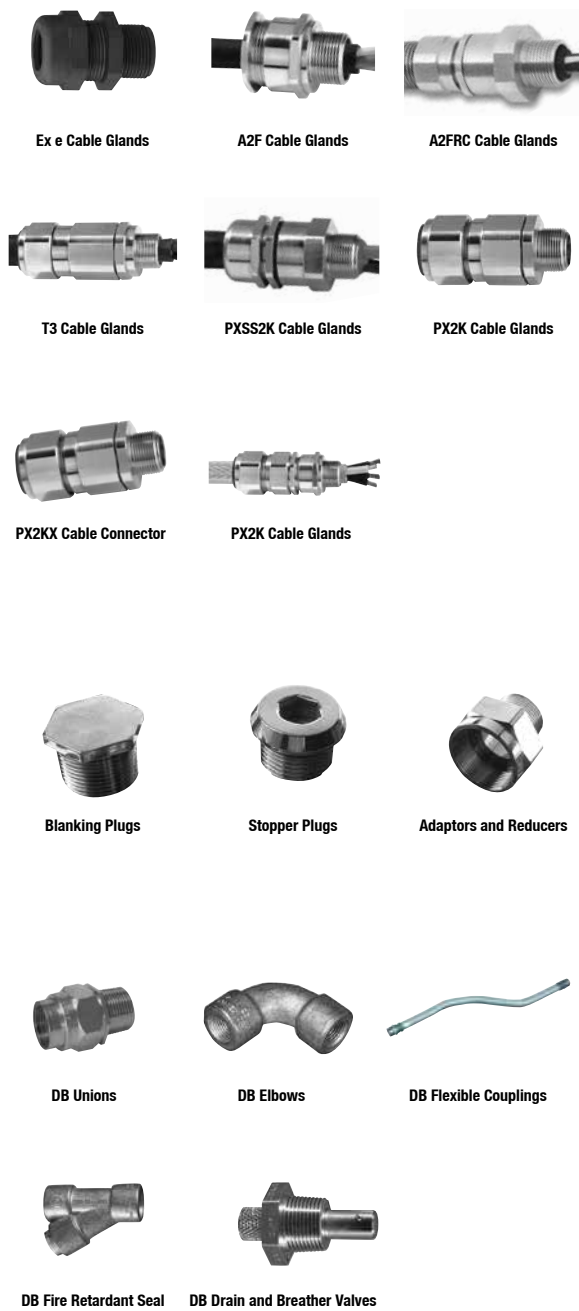
CUSTOM SWITCHRACKS

Notes

Notes

Fittings

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FITTINGS

Fittings

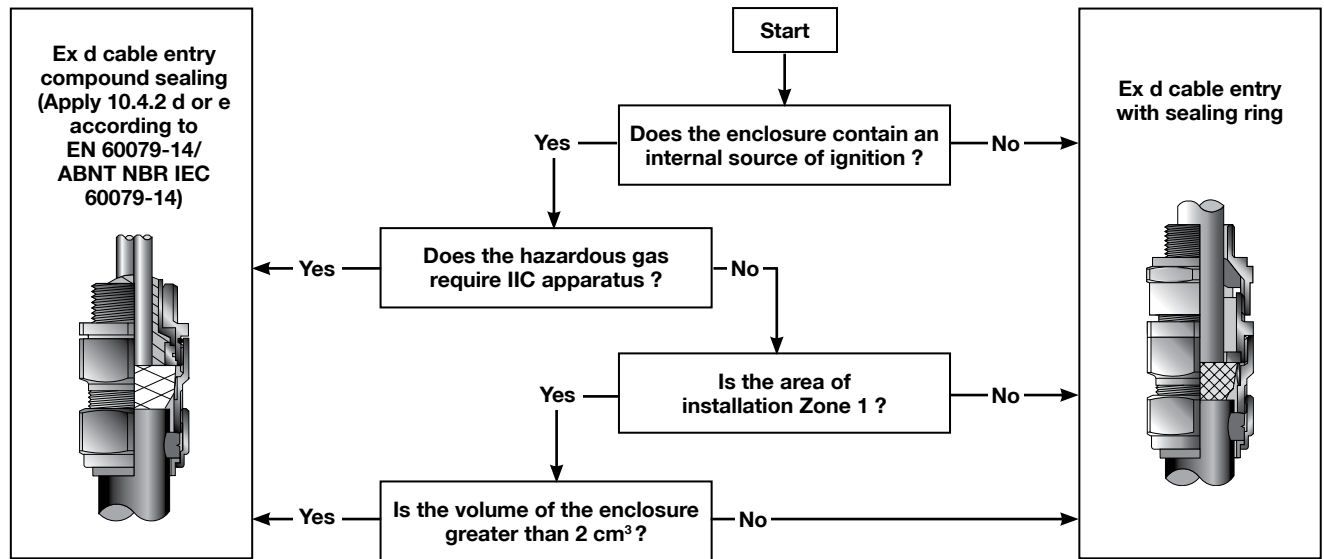
Cable Gland Selection Guide

Selection Chart – Certifications

Type		Series	Material	Non-Armored Cables	Armored Cables		
					Wire	Braid	Tape
Neoprene Seal	"e" or "i"	Ex e	Polyamide	Yes			
Elastomer Seal	"d" and "e"	A2F	Brass, fully nickel plated / Stainless Steel	Yes			
		E1FX	Brass, fully nickel plated			Yes	Yes
		E1FW	Brass, fully nickel plated		Yes		
		E1FU	Brass, fully nickel plated		Yes	Yes	Yes
		T3	Brass, fully nickel plated		Yes	Yes	Yes
		TE1FU	Stainless Steel		Yes	Yes	Yes
Compound Seal	"d" and "e"	PX (PXSS2K)	Brass, fully nickel plated	Yes			
		PX2K	Brass, fully nickel plated		Yes	Yes	Yes
Liquid resin	"d" and "e"	PXSS2K-REX	Brass, fully nickel plated	Yes			
		PX2K-REX	Brass, fully nickel plated		Yes	Yes	Yes

Selection Guide

Selection of cable entry for Ex d flameproof enclosure according to electrical installations IEC 60079-14/ABNT NBR IEC 60079-14.



Note: Cable must be substantially compact and circular with an extruding bedding, and if any filters are used they are Non-Hygroscopic.

Ex e Series Polyamide Cable Glands

For Unarmored Cables

Increased Safety and Restricted Breathing or Weatherproof IP68

Zone 1 and 2, Zone 21 and 22
Gas (G) and Dust (D)

Applications

- Ex e Certified
 - For non-armored cables certified for enclosures with the following protection modes:
 - Ex e Increased safety
 - Ex nR Restricted breathing
 - D Dust environment
 - Hazardous areas (gas and dust)
 - On-shore and off-shore
- Weatherproof IP68 or Ex i
 - For non-armored cables for intrinsic safety Ex i applications in hazardous areas (Gas and Dust).

Features

- Ex e Certified
 - Black polyamide body
 - Weatherproof elastomer gasket
 - Supplied with sealing gasket
- Weatherproof IP68 or Ex i
 - Blue polyamide body Ral 5012
 - Supplied with polyamide clamping ring
 - Weatherproof elastomer gasket
 - Supplied with sealing gasket

Materials

- Ex e Certified
 - Body: polyamide
 - Weatherproof gasket: thermoplastic elastomer
 - Entry thread seal: neoprene
- Weatherproof IP68 or Ex i
 - Body: polyamide
 - Weatherproof gasket: thermoplastic elastomer
 - Entry thread seal: neoprene

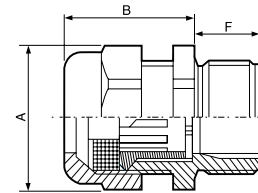


Ex e Certified



Weatherproof IP68

Dimensions in Millimeters



Certifications

ATEX Certification

- Certification Type EEx e
 - Gas, Zones 1 et 2
 - Type of Protection: Ex eb IIC
 - Dust, Zones 21 and 22
 - Type of Protection: Ex tb IIIC
 - Conforming to ATEX 94/9/CE: Ⓢ II 2 GD
 - Ambient Temperature: -20 °C to +55 °C
 - CE Declaration of Conformity: 50233
 - ATEX Certificate: LCIE 99 ATEX 6030X
 - Index of Protection according EN/IEC 60529: IP66 (Ex e version), IP68 (Weatherproof)

INMETRO Certification

- INMETRO Certificate: BR 230662-X

Metric Thread	Thread Pitch mm	Cable Capacity mm		Across Flats mm A	Gland Length mm B	Thread Length mm F	Weight kg	Volume dm ³	Catalog Number ①	Pack
		Min.	Max.							
Ex e Certified										
M16	1.5	3.0	8.5	19.0	24.0	15.0	0.015	0.160	095756	10
M20	1.5	6.5	14.5	27.0	30.0	15.0	0.021	0.160	095605	10
M25	1.5	8.0	18.5	33.0	33.0	15.0	0.032	0.160	095606	10
M32	1.5	10.0	25.0	42.0	43.0	15.0	0.061	0.440	095757	10
M40	1.5	24.0	34.0	55.0	47.0	15.0	0.072	0.072	095758	1
M50	1.5	28.0	42.0	65.0	49.0	15.0	0.124	0.072	095759	1
Weatherproof IP68										
M16	1.5	2.5	8.0	19.0	27.0	15.0	0.013	0.160	095800	10
M20	1.5	5.0	12.0	24.0	30.0	15.0	0.017	0.160	095801	10
M25	1.5	7.0	14.0	27.0	35.0	15.0	0.020	0.160	095802	10
M32	1.5	14.0	25.0	42.0	42.0	15.0	0.051	0.440	095803	10
M40	1.5	18.0	32.0	53.0	52.0	15.0	0.072	0.072	095804	1
M50	1.5	24.0	38.5	60.0	55.0	15.0	0.100	0.072	095805	1

① For Locknut, see Cable Gland Accessories section.

Shaded catalog numbers are normally stocked items. All other items are made to order.

A2F Series Nickel Plated Brass Cable Glands

For Unarmored Cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

Applications

- Cable glands for unarmored cable certified for enclosures with the following protection modes:
 - Ex d flameproof IIB or IIC
 - Ex e increased safety
 - Ex nR restricted breathing
 - D dust environment
- Hazardous areas (gas and dust)
- Onshore and offshore.

Features

- Elastomer displacement seal for unarmored cable provides a combined flameproof and weatherproof seal on the outer sheath of the cable.

Standard Materials

- Body: nickel plated brass.
- Seal: LSF (Low Smoke Fume) Halogen Free thermoset elastomer.

Options

- 316L stainless steel version: replace last digit 5 with 4
- Aluminum: replace last digit 5 with 1
- Shroud, locknut, earth tag, entry thread seal, serrated washers, adaptors and reducers: see *Cable Gland Accessories* pages

ATEX/IECEX Certifications and Compliances

- Certification Type A2F**
 - Gas: Zones 1 and 2
 - Type of Protection: Ex d IIC Gb, Ex e IIC Gb, Ex nR IIC Gc
 - Dust: Zone 20
 - Type of Protection: Ex ta IIIC Da
 - Conforming to ATEX 94/9/CE: Ⓢ II 2G 3G 1D
 - Ambient Temperature: -60 °C to +130 °C
 - CE Declaration of Conformity: DC07001
 - ATEX Certificate: Sira 13ATEX1068X, Sira 13ATEX4074X
 - IECEX Certificate: IECEX SIR 13.0023X, IECEX SIM 14.0006
 - Other Certifications: CSA, KCC, CCOE/PESO (India)
 - Marine Approval: LLOYDS, DNV, ABS
 - Index of Protection according EN/IEC 60529: IP66, IP67, IP68
 - Deluge Protection Compliance: DTS01:91

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Fittings

Cable Gland Size	Metric Thread C	Catalog Numbers				
		Standard Metric ①	Standard NPT Thread C	Standard NPT ①	Optional NPT Thread C	Optional NPT Thread ①
20S/16	M20	2016A2F5	1/2"	2016A2F0505	3/4"	2016A2F0755
20S	M20	20SA2F5	1/2"	20SA2F0505	3/4"	20SA2F0755
20	M20	20A2F5	1/2"	20A2F0505	3/4"	20A2F0755
25	M25	25A2F5	3/4"	25A2F0755	1"	25A2F1005
32	M32	32A2F5	1"	32A2F1005	1-1/4"	32A2F1255
40	M40	40A2F5	1-1/4"	40A2F1255	1-1/2"	40A2F1505
50S	M50	50SA2F5	1-1/2"	50SA2F1505	2"	50SA2F2005
50	M50	50A2F5	2"	50A2F2005	2-1/2"	50A2F2505
63S	M63	63SA2F5	2"	63SA2F2005	2-1/2"	63SA2F2505
63	M63	63A2F5	2-1/2"	63A2F2505	3"	63A2F3005
75S	M75	75SA2F5	2-1/2"	75SA2F2505	3"	75SA2F3005
75	M75	75A2F5	3"	75A2F3005	3-1/2"	75A2F3505
90	M90	90A2F5	3-1/2"	90A2F3505	4"	90A2F4005
100	M100	100A2F5	4"	100A2F4005	5"	100A2F5005
115	M115	115A2F5	4"	115A2F4005	5"	115A2F5005
130	M130	130A2F5	5"	130A2F5005	6"	130A2F6005

① Entry thread seal not supplied, see *Cable Gland Accessories and Tools*.

Shaded catalog numbers are normally stocked items. All other items are made to order.

A2F Series Nickel Plated Brass Cable Glands

For Unarmored Cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

INMETRO Certification

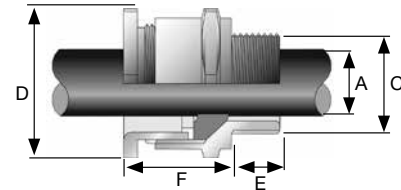
- INMETRO Certificate: TÜV 12.0619X

EURASEC Certification

- TC RU C-GB.ГБ.05.B.00138



Dimensions in Millimeters



Cable Gland Size	Thread Length (Metric) mm E	Thread Length (NPT) mm E	Overall Cable Diameter mm A		Across Flats mm D Max	Across Corners mm D Max	Protrusion Length mm F	PVC Shroud Reference	Cable Gland Weight kg
			Min	Max					
20S/16	15.0	19.9	3.2	8.7	24.0	26.4	25.1	PVC04	0.07
20S	15.0	19.9	6.1	11.7	24.0	26.4	25.1	PVC04	0.06
20	15.0	19.9	6.5	14.0	27.0	29.7	27.2	PVC05	0.07
25	15.0	20.2	11.1	20.0	36.0	39.6	35.5	PVC09	0.13
32	15.0	25.0	17.0	26.3	41.0	45.1	34.2	PVC10	0.15
40	15.0	25.6	23.5	32.2	50.0	55.0	35.1	PVC13	0.20
50S	15.0	26.1	31.0	38.2	55.0	60.5	32.0	PVC15	0.26
50	15.0	26.9	35.6	44.0	60.0	66.0	36.3	PVC18	0.27
63S	15.0	26.9	41.5	49.9	70.5	77.6	33.5	PVC21	0.43
63	15.0	39.9	47.2	55.9	75.0	82.5	35.8	PVC23	0.40
75S	15.0	39.9	54.0	61.9	80.0	88.0	34.2	PVC26	0.52
75	15.0	41.5	61.1	67.9	84.0	92.4	40.6	PVC26	0.50
90	24.0	42.8	66.6	79.9	108.0	118.8	58.3	PVC31	1.60
100	24.0	44.0	76.0	91.0	123.0	135.3	55.2	LSF33	1.78
115	24.0	44.0	86.0	97.9	133.4	146.7	65.2	LSF34	2.67
130	24.0	46.8	97.0	114.9	152.4	167.6	73.9	LSF35	3.80

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Fittings

E1FX Series Nickel Plated Brass Cable Gland

For Armored Cables (Braid, Tape)

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

Applications

- Cable gland for armored cables (braid, tape). See Options for tape with lead sheath version. Certified for enclosures with the following protection modes:
 - Ex d flameproof IIB or IIC
 - Ex e increased safety
 - Ex nR restricted breathing
 - D dust environment
- Hazardous areas (gas and dust)
- Onshore and offshore

Features

- Cable gland with elastomer seal for use in hazardous areas with braided and tape armor cable.
- The cable gland allows mechanical cable retention and earth continuity via cable armor termination.
- A detachable armor cone and AnyWay clamping ring arrangement facilitates remote make off and enables cable to be disconnected from the equipment.
- Inspection of the armor can be carried out while still maintaining the explosionproof protection mode of the enclosure.
- Sealing technique: inner displacement seal concept and LRS outer seal (load retention seal).

