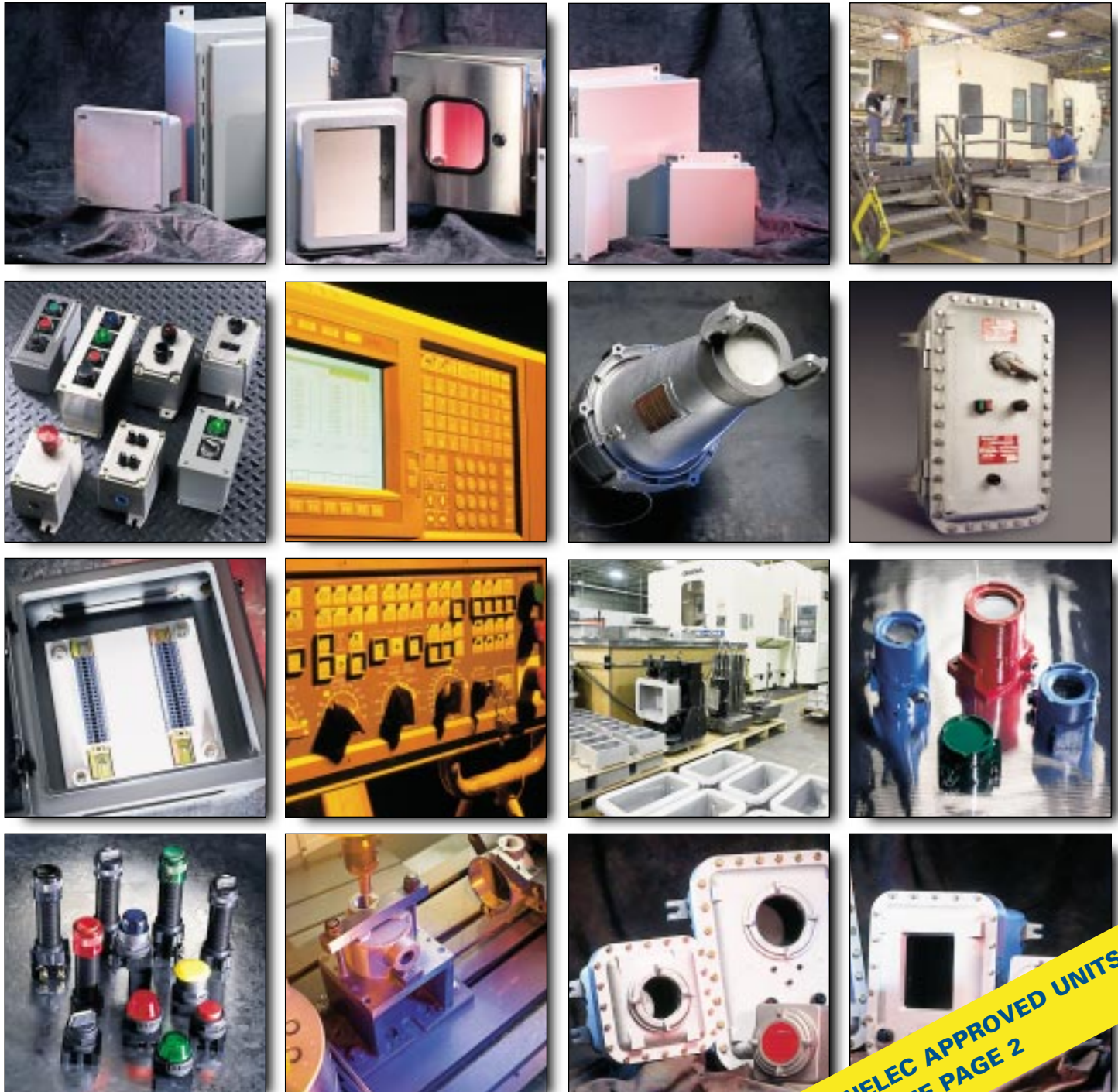


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A SCOTT FETZER COMPANY

INDUSTRIAL ELECTRICAL AND EXPLOSIONPROOF ENCLOSURE SYSTEMS



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Table of Contents

Industrial Electrical Enclosures

Pages 1A-1 To 1C-4

- 1A Stainless Steel Enclosures
- 1B Aluminum Enclosures
- 1C Accessories for Stainless Steel & Aluminum Enclosures

SECTION 1

Fiberglass Enclosures

Pages 2A-1 To 2A-20

SECTION 2

Increased Safety Products

Pages 3A-1 To 3E-4

- | | |
|--|--|
| 3A Principles, Markings, and How to Select an Increased Safety Terminal Enclosure | 3C HV Series - High Voltage Junction Boxes |
| 3B Increased Safety Terminal Enclosures: TN4 Series, TN4 Expanded Series, TSC Series, TFG Series | 3D CN Series |
| | 3E Intrinsically Safe Terminal Enclosures |

SECTION 3

Explosionproof Instrument Housings Pages 4A-1 To 4B-1

- 4A Instrument Housings
- 4B Digital Instrument Enclosures

SECTION 4

Explosionproof, Dust-Tight, Watertight Enclosures & Accessories

Pages 5A-1 To 5E-9

- | | |
|---|---|
| 5A Explosionproof External Flanged Enclosures and Accessories | 5C Explosionproof Fire Alarm Stations |
| 5B Explosionproof Internal Flanged Enclosures and Accessories | 5D Dust and Watertight Enclosures |
| | 5E Multi-Hub Boxes, Thermocouple Head Box |

SECTION 5

Explosionproof Threaded Cover Enclosures

Pages 6A-1 To 6A-15

SECTION 6

AutoCAD drawings available upon request. Please contact Adalet engineering department.

1

Now CENELEC Approved

XCEX EExd IIB

Includes pushbuttons, selector switches, potentiometers and close up plugs when installed in Adalet enclosures.

see SECTION 5A

XJ_X Screw Cover Series EExd IIB+H2

Includes pushbuttons, selector switches, potentiometers and close up plugs when installed in Adalet enclosures.

see SECTION 6A

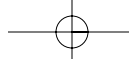
Instrument Housings EExd IIC (except XDHLX is EExd IIB+H2)

XIHX / XDHX series
XIIMX / XDIMX series
XIHLX / XDHLX series

see SECTION 4A

Increased Safety Terminal Enclosures EEx'e' II

see SECTION 3A



Explosionproof Control Stations

Pages 7A-1 To 7C-7

- 7A FS Control³
- 7B PriStar
- 7C Factory-Sealed Control Stations/OmniStar

SECTION 7

Motor Control

Pages 8-A1 To 8E-1

- 8A Panelboards
- 8B Circuit Breakers
- 8C Motor Starters
- 8D IEC Motor Control
- 8E Manual Motor Starters

SECTION 8

Explosionproof Pilot Devices

Pages 9-A1 To 9A-21

SECTION 9

Explosionproof Fittings, Accessories

Pages 10-A1 To 10A-20

SECTION 10

Couplers, Plugs, Receptacles

Pages 11-A1 To 11A-40

SECTION 11

Hazardous Location Definitions

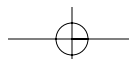
Pages 12-A1 To 12A-6

SECTION 12

Index

INDEX

AutoCAD drawings available upon request. Please contact Adalet engineering department.



Quick Reference Guide

METHODS OF PROTECTION

Area	Protection Method	UL	CSA	CENELEC	IEC
Division 1	Explosionproof	ANSI/UL 1203	CSA-30	--	--
	Intrinsically Safe (2 Fault)	ANSI/UL 913	CSA-157	--	--
	Purge/Pressurized (Type X or Y)	ANSI/NFPA 496	ANSI/NFPA 496	--	--
Division 2	Nonincendive	UL 1604	CSA-213	--	--
	Non-sparking device	UL 1604	CSA-213	--	--
	Purge/Pressurized (Type Z)	ANSI/NFPA 496	ANSI/NFPA 496	--	--
	Hermetically sealed	UL 1604	CSA-213	--	--
	Any Class I, Division 1 Method	--	--	--	--
Area	Protection Method	UL (AEx)	CSA (Ex)	CENELEC (EEx)	IEC (Ex)
Zone 0	Intrinsically Safe 'ia' (2 Fault)	UL 2279 Pt. 11	CSA-E79-18	EN 50028	IEC 60 079-18
Zone 1	Flameproof 'd'	UL 2279 Pt. 1	CSA-E79-1	EN 50018	IEC 60 079-1
	Increased Safety 'e'	UL 2279 Pt. 7	CSA-E79-7	EN 50019	IEC 60 079-7
	Intrinsically Safe 'ib' (1 Fault)0	UL 2279 Pt. 11	CSA-E79-11	EN 50020	IEC 60 079-11
	Encapsulation 'm'	UL 2279 Pt. 18	CSA-E79-18	EN 50028	IEC 60 079-18
	Oil Immersion 'o'	UL 2279	CSA-E79-6	EN 50015	IEC 60 079-6
	Purged/Pressurized 'p'	UL 2279 Pt. 2	CSA-E79-2	EN 50016	IEC 60 079-2
	Powder filling 'q'	UL 2279	CSA-E79-5	EN 50017	IEC 60 079-5
	Any Zone 0 Method	--	--	--	--
Zone 2	Non-sparking 'nA'	UL 2279 Pt. 15	CSA-E79-15	prEN 50021	IEC 60 079-15
	Hermetically sealed 'nC'	UL 2279 Pt. 15	CSA-E79-15	prEN 50021	IEC 60 079-15
	Nonincendive 'nC'	UL 2279 Pt. 15	CSA-E79-15	prEN 50021	IEC 60 079-15
	Restricted breathing 'nR'	UL 2279 Pt. 15	CSA-E79-15	prEN 50021	IEC 60 079-15
	Any Zone 0 or 1 Method	--	--	--	--

AREA CLASSIFICATIONS

	Ignitable Materials Present Continuously	Ignitable Materials Present Intermittently	Ignitable Materials Present Abnormally
IEC/CENELEC	Zone 0 (Zone 20 Dust)	Zone 1 (Zone 21 Dust)	Zone 2 (Zone 22 Dust)
NEC 505	Zone 0	Zone 1	Zone 2
NEC 500	Division 1	Division 1	Division 2

ATEX Classification by Group & Category According to Use

	Ignitable Materials Present Continuously	Ignitable Materials Present Intermittently	Ignitable Materials Present Abnormally
Equipment Group II (surface)	Category 1 Equipment	Category 2 Equipment	Category 3 Equipment
Equipment Group I (mining)	Category M1 Equipment	Category M2 Equipment	—

GAS GROUPINGS

Gas, Dust or Fiber	NEC 505/IEC/CENELEC	NEC 500
Acetylene	Group IIC	Class I/Group A
Hydrogen	Group IIC/Group IIB+H2	Class I/Group B
Ethylene	Group IIB	Class I/Group C
Propane	Group IIA	Class I/Group D
Methane	Group I (firedamp)	Class I/Group D
Metal Dust	None	Class II/Group E
Coal Dust	None	Class II/Group F
Grain Dust	None	Class II/Group G
Fibers	None	Class III

ACRONYMS

CENELEC - European Committee for Electrotechnical Standardization
IEC - International Electrotechnical Commission
NEC - National Electrical Code
U.L. - Underwriters Laboratories
C.S.A. - Canadian Standards Association
FM - Factory Mutual
BASEEFA - British Approvals Service for Electrical Apparatus in Flammable Atmospheres
NFPA - National Fire Protection Agency
ISO - International Organization for Standardization
ANSI - American National Standard Institute
ATEX - Atmospheres Explosibles

TEMPERATURE CLASSES

Maximum Surface Temperature	NEC 505 IEC CENELEC	NEC 500
450°C	T1	T1
300°C	T2	T2
280°C		T2A
260°C		T2B
230°C		T2C
215°C		T2D
200°C	T3	T3
180°C		T3A
165°C		T3B
160°C		T3C
135°C	T4	T4
120°C		T4A
100°C	T5	T5
85°C	T6	T6

INGRESS PROTECTION (IP XX) CODES

#	First Number (Protection against Solid Bodies)	Second Number (Protection against Liquids)
0	No protection	No protection
1	Objects greater than 50mm	Vertically dripping water
2	Objects greater than 12mm	75-90 Deg. dripping water
3	Objects greater than 2.5mm	Sprayed water
4	Object greater than 1mm	Splashed water
5	Dust Protected	Water jets
6	Dust-tight	Heavy seas
7	--	Effects of immersion
8	--	Indefinite immersion

NEMA Type 4X JIC Stainless Steel Enclosures – Continuous Hinge Cover



These enclosures are suitable for use in areas such as petrochemical plants, dairies, breweries, food processing areas and similar environments where they are subject to frequent high pressure hosing and generally wet conditions. They are also designed for use in areas where severe corrosion problems exist. Type 316 stainless steel enclosures are also suitable for use in offshore applications. (Not submersible.)

Construction

Adalet's JN4XHSS enclosures are available in Type 304 or Type 316 stainless steel with a #3 - #4 brush finish. (Replace -SS with -SS6 in catalog number when ordering Type 316 stainless steel.) All seams are continuously welded and ground to a smooth finish. Each enclosure comes complete with four 10-32 weld nuts (for mounting optional panels). Grounding studs are provided on the inside of the box and door, and wall mounting back brackets are welded on the top and bottom outside. The JN4XHSS cover is sealed with a neoprene gasket and is secured to the enclosure with a continuous stainless steel piano hinge on one side and stainless steel door clamping hardware on three sides. There are no knock-outs or holes in the cover or body.

Panels

Optional panels are available. Panels are fabricated from #14 ga. cold-rolled steel.

Finish

All enclosures are made from Type 304 or Type 316 stainless steel with a #3 - #4 brush finish. Panels are finished with a high gloss white paint.

Standards

All JN4XHSS enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet/Ice Resistant), Type 3R (Rainproof and Sleet/Ice Resistant), Type 4 (Watertight and Dust-tight), Type 4X (Watertight, Dust-tight and Corrosion Resistant), Type 12 (Industrial Use) and Type 13 (Oiltight and Dust-tight) enclosures. These enclosures conform to Joint Industry Council (JIC) standard EGP-1-1967. They are listed by Underwriters Laboratories, Inc. (UL) for Canada and the United States.

Special Orders

Custom units in special sizes or with punching can be supplied.

For Type 316 stainless steel enclosures, add 6 after SS (i.e. JN4XHSS6)



Shown with optional hinged cover and panel.

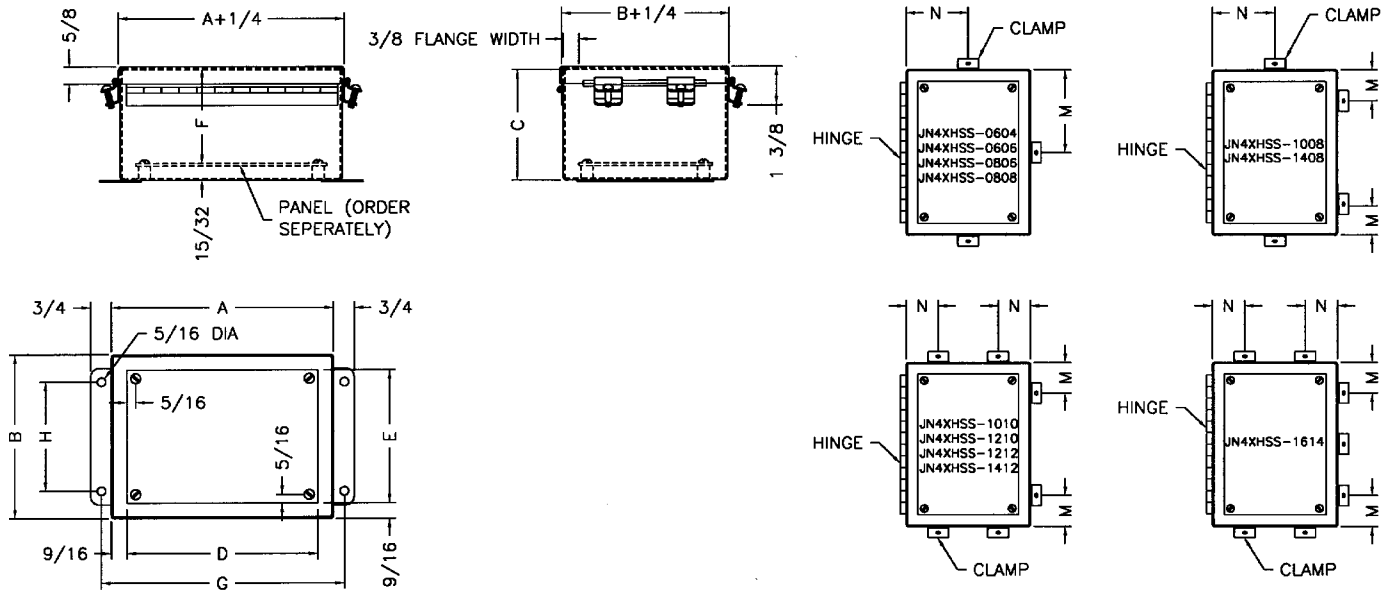
Application

Adalet's JN4XHSS series wall-mounted JIC enclosures are designed to provide protection, indoors and outdoors, against dust, dirt, oil and water for items such as pneumatic or hydraulic instruments, transformers, and junction wiring.

1A-1

NEMA Type 4X JIC Stainless Steel Enclosures – Continuous Hinge Cover

1A-2



Enclosure Catalog Number	Gauge	A	B	C	Panel Catalog No.	D	E	F	Mounting		Clamps	
									G	H	M	N
JN4XHSS-060403	16	6.00	4.00	3.00	06P04	4.88	2.88	2.55	6.75	2.00	3.00	2.00
JN4XHSS-080604	14	8.00	6.00	4.00	08P06	6.88	4.88	3.55	8.75	4.00	4.00	3.00
JN4XHSS-060404	16	6.00	4.00	4.00	06P04	4.88	2.88	3.55	6.75	2.00	3.00	2.00
JN4XHSS-060604	16	6.00	6.00	4.00	06P06	4.88	4.88	3.55	6.75	4.00	3.00	3.00
JN4XHSS-080804	14	8.00	8.00	4.00	08P08	6.88	6.88	3.55	8.75	6.00	4.00	4.00
JN4XHSS-100804	14	10.00	8.00	4.00	10P08	8.88	6.88	3.55	10.75	6.00	1.63	4.00
JN4XHSS-121005	14	12.00	10.00	5.00	12P10	10.88	8.88	4.55	12.75	8.00	3.63	2.63
JN4XHSS-080606	14	8.00	6.00	6.00	08P06	6.88	4.88	5.55	8.75	4.00	4.00	3.00
JN4XHSS-100806	14	10.00	8.00	6.00	10P08	8.88	6.88	5.55	10.75	6.00	1.63	4.00
JN4XHSS-101006	14	10.00	10.00	6.00	10P10	8.88	8.88	5.55	10.75	8.00	1.63	2.63
JN4XHSS-121206	14	12.00	12.00	6.00	12P12	10.88	10.88	5.55	12.75	10.00	3.63	3.00
JN4XHSS-140806	14	14.00	8.00	6.00	14P08	12.88	6.88	5.55	14.75	6.00	3.63	4.00
JN4XHSS-141206	14	14.00	12.00	6.00	14P12	12.88	10.88	5.55	14.75	10.00	3.63	3.00
JN4XHSS-161406	14	16.00	14.00	6.00	16P14	14.88	12.88	5.55	16.75	12.00	1.63	4.13
JN4XHSS-121008	14	12.00	10.00	8.00	12P10	10.88	8.88	7.55	12.75	8.00	3.63	2.63
JN4XHSS-141208	14	14.00	12.00	8.00	14P12	12.88	10.88	7.55	14.75	10.00	3.63	4.13
JN4XHSS-161408	14	16.00	14.00	8.00	16P14	14.88	12.88	7.55	16.75	12.00	1.63	4.13
JN4XHSS-161410	14	16.00	14.00	10.00	16P14	14.88	12.88	9.55	16.75	12.00	1.63	4.13

All dimensions in inches

For Type 316 stainless steel enclosures,
add 6 after SS. (i.e. JN4XHSS6)

NEMA Type 4X JIC Stainless Steel Enclosures – Lift Off Cover

1A-3



These enclosures are suitable for use in areas such as petrochemical plants, dairies, breweries, food processing areas and similar environments where they are subject to frequent high pressure hosing and generally wet conditions. They are also designed for use in areas where severe corrosion problems exist. Type 316 stainless steel enclosures are also suitable for use in offshore applications. (Not submersible.)

Construction

Adalet's JN4XSS enclosures are available in Type 304 or Type 316 stainless steel with a #3 - #4 brush finish. (Replace -XSS with -XSS6 in catalog number when ordering Type 316 stainless steel.) All seams are continuously welded and ground to a smooth finish. Each enclosure comes complete with four 10-32 weld nuts (for mounting optional panels). Grounding studs are provided on the inside of the box and door, and wall mounting back brackets are welded on the top and bottom outside. The JN4XSS cover is sealed with a neoprene gasket and is secured to the enclosure with a continuous stainless steel piano hinge on one side and stainless steel door clamping hardware on three sides. There are no knock-outs or holes in the cover or body.

Panels

Optional panels are available. Panels are fabricated from cold-rolled steel.

Finish

All enclosures are made from Type 304 or Type 316 stainless steel with a #3 - #4 brush finish. Panels are finished with a high gloss white paint.

Standards

All JN4XSS enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet/Ice Resistant), Type 3R (Rainproof and Sleet/Ice Resistant), Type 4 (Watertight and Dust-tight), Type 4X (Watertight, Dust-tight and Corrosion Resistant), Type 12 (Industrial Use) and Type 13 (Oiltight and Dust-tight) enclosures. These enclosures conform to Joint Industry Council (JIC) standard EGP-1-1967. They are listed by Underwriters Laboratories, Inc. (UL) for Canada and the United States.

Special Orders

Custom units in special sizes or with punching can be supplied.

For Type 316 stainless steel enclosures, replace SS with SS6 in catalog number (i.e. JN4XSS6)



Shown with optional panel.

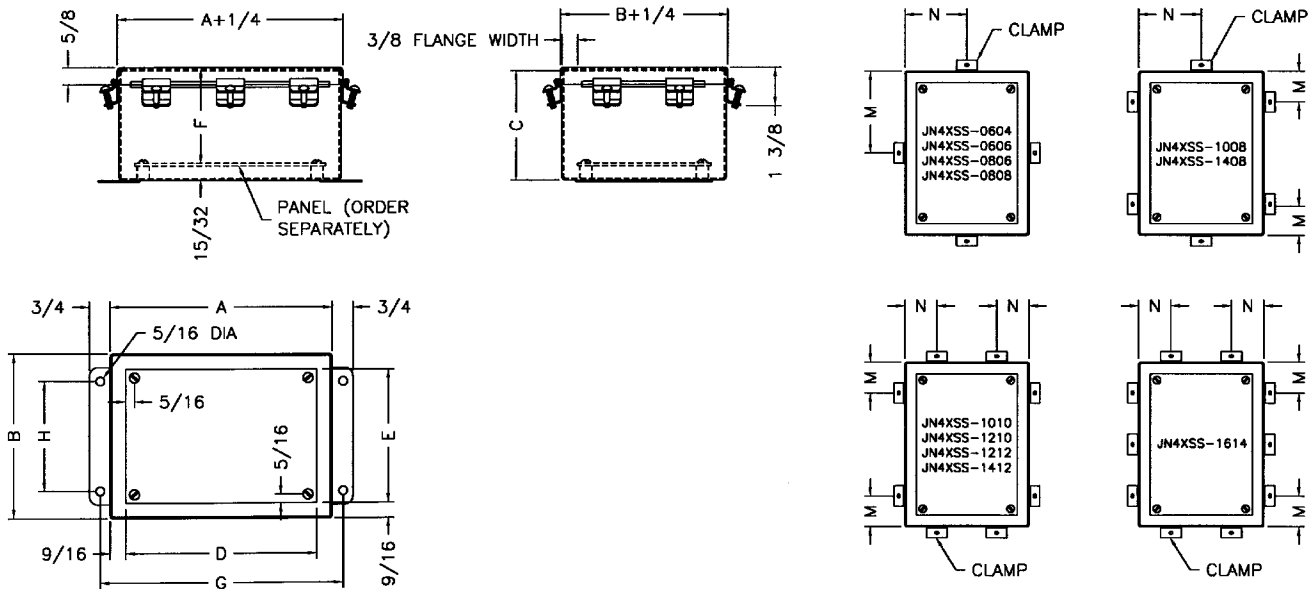


Application

Adalet's JN4XSS series wall-mounted JIC enclosures are designed to provide protection, indoors and outdoors, against dust, dirt, oil and water for items such as pneumatic or hydraulic instruments, transformers, and junction wiring.

NEMA Type 4X JIC Stainless Steel Enclosures – Lift Off Cover

1A-4



Enclosure Catalog Number	Gauge	A	B	C	Panel Catalog No.	D	E	F	Mounting		Clamps	
									G	H	M	N
JN4XSS-060403	16	6.00	4.00	3.00	06P04	4.88	2.88	2.55	6.75	2.00	3.00	2.00
JN4XSS-080604	14	8.00	6.00	4.00	08P06	6.88	4.88	3.55	8.75	4.00	4.00	3.00
JN4XSS-060404	16	6.00	4.00	4.00	06P04	4.88	2.88	3.55	6.75	2.00	3.00	2.00
JN4XSS-060604	16	6.00	6.00	4.00	06P06	4.88	4.88	3.55	6.75	4.00	3.00	3.00
JN4XSS-080804	14	8.00	8.00	4.00	08P08	6.88	6.88	3.55	8.75	6.00	4.00	4.00
JN4XSS-100804	14	10.00	8.00	4.00	10P08	8.88	6.88	3.55	10.75	6.00	1.63	4.00
JN4XSS-121005	14	12.00	10.00	5.00	12P10	10.88	8.88	4.55	12.75	8.00	3.63	2.63
JN4XSS-080606	14	8.00	6.00	6.00	08P06	6.88	4.88	5.55	8.75	4.00	4.00	3.00
JN4XSS-100806	14	10.00	8.00	6.00	10P08	8.88	6.88	5.55	10.75	6.00	1.63	4.00
JN4XSS-101006	14	10.00	10.00	6.00	10P10	8.88	8.88	5.55	10.75	8.00	1.63	2.63
JN4XSS-121206	14	12.00	12.00	6.00	12P12	10.88	10.88	5.55	12.75	10.00	3.63	3.00
JN4XSS-140806	14	14.00	8.00	6.00	14P08	12.88	6.88	5.55	14.75	6.00	3.63	4.00
JN4XSS-141206	14	14.00	12.00	6.00	14P12	12.88	10.88	5.55	14.75	10.00	3.63	3.00
JN4XSS-161406	14	16.00	14.00	6.00	16P14	14.88	12.88	5.55	16.75	12.00	1.63	4.13
JN4XSS-121008	14	12.00	10.00	8.00	12P10	10.88	8.88	7.55	12.75	8.00	3.63	2.63
JN4XSS-141208	14	14.00	12.00	8.00	14P12	12.88	10.88	7.55	14.75	10.00	3.63	4.13
JN4XSS-161408	14	16.00	14.00	8.00	16P14	14.88	12.88	7.55	16.75	12.00	1.63	4.13
JN4XSS-161410	14	16.00	14.00	10.00	16P14	14.88	12.88	9.55	16.75	12.00	1.63	4.13

All dimensions in inches

For Type 316 stainless steel enclosures, replace SS with SS6 in catalog number (i.e. JN4XSS6)

NEMA Type 4X Stainless Steel Single Door Enclosures



Application

Adalet's N4X single-door wall-mounted enclosures are used indoors and outdoors to house such items as pilot devices, electronic/electrical controls, instrumentation systems, and pneumatic, hydraulic, and machine tool controls.

These enclosures are designed to provide protection against dust, dirt, oil and water. They are for use in petrochemical plants, dairies, breweries, food processing areas and similar environments where they are subject to frequent high pressure hosing and generally wet conditions. They are also designed for use in areas where severe corrosion problems exist. Type 316 enclosures are also suitable for use in offshore applications. (Not submersible.)

Construction

Adalet's N4X enclosures are available in either Type 304 or Type 316 stainless steel with a #3 - #4 brush finish. (Replace N4X with N4X6 in catalog number when ordering Type 316 stainless steel.) The N4X has continuously welded seams ground to a smooth finish. The N4X enclosure has a folded lip around the door opening to provide complete and maximum gasket contact, and to prevent liquids from dripping into the enclosure when the door is open. Each enclosure comes complete with 3/8 collar studs (for mounting optional panels), 1/4-20 grounding studs, padlock hasp and staple, and optional print pocket.

Large N4X enclosures come complete with additional panel mounting studs and maintain a rigid construction through the use of door and body stiffeners. There are no knock-outs or holes in the door or body. Print pockets are furnished upon request and will be shipped loose.

Panels

Optional panels are available. Panels are fabricated from 12 ga. cold-rolled steel.

Finish

All enclosures are made from Type 304 or Type 316 stainless steel with a #3 - #4 brush finish. Optional panels are white.

Standards

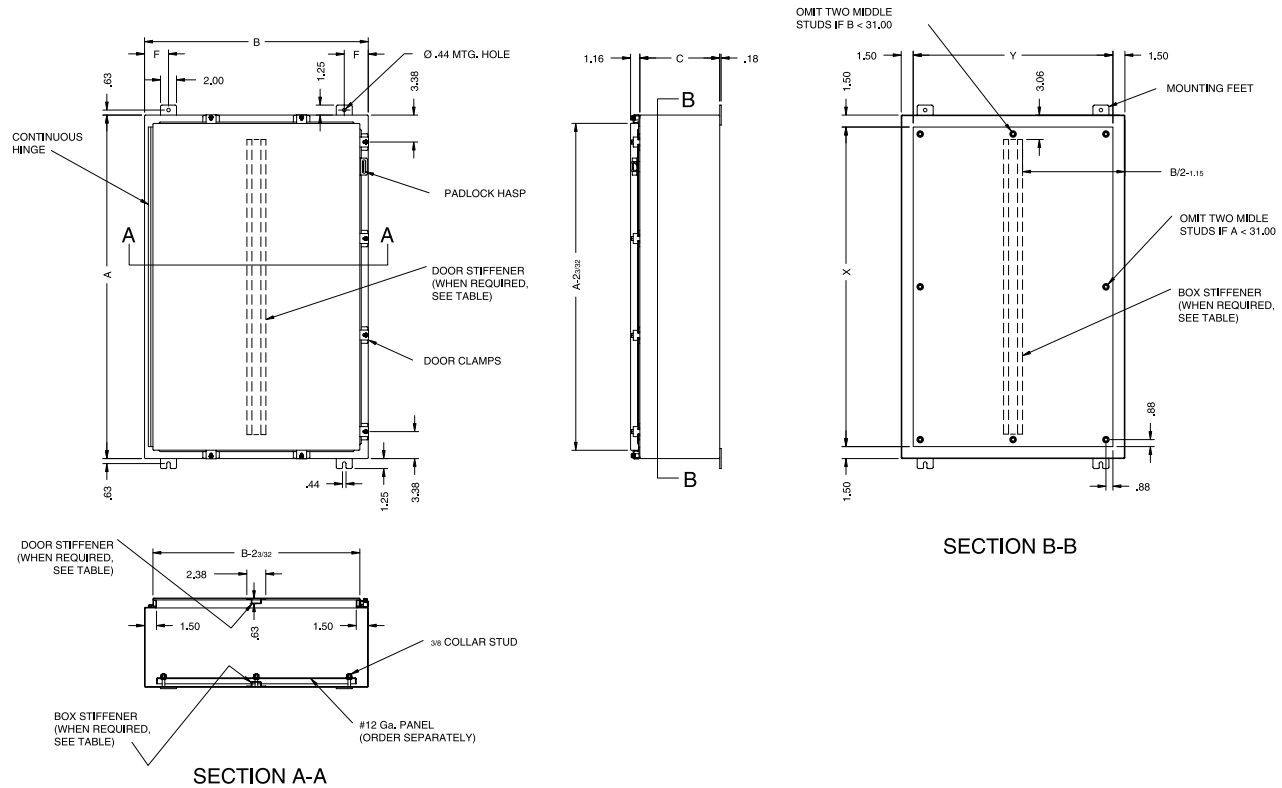
All N4X enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet/Ice Resistant), Type 3R (Rainproof and Sleet/Ice Resistant), Type 4 (Watertight and Dust-tight), Type 4X (Watertight, Dust-tight and Corrosion Resistant), Type 12 (Industrial Use) and Type 13 (Oiltight and Dust-tight) enclosures. These enclosures conform to Joint Industry Council (JIC) standard EGP-1-1967. They are listed by Underwriters Laboratories, Inc. (UL) for Canada and the United States.

Special Orders

Custom units in special sizes or with punching can be supplied.

NEMA Type 4X Stainless Steel Single Door Enclosures

1A-6



Enclosure								Panel				
Catalog # Prefixes N4X or N4X6	Gauge Thickness		Box Dimensions			No. of Clamps	F	Box Stiff. Qty	Door Stiff. Qty	Panel Catalog # (optional)	Panel Dimensions	
	Box	Door	A	B	C						X	Y
-161206	16	14	16.00	12.00	6.00	4	1.25	—	—	V1612	13.00	9.00
-161606	16	14	16.00	16.00	6.00	4	3.00	—	—	V1616	13.00	13.00
-162006	16	14	16.00	20.00	6.00	4	3.00	—	—	V2016	13.00	17.00
-201606	16	14	20.00	16.00	6.00	4	3.00	—	—	V2016	17.00	13.00
-202006	16	14	20.00	20.00	6.00	4	3.00	—	—	V2020	17.00	17.00
-202406	16	14	20.00	24.00	6.00	4	3.00	—	—	V2420	17.00	21.00
-241206	16	14	24.00	12.00	6.00	5	1.25	—	—	V2412	21.00	9.00
-241606	16	14	24.00	16.00	6.00	5	3.00	—	—	V2416	21.00	13.00
-242006	16	14	24.00	20.00	6.00	5	3.00	—	—	V2420	21.00	17.00
-242406	16	14	24.00	24.00	6.00	5	3.00	—	—	V2424	21.00	21.00
-302006	14	14	30.00	20.00	6.00	5	3.00	—	—	V3020	27.00	17.00
-302406	14	14	30.00	24.00	6.00	5	3.00	—	—	V3024	27.00	21.00
-362406	14	14	36.00	24.00	6.00	5	3.00	—	—	V3624	33.00	21.00
-363006	14	14	36.00	30.00	6.00	7	3.00	1	—	V3630	33.00	27.00
-161208	16	14	16.00	12.00	8.00	4	1.25	—	—	V1612	13.00	9.00
-161608	16	14	16.00	16.00	8.00	4	3.00	—	—	V1616	13.00	13.00
-162008	16	14	16.00	20.00	8.00	4	3.00	—	—	V2016	13.00	17.00
-201608	16	14	20.00	16.00	8.00	4	3.00	—	—	V2016	17.00	13.00
-202008	16	14	20.00	20.00	8.00	4	3.00	—	—	V2020	17.00	17.00
-202408	16	14	20.00	24.00	8.00	4	3.00	—	—	V2420	17.00	21.00
-241608	16	14	24.00	16.00	8.00	5	3.00	—	—	V2416	21.00	13.00

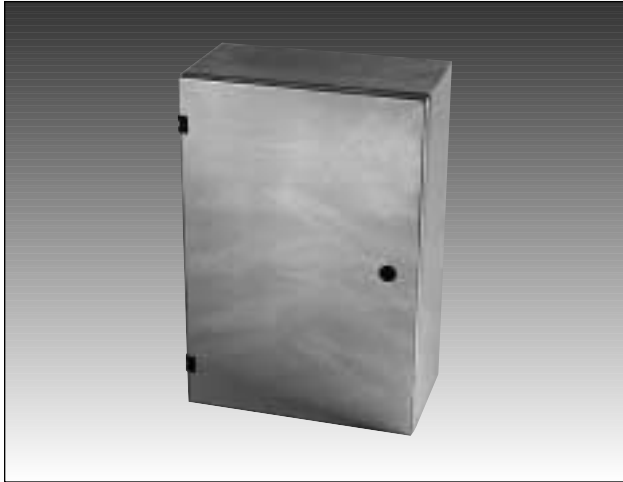
NEMA Type 4X Stainless Steel Single Door Enclosures

Enclosure								Panel				
Catalog # Prefixes N4X or N4X6	Gauge Thickness		Box Dimensions			No. of Clamps	F	Box Stiff. Qty	Door Stiff. Qty	Panel Catalog # (optional)	Panel Dimensions	
	Box	Door	A	B	C						X	Y
-242008	16	14	24.00	20.00	8.00	5	3.00	—	—	V2420	21.00	17.00
-242408	16	14	24.00	24.00	8.00	5	3.00	—	—	V2424	21.00	21.00
-243008	14	14	24.00	30.00	8.00	7	3.00	—	—	V3024	21.00	27.00
-302008	14	14	30.00	20.00	8.00	5	3.00	—	—	V3020	27.00	17.00
-302408	14	14	30.00	24.00	8.00	5	3.00	—	—	V3024	27.00	21.00
-303008	14	14	30.00	30.00	8.00	7	3.00	1	—	V3030	27.00	27.00
-362408	14	14	36.00	24.00	8.00	5	3.00	—	—	V3624	33.00	21.0
-363008	14	14	36.00	30.00	8.00	7	3.00	1	—	V3630	33.00	27.00
-363608	14	14	36.00	36.00	8.00	7	3.00	1	1	V3636	33.00	33.00
-423008	14	14	42.00	30.00	8.00	8	3.00	—	—	V4230	39.00	27.00
-423608	14	14	42.00	36.00	8.00	8	3.00	1	1	V4236	39.00	33.00
-483608	14	14	48.00	36.00	8.00	8	3.00	—	—	V4836	45.00	33.00
-201610	16	14	20.00	16.00	10.00	4	3.00	—	—	V2016	17.00	13.00
-202010	16	14	20.00	20.00	10.00	4	3.00	—	—	V2020	17.00	17.00
-242010	16	14	24.00	20.00	10.00	5	3.00	—	—	V2420	21.00	17.00
-242410	16	14	24.00	24.00	10.00	5	3.00	—	—	V2424	21.00	21.00
-302410	14	14	30.00	24.00	10.00	5	3.00	—	—	V3024	27.00	21.00
-362410	14	14	36.00	24.00	10.00	5	3.00	—	—	V3624	33.00	21.00
-363010	14	14	36.00	30.00	10.00	7	3.00	1	—	V3630	33.00	27.00
-423010	14	14	42.00	30.00	10.00	8	3.00	1	1	V4230	39.00	27.00
-423610	14	14	42.00	36.00	10.00	8	3.00	1	1	V4236	39.00	33.00
-483610	14	14	48.00	36.00	10.00	8	3.00	—	—	V4836	45.00	33.00
-603610	14	14	60.00	36.00	10.00	9	3.00	—	—	V6036	57.00	33.00
-201612	16	14	20.00	16.00	12.00	4	3.00	—	—	V2016	17.00	13.00
-242012	16	14	24.00	20.00	12.00	5	3.00	—	—	V2420	21.00	17.00
-242412	16	14	24.00	24.00	12.00	5	3.00	—	—	V2424	21.00	21.00
-302412	14	14	30.00	24.00	12.00	5	3.00	—	—	V3024	27.00	21.00
-303012	14	14	30.00	30.00	12.00	7	3.00	1	—	V3030	27.00	27.00
-362412	14	14	36.00	24.00	12.00	5	3.00	—	—	V3624	33.00	21.00
-363012	14	14	36.00	30.00	12.00	7	3.00	1	1	V3630	33.00	27.00
-363612	14	14	36.00	36.00	12.00	7	3.00	1	1	V3636	33.00	33.00
-423012	14	14	42.00	30.00	12.00	8	3.00	1	1	V4230	39.00	27.00
-423612	14	14	42.00	36.00	12.00	8	3.00	—	—	V4236	39.00	33.00
-483612	14	14	48.00	36.00	12.00	8	3.00	—	—	V4836	45.00	33.00
-603612	14	14	60.00	36.00	12.00	9	3.00	—	—	V6036	57.00	33.00
-242016	16	14	24.00	20.00	16.00	5	3.00	1	1	V2420	21.00	17.00
-242416	16	14	24.00	24.00	16.00	5	3.00	1	1	V2424	21.00	21.00
-302416	14	14	30.00	24.00	16.00	5	3.00	1	1	V3024	27.00	21.00
-363016	14	14	36.00	30.00	16.00	7	3.00	1	—	V3630	33.00	27.00
-423616	14	14	42.00	36.00	16.00	8	3.00	1	1	V4236	39.00	33.00
-483616	14	14	48.00	36.00	16.00	8	3.00	1	1	V4836	45.00	33.00
-603616	14	14	60.00	36.00	16.00	9	3.00	1	1	V6036	57.00	33.00
-302420	14	14	30.00	24.00	20.00	5	3.00	—	—	V3024	27.00	21.00
-363020	14	14	36.00	30.00	20.00	7	3.00	1	—	V3630	33.00	27.00
-483620	14	14	48.00	36.00	20.00	8	3.00	1	1	V4836	45.00	33.00
-603620	14	14	60.00	36.00	20.00	9	3.00	1	1	V6036	57.00	33.00
-302424	14	14	30.00	24.00	24.00	5	3.00	—	—	V3024	27.00	23.00

1A-7

NEMA Type 4X Victory™ Series Stainless Steel Enclosures

1A-8



Shown with optional panel.



Victory Series Enclosures

Victory series enclosures feature a streamlined design with a flush door and latches that accommodate any electrical or electronic application. Adalet has designed these enclosures to use quarter-turn latches instead of hold-down clamps (which are often inadequately secured after servicing, leaving equipment vulnerable to the elements). Attractive aluminum die-cast hinges are anodized black.

Application

Adalet's AVSS Victory series stainless steel enclosures are used indoors and outdoors to house such items as electronic/electrical controls, instrumentation systems, pneumatic, hydraulic and machine tool controls.

These enclosures are designed to provide protection against dust, dirt, oil and water. They are for use in petrochemical plants, dairies, breweries, food processing areas and similar environments where they are subject to frequent high pressure hosing and generally wet conditions. They are also designed for use in areas where severe corrosion problems exist. (Not submersible.)

Construction

Adalet's AVSS enclosures are made from Type 304 or Type 316 stainless steel with a #3 - #4 brush finish. (Replace SS with SS6 in catalog when ordering Type 316 stainless steel). All seams are continuously welded and ground to a smooth finish. AVSS enclosures have a formed lip around the door opening to provide complete and maximum gasket contact and to prevent liquids from dripping into the enclosure when the door is open.

Each enclosure comes complete with a 1/4-20 grounding stud, 3/8 collar studs (for mounting optional inner panels).

Each enclosure door is equipped with a neoprene gasket, 1/4-20 grounding stud and slotted quarter-turn latches to secure the door (optional locking latches are also available). 180° removable hinge.

Large enclosures come complete with additional panel mounting studs and maintain a rigid construction through the use of door and body stiffeners. Print pockets are furnished upon request and are shipped loose.

Panels

Optional panels are available. Panels are fabricated from 12 ga. cold-rolled steel.

Finish

All enclosures are made from Type 304 or Type 316 stainless steel with a #3 - #4 brush finish. Optional panels are white.

Standards

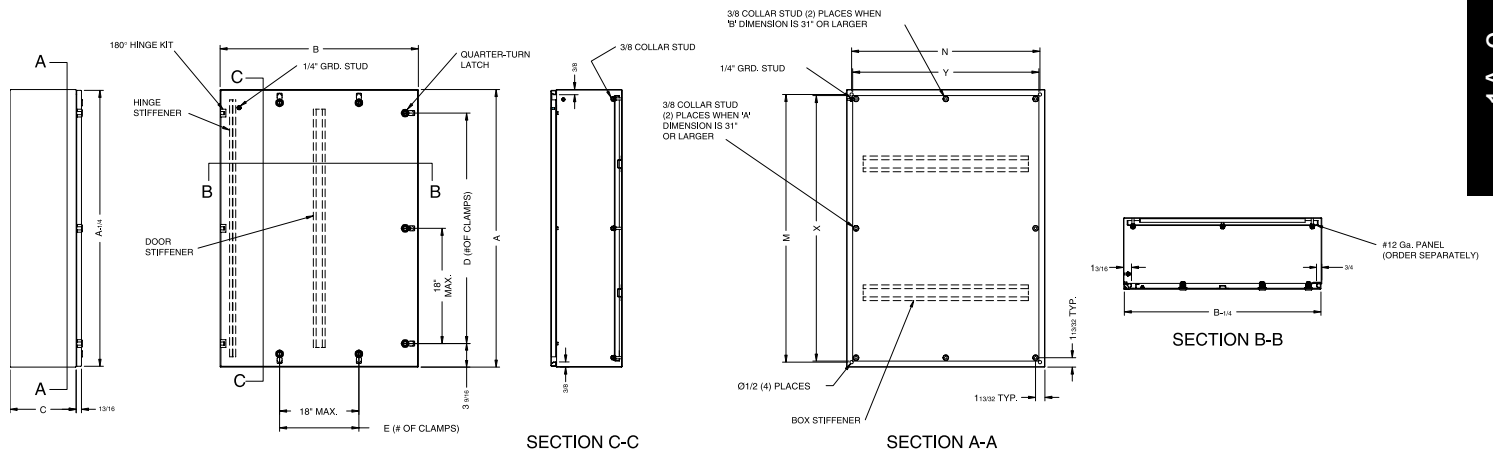
All AVSS enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet/Ice Resistant), Type 3R (Rainproof and Sleet/Ice Resistant), Type 4 (Watertight and Dust-tight), Type 4X (Watertight, Dust-tight and Corrosion Resistant), Type 12 (Industrial Use) and Type 13 (Oiltight and Dust-tight) enclosures. These enclosures conform to Joint Industry Council (JIC) standard EGP-1-1967. They are listed by Underwriters Laboratories, Inc. (UL) for Canada and the United States.

Special Orders

Custom units in special sizes, with punching or with Type 316 stainless steel, can be supplied.

See Victory series panels on page 1C-1, and accessories on page 1A-10.

NEMA Type 4X Victory™ Series Stainless Steel Enclosures



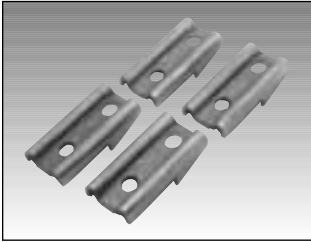
1A-9

Catalog #	Gauge Thickness†		Box Dimension			Latches		Box	Cover	Mounting Centers		Panel Cat. #	Panel Dim.		
	Prefix AVSS	Prefix AVSS6	Box	Door	A	B	C	D	E	Stiffener Qty.	Stiffener Qty.		M	N	Optional
-121206	16	16	12.00	12.00	6.00	1	-	-	-	10.50	10.50	V1212	9	9	
-161206	16	16	16.00	12.00	6.00	1	-	-	-	14.50	10.50	V1612	13	9	
-161606	16	16	16.00	16.00	6.00	1	-	-	-	14.50	14.50	V1616	13	13	
-201606	16	16	20.00	16.00	6.00	2	-	-	-	18.50	14.50	V2016	17	13	
-202006	16	16	20.00	20.00	6.00	2	-	-	-	18.50	18.50	V2020	17	17	
-241606	16	16	24.00	16.00	6.00	2	-	-	-	22.50	14.50	V2416	21	13	
-242006	16	16	24.00	20.00	6.00	2	-	-	-	22.50	18.50	V2420	21	17	
-242406	16	14	24.00	24.00	6.00	2	-	-	-	22.50	22.50	V2424	21	21	
-161208	16	16	16.00	12.00	8.00	1	-	-	-	14.50	10.50	V1612	13	9	
-161608	16	16	16.00	16.00	8.00	1	-	-	-	14.50	10.50	V1616	13	13	
-162008	16	16	16.00	20.00	8.00	1	-	-	-	14.50	18.50	V1620	13	17	
-201608	16	16	20.00	16.00	8.00	2	-	-	-	18.50	14.50	V2016	17	13	
-202008	16	16	20.00	20.00	8.00	2	-	-	-	18.50	18.50	V2020	17	17	
-202408	16	16	20.00	24.00	8.00	2	-	-	-	18.50	22.50	V2024	17	21	
-241608	16	16	24.00	16.00	8.00	2	-	-	-	22.50	14.50	V2416	21	13	
-242008	16	16	24.00	20.00	8.00	2	-	-	-	22.50	18.50	V2420	21	17	
-242408	16	14	24.00	24.00	8.00	2	-	-	-	22.50	22.50	V2424	21	21	
-243008	16	14	24.00	30.00	8.00	2	1	1	-	22.50	28.50	V2430	21	27	
-302008	16	14	30.00	20.00	8.00	3	-	-	-	28.50	18.50	V3020	27	17	
-302408	16	14	30.00	24.00	8.00	3	-	-	-	28.50	22.50	V3024	27	21	
-303008	14	14	30.00	30.00	8.00	3	1	1	-	28.50	28.50	V3030	27	27	
-362408	16	14	36.00	24.00	8.00	3	-	-	-	34.50	28.50	V3630	33	27	
-363008	14	14	36.00	30.00	8.00	3	1	2	-	34.50	28.50	V3630	33	27	
-363608	14	14	36.00	36.00	8.00	3	2	2	1	34.50	34.50	V3636	33	33	
-202012	16	16	20.00	20.00	12.00	2	-	-	-	18.50	18.50	V2020	17	17	
-242012	16	16	24.00	20.00	12.00	2	-	-	-	22.50	18.50	V2420	21	17	
-242412	16	14	24.00	24.00	12.00	2	-	-	-	22.50	22.50	V2424	21	21	
-302412	16	14	30.00	24.00	12.00	3	-	-	-	28.50	22.50	V3024	27	21	
-303012	14	14	30.00	30.00	12.00	3	1	1	-	28.50	28.50	V3030	29	27	
-362412	14	14	36.00	24.00	12.00	3	-	-	-	34.50	22.50	V3624	33	21	
-363012	14	14	36.00	30.00	12.00	3	1	2	-	34.50	28.50	V3630	33	27	
-363612	14	14	36.00	36.00	12.00	3	2	2	1	34.50	34.50	V3636	33	33	
-423612	14	14	42.00	36.00	12.00	3	2	2	1	40.50	34.50	V4236	39	33	
-483612	14	14	48.00	36.00	12.00	4	2	2	1	46.50	34.50	V4836	45	33	
-603612	14	14	60.00	36.00	12.00	4	2	2	1	58.50	34.50	V6036	57	33	
-242416	14	14	24.00	24.00	16.00	2	-	-	-	22.50	22.50	V2424	21	21	
-363016	14	14	36.00	30.00	16.00	3	1	2	-	34.50	28.50	V3630	33	27	
-483616	14	14	48.00	36.00	16.00	4	2	2	1	46.50	34.50	V4836	45	33	
-242420	14	14	24.00	24.00	20.00	2	-	-	-	22.50	22.50	V2424	21	21	
-302420	14	14	30.00	24.00	20.00	3	-	-	-	28.50	22.50	V3024	27	21	
-363020	14	14	36.00	30.00	20.00	3	1	2	-	34.50	28.50	V3630	33	27	

† AVSS6 Series: All 14 ga.

Victory™ Series Accessories

1A-10



V-SSWMB

Wall Mounting Brackets

- V-SSWMB**
- 4 stainless steel brackets
 - Maintain 4, 4X, 12, 13 ratings
 - Field installable
 - No punching or drilling required
 - All hardware included



Z-2011

Locks & Latches

- Z-2011** Wing knob lock key
- Z-2033** Wing knob latch
- Z-2034** Wing knob latch



Z-2033



Z-2034



PCC

Padlock Kits

- PCC** Covers quarter-turn catch to prevent access (stainless steel)
- Maintain 4, 4X, 12, 13 ratings
 - Field installable
 - No punching or drilling required

NEMA Type 4X Stainless Steel Double Door Enclosures



Shown with optional panel.



Application

Adalet's N4X-DD-SS double-door enclosures are used indoors and outdoors to house such items as electronic/electrical controls, instrumentation systems, and pneumatic, hydraulic, and machine tool controls.

These enclosures are designed to provide protection against dust, dirt, oil and water. They are suitable for use in petrochemical plants, dairies, breweries, food processing areas and similar environments where they are

subject to frequent high pressure hosing and generally wet conditions. They are also designed for areas where severe corrosion problems exist. (Not submersible.)

Construction

Adalet's N4X-DD-SS enclosures are made from 12 ga. Type 304 stainless steel with a #4 brush finish. All seams are continuously welded and ground to a smooth finish. The N4X-DD-SS enclosure has a folded lip around the door opening to provide complete and maximum gasket contact, and to prevent liquids from dripping into the enclosure when doors are open.

Each enclosure comes complete with 3/8 collar studs (for mounting optional panels) and two support brackets welded to the bottom of the enclosure to aid in optional panel installation. Each enclosure is equipped with 1/4-20 grounding studs, and two 5/8 eye bolts complete with solid rubber seals and reinforcing support angles welded to the top of the enclosure for easy handling. The N4X-DD-SS enclosures are equipped with wall mounting brackets and body stiffeners.

Each enclosure door is equipped with a neoprene gasket, removable print pocket, 1/4-20 grounding studs, stainless steel door clamping hardware on three sides and padlocking hasp. Each door rests on a removable center mullion which also provides for easy panel installation. Doors are easily removed by pulling the pin on the continuous stainless steel piano hinge. There are no knock-outs or holes in the doors or body.

Panels

Optional panels are available. Panels are fabricated from 12 ga. cold-rolled steel.

Finish

All enclosures are made from Type 304 stainless steel with a #4 brush finish. Panels are finished with a high gloss white polyester powder coating.

Standards

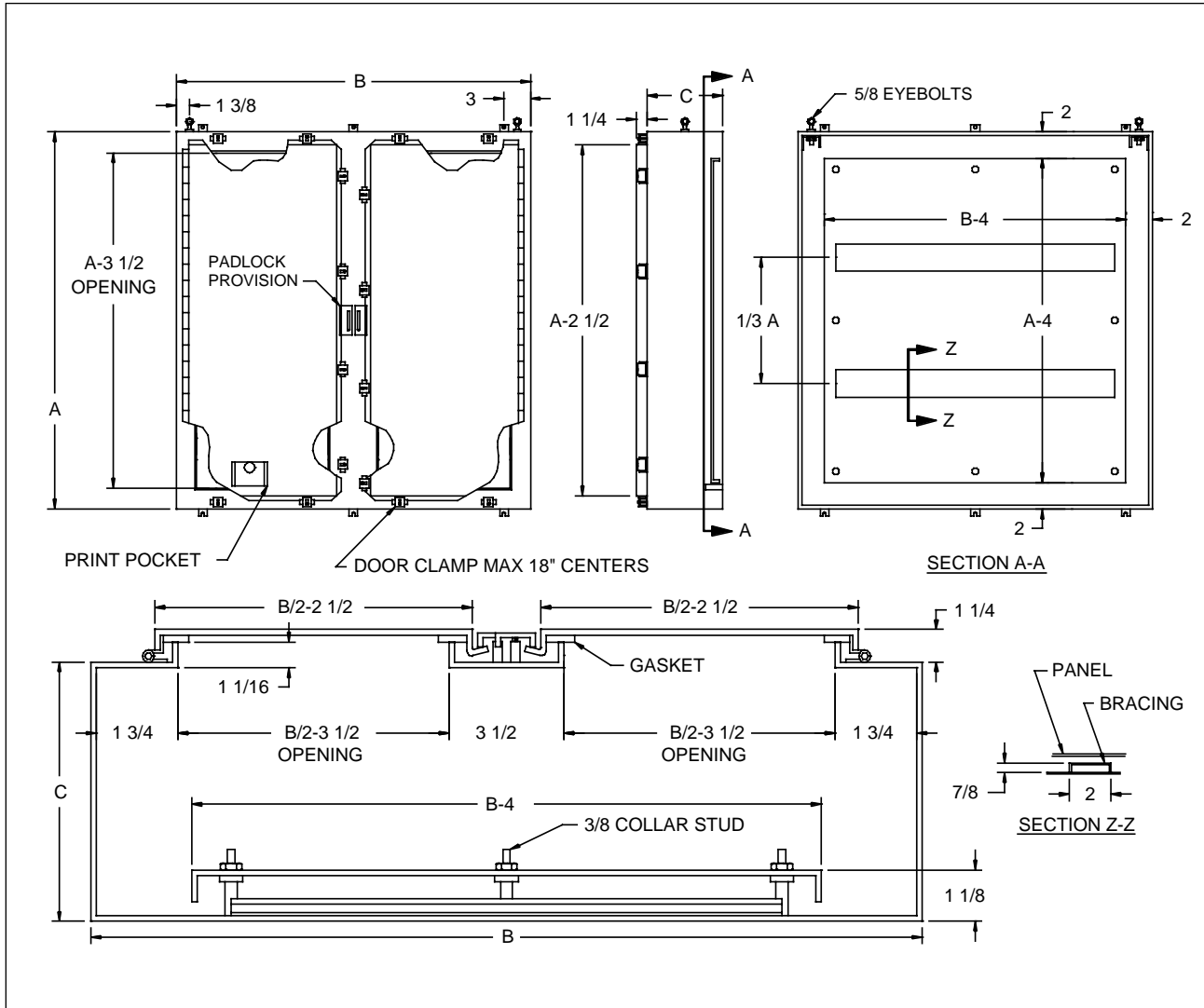
All N4X-DD-SS enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet/Ice Resistant), Type 3R (Rainproof and Sleet/Ice Resistant), Type 4 (Watertight and Dust-tight), Type 4X (Watertight, Dust-tight and Corrosion Resistant), Type 12 (Industrial Use) and Type 13 (Oiltight and Dust-tight) enclosures. These enclosures conform to Joint Industry Council (JIC) standard EGP-1-1967. They are listed by Underwriters Laboratories, Inc. (UL) and are certified by the Canadian Standards Association (CSA).

Special Orders

Custom units in special sizes, with punching or with Type 316 stainless steel, can be supplied.

NEMA Type 4X Stainless Steel Double Door Enclosures

1A-12



Enclosure				Panel	
Catalog Number	A	Size B	C	Catalog Number	Size
N4X-DD-SS-604812	60	48	12	D-60P48	56X44
N4X-DD-SS-606012	60	60	12	D-60P60	56X56
N4X-DD-SS-726012	72	60	12	D-72P60	68X56
N4X-DD-SS-727212	72	72	12	D-72P72	68X68

All dimensions in inches

NEMA Type 4X JIC Aluminum Enclosures – Continuous Hinge Cover

1B-1



Application

Adalet's JN4XHA aluminum wall-mounted enclosure can be used indoors or outdoors to provide protection against dust, dirt, oil and water for items such as hydraulic or pneumatic instruments, transformers, and junction wiring. These lightweight enclosures are suitable for applications in petrochemical plants, marine areas, sewage plants, areas containing solvents, and similar environments where they can be subject to frequent high pressure hosing and generally wet conditions. They are not for use in areas where severe corrosion problems exist. (Not submersible.)

Construction

Adalet's JN4XHA enclosures are available in Type 5052-H32 aluminum with a brushed finish. The enclosure has continuously welded seams ground to a smooth finish. It also comes complete with four 10-32 standoffs (for mounting optional panels). Grounding studs are provided on the inside of the box only, and wall mounting back brackets are mechanically clinched on the top and bottom outside. The JN4XHA cover is sealed with a neoprene gasket and is secured to the enclosure with a mechanically clinched continuous aluminum piano hinge on one side and stainless steel door clamping hardware on three sides. There are no knock-outs or holes in the cover or body.

Panels

Optional panels are available. Panels are fabricated from 14 ga. cold-rolled steel and are powder coated white.

Standards

All JN4XHA enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet / Ice Resistant), Type 3R (Rainproof and Sleet / Ice Resistant), Type 4 (Watertight and Dust-tight), Type 4X (Watertight, Dust-tight and Corrosion Resistant), Type 12 (Dust-tight) and Type 13 (Oiltight and Dust-tight) enclosures. They are listed by Underwriters Laboratories, Inc. (UL) for Canada and the United States.

Special Orders

Custom units in special sizes or with punching can be supplied.

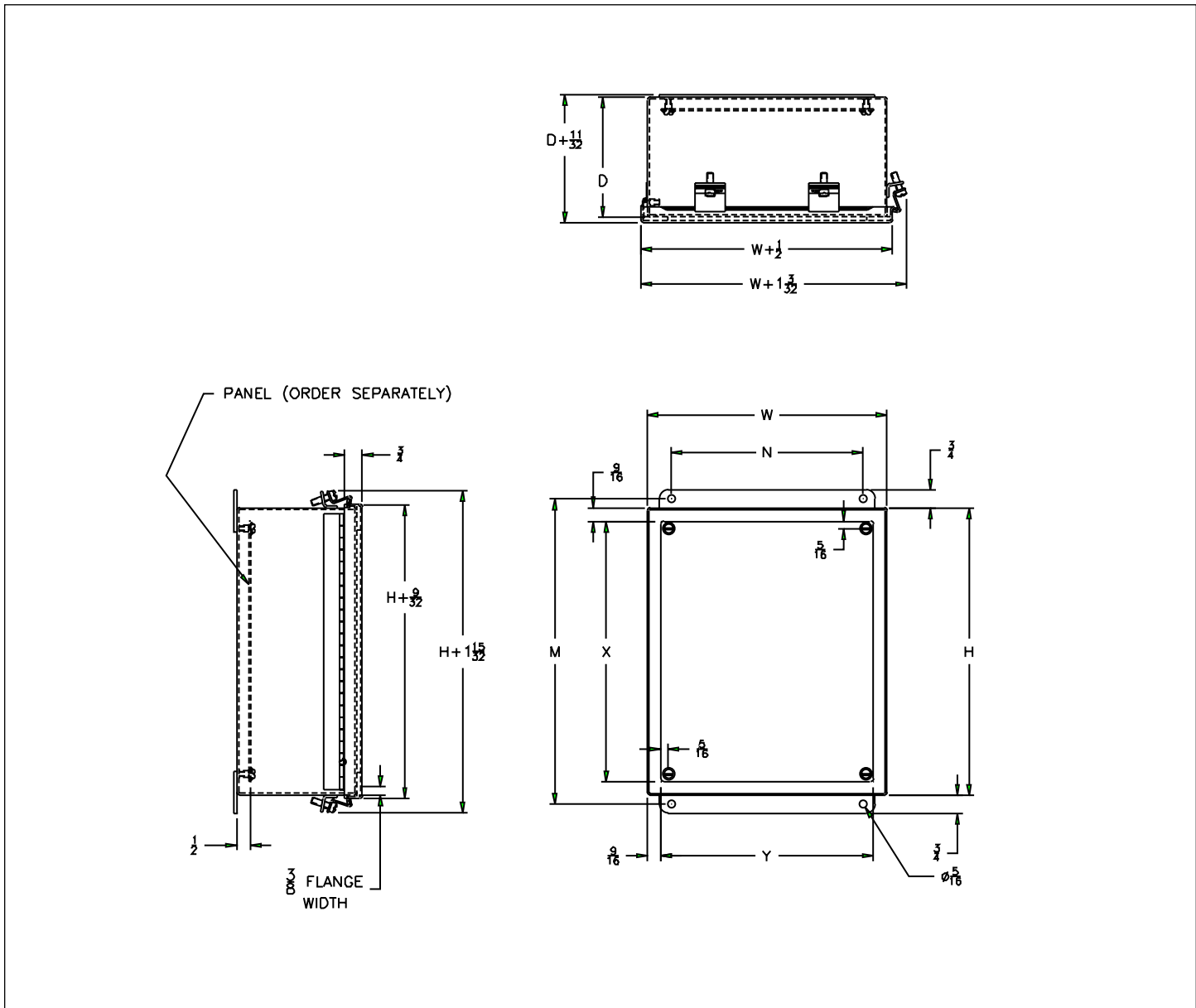


Shown with optional panel.



NEMA Type 4X JIC Aluminum Enclosures – Continuous Hinge Cover

1B-2



Catalog No.	Dimensions (in) H x W x D	Material Thickness Box / Cover	Hold Downs		Mounting Dim. (in)		Weight (lbs)	Panel Catalog No.	Panel Size (in) X x Y
			H side	W side	M	N			
JN4XHA-060604	6 x 6 x 4	0.08 / 0.08	1	1	6.75	4.00	2	06P06	4.88 x 4.88
JN4XHA-080604	8 x 6 x 4	0.08 / 0.08	1	1	8.75	4.00	2	08P06	6.88 x 4.88
JN4XHA-100804	10 x 8 x 4	0.08 / 0.08	2	1	10.75	6.00	3	10P08	8.88 x 6.88
JN4XHA-121005	12 x 10 x 5	0.08 / 0.08	2	2	12.75	8.00	5	12P10	10.88 x 8.88
JN4XHA-141206	14 x 12 x 6	0.08 / 0.08	2	2	14.75	10.00	7	14P12	12.88 x 10.88
JN4XHA-161406	16 x 14 x 6	0.08 / 0.08	3	2	16.75	12.00	8	16P14	14.88 x 12.88

All dimensions in inches

NEMA Type 4X Aluminum Single Door Enclosures



Application

Adalet's N4XA aluminum single door wall-mount enclosure can be used indoors or outdoors to house items such as pilot devices, electronic or electrical controls, instrumentation systems, and hydraulic, pneumatic and machine tool controls. These enclosures are designed to protect against dust, dirt, oil and water. They are suitable for applications in petrochemical plants, marine areas, sewage plants, areas containing solvents, and similar environments where they can be subject to frequent high pressure hosing and generally wet conditions. They are not for use in areas where severe corrosion problems exist. (Not submersible.)

Construction

Adalet's N4XA enclosures are available in Type 5052-H32 aluminum with a smooth brushed finish. The enclosure has continuously welded seams ground to a smooth finish. Around the door opening it has a folded lip consisting of multiple 90 degree bends. This provides complete and maximum gasket contact, and prevents liquids from dripping into the enclosure when the door is open. Each enclosure comes complete with 3/8 collar studs (for mounting optional panels), 1/4-20 grounding studs on inside of box, padlock hasp & staple. The continuous piano hinge and mounting feet are secured to the box by mechanical clinching.

Panels

Optional panels are available. Panels are fabricated from 12 ga. cold-rolled steel and are powder coated white.

Standards

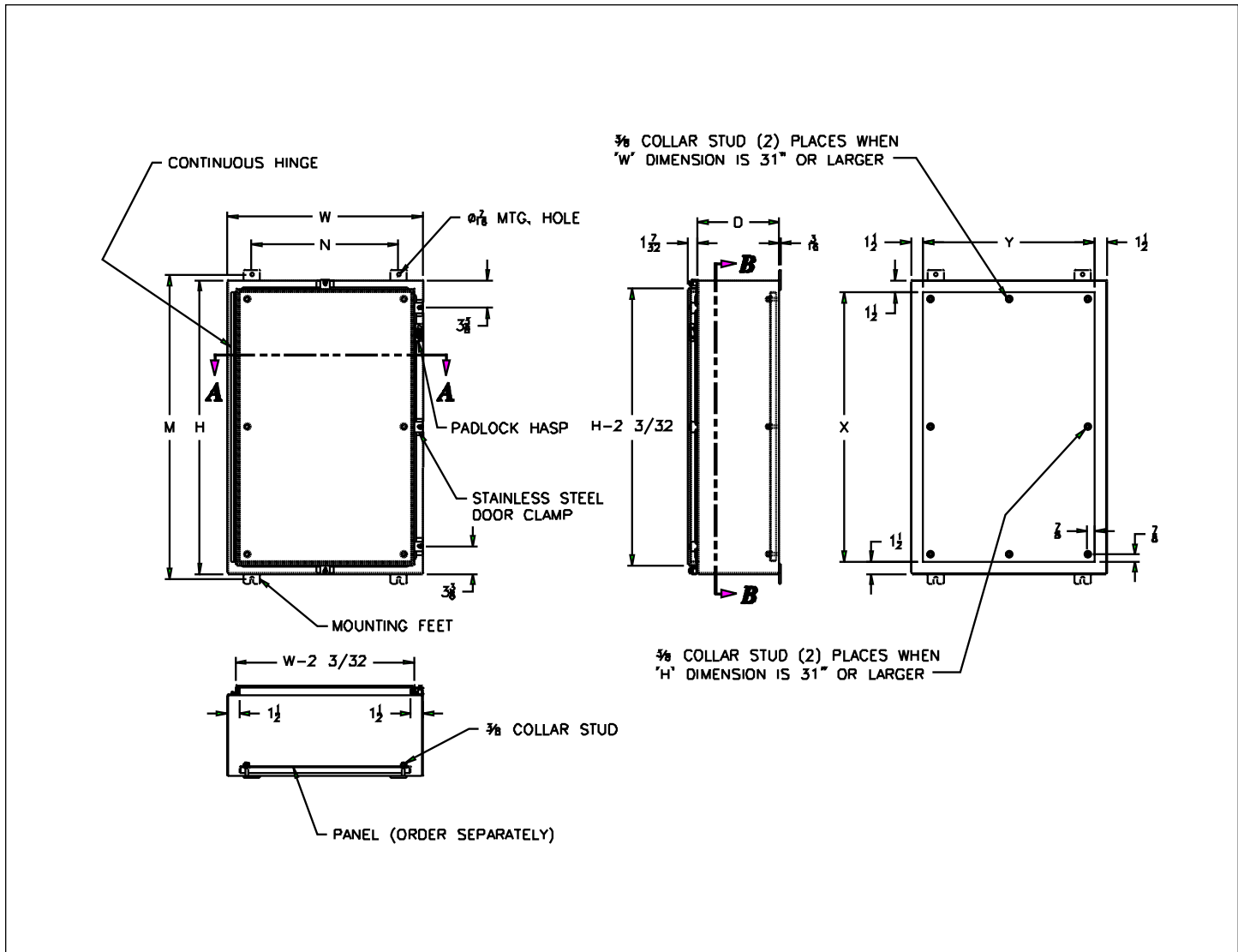
All N4XA enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet / Ice Resistant), Type 3R (Rainproof and Sleet / Ice Resistant), Type 4 (Watertight and Dust-tight), Type 4X (Watertight, Dust-tight and Corrosion Resistant), Type 12 (Dust-tight) and Type 13 (Oiltight and Dust-tight) enclosures. They are listed by Underwriters Laboratories, Inc. (UL) for Canada and the United States.

Special Orders

Custom units in special sizes or with punching can be supplied.

NEMA Type 4X Aluminum Single Door Enclosures

1B-4



Catalog No.	Dimensions (in) H x W x D	Material Thickness Box / Cover	Hold Downs		Mounting Dim. (in)		Weight (lbs)	Panel Catalog No.	Panel Size (in) X x Y
			H side	W side	M	N			
N4XA-161206	16 x 12 x 6	0.08 / 0.08	2	1	17.25	9.50	10	V1612	13.00 x 9.00
N4XA-201606	20 x 16 x 6	0.08 / 0.08	2	1	21.25	10.00	13	V2016	17.00 x 13.00
N4XA-202006	20 x 20 x 6	0.08 / 0.08	2	1	21.25	14.00	16	V2020	17.00 x 17.00
N4XA-242006	24 x 20 x 6	0.08 / 0.08	3	1	25.25	14.00	18	V2420	21.00 x 17.00
N4XA-161608	16 x 16 x 8	0.08 / 0.08	2	1	17.25	10.00	13	V1616	13.00 x 13.00
N4XA-242408	24 x 24 x 8	0.08 / 0.08	3	1	25.25	18.00	23	V2424	21.00 x 21.00
N4XA-302408	30 x 24 x 8	0.08 / 0.08	3	1	31.25	18.00	27	V3024	27.00 x 21.00
N4XA-362408	36 x 24 x 8	0.08 / 0.08	3	1	37.25	18.00	30	V3624	33.00 x 21.00
N4XA-363008	36 x 30 x 8	0.08 / 0.08	3	2	37.25	24.00	37	V3630	33.00 x 27.00
N4XA-483608	48 x 36 x 8	0.08 / 0.08	4	2	49.25	30.00	52	V4836	45.00 x 33.00
N4XA-201610	20 x 16 x 10	0.08 / 0.08	2	1	21.25	10.00	16	V2016	17.00 x 13.00
N4XA-242010	24 x 20 x 10	0.08 / 0.08	3	1	25.25	14.00	21	V2420	21.00 x 17.00
N4XA-302412	30 x 24 x 12	0.08 / 0.08	3	1	31.25	18.00	32	V3024	27.00 x 21.00
N4XA-363012	36 x 30 x 12	0.08 / 0.08	3	2	37.25	24.00	43	V3630	33.00 x 27.00

All dimensions in inches

Accessory Inner Panels



Panels for N4X Single Door and Victory Series Enclosures

12 Ga. Steel with White Polyester Powder Coat Finish

Catalog Number	For Enclosure	Panel Size	
		H	W
V-1212	12 x 12	9	9
V-1612	16 x 12	13	9
V-1616	16 x 16	13	13
V-2016	20 x 16	17	13
	16 x 20		
V-2020	20 x 20	17	17
V-2412	24 x 12	21	9
V-2416	24 x 16	21	13
V-2420	24 x 20	21	17
	20 x 24		
V-2424	24 x 24	21	21
V-3020	30 x 20	27	17
V-3024	30 x 24	27	21
	24 x 30		
V-3030	30 x 30	27	27
V-3624	36 x 24	33	21
V-3630	36 x 30	33	27
V-3636	36 x 36	33	33
V-4230	42 x 30	39	27
V-4236	42 x 36	39	33
V-4836	48 x 36	45	33
V-6036	60 x 36	57	33

All dimensions in inches

Panels for N4X JIC Enclosures

14 Ga. Steel with White Polyester Powder Coat Finish

Catalog Number	For Enclosure	Panel Size	
		H	W
06P04	6 x 4	4 7/8	2 7/8
06P06	6 x 6	4 7/8	4 7/8
08P06	8 x 6	6 7/8	4 7/8
08P08	8 x 8	6 7/8	6 7/8
10P08	10 x 8	8 7/8	6 7/8
10P10	10 x 10	8 7/8	8 7/8
12P10	12 x 10	10 7/8	8 7/8
12P12	12 x 12	10 7/8	10 7/8
14P08	14 x 8	12 7/8	6 7/8
14P12	14 x 12	12 7/8	10 7/8
16P14	16 x 14	14 7/8	12 7/8

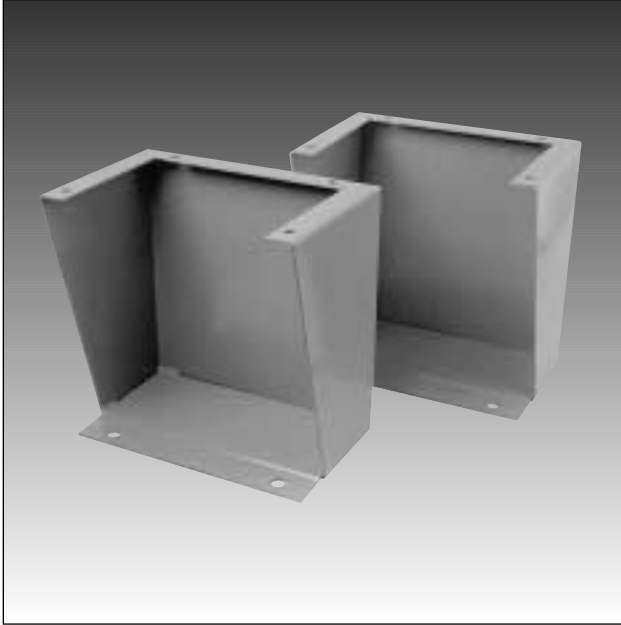
All dimensions in inches

Special Orders

Custom sizes and panels fabricated from stainless steel and aluminum are available. Consult factory for more information.

Floor Stand Kit

1C-2



Application

Kits, consisting of two mounting feet, are designed for easy installation on most wall-mounted enclosures.

Mounting feet enable enclosures to be floor mounted, and at the same time raise the enclosure 12" from the ground to clear flood levels or for easy working access.

Construction

Mounting feet are made from Type 304 stainless steel and are pre-punched for ease of mounting to both floor and enclosure. Each kit comes complete with necessary hardware for mounting.

Catalog Number	Height	Enclosure Depth
12MF-12-SS	12	12

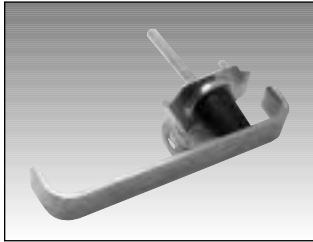
All dimensions in inches

Special Orders

Custom units made with special heights, depths or materials can be supplied.

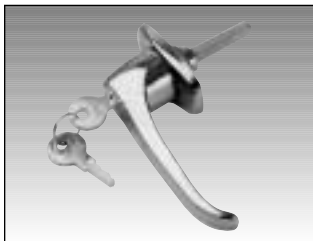
Latches, Locks and Handles

1C-3



No. Z-1010

Vault Type Locking Handle
7" long cadmium plated padlocking handle
Cat. No. Z-1010



No. Z-1011

Automotive Locking Handle
4 1/2" chrome plated key locking handle
Cat. No. Z-1011-L (Clockwise Turn)
Cat. No. Z-1011-R (Counterclockwise Turn)



No. Z-2011

Wing Knob Key Lock
Quarter-turn lock
Cat. No. Z-2011



No. Z-2033

Wing Knob Latch
Quarter-turn lock
Cat. No. Z-2033



No. Z-2034

Wing Knob Latch
Quarter-turn lock
Cat. No. Z-2034

Other Accessories

1C-4



Gasket

For Type 4X enclosures – 80' per roll

Closed-cell neoprene sponge with rubber-based adhesive (.25" thick x 1" wide)

Cat. No. M1423

NEMA Type 4X Pushbutton Fiberglass Enclosures



Application

The pushbutton fiberglass enclosure can be used indoors or outdoors to provide protection against dust, dirt, oil and water for items such as pushbuttons, pilot lights and switches. Designed for installation of standard 30mm operators.

Construction

The pushbutton enclosures are constructed of compression molded, fiberglass reinforced polyester with covers flush with enclosure sides. Cover gasket is a continuous urethane material. Cover screws are recessed and made of stainless steel. A metal grounding strap is supplied. Interior mounting wells are gasketed and sealed from the inside. There are no external mounting feet with this enclosure. Machine tool gray color.

Panels

There are no panel provisions with these enclosures.

Standards

All pushbutton fiberglass enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet/Ice Resistant), Type 4X (Watertight, Dust-tight and Corrosion Resistant) and Type 12 (Dust-tight). They are listed by Underwriters Laboratories, Inc. (UL) for Canada and the United States.

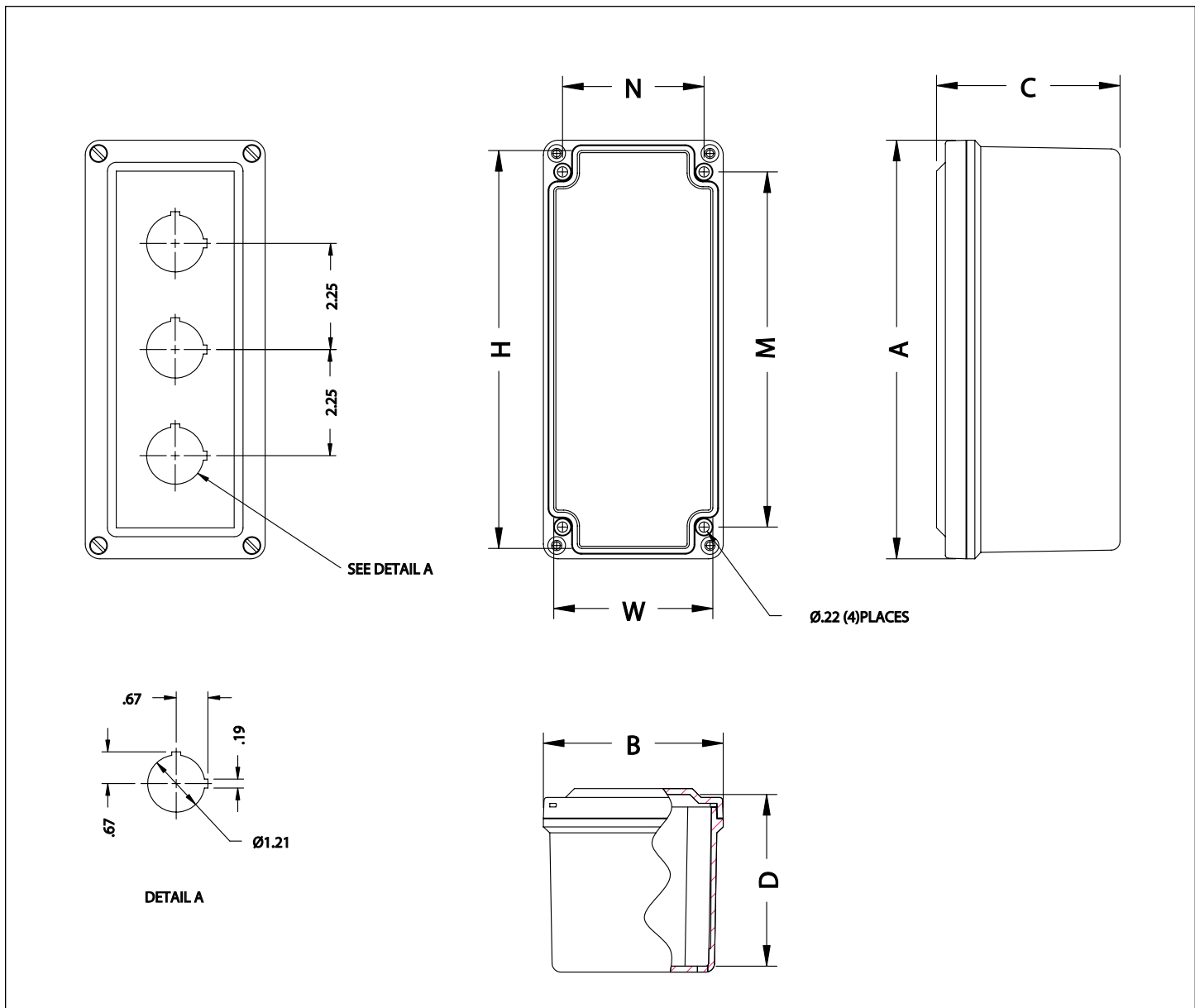
Special Orders

Custom units with holes punched and operators installed can be supplied.

2A-1

NEMA Type 4X Pushbutton Fiberglass Enclosures

2A-2



Catalog No.	Overall Dimensions (in)	Inside Dimensions (in)	Mounting Dim. (in)		Weight (lbs)	Panel Catalog No.	Panel Size (in)
	A x B x C	H x W x D	M	N			
N4X-FG-1PB	6.63 x 3.81 x 3.89	6 x 3.19 x 3.63	4.88	2.94	2	No Panel	NA
N4X-FG-2PB	6.63 x 3.81 x 3.89	6 x 3.19 x 3.63	4.88	2.94	2	No Panel	NA
N4X-FG-3PB	8.88 x 3.81 x 3.89	8.26 x 3.19 x 3.63	7.13	2.94	2	No Panel	NA

All dimensions in inches

NEMA Type 4X Flush Cover Fiberglass Enclosures



Application

The flush cover fiberglass enclosure can be used indoors or outdoors to house items such as standard size pushbuttons, pilot lights and switches. These enclosures are designed to protect against dust, dirt, oil and water.

Construction

The flush cover enclosures are constructed of compression molded, fiberglass reinforced polyester. The covers are flush with sides of enclosure. Cover gasket is a continuous urethane material. Recessed cover screws are made of stainless steel. Interior mounting wells are gasketed and sealed from the inside. There are no external mounting feet with this enclosure. Machine tool gray color.

Panels

There are no panel provisions with these enclosures.

Standards

All flush cover fiberglass enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet/Ice Resistant), Type 4X (Watertight, Dust-tight and Corrosion Resistant), Type 12 (Dust-tight) and Type 6P (Prolonged Submersion in Water). They are listed by Underwriters Laboratories, Inc. (UL) for Canada and the United States.

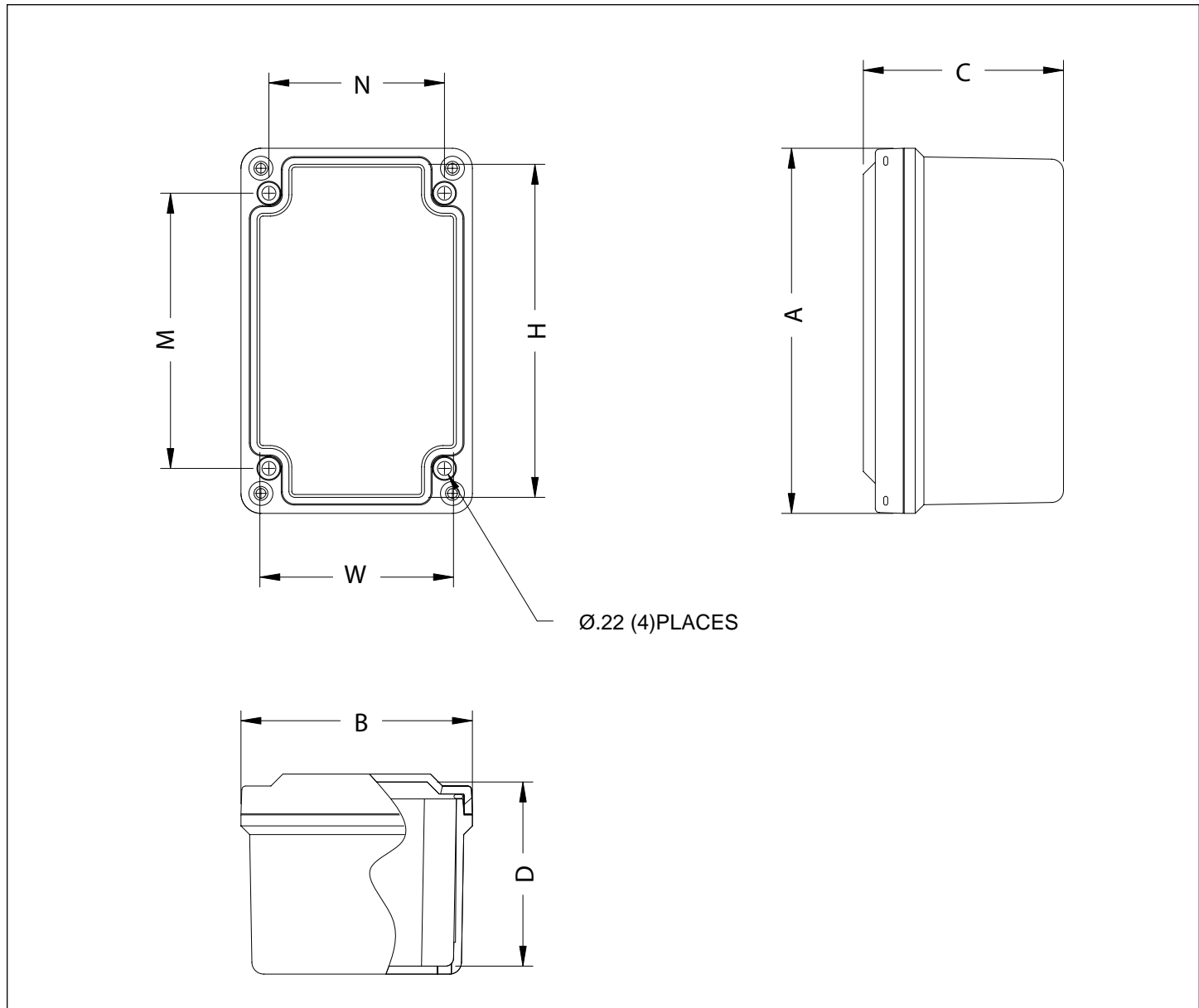
Special Orders

Custom units with holes punched and operators installed can be supplied.

2A-3

NEMA Type 4X Flush Cover Fiberglass Enclosures

2A-4



Catalog No.	Overall Dimensions (in)	Inside Dimensions (in)	Mounting Dim. (in)		Weight (lbs)	Panel Catalog No.	Panel Size (in)
	A x B x C	H x W x D	M	N			
N4X-FG-030302	3.72 x 3.63 x 2.95	3.13 x 3.03 x 2.7	2.31	2.75	1	No Panel	NA
N4X-FG-050302	5.97 x 3.63 x 3.14	5.38 x 3.03 x 2.87	4.56	2.75	1	No Panel	NA
N4X-FG-060404	6.63 x 3.81 x 3.89	6 x 3.19 x 3.63	4.88	2.94	2	No Panel	NA
N4X-FG-080404	8.88 x 3.81 x 3.89	8.26 x 3.19 x 3.63	7.13	2.94	2	No Panel	NA
N4X-FG-110404	11.13 x 3.81 x 3.89	10.51 x 3.19 x 3.63	9.37	2.94	2	No Panel	NA

All dimensions in inches

NEMA Type 4X Small Screw Cover Fiberglass Enclosures



Application

The screw cover junction fiberglass enclosure can be used indoors or outdoors to house items such as standard size pushbuttons, pilot lights and switches. These enclosures are designed to protect against dust, dirt, oil and water.

Construction

The screw cover junction enclosures are constructed of compression molded, fiberglass reinforced polyester. The covers are flush with sides of enclosure. The captive cover screws are made of stainless steel. The cover gasket is a continuous urethane material. Interior panel mounting inserts are molded to enclosure. There are no external mounting feet with this enclosure. Machine tool gray color.

Panels

Panels are not available with these enclosures.

Standards

All small screw cover junction fiberglass enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet/Ice Resistant), Type 4X (Watertight, Dust-tight and Corrosion Resistant), Type 12 (Dust-tight) and Type 6P (Prolonged Submersion in Water). They are listed by Underwriters Laboratories, Inc. (UL) for Canada and the United States.

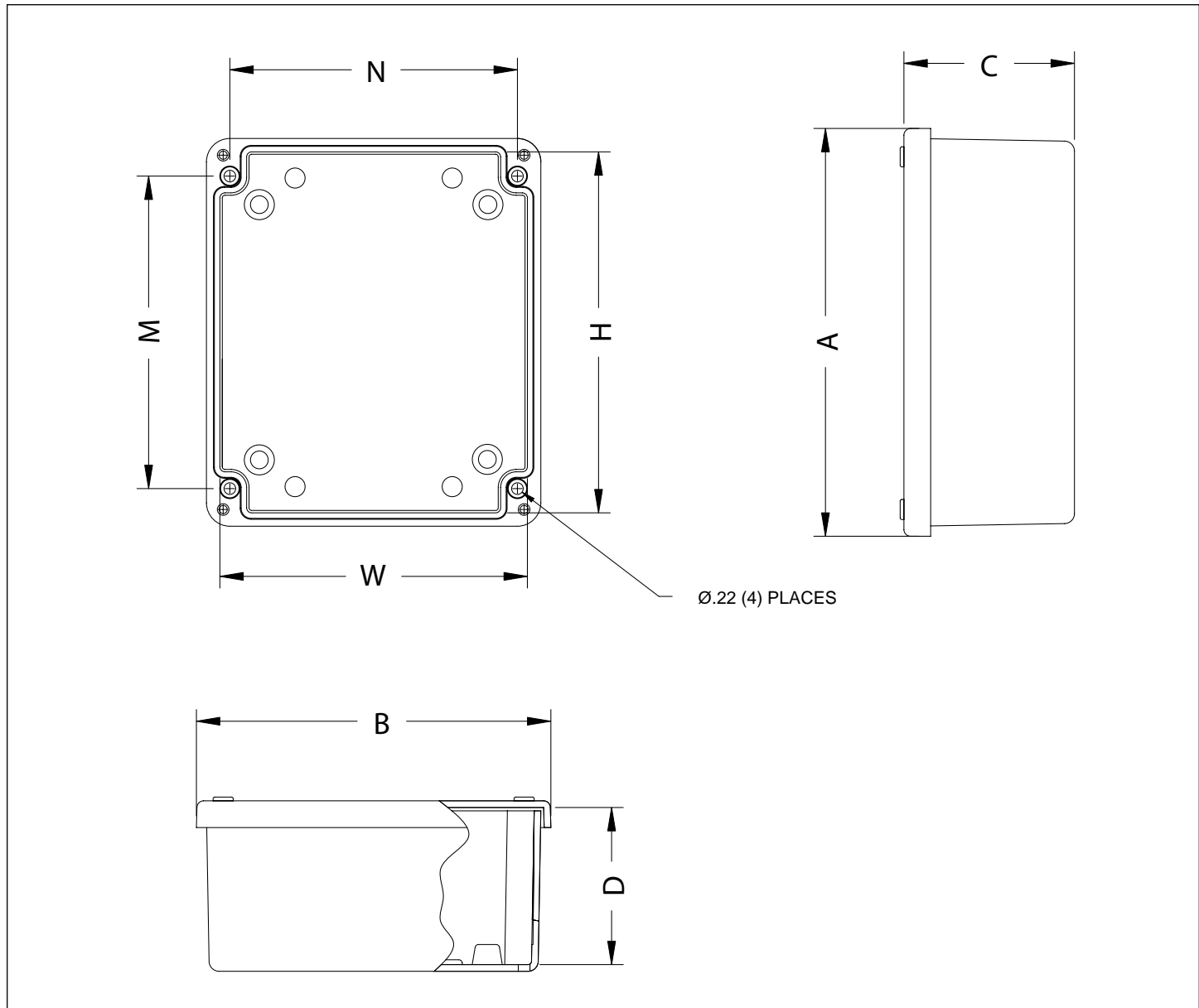
Special Orders

Custom units with holes punched and operators installed can be supplied.

2A-5

NEMA Type 4X Small Screw Cover Fiberglass Enclosures

2A-6



Catalog No.	Overall Dimensions (in)	Inside Dimensions (in)	Mounting Dim. (in)		Weight (lbs)	Panel Catalog No.	Panel Size (in)
	A x B x C	H x W x D	M	N			
N4X-FG-070603	7.63 x 6.63 x 3.19	6.9 x 5.9 x 2.88	5.37	5.63	2	No Panel	NA
N4X-FG-090603	9.87 x 6.63 x 3.19	9.15 x 5.9 x 2.88	7.62	5.63	2	No Panel	NA

All dimensions in inches

NEMA Type 4X Screw Cover Fiberglass Enclosures



Application

The screw cover fiberglass enclosure can be used indoors or outdoors to provide protection against dust, dirt, oil and water. It is designed for use as a terminal wiring box, instrumentation housing or electrical control enclosure.

Construction

The screw cover enclosures are constructed of compression molded, fiberglass reinforced polyester with stainless steel captive cover screws. The cover gasket is a continuous urethane material. A stainless steel retaining chain is attached to the cover and enclosure. Panel mounting inserts are molded to interior of enclosure. External mounting feet are also molded to enclosure. Machine tool gray color.

Panels

Optional panels are available. Panels fabricated of 0.080" aluminum.

Standards

All screw cover fiberglass enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet/Ice Resistant), Type 4X (Watertight, Dust-tight and Corrosion Resistant), Type 12 (Dust-tight) and Type 6P (Prolonged Submersion in Water). They are listed by Underwriters Laboratories, Inc. (UL) for Canada and the United States.

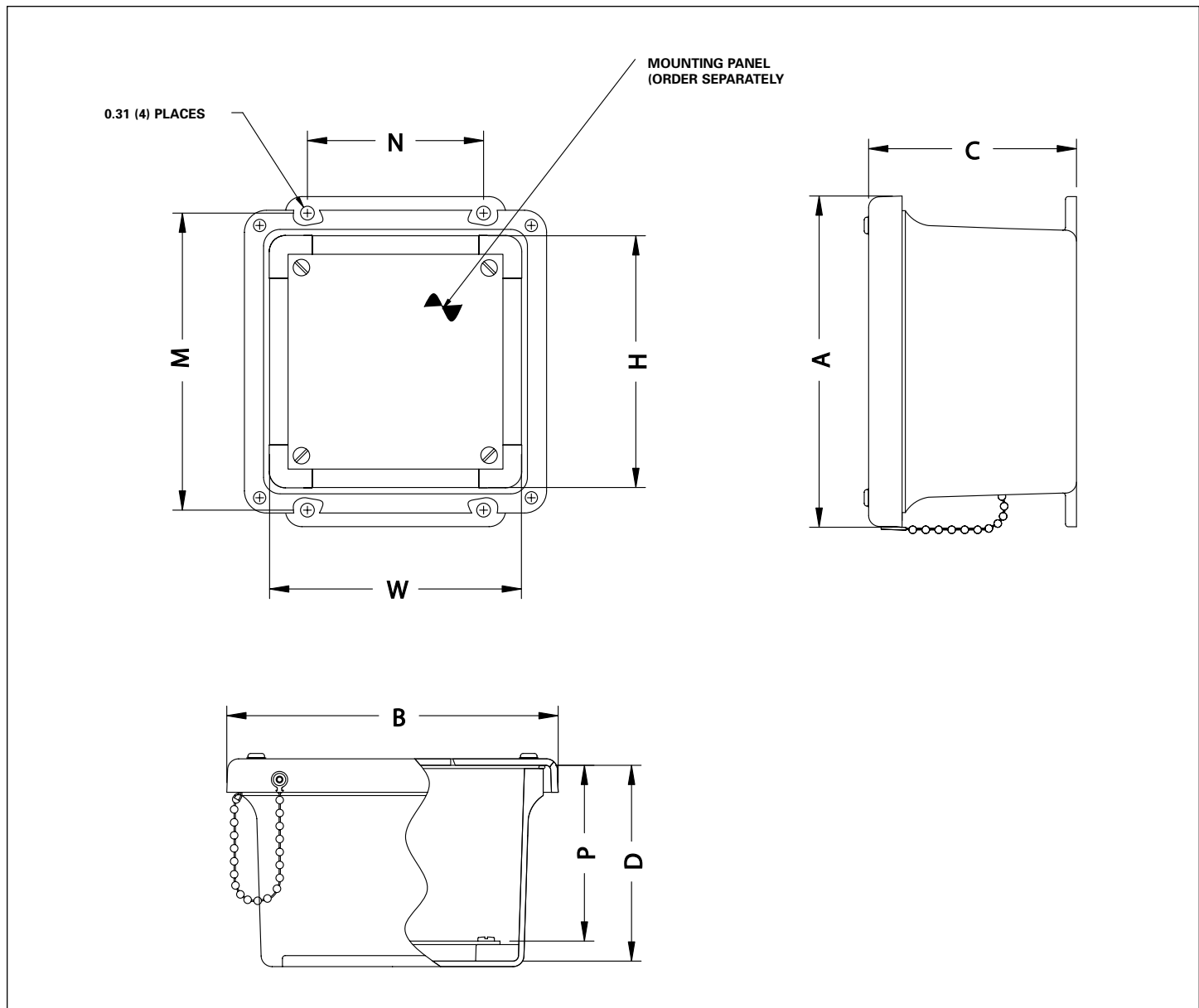
Special Orders

Custom units with holes punched and operators installed can be supplied.

2A-7

NEMA Type 4X Screw Cover Fiberglass Enclosures

2A-8



Catalog No.	Overall Dimensions (in)	Inside Dimensions (in)	M	Mounting Dim. (in)		Weight (lbs)	Panel Catalog No.	Panel Size (in)
	A x B x C	H x W x D		N	P			
N4X-FG-060604SC	7.50 x 7.50 x 4.75	5.72 x 5.72 x 4.45	6.75	4.00	4.00	3	BP66A	4.88 x 4.88
N4X-FG-080604SC	9.62 x 7.50 x 4.74	7.73 x 5.74 x 4.45	8.88	4.00	4.00	4	BP86A	6.88 x 4.88
N4X-FG-100804SC	11.62 x 9.41 x 4.25	9.73 x 7.73 x 3.98	10.75	6.00	3.50	5	BP108A	8.88 x 6.88
N4X-FG-121005SC	13.56 x 11.43 x 5.21	11.79 x 9.8 x 4.94	12.75	8.00	4.50	7	BP1210A	10.88 x 8.88
N4X-FG-141206SC	15.50 x 13.50 x 6.25	13.53 x 11.55 x 5.94	14.62	10.00	5.37	9	BP1412A	12.88 x 10.90

All dimensions in inches

NEMA Type 4X Hinged Screw Cover Fiberglass Enclosures



Application

The hinged screw cover fiberglass enclosure can be used indoors or outdoors to provide protection against dust, dirt, oil and water. It is designed for use as a terminal wiring box, instrumentation housing or electrical control enclosure where a hinged cover is desired.

Construction

The hinged screw cover enclosures are constructed of compression molded, fiberglass reinforced polyester. Enclosure includes a stainless steel continuous hinge with stainless steel captive cover screws. The cover gasket is a continuous urethane material. Panel mounting inserts are molded to interior of enclosure. External mounting feet are also molded to enclosure. Machine tool gray color.

Panels

Optional panels are available. Panels fabricated of 0.080" aluminum.

Standards

All hinged screw cover fiberglass enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet/Ice Resistant), Type 4X (Watertight, Dust-tight and Corrosion Resistant), Type 12 (Dust-tight) and Type 6P (Prolonged Submersion in Water). They are listed by Underwriters Laboratories, Inc. (UL) for Canada and the United States.

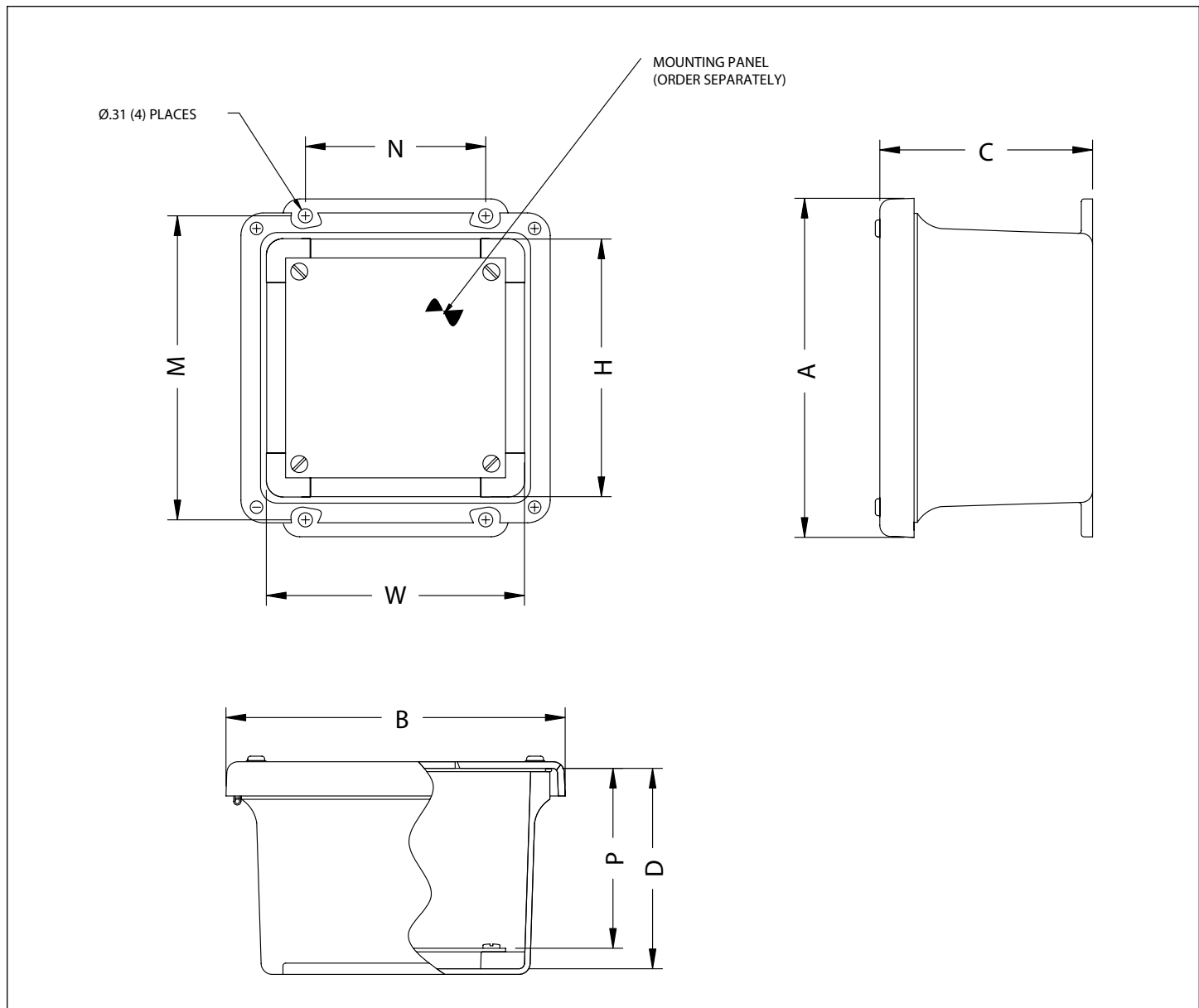
Special Orders

Custom units with holes punched and operators installed can be supplied.

2A-9

NEMA Type 4X Hinged Screw Cover Fiberglass Enclosures

2A-10



Catalog No.	Overall Dimensions (in)	Inside Dimensions (in)	Mounting Dim. (in)			Weight (lbs)	Panel Catalog No.	Panel Size (in)
	A x B x C	H x W x D	M	N	P			
N4X-FG-060604CHSC	7.50 x 7.50 x 4.75	5.72 x 5.72 x 4.45	6.75	4.00	4.00	3	BP66A	4.88 x 4.88
N4X-FG-080604CHSC	9.62 x 7.50 x 4.74	7.73 x 5.74 x 4.45	8.88	4.00	4.00	4	BP86A	6.88 x 4.88
N4X-FG-100804CHSC	11.62 x 9.41 x 4.25	9.73 x 7.73 x 3.98	10.75	6.00	3.50	5	BP108A	8.88 x 6.88
N4X-FG-121005CHSC	13.56 x 11.43 x 5.21	11.79 x 9.80 x 4.94	12.75	8.00	4.50	7	BP1210A	10.88 x 8.88
N4X-FG-141206CHSC	15.50 x 13.50 x 6.25	13.53 x 11.55 x 5.94	14.62	10.00	5.37	9	BP1412A	12.88 x 10.90
N4X-FG-161406CHSC	17.53 x 15.46 x 6.23	15.63 x 13.60 x 5.94	16.75	12.00	5.36	12	BP1614A	14.88 x 12.90
N4X-FG-181608CHSC	19.62 x 17.61 x 8.82	17.69 x 15.69 x 8.45	18.88	12.00	7.99	19	BP1816A	16.88 x 14.90

All dimensions in inches

NEMA Type 4X Quick Release Latch Fiberglass Enclosures – Flat Cover



Application

The quick release latch fiberglass enclosure can be used indoors or outdoors to provide protection against dust, dirt, oil and water. It is designed for use as a terminal wiring box, instrumentation housing or electrical control enclosure where a hinged cover is desired.

Construction

The quick release latch enclosures are constructed of compression molded, fiberglass reinforced polyester. Enclosure includes a stainless steel continuous hinge and stainless steel quick release latches with padlock hasps. The cover gasket is a continuous urethane material. Panel mounting inserts are molded to interior of enclosure. External mounting feet are also molded to enclosure. Machine tool gray color.

Panels

Optional panels are available. Panels fabricated of 0.080" or 0.090" aluminum.

Standards

All flat cover quick release latch fiberglass enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet/Ice Resistant), Type 4X (Watertight, Dust-tight and Corrosion Resistant), Type 12 (Dust-tight) and Type 6P (Prolonged Submersion in Water). They are listed by Underwriters Laboratories, Inc. (UL) for Canada and the United States.

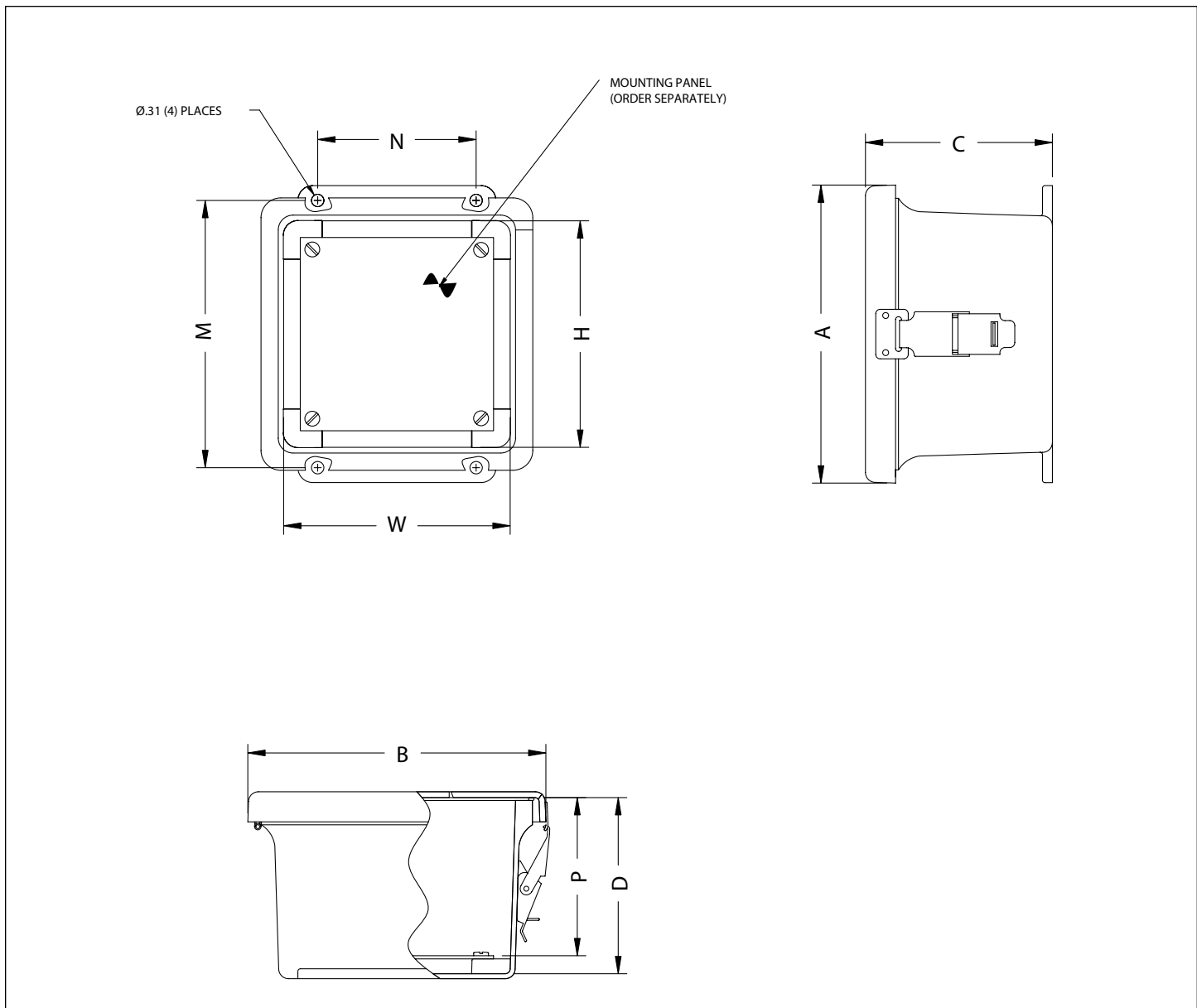
Special Orders

Custom units with holes punched and operators installed can be supplied.