Standard Materials

- Body: nickel plated brass.
- Seal: LSF (Low Smoke Fume) Halogen Free thermoset elastomer.

Options

- Lead sheath version – Replace digit 1 with 2; Example: 32E1FX5 - 32E2FX5
- Aluminum: replace last digit 5 with 1
- Shroud, locknut, earth tag, entry thread seal, serrated washers, adaptors and reducers: see *Cable Gland Accessories* pages.

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Fittings

Cable Gland Size	Metric Thread C	Catalog Numbers				
		Standard Metric ^①	Standard NPT Thread C	Standard NPT ^①	Optional NPT Thread C	Optional NPT Thread ^①
20S16	M20	2016E1FX5	1/2"	2016E1FX0505	3/4"	2016E1FX0755
20S	M20	20SE1FX5	1/2"	20SE1FX0505	3/4"	20SE1FX0755
20	M20	20E1FX5	1/2"	20E1FX0505	3/4"	20E1FX0755
25S	M25	25SE1FX5	3/4"	25SE1FX0755	1"	25SE1FX1005
25	M25	25E1FX5	3/4"	25E1FX0755	1"	25E1FX1005
32	M32	32E1FX5	1"	32E1FX1005	1-1/4"	32E1FX1255
40	M40	40E1FX5	1-1/4"	40E1FX1255	1-1/2"	40E1FX1505
50S	M50	50SE1FX5	1-1/2"	50SE1FX1505	2"	50SE1FX2005
50	M50	50E1FX5	2"	50E1FX2005	2-1/2"	50E1FX2505
63S	M63	63SE1FX5	2"	63SE1FX2005	2-1/2"	63SE1FX2505
63	M63	63E1FX5	2-1/2"	63E1FX2505	3"	63E1FX3005
75S	M75	75SE1FX5	2-1/2"	75SE1FX2505	3"	75SE1FX3005
75	M75	75E1FX5	3"	75E1FX3005	3-1/2"	75E1FX3505
90	M90	90E1FX5	3-1/2"	90E1FX3505	4"	90E1FX4005
100	M100	100E1FX5	4"	100E1FX4005	5"	100E1FX5005
115	M115	115E1FX5	4"	115E1FX4005	5"	115E1FX5005
130	M130	130E1FX5	5"	130E1FX5005	6"	130E1FX6005

^① Entry thread seal not supplied, see *Cable Gland Accessories and Tools*.

Shaded catalog numbers are normally stocked items. All other items are made to order.

E1FX Series Nickel Plated Brass Cable Gland

For Armored Cables (Braid, Tape)

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

ATEX/IECEx Certifications and Compliances

- **Certification Type E1FX/Z - E2FX/Z**
 - Gas: Zones 1 and 2
 - Type of Protection: Ex d IIC Gb, Ex e IIC Gb, Ex nR IIC Gc
 - Dust: Zone 20
 - Type of Protection: Ex ta IIIC Da
 - Conforming to ATEX 94/9/CE: Ⓢ II 2G 3G 1D
 - Ambient Temperature: -60 °C to +130 °C
 - CE Declaration of Conformity: DC07001
 - ATEX Certificate: Sira 13ATEX1071X, Sira 13ATEX4077X
 - IECEx Certificate: IECEx SIR 13.0026X, IECEx SIM 14.0007X
 - Other Certifications: cCSAus, KCC, CCOE/PESO (india)
 - Marine Approval: LLOYDS, DNV, ABS
 - Index of Protection according EN/IEC 60529: IP66
 - Deluge Protection Compliance: DTS01:91 (option available on request only)

INMETRO Certification

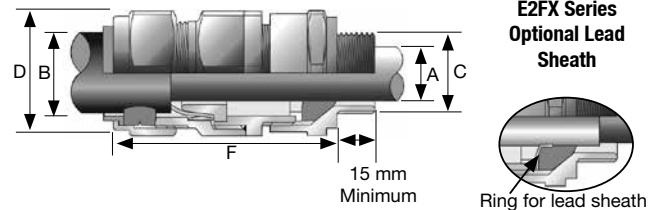
- INMETRO Certificate: TUV 12.0618X

EURASEC Certification

- TC RU C-GB.ГБ.05.В.00138



Dimensions in Millimeters



Cable Gland Size	Cable Bedding Diameter mm A		Overall Cable Diameter mm B		Across Corners mm D	Across Flats mm D	Protrusion Length mm F	PVC Shroud Reference	Cable Gland Weight kg
	Min	Max	Min	Max					
20S16	3.1	8.6	6.1	13.1	26.4	24.0	72.5	PVC36	0.16
20S	6.1	11.6	9.5	15.9	26.4	24.0	70.0	PVC36	0.15
20	6.5	13.9	12.5	20.9	33.6	30.5	73.0	PVC06	0.21
25S	11.1	19.9	14.0	22.0	41.3	37.5	89.0	PVC09	0.33
25	11.1	19.9	18.2	26.2	41.3	37.5	89.0	PVC09	0.33
32	17.0	26.2	23.7	33.9	50.6	46.0	86.0	PVC11	0.43
40	22.0	32.1	27.9	40.4	60.5	55.0	90.0	PVC15	0.62
50S	29.5	38.1	35.2	46.7	66.0	60.0	91.0	PVC18	0.75
50	35.6	44.0	40.4	53.0	77.1	70.1	95.0	PVC21	0.95
63S	40.1	49.9	45.6	59.4	82.5	75.0	102.0	PVC23	1.34
63	47.2	55.9	54.6	65.8	88.0	80.0	104.0	PVC25	1.34
75S	52.8	61.9	59.0	72.0	99.0	90.0	115.0	PVC28	2.11
75	59.1	67.9	66.7	78.4	110.0	100.0	117.0	PVC30	2.42
90	66.6	78.6	76.2	90.3	125.4	114.3	147.0	PVC32	4.21
100	76.0	90.9	86.1	101.4	135.3	123.0	140.0	LSF33	4.45
115	86.0	97.9	101.5	110.2	146.7	133.4	162.0	LSF34	6.19
130	97.0	114.9	110.2	123.3	167.6	152.4	174.0	LSF35	8.34

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Fittings

E1FW Series Nickel Plated Brass Cable Glands

For Armored Cables (SWA - Single Wire Armour)

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

Applications

- Cable gland for Single Wire Armored cables (SWA with wire and lead sheath) certified for enclosures with the following protection modes:
 - Ex d flameproof IIB or IIC
 - Ex e increased safety
 - Ex nR restricted breathing
 - D dust environment
- Hazardous areas (gas and dust).
- Onshore and offshore.

Features

- Cable gland with elastomer seal for use in hazardous areas with Single Wire Armor (SWA) cable.
- The cable gland allows mechanical cable retention and earth continuity via cable armor termination.
- A detachable armor cone and AnyWay clamping ring arrangement facilitates remote make off and enables cable to be disconnected from the equipment.
- Inspection of the armor can be carried out while still maintaining the protection mode of the enclosure.
- Sealing technique: inner displacement seal concept and LRS outer seal (load retention seal).

Standard Materials

- Body: nickel plated brass.
- Seal: LSF (Low Smoke Fume) Halogen Free thermoset elastomer.

Options

- Lead sheath version [Ⓢ] – Replace digit E1 with E2; Example: 32E1FW5 - 32E2FW5
- Aluminum: replace last digit 5 with 1
- Shroud, locknut, earth tag, entry thread seal, serrated washers, adaptors and reducers: see *Cable Gland Accessories* pages.

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Fittings

Cable Gland Size	Metric Thread C	Catalog Numbers				
		Standard Metric ^①	Standard NPT Thread C	Standard NPT ^①	Optional NPT Thread C	Optional NPT ^①
20S16	M20	2016E1FW5	1/2"	2016E1FW0505	3/4"	2016E1FW0755
20S	M20	20SE1FW5	1/2"	20SE1FW0505	3/4"	20SE1FW0755
20	M20	20E1FW5	1/2"	20E1FW0505	3/4"	20E1FW0755
25S	M25	25SE1FW5	3/4"	25SE1FW0755	1"	25SE1FW1005
25	M25	25E1FW5	3/4"	25E1FW0755	1"	25E1FW1005
32	M32	32E1FW5	1"	32E1FW1005	1-1/4"	32E1FW1255
40	M40	40E1FW5	1-1/4"	40E1FW1255	1-1/2"	40E1FW1505
50S	M50	50SE1FW5	1-1/2"	50SE1FW1505	2"	50SE1FW2005
50	M50	50E1FW5	2"	50E1FW2005	2-1/2"	50E1FW2505
63S	M63	63SE1FW5	2"	63SE1FW2005	2-1/2"	63SE1FW2505
63	M63	63E1FW5	2-1/2"	63E1FW2505	3"	63E1FW3005
75S	M75	75SE1FW5	2-1/2"	75SE1FW2505	3"	75SE1FW3005
75	M75	75E1FW5	3"	75E1FW3005	3-1/2"	75E1FW3505
90	M90	90E1FW5	3-1/2"	90E1FW3505	4"	90E1FW4005
100	M100	100E1FW5	4"	100E1FW4005	5"	100E1FW5005
115	M115	115E1FW5	4"	115E1FW4005	5"	115E1FW5005
130	M130	130E1FW5	5"	130E1FW5005	6"	130E1FW6005

^① Entry thread seal not supplied, see *Cable Gland Accessories and Tools*.

Shaded catalog numbers are normally stocked items. All other items are made to order.

E1FW Series Nickel Plated Brass Cable Glands

For Armored Cables (SWA - Single Wire Armour)

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

ATEX/IECEx Certifications and Compliances

- **Certification Type E1FW/Z - E2FW/Z**
 - Gas: Zones 1 and 2
 - Type of Protection: Ex d IIC Gb, Ex e IIC Gb, Ex nR IIC Gc
 - Dust: Zone 20
 - Type of Protection: Ex ta IIIC Da
 - Conforming to ATEX 94/9/CE: Ⓢ II 2G 3G 1D
 - Ambient Temperature: -60 °C to +130 °C
 - CE Declaration of Conformity: DC07001
 - ATEX Certificate: Sira 13ATEX1071X, Sira 13ATEX4077X
 - IECEx Certificate: IECEx SIR 13.0026X, IECEx SIM 14.0007X
 - Other Certifications: cCSAus, KCC, CCOE/PESO (india)
 - Marine Approval: LLOYDS, DNV, ABS
 - Index of Protection according EN/IEC 60529: IP66
 - Deluge Protection Compliance: DTS01:91 (option available on request only)

INMETRO Certification

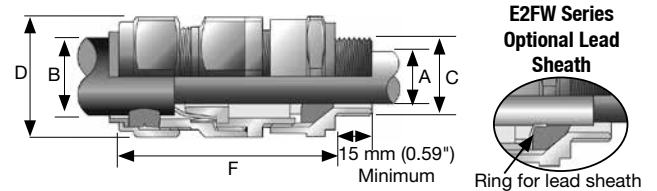
- INMETRO Certificate: TUV 12.0618X

EURASEC Certification

- TC RU C-GB.ГБ.05.В.00138



Dimensions in Millimeters



Cable Gland Size	Cable Bedding Diameter mm A		Outer Cable Capacity mm B		Across Corners mm D	Across Flats mm D	Protrusion Length mm F	Cable Gland Weight kg
	Min	Max	Min	Max				
20S16	3.1	8.6	6.1	13.1	26.4	24.0	72.5	0.16
20S	6.1	11.6	9.5	15.9	26.4	24.0	70.0	0.15
20	6.5	13.9	12.5	20.9	33.6	30.5	73.0	0.21
25S	11.1	19.9	14.0	22.0	41.3	37.5	89.0	0.33
25	11.1	19.9	18.2	26.2	41.3	37.5	89.0	0.33
32	17.0	26.2	23.7	33.9	50.6	46.0	86.0	0.43
40	22.0	32.1	27.9	40.4	60.5	55.0	90.0	0.62
50S	29.5	38.1	35.2	46.7	66.0	60.0	91.0	0.75
50	35.6	44.0	40.4	53.0	77.1	70.1	95.0	0.95
63S	40.1	49.9	45.6	59.4	82.5	75.0	102.0	1.34
63	47.2	55.9	54.6	65.8	88.0	80.0	104.0	1.34
75S	52.8	61.9	59.0	72.0	99.0	90.0	115.0	2.11
75	59.1	67.9	66.7	78.4	110.0	100.0	117.0	2.42
90	66.6	78.6	76.2	90.3	125.4	114.3	147.0	4.21
100	76.0	90.9	86.1	101.4	135.3	123.0	140.0	4.45
115	86.0	97.9	101.5	110.2	146.7	133.4	162.0	6.19
130	97.0	114.9	110.2	123.3	167.6	152.4	174.0	8.34

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Fittings

E1FU Series Triple Certified Cable Glands

For All Types of Armored Cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

Applications

- Cable gland certified for enclosures with the following protection modes:
 - Ex d flameproof IIB or IIC
 - Ex e increased safety
 - Ex nR restricted breathing
 - D dust environment
- Hazardous areas (gas and dust).
- Onshore and offshore.

Features

- Provides a flameproof (Type "d") seal on the cable inner bedding.
- Provides a gas tight seal permitting the compatibility of use with restricted breathing (Type "nR") equipment.
- Allows mechanical cable retention and earth continuity via the cable armor termination.
- Separate tightening actions for the inner
- The inner displacement seal and armor terminations are separate tightening actions providing maximum control over the pressure applied to the cable bedding.
- Reversible armor cone and AnyWay clamping ring arrangement facilitates remote make off and enables the cable to be disconnected from the equipment.

- Environmental/load retention seal is provided on the cable outer sheath.
- Stepped cone is suitable for SWA cables. Grooved cone is suitable for all other approved armored cables.
- Sealing technique: inner displacement seal concept and LRS outer seal (load retention seal).

Standard Materials

- Body: nickel plated brass.
- Seal: LSF (Low Smoke Fume) Halogen Free thermoset elastomer.

Options

- Aluminum: replace last digit 5 with 1
- Shroud, locknut, earth tag, entry thread seal, serrated washers, adaptors and reducers: see *Cable Gland Accessories* pages.

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Fittings

Cable Gland Size	Metric Thread C	Standard Metric ①	Catalog Numbers				Minimum Thread Length mm E	Cable Gland Weight kgs
			Standard NPT Thread C	Standard NPT ①	Optional NPT Thread C	Optional NPT Thread ①		
20S/16	M20	2016E1FU5	1/2"	2016E1FU0505	3/4"	2016E1FU0755	15.0	0.16
20S	M20	20SE1FU5	1/2"	20SE1FU0505	3/4"	20SE1FU0755	15.0	0.15
20	M20	20E1FU5	1/2"	20E1FU0505	3/4"	20E1FU0755	15.0	0.21
25S	M25	25SE1FU5	3/4"	25SE1FU0755	1"	25SE1FU1005	15.0	0.33
25	M25	25E1FU5	3/4"	25E1FU0755	1"	25E1FU1005	15.0	0.33
32	M32	32E1FU5	1"	32E1FU1005	1-1/4"	32E1FU1255	15.0	0.43
40	M40	40E1FU5	1-1/4"	40E1FU1255	1-1/2"	40E1FU1505	15.0	0.62
50S	M50	50SE1FU5	1-1/2"	50SE1FU1505	2"	50SE1FU2005	15.0	0.75
50	M50	50E1FU5	2"	50E1FU2005	2-1/2"	50E1FU2505	15.0	0.95
63S	M63	63SE1FU5	2"	63SE1FU2005	2-1/2"	63SE1FU2505	15.0	1.34
63	M63	63E1FU5	2-1/2"	63E1FU2505	3"	63E1FU3005	15.0	1.34
75S	M75	75SE1FU5	2-1/2"	75SE1FU2505	3"	75SE1FU3005	15.0	2.11
75	M75	75E1FU5	3"	75E1FU3005	3-1/2"	75E1FU3505	15.0	2.42
90	M90	90E1FU5	3-1/2"	90E1FU3505	4"	90E1FU4005	24.0	4.21
100	M100	100E1FU5	4"	100E1FU4005	5"	100E1FU5005	24.0	4.45
115	M115	115E1FU5	4"	115E1FU4005	5"	115E1FU5005	24.0	6.19
130	M130	130E1FU5	5"	130E1FU5005	6"	130E1FU6005	24.0	8.34

① Entry thread seal not supplied, see *Cable Gland Accessories and Tools*.

E1FU Series Triple Certified Cable Glands

For All Types of Armored Cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

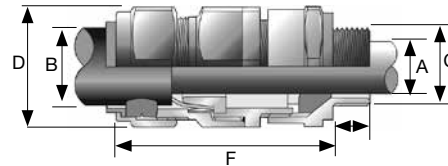
Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

ATEX/IECEx Certifications and Compliances

- **Certification Type E1FU**
 - Gas: Zones 1 and 2
 - Type of Protection: Ex d IIC Gb, Ex e IIC Gb, Ex nR IIC Gc
 - Dust: Zone 20
 - Type of Protection: Ex ta IIIC Da
 - Conforming to ATEX 94/9/CE: Ⓢ II 2G 3G 1D
 - Ambient Temperature: -60 °C to +130 °C
 - CE Declaration of Conformity: DC07001
 - ATEX Certificate: Sira 13ATEX1071X, Sira 13ATEX4077X
 - IECEx Certificate: IECEx SIR 13.0026X, IECEx SIM 14.0007X
 - Other Certifications: cCSAus, KCC, CCOE/PESO (india)
 - Marine Approval: LLOYDS, DNV, ABS
 - Index of Protection according EN/IEC 60529: IP66
 - Deluge Protection Compliance: DTS01:91 (option available on request only)



Dimensions in Millimeters



IINMETRO Certification

- IINMETRO Certificate: TUV 12.0618X

EURASEC Certification

- TC RU C-GB.ГБ.05.В.00138

Cable Gland Size	Cable Bedding Diameter mm A		Overall Cable Diameter mm B		Across Flats mm D	Across Corners mm D	Nominal Protrusion Length mm F	PVC Shroud Reference
	Min	Max	Min	Max				
20S/16	3.1	8.6	6.1	13.1	24.0	26.4	72.5	PVC36
20S	6.1	11.6	9.5	15.9	24.0	26.4	70.0	PVC36
20	6.5	13.9	12.5	20.9	30.5	33.6	73.0	PVC06
25S	11.1	19.9	14.0	22.0	37.5	41.3	89.0	PVC09
25	11.1	19.9	18.2	26.2	37.5	41.3	89.0	PVC09
32	17.0	26.2	23.7	33.9	46.0	50.6	86.0	PVC11
40	22.0	32.1	27.9	40.4	55.0	60.5	90.0	PVC15
50S	29.5	38.1	35.2	46.7	60.0	66.0	91.0	PVC18
50	35.6	44.0	40.4	53.0	70.1	77.1	95.0	PVC21
63S	40.1	49.9	45.6	59.4	75.0	82.5	102.0	PVC23
63	47.2	55.9	54.6	65.8	80.0	88.0	104.0	PVC25
75S	52.8	61.9	59.0	72.0	90.0	99.0	115.0	PVC28
75	59.1	67.9	66.7	78.4	100.0	110.0	117.0	PVC30
90	66.6	78.6	76.2	90.3	114.3	125.4	147.0	PVC32
100	76.0	90.9	86.1	101.4	123.0	135.3	140.0	LSF33
115	86.0	97.9	101.5	110.2	133.4	146.7	162.0	LSF34
130	97.0	114.9	110.2	123.2	152.4	167.6	174.0	LSF35

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Fittings

T3 Series Nickel Plated Brass Cable Glands

For all Types of Armored Cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

Applications

- Cable gland for all types of armored cable certified for enclosures with the following protection modes:
 - Ex d flameproof IIB or IIC.
 - Ex e increased safety.
 - Ex nR restricted breathing.
 - Ex d flameproof.
- Hazardous areas (gas and dust).
- Onshore and offshore.

Features

- Cable gland with elastomer seal for use in hazardous areas with all types of armored cable.
- This product utilizes a unique Compensating Displacement Seal (CDS) system which provides full compatibility with restricted breathing equipment.
- The CDS system is designed to alleviate any pressure on soft bedded cables.
- The cable gland allows mechanical cable retention and earth continuity via armor termination.
- A reversible armor cone and AnyWay universal clamping ring arrangement allows the cable to be easily disconnected from equipment.

- The cable gland is IP66/68 rated with deluge protection to DTS01: 91.
- Inspection of the armor can be carried out while still maintaining the protection mode of the enclosure.
- Sealing Technique : Inner Displacement Seal and LRS (load retention seal) outer seal.

Standard Materials

- Body: nickel plated brass.
- Seal: LSF (Low Smoke Fume) Halogen Free thermoset elastomer.

Options

- 316L stainless steel version: replace last digit **5** with **4**
- Lead sheath version: replace **T3** with **T3PB**
- Aluminum: replace last digit **5** with **1**
- Shroud, locknut, earth tag, entry thread seal, serrated washers, adaptors and reducers: see *Cable Gland Accessories* pages.

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Fittings

Cable Gland Size	Metric Thread C	Standard Metric ①	Standard NPT Thread C	Catalog Numbers			Minimum Thread Length mm E
				Standard NPT ①	Optional NPT Thread C	Optional NPT Thread ①	
20S16	M20	2016T35	1/2"	2016T30505	3/4"	2016T30755	15.0
20S	M20	20ST35	1/2"	20ST30505	3/4"	20ST30755	15.0
20	M20	20T35	1/2"	20T30505	3/4"	20T30755	15.0
25S	M25	25ST35	3/4"	25ST30755	1"	25ST31005	15.0
25	M25	25T35	3/4"	25T30755	1"	25T31005	15.0
32	M32	32T35	1"	32T31005	1-1/4"	32T31255	15.0
40	M40	40T35	1-1/4"	40T31255	1-1/2"	40T31505	15.0
50S	M50	50ST35	1-1/2"	50ST31505	2"	50ST32005	15.0
50	M50	50T35	2"	50T32005	2-1/2"	50T32505	15.0
63S	M63	63ST35	2"	63ST32005	2-1/2"	63ST32505	15.0
63	M63	63T35	2-1/2"	63T32505	3"	63T33005	15.0
75S	M75	75ST35	2-1/2"	75ST32505	3"	75ST33005	15.0
75	M75	75T35	3"	75T33005	3-1/2"	75T33505	24.0
90	M90	90T35	3-1/2"	90T33505	4"	90T34005	24.0
100	M100	100T35	4"	100T34005	5"	100T35005	24.0
115	M115	115T35	4"	115T34005	5"	115T35005	24.0
130	M130	130T35	5"	130T35005	6"	130T36005	24.0

① Entry thread seal not supplied, see *Cable Gland Accessories and Tools*.

Shaded catalog numbers are normally stocked items. All other items are made to order.

T3 Series Nickel Plated Brass Cable Glands

For all Types of Armored Cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

ATEX/IECEx Certifications and Compliances

- **Certification Type T3CDS**
 - Gas: Zones 1 and 2
 - Type of Protection: Ex d IIC Gb, Ex e IIC Gb, Ex nR IIC Gc
 - Dust: Zone 20
 - Type of Protection: Ex ta IIIC Da
 - Conforming to ATEX 94/9/CE: Ⓢ II 2G 3G 1D
 - Ambient Temperature: -60 °C to +130 °C
 - CE Declaration of Conformity: DC07001
 - ATEX Certificate: Sira 13ATEX1073X, Sira 13ATEX4079X
 - IECEx Certificate: IECEx SIR 13.0028X, IECEx SIM 14.0007X
 - Other Certifications: cCSAus, UL, CCOE/PESO (india)
 - Marine Approval: LLOYDS, DNV, ABS
 - Index of Protection according EN/IEC 60529: IP66, IP67, IP68
 - Deluge Protection Compliance: DTS01:91

INMETRO Certification

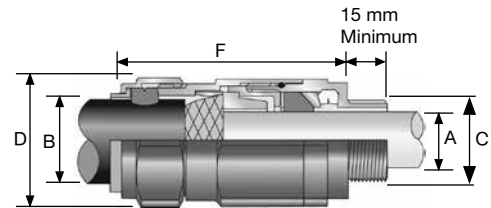
- INMETRO Certificate: TÜV 11.0374X

EURASEC Certification

- TC RU C-GB.ГБ.05.B.00138



Dimensions in Millimeters



Cable Gland Size	Cable Bedding Diameter mm A		Overall Cable Diameter mm B		Across Corners mm D	Across Flats mm D	Protrusion Length mm F	Cable Gland Weight kg
	Min	Max	Min	Max				
20S16	3.1	8.6	6.1	13.1	26.4	24.0	78.7	0.20
20S	6.1	11.6	9.5	15.9	26.4	24.0	78.7	0.20
20	6.5	13.9	12.5	20.9	33.6	30.5	76.2	0.28
25S	11.1	19.9	14.0	22.0	41.3	37.5	88.8	0.44
25	11.1	19.9	18.2	26.2	41.3	37.5	88.7	0.44
32	17.0	26.2	23.7	33.9	50.6	46.0	90.7	0.63
40	22.0	32.1	27.9	40.4	60.5	55.0	93.2	0.91
50S	29.5	38.1	35.2	46.7	66.0	60.0	100.7	1.12
50	35.6	44.0	40.4	53.0	77.1	70.1	105.8	1.60
63S	40.1	49.9	45.6	59.4	82.5	75.0	102.5	1.73
63	47.2	55.9	54.6	65.8	88.0	80.0	105.4	1.78
75S	52.8	61.9	59.0	72.0	99.0	90.0	110.6	2.57
75	59.1	67.9	66.7	78.4	110.0	100.0	120.3	3.33
90	66.6	78.6	76.2	90.3	126.5	115.0	138.9	4.87
100	76.0	90.9	86.1	101.4	139.7	127.0	128.2	4.97
115	86.0	97.9	101.5	110.2	151.8	138.0	161.3	7.72
130	97.0	114.9	110.2	123.2	172.7	157.0	173.3	9.78

PX (PXSS2K) Series Compound Barrier Type Cable Glands

For Unarmored Cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

Applications

- Cable gland for all types of armored cable certified for enclosures with the following protection modes:
 - Ex d flameproof IIB or IIC (as per §10.4.2 of IEC 60079-14)
 - Ex e increased safety.
 - Ex nR restricted breathing.
 - Ex d flameproof.
- Hazardous areas (gas and dust).
- Onshore and offshore.

Features

- Connector provides an environmental seal on the cable jacket and an explosionproof compound barrier seal around the cable inner cores.
- The connector is UL Listed for NPT or Metric entry threads.
- Continuous operating temperature -60 °C to +85 °C.
- Sealing technique: displacement seal concept.
- Sealing area(s): inner compound barrier and outer sheath.

Standard Materials

- Connector: brass fully nickel plated.
- Seal: LSF (Low Smoke Fume) Halogen Free thermoset elastomer.
- Epoxy putty.

Options

- Aluminum: replace last digit suffix **5** with **1**
- 316L stainless steel: replace last digit suffix **5** with **4**
- Shroud, locknut, earth tag, entry thread seal, serrated washers, adaptors and reducers: see *Cable Gland Accessories* pages.

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Fittings

Cable Gland Size	Metric Thread C	Standard Metric ①	Catalog Numbers				Minimum Thread Length mm E	Maximum Number of Cores
			Standard NPT Thread C	Standard NPT ①	Optional NPT Thread C	Optional NPT Thread ①		
20S16	M20	2016PX5	1/2"	2016PX0505	3/4"	2016PX0755	15.0	11
20S	M20	20SPX5	1/2"	20SPX0505	3/4"	20SPX0755	15.0	11
20	M20	20PX5	1/2"	20PX0505	3/4"	20PX0755	15.0	11
25	M25	25PX5	3/4"	25PX0755	1"	25PX1005	15.0	21
32	M32	32PX5	1"	32PX1005	1-1/4"	32PX1255	15.0	38
40	M40	40PX5	1-1/4"	40PX1255	1-1/2"	40PX1505	15.0	59
50S	M50	50SPX5	1-1/2"	50SPX1505	2"	50SPX2005	15.0	89
50	M50	50PX5	2"	50PX2005	2-1/2"	50PX2505	15.0	89
63S	M63	63SPX5	2"	63SPX2005	2-1/2"	63SPX2505	15.0	115
63	M63	63PX5	2-1/2"	63PX2505	3"	63PX3005	15.0	115
75S	M75	75SPX5	2-1/2"	75SPX2505	3"	75SPX3005	15.0	140
75	M75	75PX5	3"	75PX3005	3-1/2"	75PX3505	15.0	140
90	M90	90PX5	3-1/2"	90PX3505	4"	90PX4005	24.0	200
100	M100	100PX5	4"	100PX4005	5"	100PX5005	24.0	200

① Entry thread seal not supplied, see *Cable Gland Accessories and Tools*.

Shaded catalog numbers are normally stocked items. All other items are made to order.

PX (PXSS2K) Series Compound Barrier Type Cable Glands

For Unarmored Cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

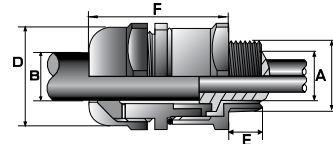
Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

ATEX/IECEx Certifications and Compliances

- **Certification Type PXSS2K**
 - Gas: Zones 1 and 2
 - Type of Protection: Ex d IIC Gb, Ex e IIC Gb, Ex nR IIC Gc
 - Dust: Zone 20
 - Type of Protection: Ex ta IIIC Da
 - Conforming to ATEX 94/9/CE: Ⓢ II 2G 3G 1D
 - Ambient Temperature: -60 °C to +85 °C
 - CE Declaration of Conformity: DC07001
 - ATEX Certificate: Sira 13ATEX10712X, Sira 13ATEX4078X
 - IECEx Certificate: IECEx SIR 13.0027X, IECEx SIM 14.0008X
 - Other Certifications: cCSAus, UL, KCC, CCOE/PESO (india)
 - Marine Approval: LLOYDS, DNV, ABS
 - Index of Protection according EN/IEC 60529: IP66, IP67, IP68
 - Deluge Protection Compliance: DTS01:91



Dimensions in Millimeters



INMETRO Certification

- INMETRO Certificate: TUV 12.2073X

EURASEC Certification

- TC RU C-GB.ГБ.05.B.00138

Cable Gland Size	Maximum Diameter Over Conductors mm A	Overall Cable Diameter mm B		Across Flats mm D	Across Corners mm D	Protrusion Length mm F	PVC Shroud Reference	Cable Gland Weight kg
		Min	Max					
20S16	8.6	3.1	8.6	30.0	33.0	53.1	PVC06	0.20
20S	11.7	6.1	11.7	30.0	33.0	53.1	PVC06	0.20
20	12.6	6.5	14.0	30.0	33.0	54.2	PVC06	0.20
25	17.5	11.1	20.0	36.0	39.6	60.0	PVC09	0.33
32	23.6	17.0	26.3	41.0	45.1	61.1	PVC10	0.39
40	30.0	22.0	32.1	50.0	55.0	62.4	PVC13	0.56
50S	36.6	29.5	38.2	55.0	60.5	65.2	PVC15	0.66
50	41.0	35.6	44.0	60.0	66.0	67.6	PVC18	0.73
63S	47.9	40.1	49.9	70.1	77.1	71.1	PVC21	1.07
63	53.7	47.2	55.9	75.0	82.5	70.4	PVC23	1.06
75S	59.9	52.8	61.9	80.0	88.0	75.3	PVC25	1.30
75	64.3	59.1	67.9	85.0	93.5	74.9	PVC27	1.30
90	75.3	66.6	79.4	108.0	118.8	94.8	PVC31	3.02
100	85.6	76.0	90.9	123.0	135.3	86.3	LSF33	4.00

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Fittings

PXSS2K-REX Series Liquid Resin Barrier Type Cable Glands

For Unarmored Cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

Applications

- Cable gland for all types of armored cable certified for enclosures with the following protection modes:
 - Ex d flameproof IIB or IIC.
 - Ex e increased safety.
 - Ex nR restricted breathing.
 - Ex d flameproof.
- Hazardous areas (gas and dust).
- Onshore and offshore.