2A-11

NEMA Type 4X Quick Release Latch Fiberglass Enclosures – Flat Cover

2A-12



Catalog No.	Overall Dimensions (in) A x B x C	Inside Dimensions (in) H x W x D	Mounting Dim. (in)			Weight (lbs)	Panel Catalog No.	Panel Size (in)
			M	N	P			
N4X-FG-060604CHQR	7.50 x 7.50 x 4.75	5.72 x 5.72 x 4.45	6.75	4.00	4.00	3	BP66A	4.88 x 4.88
N4X-FG-080604CHQR	9.62 x 7.50 x 4.74	7.73 x 5.74 x 4.45	8.88	4.00	4.00	4	BP86A	6.88 x 4.88
N4X-FG-100804CHQR	11.62 x 9.41 x 4.25	9.73 x 7.73 x 3.98	10.75	6.00	3.50	5	BP108A	8.88 x 6.88
N4X-FG-121005CHQR	13.56 x 11.43 x 5.21	11.79 x 9.80 x 4.94	12.75	8.00	4.50	7	BP1210A	10.88 x 8.88
N4X-FG-141206CHQR	15.50 x 13.50 x 6.25	13.53 x 11.55 x 5.94	14.62	10.00	5.37	9	BP1412A	12.88 x 10.90
N4X-FG-161406CHQR	17.53 x 15.46 x 6.73	15.63 x 13.60 x 5.94	16.75	12.00	5.36	12	BP1614A	14.88 x 12.90
N4X-FG-181608CHQR	19.62 x 17.61 x 8.82	17.69 x 15.69 x 8.45	18.88	12.00	7.99	19	BP1816A	16.88 x 14.90
N4X-FG-201608CHQR	22.00 x 17.68 x 8.83	19.72 x 15.72 x 8.45	21.25	10.00	8.00	21	BP2016A	17.00 x 13.00

All dimensions in inches

NEMA Type 4X Twist Latch Fiberglass Enclosures – Flat Cover



Application

The twist latch fiberglass enclosure can be used indoors or outdoors to provide protection against dust, dirt, oil and water. It is designed for use as a terminal wiring box, instrumentation housing or electrical control enclosure where a hinged cover is desired.

Construction

The twist latch enclosures are constructed of compression molded, fiberglass reinforced polyester. Enclosure includes a stainless steel continuous hinge and stainless steel twist latches. The cover gasket is a continuous urethane material. Panel mounting inserts are molded to interior of enclosure. External mounting feet are also molded to enclosure. Machine tool gray color.

Panels

Optional panels are available. Panels fabricated of 0.080" or 0.090" aluminum.

Standards

All flat cover twist latch fiberglass enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet/Ice Resistant), Type 4X (Watertight, Dust-tight and Corrosion Resistant), Type 12 (Dust-tight) and Type 6P (Prolonged Submersion in Water). They are listed by Underwriters Laboratories, Inc. (UL) for Canada and the United States.

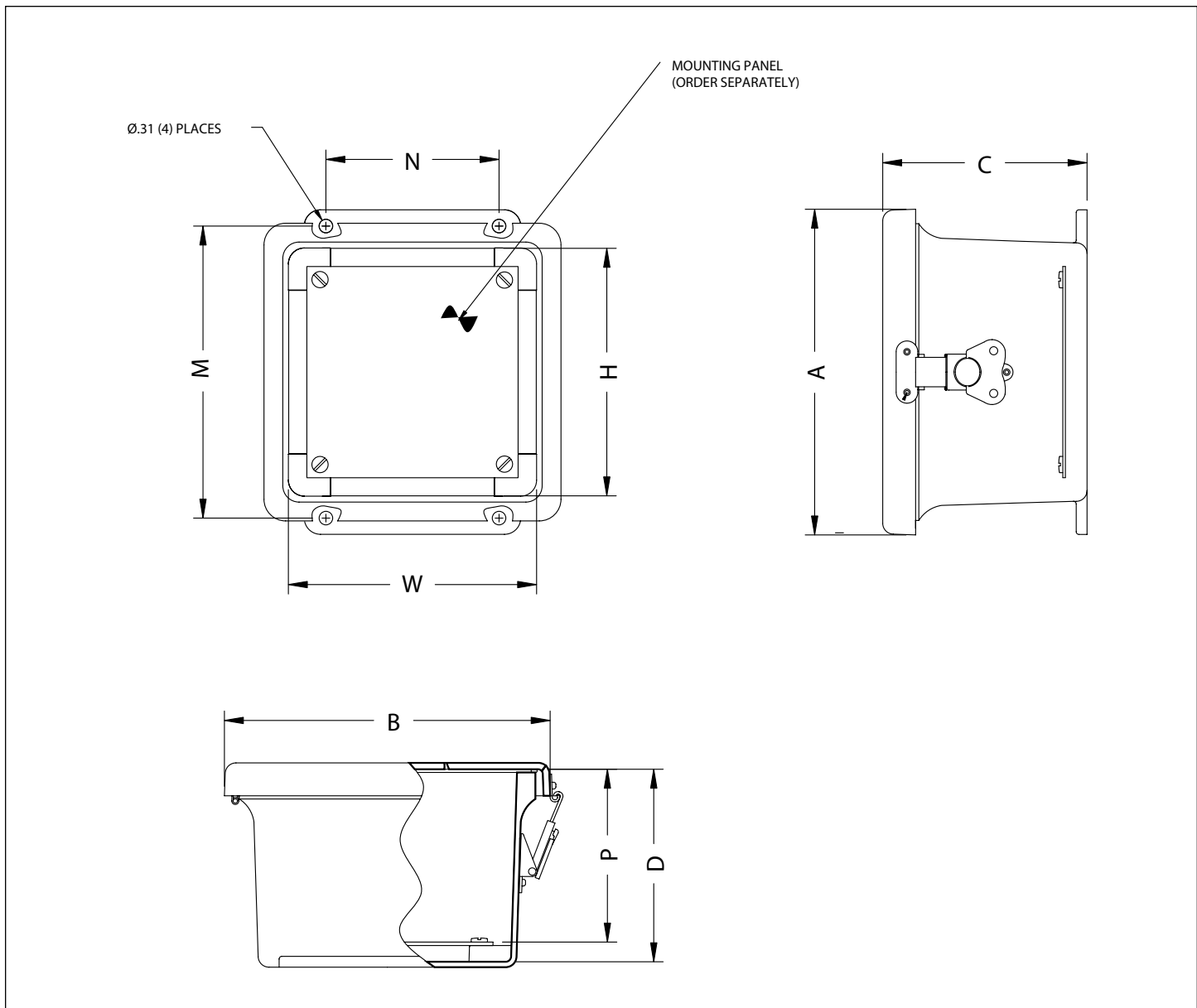
Special Orders

Custom units with holes punched and operators installed can be supplied.

2A-13

NEMA Type 4X Twist Latch Fiberglass Enclosures – Flat Cover

2A-14



Catalog No.	Overall Dimensions (in)	Inside Dimensions (in)	Mounting Dim. (in)			Weight (lbs)	Panel Catalog No.	Panel Size (in)
	A x B x C	H x W x D	M	N	P			
N4X-FG-060604CHTL	7.50 x 7.50 x 4.75	5.72 x 5.72 x 4.45	6.75	4.00	4.00	3	BP66A	4.88 x 4.88
N4X-FG-080604CHTL	9.62 x 7.50 x 4.74	7.73 x 5.74 x 4.45	8.88	4.00	4.00	4	BP86A	6.88 x 4.88
N4X-FG-100804CHTL	11.62 x 9.41 x 4.25	9.73 x 7.73 x 3.98	10.75	6.00	3.50	5	BP108A	8.88 x 6.88
N4X-FG-121005CHTL	13.56 x 11.43 x 5.21	11.79 x 9.80 x 4.94	12.75	8.00	4.50	7	BP1210A	10.88 x 8.88
N4X-FG-141206CHTL	15.50 x 13.50 x 6.25	13.53 x 11.55 x 5.94	14.62	10.00	5.37	9	BP1412A	12.88 x 10.90
N4X-FG-161406CHTL	17.53 x 15.46 x 6.23	15.63 x 13.60 x 5.94	16.75	12.00	5.36	12	BP1614A	14.88 x 12.90
N4X-FG-181608CHTL	19.62 x 17.61 x 8.82	17.69 x 15.69 x 8.45	18.88	12.00	7.99	19	BP1816A	16.88 x 14.99
N4X-FG-201608CHTL	22.00 x 17.68 x 8.83	19.72 x 15.72 x 8.45	21.25	10.00	8.00	21	BP2016A	17.00 x 13.00

NEMA Type 4X Raised Cover Fiberglass Enclosures – Quick Release Latch



Application

The raised cover quick release latch fiberglass enclosure can be used indoors or outdoors to provide protection against dust, dirt, oil and water. It is designed for use as a terminal wiring box, instrumentation housing or electrical control enclosure where a hinged cover is desired. It is also designed for use when components require additional depth.

Construction

The raised cover quick release latch enclosures are constructed of compression molded, fiberglass reinforced polyester. Enclosure includes a stainless steel continuous hinge and stainless steel quick release latches with padlock hasps. The cover gasket is a continuous urethane material. Panel mounting inserts are molded to interior of enclosure. External mounting feet are also molded to enclosure. Machine tool gray color.

Panels

Optional panels are available. Panels fabricated of 0.080" or 0.090" aluminum.

Standards

All raised cover quick release latch fiberglass enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet/Ice Resistant), Type 4X (Watertight, Dust-tight and Corrosion Resistant), Type 12 (Dust-tight) and Type 6P (Prolonged Submersion in Water). They are listed by Underwriters Laboratories, Inc. (UL) for Canada and the United States.

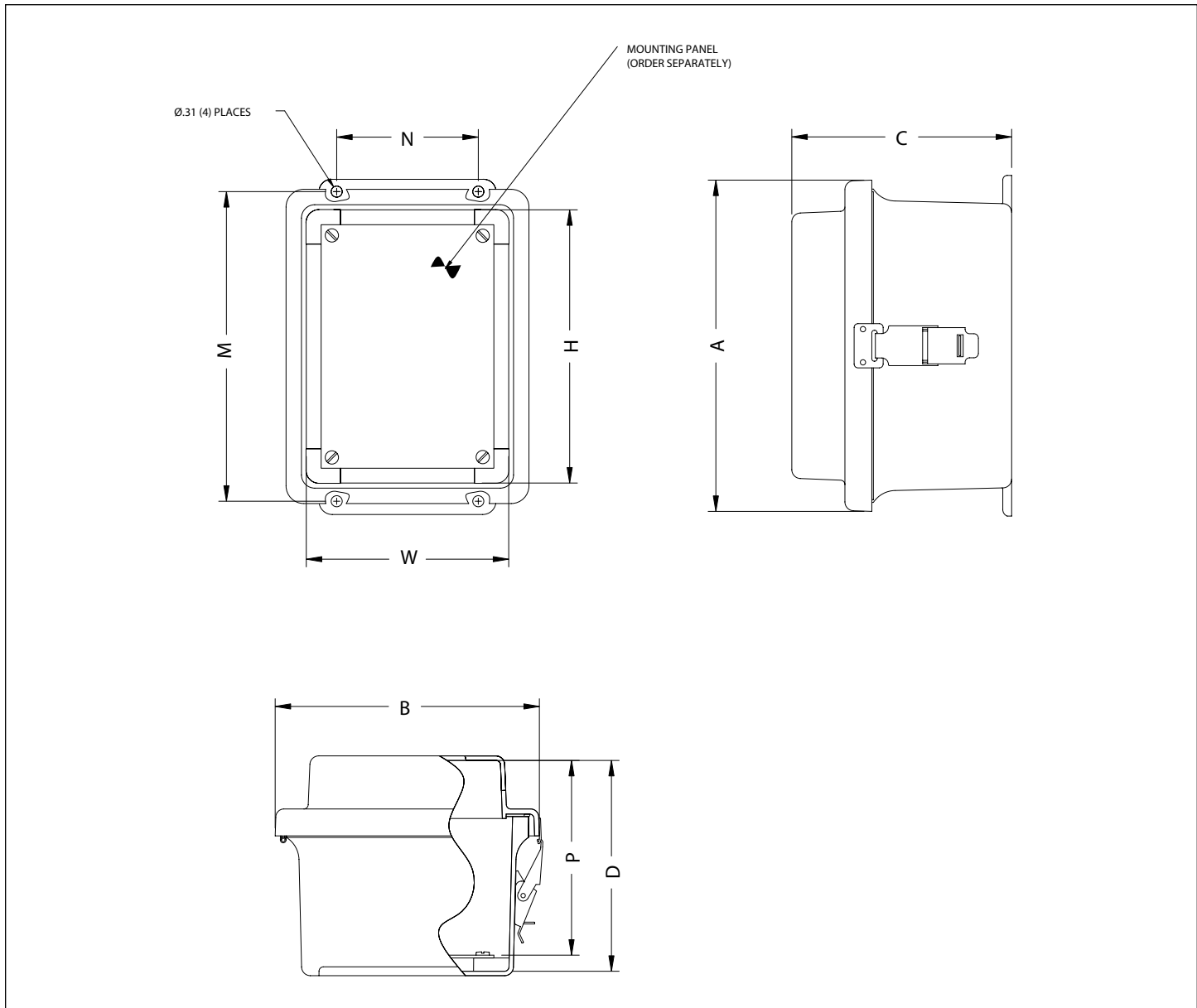
Special Orders

Custom units with holes punched and operators installed can be supplied.

2A-15

NEMA Type 4X Raised Cover Fiberglass Enclosures – Quick Release Latch

2A-16



Catalog No.	Overall Dimensions (in)	Inside Dimensions (in)	Mounting Dim. (in)			Weight (lbs)	Panel Catalog No.	Panel Size (in)
	A x B x C	H x W x D	M	N	P			
N4X-FG-080606RCHQR	9.62 x 7.46 x 6.22	7.73 x 5.74 x 5.95	8.88	4.00	5.49	4	BP86A	6.88 x 4.88
N4X-FG-100806RCHQR	11.62 x 9.37 x 6.61	9.73 x 7.73 x 6.36	10.75	6.00	5.91	5	BP108A	8.88 x 6.88
N4X-FG-121006RCHQR	13.56 x 11.43 x 6.61	11.79 x 9.80 x 6.32	12.75	8.00	5.87	7	BP1210A	10.88 x 8.88
N4X-FG-141207RCHQR	15.50 x 13.38 x 7.69	13.53 x 11.55 x 7.45	14.62	10.00	6.87	9	BP1412A	12.88 x 10.90
N4X-FG-161407RCHQR	17.53 x 15.43 x 7.71	15.63 x 13.60 x 7.45	16.75	12.00	6.87	12	BP1614A	14.88 x 12.90
N4X-FG-181610RCHQR	19.62 x 17.48 x 10.62	17.69 x 15.69 x 10.31	18.88	12.00	9.86	19	BP1816A	16.88 x 14.90
N4X-FG-201610RCHQR	22.00 x 17.56 x 10.64	19.72 x 15.72 x 10.33	21.25	10.00	9.87	21	BP2016A	17.00 x 13.00

All dimensions in inches

NEMA Type 4X Raised Cover Fiberglass Enclosures – Twist Latch



Application

The raised cover twist latch fiberglass enclosure can be used indoors or outdoors to provide protection against dust, dirt, oil and water. It is designed for use as a terminal wiring box, instrumentation housing or electrical control enclosure where a hinged cover is desired. It is also designed for use when components require additional depth.

Construction

The raised cover twist latch enclosures are constructed of compression molded, fiberglass reinforced polyester. Enclosure includes a stainless steel continuous hinge and stainless steel twist latches. The cover gasket is a continuous urethane material. Panel mounting inserts are molded to interior of enclosure. External mounting feet are also molded to enclosure. Machine tool gray color.

Panels

Optional panels are available. Panels fabricated of 0.080" or 0.090" aluminum.

Standards

All raised cover twist latch fiberglass enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet/Ice Resistant), Type 4X (Watertight, Dust-tight and Corrosion Resistant), Type 12 (Dust-tight) and Type 6P (Prolonged Submersion in Water). They are listed by Underwriters Laboratories, Inc. (UL) for Canada and the United States.

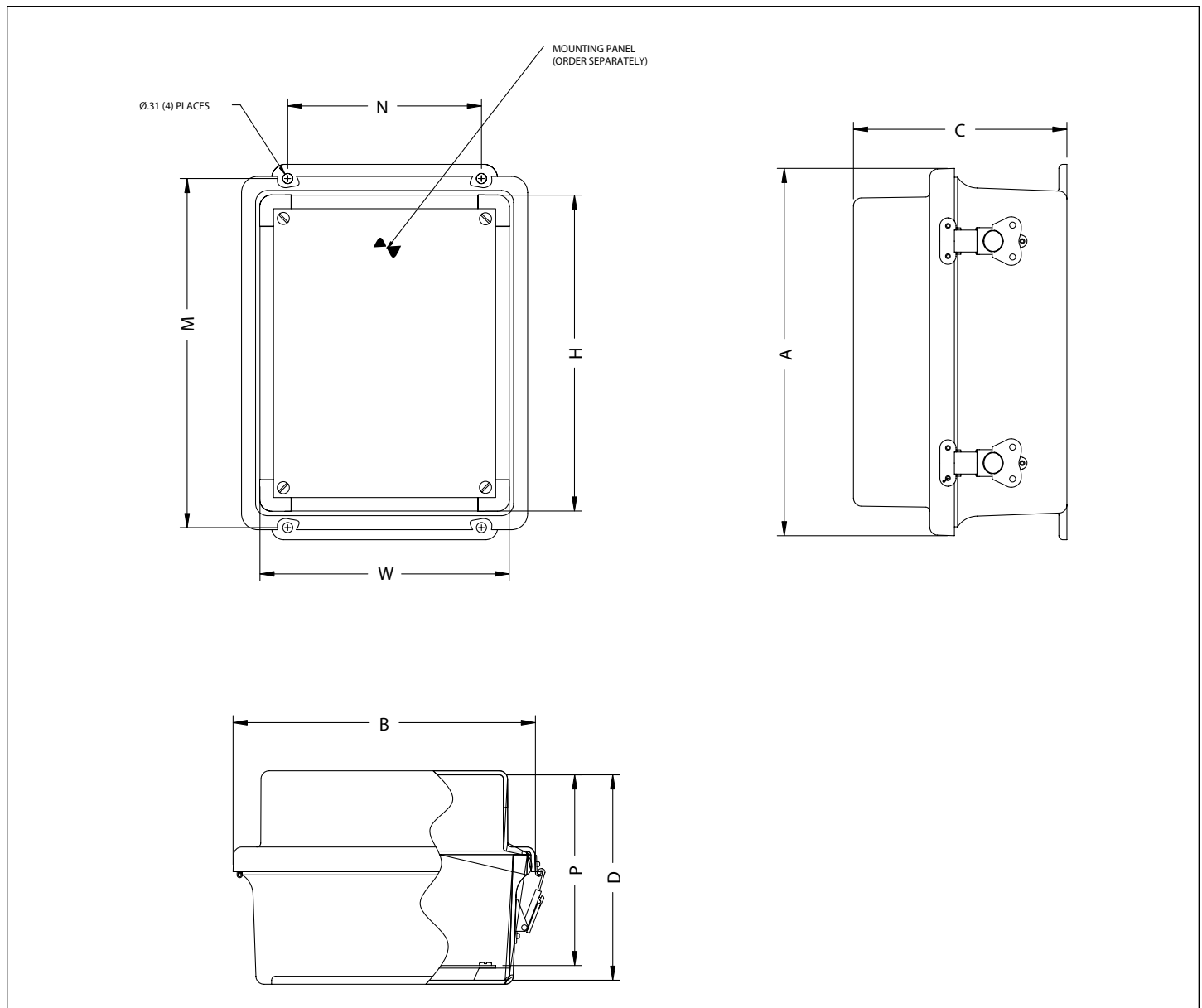
Special Orders

Custom units with holes punched and operators installed can be supplied.

2A-17

NEMA Type 4X Raised Cover Fiberglass Enclosures – Twist Latch

2A-18



Catalog No.	Overall Dimensions (in)	Inside Dimensions (in)	Mounting Dim. (in)			Weight (lbs)	Panel Catalog No.	Panel Size (in)
	A x B x C	H x W x D	M	N	P			
N4X-FG-100806RCHTL	11.62 x 9.37 x 6.61	9.73 x 7.73 x 6.36	10.75	6.00	5.91	5	BP108A	8.88 x 6.88
N4X-FG-121006RCHTL	13.56 x 11.43 x 6.61	11.79 x 9.80 x 6.32	12.75	8.00	5.87	7	BP1210A	10.88 x 8.88
N4X-FG-141207RCHTL	15.50 x 13.38 x 7.69	13.53 x 11.55 x 7.45	14.62	10.00	6.87	9	BP1412A	12.88 x 10.90
N4X-FG-161407RCHTL	17.53 x 15.43 x 7.71	15.63 x 13.60 x 7.45	16.75	12.00	6.87	12	BP1614A	14.88 x 12.90
N4X-FG-181610RCHTL	19.62 x 17.48 x 10.62	17.69 x 15.69 x 10.31	18.88	12.00	9.86	19	BP1816A	16.88 x 14.90

All dimensions in inches

NEMA Type 4X Large Control Fiberglass Enclosures



Application

The large control fiberglass enclosure can be used indoors or outdoors to provide protection against dust, dirt, oil and water. It is designed to house items such as electronic or electrical controls, instrumentation systems and mechanical controls.

Construction

The large control enclosures are constructed of compression molded, fiberglass reinforced polyester. Enclosure includes a stainless steel continuous hinge and stainless steel twist latches. A padlock hasp is also included. The cover gasket is a continuous urethane material. Panel mounting inserts are molded to interior of enclosure. External mounting feet are also molded to enclosure. Machine tool gray color.

Panels

Optional panels are available. Panels fabricated of 0.090" or 0.130" aluminum.

Standards

All large control enclosures conform to the National Electrical Manufacturers Association (NEMA) standard for Type 3 (Dust-tight, Raintight and Sleet/Ice Resistant), Type 4X (Watertight, Dust-tight and Corrosion Resistant) and Type 12 (Dust-tight). They are listed by Underwriters Laboratories, Inc. (UL) for Canada and the United States.

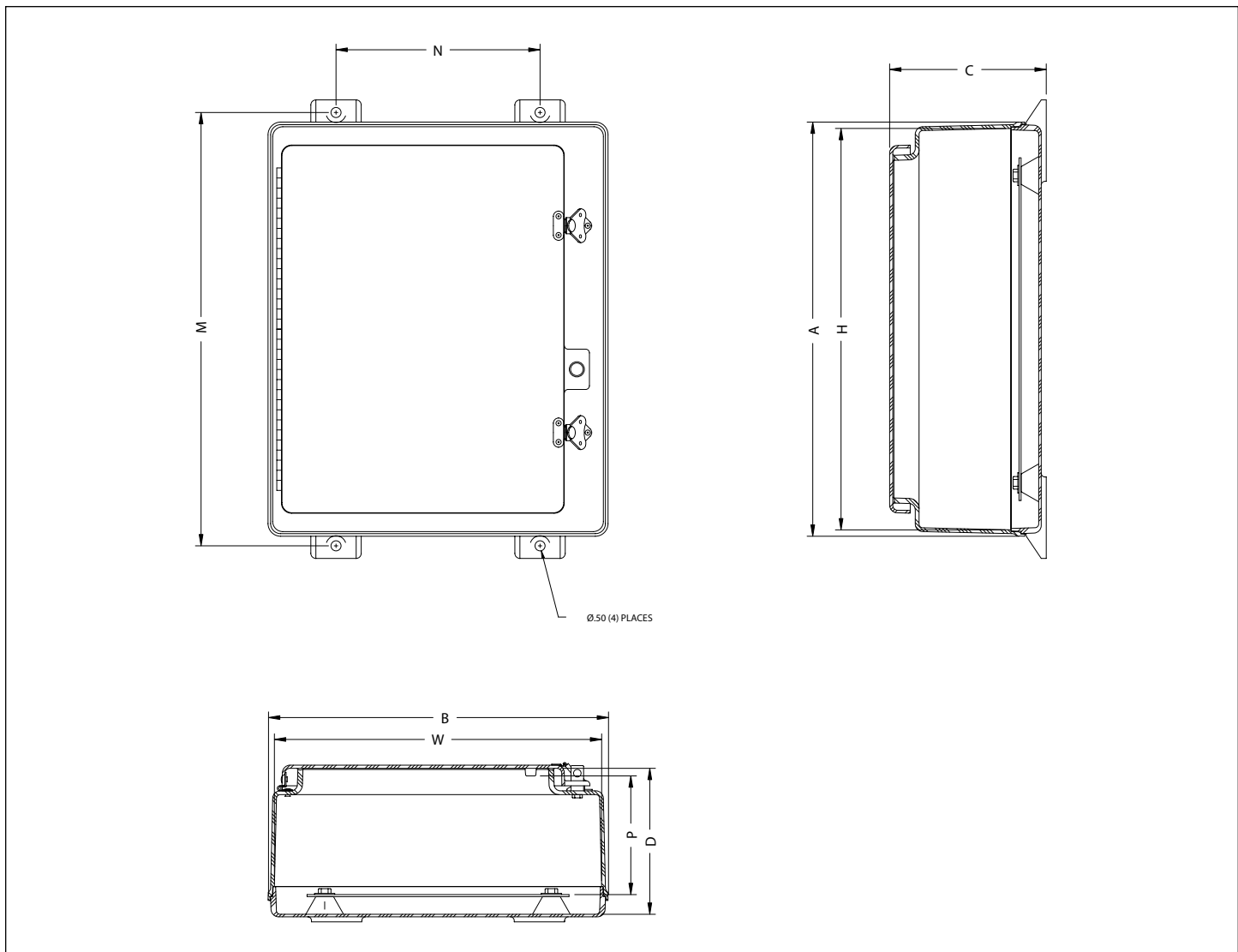
Special Orders

Custom units with holes punched and operators installed can be supplied.

2A-19

NEMA Type 4X Large Control Fiberglass Enclosures

2A-20



Catalog No.	Overall Dimensions (in)	Inside Dimensions (in)	Mounting Dim. (in)			Weight (lbs)	Panel Catalog No.	Panel Size (in)
	A x B x C	H x W x D	M	N	P			
N4X-FG-201606CH	22.75 x 16.87 x 7.77	19.70 x 16.04 x 7.24	21.50	10.12	6.26	17	BPN2016A	17.00 x 13.00
N4X-FG-201608CH	22.75 x 16.87 x 9.77	19.70 x 16.04 x 9.24	21.50	10.12	8.26	22	BPN2016A	17.00 x 13.00
N4X-FG-201612CH	22.75 x 16.87 x 13.77	19.70 x 16.04 x 13.24	21.50	10.12	12.26	24	BPN2016A	17.00 x 13.00
N4X-FG-242008CH	27.00 x 21.24 x 9.90	24.05 x 20.39 x 9.25	25.75	14.00	8.25	32	BP2420A	21.00 x 17.00
N4X-FG-242410CH	27.00 x 25.24 x 11.90	24.05 x 24.39 x 11.25	25.75	17.87	10.25	42	BP2424A	21.00 x 21.00
N4X-FG-302410CH	33.41 x 26.32 x 11.95	30.46 x 25.47 x 11.27	32.25	18.50	10.27	50	BP3024A	27.00 x 21.00
N4X-FG-302412CH	33.41 x 26.32 x 13.79	30.46 x 25.47 x 13.10	32.25	18.50	12.10	54	BP3024A	27.00 x 21.00
N4X-FG-363010CH	39.31 x 32.50 x 12.05	36.31 x 31.69 x 11.36	38.13	23.88	10.36	78	BP3630A	33.00 x 27.00
N4X-FG-363012CH	39.31 x 32.50 x 14.05	36.31 x 31.69 x 13.36	38.13	23.88	12.36	81	BP3630A	33.00 x 27.00
N4X-FG-483616CH	51.29 x 36.62 x 17.93	48.33 x 36.22 x 17.25	50.12	29.25	16.25	108	BP4836A	45.00 x 33.00

All dimensions in inches

Adalet Increased Safety Enclosures

Increased Safety 'e'

- Terminal Enclosures (TN, TSC & TFG Series)
- High Voltage Junction Boxes (HV Series)
- Control Panel Assemblies (CN Series)
- Intrinsically Safe Terminal Enclosures (TSC & TFG Series)

Increased Safety/Flameproof 'ed'

- Control Panel Assemblies (CN Series)



TN4 Series: Single Door Clamped Terminal Enclosures. 14-gauge materials: TN4 steel powder coated; TN4X stainless steel 304; TN4X6 stainless steel 316L.

TN4 Expanded Series: Single Door Clamped Terminal Enclosures.

TSC Series: Screw Cover Terminal Enclosures. 14-gauge materials: TSC4 steel powder coated; TSC4X stainless steel 304; TSC4X6 stainless steel 316L.

CN4 Series: Control Panel Enclosure. 14-gauge materials: CN4 steel powder coated; CN4X stainless steel 304; CN4X6 stainless steel 316L.

TFG Series: Fiberglass Terminal Enclosures

HV Series: High Voltage Junction Boxes. 14-gauge materials: HV4 steel powder coated; HV4X stainless steel 304; HV4X6 stainless steel 316L.

Adalet Increased Safety Enclosures

Increased Safety Enclosures

These enclosures provide an alternative to flameproof enclosures and are commonly made from sheet steel, fiberglass, and die cast aluminum. They are intended to house electrical equipment that will not generate an arc or spark during normal operation. Additional design measures are taken to prevent the possibility of excessive heat, the ingress of water or dust, and the resistance to impact, thus preventing any explosions from occurring.

Principle

Intended for product in which arcs and sparks do not occur in normal service not under fault conditions and in which surface temperatures are controlled below incandive values. Increased Safety is achieved by enhancing insulation values and creepage and clearance distances above those required for normal service, thus providing a safety factor against accidental breakdown.

Increased Safety must not be confused with Intrinsically Safe; they are two completely different approaches. Intrinsic Safety requires that the electrical components within an enclosure have very low levels of electrical energy, either stored or circulating. Typically, allowable currents will be in the tens of milliamperes and voltage will be less than 100 volts, so they will be insufficient to ignite a surrounding explosive atmosphere even under fault conditions.

Key Design Features

- **Enclosure:** must be constructed to withstand mechanical impact and provide a specified degree of ingress protection (IP rating). A minimum IP54 rating is required for Increased Safety enclosures.
- **Terminals for external connections:** must be generously dimensioned for the intended connection and ensure that conductors are securely fastened.
- **Internal connections:** must not be subject to undue mechanical stress and shall be made using specified methods.
- **Clearances:** between bare conductive parts must not be less than the values specified according to the rated voltage.
- **Creepage distances:** must not be less than the values specified according to the rated voltage and the Comparative Tracking Index (CTI) of the insulating material.

- **Temperatures:** of parts of equipment must be limited so as not to exceed values which would affect the thermal stability of the material and the T-Class relating to the ignition of explosive atmospheres.

Areas of Use

Zone Classified Areas – U.S., Canada, Europe

Zones 1 and 2

ATEX – EU Directive 94/9/EC – Europe

Equipment Groups II

Equipment Category 2GD

Applicable Standards

Europe: EN50014, EN50019

U.S.: UL2279 pt 7

Canada: CSA-E79-0, CSA-E79-7

International: IEC 60079-0, IEC 60079-7

Typical Testing for Increased Safety Apparatus

- Thermal conditioning test
- Mechanical strength
- Temperature rise
- Ingress Protection (IP Rating)
- Electrical Strength
- Thermal Stability of Insulating Materials

3A-2

Hazardous Location Marking

National Electrical Code Article 505

Article 505 was first introduced in the 1996 National Electrical Code. This new Article offered an alternative to the classification of hazardous locations based on the standards for area classification by the International Electrotechnical Commission (IEC). With the introduction of this new Article, engineers could now classify hazardous locations using either Article 500 or Article 505.

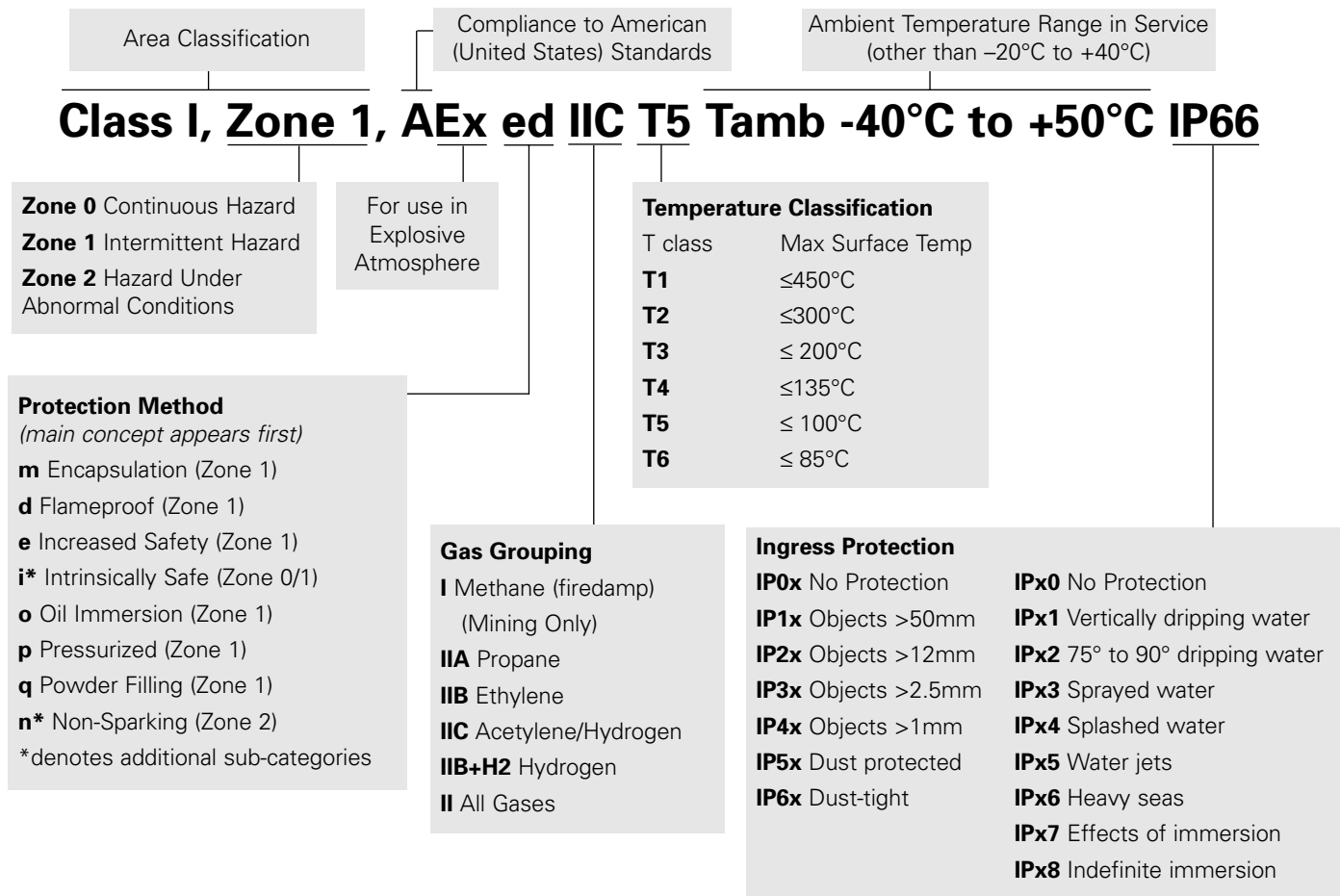
In 1999, further revision to this Article continued to bring it closer to the IEC 79 series. The 1999 changes introduced:

1. the eight different Protection Methods used by IEC,
2. the inclusion of metric threaded holes, and
3. special precautions involving area classification, dual classification, and the reclassification of division classified areas.

Note 1: Products approved for use in areas classified under Article 505 could only be used in this area. Products approved for use in areas classified under Article 500 are allowed to be installed in Article 505 areas, except Zone 0.

Note 2: The IEC Classification scheme also addresses underground mines. Article 505 does not address this area classification. All mines in the United States fall under the jurisdiction of the Mine Safety and Health Administration (MSHA).

Equipment Marking



3A-3

Hazardous Location Marking

CENELEC

CENELEC is the European Committee for Electrotechnical Standardization. It was established in 1973 as a non-profit organization under Belgium Law.

The European Commission under Directive 83/189/EEC has officially recognized it as the European Standards Organization in its field.

Each member country typically has at least one recognized test agency or notified body. These members have been working together in the interest of European harmonization since the late fifties, developing alongside the European Economic Community. CENELEC works with 35,000 technical experts from 19 countries to publish standards for the European market.

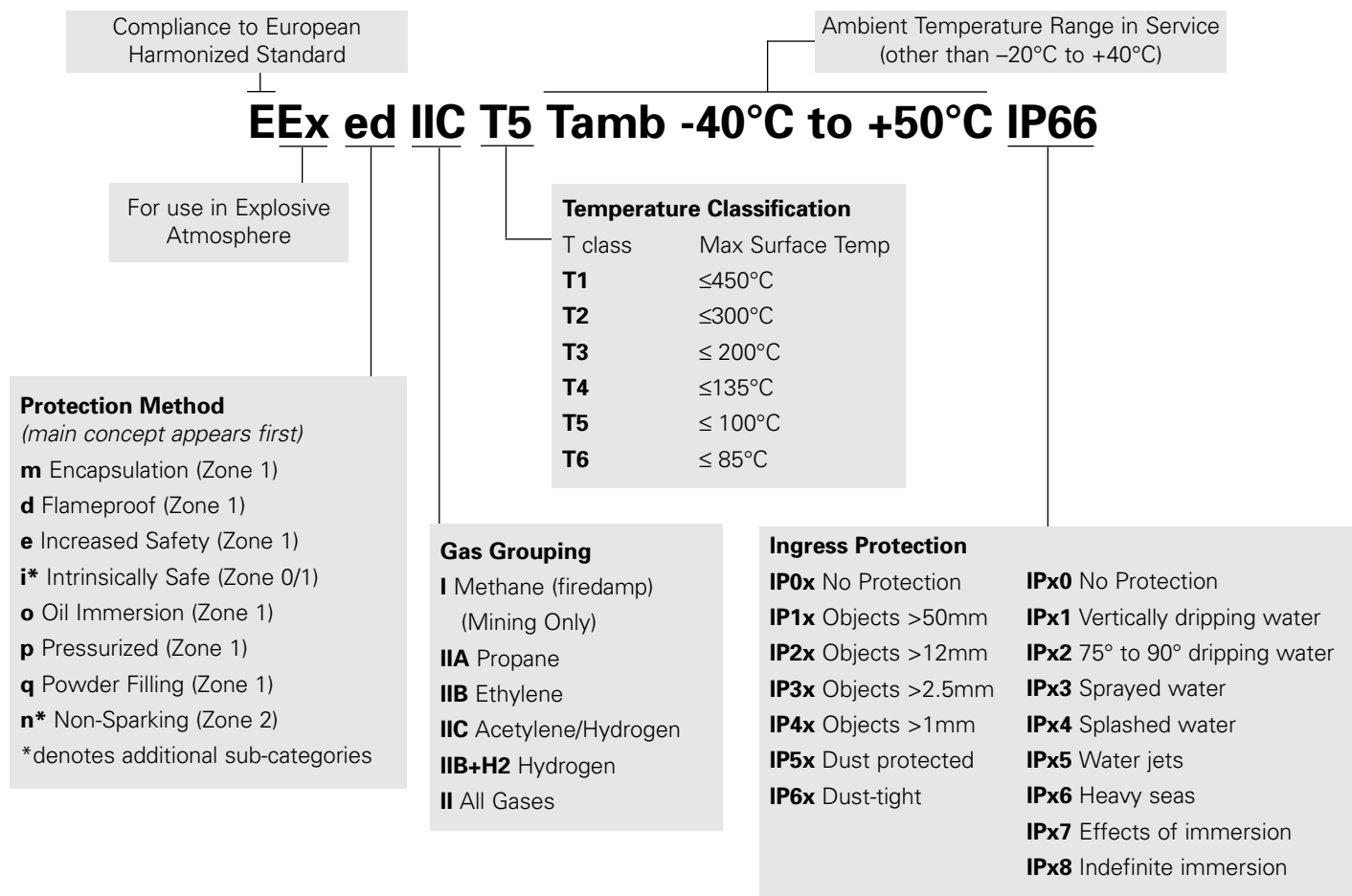


The Conformity Mark

Under the Explosive Atmospheres and Gassy Mines Directive (79/117/EEC), the "Epsilon x" symbol indicates conformity with the CENELEC requirements. This symbol is only allowed to be applied to products which are considered to be final assemblies. Not empty enclosures or component parts.

3A-4

Equipment Marking



Hazardous Location Marking

ATEX Directive

The ATEX Directive 94/9/EC was adopted by the European Union (EU) to facilitate free trade in the EU by aligning the technical and legal requirements in the Member States for products intended for use in potentially explosive atmospheres.

The ATEX Directive went into affect (on a voluntary basis) on March 1, 1996. This Directive will become mandatory effective on July 1, 2003. All Product intended for use in explosive atmospheres must comply with this Directive in order to be sold or placed in service in any Member State of the European Union.

The New Conformity Mark

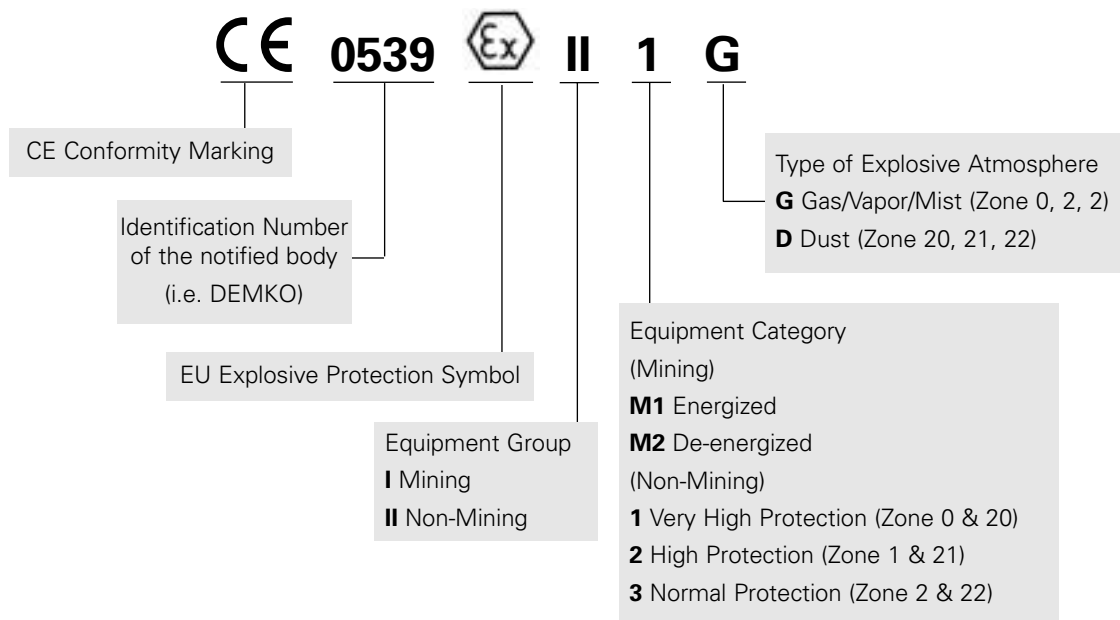


Under the old Explosive Atmospheres and Gassy Mines Directive (79/117/EEC), the "Epsilon x" symbol indicated conformity with the CENELEC requirements. This symbol was allowed to be applied to products which were considered to be final assemblies. Not empty enclosures or component parts such as terminal blocks, operators, breather drains, plugs, etc.. The "Epsilon x" symbol will move into the marking string and be used to indicate explosion protection.



Under the New Directive, the "CE" mark will now indicate conformity to the ATEX Directive. This mark can only be placed on final assemblies and not to empty enclosures or component parts.

Equipment Marking



3A-5

Selecting An Increased Safety Terminal Enclosure

Overview

Following the steps outlined below will guide you in selecting the appropriate enclosure for your Increased Safety application. Adherence to these Steps will ensure that the enclosure you select will meet the requirements for Increased Safety Certification.

STEPS:

1. Select the Enclosure Series and Catalog Prefix.
2. Select a Terminal Block Manufacturer and Terminal Block.
3. Determine the Enclosure Size and Catalog Number.
4. Locate the Thermal Dissipation Chart for the Enclosure you selected.
5. Select the Wire Size for your Application.
6. Select the Current to be applied to the Wire.

STEP 1: Select the Enclosure Series and Catalog Prefix

Select an Enclosure Series based on the environmental needs of your application from these options:

TN Single Door Clamped Series:

TN4 – Steel Powder Coated

TN4X – Stainless Steel 304

TN4X6 – Stainless Steel 316L

TSC Screw Cover Series:

TSC4 – Steel Powder Coated

TSCX – Stainless Steel 304

TSC4X6 – Stainless Steel 316L

TFG Screw Cover Series:

TFG – Fiberglass Reinforced Polyester

STEP 2: Select a Terminal Block Manufacturer and Terminal Block

Adalet Enclosures can utilize various manufacturers of Terminal Blocks, select from:

- Entrelec
- Phoenix
- Wago
- Weidmuller
- Wieland
- Woretz
- Consult factory for others.

Beginning on the fourth page of each Enclosure Series Section, you will find Tables for each of the above Terminal Block Manufacturers. Select a Manufacturer and a Terminal Block for your application.

If you have no preference for a specific Terminal Block Manufacturer, use the Quick Selector found on the third page of the Enclosure Section. Select the Wire size for your application and Adalet will supply a suitable Terminal Block.

STEP 3: Determine the Enclosure Size and Catalog Number

From the table selected in Step 2, the quantities that are shown under a terminal block type indicates the maximum number of terminal blocks for each enclosure size. (Warning: *These quantities may not qualify the Enclosure for an Increased Safety Certification.*) The column to the far left indicates the catalog enclosure size. *NOTE: This is also the nominal outside dimension of the enclosure (i.e. -201407: 20" length x 14" width x 07" depth).*

Use the following steps:

For the Terminal Block Type selected, follow the column down until the quantity meets or exceeds your requirement. Then follow the row to the far left to find the catalog enclosure size.

If your quantity requirement is not met, select another Terminal Block Type (*most manufacturers build various sizes of terminal blocks of the same wire size*) or select another Enclosure Series.

NOTE: You might want to consider having a few extra Terminal Blocks for future expansion.

Selecting An Increased Safety Terminal Enclosure

STEP 4: Locate the Thermal Dissipation Chart for the Enclosure you selected.

Each enclosure size has a unique Thermal Dissipation Chart used to qualify for Increased Safety Certification. These charts can be found on the catalog page of the enclosure style you selected. For quick reference, the catalog page number is located in the column next to each enclosure size in the Terminal Block Content tables used in Step 3.

STEP 5: Select the Wire Size for your Application

On the Thermal Dissipation Chart, locate the row listing Conductor Cross Section. Follow the row across until you find the wire size that will be connected to the terminal block. *NOTE: typically, a terminal block catalog number indicates the maximum wire size that can be installed.*

STEP 6: Select the Current to be Applied to the Wire

On the Thermal Dissipation Chart, locate the column for Current. Follow the column down until you find the current that will be applied to the conductor. At the intersection of the Current row and Conductor Cross Section column from Step 5, you will find the maximum number of terminal blocks allowed in the enclosure for an Increased Safety Certification. If this meets your requirements, you are done.

IF THE TERMINAL BLOCK QUANTITY DOES NOT MEET THE NEEDS OF YOUR APPLICATION, CONTINUE WITH THE FOLLOWING STEPS

STEP A: Reduce the Current for your Application

Follow the Conductor Cross Section column up until you find the Terminal Count required for your application. Follow the row across to the left to find the maximum allowable Current.

IF THE CURRENT CANNOT BE REDUCED OR IS LESS THAN WHAT IS REQUIRED, CONTINUE WITH STEPS B OR C.

STEP B: Increase the Wire Size for your Application

Determine if you can use a larger conductor size. If you selected a 1.5mm² conductor for a terminal block that will accommodate a 2.5mm² conductor, increase the Conductor Size. *This will increase the terminal block quantity.* Find the required quantity in the new Conductor Cross Section column. Follow that row across to the left, this is the new maximum Current.

IF THE CURRENT IS STILL LESS THAN REQUIRED, CONTINUE TO STEP C.

STEP C: Select a Larger Size Enclosure

If neither the current or the conductor size can be changed. Select the next size enclosure and repeat STEP 4-6. If none of these Steps provides you with the necessary terminal block or current, you might consider another Enclosure Series, or consult Factory.

Increased Safety Enclosure Selection Examples

Enclosure Selection: Example 1

A customer requires a TSC4X-080804 Enclosure with (19) Weidmuller SAK2.5 terminal blocks installed.

No information on Current or Conductor Size is given.

Question: Will (19) SAK2.5 terminal blocks fit in the enclosure?

Locate the Maximum Physical Content Chart for Weidmuller in the TSC Section.

Enclosure Size	Cat. Page	AKE2.5	AKE4	SAK2.5	SAK4	SAK6N
-050503	3B-47	7	6	6	6	5
-060604	3B-48	12	9	11	10	8
-070704	3B-49	34	13	15	14	11
-080804	3B-50	46	34	19	17	28
-101006	3B-51	99	72	54	50	40
-101008	3B-52	99	72	54	50	40
-120604	3B-53	43	31	36	33	27
-120605	3B-54	43	31	36	33	27

Chart reduced for clarity

Answer: Yes, from the chart above (19) SAK2.5 terminal blocks will fit.

Question: Will the enclosure qualify for Increased Safety Certification?

Locate the Thermal Dissipation Chart for the 080804 enclosure.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	55	###	###	###	###	###
10	27	###	###	Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	9	17	69			
20	3	10	20	###	###	###
25	###	5	11	22	###	###
35	Additional testing required, Consult Factory		3	8	21	###
50			###	1	7	17

Answer: Yes, (19) SAK2.5 terminal blocks can be installed and Increased Safety Certification given with a maximum current of 10 Amps using 2.5mm² wires.

Important: The Maximum Amperage and Conductor Size has to be forwarded to the customer.

Enclosure Selection: Example 2

A customer can only fit a TSC4X-121206 Enclosure within their skid package. They want (30) Weidmuller SAK2.5 terminal blocks installed and they would like 16 Amps with 2.5mm² conductors.

Question: Can (30) SAK2.5 terminal blocks fit in a TSC4X-121206 enclosure?

Locate the Maximum Physical Content Chart for Weidmuller in the TSC Section.

Enclosure Size	Cat. Page	AKE2.5	AKE4	SAK2.5	SAK4	SAK6N
-050503	3B-47	7	6	6	6	5
-060604	3B-48	12	9	11	10	8
-070704	3B-49	34	13	15	14	11
-080804	3B-50	46	34	19	17	28
-101006	3B-51	99	72	54	50	40
-101008	3B-52	99	72	54	50	40
-120604	3B-53	43	31	36	33	27
-120605	3B-54	43	31	36	33	27
-120805	3B-55	86	62	36	33	54
-120806	3B-56	86	62	36	33	54
-121206	3B-57	172	93	108	99	81
-121208	3B-58	172	93	108	99	81

Chart reduced for clarity

Answer: Yes, from the chart above the -121206 can fit (108) terminal blocks.

Question: Will the enclosure qualify for Increased Safety Certification?

Locate the Thermal Dissipation Chart for the 121206 enclosure.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	85	###	###	###	###	###
10	41	###	###	Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	14	27	107			
20	5	16	31	###	###	###
25	###	7	17	33	###	###
35	Additional testing required, Consult Factory		5	13	33	###
50			###	1	10	27

Answer: No, from the chart above the -121206 can fit (27) terminal blocks at 16 Amps with 2.5mm² wire

3A-8

Increased Safety Enclosure Selection Examples

Enclosure Selection: Example 2 Cont.

Question: What STEPS can you take.

Reminder: They can only use a -121206 enclosure.

Option 1: STEP A – Reduce the Current to be applied to Wire

Question: Will the customer accept a lower amperage?

Locate the Thermal Dissipation Chart for the 121206 enclosure.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	85	###	###	###	###	###
10	41	###	###	Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	14	27	107			
20	5	16	31	###	###	###
25	###	7	17	33	###	###
35	Additional testing required, Consult Factory		5	13	33	###
50			###	1	10	27

Answer: Reducing the Current to 10 Amps allows the customer to stay in the -121206 Enclosure with (30) SAK2.5 terminal blocks while qualifying the enclosure for Increased Safety Certification.

Option 2: STEP B – Increase the Wire Size

Note: Increasing the conductor size will change the terminal block size and may affect the enclosure size.

Question 1: Will the customer change wire size and terminal block size?

Question 2: Will (30) SAK4 terminal block fit in the -121206 enclosure?

Locate the Maximum Physical Content Chart for Weidmuller in the TSC Section.

Enclosure Size	Cat. Page	AKE2.5	AKE4	SAK2.5	SAK4	SAK6N
-050503	3B-47	7	6	6	6	5
-060604	3B-48	12	9	11	10	8
-070704	3B-49	34	13	15	14	11
-080804	3B-50	46	34	19	17	28
-101006	3B-51	99	72	54	50	40
-101008	3B-52	99	72	54	50	40
-120604	3B-53	43	31	36	33	27
-120605	3B-54	43	31	36	33	27
-120805	3B-55	86	62	36	33	54
-120806	3B-56	86	62	36	33	54
-121206	3B-57	172	93	108	99	81
-121208	3B-58	172	93	108	99	81

Answer: Yes, from the chart above (30) SAK4 Terminal Blocks will fit.

Question: Will the enclosure qualify for Increased Safety Certification?

Locate the Thermal Dissipation Chart for the 121206 enclosure.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	85	###	###	###	###	###
10	41	###	###	Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	14	27	107			
20	5	16	31	###	###	###
25	###	7	17	33	###	###
35	Additional testing required, Consult Factory		5	13	33	###
50			###	1	10	27

Answer: Yes, (30) SAK4 terminal blocks can be installed and Increased Safety Certification given with a maximum current of 16 Amps using 4mm² wires.

3A-9

Increased Safety Enclosure Selection Examples

Enclosure Selection: Example 3

A customer requires a TSC Series Enclosure with (30) Weidmuller SAK2.5 terminal blocks installed. The Minimum Current is 16 Amps with 2.5mm² conductors.

Question: What is the smallest enclosure that can fit (30) SAK2.5 terminal blocks?

Locate the Maximum Physical Content Chart for Weidmuller in the TSC Section.

Enclosure Size	Cat. Page	AKE2.5	AKE4	SAK2.5	SAK4	SAK6N
-050503	3B-47	7	6	6	6	5
-060604	3B-48	12	9	11	10	8
-070704	3B-49	34	13	15	14	11
-080804	3B-50	46	34	19	17	28
-101006	3B-51	99	72	54	50	40
-101008	3B-52	99	72	54	50	40
-120604	3B-53	43	31	36	33	27
-120605	3B-54	43	31	36	33	27

Chart reduced for clarity

Answer: From the chart above the smallest enclosure -101006 can fit (54) terminal blocks.

Question: Will the enclosure qualify for Increased Safety Certification?

Locate the Thermal Dissipation Chart for the 101006 enclosure.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	77	###	###	###	###	###
10	37	###	###	###	###	###
16	13	25	97	###	###	###
20	5	14	28	###	###	###
25	###	7	16	30	###	###
35	Additional testing required, Consult Factory		4	12	30	###
50			###	1	9	24

Answer: The terminal block quantity does not meet the customer's requirement for (30) terminal blocks.

Question: What **STEP** must you take? *Reminder: The current is 16 Amps minimum with 2.5mm² wire*

Answer: STEP C - Select a Larger Enclosure

Locate the Maximum Physical Content Chart for Weidmuller in the TSC Section.

Enclosure Size	Cat. Page	AKE2.5	AKE4	SAK2.5	SAK4	SAK6N
-050503	3B-47	7	6	6	6	5
-060604	3B-48	12	9	11	10	8
-070704	3B-49	34	13	15	14	11
-080804	3B-50	46	34	19	17	28
-101006	3B-51	99	72	54	50	40
-101008	3B-52	99	72	54	50	40
-120604	3B-53	43	31	36	33	27
-120605	3B-54	43	31	36	33	27

Chart reduced for clarity

Question: Will this enclosure qualify for Increased Safety Certification?

Locate the Thermal Dissipation Chart for the 101008 enclosure.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	92	###	###	###	###	###
10	45	###	###	Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	15	30	116	###	###	###
20	6	17	33	###	###	###
25	###	8	19	36	###	###
35	Additional testing required, Consult Factory		5	14	35	###
50			###	2	11	29

Answer: YES.

The TSC Series -101008 enclosure with (30) SAK2.5 terminal blocks will qualify for Increased Safety Certification at 16 Amps with 2.5mm² conductors.

3A-10

TN4 Series - Single Door Clamped Style



85 Enclosure Sizes

Available in 85 sizes, from 16" x 12" x 6" (model 161206) to 60" x 36" x 12" (model 603612).

Construction

- Available in (3) Materials: SS304, SS316L, Powder-Coated (ASA61 Grey) Steel.
- Folded Lip around the Door Opening to provide complete and maximum gasket seal.
- Continuously Welded and Ground Smooth Seams.
- Continuous One-Piece Silicone Gasket (sizes 2014, 2518, 3022, 3625, 3929).
- Silicone Strip Gasket For All Other Sizes.
- Welded on External Mounting Feet with 5/16" Clearance Holes/Slot.
- External Door Clamps.
- Continuous Piano Type Hinge with Removable SS Hinge Pin.
- Ground Studs on Box and Cover.
- Internal/External Earthing Stud.
- Universal Rail Mounting System.
- Padlock Hasp & Staple for Padlocking.

Options

Gland Plates

These removable plates offer great flexibility for the end user to drill holes without having to remove the entire enclosure from the installation site.

Add the following Suffixes:

- A: Gland Plate installed on top of box.
- B: Gland Plate installed on bottom of box.
- C: Gland Plate installed on left of box.
- D: Gland Plate installed on right of box.

For multiple gland plates omit dashes (i.e. TN4X-201407-**ABCD**).

Note that sizes 251807, 302207, 362507 and 392907 are furnished standard with multiple gland plates.

Conduit/Cable Entries:

Entries can be provided per a customer sketch or with detailed information on the entry locations. Please refer to Entry Spacing Tables at the end of the Increased Safety Section in the CENELEC Product Catalog. Note: This information is important and could affect the size of the enclosure you selected.

Close-up Plugs:

Any unused entries must be plugged with a Certified Close-Up Plug. Adalet can provide close-up plugs in various styles and materials. Please indicate on the sketch or provide detailed information of holes to be plugged.

Enclosure Labeling:

Adalet can provide additional enclosure labeling with custom silk screening or various colors of Lamacoid™ nameplates. Please provide detailed information of the logo or text required.

Breather Drains:

Breather Drains can be provided per customer request. They are available in Brass or Stainless Steel 316L. Please indicate on a sketch or provide detailed information for locations.

Grounding Busbars:

Some applications might require grounding points to be terminated in the enclosure. With the use of a Ground Busbar System this can be accomplished, consult factory for options.

Mounting Pans:

As an alternative to the universal rail mounting system, mounting pans are available in steel/powder coated, stainless steel, and aluminum. Please indicate when requesting quote.

Terminal Strip Assemblies:

Various options (i.e. marking tags, protective covers, jumpers, partitions, etc.) are available. Please provide detailed information requesting quote.








TN4 Series - Single Door Clamped Style

General Information

Adalet's Single Door Clamped Terminal Enclosures are available in Stainless Steel 316L & 304 and Carbon Steel. Adalet can also supply custom size enclosures, operators, and components to suit your Increased Safety Application. Silicone gaskets, removable hinge pin, box & cover ground studs including an internal/external earthing stud, along with internal standoffs and universal rail mounting system are included as standard.



3B-2

Enclosure Certifications with Terminals		CE 0539 II 2GD EEx e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C) Ex e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C) Class I, Zone 1, AEx e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C) Class II, Division 2 IP66 Type 4, 4X (Stainless Steel only), 12, & 13	ATEX Directive 94/9/EC EN50014/EN50019 CSA E79-7, IEC 60079-7 UL 2279-7 UL 1604 IEC 60529 UL50	   
Empty Enclosure Certifications		0539 II 2GD EEx e II Ex e II Class I, Zone 1, AEx e II Class II, Division 2 IP66 Type 4, 4X (Stainless Steel only), 12, & 13	ATEX Directive 94/9/EC EN50014/EN50019 CSA E79-7, IEC 60079-7 UL 2279-7 UL 1604 IEC 60529 UL50	  
Working Voltage		1100 Volts Maximum		
Terminal Blocks		Various manufacturers EEx e type with wire sizes 1.5mm up to 240mm		
Material		TN4 Series #14ga Cold Rolled Steel, Polyester Powder Coated ANSI 61 Gray TN4X Series #14ga Stainless Steel 304, Brushed Finish TN4X6 Series #14ga Stainless Steel 316, Brushed Finish TN4 Series Gland Plates #10ga Cold Rolled Steel, Polyester Powder Coated ANSI 61 Gray TN4X Series Gland Plates #10ga Stainless Steel 304, Brushed Finish TN4X6 Series Gland Plates #10ga Stainless Steel 316, Brushed Finish Mounting Pan #14ga Cold Rolled Steel, Polyester Powder Coated White		
Gasket		Cover Silicone Sponge Gland Plates Silicone Sponge		
Lid Fixing		Hinge TN4 Series Continuous piano type - Steel with removable SS304 pin TN4X Series Continuous piano type - SS304 with removable pin TN4X6 Series Continuous piano type - SS316 with removable pin Door Clamps TN4 Series Plated Steel Clear TN4X Series Stainless Steel 304 TN4X6 Series Stainless Steel 316		
Enclosure Mounting		All Types Four (4) external lugs with .44" clearance holes/slots		
Gland Plate Hardware		All Types 300 Series stainless steel		
Grounding		Box & Cover All Types 1/4-20 Stud with 300 series stainless steel hardware Earthing Stud All Types 1/4-20 Stud - All components brass		
Impact Resistant		All Types 7 Nm to EN50014/EN50019		
Ambient Temperature Range		All Types -40°C to +70°C to EN50014		

TN4 Series - Quick Selector

Enclosure Selection

- Using the table below, select the terminal block size for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.
- To complete Catalog Number, refer to Catalog Page indicated next to Enclosure Size you selected.
- For Enclosure Selection using specific Terminal Block Manufacturers refer to following pages.

For Increased Safety Applications

- Refer to Catalog Page indicated next to the Enclosure Size you selected for Heat Dissipation Table.

TN4 Series Enclosure Sizes	Catalog Page	Maximum Physical Terminal Block Content													
		1.5mm	2.5mm	4mm	6mm	10mm	16mm	35mm	50mm	70mm	95mm	120mm	150mm	185mm	240mm
-201407	3B-7	222	183	168	184	111	62	23	0	0	0	0	0	0	0
-251807	3B-8	500	410	380	305	200	126	31	25	22	10	0	0	0	0
-302207	3B-9	750	618	570	462	310	156	78	31	28	13	0	0	0	0
-362507	3B-10	1092	896	826	672	468	260	96	78	35	16	24	16	0	0
-392907	3B-11	1368	1120	1032	840	595	355	159	84	76	34	26	17	0	0

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.
- Quantities shown above are for Adalet supplied standard terminal blocks.

3B-3



Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.
- To complete Catalog Number, refer to Catalog Page indicated next to Enclosure Size you selected.

For Increased Safety Applications

- Refer to Catalog Page indicated next to the Enclosure Size you selected for Heat Dissipation Table.

Manufacturer - Entelec

Enclosure Size	Cat. Page	MA2,5/5	MA2,5/5.1	M4/6	M6/8	M10/10	M16/12	M35/16	M70/22	M4/6.H	M1,5/6.HH	MTC6	MA2,5/5.SNB	M4/6.SN	M4/6.SNB	M6/8.SNB	M4/8.SN
-201407	3B-7	219	219	183	138	111	62	23	0	183	183	183	219	183	183	138	138
-251807	3B-8	490	490	410	310	196	123	31	22	328	328	410	490	410	410	310	248
-302207	3B-9	738	738	618	468	310	208	78	28	515	515	618	738	618	618	468	390
-362507	3B-10	1071	1071	896	679	462	256	96	35	768	768	896	1071	896	896	679	582
-392907	3B-11	1344	1344	1128	848	595	355	159	76	987	987	1128	1344	1128	1128	848	742

Enclosure Size	Cat. Page	DR4/6	M35/26.FF	M70/31.FF	M120/35.FF	M300/42.FF	M35/26.AF	M70.31.AF	M120/35.AF	M300/42.AF	M120/35	D4/6...ADO	D4/6.ADO.T	D4/6.ADO	D6/8...ADO	D6/8.ADO
-201407	3B-7	248	14	0	0	0	14	0	0	0	0	183	183	183	138	138
-251807	3B-8	498	38	16	14	0	38	16	14	0	14	410	410	410	310	310
-302207	3B-9	728	48	20	17	15	48	20	17	0	17	618	618	618	468	468
-362507	3B-10	1161	90	50	22	18	90	50	22	0	22	896	896	896	679	679
-392907	3B-11	1420	99	54	48	20	99	54	48	20	48	1128	1128	1128	848	848

Notes: 1. All quantities shown are for terminal blocks installed in vertical rows.

Manufacturer - Weidmuller

Enclosure Size	Cat. Page	WDU2.5N	WDU2.5	WDU4	WDU6	WDU10	WDU16	WDU35	WDU70	WDU120	WWF35	WFF70	WFF120	ZDU2.5	ZDU4	ZDU6	AKZ2.5	AKZ4	AKE2.5
-201407	3B-7	222	222	222	141	74	62	23	0	0	0	0	0	219	183	138	370	305	296
-251807	3B-8	500	400	400	252	150	84	31	0	0	17	0	0	392	328	244	594	486	594
-302207	3B-9	750	625	625	395	252	156	78	23	0	22	19	0	615	515	385	1000	816	875
-362507	3B-10	1092	936	936	594	390	260	96	29	24	54	23	18	918	640	480	1395	1143	1395
-392907	3B-11	1368	1197	1197	756	516	284	106	31	26	60	25	19	1176	840	630	1870	1540	1700

Enclosure Size	Cat. Page	AKE4	SAK2.5	SAK4	SAK6N	SAK10	SAK16	SAK35N	SAK70	SAKG 28 I	SAKG 28 II	SAKG 28 III	SAKG 32 I	SAKG 32 II	SAKG 32 III	SAKG 40 I	SAKG 40 II	SAKG 40 III	SAKG 46 II
-201407	3B-7	216	183	168	184	111	62	23	0	12	12	12	0	0	0	0	0	0	0
-251807	3B-8	365	410	380	305	200	126	31	22	16	16	16	14	14	14	10	10	10	0
-302207	3B-9	637	618	570	462	310	156	78	28	20	20	20	18	18	18	13	13	13	0
-362507	3B-10	904	896	826	672	468	260	96	35	50	50	50	23	23	23	16	16	16	16
-392907	3B-11	1125	1120	1032	840	595	355	159	76	56	56	56	50	50	50	34	34	34	17

Notes: 1. All quantities shown are for terminal blocks installed in vertical rows.
2. Weidmuller WFF Series are installed on a mounting pan.



Maximum Physical Terminal Block Content

Enclosure Selection

1. Using the table below, select the terminal block type for your application.
2. Follow the column down until you find the quantity required for your application.
3. Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.
4. To complete Catalog Number, refer to Catalog Page indicated next to Enclosure Size you selected.

For Increased Safety Applications

1. Refer to Catalog Page indicated next to the Enclosure Size you selected for Heat Dissipation Table.

Manufacturer - Woretz

Enclosure Size	Cat. Page	30128 gr	3424 gr	3425 gr	3426 gr	3427 gr	3428 gr	3429 gr	30841 gr Ex	30842 gr Ex	30843 gr Ex	30844 gr Ex	3468 gr Ex	3469 gr Ex	30111 gr	3301 gr
-201407	3B-7	186	186	141	82	68	26	0	90	78	44	18	0	0	186	186
-251807	3B-8	336	336	248	168	90	35	21	160	136	90	24	18	0	336	336
-302207	3B-9	630	525	390	280	171	90	27	300	215	114	60	22	18	630	525
-362507	3B-10	910	780	582	435	284	110	34	434	324	188	74	56	23	910	780
-392907	3B-11	1144	1144	856	570	390	122	74	544	413	260	123	60	25	1144	1144

Enclosure Size	Cat. Page	3302 gr	3303 gr	3304 gr	3305 gr	3306 gr	3712 gr Ex	3713 gr Ex	3713/16 gr Ex	3714 gr Ex	3715 gr Ex	3716 gr Ex	30831 gr Ex	30832 gr Ex	30833 gr Ex	30834 gr Ex
-201407	3B-7	141	82	68	26	0	81	69	38	17	0	0	90	78	44	18
-251807	3B-8	248	168	90	35	21	180	124	78	22	18	0	200	136	90	24
-302207	3B-9	390	280	171	90	27	270	195	99	56	22	18	300	215	114	60
-362507	3B-10	582	435	284	110	33	392	294	164	70	56	23	434	324	188	74
-392907	3B-11	856	570	390	122	74	488	371	225	117	60	25	544	413	260	123

Notes: 1. All quantities shown are for terminal blocks installed in vertical rows.

3B-5

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.
- To complete Catalog Number, refer to Catalog Page indicated next to Enclosure Size you selected.

For Increased Safety Applications

- Refer to Catalog Page indicated next to the Enclosure Size you selected for Heat Dissipation Table.

Manufacturer - Phoenix

Enclosure Size	Cat. Page	UK 2,5 N	UK 3 N	UK 5 N	UK 6 N	UK 10 N	UK 16 N	UK 35	UKH 50	UKH 95	UKH 150	MBK 2,5/E-EX	MBK 6/E	UK 3-RETURN	MZB 1,5	MZB 1,5-NS 35	MZDB 1,5	MZDB 1,5-NS 35	ZFK 1,5	ZKF 2,5	ZFK 4	ZFK 6
-201407	3B-7	216	216	180	135	108	60	24	0	0	0	300	180	216	288	216	144	108	267	216	180	135
-251807	3B-8	480	480	405	305	196	123	33	25	20	0	486	305	384	480	480	240	240	476	384	324	183
-302207	3B-9	720	720	606	456	305	204	82	31	25	0	808	532	720	840	720	427	366	750	600	505	304
-362507	3B-10	1050	1050	882	665	456	256	102	78	31	0	1134	760	900	1200	1050	600	525	1116	900	756	475
-392907	3B-11	1312	1312	1104	832	588	350	168	84	68	27	1518	936	1312	1476	1312	747	664	1428	1148	966	624

Manufacturer - Wago

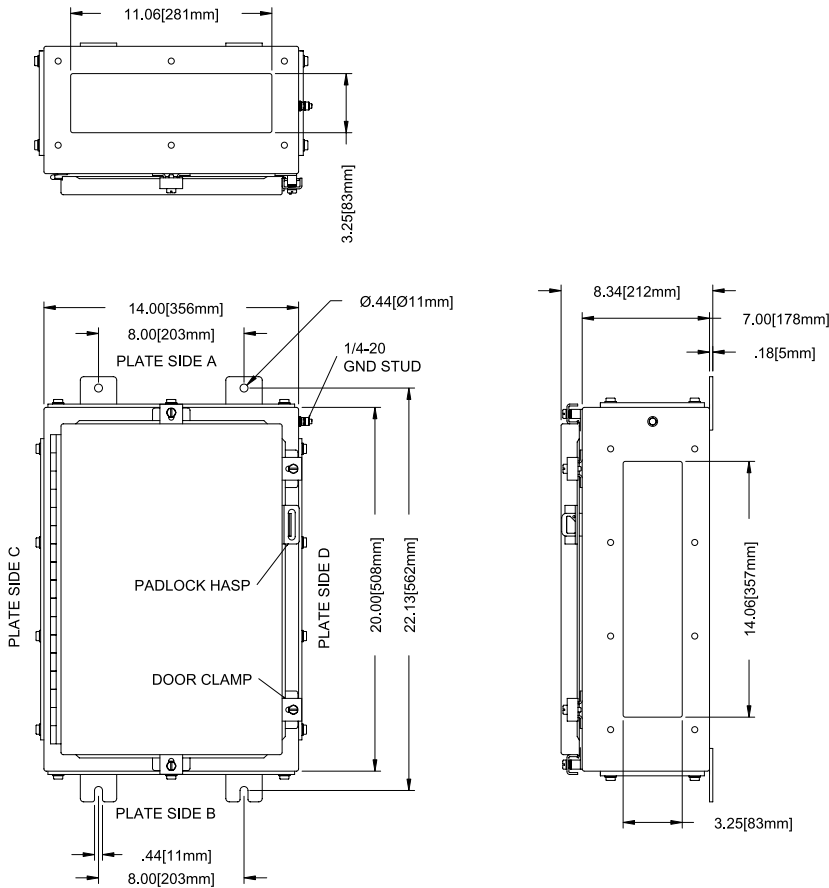
Enclosure Size	Cat. Page	280-991	281-691	281-991	282-691	284-691	283-691	285-691	280-698	281-693	264-120	264-220	264-125	264-225
-201407	3B-7	213	183	183	141	74	62	21	213	183	252	180	252	148
-251807	3B-8	380	324	324	252	150	126	29	380	324	420	300	420	250
-302207	3B-9	595	510	510	390	252	156	72	595	510	735	525	630	378
-362507	3B-10	882	756	756	490	390	260	90	882	630	1040	744	910	546
-392907	3B-11	1134	966	973	642	510	355	147	1134	973	1287	918	1287	765

Manufacturer - Wieland

Enclosure Size	Cat. Page	WK 2.5/U	WK 4/U	WK 6/U	WKI 35/U	WKN 10/U	WKN 16/U	WKN 35/U	WKN 70/U	WKN 150/U
-201407	3B-7	222	186	138	37	74	62	23	0	0
-251807	3B-8	495	415	248	49	147	82	31	20	0
-302207	3B-9	750	624	468	124	248	156	39	26	0
-362507	3B-10	1085	903	582	154	385	256	96	32	27
-392907	3B-11	1360	1136	848	170	510	284	106	70	30

Notes: 1. All quantities shown are for terminal blocks installed in vertical rows.

TN4 Series - Single Door Clamped 20"x 14"x 7"



SS316L Enclosures with Terminals	
CATALOG NUMBER	GLAND PLATES
TN4X6-201407	NONE
TN4X6-201407-A	SIDE A
TN4X6-201407-B	SIDE B
TN4X6-201407-C	SIDE C
TN4X6-201407-D	SIDE D
TN4X6-201407-AB	SIDE A & B
TN4X6-201407-CD	SIDE C & D
TN4X6-201407-ABCD	SIDE A, B, C, & D

- For Stainless Steel 304 assemblies substitute TN4X6 prefix with TN4X.
- For Steel Powder Coated assemblies substitute TN4X6 prefix with TN4.
- For empty Enclosure add U immediately following enclosure size (i.e. TN4X6-201407U).

Gland Plate Entries			
Size		Maximum Number of Entries	
NPT	Metric	Sides A & B	Sides C & D
1/2	M16	18	22
3/4	M20	14	18
1	M25	12	14
1 1/4	M32	4	6
1 1/2	M40	4	5
2	M50	3	4
2 1/2	M63	3	3

Qualifying Enclosure for Increased Safety Certification

- Find the Wire Size (conductor) you intend to use to connect to terminal block.
- Find the Current (amperage) you intend to apply to the conductor.
- The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
- If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

Current (Amps)	Maximum Terminal Block Wire Size (mm ²)												
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150
8	110												
10	53												
16	18	35	138										
20	7	20	40										
25		9	22	43									
35			6	17	42								
50				2	14	35							
63					4	16	58						
80						6	18	65					
100							7	17					
125								7	17				
160									6	15			
200										5	13	41	
225										2	7	16	
250											4	9	20
315												2	5

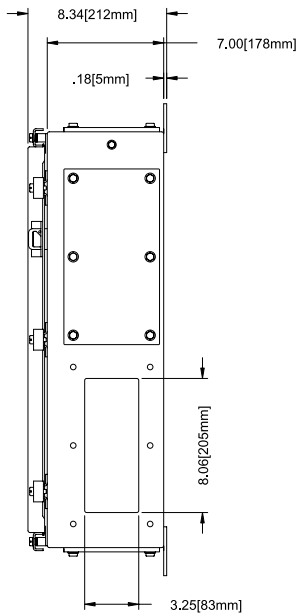
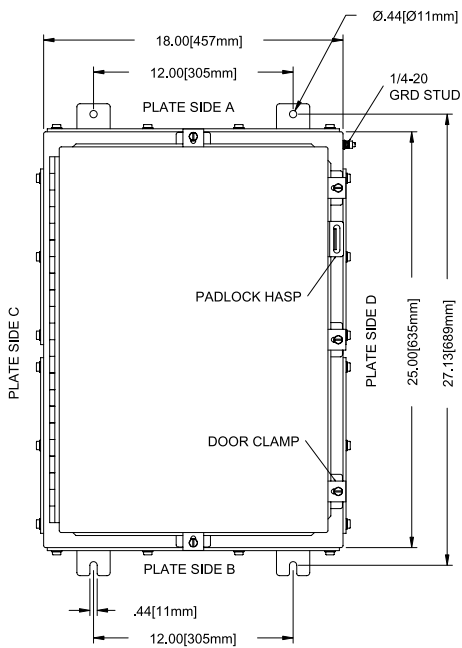
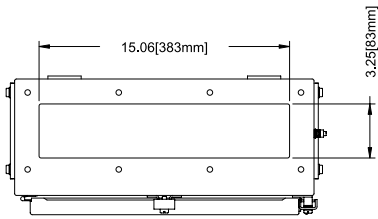
Notes:

- See end of this section for applications using Multiple Terminal Block Types.
- For other manufacturers of EE x 'e' type terminal blocks, consult factory.
- For conduit/cable entry spacings and minimum wire bending space requirements, refer to the end of this section.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

3B-7

TN4 Series - Single Door Clamped 25" x 18" x 7"



3B-8

SS316L Enclosures with Terminals	
CATALOG NUMBER	GLAND PLATES
TN4X6-251807	NONE
TN4X6-251807-A	SIDE A
TN4X6-251807-B	SIDE B
TN4X6-251807-C	SIDE C
TN4X6-251807-D	SIDE D
TN4X6-251807-AB	SIDE A & B
TN4X6-251807-CD	SIDE C & D
TN4X6-251807-ABCD	SIDE A, B, C, & D

- For Stainless Steel 304 assemblies substitute TN4X6 prefix with TN4X.
- For Steel Powder Coated assemblies substitute TN4X6 prefix with TN4.
- For empty Enclosure add U immediately following enclosure size (i.e. TN4X6-251807U).

Gland Plate Entries			
Size		Maximum Number of Entries*	
NPT	Metric	Sides A & B	Sides C & D
1/2	M16	24	12
3/4	M20	20	10
1	M25	16	8
1 1/4	M32	6	3
1 1/2	M40	5	3
2	M50	4	2
2 1/2	M63	4	2

***Note: There are (2) Gland Plates on Sides C&D. Quantity shown is for (1) Plate**

Qualifying Enclosure for Increased Safety Certification

- Find the Wire Size (conductor) you intend to use to connect to terminal block.
- Find the Current (amperage) you intend to apply to the conductor.
- The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
- If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

Current (Amps)	Terminal Block Population for Increased Safety Heat Dissipation Requirements													
	Maximum Terminal Block Wire Size (mm²)													
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185
8	127													
10	61													
16	21	41	159											
20	8	24	46											
25		11	26	50										
35			7	19	49									
50				2	16	40								
63					5	18	67							
80						7	21	75						
100							9	19						
125								8	20					
160									6	17				
200										6	15	47		
225										2	8	18		
250											4	11	23	
315												2	6	14
400														3

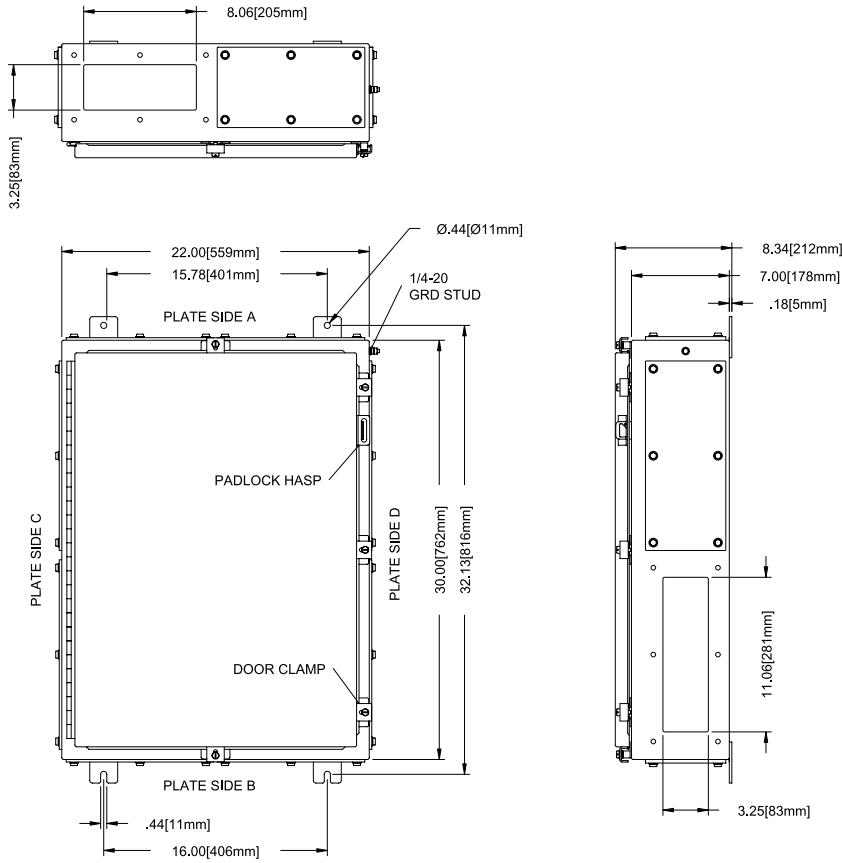
Additional Testing Required, Consult Factory

Notes:

- See end of this section for applications using Multiple Terminal Block Types.
- For other manufacturers of EE x 'e' type terminal blocks, consult factory.
- For conduit/cable entry spacings and minimum wire bending space requirements, refer to the end of this section.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

TN4 Series - Single Door Clamped 30"x 22"x 7"



SS316L Enclosures with Terminals	
CATALOG NUMBER	GLAND PLATES
TN4X6-302207	NONE
TN4X6-302207-A	SIDE A
TN4X6-302207-B	SIDE B
TN4X6-302207-C	SIDE C
TN4X6-302207-D	SIDE D
TN4X6-302207-AB	SIDE A & B
TN4X6-302207-CD	SIDE C & D
TN4X6-302207-ABCD	SIDE A, B, C, & D

- For Stainless Steel 304 assemblies substitute TN4X6 prefix with TN4X.
- For Steel Powder Coated assemblies substitute TN4X6 prefix with TN4.
- For empty Enclosure add U immediately following enclosure size (i.e. TN4X6-302207U).

Gland Plate Entries			
Size		Maximum Number of Entries*	
NPT	Metric	Sides A & B	Sides C & D
1/2	M16	12	18
3/4	M20	10	14
1	M25	8	12
1 1/4	M32	3	4
1 1/2	M40	3	4
2	M50	2	3
2 1/2	M63	2	3

***Note: There are (2) Gland Plates on All Sides. Quantity shown is for (1) Plate.**

Qualifying Enclosure for Increased Safety Certification

- Find the Wire Size (conductor) you intend to use to connect to terminal block.
- Find the Current (amperage) you intend to apply to the conductor.
- The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
- If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

Current (Amps)	Maximum Terminal Block Wire Size (mm ²)														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
8	143														
10	69														
16	24	46	180												
20	10	27	52												
25		12	29	57											
35			6	22	55										
50				3	18	46									
63					6	21	75								
80						8	23	84							
100							10	22							
125								9	22						
160									7	20					
200										7	17	53			
225										2	10	21			
250											5	12	26		
315												2	7	15	
400														3	11
500															1

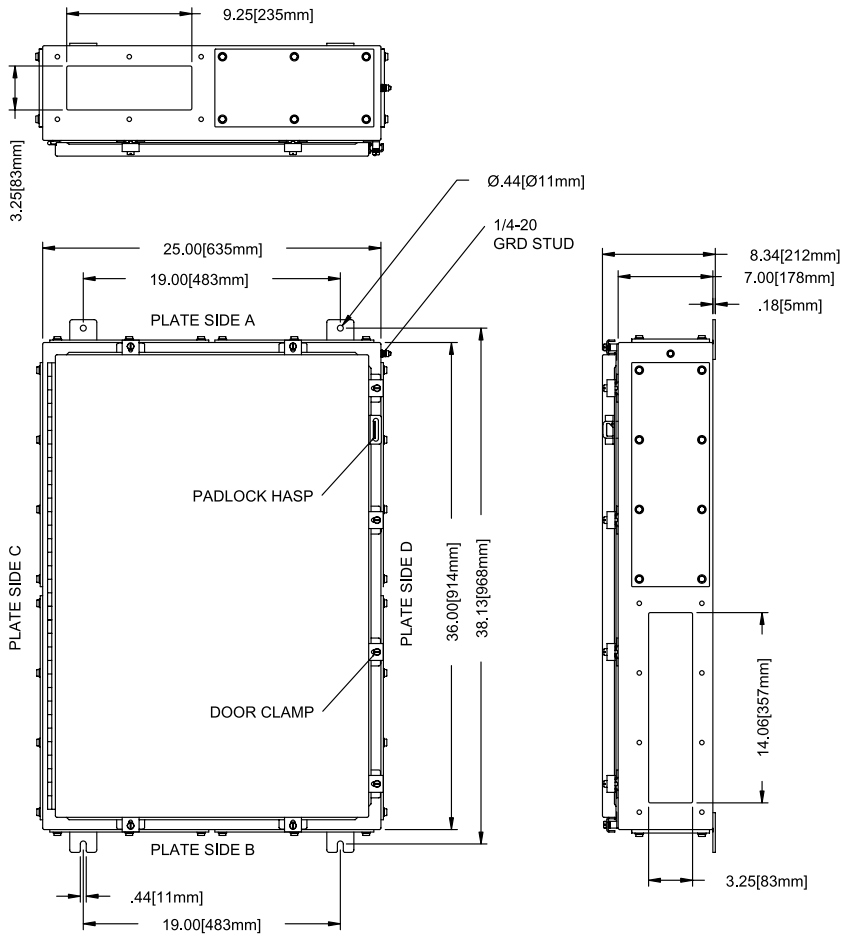
Notes:

- See end of this section for applications using Multiple Terminal Block Types.
- For other manufacturers of EE x 'e' type terminal blocks, consult factory.
- For conduit/cable entry spacings and minimum wire bending space requirements, refer to the end of this section.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

3B-9

TN4 Series - Single Door Clamped 36"x 25"x 7"



3B-10

SS316L Enclosures with Terminals	
CATALOG NUMBER	GLAND PLATES
TN4X6-362507	NONE
TN4X6-362507-A	SIDE A
TN4X6-362507-B	SIDE B
TN4X6-362507-C	SIDE C
TN4X6-362507-D	SIDE D
TN4X6-362507-AB	SIDE A & B
TN4X6-362507-CD	SIDE C & D
TN4X6-362507-ABCD	SIDE A, B, C, & D

- For Stainless Steel 304 assemblies substitute TN4X6 prefix with TN4X.
- For Steel Powder Coated assemblies substitute TN4X6 prefix with TN4.
- For empty Enclosure add U immediately following enclosure size (i.e. TN4X6-362507U).

Gland Plate Entries			
Size		Maximum Number of Entries*	
NPT	Metric	Sides A & B	Sides C & D
1/2	M16	14	22
3/4	M20	12	18
1	M25	10	14
1 1/4	M32	4	6
1 1/2	M40	3	5
2	M50	3	4
2 1/2	M63	2	3

***Note: There are (2) Gland Plates on All Sides. Quantity shown is for (1) Plate.**

Qualifying Enclosure for Increased Safety Certification

- Find the Wire Size (conductor) you intend to use to connect to terminal block.
- Find the Current (amperage) you intend to apply to the conductor.
- The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
- If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

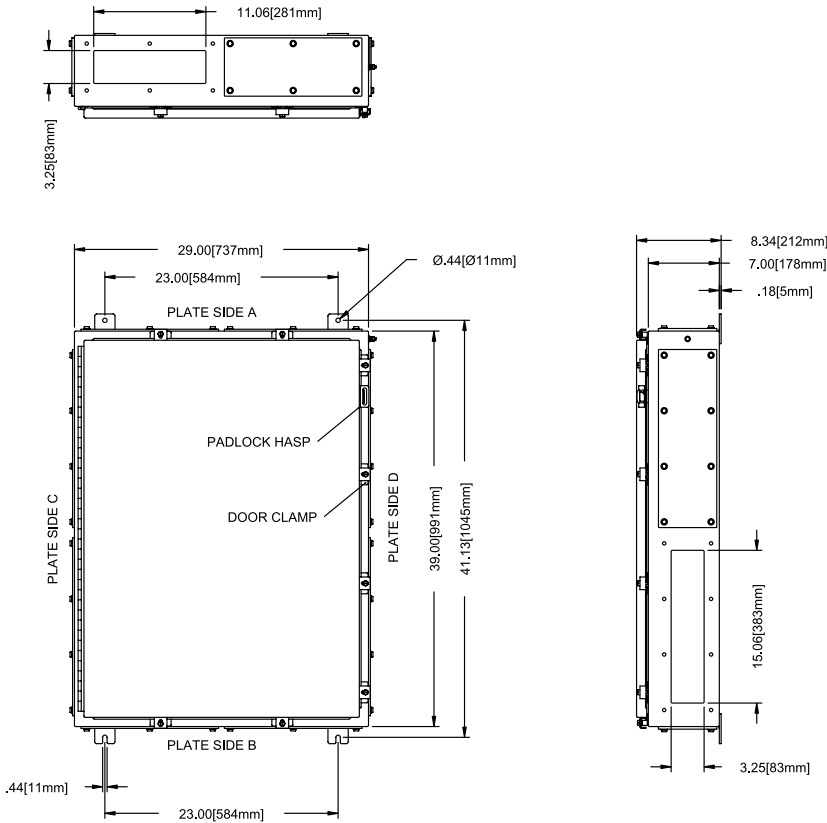
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
8	158														
10	77														
16	26	51	198												
20	11	30	57												
25		14	32	62											
35			9	24	61										
50				3	20	50									
63					6	23	83								
80						9	26	93							
100							11	24							
125							1	10	25						
160									8	22					
200										7	19	58			
225										3	11	23			
250											5	14	29		
315												3	8	17	
400														3	12
500															1

Notes:

- See end of this section for applications using Multiple Terminal Block Types.
- For other manufacturers of EE x 'e' type terminal blocks, consult factory.
- For conduit/cable entry spacings and minimum wire bending space requirements, refer to the end of this section.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

TN4 Series - Single Door Clamped 39" x 29" x 7"



SS316L Enclosures with Terminals	
CATALOG NUMBER	GLAND PLATES
TN4X6-392907	NONE
TN4X6-392907-A	SIDE A
TN4X6-392907-B	SIDE B
TN4X6-392907-C	SIDE C
TN4X6-392907-D	SIDE D
TN4X6-392907-AB	SIDE A & B
TN4X6-392907-CD	SIDE C & D
TN4X6-392907-ABCD	SIDE A, B, C, & D

- For Stainless Steel 304 assemblies substitute TN4X6 prefix with TN4X.
- For Steel Powder Coated assemblies substitute TN4X6 prefix with TN4.
- For empty Enclosure add U immediately following enclosure size (i.e. TN4X6-392907U).

Gland Plate Entries			
Size		Maximum Number of Entries*	
NPT	Metric	Sides A & B	Sides C & D
1/2	M16	18	24
3/4	M20	14	20
1	M25	12	16
1 1/4	M32	4	6
1 1/2	M40	4	5
2	M50	3	4
2 1/2	M63	3	4

***Note: There are (2) Gland Plates on All Sides. Quantity shown is for (1) Plate.**

Qualifying Enclosure for Increased Safety Certification

- Find the Wire Size (conductor) you intend to use to connect to terminal block.
- Find the Current (amperage) you intend to apply to the conductor.
- The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
- If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

Current (Amps)	Terminal Block Population for Increased Safety Heat Dissipation Requirements														
	Maximum Terminal Block Wire Size (mm ²)														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
8	173														
10	84														
16	28	56	217												
20	12	32	63												
25		15	35	68											
35			10	27	66										
50				4	21	55									
63					7	25	91								
80						9	28	102							
100							12	27							
125							1	10	27						
160									9	24					
200										8	20	64			
225										3	12	25			
250											6	15	32		
315												3	9	19	
400														4	13
500															1

Notes:

- See end of this section for applications using Multiple Terminal Block Types.
- For other manufacturers of EE x 'e' type terminal blocks, consult factory.
- For conduit/cable entry spacings and minimum wire bending space requirements, refer to the end of this section.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

3B-11

Qualifying Enclosures for Increased Safety Certification

With Multiple Terminal Block Types

Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	90					
10	44					
16	15	29	113	Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
20	6	17	33			
25		8	18	36		
35	Additional Testing Required, Consult Factory		5	14	35	
50				2	11	29

Different types of terminals may be used simultaneously by using the tabular values proportionally, as shown below.

Example:

Conductor Size	Current	Number		% of Maximum Terminal Population
2.5	16	7 (of 29)	=	24%
4	20	16 (of 33)	=	48%
10	35	9 (of 35)	=	26%
		Total	=	98% < 100%

3B-12

Notes:

1. The tables above show the maximum number of single pole (single level) terminal blocks permitted based on the conductor size and the continuous current for the designated enclosures.
2. In the shaded areas you may add as many terminals as possible in accordance with the spacing requirements and manufacturer's instructions.
3. Grounding terminals, bridges and grounding conductors are not counted.
4. Please consult factory for information on multi-pole terminals, grounding terminals, grounding bars, and bridges.
5. When selecting the permitted continuous current for the cross section, the maximum permitted current for the terminals and conductors should be considered.
6. Combinations not covered by the above tables may be permitted if they are determined acceptable by test.

Conduit/Cable & Wire Bending Guidelines

SIZE	NPT	5	4	3-1/2	3	2-1/2	2	1-1/2	1-1/4	1	3/4	1/2	1/16 ~ 3/8
NPT	METRIC	--	--	--	M75	M63	M50	M40	M32	M25	M20	M16	--
1/16 ~ 3/8	--	4-3/8 [112mm]	3-5/8 [92mm]	3-3/8 [86mm]	3 [77mm]	2-5/8 [68mm]	2-3/8 [61mm]	2 [51mm]	1-7/8 [48mm]	1-5/8 [42mm]	1-3/8 [35mm]	1-1/4 [32mm]	1-1/8 [29mm]
1/2	M16	4-3/8 [112mm]	3-5/8 [92mm]	3-3/8 [86mm]	3 [77mm]	2-5/8 [68mm]	2-3/8 [61mm]	2 [51mm]	1-7/8 [48mm]	1-5/8 [42mm]	1-3/8 [35mm]	1-1/4 [32mm]	
3/4	M20	4-1/2 [115mm]	3-3/4 [96mm]	3-1/2 [89mm]	3-1/8 [80mm]	2-3/4 [70mm]	2-1/2 [64mm]	2-1/8 [54mm]	2 [51mm]	1-3/4 [45mm]	1-1/2 [38mm]		
1	M25	4-5/8 [118mm]	3-7/8 [99mm]	3-5/8 [92mm]	3-1/4 [83mm]	2-7/8 [74mm]	2-3/4 [70mm]	2-1/4 [58mm]	2-1/8 [54mm]	1-7/8 [48mm]			
1-1/4	M32	4-7/8 [124mm]	4-1/8 [105mm]	3-7/8 [99mm]	3-1/2 [89mm]	3-1/8 [80mm]	2-7/8 [74mm]	2-1/2 [64mm]	2-3/8 [61mm]				
1-1/2	M40	5 [127mm]	4-1/4 [108mm]	4 [102mm]	3-5/8 [92mm]	3-1/4 [83mm]	3 [77mm]	2-5/8 [68mm]					
2	M50	5-3/8 [137mm]	4-3/4 [121mm]	4-1/2 [115mm]	4 [102mm]	3-5/8 [92mm]	3-3/8 [86mm]						
2-1/2	M63	5-1/2 [140mm]	4-7/8 [124mm]	4-5/8 [118mm]	4-1/4 [108mm]	3-7/8 [99mm]							
3	M75	5-7/8 [150mm]	5-1/4 [134mm]	5 [127mm]	4-5/8 [118mm]								
3-1/2	--	6-1/4 [159mm]	5-3/4 [147mm]	5-1/2 [140mm]									
4	--	6-7/8 [175mm]	6 [153mm]										
5	--	7-3/8 [188mm]											

This information is compiled from data which we believe is reliable and is given in good faith. Since the methods of application and condition under which our products are used are beyond our control, we are not able to guarantee the application and/or use of same. The user assumes all risks and liability in connection with the application and use of our products.

NPT	5	4	3-1/2	3	2-1/2	2	1-1/2	1-1/4	1	3/4	1/2	1/16 ~ 3/8
METRIC	--	--	--	M75	M63	M50	M40	M32	M25	M20	M16	--
	2-13/16 [72mm]	2-1/4 [58mm]	2 [51mm]	1-3/4 [45mm]	1-7/16 [37mm]	1-3/16 [31mm]	1 [26mm]	7/8 [23mm]	11/16 [18mm]	9/16 [14mm]	1/2 [13mm]	1/2 [13mm]

AWG	16	14	12	10	8	6	4	2	1/0	2/0	3/0	4/0	250	350	400	500
mmsq.	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
	1-1/2 [38mm]	1-1/2 [38mm]	1-1/2 [38mm]	1-1/2 [38mm]	2 [51mm]	3 [77mm]	3-1/2 [89mm]	5-1/2 [140mm]	6 [153mm]	6-1/2 [165mm]	7 [178mm]	8-1/2 [216mm]	10 [254mm]	12 [305mm]	13 [330mm]	14 [356mm]

Notes:

- The distances in Table A are recommended minimum distances between centers of conduit and cable gland entries. Consult manufacturer of conduit fitting or cable glands for their recommended minimum spacing.
- The distances in Table B are recommended minimum distances between center of conduit and cable gland entries to the edge of an opening or inside wall of box. Consult manufacturer of conduit fitting or cable glands for their recommended minimum spacing.
- The distances in Table C are the minimum wire bending space requirements between terminals, partitions, or inside walls.

3B-13

TN4 Expanded Series - Single Door Clamped Style

General Information

Adalet's Single Door Clamped Terminal Enclosures are available in Stainless Steel 316L & 304 and Carbon Steel. Adalet can also supply custom size enclosures, operators, and components to suit your Increased Safety Application. Silicone gaskets, removable hinge pin, box & cover ground studs including an internal/external earthing stud, along with internal standoffs for mounting pans are included as standard.



3B-14

Enclosure Certifications with Terminals		C E 0539 II 2GD EEx e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C) Ex e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C) Class I, Zone 1, AEx e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C) Class II, Division 2 IP66 Type 4, 4X (Stainless Steel only), 12, & 13	ATEX Directive 94/9/EC EN50014/EN50019 CSA E79-7, IEC 60079-7 UL 2279-7 UL 1604 IEC 60529 UL50	
Empty Enclosure Certifications		0539 II 2GD EEx e II Ex e II Class I, Zone 1, AEx e II Class II, Division 2 IP66 Type 4, 4X (Stainless Steel only), 12, & 13	ATEX Directive 94/9/EC EN50014/EN50019 CSA E79-7, IEC 60079-7 UL 2279-7 UL 1604 IEC 60529 UL50	
Working Voltage		1100 Volts Maximum		
Terminal Blocks		Various manufacturers EEx e type with wire sizes 1.5mm up to 240mm		
Material		TN4 Series TN4X Series TN4X6 Series TN4 Series Gland Plates TN4X Series Gland Plates TN4X6 Series Gland Plates Mounting Pan Cover	#14ga Cold Rolled Steel, Polyester Powder Coated ANSI 61 Gray #14ga Stainless Steel 304, Brushed Finish #14ga Stainless Steel 316, Brushed Finish #10ga Cold Rolled Steel, Polyester Powder Coated ANSI 61 Gray #10ga Stainless Steel 304, Brushed Finish #10ga Stainless Steel 316, Brushed Finish #14ga Cold Rolled Steel, Polyester Powder Coated White Silicone Sponge	
Gasket		Silicone Sponge		
Lid		Fixing Hinge TN4 Series TN4X Series TN4X6 Series Door Clamps TN4 Series TN4X Series TN4X6 Series	Continuous piano type - Steel with removable SS304 pin Continuous piano type - SS304 with removable pin Continuous piano type - SS316 with removable pin Plated Steel Clear Stainless Steel 304 Stainless Steel 316	
Enclosure Mounting		All Types	Four (4) external lugs with .44" clearance holes/slots	
Gland Plate Hardware		All Types	300 Series stainless steel	
Grounding		Box & Cover	1/4-20 Stud with 300 series stainless steel hardware	
		Earthing Stud	All Types 1/4-20 Stud - All components brass	
Impact Resistant		All Types	7 Nm to EN50014/EN50019	
Ambient Temperature Range		All Types	-40°C to +70°C to EN50014	

TN4 Expanded Series - Quick Selector

Enclosure Selection

- Using the table below, select the terminal block size for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size (H X W) for your application.

4. To complete Enclosure Size, Refer to Catalog Page 3B-24 for Enclosure Prefix and Depth.

5. For Enclosure Selection using specific Terminal Block Manufacturers refer to following pages.

For Increased Safety Applications

- Using the table below, find the Heat Dissipation Table Number for the enclosure size you selected.
- Refer to catalog page 3B-26 for Heat Dissipation Tables.

TN4 Series Enclosure Sizes	Heat Dissipation Table	Maximum Physical Terminal Block Content													
		1.5mm	2.5mm	4mm	6mm	10mm	16mm	35mm	50mm	70mm	95mm	120mm	150mm	185mm	240mm
-1224XX	1224	204	168	156	147	102	56	20	16	7	3	5	0	0	0
-1612XX	1612	162	132	123	99	54	22	0	0	0	0	0	0	0	0
-1616XX	1616	216	176	164	132	81	44	17	13	12	0	0	0	0	0
-1620XX	1620	270	220	205	198	135	66	17	13	12	5	0	0	0	0
-2012XX	2012	222	183	168	138	74	31	0	0	0	0	0	0	0	0
-2016XX	2016	296	244	224	184	111	62	23	18	16	0	0	0	0	0
-2020XX	2020	370	305	280	276	185	93	23	18	16	7	0	0	0	0
-2024XX	2024	444	366	336	322	222	124	46	36	16	7	11	0	0	0
-2412XX	1224	285	234	216	174	94	39	0	0	0	0	0	0	0	0
-2416XX	2416	380	312	288	232	141	78	29	23	21	0	0	0	0	0
-2420XX	2024	475	390	360	348	235	117	29	23	21	9	0	0	0	0
-2424XX	2424	570	468	432	406	282	156	58	46	21	9	14	0	0	0
-2430XX	3024	760	624	576	522	329	195	87	46	42	18	14	9	0	0
-3016XX	3016	500	412	380	308	186	104	39	31	28	0	0	0	0	0
-3020XX	3020	625	515	475	462	310	156	39	31	28	13	0	0	0	0
-3024XX	3024	750	618	570	539	372	208	78	62	28	13	19	0	0	0
-3030XX	3030	1000	824	760	693	434	260	117	62	56	26	19	13	0	0
-3036XX	3036	1250	1030	950	847	558	312	117	93	84	26	38	13	11	11
-3624XX	3624	936	768	708	672	468	260	96	78	35	16	24	0	0	0
-3630XX	3036	1248	1024	944	864	546	325	144	78	70	32	24	16	0	0
-3636XX	3636	1560	1280	1180	1056	702	390	144	117	105	32	48	16	14	13
-4224XX	4224	1116	918	846	798	558	312	116	92	42	19	29	0	0	0
-4230XX	4230	1488	1224	1128	1026	651	390	174	92	84	38	29	19	0	0
-4824XX	4824	1302	1068	984	931	648	364	134	108	49	22	33	0	0	0
-4830XX	4830	1736	1424	1312	1197	756	455	201	108	98	44	33	22	0	0
-4836XX	4836	2170	1780	1640	1463	972	546	201	162	147	44	66	22	19	19
-6036XX	6036	2780	2280	2100	1881	1251	696	258	207	186	58	86	29	24	24

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.
- Quantities shown above are for Adalet supplied standard terminal blocks.

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size (H X W) for your application.

- To complete Enclosure Size, Refer to Catalog Page 3B-24 for Enclosure Prefix and Depth.
- For Enclosure Selection using specific Terminal Block Manufacturers refer to following pages.

For Increased Safety Applications

- Using the table below, find the Heat Dissipation Table Number for the enclosure size you selected.
- Refer to catalog page 3B-26 for Heat Dissipation Tables.

Manufacturer - Entelec

TN Series	Heat Dissipation Table	MA2,5/5...	MA2,5/5.1...	M4/6...	M6/8...	M10/10...	M16/12...	M35/16...	M70/22...	M4/6.H...	M1,5/6.HH	MTC6	MA2,5/5.SNB	M4/6.SN...	M4/6.SNB	M6/8.SNB	M4/8.SN	DR4/6...
-1224XX	1224	198	198	168	126	80	56	20	7	168	140	168	198	168	168	126	126	232
-1612XX	1612	159	159	132	99	54	22	0	0	88	88	132	159	132	132	99	66	180
-1616XX	1616	212	212	176	132	81	44	16	0	176	132	176	212	176	176	132	99	225
-1620XX	1620	265	265	220	165	108	66	16	12	220	176	220	265	220	220	165	132	315
-2012XX	2012	219	219	183	138	74	31	0	0	122	122	183	219	183	183	138	92	248
-2016XX	2016	292	292	244	184	111	62	23	0	244	183	244	292	244	244	184	138	310
-2020XX	2020	365	365	305	230	148	93	23	16	305	244	305	365	305	305	230	184	434
-2024XX	2024	438	438	366	276	185	124	46	16	366	305	366	438	366	366	276	276	496
-2412XX	1224	279	279	234	177	94	39	0	0	156	156	234	279	234	234	177	118	316
-2416XX	2416	372	372	312	236	141	78	29	0	312	234	312	372	312	312	236	177	395
-2420XX	2024	465	465	390	295	188	117	29	21	390	312	390	465	390	390	295	236	553
-2424XX	2424	558	558	468	354	235	156	58	21	468	390	468	558	468	468	354	354	632
-2430XX	3024	744	744	624	472	329	195	87	42	546	546	624	744	624	624	472	413	790
-3016XX	3016	492	492	412	312	186	104	39	0	412	309	412	492	412	412	312	234	520
-3020XX	3020	615	615	515	390	248	156	39	28	515	412	515	615	515	515	390	312	728
-3024XX	3024	738	738	618	468	310	208	78	28	618	515	618	738	618	618	468	468	832
-3030XX	3030	984	984	824	624	434	260	117	56	721	721	824	984	824	824	624	546	1040
-3036XX	3036	1230	1230	1030	780	558	312	156	84	927	927	1030	1230	1030	1030	780	702	1352
-3624XX	3624	918	918	768	582	385	256	96	35	768	640	768	918	768	768	582	582	1032
-3630XX	3036	1224	1224	1024	776	539	320	144	70	896	896	1024	1224	1024	1024	776	679	1290
-3636XX	3636	1530	1530	1280	970	693	384	192	105	1152	1152	1280	1530	1280	1280	970	873	1677
-4224XX	4224	1098	1098	924	696	465	308	116	42	924	770	924	1098	924	924	696	696	1240
-4230XX	4230	1464	1464	1232	928	651	385	174	84	1078	1078	1232	1464	1232	1232	928	812	1550
-4824XX	4824	1278	1278	1074	810	540	360	134	49	1074	895	1074	1278	1074	1074	810	810	1440
-4830XX	4830	1704	1704	1432	1080	756	450	201	98	1253	1253	1432	1704	1432	1432	1080	945	1800
-4836XX	4836	2130	2130	1790	1350	972	540	268	147	1611	1611	1790	2130	1790	1790	1350	1215	2340
-6036XX	6036	2730	2730	2290	1730	1242	690	344	186	2061	2061	2290	2730	2290	2290	1730	1557	2990

Notes:

- See next page for more Entelec terminal blocks.
- All quantities shown are for terminal blocks installed in vertical rows.

3B-16

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size (H X W) for your application.

- To complete Enclosure Size, Refer to Catalog Page 3B-24 for Enclosure Prefix and Depth.
- For Enclosure Selection using specific Terminal Block Manufacturers refer to following pages.

For Increased Safety Applications

- Using the table below, find the Heat Dissipation Table Number for the enclosure size you selected.
- Refer to catalog page 3B-26 for Heat Dissipation Tables.