Features

- Utilizes RapidEx high speed liquid resin sealing compound included with each gland.
- The gland utilizes a liquid pour resin seal that vastly reduces installation time and associated costs. This solution is particularly effective on multicore cables where traditional compound is difficult and time consuming to apply.
- Connector provides an environmental seal on the cable jacket and an explosionproof liquid resin barrier seal around the cable inner cores.

- Continuous operating temperature -60 °C to +85 °C
- Sealing technique - displacement seal concept. Sealing area(s) - inner liquid resin barrier and outer sheath.
- Sealing technique: LRS outer seal (load retention seal).
- Sealing area(s): inner liquid resin barrier and outer sheath.

Standard Materials

- Connector: brass fully nickel plated.
- Seal: LSF (Low Smoke Fume) Halogen Free thermoset elastomer.
- High speed liquid resin sealing compound.

Options

- Aluminum: replace last digit 5 with 1
- 316L stainless steel: replace last digit 5 with 4 (available by quote only)
- Shroud, locknut, earth tag, entry thread seal, serrated washers, adaptors and reducers: see *Cable Gland Accessories* pages

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Fittings

Cable Gland Size	Metric Thread C	Standard Metric ①	Standard NPT Thread C	Standard NPT ①	Optional NPT Thread C	Optional NPT ①	Replacement Sealing Resin	Maximum Diameter Over Conductors mm A
20S/16	M20	2016PXREX5	1/2"	2016PXREX0505	3/4"	2016PXREX0755	RAPIDEX30	8.6
20S	M20	20SPXREX5	1/2"	20SPXREX0505	3/4"	20SPXREX0755	RAPIDEX30	11.7
20	M20	20PXREX5	1/2"	20PXREX0505	3/4"	20PXREX0755	RAPIDEX30	12.6
25	M25	25PXREX5	3/4"	25PXREX0755	1"	25PXREX1005	RAPIDEX30	17.5
32	M32	32PXREX5	1"	32PXREX1005	1-1/4"	32PXREX1255	RAPIDEX30	23.6
40	M40	40PXREX5	1-1/4"	40PXREX1255	1-1/2"	40PXREX1505	RAPIDEX30	30.0
50S	M50	50SPXREX5	1-1/2"	50SPXREX1505	2"	50SPXREX2005	RAPIDEX80	36.6
50	M50	50PXREX5	2"	50PXREX2005	2-1/2"	50PXREX2505	RAPIDEX80	41.0
63S	M63	63SPXREX5	2"	63SPXREX2005	2-1/2"	63SPXREX2505	2RAPIDEX80	47.9
63	M63	63PXREX5	2-1/2"	63PXREX2505	3"	63PXREX3005	3RAPIDEX80	53.7
75S	M75	75SPXREX5	2-1/2"	75SPXREX2505	3"	75SPXREX3005	3RAPIDEX80	59.9
75	M75	75PXREX5	3"	75PXREX3005	3-1/2"	75PXREX3505	3RAPIDEX80	64.3
90	M90	90PXREX5	3-1/2"	90PXREX3505	4"	90PXREX4005	3RAPIDEX80	75.3

① Entry thread seal not supplied, see *Cable Gland Accessories and Tools*.

PXSS2K-REX Series Liquid Resin Barrier Type Cable Glands

For Unarmored Cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

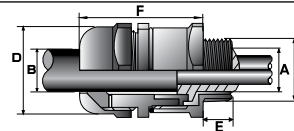
Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

ATEX/IECEx Certifications and Compliances

- **Certification Type PXSS2K-REX**
 - Gas: Zones 1 and 2
 - Type of Protection: Ex d IIC Gb, Ex e IIC Gb, Ex nR IIC Gc
 - Dust: Zone 20
 - Type of Protection: Ex ta IIIC Da
 - Conforming to ATEX 94/9/CE: Ⓜ II 2G 3G 1D
 - Ambient Temperature: -60 °C to +85 °C
 - CE Declaration of Conformity: DC07001
 - ATEX Certificate: Sira 13ATEX1072X, Sira 13ATEX4078X
 - IECEx Certificate: IECEx SIR 13.0027X, IECEx SIM 14.0008X
 - Other Certifications: cCSAus, CCOE/PESO (india)
 - Marine Approval: LLOYDS, DNV, ABS
 - Index of Protection according EN/IEC 60529: IP66, IP67, IP68
 - Deluge Protection Compliance: DTS01:91



Dimensions in Millimeters



INMETRO Certification

- INMETRO Certificate: TUV 12.2073X

EURASEC Certification

- TC RU C-GB.ГБ.05.B.00138

Cable Gland Size	Maximum Number of Cores	Maximum Cable Bedding Diameter mm G	Minimum Thread Length mm E	Cable Bedding Diameter mm B		Across Flats mm D	Across Corners mm D	Protrusion Length mm F	PVC Shroud Reference	Cable Gland Weight kg
				Min	Max					
20S/16	11	8.6	15.0	3.1	8.6	30.0	33.0	53.1	PVC06	0.20
20S	11	11.7	15.0	6.1	11.7	30.0	33.0	53.1	PVC06	0.20
20	11	12.9	15.0	6.5	14.0	30.0	33.0	54.2	PVC06	0.20
25	21	17.9	15.0	11.1	20.0	36.0	39.6	60.0	PVC09	0.33
32	38	23.9	15.0	17.0	26.3	41.0	45.1	61.1	PVC10	0.59
40	59	30.3	15.0	22.0	32.1	50.0	55.0	62.4	PVC13	0.56
50S	89	36.9	15.0	29.5	38.2	55.0	60.5	65.2	PVC15	0.66
50	89	41.3	15.0	35.6	44.0	60.0	66.0	67.6	PVC18	0.73
63S	115	48.4	15.0	40.1	49.9	70.0	77.0	71.1	PVC21	1.07
63	115	54.0	15.0	47.2	55.9	75.0	82.5	70.4	PVC23	1.06
75S	140	60.2	15.0	52.8	61.9	80.0	88.0	75.3	PVC25	1.30
75	140	64.2	24.0	59.1	67.9	85.0	93.5	74.9	PVC27	1.30
90	200	75.6	24.0	66.6	79.4	108.0	118.8	94.8	PVC31	3.02

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Fittings

PX2K Series Compound Barrier Seal Cable Glands

For all Types of Armored cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

Applications:

- Cable gland for all types of armored cables (braid, tape, wire and lead sheath version) certified for enclosures with the following protection modes:
 - Ex d flameproof IIB or IIC.
 - Ex e increased safety.
 - Ex nR restricted breathing.
 - D dust environment.
- Hazardous areas (gas and dust).
- Onshore and offshore.

Features

- Cable gland with compound barrier seal for use in hazardous areas with all types of armored cables (braid, tape and wire).
- The cable gland provides mechanical cable retention and earth continuity via cable armor termination.
- A combined detachable armor cone and compound tube, together with AnyWay universal clamping ring arrangement allows the cable to be easily disconnected from the equipment.
- The cable gland is IP66/68 and complies with deluge protection tests.
- The cable gland is supplied with epoxy resin and two detachable armor cones.
- Sealing technique: LRS outer seal (load retention seal).

Standard Materials

- Body: nickel plated brass
- Epoxy resin barrier compound
- Seal: LSF (Low Smoke Fume) Halogen Free thermoset elastomer.

Options

- 316L stainless steel version: replace last digit **5** with **4**
- Lead sheath version: Replace **PX2K** with **PX2KPB**
- Aluminum: replace last digit **5** with **1**
- Shroud, locknut, earth tag, entry thread seal, serrated washers, adaptors and reducers: see *Cable Gland Accessories* pages.

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Cable Gland Size	Metric Thread C	Catalog Numbers					Maximum Cable Bedding Diameter mm G	Minimum Thread Length mm E
		Standard Metric ①	Standard NPT Thread C	Standard NPT ①	Optional NPT Thread C	Optional NPT Thread ①		
20S16	M20	2016PX2K5	1/2"	2016PX2K0505	3/4"	2016PX2K0755	11.7	15.0
20S	M20	20SPX2K5	1/2"	20SPX2K0505	3/4"	20SPX2K0755	11.7	15.0
20	M20	20PX2K5	1/2"	20PX2K0505	3/4"	20PX2K0755	12.9	15.0
25S	M25	25SPX2K5	3/4"	25SPX2K0755	1"	25SPX2K1005	17.9	15.0
25	M25	25PX2K5	3/4"	25PX2K0755	1"	25PX2K1005	17.9	15.0
32	M32	32PX2K5	1"	32PX2K1005	1-1/4"	32PX2K1255	23.9	15.0
40	M40	40PX2K5	1-1/4"	40PX2K1255	1-1/2"	40PX2K1505	30.3	15.0
50S	M50	50SPX2K5	1-1/2"	50SPX2K1505	2"	50SPX2K2005	36.9	15.0
50	M50	50PX2K5	2"	50PX2K2005	2-1/2"	50PX2K2505	41.3	15.0
63S	M63	63SPX2K5	2"	63SPX2K2005	2-1/2"	63SPX2K2505	48.4	15.0
63	M63	63PX2K5	2-1/2"	63PX2K2505	3"	63PX2K3005	54.0	15.0
75S	M75	75SPX2K5	2-1/2"	75SPX2K2505	3"	75SPX2K3005	60.2	15.0
75	M75	75PX2K5	3"	75PX2K3005	3-1/2"	75PX2K3505	64.2	15.0
90	M90	90PX2K5	3-1/2"	90PX2K3505	4"	90PX2K4005	75.6	24.0
100	M100	100PX2K5	4"	100PX2K4005	5"	100PX2K5005	85.9	24.0

① Entry thread seal not supplied, see *Cable Gland Accessories and Tools*.

Fittings

PX2K Series Compound Barrier Seal Cable Glands

For all Types of Armored cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

ATEX/IECEx Certifications and Compliances

- **Certification Type PX2K**
 - Gas: Zones 1 and 2
 - Type of Protection: Ex d IIC Gb, Ex e IIC Gb, Ex nR IIC Gc
 - Dust: Zone 20
 - Type of Protection: Ex ta IIIC Da
 - Conforming to ATEX 94/9/CE: Ⓢ II 2G 3G 1D
 - Ambient Temperature: -60 °C to +85 °C
 - CE Declaration of Conformity: DC07001
 - ATEX Certificate: Sira 13ATEX1072X, Sira 13ATEX4078X
 - IECEx Certificate: IECEx SIR 13.0027X, IECEx SIM 14.0008X
 - Other Certifications: cCSAus, UL, KCC, CCOE/PESO (india)
 - Marine Approval: LLOYDS, DNV, ABS
 - Index of Protection according EN/IEC 60529: IP66, IP67, IP68
 - Deluge Protection Compliance: DTS01:91

INMETRO Certification

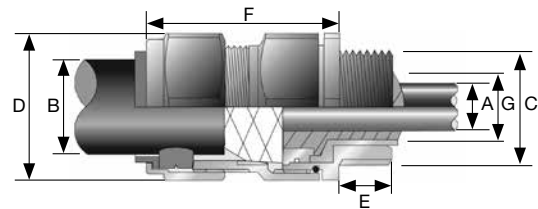
- INMETRO Certificate: TUV 12.2073X

EURASEC Certification

- TC RU C-GB.ГБ.05.B.00138



Dimensions in Millimeters



Cable Gland Size	Maximum Diameter Over Conductors mm A	Maximum Number of Cores	Overall Cable Diameter mm B		Across Flats mm D	Across Corners mm D	Protrusion Length mm F	Cable Gland Weight kg
			Min	Max				
20S16	11.7	11	6.1	13.1	30.5	33.6	62.0	0.24
20S	11.7	11	9.5	15.9	30.5	33.6	62.0	0.23
20	12.6	11	12.5	20.9	30.5	33.6	63.0	0.24
25S	17.5	21	14.0	22.0	37.5	41.3	69.5	0.37
25	17.5	21	18.2	26.2	37.5	41.3	69.5	0.37
32	23.6	38	23.7	33.9	46.0	50.6	75.0	0.57
40	30.0	59	27.9	40.4	55.0	60.5	75.0	0.80
50S	36.6	89	35.2	46.7	60.0	66.0	77.0	0.90
50	41.0	89	40.4	53.0	70.0	77.0	77.0	1.19
63S	47.9	115	45.6	59.4	75.0	82.5	79.7	1.39
63	53.7	115	54.6	65.8	80.0	88.0	80.3	1.41
75S	59.9	140	59.0	72.0	90.0	99.0	86.8	2.09
75	64.2	140	66.7	78.4	100.0	110.0	88.3	2.54
90	75.3	200	76.2	90.3	115.0	126.5	102.1	3.71
100	85.6	200	86.1	101.4	127.0	139.7	114.0	4.31

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Fittings

PX2K-REX Series Liquid Resin Barrier Type Cable Glands

For all Types of Armored cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

Applications

- Cable gland for all types of armored cables (braid, tape, wire and lead sheath version) certified for enclosures with the following protection modes:
 - Ex d flameproof IIB or IIC.
 - Ex e increased safety.
 - Ex nR restricted breathing.
 - D dust environment.
- Hazardous areas (gas and dust).
- Onshore and offshore.

Features

- Utilizes RapidEx high speed liquid resin sealing compound included with each gland.
- The gland utilizes a liquid pour resin seal, that vastly reduces installation time and associated costs. This solution is particularly effective on multicore cables where traditional compound is difficult and time consuming to apply.
- Connector provides an environmental seal on the cable outer jacket and an explosionproof liquid resin barrier seal around the cable inner cores.

- Connector provides mechanical cable retention and electrical continuity via armor termination.
- PX2K forms part of a comprehensive connector range for marine shipboard and IEE45 armored and jacketed cables.
- Sealing technique: LRS outer seal (load retention seal).

Standard Materials

- Connector: brass fully nickel plated.
- Seal: LSF (Low Smoke Fume) Halogen Free thermoset elastomer.
- High speed liquid resin sealing compound.

Options

- Aluminum: replace last digit **5** with **1**
- 316L stainless steel: replace last digit **5** with **4** (available by quote only)
- Shroud, locknut, earth tag, entry thread seal, serrated washers, adaptors and reducers: see *Cable Gland Accessories* pages.