Manufacturer - Entelec

TN Series	Heat Dissipation Table	M35/26.FF	M70/31.FF	M120/35.FF	M300/42.FF	M35/26.AF	M70.31.AF	M120/35.AF	M300/42.AF	M120/35	M300/42	M400/52.AE	D4/6...ADO	D4/6.ADO.T...	D4/6.ADO...	D6/8...ADO	D6/8.ADO...
-1224XX	1224	18	5	4	4	18	5	4	0	4	0	0	168	168	168	126	126
-1612XX	1612	10	0	0	0	10	0	0	0	0	0	0	132	132	132	99	99
-1616XX	1616	10	8	0	0	10	8	0	0	0	0	0	176	176	176	132	132
-1620XX	1620	20	8	7	6	20	8	7	0	7	0	0	220	220	220	165	165
-2012XX	2012	14	0	0	0	14	0	0	0	0	0	0	183	183	183	138	138
-2016XX	2016	14	12	0	0	14	12	0	0	0	0	0	244	244	244	184	184
-2020XX	2020	28	12	10	8	28	12	10	0	10	0	0	305	305	305	230	230
-2024XX	2024	42	12	10	8	42	12	10	0	10	0	0	366	366	366	276	276
-2412XX	1224	18	0	0	0	18	0	0	0	0	0	0	234	234	234	177	177
-2416XX	2416	18	15	0	0	18	15	0	0	0	0	0	312	312	312	236	236
-2420XX	2024	36	15	13	11	36	15	13	0	13	0	0	390	390	390	295	295
-2424XX	2424	54	15	13	11	54	15	13	0	13	0	0	468	468	468	354	354
-2430XX	3024	72	30	26	11	72	30	26	11	26	0	0	624	624	624	472	472
-3016XX	3016	24	20	0	0	24	20	0	0	0	0	0	412	412	412	312	312
-3020XX	3020	48	20	17	15	48	20	17	0	17	0	0	515	515	515	390	390
-3024XX	3024	72	20	17	15	72	20	17	0	17	0	0	618	618	618	468	468
-3030XX	3030	96	40	34	15	96	40	34	15	34	0	0	824	824	824	624	624
-3036XX	3036	120	60	34	30	120	60	34	15	34	15	12	1030	1030	1030	780	780
-3624XX	3624	90	25	22	18	90	25	22	0	22	0	0	768	768	768	582	582
-3630XX	3036	120	50	44	18	120	50	44	18	44	0	0	1024	1024	1024	776	776
-3636XX	3636	150	75	44	36	150	75	44	18	44	18	15	1280	1280	1280	970	970
-4224XX	4224	108	30	26	22	108	30	26	0	26	0	0	924	924	924	696	696
-4230XX	4230	144	60	52	22	144	60	52	22	52	0	0	1232	1232	1232	928	928
-4824XX	4824	123	35	31	25	123	35	31	0	31	0	0	1074	1074	1074	810	810
-4830XX	4830	164	70	62	25	164	70	62	25	62	0	0	1432	1432	1432	1080	1080
-4836XX	4836	205	105	62	50	205	105	62	25	62	25	20	1790	1790	1790	1350	1350
-6036XX	6036	265	132	78	66	265	132	78	33	78	33	26	2290	2290	2290	1730	1730

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.

3B-17

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size (H X W) for your application.

- To complete Enclosure Size, Refer to Catalog Page 3B-24 for Enclosure Prefix and Depth.
- For Enclosure Selection using specific Terminal Block Manufacturers refer to following pages.

For Increased Safety Applications

- Using the table below, find the Heat Dissipation Table Number for the enclosure size you selected.
- Refer to catalog page 3B-26 for Heat Dissipation Tables.

Manufacturer - Weidmuller

TN Series	Heat Dissipation Table	WDU2.5N	WDU2.5	WDU4	WDU6	WDU10	WDU16	WDU35	WDU70	WDU120	WWF35	WFF70	WFF120	WFF185	WFF300	ZDU2.5	ZDU4	ZDU6	AKZ2.5	AKZ4	AKE2.5
-1224XX	1224	204	170	170	105	85	42	20	6	5	6	5	4	0	0	165	140	105	297	243	264
-1612XX	1612	162	108	108	68	54	22	0	0	0	0	0	0	0	0	106	88	66	216	176	216
-1616XX	1616	216	162	162	102	81	44	17	0	0	10	0	0	0	0	159	132	99	270	220	270
-1620XX	1620	270	216	216	136	108	66	17	10	0	10	8	0	0	0	212	176	132	378	308	378
-2012XX	2012	222	148	148	94	74	31	0	0	0	0	0	0	0	0	146	122	92	296	244	296
-2016XX	2016	296	222	222	141	111	62	23	0	0	13	0	0	0	0	219	183	138	370	305	370
-2020XX	2020	370	296	296	188	148	93	23	13	0	13	11	0	0	0	292	244	184	518	427	518
-2024XX	2024	444	370	370	235	185	93	46	13	11	13	11	8	0	0	365	305	230	666	549	592
-2412XX	1224	285	190	190	120	96	39	0	0	0	0	0	0	0	0	186	156	116	376	308	376
-2416XX	2416	380	285	285	180	144	78	29	0	0	17	0	0	0	0	279	234	174	470	385	470
-2420XX	2024	475	380	380	240	192	117	29	17	0	17	14	0	0	0	372	312	232	658	539	658
-2424XX	2424	570	475	475	300	240	117	58	17	14	17	14	11	0	0	465	390	290	846	693	752
-2430XX	3024	760	665	665	420	288	195	87	34	14	34	28	11	0	0	651	546	406	1034	847	940
-3016XX	3016	500	375	375	237	189	104	39	0	0	22	0	0	0	0	369	309	231	625	510	625
-3020XX	3020	625	500	500	316	252	156	39	23	0	22	19	0	0	0	492	412	308	875	714	875
-3024XX	3024	750	625	625	395	315	156	78	23	19	22	19	14	0	0	615	515	385	1125	918	1000
-3030XX	3030	1000	875	875	553	378	260	117	46	19	44	38	14	0	0	861	721	539	1375	1122	1250
-3036XX	3036	1250	1000	1000	632	441	312	117	46	38	66	38	28	11	11	984	824	616	1625	1326	1625
-3624XX	3624	936	780	780	495	390	195	96	29	24	27	23	18	0	0	765	640	480	1395	1143	1240
-3630XX	3036	1248	1092	1092	693	468	325	144	58	24	54	46	18	0	0	1071	896	672	1705	1397	1550
-3636XX	3636	1560	1248	1248	792	546	390	144	58	48	81	46	36	14	14	1224	1024	768	2015	1651	2015
-4224XX	4224	1116	930	930	590	470	234	116	34	29	32	27	21	0	0	915	765	570	1674	1368	1488
-4230XX	4230	1488	1302	1302	826	564	390	174	68	29	64	54	21	0	0	1281	1071	798	2046	1672	1860
-4824XX	4824	1302	1085	1085	685	545	273	134	40	33	38	32	25	0	0	1065	890	665	1944	1593	1728
-4830XX	4830	1736	1519	1519	959	654	455	201	80	33	76	64	25	0	0	1491	1246	931	2376	1947	2160
-4836XX	4836	2170	1736	1736	1096	763	546	201	80	66	114	64	50	19	19	1704	1424	1064	2808	2301	2808
-6036XX	6036	2780	2224	2224	1408	980	696	258	102	86	144	82	64	24	24	2184	1824	1368	3601	2951	3601

Notes:

- See next page for more Weidmuller terminal blocks.
- All quantities shown are for terminal blocks installed in vertical rows.
- Weidmuller WFF Series are installed on a mounting pan.

3B-18

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size (H X W) for your application.

- To complete Enclosure Size, Refer to Catalog Page 3B-24 for Enclosure Prefix and Depth.
- For Enclosure Selection using specific Terminal Block Manufacturers refer to following pages.

For Increased Safety Applications

- Using the table below, find the Heat Dissipation Table Number for the enclosure size you selected.
- Refer to catalog page 3B-26 for Heat Dissipation Tables.

Manufacturer - Weidmuller

TN Series	Heat Dissipation Table	AKE4	SAK2.5	SAK4	SAK6N	SAK10	SAK16	SAK35N	SAK70	SAKG 28 I	SAKG 28 II	SAKG 28 III	SAKG 32 I	SAKG 32 II	SAKG 32 III	SAKG 40 I	SAKG 40 II	SAKG 40 III	SAKG 46 II	SAKG 54 II
-1224XX	1224	200	168	156	147	102	56	20	7	10	10	10	5	5	5	3	3	3	0	0
-1612XX	1612	117	132	123	99	54	22	0	0	0	0	0	0	0	0	0	0	0	0	0
-1616XX	1616	195	176	164	132	81	44	17	12	9	9	9	0	0	0	0	0	0	0	0
-1620XX	1620	234	220	205	198	135	66	17	12	9	9	9	8	8	8	5	5	5	0	0
-2012XX	2012	162	183	168	138	74	31	0	0	0	0	0	0	0	0	0	0	0	0	0
-2016XX	2016	270	244	224	184	111	62	23	16	12	12	12	0	0	0	0	0	0	0	0
-2020XX	2020	324	305	280	276	185	93	23	16	12	12	12	11	11	11	7	7	7	0	0
-2024XX	2024	432	366	336	322	222	124	46	16	24	24	24	11	11	11	7	7	7	0	0
-2412XX	1224	207	234	216	174	94	39	0	0	0	0	0	0	0	0	0	0	0	0	0
-2416XX	2416	345	312	288	232	141	78	29	21	15	15	15	0	0	0	0	0	0	0	0
-2420XX	2024	414	390	360	348	235	117	29	21	15	15	15	14	14	14	9	9	9	0	0
-2424XX	2424	552	468	432	406	282	156	58	21	30	30	30	14	14	14	9	9	9	0	0
-2430XX	3024	690	624	576	522	329	195	87	42	30	30	30	28	28	28	18	18	18	9	0
-3016XX	3016	455	412	380	308	186	104	39	28	20	20	20	0	0	0	0	0	0	0	0
-3020XX	3020	546	515	475	462	310	156	39	28	20	20	20	18	18	18	13	13	13	0	0
-3024XX	3024	728	618	570	539	372	208	78	28	40	40	40	18	18	18	13	13	13	0	0
-3030XX	3030	910	824	760	693	434	260	117	56	40	40	40	36	36	36	26	26	26	13	0
-3036XX	3036	1092	1030	950	847	558	312	117	84	60	60	60	36	54	36	26	26	26	13	11
-3624XX	3624	904	768	708	672	468	260	96	35	50	50	50	23	23	23	16	16	16	0	0
-3630XX	3036	1130	1024	944	864	546	325	144	70	50	50	50	46	46	46	32	32	32	16	0
-3636XX	3636	1356	1280	1180	1056	702	390	144	105	75	75	75	46	69	46	32	32	32	16	13
-4224XX	4224	1088	918	846	798	558	312	116	42	60	60	60	27	27	27	19	19	19	0	0
-4230XX	4230	1360	1224	1128	1026	651	390	174	84	60	60	60	54	54	54	38	38	38	19	0
-4824XX	4824	1264	1068	984	931	648	364	134	49	70	70	70	31	31	31	22	22	22	0	0
-4830XX	4830	1580	1424	1312	1197	756	455	201	98	70	70	70	62	62	62	44	44	44	22	0
-4836XX	4836	1896	1780	1640	1463	972	546	201	147	105	105	105	62	93	62	44	44	44	22	19
-6036XX	6036	2424	2280	2100	1881	1251	696	258	186	138	138	138	80	120	80	58	58	58	29	24

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.

3B-19

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size (H X W) for your application.

- To complete Enclosure Size, Refer to Catalog Page 3B-24 for Enclosure Prefix and Depth.
- For Enclosure Selection using specific Terminal Block Manufacturers refer to following pages.

For Increased Safety Applications

- Using the table below, find the Heat Dissipation Table Number for the enclosure size you selected.
- Refer to catalog page 3B-26 for Heat Dissipation Tables.

Manufacturer - Wortez

TN Series	Heat Dissipation Table	30128 gr	3424 gr	3425 gr	3426 gr	3427 gr	3428 gr	3429 gr	30841 gr Ex	30842 gr Ex	30843 gr Ex	30844 gr Ex	3468 gr Ex	3469 gr Ex	30111 gr	3301 gr
-1224XX	1224	168	168	126	95	60	24	7	84	60	40	16	6	5	168	168
-1612XX	1612	135	135	102	60	25	0	0	66	38	16	0	0	0	135	135
-1616XX	1616	180	180	136	90	50	19	11	88	57	32	13	9	0	180	180
-1620XX	1620	225	225	170	120	75	19	11	110	76	48	13	9	8	225	225
-2012XX	2012	186	186	141	82	34	0	0	90	52	22	0	0	0	186	186
-2016XX	2016	248	248	188	123	68	26	16	120	78	44	18	13	0	248	248
-2020XX	2020	310	310	235	164	102	26	16	150	104	66	18	13	11	310	310
-2024XX	2024	372	372	282	205	136	52	16	180	130	88	36	13	11	372	372
-2412XX	1224	237	237	177	106	43	0	0	114	66	29	0	0	0	237	237
-2416XX	2416	316	316	236	159	86	34	20	152	99	58	22	17	0	316	316
-2420XX	2024	395	395	295	212	129	34	20	190	132	87	22	17	14	395	395
-2424XX	2424	474	474	354	265	172	68	20	228	165	116	44	17	14	474	474
-2430XX	3024	632	632	472	318	215	102	40	304	231	145	66	34	14	632	632
-3016XX	3016	420	420	312	210	114	45	27	200	129	76	30	22	0	420	420
-3020XX	3020	525	525	390	280	171	45	27	250	172	114	30	22	18	525	525
-3024XX	3024	630	630	468	350	228	90	27	300	215	152	60	22	18	630	630
-3030XX	3030	840	840	624	420	285	135	54	400	301	190	90	44	18	840	840
-3036XX	3036	1050	1050	780	560	342	135	81	500	344	228	90	66	36	1050	1050
-3624XX	3624	780	780	582	435	284	110	34	372	270	188	74	28	23	780	780
-3630XX	3036	1040	1040	776	522	355	165	68	496	378	235	111	56	23	1040	1040
-3636XX	3636	1300	1300	970	696	426	165	102	620	432	282	111	84	46	1300	1300
-4224XX	4224	936	936	696	520	340	132	40	450	320	224	88	33	27	936	936
-4230XX	4230	1248	1248	928	624	425	198	80	600	448	280	132	66	27	1248	1248
-4824XX	4824	1086	1086	810	600	392	154	47	522	375	264	102	38	32	1086	1086
-4830XX	4830	1448	1448	1080	720	490	231	94	696	525	330	153	76	32	1448	1448
-4836XX	4836	1810	1810	1350	960	588	231	141	870	600	396	153	114	64	1810	1810
-6036XX	6036	2320	2320	1740	1232	756	297	180	1110	768	504	198	147	82	2320	2320

Notes:

- See next page for more Wortez terminal blocks.
- All quantities shown are for terminal blocks installed in vertical rows.

3B-20

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size (H X W) for your application.

- To complete Enclosure Size, Refer to Catalog Page 3B-24 for Enclosure Prefix and Depth.
- For Enclosure Selection using specific Terminal Block Manufacturers refer to following pages.

For Increased Safety Applications

- Using the table below, find the Heat Dissipation Table Number for the enclosure size you selected.
- Refer to catalog page 3B-26 for Heat Dissipation Tables.

Manufacturer - Wortez

TN Series	Heat Dissipation Table	3302 gr	3303 gr	3304 gr	3305 gr	3306 gr	3712 gr Ex	3713 gr Ex	3713/16 gr Ex	3714 gr Ex	3715 gr Ex	3716 gr Ex	30831 gr Ex	30832 gr Ex	30833 gr Ex	30834 gr Ex
-1224XX	1224	126	95	60	24	7	84	60	36	14	6	5	98	72	40	16
-1612XX	1612	102	60	25	0	0	57	34	14	0	0	0	66	38	16	0
-1616XX	1616	136	90	50	19	11	76	51	28	12	9	0	88	57	32	13
-1620XX	1620	170	120	75	19	11	95	68	42	12	9	8	110	76	48	13
-2012XX	2012	141	82	34	0	0	81	46	19	0	0	0	90	52	22	0
-2016XX	2016	188	123	68	26	16	108	69	38	17	13	0	120	78	44	18
-2020XX	2020	235	164	102	26	16	135	92	57	17	13	11	150	104	66	18
-2024XX	2024	282	205	136	52	16	189	138	76	34	13	11	210	156	88	36
-2412XX	1224	177	106	43	0	0	102	60	25	0	0	0	114	66	29	0
-2416XX	2416	236	159	86	34	20	136	90	50	21	17	0	152	99	58	22
-2420XX	2024	295	212	129	34	20	170	120	75	21	17	14	190	132	87	22
-2424XX	2424	354	265	172	68	20	238	180	100	42	17	14	266	198	116	44
-2430XX	3024	472	318	215	102	40	306	210	125	63	34	14	342	231	145	66
-3016XX	3016	312	210	114	45	27	180	117	66	28	22	0	200	129	76	30
-3020XX	3020	390	280	171	45	27	225	156	99	28	22	18	250	172	114	30
-3024XX	3024	468	350	228	90	27	315	234	132	56	22	18	350	258	152	60
-3030XX	3030	624	420	285	135	54	405	273	165	84	44	18	450	301	190	90
-3036XX	3036	780	560	342	135	81	450	351	198	112	66	36	500	387	228	90
-3624XX	3624	582	435	284	110	33	392	294	164	70	28	23	434	324	188	74
-3630XX	3036	776	522	355	165	66	504	343	205	105	56	23	558	378	235	111
-3636XX	3636	970	696	426	165	99	560	441	246	140	84	46	620	486	282	111
-4224XX	4224	696	520	340	132	40	462	348	196	84	33	27	525	384	224	88
-4230XX	4230	928	624	425	198	80	594	406	245	126	66	27	675	448	280	132
-4824XX	4824	810	600	392	154	47	539	408	228	98	38	32	609	450	264	102
-4830XX	4830	1080	720	490	231	94	693	476	285	147	76	32	783	525	330	153
-4836XX	4836	1350	960	588	231	141	770	612	342	196	114	64	870	675	396	153
-6036XX	6036	1740	1232	756	297	180	990	783	438	252	147	82	1110	864	504	198

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.

3B-21

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size (H X W) for your application.

- To complete Enclosure Size, Refer to Catalog Page 3B-24 for Enclosure Prefix and Depth.
- For Enclosure Selection using specific Terminal Block Manufacturers refer to following pages.

For Increased Safety Applications

- Using the table below, find the Heat Dissipation Table Number for the enclosure size you selected.
- Refer to catalog page 3B-26 for Heat Dissipation Tables.

Manufacturer - Phoenix

TN Series	Heat Dissipation Table	UK 2,5 N	UK 3 N	UK 5 N	UK 6 N	UK 10 N	UK 16 N	UK 35	UKH 50	UKH 95	UKH 150	UKH 240	MBK 2,5/E-EX	MBK 6/E	UK 3-RETURN	MZB 1,5	MZB 1,5-NS 35	MZDB 1,5	MZDB 1,5-NS 35	ZFK 1,5	ZKF 2,5	ZFK 4	ZFK 6
-1224XX	1224	231	231	189	140	80	56	22	16	6	0	0	243	140	198	264	231	128	112	246	198	135	100
-1612XX	1612	156	156	132	99	52	22	0	0	0	0	0	176	99	156	156	156	78	78	130	104	88	66
-1616XX	1616	208	208	176	132	78	44	18	13	0	0	0	220	165	208	260	208	130	104	195	156	132	99
-1620XX	1620	260	260	220	165	104	66	18	13	10	0	0	308	198	260	312	260	156	130	325	260	176	132
-2012XX	2012	216	216	180	135	72	30	0	0	0	0	0	240	135	216	216	216	108	108	178	144	120	90
-2016XX	2016	288	288	240	180	108	60	24	18	0	0	0	300	225	288	360	288	180	144	267	216	180	135
-2020XX	2020	360	360	300	225	144	90	24	18	15	0	0	420	270	360	432	360	216	180	445	360	240	180
-2024XX	2024	504	504	420	315	180	120	48	36	15	0	0	540	315	432	576	504	288	252	534	432	300	225
-2412XX	1224	273	273	228	174	92	39	0	0	0	0	0	304	174	273	273	273	138	138	226	182	152	116
-2416XX	2416	364	364	304	232	138	78	31	23	0	0	0	380	290	364	455	364	230	184	339	273	228	174
-2420XX	2024	455	455	380	290	184	117	31	23	19	0	0	532	348	455	546	455	276	230	565	455	304	232
-2424XX	2424	637	637	532	406	230	156	62	46	19	0	0	684	406	546	728	637	368	322	678	546	380	290
-2430XX	3024	728	728	608	464	322	195	93	46	38	15	0	836	522	728	910	728	460	368	791	637	532	348
-3016XX	3016	480	480	404	304	183	102	41	31	0	0	0	505	380	480	600	480	305	244	450	360	303	228
-3020XX	3020	600	600	505	380	244	153	41	31	25	0	0	707	456	600	720	600	366	305	750	600	404	304
-3024XX	3024	840	840	707	532	305	204	82	62	25	0	0	909	532	720	960	840	488	427	900	720	505	380
-3030XX	3030	960	960	808	608	427	255	123	62	50	20	0	1111	684	960	1200	960	610	488	1050	840	707	456
-3036XX	3036	1200	1200	1010	760	549	357	164	93	50	20	17	1313	836	1200	1440	1200	732	610	1350	1080	909	608
-3624XX	3624	1050	1050	882	665	380	256	102	78	31	0	0	1134	665	900	1200	1050	600	525	1116	900	630	475
-3630XX	3036	1200	1200	1008	760	532	320	153	78	62	25	0	1386	855	1200	1500	1200	750	600	1302	1050	882	570
-3636XX	3636	1500	1500	1260	950	684	448	204	117	62	25	21	1638	1045	1500	1800	1500	900	750	1674	1350	1134	760
-4224XX	4224	1253	1253	1050	791	455	304	122	92	37	0	0	1350	791	1074	1432	1253	720	630	1332	1074	750	565
-4230XX	4230	1432	1432	1200	904	637	380	183	92	74	30	0	1650	1017	1432	1790	1432	900	720	1554	1253	1050	678
-4824XX	4824	1456	1456	1225	924	530	356	142	108	43	0	0	1575	924	1248	1664	1456	840	735	1554	1248	875	660
-4830XX	4830	1664	1664	1400	1056	742	445	213	108	86	35	0	1925	1188	1664	2080	1664	1050	840	1813	1456	1225	792
-4836XX	4836	2080	2080	1750	1320	954	623	284	162	86	35	30	2275	1452	2080	2496	2080	1260	1050	2331	1872	1575	1056
-6036XX	6036	2670	2670	2240	1690	1224	798	364	207	110	44	38	2912	1859	2670	3204	2670	1608	1340	2979	2403	2016	1352

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.

3B-22

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size (H X W) for your application.

- To complete Enclosure Size, Refer to Catalog Page 3B-24 for Enclosure Prefix and Depth.
- For Enclosure Selection using specific Terminal Block Manufacturers refer to following pages.

For Increased Safety Applications

- Using the table below, find the Heat Dissipation Table Number for the enclosure size you selected.
- Refer to catalog page 3B-26 for Heat Dissipation Tables.

Manufacturer - Wago

TN Series	Heat Dissipation Table	280-991	281-691	281-991	282-691	284-691	283-691	285-691	280-698	281-693	264-120	264-220	264-125	264-225
-1224XX	1224	198	168	140	105	85	56	20	198	140	232	160	203	119
-1612XX	1612	104	88	88	68	54	23	15	156	88	138	96	138	81
-1616XX	1616	208	176	132	102	81	46	15	208	132	230	160	184	108
-1620XX	1620	260	220	176	136	108	69	30	260	176	276	192	276	162
-2012XX	2012	142	122	122	94	74	31	21	213	122	189	135	189	111
-2016XX	2016	284	244	183	141	111	62	21	284	183	315	225	252	148
-2020XX	2020	355	305	244	188	148	93	42	355	244	378	270	378	222
-2024XX	2024	426	366	305	235	185	124	42	426	305	504	360	441	259
-2412XX	1224	180	154	154	118	94	39	27	270	154	237	171	237	141
-2416XX	2416	360	308	231	177	141	78	27	360	231	395	285	316	188
-2420XX	2024	450	385	308	236	188	117	54	450	308	474	342	474	282
-2424XX	2424	540	462	385	295	235	156	54	540	385	632	456	553	329
-2430XX	3024	630	539	539	413	282	195	81	720	539	790	570	711	423
-3016XX	3016	476	408	306	234	189	104	36	476	306	525	375	420	252
-3020XX	3020	595	510	408	312	252	156	72	595	408	630	450	630	378
-3024XX	3024	714	612	510	390	315	208	72	714	510	840	600	735	441
-3030XX	3030	833	714	714	546	378	260	108	952	714	1050	750	945	567
-3036XX	3036	1071	918	918	624	504	312	144	1071	816	1260	900	1155	693
-3624XX	3624	882	756	630	490	390	260	90	882	630	1040	744	910	546
-3630XX	3036	1029	882	882	686	468	325	135	1176	882	1300	930	1170	702
-3636XX	3636	1323	1134	1134	784	624	390	180	1323	1008	1560	1116	1430	858
-4224XX	4224	1056	906	755	585	465	312	108	1056	755	1248	888	1092	651
-4230XX	4230	1232	1057	1057	819	558	390	162	1408	1057	1560	1110	1404	837
-4824XX	4824	1230	1050	875	680	540	360	124	1230	875	1448	1032	1267	756
-4830XX	4830	1435	1225	1225	952	648	450	186	1640	1225	1810	1290	1629	972
-4836XX	4836	1845	1575	1575	1088	864	540	248	1845	1400	2172	1548	1991	1188
-6036XX	6036	2358	2025	2025	1392	1112	696	320	2358	1800	2784	1992	2552	1529

Manufacturer - Wieland

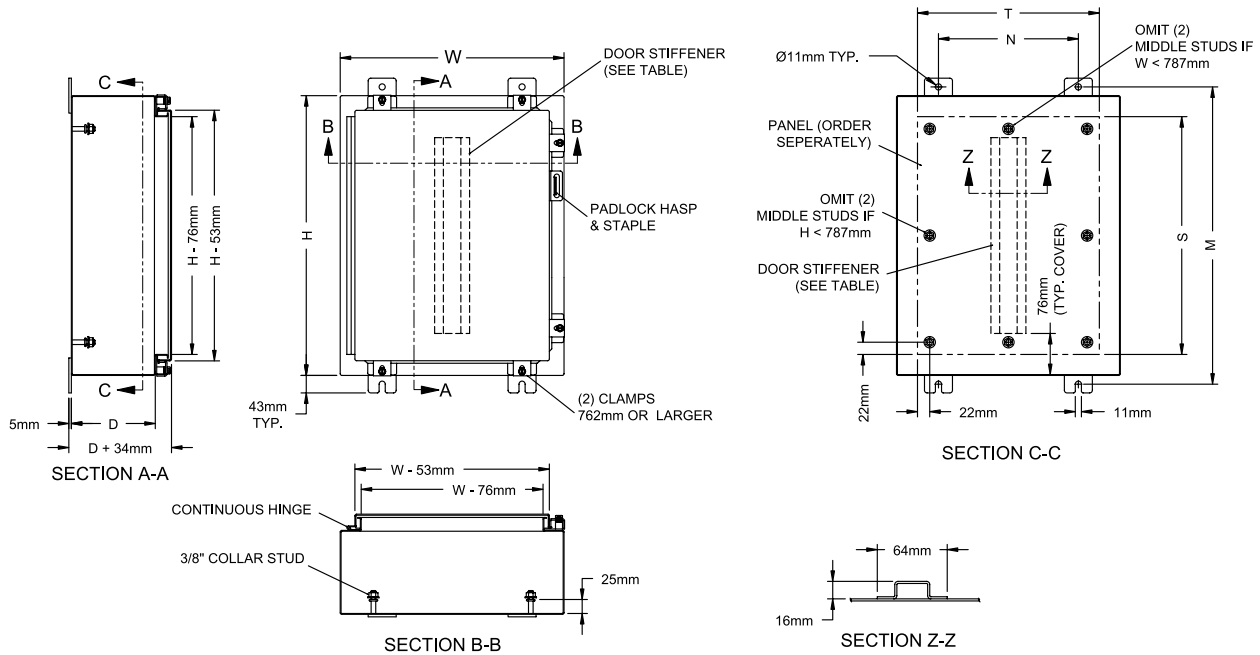
TN Series	Heat Dissipation Table	WK 2.5/U	WK 4/U	WK 6/U	WKI 35/U	WKN 10/U	WKN 16/U	WKN 35/U	WKN 70/U	WKN 150/U
-1224XX	1224	198	168	126	32	80	42	20	7	6
-1612XX	1612	162	135	99	0	54	22	0	0	0
-1616XX	1616	216	180	132	27	81	44	17	0	0
-1620XX	1620	270	225	165	27	108	66	17	11	0
-2012XX	2012	222	186	138	0	74	31	0	0	0
-2016XX	2016	296	248	184	37	111	62	23	0	0
-2020XX	2020	370	310	230	37	148	93	23	15	0
-2024XX	2024	444	372	276	74	185	93	46	15	13
-2412XX	1224	282	237	177	0	94	39	0	0	0
-2416XX	2416	376	316	236	47	141	78	29	0	0
-2420XX	2024	470	395	295	47	188	117	29	19	0
-2424XX	2424	564	474	354	94	235	117	58	19	16
-2430XX	3024	752	632	472	141	282	195	58	38	16
-3016XX	3016	500	416	312	62	186	104	39	0	0
-3020XX	3020	625	520	390	62	248	156	39	26	0
-3024XX	3024	750	624	468	124	310	156	78	26	22
-3030XX	3030	1000	832	624	186	372	260	78	52	22
-3036XX	3036	1250	1040	780	186	496	312	117	78	22
-3624XX	3624	930	774	582	154	385	192	96	32	27
-3630XX	3036	1240	1032	776	231	462	320	96	64	27
-3636XX	3636	1550	1290	970	231	616	384	144	96	27
-4224XX	4224	1116	930	696	186	465	231	116	38	33
-4230XX	4230	1488	1240	928	279	558	385	116	76	33
-4824XX	4824	1296	1080	810	216	540	270	134	45	38
-4830XX	4830	1728	1440	1080	324	648	450	134	90	38
-4836XX	4836	2160	1800	1350	324	864	540	201	135	38
-6036XX	6036	2770	2310	1730	414	1104	690	258	171	49

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.

3B-23

TN4 Expanded Series - Enclosure Outline



3B-24

ENCLOSURE SIZE	H	W	D							M	N	S	T	# OF CLAMPS	STIFFENER	
			06	08	10	12	16	20	24						BOX	COVER
-1224xx	305	610	152	203	--	--	--	--	--	359	458	229	534	4	---	---
-1612xx	406	305	152	203	254	--	--	--	--	460	241	330	229	4	---	---
-1616xx	406	406	152	203	--	--	--	--	--	460	254	330	330	4	---	---
-1620xx	406	508	152	203	--	--	--	--	--	460	356	330	432	4	---	---
-2012xx	508	305	152	203	--	--	--	--	--	562	241	432	229	4	---	---
-2016xx	508	406	152	203	254	305	--	--	--	562	254	432	330	4	---	---
-2020xx	508	508	152	203	254	--	--	--	--	562	356	432	432	4	---	---
-2024xx	508	610	152	203	--	--	--	--	--	562	458	432	534	4	---	---
-2412xx	610	305	152	203	254	--	--	--	--	664	241	534	229	5	---	---
-2416xx	610	406	152	203	--	--	--	--	--	664	254	534	330	5	---	---
-2420xx	610	508	152	203	254	305	406	--	--	664	356	534	432	5	---	---
-2424xx	610	610	152	203	254	305	406	--	--	664	458	534	534	5	---	---
-301606	762	406	152	--	--	--	--	--	--	816	254	686	330	5	---	---
-3020xx	762	508	152	203	254	--	--	--	--	816	356	686	432	5	---	---
-3024xx	762	610	152	203	254	305	406	508	588	816	458	686	534	5	---	---
-3624xx	914	610	152	203	254	305	--	--	--	968	458	838	534	5	---	---
-3630xx	914	762	152	203	254	305	406	508	--	968	610	838	686	7	REQ'D	REQ'D
-2430xx	610	762	--	203	--	--	--	--	--	664	610	534	686	7	---	---
-3030xx	762	762	--	203	--	305	--	--	--	816	610	686	686	7	REQ'D	REQ'D
-303608	762	914	--	203	--	--	--	--	--	816	762	686	838	7	REQ'D	REQ'D
-3636xx	914	914	--	203	--	305	--	--	--	968	762	838	838	7	REQ'D	REQ'D
-422408	1067	610	--	203	--	--	--	--	--	1121	458	991	534	6	---	REQ'D
-4230xx	1067	762	--	203	254	305	--	--	--	1121	610	991	686	8	REQ'D	REQ'D
-4236xx	1067	914	--	203	254	305	406	--	--	1121	762	991	838	8	REQ'D	REQ'D
-482408	1219	610	--	203	--	--	--	--	--	1273	458	1143	534	6	---	REQ'D
-4830xx	1219	762	--	203	254	--	--	--	--	1273	610	1143	686	8	REQ'D	REQ'D
-4836xx	1219	914	--	203	254	305	406	508	--	1273	762	1143	838	8	REQ'D	REQ'D
-6036xx	1524	914	--	203	254	305	406	508	588	1578	762	1448	838	9	REQ'D	REQ'D

NOTES:

- Dimensions in table are Metric.
- xx in Enclosure Size indicates multiple depths. Complete Enclosure Size with depths indicated in Column D (i.e. 122408).

TN4 Expanded Series - Catalog Numbers

SS316L Enclosures with Terminals	
Catalog Numbers	Heat Dissipation Table
TN4X6-122406	1224
TN4X6-161206	1612
TN4X6-161606	1616
TN4X6-162006	1620
TN4X6-201206	2012
TN4X6-201606	2016
TN4X6-202006	2020
TN4X6-202406	2024
TN4X6-241206	2412
TN4X6-241606	2416
TN4X6-242006	2024
TN4X6-242406	2424
TN4X6-301606	3016
TN4X6-302006	3020
TN4X6-302406	3024
TN4X6-362406	3624
TN4X6-363006	3036
TN4X6-122408	1224
TN4X6-161208	1612
TN4X6-161608	1616
TN4X6-162008	1620
TN4X6-201208	2012
TN4X6-201608	2016
TN4X6-202008	2020
TN4X6-202408	2024
TN4X6-241208	1224
TN4X6-241608	2416
TN4X6-242008	2024
TN4X6-242408	2424
TN4X6-302008	3020
TN4X6-302408	3024
TN4X6-362408	3624
TN4X6-363008	3036
TN4X6-243008	3024
TN4X6-303008	3030
TN4X6-303608	3036
TN4X6-363608	3636
TN4X6-422408	4224
TN4X6-423008	4230
TN4X6-423608	4236
TN4X6-482408	4824
TN4X6-483008	4830
TN4X6-483608	4836
TN4X6-603608	6036

SS316L Enclosures with Terminals	
Catalog Numbers	Heat Dissipation Table
TN4X6-161210	1612
TN4X6-201610	2016
TN4X6-202010	2020
TN4X6-241210	2412
TN4X6-242010	2024
TN4X6-242410	2424
TN4X6-302010	3020
TN4X6-302410	3024
TN4X6-362410	3624
TN4X6-363010	3036
TN4X6-483010	4830
TN4X6-483610	4836
TN4X6-603610	6036
TN4X6-201612	2016
TN4X6-242012	2024
TN4X6-242412	2424
TN4X6-302412	3024
TN4X6-362412	3624
TN4X6-363012	3036
TN4X6-303012	3030
TN4X6-363612	3636
TN4X6-423012	4230
TN4X6-423612	4236
TN4X6-483612	4836
TN4X6-603612	6036
TN4X6-242016	2024
TN4X6-242416	2424
TN4X6-302416	3024
TN4X6-363016	3036
TN4X6-423616	4236
TN4X6-483616	4836
TN4X6-603616	6036
TN4X6-302420	3024
TN4X6-363020	3036
TN4X6-483620	4836
TN4X6-603620	6036
TN4X6-483624	4836
TN4X6-603624	6036

Mounting Pans	
Enclosure Size	Catalog Numbers
-1224xx	V2412
-1612xx	V1612
-1616xx	V1616
-1620xx	V1620
-2012xx	V2012
-2016xx	V2016
-2020xx	V2020
-2024xx	V2420
-2412xx	V2412
-2416xx	V2416
-2420xx	V2420
-2424xx	V2424
-3020xx	V3020
-3024xx	V3024
-3624xx	V3624
-3630xx	V3630
-2430xx	V3024
-3030xx	V3030
-3036xx	V3036
-3636xx	V3636
-4224xx	V4224
-4230xx	V4230
-4236xx	V4236
-4824xx	V4824
-4830xx	V4830
-4836xx	V4836
-6036xx	V6036

NOTES:

1. For Stainless Steel 304 assemblies substitute TN4X6 prefix with TN4X.
2. For Steel Powder Coated assemblies substitute TN4X6 prefix with TN4.
3. For Empty Enclosures add U immediately following enclosure size (i.e. TN4X6-122406U).
4. For Stainless Steel Mounting Pan add S to catalog number (i.e. V2412S).
5. For Aluminum Mounting Pan add A to catalog number (i.e. V2412A).
6. For Increased Safety Applications, refer to Heat Dissipation Tables indicated next to Catalog number.

3B-25

Heat Dissipation Tables

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to the terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found.
5. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

1224 - Terminal Block Population for Increased Safety Heat Dissipation Requirements														
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)													
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185
8	95													
10	46													
16	15	30	119											
20	6	18	34											
25		8	19	37										
35			5	14	36									
50				2	12	30								
63					4	14	50							
80						5	15	56						
100							6	14						
125								6	15					
160									5	13				
200			Additional Testing Required, Consult Factory							4	11	35		
225										1	6	13		
250											3	8	17	
315												1	5	10
400														2

1612 - Terminal Block Population for Increased Safety Heat Dissipation Requirements											
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)										
	1.5	2.5	4	6	10	16	25	35	50	70	95
8	90										
10	44										
16	15	29	113								
20	6	17	33								
25		8	18	36							
35			5	14	35						
50				2	11	29					
63					3	13	47				
80						5	15	53			
100							6	14			
125								5	14		
160									4	12	
200			Additional Testing Required, Consult Factory							4	10
225										1	6
250											3

1616 - Terminal Block Population for Increased Safety Heat Dissipation Requirements											
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)										
	1.5	2.5	4	6	10	16	25	35	50	70	95
8	100										
10	48										
16	16	32	125								
20	7	19	36								
25		9	20	39							
35			6	15	38						
50				2	12	32					
63					4	14	52				
80						5	16	59			
100							7	15			
125								6	15		
160									5	14	
200			Additional Testing Required, Consult Factory							5	12
225										1	7
250											3

Notes:

1. See the end of this section for applications using multiple terminal blocks.

3B-26

Heat Dissipation Tables

1620 - Terminal Block Population for Increased Safety Heat Dissipation Requirements														
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)													
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	
8	106													
10	51													
16	17	34	133			Maximum fill permitted based solely on minimum wire bending space and electrical clearances								
20	7	20	38											
25		9	22	24										
35			6	16	41									
50				2	13	34								
63					4	15	56							
80						6	17	62						
100							7	16						
125								6	16					
160									5	14				
200		Additional Testing Required, Consult Factory									5	12	39	
225										2	7	15		
250											3	9	19	
315												2	5	

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to the terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found.
5. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

2012 - Terminal Block Population for Increased Safety Heat Dissipation Requirements														
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)													
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	
8	93													
10	45													
16	15	30	117			Maximum fill permitted based solely on minimum wire bending space and electrical clearances								
20	6	17	34											
25		8	19	37										
35			5	14	36									
50				2	11	29								
63					4	13	49							
80						5	15	55						
100							6	14						
125								5	14					
160									5	13				
200		Additional Testing Required, Consult Factory									4	11	34	
225										1	6	13		
250											3	8	17	
315												1	5	

2016 - Terminal Block Population for Increased Safety Heat Dissipation Requirements														
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)													
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	
8	106													
10	51													
16	17	34	133			Maximum fill permitted based solely on minimum wire bending space and electrical clearances								
20	7	20	38											
25		9	22	42										
35			6	16	41									
50				2	13	34								
63					4	15	56							
80						6	17	62						
100							7	16						
125								6	16					
160									5	14				
200		Additional Testing Required, Consult Factory									5	12	39	
225										2	7	15		
250											3	9	19	
315												2	5	

Notes:

1. See the end of this section for applications using multiple terminal blocks.

3B-27

Heat Dissipation Tables

2020 - Terminal Block Population for Increased Safety Heat Dissipation Requirements													
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)												
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150
8	115												
10	66												
16	19	37	144			Maximum fill permitted based solely on minimum wire bending space and electrical clearances							
20	8	22	42										
25		10	23	45									
35			7	18	44								
50				2	14	36							
63					4	17	60						
80						6	19	67					
100							8	18					
125								7	18				
160									6	16			
200		Additional Testing Required, Consult Factory								5	13	42	
225										2	8	16	
250											4	10	21
315												2	6

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to the terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found.
5. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

3B-28

2024 - Terminal Block Population for Increased Safety Heat Dissipation Requirements														
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)													
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185
8	121													
10	59													
16	20	39	152			Maximum fill permitted based solely on minimum wire bending space and electrical clearances								
20	8	23	44											
25		10	25	48										
35			7	18	46									
50				2	15	38								
63					5	18	64							
80						7	20	71						
100							8	18						
125								7	19					
160									6	16				
200		Additional Testing Required, Consult Factory								6	14	45		
225										2	8	17		
250											4	10	22	
315												2	12	13
400														3

2412 - Terminal Block Population for Increased Safety Heat Dissipation Requirements														
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)													
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185
8	95													
10	46													
16	15	30	119			Maximum fill permitted based solely on minimum wire bending space and electrical clearances								
20	6	18	34											
25		8	19	37										
35			5	14	36									
50				2	12	30								
63					4	14	50							
80						5	15	56						
100							6	14						
125								6	15					
160									5	13				
200		Additional Testing Required, Consult Factory									4	11	35	
225											1	6	13	
250												3	8	17
315													1	5
400														2

Notes:

1. See the end of this section for applications using multiple terminal blocks.

Heat Dissipation Tables

2416 - Terminal Block Population for Increased Safety Heat Dissipation Requirements															
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	
8	110														
10	53														
16	18	35	138			Maximum fill permitted based solely on minimum wire bending space and electrical clearances									
20	7	20	40												
25		9	22	43											
35			6	17	42										
50				2	13	35									
63					4	16	58								
80						6	18	64							
100							7	17							
125								6	17						
160									6	15					
200		Additional Testing Required, Consult Factory								5	13	40			
225										2	7	16			
250											4	9	20		
315												2	5	12	
400														2	

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to the terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found.
5. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

2424 - Terminal Block Population for Increased Safety Heat Dissipation Requirements															
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	
8	130														
10	63														
16	21	42	113			Maximum fill permitted based solely on minimum wire bending space and electrical clearances									
20	9	24	47												
25		11	26	51											
35			7	20	50										
50				3	16	41									
63					5	19	68								
80						7	21	76							
100							9	20							
125							1	8	20						
160									7	18					
200		Additional Testing Required, Consult Factory								6	15	48			
225										2	9	19			
250											4	11	24		
315												2	7	14	
400														3	

2430 - Terminal Block Population for Increased Safety Heat Dissipation Requirements															
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
8	139														
10	67														
16	23	45	174			Maximum fill permitted based solely on minimum wire bending space and electrical clearances									
20	9	51	50												
25		12	28	55											
35			8	21	53										
50				3	17	44									
63					6	20	73								
80						8	23	82							
100							9	21							
125							1	8	22						
160									7	19					
200		Additional Testing Required, Consult Factory								7	16	51			
225										2	9	20			
250											5	12	25		
315												2	7	15	
400														3	10
500															1

Notes:

1. See the end of this section for applications using multiple terminal blocks.

3B-29

Heat Dissipation Tables

3016 - Terminal Block Population for Increased Safety Heat Dissipation Requirements															
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
8	113														
10	55														
16	18	36	142			Maximum fill permitted based solely on minimum wire bending space and electrical clearances									
20	7	21	41												
25		10	23	45											
35			6	17	43										
50				2	14	36									
63					4	16	59								
80						6	18	66							
100							8	17							
125								7	17						
160									6	15					
200		Additional Testing Required, Consult Factory								5	13	42			
225										2	7	16			
250											4	10	20		
315												2	6	12	
400														2	8
500															1

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to the terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found.
5. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

3B-30

3020 - Terminal Block Population for Increased Safety Heat Dissipation Requirements															
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
8	127														
10	62														
16	21	41	160			Maximum fill permitted based solely on minimum wire bending space and electrical clearances									
20	8	24	46												
25		11	26	50											
35				19	49										
50				2	16	40									
63					5	19	67								
80						7	21	75							
100							9	19							
125								8	20						
160									7	17					
200		Additional Testing Required, Consult Factory								6	15	47			
225										2	8	18			
250											4	11	23		
315												2	6	14	
400														3	9
500															1

3024 - Terminal Block Population for Increased Safety Heat Dissipation Requirements															
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
8	139														
10	67														
16	23	45	174			Maximum fill permitted based solely on minimum wire bending space and electrical clearances									
20	9	26	50												
25		12	28	55											
35			8	21	53										
50				3	17	44									
63					6	20	73								
80						8	23	82							
100							9	21							
125								8	22						
160									7	19					
200		Additional Testing Required, Consult Factory									7	16	51		
225											2	9	20		
250												5	12	25	
315													2	7	15
400															3
500															1

Notes:

1. See the end of this section for applications using multiple terminal blocks.

Heat Dissipation Tables

3030 - Terminal Block Population for Increased Safety Heat Dissipation Requirements																
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)															
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	
8	152															
10	74															
16	25	49	191			Maximum fill permitted based solely on minimum wire bending space and electrical clearances										
20	10	28	55													
25		13	31	60												
35			9	23	58											
50				3	19	48										
63					6	22	80									
80						8	25	89								
100							10	23								
125							1	9	24							
160									8	21						
200		Additional Testing Required, Consult Factory								7	18	56				
225									2	10	22					
250										5	13	28				
315											2	8	16			
400													3	11		
500															1	

3036 - Terminal Block Population for Increased Safety Heat Dissipation Requirements																
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)															
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	
8	162															
10	78															
16	27	52	203			Maximum fill permitted based solely on minimum wire bending space and electrical clearances										
20	11	30	59													
25		14	33	64												
35			9	25	62											
50				3	20	51										
63					7	24	85									
80						9	26	95								
100							11	25								
125							1	10	25							
160									8	22						
200		Additional Testing Required, Consult Factory								8	19	60				
225									3	11	23					
250										12	14	30				
315											3	8	18			
400													4	12		
500															1	

3624 - Terminal Block Population for Increased Safety Heat Dissipation Requirements																
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)															
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	
8	145															
10	70															
16	24	46	182			Maximum fill permitted based solely on minimum wire bending space and electrical clearances										
20	10	27	52													
25		13	30	57												
35			8	22	56											
50				3	18	46										
63					6	21	76									
80						8	24	85								
100							10	22								
125								9	22							
160									7	20						
200		Additional Testing Required, Consult Factory								7	17	53				
225									2	10	21					
250										5	12	26				
315											2	7	16			
400													3	11		
500															1	

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to the terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found.
5. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

3B-31

Notes:

1. See the end of this section for applications using multiple terminal blocks.

Heat Dissipation Tables

3636 - Terminal Block Population for Increased Safety Heat Dissipation Requirements																
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)															
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	
8	175															
10	85															
16	29	56	219			Maximum fill permitted based solely on minimum wire bending space and electrical clearances										
20	12	33	63													
25		15	36	69												
35			10	27	67											
50				4	22	56										
63					7	56	92									
80						10	28	103								
100							12	27								
125							1	11	27							
160								9	24							
200		Additional Testing Required, Consult Factory								8	21	64				
225									3	12	25					
250										6	15	23				
315											3	9	19			
400													4	13		
500															1	

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to the terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found.
5. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

3B-32

4224 - Terminal Block Population for Increased Safety Heat Dissipation Requirements																
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)															
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	
8	149															
10	72															
16	24	48	187			Maximum fill permitted based solely on minimum wire bending space and electrical clearances										
20	10	28	54													
25		13	30	59												
35			9	23	57											
50				3	18	47										
63					6	22	78									
80						8	24	87								
100							10	23								
125							1	9	23							
160								8	20							
200		Additional Testing Required, Consult Factory								7	18	55				
225									2	10	22					
250										5	13	27				
315											2	8	16			
400													3	11		
500															1	

4230 - Terminal Block Population for Increased Safety Heat Dissipation Requirements																
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)															
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	
8	168															
10	82															
16	28	54	211			Maximum fill permitted based solely on minimum wire bending space and electrical clearances										
20	11	31	61													
25		15	34	67												
35			10	26	65											
50				3	21	54										
63					7	25	88									
80						9	27	99								
100							12	26								
125							1	10	26							
160								9	23							
200		Additional Testing Required, Consult Factory								8	20	62				
225									3	11	24					
250										6	15	31				
315											3	9	18			
400													4	12		
500															1	

Notes:

1. See the end of this section for applications using multiple terminal blocks.

Heat Dissipation Tables

4236 - Terminal Block Population for Increased Safety Heat Dissipation Requirements																
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)															
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	
8	184															
10	89															
16	30	59	231			Maximum fill permitted based solely on minimum wire bending space and electrical clearances										
20	12	34	67													
25		16	38	73												
35			11	28	71											
50				4	23	59										
63					7	27	97									
80						10	30	108								
100							13	28								
125								11	29							
160									10	25						
200		Additional Testing Required, Consult Factory									9	22	68			
225										3	12	26				
250											6	16	34			
315												3	9	20		
400														4	14	
500															2	

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to the terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found.
5. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

4824 - Terminal Block Population for Increased Safety Heat Dissipation Requirements																
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)															
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	
8	151															
10	73															
16	25	49	190			Maximum fill permitted based solely on minimum wire bending space and electrical clearances										
20	10	28	55													
25		13	31	60												
35			9	43	58											
50				3	19	48										
63					6	22	79									
80						8	25	89								
100							10	23								
125								1	9	24						
160									8	21						
200		Additional Testing Required, Consult Factory									7	18	56			
225										2	10	22				
250											5	13	28			
315												2	8	16		
400														3	11	
500															1	

4830 - Terminal Block Population for Increased Safety Heat Dissipation Requirements																
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)															
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	
8	173															
10	84															
16	29	56	217			Maximum fill permitted based solely on minimum wire bending space and electrical clearances										
20	12	32	63													
25		15	35	69												
35			10	27	67											
50				4	22	55										
63					7	25	91									
80						10	28	102								
100							12	27								
125								1	11	27						
160									9	24						
200		Additional Testing Required, Consult Factory									8	21	64			
225										3	12	25				
250											6	15	32			
315												3	9	19		
400														4	13	
500															1	

Notes:

1. See the end of this section for applications using multiple terminal blocks.

3B-33

Heat Dissipation Tables

4836 - Terminal Block Population for Increased Safety Heat Dissipation Requirements																
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)															
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	
8	192															
10	93															
16	32	62	240			Maximum fill permitted based solely on minimum wire bending space and electrical clearances										
20	13	36	70													
25		17	39	76												
35			11	30	74											
50				4	24	61										
63					8	28	101									
80						11	31	113								
100							13	30								
125								12	30							
160									10	26						
200		Additional Testing Required, Consult Factory									9	23	71			
225										3	13	28				
250											7	17	35			
315												3	10	21		
400														4	14	
500															2	

6036 - Terminal Block Population for Increased Safety Heat Dissipation Requirements																
Current (Amps)	Maximum Terminal Block Wire Size (mm ²)															
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	
8	202															
10	98															
16	33	65	253			Maximum fill permitted based solely on minimum wire bending space and electrical clearances										
20	14	38	73													
25		18	41	80												
35			12	31	78											
50				4	25	64										
63					8	30	106									
80						11	33	119								
100							14	32								
125							1	12	32							
160									11	28						
200		Additional Testing Required, Consult Factory									10	24	75			
225										3	14	29				
250											7	18	37			
315												3	10	22		
400														10	15	
500															2	

Notes:

1. The tables above show the maximum number of single pole (single level) terminal blocks permitted based on the conductor size and the continuous current for the designated enclosures.
2. In the shaded areas you may add as many terminals as possible in accordance with the spacing requirements and manufacturer's instructions.
3. Grounding terminals, bridges and grounding conductors are not counted.
4. Please consult factory for information on multi-pole terminals, grounding terminals, grounding bars, and bridges.
5. When selecting the permitted continuous current for the cross section, the maximum permitted current for the terminals and conductors should be considered.
6. Different types of terminals may be used simultaneously by using the tabular values proportionally, as shown below.

Example from	Conductor Size	Current	Number	% of Maximum Terminal Population	
-6036xx Table:	2.5	16	35 (of 65)	=	54%
	4	20	15 (of 73)	=	21%
	10	35	19 (of 78)	=	24%
			Total	=	99% < 100%

7. Combinations not covered by the above tables may be permitted if they are determined acceptable by test.

3B-34

Conduit/Cable & Wire Bending Guidelines

Table A - Minimum Spacing Between Centers of Conduit or Cable Entries													
SIZE	NPT	5	4	3-1/2	3	2-1/2	2	1-1/2	1-1/4	1	3/4	1/2	1/16 ~ 3/8
NPT	METRIC	--	--	--	M75	M63	M50	M40	M32	M25	M20	M16	--
1/16 ~ 3/8	--	4-3/8 [112mm]	3-5/8 [92mm]	3-3/8 [86mm]	3 [77mm]	2-5/8 [68mm]	2-3/8 [61mm]	2 [51mm]	1-7/8 [48mm]	1-5/8 [42mm]	1-3/8 [35mm]	1-1/4 [32mm]	1-1/8 [29mm]
1/2	M16	4-3/8 [112mm]	3-5/8 [92mm]	3-3/8 [86mm]	3 [77mm]	2-5/8 [68mm]	2-3/8 [61mm]	2 [51mm]	1-7/8 [48mm]	1-5/8 [42mm]	1-3/8 [35mm]	1-1/4 [32mm]	
3/4	M20	4-1/2 [115mm]	3-3/4 [96mm]	3-1/2 [89mm]	3-1/8 [80mm]	2-3/4 [70mm]	2-1/2 [64mm]	2-1/8 [54mm]	2 [51mm]	1-3/4 [45mm]	1-1/2 [38mm]		
1	M25	4-5/8 [118mm]	3-7/8 [99mm]	3-5/8 [92mm]	3-1/4 [83mm]	2-7/8 [74mm]	2-3/4 [70mm]	2-1/4 [58mm]	2-1/8 [54mm]	1-7/8 [48mm]			
1-1/4	M32	4-7/8 [124mm]	4-1/8 [105mm]	3-7/8 [99mm]	3-1/2 [89mm]	3-1/8 [80mm]	2-7/8 [74mm]	2-1/2 [64mm]	2-3/8 [61mm]				
1-1/2	M40	5 [127mm]	4-1/4 [108mm]	4 [102mm]	3-5/8 [92mm]	3-1/4 [83mm]	3 [77mm]	2-5/8 [68mm]					
2	M50	5-3/8 [137mm]	4-3/4 [121mm]	4-1/2 [115mm]	4 [102mm]	3-5/8 [92mm]	3-3/8 [86mm]						
2-1/2	M63	5-1/2 [140mm]	4-7/8 [124mm]	4-5/8 [118mm]	4-1/4 [108mm]	3-7/8 [99mm]							
3	M75	5-7/8 [150mm]	5-1/4 [134mm]	5 [127mm]	4-5/8 [118mm]								
3-1/2	--	6-1/4 [159mm]	5-3/4 [147mm]	5-1/2 [140mm]									
4	--	6-7/8 [175mm]	6 [153mm]										
5	--	7-3/8 [188mm]											

This information is compiled from data which we believe is reliable and is given in good faith. Since the methods of application and condition under which our products are used are beyond our control, we are not able to guarantee the application and/or use of same. The user assumes all risks and liability in connection with the application and use of our products.

Table B - Minimum Distance from Conduit/Cable Center to Edge of Opening or Edge of Box												
NPT	5	4	3-1/2	3	2-1/2	2	1-1/2	1-1/4	1	3/4	1/2	1/16 ~ 3/8
METRIC	--	--	--	M75	M63	M50	M40	M32	M25	M20	M16	--
	2-13/16 [72mm]	2-1/4 [58mm]	2 [51mm]	1-3/4 [45mm]	1-7/16 [37mm]	1-3/16 [31mm]	1 [26mm]	7/8 [23mm]	11/16 [18mm]	9/16 [14mm]	1/2 [13mm]	1/2 [13mm]

Table C - Minimum Wire Bending Space Between Terminals, Partitions, or Inside Walls																
AWG	16	14	12	10	8	6	4	2	1/0	2/0	3/0	4/0	250	350	400	500
mmsq.	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
	1-1/2 [38mm]	1-1/2 [38mm]	1-1/2 [38mm]	1-1/2 [38mm]	2 [51mm]	3 [77mm]	3-1/2 [89mm]	5-1/2 [140mm]	6 [153mm]	6-1/2 [165mm]	7 [178mm]	8-1/2 [216mm]	10 [254mm]	12 [305mm]	13 [330mm]	14 [356mm]

Notes:

- The distances in Table A are recommended minimum distances between centers of conduit and cable gland entries. Consult manufacturer of conduit fitting or cable glands for their recommended minimum spacing.
- The distances in Table B are recommended minimum distances between center of conduit and cable gland entries to the edge of an opening or inside wall of box. Consult manufacturer of conduit fitting or cable glands for their recommended minimum spacing.
- The distances in Table C are the minimum wire bending space requirements between terminals, partitions, or inside walls.

3B-35

TSC Series - Screw Cover Terminal Enclosure



18 Enclosure Sizes

Available in 18 sizes, from 5"x5"x3" (model 050503) to 16"x16"x8" (model 161608).

Construction

- Available in (3) Materials: SS304, SS316L, Powder-Coated (ASA61 Grey) Steel.
- Continuously Welded and Ground Smooth Seams.
- Continuous One-Piece Silicone Gasket.
- Welded on External Mounting Feet with 5/16" Clearance Holes.
- Captive Cover Screws.
- Universal Rail Mounting System. (Mounting pan supplied standard on 050503 enclosure).
- Ground Studs on Box and Cover.
- Internal/External Earthing Stud.

Options

Gland Plates

For enclosures with depths greater than 6"

These removable plates offer great flexibility for the end user to drill holes without having to remove the entire enclosure from the installation site.

Add the following Suffixes:

- A: Gland Plate installed on top of box.
- B: Gland Plate installed on bottom of box.
- C: Gland Plate installed on left of box.
- D: Gland Plate installed on right of box.

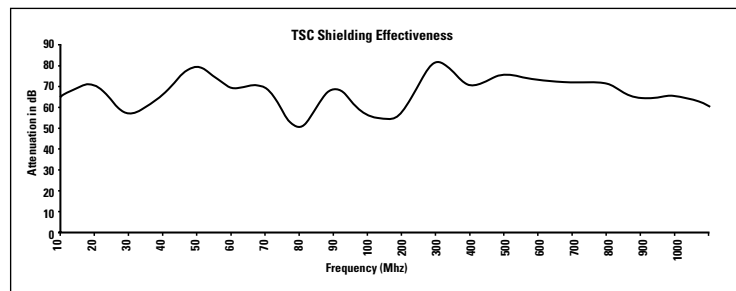
For multiple gland plates omit dashes (i.e. TSC4X-101006-**ABCD**)

EMC Shielding

For stainless steel enclosures only

EMC shielding is available on the TSC4X (SS304) and TSC4X6 (SS316L) enclosures with a shielding effectiveness of >50dB through out the frequency range of 1MHz to 1000MHz. For EMC shielding add the prefix **-EMC** to the catalog text string, immediately following the enclosure size. (i.e. TSC4X-101006-**EMC**)

Note: This option is not available on enclosures with gland plates installed.



Conduit/Cable Entries:

Entries can be provided per a customer sketch or with detailed information on the entry locations. Please refer to Entry Spacing Tables at the end of the Increased Safety Section in the CENELEC Product Catalog. *Note: This information is important and could affect the size of the enclosure you selected.*

Close-up Plugs:

Any unused entries must be plugged with a Certified Close-Up Plug. Adalet can provide close-up plugs in various styles and materials. Please indicate on the sketch or provide detailed information of holes to be plugged.

Enclosure Labeling:

Adalet can provide additional enclosure labeling with custom silk screening or various colors of Lamacoid™ nameplates. Please provide detailed information of the logo or text required.

Breather Drains:

Breather Drains can be provided per customer request. They are available in Brass or Stainless Steel 316L. Please indicate on a sketch or provide detailed information for locations.

Grounding Busbars:

Some applications might require grounding points to be terminated in the enclosure. With the use of a Ground Busbar System this can be accomplished, consult factory for options.

Mounting Pans:

As an alternative to the universal rail mounting system, mounting pans are available in steel/powder coated, stainless steel, and aluminum. Please indicate when requesting quote.

Terminal Strip Assemblies:

Various options (i.e. marking tags, protective covers, jumpers, partitions,...) are available. Please provide detailed information requesting quote.

TSC Series - Screw Cover Terminal Enclosure

General Information

Adalet's Screw Cover Terminal Enclosures are available in Stainless Steel 304 & 316 and Carbon Steel. Adalet can also supply custom size enclosures, operators, and components to suit your EEx e application. Silicone gasket, slotted captive cover bolts, box & cover ground studs including an internal/external earthing stud, and universal rail mounting system are included as standard (except 050503, mtg. pan used).



Enclosure Certifications with Terminals		CE 0539 II 2GD EEx e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C) Ex e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C) Class I, Zone 1, AEx e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C) Class II, Division 2 IP66 Type 4, 4X (Stainless Steel only), 12, & 13	ATEX Directive 94/9/EC EN50014/EN50019 CSA E79-7, IEC 60079-7 UL 2279-7 UL 1604 IEC 60529 UL50	
Empty Enclosure Certifications		0539 II 2GD EEx e II Ex e II Class I, Zone 1, AEx e II Class II, Division 2 IP66 Type 4, 4X (Stainless Steel only), 12, & 13	ATEX Directive 94/9/EC EN50014/EN50019 CSA E79-7, IEC 60079-7 UL 2279-7 UL 1604 IEC 60529 UL50	
Working Voltage			1100 Volts Maximum	
Terminal Blocks	Various manufacturers		EEx e type with wire sizes 1.5mm up to 16mm	
Material	TSC4 Series TSC4X Series TSC4X6 Series TSC4 Series Gland Plates TSC4X Series Gland Plates TSC4X6 Series Gland Plates Mounting Pan		#14ga Cold Rolled Steel, Polyester Powder Coated ANSI 61 Gray #14ga Stainless Steel 304, Brushed Finish #14ga Stainless Steel 316, Brushed Finish #10ga Cold Rolled Steel, Polyester Powder Coated ANSI 61 Gray #10ga Stainless Steel 304, Brushed Finish #10ga Stainless Steel 316, Brushed Finish #14ga Cold Rolled Steel, Polyester Powder Coated White	
Gasket	Cover Gland Plates		Silicone Sponge Silicone Sponge	
Lid Fixing	All Types		1/4-20 Captive Slotted Hex Head Bolts - Stainless Steel	
Enclosure Mounting	All Types		External mounting feet with .31" clearance holes	
Gland Plate Hardware	All Types		300 Series stainless steel	
Grounding	Box & Cover	All Types	1/4-20 Stud with 300 series stainless steel hardware	
	Earthing Stud	All Types	1/4-20 Stud - All components brass	
Impact Resistant	All Types		7 Nm to EN50014/EN50019	
Ambient Temperature Range	All Types		-40°C to +70°C to EN50014	

3B-37

TSC Series - Quick Selector

Enclosure Selection

- Using the table below, select the terminal block size for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.

- To complete Catalog Number, Refer to Catalog Page indicated next to enclosure size.
- For Enclosure Selection using specific Terminal Block Manufacturers refer to following pages.

For Increased Safety Applications

- Using the table below, refer to the Heat Dissipation Table found on the catalog page for the enclosure size you selected.

TN4 Series Enclosure Sizes	Catalog Page	Maximum Physical Terminal Block Content													
		1.5mm	2.5mm	4mm	6mm	10mm	16mm	35mm	50mm	70mm	95mm	120mm	150mm	185mm	240mm
-050503	3B-47	8	6	6	5	0	0	0	0	0	0	0	0	0	0
-060604	3B-48	13	11	10	8	6	0	0	0	0	0	0	0	0	0
-070704	3B-49	18	15	14	11	9	0	0	0	0	0	0	0	0	0
-080804	3B-50	46	19	17	28	11	9	0	0	0	0	0	0	0	0
-101006	3B-51	66	54	50	40	32	14	0	0	0	0	0	0	0	0
-101008	3B-52	66	54	50	40	32	14	0	0	0	0	0	0	0	0
-120604	3B-53	43	36	33	27	21	0	0	0	0	0	0	0	0	0
-120605	3B-54	43	36	33	27	21	0	0	0	0	0	0	0	0	0
-120805	3B-55	86	36	33	54	21	18	0	0	0	0	0	0	0	0
-120806	3B-56	86	36	33	54	21	18	0	0	0	0	0	0	0	0
-121206	3B-57	129	108	99	81	42	18	0	0	0	0	0	0	0	0
-121208	3B-58	129	108	99	81	42	18	0	0	0	0	0	0	0	0
-151506	3B-59	236	192	176	144	87	48	18	14	0	0	0	0	0	0
-151508	3B-60	236	192	176	144	87	48	18	14	0	0	0	0	0	0
-161206	3B-61	192	156	144	117	64	26	0	0	0	0	0	0	0	0
-161208	3B-62	192	156	144	117	64	26	0	0	0	0	0	0	0	0
-161606	3B-63	256	208	192	156	96	52	20	16	14	0	0	0	0	0
-161608	3B-64	256	208	192	156	96	52	20	16	14	0	0	0	0	0

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.
- Quantities shown above are for Adalet supplied standard terminal blocks.

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size (H X W) for your application.

- To complete catalog number, refer to catalog page indicated next to the enclosure size.
- For Enclosure Selection using specific Terminal Block Manufacturers refer to following pages.

For Increased Safety Applications

- Using the table below, find the catalog page for the enclosure size you selected.
- Refer to the Heat Dissipation Table found on the catalog page for the enclosure size you selected.

Manufacturer - Entelec

Enclosure Size	Cat. Page	MA2,5/5...	MA2,5/5.1...	M4/6...	M6/8...	M10/10...	M16/12...	M35/16...	M4/6.H...	M1,5/6.HH	MTC6	MA2,5/5.SN	M4/6.SN...	M4/6.SNB
-050503	3B-47	7	7	6	4	0	0	0	0	0	6	7	6	6
-060604	3B-48	12	12	10	8	6	0	0	10	10	10	12	10	10
-070704	3B-49	17	17	14	11	9	0	0	14	14	14	17	14	14
-080804	3B-50	44	44	38	28	11	9	0	19	19	38	44	38	38
-101006	3B-51	64	64	54	40	32	13	0	54	54	54	64	54	54
-101008	3B-52	64	64	54	40	32	13	0	54	54	54	64	54	54
-120604	3B-53	42	42	35	27	21	0	0	35	35	35	42	35	35
-120605	3B-54	42	42	35	27	21	0	0	35	35	35	42	35	35
-120805	3B-55	84	84	70	54	21	18	0	35	35	70	84	70	70
-120806	3B-56	84	84	70	54	21	18	0	35	35	70	84	70	70
-121206	3B-57	126	126	105	81	42	18	0	70	70	105	126	105	105
-121208	3B-58	126	126	105	81	42	18	0	70	70	105	126	105	105
-151506	3B-59	228	228	192	144	87	48	18	144	144	192	228	192	192
-151508	3B-60	228	228	192	144	87	48	18	144	144	192	228	192	192
-161206	3B-61	186	186	156	117	62	26	0	104	104	156	186	156	156
-161208	3B-62	186	186	156	117	62	26	0	104	104	156	186	156	156
-161606	3B-63	248	248	208	156	93	52	19	208	156	208	248	208	208
-161608	3B-64	248	248	208	156	93	52	19	208	156	208	248	208	208

Notes:

- See next page for more Entelec terminal blocks.
- All quantities shown are for terminal blocks installed in vertical rows.

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size (H X W) for your application.

- To complete catalog number, refer to catalog page indicated next to the enclosure size.
- For Enclosure Selection using specific Terminal Block Manufacturers refer to following pages.

For Increased Safety Applications

- Using the table below, find the catalog page for the enclosure size you selected.
- Refer to the Heat Dissipation Table found on the catalog page for the enclosure size you selected.

Manufacturer - Entelec

Enclosure Size	Cat. Page	M6/8.SNB	M4/8.SN	DR4/6...	M35/26.FF	M70/31.FF	M35/26.AF	M70.31.AF	D4/6...ADO	D4/6.ADO.T...	D4/6.ADO...	D6/8...ADO	D6/8.ADO...
-050503	3B-47	4	0	7	0	0	0	0	6	6	6	4	4
-060604	3B-48	8	8	11	0	0	0	0	10	10	10	8	8
-070704	3B-49	11	11	30	0	0	0	0	14	14	14	11	11
-080804	3B-50	28	14	40	0	0	0	0	19	19	19	14	14
-101006	3B-51	40	40	84	6	0	6	0	54	54	54	40	40
-101008	3B-52	40	40	84	6	0	6	0	54	54	54	40	40
-120604	3B-53	27	27	36	0	0	0	0	35	35	35	27	27
-120605	3B-54	27	27	36	0	0	0	0	35	35	35	27	27
-120805	3B-55	54	27	72	0	0	0	0	35	35	35	27	27
-120806	3B-56	54	27	72	0	0	0	0	35	35	35	27	27
-121206	3B-57	81	54	144	8	0	8	0	105	105	105	81	81
-121208	3B-58	81	54	144	8	0	8	0	105	105	105	81	81
-151506	3B-59	144	108	245	11	0	11	0	192	192	192	144	144
-151508	3B-60	144	108	245	11	0	11	0	192	192	192	144	144
-161206	3B-61	117	78	212	12	0	12	0	156	156	156	117	117
-161208	3B-62	117	78	212	12	0	12	0	156	156	156	117	117
-161606	3B-63	156	117	265	12	10	12	10	208	208	208	156	156
-161608	3B-64	156	117	265	12	10	12	10	208	208	208	156	156

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.

- To complete catalog number, refer to catalog page indicated next to the enclosure size.

For Increased Safety Applications

- Using the table below, find the catalog page for the enclosure size you selected.
- Refer to the Heat Dissipation Table found on the catalog page for the enclosure size you selected.

Manufacturer - Weidmuller

Enclosure Size	Cat. Page	WDU2.5N	WDU2.5	WDU4	WDU6	WDU10	WDU16	WDU35	WWF35	ZDU2.5	ZDU4	ZDU6	AKZ2.5	AKZ4
-050503	3B-47	8	0	0	0	0	0	0	0	0	0	0	7	6
-060604	3B-48	13	13	13	8	0	0	0	0	13	11	8	12	10
-070704	3B-49	18	18	18	11	9	0	0	0	18	15	11	34	28
-080804	3B-50	46	23	23	14	11	0	0	0	23	19	14	46	36
-101006	3B-51	66	66	66	42	17	14	0	0	66	54	40	99	81
-101008	3B-52	66	66	66	42	17	14	0	0	66	54	40	99	81
-120604	3B-53	43	43	43	27	0	0	0	0	43	36	27	43	35
-120605	3B-54	43	43	43	27	0	0	0	0	43	36	27	43	35
-120805	3B-55	86	43	43	27	22	0	0	0	43	36	27	86	70
-120806	3B-56	86	43	43	27	22	0	0	0	43	36	27	86	70
-121206	3B-57	129	86	86	54	44	18	0	0	86	72	54	172	140
-121208	3B-58	129	86	86	54	44	18	0	0	86	72	54	172	140
-151506	3B-59	236	177	177	111	58	48	18	0	174	144	108	290	240
-151508	3B-60	236	177	177	111	58	48	18	0	174	144	108	290	240
-161206	3B-61	192	128	128	80	64	26	0	0	126	104	78	252	208
-161208	3B-62	192	128	128	80	64	26	0	0	126	104	78	252	208
-161606	3B-63	256	192	192	120	96	52	20	11	189	156	117	315	260
-161608	3B-64	256	192	192	120	96	52	20	11	189	156	117	315	260

Notes:

- See next page for more Weidmuller terminal blocks.
- All quantities shown are for terminal blocks installed in vertical rows.

3B-41

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.

- To complete Catalog Number, Refer to Catalog Page indicated next to the enclosure size you selected.

For Increased Safety Applications

- Using the table below, find the catalog page for the enclosure size you selected.
- Refer to the Heat Dissipation Table found on the catalog page for the enclosure size you selected.

Manufacturer - Weidmuller

Enclosure Size	Cat. Page	AKE2.5	AKE4	SAK2.5	SAK4	SAK6N	SAK10	SAK16	SAK35N	SAK70	SAKG 28 I	SAKG 28 II	SAKG 28 III
-050503	3B-47	7	6	6	6	5	0	0	0	0	0	0	0
-060604	3B-48	12	9	11	10	8	6	0	0	0	0	0	0
-070704	3B-49	34	13	15	14	11	9	0	0	0	0	0	0
-080804	3B-50	46	34	19	17	28	11	9	0	0	0	0	0
-101006	3B-51	99	72	54	50	40	32	14	0	0	0	0	0
-101008	3B-52	99	72	54	50	40	32	14	0	0	0	0	0
-120604	3B-53	43	31	36	33	27	21	0	0	0	0	0	0
-120605	3B-54	43	31	36	33	27	21	0	0	0	0	0	0
-120805	3B-55	86	62	36	33	54	21	18	0	0	0	0	0
-120806	3B-56	86	62	36	33	54	21	18	0	0	0	0	0
-121206	3B-57	172	93	108	99	81	42	18	0	0	0	0	0
-121208	3B-58	172	93	108	99	81	42	18	0	0	0	0	0
-151506	3B-59	290	172	192	176	144	87	48	18	0	9	9	9
-151508	3B-60	290	172	192	176	144	87	48	18	0	9	9	9
-161206	3B-61	252	138	156	144	117	64	26	0	0	0	0	0
-161208	3B-62	252	138	156	144	117	64	26	0	0	0	0	0
-161606	3B-63	315	230	208	192	156	96	52	20	14	10	10	10
-161608	3B-64	315	230	208	192	156	96	52	20	14	10	10	10

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.

3B-42

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.

- To complete Catalog Number, Refer to Catalog Page indicated next to the enclosure size you selected.

For Increased Safety Applications

- Using the table below, find the catalog page for the enclosure size you selected.
- Refer to the Heat Dissipation Table found on the catalog page for the enclosure size you selected.

Manufacturer - Woretz

Enclosure Size	Cat. Page	30128 gr	3424 gr	3425 gr	3426 gr	3427 gr	3428 gr	3429 gr	30841 gr Ex	30842 gr Ex	30843 gr Ex	30844 gr Ex	3468 gr Ex	30111 gr	3301 gr
-050503	3B-47	7	7	5	0	0	0	0	3	0	0	0	0	7	7
-060604	3B-48	11	11	8	0	0	0	0	5	4	0	0	0	11	11
-070704	3B-49	15	15	11	10	0	0	0	7	6	0	0	0	15	15
-080804	3B-50	19	19	14	13	0	0	0	9	8	7	0	0	19	19
-101006	3B-51	56	56	42	18	15	0	0	26	22	10	0	0	56	56
-101008	3B-52	56	56	42	18	15	0	0	26	22	10	0	0	56	56
-120604	3B-53	36	36	27	0	0	0	0	17	15	0	0	0	36	36
-120605	3B-54	36	36	27	0	0	0	0	17	15	0	0	0	36	36
-120805	3B-55	36	36	27	24	0	0	0	17	15	13	0	0	36	36
-120806	3B-56	36	36	27	24	0	0	0	17	15	13	0	0	36	36
-121206	3B-57	108	108	81	48	20	0	0	51	30	13	0	0	108	108
-121208	3B-58	108	108	81	48	20	0	0	51	30	13	0	0	108	108
-151506	3B-59	196	147	111	99	54	21	0	92	60	36	14	0	196	147
-151508	3B-60	196	147	111	99	54	21	0	92	60	36	14	0	196	147
-161206	3B-61	159	159	120	70	29	0	0	75	44	19	0	0	159	159
-161208	3B-62	159	159	120	70	29	0	0	75	44	19	0	0	159	159
-161606	3B-63	212	212	160	105	58	23	14	100	66	38	15	11	212	212
-161608	3B-64	212	212	160	105	58	23	14	100	66	38	15	11	212	212

Notes:

- See next page for more Woretz terminal blocks.
- All quantities shown are for terminal blocks installed in vertical rows.

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.

- To complete Catalog Number, Refer to Catalog Page indicated next to the enclosure size you selected.

For Increased Safety Applications

- Using the table below, find the catalog page for the enclosure size you selected.
- Refer to the Heat Dissipation Table found on the catalog page for the enclosure size you selected.

Manufacturer - Woretz

Enclosure Size	Cat. Page	3302 gr	3303 gr	3304 gr	3305 gr	3306 gr	3712 gr Ex	3713 gr Ex	3713/16 gr Ex	3714 gr Ex	3715 gr Ex	30831 gr Ex	30832 gr Ex	30833 gr Ex	30834 gr Ex
-050503	3B-47	5	0	0	0	0	3	0	0	0	0	3	0	0	0
-060604	3B-48	8	0	0	0	0	5	4	0	0	0	5	4	0	0
-070704	3B-49	11	10	0	0	0	6	6	0	0	0	7	6	0	0
-080804	3B-50	14	13	0	0	0	16	7	6	0	0	18	8	7	0
-101006	3B-51	42	18	15	0	0	24	20	9	0	0	26	22	10	0
-101008	3B-52	42	18	15	0	0	24	20	9	0	0	26	22	10	0
-120604	3B-53	27	0	0	0	0	15	13	0	0	0	17	15	0	0
-120605	3B-54	27	0	0	0	0	15	13	0	0	0	17	15	0	0
-120805	3B-55	27	24	0	0	0	30	13	11	0	0	34	15	13	0
-120806	3B-56	27	24	0	0	0	30	13	11	0	0	34	15	13	0
-121206	3B-57	81	48	20	0	0	45	26	11	0	0	51	30	13	0
-121208	3B-58	81	48	20	0	0	45	26	11	0	0	51	30	13	0
-151506	3B-59	111	99	54	21	0	84	54	30	13	0	92	60	36	14
-151508	3B-60	111	99	54	21	0	84	54	30	13	0	92	60	36	14
-161206	3B-61	120	70	29	0	0	69	40	17	0	0	75	44	19	0
-161208	3B-62	120	70	29	0	0	69	40	17	0	0	75	44	19	0
-161606	3B-63	160	105	58	23	13	92	60	34	14	11	100	66	38	15
-161608	3B-64	160	105	58	23	13	92	60	34	14	11	100	66	38	15

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.

3B-44

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.

- To complete Catalog Number, Refer to Catalog Page indicated next to the enclosure size you selected.

For Increased Safety Applications

- Using the table below, find the catalog page for the enclosure size you selected.
- Refer to the Heat Dissipation Table found on the catalog page for the enclosure size you selected.

Manufacturer - Phoenix

Enclosure Size	Cat. Page	UK 2,5 N	UK 3 N	UK 5 N	UK 6 N	UK 10 N	UK 16 N	UK 35	UKH 50	MBK 2,5/E-EX	MBK 6/E	UK 3-RETURN	MZB 1,5	MZB 1,5-NS 35	MZDB 1,5	MZDB 1,5-NS 35	ZFK 1,5	ZKF 2,5	ZFK 4	ZFK 6
-050503	3B-47	8	8	6	5	0	0	0	0	6	5	8	8	8	4	4	0	0	0	0
-060604	3B-48	12	12	10	8	6	0	0	0	10	8	12	12	12	6	6	16	12	10	8
-070704	3B-49	17	17	14	11	9	0	0	0	28	11	17	17	17	8	8	22	17	14	11
-080804	3B-50	44	44	38	28	11	9	0	0	38	28	22	44	44	22	22	28	22	19	14
-101006	3B-51	64	64	54	40	32	13	0	0	81	40	64	96	64	48	32	80	64	54	40
-101008	3B-52	64	64	54	40	32	13	0	0	81	40	64	96	64	48	32	80	64	54	40
-120604	3B-53	42	42	35	26	21	0	0	0	35	26	42	42	42	21	21	52	42	35	26
-120605	3B-54	42	42	35	26	21	0	0	0	35	26	42	42	42	21	21	52	42	35	26
-120805	3B-55	84	84	70	52	21	18	0	0	70	52	42	84	84	42	42	52	42	35	26
-120806	3B-56	84	84	70	52	21	18	0	0	70	52	42	84	84	42	42	52	42	35	26
-121206	3B-57	126	126	105	78	42	18	0	0	140	78	126	126	126	63	63	104	84	70	52
-121208	3B-58	126	126	105	78	42	18	0	0	140	78	126	126	126	63	63	104	84	70	52
-151506	3B-59	224	224	188	144	84	48	19	14	235	144	224	224	224	112	112	210	168	141	108
-151508	3B-60	224	224	188	144	84	48	19	14	235	144	224	224	224	112	112	210	168	141	108
-161206	3B-61	183	183	153	117	62	26	0	0	204	117	183	183	183	93	93	152	122	102	78
-161208	3B-62	183	183	153	117	62	26	0	0	204	117	183	183	183	93	93	152	122	102	78
-161606	3B-63	244	244	204	156	93	52	21	16	255	195	244	305	244	155	124	228	183	153	117
-161608	3B-64	244	244	204	156	93	52	21	16	255	195	244	305	244	155	124	228	183	153	117

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.

3B-45

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.

- To complete Catalog Number, Refer to Catalog Page indicated next to the enclosure size you selected.

For Increased Safety Applications

- Using the table below, find the catalog page for the enclosure size you selected.
- Refer to the Heat Dissipation Table found on the catalog page for the enclosure size you selected.

Manufacturer - Wago

Enclosure Size	Cat. Page	280-991	281-691	281-991	282-691	284-691	283-691	285-691	280-698	281-693	264-120	264-220	264-125	264-225
-050503	3B-47	0	0	0	0	0	0	0	8	0	7	5	7	4
-060604	3B-48	13	11	11	8	6	0	0	13	11	11	8	11	6
-070704	3B-49	18	15	15	11	9	0	0	18	15	15	11	15	9
-080804	3B-50	22	19	19	15	12	10	0	22	19	40	28	40	24
-101006	3B-51	64	54	54	42	34	14	0	64	54	84	60	56	34
-101008	3B-52	64	54	54	42	34	14	0	64	54	84	60	56	34
-120604	3B-53	42	36	36	27	22	0	0	42	36	37	26	37	22
-120605	3B-54	42	36	36	27	22	0	0	42	36	37	26	37	22
-120805	3B-55	42	36	36	27	22	18	0	42	36	74	52	74	44
-120806	3B-56	42	36	36	27	22	18	0	42	36	74	52	74	44
-121206	3B-57	84	72	72	54	44	18	12	126	72	111	78	111	66
-121208	3B-58	84	72	72	54	44	18	12	126	72	111	78	111	66
-151506	3B-59	168	144	144	111	87	48	17	168	144	196	140	196	116
-151508	3B-60	168	144	144	111	87	48	17	168	144	196	140	196	116
-161206	3B-61	122	104	104	80	64	27	18	183	104	162	114	162	96
-161208	3B-62	122	104	104	80	64	27	18	183	104	162	114	162	96
-161606	3B-63	244	208	156	120	96	54	18	244	156	270	190	216	128
-161608	3B-64	244	208	156	120	96	54	18	244	156	270	190	216	128

Manufacturer - Wieland

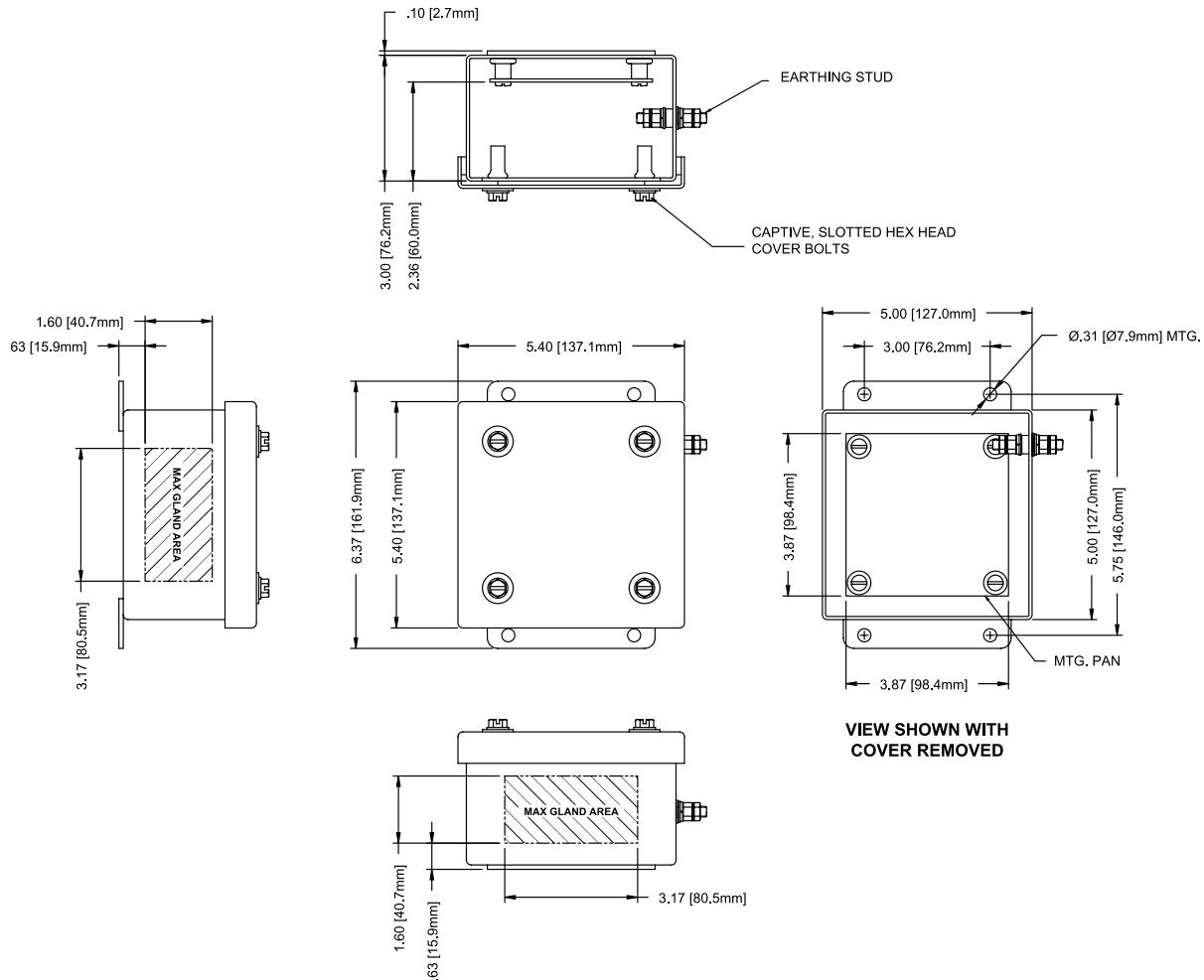
Enclosure Size	Cat. Page	WK 2.5/U	WK 4/U	WK 6/U	WK1 35/U	WKN 10/U	WKN 16/U	WKN 35/U
-050503	3B-47	7	6	4	0	0	0	0
-060604	3B-48	12	10	8	0	0	0	0
-070704	3B-49	17	14	11	0	8	0	0
-080804	3B-50	22	19	14	0	11	0	0
-101006	3B-51	66	54	40	0	16	13	0
-101008	3B-52	66	54	40	0	16	13	0
-120604	3B-53	43	36	27	0	0	0	0
-120605	3B-54	43	36	27	0	0	0	0
-120805	3B-55	43	36	27	0	21	0	0
-120806	3B-56	43	36	27	0	21	0	0
-121206	3B-57	129	108	81	0	42	18	0
-121208	3B-58	129	108	81	0	42	18	0
-151506	3B-59	232	192	108	29	87	48	18
-151508	3B-60	232	192	108	29	87	48	18
-161206	3B-61	189	159	117	0	62	26	0
-161208	3B-62	189	159	117	0	62	26	0
-161606	3B-63	252	212	156	31	93	52	19
-161608	3B-64	252	212	156	31	93	52	19

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.

3B-46

TSC Series - Screw Cover Terminal Enclosure 5"x 5"x 3"



Enclosure Material	Catalog Number
SS316L	TSC4X6-050503
SS304	TSC4X-050503
Steel, Powder Coated	TSC4-050503

Notes:

1. For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-050503U).
2. See the end of this section for applications using multiple terminal block types.
3. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
4. For Conduit/Cable entry spacings refer to the end of this section.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	41					
10	19					Maximum fill permitted based solely on minimum wire bending space and electrical clearances
16	6	13	51			
20	2	7	14			
25		3	8	16		
35	Additional testing required, Consult Factory			2	6	15
50					5	13

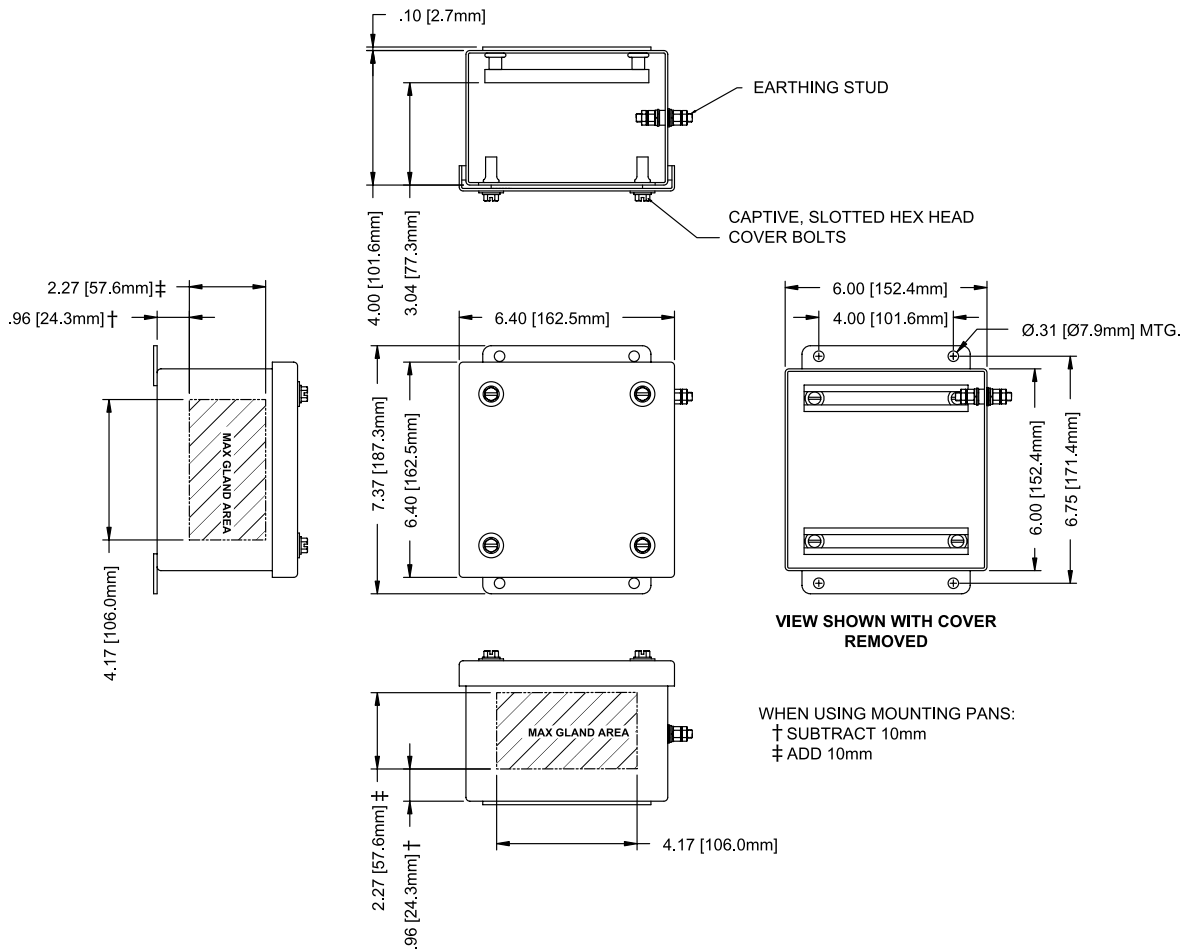
Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

3B-47

TSC Series - Screw Cover Terminal Enclosure 6"x 6"x 4"



3B-48

Enclosure Material	Catalog Number
SS316L	TSC4X6-060604
SS304	TSC4X-060604
Steel, Powder Coated	TSC4-060604

Notes:

1. For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-060604U).
2. See the end of this section for applications using multiple terminal block types.
3. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
4. For Conduit/Cable entry spacings refer to the end of this section.

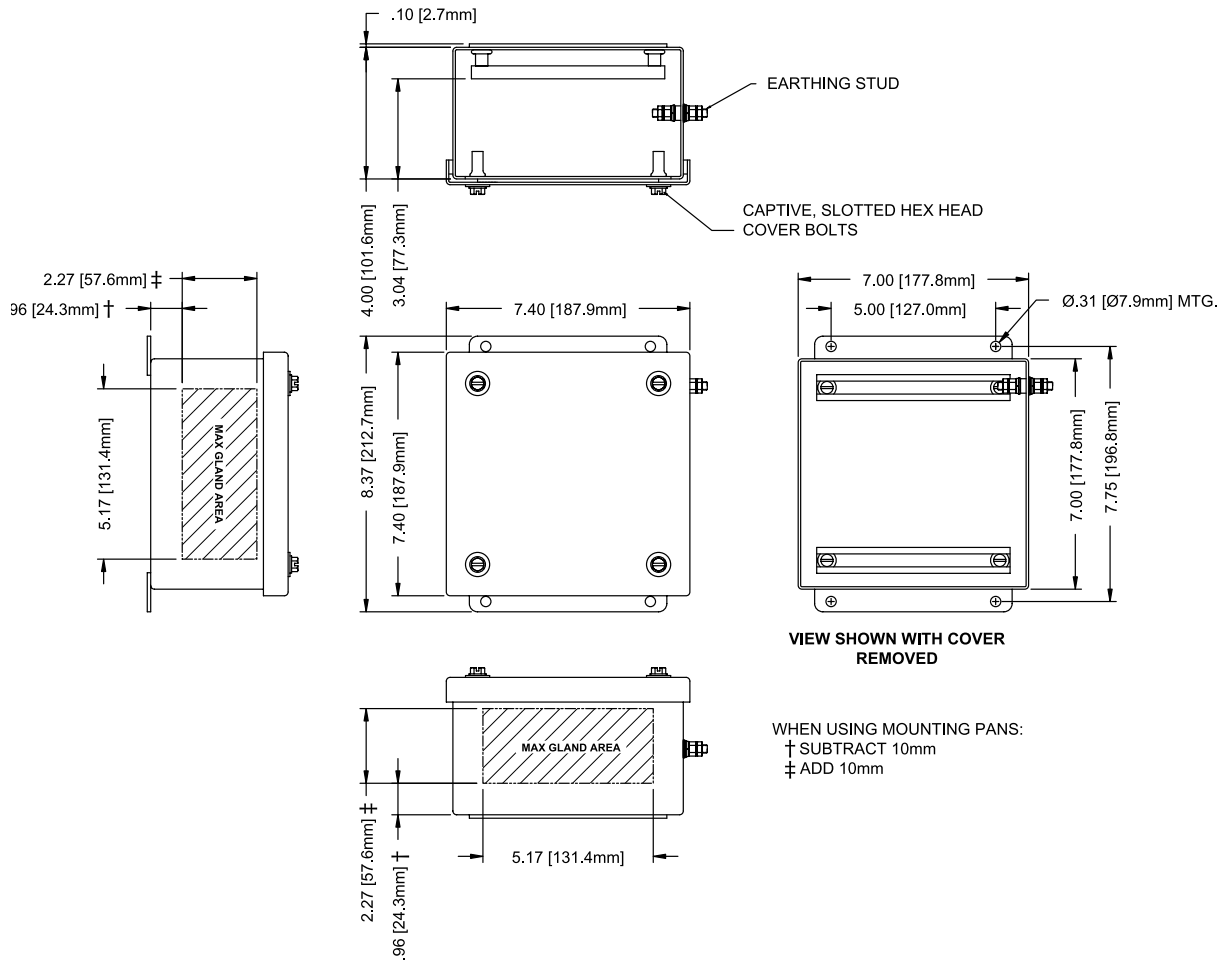
Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	48					
10	23					
16	8	15	60	Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
20	3	9	17			
25		9	9	19		
35	Additional testing required, Consult Factory		2	7	18	
50				1	6	15

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

TSC Series - Screw Cover Terminal Enclosure 7"x 7"x 4"



WHEN USING MOUNTING PANS:
 † SUBTRACT 10mm
 ‡ ADD 10mm

Enclosure Material	Catalog Number
SS316L	TSC4X6-070704
SS304	TSC4X-070704
Steel, Powder Coated	TSC4-070704

Notes:

1. For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-070704U).
2. See the end of this section for applications using multiple terminal block types.
3. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
4. For Conduit/Cable entry spacings refer to the end of this section.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	51					
10	25					Maximum fill permitted based solely on minimum wire bending space and electrical clearances
16	8	16	64			
20	3	9	18			
25		4	10	20		
35	Additional testing required, Consult Factory		3	8	20	
50				1	6	16

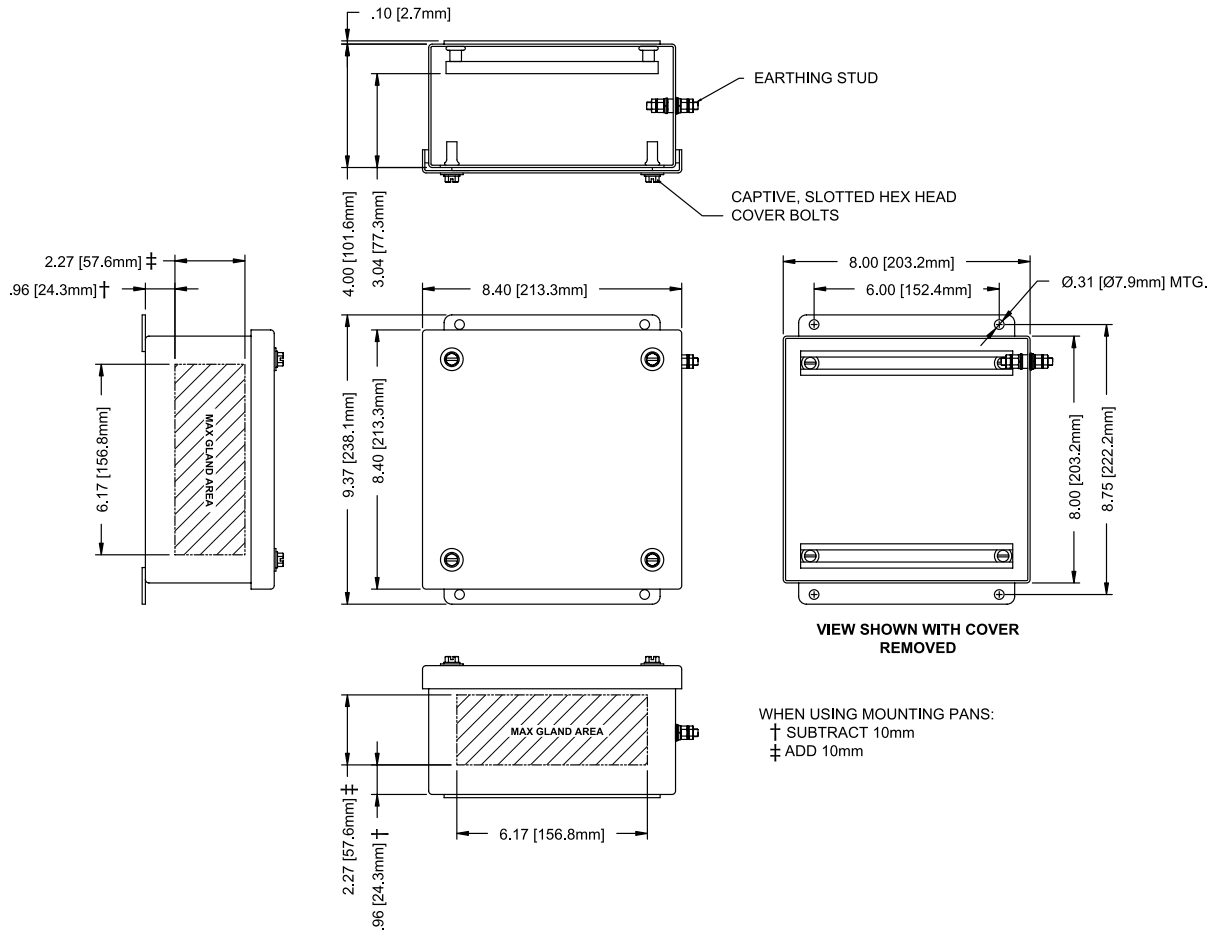
Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

3B-49

TSC Series - Screw Cover Terminal Enclosure 8"x 8"x 4"



3B-50

Enclosure Material	Catalog Number
SS316L	TSC4X6-080804
SS304	TSC4X-080804
Steel, Powder Coated	TSC4-080804

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	55					
10	27					Maximum fill permitted based solely on minimum wire bending space and electrical clearances
16	9	17	69			
20	3	10	20			
25		5	11	22		
35	Additional testing required, Consult Factory		3	8	21	
50				1	7	17

Notes:

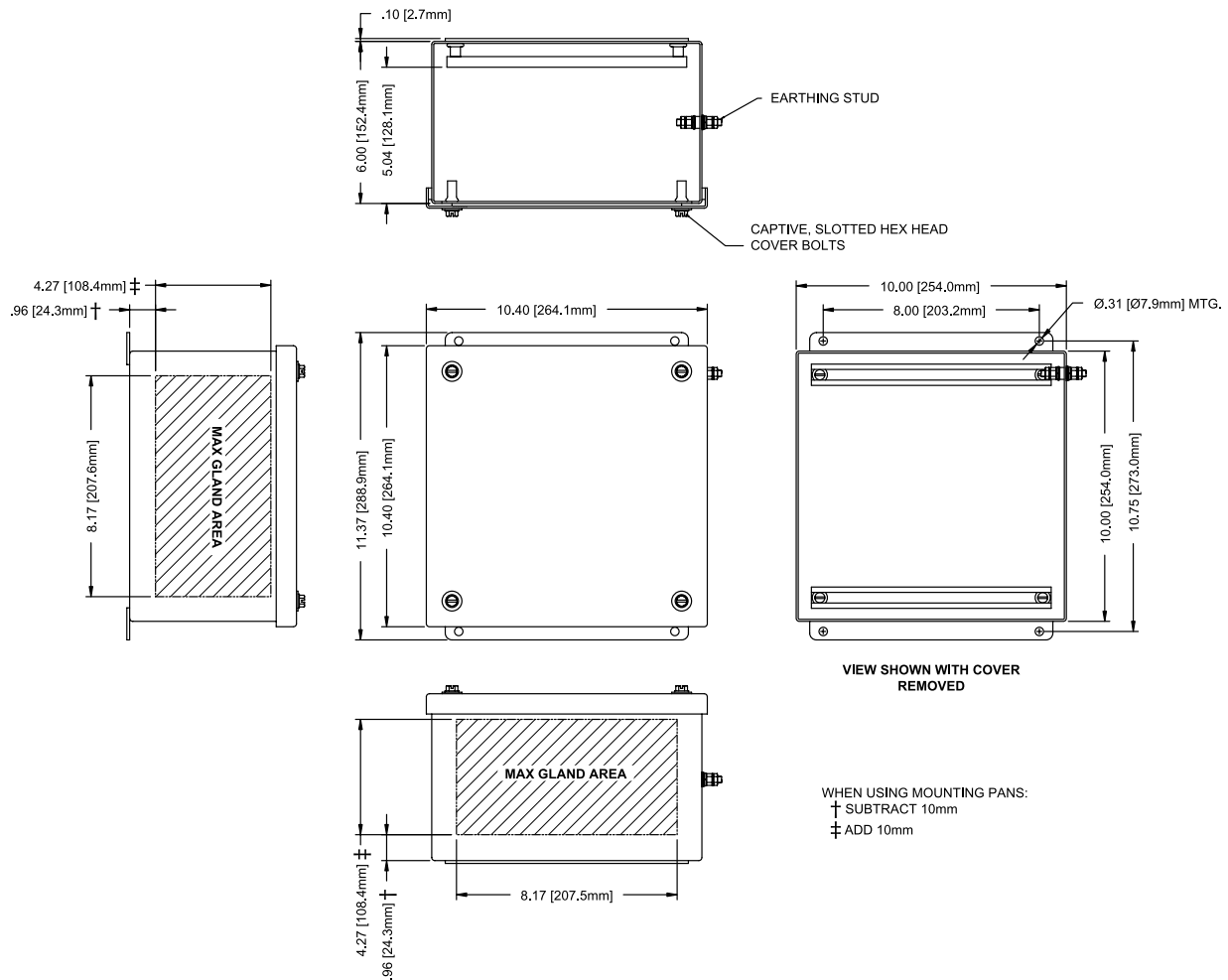
1. For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-080804U).
2. See the end of this section for applications using multiple terminal block types.
3. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
4. For Conduit/Cable entry spacings refer to the end of this section.

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

TSC Series - Screw Cover Terminal Enclosure 10''x 10''x 6''



Enclosure Material	Catalog Number
SS316L	TSC4X6-101006
SS304	TSC4X-101006
Steel, Powder Coated	TSC4-101006

Notes:

1. For Gland Plates add suffixes -A (top), -B (bottom), -C (left), -D (right) immediately following the catalog number (i.e. TSC4X6-101006-ABCD).
2. For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-101006U).
3. See the end of this section for applications using multiple terminal block types.
4. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
5. For Conduit/Cable entry spacings refer to the end of this section.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	77					
10	37					
16	13	25	97	Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
20	5	14	28			
25		7	16	30		
35	Additional testing required, Consult Factory		4	12	30	
50				1	9	24

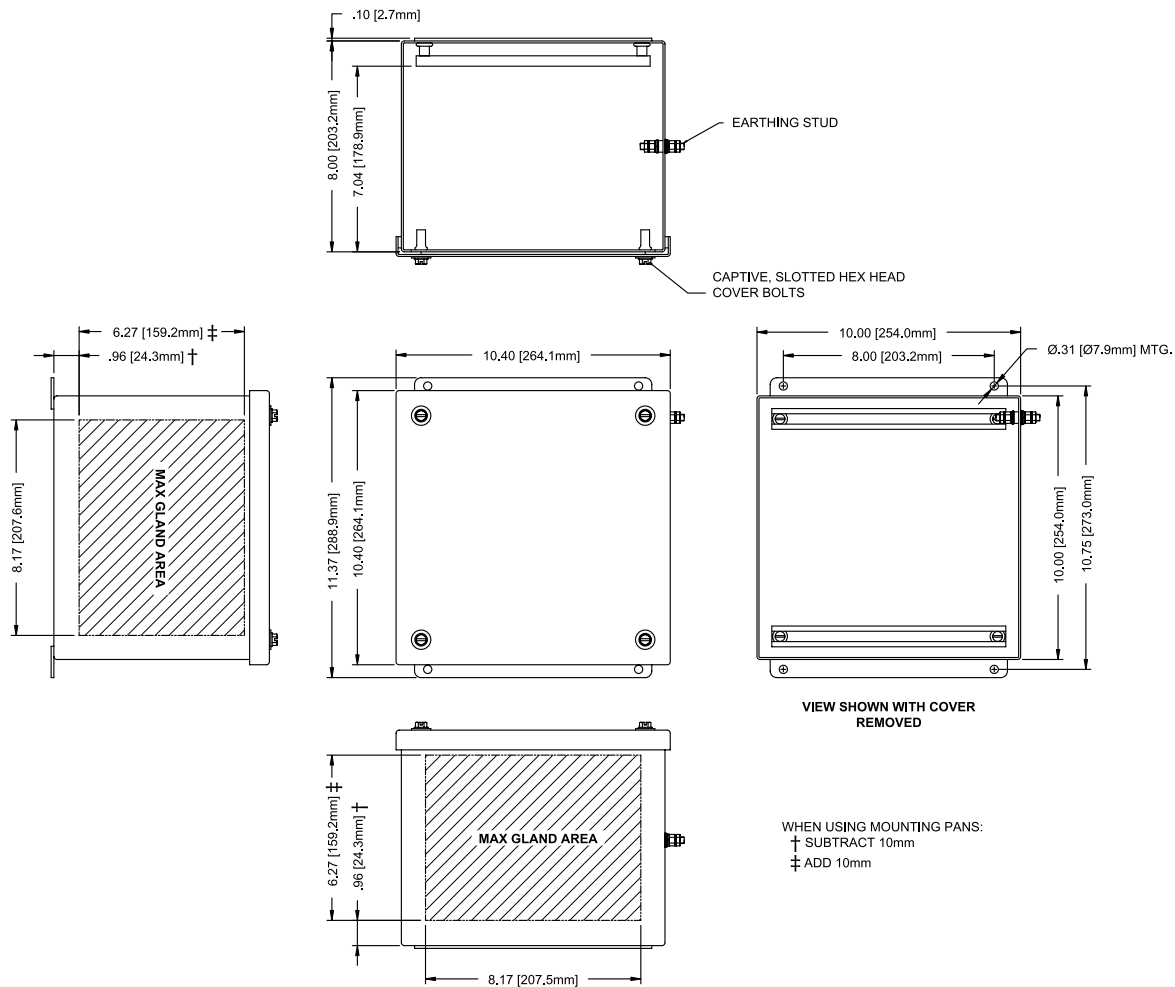
Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

3B-51

TSC Series - Screw Cover Terminal Enclosure 10''x 10''x 8''



3B-52

Enclosure Material	Catalog Number
SS316L	TSC4X6-101008
SS304	TSC4X-101008
Steel, Powder Coated	TSC4-101008

Notes:

- For Gland Plates add suffixes -A (top), -B (bottom), -C (left), -D (right) immediately following the catalog number (i.e. TSC4X6-101008-ABCD).
- For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-101008U).
- See the end of this section for applications using multiple terminal block types.
- For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
- For Conduit/Cable entry spacings refer to the end of this section.