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Fittings

Cable Gland Size	Metric Thread C	Thread Length (Metric) mm E	Catalog Numbers					
			Standard Metric ①	Standard NPT Thread C	Standard NPT ①	Optional NPT Thread C	Optional NPT ①	Replacement Sealing Resin
20S/16	M20	15.0	2016PX2KREX5	1/2"	2016PX2KRX505	3/4"	2016PX2KRX755	RAPIDEX30
20S	M20	15.0	20SPX2KREX5	1/2"	20SPX2KRX0505	3/4"	20SPX2KRX0755	RAPIDEX30
20	M20	15.0	20PX2KREX5	1/2"	20PX2KREX0505	3/4"	20PX2KREX0755	RAPIDEX30
25S	M25	15.0	25SPX2KREX5	3/4"	25SPX2KRX0755	1"	25SPX2KRX1005	RAPIDEX30
25	M25	15.0	25PX2KREX5	3/4"	25PX2KREX0755	1"	25PX2KREX1005	RAPIDEX30
32	M32	15.0	32PX2KREX5	1"	32PX2KREX1005	1-1/4"	32PX2KREX1255	RAPIDEX30
40	M40	15.0	40PX2KREX5	1-1/4"	40PX2KREX1255	1-1/2"	40PX2KREX1505	RAPIDEX30
50S	M50	15.0	50SPX2KREX5	1-1/2"	50SPX2KRX1505	2"	50SPX2KRX2005	RAPIDEX80
50	M50	15.0	50PX2KREX5	2"	50PX2KREX2005	2-1/2"	50PX2KREX2505	RAPIDEX80
63S	M63	15.0	63SPX2KREX5	2"	63SPX2KRX2005	2-1/2"	63SPX2KRX2505	2RAPIDEX80
63	M63	15.0	63PX2KREX5	2-1/2"	63PX2KREX2505	3"	63PX2KREX3005	2RAPIDEX80
75S	M75	15.0	75SPX2KREX5	2-1/2"	75SPX2KRX2505	3"	75SPX2KRX3005	2RAPIDEX80
75	M75	15.0	75PX2KREX5	3"	75PX2KREX3005	3-1/2"	75PX2KREX3505	3RAPIDEX80
90	M90	20.0	90PX2KREX5	3-1/2"	90PX2KREX3505	4"	90PX2KREX4005	3RAPIDEX80

① Entry thread seal not supplied, see *Cable Gland Accessories and Tools*.

PX2K-REX Series Liquid Resin Barrier Type Cable Glands

For all Types of Armored cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

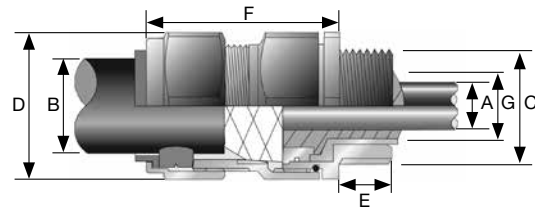
Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

ATEX/IECEx Certifications and Compliances

- **Certification Type PX2K REX**
 - Gas: Zones 1 and 2
 - Type of Protection: Ex d IIC Gb, Ex e IIC Gb, Ex nR IIC Gc
 - Dust: Zone 20
 - Type of Protection: Ex ta IIIC Da
 - Conforming to ATEX 94/9/CE: Ⓢ II 2G 3G 1D
 - Ambient Temperature: -60 °C to +85 °C
 - CE Declaration of Conformity: DC07001
 - ATEX Certificate: Sira 13ATEX1072X, Sira 13ATEX4078X
 - IECEx Certificate: IECEx SIR 13.0027X, IECEx SIM 14.0008X
 - Other Certifications: cCSAus, CCOE/PESO (india)
 - Marine Approval: LLOYDS, DNV, ABS
 - Index of Protection according EN/IEC 60529: IP66, IP67, IP68
 - Deluge Protection Compliance: DTS01:91



Dimensions in Millimeters



INMETRO Certification

- INMETRO Certificate: TUV 12.2073X

EURASEC Certification

- TC RU C-GB.ГБ.05.В.00138

Cable Gland Size	Maximum Diameter Over Conductors mm A	Overall Cable Diameter mm B		Maximum Cable Bedding Diameter mm G	Across Flats mm D	Across Corners mm D	Protrusion Length mm F	PVC Shroud Reference	Cable Gland Weight kg
		Min	Max						
20S/16	11.7	6.1	13.1	11.7	30.5	33.6	62.0	PVC06	0.24
20S	11.7	9.5	15.9	11.7	30.5	33.6	62.0	PVC06	0.23
20	12.6	12.5	20.9	12.9	30.5	33.6	63.0	PVC06	0.24
25S	17.5	14.0	22.0	17.9	37.5	41.3	69.5	PVC09	0.37
25	17.5	18.2	26.2	17.9	37.5	41.3	69.5	PVC09	0.37
32	23.6	23.7	33.9	23.9	46.0	50.6	75.0	PVC11	0.57
40	30.0	27.9	40.4	30.3	55.0	60.5	75.0	PVC15	0.80
50S	36.6	35.2	46.7	36.9	60.0	66.0	77.0	PVC18	0.90
50	41.0	40.4	53.0	41.3	70.0	77.0	77.0	PVC21	1.19
63S	47.9	45.6	59.4	48.4	75.0	82.5	79.7	PVC23	1.39
63	53.7	54.6	65.8	54.0	80.0	88.0	80.3	PVC25	1.41
75S	59.9	59.0	72.0	60.2	90.0	99.0	86.8	PVC28	2.09
75	64.2	66.7	78.4	64.2	100.0	110.0	88.3	PVC30	2.54
90	75.3	76.2	90.3	75.6	115.0	126.5	102.21	PVC32	3.71

ZONE 1 RATED NICKEL PLATED BRASS CABLE GLANDS

Fittings

A2F Series Stainless Steel Cable Glands

For Unarmored Cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

Applications

- Cable glands for unarmored cable certified for enclosures with the following protection modes:
 - Ex d flameproof IIB or IIC
 - Ex e increased safety
 - Ex nR restricted breathing
 - D dust environment
- Hazardous areas (gas and dust)
- Onshore and offshore

Features

- Elastomer displacement seal for unarmored cable provides a combined flameproof and weatherproof seal on the outer sheath of the cable.

Standard Materials

- Body: Stainless Steel.
- Seal: LSF (Low Smoke Fume) Halogen Free thermoset elastomer.

Options

- Nickel plated brass version: replace last digit 4 with 5
- Aluminum: replace last digit 4 with 1
- Shroud, locknut, earth tag, entry thread seal, serrated washers, adaptors and reducers: see *Cable Gland Accessories* pages

ATEX/IECEx Certifications and Compliances

- **Certification Type A2F**
 - Gas: Zones 1 and 2
 - Type of Protection: Ex d IIC Gb, Ex e IIC Gb, Ex nR IIC Gc
 - Dust: Zone 20
 - Type of Protection: Ex ta IIIC Da
 - Conforming to ATEX 94/9/CE: Ⓢ II 2G 3G 1D
 - Ambient Temperature: -60 °C to +130 °C
 - CE Declaration of Conformity: DC07001
 - ATEX Certificate: Sira 13ATEX1068X, Sira 13ATEX4074X
 - IECEx Certificate: IECEx SIR 13.0023X, IECEx SIM 14.0006
 - Other Certifications: CSA, KCC, CCOE/PESO (india)
 - Marine Approval: LLOYDS, DNV, ABS
 - Index of Protection according EN/IEC 60529: IP66, IP67, IP68
 - Deluge Protection Compliance: DTS01:91

ZONE 1 RATED STAINLESS STEEL CABLE GLANDS

Fittings

Cable Gland Size	Metric Thread C	Catalog Numbers				
		Standard Metric ①	Standard NPT Thread C	Standard NPT ①	Optional NPT Thread C	Optional NPT Thread ①
20S/16	M20	2016A2F4	1/2"	2016A2F0504	3/4"	2016A2F0754
20S	M20	20SA2F4	1/2"	20SA2F0504	3/4"	20SA2F0754
20	M20	20A2F4	1/2"	20A2F0504	3/4"	20A2F0754
25	M25	25A2F4	3/4"	25A2F0754	1"	25A2F1004
32	M32	32A2F4	1"	32A2F1004	1-1/4"	32A2F1254
40	M40	40A2F4	1-1/4"	40A2F1254	1-1/2"	40A2F1504
50S	M50	50SA2F4	1-1/2"	50SA2F1504	2"	50SA2F2004
50	M50	50A2F4	2"	50A2F2004	2-1/2"	50A2F2504
63S	M63	63SA2F4	2"	63SA2F2004	2-1/2"	63SA2F2504
63	M63	63A2F4	2-1/2"	63A2F2504	3"	63A2F3004
75S	M75	75SA2F4	2-1/2"	75SA2F2504	3"	75SA2F3004
75	M75	75A2F4	3"	75A2F3004	3-1/2"	75A2F3504
90	M90	90A2F4	3-1/2"	90A2F3504	4"	90A2F4004
100	M100	100A2F4	4"	100A2F4004	5"	100A2F5004
115	M115	115A2F4	4"	115A2F4004	5"	115A2F5004
130	M130	130A2F4	5"	130A2F5004	6"	130A2F6004

① Entry thread seal not supplied, see *Cable Gland Accessories and Tools*.

A2F Series Stainless Steel Cable Glands

For Unarmored Cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

INMETRO Certification

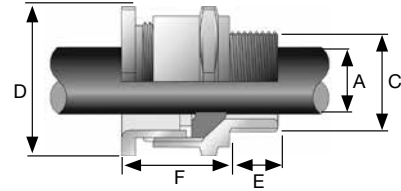
- INMETRO Certificate: TÜV 12.0619-X

EURASEC Certification

- TC RU C-GB.ГБ.05.В.00138



Dimensions in Millimeters



Cable Gland Size	Minimum Thread Length mm E	Overall Cable Diameter mm A		Across Flats mm D	Across Corners mm D	Protrusion Length mm F	PVC Shroud Reference	Cable Gland Weight kg
		Min	Max					
20S/16	15.0	3.3	8.64	22.1	24.13	21.08	PVC04	0.07
20S	15.0	6.1	11.68	22.1	24.13	21.08	PVC04	0.06
20	15.0	6.6	13.97	26.92	29.72	23.88	PVC05	0.07
25	15.0	11.18	20.07	36.07	39.62	25.91	PVC09	0.13
32	15.0	17.02	26.42	40.89	45.21	26.92	PVC10	0.15
40	15.0	23.62	32.26	45.97	50.55	27.94	PVC13	0.20
50S	15.0	30.99	38.1	55.12	60.45	28.96	PVC15	0.26
50	15.0	35.56	44.2	59.94	66.04	29.97	PVC18	0.27
63S	15.0	41.4	50.04	65.02	71.37	29.97	PVC21	0.43
63	15.0	47.24	55.88	70.1	76.96	29.97	PVC23	0.40
75S	15.0	54.1	61.98	80.01	88.65	32.0	PVC26	0.52
75	15.0	61.21	68.07	84.07	92.46	32.0	PVC26	0.50
90	24.0	66.55	80.01	107.95	120.65	43.94	PVC31	1.60
100	24.0	75.95	90.93	114.3	128.52	48.01	LSF33	1.78
115	24.0	86.11	98.04	131.57	146.05	55.12	LSF34	2.67
130	24.0	97.03	115.06	152.4	167.64	61.98	LSF35	3.80

ZONE 1 RATED STAINLESS STEEL CABLE GLANDS

Fittings

TE1FU Series Stainless Steel Cable Glands

For All Types of Armored Cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

Applications

- Cable gland certified for enclosures with the following protection modes:
 - Ex d flameproof IIB or IIC.
 - Ex e increased safety
 - Ex nR restricted breathing
 - D dust environment
- Hazardous areas (gas and dust).
- Onshore and offshore.

Features

- Provides a flameproof (Type "d") seal on the cable inner bedding.
- Provides a gas tight seal permitting the compatibility of use with restricted breathing (Type "nR") equipment.
- Allows mechanical cable retention and earth continuity via the cable armor termination.
- Separate tightening actions for the inner
- The inner displacement seal and armor terminations are separate tightening actions providing maximum control over the pressure applied to the cable bedding.

- Reversible armor cone and AnyWay clamping ring arrangement facilitates remote make off and enables the cable to be disconnected from the equipment.
- Environmental/load retention seal is provided on the cable outer sheath.
- Stepped cone is suitable for SWA cables. Grooved cone is suitable for all other approved armored cables.
- Sealing Technique : Inner Displacement Seal and LRS (load retention seal) outer seal.

Standard Materials

- Body: Stainless Steel.
- Seal: LSF (Low Smoke Fume) Halogen Free thermoset elastomer.

Options

- Aluminum: replace last digit 5 with 1
- Shroud, locknut, earth tag, entry thread seal, serrated washers, adaptors and reducers: see *Cable Gland Accessories* pages.

ZONE 1 RATED STAINLESS STEEL CABLE GLANDS

Fittings

Cable Gland Size	Metric Thread C	Standard Metric ①	Catalog Numbers				Minimum Thread Length mm E	Cable Gland Weight kgs
			Standard NPT Thread C	Standard NPT ①	Optional NPT Thread C	Optional NPT Thread ①		
20S/16	M20	2016TE1FU4	1/2"	2016TE1FU0504	3/4"	2016TE1FU0754	15.0	0.15
20S	M20	20STE1FU4	1/2"	20STE1FU0504	3/4"	20STE1FU0754	15.0	0.15
20	M20	20TE1FU4	1/2"	20TE1FU0504	3/4"	20TE1FU0754	15.0	0.23
25S	M25	25STE1FU4	3/4"	25STE1FU0754	1"	25STE1FU1004	15.0	0.34
25	M25	25TE1FU4	3/4"	25TE1FU0754	1"	25TE1FU1004	15.0	0.34
32	M32	32TE1FU4	1"	32TE1FU1004	1-1/4"	32TE1FU1254	15.0	0.55
40	M40	40TE1FU4	1-1/4"	40TE1FU1254	1-1/2"	40TE1FU1504	15.0	0.79
50S	M50	50STE1FU4	1-1/2"	50STE1FU1504	2"	50STE1FU2004	15.0	1.00
50	M50	50TE1FU4	2"	50TE1FU2004	2-1/2"	50TE1FU2504	15.0	1.37
63S	M63	63STE1FU4	2"	63STE1FU2004	2-1/2"	63STE1FU2504	15.0	1.50
63	M63	63TE1FU4	2-1/2"	63TE1FU2504	3"	63TE1FU3004	15.0	1.56
75S	M75	75STE1FU4	2-1/2"	75STE1FU2504	3"	75STE1FU3004	15.0	2.45
75	M75	75TE1FU4	3"	75TE1FU3004	3-1/2"	75TE1FU3504	15.0	3.15
90	M90	90TE1FU4	3-1/2"	90TE1FU3504	4"	90TE1FU4004	24.0	4.62
100	M100	100TE1FU4	4"	100TE1FU4004	5"	100TE1FU5004	24.0	4.95
115	M115	115TE1FU4	4"	115TE1FU4004	5"	115TE1FU5004	24.0	7.60
130	M130	130TE1FU4	5"	130TE1FU5004	6"	130TE1FU6004	24.0	8.73

① Entry thread seal not supplied, see *Cable Gland Accessories and Tools*.

TE1FU Series Stainless Steel Cable Glands

For All Types of Armored Cables

Increased Safety, Flameproof, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 20
Gas (G) and Dust (D)

ATEX/IECEx Certifications and Compliances

- **Certification Type TE1FU**
 - Gas: Zones 1 and 2
 - Type of Protection: Ex d IIC Gb, Ex e IIC Gb, Ex nR IIC Gc
 - Dust: Zone 20
 - Type of Protection: Ex ta IIIC Da
 - Conforming to ATEX 94/9/CE: Ⓜ II 2G 3G 1D
 - Ambient Temperature: -60 °C to +130 °C
 - CE Declaration of Conformity: DC07001
 - ATEX Certificate: Sira 13ATEX1073X, Sira 13ATEX4079X
 - IECEx Certificate: IECEx SIR 13.0028X, IECEx SIM 14.0007X
 - Other Certifications: LLOYDS, DNV, ABS
 - Index of Protection according EN/IEC 60529: IP66, IP67, IP68
 - Deluge Protection Compliance: DTS01:91

INMETRO Certification

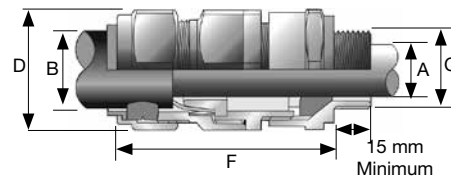
- INMETRO Certificate: TÜV 11.0374-X

EURASEC Certification

- EURASEC TC RU C-GB.ГБ05.B.00138



Dimensions in Millimeters



Cable Gland Size	Cable Bedding Diameter mm A		Overall Cable Diameter mm B		Across Flats mm D	Across Corners mm D	Protrusion Length mm F	PVC Shroud Reference
	Min	Max	Min	Max				
20S/16	3.1	8.6	6.1	13.1	24.0	26.4	57.3	PVC04
20S	6.1	11.6	9.5	15.9	24.0	26.4	57.3	PVC04
20	6.5	13.9	12.5	20.9	30.5	33.6	61.2	PVC06
25S	11.1	19.9	14.0	22.0	37.5	41.3	74.0	PVC09
25	11.1	19.9	18.2	26.2	37.5	41.3	74.0	PVC09
32	17.0	26.2	23.7	33.9	46.0	50.6	78.2	PVC11
40	22.0	32.1	27.9	40.4	55.0	60.5	81.6	PVC15
50S	29.5	38.1	35.2	46.7	60.0	66.0	88.1	PVC18
50	35.6	44.0	40.4	53.0	70.1	77.1	91.2	PVC21
63S	40.1	49.9	45.6	59.4	75.0	82.4	90.5	PVC23
63	47.2	55.9	54.6	65.8	80.0	88.0	90.3	PVC25
75S	52.8	61.9	59.0	72.0	90.0	99.0	104.7	PVC28
75	59.1	67.9	66.7	78.4	100.0	110.0	110.8	PVC30
90	66.6	78.6	76.2	90.3	115.0	126.5	135.5	PVC32
100	76.0	90.9	86.1	101.4	127.0	139.7	126.8	LSF33
115	86.0	97.9	101.5	110.2	138.0	151.8	157.5	LSF34
130	97.0	114.9	110.2	123.2	157.0	172.7	164.5	LSF35

ZONE 1 RATED STAINLESS STEEL CABLE GLANDS

Fittings

737 Series Adaptors and Reducers

Cable Gland Accessories

Increased Safety, Flameproof and Dust Environment

Zone 1 and Zone 20
Gas (G) and Dust (D)

Applications

- A wide range of thread conversion adaptors and reducers for hazardous area applications. Used to connect cable entry devices and equipment having dissimilar threads.
- Care should be taken to ensure that a suitable sealing gasket is also selected and installed, where applicable, to ensure that an effective seal is made at the entry, thereby maintaining the integrity of the enclosure or equipment IP rating.

Features

- Wide range of thread types and sizes.

Standard Materials

- Nickel plated brass.

Options

- Aluminum: replace last digit 5 with 1
- Brass version: remove last digit 5
- 316L stainless steel version: replace last digit 5 with 4
- Shroud, locknut, earth tag, entry thread seal, serrated washers, adaptors and reducers: see *Cable Gland Accessories* pages.



ATEX/IECEX Certifications and Compliances

- **Certification Type 737**
 - Gas: Zones 1
 - Type of Protection: Ex d IIC Gb, Ex e IIC Gb
 - Dust: Zone 20
 - Type of Protection: Ex ta IIIC Da
 - Conforming to ATEX 94/9/CE: Ⓜ II 2G 1D
 - Operating Temperature: -60 °C to +200 °C (Metallic)
 - CE Declaration of Conformity: DC07001
 - ATEX Certificate: Sira 13ATEX1265X
 - IECEX Certificate: IECEX SIR 13.0094X
 - Other Certifications: UL, cCSAus
 - Marine Approval: LLOYDS, DNV, ABS
 - Index of Protection according EN/IEC 60529: IP66, IP67, IP68 (when fitted with seal)

EURASEC Certification

- TC RU C-GB.г5.05.B.00138

Catalog Numbering Guide

ACCESSORIES

Fittings

737

737 Series:
Zone 1 and 20
ATEX / IECEX
Certified

D

Form of Protection:
D - Ex d, Ex e, Ex ta

Blank - No O-Ring
R - Optional O-Ring

M

Male Thread Type:
M - Metric
T - NPT
P - PG

1

Male Thread Size:
1 - M16, 1/2" NPT, PG 9
2 - M20, 3/4" NPT, PG 11
3 - M25, 1" NPT, PG 13.5
4 - M32, 1-1/4" NPT, PG 16
5 - M40, 1-1/2" NPT, PG 21
6 - M50, 2" NPT, PG 29
7 - M63, 2-1/2" NPT, PG 36
8 - M75, 3" NPT, PG 42
9 - M90, 3-1/2" NPT, PG 48
10 - M100, 4" NPT

M

Female Thread Type:
M - Metric
T - NPT
P - PG

1

Female Thread Size:
1 - M16, 1/2" NPT, PG 9
2 - M20, 3/4" NPT, PG 11
3 - M25, 1" NPT, PG 13.5
4 - M32, 1-1/4" NPT, PG 16
5 - M40, 1-1/2" NPT, PG 21
6 - M50, 2" NPT, PG 29
7 - M63, 2-1/2" NPT, PG 36
8 - M75, 3" NPT, PG 42
9 - M90, 3-1/2" NPT, PG 48
10 - M100, 4" NPT

5

Materials:
Blank - Brass
1 - Aluminum
4 - 316L Stainless Steel
5 - Nickel Plated Brass

① IP68 with entry thread seal or O-Ring not supplied, see *Cable Gland Accessories and Tools*.

737 Series Adaptors and Reducers

Cable Gland Accessories

Increased Safety, Flameproof and Dust Environment

Zone 1 and Zone 20
Gas (G) and Dust (D)

Size	Male Thread														Female Thread															
	M16	M20	M25	M32	M40	M50	M63	M75	PG7	PG9	PG11	PG13.5	PG16	PG21	PG29	PG36	PG42	PG48	1/2" NPT/NPS (M)	3/4" NPT/NPS (M)	1" NPT/NPS (M)	1-1/4" NPT/NPS (M)	1-1/2" NPT/NPS (M)	2" NPT/NPS (M)	2-1/2" NPT/NPS (M)	3" NPT/NPS (M)	3-1/2" NPT/NPS (M)	4" NPT/NPS (M)		
M16	■	■																		■										
M20		■	■																		■	■								
M25			■	■																	■	■	■							
M32				■	■																■	■	■	■						
M40					■	■															■	■	■	■	■					
M50						■	■														■	■	■	■	■	■				
M63							■	■													■	■	■	■	■	■	■			
M75								■	■												■	■	■	■	■	■	■	■		
PG7	■								■	■											■	■	■	■	■	■	■			
PG9		■								■	■										■	■	■	■	■	■	■	■		
PG11			■								■	■									■	■	■	■	■	■	■	■		
PG13.5				■								■	■								■	■	■	■	■	■	■	■		
PG16					■								■	■							■	■	■	■	■	■	■	■		
PG21						■								■	■						■	■	■	■	■	■	■	■		
PG29							■								■	■					■	■	■	■	■	■	■	■		
PG36								■								■	■				■	■	■	■	■	■	■	■		
PG42									■								■	■			■	■	■	■	■	■	■	■		
PG48										■								■	■		■	■	■	■	■	■	■	■		
1/2" NPT/NPS (M)			■																		■	■	■	■	■	■	■			
3/4" NPT/NPS (M)				■																	■	■	■	■	■	■	■			
1" NPT/NPS (M)					■																■	■	■	■	■	■	■			
1-1/4" NPT/NPS (M)						■															■	■	■	■	■	■	■			
1-1/2" NPT/NPS (M)							■														■	■	■	■	■	■	■			
2" NPT/NPS (M)								■													■	■	■	■	■	■	■			
2-1/2" NPT/NPS (M)									■												■	■	■	■	■	■	■			
3" NPT/NPS (M)										■											■	■	■	■	■	■	■			
3-1/2" NPT/NPS (M)											■										■	■	■	■	■	■	■			
4" NPT/NPS (M)												■									■	■	■	■	■	■	■			

■ Ex d/Ex e reducer ■ Ex d/Ex e adaptor □ Non-certified adaptor

Thread Table

	Metric ①	NPT	PG
1	M16	1/2"	PG9
2	M20	3/4"	PG11
3	M25	1"	PG13.5
4	M32	1-1/4"	PG16
5	M40	1-1/2"	PG21
6	M50	2"	PG29
7	M63	2-1/2"	PG36
8	M75	3"	PG42
9	M90	3-1/2"	PG48
10	M100	4"	-

① IP68 with entry thread seal or O-Ring (not supplied), see Cable Gland Accessories and Tools.

737 Series Adaptors and Reducers

Cable Gland Accessories

Increased Safety, Flameproof and Dust Environment

Zone 1 and Zone 20
Gas (G) and Dust (D)

Reducers (Nickel Plated Brass)			Adaptors (Nickel Plated Brass)		
Male Thread	Female Thread	Catalog Number	Male Thread	Female Thread	Catalog Number
M20	M16	737DM2M15	M16	M20	737DM1M25
M25	M16	737DM3M15	M20	M25	737DM2M35
M25	M20	737DM3M25	M25	M32	737DM3M45
M32	M20	737DM4M25	M32	M40	737DM4M55
M32	M25	737DM4M35	M40	M50	737DM5M65
M40	M25	737DM5M35	M50	M63	737DM6M75
M40	M32	737DM5M45	M63	M75	737DM7M85
M50	M32	737DM6M45	M75	M90	737DM8M95
M50	M40	737DM6M55	M90	M100	737DM9M105
M63	M40	737DM7M55	M16	1/2	737DM1T15
M63	M50	737DM7M65	M20	1/2	737DM2T15
M75	M50	737DM8M65	M20	3/4	737DM2T25
M75	M63	737DM8M75	M25	3/4	737DM3T25
1/2	3/4	737DT1T25	M25	1	737DM3T35
3/4	1/2	737DT2T15	M32	1	737DM4T35
1	1/2	737DT3T15	M32	1-1/4	737DM4T45
1	3/4	737DT3T25	M40	1-1/4	737DM5T45
1-1/4	3/4	737DT4T25	M40	1-1/2	737DM5T55
1-1/4	1	737DT4T35	M50	1-1/2	737DM6T55
1-1/2	1	737DT5T35	M50	2	737DM6T65
1-1/2	1-1/4	737DT5T45	M63	2	737DM7T65
2	1-1/4	737DT6T45	M63	2-1/2	737DM7T75
2	1-1/2	737DT6T55	M75	2-1/2	737DM8T75
2-1/2	1-1/2	737DT7T55	M75	3	737DM8T85
2-1/2	2	737DT7T65	1/2	M20	737DT1M25
3	2	737DT8T65	3/4	M20	737DT2M25
3	2-1/2	737DT8T75	3/4	M25	737DT2M35
3-1/2	2-1/2	737DT9T75	1	M25	737DT3M35
3-1/2	3	737DT9T85	1	M32	737DT3M45
4	3	737DT10T85	1-1/4	M32	737DT4M45
4	3-1/2	737DT10T95	1-1/4	M40	737DT4M55
			1-1/2	M40	737DT5M55
			1-1/2	M50	737DT5M65
			2	M50	737DT6M65
			2	M63	737DT6M75
			2-1/2	M63	737DT7M75
			2-1/2	M75	737DT7M85
			3	M75	737DT8M85

ACCESSORIES

Fittings

① IP68 with entry thread seal or O-Ring not supplied, see Cable Gland Accessories and Tools.

Shaded catalog numbers are normally stocked items. All other items are made to order.

BVE Series Blanking Plugs

Cable Gland Accessories

Increased Safety, Restricted Breathing and Dust Environment

Zone 1 and 2, Zone 21 and 22
Gas (G) and Dust (D)

Applications

- A comprehensive range of plastic blanking plugs designed to close any unused entries in electrical equipment.
- Entry thread sealing washer supplied.

Features

- Catering to hazardous areas, the range covers all metric threads from M16 to M50.
- Certification Ex e.

Standard Materials

- Nylon

ATEX Certifications and Compliances

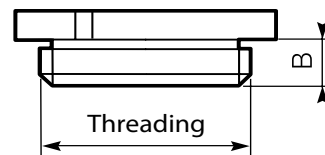
- **Certification Type BVe**
 - Gas: Zones 1 and 2
 - Type of Protection: Ex e II
 - Dust: Zone 21 and 22
 - Type of Protection: Ex tD
 - Conforming to ATEX 94/9/CE: Ⓜ II 2GD
 - Ambient Temperature: -40 °C to +55 °C
 - CE Declaration of Conformity: 5C218
 - ATEX Certificate: LCIE 03 ATEX 0011U
 - IECEx Certificate: IECEx LCI 04.0027U
 - Index of Protection according EN/IEC 60529: IP66

INMETRO Certification

- INMETRO Certificate: BVC 11.0600-U



Dimensions



Dimensions mm	Metric	Weight kg	Volume	Catalog Number
B				
–	M16	0.10	0.03	095485
12.0	M20	0.10	0.03	095714
12.0	M25	0.10	0.03	095715
12.0	M32	0.10	0.03	095486
12.0	M40	0.10	0.07	095487
–	M50	0.20	0.07	095488

Shaded catalog numbers are normally stocked items. All other items are made to order.

757 Series Blanking Plugs

Cable Gland Accessories

Increased Safety, Flameproof and Dust Environment

Zone 1 and Zone 20
Gas (G) and Dust (D)

Applications

- Blanking plugs are designed for use from the outside of the enclosure to permanently or temporarily close any unused entries.
- Idea for use on flameproof, increased safety electrical equipment in hazardous areas.
- In general, care should be taken to ensure that a suitable entry thread sealing washer is also selected and installed, where applicable, to ensure that an effective seal is made at the entry, thereby maintaining the integrity of the enclosure or equipment I.P. rating.



Features

- Catering to hazardous area applications, the range of products covers a number of different design types which are supplied in both metal and plastic (Exe only).
- Hexagon head allows for the installation or remove of the plug with either an open ended or ring type spanner or wrench.

Standard Materials

- Nickel plated brass

Options

- Brass version: remove last digit 5
- 316L stainless steel version: replace last digit 5 with 4
- Plastic (see BVE series)

Optional Accessories

- Shroud, locknut, earth tag, entry thread seal, serrated washers, adaptors and reducers: see *Cable Gland Accessories* pages.

ATEX/IECEx Certifications and Compliances

- **Certification Type 757**
 - Gas: Zones 1
 - Type of Protection: Ex d IIC Gb, Ex e IIC Gb
 - Dust: Zone 20
 - Type of Protection: Ex ta IIIC Da
 - Conforming to ATEX 94/9/CE: Ⓢ II 2G 1D
 - Operating Temperature: -60 °C to +200 °C (Metallic)
 - CE Declaration of Conformity: DC07001
 - ATEX Certificate: Sira 13ATEX1265X
 - IECEx Certificate: IECEx SIR 13.0094X
 - Other Certifications: UL, cCSAus
 - Marine Approval: LLOYDS, DNV, ABS
 - Index of Protection according EN/IEC 60529: IP66 or IP68 with seal

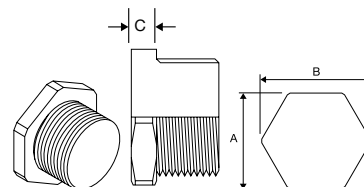
INMETRO Certification

- INMETRO Certificate: TÜV 12.1333X

EURASEC Certification

- TC RU C-GB.ГБ.05.B.00138

Dimensions



① IP68 with entry thread seal or O-Ring not supplied, see *Cable Gland Accessories and Tools*.