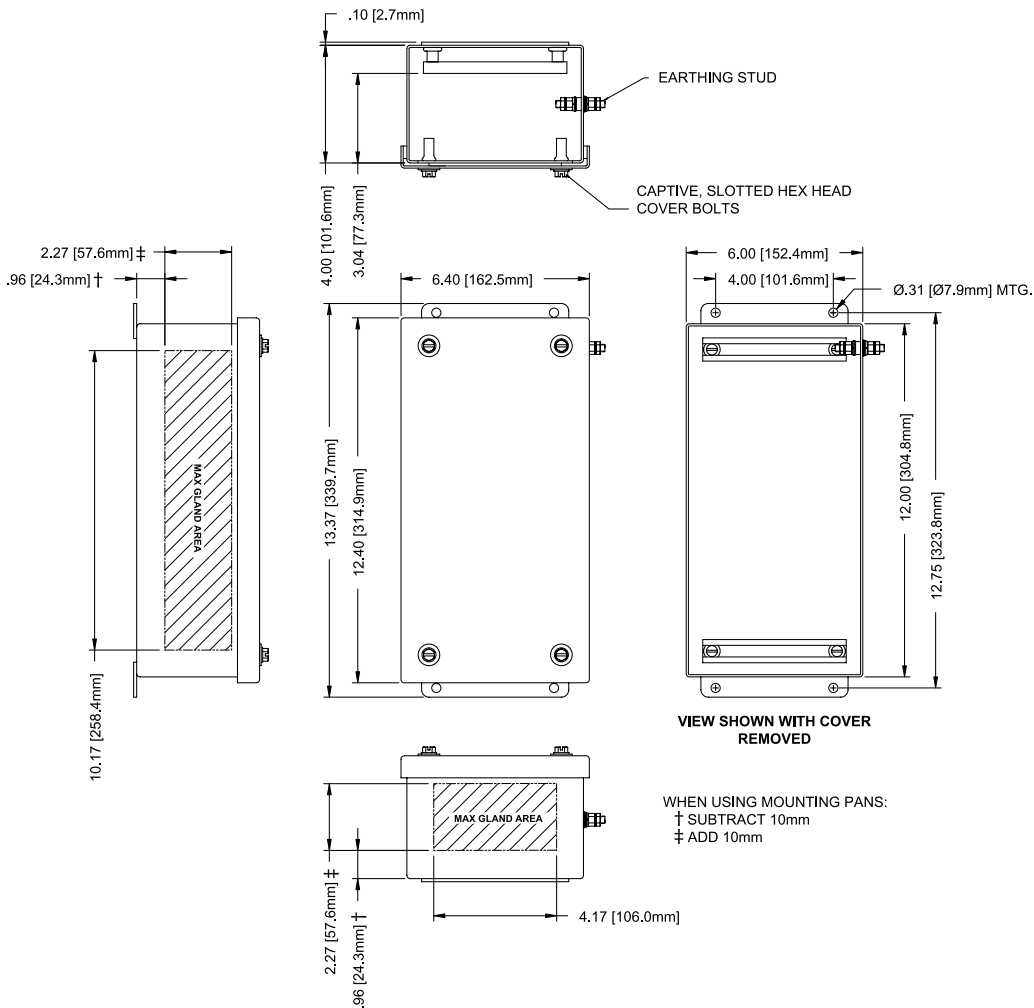
Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	92					
10	45			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	15	30	116			
20	6	17	33			
25		8	19			
35	Additional testing required, Consult Factory		5	14	35	
50				2	11	29

Qualifying Enclosure for Increased Safety Certification

- Find the Wire Size (conductor) you intend to use to connect to terminal block.
- Find the Current (amperage) you intend to apply to the conductor.
- The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
- If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

TSC Series - Screw Cover Terminal Enclosure 12''x 6''x 4''



WHEN USING MOUNTING PANS:
 † SUBTRACT 10mm
 ‡ ADD 10mm

Enclosure Material	Catalog Number
SS316L	TSC4X6-120604
SS304	TSC4X-120604
Steel, Powder Coated	TSC4-120604

Notes:

1. For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-120604U).
2. See the end of this section for applications using multiple terminal block types.
3. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
4. For Conduit/Cable entry spacings refer to the end of this section.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	52					
10	25					Maximum fill permitted based solely on minimum wire bending space and electrical clearances
16	8	17	66			
20	3	9	19			
25		4	10	20		
35	Additional testing required, Consult Factory		3	8	20	
50				1	6	16

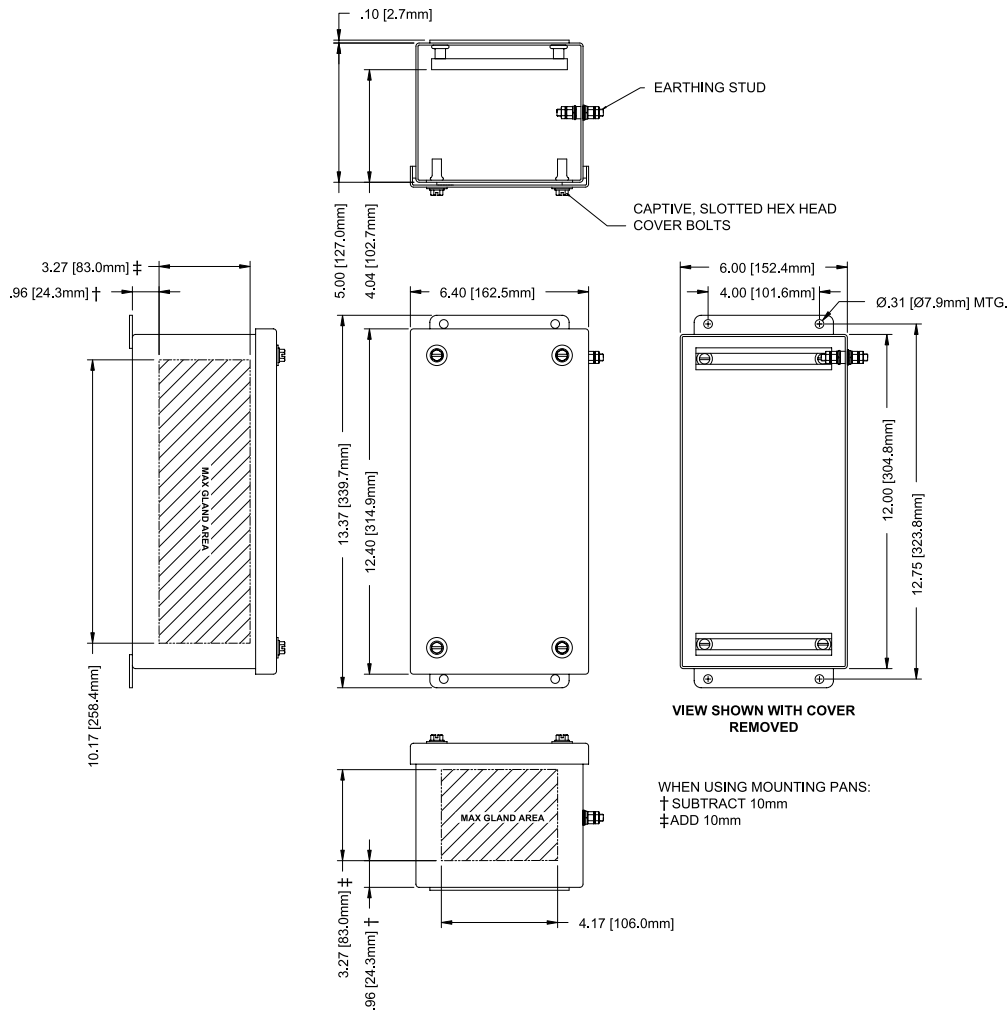
Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

3B-53

TSC Series - Screw Cover Terminal Enclosure 12"x 6"x 5"



3B-54

Enclosure Material	Catalog Number
SS316L	TSC4X6-120605
SS304	TSC4X-120605
Steel, Powder Coated	TSC4-120605

Notes:

1. For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-120605U).
2. See the end of this section for applications using multiple terminal block types.
3. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
4. For Conduit/Cable entry spacings refer to the end of this section.

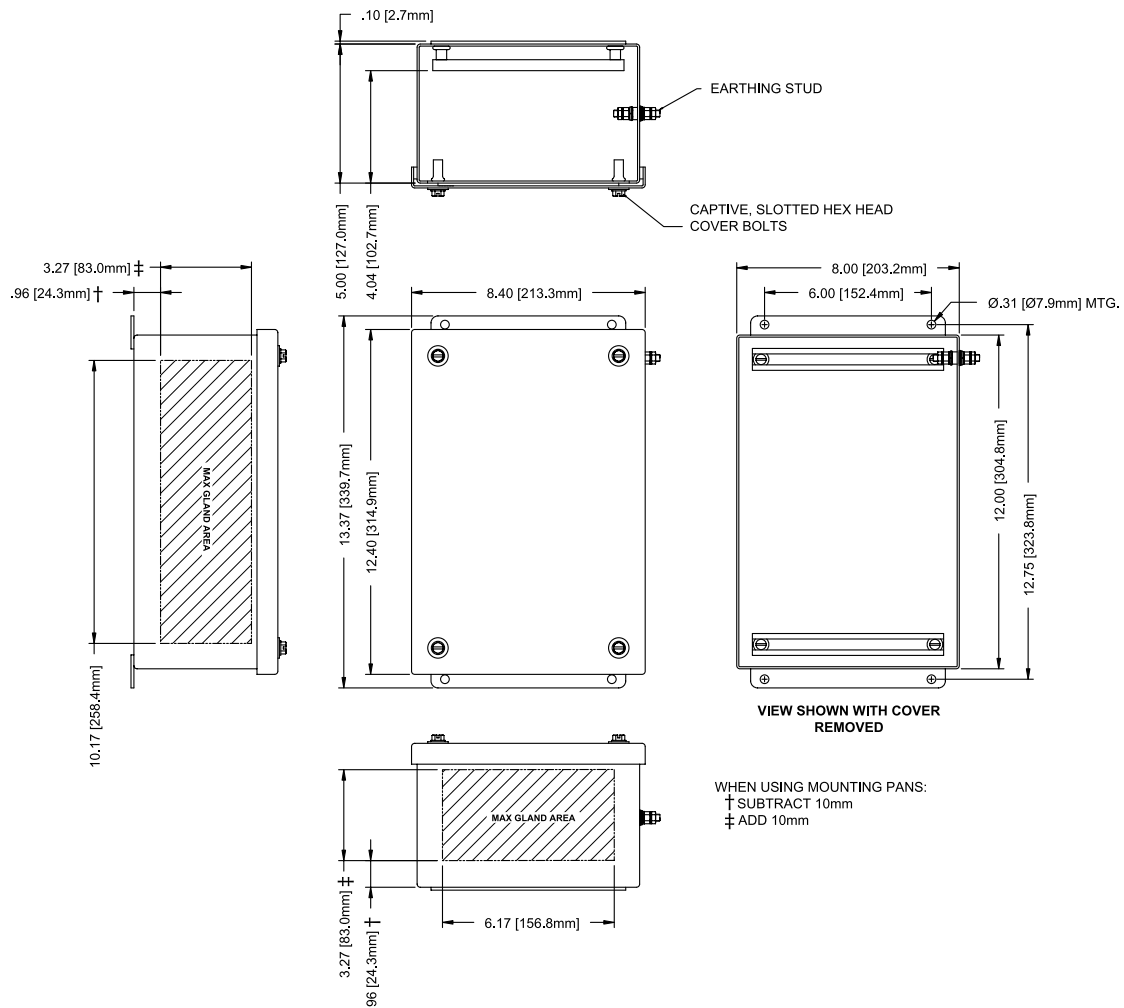
Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	59					
10	29			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	10	19	74			
20	4	11	21			
25		5	12	23		
35	Additional testing required, Consult Factory			3	9	23
50					1	7

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

TSC Series - Screw Cover Terminal Enclosure 12''x 8''x 5''



WHEN USING MOUNTING PANS:
 † SUBTRACT 10mm
 ‡ ADD 10mm

Enclosure Material	Catalog Number
SS316L	TSC4X6-120805
SS304	TSC4X-120805
Steel, Powder Coated	TSC4-120805

Notes:

1. For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-120805U).
2. See the end of this section for applications using multiple terminal block types.
3. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
4. For Conduit/Cable entry spacings refer to the end of this section.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	67					
10	32					
16	11	21	84	Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
20	4	12	24			
25		6	14	26		
35	Additional testing required, Consult Factory		4	10	26	
50				1	8	21

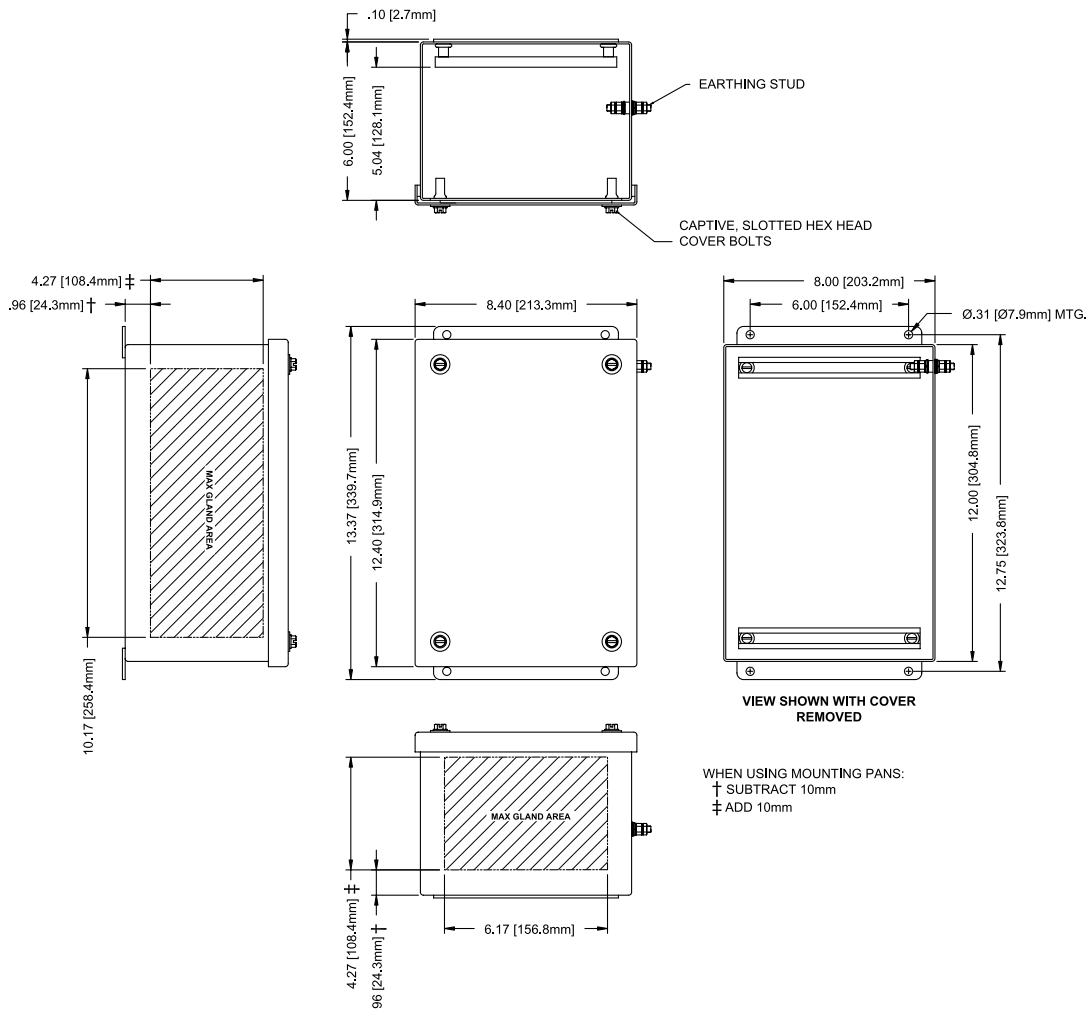
Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

3B-55

TSC Series - Screw Cover Terminal Enclosure 12''x 8''x 6''



WHEN USING MOUNTING PANS:
 † SUBTRACT 10mm
 ‡ ADD 10mm

Enclosure Material	Catalog Number
SS316L	TSC4X6-120806
SS304	TSC4X-120806
Steel, Powder Coated	TSC4-120806

Notes:

1. For Gland Plates add suffixes -A (top), -B (bottom), -C (left), -D (right) immediately following the catalog number (i.e. TSC4X6-120806-ABCD).
2. For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-120806U).
3. See the end of this section for applications using multiple terminal block types.
4. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
5. For Conduit/Cable entry spacings refer to the end of this section.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	74					
10	36				Maximum fill permitted based solely on minimum wire bending space and electrical clearances	
16	12	24	93			
20	5	14	27			
25		6	15	29		
35	Additional testing required, Consult Factory		4	11	28	
50				1	9	23

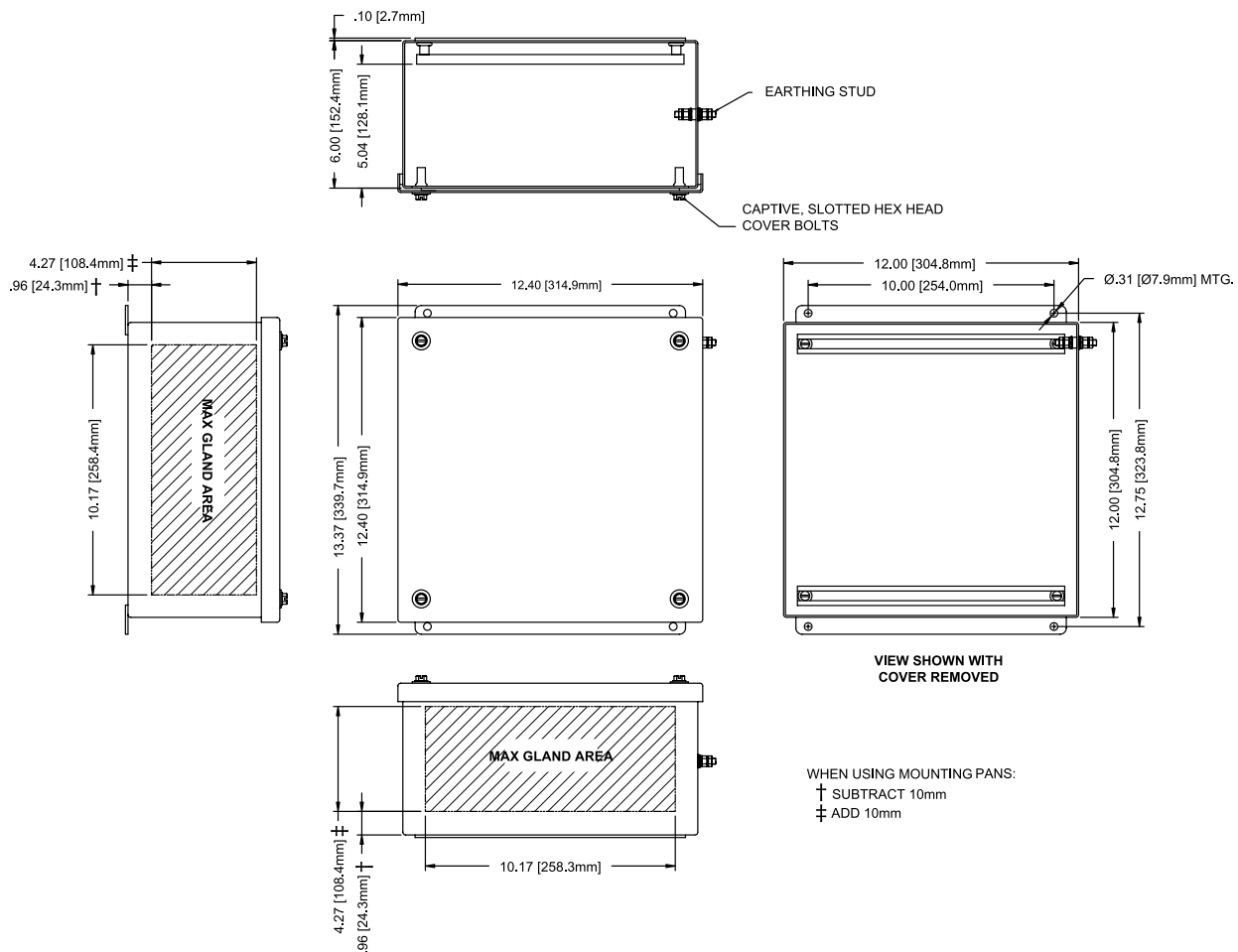
Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

3B-56

TSC Series - Screw Cover Terminal Enclosure 12"x 12"x 6"



WHEN USING MOUNTING PANS:
 † SUBTRACT 10mm
 ‡ ADD 10mm

Enclosure Material	Catalog Number
SS316L	TSC4X6-121206
SS304	TSC4X-121206
Steel, Powder Coated	TSC4-121206

Notes:

1. For Gland Plates add suffixes -A (top), -B (bottom), -C (left), -D (right) immediately following the catalog number (i.e. TSC4X6-121206-ABCD).
2. For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-121206U).
3. See the end of this section for applications using multiple terminal block types.
4. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
5. For Conduit/Cable entry spacings refer to the end of this section.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	85					
10	41					Maximum fill permitted based solely on minimum wire bending space and electrical clearances
16	14	27	107			
20	5	16	31			
25		7	17	33		
35	Additional testing required, Consult Factory		5	13	33	
50				1	10	27

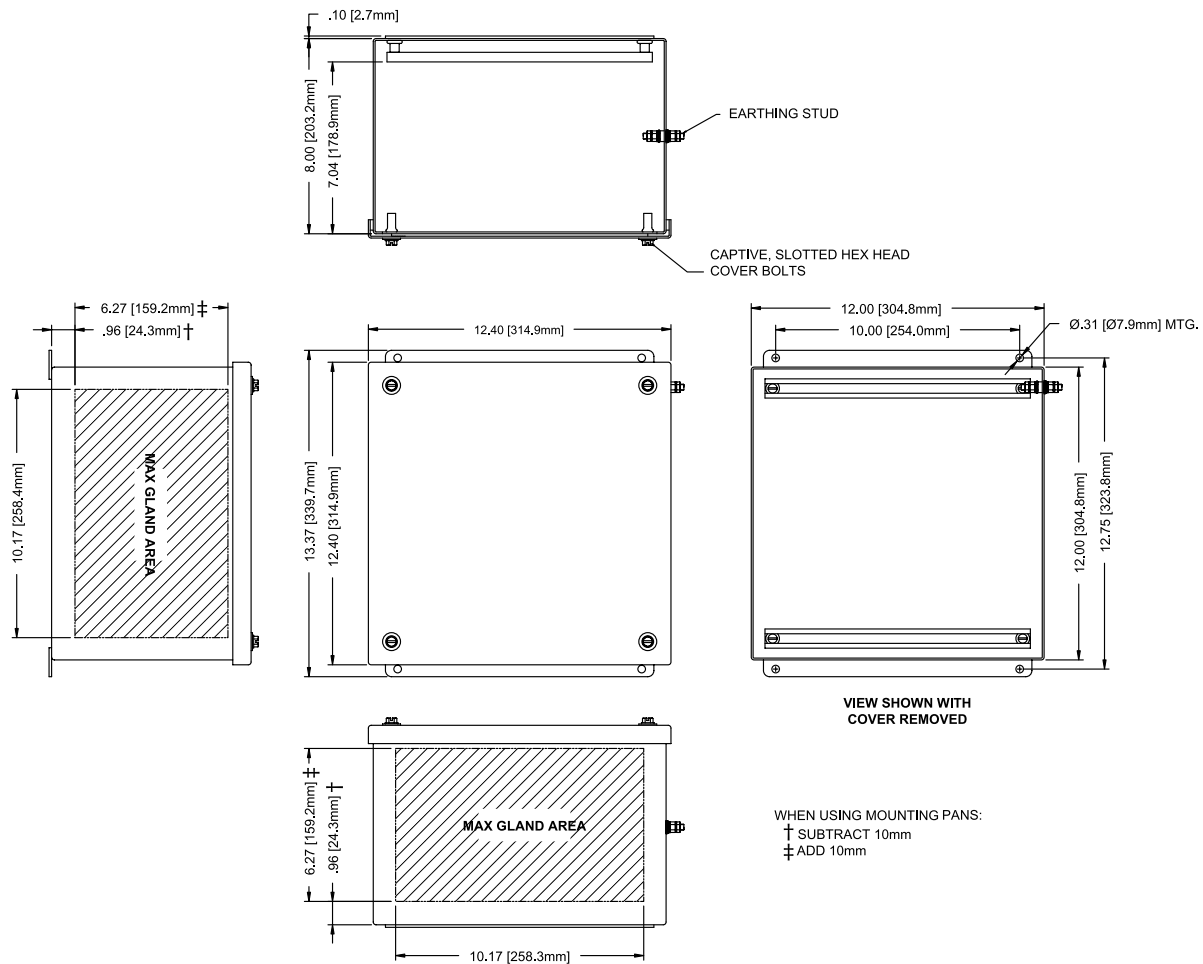
Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

3B-57

TSC Series - Screw Cover Terminal Enclosure 12"x 12"x 8"



3B-58

Enclosure Material	Catalog Number
SS316L	TSC4X6-121208
SS304	TSC4X-121208
Steel, Powder Coated	TSC4-121208

Notes:

- For Gland Plates add suffixes -A (top), -B (bottom), -C (left), -D (right) immediately following the catalog number (i.e. TSC4X6-121208-ABCD).
- For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-121208U).
- See the end of this section for applications using multiple terminal block types.
- For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
- For Conduit/Cable entry spacings refer to the end of this section.

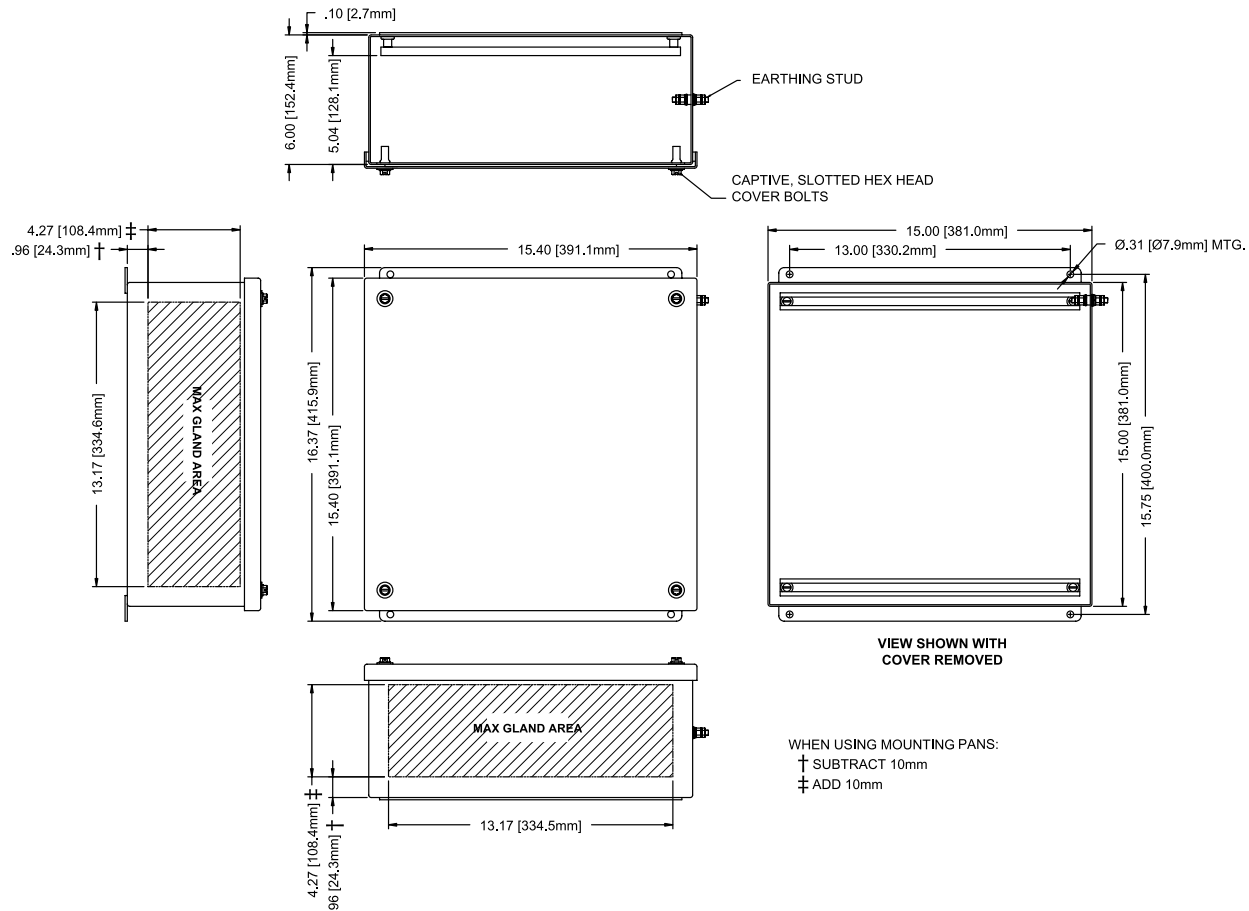
Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	100					
10	48			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	16	32	125			
20	7	19	36			
25		9	20	39		
35	Additional testing required, Consult Factory		6	15	38	
50				2	12	32

Qualifying Enclosure for Increased Safety Certification

- Find the Wire Size (conductor) you intend to use to connect to terminal block.
- Find the Current (amperage) you intend to apply to the conductor.
- The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
- If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

TSC Series - Screw Cover Terminal Enclosure 15''x 15''x 6''



Enclosure Material	Catalog Number
SS316L	TSC4X6-151506
SS304	TSC4X-151506
Steel, Powder Coated	TSC4-151506

Notes:

1. For Gland Plates add suffixes -A (top), -B (bottom), -C (left), -D (right) immediately following the catalog number (i.e. TSC4X6-151506-ABCD).
2. For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-151506U).
3. See the end of this section for applications using multiple terminal block types.
4. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
5. For Conduit/Cable entry spacings refer to the end of this section.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	96					
10	46			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	16	31	121			
20	6	18	35			
25		8	19	38		
35	Additional testing required, Consult Factory		5	15	37	
50				2	12	30

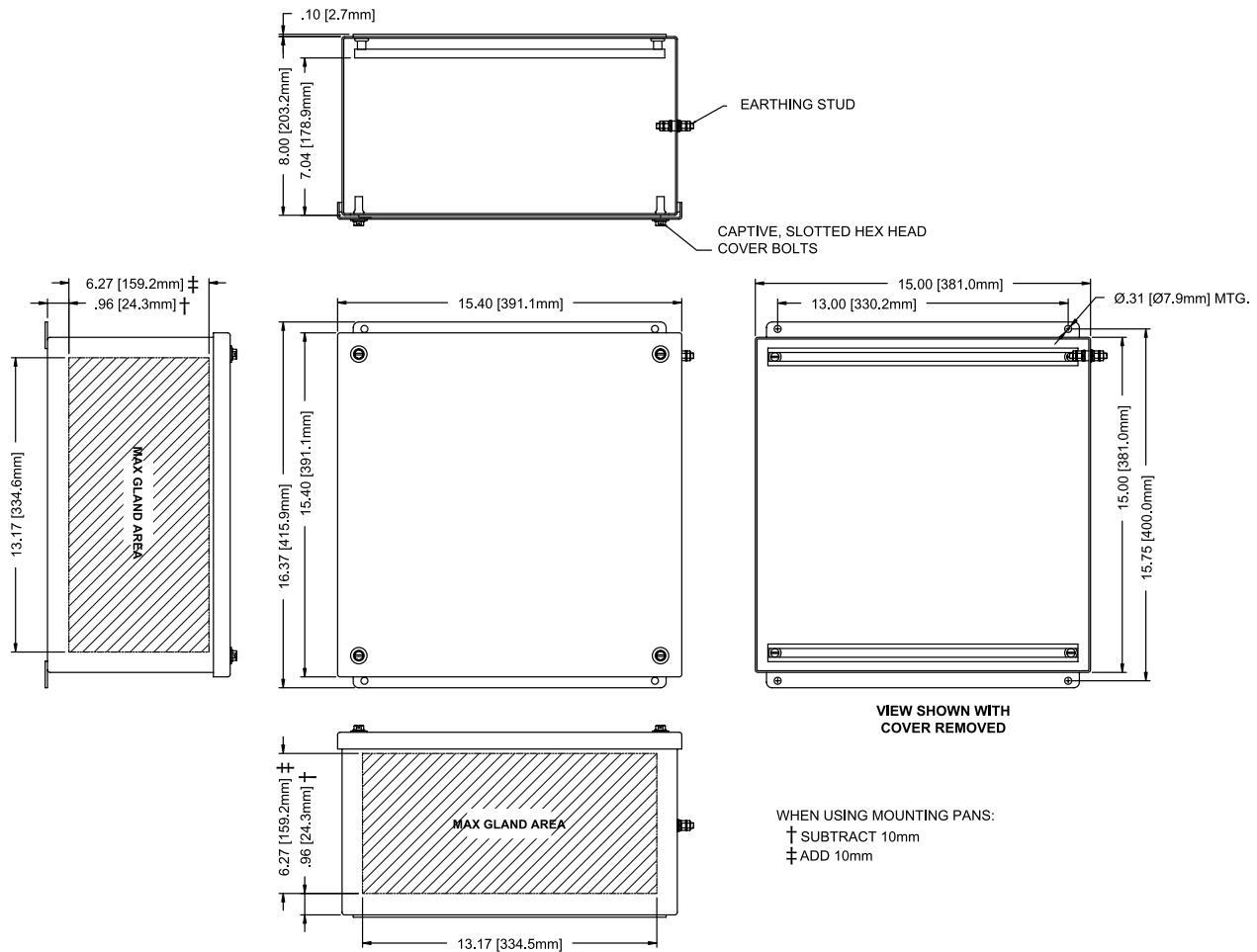
Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

3B-59

TSC Series - Screw Cover Terminal Enclosure 15''x 15''x 8''



3B-60

Enclosure Material	Catalog Number
SS316L	TSC4X6-151508
SS304	TSC4X-151508
Steel, Powder Coated	TSC4-151508

Notes:

1. For Gland Plates add suffixes -A (top), -B (bottom), -C (left), -D (right) immediately following the catalog number (i.e. TSC4X6-151508-ABCD).
2. For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-151508U).
3. See the end of this section for applications using multiple terminal block types.
4. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
5. For Conduit/Cable entry spacings refer to the end of this section.

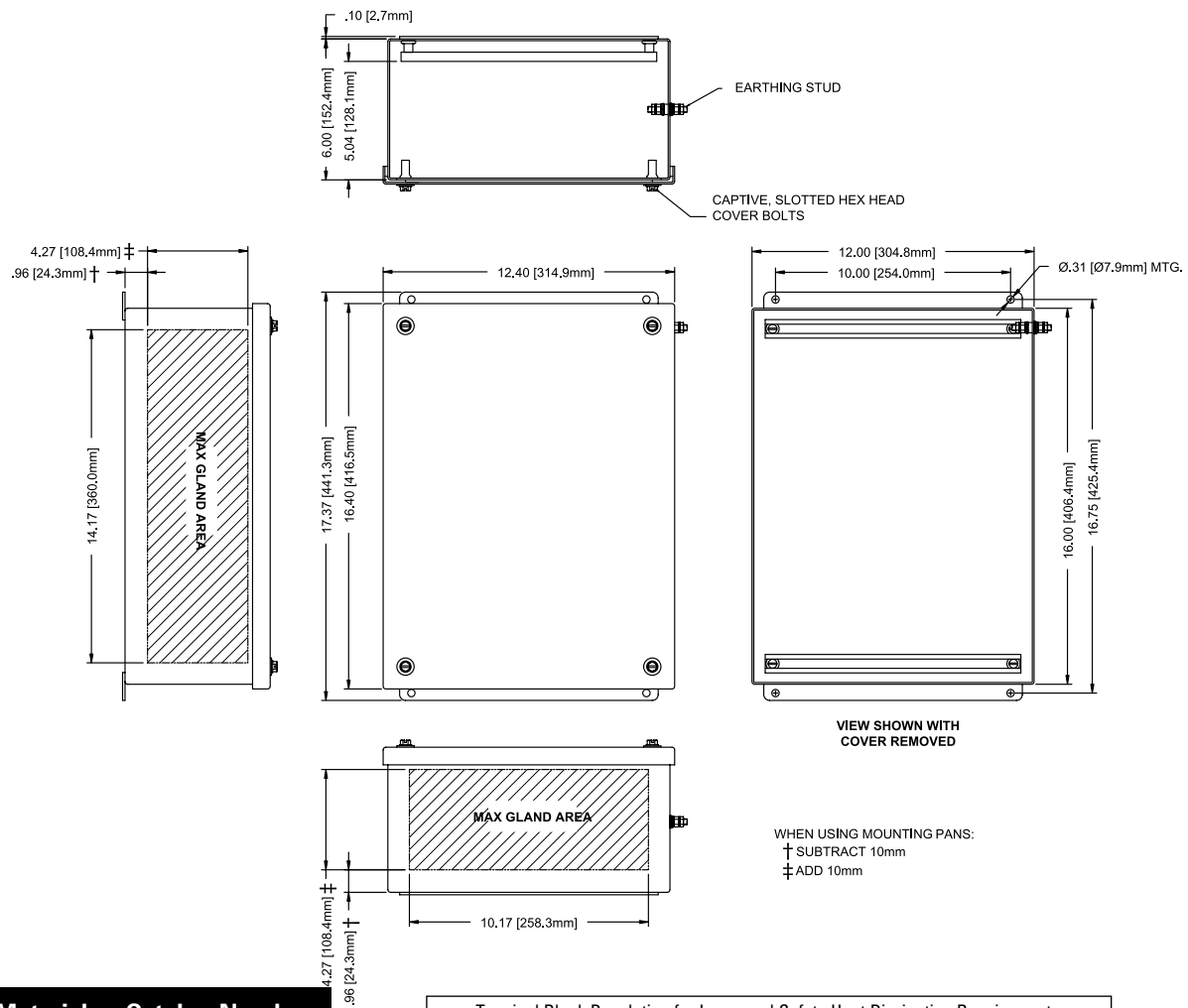
Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	111					
10	54			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	18	36	139			
20	7	21	40			
25		10	23			
35	Additional testing required, Consult Factory		6	17	43	
50			2	14	35	

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

TSC Series - Screw Cover Terminal Enclosure 16"x 12"x 6"



Enclosure Material	Catalog Number
SS316L	TSC4X6-161206
SS304	TSC4X-161206
Steel, Powder Coated	TSC4-161206

Notes:

- For Gland Plates add suffixes -A (top), -B (bottom), -C (left), -D (right) immediately following the catalog number (i.e. TSC4X6-161206-ABCD).
- For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-161206U).
- See the end of this section for applications using multiple terminal block types.
- For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
- For Conduit/Cable entry spacings refer to the end of this section.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	90					
10	44					Maximum fill permitted based solely on minimum wire bending space and electrical clearances
16	15	29	113			
20	6	17	33			
25		8	18	36		
35	Additional testing required, Consult Factory		5	14	35	
50				2	11	29

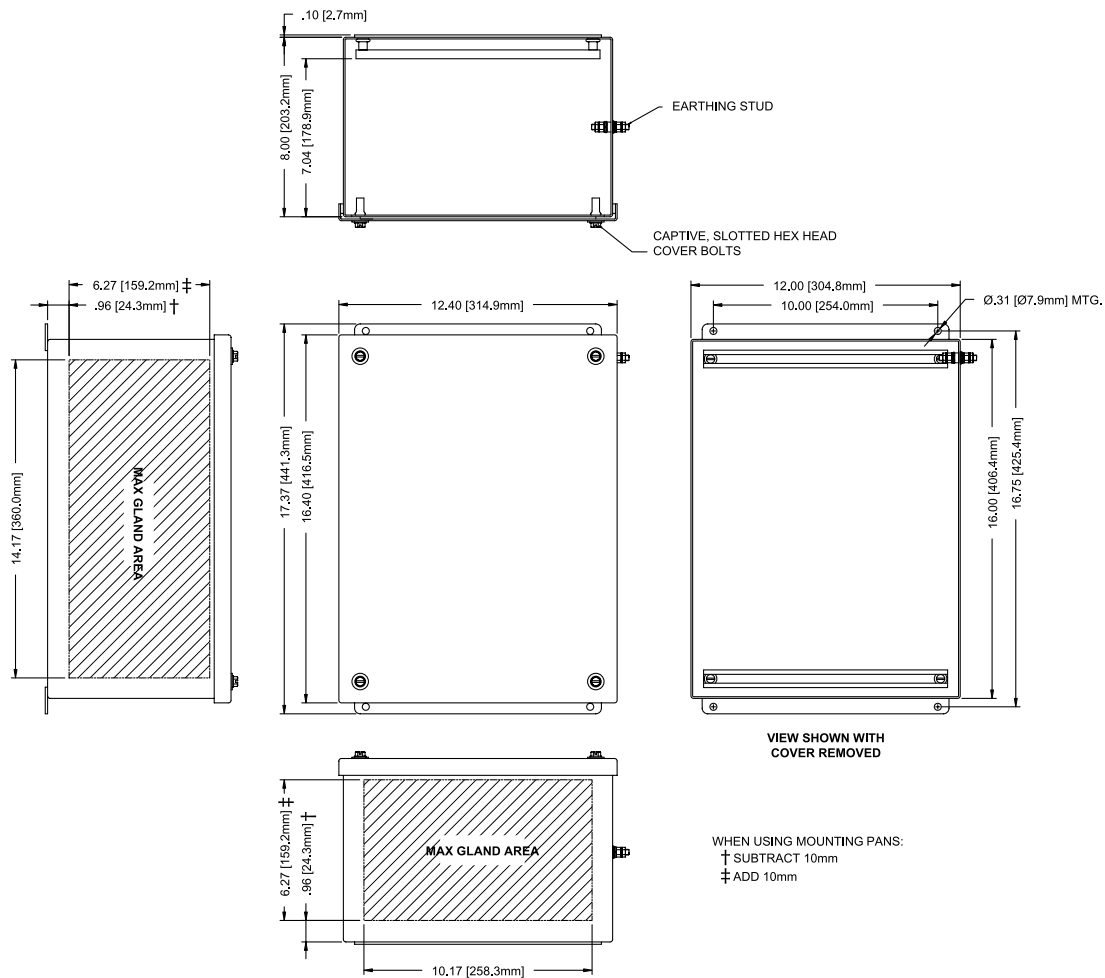
Qualifying Enclosure for Increased Safety Certification

- Find the Wire Size (conductor) you intend to use to connect to terminal block.
- Find the Current (amperage) you intend to apply to the conductor.
- The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
- If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

3B-61

TSC Series - Screw Cover Terminal Enclosure 16"x 12"x 8"



WHEN USING MOUNTING PANS:
 † SUBTRACT 10mm
 ‡ ADD 10mm

3B-62

Enclosure Material	Catalog Number
SS316L	TSC4X6-161208
SS304	TSC4X-161208
Steel, Powder Coated	TSC4-161208

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	105					
10	51			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	17	34	132			
20	7	20	38			
25		9	21	41		
35	Additional testing required, Consult Factory		6	16	40	
50				2	13	33

Notes:

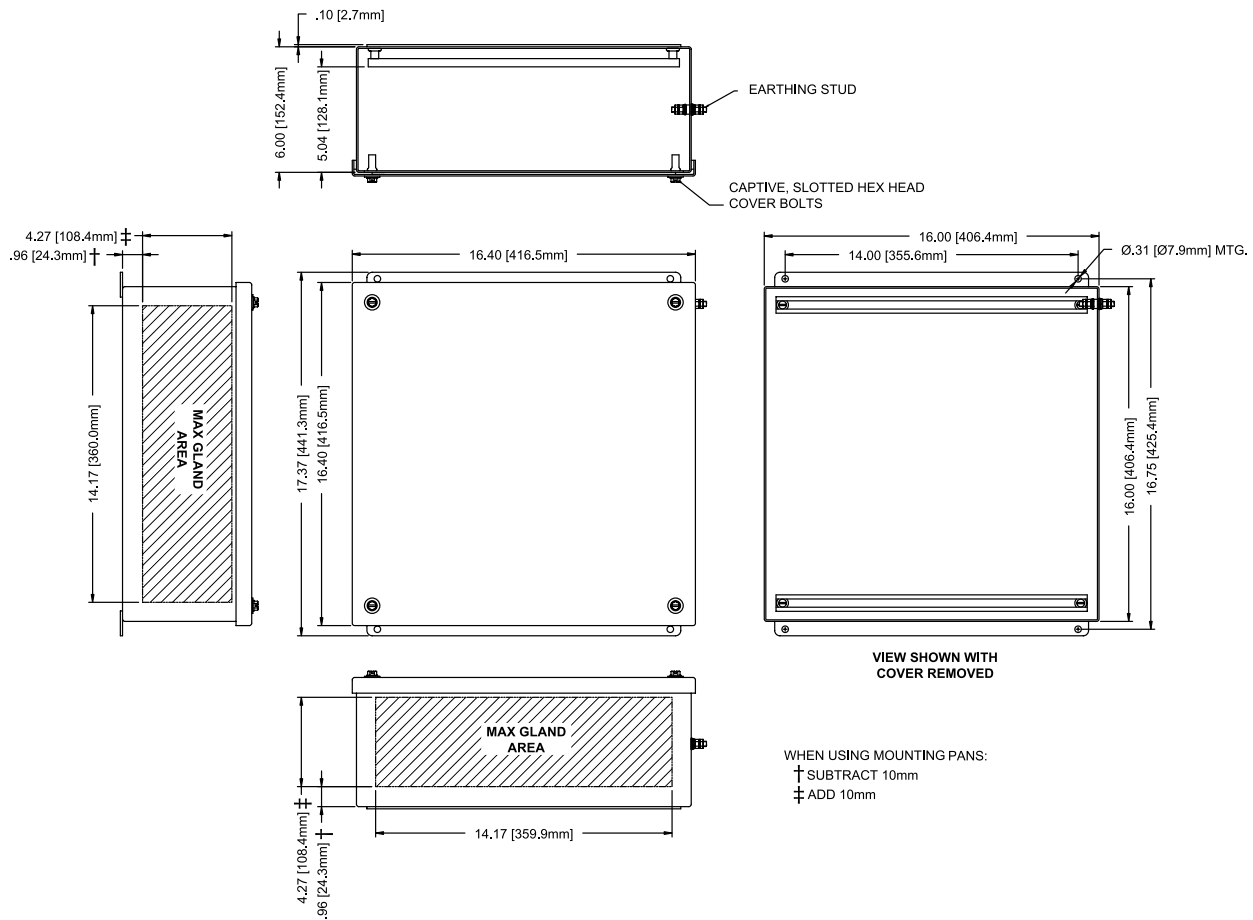
1. For Gland Plates add suffixes -A (top), -B (bottom), -C (left), -D (right) immediately following the catalog number (i.e. TSC4X6-161208-ABCD).
2. For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-161208U).
3. See the end of this section for applications using multiple terminal block types.
4. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
5. For Conduit/Cable entry spacings refer to the end of this section.

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

TSC Series - Screw Cover Terminal Enclosure 16''x 16''x 6''



Enclosure Material	Catalog Number
SS316L	TSC4X6-161606
SS304	TSC4X-161606
Steel, Powder Coated	TSC4-161606

Notes:

1. For Gland Plates add suffixes -A (top), -B (bottom), -C (left), -D (right) immediately following the catalog number (i.e. TSC4X6-161606-ABCD).
2. For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-161606U).
3. See the end of this section for applications using multiple terminal block types.
4. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
5. For Conduit/Cable entry spacings refer to the end of this section.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	100					
10	48			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	16	32	125			
20	7	19	36			
25		9	20	39		
35	Additional testing required, Consult Factory		6	15	38	
50				2	12	32

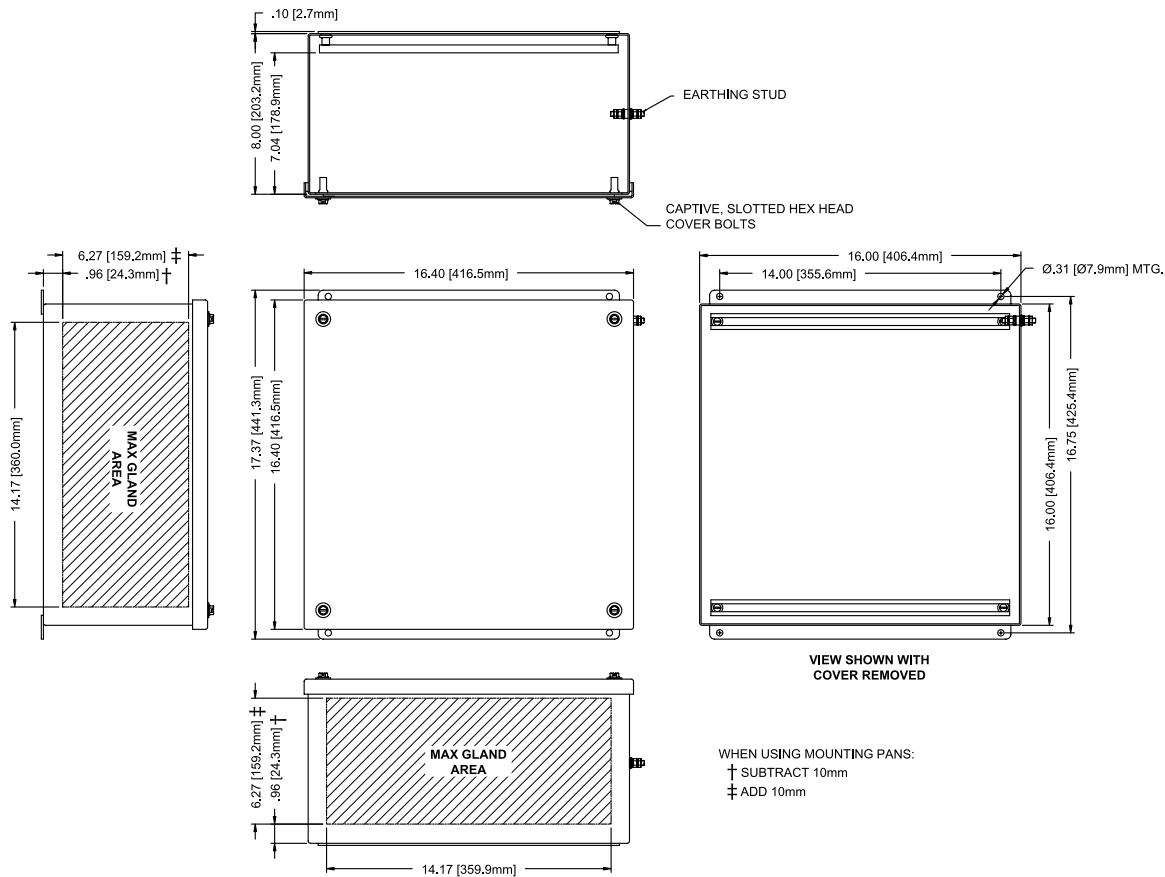
Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

3B-63

TSC Series - Screw Cover Terminal Enclosure 16"x 16"x 8"



3B-64

Enclosure Material	Catalog Number
SS316L	TSC4X6-161608
SS304	TSC4X-161608
Steel, Powder Coated	TSC4-161608

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ⁵)					
	1.5	2.5	4	6	10	16
8	115					
10	56					
16	19	37	144	Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
20	8	21	42			
25		10	23	45		
35	Additional testing required, Consult Factory		7	18	44	
50				2	14	36

Notes:

- For Gland Plates add suffixes -A (top), -B (bottom), -C (left), -D (right) immediately following the catalog number (i.e. TSC4X6-161608-ABCD).
- For Empty Enclosures add U immediately following the catalog number (i.e. TSC4X6-161608U).
- See the end of this section for applications using multiple terminal block types.
- For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
- For Conduit/Cable entry spacings refer to the end of this section.

Qualifying Enclosure for Increased Safety Certification

- Find the Wire Size (conductor) you intend to use to connect to terminal block.
- Find the Current (amperage) you intend to apply to the conductor.
- The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
- If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

Qualifying Enclosures for Increased Safety Certification

with Multiple Terminal Block Types

Current (amps)	Maximum Terminal Block Wire Size (mm5)					
	1.5	2.5	4	6	10	16
8	90					
10	44					
16	15	29	113	Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
20	6	17	33			
25		8	18	36		
35	Additional Testing Required, Consult Factory		5	14	35	
50				2	11	29

Different types of terminals may be used simultaneously by using the tabular values proportionally, as shown below.

Example:

Conductor Size	Current	Number		% of Maximum Terminal Population
2.5	16	7 (of 29)	=	24%
4	20	16 (of 33)	=	48%
10	35	9 (of 35)	=	26%
		Total	=	98% < 100%

Notes:

- The tables above show the maximum number of single pole (single level) terminal blocks permitted based on the conductor size and the continuous current for the designated enclosures.
- In the shaded areas you may add as many terminals as possible in accordance with the spacing requirements and manufacturer's instructions.
- Grounding terminals, bridges and grounding conductors are not counted.
- Please consult factory for information on multi-pole terminals, grounding terminals, grounding bars, and bridges.
- When selecting the permitted continuous current for the cross section, the maximum permitted current for the terminals and conductors should be considered.
- Combinations not covered by the above tables may be permitted if they are determined acceptable by test.



Conduit/Cable & Wire Bending Guidelines

Table A - Minimum Spacing Between Centers of Conduit or Cable Entries

SIZE	NPT	5	4	3-1/2	3	2-1/2	2	1-1/2	1-1/4	1	3/4	1/2	1/16 ~ 3/8
NPT	METRIC	--	--	--	M75	M63	M50	M40	M32	M25	M20	M16	--
1/16 ~ 3/8	--	4-3/8 [112mm]	3-5/8 [92mm]	3-3/8 [86mm]	3 [77mm]	2-5/8 [68mm]	2-3/8 [61mm]	2 [51mm]	1-7/8 [48mm]	1-5/8 [42mm]	1-3/8 [35mm]	1-1/4 [32mm]	1-1/8 [29mm]
1/2	M16	4-3/8 [112mm]	3-5/8 [92mm]	3-3/8 [86mm]	3 [77mm]	2-5/8 [68mm]	2-3/8 [61mm]	2 [51mm]	1-7/8 [48mm]	1-5/8 [42mm]	1-3/8 [35mm]	1-1/4 [32mm]	
3/4	M20	4-1/2 [115mm]	3-3/4 [96mm]	3-1/2 [89mm]	3-1/8 [80mm]	2-3/4 [70mm]	2-1/2 [64mm]	2-1/8 [54mm]	2 [51mm]	1-3/4 [45mm]	1-1/2 [38mm]		
1	M25	4-5/8 [118mm]	3-7/8 [99mm]	3-5/8 [92mm]	3-1/4 [83mm]	2-7/8 [74mm]	2-3/4 [70mm]	2-1/4 [58mm]	2-1/8 [54mm]	1-7/8 [48mm]			
1-1/4	M32	4-7/8 [124mm]	4-1/8 [105mm]	3-7/8 [99mm]	3-1/2 [89mm]	3-1/8 [80mm]	2-7/8 [74mm]	2-1/2 [64mm]	2-3/8 [61mm]				
1-1/2	M40	5 [127mm]	4-1/4 [108mm]	4 [102mm]	3-5/8 [92mm]	3-1/4 [83mm]	3 [77mm]	2-5/8 [68mm]					
2	M50	5-3/8 [137mm]	4-3/4 [121mm]	4-1/2 [115mm]	4 [102mm]	3-5/8 [92mm]	3-3/8 [86mm]						
2-1/2	M63	5-1/2 [140mm]	4-7/8 [124mm]	4-5/8 [118mm]	4-1/4 [108mm]	3-7/8 [99mm]							
3	M75	5-7/8 [150mm]	5-1/4 [134mm]	5 [127mm]	4-5/8 [118mm]								
3-1/2	--	6-1/4 [159mm]	5-3/4 [147mm]	5-1/2 [140mm]									
4	--	6-7/8 [175mm]	6 [153mm]										
5	--	7-3/8 [188mm]											

This information is compiled from data which we believe is reliable and is given in good faith. Since the methods of application and condition under which our products are used are beyond our control, we are not able to guarantee the application and/or use of same. The user assumes all risks and liability in connection with the application and use of our products.

Table B - Minimum Distance from Conduit/Cable Center to Edge of Opening or Edge of Box

NPT	5	4	3-1/2	3	2-1/2	2	1-1/2	1-1/4	1	3/4	1/2	1/16 ~ 3/8
METRIC	--	--	--	M75	M63	M50	M40	M32	M25	M20	M16	--
	2-13/16 [72mm]	2-1/4 [58mm]	2 [51mm]	1-3/4 [45mm]	1-7/16 [37mm]	1-3/16 [31mm]	1 [26mm]	7/8 [23mm]	11/16 [18mm]	9/16 [14mm]	1/2 [13mm]	1/2 [13mm]

Table C - Minimum Wire Bending Space Between Terminals, Partitions, or Inside Walls

AWG	16	14	12	10	8	6	4	2	1/0	2/0	3/0	4/0	250	350	400	500
mm sq.	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
	1-1/2 [38mm]	1-1/2 [38mm]	1-1/2 [38mm]	1-1/2 [38mm]	2 [51mm]	3 [77mm]	3-1/2 [89mm]	5-1/2 [140mm]	6 [153mm]	6-1/2 [165mm]	7 [178mm]	8-1/2 [216mm]	10 [254mm]	12 [305mm]	13 [330mm]	14 [356mm]

Notes:

- The distances in Table A are recommended minimum distances between centers of conduit and cable gland entries. Consult manufacturer of conduit fitting or cable glands for their recommended minimum spacing.
- The distances in Table B are recommended minimum distances between center of conduit and cable gland entries to the edge of an opening or inside wall of box. Consult manufacturer of conduit fitting or cable glands for their recommended minimum spacing.
- The distances in Table C are the minimum wire bending space requirements between terminals, partitions, or inside walls.

3B-66



TFG Series



Close-up Plugs:

Any unused entries must be plugged with a Certified Close-Up Plug. Adalet can provide close-up plugs in various styles and materials. Please indicate on the sketch or provide detailed information of holes to be plugged.

Enclosure Labeling:

Adalet can provide additional enclosure labeling with custom silk screening or various colors of Lamacoid™ nameplates. Please provide detailed information of the logo or text required.

18 Enclosure Sizes

Available in 18 sizes, from 6"x4"x4" (model 060406) to (model 201610).

Construction

- Compression Molded, Fiberglass Reinforced Polyester
- Memory Retaining, Poured In Place Silicone Gasket
- Molded Mounting Feet with 5/16" Clearance Holes
- Captive Cover Screws
- Universal Rail Mounting System

Options

Hinged Cover:

A stainless steel piano type hinge is available by adding an **H** to the end of the catalog string. (i.e. **TFG-201407H**)

Earthing Stud Assembly:

An Internal/External Earthing Stud can be provided upon request. Please specify on the request for quote.

Conduit/Cable Entries:

Entries can be provided per a customer sketch or with detailed information on the entry locations. Please refer to Entry Spacing Tables at the end of the Increased Safety Section in the CENELEC Product Catalog. Note: This information is important and could affect the size of the enclosure you selected.

Breather Drains:

Breather Drains can be provided per customer request. They are available in Brass or Stainless Steel 316L. Please indicate on a sketch or provide detailed information for locations.

Grounding Busbars:

Some applications might require grounding points to be terminated in the enclosure. With the use of a Ground Busbar System this can be accomplished, consult factory for options.

Mounting Pans:

As an alternative to the universal rail mounting system, mounting pans are available in steel/powder coated, stainless steel, and aluminum. Please indicate when requesting quote.

Terminal Strip Assemblies:

Various options (i.e. marking tags, protective covers, jumpers, partitions,..) are available. Please provide detailed information requesting quote.

TFG Series - Screw Cover Terminal Enclosure

General Information

Adalet's TFG Series of Increased Safety Terminal Enclosures are compression molded from a fiberglass reinforced polyester resin. Available in (18) sizes with integral mounting feet and a minimum wall section thickness of 3mm, these enclosures are ideal for indoor and outdoor areas where dampness and highly corrosive atmospheres are present. Suitable for Petrochemical, Water Treatment, Food Processing, Coating, Salts and Chemical applications, they are also ideal for installation where weight is a prime factor in enclosure selection.



3B-68

Enclosure Certifications with Terminals		C E 0539 II 2GD EEx e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C) Ex e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C) Class I, Zone 1, AEx e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C) Class II, Division 2 IP66 Type 4, 4X (Stainless Steel only), 12, & 13	ATEX Directive 94/9/EC EN50014/EN50019 CSA E79-7, IEC 60079-7 UL 2279-7 UL 1604 IEC 60529 UL50	
Empty Enclosure Certifications		0539 II 2GD EEx e II Ex e II Class I, Zone 1, AEx e II Class II, Division 2 IP66 Type 4, 4X (Stainless Steel only), 12, & 13	ATEX Directive 94/9/EC EN50014/EN50019 CSA E79-7, IEC 60079-7 UL 2279-7 UL 1604 IEC 60529 UL50	
Working Voltage			1100 Volts Maximum	
Terminal Blocks	Various manufacturers		EEx e type with wire sizes 1.5mm up to 16mm	
Material	Enclosure		Fiberglass Reinforced Polyester - 3mm Wall Section Thickness	
	Mounting Pan		.08 Aluminum, Steel - Painted, or Stainless Steel	
Gasket	Cover		Silicone	
Lid Fixing	All Types		Captive Cover Screws - Stainless Steel	
Enclosure Mounting	All Types		External mounting feet with .31" clearance holes	
Grounding	All Types		Grounding Terminal Block (sized for the largest conductor used)	
Impact Resistant	All Types		7 Nm to EN50014/EN50019	
Ambient Temperature Range	All Types		-40°C to +70°C to EN50014	

TFG Series - Quick Selector

Enclosure Selection

- Using the table below, select the terminal block size for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.

- To complete catalog number, refer to catalog page indicated next to enclosure size you selected.
- For Enclosure Selection using specific Terminal Block Manufacturers refer to following pages.

For Increased Safety Applications

- Using the table below, refer to the Heat Dissipation Table found on the catalog page for the enclosure size you selected.

Enclosure Sizes	Catalog Page	Maximum Physical Terminal Block Content								
		1.5mm	2.5mm	4mm	6mm	10mm	16mm	35mm	50mm	70mm
-060404	3B-78	0	9	7	0	0	0	0	0	0
-060406	3B-79	0	9	7	0	0	0	0	0	0
-060604	3B-80	10	9	7	6	5	0	0	0	0
-060606	3B-81	10	9	7	6	5	0	0	0	0
-080604	3B-82	20	16	15	12	10	0	0	0	0
-080606	3B-83	20	16	15	12	10	0	0	0	0
-100804	3B-84	60	25	23	36	15	12	0	0	0
-100806	3B-85	60	25	23	36	15	12	0	0	0
-121005	3B-86	80	66	60	50	40	17	0	0	0
-121006	3B-87	80	66	60	50	40	17	0	0	0
-141206	3B-88	150	123	114	93	50	21	0	0	0
-141207	3B-89	150	123	114	93	50	21	0	0	0
-161406	3B-90	183	150	138	148	90	50	19	0	0
-161407	3B-91	183	150	138	148	90	50	19	0	0
-181608	3B-92	284	232	212	172	105	58	22	17	16
-181610	3B-93	284	232	212	172	105	58	22	17	16
-201608	3B-94	324	264	244	200	120	68	25	20	18
-201610	3B-95	324	264	244	200	120	68	25	20	18

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.
- Quantities shown above are for Adalet supplied standard terminal blocks.

3B-69

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size (H X W) for your application.

- To complete catalog number, refer to the catalog page indicated next to enclosure size you selected.

For Increased Safety Applications

- Using the table below, find the catalog page for the enclosure size you selected.
- Refer to catalog page for Heat Dissipation Tables.

Manufacturer - Entrelec

Enclosure Size	Cat. Page	MA2,5/5...	MA2,5/5.1...	M4/6...	M6/8...	M10/10...	M16/12...	M35/16...	M4/6.H...	M1,5/6.HH	MTC6	MA2,5/5.SNB	M4/6.SN...	M4/6.SNB
-060404	3B-78	0	0	0	0	0	0	0	0	0	0	0	0	0
-060406	3B-79	0	0	0	0	0	0	0	0	0	0	0	0	0
-060604	3B-80	9	9	8	6	4	0	0	8	8	8	9	8	8
-060606	3B-81	9	9	8	6	4	0	0	8	8	8	9	8	8
-080604	3B-82	19	19	16	12	9	0	0	16	16	16	19	16	16
-080606	3B-83	19	19	16	12	9	0	0	16	16	16	19	16	16
-100804	3B-84	58	58	48	36	15	12	0	24	24	48	58	48	48
-100806	3B-85	58	58	48	36	15	12	0	24	24	48	58	48	48
-121005	3B-86	78	78	66	50	40	16	0	66	66	66	78	66	66
-121006	3B-87	78	78	66	50	40	16	0	66	66	66	78	66	66
-141206	3B-88	147	147	123	93	50	20	0	82	82	123	147	123	123
-141207	3B-89	147	147	123	93	50	20	0	82	82	123	147	123	123
-161406	3B-90	177	177	150	111	90	50	18	150	150	150	177	150	150
-161407	3B-91	177	177	150	111	90	50	18	150	150	150	177	150	150
-181608	3B-92	276	276	232	176	105	58	22	232	174	232	276	232	232
-181610	3B-93	276	276	232	176	105	58	22	232	174	232	276	232	232
-201608	3B-94	316	316	264	200	120	66	25	264	198	264	316	264	264
-201610	3B-95	316	316	264	200	120	66	25	264	198	264	316	264	264

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.

Maximum Physical Terminal Block Content

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size (H X W) for your application.

- To complete catalog number, refer to the catalog page indicated next to enclosure size you selected.
- For Enclosure Selection using specific Terminal Block Manufacturers refer to following pages.

For Increased Safety Applications

- Using the table below, find the catalog page for the enclosure size you selected.
- Refer to catalog page for Heat Dissipation Tables.

Manufacturer - Entrelec

Enclosure Size	Cat. Page	M6/8.SNB	M4/8.SN	DR4/6...	M35/26.FF	M70/31.FF	M35/26.AF	M70.31.AF	D4/6...ADO	D4/6.ADO.T...	D4/6.ADO...	D6/8...ADO	D6/8.ADO...
-060404	3B-78	0	0	0	0	0	0	0	0	0	0	0	0
-060406	3B-79	0	0	0	0	0	0	0	0	0	0	0	0
-060604	3B-80	6	6	9	0	0	0	0	8	8	8	6	6
-060606	3B-81	6	6	9	0	0	0	0	8	8	8	6	6
-080604	3B-82	12	12	17	0	0	0	0	16	16	16	12	12
-080606	3B-83	12	12	17	0	0	0	0	16	16	16	12	12
-100804	3B-84	36	18	50	0	0	0	0	24	24	24	18	18
-100806	3B-85	36	18	50	0	0	0	0	24	24	24	18	18
-121005	3B-86	50	50	102	7	0	7	0	66	66	66	50	50
-121006	3B-87	50	50	102	7	0	7	0	66	66	66	50	50
-141206	3B-88	93	62	168	9	0	9	0	123	123	123	93	93
-141207	3B-89	93	62	168	9	0	9	0	123	123	123	93	93
-161406	3B-90	111	111	204	11	0	11	0	150	150	150	111	111
-161407	3B-91	111	111	204	11	0	11	0	150	150	150	111	111
-181608	3B-92	176	132	295	13	11	13	11	232	232	232	176	176
-181610	3B-93	176	132	295	13	11	13	11	232	232	232	176	176
-201608	3B-94	200	150	335	15	13	15	13	264	264	264	200	200
-201610	3B-95	200	150	335	15	13	15	13	264	264	264	200	200

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.

3B-71

Maximum Physical Terminal Block Content

Enclosure Selection

1. Using the table below, select the terminal block type for your application.
2. Follow the column down until you find the quantity required for your application.
3. Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.

4. To complete catalog number, refer to catalog page indicated next to the enclosure size you selected.

For Increased Safety Applications

1. Using the table below, find the catalog page for the enclosure size you selected.
2. Refer to catalog page for Heat Dissipation Tables.

Manufacturer - Weidmuller

Enclosure Size	Cat. Page	WDU2.5N	WDU2.5	WDU4	WDU6	WDU10	WDU16	WDU35	WWF35	ZDU2.5	ZDU4	ZDU6	AKZ2.5	AKZ4
-060404	3B-78	0	0	0	0	0	0	0	0	0	0	0	9	7
-060406	3B-79	0	0	0	0	0	0	0	0	0	0	0	9	7
-060604	3B-80	10	10	10	6	0	0	0	0	10	8	6	9	7
-060606	3B-81	10	10	10	6	0	0	0	0	10	8	6	9	7
-080604	3B-82	20	20	20	12	0	0	0	0	20	16	12	19	16
-080606	3B-83	20	20	20	12	0	0	0	0	20	16	12	19	16
-100804	3B-84	60	30	30	19	15	0	0	0	30	25	18	60	48
-100806	3B-85	60	30	30	19	15	0	0	0	30	25	18	60	48
-121005	3B-86	80	80	80	50	20	17	0	0	80	66	50	120	96
-121006	3B-87	80	80	80	50	20	17	0	0	80	66	50	120	96
-141206	3B-88	150	100	100	64	50	21	0	0	100	82	62	200	164
-141207	3B-89	150	100	100	64	50	21	0	0	100	82	62	200	164
-161406	3B-90	183	183	183	114	60	50	19	0	180	150	111	300	245
-161407	3B-91	183	183	183	114	60	50	19	0	180	150	111	300	245
-181608	3B-92	284	213	213	135	105	58	22	12	210	174	129	350	285
-181610	3B-93	284	213	213	135	105	58	22	12	210	174	129	350	285
-201608	3B-94	324	243	243	153	123	68	25	14	240	198	150	400	330
-201610	3B-95	324	243	243	153	123	68	25	14	240	198	150	400	330

Notes:

1. All quantities shown are for terminal blocks installed in vertical rows.

3B-72

Maximum Physical Terminal Block Content

Enclosure Selection

1. Using the table below, select the terminal block type for your application.
2. Follow the column down until you find the quantity required for your application.
3. Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.

4. To complete catalog number, refer to catalog page indicated next to the enclosure size you selected.

For Increased Safety Applications

1. Using the table below, find the catalog page for the enclosure size you selected.
2. Refer to catalog page for Heat Dissipation Tables.

Manufacturer - Weidmuller

Enclosure Size	Cat. Page	AKE2.5	AKE4	SAK2.5	SAK4	SAK6N	SAK10	SAK16	SAK35N	SAK70	SAKG 28 I	SAKG 28 II	SAKG 28 III
-060404	3B-78	0	0	0	0	0	0	0	0	0	0	0	0
-060406	3B-79	0	0	0	0	0	0	0	0	0	0	0	0
-060604	3B-80	9	7	8	7	6	5	0	0	0	0	0	0
-060606	3B-81	9	7	8	7	6	5	0	0	0	0	0	0
-080604	3B-82	19	14	16	15	12	10	0	0	0	0	0	0
-080606	3B-83	19	14	16	15	12	10	0	0	0	0	0	0
-100804	3B-84	60	44	25	23	36	15	12	0	0	0	0	0
-100806	3B-85	60	44	25	23	36	15	12	0	0	0	0	0
-121005	3B-86	120	87	66	60	50	40	17	0	0	0	0	0
-121006	3B-87	120	87	66	60	50	40	17	0	0	0	0	0
-141206	3B-88	200	111	123	114	93	50	21	0	0	0	0	0
-141207	3B-89	200	111	123	114	93	50	21	0	0	0	0	0
-161406	3B-90	240	176	150	138	148	90	50	19	0	10	10	10
-161407	3B-91	240	176	150	138	148	90	50	19	0	10	10	10
-181608	3B-92	350	255	232	212	172	105	58	22	16	11	11	11
-181610	3B-93	350	255	232	212	172	105	58	22	16	11	11	11
-201608	3B-94	400	295	264	244	200	120	68	25	18	13	13	13
-201610	3B-95	400	295	264	244	200	120	68	25	18	13	13	13

Notes:

1. All quantities shown are for terminal blocks installed in vertical rows.

3B-73

Maximum Physical Terminal Block Content Manufacturer - Woretz

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.

- To complete catalog number, refer to catalog page indicated next to the enclosure size you selected.

For Increased Safety Applications

- Using the table below, find the catalog page for the enclosure size you selected.
- Refer to catalog page for Heat Dissipation Tables.

Manufacturer - Woretz

Enclosure Size	Cat. Page	30128 gr	3424 gr	3425 gr	3426 gr	3427 gr	3428 gr	3429 gr	30841 gr Ex	30842 gr Ex	30843 gr Ex	30844 gr Ex	3468 gr Ex	30111 gr	3301 gr
-060404	3B-78	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-060406	3B-79	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-060604	3B-80	8	8	6	0	0	0	0	4	3	0	0	0	8	8
-060606	3B-81	8	8	6	0	0	0	0	4	3	0	0	0	8	8
-080604	3B-82	17	17	12	0	0	0	0	8	7	0	0	0	17	17
-080606	3B-83	17	17	12	0	0	0	0	8	7	0	0	0	17	17
-100804	3B-84	25	25	19	17	0	0	0	12	10	9	0	0	25	25
-100806	3B-85	25	25	19	17	0	0	0	12	10	9	0	0	25	25
-121005	3B-86	68	68	50	22	18	0	0	32	28	12	0	0	68	68
-121006	3B-87	68	68	50	22	18	0	0	32	28	12	0	0	68	68
-141206	3B-88	126	126	96	56	23	0	0	60	34	15	0	0	126	126
-141207	3B-89	126	126	96	56	23	0	0	60	34	15	0	0	126	126
-161406	3B-90	153	153	114	68	54	21	0	72	63	36	14	0	153	153
-161407	3B-91	153	153	114	68	54	21	0	72	63	36	14	0	153	153
-181608	3B-92	236	236	176	117	64	25	15	112	72	42	17	12	236	236
-181610	3B-93	236	236	176	117	64	25	15	112	72	42	17	12	236	236
-201608	3B-94	272	272	204	135	74	29	17	128	84	48	19	14	272	272
-201610	3B-95	272	272	204	135	74	29	17	128	84	48	19	14	272	272

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.

3B-74

Maximum Physical Terminal Block Content Manufacturer - Woretz

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.

- To complete catalog number, refer to catalog page indicated next to the enclosure size you selected.

For Increased Safety Applications

- Using the table below, find the catalog page for the enclosure size you selected.
- Refer to catalog page for Heat Dissipation Tables.

Manufacturer - Woretz

Enclosure Size	Cat. Page	3302 gr	3303 gr	3304 gr	3305 gr	3306 gr	3712 gr Ex	3713 gr Ex	3713/16 gr Ex	3714 gr Ex	3715 gr Ex	30831 gr Ex	30832 gr Ex	30833 gr Ex	30834 gr Ex
-060404	3B-78	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-060406	3B-79	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-060604	3B-80	6	0	0	0	0	3	3	0	0	0	4	3	0	0
-060606	3B-81	6	0	0	0	0	3	3	0	0	0	4	3	0	0
-080604	3B-82	12	0	0	0	0	7	6	0	0	0	8	7	0	0
-080606	3B-83	12	0	0	0	0	7	6	0	0	0	8	7	0	0
-100804	3B-84	19	17	0	0	0	22	9	8	0	0	24	10	9	0
-100806	3B-85	19	17	0	0	0	22	9	8	0	0	24	10	9	0
-121005	3B-86	50	22	18	0	0	28	24	10	0	0	32	28	12	0
-121006	3B-87	50	22	18	0	0	28	24	10	0	0	32	28	12	0
-141206	3B-88	96	56	23	0	0	54	32	13	0	0	60	34	15	0
-141207	3B-89	96	56	23	0	0	54	32	13	0	0	60	34	15	0
-161406	3B-90	114	68	54	21	0	66	57	32	14	0	72	63	36	14
-161407	3B-91	114	68	54	21	0	66	57	32	14	0	72	63	36	14
-181608	3B-92	176	117	64	25	15	100	66	36	16	12	112	72	42	17
-181610	3B-93	176	117	64	25	15	100	66	36	16	12	112	72	42	17
-201608	3B-94	204	135	74	29	17	116	75	42	18	14	128	84	48	19
-201610	3B-95	204	135	74	29	17	116	75	42	18	14	128	84	48	19

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.

3B-75

Maximum Physical Terminal Block Content Manufacturer - Phoenix

Enclosure Selection

- Using the table below, select the terminal block type for your application.
- Follow the column down until you find the quantity required for your application.
- Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.

- To complete catalog number, refer to catalog page indicated next to the enclosure size you selected.

For Increased Safety Applications

- Using the table below, find the catalog page for the enclosure size you selected.
- Refer to catalog page for Heat Dissipation Tables.

Manufacturer - Phoenix

Enclosure Size	Cat. Page	UK 2,5 N	UK 3 N	UK 5 N	UK 6 N	UK 10 N	UK 16 N	UK 35	UKH 50	MBK 2,5/E-EX	MBK 6/E	UK 3-RETURN	MZB 1,5	MZB 1,5-NS 35	MZDB 1,5	MZDB 1,5-NS 35	ZFK 1,5	ZKF 2,5	ZFK 4	ZFK 6
-060404	3B-78	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0
-060406	3B-79	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0
-060604	3B-80	9	9	8	6	5	0	0	0	8	6	9	9	9	4	4	12	9	8	6
-060606	3B-81	9	9	8	6	5	0	0	0	8	6	9	9	9	4	4	12	9	8	6
-080604	3B-82	19	19	16	12	10	0	0	0	16	12	19	19	19	9	9	24	19	16	12
-080606	3B-83	19	19	16	12	10	0	0	0	16	12	19	19	19	9	9	24	19	16	12
-100804	3B-84	58	58	48	36	14	12	0	0	48	36	29	58	58	28	28	36	29	24	18
-100806	3B-85	58	58	48	36	14	12	0	0	48	36	29	58	58	28	28	36	29	24	18
-121005	3B-86	78	78	64	48	38	16	0	0	96	48	78	117	78	57	38	96	78	64	48
-121006	3B-87	78	78	64	48	38	16	0	0	96	48	78	117	78	57	38	96	78	64	48
-141206	3B-88	144	144	123	93	48	20	0	0	164	93	144	144	144	72	72	120	96	82	62
-141207	3B-89	144	144	123	93	48	20	0	0	164	93	144	144	144	72	72	120	96	82	62
-161406	3B-90	174	174	147	111	87	50	20	0	245	148	174	232	174	116	87	216	174	147	111
-161407	3B-91	174	174	147	111	87	50	20	0	245	148	174	232	174	116	87	216	174	147	111
-181608	3B-92	272	272	228	172	102	58	23	17	285	215	272	340	272	170	136	252	204	171	129
-181610	3B-93	272	272	228	172	102	58	23	17	285	215	272	340	272	170	136	252	204	171	129
-201608	3B-94	312	312	260	196	117	66	26	20	325	245	312	390	312	195	156	291	234	195	147
-201610	3B-95	312	312	260	196	117	66	26	20	325	245	312	390	312	195	156	291	234	195	147

Notes:

- All quantities shown are for terminal blocks installed in vertical rows.

Maximum Physical Terminal Block Content

Enclosure Selection

1. Using the table below, select the terminal block type for your application.
2. Follow the column down until you find the quantity required for your application.
3. Follow the row left until you reach the Enclosure Size column. This is the minimum enclosure size for your application.

4. To complete catalog number, refer to catalog page indicated next to the enclosure size you selected.

For Increased Safety Applications

1. Using the table below, find the catalog page for the enclosure size you selected.
2. Refer to catalog page for Heat Dissipation Tables.

Manufacturer - Wago

Enclosure Size	Cat. Page	280-991	281-691	281-991	282-691	284-691	283-691	285-691	280-698	281-693	264-120	264-220	264-125	264-225
-060404	3B-78	0	0	0	0	0	0	0	0	0	0	0	0	0
-060406	3B-79	0	0	0	0	0	0	0	0	0	0	0	0	0
-060604	3B-80	10	8	8	6	5	0	0	10	8	8	6	8	5
-060606	3B-81	10	8	8	6	5	0	0	10	8	8	6	8	5
-080604	3B-82	19	17	17	13	10	0	0	19	17	17	12	17	10
-080606	3B-83	19	17	17	13	10	0	0	19	17	17	12	17	10
-100804	3B-84	29	25	25	19	15	12	0	29	25	50	36	50	30
-100806	3B-85	29	25	25	19	15	12	0	29	25	50	36	50	30
-121005	3B-86	78	66	66	50	40	17	0	78	66	102	72	68	40
-121006	3B-87	78	66	66	50	40	17	0	78	66	102	72	68	40
-141206	3B-88	96	82	82	64	50	21	14	144	82	126	90	126	75
-141207	3B-89	96	82	82	64	50	21	14	144	82	126	90	126	75
-161406	3B-90	174	147	147	114	60	50	17	174	147	204	144	204	120
-161407	3B-91	174	147	147	114	60	50	17	174	147	204	144	204	120
-181608	3B-92	268	232	174	132	105	58	20	268	174	295	210	236	140
-181610	3B-93	268	232	174	132	105	58	20	268	174	295	210	236	140
-201608	3B-94	308	264	198	153	120	68	23	308	198	340	240	272	160
-201610	3B-95	308	264	198	153	120	68	23	308	198	340	240	272	160

Manufacturer - Wieland

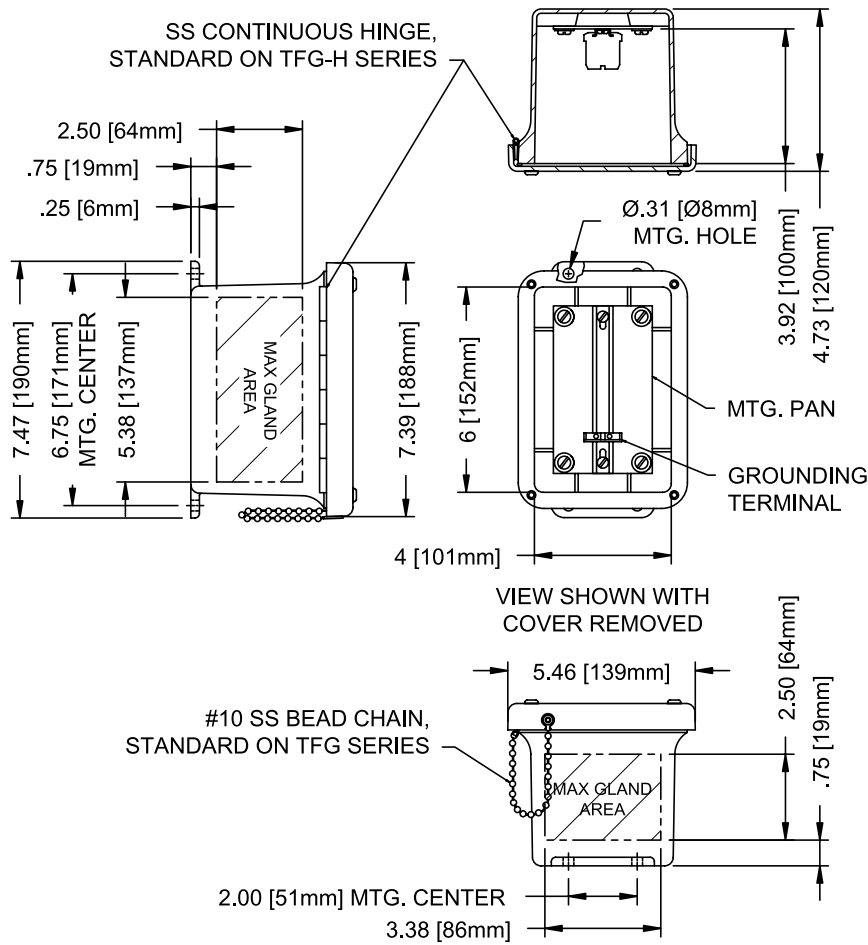
Enclosure Size	Cat. Page	WK 2.5/U	WK 4/U	WK 6/U	WKI 35/U	WKN 10/U	WKN 16/U	WKN 35/U
-060404	3B-78	0	0	0	0	0	0	0
-060406	3B-79	0	0	0	0	0	0	0
-060604	3B-80	9	8	6	0	0	0	0
-060606	3B-81	9	8	6	0	0	0	0
-080604	3B-82	19	16	12	0	0	0	0
-080606	3B-83	19	16	12	0	0	0	0
-100804	3B-84	29	25	18	0	14	0	0
-100806	3B-85	29	25	18	0	14	0	0
-121005	3B-86	80	66	50	0	20	16	0
-121006	3B-87	80	66	50	0	20	16	0
-141206	3B-88	150	123	93	0	50	20	0
-141207	3B-89	150	123	93	0	50	20	0
-161406	3B-90	180	150	111	30	60	50	18
-161407	3B-91	180	150	111	30	60	50	18
-181608	3B-92	280	232	176	35	105	58	22
-181610	3B-93	280	232	176	35	105	58	22
-201608	3B-94	320	268	200	40	120	66	25
-201610	3B-95	320	268	200	40	120	66	25

Notes:

1. All quantities shown are for terminal blocks installed in vertical rows.

3B-77

TFG Series - Screw Cover Terminal Enclosure 6"x 4"x 4"



3B-78

Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-060404
Hinged	TFG-060404H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

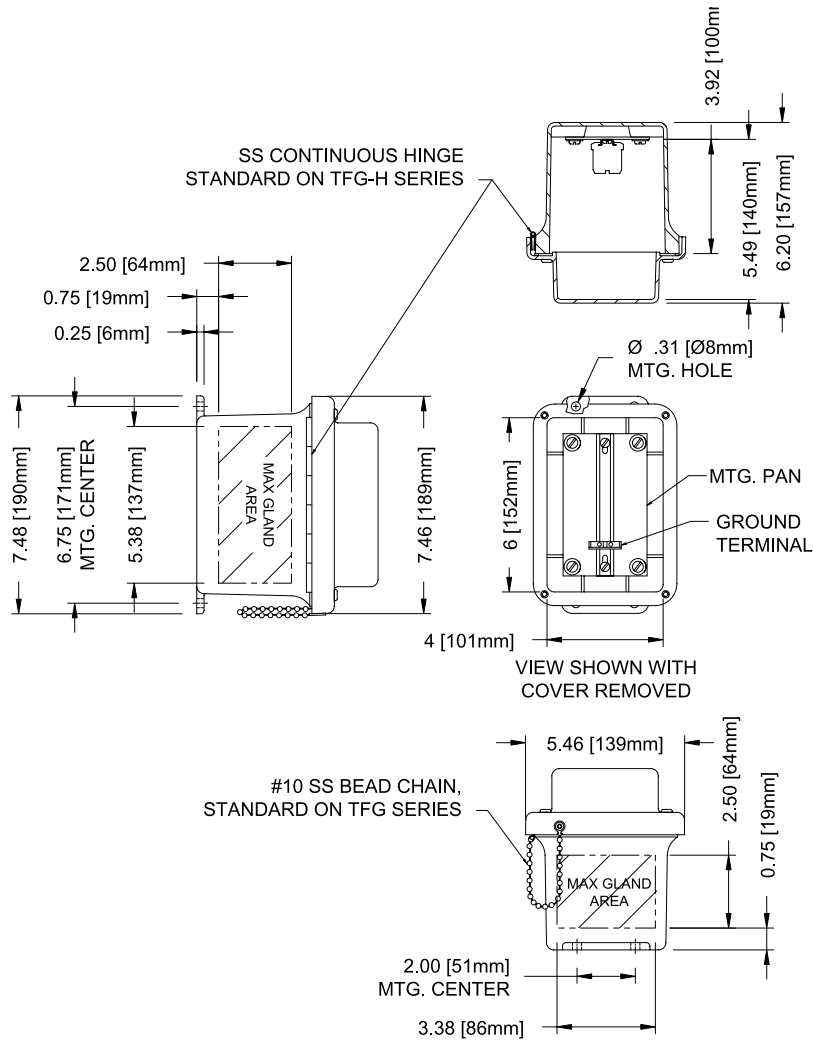
The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

Current (amps)	Terminal Block Population for Increased Safety Heat Dissipation Requirements					
	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	52					
10	25					
16	8	16	65	Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
20	3	9	19			
25		4	10	20		
35	Additional testing required, Consult Factory			3	8	20
50					1	6

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

TFG Series - Screw Cover Terminal Enclosure 6"x 4"x 6"



3B-79

Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-060406
Hinged	TFG-060406H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

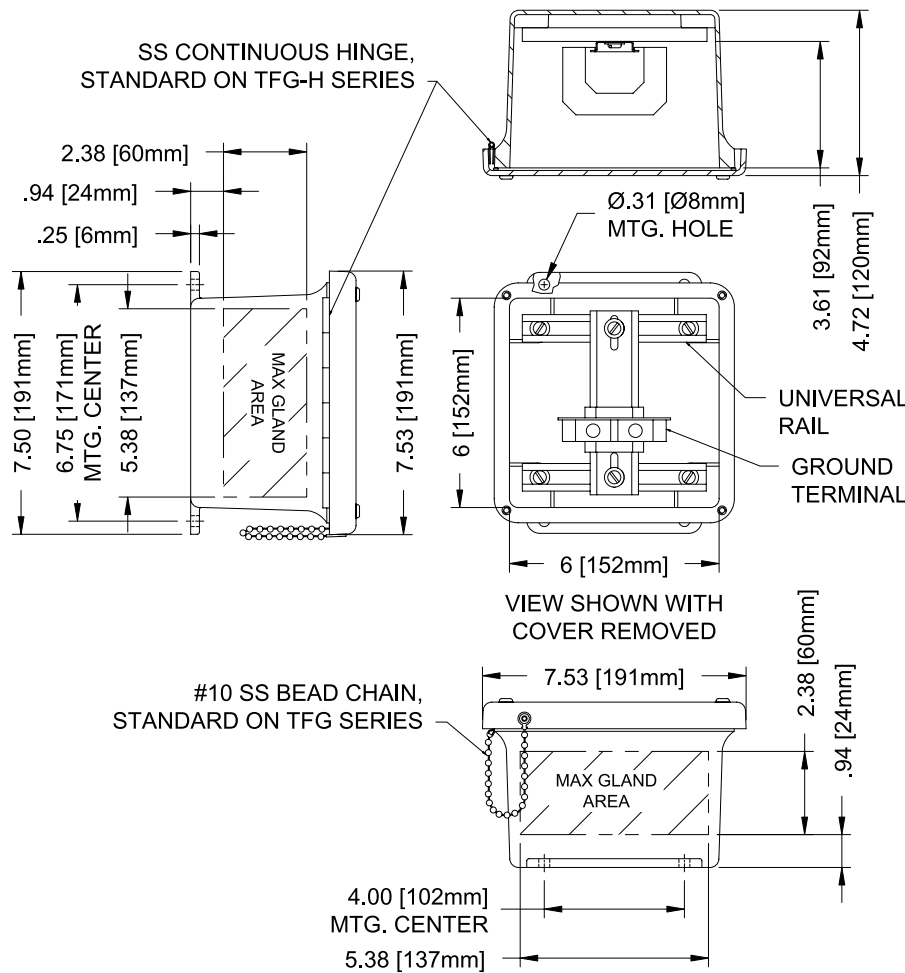
The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	63					
10	30					
16	10	20	79	Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
20	4	12	23			
25		5	13	25		
35	Additional testing required, Consult Factory		3	9	24	
50				1	8	20

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

TFG Series - Screw Cover Terminal Enclosure 6"x 6"x 4"



3B-80

Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-060604
Hinged	TFG-060604H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

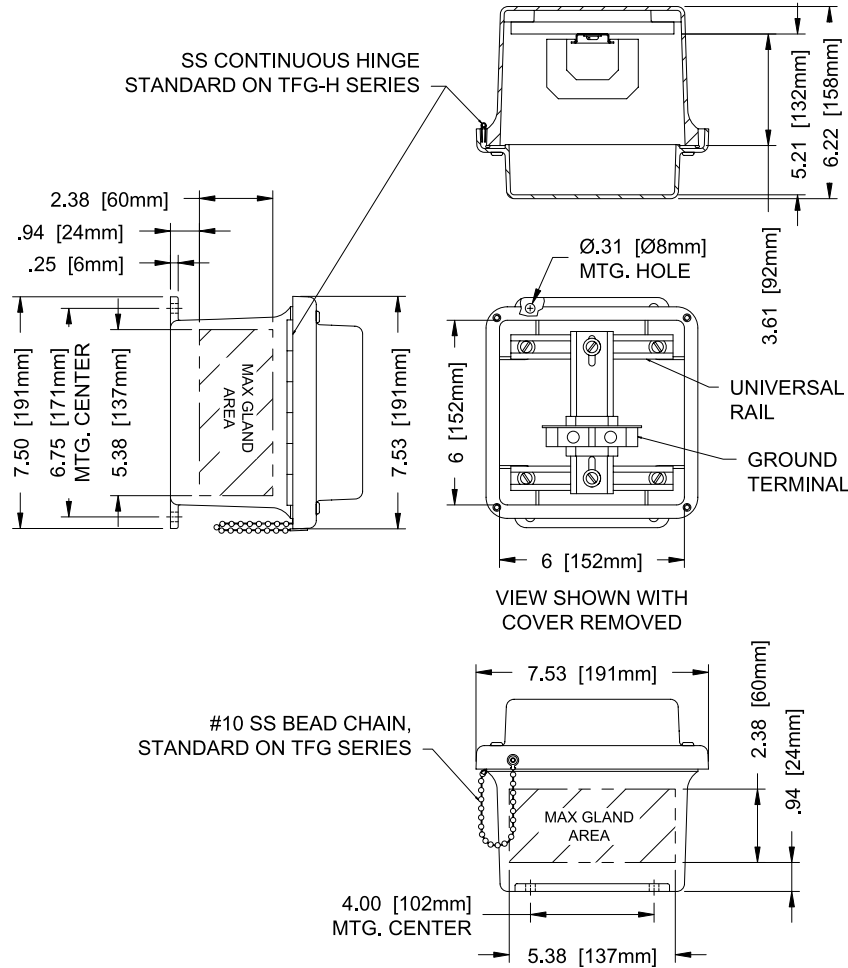
The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

Current (amps)	Terminal Block Population for Increased Safety Heat Dissipation Requirements					
	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	57					
10	28			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	9	18	72			
20	4	10	21			
25		5	11	23		
35	Additional testing required, Consult Factory			3	9	22
50					1	7

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

TFG Series - Screw Cover Terminal Enclosure 6"x 6"x 6"



Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-060606
Hinged	TFG-060606H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

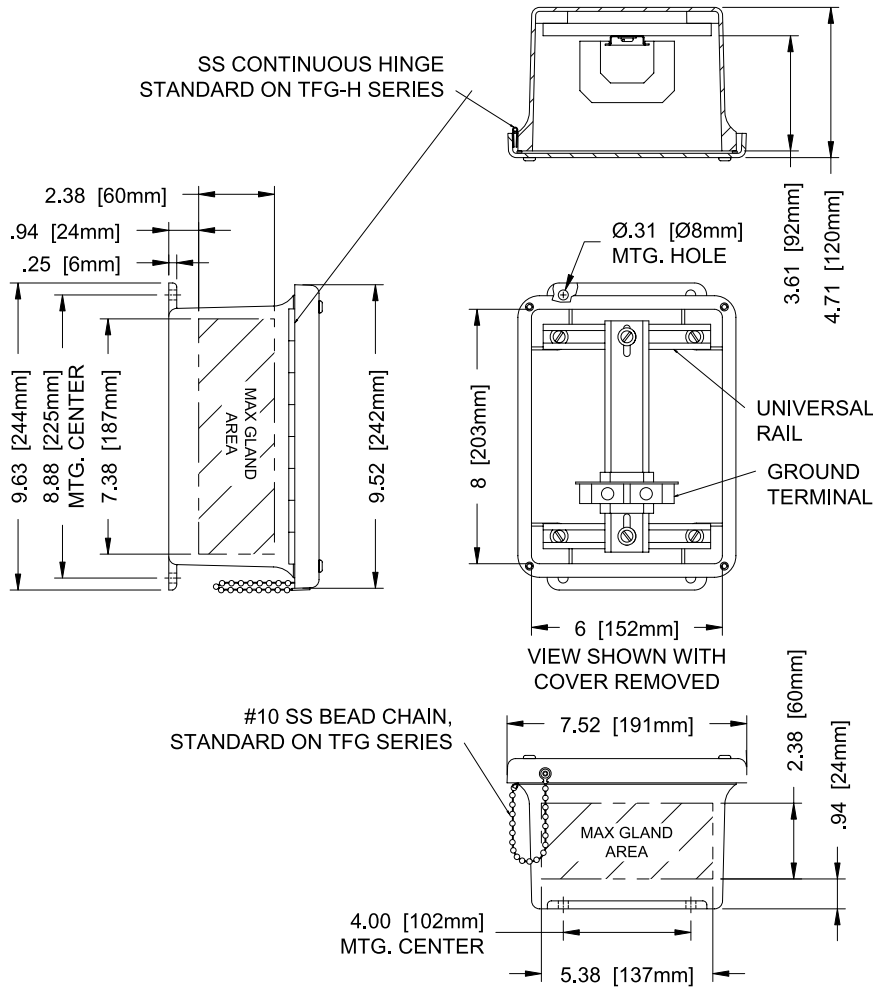
Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	69					
10	33			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	11	22	86			
20	4	13	25			
25		6	14	27		
35	Additional testing required, Consult Factory		4	10	26	
50				1	8	22

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

3B-81

TFG Series - Screw Cover Terminal Enclosure 8"x 6"x 4"



3B-82

Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-080604
Hinged	TFG-080604H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

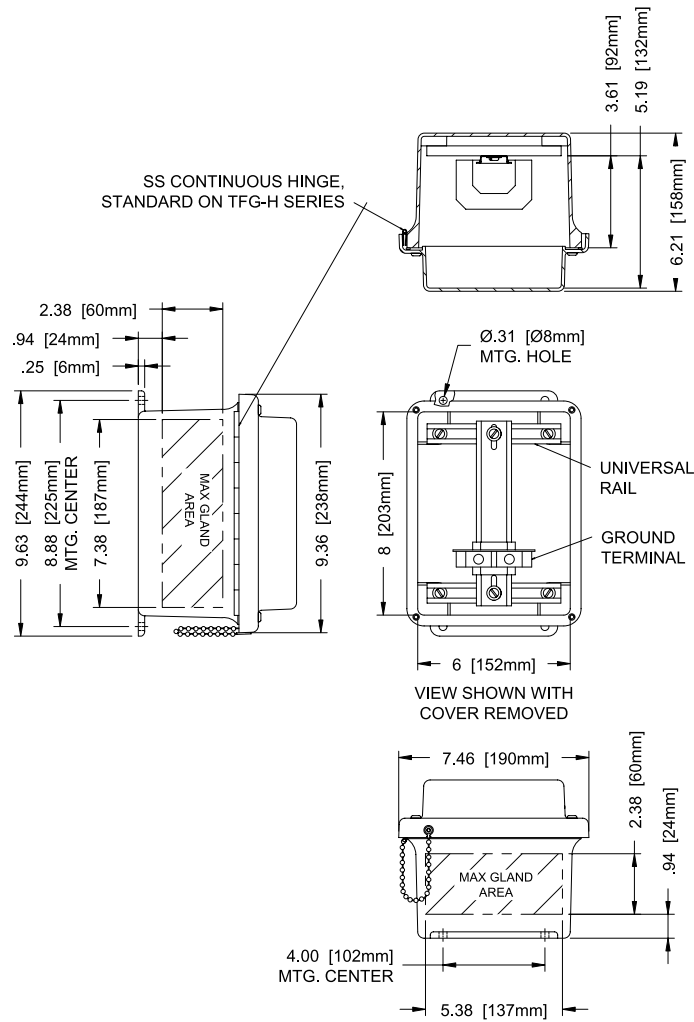
The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	60					
10	29			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	10	19	75			
20	4	11	22			
25		5	12	24		
35	Additional testing required, Consult Factory		3	9	23	
50				1	7	19

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

TFG Series - Screw Cover Terminal Enclosure 8"x 6"x 6"



3B-83

Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-080606
Hinged	TFG-080606H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

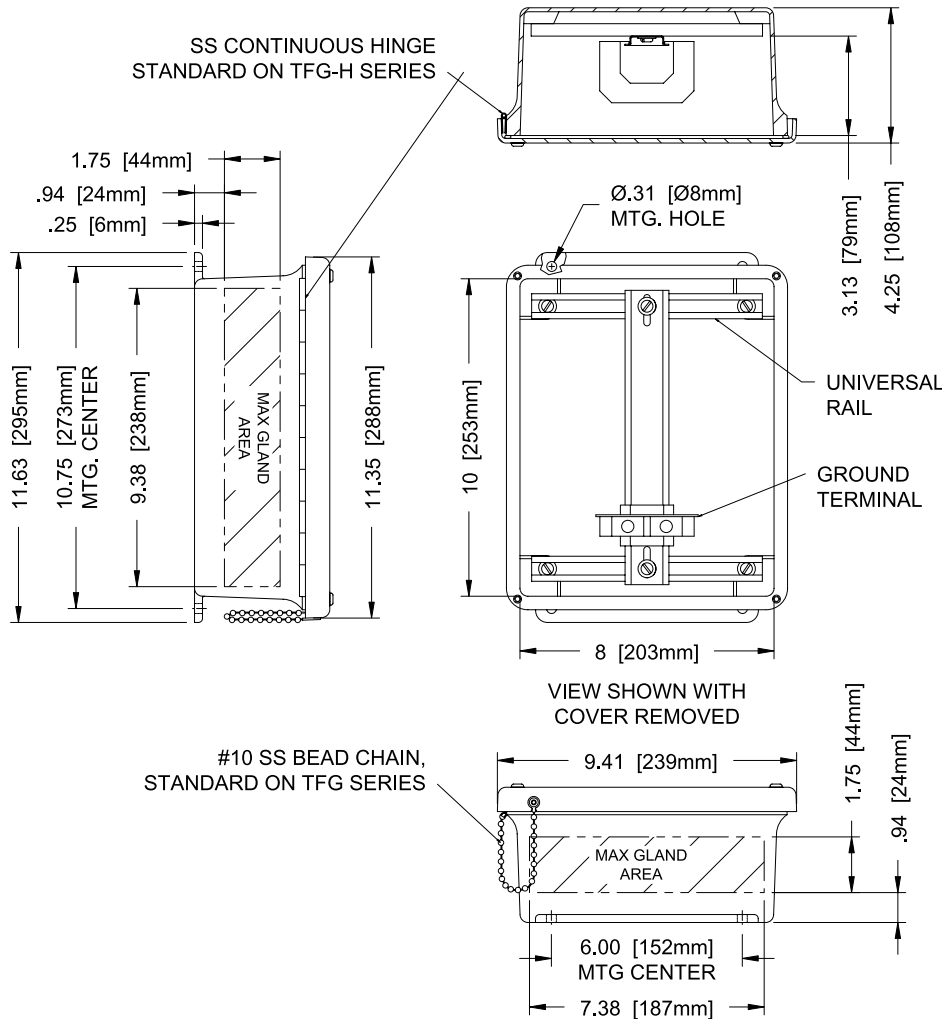
Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	71					
10	34			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	11	23	89			
20	4	13	26			
25		6	14			
35	Additional testing required, Consult Factory			4	11	27
50				1	9	22

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

TFG Series - Screw Cover Terminal Enclosure 10"x 8"x 4"

3B-84



Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-100804
Hinged	TFG-100804H

Current (amps)	Terminal Block Population for Increased Safety Heat Dissipation Requirements					
	Maximum Terminal Block Wire Size (mm ²)					
8	64					
10	31			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	10	20	80			
20	4	12	23			
25		5	13			
35	Additional testing required, Consult Factory		3	10	24	
50	Additional testing required, Consult Factory			1	8	20

Notes:

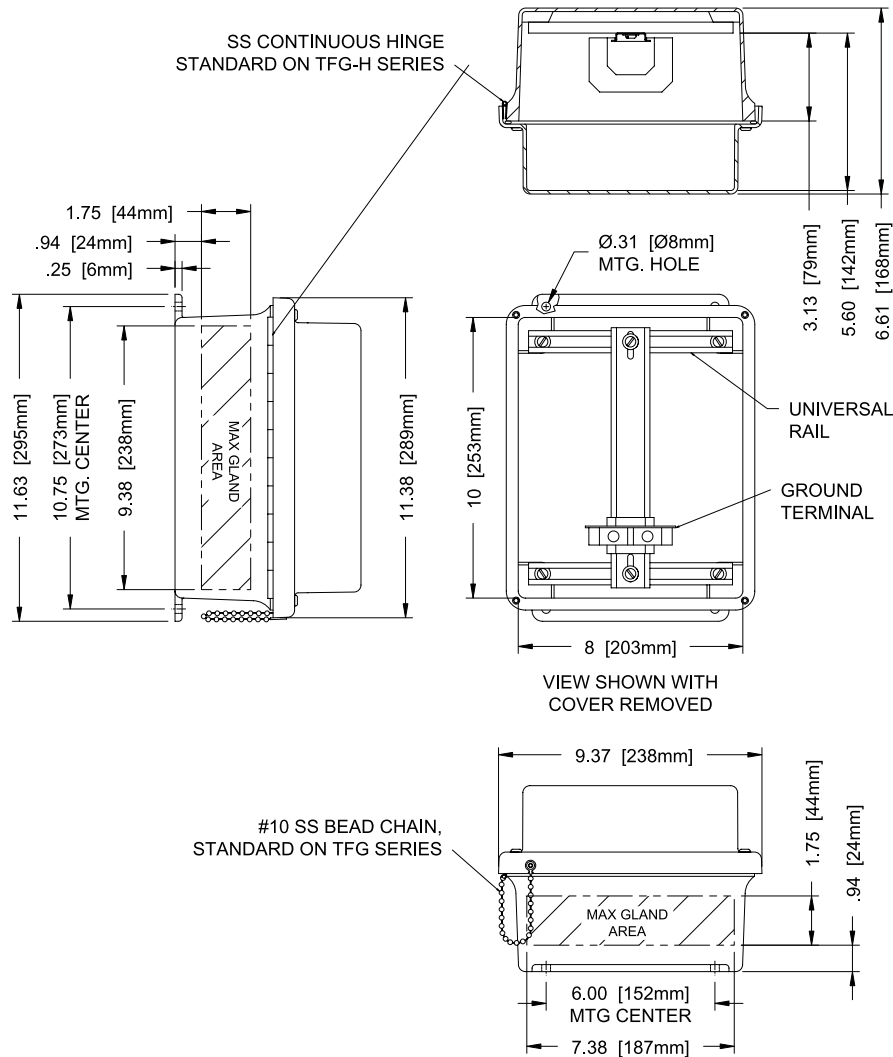
1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

TFG Series - Screw Cover Terminal Enclosure 10"x 8"x 6"



Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-100806
Hinged	TFG-100806H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

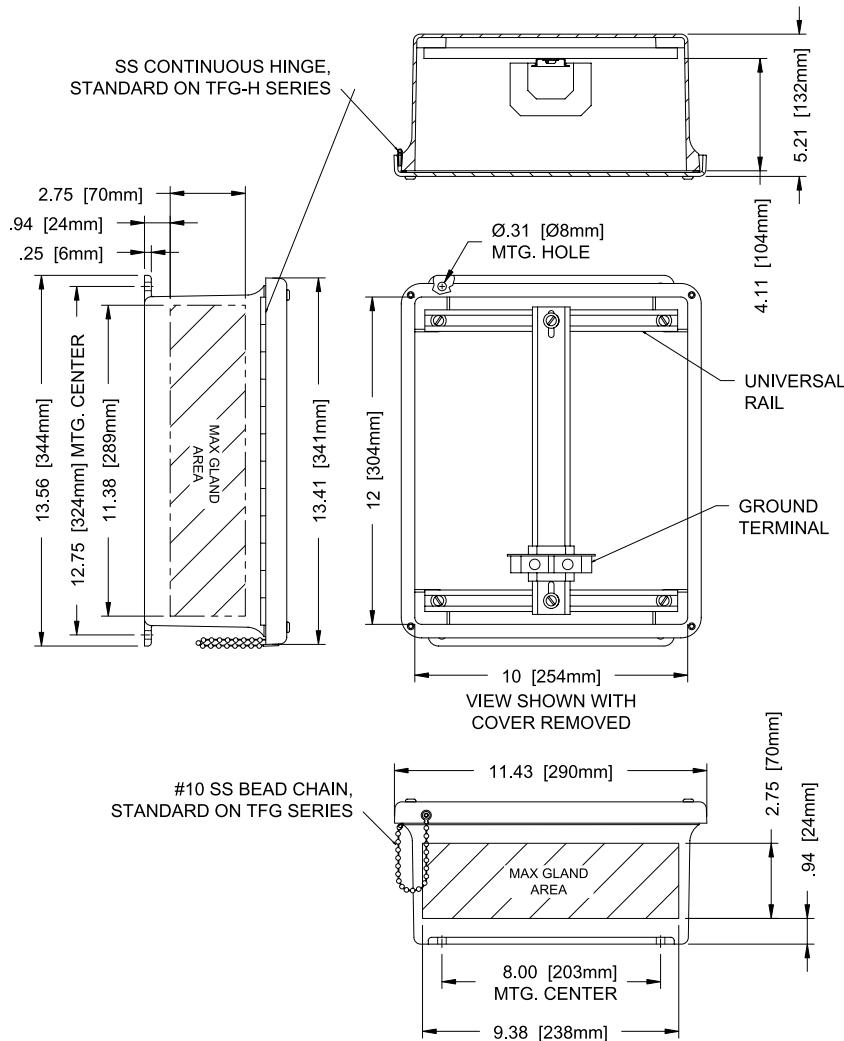
Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	82					
10	39			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	13	26	102			
20	5	15	29			
25		7	16	32		
35	Additional testing required, Consult Factory		5	12	31	
50				1	10	26

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

3B-85

TFG Series - Screw Cover Terminal Enclosure 12"x 10"x 5"



3B-86

Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-121005
Hinged	TFG-121005H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

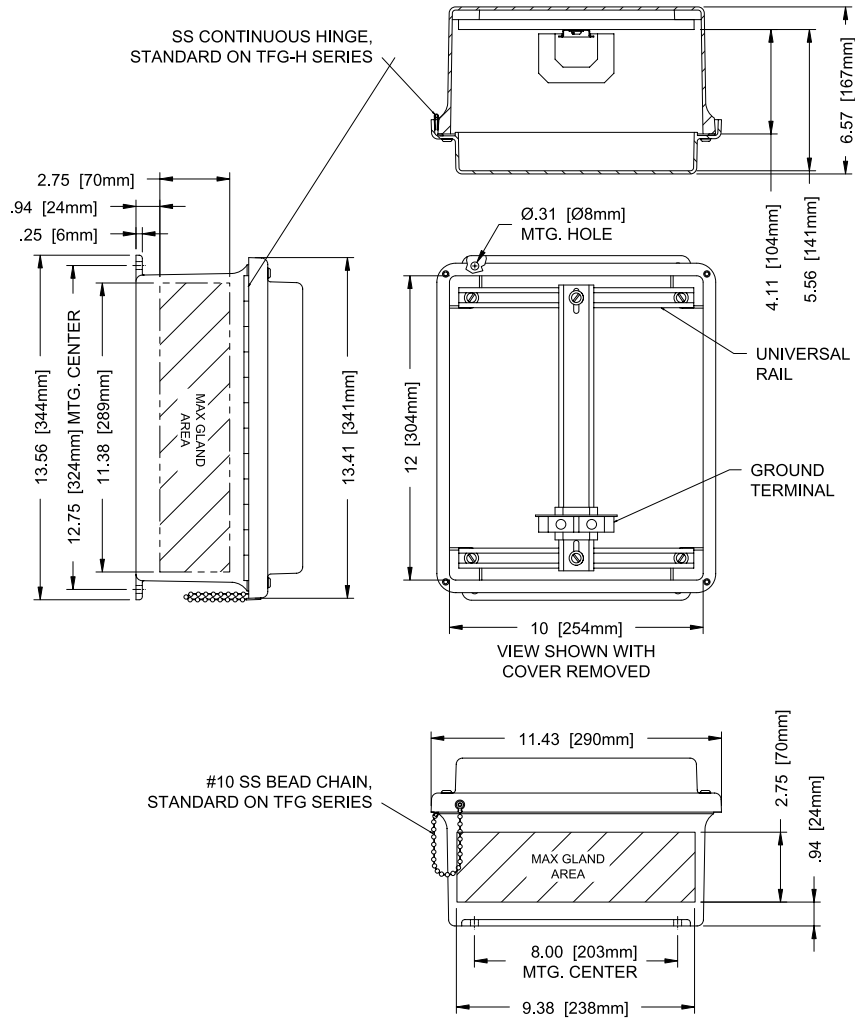
The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	79					
10	38			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	13	25	99			
20	5	15	28			
25		7	16			
35	Additional testing required, Consult Factory			4	12	30
50				1	10	25

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

TFG Series - Screw Cover Terminal Enclosure 12"x 10"x 6"



Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-121006
Hinged	TFG-121006H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

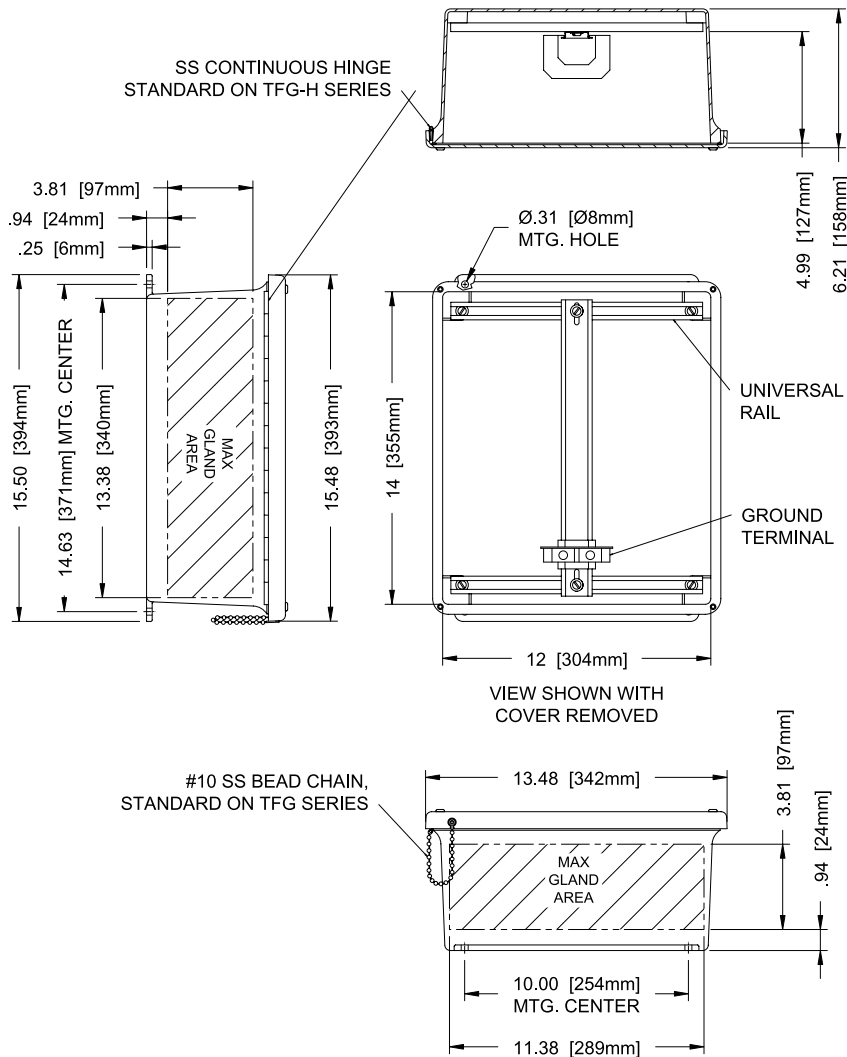
Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	89					
10	43			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	15	29	112			
20	6	16	32			
25		8	18	35		
35	Additional testing required, Consult Factory			5	14	34
50					4	11

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

3B-87

TFG Series - Screw Cover Terminal Enclosure 14"x 12"x 6"



3B-88

Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-141206
Hinged	TFG-141206H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

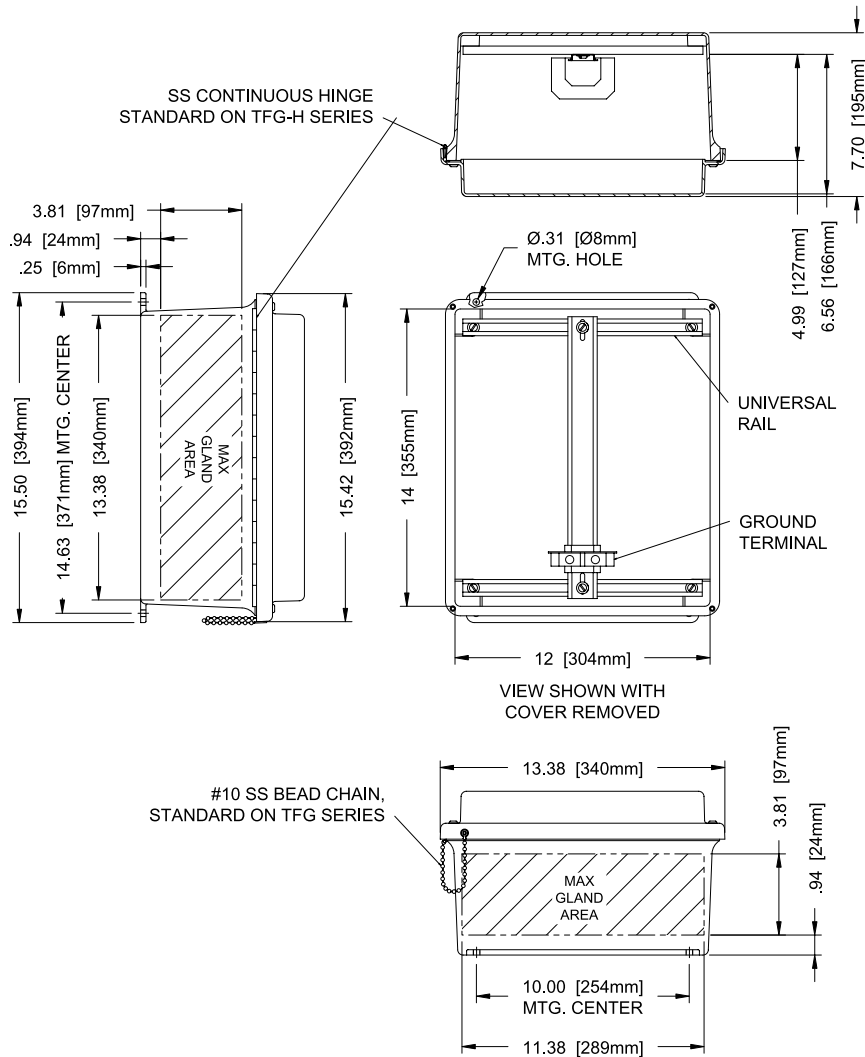
The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	94					
10	46			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	15	30	118			
20	6	17	34			
25		8	19			
35	Additional testing required, Consult Factory		5	14	36	
50				2	12	30

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

TFG Series - Screw Cover Terminal Enclosure 14"x 12"x 7"



Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-141207
Hinged	TFG-141207H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

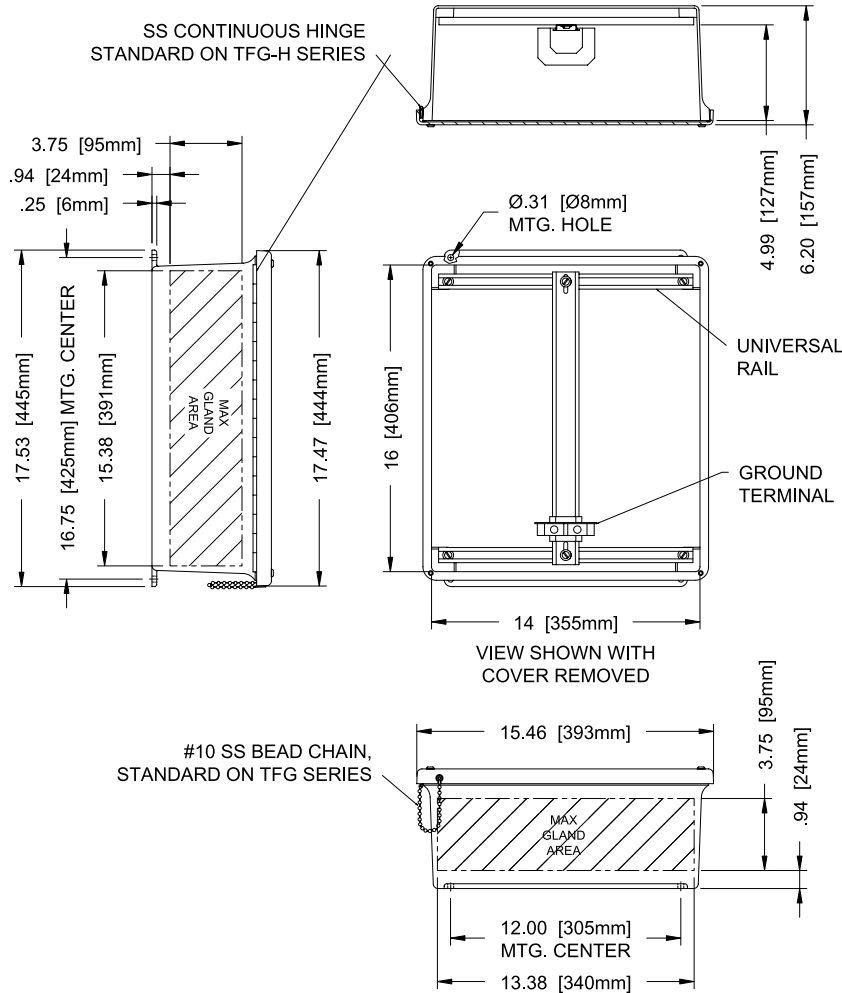
Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	105					
10	51			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	17	34	131			
20	7	19	38			
25		9	21			
35	Additional testing required, Consult Factory		6	16	40	
50				2	13	38

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

3B-89

TFG Series - Screw Cover Terminal Enclosure 16"x 14"x 6"



3B-90

Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-161406
Hinged	TFG-161406H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

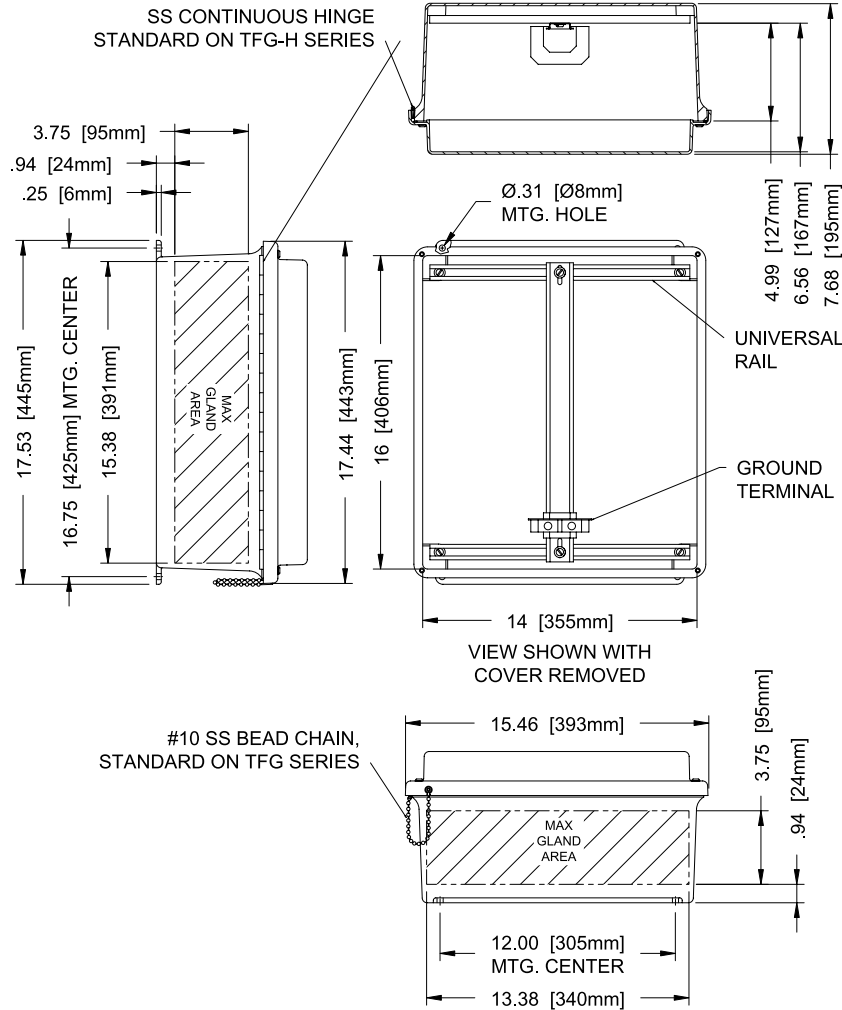
The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	102					
10	49			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	17	33	128			
20	7	19	37			
25		9	21			
35	Additional testing required, Consult Factory		6	15	39	
50				2	12	32

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

TFG Series - Screw Cover Terminal Enclosure 16"x 14"x 7"



Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-161407
Hinged	TFG-161407H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	113					
10	55			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	18	36	142			
20	7	21	41			
25		10	23	45		
35	Additional testing required, Consult Factory		6	17	43	
50				2	14	36

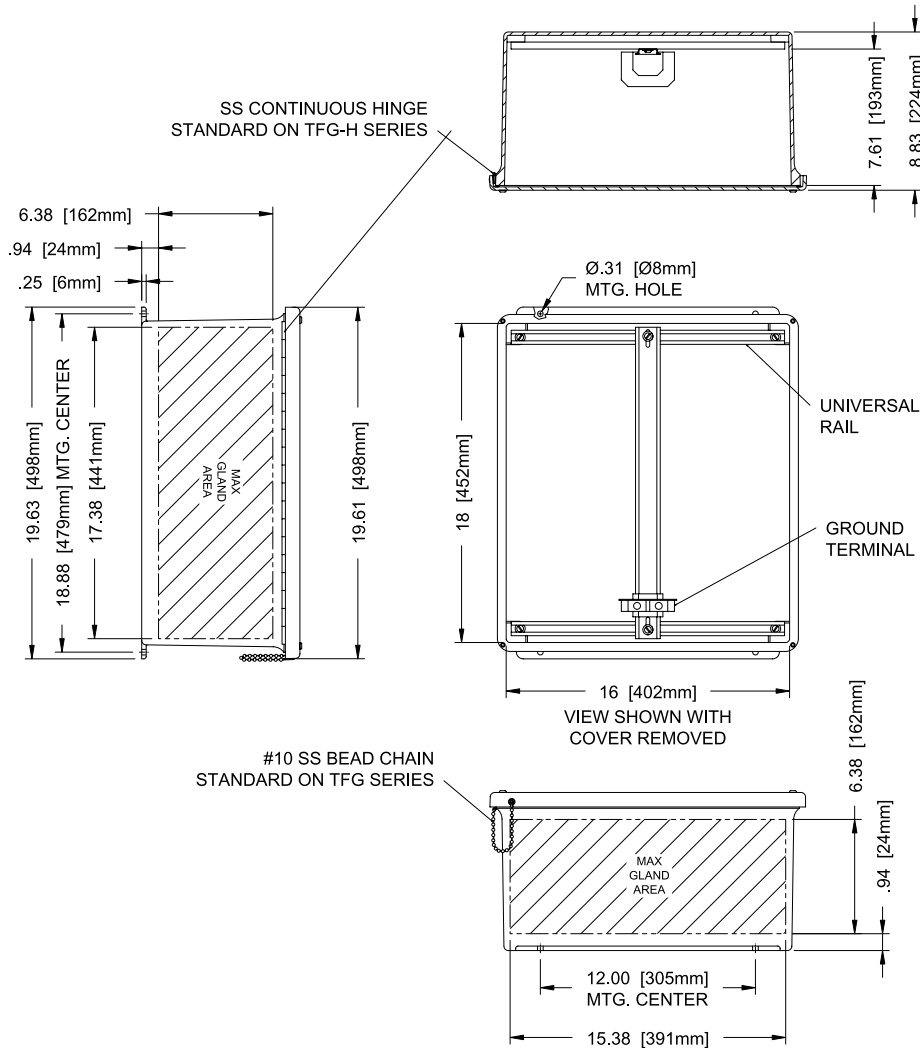
Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

3B-91

TFG Series - Screw Cover Terminal Enclosure 18"x 16"x 8"

3B-92



Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-181608
Hinged	TFG-181608H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

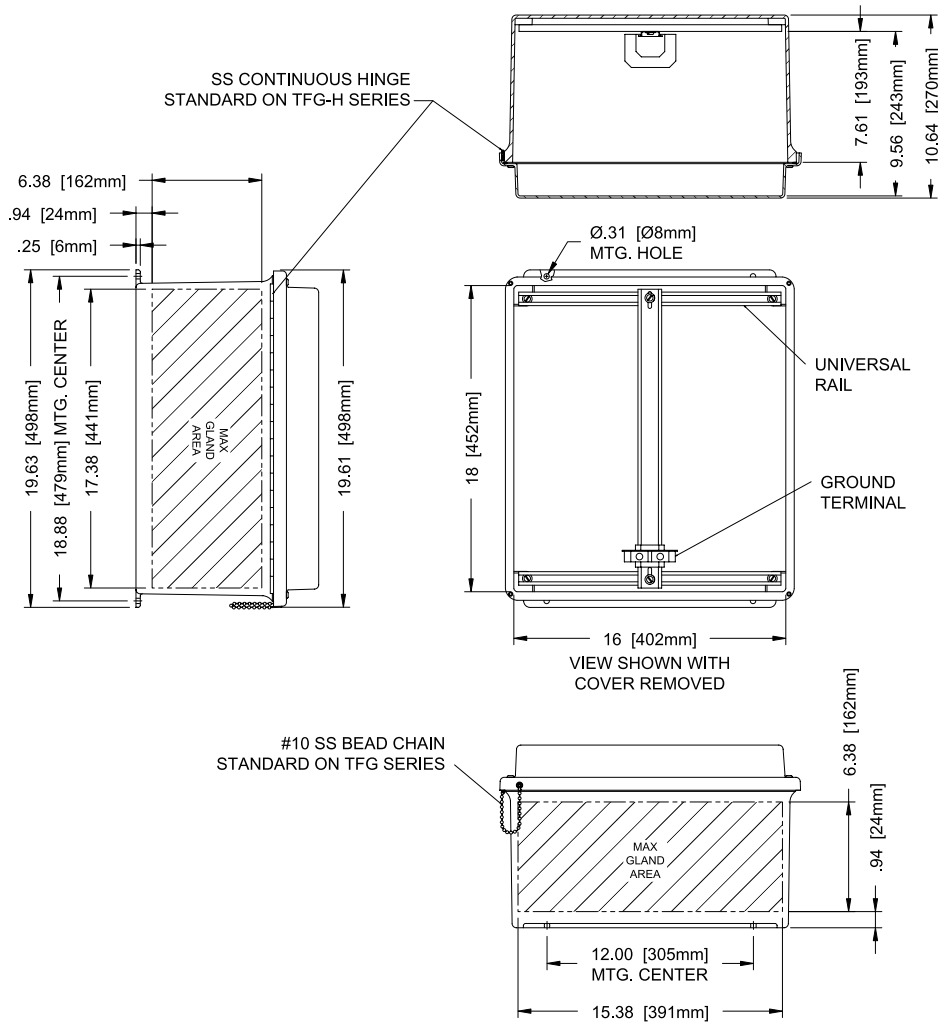
The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	128					
10	62			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	21	41	161			
20	8	24	46			
25		11	26	51		
35	Additional testing required, Consult Factory		7	20	49	
50				3	16	41

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

TFG Series - Screw Cover Terminal Enclosure 18"x 16"x 10"



Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-181610
Hinged	TFG-181610H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

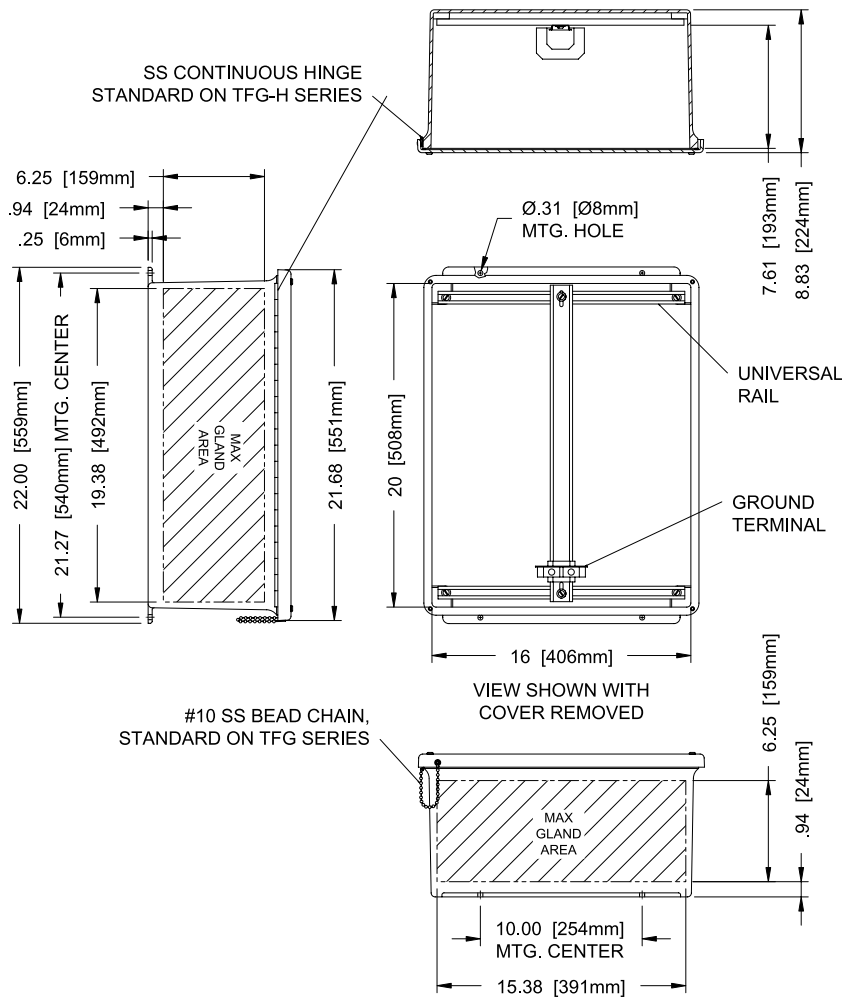
Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	142					
10	69			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	23	46	178			
20	9	26	51			
25		12	29	56		
35	Additional testing required, Consult Factory		8	22	55	
50				3	18	45

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

3B-93

TFG Series - Screw Cover Terminal Enclosure 20"x 16"x 8"



3B-94

Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-201608
Hinged	TFG-201608H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

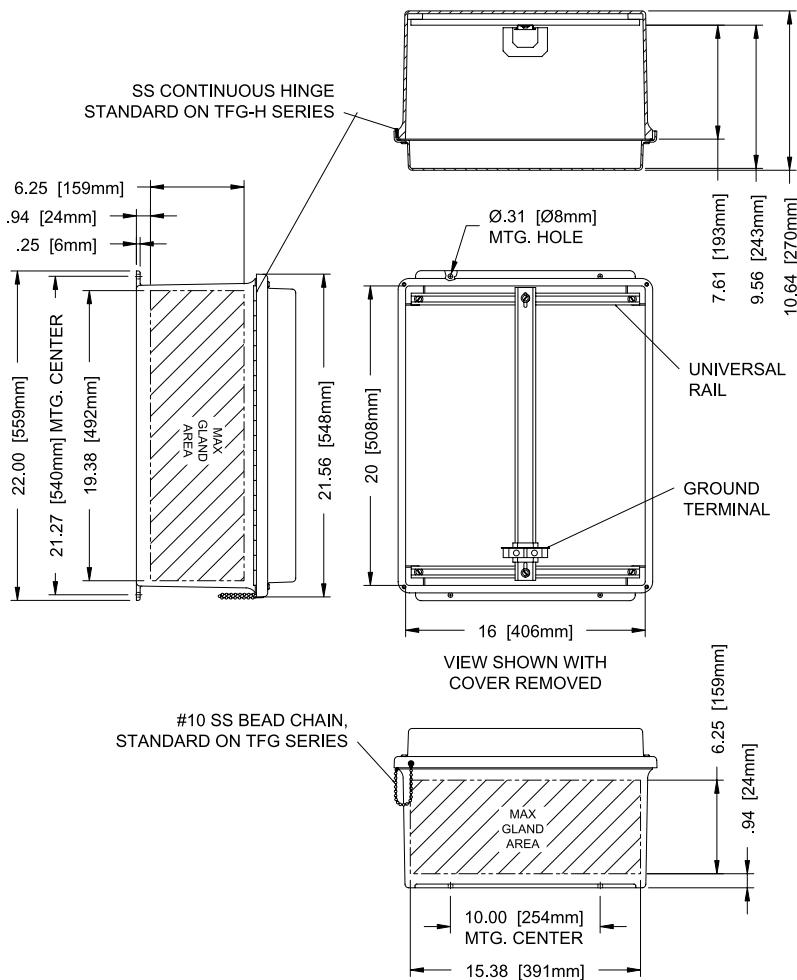
The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

Current (amps)	Terminal Block Population for Increased Safety Heat Dissipation Requirements					
	Maximum Terminal Block Wire Size (mm ²)					
	1.5	2.5	4	6	10	16
8	131					
10	63			Maximum fill permitted based solely on minimum wire bending space and electrical clearances		
16	21	42	164			
20	9	24	47			
25		11	27			
35	Additional testing required, Consult Factory		8	20	50	
50				3	16	42

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

TFG Series - Screw Cover Terminal Enclosure 20"x 16"x 10"



Enclosure Type	Catalog Number
Chained, Lift-Off	TFG-201610
Hinged	TFG-201610H

Notes:

1. See the end of this section for applications using multiple terminal block types.
2. For other manufacturers of EEx 'e' type terminal blocks, please consult factory.
3. For Conduit/Cable entry spacings refer to the end of this section.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

Terminal Block Population for Increased Safety Heat Dissipation Requirements						
Current (amps)	Maximum Terminal Block Wire Size (mm ⁵)					
	1.5	2.5	4	6	10	16
8	144					
10	70				Maximum fill permitted based solely on minimum wire bending space and electrical clearances	
16	24	46	181			
20	10	27	52			
25		13	29	57		
35	Additional testing required, Consult Factory		8	22	55	
50				3	18	46

Qualifying Enclosure for Increased Safety Certification

1. Find the Wire Size (conductor) you intend to use to connect to terminal block.
2. Find the Current (amperage) you intend to apply to the conductor.
3. The intersection of the Wire Size (column) and Current (row) gives you the maximum number of terminal blocks permitted for proper heat dissipation and Increased Safety Certification.
4. If the terminal count is too small, decrease the current or increase the wire size until the desired terminal count is found. If neither is possible, continue to the next size enclosure until the desired terminal count is found.

3B-95

Qualifying Enclosures for Increased Safety Certification

with Multiple Terminal Block Types

Current (amps)	Maximum Terminal Block Wire Size (mm5)					
	1.5	2.5	4	6	10	16
8	90					
10	44					
16	15	29	113			
20	6	17	33			
25		8	18	36		
35	Additional Testing Required, Consult Factory		5	14	35	
50				2	11	29

Different types of terminals may be used simultaneously by using the tabular values proportionally, as shown below.

Example:

Conductor Size	Current	Number		% of Maximum Terminal Population
2.5	16	7 (of 29)	=	24%
4	20	16 (of 33)	=	48%
10	35	9 (of 35)	=	26%
		Total	=	98% < 100%

Notes:

1. The tables above show the maximum number of single pole (single level) terminal blocks permitted based on the conductor size and the continuous current for the designated enclosures.
2. In the shaded areas you may add as many terminals as possible in accordance with the spacing requirements and manufacturer's instructions.
3. Grounding terminals, bridges and grounding conductors are not counted.
4. Please consult factory for information on multi-pole terminals, grounding terminals, grounding bars, and bridges.
5. When selecting the permitted continuous current for the cross section, the maximum permitted current for the terminals and conductors should be considered.
6. Combinations not covered by the above tables may be permitted if they are determined acceptable by test.

3B-96

Conduit/Cable & Wire Bending Guidelines

SIZE	NPT	5	4	3-1/2	3	2-1/2	2	1-1/2	1-1/4	1	3/4	1/2	1/16 ~ 3/8
NPT	METRIC	--	--	--	M75	M63	M50	M40	M32	M25	M20	M16	--
1/16 ~ 3/8	--	4-3/8 [112mm]	3-5/8 [92mm]	3-3/8 [86mm]	3 [77mm]	2-5/8 [68mm]	2-3/8 [61mm]	2 [51mm]	1-7/8 [48mm]	1-5/8 [42mm]	1-3/8 [35mm]	1-1/4 [32mm]	1-1/8 [29mm]
1/2	M16	4-3/8 [112mm]	3-5/8 [92mm]	3-3/8 [86mm]	3 [77mm]	2-5/8 [68mm]	2-3/8 [61mm]	2 [51mm]	1-7/8 [48mm]	1-5/8 [42mm]	1-3/8 [35mm]	1-1/4 [32mm]	
3/4	M20	4-1/2 [115mm]	3-3/4 [96mm]	3-1/2 [89mm]	3-1/8 [80mm]	2-3/4 [70mm]	2-1/2 [64mm]	2-1/8 [54mm]	2 [51mm]	1-3/4 [45mm]	1-1/2 [38mm]		
1	M25	4-5/8 [118mm]	3-7/8 [99mm]	3-5/8 [92mm]	3-1/4 [83mm]	2-7/8 [74mm]	2-3/4 [70mm]	2-1/4 [58mm]	2-1/8 [54mm]	1-7/8 [48mm]			
1-1/4	M32	4-7/8 [124mm]	4-1/8 [105mm]	3-7/8 [99mm]	3-1/2 [89mm]	3-1/8 [80mm]	2-7/8 [74mm]	2-1/2 [64mm]	2-3/8 [61mm]				
1-1/2	M40	5 [127mm]	4-1/4 [108mm]	4 [102mm]	3-5/8 [92mm]	3-1/4 [83mm]	3 [77mm]	2-5/8 [68mm]					
2	M50	5-3/8 [137mm]	4-3/4 [121mm]	4-1/2 [115mm]	4 [102mm]	3-5/8 [92mm]	3-3/8 [86mm]						
2-1/2	M63	5-1/2 [140mm]	4-7/8 [124mm]	4-5/8 [118mm]	4-1/4 [108mm]	3-7/8 [99mm]							
3	M75	5-7/8 [150mm]	5-1/4 [134mm]	5 [127mm]	4-5/8 [118mm]								
3-1/2	--	6-1/4 [159mm]	5-3/4 [147mm]	5-1/2 [140mm]									
4	--	6-7/8 [175mm]	6 [153mm]										
5	--	7-3/8 [188mm]											

This information is compiled from data which we believe is reliable and is given in good faith. Since the methods of application and condition under which our products are used are beyond our control, we are not able to guarantee the application and/or use of same. The user assumes all risks and liability in connection with the application and use of our products.

NPT	5	4	3-1/2	3	2-1/2	2	1-1/2	1-1/4	1	3/4	1/2	1/16 ~ 3/8
METRIC	--	--	--	M75	M63	M50	M40	M32	M25	M20	M16	--
	2-13/16 [72mm]	2-1/4 [58mm]	2 [51mm]	1-3/4 [45mm]	1-7/16 [37mm]	1-3/16 [31mm]	1 [26mm]	7/8 [23mm]	11/16 [18mm]	9/16 [14mm]	1/2 [13mm]	1/2 [13mm]

AWG	16	14	12	10	8	6	4	2	1/0	2/0	3/0	4/0	250	350	400	500
mm sq.	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
	1-1/2 [38mm]	1-1/2 [38mm]	1-1/2 [38mm]	1-1/2 [38mm]	2 [51mm]	3 [77mm]	3-1/2 [89mm]	5-1/2 [140mm]	6 [153mm]	6-1/2 [165mm]	7 [178mm]	8-1/2 [216mm]	10 [254mm]	12 [305mm]	13 [330mm]	14 [356mm]

Notes:

- The distances in Table A are recommended minimum distances between centers of conduit and cable gland entries. Consult manufacturer of conduit fitting or cable glands for their recommended minimum spacing.
- The distances in Table B are recommended minimum distances between center of conduit and cable gland entries to the edge of an opening or inside wall of box. Consult manufacturer of conduit fitting or cable glands for their recommended minimum spacing.
- The distances in Table C are the minimum wire bending space requirements between terminals, partitions, or inside walls.

3B-97

HV Series - High Voltage Junction Boxes



Construction

- Available in (3) Materials: SS304, SS316L, Powder Coated (ASA61 Grey) Steel
- Folded Lip around the Door Opening to provide complete and maximum gasket seal
- Continuously Welded and Ground Smooth Seams
- Silicone Strip Gasket
- Welded on External Mounting Feet with 5/16" Clearance Holes/Slot
- External Door Clamps
- Continuous Piano Type Hinge with Removable SS Hinge Pin
- Ground Studs on Box and Cover
- Internal/External Earthing Lugs
- Universal Rail Mounting System
- Padlock Hasp & Staple for Padlocking

Options

Gland Plates:

These removable plates offer great flexibility for the end user to drill holes without having to remove the entire enclosure from the installation site.

Add the following Suffixes:

- A**: Gland Plate installed on top of box.
- B**: Gland Plate installed on bottom of box.
- C**: Gland Plate installed on left of box.
- D**: Gland Plate installed on right of box.

For multiple gland plates omit dashes (*i.e.* HV4X-201407-**ABCD**)

Conduit/Cable Entries:

Entries can be provided per a customer sketch or with detailed information on the entry locations. Please refer to Entry Spacing Tables at the end of this section. *Note: This information is important and could affect the size of the enclosure you selected.*

Close-up Plugs:

Any unused entries must be plugged with a Certified Close-Up Plug. Adalet can provide close-up plugs in various styles and materials. Please indicate on the sketch or provide detailed information of holes to be plugged.

Enclosure Labeling:

Adalet can provide additional enclosure labeling with custom silk screening or various colors of Lamacoid™ nameplates. Please provide detailed information of the logo or text required.

Breather Drains:

Breather Drains can be provided per customer request. They are available in Brass or Stainless Steel 316L. Please indicate on a sketch or provided detailed information for locations.

Mounting Pans:





As an alternative to the universal rail mounting system, mounting pans are available in steel/powder coated, stainless steel, and aluminum. Please indicate when requesting quote.

HV Series - High Voltage Junction Boxes

General Information

Adalet's Single Door Clamped High Voltage Junction Boxes are available in Stainless Steel 316L & 304 and Carbon Steel. Silicone gaskets, removable hinge pin, box & cover ground studs including an internal/external earthing stud, and a universal rail mounting system are included as standard.

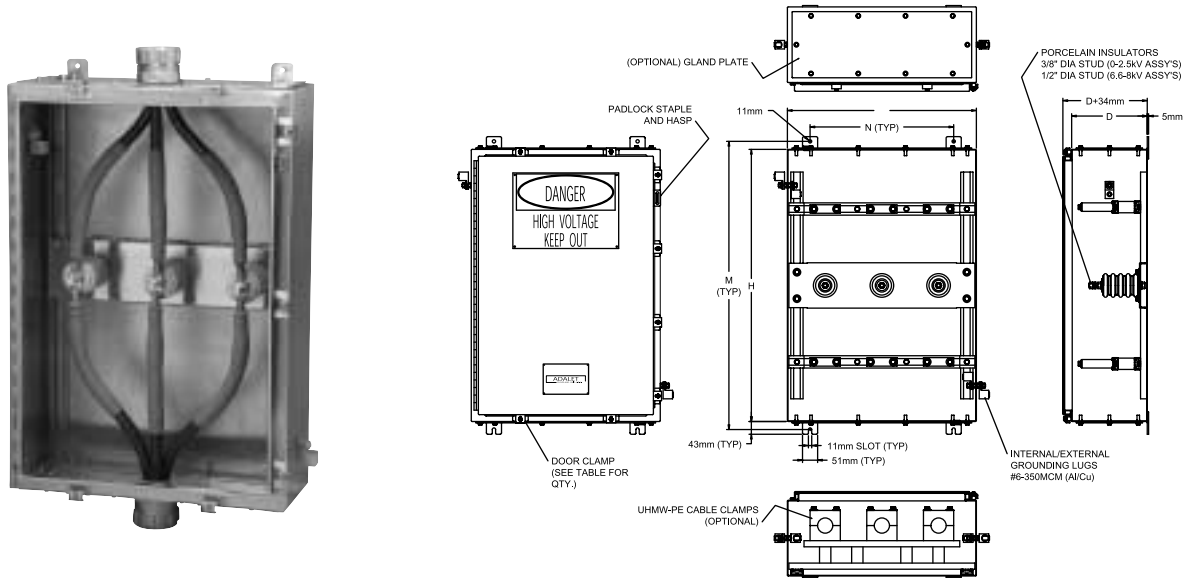


Enclosure Certifications		CE 0539 II 2GD EEx e II T6 (T5 Tamb +55°C) Ex e II T6 (T5 Tamb +55°C) Class I, Zone 1, AEx e II T6 (T5 Tamb +55°C) Class II, Division 2 IP66 Type 4, 4X (Stainless Steel only), 12, & 13	ATEX Directive 94/9/EC EN50014/EN50019 CSA E79-7, IEC 60079-7 UL 2279-7 UL 1604 IEC 60529 UL50	   
Working Voltage		AC	8kV Maximum	
Material		HV4 Series HV4X Series HV4X6 Series HV4 Series Gland Plates HV4X Series Gland Plates HV4X6 Series Gland Plates Universal Rail System Mounting Pan	#14ga Cold Rolled Steel, Polyester Powder Coated ANSI 61 Gray #14ga Stainless Steel 304, Brushed Finish #14ga Stainless Steel 316, Brushed Finish #10ga Cold Rolled Steel, Polyester Powder Coated ANSI 61 Gray #10ga Stainless Steel 304, Brushed Finish #10ga Stainless Steel 316, Brushed Finish 300 Series Stainless Steel #14ga Cold Rolled Steel, Polyester Powder Coated White	
Gasket			Silicone Sponge	
Lid Fixing	Hinge	HV4 Series HV4X Series HV4X6 Series	Continuous piano type - Steel with removable SS304 pin Continuous piano type - SS304 with removable pin Continuous piano type - SS316 with removable pin	
	Door Clamps	HV4 Series HV4X Series HV4X6 Series	Plated Steel Clear Stainless Steel 304 Stainless Steel 316	
Enclosure Mounting		All Types	Four (4) external lugs with .44" clearance holes/slots	
Gland Plate Hardware		All Types	300 Series stainless steel	
Grounding	Box & Cover	All Types	1/4-20 Stud with 300 series stainless steel hardware	
	Earthing Lugs	All Types	#6-350MCM - Al/Cu	
Impact Resistant		All Types	7 Nm to EN50014/EN50019	
Ambient Temperature Range		All Types	-40°C to +55°C to EN50014	

3C-2

HV Series - High Voltage Junction Boxes 1 x 1 Connection Series

Shielded or Unshielded Cables



3C-3

SS316L CATALOG NUMBERS	H	W	D	M	N	Maximum Voltage	Maximum Amps (T5/T6)	# of Clamps
HV4X6-241206	610	305	152	664	241	1.5kV	315	5
HV4X6-242006	610	508	152	664	356	1.5kV	315	5
HV4X6-201206	508	305	152	562	241	2.5kV	250	4
HV4X6-161606	406	406	152	460	254	2.5kV	200	4
HV4X6-241606	610	406	152	664	254	2.5kV	315	5
HV4X6-301606	762	406	152	816	254	2.5kV	400	5
HV4X6-202006	508	508	152	562	356	2.5kV	250	4
HV4X6-201407	508	356	178	562	203	2.5kV	250	4
HV4X6-251807	635	457	178	689	305	2.5kV	315	5
HV4X6-302207	762	559	178	816	406	2.5kV	400	5
HV4X6-362507	914	635	178	968	483	2.5kV	400	8
HV4X6-201610	508	406	254	562	254	6.6kV	250	4
HV4X6-302010	762	508	254	816	356	8kV	400	5
HV4X6-242010	610	508	254	664	356	8kV	315	5
HV4X6-302410	762	762	254	816	458	8kV	400	5
HV4X6-242410	610	610	254	664	458	8kV	315	5
HV4X6-362410	914	610	254	968	458	8kV	400	5
HV4X6-362510	914	635	254	968	483	8kV	500	8
HV4X6-603610	1524	914	254	1578	762	8kV	500	9
HV4X6-603616	1524	914	406	1578	762	8kV	500	9

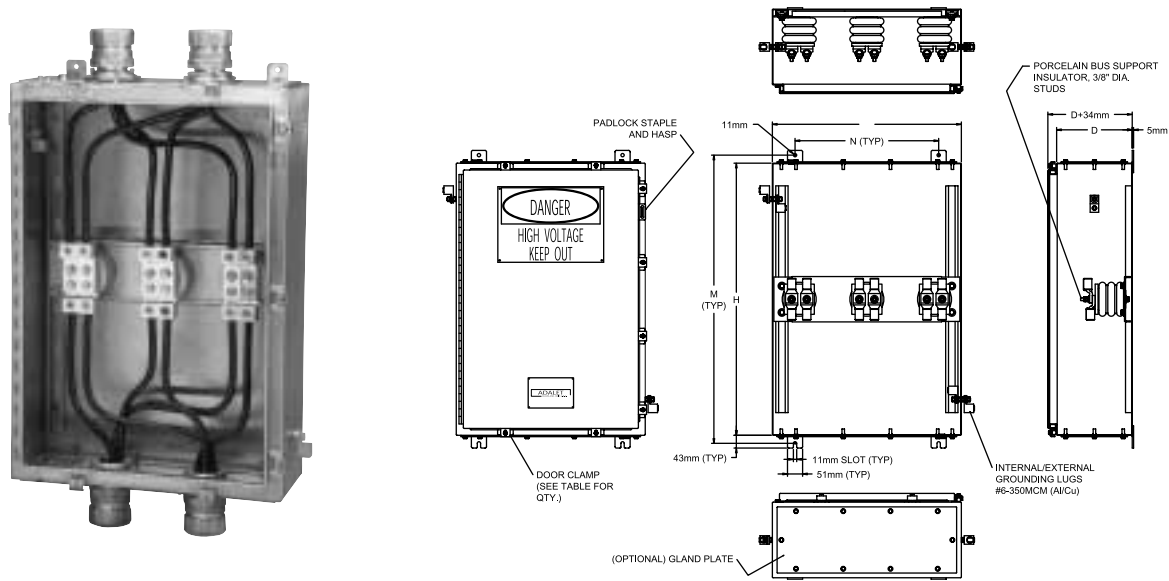
Notes:

1. For stainless steel 304 assemblies substitute HV4X6- prefix with HV4X- prefix.
2. For steel powder coated assemblies substitute HV4X6- prefix with HV4- prefix.
3. Please specify working voltage and amperage when requesting quote.
4. For conduit/cable entry spacing and minimum wire bending space requirements, refer to the end of this section.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

HV Series - High Voltage Junction Boxes 2 x 2 Connection Series

2 Parallel Unshielded Cables



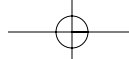
SS316L CATALOG NUMBERS	H	W	D	M	N	Maximum Voltage	Maximum Amps (T6)	Maximum Amps (T5)	# of Clamps
HV4X6-202008	508	508	203	562	356	1.1kV	500	500	4
HV4X6-242008	610	508	203	664	356	1.1kV	630	630	5
HV4X6-242408	610	610	203	664	458	1.1kV	630	630	5
HV4X6-202010	508	508	254	562	356	1.1kV	500	500	4
HV4X6-242010	610	508	254	664	356	1.1kV	630	630	5
HV4X6-302010	762	508	254	816	356	1.1kV	650	800	5
HV4X6-242410	610	610	254	664	458	1.1kV	630	630	5
HV4X6-302410	762	610	254	816	458	1.1kV	650	800	5
HV4X6-362410	914	610	254	968	458	1.1kV	650	800	5
HV4X6-362510	914	635	254	968	483	1.1kV	650	1000	8
HV4X6-603610	1524	914	254	1578	762	1.1kV	650	1000	9

Notes:

1. For stainless steel 304 assemblies substitute HV4X6- prefix with HV4X- prefix.
2. For steel powder coated assemblies substitute HV4X6- prefix with HV4- prefix.
3. Please specify working voltage and amperage when requesting quote.
4. For conduit/cable entry spacing and minimum wire bending space requirements, refer to the end of this section.

The Adalet Engineering Department is available to assist you in the selection of Increased Safety Enclosures.

3C-4



Conduit/Cable & Wire Bending Guidelines

Table A - Minimum Spacing Between Centers of Conduit or Cable Entries

SIZE	NPT	5	4	3-1/2	3	2-1/2	2	1-1/2	1-1/4	1	3/4	1/2	1/16 ~ 3/8
NPT	METRIC	--	--	--	M75	M63	M50	M40	M32	M25	M20	M16	--
1/16 ~ 3/8	--	4-3/8 [112mm]	3-5/8 [92mm]	3-3/8 [86mm]	3 [77mm]	2-5/8 [68mm]	2-3/8 [61mm]	2 [51mm]	1-7/8 [48mm]	1-5/8 [42mm]	1-3/8 [35mm]	1-1/4 [32mm]	1-1/8 [29mm]
1/2	M16	4-3/8 [112mm]	3-5/8 [92mm]	3-3/8 [86mm]	3 [77mm]	2-5/8 [68mm]	2-3/8 [61mm]	2 [51mm]	1-7/8 [48mm]	1-5/8 [42mm]	1-3/8 [35mm]	1-1/4 [32mm]	
3/4	M20	4-1/2 [115mm]	3-3/4 [96mm]	3-1/2 [89mm]	3-1/8 [80mm]	2-3/4 [70mm]	2-1/2 [64mm]	2-1/8 [54mm]	2 [51mm]	1-3/4 [45mm]	1-1/2 [38mm]		
1	M25	4-5/8 [118mm]	3-7/8 [99mm]	3-5/8 [92mm]	3-1/4 [83mm]	2-7/8 [74mm]	2-3/4 [70mm]	2-1/4 [58mm]	2-1/8 [54mm]	1-7/8 [48mm]			
1-1/4	M32	4-7/8 [124mm]	4-1/8 [105mm]	3-7/8 [99mm]	3-1/2 [89mm]	3-1/8 [80mm]	2-7/8 [74mm]	2-1/2 [64mm]	2-3/8 [61mm]				
1-1/2	M40	5 [127mm]	4-1/4 [108mm]	4 [102mm]	3-5/8 [92mm]	3-1/4 [83mm]	3 [77mm]	2-5/8 [68mm]					
2	M50	5-3/8 [137mm]	4-3/4 [121mm]	4-1/2 [115mm]	4 [102mm]	3-5/8 [92mm]	3-3/8 [86mm]						
2-1/2	M63	5-1/2 [140mm]	4-7/8 [124mm]	4-5/8 [118mm]	4-1/4 [108mm]	3-7/8 [99mm]							
3	M75	5-7/8 [150mm]	5-1/4 [134mm]	5 [127mm]	4-5/8 [118mm]								
3-1/2	--	6-1/4 [159mm]	5-3/4 [147mm]	5-1/2 [140mm]									
4	--	6-7/8 [175mm]	6 [153mm]										
5	--	7-3/8 [188mm]											

This information is compiled from data which we believe is reliable and is given in good faith. Since the methods of application and condition under which our products are used are beyond our control, we are not able to guarantee the application and/or use of same. The user assumes all risks and liability in connection with the application and use of our products.

Table B - Minimum Distance from Conduit/Cable Center to Edge of Opening or Edge of Box

NPT	5	4	3-1/2	3	2-1/2	2	1-1/2	1-1/4	1	3/4	1/2	1/16 ~ 3/8
METRIC	--	--	--	M75	M63	M50	M40	M32	M25	M20	M16	--
	2-13/16 [72mm]	2-1/4 [58mm]	2 [51mm]	1-3/4 [45mm]	1-7/16 [37mm]	1-3/16 [31mm]	1 [26mm]	7/8 [23mm]	11/16 [18mm]	9/16 [14mm]	1/2 [13mm]	1/2 [13mm]

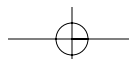
Table C - Minimum Wire Bending Space Between Terminals, Partitions, or Inside Walls

AWG	16	14	12	10	8	6	4	2	1/0	2/0	3/0	4/0	250	350	400	500
mm sq.	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
	1-1/2 [38mm]	1-1/2 [38mm]	1-1/2 [38mm]	1-1/2 [38mm]	2 [51mm]	3 [77mm]	3-1/2 [89mm]	5-1/2 [140mm]	6 [153mm]	6-1/2 [165mm]	7 [178mm]	8-1/2 [216mm]	10 [254mm]	12 [305mm]	13 [330mm]	14 [356mm]

Notes:

- The distances in Table A are recommended minimum distances between centers of conduit and cable gland entries. Consult manufacturer of conduit fitting or cable glands for their recommended minimum spacing.
- The distances in Table B are recommended minimum distances between center of conduit and cable gland entries to the edge of an opening or inside wall of box. Consult manufacturer of conduit fitting or cable glands for their recommended minimum spacing.
- The distances in Table C are the minimum wire bending space requirements between terminals, partitions, or inside walls.

3C-5



CN Series



85 Enclosure Sizes

Available in eighty-five (85) sizes, ranging from 16"x12"x6" (model 161206) to 60"x36"x12" (model 603612).

Construction

- Available in (3) Materials: SS304, SS316L, Powder Coated (ASA61 Grey) Steel
- Folded Lip around the Door Opening to provide complete and maximum gasket seal
- Continuously Welded and Ground Smooth Seams
- Silicone Strip Gasket
- Welded on External Mounting Feet with 5/16" Clearance Holes/Slot
- External Door Clamps
- Continuous Piano Type Hinge with Removable SS Hinge Pin
- Ground Studs on Box and Cover
- Internal/External Earthing Stud
- Padlock Hasp & Staple for Padlocking

Options

Gland Plates:

These removable plates offer great flexibility for the end user to drill holes without having to remove the entire enclosure from the installation site.

Add the following Suffixes:

- A**: Gland Plate installed on top of box.
- B**: Gland Plate installed on bottom of box.
- C**: Gland Plate installed on left of box.
- D**: Gland Plate installed on right of box.

For multiple gland plates omit dashes (*i.e.* CN4X-201407-**ABCD**)

Auxiliary Devices:



Pushbuttons - Rated 250V, 16A (T6) - 11A (T5)

- Single Button
- Dual
- Mushroom Head & Keyed Mushroom Head

Selector Switches - Rated 250V, 16A (T6) - 11A (T5)

- Two or Three Position
- Keyed
- Momentary or Maintained

Pilot Lights - Rated 12-240VAC, 12-110VDC, W 1W

- Lens Colors: Blue, Green, Red, Yellow, White

Potentiometers - Rated 250V

- 1W @ 1K, 4700, or 10K Ohms

Measuring Instruments:

Ammeters, Voltmeters - Rated 420V or 750V

- Direct Measurement
- Indirect Measurement
- Interchangeable Scales

CN Series

General Information

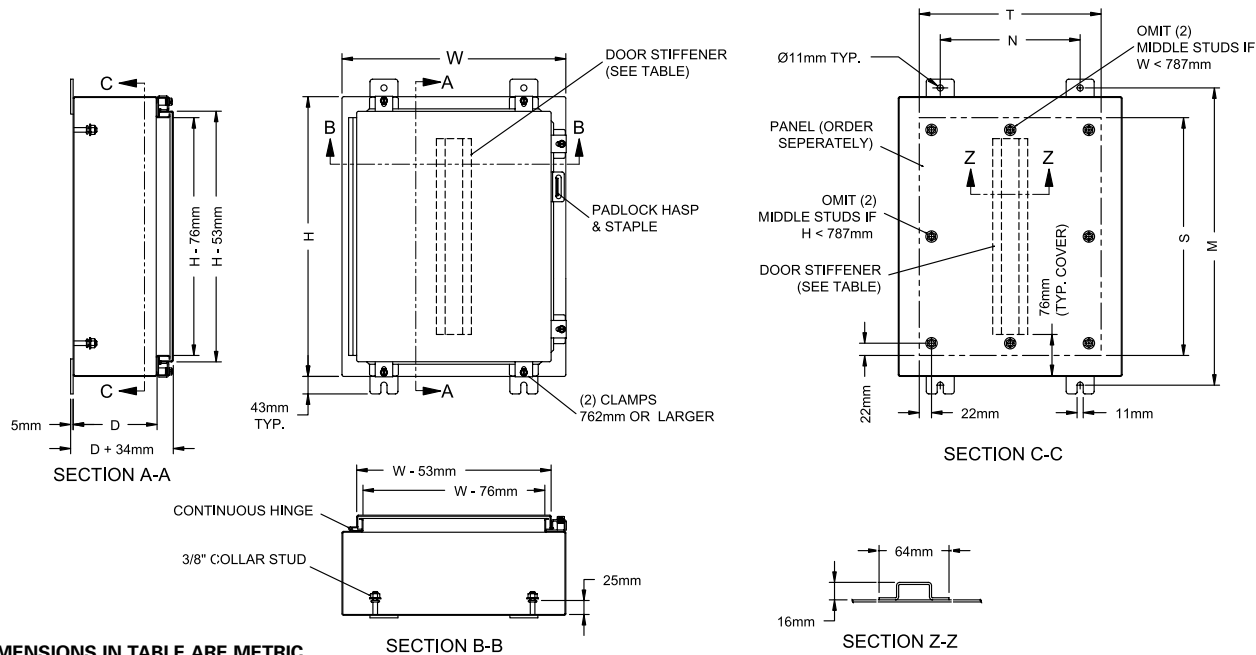
Adalet's Single Door Clamped Control Enclosures are available in Stainless Steel 316L & 304 and Carbon Steel. Adalet can also supply custom size enclosures, operators, and wiring of devices to rail mounted terminal blocks to suit your Increased Safety Application. Silicone gaskets, removable hinge pin, box & cover ground studs including an internal/external earthing stud, along with internal standoffs for mounting pans are included as standard.



3D-2

Enclosure Certifications		C _E 0539 II 2GD EEx e II T6 Tamb +40°C (T5 Tamb +55°C) IP66	ATEX Directive 94/9/EC EN50014/EN50019 IEC 60529	
Working Voltage			Up to 1100 Volts Maximum	
Terminal Blocks		Various Manufacturers	EEx e type with wire sizes 1.5mm up to 240mm	
Material		CN4 Series CN4X Series CN4X6 Series CN4 Series Gland Plates CN4X Series Gland Plates CN4X6 Series Gland Plates Mounting Pan	#14ga Cold Rolled Steel, Polyester Powder Coated ANSI 61 Gray #14ga Stainless Steel 304, Brushed Finish #14ga Stainless Steel 316, Brushed Finish #10ga Cold Rolled Steel, Polyester Powder Coated ANSI 61 Gray #10ga Stainless Steel 304, Brushed Finish #10ga Stainless Steel 316, Brushed Finish #14ga Cold Rolled Steel, Polyester Powder Coated White	
Gasket			Silicone Sponge	
Lid Fixing		Hinge CN4 Series CN4X Series CN4X6 Series Door Clamps CN4 Series CN4X Series CN4X6 Series	Continuous piano type - Steel with removable SS304 pin Continuous piano type - SS304 with removable pin Continuous piano type - SS316 with removable pin Plated Steel Clear Stainless Steel 304 Stainless Steel 316	
Enclosure Mounting		All Types	Four (4) external lugs with .44" clearance holes/slots	
Gland Plate Hardware		All Types	300 Series stainless steel	
Grounding		Box & Cover All Types Earthing Stud All Types	1/4-20 Stud with 300 series stainless steel hardware 1/4-20 Stud - All components brass	
Impact Resistant		All Types	7 Nm to EN50014/EN50019	
Ambient Temperature Range		All Types	-20°C to +55°C to EN50014	

CN Series – Catalog Numbers & Enclosure Sizes



DIMENSIONS IN TABLE ARE METRIC

ENCLOSURE SIZE	H	W	D							M	N	S	T	# OF CLAMPS	STIFFENER	
			06	08	10	12	16	20	24						BOX	COVER
-1224xx	305	610	152	203	--	--	--	--	--	359	458	229	534	4	---	---
-1612xx	406	305	152	203	254	--	--	--	--	460	241	330	229	4	---	---
-1616xx	406	406	152	203	--	--	--	--	--	460	254	330	330	4	---	---
-1620xx	406	508	152	203	--	--	--	--	--	460	356	330	432	4	---	---
-2012xx	508	305	152	203	--	--	--	--	--	562	241	432	229	4	---	---
-2016xx	508	406	152	203	254	305	--	--	--	562	254	432	330	4	---	---
-2020xx	508	508	152	203	254	--	--	--	--	562	356	432	432	4	---	---
-2024xx	508	610	152	203	--	--	--	--	--	562	458	432	534	4	---	---
-2412xx	610	305	152	203	254	--	--	--	--	664	241	534	229	5	---	---
-2416xx	610	406	152	203	--	--	--	--	--	664	254	534	330	5	---	---
-2420xx	610	508	152	203	254	305	406	--	--	664	356	534	432	5	---	---
-2424xx	610	610	152	203	254	305	406	--	--	664	458	534	534	5	---	---
-301606	762	406	152	--	--	--	--	--	--	816	254	686	330	5	---	---
-3020xx	762	508	152	203	254	--	--	--	--	816	356	686	432	5	---	---
-3024xx	762	610	152	203	254	305	406	508	588	816	458	686	534	5	---	---
-3624xx	914	610	152	203	254	305	--	--	--	968	458	838	534	5	---	---
-3630xx	914	762	152	203	254	305	406	508	--	968	610	838	686	7	REQ'D	REQ'D
-2430xx	610	762	--	203	--	--	--	--	--	664	610	534	686	7	---	---
-3030xx	762	762	--	203	--	305	--	--	--	816	610	686	686	7	REQ'D	REQ'D
-303608	762	914	--	203	--	--	--	--	--	816	762	686	838	7	REQ'D	REQ'D
-3636xx	914	914	--	203	--	305	--	--	--	968	762	838	838	7	REQ'D	REQ'D
-422408	1067	610	--	203	--	--	--	--	--	1121	458	991	534	6	---	REQ'D
-4230xx	1067	762	--	203	254	305	--	--	--	1121	610	991	686	8	REQ'D	REQ'D
-4236xx	1067	914	--	203	254	305	406	--	--	1121	762	991	838	8	REQ'D	REQ'D
-482408	1219	610	--	203	--	--	--	--	--	1273	458	1143	534	6	---	REQ'D
-4830xx	1219	762	--	203	254	--	--	--	--	1273	610	1143	686	8	REQ'D	REQ'D
-4836xx	1219	914	--	203	254	305	406	508	--	1273	762	1143	838	8	REQ'D	REQ'D
-6036xx	1524	914	--	203	254	305	406	508	588	1578	762	1448	838	9	REQ'D	REQ'D

To build catalog number:

1. For enclosure sizes ending in xx, select enclosure depth for your application from column D. (i.e. -243008)
2. For Stainless Steel 316L enclosures add prefix CN4X6. (i.e. CN4X6-243008)
3. For Stainless Steel 304 enclosures add prefix CN4X. (i.e. CN4X-243008)
4. For Steel Powder Coated enclosures add prefix CN4. (i.e. CN4-243008)

3D-3

CN Series – Auxiliary Devices



Pilot Lights

II 2 G EEx de IIC

IEC 60529: IP66

Rated Operating Voltage: AC 24V, 48V, 110V, 230V; DC 24V, 48V

Lamp: Multi-LED

Electrical Life: 10⁵ Hours Illuminated

Catalog Numbers

Red: **07-3353-1110/1000**

Green: **07-3353-1120/2000**

Yellow: **07-3353-1130/3000**

White: **07-3353-1140/4000**

Blue: **07-3353-1150/5000**



Pushbuttons

II 2 G EEx de IIC

IEC60529: IP66

Rated Insulation Voltage: 300V

Nominal Currents: 16A/+40°C, 11A/ +60°C

Catalog Numbers

Pushbuttons

Pushbutton, 1NO/1NC: **07-3323-1400/1000**

Pushbutton, 2NO: **07-3323-1200/1000**

Pushbutton, 2NC: **07-3323-1100/1000**

* Pushbuttons are supplied with (4) loose colored discs: Red, Green, Yellow, White

Mushroom Head Pushbuttons

Mushroom, Black, 1NO/1NC: **07-3323-1400/5000**

Mushroom, Black, 2NO: **07-3323-1200/5000**

Mushroom, Black, 2NC: **07-3323-1100/5000**

Mushroom, Black, Lockable, 1NO/1NC: **07-3323-1400/6300**

Mushroom, Black, Lockable, 2NO: **07-3323-1200/6300**

Mushroom, Black, Lockable, 2NC: **07-3323-1100/6300**



Emergency Stop Pushbuttons

II 2 G EEx de IIC

IEC 60529: IP66

Rated Insulation Voltage: 300V

Nominal Currents: 16A/+40°C, 11A/ +60°C

Catalog Numbers

1NO/1NC: **07-3323-1400/2000**

2NO: **07-3323-1200/2000**

2NC: **07-3323-1100/2000**

3D-4

CN Series – Auxiliary Devices



Selector Switches

II 2 G EEx de IIC

IEC 60529: IP66

Rated Insulation Voltage: 300V

Nominal Currents: 16A/+40°C, 11A/ +60°C

Catalog Numbers

Maintained Selector Switches

2-Position, 1NO/1NC:	07-3323-1400/3000
2-Position, 2NO:	07-3323-1200/3000
2-Position, 2NC:	07-3323-1100/3000
3-Position, 1NO/1NC:	07-3323-1400/4000
3-Position, 2NO:	07-3323-1200/4000
3-Position, 2NC:	07-3323-1100/4000

Momentary (Left-Right) Selector Switches

3-Position, 1NO/1NC:	07-3323-1400/4100
3-Position, 2NO:	07-3323-1200/4100
3-Position, 2NC:	07-3323-1100/4100

Latching (Left) - Momentary (Right) Selector Switches

3-Position, 1NO/1NC:	07-3323-1400/4200
3-Position, 2NO:	07-3323-1200/4200
3-Position, 2NC:	07-3323-1100/4200

Momentary (Left) - Latching (Right) Selector Switches

3-Position, 1NO/1NC:	07-3323-1400/4300
3-Position, 2NO:	07-3323-1200/4300
3-Position, 2NC:	07-3323-1100/4300

Keyed Selector Switches (2 Position)

Lockable Both Positions, Key Removable Both Positions, 1NO/1NC:	07-3323-1400/6000
Lockable Both Positions, Key Removable Both Positions, 2NO:	07-3323-1200/6000
Lockable Both Positions, Key Removable Both Positions, 2NC:	07-3323-1100/6000
Lockable Depressed Position, Key Removable Depressed Position, 1NO/1NC:	07-3323-1400/6100
Lockable Depressed Position, Key Removable Depressed Position, 2NO:	07-3323-1200/6100
Lockable Depressed Position, Key Removable Depressed Position, 2NC:	07-3323-1100/6100
Lockable Initial Position, Key Removable Initial Position, 1NO/1NC:	07-3323-1400/6200
Lockable Initial Position, Key Removable Initial Position, 2NO:	07-3323-1200/6200
Lockable Initial Position, Key Removable Initial Position, 2NC:	07-3323-1100/6200

CN Series – Auxiliary Devices

Potentiometers

EEx de IIC

IEC 60529: IP66

Rated Voltage/Power: 250V / 1 Watt

1 Turn

Scale: 0 - 100%

Catalog Numbers

1 Watt, 1000 Ohm: **GHG 418 8131 R0014**

1 Watt, 4700 Ohm: **GHG 418 8131 R0015**

1 Watt, 10000 Ohm: **GHG 418 8131 R0016**

Measuring Instruments

EEx e IIC

IEC 60529: IP66

Current Type: AC or DC

Movement: Moving Iron

Exactitude of Measurement: Class 2.5

Rated Current: Red Indicator

Zero Adjustment: Adjustment Screw on Instrument

Overload Range: 1 : 1.5 (indicated)

3D-6

CATALOG NUMBERS

<u>Movement</u>	<u>Scale</u>	<u>Catalog Number</u>
n / 1A	0 - 100 / 150 %	GHG 412 8282 R0031
0 - 20 mA (Ri = 320 Ohm)	0 - 100 / 120 %	GHG 412 8285 R0033
4 - 20 mA (Ri = 320 Ohm)	0 - 100 / 120 %	GHG 412 8286 R0035
Other	-	GHG 412 828_ R00

Code for Movement:

1 = Direct Measurement **2** = Instrument Transformer Connection, n / 1A

Code for Interchangeable Scales:

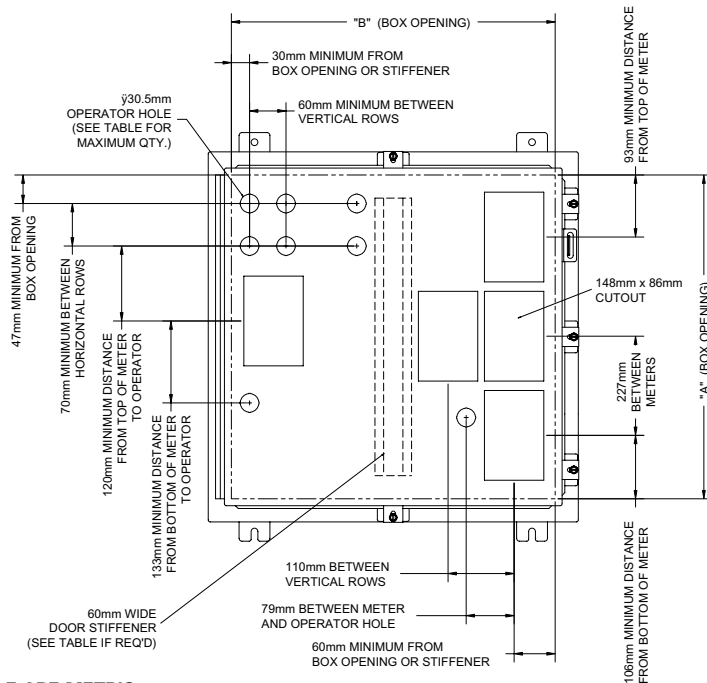
Direct Measurement:

<u>Code</u>	<u>Scale</u>
02	0 - 1 / 1.5 A
03	0 - 2.5 / 3.75 A
04	0 - 5 / 7.5 A
05	0 - 10 / 15 A
07	0 - 16 / 24 A
08	0 - 20 / 30 A

Interchangeable Scale:

<u>Code</u>	<u>Scale</u>	<u>Code</u>	<u>Scale</u>	<u>Code</u>	<u>Scale</u>
02	0 - 1 / 1.5 A	09	0 - 30 / 45 A	16	0 - 200 / 300 A
03	0 - 2.5 / 3.75 A	10	0 - 40 / 60 A	17	0 - 250 / 375 A
04	0 - 5 / 7.5 A	11	0 - 50 / 75 A	18	0 - 300 / 450 A
05	0 - 10 / 15 A	12	0 - 60 / 90 A	19	0 - 400 / 600 A
07	0 - 16 / 24 A	13	0 - 75 / 112.5 A	20	0 - 500 / 750 A
08	0 - 20 / 30 A	14	0 - 100 / 150 A	21	0 - 600 / 900 A
		15	0 - 150 / 225 A		

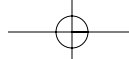
CN Series – Cover Matrix



DIMENSIONS IN TABLE ARE METRIC

Cover Size	Box Opening		Door Stiffener	Max No. Of Operator Rows		Max No. Of Operators	Max No. Of GHG Type Meter Rows		Max No. Of GHG Type Meters
	A	B		Horiz	Vert		Horiz	Vert	
-1224	229	533	--	2	8	16	1	4	4
-1612	330	229	--	4	3	12	1	1	1
-1616	330	330	--	4	5	20	1	2	2
-1620	330	432	--	4	7	28	1	3	3
-2012	432	229	--	5	3	18	2	1	2
-2016	432	330	--	5	5	25	2	2	4
-2020	432	432	--	5	7	35	2	3	6
-2024	432	533	--	5	8	40	2	4	8
-2412	533	229	--	7	3	21	2	1	2
-2416	533	330	--	7	5	35	2	2	4
-2420	533	432	--	7	7	49	2	3	6
-2424	533	533	--	7	8	56	2	4	8
-2430	533	686	--	7	11	77	2	6	12
-3016	686	330	--	9	5	45	3	2	6
-3020	686	432	--	9	7	63	3	3	9
-3024	686	533	--	9	8	72	3	4	12
-3030	686	686	--	9	11	99	3	6	18
-3036	686	838	--	9	13	117	3	7	21
-3624	838	533	--	11	8	88	3	4	12
-3630	838	686	--	11	11	121	3	6	18
-3636	838	838	--	11	13	143	3	7	21
-4224	991	533	YES	13	6	78	4	4	16
-4230	991	686	YES	13	10	130	4	4	16
-4236	991	838	YES	13	12	156	4	6	24
-4824	1143	533	YES	15	6	90	5	4	20
-4830	1143	686	YES	15	10	150	5	4	20
-4836	1143	838	YES	15	12	180	5	6	30
-6036	1448	838	YES	20	12	240	6	6	36

3D-7



Conduit/Cable & Wire Bending Guidelines

Table A - Minimum Spacing Between Centers of Conduit or Cable Entries

SIZE	NPT	5	4	3-1/2	3	2-1/2	2	1-1/2	1-1/4	1	3/4	1/2	1/16 ~ 3/8
NPT	METRIC	--	--	--	M75	M63	M50	M40	M32	M25	M20	M16	--
1/16 ~ 3/8	--	4-3/8 [112mm]	3-5/8 [92mm]	3-3/8 [86mm]	3 [77mm]	2-5/8 [68mm]	2-3/8 [61mm]	2 [51mm]	1-7/8 [48mm]	1-5/8 [42mm]	1-3/8 [35mm]	1-1/4 [32mm]	1-1/8 [29mm]
1/2	M16	4-3/8 [112mm]	3-5/8 [92mm]	3-3/8 [86mm]	3 [77mm]	2-5/8 [68mm]	2-3/8 [61mm]	2 [51mm]	1-7/8 [48mm]	1-5/8 [42mm]	1-3/8 [35mm]	1-1/4 [32mm]	
3/4	M20	4-1/2 [115mm]	3-3/4 [96mm]	3-1/2 [89mm]	3-1/8 [80mm]	2-3/4 [70mm]	2-1/2 [64mm]	2-1/8 [54mm]	2 [51mm]	1-3/4 [45mm]	1-1/2 [38mm]		
1	M25	4-5/8 [118mm]	3-7/8 [99mm]	3-5/8 [92mm]	3-1/4 [83mm]	2-7/8 [74mm]	2-3/4 [70mm]	2-1/4 [58mm]	2-1/8 [54mm]	1-7/8 [48mm]			
1-1/4	M32	4-7/8 [124mm]	4-1/8 [105mm]	3-7/8 [99mm]	3-1/2 [89mm]	3-1/8 [80mm]	2-7/8 [74mm]	2-1/2 [64mm]	2-3/8 [61mm]				
1-1/2	M40	5 [127mm]	4-1/4 [108mm]	4 [102mm]	3-5/8 [92mm]	3-1/4 [83mm]	3 [77mm]	2-5/8 [68mm]					
2	M50	5-3/8 [137mm]	4-3/4 [121mm]	4-1/2 [115mm]	4 [102mm]	3-5/8 [92mm]	3-3/8 [86mm]						
2-1/2	M63	5-1/2 [140mm]	4-7/8 [124mm]	4-5/8 [118mm]	4-1/4 [108mm]	3-7/8 [99mm]							
3	M75	5-7/8 [150mm]	5-1/4 [134mm]	5 [127mm]	4-5/8 [118mm]								
3-1/2	--	6-1/4 [159mm]	5-3/4 [147mm]	5-1/2 [140mm]									
4	--	6-7/8 [175mm]	6 [153mm]										
5	--	7-3/8 [188mm]											

This information is compiled from data which we believe is reliable and is given in good faith. Since the methods of application and condition under which our products are used are beyond our control, we are not able to guarantee the application and/or use of same. The user assumes all risks and liability in connection with the application and use of our products.

Table B - Minimum Distance from Conduit/Cable Center to Edge of Opening or Edge of Box

NPT	5	4	3-1/2	3	2-1/2	2	1-1/2	1-1/4	1	3/4	1/2	1/16 ~ 3/8
METRIC	--	--	--	M75	M63	M50	M40	M32	M25	M20	M16	--
	2-13/16 [72mm]	2-1/4 [58mm]	2 [51mm]	1-3/4 [45mm]	1-7/16 [37mm]	1-3/16 [31mm]	1 [26mm]	7/8 [23mm]	11/16 [18mm]	9/16 [14mm]	1/2 [13mm]	1/2 [13mm]

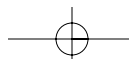
Table C - Minimum Wire Bending Space Between Terminals, Partitions, or Inside Walls

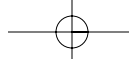
AWG	16	14	12	10	8	6	4	2	1/0	2/0	3/0	4/0	250	350	400	500
mm ²	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
	1-1/2 [38mm]	1-1/2 [38mm]	1-1/2 [38mm]	1-1/2 [38mm]	2 [51mm]	3 [77mm]	3-1/2 [89mm]	5-1/2 [140mm]	6 [153mm]	6-1/2 [165mm]	7 [178mm]	8-1/2 [216mm]	10 [254mm]	12 [305mm]	13 [330mm]	14 [356mm]

Notes:

- The distances in Table A are recommended minimum distances between centers of conduit and cable gland entries. Consult manufacturer of conduit fitting or cable glands for their recommended minimum spacing.
- The distances in Table B are recommended minimum distances between center of conduit and cable gland entries to the edge of an opening or inside wall of box. Consult manufacturer of conduit fitting or cable glands for their recommended minimum spacing.
- The distances in Table C are the minimum wire bending space requirements between terminals, partitions, or inside walls.

3D-8





CN Series – Enclosure Specification Sheet

Name: _____ Company: _____

Street/PO Box: _____ Phone: _____

City/State/Country/Zip: _____ Fax: _____

Enclosure Catalog Number: _____

- Gland Plate(s):** Top (-A) Bottom (-B) Left (-C) Right (-D)
- Mounting Pan:** Steel, Powder Coated Stainless Steel Aluminum
- Breather/Drain:** Breather Drain Brass Stainless Steel

Nominal Working Voltage: AC _____ V DC _____ V

Auxiliary Devices	Qty.	Tag
1:		
2:		
3:		
4:		
5:		
6:		
7:		
8:		
9:		
10:		

Use Second Sheet For Additional Devices

2.5mm Terminal Blocks	Qty.	Tag

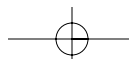
Conduit/Cable Entries:

	Top Side	Qty.	Bottom Side	Qty.	Left Side	Qty.	Right Side	Qty.
1:								
2:								
3:								
4:								
5:								

Use Second Sheet For Additional Devices

Enclosure Labeling:

3D-9



Intrinsically Safe Terminal Enclosures



General Information

Adalet's Intrinsically Safe Terminal Enclosures are available in (33) standard enclosure sizes of Stainless Steel 316L, Stainless Steel 304, Steel Powder Coated and Fiberglass Reinforced Polyester materials. Adalet can also supply custom size enclosures and terminal rail configurations to meet your Intrinsically Safe applications. These enclosures are suitable for areas where ignitable concentration of flammable gases, vapors, liquids, and dusts can exist under normal operating conditions. They are also ideal for indoor and outdoor areas where dampness and highly corrosive atmospheres are present such as refineries, water treatment, food processing, coating, salt, and chemical facilities.

Basic Principle of Intrinsically Safe

Intrinsic safety is intended for product in which the level of electrical energy circulating or stored in the product is insufficient to ignite a surrounding explosive atmosphere even under fault conditions.

Note: *No one device or wiring is intrinsically safe by itself (except self-contained devices i.e. pagers, portable gas detectors, etc.) but is intrinsically safe when incorporated into a properly designed intrinsically safe system.*

Areas of Use

Zone Classified Areas - U.S., Canada, Europe

Intrinsically Safe 'ia': Zones 0, 1 and 2

Intrinsically Safe 'ib': Zones 1 and 2

Division Classified Areas - U.S.

Intrinsically Safe (2 fault): Class I, II, and III, Division 1

ATEX - EU Directive 94/9/EC

Equipment Groups I and II

Intrinsically Safe 'ia': Category 1GD or M1

Intrinsically Safe 'ib': Category 2GD or M2

Applicable Standards

Europe: EN50014, EN50020

U.S.: UL2279 pt 11, ANSI/UL 913

Canada: CSA-E79-0, CSA-E79-11

International: IEC60 079-0, IEC60 079-11

Key Design Features

Intrinsically Safe equipment must not be capable of causing ignition of a surrounding explosive atmosphere under specified conditions including:

two countable faults: Category 'ia'

one countable fault: Category 'ib'

Enclosures must provide at least IP20 protection in accordance with EN60529, with higher levels of protection required for certain applications. (i.e. an enclosure containing intrinsically safe terminals and increased safety terminals would require an increased safety enclosure 'e' and minimum IP54 rating.)

Temperatures of wiring and small components must be limited to the specified values according to the T-Class of the equipment.

Separation of conductive parts must be achieved in terms of specified clearances and creepage distances. Particular attention is required for separation of intrinsically safe circuits from non-intrinsically safe circuits.

Components on which intrinsic safety depends must be of specified rating and construction.

Blue is the internationally recognized color for intrinsically safe wiring and terminal blocks.

The Adalet Engineering Department is available to assist in your Intrinsically Safe Terminal Enclosure Selection

Intrinsically Safe Terminal Enclosures - TSC & TFG Series

Options

Gland Plates (TSC Series Only):

For enclosures with depths greater than 6"

These removable plates offer great flexibility for the end user to drill holes without having to remove the entire enclosure from the installation site.

Add the following Suffixes:

- A: Gland Plate installed on top of box.
- B: Gland Plate installed on bottom of box.
- C: Gland Plate installed on left of box.
- D: Gland Plate installed on right of box.

For multiple gland plates omit dashes
(i.e. TSC4X-101006-**ABCD**)

EMC Shielding (TSC Series Only):

For stainless steel enclosures only

EMC shielding is available on the TSC4X (SS304) and TSC4X6 (SS316L) enclosures with a shielding effectiveness of >50dB through out the frequency range of 1MHz to 100MHz. For EMC shielding add the prefix **-EMC** to the catalog text string, immediately following the enclosure size.
(i.e. TSC4X-101006-**EMC**)

Note: This option is not available on enclosures with gland plates installed.

Hinged Cover (TFG Series Only):

A stainless steel piano type hinge is available by adding an **H** to the end of the catalog string. (i.e. TFG-201407**H**)

Earthing Stud Assembly (TFG Series Only):

An Internal/External Earthing Stud can be provided upon request. Please specify on the request for quote.

Conduit/Cable Entries:

Entries can be provided per a customer sketch or with detailed information on the entry locations. Please refer to Entry Spacing Tables at the end of the Increased Safety Section in the CENELEC Product Catalog. *Note: This information is important and could affect the size of the enclosure you selected.*

Close-up Plugs:

Any unused entries must be plugged with a Certified Close-Up Plug. Adalet can provide close-up plugs in various styles and materials. Please indicate on the sketch or provide detailed information of holes to be plugged.

Enclosure Labeling:

Adalet can provide additional enclosure labeling with custom silk screening or various colors of Lamacoid™ nameplates. Please provide detailed information of the logo or text required.

Breather Drains:

Breather Drains can be provided per customer request. They are available in Brass or Stainless Steel 316L. Please indicate on a sketch or provide detailed information for locations.

Grounding Busbars:

Some applications might require grounding points to be terminated in the enclosure. With the use of a Ground Busbar System this can be accomplished, consult factory for options.

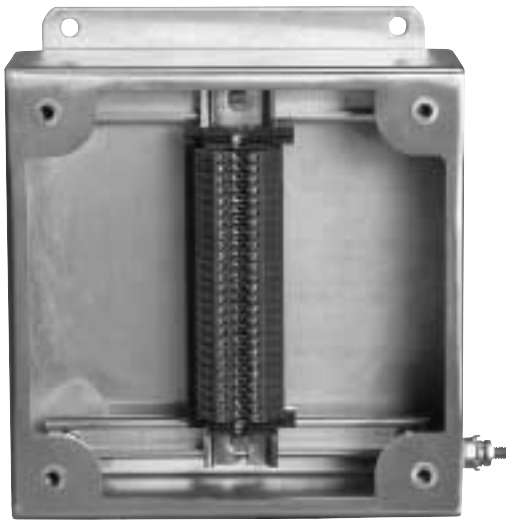
Mounting Pans:

As an alternative to the universal rail mounting system, mounting pans are available in steel/powder coated, stainless steel, and aluminum. Please indicate when requesting quote.

Terminal Strip Assemblies:

Various options (i.e. marking tags, protective covers, jumpers, partitions...) are available. Please provide detailed information requesting quote.

TSC Series - Intrinsically Safe Circuits



Certifications

CE 0539 II 2GD

EEx e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C)

Ex e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C)

Class I, Zone 1, AEx e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C)

Class II, Division 2

IEC60529: IP66

UL50: Type 4, 4X (Stainless Steel only), 12, & 13



Technical Details

Maximum Working Voltage: 600 Volts

Maximum Current: 5 Amps

Terminal Blocks: EN50019 Certified - Blue Colored

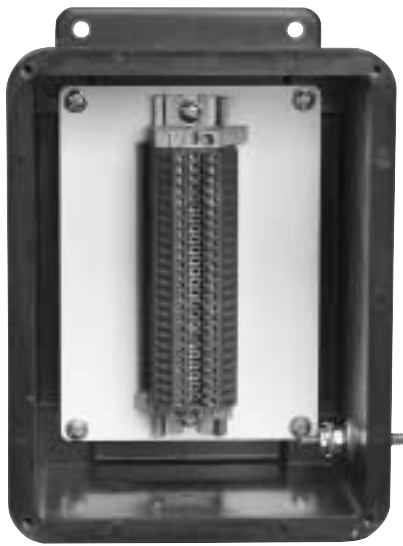
3E-3

2.5mm5 Terminals		4mm5 Terminals		SS316L Catalog Numbers	For Enclosure Dimensions see Catalog Page
Max. Qty.	# of Rows	Max. Qty.	# of Rows		
12	1	10	1	TSC4X6-060604I	3B-48
18	1	14	1	TSC4X6-070704I	3B-49
22	1	19	1	TSC4X6-080804I	3B-50
32	1	27	1	TSC4X6-101006I	3B-51
32	1	27	1	TSC4X6-101008I	3B-52
42	1	35	1	TSC4X6-120604I	3B-53
42	1	35	1	TSC4X6-120605I	3B-54
42	1	35	1	TSC4X6-120805I	3B-55
42	1	35	1	TSC4X6-120806I	3B-56
84	2	70	2	TSC4X6-121206I	3B-57
84	2	70	2	TSC4X6-121208I	3B-58
114	2	96	2	TSC4X6-151506I	3B-59
114	2	96	2	TSC4X6-151508I	3B-60
124	2	104	2	TSC4X6-161206I	3B-61
124	2	104	2	TSC4X6-161208I	3B-62
180	3	150	3	TSC4X6-161606I	3B-63
180	3	150	3	TSC4X6-161608I	3B-64

- All quantities shown are for terminal blocks installed in vertical rows.
- For Stainless Steel 304 assemblies substitute TSC4X6 prefix with **TSC4X** prefix.
- For Steel Powder Coated assemblies substitute TSC4X6 prefix with **TSC4** prefix.
- For Gland Plates (available only on enclosures with depths greater than 6 inches) add the following suffixes:
 - A**: Gland Plate installed on top of box
 - B**: Gland Plate installed on bottom of box
 - C**: Gland Plate installed on left of box
 - D**: Gland Plate installed on right of box

For multiple Gland Plates omit dashes. (i.e. TSC4X6-161608I-ABCD)

TFG Series - Intrinsically Safe Circuits



Certifications

CE 0539 II 2GD

EEx e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C)

Ex e II T6 (T5 Tamb +55°C)

Class I, Zone 1, AEx e II T6 (T5 Tamb +55°C) (T4 Tamb +70°C)

Class II, Division 2

IEC60529: IP66

UL50: Type 4X, 12, & 13



Technical Details

Maximum Working Voltage: 600 Volts

Maximum Current: 5 Amps

Terminal Blocks: EN50019 Certified - Blue Colored

2.5mm5 Terminals		4mm5 Terminals		Catalog Numbers	For Enclosure Dimensions see Catalog Page
Max. Qty.	# of Rows	Max. Qty.	# of Rows		
10	1	8	1	TFG-060604I	3B-80
10	1	8	1	TFG-060606I	3B-81
20	1	18	1	TFG-080604I	3B-82
20	1	18	1	TFG-080606I	3B-83
30	1	25	1	TFG-100804I	3B-84
30	1	25	1	TFG-100806I	3B-85
40	1	35	1	TFG-121005I	3B-86
40	1	35	1	TFG-121006I	3B-87
100	2	80	2	TFG-141206I	3B-88
100	2	80	2	TFG-141207I	3B-89
120	2	100	2	TFG-161406I	3B-90
120	2	100	2	TFG-161407I	3B-91
210	3	180	3	TFG-181608I	3B-92
210	3	180	3	TFG-181610I	3B-93
240	3	210	3	TFG-201608I	3B-94
240	3	210	3	TFG-201610I	3B-95

1. All quantities shown are for terminal blocks installed in vertical rows.

3E-4

Quick Reference Guide

METHODS OF PROTECTION

Area	Protection Method	UL	CSA	CENELEC	IEC
Division 1	Explosionproof	ANSI/UL 1203	CSA-30	--	--
	Intrinsically Safe (2 Fault)	ANSI/UL 913	CSA-157	--	--
	Purge/Pressurized (Type X or Y)	ANSI/NFPA 496	ANSI/NFPA 496	--	--
Division 2	Nonincendive	UL 1604	CSA-213	--	--
	Non-sparking device	UL 1604	CSA-213	--	--
	Purge/Pressurized (Type Z)	ANSI/NFPA 496	ANSI/NFPA 496	--	--
	Hermetically sealed	UL 1604	CSA-213	--	--
	Any Class I, Division 1 Method	--	--	--	--
Area	Protection Method	UL (AEx)	CSA (Ex)	CENELEC (EEx)	IEC (Ex)
Zone 0	Intrinsically Safe 'ia' (2 Fault)	UL 2279 Pt. 11	CSA-E79-18	EN 50028	IEC 60 079-18
Zone 1	Flameproof 'd'	UL 2279 Pt. 1	CSA-E79-1	EN 50018	IEC 60 079-1
	Increased Safety 'e'	UL 2279 Pt. 7	CSA-E79-7	EN 50019	IEC 60 079-7
	Intrinsically Safe 'ib' (1 Fault)0	UL 2279 Pt. 11	CSA-E79-11	EN 50020	IEC 60 079-11
	Encapsulation 'm'	UL 2279 Pt. 18	CSA-E79-18	EN 50028	IEC 60 079-18
	Oil Immersion 'o'	UL 2279	CSA-E79-6	EN 50015	IEC 60 079-6
	Purged/Pressurized 'p'	UL 2279 Pt. 2	CSA-E79-2	EN 50016	IEC 60 079-2
	Powder filling 'q'	UL 2279	CSA-E79-5	EN 50017	IEC 60 079-5
	Any Zone 0 Method	--	--	--	--
Zone 2	Non-sparking 'nA'	UL 2279 Pt. 15	CSA-E79-15	prEN 50021	IEC 60 079-15
	Hermetically sealed 'nC'	UL 2279 Pt. 15	CSA-E79-15	prEN 50021	IEC 60 079-15
	Nonincendive 'nC'	UL 2279 Pt. 15	CSA-E79-15	prEN 50021	IEC 60 079-15
	Restricted breathing 'nR'	UL 2279 Pt. 15	CSA-E79-15	prEN 50021	IEC 60 079-15
	Any Zone 0 or 1 Method	--	--	--	--

AREA CLASSIFICATIONS

	Ignitable Materials Present Continuously	Ignitable Materials Present Intermittently	Ignitable Materials Present Abnormally
IEC/CENELEC	Zone 0 (Zone 20 Dust)	Zone 1 (Zone 21 Dust)	Zone 2 (Zone 22 Dust)
NEC 505	Zone 0	Zone 1	Zone 2
NEC 500	Division 1	Division 1	Division 2

ATEX Classification by Group & Category According to Use

	Ignitable Materials Present Continuously	Ignitable Materials Present Intermittently	Ignitable Materials Present Abnormally
Equipment Group II (surface)	Category 1 Equipment	Category 2 Equipment	Category 3 Equipment
Equipment Group I (mining)	Category M1 Equipment	Category M2 Equipment	—

GAS GROUPINGS

Gas, Dust or Fiber	NEC 505/IEC/CENELEC	NEC 500
Acetylene	Group IIC	Class I/Group A
Hydrogen	Group IIC/Group IIB+H2	Class I/Group B
Ethylene	Group IIB	Class I/Group C
Propane	Group IIA	Class I/Group D
Methane	Group I (firedamp)	Class I/Group D
Metal Dust	None	Class II/Group E
Coal Dust	None	Class II/Group F
Grain Dust	None	Class II/Group G
Fibers	None	Class III

ACRONYMS

CENELEC - European Committee for Electrotechnical Standardization
IEC - International Electrotechnical Commission
NEC - National Electrical Code
U.L. - Underwriters Laboratories
C.S.A. - Canadian Standards Association
FM - Factory Mutual
BASEEFA - British Approvals Service for Electrical Apparatus in Flammable Atmospheres
NFPA - National Fire Protection Agency
ISO - International Organization for Standardization
ANSI - American National Standard Institute
ATEX - Atmospheres Explosibles

TEMPERATURE CLASSES

Maximum Surface Temperature	NEC 505 IEC CENELEC	NEC 500
450°C	T1	T1
300°C	T2	T2
280°C		T2A
260°C		T2B
230°C		T2C
215°C		T2D
200°C	T3	T3
180°C		T3A
165°C		T3B
160°C		T3C
135°C	T4	T4
120°C		T4A
100°C	T5	T5
85°C	T6	T6

INGRESS PROTECTION (IP XX) CODES

#	First Number (Protection against Solid Bodies)	Second Number (Protection against Liquids)
0	No protection	No protection
1	Objects greater than 50mm	Vertically dripping water
2	Objects greater than 12mm	75-90 Deg. dripping water
3	Objects greater than 2.5mm	Sprayed water
4	Object greater than 1mm	Splashed water
5	Dust Protected	Water jets
6	Dust-tight	Heavy seas
7	--	Effects of immersion
8	--	Indefinite immersion

XIH Explosionproof Instrument Housing



NEW!

XIHMK 316SS & Aluminum 3⁹/₁₆" ID

XIHL & XDHL 4" ID Aluminum

XIHM 3⁹/₁₆" & 3⁵/₈" ID Aluminum

XDHM 3⁵/₈" ID Aluminum

XIH & XDH 3³/₁₆" ID Aluminum

XIHS 2⁵/₈" ID Aluminum

XDF Custom Digital Enclosure

(ATEX available on some models)

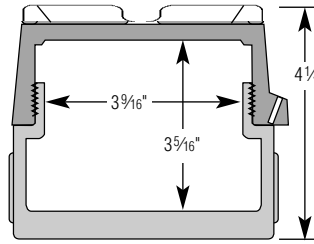
4A-1

XIHMK Explosionproof Instrument Housing (316 Stainless or Aluminum)



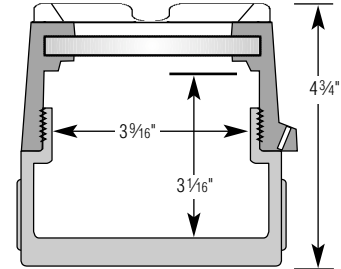
3 9/16" ID Enclosure

Solid Cover Arrangements



Catalog Number	Description
XIHMKFCX	Flat Cover 3/4" NPT Hubs

Glass Cover Arrangements



Catalog Number	Description
XIHMKFGCX	Flat Glass Cover 3/4" NPT Hubs

Standard Features

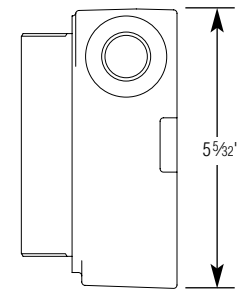
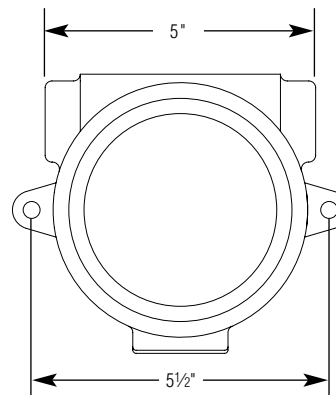
XIHMK housings accommodate large diameter assemblies, multi-level circuit boards or wide angle readouts and displays. The 3-9/16" ID provides maximum clearance to facilitate instrument mounting, calibration or service. Precision machined from sand-cast, copper-free aluminum.

XIHMK housings feature:

- 3/4" NPT conduit feed-through hubs offset for maximum clearance and capacity
- 7/16" thick base for blind tapped instrument mounting holes in any location
- Glass cover models have a large 2-1/2" diameter, tempered glass window for local read out
- 45° chamfer on window opening provides enhanced viewing angle
- Buna-N rubber gasket for NEMA 4X watertight applications
- Front boss for use as additional conduit or sensor entry
- Corrosion resistant, "safety blue" polyester powder coating (other colors available)
- Internal and external ground screws and tamper resistant cover set screw for extra safety
- Stainless steel hardware

Design Options

- Mounting lugs with 5/16" holes
- Additional small hole drilling and tapping in the backwall for mounting of instrumentation
- 1/2" NPT or 3/4" NPT opening into back wall for conduit, sensor or probe
- Front Boss Modifications: 1/2", 3/4" or 1" NPT; 1/2", 3/4" or 1" NPSM; or 20mm or 25mm for sensor, probe or conduit entry
- 1/2" NPT reducers are available – add suffix "2" to catalog number



Certifications

- FM STANDARD 3615
- CSA STANDARD C22.2 No. 30
- UL STANDARD 1203
- DEMKO CENELEC STANDARD EN 50014, 50018

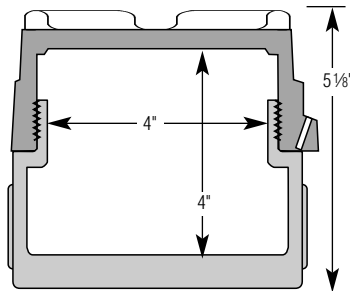
Class I, Groups B,C,D
 Class II, Groups E,F,G
 Class III
 CENELEC: EExd IIC, IP66
 NEMA 4X, 7BCD, 9EFG

4A-2

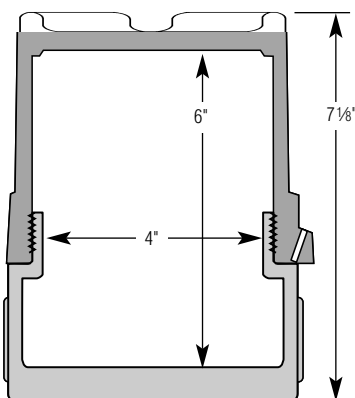
XIHL (Explosionproof Instrument Housing – Large)

4" ID Enclosure

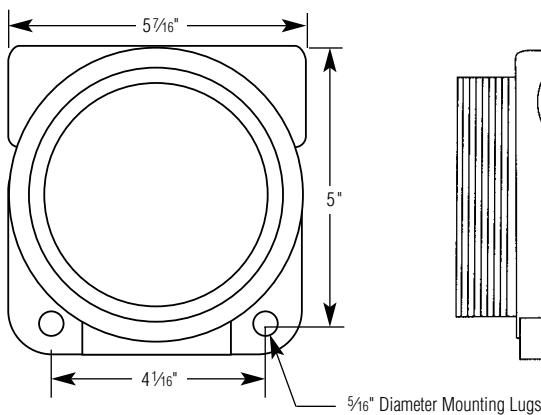
Solid Cover Arrangements



Catalog Number	Description
XIHLFCX	Flat Cover 3/4" NPT Hubs

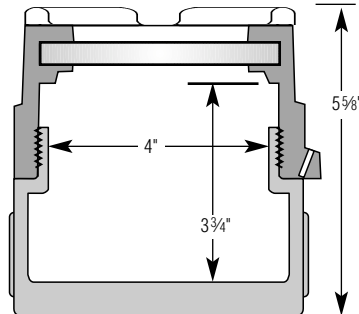


Catalog Number	Description
XIHLDCX	Dome Cover 3/4" NPT Hubs

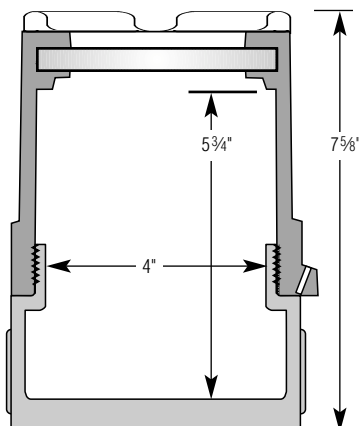


Class I, Groups B,C,D
 Class II, Groups E,F,G
 Class III
 CENELEC: EExd IIC, IP66
 NEMA 4X, 7BCD, 9EFG

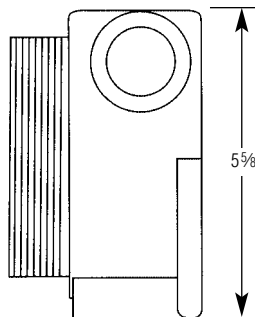
Glass Cover Arrangements



Catalog Number	Description
XIHLFGCX	Flat Glass Cover 3/4" NPT Hubs



Catalog Number	Description
XIHLDCGX	Dome Glass Cover 3/4" NPT Hubs



Standard Features

XIHL housings accommodate large diameter assemblies, multi-level circuit boards or wide angle readouts and displays. The 4" ID provides maximum clearance to facilitate instrument mounting, calibration or service. Precision machined from sand-cast copper-free aluminum. XIHL housings feature:

- 3/4" NPT conduit feed-through hubs offset for maximum clearance and capacity
- 1/2" thick base for blind tapped instrument mounting holes in any location
- Glass cover models have a large 3 5/16" diameter, tempered glass window for local read out
- Buna-N rubber gasket for NEMA 4X watertight applications
- Corrosion resistant, "safety blue" polyester powder coating (other colors available)
- Internal and external ground screws and tamper resistant cover set screw for extra safety
- Stainless steel hardware

Design Options

- Four 1/4-20 UNC holes in front boss for bracket mounting
- Front Boss Modifications: 1/2" to 1" NPT, 1/2" to 3/4" NPSM or 20 mm for sensor, probe or conduit entry. Consult factory for other sizes.
- 1/2" NPT reducers are available – add suffix "2" to catalog number

Certifications

- FM STANDARD 3615
- CSA STANDARD C22.2 No. 30
- UL STANDARD 1203
- KEMA CENELEC STANDARD EN 50014, 50018

4A-3

XDHL (Explosionproof Double-Ended Housing – Large)



4" ID Enclosure

Standard Features

XDHL housings are designed to isolate incoming power connections from instrumentation. The 4" ID provides maximum clearance to facilitate instrument mounting, calibration or service, with back-to-back chambers separated by a solid, 1/2" thick wall. Precision machined from sand-cast, copper-free aluminum.

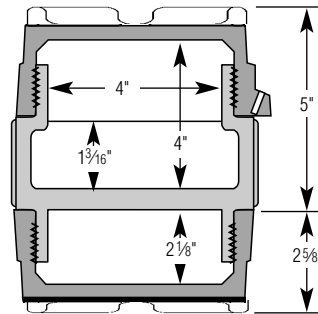
XDHL housings feature:

- 3/4" NPT conduit feed-through hubs, offset into power side for maximum clearance and capacity
- Front boss with 3/4" NPT opening into instrument side for conduit, sensor or probe (see design options for other sizes)
- Internal and external ground screws and tamper resistant cover set screws for extra safety
- A choice of solid covers or 3 5/16" diameter tempered glass window for local read out and display
- Buna-N rubber gasket for NEMA 4X watertight applications
- Corrosion resistant, "safety blue" polyester powder coating (other colors available)
- Stainless steel hardware

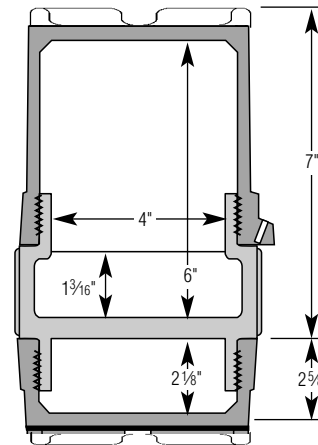
Design Options

- 2- to 12-point, power side terminal strip with sealed pass-through to instrument (add suffix "2T", "4T", "6T", "8T", "10T" or "12T" to catalog number)
- Internal wall can be modified (Drilled & Tapped) to suit design needs – please consult factory
- Power side cover options:
 - Flat Solid — Standard
 - Dome Glass — Add Suffix "A"
 - Flat Glass — Add Suffix "B"
 - Dome Solid — Add Suffix "C"
- Front Boss Modifications: 1/2", 3/4" or 1" NPT; 1/2", 3/4" or 1" NPSM; or 20mm, 25mm or 30mm for sensor, probe or conduit entry
- 1/2" NPT reducers are available – add suffix "2" to catalog number
- Four 1/4–20 UNC holes in front boss for bracket mounting. (Consult factory for other sizes)

Solid Cover Arrangements

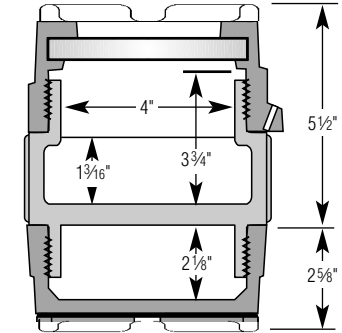


Catalog Number	Description
XDHLFCX	Flat Cover 3/4" NPT Hubs

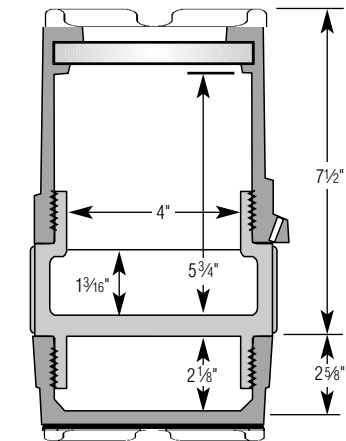


Catalog Number	Description
XDHLDCX	Dome Cover 3/4" NPT Hubs

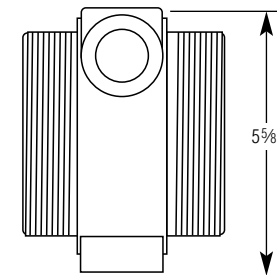
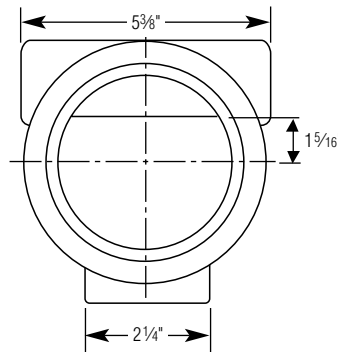
Glass Cover Arrangements



Catalog Number	Description
XDHLFGCX	Flat Glass Cover 3/4" NPT Hubs



Catalog Number	Description
XDHLGDCX	Dome Glass Cover 3/4" NPT Hubs



Certifications

- FM STANDARD 3615
- CSA STANDARD C22.2 No. 30
- UL STANDARD 1203
- KEMA CENELEC STANDARD EN 50014,50018

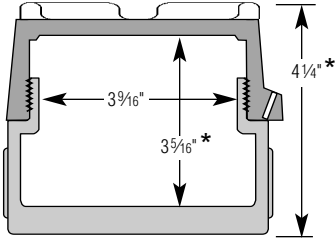
Class I, Groups B,C,D
 Class II, Groups E,F,G
 Class III
 CENELEC: EExd IIB+H2, IP66
 NEMA 4X, 7BCD, 9EFG

XIHM (Explosionproof Instrument Housing – Medium)

3⁹/₁₆" ID Enclosure (Standard)
3⁵/₈" ID Enclosure (Available - see note)

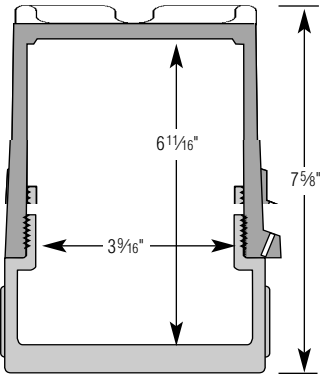


Solid Cover Arrangements

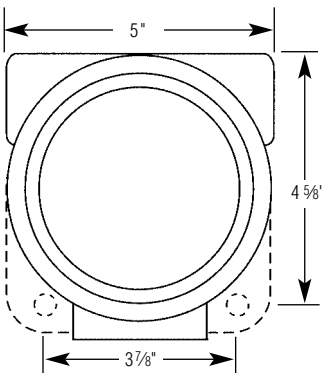


* Midsize solid cover available – add 11/16" to above dimensions.

Catalog Number	Description
XIHMFCX	Flat Cover 3/4" NPT Hubs
* XIHMMCX	Mid-Size Cover 3/4" NPT Hubs

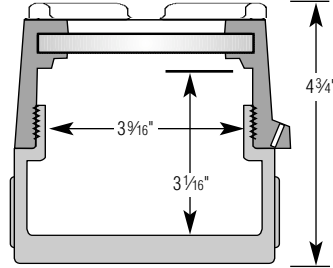


Catalog Number	Description
XIHMDCX	Dome Cover 3/4" NPT Hubs

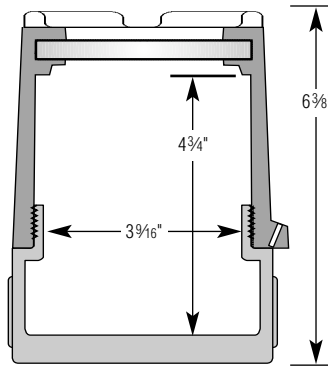


Class I, Groups B,C,D
 Class II, Groups E,F,G
 Class III
 CENELEC: EExd IIC, IP66
 NEMA 4X, 7BCD, 9EFG

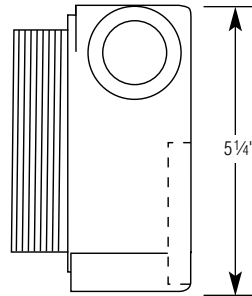
Glass Cover Arrangements



Catalog Number	Description
XIHMFGCX	Flat Glass Cover 3/4" NPT Hubs



Catalog Number	Description
XIHMDGCX	Dome Glass Cover 3/4" NPT Hubs



Certifications

- FM STANDARD 3615
- CSA STANDARD C22.2 No. 30
- UL STANDARD 1203
- DEMKO CENELEC STANDARD EN 50014, 50018

Standard Features

XIHM housings accommodate large diameter assemblies, multi-level circuit boards or wide angle readouts and displays. The 3 9/16" ID provides maximum clearance to facilitate instrument mounting, calibration or service. Precision machined from sand-cast, copper-free aluminum.

XIHM housings feature:

- 3/4" NPT conduit feed-through hubs offset for maximum clearance and capacity
- 7/16" thick base for blind tapped instrument mounting holes in any location
- Glass cover models have a large 2 5/8" diameter, tempered glass window for local read out
- 60° chamfer on window opening provides enhanced viewing angle
- Buna-N rubber gasket for NEMA 4X watertight applications
- Front boss for bracket mounting or for use as additional conduit or sensor entry
- Corrosion resistant, "safety blue" polyester powder coating (other colors available)
- Internal and external ground screws and tamper resistant cover set screw for extra safety
- Stainless steel hardware

Design Options

- Mounting lugs with 5/16" holes (add suffix "L" to catalog number)
- Additional small hole drilling and tapping in the backwall for mounting of instrumentation
- 1/2" NPT or 3/4" NPT opening into back wall for conduit, sensor or probe
- Front Boss Modifications: 1/2", 3/4" or 1" NPT; 1/2", 3/4" or 1" NPSM; or 20mm or 25mm for sensor, probe or conduit entry
- **Throat diameter can be increased to 3 5/8" – please consult factory**
- Glass window covers designed for Groups C and D only (CENELEC: EExd IIB) are also available – please consult factory for pricing
- 1/2" NPT reducers are available – add suffix "2" to catalog number
- Four 1/4–20 UNC holes in front boss for bracket mounting. (Consult factory for other sizes.)