757 Series Blanking Plugs

Cable Gland Accessories

Increased Safety, Flameproof and Dust Environment

Zone 1 and Zone 20
Gas (G) and Dust (D)

Catalog Numbering Guide

757
757 Series:
Zone 1 and 20
ATEX / IECEx Certified

D
Type:
D - Ex d and Ex e

M
Male Thread Type:
M - Metric
T - NPT
P - PG

1
Male Thread Size:
1 - M16 or 1/2" NPT
2 - M20 or 3/4" NPT
3 - M25 or 1" NPT
4 - M32 or 1-1/4" NPT
5 - M40 or 1-1/2" NPT
6 - M50 or 2" NPT
7 - M63 or 2-1/2" NPT
8 - M75 or 3" NPT
9 - M90 or 3-1/2" NPT
10 - M100 or 4" NPT

5
Material:
Blank - Brass
4 - 316L Stainless Steel
5 - Nickel Plated Brass

Dimensions mm

Flats A	Corners B	C	Catalog Numbers (Nickel Plated Brass)				Weight kg
			Metric ②		NPT		
24.0	26.0	5.0	M16 x 1.5	757DM15	1/2"	757DT15	0.05
24.0	26.0	5.0	M20 x 1.5	757DM25	3/4"	757DT25	0.07
30.0	33.0	5.0	M25 x 1.5	757DM35	1"	757DT35	0.10
36.0	40.0	5.0	M32 x 1.5	757DM45	1-1/4"	757DT45	0.16
46.0	51.0	6.0	M40 x 1.5	757DM55	1-1/2"	757DT55	0.32
55.0	61.0	6.0	M50 x 1.5	757DM65	2"	757DT65	0.42
70.0	78.0	6.0	M63 x 1.5	757DM75	2-1/2"	757DT75	0.63
80.0	89.0	6.0	M75 x 1.5	757DM85	3"	757DT85	0.98
95.0	106.0	6.0	M90 x 2	757DM95	3-1/2"	757DT95	1.35
110.0	123.0	6.0	M100 x 2	757DM105	4"	757DT105	1.60

Thread Table

	Metric	NPT	PG
1	M16	1/2"	PG9
2	M20	3/4"	PG11
3	M25	1"	PG13.5
4	M32	1-1/4"	PG16
5	M40	1-1/2"	PG21
6	M50	2"	PG29
7	M63	2-1/2"	PG36
8	M75	3"	PG42
9	M90	3-1/2"	PG48
10	M100	-	-

① IP68 with entry thread seal or O-Ring not supplied, see Cable Gland Accessories and Tools.

② Entry thread seal not supplied, see Cable Gland Accessories and Tools.

Shaded catalog numbers are normally stocked items. All other items are made to order.

747 Series Stopper Plugs

Cable Gland Accessories

Increased Safety, Flameproof and Dust Environment

Zone 1 and Zone 20
Gas (G) and Dust (D)

Applications

- Stopper plug is designed for use from the outside of the enclosure to permanently or temporarily close any unused entries.
- Idea for use on flameproof electrical equipment in hazardous areas.
- In general, care should be taken to ensure that a suitable entry thread sealing washer is also selected and installed, where applicable, to ensure that an effective seal is made at the entry, thereby maintaining the integrity of the enclosure or equipment I.P. rating.

Features

- Catering to both Industrial and Hazardous Area applications the range covers a number of different metallic and non-metallic (e.g. Nylon) forms.
- Compensating Displacement Seal (CDS) system allows for use with Restricted Breathing equipment.
- Available with both external (Type A) or internal (Type B) Allen Key design.
- Internal Allen Key design is considered tamper proof. Once the equipment has been de-energized and the terminal chamber cover removed it can be removed from the inside.

Standard Materials

- Brass fully nickel plated

Options

- Aluminum: replace suffix -5 with 1
- 316L stainless steel: replace suffix -5 with 4
- Nylon: replace suffix -5 with 2
- Type 'B': replace 'A' with 'B'



ATEX/IECEx Certifications and Compliances

- **Certification Type 747**
 - Gas: Zones 1
 - Type of Protection: Ex d IIC Gb (except Nylon), Ex e IIC Gb
 - Dust: Zone 20
 - Type of Protection: Ex ta IIC Da
 - Conforming to ATEX 94/9/CE: Ⓜ II 2G 1D
 - Operating Temperature: -60 °C to +200 °C (Metallic) and -20 °C to +60 °C (Nylon)
 - CE Declaration of Conformity: DC07001
 - ATEX Certificate: Sira 13ATEX1265X
 - IECEx Certificate: IECEx SIR 13.0094X
 - Other Certifications: UL, cCSAus
 - Marine Approval: LLOYDS, DNV, ABS
 - Index of Protection according EN/IEC 60529: IP66

INMETRO Certification

- INMETRO Certificate: TÜV 12.1333X

EURASEC Certification

- TC RU C-GB.гб.05.B.00138

	767 Series Male Thread Size	Allen Key size A/F	Minimum Thread Length mm	Type 'A' Nickel Plated Brass Catalog Number
<p>Ex 'd' Recessed Stopper Plug Type 'A'</p>	M16	M8	15	747DAM15
	M20	M10	15	747DAM25
	M25	M10	15	747DAM35
	M32	M10	15	747DAM45
	M40	M10	15	747DAM55
	M50	M10	15	747DAM65
	M63	M14	15	747DAM75
	M75	M14	15	747DAM85
	M90	M14	24	747DAM95
	<p>Ex 'd' Recessed Stopper Plug Type 'B'</p>	1/2 NPT		
3/4 NPT				747DAT25
1 NPT				747DAT35
1-1/4 NPT				747DAT45
1-1/2 NPT				747DAT55
2 NPT				747DAT65
2-1/2 NPT				747DAT75
3 NPT				747DAT85

767 Series Stopper Plugs

Cable Gland Accessories

Increased Safety and Flameproof.

Zone 1 and 2, Zone 21 and 22
Gas (G) and Dust (D)

Applications

- Stopper plug is designed for use from the outside of the enclosure to permanently or temporarily close any unused entries.
- Idea for use on flameproof, increased safety electrical equipment in hazardous areas.
- In general, care should be taken to ensure that a suitable entry thread sealing washer is also selected and installed, where applicable, to ensure that an effective seal is made at the entry, thereby maintaining the integrity of the enclosure or equipment I.P. rating.

Features

- Catering to both Industrial and Hazardous Area applications the range covers a number of different metallic and non-metallic (e.g. Nylon) forms.
- Features a dome head with an Allen Key.
- Optional integral entry thread "O" Ring seal is available.

Standard Materials

- Brass fully nickel plated

Options

- Aluminum: replace suffix -5 with 1
- 316L stainless steel: replace suffix -5 with 4
- Nylon: replace suffix -5 with 2
- Optional O-Ring: replace **D** with **DR**
- IP68 when fitted with an O-Ring entry thread sealing washer



ATEX/IECEX Certifications and Compliances

- **Certification Type 767**
 - Gas: Zones 1
 - Type of Protection: Ex d IIC Gb (except Nylon), Ex e IIC Gb
 - Dust: Zone 20
 - Type of Protection: Ex ta IIIC Da
 - Conforming to ATEX 94/9/CE: Ⓢ II 2G 1D
 - Operating Temperature: -60 °C to +200 °C (Metallic) and -20 °C to +60 °C (Nylon)
 - CE Declaration of Conformity: DC07001
 - ATEX Certificate: Sira 13ATEX1265X
 - IECEX Certificate: IECEX SIR 13.0094X
 - Other Certifications: UL, cCSAus
 - Marine Approval: LLOYDS, DNV, ABS
 - Index of Protection according EN/IEC 60529: IP66 or IP68 with seal

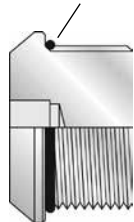
INMETRO Certification

- INMETRO Certificate: TÜV 12.1333X

EURASEC Certification

- TC RU C-GB.᠖5.05.B.00138

Optional 'O' Ring ①



Mushroom Head
Stopper Plug

Male Thread Size	Allen Key size A/F	Head diameter in mm	Nickel Plated Brass Catalog Number
M16	M8	22.0	767DM15
M20	M10	27.0	767DM25
M25	M10	30.0	767DM35
M32	M10	36.0	767DM45
M40	M10	46.0	767DM55
M50	M10	55.0	767DM65
M63	M14	65.0	767DM75
M75	M14	80.0	767DM85
M90	M14	95.0	767DM95
1/2"NPT			767DT15
3/4"NPT			767DT25
1"NPT			767DT35
1-1/4"NPT			767DT45
1-1/2"NPT			767DT55
2"NPT			767DT65
2-1/2"NPT			767DT75
3"NPT			767DT85

① For optional O-Ring, change **D** to **DR** in catalog number. Contact your factory representative for price and availability.

Cable Gland Accessories and Tools

Description	Catalog Number	Description	Catalog Number
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Locknuts – Nickel Plated Brass

- Brass locknuts are recommended for use in securing brass cable glands to a gland plate or into equipment.



M16	095707	050NPT	050NPTLN5
M20	095701	075NPT	075NPTLN5
M25	095702	100NPT	100NPTLN5
M32	095703	125NPT	125NPTLN5
M40	095708	150NPT	150NPTLN5
M50	095709	200NPT	200NPTLN5
M63	095710	250NPT	250NPTLN5
M75	095711	300NPT	300NPTLN5
M90	095712	350NPT	350NPTLN5
M100	095713	—	—

Earth Tags – Pear (Brass)

- Installed between the cable gland and equipment. Provide an earth bond connection as specified in BS 6121 : Part 5 : 1993.



M16	16ET	050NPT	050NPTET
M20	20ET	075NPT	075NPTET
M25	25ET	100NPT	100NPTET
M32	32ET	125NPT	125NPTET
M40	40ET	150NPT	150NPTET
M50	50ET	200NPT	200NPTET
M63	63ET	250NPT	250NPTET
M75	75ET	300NPT	300NPTET
M90	90ET	350NPT	350NPTET
M100	100ET	—	—

ACCESSORIES


Fittings


Shaded catalog numbers are normally stocked items. All other items are made to order.

Cable Gland Accessories and Tools

Serrated Washers – Stainless Steel

- Available in stainless steel as standard, these “shake-proof” serrated washers fitted internally to the equipment and before a locknut act as an anti-vibration device to prevent the gland and locknut arrangement from inadvertently loosening in service.

	Metric Thread	Catalog Number	NPT	Catalog Number
	M16	16SW4	—	—
	M20	20SW4	1/2	050NPTSW4
	M25	25SW4	3/4	075NPTSW4
	M32	32SW4	1	100NPTSW4
	M40	40SW4	1-1/4	125NPTSW4
	M50	50SW4	1-1/2	150SPTNW4
	M63	63SW4	2	200NPTSW4
	M75	75SW4	2-1/2	250NPTSW4
	M90	90SW4	3	300NPTSW4
	M100	100SW4	3-1/2	350NPTSW4

	Metric Thread	NPT	Dimensions mm		Weight kg
			B	C	
	M16	—	19	25.4	0.01
	M20	1/2	24	32	0.01
	M25	3/4	33	40	0.01
	M32	1	42	44	0.01
	M40	1-1/4	55	59	0.02
	M50	1-1/2	65	80	0.02
	M63	2	70	100	0.06
	M75	2-1/2	85	112	0.09
	M90	3	100	120	0.11
	M100	3-1/2	110	150	0.16

ACCESSORIES

Fittings

Cable Gland Accessories and Tools

For Cable Entries

Pack	Weight (kg)	Description	Catalog Number	Description	Catalog Number
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Entry Thread Seals – Sealing (IP) Washers - Nylon (White)

- It is essential to maintain the integrity of the degree of IP protection for which explosionproof equipment have been rated. The need for a sealing washer will depend on the IP rating, code of protection and the type of entry holes available within that equipment (e.g. for Ex e apparatus or terminal boxes which are permitted to have untapped through clearance holes it is necessary to fit a sealing washer to ensure that the minimum IP54 requirement is met). Other equipment with tapped entry holes may not require a sealing washer to maintain the rated integrity of the installation.
- Entry thread sealing washers are produced in 2mm thick white nylon as standard which are recommended and meet the specified requirements of Shell's Offshore operations.
- To verify the effectiveness of the nylon entry sealing washers, independent 3rd party tests to BS EN 60529:1992 have been conducted on certain cable gland types at IP66, IP67 and IP68 levels of protection. Documentation of these high standard tests is available upon request.



10	0,0006	M16	16ETS2	050NPT	050NPTETS
10	0,0010	M20	20ETS2	075NPT	075NPTETS
10	0,0018	M25	25ETS2	100NPT	100NPTETS
10	0,0020	M32	32ETS2	125NPT	125NPTETS
5	0,0034	M40	40ETS2	150NPT	150NPTETS
5	0,0036	M50	50ETS2	200NPT	200NPTETS
5	0,0040	M63	63ETS2	250NPT	250NPTETS
1	0,0060	M75	75ETS2	300NPT	300NPTETS
1	0,0120	M90	90ETS2	350NPT	350NPTETS
1	0,0350	M100	100ETS2	–	–

Entry Thread Seals – Sealing (IP) Washers - Néoprène (Black)



10	0,0001	M16	16ETS
10	0,0002	M20	20ETS
10	0,0004	M25	25ETS
10	0,0005	M32	32ETS
5	0,0008	M40	40ETS
5	0,0009	M50	50ETS

Shaded catalog numbers are normally stocked items. All other items are made to order.

Cable Gland Accessories and Tools

For Cable Entries

Cable Gland Size	Catalog Number
Lead Star Clamp for E2FX and E2FW Cable Glands Lead Sheath Continuity	
2016	2016LSW
20S	20SLSW
20	20LSW
25S and 25	25LSW
32	32LSW
40	40LSW
50S	50SLSW
50	50LSW
63S	63SLSW
63	63LSW
75S	75SLSW
75	75LSW
90	90LSW
100	100LSW



Cable Gland Size	PX2K	E1F. / E2F. / T3
Black PVC Shrouds		
<ul style="list-style-type: none"> • Push on shrouds are used to minimise the risk of dirt or foreign substances gathering on the cable gland body, and/or point of cable to gland interface. Standard shrouds are produced in black PVC. • Refer to the specific cable gland page for the PVC Shroud catalog number that is appropriate for use with that specific style cable gland. 		
20/16	PVC06	PVC36
20S	PVC06	PVC36
20	PVC06	PVC06
25S	PVC09	PVC09
25	PVC09	PVC09
32	PVC11	PVC11
40	PVC15	PVC15
50S	PVC18	PVC18
50	PVC21	PVC21
63S	PVC23	PVC23
63	PVC25	PVC25
75S	PVC28	PVC28
75	PVC30	PVC30
90	PVC32	PVC32
100	LSF33	LSF33
115	—	LSF34
130	—	LSF35



DB Series IIB Unions

Flameproof

Zone 1 and 21
Gas (G) and Dust (D)

Applications

- To be used with a fire retardant seal fitted directly at the entry to the flameproof housing. Enables connection via rigid or flexible union.
- Used for joining conduit and connecting conduit to enclosures.
- Facilitates modifications, permits the removal of enclosures without turning or removal of conduit.

Features

- Accurately tapped, tapered threads for tight, rigid joints and ground continuity.

Standard Materials

- Zinc plated steel

ATEX/IECEx Certifications and Compliances

- **Certification Type BMF - BFF**
 - Gas: Zone 1
 - Type of Protection: Ex d IIB
 - Dust: Zone 21
 - Type of Protection: Ex tD A21
 - Conforming to ATEX 94/9/CE: Ⓢ II 2GD
 - Operating Temperatures: -20 °C to +60 °C
 - CE Declaration of Conformity: 5C232
 - ATEX Certificate: CESI 99 ATEX 034U
 - Index of Protection according EN/IEC 60529: IP66/67



500044



500049

ZONE 1 CONDUIT FITTINGS

Fittings

Tapered Thread (NPT)	Weight kg	Volume dm ³	Pack	Catalog Number
Male/Female				
1/2"	0.17	0.12	1	500044
3/4"	0.19	0.12	1	500045
1"	0.30	0.23	1	500046
1-1/4"	0.80	0.50	1	500047
1-1/2"	1.00	0.50	1	500048
Female/Female				
1/2"	0.15	0.12	1	500049
3/4"	0.15	0.12	1	500050
1"	0.23	0.23	1	500051
1-1/4"	0.70	0.50	1	500052
1-1/2"	0.37	0.50	1	500053
3"	0.90	2.00	1	500158

Shaded catalog numbers are normally stocked items. All other items are made to order.