4A-5

XDHM (Explosionproof Double-Ended Housing — Medium)



Standard Features

XDHM housings are designed to isolate incoming power connections from instrumentation. The 3 5/8" ID provides maximum clearance to facilitate instrument mounting, calibration or service, with back-to-back chambers separated by a solid, 1/2" thick wall. Precision machined from sand-cast, copper-free aluminum.

XDHM housings feature:

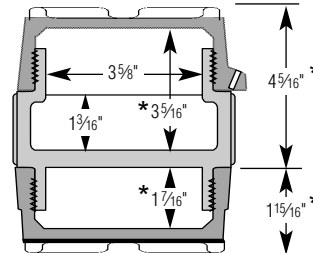
- 3/4" NPT conduit feed-through hubs, offset into power side for maximum clearance and capacity
- Front boss with 3/4" NPT opening into instrument side for conduit, sensor or probe (see design options for other sizes)
- Internal and external ground screws and tamper resistant cover set screws for extra safety
- A choice of solid covers or 2 5/8" diameter tempered glass window for local read out and display
- 60° chamfer on window opening provides enhanced viewing angle
- Buna-N rubber gasket for NEMA 4X watertight applications
- Corrosion resistant, "safety blue" polyester powder coating (other colors available)
- Stainless steel hardware

Design Options

- 2- to 8-point, power side terminal strip with sealed pass-through to instrument (add suffix "2T", "4T", "6T" or "8T" to catalog number)
- Internal wall can be modified (drilled & tapped) to suit design needs - please consult factory
- Power side cover options:
 - Flat Solid — Standard
 - Dome Glass — Add Suffix "A"
 - Flat Glass — Add Suffix "B"
 - Dome Solid — Add Suffix "C"
 - Midsized Solid — Add Suffix "D"
- Front Boss Modifications: 1/2", 3/4" or 1" NPT; 1/2", 3/4" or 1" NPSM; or 20mm or 25mm opening modify for sensor, probe or conduit entry
- Glass window covers designed for Groups C and D only (CENELEC: EExd IIB) are also available – please consult factory for pricing
- 1/2" NPT reducers are available – add suffix "2" to catalog number
- Four 1/4–20 UNC holes in front boss for bracket mounting. (Consult factory for other sizes.)

3 5/8" ID Enclosure

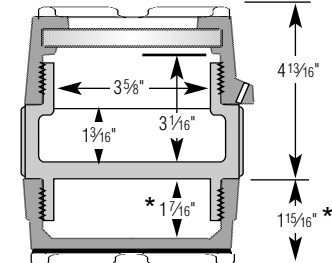
Solid Cover Arrangements



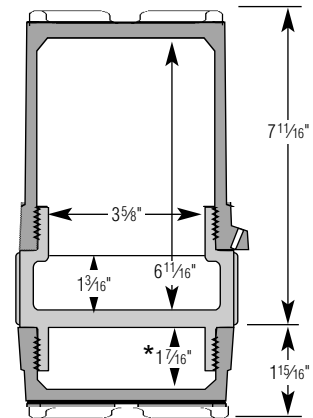
* Midsized solid cover available – add 11/16" to above dimensions.

Catalog Number	Description
XDHMFCX	Flat Cover 3/4" NPT Hubs
* XDHMMCX	Mid Size Cover 3/4" NPT Hubs

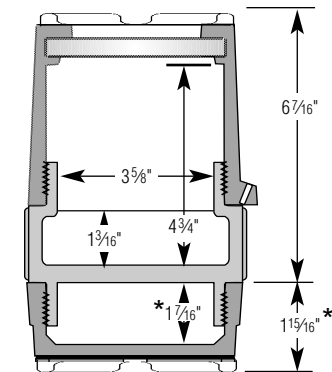
Glass Cover Arrangements



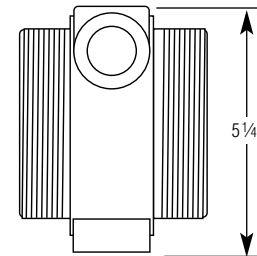
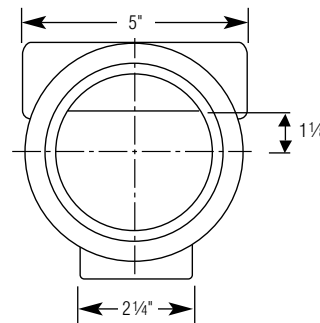
Catalog Number	Description
XDHMFGCX	Flat Glass Cover 3/4" NPT Hubs



Catalog Number	Description
XDHMDXC	Dome Cover 3/4" NPT Hubs



Catalog Number	Description
XDHMDGCX	Dome Glass Cover 3/4" NPT Hubs



Certifications



FM STANDARD 3615



CSA STANDARD C22.2 No. 30



UL STANDARD 1203

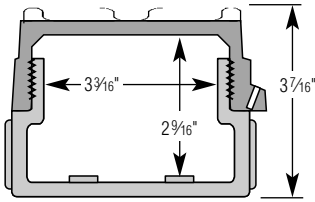
DEMKO CENELEC STANDARD EN 50014, 50018

Class I, Groups B,C,D
 Class II, Groups E,F,G
 Class III
 CENELEC: EExd IIC, IP66
 NEMA 4X, 7BCD, 9EFG

XIH (Explosionproof Instrument Housing)

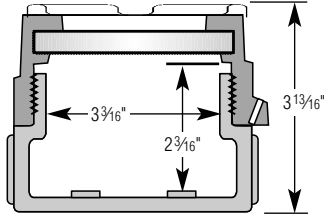
3 3/16" ID Enclosure

Solid Cover Arrangements

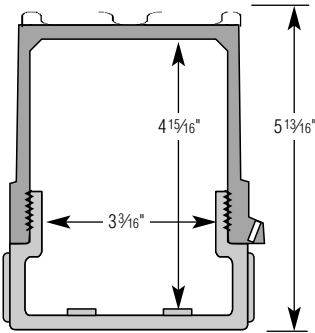


Catalog Number	Description
XIHFCX2	Flat Cover 1/2" NPT Hubs
XIHFCX3	Flat Cover 3/4" NPT Hubs

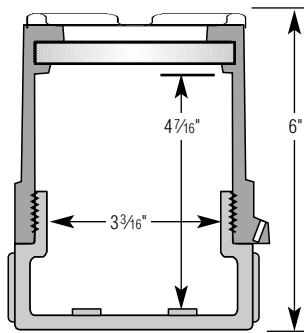
Glass Cover Arrangements



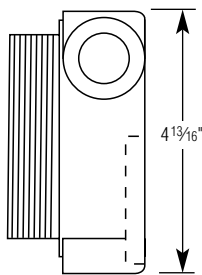
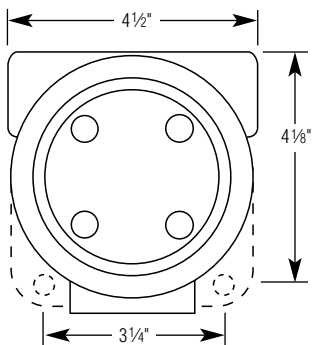
Catalog Number	Description
XIHFGCX2	Flat Glass Cover 1/2" NPT Hubs
XIHFGCX3	Flat Glass Cover 3/4" NPT Hubs



Catalog Number	Description
XIHDCX2	Dome Cover 1/2" NPT Hubs
XIHDCX3	Dome Cover 3/4" NPT Hubs



Catalog Number	Description
XIHDCGX2	Dome Glass Cover 1/2" NPT Hubs
XIHDCGX3	Dome Glass Cover 3/4" NPT Hubs



Class I, Groups B,C,D
 Class II, Groups E,F,G
 Class III
 CENELEC: EExd IIC, IP66
 NEMA 4X, 7BCD, 9EFG



Standard Features

XIH housings are designed for small to medium size electronic assemblies. The 3 3/16" ID provides ample clearance to accommodate a wide variety of measurement and control devices. Precision machined from sand-cast copper-free aluminum.

XIH housings feature:

- Four interior mounting bosses at 45° orientation accommodate blind tapped holes on a 2 1/2" bolt circle
- 1/2" or 3/4" NPT conduit feed-through hubs, offset for maximum clearance and capacity
- Internal and external ground screws and tamper resistant cover set screw for extra safety
- Glass cover models have a 2 5/8" diameter, tempered glass window for local read out
- Buna-N rubber gasket for NEMA 4X watertight applications
- Corrosion resistant, "safety blue" polyester powder coating (other colors available)
- Stainless steel hardware

Design Options

- Four 1/4-20 UNC holes in front boss for bracket mounting. Consult factory for other sizes.
- Front Boss Modifications: 1/2" or 3/4" NPT for sensor, probe or conduit entry
- Mounting lugs with 5/16" holes (add suffix "L" to catalog number)
- Other interior mounting bosses available – please consult factory

Certifications

- FM STANDARD 3615
- CSA STANDARD C22.2 No. 30
- UL STANDARD 1203 (Consult factory for availability)
- ISSEP CENELEC STANDARD EN 50014, 50018

4A-7

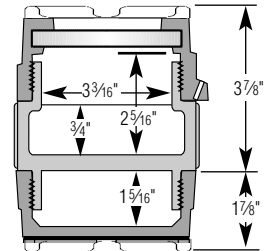
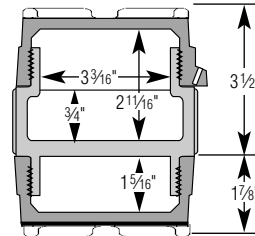
XDH (Explosionproof Double-Ended Housing)



3 3/16" ID Enclosure

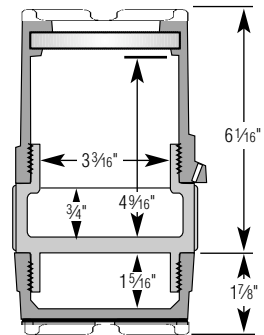
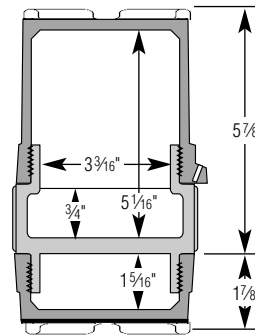
Solid Cover Arrangements

Glass Cover Arrangements



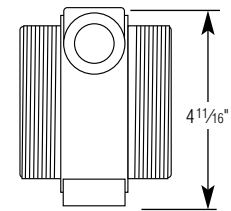
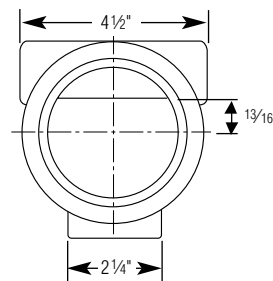
Catalog Number	Description
XDHFCX	Flat Cover 3/4" NPT Hubs

Catalog Number	Description
XDHFGCX	Flat Glass Cover 3/4" NPT Hubs



Catalog Number	Description
XDHDCX	Dome Cover 3/4" NPT Hubs

Catalog Number	Description
XDHGDCX	Dome Glass Cover 3/4" NPT Hubs



Standard Features

XDH housings are designed to isolate incoming power connections from instrumentation. The 3 3/16" ID provides ample clearance to accommodate a wide variety of measurement and control devices, with back-to-back chambers separated by a solid, 3/8" thick wall. Precision machined from sand-cast copper-free aluminum.

XDH housings feature:

- 3/4" NPT conduit feed-through hubs, offset into power side for maximum clearance and capacity
- Front boss with 3/4" NPT opening into instrument side for conduit, sensor or probe (see design options for other sizes)
- Internal and external ground screws and tamper resistant cover set screws for extra safety
- A choice of solid covers or 2 5/8" diameter tempered glass window for local read out and display
- Buna-N rubber gasket for NEMA 4X watertight applications
- Corrosion resistant, "safety blue" polyester powder coating (other colors available)
- Stainless steel hardware

Design Options

- 2- or 4-point, power side terminal strip with sealed pass-through to instrument (add suffix "2T" or "4T" to catalog number)
- Power side cover options:
 - Flat Solid — Standard
 - Dome Glass — Add Suffix "A"
 - Flat Glass — Add Suffix "B"
 - Dome Solid — Add Suffix "C"
- Four 1/4-20 UNC holes in front boss for bracket mounting. (Consult factory for other sizes.)
- Front Boss Modifications: 1/2" or 3/4" for sensor, probe or conduit entry
- 1/2" NPT conduit entries are available – add suffix "2" to catalog number.

Class I, Groups B,C,D
 Class II, Groups E,F,G
 Class III
 CENELEC: EExd IIC, IP66
 NEMA 4X, 7BCD, 9EFG

Certifications

FM APPROVED FM STANDARD 3615
CSA APPROVED CSA STANDARD C22.2 No. 30
 ISSEP CENELEC STANDARD EN 50014, 50018

4A-8

XIHS (Explosionproof Instrument Housing — Small)

2 5/8" ID Enclosure

Cover Arrangements	Flat Cover		Dome Cover		Dome Glass Cover	
	Catalog Number	Conduit Size	Catalog Number	Conduit Size	Catalog Number	Conduit Size
"B"	XIHSBFC2 XIHSBFC3 XIHSBFC4	1/2" NPT 3/4" NPT 1" NPT	XIHSBDC2 XIHSBDC3 XIHSBDC4	1/2" NPT 3/4" NPT 1" NPT	XIHSBDGC2 XIHSBDGC3 XIHSBDGC4	1/2" NPT 3/4" NPT 1" NPT
"C"	XIHSCFC2 XIHSCFC3 XIHSCFC4	1/2" NPT 3/4" NPT 1" NPT	XIHSCDC2 XIHSCDC3 XIHSCDC4	1/2" NPT 3/4" NPT 1" NPT	XIHSCDGC2 XIHSCDGC3 XIHSCDGC4	1/2" NPT 3/4" NPT 1" NPT
"D"	XIHSDFC3 XIHSDFC4	3/4" NPT 1" NPT	XIHSDDC3 XIHSDDC4	3/4" NPT 1" NPT	XIHSDDGC3 XIHSDDGC4	3/4" NPT 1" NPT
"L"	XIHSLFC2 XIHSLFC3 XIHSLFC4	1/2" NPT 3/4" NPT 1" NPT	XIHSLDC2 XIHSLDC3 XIHSLDC4	1/2" NPT 3/4" NPT 1" NPT	XIHSLDGC2 XIHSLDGC3 XIHSLDGC4	1/2" NPT 3/4" NPT 1" NPT
"T"	XIHSTFC2 XIHSTFC3 XIHSTFC4	1/2" NPT 3/4" NPT 1" NPT	XIHSTDC2 XIHSTDC3 XIHSTDC4	1/2" NPT 3/4" NPT 1" NPT	XIHSTDGC2 XIHSTDGC3 XIHSTDGC4	1/2" NPT 3/4" NPT 1" NPT
"X"	XIHSXFC2 XIHSXFC3 XIHSXFC4	1/2" NPT 3/4" NPT 1" NPT	XIHSXDC2 XIHSXDC3 XIHSXDC4	1/2" NPT 3/4" NPT 1" NPT	XIHSXDGC2 XIHSXDGC3 XIHSXDGC4	1/2" NPT 3/4" NPT 1" NPT
"Y"	XIHSYFC23 ONE 1/2" NPT ONE 3/4" NPT		XIHSYDC23 ONE 1/2" NPT ONE 3/4" NPT		XIHSYDGC23 ONE 1/2" NPT ONE 3/4" NPT	



Standard Features

XIHS housings are designed to accommodate small instruments or devices. The 2 5/8" ID enclosure is offered in six different conduit configurations and a choice of cover arrangements. Precision machined from sand-cast, copper-free aluminum.

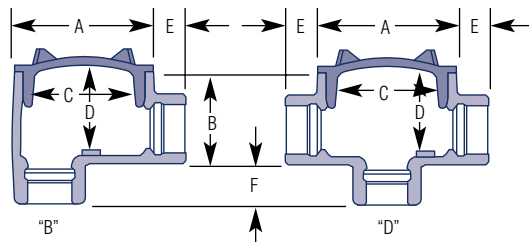
XIHS housings feature:

- 1/2", 3/4" or 1" NPT conduit feed-through hubs for power
- Internal ground screw
- Interior instrument mounting bosses that accommodate blind tapped holes on a 2" bolt circle
- Glass cover arrangements with a 1 1/8" diameter tempered glass window for local read out
- Buna-N rubber gasket for NEMA 4X watertight applications
- Tumbleblast, natural aluminum finish

Design Options

- Corrosion resistant, "safety blue" polyester powder coating (other colors available)

Note: Above dimensions are for 1/2" and 3/4" NPT. For 1" NPT housings, add 5/16" to height dimensions.



CONDUIT SIZE	A	B	C	D	E	F
1/2	3 1/2	2 1/16	2 5/8	1 11/16	7/8	7/8
3/4	3 1/2	2 1/16	2 5/8	1 11/16	7/8	7/8
1	3 1/2	2 3/8	2 5/8	2	1	1

Certifications



FM STANDARD 3615



CSA STANDARD C22.2 No. 30

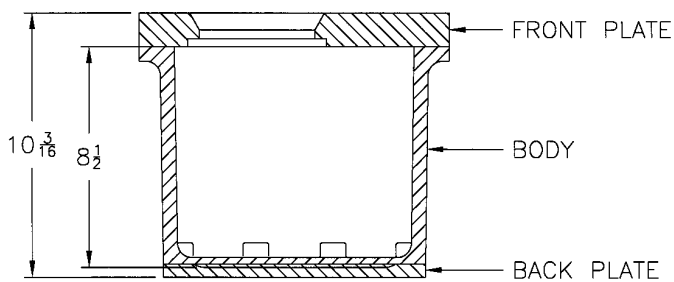
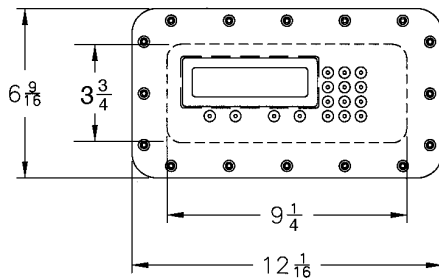


UL STANDARD 1203

Class I, Groups B, C and D
Class II, Groups E,F,G
Class III
NEMA 4X, 7BCD, 9EFG

4A-9

XDF Custom Enclosure Systems For Digital Instrumentation



4B-1

Applications

Environments requiring explosionproof or dust-tight enclosures.

Housing for panel mounted instrumentation with or without external operator functions – can accommodate standard DIN or other size devices.

Examples

- Flow Meters
- Level Indicators
- Motion Controllers
- Temperature Monitors
- Gas Analyzers

Features

- Space saving rectangular design
- Enclosure dimensions customized to match the instrument
- A range of rectangular window openings
- Choice of quantity and location of miniature operators including “key pad” configuration
- Front or rear accessibility for instrument service
- Watertight NEMA 4 gasketing
- Choice of surface finishes
- Recessed Allen Head cover bolts for appearance and security
- Special nameplating and escutcheon available.

Availability & Support

Adalet engineering will review your specific requirements.

Adalet offers design support, custom dimensional layout, product prototyping, testing and certification assistance.

Production scheduling and inventory to match defined needs.

Custom sizes available, consult factory for details.

Certifications

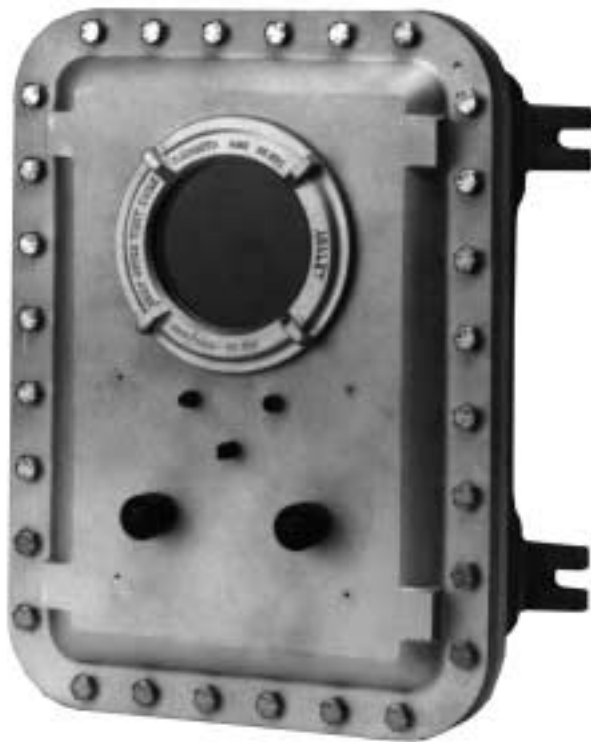
 FM STANDARD 3615

 CSA STANDARD C22.2 No. 30

NEMA 4, 7CD, 9E, F & G
 NEC Class I, Division I, Groups C & D
 Class II, Groups E, F & G
 NEMA 4, 7CD, 9E, F, & G

XCE & XJF Explosionproof Enclosures

XCE EXPLOSIONPROOF CONTROL ENCLOSURES XJF EXPLOSIONPROOF JUNCTION BOXES FLANGED



Applications:

Adalet XCE series and XJF enclosures are used in the installation of electrical/electronic components for control, measurement or monitoring applications in hazardous environments. XCE control enclosures can be modified for installation of a variety of explosionproof operator devices, viewing windows and accessories permitting the development of customized enclosure systems.

Features


- Copper-free aluminum, lightweight and corrosion resistant.
- Integral, cast-on mounting lugs, slotted for ease of field installation.
- Uniform wall thickness for ease of installation of control devices, windows and conduit openings.
- External flange provides maximum accessibility of components mounted inside.
- Tumbleblast finish for quality appearance.
- Premium high strength steel cover bolts, plated and coated for maximum corrosion resistance (stainless steel optional).
- Enclosures certified drillable for conduit entrances in the factory or the field.
- Internal grounding screw standard.
- Covers exceeding approximately 75 lbs. are provided with two removable eye bolts for ease of handling.
- XCE/XCEQ/XCEX certified drillable for operators at the factory or in the field.
- IP40 standard on XCEX without gasket.

Design Options

- CENELEC flameproof optional – designate XCEX when ordering. Includes external earthing assembly.
- Quad-lead bolt (quick thread bolt) option - designate XCEQ when ordering. Not available with XCEX.
- NEMA 4 (WATERTIGHT)/IP66:
Features a nitrile O-Ring retained in the cover flange in a machined groove. When ordering, add N4 to the catalog number. *This option may affect certifications - consult factory.
- NEMA 6 (SUBMERSIBLE):
Consult factory.
- Cast-on mounting buttons, bosses and pads:
Per customer specifications.
- Captive cover bolts:
Consult factory.
- Hinges:
May be installed for removable or non-removable cover. Left side standard, other locations optional.
- Windows:
Circular window sizes ranging from 1" to 8" diameter viewing area. Rectangular window sizes ranging from 3" x 3" to 13" x 13" viewing area.
- Stainless steel cover bolts. Consult factory for NEMA 4X rating.
- Mounting Pans:
Available in galvanized steel, aluminum or phenolic.
- Sidewall auxiliary device installation or machining available on XCE/XCEQ/XCEX series enclosures – Consult Factory.
- Factory machined metric sidewall threads approved on XCE and XCEX series for Groups C & D only.
- The Adalet engineering department is available to assist in the selection of custom explosionproof enclosures for your products.


Certifications

XCE Series Control Enclosures

 UL STANDARD 1203
CSA STANDARD C22.2 No. 30
EN 50 018 (XCEX)

Class I, Groups B,C,D
Class II, Groups E,F,G
Class III
CENELEC: EExd IIB, (Specify XCEX)
ATEX Certifications available – Consult Factory.
NEMA 4, 7B*CD, 9EFG

XJF Junction Boxes

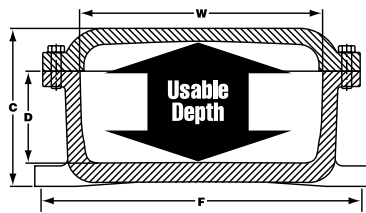
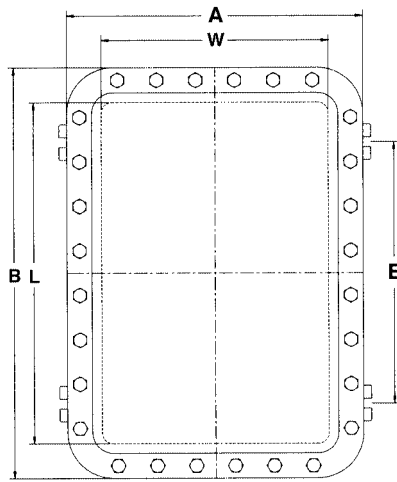
 CSA STANDARD C22.2 No. 30
 UL STANDARD 886

Some sizes and option combinations may not be certified.

Consult Factory for specific certifications and file numbers.

5A-1

XCE & XJF Explosionproof Enclosures



- To indicate Quad-Lead bolt option, add suffix "Q" after XCE. (Not available on XCEX models.)
- Operators, windows and hinges are ordered separately.
- To indicate EEx d approval specify XCEX.
- To indicate NEMA 4/IP66 option, add suffix "N4" after size (catalog number).

Note: All dimensions are in inches and are nominal enclosure size only. Inside nominal dimensions are at flange. Consult factory for exact dimensions.

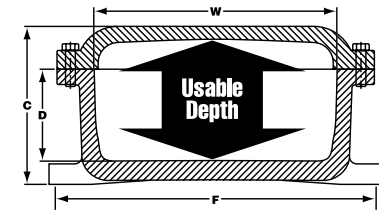
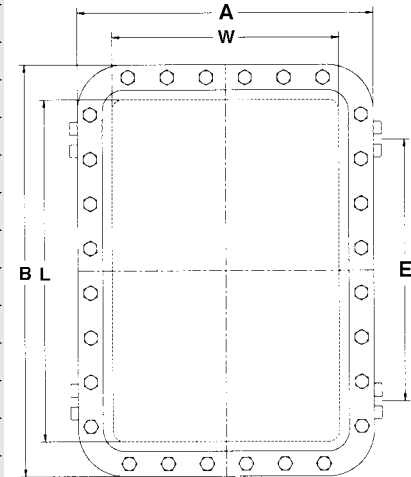
*Approval Pending – Consult Factory.

XCE/XJF Catalog Number	Inside Nominal Dimensions			Usable Inside Depth	Overall Dimension			Mounting Lug CL to CL		Mtg. Bolt Size	Apprx. Shipping Weight, lbs.
	W	L	D		A	B	C	E	F		
041604	4	16	4	4 3/4	7 1/4	19 1/4	6	12 1/8	6 3/4	3/8	25
060804	6	8	4	4 5/8	9 1/4	11 1/4	5 15/16	4 1/2	9 1/8	3/8	21
060805	6	8	5	5 5/8	9 1/4	11 1/4	6 15/16	4 1/2	9 1/8	3/8	23
060806	6	8	6	6 5/8	9 1/4	11 1/4	7 15/16	4 1/2	9 1/8	3/8	25
061105	6	11	5	5 7/8	9 1/4	14 1/4	7 3/16	7 1/2	9 1/8	3/8	24
061204	6	12	4	4 3/4	9 1/4	15 1/4	6 1/16	8 1/2	9 1/8	3/8	24
061206	6	12	6	6 3/4	9 1/4	15 1/4	8 1/16	8 1/2	9 1/8	3/8	29
061305	6	13	5	5 7/8	9 1/4	16 1/4	7 3/16	9 1/2	9 1/8	3/8	26
071004	7	10	4	4 3/4	10 3/8	13 3/8	6 3/16	6 1/2	9 3/4	3/8	27
071006	7	10	6 1/8	6 3/4	10 3/8	13 3/8	8 3/16	6 1/2	9 3/4	3/8	31
071805	7	18 1/4	5	5 3/4	10 3/8	21 5/8	7 3/16	14 1/2	9 3/4	3/8	55
080804	8	8	4	4 13/16	11 3/8	11 3/8	6 3/8	4 1/4	11	3/8	24
080806	8	8	6	6 13/16	11 3/8	11 3/8	8 3/8	4 1/4	11	3/8	28
080808	8	8	8	8 13/16	11 3/8	11 3/8	10 3/8	4 1/4	11	3/8	35
081004	8	10	4	4 3/4	11 3/8	13 3/8	6 1/4	6 1/2	10 3/4	3/8	30
081006	8	10	6	6 3/4	11 3/8	13 3/8	8 1/4	6 1/2	10 3/4	3/8	34
081008	8	10	8	8 3/4	11 3/8	13 3/8	10 1/4	6 1/2	10 3/4	3/8	39
081204	8	12	4	4 3/4	11 3/8	15 3/8	6 1/4	8 1/2	10 3/4	3/8	34
081206	8	12	6	6 3/4	11 3/8	15 3/8	8 1/4	8 1/2	10 3/4	3/8	42
081208	8	12	8	8 3/4	11 3/8	15 3/8	10 1/4	8 1/2	10 3/4	3/8	48
091105	9	11	5	5 3/4	12 3/8	14 3/8	7 5/16	7 1/2	12	3/8	41
101004	10	10	4	4 3/4	13 3/8	13 3/8	6 5/16	6 1/2	13	3/8	34
101006	10	10	6	6 3/4	13 3/8	13 3/8	8 5/16	6 1/2	13	3/8	44
101008	10	10	8	8 3/4	13 3/8	13 3/8	10 5/16	6 1/2	13	3/8	50
101206	10	12	6 1/4	7 1/4	13 3/8	15 3/8	8 7/8	8 1/2	13 1/4	3/8	46
101404	10	14	4	4 3/4	13 3/8	17 3/8	6 7/16	10 5/8	13 1/4	3/8	42
101406	10	14	6	6 3/4	13 3/8	17 3/8	8 7/16	10 5/8	13	3/8	49
101408	10	14	8	8 3/4	13 3/8	17 3/8	10 1/2	10 5/8	13	3/8	57
101410	10	14	8	10 13/16	13 3/8	17 3/8	12 7/16	10 5/8	13	3/8	70
121204	12	12	4	5	16 1/4	16 1/4	6 15/16	8 5/8	15 3/4	1/2	60
121206	12	12	6	7	16 1/4	16 1/4	8 15/16	8 5/8	15 3/4	1/2	68
121208	12	12	8	9	16 1/4	16 1/4	10 15/16	8 5/8	15 3/4	1/2	80
121804	12	18	4	4 3/4	16 1/4	22 1/4	6 3/4	14 1/8	15 3/4	1/2	85
121806	12	18	6	6 3/4	16 1/4	22 1/4	8 3/4	14 1/8	15 3/4	1/2	93
121808	12	18	8	8 3/4	16 1/4	22 1/4	10 3/4	14 1/8	15 3/4	1/2	101
122005	12	20	5	5 3/4	16 1/4	24 1/4	8 1/8	14 3/8	15 3/4	1/2	104
122404	12	24	4	4 15/16	16 1/4	28 1/4	7 1/4	18 3/8	15 3/4	1/2	116
122406	12	24	6	6 15/16	16 1/4	28 1/4	9 1/4	18 3/8	15 3/4	1/2	127

5A-2

XCE & XJF Explosionproof Enclosures

XCE/XJF Catalog Number	Inside Nominal Dimensions			Usable Inside Depth	Overall Dimension			Mounting Lug CL to CL		Mtg. Bolt Size	Apprx. Shipping Weight, lbs.
	W	L	D		A	B	C	E	F		
122408	12	24	8	8 15/16	16 1/4	28 1/4	11 1/4	18 3/8	15 3/4	1/2	140
122410	12	24	10	10 15/16	16 1/4	28 1/4	13 1/4	18 3/8	15 3/4	1/2	154
123006	12	30	6	6 11/16	16 3/4	34 1/4	9 5/8	23	15 3/4	1/2	180
123604	12	36	4	4 15/16	16 1/4	40 1/4	7 11/16	29	15 3/4	1/2	192
123606	12	36	6	6 15/16	16 1/4	40 1/4	9 11/16	29	15 3/4	1/2	212
123608	12	36	8	8 15/16	16 1/4	40 1/4	11 11/16	29	15 3/4	1/2	232
124608	12	46	8	8 15/16	16 1/4	50 1/4	11 11/16	39	15 3/4	5/8	280
141404	14	14	4	5	18 1/4	18 1/4	7 1/8	9 3/4	17 3/4	1/2	91
141406	14	14	6	7	18 1/4	18 1/4	9 1/4	9 3/4	17 3/4	1/2	97
141408	14	14	8	9	18 1/4	18 1/4	11 1/8	9 3/4	17 3/4	1/2	103
* 142210	14	22	10	11 1/4	18 1/4	26 1/4	13 5/8	16 1/2	17 3/4	1/2	181
* 142213	14	22	10	13	18 1/4	26 1/4	15 1/8	16 1/2	17 3/4	1/2	235
142806	14	28	6	7 13/16	18 1/4	32 1/4	9 9/16	22 1/2	17 3/4	1/2	120
161604	16	16	4	6 5/8	20 7/8	20 7/8	7 15/16	11	19 3/4	5/8	114
161606	16	16	6	7 5/8	20 7/8	20 7/8	9 15/16	11	19 3/4	5/8	135
161608	16	16	8	9 5/8	20 7/8	20 7/8	11 15/16	11	19 3/4	5/8	156
162406	16	24	6	7 13/16	20 7/8	28 7/8	10 3/8	18 3/8	19 3/4	5/8	190
162408	16	24	8	9 13/16	20 7/8	28 7/8	12 3/8	18 5/8	19 3/4	5/8	209
162410	16	24	10	11 13/16	20 7/8	28 7/8	14 3/8	18 3/8	19 3/4	5/8	225
162806	16	28	6	6 13/16	20 1/2	32 11/16	9 1/2	22 1/2	19 3/4	5/8	200
163406	16	34	6	6 15/16	20 1/2	38 1/2	9 1/2	27	19 3/4	5/8	260
163010	16	30	10	11 1/8	20 1/2	34 1/2	13 7/8	27	19 3/4	5/8	320
164610	16	46	10	11 13/16	20 7/8	50 7/8	14 9/16	39	19 3/4	5/8	390
181804	18	18	4	5 13/16	22 7/8	22 7/8	8 1/2	13	21 3/4	5/8	154
181806	18	18	6	7 13/16	22 7/8	22 7/8	10 1/2	13	21 3/4	5/8	177
181808	18	18	8	9 13/16	22 7/8	22 7/8	12 1/2	13	21 3/4	5/8	200
182406	18	24	6	7 7/16	22 7/8	28 7/8	10 13/16	18 3/8	21 3/4	5/8	226
182408	18	24	8	9 7/16	22 7/8	28 7/8	12 13/16	18 3/8	21 3/4	5/8	239
182410	18	24	10	11 7/16	22 7/8	28 7/8	14 13/16	18 3/8	21 3/4	5/8	260
183008	18	30	8	9 3/8	22 7/8	34 7/8	12 13/16	23	21 3/4	5/8	293
183608	18	36	8	9 3/8	22 7/8	40 7/8	12 7/8	29	21 3/4	5/8	318
183610	18	36	10	11 3/8	22 7/8	40 7/8	14 7/8	29	21 3/4	5/8	340
* 203606	20	36	6	7 1/8	24 7/8	40 7/8	10 7/8	29	24	5/8	340
* 203612	20	36	6	12	25 5/8	41 5/8	15	29	24	5/8	415
* 204806	20	48	6	7 1/8	24 7/8	52 7/8	10 7/8	41	24	5/8	430
* 204812	20	48	6	12	25 5/8	53 5/8	15	41	24	5/8	515
242408	24	24	8	9 7/16	28 7/8	28 7/8	12 7/16	18 3/8	28	5/8	302
242410	24	24	10	11 7/16	28 7/8	28 7/8	14 7/16	18 3/8	28	5/8	330
243008	24	30	8	9 1/4	28 7/8	34 7/8	12 15/16	23	28	5/8	356
243608	24	36	8	9 1/4	28 7/8	40 7/8	12 7/16	29	28	5/8	408
243610	24	36	10	11 1/4	28 7/8	40 7/8	14 7/8	29	28	5/8	433
* 243612	24	36	10	12	28 7/8	40 7/8	16 1/2	29	28	5/8	545
* 323612	32	36	6	12	37 3/4	41 3/4	15 1/2	29	36 1/8	5/8	691



- To indicate Quad-Lead bolt option, add suffix "Q" after XCE. (Not available on XCEX models.)
- Operators, windows and hinges are ordered separately.
- To indicate EEx d approval specify XCEX.
- To indicate NEMA 4/IP66 option, add suffix "N4" after size (catalog number).

Note: All dimensions are in inches and are nominal enclosure size only. Inside nominal dimensions are at flange. Consult factory for exact dimensions.

*Approval Pending – Consult Factory.

5A-3

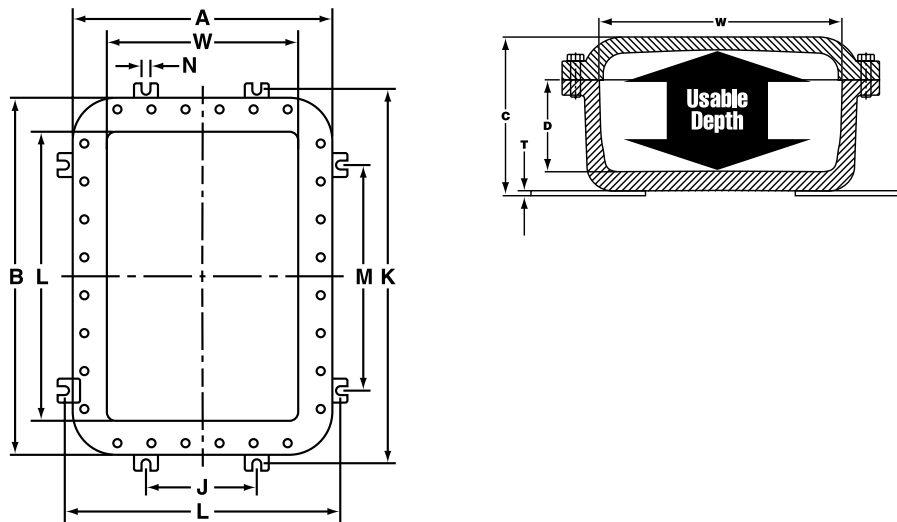
Bolt-On Mounting Lugs for XCE & XJF Enclosures

**Adjust To Irregular Mounting Surfaces
Without Damaging Enclosures**



Adalet Bolt-On Mounting Lugs for XCE and XJF Enclosures are bi-directional, permitting either vertical or horizontal mounting orientation. The ductile aluminum alloy lugs adapt to irregular surfaces so lug bolts can be tightened without damaging the enclosure.

5A-4



Bolt-On Mounting Lugs

Catalog Number	Mounting Dimensions				Mtg. Lug Size N	Mtg. Lug Thickness T
	Optional Mounting J	Optional Mounting K	Standard Mounting L	Standard Mounting M		
XCE060804M	X	X	7 7/8	4	3/8	1/4
XCE060805M	X	X	7 7/8	4	3/8	1/4
XCE060806M	X	X	7 7/8	4	3/8	1/4
XCE061105M	X	X	7 7/8	9	3/8	1/4
XCE061204M	X	X	7 7/8	10	3/8	1/4
XCE061206M	X	X	7 7/8	10	3/8	1/4
XCE061305M	X	X	7 7/8	11	3/8	1/4
XCE071004M	X	X	8 7/8	8	3/8	1/4
XCE071006M	X	X	8 7/8	8	3/8	1/4
XCE071805M	X	X	8 7/8	16	3/8	1/4
XCE080804M	X	X	9 7/8	6	3/8	1/4
XCE080806M	X	X	9 7/8	6	3/8	1/4
XCE080808M	X	X	9 7/8	6	3/8	1/4
XCE081004M	X	X	9 7/8	8	3/8	1/4
XCE081006M	X	X	9 7/8	8	3/8	1/4
XCE081008M	X	X	9 7/8	8	3/8	1/4
XCE081204M	3 13/16	14 3/8	10 3/8	7 13/16	1/2	3/8
XCE081206M	3 13/16	14 3/8	10 3/8	7 13/16	1/2	3/8
XCE081208M	3 13/16	14 3/8	10 3/8	7 13/16	1/2	3/8
XCE091105M	4 13/16	13 3/8	11 3/8	9	1/2	3/8
XCE101004M	5	13	13	5	1/2	3/8
XCE101006M	5	13	13	5	1/2	3/8
XCE101008M	5	13	13	5	1/2	3/8
XCE101206M	5	15	13	6	1/2	3/8
XCE101404M	5	17	13	9	1/2	3/8
XCE101406M	5	17	13	9	1/2	3/8
XCE101408M	5	17	13	9	1/2	3/8
XCE101410M	5	17	13	9	1/2	3/8
XCE121204M	7	15	15	7	1/2	3/8
XCE121206M	7	15	15	7	1/2	3/8
XCE121208M	7	15	15	7	1/2	3/8
XCE121804M	7	20 7/8	15	12 7/8	1/2	3/8
XCE121806M	7	20 7/8	15	12 7/8	1/2	3/8
XCE121808M	7	20 7/8	15	12 7/8	1/2	3/8
XCE122005M	7	22 7/8	15	14 7/8	1/2	3/8
XCE122404M	7	26 7/8	15	18 7/8	1/2	3/8
XCE122406M	7	26 7/8	15	18 7/8	1/2	3/8
XCE122408M	7	26 7/8	15	18 7/8	1/2	3/8
XCE122410M	7	26 7/8	15	18 7/8	1/2	3/8
XCE123006M	7	33	15	24 7/8	1/2	3/8
XCE123604M	7	39	15	31	1/2	3/8
XCE123606M	7	39	15	31	1/2	3/8
XCE123608M	7	39	15	31	1/2	3/8

Catalog Number	Mounting Dimensions				Mtg. Lug Size N	Mtg. Lug Thickness T
	Optional Mounting J	Optional Mounting K	Standard Mounting L	Standard Mounting M		
XCE124608M	7	49	15	41	1/2	3/8
XCE141404M	9	17	17	9	1/2	3/8
XCE141406M	9	17	17	9	1/2	3/8
XCE141408M	9	17	17	9	1/2	3/8
XCE142806M	9	31	17	23	1/2	3/8
XCE161604M	11	19	19	10 15/16	1/2	3/8
XCE161606M	11	19	19	10 15/16	1/2	3/8
XCE161608M	11	19	19	10 15/16	1/2	3/8
XCE162406M	11 3/8	27 1/4	19 3/8	19 3/8	1/2	3/8
XCE162408M	11 3/8	27 1/4	19 3/8	19 3/8	1/2	3/8
XCE162410M	11 3/8	27 1/4	19 3/8	19 3/8	1/2	3/8
XCE162806M	11 3/8	31 3/8	19 3/8	23	1/2	3/8
XCE163406M	11 3/8	37 3/8	19 3/8	29 3/8	1/2	3/8
XCE164610M	11 3/8	49 3/8	19 3/8	41 3/8	1/2	3/8
XCE181804M	13 3/8	21 3/8	21 3/8	13 3/8	1/2	3/8
XCE181806M	13 3/8	21 3/8	21 3/8	13 3/8	1/2	3/8
XCE181808M	13 3/8	21 3/8	21 3/8	13 3/8	1/2	3/8
XCE182406M	13	27	21	19	1/2	3/8
XCE182408M	13	27	21	19	1/2	3/8
XCE182410M	13	27	21 1/4	19	1/2	3/8
XCE183008M	13	31	21	25	1/2	3/8
XCE183608M	13 1/4	39 1/2	21	31 1/2	1/2	3/8
XCE183610M	13 1/4	39 1/2	21 1/4	31 1/2	1/2	3/8
XCE203606M	15 3/4	39 3/4	23 3/4	31 3/4	1/2	3/8
XCE204806M	15 3/4	51 3/4	23 3/4	43 3/4	1/2	3/8
XCE242408M	19 1/2	27 1/2	27 1/2	19 1/2	1/2	3/8
XCE242410M	19 1/2	27 1/2	27 1/2	19 1/2	1/2	3/8
XCE243008M	19 9/16	33 9/16	27 9/16	25 9/16	1/2	3/8
XCE243608M	19 9/16	39 9/16	27 9/16	31 9/16	1/2	3/8
XCE243610M	19 9/16	39 9/16	27 9/16	31 9/16	1/2	3/8

5A-5

XCE Series Recommended Spacing For Operators In Covers

Catalog Number	Standard Operators				Miniature Operators				Cover Wall Thickness (Inches)
	Maximum Number Operators	Maximum Number Operator Rows	Maximum Number Operators Per Row	Recommended Spacing CL to CL	Maximum Number Operators	Maximum Number Operator Rows	Maximum Number Operators Per Row	Recommended Spacing CL to CL	
XCE041604	5	5	1	2 1/2	13	13	1	1	1/2
XCE060804	2	2	1	2 1/2	8	4	2	1	1/2
XCE060805	2	2	1	2 1/2	8	4	2	1	1/2
XCE060806	2	2	1	2 1/2	8	4	2	1	1/2
XCE061105	3	3	1	2 1/2	14	7	2	1	1/2
XCE061204	4	4	1	2 1/2	16	8	2	1	5/8
XCE061206	4	4	1	2 1/2	16	8	2	1	5/8
XCE061305	4	4	1	2 1-2	18	9	2	1	1/2
XCE071004	6	3	2	2 1/2	18	6	3	1	5/8
XCE071006	6	3	2	2 1/2	18	6	3	1	5/8
XCE071805	12	6	2	2 1/2	45	15	3	1	5/8
XCE080804	4	2	2	2 1/2	16	4	4	1	11/16
XCE080806	4	2	2	2 1/2	16	4	4	1	11/16
XCE080808	4	2	2	2 1/2	16	4	4	1	11/16
XCE081004	6	3	2	2 1/2	24	6	4	1	11/16
XCE081006	6	3	2	2 1/2	24	6	4	1	11/16
XCE081008	6	3	2	2 1/2	24	6	4	1	11/16
XCE081204	8	4	2	2 1/2	32	8	4	1	11/16
XCE081206	8	4	2	2 1/2	32	8	4	1	11/16
XCE081208	8	4	2	2 1/2	32	8	4	1	11/16
XCE091105	6	3	2	2 1/2	35	7	5	1	11/16
XCE101004	9	3	3	2 1/2	36	6	6	1	11/16
XCE101006	9	3	3	2 1/2	36	6	6	1	11/16
XCE101008	9	3	3	2 1/2	36	6	6	1	11/16
XCE101206	12	4	3	2 1/2	48	8	6	1	3/4
XCE101404	12	4	3	2 1/2	60	10	6	1	3/4
XCE101406	12	4	3	2 1/2	60	10	6	1	3/4
XCE101408	12	4	3	2 1/2	60	10	6	1	3/4
XCE101410	12	4	3	2 1/2	60	10	6	1	3/4
XCE121204	9	3	3	3	64	8	8	1	7/8
XCE121206	9	3	3	3	64	8	8	1	7/8
XCE121208	9	3	3	3	64	8	8	1	7/8
XCE121804	15	5	3	3	92	14	8	1	15/16
XCE121806	15	5	3	3	92	14	8	1	15/16
XCE121808	15	5	3	3	92	14	8	1	15/16
XCE122005	18	6	3	3	128	16	8	1	1 1/8
XCE122404	21	7	3	3	150	20	8	1	1 1/8
XCE122406	21	7	3	3	150	20	8	1	1 1/8
XCE122408	21	7	3	3	150	20	8	1	1 1/8

Note: Closer spacing other than 2 1/2 & 3 inches available – Consult factory for special designs.

5A-6

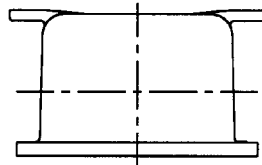
XCE Series Recommended Spacing For Operators In Covers

Catalog Number	Standard Operators				Miniature Operators				Cover Wall Thickness (Inches)
	Maximum Number Operators	Maximum Number Operator Rows	Maximum Number Operators Per Row	Recommended Spacing CL to CL	Maximum Number Operators	Maximum Number Operator Rows	Maximum Number Operators Per Row	Recommended Spacing CL to CL	
XCE122410	21	7	3	3	150	20	8	1	1 1/8
XCE123006	27	9	3	3	150	26	8	1	1 3/8
XCE123604	33	11	3	3	150	32	8	1	1 3/16
XCE123606	33	11	3	3	150	32	8	1	1 3/16
XCE123608	33	11	3	3	150	32	8	1	1 3/16
XCE124608	42	14	3	3	150	41	8	1	1 1/4
XCE141404	16	4	4	3	100	10	10	1	7/8
XCE141406	16	4	4	3	100	10	10	1	7/8
XCE141408	16	4	4	3	100	10	10	1	7/8
XCE142210	24	6	4	3	100	18	10	1	1 1/8
XCE142213	24	6	4	3	100	18	10	1	1 1/8
XCE142806	32	8	4	3	150	24	10	1	1 1/8
XCE161604	16	4	4	3 1/2	121	11	11	1	7/8
XCE161606	16	4	4	3 1/2	121	11	11	1	7/8
XCE161608	16	4	4	3 1/2	121	11	11	1	7/8
XCE162406	24	6	4	3 1/2	150	19	11	1	7/8
XCE162408	24	6	4	3 1/2	150	19	11	1	7/8
XCE162410	24	6	4	3 1/2	150	19	11	1	7/8
XCE162806	28	7	4	3 1/2	150	24	11	1	1 1/4
XCE163010	32	8	4	3 1/2	150	26	12	1	1 1/4
XCE163406	32	8	4	3 1/2	150	30	11	1	1 1/4
XCE164610	48	12	4	3 1/2	150	41	11	1	1
XCE181804	16	4	4	3 1/2	150	13	13	1	1
XCE181806	16	4	4	3 1/2	150	13	13	1	1
XCE181808	16	4	4	3 1/2	150	13	13	1	1
XCE182406	24	6	4	3 1/2	150	19	13	1	1 1/2
XCE182408	24	6	4	3 1/2	150	19	13	1	1 1/2
XCE182410	24	6	4	3 1/2	150	19	13	1	1 1/2
XCE183008	32	8	4	3 1/2	150	25	13	1	1 1/2
XCE183608	36	9	4	3 1/2	150	31	13	1	1 7/8
XCE183610	36	9	4	3 1/2	150	31	13	1	1 7/8
XCE203606	45	9	5	3 1/2	150	31	15	1	1 7/8
XCE203612	45	9	5	3 1/2	150	31	15	1	1 3/8
XCE204806	65	13	5	3 1/2	150	43	15	1	1 7/8
XCE204812	65	13	5	3 1/2	150	43	15	1	1 3/8
XCE242408	36	6	6	3 1/2	150	19	19	1	1 1/2
XCE242410	36	6	6	3 1/2	150	19	19	1	1 1/2
XCE243008	42	7	6	3 1/2	150	25	19	1	1 7/8
XCE243608	54	9	6	3 1/2	150	31	19	1	1 7/8
XCE243610	54	9	6	3 1/2	150	31	19	1	1 7/8
XCE243612	54	9	6	3 1/2	150	31	19	1	1 3/8
XCE323612	72	9	8	3 1/2	150	31	27	1	1 3/8

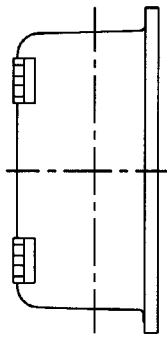
Note: Closer spacing other than 3 & 3 1/2 inches available – Consult factory for special designs.

XCE & XJF Explosionproof Enclosures

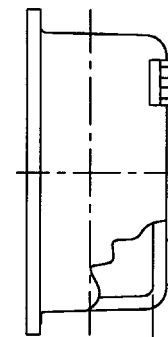
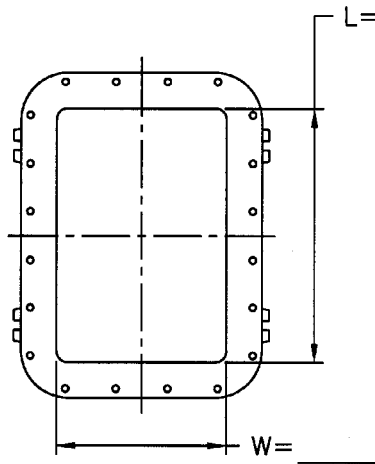
CUSTOMER DESIGN SHEET



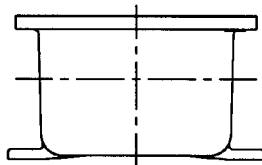
TOP VIEW



LEFT VIEW



RIGHT VIEW

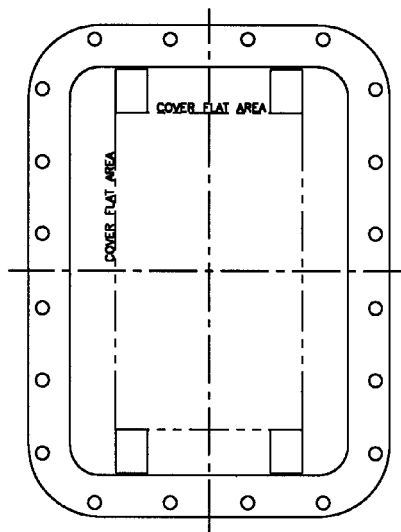


BOTTOM VIEW

BOX LAYOUT

CAT. #: X _____

- N4 O-RING
- MOUNTING PAN
- HINGES
 - LONG SIDE:
 - LEFT
 - RIGHT
 - SHORT SIDE:
 - TOP
 - BOTTOM
 - NON REMOVABLE
- NO HINGES



COVER LAYOUT

*CONSULT FACTORY FOR FLAT AREA DIMENSIONS

5A-8

Conduit Drilling and Tapping Guidelines

When drilling & tapping enclosures for conduit, proper installation requires compliance with the following:

1. Must be tapped with at least 5 full NPT threads (XCEX requires six NPT threads) in enclosure back or sides only; min. 1/2" conduit size.
2. Tapping depth of NPT holes must be plus 1/2 turn min. to plus 1-1/2 turns max. past standard NPT plug gage notch.
3. Inner end of conduit openings shall be smooth and well-rounded.

TABLE I

Thread Size Of Conduit, Inches (NPT)	Minimum wall thickness at conduit entrance excluding XCEX	
	Explosionproof	Dust Ignition Proof / Weather Proof
1/2 - 3/4	3/8 inch	1/4 inch
1 - 2	7/16 inch	5/16 inch
2 1/2 - 5	5/8 inch	7/16 inch

TABLE II

Conduit size, inches (NPT)	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5
Minimum Distance from conduit CL to inside corner or back of box	1 5/16	1 7/16	1 9/16	1 3/4	1 7/8	2 1/8	2 3/8	2 11/16	2 15/16	3 1/4	3 7/8
Approximate diameter of union	1 7/8	1 7/8	2 1/16	2 7/8	3 1/4	3 7/8	4 7/8	5 1/2	6	6 1/2	7 1/2

TABLE III

Minimum spacing between conduit centers thru sidewalls only (inches)
(Double all distances in table for holes located in backwall)

Size	5	4	3 1/2	3	2 1/2	2	1 1/2	1 1/4	1	3/4	1/2
1/2	4 1/2	3 5/8	3 3/8	3	2 5/8	2 3/8	2	1 7/8	1 3/4	1 5/8	1 1/2
3/4	4 3/4	3 3/4	3 1/2	3 1/8	2 3/4	2 1/2	2 1/8	2	1 7/8	1 3/4	
1	4 7/8	4	3 5/8	3 1/4	3	2 5/8	2 3/8	2 1/4	2		
1 1/4	5 1/8	4 1/8	3 7/8	3 1/2	3 1/8	2 7/8	2 1/2	2 3/8			
1 1/2	5 1/2	4 1/4	4	3 5/8	3 1/4	3	2 5/8				
2	5 3/4	4 5/8	4 1/4	3 7/8	3 5/8	3 1/4					
2 1/2	6	4 7/8	4 5/8	4 1/4	3 7/8						
3	6 1/4	5 3/8	5	4 5/8							
3 1/2	6 1/2	5 5/8	5 1/4								
4	6 3/4	5 7/8									
5	7 1/4										

This information is compiled from data which we believe is reliable and is given in good faith. Since the methods of application and conditions under which our products are used are beyond our control, we are not able to guarantee the application and/or use of same. The user assumes all risks and liability in connection with the application and use of our products.

Note: All dimensions are in inches.
Metric threads available from factory for Group C & D applications only – Consult Factory.

The Adalet engineering department is available to assist in designing custom explosionproof enclosures for your products.

5A-9

Conduit & Auxiliary Device Drilling and Tapping Guidelines

SPACING FOR AUXILIARY DEVICES INSTALLED IN BOX WALLS OF CONTROL PANEL ENCLOSURES USED IN HAZARDOUS LOCATIONS.

When using an Auxiliary Device in the box wall of an enclosure used in hazardous locations, proper installation requires compliance with the following:

1. A minimum of (5) thread engagement, class 2 fit, required for group C & D applications.
A minimum of (7) thread engagement, class 2 fit, required for group B applications.
2. Table I shows minimum box wall thickness for Auxiliary Device threads.

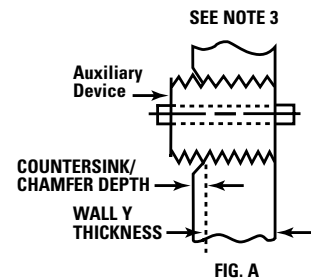
TABLE I

Thread Size (In.)	REQUIRED MINIMUM BOX WALL THICKNESS		Typical Auxiliary Devices
	Group C & D Applications min. (5) thread engagement	Group B Applications min. (7) thread engagement	
1/2 – 3/4 NPSM (14 PITCH)	3/8 Inch	1/2 Inch	XBO, XHPB, XHSS, Standard Operators
1 NPSM (11 1/2 PITCH)	7/16 Inch	5/8 Inch	XCBH Large Handle Assembly
3/8 NPSM (18 PITCH)	9/32 Inch	13/32 Inch	XCBH Small Handle Assembly
3/8 – 16 UNC	5/16 Inch	7/16 Inch	XMOB, XMOSS, Mini Operators

3. If Auxiliary Device contains undercut in engaging threaded section, the minimum wall thickness shown in Table I must increase to maintain the minimum required thread engagement. (Fig. A)
4. Table II provides the minimum distance an Auxiliary Device center can be placed from inside corner or back of box.

TABLE II

AUXILIARY DEVICE THREAD SIZE (In.)	3/8-16 UNC	3/8 NPSM	1/2 NPSM	3/4 NPSM	1 NPSM
Minimum distance from Auxiliary Device CL to inside corner of back of box.	1-1/2	1-5/8	1-3/4	1-7/8	2



5. Table III shows minimum spacing between conduit and Auxiliary Device entrances.

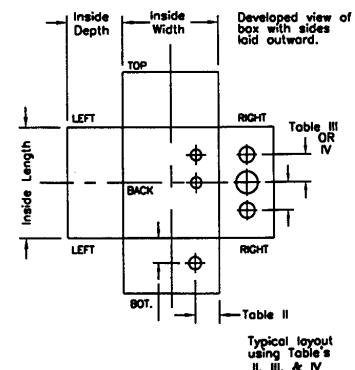
TABLE III

Aux. Device Thread Size	Minimum space between centers of conduits and auxiliary devices in box wall. (Inches)										
	Conduit Thread Size (NPT)										
	5	4	3-1/2	3	2-1/2	2	1-1/2	1-1/4	1	3/4	1/2
3/8	4-1/2	3-5/8	3-3/8	3	2-5/8	2-3/8	2	1-7/8	1-3/4	1-5/8	1-1/2
1/2	4-5/8	3-3/4	3-1/2	3-1/8	2-3/4	2-1/2	2-1/4	2-1/8	2	1-7/8	1-3/4
3/4	4-3/4	4	3-5/8	3-1/4	2-7/8	2-5/8	2-3/8	2-1/4	2-1/8	2	1-7/8
1	5	4-1/4	3-7/8	3-1/2	3	2-3/4	2-1/2	2-3/8	2-1/4	2-1/8	2

6. Table IV shows minimum spacing between auxiliary device entrances.
NOTE: Increase distance between devices as required to maintain minimum through air spacing of contacts required by electrical codes.
7. Double all distances in Table III and IV for holes located in back wall.

TABLE IV

Minimum spacing between Auxiliary Device of varying thread sizes (Inches)				
	3/8	1/2	3/4	1
3/8	1-1/2	1-1/2	1-1/2	2-1/2
1/2	1-1/2	2	2	2-1/2
3/4	1-1/2	2	2	3
1	2-1/2	2-1/2	3	3-1/2



Consult factory for layout data sheets.

5A-10

XCE and XJF Mounting Pans and Hinges

MOUNTING PANS

Catalog Number (Steel)	Catalog Number (Aluminum)	Catalog Number (Phenolic)	Pan Dimensions Nominal		Enclosure Size Reference Inside width x length	Weight Each (pounds) (Steel)
			Width	Length		
XSM 0416	XSA 0416	XSB 0416	3 1/4	15 1/4	4 x 16	1 1/2
XSM 0608	XSA 0608	XSB 0608	5 1/8	7 1/8	6 x 8	1
XSM 0611	XSA 0611	XSB 0611	5 1/8	10 1/8	6 x 11	1 1/2
XSM 0612	XSA 0612	XSB 0612	5 1/8	11 1/8	6 x 12	1 3/4
XSM 0613	XSA 0613	XSB 0613	5 1/8	12 1/8	6 x 13	2
XSM 0710	XSA 0710	XSB 0710	6 1/8	9 1/8	7 x 10	1 1/4
XSM 0718	XSA 0718	XSB 0718	6 1/8	17 3/8	7 x 18	2 1/2
XSM 0808	XSA 0808	XSB 0808	7	7	8 x 8	1 1/4
XSM 0810	XSA 0810	XSB 0810	7	9 1/8	8 x 10	1 1/2
XSM 0812	XSA 0812	XSB 0812	6 7/8	10 7/8	8 x 12	2 1/4
XSM 0911	XSA 0911	XSB 0911	8	10	9 x 11	2 1/2
XSM 1010	XSA 1010	XSB 1010	8 7/8	8 7/8	10 x 10	2 1/2
XSM 1012	XSA 1012	XSB 1012	10 7/8	8 7/8	10 x 12	3
XSM 1014	XSA 1014	XSB 1014	8 7/8	12 7/8	10 x 14	3 1/2
XSM 1212	XSA 1212	XSB 1212	10 7/8	10 7/8	12 x 12	3 3/4
XSM 1218	XSA 1218	XSB 1218	10 1/2	16 1/2	12 x 18	5 1/2
XSM 1220	XSA 1220	XSB 1220	11	19	12 x 20	6 1/2
XSM 1224	XSA 1224	XSB 1224	11	23	12 x 24	8
XSM 1230	XSA 1230	XSB 1230	10 3/4	28 3/4	12 x 30	9 3/4
XSM 1236	XSA 1236	XSB 1236	10 3/4	34 3/4	12 x 36	11 3/4
XSM 1246	XSA 1246	XSB 1246	10 3/4	44 3/4	12 x 46	15
XSM 1414	XSA 1414	XSB 1414	12 7/8	12 7/8	14 x 14	5
XSM 1422	XSA 1422	XSB 1422	12 7/8	20 7/8	14 x 22	8
XSM 1428	XSA 1428	XSB 1428	12 7/8	26 7/8	14 x 28	10 3/4
XSM 1616	XSA 1616	XSB 1616	14 3/4	14 3/4	16 x 16	6 3/4
XSM 1624	XSA 1624	XSB 1624	14 1/2	22 1/2	16 x 24	10 1/4
XSM 1628	XSA 1628	XSB 1628	26 1/2	14 1/2	16 x 28	12
XSM 1630	XSA 1630	XSB 1630	14 1/2	28 1/2	16 x 30	12 1/2
XSM 1634	XSA 1634	XSB 1634	32 1/2	14 1/2	16 x 34	14 3/4
XSM 1646	XSA 1646	XSB 1646	14 1/2	44 1/2	16 x 46	20 1/4
XSM 1818	XSA 1818	XSB 1818	16 3/4	16 3/4	18 x 18	8 3/4
XSM 1824	XSA 1824	XSB 1824	16 1/2	22 1/2	18 x 24	11 1/2
XSM 1830	XSA 1830	XSB 1830	16 1/2	28 1/2	18 x 30	14 3/4
XSM 1836	XSA 1836	XSB 1836	16 1/2	34 1/2	18 x 36	18
XSM 2036	XSA 2036	XSB 2036	34 1/2	18 1/2	20 x 36	20
XSM 2048	XSA 2048	XSB 2048	46 1/2	18 1/2	20 x 48	27
XSM 2424	XSA 2424	XSB 2424	22	22	24 x 24	15 1/4
XSM 2430	XSA 2430	XSB 2430	22	28	24 x 30	19 1/4
XSM 2436	XSA 2436	XSB 2436	34	22	24 x 36	23 1/2
XSM 3236	XSA 3236	XSB 3236	29	33	32 x 36	28 3/4

Mounting Pans

MATERIAL — Steel: (XSM)

Galvanized 12 gauge steel plate. The catalog number includes the steel mounting pan complete with 1/4" high spacers and stainless steel mounting screws.

MATERIAL — Aluminum: (XSA) Consult factory for availability.

MATERIAL — Phenolic: (XSB)

A special phenolic laminated material that has high mechanical and dielectric strength. It is excellent for mounting and wiring control equipment. The catalog number includes the phenolic board, 3/8" thick, complete with 1/4" high spacers and stainless steel mounting screws.

Note: No installation charge when customer specifies factory installation of mounting pan.

HINGES

Hinges Catalog Number	Enclosure Size Reference Inside width x length
XHB-2	4 x 16
XHB-2	6 x 8
XHB-2	6 x 11
XHB-2	6 x 12
XHB-2	6 x 13
XHB-2	7 x 10
XHB-2	7 x 18
XHB-2	8 x 8
XHB-2	8 x 10
XHB-2	8 x 12
XHB-2	9 x 11
XHB-2	10 x 10
XHB-2	10 x 12
XHB-2	10 x 12
XHB-2	10 x 14
XHB-2	10 x 14
XHC-2	12 x 12
XHC-2	12 x 18
XHC-2	12 x 20
XHC-2	12 x 24
XHC-2	12 x 30
XHD-3	12 x 36
XHD-4	12 x 46
XHC-2	14 x 14
XHF-2	14 x 22
XHF-2	14 x 28
XHD-2	16 x 16
XHF-2	16 x 24
XHF-2	16 x 28
XHF-2	16 x 30
XHD-3	16 x 34
XHF-4	16 x 46
XHF-2	18 x 18
XHF-2	18 x 24
XHF-2	18 x 30
XHF-3	18 x 36
XHF-3	20 x 36
XHF-4	20 x 48
XHF-2	24 x 24
XHF-2	24 x 30
XHF-3	24 x 36
XHF-3	32 x 36

Hinge Set

Description:

Made of extruded aluminum alloy consisting of two sections, female and male (with stainless steel pin) and four stainless steel hex head bolts. Designed to allow right or left hand removable or non-removable installation.

Unless specified, left hand removable hinge installation will be furnished by factory when hinged enclosures are ordered.

Note: Catalog numbers represent complete hinge sets necessary for enclosure assembly.

XCE Glass Windows

**DIVISION I AND DIVISION II
CLASS I GROUPS B, C, & D; CLASS II GROUPS E, F, & G
NEMA 7, 9, NEMA 4/IP66 (OPTIONAL)**



Circular Window	Window Viewing Area Diameter	Overall Window Cover Diameter	Minimum Enclosure Inside Width / Length
XGC 10	1 1/8	3	8
XGC 20	1 15/16	4 1/8	9
XGC 30	3	5 3/16	9
XGC 40	4	6 3/8	9
XGC 52	5 1/4	7 7/8	12
XGC 66	6 11/16	10 3/8	16
XGC 80	8	12 1/8	18

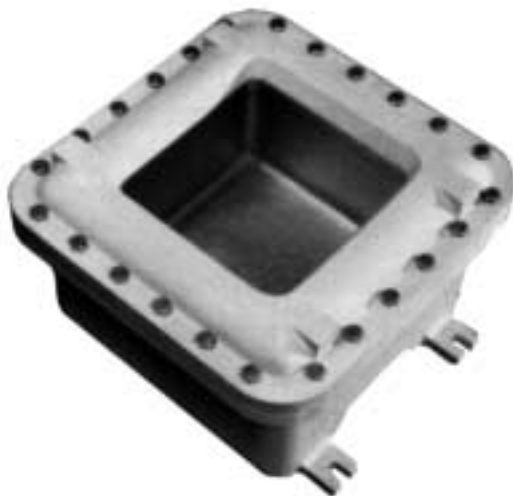
All dimensions are in inches.

Glass window catalog number includes XCE cover machining and installation.

For raintight, watertight NEMA 4/IP66 option add suffix "N4".

To order glass windows for field installations, add suffix SLF to XGC catalog no.

Consult factory for closer spacing requirements, multiple windows or combinations of operators and windows.



Rectangular Window	Window Viewing Area Size	Minimum Enclosure Inside Width	Minimum Enclosure Inside Length
XGW 0303	3 X 3	8	8
XGW 0305	3 X 5	8	10
XGW 0307	3 X 7	8	12
XGW 0505	5 X 5	10	10
XGW 0509	5 X 9	10	14
XGW 0707	7 X 7	12	12
XGW 0713	7 X 13	12	18
XGW 0909	9 X 9	14	14
XGW 1111	11 X 11	16	16
XGW 1313	13 X 13	18	18

All dimensions are in inches.

Glass window catalog number includes installation.

For raintight, watertight NEMA 4 option add suffix "N4".

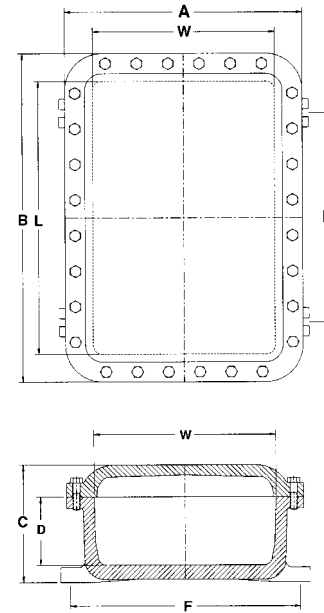
Consult factory for special viewing area requirement, closer spacing and to combine windows with other window sizes or operators.

5A-12

DJF and WJF External Flanged Junction Boxes

DJF DUST-TIGHT EXTERNAL FLANGED JUNCTION BOXES CLASS II GROUPS E, F, & G; NEMA 9

WJF WATERTIGHT EXTERNAL FLANGED JUNCTION BOXES NEMA 4

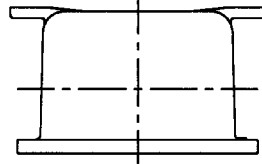


DJF/WJF Catalog Number	Inside Nominal Dimensions			Overall Dimensions			Mounting Lug CL to CL		Mounting Bolt Size	Side Wall Thickness	Shipping Weight, Pounds
	W	L	D	A	B	C	E	F			
061105	6	11	5	8 3/8	13 1/8	6 13/16	7 1/2	8 5/8	3/8	3/8	16
061305	6	13	5	8 1/8	15 1/8	6 13/16	9 1/2	8 5/8	3/8	3/8	18
071805	7	18	5	9 1/8	20 1/8	6 13/16	14 1/2	9 1/8	3/8	3/8	30
121806	12	18	6	14 1/2	20 1/2	7 15/16	14 3/8	14 3/4	1/2	7/16	42
122005	12	20	5	14 1/4	22 1/4	6 15/16	14 3/8	14 3/4	1/2	7/16	47
122406	12	24	6	14 1/4	26 1/4	7 15/16	18 3/4	14 3/4	1/2	7/16	52
122408	12	24	8	14 1/4	26 1/4	9 15/16	18 3/4	14 3/4	1/2	7/16	62
123006	12	30	6	14 3/8	32 3/8	8 1/16	22 3/4	15	5/8	1/2	67
123208	12	32	8	15	35	10 3/16	27 1/2	14 1/8	1/2	5/8	80
123608	12	36	8	14 3/8	38 3/8	10 3/16	29	14 3/4	1/2	5/8	110

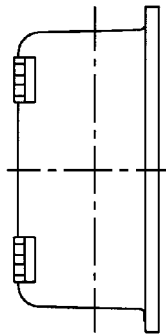
5A-13

DJF and WJF External Flanged Junction Boxes

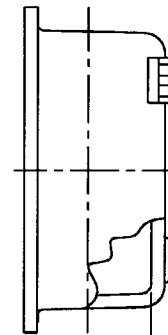
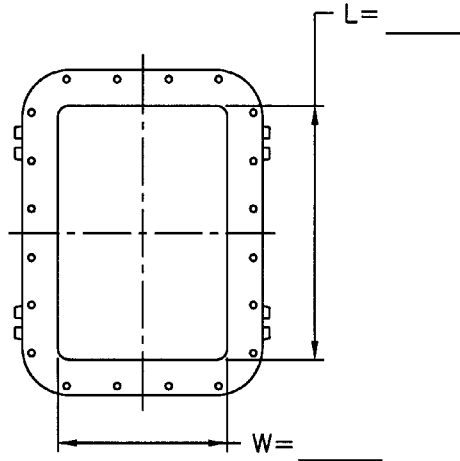
CUSTOMER DESIGN SHEET



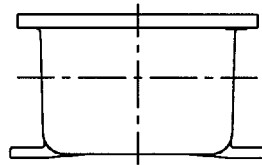
TOP VIEW



LEFT VIEW



RIGHT VIEW

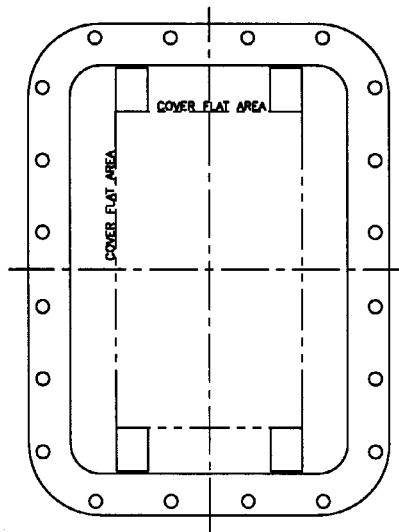


BOTTOM VIEW

BOX LAYOUT

CAT. # DJF _____
 # WJF _____

- N4 O-RING
- MOUNTING PAN
- HINGES
 - LONG SIDE:
 - LEFT
 - RIGHT
 - SHORT SIDE:
 - TOP
 - BOTTOM
 - NON REMOVABLE
- NO HINGES



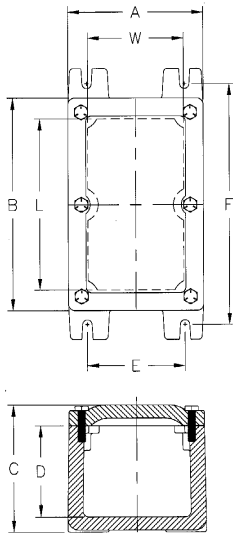
COVER LAYOUT

*CONSULT FACTORY FOR FLAT AREA DIMENSIONS

5A-14

XIF/XIFC Explosionproof Internal Flanged Junction Boxes & Control Enclosures

XIF: Junction Boxes XIFC: Control Enclosures



Optional NEMA 4. Add suffix "N4" to catalog number.
Use layout sheet for drilling and tapping specifications.

XIFC Certifications: (N4 Optional)

- Class I, Groups C & D
- Class II, Groups E, F & G
- Class III
- UL 1203 (Classified)

XIF Compliances:

- NEC Class I, Group D
- Class II, Groups E, F & G
- Class III
- UL Standard 886
- CSA Standard C22.2 No. 30
- For XIF consult factory for specific certifications.

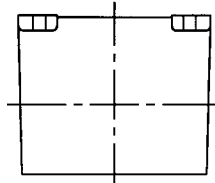
Catalog Number	Inside Nominal Dimensions	Inside Nominal Dimensions			Overall Dimensions			Mounting Lug CL to CL		Mounting Bolt Size	Shipping Weight, Pounds
		W	L	D	A	B	C	E	F		
XIFC 030303	XIF 030303	3 5/16	3 5/16	3 3/16	4 1/2	4 1/2	4 5/16	3 1/4	5 1/2	5/16	5
XIFC 030603	XIF 030603	3 1/4	5 3/4	3	4 1/2	7 1/16	4 1/4	3 1/4	8	5/16	6 1/2
XIFC 030703	XIF 030703	3 1/4	6 7/8	3	4 1/2	8 1/8	4 5/16	3 5/16	9	5/16	7 1/2
XIFC 030903	XIF 030903	3 11/32	8 15/16	3	4 1/2	10 1/16	4 5/16	3 1/4	11	5/16	9 1/2
XIFC 031103	XIF 031103	3 1/4	10 15/16	3	4 1/2	12	4 5/16	3 1/4	13	5/16	11
XIFC 031303	XIF 031303	3 1/4	12 13/16	3	4 1/2	14 1/16	4 5/16	3 1/4	15	5/16	11 1/2
XIFC 031503	XIF 031503	3 1/4	14 3/4	3 1/16	4 1/2	16	4 5/16	3 1/4	17	5/16	13
XIFC 031803	XIF 031803	3 1/4	17 3/4	3	4 1/2	19	4 1/4	3 1/4	20	5/16	16
XIFC 032403	XIF 032403	3 1/4	23 9/16	3	4 1/2	25 1/16	4 5/16	3 1/4	26	5/16	21
XIFC 033003	XIF 033003	3 1/4	29 1/2	3	4 9/16	31 1/16	4 5/16	3 1/4	32 1/8	5/16	28
XIFC 033603	XIF 033603	3 1/4	35 7/16	3	4 1/2	37	4 3/8	3 1/4	38 1/8	5/16	33
XIFC 040604	XIF 040604	4 1/8	5 7/8	4	5 3/8	7	5 5/16	4 3/8	8 1/4	5/16	8 1/2
XIFC 041204	XIF 041204	4 1/4	11 13/16	4	5 1/2	13 1/8	5 5/16	4 3/8	14 1/4	5/16	15 1/2
XIFC 060606	XIF 060606	5 1/2	5 1/2	6	7	7	7 3/8	5 1/2	8 1/2	3/8	14
XIFC 060608	XIF 060608	5 1/4	5 1/2	8	7	7	9 3/8	5 1/2	8 1/2	3/8	17 1/2
XIFC 061206	XIF 061206	5 1/4	11 1/8	6	7 1/4	13 1/2	7 5/8	5 1/2	15	3/8	28
	XIF 061806	6	18	6	7 1/2	19 1/2	7 13/16	5 1/2	21 1/8	3/8	33
	XIF 062406	6	24	6	7 1/2	25 1/2	7 3/4	5 1/2	27	3/8	59
	XIF 063606	6	36	6	7 1/2	37 1/2	7 13/16	5 1/2	39	3/8	84
XIFC 070704	XIF 070704	6 7/8	6 7/8	4	7 15/16	7 15/16	5 5/16	6 5/8	9 1/8	3/8	13
	XIF 071603	7	16	3 1/2	8 1/2	17 1/2	5 5/16	6 1/2	18 7/8	3/8	36
	XIF 083206	8	32	5 7/8	9 1/2	33 1/2	7 7/8	7 1/2	35	3/8	87

Note: All dimensions are in inches and are nominal enclosure size only.

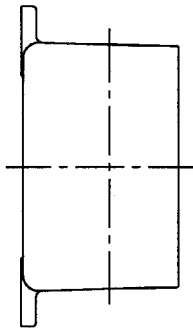
5B-1

XIF/XIFC Explosionproof Internal Flanged Junction Boxes & Control Enclosures

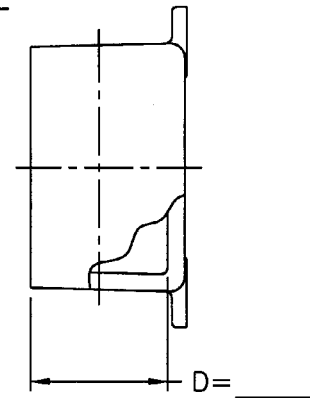
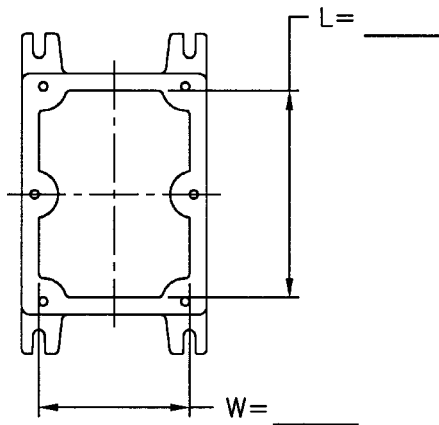
CUSTOMER DESIGN SHEET



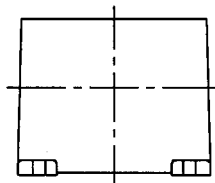
TOP VIEW



LEFT VIEW



RIGHT VIEW

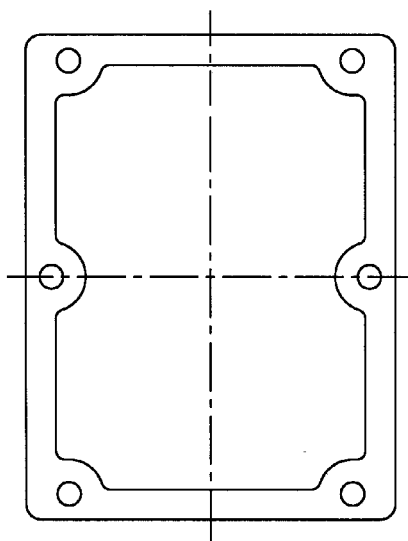


BOTTOM VIEW

BOX LAYOUT

CAT. # XIF(C) _____

- N4 O-RING
- MOUNTING PAN



COVER LAYOUT

5B-2

XIF/XIFC Mounting Pans

MATERIAL — Steel: (XSM)

Galvanized 12 gauge steel plate. The catalog number includes the steel mounting pan complete with 1/4" high spacers and stainless steel mounting screws.

MATERIAL — Aluminum: (XSA)

Consult factory for availability.

MATERIAL — Phenolic: (XSB)

A special phenolic laminated material that has high mechanical and dielectric strength. It is excellent for mounting and wiring control equipment. The catalog number includes the phenolic board, 3/8" thick, complete with 1/4" high spacers and stainless steel mounting screws.

Note: No installation charge when customer specifies factory installation of mounting pan.

Catalog Number (Steel)	Catalog Number (Aluminum)	Catalog Number (Phenolic)	Pan Dimensions		Enclosure Size Reference Inside Width x Length	Weight Each (pounds) (Steel)
			Width	Length		
XSM 0303	XSA 0303	XSB 0303	3	3	3 x 3	1/4
XSM 0306	XSA 0306	XSB 0306	3	5 1/2	3 x 6	1/2
XSM 0307	XSA 0307	XSB 0307	3	6 1/2	3 x 7	1/2
XSM 0309	XSA 0309	XSB 0309	3	8 1/2	3 x 9	3/4
XSM 0311	XSA 0311	XSB 0311	3	10 1/2	3 x 11	1
XSM 0313	XSA 0313	XSB 0313	3	12 1/2	3 x 13	1 1/4
XSM 0315	XSA 0315	XSB 0315	3	14 1/2	3 x 15	1 1/2
XSM 0318	XSA 0318	XSB 0318	3	17 1/2	3 x 18	1 3/4
XSM 0324	XSA 0324	XSB 0324	3	23 1/2	3 x 24	2 1/4
XSM 0330	XSA 0330	XSB 0330	3	29	3 x 30	2 3/4
XSM 0336	XSA 0336	XSB 0336	3	35	3 x 36	3 1/4
XSM 0406	XSA 0406	XSB 0406	3 7/8	5 1/2	4 x 6	3/4
XSM 0412	XSA 0412	XSB 0412	3 7/8	11 1/2	4 x 12	1 1/2
XSM 0606	XSA 0606	XSB 0606	5 1/2	5 1/2	6 x 6	1
XSM 0612	XSA 0612	XSB 0612	5 1/2	11 1/2	6 x 12	2
XSM 0618	XSA 0618	XSB 0618	5 5/8	16 7/8	6 x 18	3
XSM 0624	XSA 0624	XSB 0624	5 5/8	22 7/8	6 x 24	4
XSM 0636	XSA 0636	XSB 0636	5 5/8	34 7/8	6 x 36	6
XSM 0707	XSA 0707	XSB 0707	6 1/2	6 1/2	7 x 7	1 1/2
XSM 0716	XSA 0716	XSB 0716	6 1/2	15 1/2	7 x 16	3
XSM 0832	XSA 0832	XSB 0832	7 1/2	31 1/2	8 x 32	7 1/2

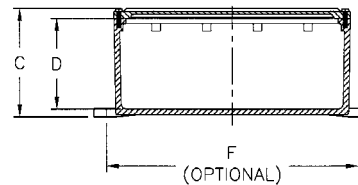
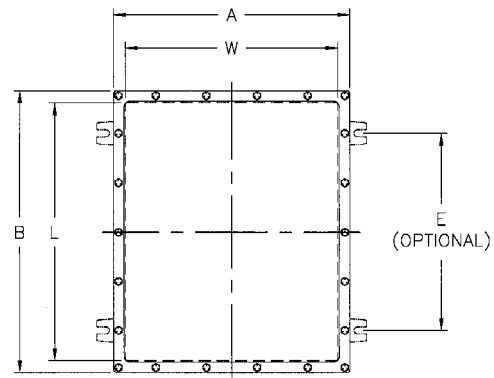
When ordering separately, be sure to designate that mounting pan is for XIF series enclosure and specify size of box.

5B-3

DIF and WIF Junction Boxes

DIF DUST-TIGHT INTERNAL FLANGED JUNCTION BOXES CLASS II GROUPS E, F, & G; NEMA 9

WIF WATERTIGHT INTERNAL FLANGED JUNCTION BOXES NEMA 3, 4



DIF/WIF Catalog Number	Inside Nominal Dimensions			Overall Dimensions			Mounting Lug CL to CL		Mounting Bolt Size	Side Wall Thickness	Shipping Weight, Pounds
	W	L	D	A	B	C	E	F			
101406	10	14	6	10 3/4	14 3/4	7 5/16	12 3/8	10 3/4	3/8	3/8	28
164810	16	48	10	17	49	11 5/8	19	41 1/16	5/8	1/2	150
202408	20	24	8	21	25	9 9/16	22 3/8	17 1/2	1/2	1/2	90
202412	20	24	12	21	25	13 9/16	22 1/2	17 1/2	1/2	1/2	106
243608	24	36	8	25	37	9 5/8	27 1/4	28	5/8	1/2	146
364808	36	48	8	37	49	9 3/8	39 1/4	41	5/8	1/2	242
242414	24	24	14	25	25	15 9/16	26 1/2	17 1/2	1/2	1/2	120

Note: WIF Series includes a one piece neoprene gasket. Mounting lugs optional.
DIF Series does not include mounting lugs or gasket.

5B-4

XHFA Explosionproof Fire Alarm Stations

CLASS I, GROUPS B*, C, & D; CLASS II, GROUPS E, F & G, NEMA 4, 7 & 9



Fire alarm call stations, for installation in hazardous atmosphere locations where emergency control of fire alarm or signal circuits is required.

Station is painted red for easy identification. Housing and break glass hammer are cast aluminum alloy. Exposed operator parts are red anodized aluminum.

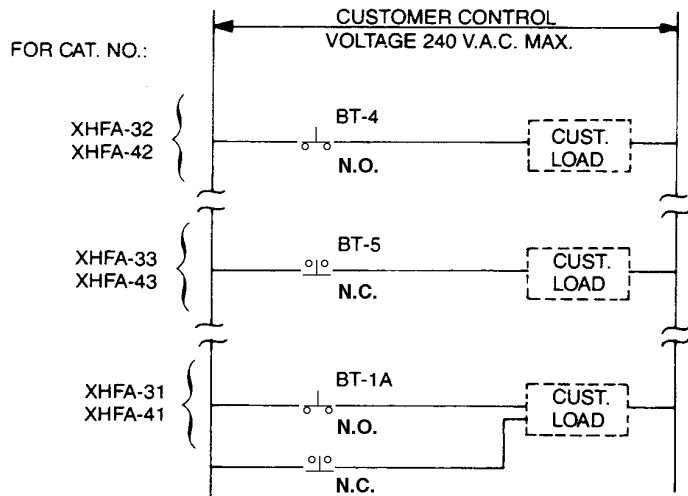
A yellow adhesive backed label "Caution-Stand Clear of Area in Front of Glass to Protect Eyes from Flying Glass", furnished for application above the alarm station.

Complete Assembly	
Catalog Number with 3/4" NPT conduit opening top and bottom	Catalog Number with 1" NPT conduit opening top and bottom
XHFA 31-N4	XHFA 41-N4
XHFA 32-N4	XHFA 42-N4
XHFA 33-N4	XHFA 43-N4
Replacement glass: Catalog number XHFG	

* Add GB suffix to part number for group B.
Example: XHFA 31-GB-N4.

Important Notice:

Contacts are shown as held in their actuated position.



Note: Contact blocks furnished as standard.

Compliances:

NEC Class I, Group B*, C and D
Class II, Groups E, F & G
UL Standard 886 • UL Standard 689
UL Standard UL38 manually actuated signaling boxes for use with Fire Protective Signaling Systems.
Aluminum Alloy Copper Content 0.3% max.

Maximum current ratings for control circuit contacts			
Volts	Make Amperes	Break Amperes	Continuous Carrying
120	60	6	10
240	30	3	10

5C-1

Junction Boxes General Purpose, Weatherproof

NEMA TYPE 1, NEMA TYPE 4 (OPTIONAL)

JP (UNFLANGED TYPE FOR SURFACE MOUNTING)

JF (FLANGED TYPE FOR SURFACE MOUNTING)

JR (RECESSED COVER TYPE FOR FLUSH MOUNTING)

JH (HINGED COVER TYPE FOR SURFACE MOUNTING)

JU (ABOVE GROUND TYPE FOR CONDUIT MOUNTING)

APPLICATIONS:

Designed for installation in electrical systems requiring rugged applications.

- Wiring: pull boxes, splices, taps and terminal strips.
- Housing for apparatus, instruments, terminal strips and other equipment.

FEATURES:

- Rugged sand-cast copper-free aluminum alloy, 0.3% maximum copper content.
- Tumbled for quality appearance.
- Boxes are furnished complete with cover, neoprene gasket and stainless steel cover bolts, except "JU Series" enclosures, which are furnished with steel zinc dichromate plated cover bolts.
- Grounding screw standard.

OPTIONS:

- Cast-on mounting buttons, bosses and pads available for terminal block or equipment mounting.
- Conduit openings available, drilled and tapped or drilled slip fit for type 1 applications, to customer requirements.
- NEMA type 4, standard on JR Series when used for direct burial in concrete or cinder fill, JF, JP and JH require addition of mounting lugs, cast on long side unless otherwise specified. Wall thickness must be 5/16" or greater for conduit sizes up to 2" NPT to permit, not less than 3-1/2 threads of engagement. Enclosures with less than 5/16" wall thickness require padded conduit entrances to maintain 3-1/2 thread engagement.

5D-1

Compliances



CSA STANDARD C22.2 No. 18



UL STANDARD 50

CONTACT FACTORY FOR SPECIFIC UL, CSA, FILE NUMBERS

200

Junction Boxes General Purpose, Weatherproof

UNFLANGED TYPE FOR SURFACE MOUNTING



Catalog Number	Nominal Inside Dimensions (Inches)			Wall Thick. Inches	Ship. Wt. Lbs.
	W	L	D		
JP 020401	2-3/4	4-1/4	1-3/16	1/8	1
JP 030302	3-1/2	3-1/2	2-1/8	1/8	1
JP 030303	3-9/16	3-9/16	2-7/16	5/16	2
JP 040403	4	4	2-1/2	5/32	1-1/2
JP 040404	4	4	4	1/4	3
JP 040603	4	6	2-1/2	1/4	3
JP 040604	4	6	4	7/32	4
JP 040804	4	8	4	5/16	6
JP 041204	4	12	4	5/16	8
JP 060603	6	6	3-1/2	5/16	6
JP 060604	6	6	4	5/16	6
JP 060606	6	6	6	5/16	7
JP 060804	6	8	4	5/16	7
JP 060806	6	8	6	5/16	10
JP 061004	6	10	4	5/16	9
JP 061204	6	12	4	5/16	10
JP 061206	6	12	6	5/16	11
JP 080804	8	8	4	5/16	9
JP 080806	8	8	6	5/16	11
JP 080808	8	8	8	5/16	12
JP 081004	8	10	4	5/16	9
JP 081006	8	10	6	5/16	13
JP 081008	8	10	8	5/16	15
JP 081204	8	12	4	5/16	11
JP 081206	8	12	6	5/16	16
JP 101204	10	12	4	5/16	12
JP 101206	10	12	6	5/16	18
JP 101208	10	12	8	5/16	21

Catalog Number	Nominal Inside Dimensions (Inches)			Wall Thick. Inches	Ship. Wt. Lbs.
	W	L	D		
JP 121204	12	12	4	5/16	17
JP 121206	12	12	6	5/16	21
JP 121208	12	12	8	5/16	24
JP 121604	12	16	4	5/16	17
JP 121606	12	16	6	5/16	21
JP 121608	12	16	8	5/16	26
JP 121806	12	18	6	5/16	26
JP 121810	12	18	10	5/16	36
JP 122406	12	24	6	5/16	38
JP 122408	12	24	8	5/16	48
JP 123606	12-1/8	36-1/2	6	1/2	82
JP 141406	14	14	6	5/16	25
JP 151508	15	15	8	3/8	32
JP 181806	18	18	6	5/16	57
JP 181808	18	18	8	5/16	48
JP 181810	18	18	10	5/16	53
JP 181812	18	18	12	5/16	63
JP 182408	18	24	8	3/8	65
JP 183606	18	36	6	1/2	94
JP 183608	18	36	8	1/2	126
JP 242408	24	24	8	3/8	80
JP 242410	24	24	10	5/16	92
JP 243008	23-3/4	23-3/4	8	3/8	94
JP 243606	24	36	6	1/2	114
JP 243608	24-1/8	36-1/8	8	3/8	113
JP 243612	24	36	12	1/2	173
JP 363612	36	36	12	1/2	226

5D-2

 CSA Certified LR28852

 UL Listed E33075

Junction Boxes General Purpose, Weatherproof

FLANGED TYPE FOR SURFACE MOUNTING

Catalog Number	Nominal Inside Dimensions (Inches)			Wall Thick. Inches	Ship. Wt. Lbs.
	W	L	D		
JF 060604	6	6	4	1/4	5-1/2
JF 060606	6	6	6	1/4	8
JF 060804	6	8	4	7/32	6
JF 060806	6	8	6	1/4	9
JF 061206	6	11-13/16	6	1/4	11
JF 080804	8	8	4	3/8	11
JF 080806	8	8	6	3/8	13-1/2
JF 081206	8	12	6	5/16	14-1/2
JF 121206	12	12	6	1/4	17
JF 121208	12	12	8	1/4	20
JF 121810	12	18	10	5/16	47
JF 122406	12	24	6	3/8	35
JF 122408	12	24	8	7/16	62
JF 183608	18	36	8	1/2	157



CSA Certified LR28852

UL Listed E33075

RECESSED COVER TYPE FOR FLUSH MOUNTING

Catalog Number	Nominal Inside Dimensions (Inches)			Wall Thick. Inches	Ship. Wt. Lbs.
	W	L	D		
JR 040404	4	4	4	1/4	5
JR 040604	4	6	4	1/4	6
JR 060604	6	6	4	1/4	5-1/2
JR 060606	6	6	6	1/4	8
JR 060804	6	8	4	1/4	6
JR 060806	6	8	6	1/4	9
JR 061006	6	10	6	1/4	12
JR 061206	6	12	6	1/4	14
JR 080804	8	8	4	3/8	12
JR 080806	8	8	6	3/8	14
JR 080808	8	8	8	3/8	18
JR 081206	8	12	6	5/16	15
JR 101006	10	10	6	1/4	18
JR 121206	12	12	6	1/4	19
JR 121208	12	12	7-15/16	1/4	20
JR 121810	12	18	10	5/16	48
JR 122406	12	24	6	3/8	36
JR 161606	16-1/4	16-1/4	6	5/16	34
JR 161808	16	18	8	3/8	44
JR 161810	16	18	10	3/8	50
JR 181812	18-3/16	18-3/16	12-5/32	5/16	66
JR 183608	18	36	8	1/2	150



CSA Certified LR28852

UL Listed E33075

All JR style weatherproof cast aluminum junction boxes are coated with a black asphalt paint - for direct burial in concrete or cinder fill and are UL approved for this application. Covers are plain with no coating. Covers have rubber stamped marking "Suitable for use in concrete or cinder fill".



202

Junction Boxes General Purpose, Weatherproof

HINGED COVER TYPE FOR SURFACE MOUNTING

Catalog Number	Nominal Inside Dimensions (Inches)			Wall Thick. Inches	Ship. Wt. Lbs.
	W	L	D		
With 2 Hinges and 1 Wing Bolt					
JH 060604	6	6	4	1/4	6
JH 060606	6	6	6	1/4	8
JH 060804	5-15/16	8	4	1/4	8
JH 060806	5-15/16	8	6	1/4	9
With 2 Hinges and 2 Wing Bolts					
JH 061004	5-15/16	10	4	1/4	10
JH 061204	5-15/16	11-7/8	3-15/16	1/4	10-1/2
JH 061206	5-15/16	11-7/8	6	1/4	13-1/2
JH 080804	8	8	4	1/4	9-1/2
JH 080806	8	8	6	1/4	11-1/2
JH 080808	8	8	8	1/4	13
JH 081004	8	10	4	1/4	11
JH 081006	8	10	6	1/4	12
JH 081008	8	10	8	1/4	14
JH 081204	8	12	4	1/4	12
JH 081206	8	12	6	1/4	14-1/2
With 2 Hinges and 4 Wing Bolts					
JH 101204	10	12	4	1/4	15
JH 101206	10	12	6	1/4	17
JH 101208	10	12	8	1/4	19
JH 121204	12	12	4	1/4	17-1/2
JH 121206	12	12	6	1/4	21-1/2
JH 121208	12	12	8	1/4	24-1/2



 CSA Certified LR28852
 UL Listed E33075

Catalog Number	Nominal Inside Dimensions (Inches)			Wall Thick. Inches	Ship. Wt. Lbs.
	W	L	D		
With 2 Hinges and 4 Wing Bolts					
JH 121604	12	16	4	1/4	21
JH 121606	12	16	6	1/4	23
JH 121608	12	16	8	1/4	29
JH 141406	14-1/8	14-1/8	6-1/6	1/4	21
JH 151508	15	15	8	1/4	40
With 3 Hinges and 5 Wing Bolts					
JH 121806	12	18	6	1/4	26-1/2
JH 121810	12	18	10	1/4	46-1/2
JH 122406	12	24	6	5/16	37
JH 122408	12	24	8	5/16	47
JH 123606	12-1/8	36-1/2	6-1/16	1/2	78
With 3 Hinges and 7 Wing Bolts					
JH 181806	18	18	6	5/16	52
JH 181808	18	18	8	5/16	50
JH 181810	18	18	10	5/16	54
JH 181812	18	18	12	5/16	75
JH 182408	18	24	8	3/8	89
JH 183606	18	36	6-1/16	1/2	103
JH 183608	18	36	8	1/2	138
JH 242408	24	24	8	3/8	77
JH 243008	24	30	8	3/8	116
JH243606	24	36	6-1/16	1/2	128
JH 243608	24	36	8	1/2	136
JH 243612	24	36	12	1/2	165

5D-4

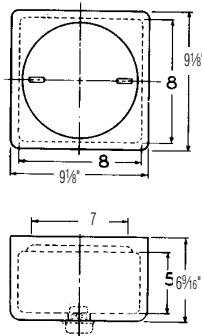
Junction Boxes Explosionproof

JUNCTION BOXES THREADED FLAT COVER STYLE EXPLOSIONPROOF AND DUST-TIGHT CLASS I, GROUP D; CLASS II, GROUPS E, F & G; NEMA 3, 7 & 9, Raintight Junction Boxes for Service Station Islands



XSO 885 is a larger cast aluminum raintight explosionproof box having inside dimensions of 8" x 8" x 5" deep. Standard blank, drilled and tapped to specification. Any of the XVS "sealing" hubs can be installed in the back.

Catalog Number	Nominal Inside Dimensions (In.)	Shipping Weight Lbs.
XSO 885	8 x 8 x 5 deep	20



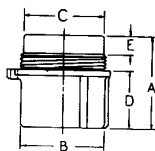
XVS VERTICAL SEALING HUBS

Vertical sealing hubs save space and are accessible from the inside of the box for packing and sealing. Size, number and location of seals must be specified in the order. They must be factory installed and must be added to the price of the box. Catalog number and price include installation in the box. The male thread is not a standard pipe thread.



UL & CSA approval of XSO 884 & XSO 885 is maintained with use of XVS hub.

Catalog Number	Conduit Size	Dimensions (Inches)				
		A	B	C	D	E
XVS4	1"	2-1/16	1-3/4	1-5/8	7/8	11/16
XVS5	1-1/4"	2-1/2	2-1/8	2	1-1/4	11/16
XVS6	1-1/2"	2-3/4	2-3/8	2-1/4	1-9/16	11/16
XVS8	2"	3-3/16	2-7/8	2-3/4	2	11/16

NOTE: Sealing hubs for use only with Adalet XSC sealing compound.

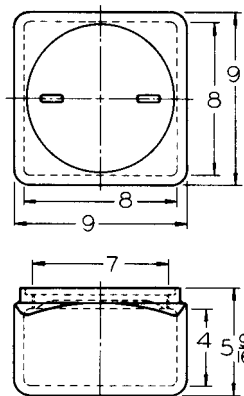
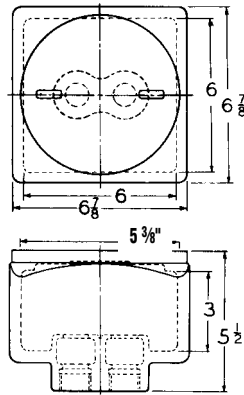


SE-1

 CSA Certified LR27991
 UL Listed E10493

Junction Boxes Explosionproof

JUNCTION BOXES THREADED FLAT COVER STYLE EXPLOSIONPROOF AND DUST-TIGHT CLASS I, GROUP D; CLASS II, GROUPS E, F & G; NEMA 3, 7 & 9, Raintight Junction Boxes for Service Station Islands



These three sizes of flush mounting service station island junction boxes should answer all requirements for station island loads. The side walls are cast blank and are drilled and tapped to requirements. The wall sections are heavy enough for 2" conduit. They are all made raintight by Buna-N O-ring seals, having excellent resistance to petroleum oils and aromatic hydrocarbons.

XSO 663B, box, having inside dimensions of 6" x 6" x 3" deep has 2-1" "sealing" hubs cast integrally in the back of the box, one plugged. The side walls are drilled and tapped to specification.

XSO 663S is the same box as XSO 663B but is a stock box drilled and tapped for three 3/4" conduits on each of two opposite sides, also has the 2-1" sealing conduit hubs, one plugged.

XSO 884, a larger 8" x 8" x 4" deep cast aluminum raintight explosionproof box is completely flexible in that any size and number of sealing hubs, type XVS shown on page 5E-1, can be installed in the back, and conduit holes can be drilled and tapped in any or all side walls from 1/2" through 2". Stocked blank, drilled and tapped to layout.

XSO 884S is the same box as XSO 884 but is stocked, drilled and tapped, to handle most island requirements, consisting of one 1-1/4" "sealing conduit hub" in the back, and with three 3/4" drilled and tapped conduit holes on each of two opposite sides.

Catalog Number	Nominal Inside Dimension (In.)	Number & Size of Conduit			Shipping Wt. Lbs.
		Each Side	Top	Bottom	
XSO 663S	6 x 6 x 3 deep	None	3-3/4"	3-3/4"	8
XSO 663B	6 x 6 x 3 deep	D & T to specifications thru 2"			8-1/4
XSO 884	8 x 8 x 4 deep	D & T to specifications thru 2"			18
XSO 884S	8 x 8 x 4 deep	None	3-3/4"	3-3/4"	18

NOTE: Sealing hubs for use only with Adalet XSC sealing compound.

CSA Certified LR27991

UL Listed E10493

5E-2

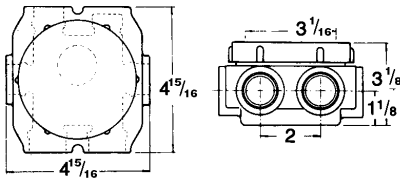
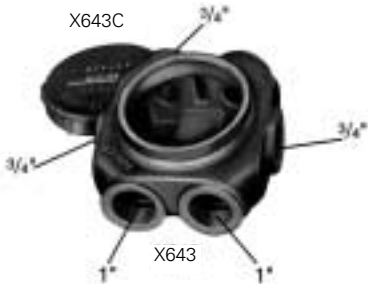
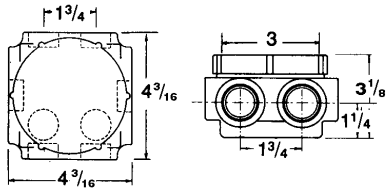
Explosionproof and Dust-Tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT JUNCTION BOXES CLASS I, GROUP D; CLASS II, GROUPS E, F, & G; NEMA 7 & NEMA 9 MULTI-HUB GENERAL PURPOSE BOXES

X82C/X83C



X82/X83



Designed for general wiring in hazardous locations. For pulling and splicing conductors. X82 box has six 1/2" conduit entrances in the sides and two 3/4" conduit entrances in the back. X83 box has six 3/4" conduit entrances in the sides and two 3/4" conduit entrances in back. Boxes are furnished with close-up plugs as shown in chart.

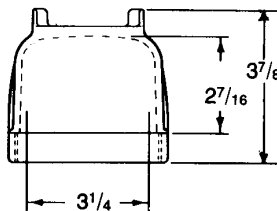
Catalog Number	Conduit Size	Left/Right Sides	Number of Hubs			Std. Package	
			Top	Bottom	Back	Qty	Wt. Lbs.
X82*	1/2" And 3/4"	One 1/2" Plugged	Two 1/2" Open	Two 1/2" One Plugged	Two 3/4" Both Plugged	10	19
X83*	3/4"	One 3/4" Plugged	Two 3/4" Open	Two 3/4" One Plugged	Two 3/4" Both Plugged	10	19
X643*	3/4" And 1"	One 3/4" Open	One 3/4" Open, One Boss Undrilled	Two 1" Open	One Boss Undrilled	10	24

COVERS ONLY (CONSULT FACTORY FOR APPROVALS)

Catalog Number		Standard Package	
		Quantity	Weight Lbs.
X82C	Blank	10	4
X83C	Blank	10	4
X643C	Blank	10	4
XDC	Dome	1	1
X8230	O-Ring for NEMA 4 watertight		

To order box with Dome Cover add XDC as suffix to catalog number required.

XDC



- * CSA Certified LR27991
- * UL Listed E10493

Compliance

NEC Class I, Group D Class II, Groups E, F, G - Class III
UL Standard 886 - CSA Standard C22.2 No. 30

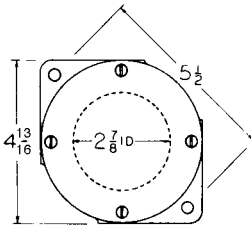
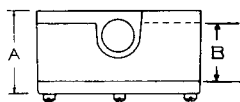
SE-3

Explosionproof and Dust-Tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT JUNCTION BOXES CLASS I, GROUP D; CLASS II, GROUPS E, F, & G; NEMA 7 & NEMA 9 MULTI-HUB GENERAL PURPOSE BOXES

Designed for general wiring in hazardous locations. For pulling and splicing conductors, also serves as fixture mounting outlets with appropriate cover.

Boxes have 4 conduit entrances and are furnished with 2 close-up plugs.

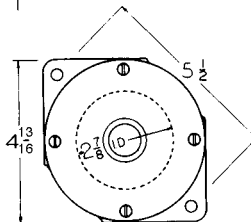
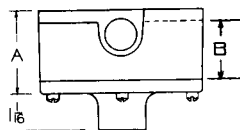


Catalog Number	Conduit Size (In.)		Standard Pkg. Quantity	Standard Pkg. Weight Lbs.
XJBCC2*	1/2	Blank	10	26
XJBCC3*	3/4	Cover	10	26
XJFCC2	1/2	1/2" Stem	10	26
XJFCC3	3/4	Cover	10	26
XJFC3C2	1/2	3/4" Stem	10	26
XJFC3C3	3/4	Cover	10	26
COVERS ONLY				
XJBC	Blank		10	4
XJFC2	1/2" Stem		10	4
XJFC3	3/4" Stem		10	4



Nominal Dimensions (Inch)		
Conduit Size	XJBC & XJFC	
	A	B
1/2	2-1/2	1-13/16
3/4	2-1/2	1-13/16

Mounting hole size 5/16"



* CSA Certified LR27991

* UL Listed E10493

Compliance

NEC Class I, Group D Class II, Groups E, F, G - Class III
UL Standard 886 - CSA Standard C22.2 No. 30

5E-4

Explosionproof and Dust-Tight Fittings and Accessories

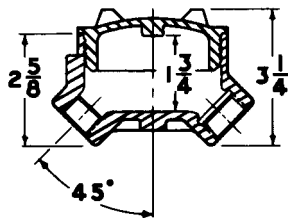
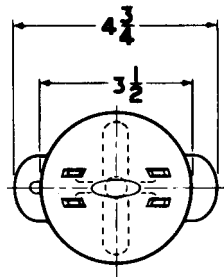
EXPLOSIONPROOF AND DUST-TIGHT JUNCTION BOXES CLASS I, GROUP C AND D; CLASS II, GROUPS E, F, & G; NEMA 7 & NEMA 9 THERMOCOUPLE HEAD BOX



XJAY

XJAY Junction Box for thermocouple sensing heads. Body has 1/2" NPT entrance for probe unit and one 3/4" NPT conduit entrance with conduit stop. The body has an exterior pad 5/8" wide across the back between the conduit hubs. The interior of the box can be blind tapped into the back pad with screw spacing up to 2-3/4" for mounting terminal strips or connection blocks. The outside boss on the 1/2" hub and the interior boss on the cover can be blind tapped for screws for use with a retaining chain at additional cost. Consult factory.

Catalog Number	Conduit Size	Standard Pkg. Quantity	Standard Pkg. Weight Lbs.
XJAY	1/2"-3/4" (1) EA.	10	10
XJAO	O-Ring for NEMA 4 watertight		
XJAYRC	Cover retaining chain		



5E-5

Compliance

NEC Class I, Groups C, D
Class II, Groups E, F, G - Class III
UL Standard 886 - CSA Standard
C22.2 No. 30

Explosionproof and Dust-Tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT JUNCTION BOXES CLASS I, GROUP D; CLASS II, GROUPS E, F, & G; NEMA 7 & NEMA 9 MULTI-HUB GENERAL PURPOSE BOXES

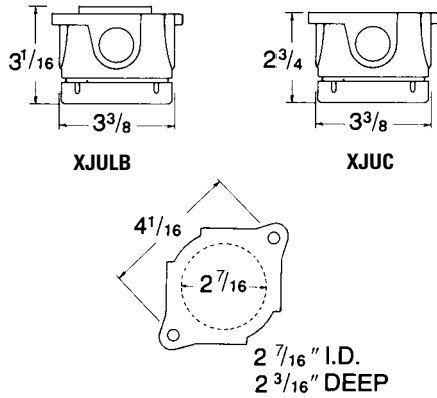


Designed for general wiring in hazardous locations. For pulling and splicing conductors, these boxes also serve as fixture mounting outlets with appropriate cover.

Boxes have 4 conduit entrances and furnished with 2 close-up plugs.

XJULB has 5 conduit entrances and furnished with 3 plugs.

Box Mounting hole size 5/16".



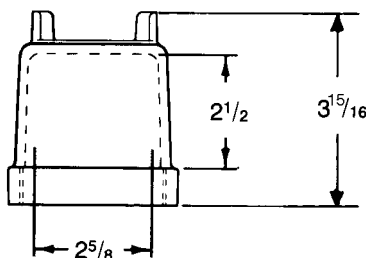
Nominal Dimensions (Inch)				
Catalog Number	Conduit Size	Cover Style	Standard Pkg. Quantity	Standard Pkg. Weight Lbs.
XJUC2*	1/2	Blank	10	11-1/2
XJUC3*	3/4	Blank	10	11-1/2
XJULB2	1/2	Blank	10	11-1/2
XJULB3	3/4	Blank	10	11-1/2
COVERS ONLY (CONSULT FACTORY FOR APPROVAL)				
XJU23	Blank Cover		10	3
XJU23	Dome Cover		10	8

To order box with Dome Cover add XJU23 as suffix to catalog number required.

* CSA Certified LR27991

* UL Listed E10493

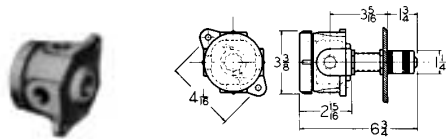
XJU23



SE-7

Explosionproof and Dust-Tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT CONTROL STATIONS FOR PANEL MOUNTING CLASS I, GROUPS C & D; CLASS II, GROUPS E, F, & G; NEMA 7 & NEMA 9



XA

Maximum panel thickness 1 5/8"

This group of station boxes and devices is designed for mounting on panel boards so that pilot lights, pushbuttons and switch handles are flush with panel fronts and the bodies or housings are in back of the panel. Threaded necks are provided with locknuts to clamp fittings in place on panels. The parts extending beyond the face of the panel have a black anodized finish.

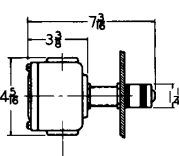


XB1

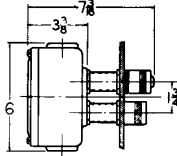


XB2

Station boxes are available in two styles. Economical style XA single station is suitable for 600 volt maximum use. XA bodies have threaded covers and are provided with 4 tapped hubs and 3 plugs. Style XB is suitable for combinations of pilot lights, pushbuttons and selector pilot light transformers. XB bodies have flat machined joint covers fastened with machine screws. Covers give maximum accessibility to interiors.



XB3

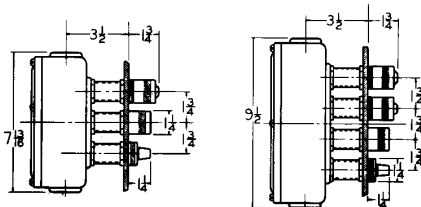


XB4



Catalog Number	Description	Outside Dim.			Weight Ea. Pounds
		W	L	D	
XA 2	1 station with four 1/2" tapped openings, three plugs	3 3/8 O.D.	-	2 5/16	1
XA 3	1 station with four 3/4" tapped openings, three plugs	3 3/8 O.D.	-	2 5/16	1
XB 1	1 station box - specify hubs	3 1/2	4 7/16	3 7/16	1 3/4
XB 2	2 station box - specify hubs	3 1/2	6 3/8	3 7/16	2
XB 3	3 station box - specify hubs	3 1/2	8 1/16	3 7/16	2 3/4
XB 4	4 station box - specify hubs	3 1/2	9 5/8	3 7/16	3 1/4

**Compliances: NEC Class I, Groups C & D (XA Series - Group D)
Class II, Groups E, F, G**

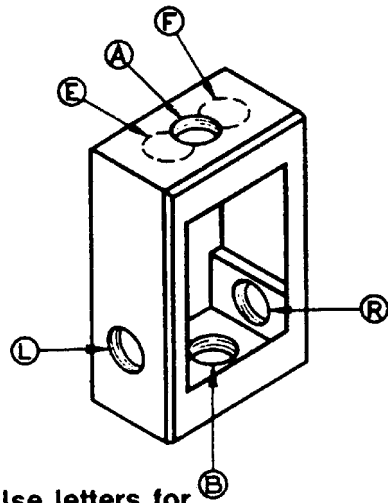


All station boxes are drilled and tapped with 3/4" NPSM thread for operator, or pilot lights. Unused openings must be plugged with XPP plugs. XB style boxes are suitably padded for two conduit openings on one end and one on opposite end. 1" maximum conduit size. Box price includes one or two conduit openings; specify size, location and number of holes. Holes in panels should be 1-1/8" diameter with 1-3/4" centers for XB box.

5E-8

Fittings and Accessories

FSO & FDO OUTLET BOXES DRILLED & TAPPED TO ORDER Cast aluminum alloy (copper content 0.3% max)



Use letters for
hole positioning on sketch.

FSO can be tapped with 1" conduit maximum and FDO can be tapped with 1-1/2" conduit maximum. Two 3/4" maximum conduit holes in top and one hole in bottom.

NOTE: Box can be rotated 180° to meet your needs.

Catalog Number	Outside Nominal Dimension			Description	Standard Package	Standard Pkg. Weight Lbs.
	W	L	D			
FSO	3	4-3/4	1-3/4	Box, shallow type	20	20
FDO	3	4-3/4	2-3/4	Box, deep type	20	31
WSO	3	4-3/4	—	Cover, weatherproof	10	2
WSG				(Furnished with screws & gasket) Gasket, Neocork 1/2" conduit		
FS21	3-1/16	5-1/2	1-3/4	Box, shallow type, hub	20	15
FSH2				1/2" Female to 3/4" Male	50	4
FSH3				3/4" Female to 3/4" Male	50	3
FSP2				1/2" Conduit plug	100	2
FSP3				3/4" Conduit plug	100	3

SE-9

Explosionproof Enclosures With Threaded Cover



Solid Threaded Cover



Threaded Dome Cover



Threaded Glass Cover

Applications:

- Adalet Junction Boxes and Instrument Housings are designed for installation in electrical conduit systems for hazardous environments.
 - Wiring: Pull boxes, splices, taps and terminal strips.
 - Housing for apparatus, instruments and other equipment.

Features

- Rugged sand-cast aluminum copper-free alloy — 0.3% max. copper content.
- Tumbled for quality appearance.
- Cast-on mounting lugs, ease of field installation.
- Grounding screw standard.

Options

- NEMA 3, 4 available; Features installation of an O-ring gasket on cover.
- Conduit openings available, drilled and tapped to customer requirements.
- Cast-on mounting buttons, bosses and pads available.

Notes:

Where reference is made to Class I and Class II hazardous locations, the equipment is suitable for use in both Division 1 and Division 2 hazardous locations.

Explosionproof Enclosures With Threaded Cover

**CLASS I GROUPS C & D; CLASS II GROUPS E, F, & G;
NEMA 3, 4 (optional); NEMA 7, 9**



XJD



XJDA



XJS
(Can be tapped on side pads only)



XJL



XJT



XJX



XJM



XJMA



XJMC



XJHA



XJHC



XJHB



XJK



XJKA



XJN



XJWH



XJWT

Certifications



Compliance

- NEC Class I, Groups C & D, Class II, Groups E, F & G
- UL Standard 1203
- Investigated to CSA Standard C22.2 No. 30 by UL

Drilled and tapped to specification, attach layout sheet.

Explosionproof Enclosures With Threaded Window Cover

METER AND INSTRUMENT HOUSINGS EXPLOSIONPROOF AND DUST-TIGHT CLASS I, GROUPS C & D; CLASS II GROUPS E, F, & G; NEMA 3, 4 (optional); NEMA 7, 9



XJDGC
XJDFGC*



XJMCGC*



XJTGC
XJTFGC*



XJMGCG*



XJMAGCG*



XJXGC



XJLGC

* includes internal flange and meter mounting plate.



XJNGC 6 & 12



XJHAGC



XJHBGC



XJHCGC



XJKGC



XJKAGC



****XJOGC**



XJWHGC



XJWTGC

Certifications



Compliance

- NEC Class I, Groups C & D, Class II, Groups E, F & G
- UL Standard 1203
- Investigated to CSA Standard C22.2 No. 30 by UL

Drilled and tapped to specification, attach layout sheet.

**XJOGC Enclosure is UL Classified and CSA Certified

Back wall mounting plates optional on some housings. Consult factory.

6A-3

Explosionproof Enclosures With Threaded Cover

**CLASS I GROUPS B, C & D; CLASS II GROUPS E, F, & G;
NEMA 3, 4 (optional); NEMA 7, 9**



XJDH



XJDAH



XJSH
(Can be tapped on
side pads only)



XJLH



XJTH



XJXH



XJMH



XJMAH



XJMCH



XJHAH



XJHCH



XJHBH



XJKH



XJKAH



XJNH 6 & 12



XJWHH



XJWTH

Certifications



Compliance

- NEC Class I, Groups B, C & D, Class II, Groups E, F & G
- UL Standard 1203
- Investigated to CSA Standard C22.2 No. 30 by UL

Drilled and tapped to specification, attach layout sheet.

6A-4

Explosionproof Enclosures With Threaded Window Cover

METER AND INSTRUMENT HOUSINGS EXPLOSIONPROOF AND DUST-TIGHT CLASS I, GROUPS B, C & D; CLASS II GROUPS E, F, & G; NEMA 3, 4 (optional); NEMA 7, 9



* includes internal flange and meter mounting plate.



Certifications



Compliance

- NEC Class I, Groups B, C & D, Class II, Groups E, F & G
- UL Standard 1203
- Investigated to CSA Standard C22.2 No. 30 by UL

Drilled and tapped to specification, attach layout sheet.

Back wall mounting plates optional on some housings. Consult factory.

6A-5

Explosionproof Enclosures With Threaded Cover

**CLASS I GROUPS C & D; CLASS II GROUPS E, F, & G;
NEMA 3, 4 (optional); NEMA 7, 9
EExd IIB + H2 IP60, IP66 (optional); Exd IIB + H2 IP60, IP66 (optional)**



XJDJ



XJDAX



XJSX
(Can be tapped on side pads only)



XJLX



XJTX



XJXX



XJMX



XJMAX



XJMCX



XJHAX



XJHCX



XJHBX



XJKX



XJKAX



XJNX 6 & 12



XJWHX



XJWTX

Certifications



Compliance

- NEC Class I, Groups C & D, Class II, Groups E, F & G
 - UL Standard 1203, 2279
 - Investigated to CSA Standard C22.2 No. 30 by UL
 - CENELEC EN 50.014 & 50.018 EExd IIB+H2 IP60, (optional IP66 with o-ring seal)
 - IEC 79 Exd IIB + H2 IP60, (optional IP66 with o-ring seal)
 - Demko Certified 99E. 124129U
 - UL Classified, Class I, Zone 1, Group IIB
- Drilled and tapped to specification, attach layout sheet.

6A-6

Explosionproof Enclosures With Threaded Window Cover

**METER AND INSTRUMENT HOUSINGS
EXPLOSIONPROOF AND DUST-TIGHT
CLASS I, GROUPS C & D; CLASS II GROUPS E, F, & G;
NEMA 3, 4 (optional); NEMA 7, 9
EExd IIB + H2 IP60, IP66 (optional); Exd IIB + H2 IP60, IP66 (optional)**



* includes internal flange and meter mounting plate.



Back wall mounting plates optional on some housings. Consult factory.

Certifications



Compliance

- NEC Class I, Groups C & D, Class II, Groups E, F & G
 - UL Standard 1203, 2279
 - Investigated to CSA Standard C22.2 No. 30 by UL
 - CENELEC EN 50.014 & 50.018 EExd IIB+H2 IP60, (optional IP66 with o-ring seal)
 - IEC 79 Exd IIB + H2 IP60, (optional IP66 with o-ring seal)
 - Demko Certified 99E. 124129U
 - UL Classified, Class I, Zone 1
- Drilled and tapped to specification, attach layout sheet.

Explosionproof Enclosures With Threaded Cover

**CLASS I GROUPS B, C & D; CLASS II GROUPS E, F, & G;
NEMA 3, 4 (optional); NEMA 7, 9
EExd IIB + H2 IP60, IP66 (optional); Exd IIB + H2 IP60, IP66 (optional)**



XJDHX



XJDAH



XJSHX
(Can be tapped on side pads only)



XJLHX



XJTHX



XJXHX



XJMHX



XJMAHX



XJMCHX



XJHAHX



XJHCHX



XJHBHX



XJKHX



XJKAHX



XJNHX 6 & 12

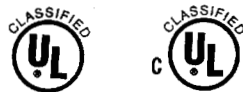


XJWHHX



XJWTHX

Certifications



Compliance

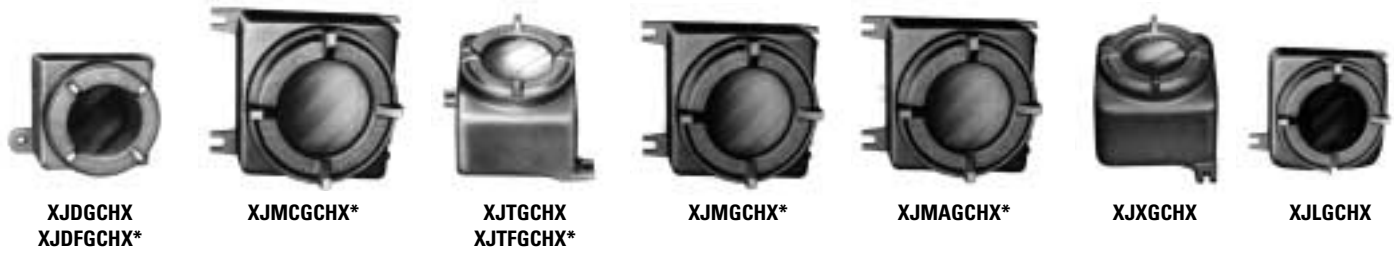
- NEC Class I, Groups B, C & D, Class II, Groups E, F & G
- UL Standard 1203, 2279
- Investigated to CSA Standard C22.2 No. 30 by UL
- CENELEC EN 50.014 & 50.018 EExd IIB + H2 IP60, (optional IP66 with o-ring seal)
- IEC 79 Exd IIB + H2 IP60, (optional IP66 with o-ring seal)
- Demko Certified 99E.124129U
- UL Classified, Class I, Zone 1, Group IIB + H2

Drilled and tapped to specification, attach layout sheet.

6A-8

Explosionproof Enclosures With Threaded Window Cover

METER AND INSTRUMENT HOUSINGS EXPLOSIONPROOF AND DUST-TIGHT CLASS I, GROUPS B, C & D; CLASS II GROUPS E, F, & G; NEMA 3, 4 (optional); NEMA 7, 9 EExd IIB + H2 IP60; IP66 (optional); Exd IIB + H2 IP66 (optional)



* includes internal flange and meter mounting plate.



Back wall mounting plates optional on some housings. Consult factory.

Certifications



Compliance

- NEC Class I, Groups B, C & D, Class II, Groups E, F & G
 - UL Standard 1203, 2279
 - Investigated to CSA Standard C22.2 No. 30 by UL
 - CENELEC EN 50.014 & 50.018 EExd IIB + H2 IP60, (optional IP66 with o-ring seal)
 - IEC 79 Exd IIB + H2 IP60, (optional IP66 w/o-ring seal)
 - Demko Certified 99E.124129U
 - UL Classified, Class I, Zone 1, Group IIB + H2
- Drilled and tapped to specification, attach layout sheet.

6A-9

Explosionproof Meter Instrument Housings

METER AND INSTRUMENT HOUSINGS SQUARE WINDOW THREADED STYLE CLASS I, GROUPS C & D; CLASS II GROUPS E, F, & G; NEMA 7 & NEMA 9 Designed for 3 1/2" Rectangular Meters



XJSWGC

Non Magnetic Copper-free aluminum casting designed for specific instruments and meters

Features

Recessed window with no exposed hardware or protrusions on the cover. Provides clean finished appearance compatible with rectangular meters. Designed for 3 1/2" rectangular and 4 1/2" round meters. Furnished with cast inside mounting ears to support adapter plate for meter mounting. Interior neck opening has clearance for meter face, diagonal dimension 3 13/16" x 3 1/4".

Mounting

Can be surface mounted or panel mounted in panels up to 1/4" thick. Panel mounting requires 5 5/8" round opening allowing neck to protrude through the panel and the cover only appears on the front surface of the panel. Cover locks in position with set screw. For additional support, the front surface under the cover of the box can be drilled and tapped with blind holes on 5 1/2" x 5 1/2" centers for screw attachment. Requires countersunk screw openings in panel.

For specific meter application consult factory.
(Meter not included)

Certifications

- UL Classified E81696
- CSA Certified LR27991

Compliance

- NEC Class I, Groups C & D, Class II, Groups E, F & G
- UL Standard 1203
- CSA Standard C22.2 No. 30

Drilled and tapped to specification, attach layout sheet.

Explosionproof Enclosures With Threaded Cover

JUNCTION BOXES THREADED DOME COVER STYLE EXPLOSIONPROOF AND DUST-TIGHT CLASS I, GROUP C & D; CLASS II GROUPS E, F, & G; NEMA 3, 4 (optional); NEMA 7, 9



XJLD



XJTD



XJHAD



XJHAD
Without Cover
To show Mounting Plate
(Optional)



XJHCD



XJKD



XJKAD



XJWT



XJW



XJSD



XJWH



XJW Modified
To house transfer switch
Modification
(Not UL or CSA)

Certifications

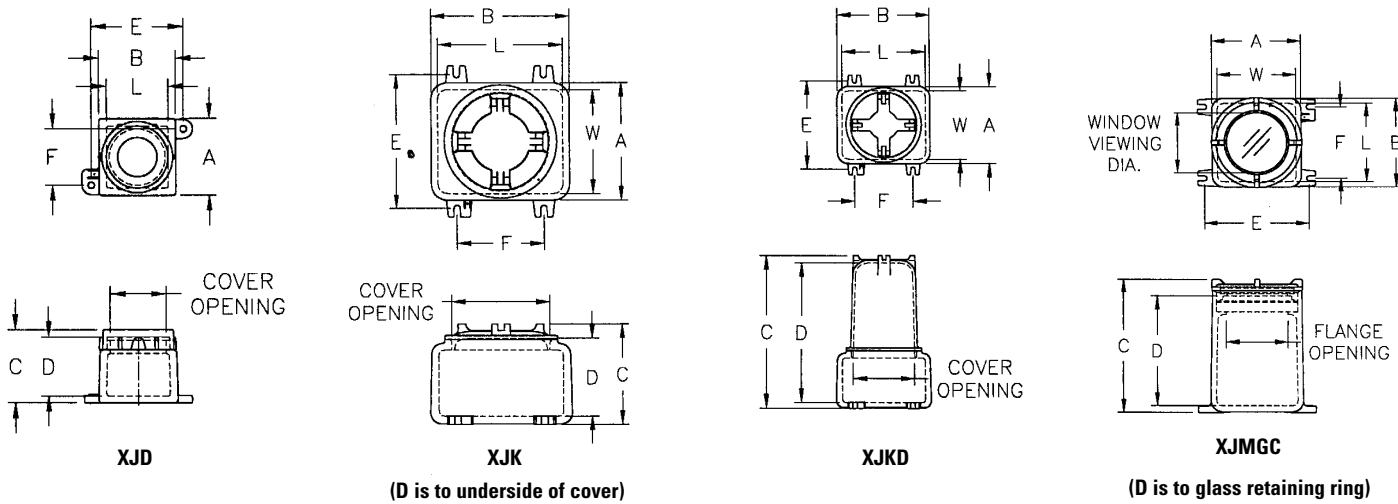
- UL Listed E10493
- CSA Certified LR27991

Compliance

- NEC Class I, Division I, Groups C & D, Class II, Groups E, F & G
- UL Standard 886
- CSA Standard C22.2 No. 30

Drilled and tapped to specification, attach layout sheet.

Explosionproof Enclosures With Threaded Cover



Base Catalog Number	Inside Nominal Dimensions			Overall Dimensions			Mounting CL to C L		Cover Opening Dia.	Window Viewing Dia.	Flange Opening Dia.	Max. Conduit Size	Mount. Bolt Size	Ship. Wt. Pounds
	W	L	D	A	B	C	E	F						
XJD	4 1/8	4 1/8	3 7/8	5 5/16	5 5/16	4 7/8	6 3/16	3 3/4	3 3/4	-	-	2	3/8	5 3/4
XJDGC	4 1/8	4 1/8	4 1/16	5 5/16	5 5/16	5 9/16	6 3/16	3 3/4	3 3/4	3	-	2	3/8	5
XJDFGC**	4 1/8	4 1/8	4 1/16	5 5/16	5 5/16	5 9/16	6 3/16	3 3/4	2 7/8	3	2 3/4	2	3/8	6
XJDA	5 3/4	5 3/4	5 7/8	7 1/16	7 1/16	7 1/4	8 3/8	5 1/4	4 3/16	-	-	2	3/8	12
XJS	4 DIA.		3 3/8	4 7/8	4 7/8	4 1/2	3 3/4	3 3/4	4	-	-	1	1/4	3
XJSD	4 DIA.		4 7/16	4 7/8	4 7/8	5 1/2	3 3/4	3 3/4	4	-	-	1	1/4	3 1/2
XJL	6	6	4 7/8	7	7	6 1/8	8 3/8	5 1/4	5 3/8	-	-	2	3/8	11
XJLD4	6	6	8 9/16	7	7	9 7/8	8 3/8	5 1/4	5 3/8	-	-	2	3/8	12
XJLD6	6	6	10 1/6	7	7	11 7/16	8 3/8	5 1/4	5 3/8	-	-	2	3/8	12 1/4
XJLD10	6	6	14 9/16	7	7	15 15/16	8 3/8	5 1/4	5 3/8	-	-	2	3/8	14
XJLD13	6	6	17 9/16	7	7	18 15/16	8 3/8	5 1/4	5 3/8	-	-	2	3/8	15
XJLGC	6	6	3 7/8	7	7	6 3/16	8 3/8	5 1/4	5 3/8	4	-	2	3/8	11
XJT	5 13/16	6 9/16	5 7/16	6 13/16	7 9/16	6 5/8	7 3/4	6	5 3/8	-	-	2	7/16	12 3/4
XJTD4	5 13/16	6 9/16	9 1/16	6 13/16	7 9/16	10 3/8	7 3/4	6	5 3/8	-	-	2	7/16	13 1/2
XJTD6	5 13/16	6 9/16	10 9/16	6 13/16	7 9/16	11 15/16	7 3/4	6	5 3/8	-	-	2	7/16	14
XJTD10	5 13/16	6 9/16	15 1/16	6 13/16	7 9/16	16 7/16	7 3/4	6	5 3/8	-	-	2	7/16	15 1/2
XJTD13	5 13/16	6 9/16	18 1/16	6 13/16	7 9/16	19 7/16	7 3/4	6	5 3/8	-	-	2	7/16	16 1/2
XJTGC	5 13/16	6 9/16	4 5/16	6 13/16	7 9/16	6 5/8	7 3/4	6	5 3/8	4	-	2	7/16	12 3/4
XJTFGC**	5 13/16	6 9/16	4 5/16	6 13/16	7 9/16	6 5/8	7 3/4	6	5 3/8	4	4 1/8	2	7/16	13
XJX	4 3/4	4 3/4	4 3/16	5 3/4	5 3/4	5 1/2	6 3/4	4 3/4	4 5/8	-	-	2	1/4	7
XJXGC	4 3/4	4 3/4	3 5/16	5 3/4	5 3/4	5 3/8	6 3/4	4 3/4	4 5/8	3	-	2	1/4	7
XJM	6 3/4	6 3/4	10 3/16	7 3/4	7 3/4	11 11/16	9 1/8	6 1/4	7	-	-	2	3/8	22 1/2
XJMGC**	6 3/4	6 3/4	9 1/8	7 3/4	7 3/4	11 1/2	9 1/8	6 1/4	7	5 1/4	5 3/8	2	3/8	22 1/2
XJMA	6 13/16	6 13/16	7 3/16	7 13/16	7 13/16	8 11/16	9 1/8	6 1/4	7	-	-	2	3/8	17
XJMAGC**	6 13/16	6 13/16	6 1/8	7 13/16	7 13/16	8 1/2	9 1/8	6 1/4	7	5 1/4	5 1/4	2	3/8	17
XJMC	6 3/4	6 3/4	5 3/16	7 13/16	7 13/16	6 11/16	9 1/8	6 1/4	7	-	-	2	3/8	13 1/2
XJMCGC**	6 3/4	6 3/4	4 1/8	7 13/16	7 13/16	6 1/2	9 1/8	6 1/4	7	5 1/4	5 3/8	2	3/8	13 3/4
XJHA	7 3/16	9 3/16	5 1/4	8 3/16	10 3/16	6 3/4	9 3/4	8 3/4	7	-	-	2	1/2	16 1/2
XJHAD6	7 3/16	9 3/16	11	8 3/16	10 3/16	12 7/16	9 3/4	8 3/4	7	-	-	2	1/2	19 3/4
XJHAD9	7 3/16	9 3/16	14	8 3/16	10 3/16	15 7/16	9 3/4	8 3/4	7	-	-	2	1/2	21 1/2
XJHAD12	7 3/16	9 3/16	17	8 3/16	10 3/16	18 7/16	9 3/4	8 3/4	7	-	-	2	1/2	23 1/2
XJHAGC	7 3/16	9 3/16	4 3/16	8 3/16	10 3/16	6 9/16	9 3/4	8 3/4	7	5 1/4	-	2	1/2	16 1/2
XJHB	7 1/4	9 1/8	7 1/4	8 3/8	10 1/4	8 13/16	9 3/4	8 7/8	7	-	-	2	1/2	22
XJHBGC	7 1/4	9 1/8	6 3/16	8 3/8	10 1/4	8 9/16	9 3/4	8 7/8	7	5 1/4	-	2	1/2	22

Note: Suffix H, X and HX enclosure types are dimensionally identical. **Includes built-in meter mounting provisions; call factory for details.

Explosionproof Enclosures With Threaded Cover

Base Catalog Number	Inside Nominal Dimensions			Overall Dimensions			Mounting CL to CL		Cover Opening	Window Viewing	Flange Opening	Max. Conduit Size	Mount. Bolt Size	Ship. Wt. Pounds
	W	L	D	A	B	C	E	F	Dia.	Dia.	Dia.			
XJHC	7 3/4	10 5/16	6 3/16	8 7/8	11 7/16	7 3/4	10 1/4	7 3/4	7	-	-	2	1/2	23 1/2
XJHCD6	7 3/4	10 5/16	11 15/16	8 7/8	11 7/16	13 7/16	10 1/4	7 3/4	7	-	-	2	1/2	26 3/4
XJHCD9	7 3/4	10 5/16	14 15/16	8 7/8	11 7/16	16 7/16	10 1/4	7 3/4	7	-	-	2	1/2	28 1/2
XJHCD12	7 3/4	10 5/16	17 15/16	8 7/8	11 7/16	19 7/16	10 1/4	7 3/4	7	-	-	2	1/2	30 1/2
XJHCGC	7 3/4	10 5/16	5 1/8	8 7/8	11 7/16	7 9/16	10 1/4	7 3/4	7	5 1/4	-	2	1/2	23 1/2
XJK	9 1/2	11 1/2	7 1/4	10 3/4	12 3/4	9 1/4	12 1/4	8	9	-	-	3	1/2	39 1/4
XJKD6	9 1/2	11 1/2	13 1/16	10 3/4	12 3/4	14 15/16	12 1/4	8	9	-	-	3	1/2	43 3/4
XJKD12	9 1/2	11 1/2	19 1/16	10 3/4	12 3/4	20 15/16	12 1/4	8	9	-	-	3	1/2	49
XJKD18	9 1/2	11 1/2	25 1/16	10 3/4	12 3/4	26 15/16	12 1/4	8	9	-	-	3	1/2	54 3/4
XJKGC	9 1/2	11 1/2	6 3/16	10 3/4	12 3/4	9 1/16	12 1/4	8	9	6 11/16	-	3	1/2	39 1/4
XJKA	9 1/2	11 1/2	9 1/8	10 3/4	12 3/4	11 3/16	12 3/8	8	9	-	-	3	1/2	45 3/4
XJKAD6	9 1/2	11 1/2	15	10 3/4	12 3/4	16 13/16	12 3/8	8	9	-	-	3	1/2	50 1/4
XJKAD12	9 1/2	11 1/2	21	10 3/4	12 3/4	22 13/16	12 3/8	8	9	-	-	3	1/2	55 1/4
XJKAD18	9 1/2	11 1/2	27	10 3/4	12 3/4	28 13/16	12 3/8	8	9	-	-	3	1/2	61 1/4
XJKAGC	9 1/2	11 1/2	8 1/16	10 3/4	12 3/4	11	12 3/8	8	9	6 11/16	-	3	1/2	45 3/4
XJN6	11 1/2	12 3/4	7 7/16	13 3/8	14 5/8	9 13/16	15 3/8	9	10 11/16	-	-	4	1/2	60 1/2
XJN12	11 1/2	12 3/4	13 9/16	13 9/16	14 13/16	15 15/16	15 3/8	9	10 11/16	-	-	4	1/2	87 1/2
XJNGC6	11 1/2	12 3/4	6 3/16	13 3/8	14 5/8	9 7/8	15 3/8	9	10 11/16	8	-	2	1/2	60 1/2
XJNGC12	11 1/2	12 3/4	12 5/16	13 9/16	14 13/16	16	15 3/8	9	10 11/16	8	-	2	1/2	87 1/2
XJWH	6 5/8 DIA		4 3/8	7 15/16	7 15/16	5 15/16	6 3/8	6 3/8	7	-	-	2	3/8	11 1/2
XJWH6	6 5/8 DIA		10 1/8	7 15/16	7 15/16	11 5/8	6 3/8	6 3/8	7	-	-	2	3/8	14 3/4
XJWH9	6 5/8 DIA		13 1/8	7 15/16	7 15/16	14 5/8	6 3/8	6 3/8	7	-	-	2	3/8	16 1/2
XJWH12	6 5/8 DIA		16 1/8	7 15/16	7 15/16	17 5/8	6 3/8	6 3/8	7	-	-	2	3/8	18 1/2
XJWHGC	6 5/8 DIA		3 5/16	7 15/16	7 15/16	5 3/4	6 3/8	6 3/8	7	5 1/4	-	2	3/8	11 1/2
XJW3	4 7/8 DIA		5 5/16	5 11/16	5 11/16	6 7/8	4 1/2	4 1/2	4 7/8	-	-	1 1/4	1/4	5
XJW5	4 7/8 DIA		7 5/16	5 11/16	5 11/16	8 11/16	4 1/2	4 1/2	4 7/8	-	-	1 1/4	1/4	5 3/4
XJWT	5 3/8 DIA		3 13/16	6 3/8	6 3/8	5 1/8	5 1/8	5 1/8	5 3/8	-	-	2	5/16	8
XJWT4	5 3/8 DIA		7 9/16	6 3/8	6 3/8	8 7/8	5 1/8	5 1/8	5 3/8	-	-	2	5/16	9
XJWT6	5 3/8 DIA		9 1/16	6 3/8	6 3/8	10 3/8	5 1/8	5 1/8	5 3/8	-	-	2	5/16	9 1/2
XJWT10	5 3/8 DIA		13 9/16	6 3/8	6 3/8	14 7/8	5 1/8	5 1/8	5 3/8	-	-	2	5/16	11
XJWT13	5 3/8 DIA		16 9/16	6 3/8	6 3/8	17 7/8	5 1/8	5 1/8	5 3/8	-	-	2	5/16	12
XJWTGC	5 3/8 DIA		2 15/16	6 3/8	6 3/8	5 1/8	5 1/8	5 1/8	5 3/8	4	-	2	5/16	8
XJSWGC**	5 1/4	5 1/4	4 1/16	6 1/8	6 1/8	5 5/8	7 1/8	4 3/4	5	3 3/8 x 3 3/8	3 3/4	3/4	5/16	8
XJOGC	8	8	5 1/4	9	9	7 9/16	8	8	7	5 1/4	-	2	5/16	20 1/4

Note: Suffix H, X and HX enclosure types are dimensionally identical. **Includes built-in meter mounting provisions; call factory for details.

6A-13

Conduit Drilling and Tapping Guidelines For Threaded Enclosure

When drilling & tapping enclosures for conduit, proper installation requires compliance with the following:

1. Must be tapped with at least 5 full NPT threads (suffix X enclosures require 6 NPT threads) in enclosure back or sides only; min. 1/2" conduit size.
2. Tapping depth of NPT holes must be plus 1/2 turn min. to plus 1-1/2 turns max. past standard NPT plug gage notch.
3. Inner end of conduit openings shall be smooth and well-rounded.

TABLE I

Trade Size Of Conduit, Inches (NPT)	Minimum wall thickness at conduit entrance excluding suffix X enclosures (XCEX)
1/2 - 3/4	3/8 inch
1 - 2	7/16 inch
2 1/2 - 5	5/8 inch

TABLE II

Conduit size, inches (NPT)	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Minimum Distance from conduit CL to inside corner or back of box	1 5/16	1 7/16	1 9/16	1 3/4	1 7/8	2 1/8	2 3/8	2 11/16	2 15/16	3 1/4
Approximate diameter of union	1 7/8	1 7/8	2 1/16	2 7/8	3 1/4	3 7/8	4 7/8	5 1/2	6	6 1/2

TABLE III

NPT (METRIC) THREADS

SIZE	5	4	3 1/2	3 (M75)	2 1/2 (M63)	2 (M50)	1 1/2 (M40)	1 1/4 (M32)	1 (M25)	3/4 (M20)	1/2 (M16)	1/16 - 3/8
1/16-3/8 NPT	4 3/8	3 5/8	3 3/8	3	2 5/8	2 3/8	2	1 7/8	1 5/8	1 3/8	1 1/4	1 1/8
1/2 (M16)	4 3/8	3 5/8	3 3/8	3	2 5/8	2 3/8	2	1 7/8	1 5/8	1 3/8	1 1/4	
3/4 (M20)	4 1/2	3 3/4	3 1/2	3 1/8	2 3/4	2 1/2	2 1/8	2	1 3/4	1 1/2		
1 (M25)	4 5/8	3 7/8	3 5/8	3 1/4	2 7/8	2 3/4	2 1/4	2 1/8	1 7/8			
1 1/4 (M32)	4 7/8	4 1/8	3 7/8	3 1/2	3 1/8	2 7/8	2 1/2	2 3/8				
1 1/2 (M40)	5	4 1/4	4	3 5/8	3 1/4	3	2 5/8					
2 (M50)	5 3/8	4 3/4	4 1/2	4	3 5/8	3 3/8						
2 1/2 (M63)	5 1/2	4 7/8	4 5/8	4 1/4	3 7/8							
3 (M75)	5 7/8	5 1/4	5	4 5/8								
3 1/2	6 1/4	5 3/4	5 1/2									
4	6 7/8	6										
5	7 3/8											

This information is compiled from data which we believe is reliable and is given in good faith. Since the methods of application and conditions under which our products are used are beyond our control, we are not able to guarantee the application and/or use of same. The user assumes all risks and liability in connection with the application and use of our products.

Note: All dimensions are in inches.

The Adalet engineering department is available to provide custom explosionproof enclosures for your products.

6A-14

Explosionproof Enclosures With Threaded Cover

METER & INSTRUMENT HOUSINGS EXPLOSIONPROOF AND DUST-TIGHT DRILLING & TAPPING LAYOUT INSTRUCTIONS

Consult factory for extensive machining options, i.e.
mounting of operators, thread type and size thru wall, mounting pans.

Layout data sheets available.

MINIMUM DISTANCE BETWEEN CENTERS OF AUXILIARY DEVICES AND CONDUIT ENTRIES

SIZE	5 NPSM	4 NPSM	3 1/2 NPSM	3 NPSM	2 1/2 NPSM	2 NPSM	1 1/2 NPSM	1 1/4 NPSM	1 NPSM	3/4 NPSM	1/4-3/8 NPSM	1/4-1 UN
1/16-3/8 NPT	4 3/8	3 5/8	3 3/8	3	2 5/8	2 3/8	2	1 7/8	1 5/8	1 3/8	1 1/4	1 1/8
1/2NPT (M16)	4 3/8	3 5/8	3 3/8	3	2 5/8	2 3/8	2	1 7/8	1 5/8	1 3/8	1 1/4	
3/4 NPT (M20)	4 1/2	3 3/4	3 1/2	3 1/8	2 3/4	2 1/2	2 1/8	2	1 3/4	1 1/2		
1 NPT (M25)	4 5/8	3 7/8	3 5/8	3 1/4	2 7/8	2 3/4	2 1/4	2 1/8	1 7/8			
1 1/4 NPT (M32)	4 7/8	4 1/8	3 7/8	3 1/2	3 1/8	2 7/8	2 1/2	2 3/8				
1 1/2 NPT (M40)	5	4 1/4	4	3 5/8	3 1/4	3	2 5/8					
2 NPT (M50)	5 3/8	4 3/4	4 1/2	4	3 5/8	3 3/8						
2 1/2 NPT (M63)	5 1/2	4 7/8	4 5/8	4 1/4	3 7/8							
3 NPT (M75)	5 7/8	5 1/4	5	4 5/8								
3 1/2 NPT	6 1/4	5 3/4	5 1/2									
4 NPT	6 7/8	6										
5 NPT	7 3/8											

MINIMUM DISTANCE BETWEEN CENTERS OF AUXILIARY DEVICES

SIZE	5 NPSM	4 NPSM	3 1/2 NPSM	3 NPSM	2 1/2 NPSM	2 NPSM	1 1/2 NPSM	1 1/4 NPSM	1 NPSM	3/4 NPSM	1/4-3/8 NPSM	1/4-1 UN
1/4-1 UN	4 3/8	3 5/8	3 3/8	3	2 5/8	2 3/8	2	1 7/8	1 5/8	1 3/8	1 1/4	1 1/8
1/4-3/8 NPSM	4 3/8	3 5/8	3 3/8	3	2 5/8	2 3/8	2	1 7/8	1 5/8	1 3/8	1 1/4	
3/4 NPSM	4 1/2	3 3/4	3 1/2	3 1/8	2 3/4	2 1/2	2 1/8	2	1 3/4	1 1/2		
1 NPSM	4 5/8	3 7/8	3 5/8	3 1/4	2 7/8	2 3/4	2 1/4	2 1/8	1 7/8			
1 1/4 NPSM	4 7/8	4 1/8	3 7/8	3 1/2	3 1/8	2 7/8	2 1/2	2 3/8				
1 1/2 NPSM	5	4 1/4	4	3 5/8	3 1/4	3	2 5/8					
2 NPSM	5 3/8	4 3/4	4 1/2	4	3 5/8	3 3/8						
2 1/2 NPSM	5 1/2	4 7/8	4 5/8	4 1/4	3 7/8							
3 NPSM	5 7/8	5 1/4	5	4 5/8								
3 1/2 NPSM	6 1/4	5 3/4	5 1/2									
4 NPSM	6 7/8	6										
5 NPSM	7 3/8											

Quick Reference Guide

METHODS OF PROTECTION

Area	Protection Method	UL	CSA	CENELEC	IEC
Division 1	Explosionproof	ANSI/UL 1203	CSA-30	--	--
	Intrinsically Safe (2 Fault)	ANSI/UL 913	CSA-157	--	--
	Purge/Pressurized (Type X or Y)	ANSI/NFPA 496	ANSI/NFPA 496	--	--
Division 2	Nonincendive	UL 1604	CSA-213	--	--
	Non-sparking device	UL 1604	CSA-213	--	--
	Purge/Pressurized (Type Z)	ANSI/NFPA 496	ANSI/NFPA 496	--	--
	Hermetically sealed	UL 1604	CSA-213	--	--
	Any Class I, Division 1 Method	--	--	--	--
Area	Protection Method	UL (AEx)	CSA (Ex)	CENELEC (EEx)	IEC (Ex)
Zone 0	Intrinsically Safe 'ia' (2 Fault)	UL 2279 Pt. 11	CSA-E79-18	EN 50028	IEC 60 079-18
Zone 1	Flameproof 'd'	UL 2279 Pt. 1	CSA-E79-1	EN 50018	IEC 60 079-1
	Increased Safety 'e'	UL 2279 Pt. 7	CSA-E79-7	EN 50019	IEC 60 079-7
	Intrinsically Safe 'ib' (1 Fault)0	UL 2279 Pt. 11	CSA-E79-11	EN 50020	IEC 60 079-11
	Encapsulation 'm'	UL 2279 Pt. 18	CSA-E79-18	EN 50028	IEC 60 079-18
	Oil Immersion 'o'	UL 2279	CSA-E79-6	EN 50015	IEC 60 079-6
	Purged/Pressurized 'p'	UL 2279 Pt. 2	CSA-E79-2	EN 50016	IEC 60 079-2
	Powder filling 'q'	UL 2279	CSA-E79-5	EN 50017	IEC 60 079-5
Any Zone 0 Method	--	--	--	--	
Zone 2	Non-sparking 'nA'	UL 2279 Pt. 15	CSA-E79-15	prEN 50021	IEC 60 079-15
	Hermetically sealed 'nC'	UL 2279 Pt. 15	CSA-E79-15	prEN 50021	IEC 60 079-15
	Nonincendive 'nC'	UL 2279 Pt. 15	CSA-E79-15	prEN 50021	IEC 60 079-15
	Restricted breathing 'nR'	UL 2279 Pt. 15	CSA-E79-15	prEN 50021	IEC 60 079-15
	Any Zone 0 or 1 Method	--	--	--	--

AREA CLASSIFICATIONS

	Ignitable Materials Present Continuously	Ignitable Materials Present Intermittently	Ignitable Materials Present Abnormally
IEC/CENELEC	Zone 0 (Zone 20 Dust)	Zone 1 (Zone 21 Dust)	Zone 2 (Zone 22 Dust)
NEC 505	Zone 0	Zone 1	Zone 2
NEC 500	Division 1	Division 1	Division 2

ATEX Classification by Group & Category According to Use

	Ignitable Materials Present Continuously	Ignitable Materials Present Intermittently	Ignitable Materials Present Abnormally
Equipment Group II (surface)	Category 1 Equipment	Category 2 Equipment	Category 3 Equipment
Equipment Group I (mining)	Category M1 Equipment	Category M2 Equipment	—

GAS GROUPINGS

Gas, Dust or Fiber	NEC 505/IEC/CENELEC	NEC 500
Acetylene	Group IIC	Class I/Group A
Hydrogen	Group IIC/Group IIB+H2	Class I/Group B
Ethylene	Group IIB	Class I/Group C
Propane	Group IIA	Class I/Group D
Methane	Group I (firedamp)	Class I/Group D
Metal Dust	None	Class II/Group E
Coal Dust	None	Class II/Group F
Grain Dust	None	Class II/Group G
Fibers	None	Class III

ACRONYMS

CENELEC - European Committee for Electrotechnical Standardization
IEC - International Electrotechnical Commission
NEC - National Electrical Code
U.L. - Underwriters Laboratories
C.S.A. - Canadian Standards Association
FM - Factory Mutual
BASEEFA - British Approvals Service for Electrical Apparatus in Flammable Atmospheres
NFPA - National Fire Protection Agency
ISO - International Organization for Standardization
ANSI - American National Standard Institute
ATEX - Atmospheres Explosibles

TEMPERATURE CLASSES

Maximum Surface Temperature	NEC 505 IEC CENELEC	NEC 500
450°C	T1	T1
300°C	T2	T2
280°C		T2A
260°C		T2B
230°C		T2C
215°C		T2D
200°C	T3	T3
180°C		T3A
165°C		T3B
160°C		T3C
135°C	T4	T4
120°C		T4A
100°C	T5	T5
85°C	T6	T6

INGRESS PROTECTION (IP XX) CODES

#	First Number (Protection against Solid Bodies)	Second Number (Protection against Liquids)
0	No protection	No protection
1	Objects greater than 50mm	Vertically dripping water
2	Objects greater than 12mm	75-90 Deg. dripping water
3	Objects greater than 2.5mm	Sprayed water
4	Object greater than 1mm	Splashed water
5	Dust Protected	Water jets
6	Dust-tight	Heavy seas
7	--	Effects of immersion
8	--	Indefinite immersion

FS Control³ Specifications

FS Control³

We named this line of control stations FS Control³ because we offer it in three different material types – carbon steel, stainless steel and fiberglass – to meet your control station needs. Each material type has certain

properties and characteristics that make it well-suited for certain applications. If you would like assistance in determining which enclosure type best fits your application, please consult our engineering department.

Features and Benefits

- The normally open/normally closed factory sealed contact block is rated both NEMA A600 and NEMA Q300
- Electrical ratings for pilot lights range between 6 volts and 480 volts
- Carbon steel, stainless steel and fiberglass control station enclosure types available in one- through four-hole arrangements to accommodate a wide variety of system needs. Other configurations are available - consult factory
- Conduit hub entries available in 1/2", 3/4" and 1" sizes either dead-end or feed through
- Broad new line of 30mm industrial pilot lights, pushbuttons and selector switches allows thousands of possible control station configurations
- High-quality legend plates permit easy identification of device function

Material/Finish

- Enclosures:

X2CS – Made from 14 ga. cold-rolled steel with continuously welded seams ground to a smooth finish. Each X2CS enclosure comes complete with a grounding stud and wall mounting back brackets welded to the outside top and bottom. Phosphatized and finished inside and out with ANSI/ASA 61 gray polyester powder coating.

X2SS – Made from 14 ga. Type 304 stainless steel with continuously welded seams ground to a smooth finish. Each X2SS comes complete with a grounding stud and wall mounting brackets welded to the outside top and bottom. Finished with #4 brush.

X2FG – Made from compression-molded, fiberglass-reinforced polyester. Each X2FG comes complete with a grounding strap and optional mounting brackets can be provided. Molded standard machine tool gray.

- Industrial Pilot Device Bodies: PBT Polyester
- Industrial Pilot Device Caps: PBT Polyester
- Industrial Pilot Device Clamp Rings: Polyester (standard) or aluminum

Application

- For installation in Division 2 areas of chemical and petrochemical plants, refineries and other process industries where flammable vapors, gases or combustible dust may be present due to accidental or abnormal operation
- For use with Adalet 30mm pushbuttons, selector switches and pilot lights to provide circuit/motor control and/or electrical status indication

Compliances

X2CS, X2SS, and X2FG Series:

UL Standard 698, 1604 and 2279

Canadian Standards Association C22.2 No. 213-M1987
NEC Class I, Division 2, Groups ABCD; Class II, Division 2, Groups FG; Class III
NEC Class I, Zone 2, Group IIC

X2CS Series:

NEMA Type 3, 3R, 7ABCD (Division 2), 12 and 13, 4

X2FG and X2SS Series:

NEMA Type 3, 3R, 4, 4X, 7ABCD (Division 2), 12, 13

Factory Sealed Contact Block:

Underwriters Laboratories – UL698, UL 1203, UL1604 and UL2279

Class I, Division 1, Groups ABCD

Class I, Zone 1, Group IIC

Class I, Division 2, Groups ABCD

Class I, Zone 2, Group IIC

Canadian Standards Association C22.2 No. 213-M1987

Class I, Div. 2, Groups BCD

Pilot Lights:

Listed Underwriters Laboratories:

Class I, Division 2, Groups ABCD

Certifications



X2CS, X2SS, and X2FG Series:

Listed Underwriters Laboratories:

Class I, Division 2, Groups BCD; Class I, Zone 2, Group IIB+H2;



Class II, Division 2, Groups FG;

X2CS Series:

Type 12, 4

X2FG and X2SS Series:

Type 3, 4X, 12 and 13

Factory Sealed Contact Block:

Listed Underwriters Laboratories:

Class I, Division 2, Groups BCD

Class I, Zone 2, Group IIB+H2



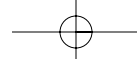
Certified Canadian Standards Association Class I, Div. 2, Groups BCD

Pilot Lights:

Listed Underwriters Laboratories:

Class I, Division 2, Groups ABCD





7A-2

Pushbutton Operators for Use with FS Control³

Pushbutton Operators with Polyester Clamp Ring

Cap Color	Flush Cap	Suffix	Extended Cap	Suffix	Mushroom Cap	Suffix
Green	PBO-FCGN-FS	1TS	PBO-XCGN-FS	4TS	PBO-MCGN-FS	7TS
Black	PBO-FCBK-FS	2TS	PBO-XCBK-FS	5TS	PBO-MCBK-FS	8TS
Red	PBO-FCRD-FS	3TS	PBO-XCRD-FS	6TS	PBO-MCRD-FS	9TS

For additional NO/NC contact block add "/FS" to end of catalog number

For aluminum clamp ring, add "A" after first dash in catalog number.

Example – PBO-AXCRD-FS is red extended cap pushbutton with aluminum clamp ring.

Note: Caps and operating heads are available in a variety of styles and colors – please consult factory



Maximum Ampere Rating Control Circuit Contacts Type FSBT

Volts	AC (A600) 600 VAC max				DC (Q300)	
	110	220	440	550	120	240
Make & Interrupting Capacity	60	30	15	12	.55	.27
Normal Load Break	6	3	1.5	1.2	.55	.27
Continuous Current	10	10	10	10	2.5	2.5
Catalog No.	FSBT					
	One Normally Open and One Normally Closed.					



Illuminated Pushbuttons Unit Complete Less Cap¹

Type	Volts	Catalog Number	Suffix
Transformer 50/60 Hz	120 AC	TFLU120FS	10TS
	240 AC	TFLU240FS	11TS
	480 AC	TFLU480FS	12TS
	277 AC ³	TFLU277FS	13TS
Full Voltage Type	6 AC/DC	FVLU6FS	14TS
	12 AC/DC	FVLU12FS	15TS
	24 AC/DC	FVLU24FS	16TS
	120 AC/DC	FVLU120FS	17TS
Neon Type ²	120 AC/DC	FVLU120NFS	18TS
	240 AC/DC	FVLU240NFS	19TS
	480 AC/DC	FVLU480NFS	20TS
Incandescent	120 AC/DC	RLU120IFS	21TS
	240 AC/DC	RLU240IFS	22TS
LED Resistor Type ⁴	120 AC/DC	RLU120LFS	23TS
	240 AC/DC	RLU240LFS	24TS
Dual Input Remote Test	6 AC/DC	RTLU6FS	25TS
	12 AC/DC	RTLU12FS	26TS
	24 AC/DC	RTLU24FS	27TS
	120 AC/DC	RTLU120FS	28TS
	240 AC/DC	RTLU240FS	29TS



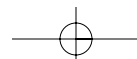
Color Caps for Illuminated Pushbuttons⁵

Color Cap with Polyester Clamp Ring		
Color	Catalog Number	Suffix
Amber	IPBCAR	30TS
Blue	IPBCBE	31TS
Clear	IPBCCR	32TS
Green	IPBCGN	33TS
Red	IPBCRD	34TS
White	IPBCWE	35TS

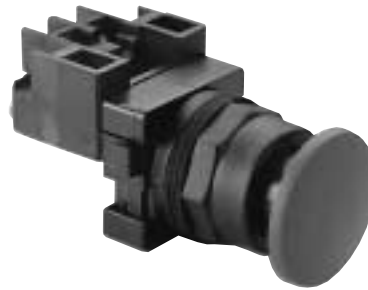
For aluminum clamp ring, add "A" prefix to color cap catalog number. Example – AIPBCBE is blue color cap for illuminated pushbutton with aluminum clamp ring.

Footnotes

- To order as an assembled illuminated pushbutton with color cap, add color cap catalog number to the end of illuminated pushbutton catalog number. Example – TFLU120FS-IPBCRD would be complete illuminated pushbutton with red cap.
- Neon lights are available with red or green lamps. Add suffix letter "R" or "G" respectively to designate color. Use amber, clear or red cap only for red neon lights; green or clear cap only for green neon lights.
- 120 Volt incandescent lamps are not recommended when the unit is subjected to shock and/or vibration. A transformer, resistor, neon or LED unit will provide longer lamp life.
- Specify LED lamp color. Add suffix letter "R" for red, "G" for green and "Y" for yellow (amber). Use amber, clear or red cap only for red lights; green or clear cap only for green lights; red, clear or amber for yellow lights.
- Catalog numbers are for extended color caps. For flush guarded color caps, add suffix "EECR" to the catalog number.



Push-Twist/Push-Pull Operators for Use with FS Control³



2 Position Push-Twist Release Maintained Operators Non-Illuminated

Maintained In/Maintained Out		
Color	Catalog Number	Suffix
Black	PTR-TMCBK-FS	36TS
Red	PTR-TMCRD-FS	37TS
Green	PTR-TMCGN-FS	38TS
Yellow	PTR-TMCYW-FS	39TS

For aluminum clamp ring, add "A" after first dash in catalog number.
 Example – PTR-ATMCGN-FS is 2 position push-twist release operator with green cap and aluminum clamp ring.

Note: For additional NO/NC contact block add "/FS" to end of catalog number.

2 Position Push-Pull Maintained Operators Non-Illuminated

Maintained In/Maintained Out		
Color	Catalog Number	Suffix
Black	PBO-PPMCBK-FS	40TS
Red	PBO-PPMCRD-FS	41TS
Green	PBO-PPMCGN-FS	42TS
Yellow	PBO-PPMCYW-FS	43TS

For aluminum clamp ring, add "A" after first dash in catalog number.
 Example – PBO-APPMCYW-FS is 2 position push-pull operator with yellow cap and aluminum clamp ring.

Note: For additional NO/NC contact block add "/FS" to end of catalog number.

2 Position Push-Pull Release Maintained Operators Illuminated

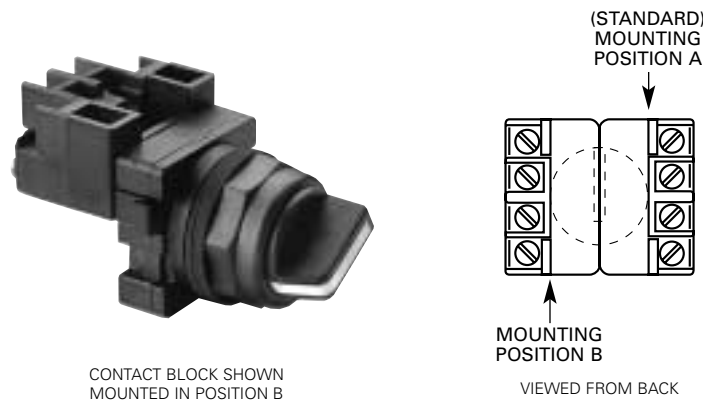
Maintained In/Maintained Out			
Type	Volts	Catalog Number	Suffix
Transformer 60/50 Hz	120 AC	TFPPM120-IMCRD-FS	44TS
	240 AC	TFPPM240-IMCRD-FS	45TS
	480 AC	TFPPM480-IMCRD-FS	46TS
	600 AC	TFPPM600-IMCRD-FS	47TS
Full Voltage	6 AC/DC	FVPPM6-IMCRD-FS	48TS
	12 AC/DC	FVPPM12-IMCRD-FS	49TS
	24 AC/DC	FVPPM24-IMCRD-FS	50TS
	120 AC/DC	FVPPM120-IMCRD-FS	51TS
	120 AC/DC Neon	FVPPM120NR-IMCRD-FS	52TS
Incandescent Resistor	120 AC/DC	RLPPM120-IMCRD-FS	53TS
	240 AC/DC	RLPPM240-IMCRD-FS	54TS



For aluminum clamp ring, add "A" after first dash in catalog number.
 Example – FVPPM6-IMCRD-FS is full voltage 2 position push-pull release illuminated operator with aluminum clamp ring.

Note: Standard color cap on 2 position push-pull illuminated operator is red. Additional color caps are available – please consult factory.

Selector Switch Units for Use with FS Control³



2 Position Selector Switch Units Assembled with Polyester Clamp Ring (partial listing)¹

Mounting Position	Contact Symbol	Handle Position Left / Right O=Open, X=Closed	Type of Operator	Maintained Position	Suffix	Spring Return – Right to Left		Spring Return – Left to Right ²		
						Suffix	Suffix	Suffix	Suffix	
A&B		O X X O	Standard	SS02-SHWE-FS	55TS	SRORL-SHWE-FS	60TS	SROLR-SHWE-FS	63TS	
			Lever	SS02-SLWE-FS	56TS	SRORL-SLWE-FS	61TS	SROLR-SLWE-FS	64TS	
			Key Locking Pos							
			Left	K0SS2-KL-FS	57TS	KOSRRL-KLFS	62TS	—	—	
			Right	K0SS2-KR-FS	58TS	—	—	—	—	
Both	K0SS2-KLR-FS	59TS	—	—	—	—				

For aluminum clamp ring on standard or lever, add "A" after first dash in catalog number. Example – SS02-ASHWE-FS is standard 2 position selector switch unit maintained position with aluminum clamp ring. For aluminum clamp ring on key, add "A" to beginning of catalog number. Example – AKOSS2-KL-FS is 2 position key selector switch key locking left with aluminum clamp ring. Optional contact sequences available upon request. Contact block mounted standard in "A" position. To order additional contact block for "B" mounting position, add "/FS" to the end of the catalog number.

3 Position Selector Switch Units Assembled with Polyester Clamp Ring (partial listing)¹

Mounting Position	Contact Symbol	Handle Position Left/Center/Right O=Open, X=Closed	Type of Operator	Maintained Position	Suffix	Spring Return – Left to Center		Spring Return – Right to Center		Spring Return – Either to Center	
						Suffix	Suffix	Suffix	Suffix	Suffix	Suffix
A		X O O O X O	Standard	SSO3-SHWE-FS	65TS	SRORLC-SHWE-FS	73TS	SRORC-SHWE-FS	81TS	SROLRC-SHWE-FS	89TS
			Lever	SSO3-SLWE-FS	66TS	SRORLC-SLWE-FS	74TS	SRORC-SLWE-FS	82TS	SROLRC-SLWE-FS	90TS
			Key Locking Pos								
			Left	K0SS3-KL-FS	67TS	KOSRLC-KL-FS	75TS	KOSRRC-KL-FS	83TS	KOSRLRC-KL-FS	91TS
			Right	K0SS3-KR-FS	68TS	KOSRLC-KR-FS	76TS	KOSRRC-KR-FS	84TS	KOSRLRC-KR-FS	92TS
B		O O X O X O	Key Locking Pos								
			Left & Right	KOSS3-KLR-FS	70TS	KOSRLC-KLR-FS	78TS	KOSRRC-KLR-FS	86TS	KOSRLRC-KLR-FS	94TS
			Left & Center	KOSS3-KLC-FS	71TS	KOSRLC-KLC-FS	79TS	KOSRRC-KLC-FS	87TS	KOSRLRC-KLC-FS	95TS
			Right & Center	KOSS3-KRC-FS	72TS	KOSRLC-KRC-FS	80TS	KOSRRC-KRC-FS	88TS	KOSRLRC-KRC-FS	96TS

For aluminum clamp ring on standard or lever, add "A" after first dash in catalog number. Example – SSO3-ASLWE-FS is lever 3 position selector switch unit maintained position with aluminum clamp ring. For aluminum clamp ring on key, add "A" to beginning of catalog number. Example – AKOSS3-KLR-FS is 3 position key selector switch key locking left and right with aluminum clamp ring. Optional contact sequences available upon request. Specific key removable positions are available – consult factory. Contact block mounted standard in "A" position. To order additional contact block for "B" mounting position, add "/FS" to the end of the catalog number.

Footnotes

- Catalog numbers for standard and lever operators identify black operators with white color insert. Consult factory for other available colors.
- Spring Return Left to Right uses a reverse cam and the contact block selection is the opposite as shown as standard.

Pilot Lights for Use with FS Control³

Standard Pilot Lights Unit Complete Less Cap

Type	Volts	Catalog Number	Suffix
Transformer 50/60 Hz	120 AC	TFLU120	97TS
	240 AC	TFLU240	98TS
	480 AC	TFLU480	99TS
	277 AC	TFLU277	100TS
Full Voltage Type	6 AC/DC	FVLU6	101TS
	12 AC/DC	FVLU12	102TS
	24 AC/DC	FVLU24	103TS
	120 AC/DC ²	FVLU120	104TS
Neon Type ¹	120 AC/DC	FVLU120N	105TS
	240 AC/DC	FVLU240N	106TS
	480 AC/DC	FVLU480N	107TS
Incandescent	120 AC/DC	RLU120I	108TS
	240 AC/DC	RLU240I	109TS
LED Resistor Type ³	120 AC/DC	RLU120L	110TS
	240 AC/DC	RLU240L	111TS
Dual Input Remote Test	120 AC/DC	RTL120	112TS
	240 AC/DC	RTL240	113TS

Footnotes

- Neon lights are available with red or green lamps. Add suffix letter "R" or "G" respectively to designate color. Use amber, clear or red cap only for red neon lights; green or clear cap only for green neon lights.
- 120 Volt incandescent lamps are not recommended when the unit is subjected to shock and/or vibration. A transformer, resistor, neon or LED unit will provide longer lamp life.
- Specify LED lamp color. Add suffix letter "R" for red, "G" for green and "Y" for yellow (amber). Use amber, clear or red cap only for red lights; green or clear cap only for green lights; red, clear or amber for yellow lights.



Color Caps for Standard Pilot Lights

Color Cap with Polyester Clamp Ring		
Color	Catalog Number	Suffix
Amber	PLLAR	126TS
Blue	PLLBE	127TS
Clear	PLLCR	128TS
Green	PLLGN	129TS
Red	PLLRD	130TS
White	PLLWE	131TS

For aluminum clamp ring, add "A" prefix to color cap catalog number. Example – APLLBE is blue color cap for standard pilot light with aluminum clamp ring.

LED Lamps

Transformer lights and full voltage 6, 12 and 24 volt lights can be provided with solid state long life LED lamps in place of the standard incandescent lamps. Adalet's LED lamps are in a miniature bayonet base for direct interchangeability and feature an ultra bright 4 LED cluster with light output comparable to a standard type 755 incandescent lamp. The 4 LEDs are built into two circuits for redundancy and include internal current limiting resistors. Lamps are available in red, green, and yellow.

How to Order

Add the letter "L" plus the first letter of the color to the light catalog number.

Example: Catalog number TFLU120LR would be a transformer light with red LED lamp.

Push-to-Test Pilot Lights Unit Complete Less Cap

Type	Volts	Catalog Number	Suffix
Transformer 50/60 Hz	120 AC	TFPTT120FS	114TS
	240 AC	TFPTT240FS	115TS
	480 AC	TFPTT480FS	116TS
Full Voltage Type	6 AC/DC	FVPTT6FS	117TS
	12 AC/DC	FVPTT12FS	118TS
	24 AC/DC	FVPTT24FS	119TS
	120 AC/DC ²	FVPTT120FS	120TS
Neon Type ¹	120 AC/DC	FVPTT120NFS	121TS
	240 AC/DC	FVPTT240NFS	122TS
	480 AC/DC	FVPTT480NFS	123TS
Incandescent Resistor Type	120 AC/DC	RLPTT120FS	124TS
LED Resistor Type ³	120 AC/DC	RLPTT120LFS	125TS

Footnotes

- Neon lights are available with red or green lamps. Add suffix letter "R" or "G" respectively to designate color. Use amber, clear or red cap only for red neon lights; green or clear cap only for green neon lights.
- 120 Volt incandescent lamps are not recommended when the unit is subjected to shock and/or vibration. A transformer, resistor, neon or LED unit will provide longer lamp life.
- Specify LED lamp color. Add suffix letter "R" for red, "G" for green and "Y" for yellow (amber). Use amber, clear or red cap only for red lights; green or clear cap only for green lights; red, clear or amber for yellow lights.
- Catalog numbers are for extended color caps. For flush guarded color caps, add suffix "EECR" to the catalog number.

Color Caps for Push-to-Test Pilot Lights⁴

Color Cap with Polyester Clamp Ring		
Color	Catalog Number	Suffix
Amber	IPBCAR	30TS
Blue	IPBCBE	31TS
Clear	IPBCCR	32TS
Green	IPBCGN	33TS
Red	IPBCRD	34TS
White	IPBCWE	35TS

For aluminum clamp ring, add "A" prefix to color cap catalog number. Example – AIPBCBE is blue color cap for push-to-test pilot light with aluminum clamp ring.

Legend Plates for Use with FS Control³

Standard Legend Plates

Description	Catalog Number Prefix	Height (inches)	Width (inches)	Characters Per Line	Number of Lines
Standard	LP	2	2	16	2
Narrow	LPN	2	1 3/4	16	2
Short	LPS	1 3/4	2	16	2



Legend plates are available in the three styles listed above plus the IEC standard emergency legend plate shown to the right. Standard is black background with white letters except -05 and -28 which are red background with white letters. Other colors are available – consult factory. Plates with special legends are available – consult factory.

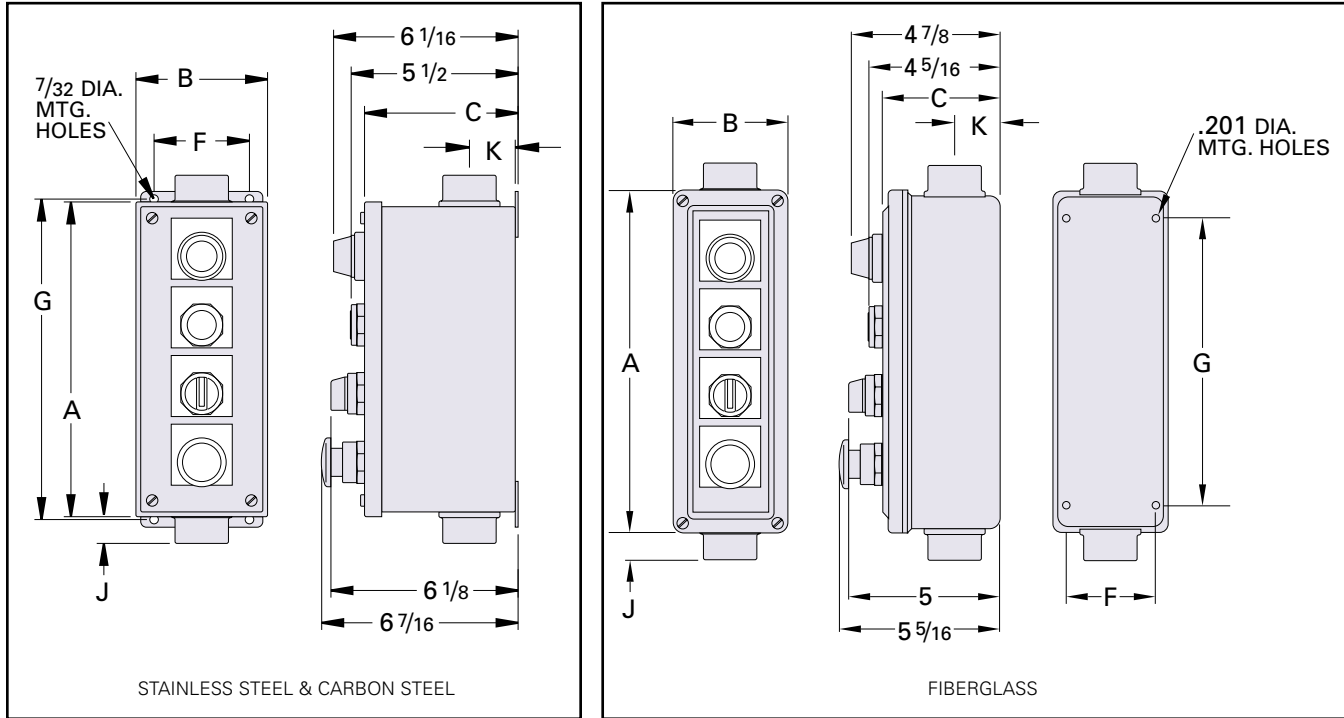
Standard Legends

Pushbuttons and Lights		2 Position Selector			3 Position Selector			
Legend	Catalog No. Suffix	Legend Left	Legend Right	Catalog No. Suffix	Legend Left	Legend Center	Legend Right	Catalog No. Suffix
Auto	01	Auto	Hand	50	Down	Off	Up	80
Close	02	Auto	Manual	68	Fwd	Auto	Rev	81
Down	03	Down	Up	51	Fwd	Off	Rev	82
Emergency Stop	04	Fast	Slow	63	Hand	Off	Auto	83
Emergency Stop (red)	05	Fwd	Rev	52	Manual	Off	Auto	84
Fast	06	Hand	Auto	53	Off	Run	Start	89
Forward	07	Inch	Run	54	Off	Start	Run	85
Hand	08	Manual	Auto	55	Off	1	2	86
Inch	09	Off	On	56	1	Off	2	87
Jog	10	On	Off	57	1	2	3	88
Manual	11	Open	Close	58				
Motor Run	26	Push On	Push Off	64				
Off	12	Pull Start	Push Stop	65				
On	13	Push Off	Pull On	66				
Overload	27	Push to Stop	Pull to Start	67				
Open	14	Rev	Fwd	59				
Power Off	15	Run	Jog	60				
Power On	16	Slow	Fast	69				
Push-to-Reset	30	Start	Stop	61				
Push-to-Test	17	Stop	Start	62				
Reset	18							
Reverse	19							
Run	20							
Slow	21							
Start	22							
Stop	23							
Stop (red)	28							
Test	24							
Trip	29							
Up	25							

Options

- Laser engraving on legend plates
- Legend plates available in white, red and aluminum in addition to standard black
- Round, yellow legend plates.

FS Control³ Dimensions



Dimensions Stainless Steel (X2SS) & Carbon Steel (X2CS)

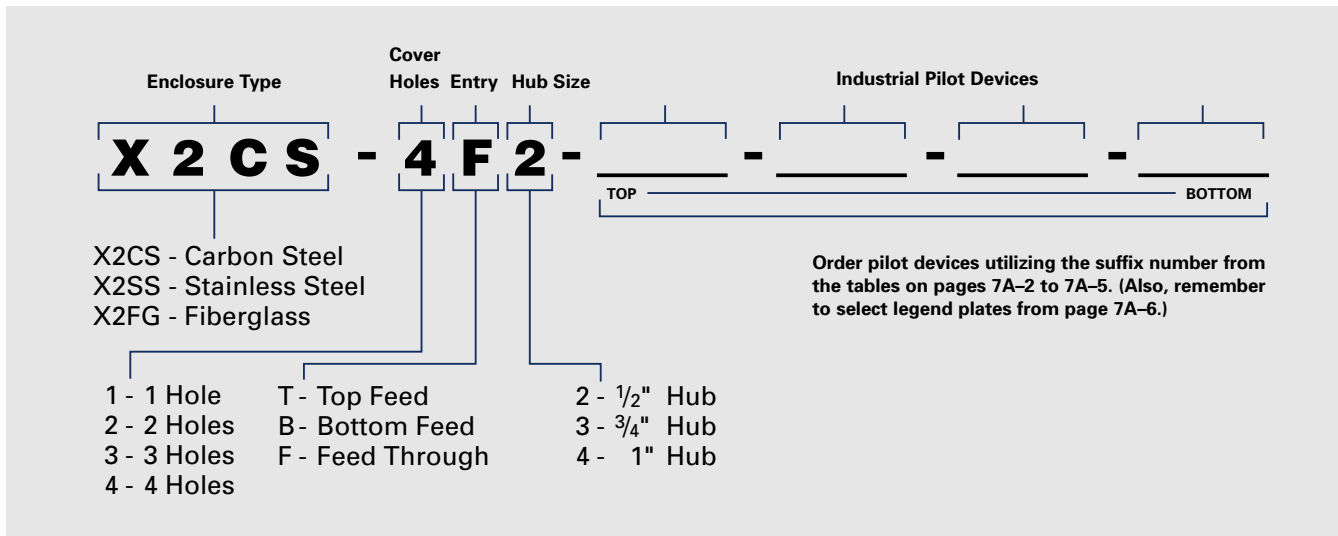
Body Style	Outside Dimensions			Mounting Dimensions		1/2" Hubs		3/4" Hubs		1" Hubs	
	A	B	C	F	G	J	K	J	K	J	K
1 Hole	4 5/16	4 5/16	5	3 1/8	4 1/2	13/16	1 1/2	7/8	1 1/2	1	1 1/2
2 Holes	6 5/16	4 5/16	5	3 1/8	6 1/2	13/16	1 1/2	7/8	1 1/2	1	1 1/2
3 Holes	8 5/16	4 5/16	5	3 1/8	8 1/2	13/16	1 1/2	7/8	1 1/2	1	1 1/2
4 Holes	10 5/16	4 5/16	5	3 1/8	10 1/2	13/16	1 1/2	7/8	1 1/2	1	1 1/2

Dimensions Fiberglass (X2FG)

Body Style	Outside Dimensions			Mounting Dimensions		1/2" Hubs		3/4" Hubs		1" Hubs	
	A	B	C	F	G	J	K	J	K	J	K
1 Hole	6 5/8	3 13/16	3 7/8	2 15/16	4 7/8	13/16	1 1/2	7/8	1 1/2	1	1 1/2
2 Holes	6 5/8	3 13/16	3 7/8	2 15/16	4 7/8	13/16	1 1/2	7/8	1 1/2	1	1 1/2
3 Holes	8 7/8	3 13/16	3 7/8	2 15/16	7 1/8	13/16	1 1/2	7/8	1 1/2	1	1 1/2
4 Holes	11 1/8	3 13/16	3 7/8	2 15/16	9 3/8	13/16	1 1/2	7/8	1 1/2	1	1 1/2

FS Control³ Catalog Logic

Catalog Logic/Example



The above example is a carbon steel control station, 4 holes, with feed through and 1/2" hub. Hubs included.

PriStar Specifications

Features and Benefits



- Lightweight, corrosion-resistant, copper-free aluminum alloy (0.3% max. copper content).
- All operating shafts are stainless steel for corrosion resistance.
- Durable cast on lugs cannot get lost.
- Ground screw is highly visible and accessible.
- Uniform wall thickness (not ribbed) for versatility of conduit openings assuring 5 full threads engagement and maximum available area for conduit drilling and tapping.
- Operators may be mounted through back wall for panel mounting.
- Box depth provides for the stacking of 2 contact blocks.
- Anodized aluminum operators install easily in the field.

Certifications/Compliances



*CSA certified products require guarded pilot devices.

Class I, Groups C&D

Class II, Groups E, F, G

Class III

For NEMA 4 or special machining options, see XIFC Series in Section 5.

Table A2 Control Station Boxes

Number of Operators	Surface Mount	Panel Mount	Std. Cond. Size (inches)
1	X1	X1P	3/4
2	X2	X2P	3/4
3	X3	X3P	3/4
4	X4	X4P	1
5	X5	X5P	1 1/4
6	X6	X6P	1 1/4
7	X7	X7P	1 1/4
8	X8	X8P	1 1/4
12	X12	X12P	1 1/2
15	X15	X15P	1 1/2
18	X18	X18P	1 1/2

Surface Mount: Operators mounted in cover

Panel Mount: Operators mounted in back

Note: All operator holes are 3/4"-14 NPSM

Applicable Standard

Underwriters Laboratories: UL 698, CSA C22.2 No. 30.

Table B2 Pilot Lights & Lighted Pushbutton

Lens Color	Suffix Nos. for Std. Pilot Lt. Candelabra Base 1000 Hr. Lamp	Suffix Nos. for Guarded Pilot Lt. Candelabra Base	Suffix Nos. for Pilot Lt. Slide Base 5000 Hr. Lamp	Suffix Nos. for Guarded Pilot Lt. Slide Base	Suffix Nos. for Lighted Pushbutton
Amber	60	337	66	343	30
Blue	61	338	67	344	35
Clear	62	339	68	345	40
Green	63	340	69	346	45
Red	64	341	70	347	50
White	65	342	71	348	55

PriStar Box & Suffix Numbers

Table C2 Selector & Key Switch Suffix Numbers

Contact Block/Cam Included	Contact Sequence	Selector Switch Suffix Numbers					Key Switch Suffix Numbers			
		Standard Sel. Switch	Sel. Switch w/ Padlock	Spring Ret. Center from R & L	Spring Ret. Center from R	Spring Ret. Center from L	Standard Key Switch	Spring Ret. Center from R & L	Spring Ret. Center from R	Spring Ret. Center from L
BT1A/1 NO NC	XO OX	6	283				82			
BT1B/1 NC NO	OX XO	7	284				83			
BT2/1 NO NO	OX OX	8	285				84			
BT3/1 NC NC	XO XO	9	286				85			
BT2/3 NO NO	XOO OOX	10	293	111	135	159	86	229	249	269
BT1B/2 NC NO	XOX XXO	11	288	112	136	160	87	224	244	264
BT2/2 NO NO	XOX OOX	12	289	113	137	161	88	225	245	265
BT3/2 NC NC	OXO XXO	13	290	114	138	162	89	226	246	266
BT3/3 NC NC	OXO XXO	14	294	115	139	163	90	230	250	270
BT1A/2 NO NC	OXO OOX	15	287	116	140	164	91	223	243	263
BT1A/3 NO NC	OXO OOX	16	291	117	141	165	92	227	247	267
BT1B/3 NC NO	XOO XXO	17	292	118	142	166	93	228	248	268

O = Contact Open
X = Contact Closed

Contact blocks and cam included with selector switch.

Table D2 Pushbutton Suffix Numbers

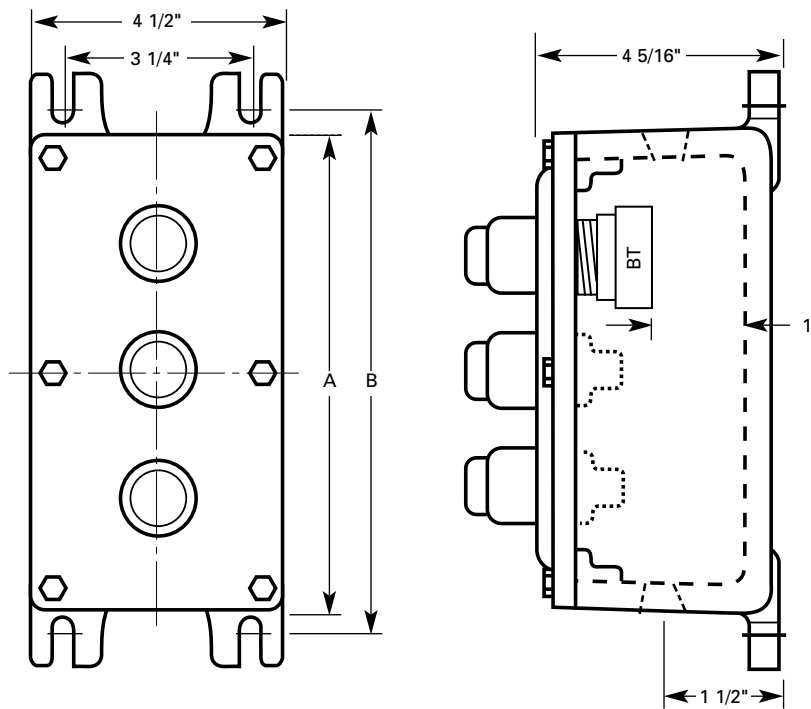
	Contact Configuration	Momentary Pushbutton	Momentary Pushbutton w/ Padlock	Mushroom Head ¹ Momentary Pushbutton	Dual Pushbutton ² Momentary	Dual Pushbutton ² w/ Lockout	Dual Pushbutton ² Maint.	Dual Pushbutton ² Maint. w/ Lock
BT1A	1NO/1NC	1	307	106	72	322	77	327
BT2	2NO	2	308	107	73	323	78	329
BT3	2NC	3	309	108	74	324	79	329
BT4	1NO	4	310	109				
BT5	1NC	5	311	110				

Pushbuttons furnished with Black collars and knobs as standard.
Optional knobs: Green, Red. Optional Collars: Blue, Green, Gold, Red or Aluminum (unpainted).

- Standard knob is Red. Black or Green available.
- Standard with one Green knob labeled "Start" and one Red knob labeled "Stop." Unlabeled Black knobs available.

Other pilot devices available – Consult Factory.

PriStar Dimensions



Dimensions

Enclosure	Nom. Inside Dim.	Dim. in Inches		Est. Weight (lbs.)	*Std. Conduit Size (inches)
		A	B		
X1	030303	4 1/2	5 1/2	5	3/4
X2	030603	7	8	7	3/4
X3	030703	8	9	8	3/4
X4	030903	10	11	10	1
X5	031103	12	13	11	1 1/4
X6	031303	14	15	12	1 1/4
X7	031503	16	17	13	1 1/4
X8	031803	19	20	16	1 1/4
X12	032403	25	26	21	1 1/2
X15	033003	31	32	28	1 1/2
X18	033603	37	38	33	1 1/2

Control Stations have conduit openings centered on top and bottom.
 *Consult factory for other conduit sizes.

PriStar Ordering Information

To Order

To order control stations, determine the number of operators required. Select the control station box by operator quantity and mounting type from Table A2. Order operators by suffix numbers from Tables B2, C2 and D2. Add suffix numbers to box number and separate

by dashes. All operator holes must be filled by an operator. Use suffix "0" for plugs to fill unused space. Installation of operators will be made from top to bottom in sequence as listed. Select optional legend plates from Table F2 below.

Table F2 Legend Plate Standard Markings

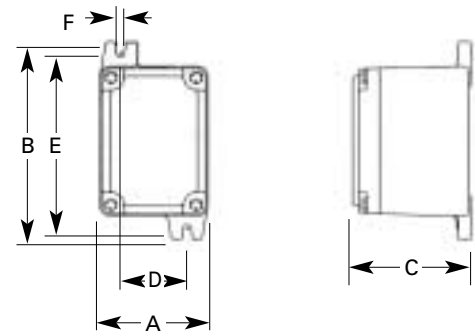
Pushbuttons/Pilot Lights			Selector Switches	
Blank	Slow	Reset	Run-Jog	Open-Off-Close
Start	Open	In	Hand-Auto	Fast-Off-Slow
Inch	Close	Out	Forward-Reverse	Run-Auto-Jog
Stop	Up	Left	Fast-Slow	Hand-Off-Auto
Run	Jog	Right	Open-Close	Forward-Off-Reverse
Forward	On	Low	Up-Down	1-Off-2
Reverse	Off	High	Off-On	Up-Off-Down
Fast	Back	Down		
		E-Stop		

Legend plates are anodized aluminum with engraved letters on black background.
 Stop has red and start has green background.
 Special engraved legend plates can be supplied.

Contact Ratings PriStar

		AC				DC		
		110	220	440	550	120	240	600
Volts								
Make & Interrupting Capacity	A	60	30	15	12	1.1	0.5	0.2
Normal Load Break	A	6.0	3.0	1.5	1.2	1.1	0.5	0.2
Continuous Current	A	10	10	10	10	10	10	10

Factory-Sealed Control Stations



Dimensions

Dimensions in Inches					
A	B	C	D	E	F
4 1/4	8	4 11/16	2 5/8	7 1/8	11/32

Features and Benefits

- Factory-sealed control stations eliminate the need for poured seals
- All control stations have 3/4" feed-through conduit entries
- Factory-sealed contact block rated NEMA A600 and NEMA Q300
- All selector switches have lock-out capabilities
- Bodies and covers are cast from lightweight, corrosion-resistant, copper-free aluminum
- High-quality legend plates permit easy identification of device function
- Durable cast-on lugs cannot get lost
- Ground screw is highly visible and accessible
- Strong, durable materials for reliability and safety
- Customization of box entries available – please consult factory
- NEMA 4 option available – please consult factory

Material/Finish

Body, Cover: Copper-Free Aluminum
 Operator and Pilot Light Bodies: Anodized Aluminum
 Operator Shaft: Stainless Steel
 Levers: Aluminum

Application

A wide variety of control stations may be assembled from Adalet bodies, devices and covers for use indoor or outdoor where Class I or Class II hazards are present, such as petroleum refineries, chemical plants and grain-processing and storage facilities. XFS Control Stations may be used in conjunction with magnetic starters or contactors for remote control of motors.

Catalog No.	Control Station Description
XFSA3101	Black momentary pushbutton
XFSA3223	Start-stop momentary pushbuttons
XFSA3911	Maintained emergency stop with mushroom head
XFSA3173	2-position, 2-circuit selector switch with 1NO/1NC contact
XFSA3185	2-position, 4-circuit selector switch with 2NO/2NC contacts
XFSA3178	3-position, 2-circuit selector switch with 1NO/1NC contact marked HAND-OFF-AUTO
XFSA31208	Green pilot light
XFSA31209	Red pilot light
XFSA32089	One green and one red pilot light
XFSA30925	Red pilot light with start-stop momentary dual pushbutton

Certifications/Compliances

Cover Assembly
Body Assembly
Complete Enclosure Assembly



Class I, Division 1, Groups B* CD
 Class I, Division 2, Groups BCD†
 Class I, Zone 1, Group IIB
 Class I, Zone 2, Group IIB

NEMA 4 Option:
 Class I, Division 1, Groups C & D
 Class I, Division 2, Groups BCD†
 Class I, Zone 1, Group IIB
 Class I, Zone 2, Group IIB

Class II, Division 1, Groups E, F & G
 Class II, Division 2, Groups E, F & G†

NEMA 3, 3R, 4, 7CD, 9EFG, 12

Contact Block Only

Class I, Division 1, Groups BCD (recognized)
 Class I, Division 2, Groups BCD (listed)
 Class I, Zone 1, Group IIB+H2
 Class I, Zone 2, Group IIB+H2



Applicable Standard

Underwriters Laboratories:
 UL 698, UL 1203



*Group B pending

†Division 2 Compliance

OmniStar Specifications



Features and Benefits

- Factory sealed control station **eliminates the need for poured seals**
- Factory sealed contact block rated NEMA A600 and NEMA Q300
- Single-station through four-gang vertical or horizontal configurations are available to accommodate a wide variety of system needs
- Conduit entries available in 1/2", 3/4" and 1" sizes either dead-end or feed through
- Customization possible by using any of a wide variety of devices: pilot lights, miniature operators, momentary contact pushbuttons, selector switches, key operator selector switches or rocker arm
- One- through four-hole covers allow up to four NO/NC contact blocks per station
- Bodies and covers are cast from lightweight, corrosion-resistant, copper-free aluminum
- High-quality legend plates permit easy identification of device function
- Durable cast-on lugs cannot get lost
- Ground screw is highly visible and accessible
- Strong, durable materials for reliability and safety
- Customization of box entries available – please consult factory
- NEMA 4 option available – please consult factory

Material/Finish

Body, Cover: Copper-Free Aluminum

Operator and Pilot Light Bodies: Anodized Aluminum

Operator Shaft: Stainless Steel

Knobs: Nylon

Application

A wide variety of control stations may be assembled from Adalet bodies, devices and covers for use indoor or outdoor where Class I or Class II hazards are present, such as petroleum refineries, chemical plants and grain processing and storage facilities. XFS Control Stations may be used in conjunction with magnetic starters or contactors for remote control of motors.

Certifications/Compliances

XFSC Cover Assembly

XFSB Body Assembly

XFSA Complete Enclosure Assembly



Contact Block Only



Class I, Division 1, Groups CD
Class I, Division 2, Groups B*CD†
Class I, Zone 1, Group IIB
Class I, Zone 2, Group IIB

NEMA 4 Option:

Class I, Division 1, Groups C & D
Class I, Division 2, Groups C & Dt
Class I, Zone 1, Group IIB
Class I, Zone 2, Group IIB
Class II, Division 1, Groups E, F & G
Class II, Division 2, Groups E, F & G†
NEMA 3, 3R, 4, 7CD, 9EFG, 12

*Group B Compliance

†Division 2 Compliance

Class I, Division 1, Groups BCD (recognized)
Class I, Division 2, Groups BCD (listed)
Class I, Zone 1, Group IIB+H2
Class I, Zone 2, Group IIB+H2

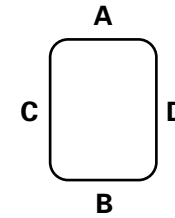
Applicable Standard

Underwriters Laboratories: UL 698, UL 1203

OmniStar Bodies & Covers

Table A1 Conduit Entry

Conduit Entry	Catalog Suffix No.	Hole Location Suffix Numbers				Replacement Body Catalog No.
		Top	Bottom	Left	Right	
1/2"	2	A	B	C ¹	D ¹	XFSB2
3/4"	3	A	B	C ¹	D ¹	XFSB3
1"	4	A	B	C	D	XFSB4



¹ Catalog suffix number followed by hole location suffix (C&D holes always 1" NPT)

Example – 3ACD would be a body with a 3/4" hole in the top position and two 1" holes on the sides.

Note: When ordering assembled control station, catalog number should begin with XFSA to indicate body and cover. Refer to page 7D-6 for catalog logic/example.

Table B1 Covers

Style	Catalog Suffix No.	NEMA Type 4 Catalog Suffix No.	Replacement Cover Catalog No. ²	NEMA Type 4 Replacement Cover Catalog No. ²
Blank	–	-N4	XFSC	XFSC-N4
One 3/4" NPSM Hole	1	1-N4	XFSC-1	XFSC-1-N4
Two 3/4" NPSM Holes	2	2-N4	XFSC-2	XFSC-2-N4
One 3/4" NPSM Hole and Two 3/8-16" UNC Holes	3	3-N4	XFSC-3	XFSC-3-N4
Four 3/8-16" UNC Holes	4	4-N4	XFSC-4	XFSC-4-N4
Two 3/8-16" UNC Holes	5	5-N4	XFSC-5	XFSC-5-N4
Rocker Arm — See next page	RA	RA-N4		

² Replacement cover catalog numbers should be followed by suffix numbers for Adalet operators.

Example – XFSC-4-N4 would be a NEMA Type 4 cover with four holes.



XFSC-1



XFSC-2



XFSC-3



XFSC-4



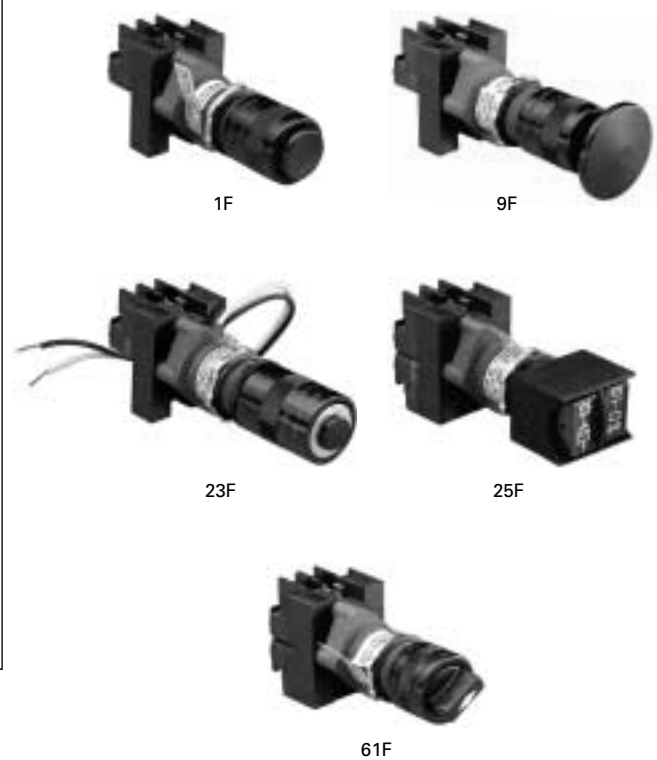
XFSC-5

OmniStar Device Kits – Pushbuttons & Pilot Lights

Table C1 Pushbuttons

Kit	Catalog Suffix Nos. for 1 NO/1 NC	Catalog Suffix Nos. for 2 NO/2 NC
Momentary Pushbutton – Black	1F	10F
Momentary Pushbutton – Green	2F	11F
Momentary Pushbutton – Red	3F	12F
Momentary PB w/ Padlock – Black	4F	13F
Momentary PB w/ Padlock – Green	5F	14F
Momentary PB w/ Padlock – Red	6F	15F
Mushrm Hd Momentary PB – Black	7F	16F
Mushrm Hd Momentary PB – Green	8F	17F
Mushrm Hd Momentary PB – Red	9F	18F
Mushrm Hd Maintained	911F	
Mushrm Hd Maintained		912F
Lighted Pushbutton – Amber ²	20F	
Lighted Pushbutton – Blue ²	21F	
Lighted Pushbutton – Clear ²	22F	
Lighted Pushbutton – Red ²	23F	
Lighted Pushbutton – White ²	24F	
Dual PB Momentary – “Start/Stop”		25F
Dual PB Momentary – Green/Red		26F
Dual PB Momentary – Black/Black		27F
Dual PB w/ Lockout – “Start/Stop”		28F
Dual PB w/ Lockout – Green/Red		29F
Dual PB w/ Lockout – Black/Black		30F
Dual PB Maint – “Start/Stop”		31F
Dual PB Maint – Green/Red		32F
Dual PB Maint – Black/Black		34F
Dual PB Maint w/ Lockout – “Start/Stop”		35F
Dual PB Maint w/ Lockout – Green/Red		36F
Dual PB Maint w/ Lockout – Black/Black		37F
Rocker Arm 2 NO/2 NC ¹		RA1

Use Suffix “0” for 3/4" NPSM plug and Suffix “00” for 3/8" UNC plug to fill unused spaces. For collars different in color than pushbutton ordered, consult factory.



1 For Rocker Arm 3 NO/3 NC, use suffix RA2 and for Rocker Arm 4 NO/4 NC, use suffix RA3.
 2 Not for use in NEMA 4 applications

Contact Ratings OmniStar

		AC				DC	
Volts		110	220	440	550	120	440
Make & Interrupting Capacity	A	60	30	15	12	.55	.27
Normal Load Break	A	6	3	1.5	1.2	.55	.27
Continuous Current	A	10	10	10	10	2.50	2.50
Catalog No.	FSBT	One Normally Open and One Normally Closed.					

Table D1 Pilot Lights

Lens Color	Suffix Nos. for Guarded Pilot Lt. Candelabra Base	Suffix Nos. for Guarded Pilot Lt. Slide Base	Suffix Nos. for Miniature Pilot Lights
Amber	205F	215F	201F
Blue	206F	216F	
Clear	207F	217F	
Green	208F	218F	202F
Red	209F	219F	203F
White	210F	220F	

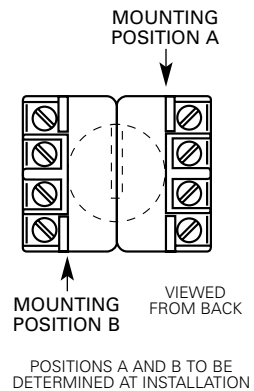
OmniStar Device Kits – Selector Switches

Table E1 Selector Switches

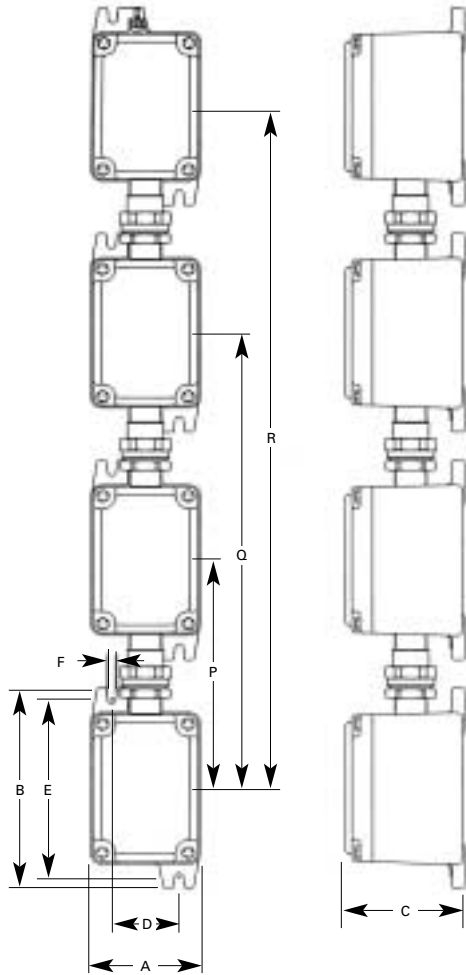
Selector Switch	Cam	Suffix Nos. for Mounting Position A 1 NO/1 NC	Suffix Nos. for Mounting Position B 1 NO/1 NC	Suffix Nos. for Mounting Position AB 2 NO/2 NC
Selector Switch	1	51F	61F	67F
Selector Switch	2	52F	62F	68F
Selector Switch	3	53F	63F	69F
Selector Switch	4	54F	64F	70F
Selector Switch	5	55F	65F	71F
Selector Switch	6	56F	66F	72F
Selector Switch with Padlock	1	73F	79F	85F
Selector Switch with Padlock	2	74F	80F	86F
Selector Switch with Padlock	3	75F	81F	87F
Selector Switch with Padlock	4	76F	82F	88F
Selector Switch with Padlock	5	77F	83F	89F
Selector Switch with Padlock	6	78F	84F	90F
Selector Switch with Spring Return Center Right to Left	2	91F	96F	101F
Selector Switch with Spring Return Center Right to Left	3	92F	97F	102F
Selector Switch with Spring Return Center Right to Left	4	93F	98F	103F
Selector Switch with Spring Return Center Right to Left	5	94F	99F	104F
Selector Switch with Spring Return Center Right to Left	6	95F	100F	105F
Selector Switch with Spring Return Center from Right	2	106F	111F	116F
Selector Switch with Spring Return Center from Right	3	107F	112F	117F
Selector Switch with Spring Return Center from Right	4	108F	113F	118F
Selector Switch with Spring Return Center from Right	5	109F	114F	119F
Selector Switch with Spring Return Center from Right	6	110F	115F	120F
Selector Switch with Spring Return Center from Left	2	122F	127F	132F
Selector Switch with Spring Return Center from Left	3	123F	128F	133F
Selector Switch with Spring Return Center from Left	4	124F	129F	134F
Selector Switch with Spring Return Center from Left	5	125F	130F	135F
Selector Switch with Spring Return Center from Left	6	126F	131F	136F
Key Selector Switch with Spring Return Center Right to Left	2	138F	143F	148F
Key Selector Switch with Spring Return Center Right to Left	3	139F	144F	149F
Key Selector Switch with Spring Return Center Right to Left	4	140F	145F	150F
Key Selector Switch with Spring Return Center Right to Left	5	141F	146F	151F
Key Selector Switch with Spring Return Center Right to Left	6	142F	147F	152F
Key Selector Switch with Spring Return Center from Right	2	153F	158F	163F
Key Selector Switch with Spring Return Center from Right	3	154F	159F	164F
Key Selector Switch with Spring Return Center from Right	4	155F	160F	165F
Key Selector Switch with Spring Return Center from Right	5	156F	161F	166F
Key Selector Switch with Spring Return Center from Right	6	157F	162F	167F
Key Selector Switch with Spring Return Center from Left	2	168F	173F	178F
Key Selector Switch with Spring Return Center from Left	3	169F	174F	179F
Key Selector Switch with Spring Return Center from Left	4	170F	175F	180F
Key Selector Switch with Spring Return Center from Left	5	171F	176F	181F
Key Selector Switch with Spring Return Center from Left	6	172F	177F	182F
Key Selector Switch	1	183F	189F	195F
Key Selector Switch	2	184F	190F	196F
Key Selector Switch	3	185F	191F	197F
Key Selector Switch	4	186F	192F	198F
Key Selector Switch	5	187F	193F	199F
Key Selector Switch	6	188F	194F	200F

Contact Sequence Chart

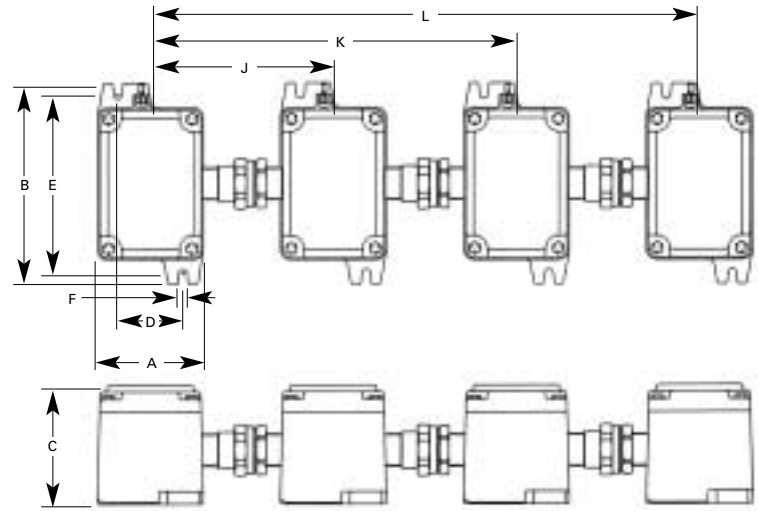
Circuit of Contact Block	Mounting Position	2-Position Selector Switches		3-Position Selector Switches					
		Cam 1 Contact Sequence	Cam 2 Contact Sequence	Cam 3 Contact Sequence	Cam 4 Contact Sequence	Cam 5 Contact Sequence	Cam 6 Contact Sequence		
Normally Closed (NC)	A	Circuit A	X O	X X O	X X O	X O X	O O X	O O X	
Normally Open (NO)		Circuit B	O X	O O X	O O X	O X O	X X O	O X O	
Normally Closed (NC)	B	Circuit A	X O	O X O	O X X	X O O	O X X	X O O	
Normally Open (NO)		Circuit B	O X	X O X	X O O	O X X	X O O	O O X	



OmniStar Dimensions – Vertical & Horizontal 4-Gang Assembly



VERTICAL 4-GANG ASSEMBLY



HORIZONTAL 4-GANG ASSEMBLY

Dimensions

Dimensions in Inches											
A	B	C	D	E	F	J	K	L	P	Q	R
4 1/4	8	4 11/16	2 5/8	7 1/8	11/32	7 5/16	14 5/8	21 15/16	9 1/8	18 1/4	27 3/8

OmniStar Ordering Information

To Order

To order control stations, determine the number of operators required. Select the control station body and cover by operator quantity and mounting type from Tables A1 and B1. Order operators by suffix numbers from Tables C1, D1 and E1. Add suffix numbers to box/cover assembly number (replacing the "B" in the box catalog number with an "A" for "Assembly" followed by a

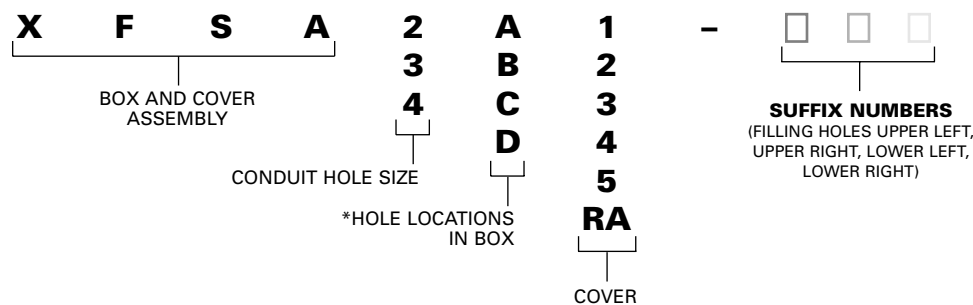
number to indicate the number of holes in the cover), separating the assembly number from the suffix number(s) by dashes. All operator holes must be filled by an operator or plug. Installation of operators will be made in the following order: upper left, upper right, lower left, lower right. See Assembly Catalog Numbers Logic/Example below. Select legend plates from Table F1 below.

Table F1 Legend Plate Standard Markings

Pushbuttons/Pilot Lights			Selector Switches	
Blank	Slow	Reset	Run-Jog	Open-Off-Close
Start	Open	In	Hand-Auto	Fast-Off-Slow
Inch	Close	Out	Forward-Reverse	Run-Auto-Jog
Stop	Up	Left	Fast-Slow	Hand-Off-Auto
Run	Jog	Right	Open-Close	Forward-Off-Reverse
Forward	On	Low	Up-Down	1-Off-2
Reverse	Off	High	Off-On	Up-Off-Down
Fast	Back	Down		
		E-Stop		

Legend Plates are anodized aluminum with engraved letters on black background. Stop has red and start has green background. Special engraved legend plates can be supplied.

Assembly Catalog Numbers Logic/Example



XFSA2A1-1F is an assembled control station with one 1/2" hub, and one operator hole with one momentary pushbutton black.

*C & D holes are always supplied as 1" NPT

Quick Reference Guide

METHODS OF PROTECTION

Area	Protection Method	UL	CSA	CENELEC	IEC
Division 1	Explosionproof	ANSI/UL 1203	CSA-30	--	--
	Intrinsically Safe (2 Fault)	ANSI/UL 913	CSA-157	--	--
	Purge/Pressurized (Type X or Y)	ANSI/NFPA 496	ANSI/NFPA 496	--	--
Division 2	Nonincendive	UL 1604	CSA-213	--	--
	Non-sparking device	UL 1604	CSA-213	--	--
	Purge/Pressurized (Type Z)	ANSI/NFPA 496	ANSI/NFPA 496	--	--
	Hermetically sealed	UL 1604	CSA-213	--	--
	Any Class I, Division 1 Method	--	--	--	--
Area	Protection Method	UL (AEx)	CSA (Ex)	CENELEC (EEx)	IEC (Ex)
Zone 0	Intrinsically Safe 'ia' (2 Fault)	UL 2279 Pt. 11	CSA-E79-18	EN 50028	IEC 60 079-18
Zone 1	Flameproof 'd'	UL 2279 Pt. 1	CSA-E79-1	EN 50018	IEC 60 079-1
	Increased Safety 'e'	UL 2279 Pt. 7	CSA-E79-7	EN 50019	IEC 60 079-7
	Intrinsically Safe 'ib' (1 Fault)0	UL 2279 Pt. 11	CSA-E79-11	EN 50020	IEC 60 079-11
	Encapsulation 'm'	UL 2279 Pt. 18	CSA-E79-18	EN 50028	IEC 60 079-18
	Oil Immersion 'o'	UL 2279	CSA-E79-6	EN 50015	IEC 60 079-6
	Purged/Pressurized 'p'	UL 2279 Pt. 2	CSA-E79-2	EN 50016	IEC 60 079-2
	Powder filling 'q'	UL 2279	CSA-E79-5	EN 50017	IEC 60 079-5
Any Zone 0 Method	--	--	--	--	
Zone 2	Non-sparking 'nA'	UL 2279 Pt. 15	CSA-E79-15	prEN 50021	IEC 60 079-15
	Hermetically sealed 'nC'	UL 2279 Pt. 15	CSA-E79-15	prEN 50021	IEC 60 079-15
	Nonincendive 'nC'	UL 2279 Pt. 15	CSA-E79-15	prEN 50021	IEC 60 079-15
	Restricted breathing 'nR'	UL 2279 Pt. 15	CSA-E79-15	prEN 50021	IEC 60 079-15
	Any Zone 0 or 1 Method	--	--	--	--

AREA CLASSIFICATIONS

	Ignitable Materials Present Continuously	Ignitable Materials Present Intermittently	Ignitable Materials Present Abnormally
IEC/CENELEC	Zone 0 (Zone 20 Dust)	Zone 1 (Zone 21 Dust)	Zone 2 (Zone 22 Dust)
NEC 505	Zone 0	Zone 1	Zone 2
NEC 500	Division 1	Division 1	Division 2

ATEX Classification by Group & Category According to Use

	Ignitable Materials Present Continuously	Ignitable Materials Present Intermittently	Ignitable Materials Present Abnormally
Equipment Group II (surface)	Category 1 Equipment	Category 2 Equipment	Category 3 Equipment
Equipment Group I (mining)	Category M1 Equipment	Category M2 Equipment	—

GAS GROUPINGS

Gas, Dust or Fiber	NEC 505/IEC/CENELEC	NEC 500
Acetylene	Group IIC	Class I/Group A
Hydrogen	Group IIC/Group IIB+H2	Class I/Group B
Ethylene	Group IIB	Class I/Group C
Propane	Group IIA	Class I/Group D
Methane	Group I (firedamp)	Class I/Group D
Metal Dust	None	Class II/Group E
Coal Dust	None	Class II/Group F
Grain Dust	None	Class II/Group G
Fibers	None	Class III

ACRONYMS

CENELEC - European Committee for Electrotechnical Standardization
IEC - International Electrotechnical Commission
NEC - National Electrical Code
U.L. - Underwriters Laboratories
C.S.A. - Canadian Standards Association
FM - Factory Mutual
BASEEFA - British Approvals Service for Electrical Apparatus in Flammable Atmospheres
NFPA - National Fire Protection Agency
ISO - International Organization for Standardization
ANSI - American National Standard Institute
ATEX - Atmospheres Explosibles

TEMPERATURE CLASSES

Maximum Surface Temperature	NEC 505 IEC CENELEC	NEC 500
450°C	T1	T1
300°C	T2	T2
280°C		T2A
260°C		T2B
230°C		T2C
215°C		T2D
200°C	T3	T3
180°C		T3A
165°C		T3B
160°C		T3C
135°C	T4	T4
120°C		T4A
100°C	T5	T5
85°C	T6	T6

INGRESS PROTECTION (IP XX) CODES

#	First Number (Protection against Solid Bodies)	Second Number (Protection against Liquids)
0	No protection	No protection
1	Objects greater than 50mm	Vertically dripping water
2	Objects greater than 12mm	75-90 Deg. dripping water
3	Objects greater than 2.5mm	Sprayed water
4	Object greater than 1mm	Splashed water
5	Dust Protected	Water jets
6	Dust-tight	Heavy seas
7	--	Effects of immersion
8	--	Indefinite immersion

Circuit Breaker Lighting & Power Distribution Panel Boards

Explosionproof and Dust-Ignitionproof



ENCLOSURES: The housings are copper-free cast aluminum alloy. The housings are Adalet XCE series and have precision ground cover and body joints.