DB Series IIC Elbows

Zone 1 and 21
Gas (G) and Dust (D)

Applications

- Used to connect two lengths of conduit.
- Used to make 90° bends in conduit runs.

Features

- Accurately tapped, tapered threads for tight, rigid joints and ground continuity.

Standard Materials

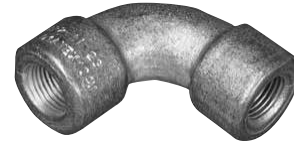
- Aluminum

Features

- Female to female thread.

ATEX/IECEx Certifications and Compliances

- **Certification Type ELF**
 - Gas: Zone 1
 - Type of Protection: Ex d IIC Gb; Ex e IIC Gb
 - Dust: Zone 21
 - Type of Protection: Ex tb IIIC Db
 - Conforming to ATEX 94/9/CE: Ⓢ II 2GD
 - Operating Temperatures: -55 °C to +150 °C
 - CE Declaration of Conformity: 5C223
 - ATEX Certificate: CESI 01 ATEX 104U
 - IECEx Certificate: IECEx CES 15.0005U
 - Index of Protection according EN/IEC 60529: IP66/67



Tapered Thread (NPT)	Dimensions mm		Weight kg	Volume dm ³	Catalog Number
	A	B			
1/2"	73	57	0.1	0.12	500054
3/4"	73	67	0.1	0.10	500055
1"	92	83	0.2	0.23	500056
1-1/4"	115	84	0.4	0.50	500057
1-1/2"	115	84	0.6	0.50	500058
3"	185	95	0.5	2.00	500059

Shaded catalog numbers are normally stocked items. All other items are made to order.

DB Series IIC Flexible Couplings

Flameproof

Zone 1 and 21
Gas (G) and Dust (D)

Applications

- Used in areas where vibration and/or movement are a problem.
- Used in place of rigid conduit in where it would be difficult to bend conduit.

Standard Materials

- Stainless steel

ATEX/IECEx Certifications and Compliances

- **Certification Type FLEXCO**
 - Gas: Zones 1
 - Type of Protection: Ex d IIC Gb
 - Dust: Zone 21
 - Type of Protection: Ex t IIIC Db
 - Conforming to ATEX 94/9/CE: Ⓢ II 2G 2D
 - Operating Temperatures: -40 °C to +150 °C



- CE Declaration of Conformity: 5C247
- ATEX Certificate: LCIE 11 ATEX 3006U
- IECEx Certificate: IECEx LCIE 12.0011U
- Index of Protection according EN/IEC 60529: IP66

Male/Male — To be used with fire-retardant seals or unions,

Tapered Thread (NPT)	Length mm	Weight kg	Volume dm ³	Catalog Number	Pack
1/2"	100	0.65	1	500060	1
1/2"	170	0.70	1.75	500061	1
1/2"	250	0.70	2.5	500106	1
1/2"	300	0.75	3	500062	1
1/2"	400	0.80	4	500063	1
1/2"	500	0.85	5	500064	1
1/2"	600	0.90	6	500065	1
1/2"	700	0.95	7	500066	1
1/2"	800	1.00	8	500067	1
1/2"	900	1.05	9	500068	1
1/2"	1000	1.10	10	500069	1
3/4"	300	0.75	3	500070	1
3/4"	400	0.80	1	500071	1
3/4"	500	0.85	5	500072	1
3/4"	600	0.90	6	500073	1
3/4"	700	0.95	7	500074	1
3/4"	800	1.00	8	500075	1
3/4"	900	1.05	9	500076	1
3/4"	1000	1.10	10	500077	1
1"	300	0.75	3	500078	1
1"	400	0.80	1	500079	1
1"	500	0.85	5	500080	1
1"	600	0.90	6	500081	1
1"	700	0.95	7	500082	1
1"	800	1.00	8	500083	1
1"	900	1.05	9	500084	1
1"	1000	1.1	3	500085	1
1-1/4"	300	0.75	3	500086	1
1-1/4"	400	0.80	3	500087	1
1-1/4"	500	0.85	5	500088	1
1-1/4"	600	0.90	6	500089	1
1-1/4"	700	0.95	7	500090	1
1-1/4"	800	1.00	8	500091	1
1-1/4"	900	1.05	9	500092	1
1-1/4"	1000	1.10	10	500093	1
1-1/2"	300	0.75	3	500094	1
1-1/2"	400	0.80	1	500095	1
1-1/2"	500	0.85	5	500096	1
1-1/2"	600	0.90	6	500097	1
1-1/2"	700	0.95	7	500098	1

ZONE 1 CONDUIT FITTINGS

Fittings

DB Series Fire Retardant Seal

Flameproof

Zone 1 and 21
Gas (G) and Dust (D)

Applications

- Used to prevent passage of gasses, vapors or flames from one portion of a conduit system to another.

Features

- Female to female threads.

Standard Materials

- Aluminum

ATEX Certifications and Compliances

- Certification Type EYS**
 - Gas: Zones 1
 - Type of Protection: Ex d IIC
 - Dust: Zone 21
 - Type of Protection: Ex tD A21
 - Conforming to ATEX 94/9/CE: Ⓢ II 2GD
 - Ambient Temperature: -60 °C to +130 °C
 - CE Declaration of Conformity: 50268
 - ATEX Certificate: CESI 03 ATEX 085
 - Index of Protection according EN/IEC 60529: IP66



Tapered Thread (NPT)	Dimensions mm				Qty of resin required	Weight kg	Volume dm ³	Pack	Catalog Number
	A	B	B1	R					
Aluminum Fire-Retardant Seal — Female/Female									
1/2"	77		—	43	35 g	0.13	2.3	1	500146
3/4"	87	67	—	50	50 g	0.19	3.2	1	500147
1"	105	83	—	62	100 g	0.32	3.2	1	500148
1-1/4"	130	84	—	56	240 g	0.60	3.2	1	500149
1-1/2"	130	84	—	56	240 g	0.60	4.0	1	500150
2"	140	95	—	63	380 g	0.65	7.6	1	500151
2-1/2"	175	113	—	74	1250 g	1.26	7.6	1	500152
3"	190	—	135	92	1250 g	1.33	7.6	1	500153
Fire Retardant Resin									
1 kg pot of resin + 250 g of catalyst						1.5	3.2	1	500154
Fire Retardant Fiber									
1 kg bog						1.5	8.0	1	500155

Shaded catalog numbers are normally stocked items. All other items are made to order.

DB Series Drain and Breather Valves

Flameproof or Increased safety

Zone 1 and 21
Gas (G) and Dust (D)

Applications


- Flameproof Bleed Valve:
 - Used to drain condensation from inside enclosures and boxes.
- Increased Safety Breather Drain:
 - Ensures that the condensation is evacuated from the lower section of the enclosures and limits the "pumping" effect in the upper section.

Standard Materials

- Bleed Valve and Breather: nickel plated brass or stainless steel.
- Breather Drain: polyamide, brass or stainless steel

ATEX/IECEX Certifications and Compliances

- Certification Type DP-E
 - Gas: Zones 1
 - Type of Protection: Ex e IIC Gb
 - Dust: Zone 21
 - Type of Protection: Ex tb IIIC Db
 - Conforming to ATEX 94/9/CE: Ⓜ II 2G 2D
 - Ambient Temperature: -50 °C to +85 °C
 - CE Declaration of Conformity: 5C225
 - ATEX Certificate: Sira 99ATEX3050X
 - IECEX Certificate: IECEX SIR 08.0024X
 - Index of Protection according EN/IEC 60529: IP66

	Metric Thread	Material	Weight kg	Volume dm ³	Pack	Catalog Number
	M20	Nickel plated brass	0.20	0.33	1	DBD20NB
	M20	Stainless steel	0.20	0.33	1	DBD20S

To be used only with our range of flameproof enclosure. The ATEX certification is included in our Exd enclosure's certification.

Flameproof Breather

To be used only with our range of flameproof enclosure. The ATEX certification is included in our Exd enclosure's certification.

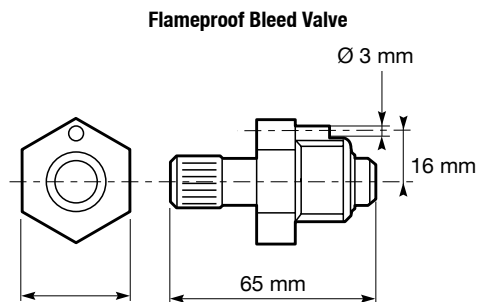
M20	Nickel plated brass	0.20	0.33	1	DBDB20NB
M20	Stainless steel	0.20	0.33	1	DBDB20S

Increased Safety Combination Drain and Breather (Type DP-E)

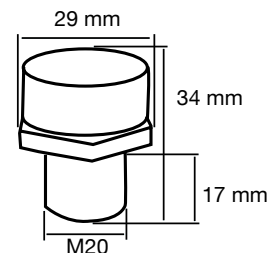


M20	Polyamide	0.20	0.10	1	DBE20P
M20	Brass	0.20	0.10	1	DBE20B
M20	Stainless steel	0.20	0.10	1	DBE20S

Dimensions in Millimeters



Increased Safety Drain and Breather



Shaded catalog numbers are normally stocked items. All other items are made to order.

Notes

Notes

Specialty Products

Description	Page
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Camera Housing	
VCB series Video Camera Housings	548



VCB4



DA2W2E102



VCBA

VCB series Video Camera Housings

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Flameproof housing to encase video camera used for onshore and offshore site and process supervision.

Features

- Compatible with any camera model with the following specifications:
 - Length compatible with one of the two sizes:
 - 475 mm
 - 735 mm
 - Maximum cross section for the camera : < 127 cm².
 - Capacitor's residual energy (after opening) : < 20 µJ.
 - Maximum dissipated power: 14 W.
 - Equipped with back plate.
 - Two M20 threaded cable entries.

Standard Materials

- Body: gray painted aluminium
- Window: sealed toughened glass

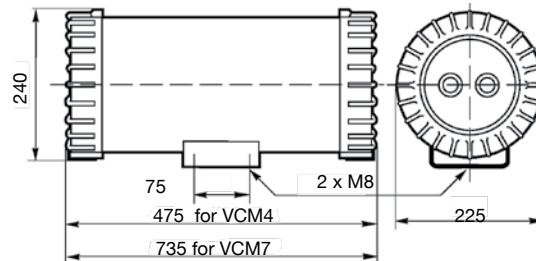
ATEX Certifications and Compliances

- **Certification Type: CAM**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 G
 - Type of Protection: Ex d IIC
 - Temperature class: T6 for Ta ≤ +40 °C and T5 for +55 °C
 - Dust: Zones 21 and 22
 - Conforming to ATEX 94/9/CE: Ⓜ II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T100 °C
 - Ambient Temperature: -40 °C to +55 °C
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10
 - Internal Volume: ≤ 2 dm³ – 2 liters
 - CE Declaration of Conformity: 50255
 - ATEX Certificate: LCIE 03 ATEX 6080



VCB4
(475 mm length version)

Dimensions in Millimeters



Length (mm)	Weight kg	Volume dm ³	Catalog Number
475	14.2	41	VCB4
735	18.7	61	VCB7

VCB series Video Camera Housings

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Flameproof housing to encase video camera used for onshore and offshore site and process supervision.

Features

- Maximum dissipated power: 10 W.
- Equipped with a back plate.
- One open view glass window, usable \varnothing 84 mm.
- Two internal grounding connection: M4 screw. External grounding: M6 screw.
- Two M20 threaded entries at the bottom.

Standard Materials

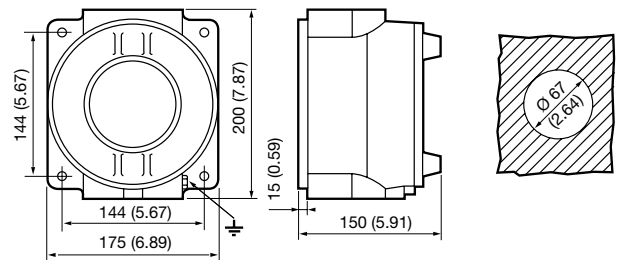
- Body: gray painted aluminium
- Window: sealed toughened glass

ATEX Certifications and Compliances

- **Certification Type: BR2d**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ex II 2 G
 - Type of Protection: Ex d IIC
 - Temperature Class: T6
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ex II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C
 - Ambient Temperature: -40 °C to +55 °C
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK09
 - Internal Volume: $\leq 2 \text{ dm}^3$ – 2 liters
 - CE Declaration of Conformity: 50256
 - ATEX Certificate: LCIE 03 ATEX 6062




Dimensions in Millimeters (Inches)



Weight kg	Volume dm ³	Catalog Number
3.5	13	DA2W2E102

Accessories

Description	Catalog Number
 Adjustable Mount	VCBHBA

VCB series Video Camera Housings

Flameproof

Zone 1 and 2 - 21 and 22
Gas (G) and Dust (D)

Applications

- Flameproof housing to encase video camera used for onshore and offshore site and process supervision.

Features

- Maximum Power: 10 W.
- One open view glass window, usable diameter 155 mm.
- Threaded flameproof joint.
- Two M20 threaded entries with one blanking plug.

Standard Materials

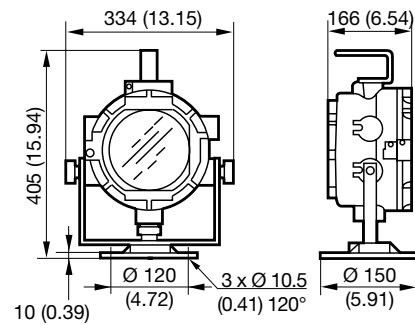
- Body: gray painted aluminium
- Window: sealed toughened glass

ATEX Certifications and Compliances

- **Certification Type: PJ70**
 - Gas: Zones 1 and 2
 - Conforming to ATEX 94/9/CE: Ex II 2 G
 - Type of Protection: Ex d IIC
 - Temperature Class: T6
 - Dust: Zone 21 and 22
 - Conforming to ATEX 94/9/CE: Ex II 2 D
 - Type of Protection: Ex tD A21
 - Surface Temperature: T80 °C
 - Ambient Temperature: -40 °C to +55 °C
 - Index of Protection according EN/IEC 60529: IP66
 - Impact Resistance (shock): IK10
 - Internal Volume: $\leq 2 \text{ dm}^3$ – 2 liters
 - CE Declaration of Conformity: 50239
 - ATEX Certificate: LCIE 02 ATEX 6227



Dimensions in Millimeters (Inches)



Weight kg	Volume dm ³	Catalog Number
8	27	VCBA

Notes

Notes

Appleton is our premium line of industrial electrical products under Appleton Group, a business unit of Emerson.

Emerson brings integrated manufacturing solutions to diverse industries worldwide. Our comprehensive product line, extensive experience, world-class engineering and global presence enable us to implement solutions that give our customers the competitive edge.

For over 150 years, our electrical product brands have been providing a rich tradition of long-term, practical, high quality solutions with applications ranging from the construction and safe operation of petrochemical and process plants to providing quality power that precisely controls automotive robotic production.

Engineers, distributors, contractors, electricians and site maintenance professionals around the world trust Emerson brands to make electrical installations safer, more productive and more reliable.

Appleton Group is organized into three focused businesses that provide distributors and end-users expert knowledge and excellent service.

Electrical Construction Materials

This group is made up of the Appleton, Nutsteel and O-Z/Gedney brands. They manufacture a broad range of electrical products including conduit and cable fittings, plugs and receptacles, enclosures and controls, conduit bodies and industrial and hazardous lighting. Whether the application is hazardous location, industrial or commercial, the electrical construction materials group has the products to meet your needs.

Power Quality Solutions

The SolaHD brand offers the broadest power quality line, including uninterruptible power supplies, power conditioners, voltage regulators, shielded transformers, surge protection devices and power supplies.

Heating Cable Systems

This group is made up of the EasyHeat and Nelson brands. They offer a broad range of electrical heating cable products for residential, commercial and industrial applications.

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