The design offers sufficient gutter space on sides to allow through wiring and easy lug connection. All enclosures are furnished with hinges, stainless steel cover bolts and are provided with Nema 4 gasketing. All covers are removable for clear access to breakers and gutter space. The compact design of rectangular housings permits close grouping on switch racks and other structures. No additional space is required for cover removal except from the front.

MECHANICAL FEATURES: The front mounted power panel and lighting panel branch breaker handles can be padlocked either in "off" or "on" position. All breaker handles are spring loaded allowing closing of the cover with breaker toggle in any position. Operating handle shafts have "V" ring gaskets for watertight application.

ELECTRICAL FEATURES: Breaker panel chassis, featuring bolt-on circuit breakers, are made by Cutler-Hammer. Chassis for the power distribution XPB2 series provides 480V/277 volt connections. The circuit breakers are rated for 480 volt max.

The Adalet lighting panel board XPB1 series offers 15 through 60 amps, 120, 240 volt bolt on circuit breakers with ground and insulated neutral bars as standard features. The Cutler-Hammer Industrial Ground Fault Circuit Protectors (GFCI 5mA, GFEPD 30mA) and switching neutral breakers are available as optional features.

Compliances:

UL, cUL Classified Enclosure
UL Standard 1203
CSA Standard C22.2 No. 30

Class I, Groups B, C, D
Class II, Groups E, F, G
Class III
NEMA 4, 7, 9

Approvals:

Enclosure Certifications



E81696

8A-1

Circuit Breaker Lighting Panel Boards

Explosionproof and Dust-Ignitionproof

CLASS I, GROUP B, C, D; CLASS II, GROUPS E, F & G; CLASS III, NEMA 4, 7 & 9

Explosionproof circuit breaker lighting panelboards use cast aluminum alloy housings with hinged cover. External operating handles can be padlocked in "on" or "off" position. Incorporates Cutler-Hammer bolt-on breakers @ 240 volt max. Top feed standard.

8A-2

BACK FED MAIN BREAKER PANELBOARDS
120/240 VOLT, 1 PHASE 3 WIRE, SOLID NEUTRAL
CHASSIS WITHOUT BRANCH BREAKERS OR OPERATING HANDLES
10,000 AMPERE INTERRUPTING CAPACITY (SYM.)

Number of Avail. Breakers	MLO / BFD	Catalog Number	Main Breaker Amperes	Box Size
10	BFD	XPB1-121 B1	100	A
16	BFD	XPB1-181 B1	100	A
22	BFD	XPB1-241 B1	100	B

BACK FED MAIN BREAKER PANELBOARDS
120/208 VOLT, 3 PHASE 4 WIRE, SOLID NEUTRAL
CHASSIS WITHOUT BRANCH BREAKERS OR OPERATING HANDLES
10,000 AMPERE INTERRUPTING CAPACITY (SYM.)

Number of Avail. Breakers	MLO / BFD	Catalog Number	Main Breaker Amperes	Box Size
9	BFD	XPB1-123 B1	100	A
15	BFD	XPB1-183 B1	100	A
21	BFD	XPB1-243 B1	100	B

Circuit Breaker Lighting Panel Boards

Explosionproof and Dust-Ignitionproof

8A-3

MAIN LUG ONLY PANELBOARDS
1 PHASE 3 WIRE 120/240 VOLT TOP FEED MAIN LUG ONLY
CHASSIS WITHOUT BRANCH BREAKERS OR OPERATING HANDLES
10,000 AMPERE INTERRUPTING CAPACITY (SYM)

Number of Breakers	Catalog Number	Main Lug Amperes	Box Size
12	XPB1-121L1	100	A
18	XPB1-181L1	100	A
24	XPB1-241L1	100	B
24	XPB1-241L2	225	B
30	XPB1-301L2	225	D
36	XPB1-361L2	225	D

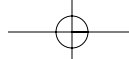
MAIN LUG ONLY PANELBOARDS
3 PHASE 4 WIRE 120/208 VOLT TOP FEED MAIN LUG ONLY
CHASSIS WITHOUT BRANCH BREAKERS OR OPERATING HANDLES
10,000 AMPERE INTERRUPTING CAPACITY (SYM)

Number of Breakers	Catalog Number	Main Lug Amperes	Box Size
12	XPB1-123L1	100	A
18	XPB1-183L1	100	A
24	XPB1-243L1	100	B
24	XPB1-243L2	225	B
30	XPB1-303L2	225	D
36	XPB1-363L2	225	D

How to order:

- A) Specify catalog number and voltage
- B) Number of operator handles, single pole, two pole and three pole as required.
- C) Circuit breakers, number of poles and ampere rating.

Unused spaces will be plugged. Top feed standard.



Circuit Breaker Lighting Panel Boards

Explosionproof and Dust-Ignitionproof

MODIFICATIONS AND OPTIONS

8A-4

Branch Breakers - Operating Handles - Components

CIRCUIT BREAKER OPERATOR HANDLES INSTALLED IN XPB1 PANEL BOARDS

Catalog Number	Description	Weight Each
XPB1-H1	For single pole BAB breakers	1/4 lb.
XPB1-H2	For two pole BAB breakers	1/4 lb.
XPB1-H3	For three pole BAB breakers	1/4 lb.
XPB1-GL	For single pole GFI ground	1/4 lb.
XPB1-GR	Fault breakers (specify left or right side)	1/4 lb.

BRANCH CIRCUIT BREAKERS INSTALLED IN XPB1 PANEL BOARDS: BOLT-ON THERMAL MAGNETIC BREAKERS 120/240 VOLT 10,000 AMPERE I.C.

Catalog No.	Description
XPB1-1*	1 pole breaker (available in 10-70 amp)
XPB1-2*	2 pole breaker (available in 10-100 amp)
XPB1-3*	3 pole breaker (available in 10-100 amp)

*Add ampere rating of the branch breaker when ordering.

GROUND FAULT CIRCUIT PROTECTORS 120/240 VOLT 10,000 AMPERE I.C. STD. 22,000 AMPERE I.C. OPTIONAL

Catalog No.	Description
XPB1-1GFCl*	1 pole GFCI Breaker 5 MA Sensitivity
XPB1-2GFCl*	2 pole GFCI Breaker 5 MA Sensitivity
XPB1-1GFEPD*	1 pole GFCI Breaker 30 MA Sensitivity
XPB1-2GFEPD*	2 pole GFCI Breaker 30 MA Sensitivity

Above Available with special application Bell Alarm or Auxiliary Switch.

*Add ampere rating of the branch breaker when ordering

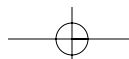
BOLT-ON SWITCHING NEUTRAL BREAKERS 120/240 VOLT 10,000 AMPERE I.C.

Catalog No.	Description
XPB1-N1*	1 pole switching to neutral Requires two spaces (available in 15-30 amp)
XPB1-N2*	2 pole switching to neutral Requires three spaces (available in 15-30 amp)

*Add ampere rating of the branch breaker when ordering

OPTIONAL FEATURES MODIFICATIONS:

Suffix Letter	Description
E	Breather Drain (not type 4)
EE	Breather and drain (not type 4)
L1	Epoxy Coating Outside
L2	Epoxy Coating Inside/Outside
NP	Lamacoid Nameplate
CU	Copper Bus Bar
Q	Quad-Lead Bolts



Circuit Breaker Power Distribution Panel Boards

Explosionproof and Dust-Ignitionproof

CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; CLASS II, NEMA 4, 7 & 9

Explosionproof circuit breaker power panelboards use cast aluminum alloy housings with hinged cover. External operating handles can be padlocked in "on" or "off" positions. Incorporates Cutler-Hammer bolt-on breakers @ 480 volt max. Top feed standard.

8A-5

BACK FED MAIN BREAKER PANELBOARDS 277/480 VOLT, 3 PHASE 4 WIRE, SOLID NEUTRAL CHASSIS WITHOUT BRANCH BREAKERS OR OPERATING HANDLES 14,000 AMPERE INTERRUPTING CAPACITY (SYM.)

Number of Avail. Breakers	MLO / BFD	Catalog Number	Main Breaker Amperes	Box Size
9	BFD	XPB2-123B1	100	A
15	BFD	XPB2-183B1	100	A
21	BFD	XPB2-243B1	100	B

100 ampere main lugs conductor size #12 -1/0 CU/AL.
225 ampere main lugs conductor size #6-300 MCM CU/AL.

How to order:

- A) Specify catalog number and voltage
- B) Number of operator handles, single pole, two pole and three pole as required.
- C) Circuit breakers, number of poles and ampere rating

Unused spaces will be plugged. Top feed standard.

MAIN LUG ONLY PANELBOARDS 277/480 VOLT, 3 PHASE 4 WIRE CHASSIS WITHOUT BRANCH BREAKERS OR OPERATING HANDLES 14,000 AMPERES INTERRUPTING CAPACITY (SYM)

Number of Breakers	Catalog Number	Main Lug Amperes	Box Size
12	XPB2-123L1	100	A
18	XPB2-183L1	100	A
24	XPB2-243L1	100	B
24	XPB2-243L2	225	B
30	XPB2-303L2	225	D
36	XPB2-363L2	225	D

Compliances:

UL, cUL Classified Enclosure
UL Standard 1203
CSA Standard C22.2 No. 30

Class I, Groups B, C, D
Class II, Groups E, F, G
NEMA 4, 7, 9

How to order: Specify catalog number, operator handles and circuit breakers as separate items. Single pole breakers use 1 handle space, 1 handle. 2 pole, 2 spaces, 1 handle. 3 pole, 3 spaces, 1 handle. Unused spaces will be plugged. Top feed standard.

Approvals:

Enclosure Certifications



E81696



Circuit Breaker Power Distribution Panel Boards

Explosionproof and Dust-Ignitionproof

8A-6

MODIFICATIONS AND OPTIONS

Branch Breakers - Operating Handles - Components

BREAKER OPERATOR HANDLES INSTALLED IN XPB2 PANEL BOARDS

Catalog Number	Description	Weight Each
XPB2-H1	For 1, 2 or 3-pole GHB breaker	1/4 lb.

BRANCH CIRCUIT BREAKERS INSTALLED IN XPB2 PANEL BOARDS: BOLT-ON THERMAL MAGNETIC BREAKERS

Catalog No.	Description
XPB2-1*	1 pole GHB breaker (available in 15-100 amp) 277 volt A.C.
XPB2-2*	2 pole GHB breaker (available in 15-100 amp) 480 volt A.C.
XPB2-3*	3 pole GHB breaker (available in 15-100 amp) 480 volt A.C.

*Add ampere rating of the branch breaker when ordering.

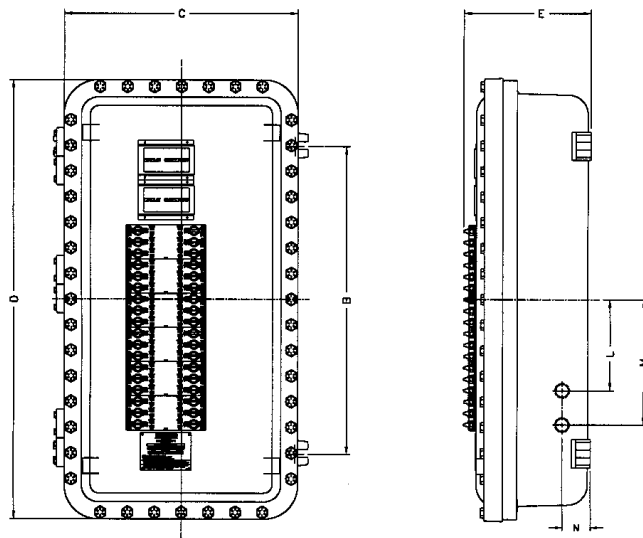
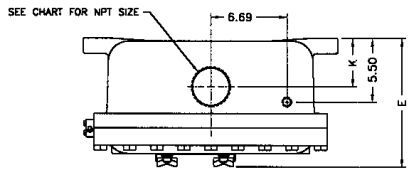
OPTIONAL FEATURES MODIFICATIONS:

Suffix Letter	Description
E	Breather Drain (not type 4)
EE	Breather and drain (not type 4)
L1	Epoxy Coating Outside
L2	Epoxy Coating Inside/Outside
NP	Lamacoid Nameplate
CU	Copper Bus Bar
Q	Quad-Lead Bolts

Circuit Breaker Lighting and Distribution Panel Boards

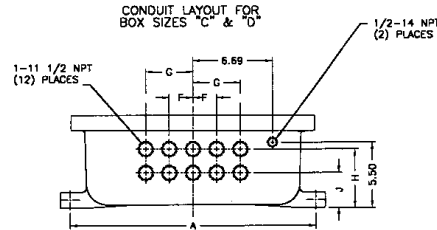
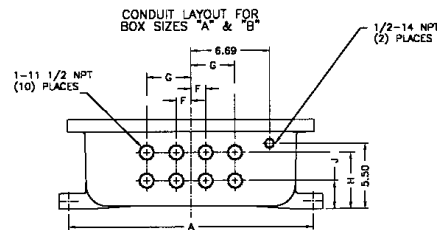
Explosionproof and Dust-Ignitionproof

ENCLOSURE DIMENSIONS & DATA SHEET



CONDUIT ENTRIES

Enclosure Size	Conduit Entries			
	1/2" NPT	1" NPT	2" NPT	3" NPT
A	Top	(1)	—	(1)
	Side	—	(2)	—
	Bottom	(1)	(8)	—
B	Top	(1)	—	(1)
	Side	—	(2)	—
	Bottom	(1)	(8)	—
C	Top	(1)	—	(1)
	Side	—	(2)	—
	Bottom	(1)	(10)	—
D	Top	(1)	—	(1)
	Side	—	(2)	—
	Bottom	(1)	(10)	—



Box Size	Internal Dimensions	(A) Mtg Width	(B) Mtg Height	(C) Overall Width	(D) Overall Height	(E) Overall Depth	Mtg. Bolt Size
A	161606	19 3/4	11	20 7/8	20 7/8	11	5/8
B	162406	19 3/4	18 3/8	20 7/8	28 7/8	11 1/2	5/8
C	162806	19 3/4	22 1/2	20 1/2	32 1/2	10 3/4	5/8
D	163406	19 3/4	27	20 1/2	38 1/2	10 3/4	5/8

Box Size	F	G	H	J	K	L	M	N	Weight lbs.
A	1 1/4	3 3/4	4 3/4	2 3/8	3 5/8	1	3 1/2	2 1/2	160
B	1 1/4	3 3/4	4 3/4	2 3/8	3 5/8	3	5	2 1/2	220
C	2	4	4 15/16	2 15/16	4 3/16	5	7	2 1/2	235
D	2	4	4 15/16	2 15/16	4 3/16	8	11	2 1/2	285

8A-7

Motor Control Explosionproof Circuit Breakers - Disconnect Switches

8B-1

EXPLOSIONPROOF AND DUST-IGNITIONPROOF CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; NEMA 7 & 9



Optional XCBH 2-2 handle shown; standard handle is XBO.

BREAKERS: Circuit breakers are thermal magnetic type and are available in frame sizes ranging from 15 to 1200 amperes. Also available as non-automatic circuit interrupters, without automatic overload trip elements for load switching and isolation. In this application short circuit and overload protection must be provided by separate protection device. Breakers also available for magnetic trip only.

The units can be set up for GE, Cutler-Hammer (Westinghouse), Square-D and ITE (Siemens) brand circuit breakers. Consult factory for other brands. Holes for Cutler-Hammer circuit breakers are drilled directly into back wall.

ENCLOSURES: The housings are copper-free cast aluminum alloy. The enclosures are Adalet XCE series with precision ground cover and body joints.

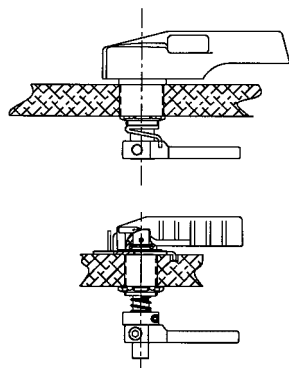
The enclosure design offers sufficient space for wire bending and ease of installation and maintenance. XCBC and larger units are furnished with hinges, and stainless steel cover bolts. The covers are removable for clear access to breakers. For XCBA and XCBB units, hinge and mounting pan are optional.

The front mounted circuit breaker handle is padlockable in either "on" or "off" position.

High interrupting capacity breakers are also available in comparable size.

Approvals:
Enclosure Certifications

Compliances:
Class I, Groups B, C, D
Class II, Groups E, F, G
NEMA 4, 7, 9
UL Classified Enclosure



Optional XCBH Style
"Classic", larger handle.
Special 1" – 1 1/2" NPSM opening required for installation.

Standard XBO Style
"New", spring loaded, compact adjustable design, ease of assembly and less expensive.
Standard 3/4 – 14 NPSM opening required for installation.

Enclosure	UL Classified Enclosure Rating
XCBA, XCBB, XCBC, XCBD, XCBE, XCBF, XCBG	Class 1, Grps BCD
XCBA N4, XCBB N4, XCBC N4, XCBD N4, XCBE N4, XCBF N4, XCBGN4	Class 1, Grps CD

Motor Control Explosionproof Circuit Breakers - Disconnect Switches

Molded Case Circuit Breaker Enclosures (Breaker Included)

Breaker Frame Size	Breaker Interrupting Rating	Volts	Amp Rating	Catalog No.	
				2 Pole Non-Interchangeable	3 Pole Non-Interchangeable
100/150	14,000 Amperes Interrupting Capacity at 480 Volt AC	480 Volt AC	15	XCBA-N4-15E42*	XCBA-N4-15E43*
			20	XCBA-N4-20E42*	XCBA-N4-20E43*
			30	XCBA-N4-30E42*	XCBA-N4-30E43*
			40	XCBA-N4-40E42*	XCBA-N4-40E43*
			50	XCBA-N4-50E42*	XCBA-N4-50E43*
			60	XCBA-N4-60E42*	XCBA-N4-60E43*
		250 Volt DC	70	XCBA-N4-70E42*	XCBA-N4-70E43*
			80	XCBB-N4-80E42*	XCBB-N4-80E43*
			90	XCBB-N4-90E42*	XCBB-N4-90E43*
			100	XCBB-N4-100E42*	XCBB-N4-100E43*
			110	XCBB-N4-110E42*	XCBB-N4-110E43*
			125	XCBB-N4-125E42*	XCBB-N4-125E43*
			150	XCBB-N4-150E42*	XCBB-N4-150E43*
100/150	14,000 Amperes Interrupting Capacity at 600 Volt AC	600 Volt AC	15	XCBA-N4-15E62*	XCBA-N4-15E63*
			20	XCBA-N4-20E62*	XCBA-N4-20E63*
			30	XCBA-N4-30E62*	XCBA-N4-30E63*
			40	XCBA-N4-40E62*	XCBA-N4-40E63*
			50	XCBA-N4-50E62*	XCBA-N4-50E63*
			60	XCBA-N4-60E62*	XCBA-N4-60E63*
		250 Volt DC	70	XCBA-N4-70E62*	XCBA-N4-70E63*
			80	XCBB-N4-80E62*	XCBB-N4-80E63*
			90	XCBB-N4-90E62*	XCBB-N4-90E63*
			100	XCBB-N4-100E62*	XCBB-N4-100E63*
			110	XCBB-N4-110E62*	XCBB-N4-110E63*
			125	XCBB-N4-125E62*	XCBB-N4-125E63*
			150	XCBB-N4-150E62*	XCBB-N4-150E63*
225/250	18,000 Amperes Interrupting Capacity at 600 Volt AC	600 Volt DC	70	XCBC-N4-70JN2*	XCBC-N4-70JN3*
			90	XCBC-N4-90JN2*	XCBC-N4-90JN3*
			100	XCBC-N4-100JN2*	XCBC-N4-100JN3*
			125	XCBC-N4-125JN2*	XCBC-N4-125JN3*
			150	XCBC-N4-150JN2*	XCBC-N4-150JN3*
			175	XCBC-N4-175JN2*	XCBC-N4-175JN3*
			200	XCBC-N4-200JN2*	XCBC-N4-200JN3*
			225	XCBC-N4-225JN2*	XCBC-N4-225JN3*
			250	XCBC-N4-250JN2*	XCBC-N4-250JN3*

* Circuit breaker brand suffix:

W-Cutler-Hammer (Westinghouse)

G-General Electric

S-Square-D

T-I.T.E. (Siemens)

8B-2

Motor Control Explosionproof Circuit Breakers - Disconnect Switches

8B-3

Molded Case Circuit Breaker Enclosures (Breaker Included)

Breaker Frame Size	Breaker Interrupting Rating	Volts	Amp Rating	Catalog No.	
				2 Pole Non-Interchangeable	3 Pole Non-Interchangeable
400	22,000 Amperes Interrupting Capacity at 600 Volt AC	600 Volt AC	100	XCBD-N4-100KN2*	XCBD-N4-100KN3*
			125	XCBD-N4-125KN2*	XCBD-N4-125KN3*
			150	XCBD-N4-150KN2*	XCBD-N4-150KN3*
		250 Volt DC	175	XCBD-N4-175KN2*	XCBD-N4-175KN3*
			200	XCBD-N4-200KN2*	XCBD-N4-200KN3*
			225	XCBD-N4-225KN2*	XCBD-N4-225KN3*
			250	XCBE-N4-250KN2*	XCBE-N4-250KN3*
			300	XCBE-N4-300KN2*	XCBE-N4-300KN3*
			350	XCBE-N4-350KN2*	XCBE-N4-350KN3*
400	XCBE-N4-400KN2*	XCBE-N4-400KN3*			
600	22,000 Amperes Interrupting Capacity at 600 Volt AC	600 Volt AC	250	XCBE-N4-250LI2*	XCBE-N4-250LI3*
			300	XCBE-N4-300LI2*	XCBE-N4-300LI3*
			350	XCBE-N4-350LI2*	XCBE-N4-350LI3*
		250 Volt DC	400	XCBE-N4-400LI2*	XCBE-N4-400LI3*
			500	XCBF-N4-500LI2*	XCBF-N4-500LI3*
			600	XCBF-N4-600LI2*	XCBF-N4-600LI3*
800	22,000 Amperes Interrupting Capacity at 600 Volt AC	600 Volt AC	400	XCBF-N4-400MI2*	XCBF-N4-400MI3*
			500	XCBF-N4-500MI2*	XCBF-N4-500MI3*
		250 Volt AC	600	XCBF-N4-600MI2*	XCBF-N4-600MI3*
			700	XCBF-N4-700MI2*	XCBF-N4-700MI3*
			800	XCBF-N4-800MI2*	XCBF-N4-800MI3*

Note: For Interchangeable Trip substitute an "I" for "N" in the Catalog Number.
 (Example: XCBC-N4-70JI2)

Fusible Disconnect Switches

Horsepower Rating at 480 Volts	Horsepower Rating at 600 Volts	Amp Rating	Catalog No. 3 Pole
20	20	30	XCBA-N4-30DF3*
40	50	60	XCBA-N4-60DF3*
75	75	100	XCBB-N4-100DF3*
125	150	200	XCBC-N4-200DF3*

Note: (3) Class "J" fuses are optional in the above catalog numbers.

* Circuit breaker brand suffix:

W-Cutler-Hammer (Westinghouse)

G-General Electric

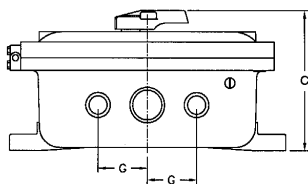
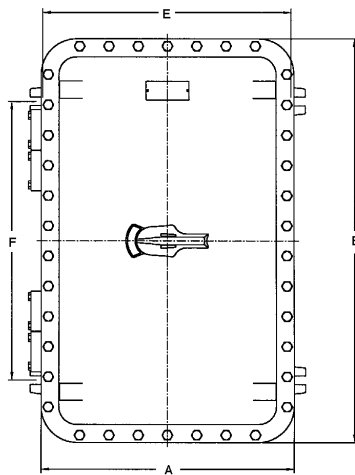
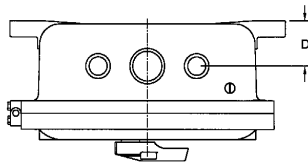
S-Square-D

T-I.T.E. (Siemens)

Motor Control Explosionproof Circuit Breakers - Disconnect Switches

Non-Fused Disconnect Switches

Horsepower Rating at 480 Volts	Horsepower Rating at 600 Volts	Amp Rating	Catalog No. 3 Pole
20	25	30	XCBA-N4-30DN3
40	60	60	XCBA-N4-60DN3
75	75	100	XCBB-N4-100DN3
125	150	200	XCBC-N4-200DN3



Circuit Breaker Enclosure Only

Breaker Frame Size	Trip Range	Catalog Number
100	15-70	XCBA-N4
100/150	80-150	XCBB-N4
225/250	70-250	XCBC-N4
400	100-225	XCBD-N4
400/600	250-400	XCBE-N4
600/800	400-800	XCBF-N4
1200	800-1200	XCBG-N4

CIRCUIT BREAKERS and DISCONNECT OPTIONS

Description	Suffix	Available On		Universal Enclosure Only
		Circuit Breaker	Disconnect Switch	
Auxiliary Switch 1A and 1B Contacts	AS1	•	•	
Auxiliary Switch 2A and 2B Contacts	AS2	•	•	
Bell Alarm (Specify No. of Contacts)	BA	•		
Breather/Drain - installed in bottom	E	•	•	•
Breather and Drain installed	EE	•	•	•
High Interrupting Capacity Breaker	HI	•		
Epoxy Coating (External), (Specify Color)	LI	•	•	•
Epoxy Coating (Internal and External), (Specify Color)	L2	•	•	•
Substitute MCP for Breaker	M	•		
Phenolic Nameplate (Specify Legend)	NP	•	•	•
Shunt Trip (Specify Voltage Rating)	ST	•		
Undervoltage Release (Specify Voltage Rating)	UV	•		
Other / Special	Z	•	•	

Data Dimensions

Enclosure	Nominal Inside Dimensions			Overall Dimensions			Mounting CL to CL		Mounting Bolt Size	Conduit Dimension		Conduit # of Holes		Shipping Weight
	Width	Length	Depth	A	B	C	E	F		D	G	Size	Top/Bottom	Pounds
XCBA-N4	6	11	5	9 1/4	14 1/4	9	9 1/8	7 1/2	7/16	2 1/2	—	1 1/4	1	28
XCBB-N4	6	13	5	9 1/4	16 1/4	9	9 1/8	9 1/2	3/8	2 1/2	—	2	1	31
XCBC-N4	7	18	5	10 3/8	21 5/8	9	9 3/4	14 1/2	3/8	2 3/4	—	2 1/2	1	47
XCBD-N4	12	20	5	16 1/4	24 1/4	10	15 3/4	14 3/8	1/2	3 1/4	—	2 1/2	1	108
XCBE-N4	12	24	6	16 1/4	28 1/4	11	15 3/4	18 3/8	1/2	3 5/8	2 7/8	3	2	131
XCBF-N4	12	36	8	16 1/4	40 1/4	13 1/2	15 3/4	29	5/8	4 1/2	3 3/8	4	2	237
XCBG-N4	12	46	8	16 1/4	50 1/4	13 3/8	15 3/4	39	5/8	4 1/2	3 3/8	4	2	286

All enclosures have 1/2" NPT top and bottom for breather drain.

8B-4

Motor Control Explosionproof Motor Starters

8C-1



XCBSLQN4

Features:

- Lightweight, corrosion resistant, copper-free aluminum alloy (0.3% max. copper content).
- Uniform wall thickness (not ribbed) for versatility of conduit openings assuring 5 full thread engagement and maximum available area for conduit drilling and tapping.
- Captive stainless steel cover bolts resist corrosion and cannot get lost.
- Ground lug is highly visible and accessible.
- Bolted flange design provides clear access to internal components.
- Rugged cast aluminum handle allows locking in "on" or "off" position with as many as three padlocks.
- Clevis assembly allows closing of door with breaker handle assembly in any position without damage to breaker and without internal mounting hardware.
- All operating shafts are stainless steel for corrosion resistance.
- Durable cast-on lugs cannot get lost.
- Backpan accommodates most popular brands of circuit breaker and motor circuit protectors and motor starters.
- Two predrilled and tapped operator holes furnished with explosionproof plugs for field installation of pilot devices.
- Two additional optional holes available.
- Aluminum hinges with stainless steel hinge pins are "lift-off" so the cover can be easily removed.
- Easily adjustable reset button allows for starter changes in the field.
- N4 gasket furnished as standard on combination starters.
- Narrow design on combination starter through size 2 allows closer spacing on switchracks while providing ample room to mount control transformer on the backpan.
- XCBSAQ and XCBSBQ provided with XBO breaker handle as standard.

Compliances:

- NEC: Class I, Groups B, C, D
Class II, Groups E, F, G
Class III
- UL Standard 1203
Hazardous (Classified) Locations
- CSA Standard C22.2 No. 30
- NEMA: 3, 3R, 4, 7BCD, 9EFG, 12

Certifications



Note: Consult Factory for approvals and certifications on specific enclosures.

Motor Control Explosionproof Motor Starters

Universal Enclosures Only (does not include breaker or starter) Class I, Groups C and D; Class II, Groups E, F & G; Class III, Type 3, 3R, 4,7CD, 9EFG, 12

8C-2

Combination full voltage non-reversing starters

<u>Max Starter Nema Size</u>	<u>Standard Breaker Frame Size</u>	<u>Enclosure</u>
1	100	XCBSAQ-N4
2	100	XCBSBQ-N4
3	100	XCBSLQ-N4
4	225/250	XCBSMQ-N4
5	400	XCBSN -N4

Combination full voltage reversing starters

<u>Max Starter Nema Size</u>	<u>Standard Breaker Frame</u>	<u>Enclosure</u>
1	100	XCMRSG-N4
2	100	XCMRSK-N4
3	100	XCMRSP-N4

For Group B applications delete suffix "N4"

Class I, Groups C and D; Class II, Groups E, F & G; Class III, Type 7CD, 9EFG Type 4

Across the line full voltage non-reversing starters

<u>Starter Nema Size</u>	<u>Enclosure</u>
1	XMSB-N4
2	XMSD-N4
3 & 4	XMSH-N4
5	XMSQ-N4

Across the line full voltage reversing starters

<u>Starter Nema Size</u>	<u>Enclosure</u>
1	XMRSC -N4
2	XMRSF -N4
3 & 4	XMRSO -N4

For Group B applications delete suffix "N4"

For two-speed, Y-Delta, reduced voltage, or multiple starter packages consult factory for availability.

Motor Control Explosionproof Motor Starters

Combination Starter Enclosures (includes breaker and starter) Full voltage non-reversing

8C-3

240 Volt AC Motor Thermal Magnetic Breaker † / 120 Volt AC Coil

Maximum HP	Nema Size	Catalog Number
2	0	XCBSAQ-N4-2015
3	0	XCBSAQ-N4-2020
5	1	XCBSAQ-N4-2130
7 1/2	1	XCBSAQ-N4-2150
10	2	XCBSBQ-N4-2270
15	2	XCBSBQ-N4-22100
20	3	XCBSLQ-N4-23100
30	3	XCBSLQ-N4-23125
40	4	XCBSMQ-N4-24175
50	4	XCBSMQ-N4-24200
60	5	XCBSN-N4-25225
75	5	XCBSN-N4-25300
100	5	XCBSN-N4-25400

480 Volt AC Motor Thermal Magnetic Breaker † / 120 Volt AC Coil

Maximum HP	Nema Size	Catalog Number
2	0	XCBSAQ-N4-4015
5	0	XCBSAQ-N4-4020
10	1	XCBSAQ-N4-4130
25	2	XCBSBQ-N4-4270
30	3	XCBSLQ-N4-4370
50	3	XCBSLQ-N4-43100
75	4	XCBSMQ-N4-44175
100	4	XCBSMQ-N4-44200
125	5	XCBSN-N4-45225
150	5	XCBSN-N4-45300
200	5	XCBSN-N4-45400

600 Volt AC Motor Thermal Magnetic Breaker † / 120 Volt AC Coil

Maximum HP	Nema Size	Catalog Number
2	0	XCBSAQ-N4-6015
5	0	XCBSAQ-N4-6020
10	1	XCBSAQ-N4-6130
25	2	XCBSBQ-N4-6250
30	3	XCBSLQ-N4-6370
50	3	XCBSLQ-N4-63100
75	4	XCBSMQ-N4-64125
100	4	XCBSMQ-N4-64175
125	5	XCBSN-N4-65200
150	5	XCBSN-N4-65225
200	5	XCBSN-N4-65400

480/600 Volt AC Motor Motor Circuit Protector † / 120 Volt AC Coil

Maximum HP	Nema Size	Catalog Number
1	0	XCBSAQ-N4-M6003
2	0	XCBSAQ-N4-M6007
5	0	XCBSAQ-N4-M6015
10	1	XCBSAQ-N4-M6130
25	2	XCBSBQ-N4-M6250
50	3	XCBSLQ-N4-M63100
100	4	XCBSMQ-N4-M64150
200	5	XCBSN-N4-M65400

† Trip rating is last 2-3 digits of catalog number

For Group B applications delete "N4" from catalog number and insert "H"

Note: Overload Heaters Not Included, See Options

Motor Control Explosionproof Motor Starters

Combination Starter Enclosures (includes breaker and starter) Full voltage reversing

240 Volt AC Motor
Thermal Magnetic Breaker † / 120 Volt AC Coil

Maximum HP	Nema Size	Catalog Number
2	0	XCMRSG-N4-2015
3	0	XCMRSG-N4-2020
5	1	XCMRSG-N4-2130
7 1/2	1	XCMRSG-N4-2150
10	2	XCMRSK-N4-2270
15	2	XCMRSK-N4-22100
20	3	XCMRSP-N4-23100
30	3	XCMRSP-N4-23125

480 Volt AC Motor
Thermal Magnetic Breaker † / 120 Volt AC Coil

Maximum HP	Nema Size	Catalog Number
2	0	XCMRSG-N4-4015
5	0	XCMRSG-N4-4020
10	1	XCMRSG-N4-4130
25	2	XCMRSK-N4-4270
40	3	XCMRSP-N4-43100
50	3	XCMRSP-N4-43125

600 Volt AC Motor
Thermal Magnetic Breaker † / 120 Volt AC Coil

Maximum HP	Nema Size	Catalog Number
2	0	XCMRSG-N4-6015
5	0	XCMRSG-N4-6020
10	1	XCMRSG-N4-6130
25	2	XCMRSK-N4-6250
50	3	XCMRSP-N4-63100

480/600 Volt AC Motor
Motor Circuit Protector † / 120 Volt AC Coil

Maximum HP	Nema Size	Catalog Number
1	0	XCMRSG-N4-M6003
2	0	XCMRSG-N4-M6007
5	0	XCMRSG-N4-M6015
10	1	XCMRSG-N4-M6130
25	2	XCMRSK-N4-M6250
50	3	XCMRSP-N4-M63100
100	4	XCMRSP-N4-M64150

† Trip rating is last 2-3 digits of catalog number
For Group B applications delete "N4" from catalog number
Note: Overload Heaters Not Included, See Options

Magnetic Full Voltage Starter Enclosures (includes starter)

Full voltage non-reversing starters
120 Volt AC Coil

Maximum HP @			Nema Size	Catalog Number
240V	480V	600V		
3	5	5	0	XMSB-60
7 1/2	10	10	1	XMSB-61
15	25	25	2	XMSD-62
30	50	50	3	XMSH-63
50	100	100	4	XMSH-64
100	200	200	5	XMSQ-65

Full voltage reversing starters
120 Volt AC Coil

Maximum HP @			Nema Size	Catalog Number
240V	480V	600V		
3	5	5	0	XMRSC-60
7 1/2	10	10	1	XMRSC-61
15	25	25	2	XMRSF-62
30	50	50	3	XMRSO-63
50	100	100	4	XMRSO-64

For Nema 4 applications insert "N4" before number 6
Note: Overload Heaters Not Included, See Options

8C-4

Motor Control Explosionproof Motor Starters

Options, Dimensions and Ordering Instructions

8C-5

Description	Suffix	Combination Starter	Available On Non-Combination Starter	Universal Enclosure Only
Start/Stop Dual Pushbutton (1NO Start, 1NC Stop)	A	•	•	•
Green Start Pushbutton (1NO)	A1	•	•	•
Red Stop Pushbutton (1NC)	A2	•	•	•
Red Stop Pushbutton, Mushroom Head (1NC)	A3	•	•	•
Black Pushbutton (1NO, 1NC)	A4	•	•	•
Auxiliary Switch on Breaker (1A and 1B Contacts)	AS1	•		
Auxiliary Switch on Breaker (2A and 2B Contacts)	AS2	•		
Hand-Off-Auto Selector Switch	B	•	•	•
Selector Switch (2-Position) (1NO, 1NC)	B1	•	•	•
Bell Alarm Switch on Breaker (Specify No. of Contacts)	BA	•		
Pilot Light 120 Volt AC (*See Color Table)	C1*	•	•	•
Pilot Light with Guard 120 Volt AC (*See Color Table)	CG1*	•	•	•
Push-to-Test Light 120 Volt AC (1NO, 1NC) (*See Color Table)	CP1*†	•	•	•
Breather/Drain Installed in Bottom	E\$	•	•	•
Breather and Drain Installed	EE\$	•	•	•
Auxiliary Contacts on Starter (+NO, -NC) (Specify No. of Contacts)	G (+ -)	•	•	
Time Delay Relay-On Delay (Specify Range)	H1	•	•	
Time Delay Relay-Off Delay (Specify Range)	H2	•	•	
8-Point Terminal Strip	K	•	•	
Epoxy Coating External Only (Specify Color)	L1	•	•	•
Epoxy Coating External and Internal (Specify Color)	L2	•	•	•
Lamacoid Nameplate (Specify Legend)	NP	•	•	•
Overload Heaters (Specify Full Load Amps)	OL	•	•	
Control Relay (Description Required)	R	•	•	
Space Heater (Specify Wattage)	S	•	•	
Shunt Trip on Breaker (Specify Voltage)	ST	•		
50 VA Control Transformer 480V Pri, 120V Sec. W/Fuse Block††	T1F	•	•	
100 VA Control Transformer 480V Pri, 120V Sec. W/Fuse Block††	T2F	•	•	
150 VA Control Transformer 480V Pri, 120V Sec. W/Fuse Block††	T3F	•	•	
200 VA Control Transformer 480V Pri, 120V Sec. W/Fuse Block††	T4F	•	•	
250 VA Control Transformer 480V Pri, 120V Sec. W/Fuse Block††	T5F	•	•	
300 VA Control Transformer 480V Pri, 120V Sec. W/Fuse Block††	T6F	•	•	
Other Control Transformer (Specify VA, Pri. And Sec.)	T7	•	•	
Undervoltage Release on Breaker (Specify Voltage Rating)	UV	•		
Internal Control Wiring	W	•	•	
Other (Specify)	Z	•	•	•

*Color Table

R-Red

G-Green

A-Amber

B-Blue

C-Clear

W-White

† Not available in Group B applications

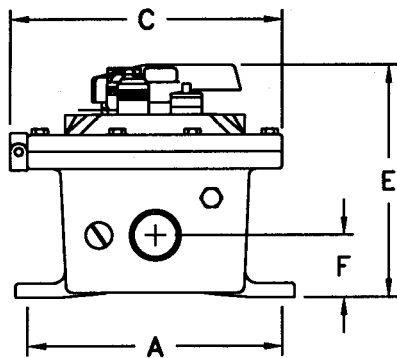
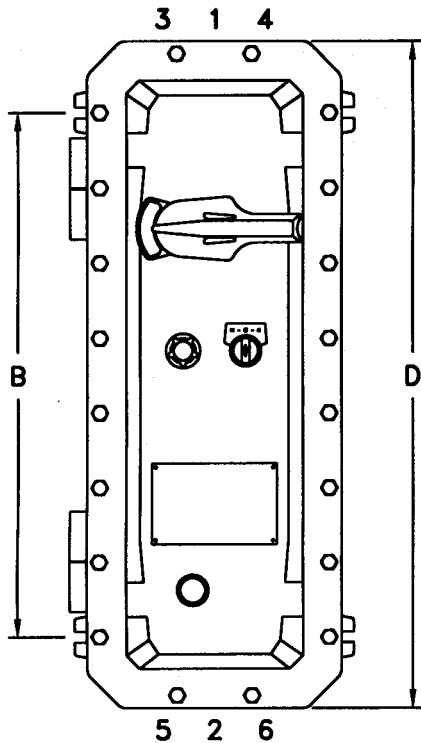
†† Fuses Included

\$ for Group B applications add H to the suffix

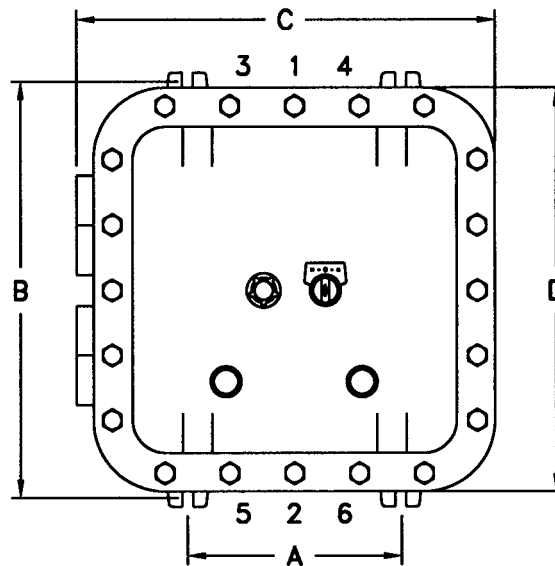
Motor Control Explosionproof Motor Starters

DIMENSIONS

Enclosure	Nom. Inside Dim.	Nominal Dimensions In Inches							Est. Ship. Wt.	Cond. Size
		A	B	C	D	E	F	G		
\$ *XCBSAQ-N4	062305	4 1/8	25 1/2	11 1/8	26 15/16	9 11/16	2 1/2	3 & 5	61	1 1/2
\$ *XCBSBQ-N4	072706	4 3/4	29 7/8	11 13/16	31 1/8	10 1/2	2 13/16	3 & 5	87	1 1/2
XCBSLQ-N4	122408	15 3/4	18 3/8	16 15/16	28 1/4	12 15/16	3	3 & 5	160	2
XCBSMQ-N4	123608	15 3/4	29	16 15/16	40 1/4	13 3/8	3 5/8	3 & 5	260	2 1/2
XCBSN-N4	164610	19 3/4	39	21 3/4	50 7/8	16 7/16	4 7/8	3 & 5	420	4
XCMRSG-N4	121808	15 3/4	14 1/8	17	22 1/4	12 5/8	2 13/16	3 & 6	100	1 1/4
XCMRSK-N4	122406	15 3/4	18 3/8	17	28 1/4	10 15/16	3 5/16	3 & 5	130	2
XCMRSP-N4	183608	21 3/4	29	23 3/4	40 7/8	14 3/4	4 1/8	3 & 5	395	2
†XMSB	081006	10 3/4	6 1/2	12	13 3/8	8 1/4	2 3/8	3 & 6	36	1
†XMSD	101406	13	10 5/8	14	17 3/8	8 3/8	2 3/4	3 & 6	55	1 1/2
†XMSH	121808	15 3/4	14 1/8	17	22 1/4	10 3/4	3 1/2	3 & 6	105	2 1/2
†XMSQ	183610	21 3/4	29	23 3/4	40 7/8	14 7/8	4 5/16	3 & 6	380	3
\$ † XMRSC	101406	10 5/8	13	18	13 3/8	8 3/8	2 1/4	3 & 5	55	1
\$ † XMRSF	121206	8 5/8	15 3/4	17	16 1/4	8 15/16	3	3 & 6	85	1 1/2
\$ † XMRSO	181808	13	21 3/4	23 3/4	22 7/16	12 7/16	3 7/8	3 & 6	190	2 1/2



VIEW A



VIEW B

Standard conduit openings at locations 1 and 2, control circuit opening 3/4" NPT at locations shown in column "G". Each housing has one 1/2" NPT top & bottom for breather and drain.

- * Mounting feet on top and bottom.
- † No breaker handle furnished.
- \$ Use view "B" for mounting dimensions.

8C-6

Explosionproof Enclosures & Components - IEC Motor Control



Explosionproof enclosures suitable for housing IEC (International Electrotechnical Commission) style motor starters and combination starters. Sizes from 8" x 8" x 4" up to 12" x 18" x 6". Design options include: pushbutton and switch operators, pilot lights, push-to-test lights, breather/drains, auxiliary contacts, Lamacold™ nameplates, and control transformers with fuse blocks.

Enclosures are classified by UL/cUL as to explosion and fire hazards.

Compliances:

Class I, Groups C, D
Class II, Groups E, F, G
Type 4



IEC Motor Starters - Starters Included

For ABB Components

Catalog Number	Enclosure Size	Amp Rating	HP at 480 Volts
XSIAA9	XCE 080804	9	5
XSIAA11	XCE 080804	11	7.5
XDIAA17	XCE 080804	17	10
XSIAA25	XCE 080806	25	15
XSICA28	XCE 101006	28	20
XSICA32	XCE 101006	32	25
XSICA41	XCE 101006	41	30
XSICA54	XCE 101006	54	40
XSIDA65	XCE 101206	65	50
XSIDA80	XCE 101206	80	60
XSIEA110	XCE 1014D6	110	75

For Cutler-Hammer Components

XSIAH10	XCE 080804	9	5
XSIAH12	XCE 080804	12	7.5
XSIAH18	XCE 080804	18	10
XSIAH25	XCE 080804	25	15
XSICH32	XCE 101006	32	20
XSICH37	XCE 101006	37	25
XSICH44	XCE 101006	44	30
XSICH60	XCE 101006	60	40
XSIDH73	XCE 101206	73	50

For Siemens Components

XSIAS9	XCE 080804	9	5
XSIAS12	XCE 080804	12	7.5
XSIAS17	XCE 080804	17	10
XSIAS25	XCE 080804	25	15
XSICS28	XCE 101006	28	20
XSICS32	XCE 101006	32	25
XSICS40	XCE 101006	40	30
XSICS50	XCE 101006	50	40
XSIDS65	XCE 101206	65	50
XSIDS80	XCE 101206	80	60
XSIDS95	XCE 101206	95	75

For Square D Components

XSIAD9	XCE 080804	9	5
XSIAD12	XCE 080804	12	7.5
XSIAD18	XCE 080804	18	10
XSIBD25	XCE 080806	25	15
XSIBD32	XCE 080806	32	20
XSICD37	XCE 101006	37	25
XSICD40	XCE 101006	40	30
XSICD50	XCE 101006	50	40
XSIDD65	XCE 101206	65	50
XSIDD80	XCE 101206	80	60

IEC Combination Motor Starters - Components Included

For ABB Components

Catalog Number	Enclosure Size	Amp Rating	HP at 480 Volts
XCIAA9	XCE 1014D6	9	5
XCIAA11	XCE 1014D6	11	7.5
XCIAA17	XCE 1014D6	17	10
XCIAA25	XCE 1014D6	25	15
XCIAA28	XCE 1014D6	28	20
XCIAA32	XCE 1014D6	32	25
XCIAA41	XCE 1014D6	41	30
XCIAA54	XCE 1014D6	54	40
XCIAA65	XCE 1014D6	65	50
XCIBB80	XCE 121806	80	60
XCIBB110	XCE 121806	110	75

For Cutler-Hammer Components

XCIAH10	XCE 1014D6	10	5
XCIAH12	XCE 1014D6	12	7.5
XCIAH18	XCE 1014D6	18	10
XCIAH25	XCE 1014D6	25	15
XCIAH32	XCE 1014D6	32	20
XCIAH37	XCE 1014D6	37	25
XCIAH44	XCE 1014D6	44	30
XCIAH60	XCE 1014D6	50	40
XCIAH73	XCE 1014D6	73	50

For Siemens Components

XCIAS9	XCE 1014D6	9	5
XCIAS12	XCE 1014D6	12	7.5
XCIAS17	XCE 1014D6	17	10
XCIAS25	XCE 1014D6	25	15
XCIAS28	XCE 1014D6	28	20
XCIAS32	XCE 1014D6	32	25
XCIAS40	XCE 1014D6	40	30
XCIAS50	XCE 1014D6	50	40
XCIBS65	XCE 121806	65	50
XCIBS80	XCE 121806	80	60
XCIBS95	XCE 121806	95	75

For Square D Components

XCIAD9	XCE 1014D6	9	5
XCIAD12	XCE 1014D6	12	7.5
XCIAD18	XCE 1014D6	18	10
XCIAD25	XCE 1014D6	25	15
XCIAD32	XCE 1014D6	32	20
XCIAD37	XCE 1014D6	37	25
XCIAD40	XCE 1014D6	40	30
XCIAD50	XCE 1014D6	50	40
XCIAD65	XCE 1014D6	65	50
XCIBD80	XCE 121806	80	60

Explosionproof Enclosures & Components - IEC Motor Control

IEC Motor Starters *Enclosures only*

For ABB Components

Catalog Number	Enclosure Size	Amp Rating	HP at 480 Volts
XSIAA	XCE 080804	9	5
XSIAA	XCE 080804	11	7.5
XSIAA	XCE 080804	17	10
XSIAA	XCE 080804	25	15
XSICA	XCE 101006	28	20
XSICA	XCE 101006	32	25
XSICA	XCE 101006	41	30
XSICA	XCE 101006	54	40
XSIDA	XCE 101206	65	50
XSIDA	XCE 101206	80	60
XSIEA	XCE 1014D6	110	75

For Cutler-Hammer Components

XSIAH	XCE 080804	10	5
XSIAH	XCE 080804	12	7.5
XSIAH	XCE 080804	18	10
XSIAH	XCE 080804	25	15
XSICH	XCE 101006	32	20
XSICH	XCE 101006	37	25
XSICH	XCE 101006	44	30
XSICH	XCE 101006	60	40
XSIDH	XCE 101206	73	50

For Siemens Components

XSIAS	XCE 080804	9	5
XSIAS	XCE 080804	12	7.5
XSIAS	XCE 080804	17	10
XSIAS	XCE 080804	25	15
XSICS	XCE 101006	28	20
XSICS	XCE 101006	32	25
XSICS	XCE 101006	40	30
XSICS	XCE 101006	50	40
XSIDS	XCE 101206	65	50
XSIDS	XCE 101206	80	60
XSIDS	XCE 101206	95	75

For Square D Components

XSIAD	XCE 080804	9	5
XSIAD	XCE 080804	12	7.5
XSIAD	XCE 080804	18	10
XSIBD	XCE 080806	25	15
XSIBD	XCE 080806	32	20
XSICD	XCE 101006	37	25
XSICD	XCE 101006	40	30
XSICD	XCE 101006	50	40
XSIDD	XCE 101206	65	50
XSIDD	XCE 101206	80	60

IEC Combination Motor Starters *Enclosures only*

For ABB Components

Catalog Number	Enclosure Size	Amp Rating	HP at 480 Volts
XCIAA	XCE 1014D6	9	5
XCIAA	XCE 1014D6	11	7.5
XCIAA	XCE 1014D6	17	10
XCIAA	XCE 1014D6	25	15
XCIAA	XCE 1014D6	28	20
XCIAA	XCE 1014D6	32	25
XCIAA	XCE 1014D6	41	30
XCIAA	XCE 1014D6	54	40
XCIAA	XCE 1014D6	65	50
XCIBB	XCE 121806	80	60
XCIBB	XCE 121806	110	75

For Cutler-Hammer Components

XCIAH	XCE 1014D6	10	5
XCIAH	XCE 1014D6	12	7.5
XCIAH	XCE 1014D6	18	10
XCIAH	XCE 1014D6	25	15
XCIAH	XCE 1014D6	32	20
XCIAH	XCE 1014D6	37	25
XCIAH	XCE 1014D6	44	30
XCIAH	XCE 1014D6	60	40
XCIAH	XCE 1014D6	73	50

For Siemens Components

XCIAS	XCE 1014D6	9	5
XCIAS	XCE 1014D6	12	7.5
XCIAS	XCE 1014D6	17	10
XCIAS	XCE 1014D6	25	15
XCIAS	XCE 1014D6	28	20
XCIAS	XCE 1014D6	32	25
XCIAS	XCE 1014D6	40	30
XCIAS	XCE 1014D6	50	40
XCIBS	XCE 121806	65	50
XCIBS	XCE 121806	80	60
XCIBS	XCE 121806	95	75

For Square D Components

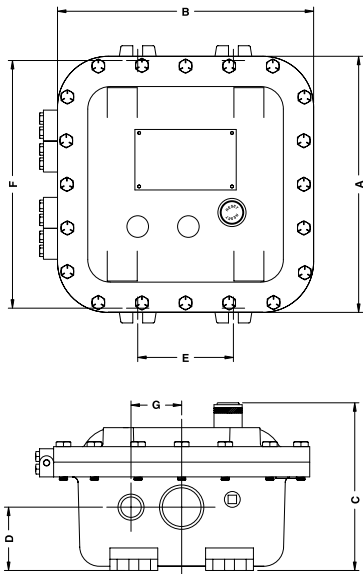
XCIAD	XCE 1014D6	9	5
XCIAD	XCE 1014D6	12	7.5
XCIAD	XCE 1014D6	18	10
XCIAD	XCE 1014D6	25	15
XCIAD	XCE 1014D6	32	20
XCIAD	XCE 1014D6	37	25
XCIAD	XCE 1014D6	40	30
XCIAD	XCE 1014D6	50	40
XCIAD	XCE 1014D6	65	50
XCIBD	XCE 121806	80	60

8D-2

Explosionproof Enclosures & Components - IEC Motor Control

8D-3

Starters Diagram



Combination Diagram

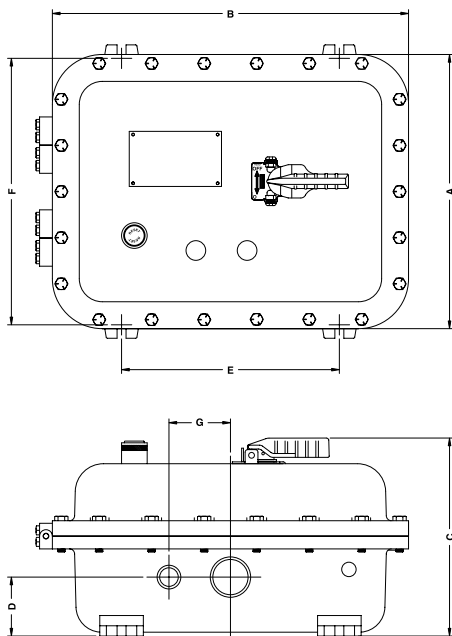


Diagram Specifications

Catalog No.	Base Enclosure XCE	A	Overall B	C	MTG E	MTG F	MTG BOLT	Conduit D	Location G	Conduit Size	Weight
Starters											
XSIA	080804	11.38	11.38	7.75	4.25	11	3/8	2.81	2.25	1-1/2	26
XSIB	080806	11.38	11.38	9.75	4.25	11	3/8	3.81	2.25	1-1/2	30
XSIC	101006	13.38	13.38	9.62	6.5	13	3/8	3.88	2.50	2	46
XSID	101206	13.38	15.38	10.25	8.5	13.25	3/8	4.13	2.5	2	48
XSIE	1014D6	13.38	17.38	9.75	10.62	13.25	3/8	2.88	2.5	2	51
Combinations											
XCIA	1014D6	13.38	17.38	9.75	10.62	13.25	3/8	2.88	3.0	1-1/2	51
XCIB	121806	16.25	22.25	10.12	14.12	15.75	1/2	4.00	3.0	2	95

Options

Description	Suffix	Combination Starter	Available On Non-Combination Starter	Universal Enclosure Only
Start/Stop Dual Pushbutton (1NO Start, 1NC Stop)	A	•	•	•
Green Start Pushbutton (1NO)	A1	•	•	•
Red Stop Pushbutton (1NC)	A2	•	•	•
Red Stop Pushbutton, Mushroom Head (1NC)	A3	•	•	•
Black Pushbutton (1NO, 1NC)	A4	•	•	•
Hand-Off-Auto Selector Switch	B	•	•	•
Selector Switch (2-Position) (1NO, 1NC)	B1	•	•	•
Pilot Light 120 Volt AC (*See Color Table)	C1*	•	•	•
Pilot Light with Guard 120 Volt AC (*See Color Table)	CG1*	•	•	•
Push-to-Test Light 120 Volt AC (1NO, 1NC) (*See Color Table)	CP1*†	•	•	•
Breather/Drain Installed in Bottom	E	•	•	•
Breather and Drain Installed	EE	•	•	•
Auxiliary Contacts on Starter (+NO,-NC) (Specify No. of Contacts)	G(+ -)	•	•	•
Lamacold Nameplate (Specify Legend)	NP	•	•	•
50 VA Control Transformer 480V Pri, 120V Sec. W/Fuse Block	T1F	•	•	•
100 VA Control Transformer 480V Pri, 120V Sec. W/Fuse Block	T2F	•	•	•
150 VA Control Transformer 480V Pri, 120 V Sec. W/Fuse Block	T3F	•	•	•
200 VA Control Transformer 480V Pri, 120V Sec. W/Fuse Block	T4F	•	•	•

*Color Table R-Red G-Green A-Amber B-Blue C-Clear W-White
 †Not available in Group B applications

Motor Control Explosionproof Motor Starters

MANUAL MOTOR STARTERS

Type XLS Manual Motor Starting Switches are furnished complete with switch and interchangeable heaters. The XLS housings are cast aluminum alloy and have a trouble free operating lever threaded through the cover.

Catalog Number	Number of Hubs	Conduit Size	Poles	Mfg. Bolt Size	Weight (lbs.)
XLSC21 †*	2	1/2	1	1/4"	2 3/4
XLSC22 †*	2	1/2	2	1/4"	2 3/4
XLSC31 †*	2	3/4	1	1/4"	2 3/4
XLSC32 †*	2	3/4	2	1/4"	2 3/4
XLSC2 **	2	1/2	-	1/4"	2 3/4
XLSC3 **	2	3/4	-	1/4"	2 3/4

† = HP Rating
* = Heater Table

MAXIMUM HORSEPOWER RATINGS

†Adalet Symbol	Make & Catalog No.	Poles	115-230 Volts AC	32 Volts DC	115 Volts DC	230 Volts DC
1B	Westinghouse MST01	1	1 H.P.	1/4 H.P.	1/4 H.P.	1/4 H.P.
2B	Westinghouse MST02	2	1 H.P.	1/4 H.P.	1 H.P.	1 H.P.
1C	GE CR101Y	1	1 H.P.	-	1 H.P.	1/4 H.P.
2C	GE CR101H	2	1 H.P.	-	1 H.P.	1 H.P.

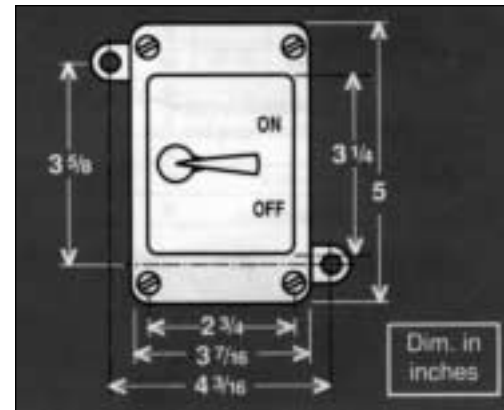
The following tables list interchangeable Heater elements for each manufacturer. The elements are not interchangeable between manufacturers. The heater elements listed are for motors rated 40°C continuous. For motors rated 50°C or 55°C, multiply by 0.9 and use this value to select heaters.

WESTINGHOUSE

*Adalet Symbol	Motor Full Load Current	*Adalet Symbol	Motor Full Load Current	*Adalet Symbol	Motor Full Load Current
1	.40 - .43	14	1.36 - 1.51	27	4.80 - 5.26
2	.44 - .48	15	1.52 - 1.67	28	5.27 - 5.83
3	.49 - .53	16	1.68 - 1.83	29	5.84 - 6.39
4	.54 - .58	17	1.84 - 1.99	30	6.40 - 7.03
5	.59 - .64	18	2.00 - 2.23	31	7.04 - 7.74
6	.65 - .71	19	2.24 - 2.47	32	7.75 - 8.46
7	.72 - .78	20	2.48 - 2.71	33	8.47 - 9.35
8	.79 - .87	21	2.72 - 2.95	34	9.36 - 10.30
9	.88 - .95	22	2.96 - 3.27	35	10.31 - 11.35
10	.96 - 1.03	23	3.28 - 3.59	36	11.36 - 12.47
11	1.04 - 1.15	24	3.60 - 3.99	37	12.48 - 13.67
12	1.16 - 1.27	25	4.00 - 4.39	38	13.68 - 15.12
13	1.28 - 1.35	26	4.40 - 4.79	39	15.13 - 16.00

GE

1	.48	15	1.78	29	5.90
2	.53	16	1.95	30	6.41
3	.58	17	2.13	31	6.98
4	.65	18	2.32	32	7.60
5	.71	19	2.53	33	8.25
6	.78	20	2.76	34	8.95
7	.86	21	3.01	35	9.75
8	.95	22	3.27	36	10.60
9	1.04	23	3.56	37	11.40
10	1.14	24	3.88	38	12.50
11	1.25	25	4.22	39	13.60
12	1.37	26	4.60	40	14.80
13	1.49	27	5.00	41	16.00
14	1.63	28	5.43		



How To Order: To determine the complete catalog number, select the unit wanted and add the Adalet symbol numbers for the make of starter wanted and the heaters required. Select heaters from charts.

** Enclosure less switch - for CSA certified switches rated 600V max, 30 amp max, 15HP max.

Certifications

Class I, Groups C & D
Class II, Groups E, F & G



8E-1

Motor Control Explosionproof Motor Starter/Protector

8E-2

Universal Enclosure Only

To order universal motor starter/protector enclosure, specify enclosure for desired brand of switch and add options from table below.

Enclosure Catalog Numbers

Catalog Number	Number of Hubs	Conduit Size	Suitable Switch Brands
XMMSA1	2	3/4"	Klockner Moeller, Allen Bradley, GE, AEG, Square D
XMMSA2	2	3/4"	Sprecher & Schuh

Enclosures have 1/2" NPT-plugged tops and bottoms to accommodate breather drains.

Example: XMMSA2-EE

describes an enclosure only for a Sprecher & Schuh motor starter with a breather and a drain installed.

Complete Starter Assembly

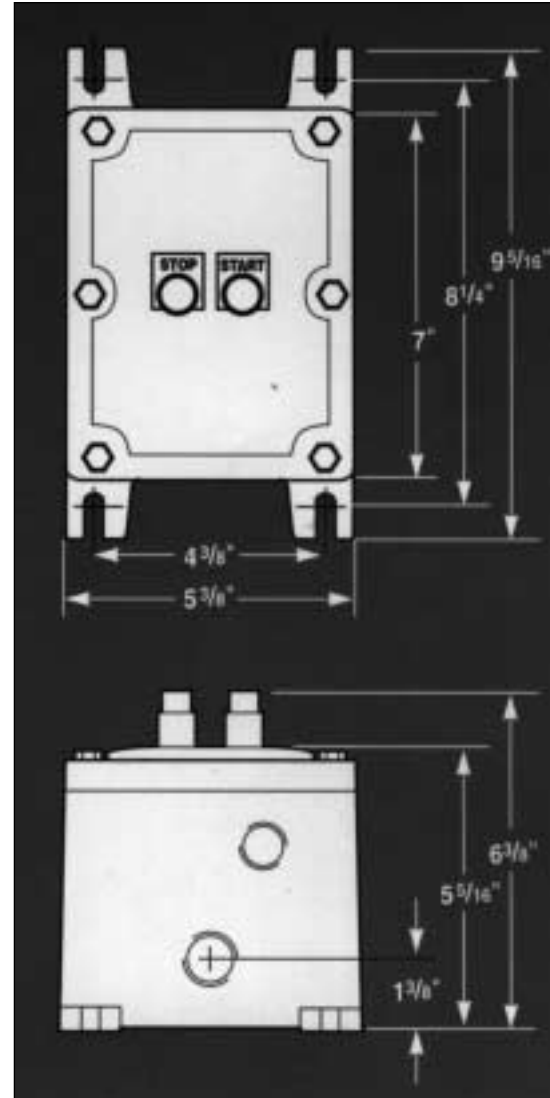
To order a complete starter assembly, specify enclosure number from the table above omitting the last number: insert suffix for switch trip range and options from tables below.

Trip Rating Suffix Table

Suffix	Trip Range (Amps)	Suffix	Trip Range (Amps)	Suffix	Trip Range (Amps)
AT01	.10-.16	AT06	1.0-1.6	AT10	6.0*-10.0
AT02	.16-.25*	AT07	1.6-2.5*	AT11	10.0-16.0*
AT03	.25*-.40	AT08	2.5*-4.0	AT12	16.0*-20.0*
AT04	.40-.60*	AT09	4.0-6.0*	AT13	20.0*-25.0
AT05	.60*-1.0	*May vary slightly depending on brand.			

Example: XMMSA-AT06-AC-C1MG

describes a complete switch assembly with a trip range of 1.0-1.6 amps with 1NO and 1NC auxiliary contacts and a green miniature pilot light installed.



Description	Suffix	Complete Unit	Universal Enclosure Only
Auxiliary Contact (1NO, 1NC)	AC	●	
Amber Miniature Pilot Light	C1MA	●	●
Green Miniature Pilot Light	C1MG	●	●
Red Miniature Pilot Light	C1MR	●	●
Breather/Drain Installed in Bottom	E	●	●
Breather and Drain Installed	EE	●	●
Epoxy Coating External Only	L1	●	●
Epoxy Coating Internal & External	L2	●	●
Lockout Device on Stop P.B.	LD	●	●
Shunt Trip	ST1	●	
Undervoltage Release	UV1	●	

Compliances:

- NEC: Class I, Groups C, D
Class II, Groups E, F, G
- UL Standard 1203
Hazardous (Classified) Locations
- CSA Standard 22.2
- NEMA: 7CD, 9EFG

Approvals:

- UL Classified
 Class I, Groups C, D
Class II, Groups E, F, G
- CSA Certified
 Class I, Groups C, D
Class II, Groups E, F, G

Explosionproof Pilot Devices

CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G



APPLICATIONS

Adalet operators are for use in control circuits functioning in environments containing hazardous gases, vapors or dusts. These heavy duty pilot lights, pushbuttons and selector switches are suitable for use in Class I, Groups B, C & D hazardous gas; Class II, Groups E, F & G dust atmospheres. Most are suitable for weather-tight (N4) applications.

FEATURES:

- Most operators are suitable for NEMA 3, 4, NEMA 7, 9, rain-tight, water-tight in hazardous environments.
- Two lengths available for either surface or panel mount.
- Knurled caps are standard with black anodized finish.
- Optional: specify color-coding of operator caps (no additional cost).
- Pilot light transformers available for 240 volts.
- Special length pilot light wiring leads available.
- Screw terminals available suffix T.
- Coated to minimize corrosion and provide for ease of installation.
- Operators are 3/4" NPSM standard.
- Stainless steel shafts are standard (except pilot light pushbutton operator).

Consult factory for UL/CSA certification availability.

Compliances: NEC Class I, Groups B, C & D - Class II, Groups E, F, G

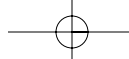
UL Standard 698 - Standard C22.2 No. 30



Notes:

Where reference is made to Class I and Class II hazardous locations, the equipment is suitable for use in both Division 1 and Division 2 hazardous locations.

The Adalet engineering department is available to assist in the selection of custom explosionproof housings for your products.



Explosionproof and Dust-tight Pilot Lights

CLASS I, GROUPS C & D; CLASS II, GROUPS E, F & G; NEMA 3, 4, 7, 9

Explosionproof pilot lights are suitable for panel or surface mount applications. All pilot lights are of sealed construction and can be relamped from the front by removal of lens cap.

All pilot lights are made with 3/4" NPSM threads. All pilot lights have 8" flexible leads, other lengths on special order, or screw terminals.

All lens caps are black anodized aluminum finish. For color coding we will furnish at no additional charge the following color combinations: lens amber-cap gold, lens blue-cap blue, lens clear-cap natural aluminum, lens green-cap green, lens red-cap red, lens white-cap natural aluminum. Specify on orders.

Maximum installation thickness 1 15/16" on Long Series, 3/4" on Short Series.

This standard series of pilot lights is equipped with candelabra base receptacles and 6 watt 120 volt 6S6 clear 1500 hr. avg. lamps. Also available with 6, 12, 24, 30, 50, 75 and 135 volt lamps. Specify voltage desired.

9A-2



Catalog Number Long Series	Catalog Number Short Series	Description	Weight Each Pounds
XLA	XLSA	Amber Lens	1/2
XLB	XLSB	Blue Lens	1/2
XLC	XLSC	Clear Lens	1/2
XLG	XLSG	Green Lens	1/2
XLR	XLSR	Red Lens	1/2
XLW	XLSW	White Lens	1/2

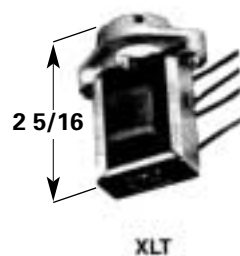
*Add suffix T to P/N for screw terminal

This special series of pilot lights is equipped with slide base receptacles and 120 volt 5000 hr. avg. lamps with slide base. Also available with 6, 12, 24, 48 and 60 volt lamps. Specify voltage desired.

Catalog Number Long Series	Catalog Number Short Series	Description	Weight Each Pounds
XLAS	XLSAS	Amber Lens	1/2
XLBS	XLSBS	Blue Lens	1/2
XLCS	XLSCS	Clear Lens	1/2
XLGS	XLSGS	Green Lens	1/2
XLRS	XLSRS	Red Lens	1/2
XLWS	XLSWS	White Lens	1/2

*Add suffix T to P/N for screw terminal

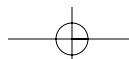
Legend Plates, see page 9A-18



Pilot Light Transformers

Catalog Number	Description	Weight Each Pounds
XLT 240	240 to 120 volt, 6VA	1

One transformer required for each pilot light. Adapter furnished for mounting on threaded pilot light stem, or can be mounted to housing as space requires.



Explosionproof and Dust-tight Pilot Lights

CLASS I, GROUPS C & D; CLASS II, GROUPS E, F & G; NEMA 3, 4, 7, 9



XL Long Series
(Panel Mount)



XL Short Series
(Surface Mount)



Replacement Cap

Guarded Pilot Lights

Explosionproof pilot lights are suitable for panel or surface mount applications. All pilot lights are of sealed construction and can be relamped from the front by removal of lens cap.

All pilot lights are made with 3/4" NPSM threads. All pilot lights have 8" flexible leads, other lengths on special order, or screw terminals.

All lens caps are black anodized aluminum finish.

Maximum installation thickness 1 15/16" on Long Series (Panel Mount), 3/4" on Short Series (Surface Mount).

This standard series of pilot lights is equipped with candelabra base receptacles and 6 watt 120 volt 6S6 clear 1500 hr. avg. lamps. Also available with 6, 12, 24, 30, 50, 75 and 135 volt lamps. Specify voltage desired.

Catalog No. Panel Mount (Long Series)	Catalog No. Surface Mount (Short Series)	Description	Weight Each Pounds
XLA-G	XLSA-G	Amber Lens	1/2
XLB-G	XLSB-G	Blue Lens	1/2
XLC-G	XLSC-G	Clear Lens	1/2
XLG-G	XLSG-G	Green Lens	1/2
XLR-G	XLSR-G	Red Lens	1/2
XLW-G	XLSW-G	White Lens	1/2

*Add suffix T to P/N for screw terminal

This special series of pilot lights is equipped with slide base receptacles and 120 volt 5000 hr. avg. lamps with slide base. Also available with 6, 12, 24, 48 and 60 volt lamps. Specify voltage desired.

Catalog No. Panel Mount (Long Series)	Catalog No. Surface Mount (Short Series)	Description	Weight Each Pounds
XLAS-G	XLSAS-G	Amber Lens	1/2
XLBS-G	XLSBS-G	Blue Lens	1/2
XLCS-G	XLSCS-G	Clear Lens	1/2
XLGS-G	XLSGS-G	Green Lens	1/2
XLRS-G	XLSRS-G	Red Lens	1/2
XLWS-G	XLSWS-G	White Lens	1/2

*Add suffix T to P/N for screw terminal

Replacement Guarded Lens Cap Assembly

Catalog Number	Description	Weight Each Pounds
XLA-GC	Amber Lens	1/8
XLB-GC	Blue Lens	1/8
XLC-GC	Clear Lens	1/8
XLG-GC	Green Lens	1/8
XLR-GC	Red Lens	1/8
XLW-GC	White Lens	1/8

Legend Plates, see page 9A-19.

9A-3

Explosionproof and Dust-tight Pilot Lights

CLASS I, GROUPS C & D; CLASS II, GROUPS E, F & G; NEMA 3, 4, 7, 9

Guarded Pilot LED Lights

LED Advantages:

- 10 Year/100,000 hour service life under normal ambient conditions.
- 1x to 4x more energy efficient.
- Improved resistance to shock and vibration.
- LEDs operate significantly cooler than traditional lamps.
- Ultra bright cluster LED's

Explosionproof pilot LED lights are suitable for panel or surface mount applications. All candelabra base LED lights can be relamped from the front by removal of the lens cap.

All pilot LED lights are made with 3/4" NPSM threads. All pilot LED lights have 8" flexible leads, other lengths on special order, or screw terminal.

Screw terminal available suffix T.

All lens caps are black anodized aluminum finish with clear glass lens.

Maximum installation thickness: 1-15/16" on Panel Mount (Long Series), 3/4" on Surface Mount (Short Series).

Consult Adalet for the availability of other voltages.



XL Long Series
(Panel Mount)



XL Short Series
(Surface Mount)



Replacement Cap

Catalog No. Panel Mount (Long Series)	Catalog No. Surface Mount (Short Series)	Description	Weight Each Pounds
XLRL-G	XLSRL-G	Red	1/2
XLAL-G	XLSAL-G	Amber	1/2
XLGL-G	XLSGL-G	Green	1/2
XLWL-G	XLSWL-G	White	1/2
XLBL-G	XLSBL-G	Blue	1/2

*Add suffix T to P/N for screw terminal

9A-4

Explosionproof and Dust-tight Pilot Light Push Buttons

CLASS I, GROUPS C & D; CLASS II, GROUPS E, F & G; NEMA 7, 9

Indicator Light/Push Button Push-To-Test Operators

All operators are die cast aluminum alloy. The barrels are all 3/4" NPSM thread. Maximum installation thickness 1 15/16" panel mount, 3/4" surface mount.

Furnished standard with 120 volt slide base lamp. Also available for 6, 12, 24, 28, 48 and 60 volts. Specify when ordering.

For use with BT contact blocks. Contact blocks can be stacked for multiple circuits. Contact blocks are not included with the operators. Order from page 9A-20. For NEMA 4 application, add boot and special legend plate, see page 9A-19.



For use with series BT contact blocks	Description of operators only	Weight Each Pounds
For Panel Mounting		
XLPA	Amber Lens	3/4
XLPB	Blue Lens	3/4
XLPC	Clear Lens	3/4
XLPG	Green Lens	3/4
XLPR	Red Lens	3/4
XLPW	White Lens	3/4
For Surface Mounting		
XPAS	Amber Lens	1/2
XPBS	Blue Lens	1/2
XPBS	Blue Lens	1/2
XLPCS	Clear Lens	1/2
XLPGS	Green Lens	1/2
XLPRS	Red Lens	1/2
XLPS	White Lens	1/2

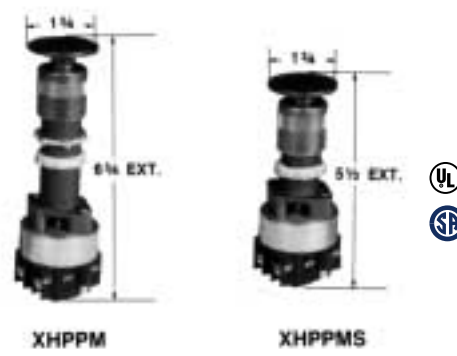
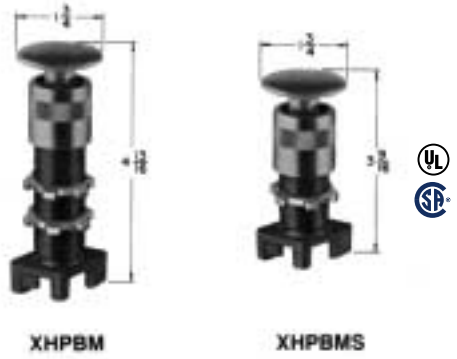
Legend Plates, see page 9A-19.

9A-5

Explosionproof and Dust-tight Push Buttons

CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; NEMA 3, 4, 7, 9

9A-6



Push Button Operators

All operators are die cast aluminum alloy. The barrels are all 3/4" NPSM thread. Maximum installation thickness 1 3/4" panel mount, 3/4" surface mount.

All operators have black molded nylon buttons. The exposed metal parts are black anodized aluminum. For color coding we will furnish at no additional cost the following color combinations: Red buttons with red metal caps and green buttons with green metal caps. Metal caps are also available in blue, gold or clear with black buttons. Specify colors required.

Red Mushroom head buttons are 1 3/4" diameter anodized aluminum. Also available in black or green.

XHPBPL has padlock attachment on top of cap allowing operator to be locked with the push button depressed.

For use with BT contact blocks. Contact blocks can be stacked for multiple circuits. Contact blocks are not included with the operators. Order from page 9A-20.

XHPPM/XHPPMS require 2" minimum spacing.

For use with series BT contact blocks	Description of operators only	Weight Each Pounds
XHPB	Panel Mount	1/2
XHPBS	Surface Mount	1/2
XHPBM	Red Mushroom Head, Panel Mount	1/2
XHPBMS	Red Mushroom Head, Surface Mount	1/2
XHPBPL	W/Padlock devices, Panel Mount	3/4
XHPBSPL	W/Padlock devices, Surface Mount	3/4
XHPPM*	Push/Pull switches, Panel Mount	3/4
XHPPMS*	Push/Pull switches, Surface Mount	3/4

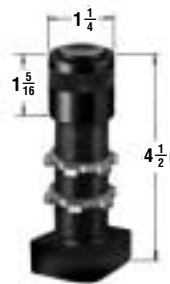
Legend Plates, see page 9A-19.

*Type BT1 contact blocks are included

For extremely wet-dirty location applications, XHPB and XHPBS series are available to be used with protective boots, see page 9A-19.

Explosionproof and Dust-tight Push Buttons

CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; NEMA 3, 4, 7, 9



XVHPB



XVHPBS



XVHPBM



XVHPBMS



XVHPPM



XVHPPMS



XVHPBPL



XVHPBSPL



Push Button Operators

Cost effective modular operator body. The barrels are all 3/4" NPSM thread aluminum. Maximum installation thickness 1 3/4" panel mount, 3/4" surface mount.

All operators have black molded nylon buttons. The exposed metal parts are black anodized aluminum. For color coding we will furnish at no additional cost the following color combinations: Red buttons with red metal caps and green buttons with green metal caps. Metal caps are also available in blue, gold or clear with black buttons. Specify colors required.

Red Mushroom head buttons are 1 3/4" diameter anodized aluminum. Also available in black or green.

XVHPBPL has padlock attachment on top of cap allowing operator to be locked with the push button depressed.

For use with BT contact blocks. Contact blocks can be stacked for multiple circuits. Contact blocks are not included with the operators. Order from page 9A-20.

XVHPPM/XVHPPMS require 2" minimum spacing.

For use with series BT contact blocks	Description of operators only	Weight Each Pounds
XVHPB	Panel Mount	1/2
XVHPBS	Surface Mount	1/2
XVHPBM	Red Mushroom Head, Panel Mount	1/2
XVHPBMS	Red Mushroom Head, Surface Mount	1/2
XVHPBPL	W/Padlock devices, Panel Mount	3/4
XVHPBSPL	W/Padlock devices, Surface Mount	3/4
XVHPPM*	Push/Pull switches, Panel Mount	3/4
XVHPPMS*	Push/Pull switches, Surface Mount	3/4

Legend Plates, see page 9A-19.

*Type BT1 contact blocks are included

For extremely wet-dirty location applications, XVHPB and XVHPBS series are available to be used with protective boots, see page 9A-19.

9A-7

Explosionproof and Dust-tight Push Buttons

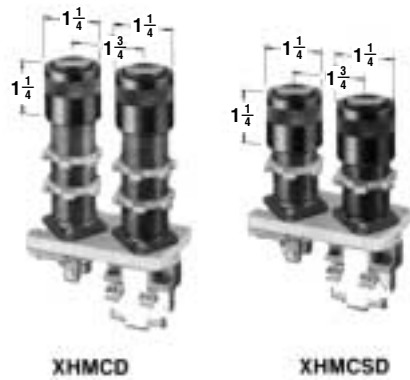
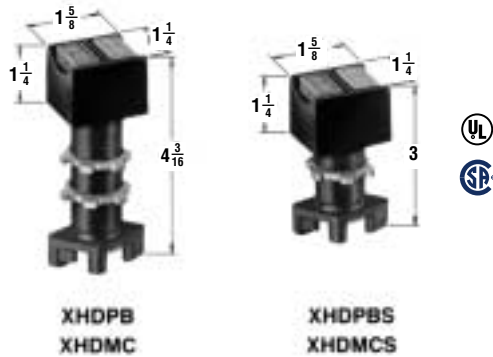
CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; NEMA 3, 4, 7, 9

Dual Push Button Operator or Maintained Contact Unit

All operators are die cast aluminum alloy. The barrels are all 3/4" NPSM thread. Maximum installation thickness 1 15/16" panel mount, 3/4" surface mount.

For use with BT contact blocks. Contact blocks can be stacked for multiple circuits. Contact blocks are not included with XHD operators. Order from page 9A-20.

9A-8



Group CD Only

For use with series BT contact blocks	Description of operators only	Weight Each Pounds
XHDPB	Panel Mount - momentary*	1/2
XHDPBS	Surface Mount - momentary*	1/2
XHDMC	Maintained Contact, Panel Mount	1/2
XHMCS	Maintained Contact, Surface Mount	1/2

*Two contacts in the BT contact block are actuated independently

Furnished with one contact block	Description of operators only	Weight Each Pounds
XHMCD	Maintained Contact Unit Two Push Buttons, Panel Mount	1
XHMCS	Maintained Contact Unit Two Push Buttons, Surface Mount	1
XHMCD	Maintained Contact Unit Two Push Buttons, Panel Mount With one mushroom and one standard button	1
XHMCS	Maintained Contact Unit Two Push Buttons, Surface Mount With one mushroom and one standard button	1

The XHMCD and XHMCS maintained contact units require only one contact block. These units consist of two operators and require two mounting positions.

Legend Plates, see page 9A-19.

Explosionproof and Dust-tight Selector Switches

CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; NEMA 3, 4, 7, 9

Selector Switch Operators

All operators are die cast aluminum alloy. The barrels are all 3/4" NPSM thread. Maximum installation thickness: 1 15/16" panel mount, 3/4" surface mount. Selector switch operators can be used as 2 position or 3 position by removal of knob and rotating knob 180°. The actuator cam which operates the plungers on the contact blocks can be readily changed for various contact sequences. FOR 3 POSITION, ORDERS MUST STATE CAM NUMBER. Contact blocks are not included with XHSS operators. Select contact block and sequence operating cam from contact block page 9A-20.

All operators have black molded nylon knobs. The exposed metal parts are black anodized aluminum. Metal caps are also available in blue, gold, clear, red or green with black knobs. Specify colors required.



Switch Included

For use with series BT contact blocks	Description of operators only	Weight Each Pounds
XHSS	Panel Mount	1/2
XHSSS	Surface Mount	1/2
XHSC	Spring Return to Center from Right and Left	1/2
XHSSC	Panel Mount	1/2
	Spring Return to Center from Right and Left	
XHSSPL	Surface Mount	1/2
	Spring Return to Center from Right, Maintain Left	
XHSSR	Panel Mount	1/2
	Spring Return to Center from Right, Maintain Left	
XHSL	Surface Mount	1/2
	Spring Return to Center from Left, Maintain Right	
XHSSL	Panel Mount	1/2
	Spring Return to Center from Left, Maintain Right	
XHSSPL	W/padlock device Panel Mount	3/4
XHSSSPL	W/padlock device Surface Mount	3/4
XSSL-4P	Panel Mount, Four Position Selector Switch	3/4
XSSL-5P	Panel Mount, Five Position Selector Switch	3/4
XSSS-4P	Surface Mount, Four Position Selector Switch	3/4
XSSS-5P	Surface Mount, Five Position Selector Switch	3/4

For extremely wet-dirty location applications, use Protective Boots Page 9A-19. EXCLUDES PADLOCK DEVICES.

Legend Plates, see page 9A-19.

9A-9

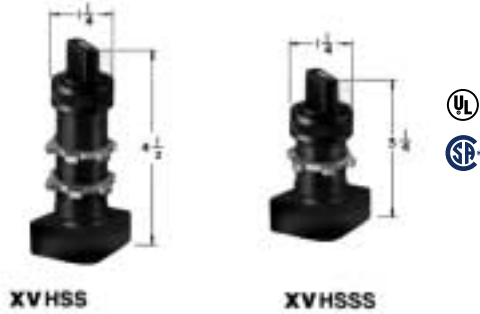
Explosionproof and Dust-tight Selector Switches

CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; NEMA 3, 4, 7, 9

Selector Switch Operators

Cost effective modular operator body. The barrels are all 3/4" NPSM thread aluminum. Maximum installation thickness: 1 15/16" panel mount, 3/4" surface mount. Selector switch operators can be used as 2 position or 3 position by removal and rotation of the cam actuator. The cam which operates the plungers on the contact blocks can be changed for various contact sequences. FOR 3 POSITION, ORDERS MUST STATE CAM NUMBER. Contact blocks are not included with XVHSS operators. Select contact block and sequence operating cam from contact block page 9A-20.

All operators have black molded nylon knobs. The exposed metal parts are black anodized aluminum. Metal caps are also available in blue, gold, clear, red or green with black knobs. Specify colors required.



For use with series BT contact blocks	Description of operators only	Weight Each Pounds
XVHSS	Panel Mount	1/2
XVHSSS	Surface Mount	1/2
XVHSSPL	W/padlock device Panel Mount	3/4
XVHSSSPL	W/padlock device Surface Mount	3/4

Legend Plates, see page 9A-19.

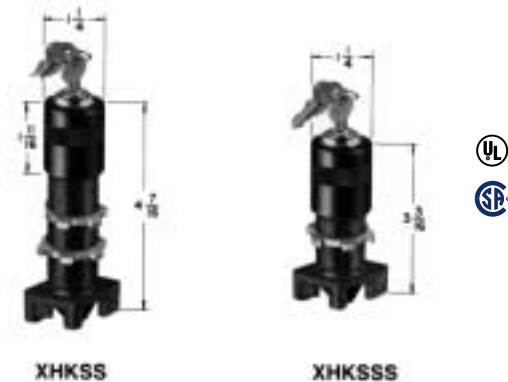
For extremely wet-dirty location applications, use Protective Boots Page 9A-19. EXCLUDES PADLOCK DEVICES.

The selector switch for Series BT blocks have a sequence actuating cam as an integral part of the operator. **THE CAM NUMBER MUST BE INCLUDED IN THE OPERATOR DESCRIPTION WHEN ORDERING. THE CAM NUMBERS ARE SHOWN IN THE CIRCUIT ARRANGEMENT CHARTS, SEE PAGE 9A-20.**

9A-10

Explosionproof and Dust-tight Selector Switches

CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; NEMA 3, 4, 7, 9



Key removable one position only
specify right, center or left

Keylock Selector Switch Operators

All operators are die cast aluminum alloy. The barrels are all 3/4" NPSM thread. Maximum installation thickness: 1 15/16" panel mount, 3/4" surface mount. Selector switch operators can be used as 2 position or 3 position by removal of knob and rotating knob 180°. The actuator cam which operates the plungers on the contact blocks can be readily changed for various contact sequences. FOR 3 POSITION, ORDERS MUST STATE CAM NUMBER. Contact blocks are not included with operators. Select contact block and sequence operating cam from contact block page 9A-20.

The exposed metal parts are black anodized aluminum.

For use with series BT contact blocks	Description of operators only	Weight Each Pounds
XHKSS	Key Lock Operation Panel Mount	1/2
XHKSSS	Key Lock Operation Surface Mount	1/2
XHKSC	Spring Return to Center from Right and Left Panel Mount	1/2
XHKSSC	Spring Return to Center from Right and Left Surface Mount	1/2
XHKSR	Spring Return to Center from Right, Maintain Left Panel Mount	1/2
XHKSSR	Spring Return to Center from Right, Maintain Left Surface Mount	1/2
XHKSL	Spring Return to Center from Left, Maintain Right Panel Mount	1/2
XHKSSL	Spring Return to Center from Left, Maintain Right Surface Mount	1/2

Legend Plates, see page 9A-19.

The selector switch for Series BT blocks have a sequence actuating cam as an integral part of the operator. **THE CAM NUMBER MUST BE INCLUDED IN THE OPERATOR DESCRIPTION WHEN ORDERING. THE CAM NUMBERS ARE SHOWN IN THE CIRCUIT ARRANGEMENT CHARTS, SEE PAGE 9A-20.**

9A-11

Explosionproof and Dust-tight Selector Switches

CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; NEMA 3, 4, 7, 9

Keylock Selector Switch Operators

Cost effective modular operator body. The barrels are all 3/4" NPSM thread aluminum. Maximum installation thickness: 1 15/16" panel mount, 3/4" surface mount. Selector switch operators can be used as 2 position or 3 position by removal and rotation of the cam actuator. The cam which operates the plungers on the contact blocks can be changed for various contact sequences. FOR 3 POSITION, ORDERS MUST STATE CAM NUMBER. Contact blocks are not included with operators. Select contact block and sequence operating cam from contact block page 9A-20.

The exposed metal parts are black anodized aluminum.



XVHKSS



XVHKSSS



Key removable one position only
specify right, center or left

For use with series BT contact blocks	Description of operators only	Weight Each Pounds
XVHKSS	Key Lock Operation, Panel Mount	1/2
XVHKSSS	Key Lock Operation, Surface Mount	1/2

Legend Plates, see page 9A-19.

The selector switch for Series BT blocks have a sequence actuating cam as an integral part of the operator. **THE CAM NUMBER MUST BE INCLUDED IN THE OPERATOR DESCRIPTION WHEN ORDERING. THE CAM NUMBERS ARE SHOWN IN THE CIRCUIT ARRANGEMENT CHARTS, SEE PAGE 9A-20.**

9A-12

Explosionproof Potentiometer and Switch Operators

CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; NEMA 3, 4, 7, 9



Potentiometer and Switch Operators

Operators are die cast aluminum alloy. The barrels are all 3/4" NPSM thread. 1/4" diameter shafts. Maximum installation thickness: 1 15/16" panel mount, 3/4" surface mount. XPO-XPOS have knob and dial marked 1 to 100. Two dial sizes are available. XPOC-XPOCS have 15 turn counting dial. Operators include 3 pc. coupling and device mounting bracket.

Catalog No.	Description	Weight Each Pounds
XPO	Plain Dial, Panel Mount	1/2
XPOS	Plain Dial, Surface Mount	1/2
XPOL	Plain Dial, Large Size, Panel Mount	1/2
XPOSL	Plain Dial, Large Size, Surface Mount	1/2
XPOC	Counting Dial, Panel Mount	3/4
XPOCS	Counting Dial, Surface Mount	3/4

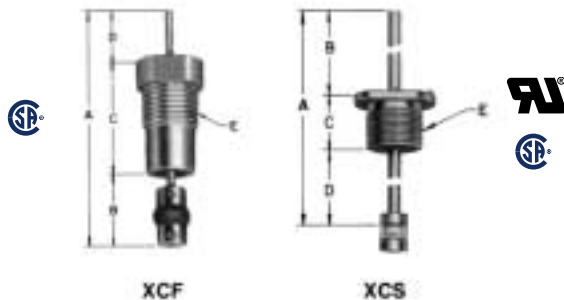
POTENTIOMETER NOT FURNISHED — Consult Factory.

CLASS I, GROUPS C & D; CLASS II, GROUPS E, F & G; NEMA 7, 9

Manual and Motor Operated Rotating Shafts

XCS manual operated shafts suitable for potentiometers, rheostats and other devices requiring external adjustment. Includes 3 piece coupling to compensate for misalignment.

XCF motor operated shafts suitable for tachometers and rotating equipment with speeds to 5000 rpm. Shaft is ball bearing mounted. Includes flexible coupling to compensate for misalignment.



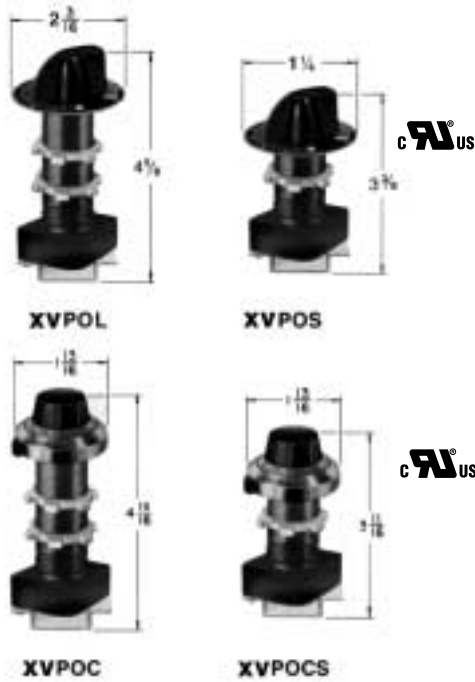
Cat. No.	Shaft Dia.	Dimension in Inches				
		A	B	C	D	E (NPSM)
XCS-1	1/8	6	2 1/2	1	2 1/2	3/4-14
XCS-2	1/4	6	2 1/2	1	2 1/2	3/4-14
XCS-3	5/16	6	2 1/2	1	2 1/2	3/4-14
XCS-4	3/8	6	2 1/2	1	2 1/2	3/4-14
XCS-5	1/2	6	2 1/2	1	2 1/2	3/4-14
XCF-1	1/8	6	2 3/16	1 5/8	2 3/16	1/2-14
XCF-2	1/4	6	2 1/8	1 3/4	2 1/8	3/4-14
XCF-3	5/16	6	2	2	2	1-11 1/2
XCF-4	3/8	6	2	2	2	1-11 1/2
XCF-5	1/2	6	2	2	2	1 1/4-11 1/2

NOTE: NEMA 3, 4 Features Available for XCF Only

Explosionproof Potentiometer and Switch Operators

CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; NEMA 3, 4, 7, 9

9A-14



Potentiometer Operators

Cost effective modular operator body. The barrels are all 3/4" NPSM thread aluminum. 1/4" diameter shafts. Maximum installation thickness: 1 15/16" panel mount, 3/4" surface mount. XVPO-XVPOS have knob and dial marked 1 to 100. Two dial sizes are available. XVPOC-XVPOCS have 15 turn counting dial. Operators include 3 pc. coupling and device mounting bracket.

Catalog No.	Description	Weight Each Pounds
XVPO	Plain Dial, Panel Mount	1/2
XVPOS	Plain Dial, Surface Mount	1/2
XVPOL	Plain Dial, Large Size, Panel Mount	1/2
XVPOSL	Plain Dial, Large Size, Surface Mount	1/2
XVPOC	Counting Dial, Panel Mount	3/4
XVPOCS	Counting Dial, Surface Mount	3/4

POTENTIOMETER NOT FURNISHED — Consult Factory.

Explosionproof and Dust-tight Pilot Lights

CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; NEMA 3, 4, 7, 9

Guarded Pilot Lights for Group B Application

Explosionproof pilot lights are suitable for panel or surface mount applications. All pilot lights are of sealed construction and can be relamped from the front by removal of lens cap.

All pilot lights are made with 3/4" NPSM threads. All pilot lights have 8" flexible leads, other lengths on special order, or screw terminal (suffix T).

All lens caps are black anodized aluminum finish.

Maximum installation thickness: 1 15/16" on Long Series, 5/8" on Short Series.

This standard series of pilot lights is equipped with candelabra base receptacles and 6 watt 120 volt 6S6 clear 1500 hr. avg. lamps. Also available with 6, 12, 24, 30, 50, 75 and 135 volt lamps. Specify voltage desired.



Catalog No. Panel Mount	Catalog No. Surface Mount	Description	Weight Each Pounds
XLA-GH	XLSA-GH	Amber Lens	1/2
XLB-GH	XLSB-GH	Blue Lens	1/2
XLC-GH	XLSC-GH	Clear Lens	1/2
XLG-GH	XLSG-GH	Green Lens	1/2
XLR-GH	XLSR-GH	Red Lens	1/2
XLW-GH	XLSW-GH	White Lens	1/2

*Add suffix T to P/N for screw terminal

This special series of pilot lights is equipped with slide base receptacles and 120 volt 5000 hr. avg. lamps with slide base. Also available with 6, 12, 24, 48 and 60 volt lamps. Specify voltage desired.

Catalog No. Panel Mount	Catalog No. Surface Mount	Description	Weight Each Pounds
XLAS-GH	XLSAS-GH	Amber Lens	1/2
XLBS-GH	XLSBS-GH	Blue Lens	1/2
XLCS-GH	XLSCS-GH	Clear Lens	1/2
XLGS-GH	XLSGS-GH	Green Lens	1/2
XLRS-GH	XLSRS-GH	Red Lens	1/2
XLWS-GH	XLSWS-GH	White Lens	1/2

*Add suffix T to P/N for screw terminal

Replacement Guarded Lens Cap Assembly

Catalog No.	Description	Weight Each Pounds
XLA-GCH	Amber Lens	1/8
XLB-GCH	Blue Lens	1/8
XLC-GCH	Clear Lens	1/8
XLG-GCH	Green Lens	1/8
XLR-GCH	Red Lens	1/8
XLW-GCH	White Lens	1/8

9A-15

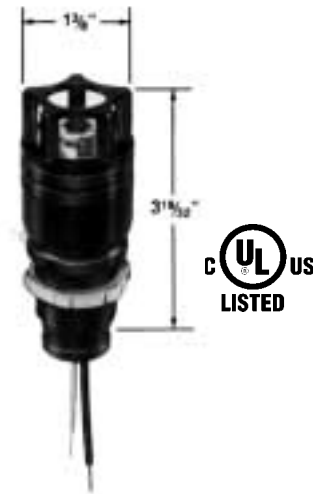
Explosionproof and Dust-tight Pilot Lights

CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; NEMA 3, 4, 7, 9

9A-16



XL Long Series
(Panel Mount)



XL Short Series
(Surface Mount)



Replacement Cap

Guarded Pilot LED Lights for Group B Application

LED Advantages:

- 10 Year/100,000 hour service life under normal ambient conditions.
- 1x to 4x more energy efficient.
- Improved resistance to shock and vibration.
- LEDs operate significantly cooler than traditional lamps.
- Ultra bright cluster LED's.

Explosionproof pilot LED lights are suitable for panel or surface mount applications. All candelabra base LED lights and can be relamped from the front by removal of the lens cap.

All pilot LED lights are made with 3/4" NPSM threads. All pilot LED lights have 8" flexible leads, other lengths on special order, or screw terminal.

Add suffix T to P/N for screw terminal.

All lens caps are black anodized aluminum finish with clear glass lens.

Maximum installation thickness: 1-15/16" on Panel Mount (Long Series), 5/8" on Surface Mount (Short Series).

Consult Adalet for the availability of other voltages.

Catalog No. Panel Mount (Long Series)	Catalog No. Surface Mount (Short Series)	Description	Weight Each Pounds
XLRL-GH	XLSRL-GH	Red	1/2
XLAL-GH	XLSAL-GH	Amber	1/2
XLGL-GH	XLSGL-GH	Green	1/2
XCWL-GH	XLSWL-GH	White	1/2
XLBL-GH	XLSBL-GH	Blue	1/2

*Add suffix T to P/N for screw terminal.

Explosionproof Special Operators and Accessories

CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; NEMA 3, 4, 7, 9



XRB / XRBL

Reset Button Operators

Catalog No.	Description of operations only	Weight Each Pounds
XRBL	Reset Button - Long	1/2
XRBL	Reset Button - Long	1/2

Used for resetting contactors, relays, etc. in explosionproof and weather-proof enclosures. Made with 3/4" NPSM threaded stem. Standard operating shaft length 6" can be cut to length. Special lengths are also available. Use XRBL for wall thickness greater than 3/4".



**XPP
BLACK ANODIZED**

Close-Up Plugs For Unused Operator Openings

Catalog No.	Description of operations only	Net Weight
XPP	3/4" NPSM	3/4 oz.
XPP-N4	3/4" NPSM Type 4	3/4 oz.

9A-17

Explosionproof and Dust-Tight Pilot Lights

CLASS I, GROUPS C & D

Non-Guarded Lens Caps

All lens caps are black anodized aluminum finish. For color coding, Adalet will furnish at no additional charge the following color combinations:

- Black Cap
- Clear Cap
- Amber Cap
- Green Cap
- Blue Cap
- Red Cap

9A-18

Catalog No.	Description	Cap Color	Weight Each lbs.
XLA-C	Amber Lens	Black	1/2
XLB-C	Blue Lens	Black	1/2
XLC-C	Clear Lens	Black	1/2
XLG-C	Green Lens	Black	1/2
XLR-C	Red Lens	Black	1/2
XLW-C	White Lens	Black	1/2
XLAC-C	Amber Lens	Clear	1/2
XLBC-C	Blue Lens	Clear	1/2
XLCC-C	Clear Lens	Clear	1/2
XLGC-C	Green Lens	Clear	1/2
XLRC-C	Red Lens	Clear	1/2
XLWC-C	White Lens	Clear	1/2
XLAA-C	Amber Lens	Amber	1/2
XLBA-C	Blue Lens	Amber	1/2
XLCA-C	Clear Lens	Amber	1/2
XLGA-C	Green Lens	Amber	1/2
XLRA-C	Red Lens	Amber	1/2
XLWA-C	White Lens	Amber	1/2
XLAG-C	Amber Lens	Green	
XLBG-C	Blue Lens	Green	1/2
XLCG-C	Clear Lens	Green	1/2
XLGG-C	Green Lens	Green	1/2
XLRG-C	Red Lens	Green	1/2
XLWG-C	White Lens	Green	1/2
XLAB-C	Amber Lens	Blue	1/2
XLBB-C	Blue Lens	Blue	1/2
XLCB-C	Clear Lens	Blue	1/2
XLGB-C	Green Lens	Blue	1/2
XLRB-C	Red Lens	Blue	1/2
XLWB-C	White Lens	Blue	1/2
XLAR-C	Amber Lens	Red	1/2
XLBR-C	Blue Lens	Red	1/2
XLCR-C	Clear Lens	Red	1/2
XLGR-C	Green Lens	Red	1/2
XLRR-C	Red Lens	Red	1/2
XLWR-C	White Lens	Red	1/2

Operator Boots and Hardware



Legend Plates Standard Marking

For Push Button			For Selector switches	
(BLANK)	SLOW	RESET	RUN-JOG	OPEN-OFF-CLOSE
START	OPEN	IN	HAND-AUTO	FAST-OFF-SLOW
INCH	CLOSE	OUT	FWD-REV	RUN-AUTO-JOG
STOP	UP	LEFT	FAST-SLOW	HAND-OFF-AUTO
RUN	JOG	RIGHT	OPEN-CLOSE	FWD-OFF-REV
FORWARD	ON	LOW	UP-DOWN	1-OFF-2
REVERSE	OFF	HIGH	OFF-ON	UP-OFF-DOWN
FAST	BACK	DOWN		EMERGENCY STOP

Catalog No.	Description	Weight Each
XNP	Specify legend	1/16

Legend plates are anodized aluminum with engraved letters on black background. Stop has red and start has green background. Special engraved legend plates can be supplied.

Operator Protective Boots

Molded silicone rubber, protective boots for use with explosion proof operators in extremely wet-dirty locations. Makes operators suitable for NEMA 3, 4, 4X, 5, 7, 9, 12, 13 application. Boot and metal collar are an integral assembly available as a factory adder or a field replacement.

Simple installation requires removal of existing cap and threading on the replacement.

Catalog No.	Description	Weight Each
XBB	Black Push Button Cap	1 oz.
XBG	Green Push Button Cap	1 oz.
XBR	Red Push Button Cap	1 oz.
XBSB	Black Selector Switch Cap	1 oz.
XBSG	Green Selector Switch Cap	1 oz.
XBSR	Red Selector Switch Cap	1 oz.
XBPC	Clear Pilot Light Push Button Cap	1 oz.

To order as complete operator add part number as suffix.

Catalog No.	Description	Weight Each
XNPWB	Black Blank Legend Plate	1/16
XNPWG	Green Blank Legend Plate	1/16
XNPWR	Red Blank Legend Plate	1/16

Legend plate has foam gasket backing for use with protective boots for sealing. Engraving 1 line only see Price List.

Push Button and Selector Switch Components

Operator locking caps and actuator devices can be adapted to existing explosion proof operators. Simple installation requires removal of top cap and threading on the replacement unit.

Catalog No.	Description	Weight Each
XHDPL	Padlock Device for Dual Push Button	1/4
XHPL	Padlock Device to activate Push Button	1/4
XHSPL	Padlock Device for Selector Switch	1/4
XMB	Red Mushroom Head 2 1/4" Button	1/4
XMC	Maintained Contact Lever for Push Buttons	1/4
XMT	Wobble Stick 2 1/2" Long for NC Push Button	1/4
XHPLG	Padlockable Push Button Cover (Not Shown)	1/4

Mushroom button and wobble stick recommended only for operators with normally closed contact blocks.

9A-19

Explosionproof Push Button and Selector Switch Components

600 Volts AC Maximum Contact Blocks for Push Buttons and Selector Switches

Series BT

Catalog	Contact Block	Push Button	Selector Switch	Weight Ea.
BT1A	One Open and One Closed	1 N.O. 1 N.C.		1/10
BT1B	One Closed and One Open (this is BT1A block rotated 180 degrees when assembled to operator)	1 N.C. 1 N.O.	See Chart	1/10
BT2	Two open	1 N.O. 1 N.O.		1/10
BT3	Two closed	1 N.C. 1 N.C.		1/10
BT4	One open	1 N.O.	Specify Cam and Contact Block	1/10
BT5	One closed	1 N.C.		1/10
BT44	Two open Two closed	1 N.C. 1 N.O. 1 N.O. 1 N.C.		1/10



Series BT Contact Blocks Extend 1/8" beyond operator

Contact Blocks can be stacked for multiple circuits.

9A-20

Contact Sequence Chart

Circuit of Contact Block	Contact Block Number	2-Position Selector Switches		3-Position Selector Switches					
		Cam 1 Contact Sequence	Cam 2 Contact Sequence	Cam 3 Contact Sequence	Cam 4 Contact Sequence	Cam 5 Contact Sequence	Cam 6 Contact Sequence		
Normally Closed (NC)	BT1A	Circuit A	X O	O X O	O X X	X O O	O X X	X O O	
Normally Open (NO)		Circuit B	O X	O O X	O O X	O X O	X X O	O X O	
Normally Closed (NC)	BT1B*	Circuit B	X O	X X O	X X O	X O X	O O X	O O X	
Normally Open (NO)		Circuit A	O X	X O X	X O O	O X X	X O O	O O X	
Normally Open (NO)	BT2	Circuit A	O X	X O X	X O O	O X X	X O O	O O X	
Normally Open (NO)		Circuit B	O X	O O X	O O X	O X O	X X O	O X O	
Normally Closed (NC)	BT3	Circuit A	X O	O X O	O X X	X O O	O X X	X O O	
Normally Closed (NC)		Circuit B	X O	X X O	X X O	X O X	O O X	O O X	

* This contact block is same as BT1A one N.C. and one N.O. except rotated 180° when assembled to operator.

Maximum Ampere Rating Control Circuit Contacts Type BT

Volts	AC				DC		
	110	220	440	550	120	240	600
Make & Emergency Interrupting Capacity	60.	30.	15.	12.	1.1	0.5	0.2
Normal Load Break	6.	3.	1.5	1.2	1.1	0.5	0.2
Continuous Current	10.	10.	10.	10.	10.	10.	10.

Explosionproof and Dust-tight Miniature Operators

CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; NEMA 4, 7 & 9

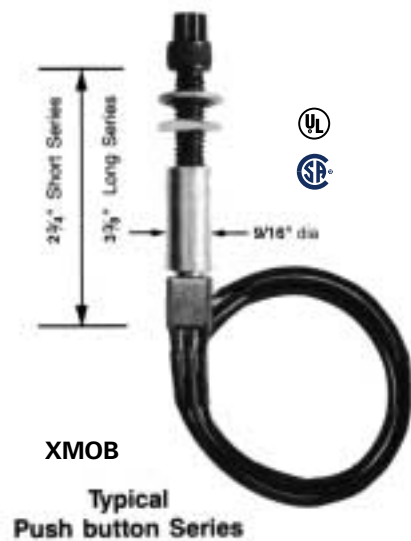
Features

- Reduce size of control enclosure requirements in hazardous environments.
- Mount on 1" centers vs. standard operators requiring 2 1/2" centers.
- No special enclosures required; can be installed in most Adalet standard explosionproof enclosures.

Push Button / Selector Switch Description

- 3/8"-16 UNC thread size body.
- Black anodized body, cap, button or knob
- Two lengths available:

Long Series	Accommodates up to 1 9/16" enclosure wall thickness
Short Series	Accommodates up to 13/16" enclosure wall thickness
- Stainless steel actuator shaft.
- Optional red or green button (Push button Operator only)



Push Buttons

Catalog No. Panel Mount	Catalog No. Surface Mount	Contact Configurations	Weight Each
XMOB-1	XMOBS-1	SPDT maintained	1 oz.
XMOB-2	XMOBS-2	SPDT momentary	1 oz.
XMOB-3*	XMOBS-3*	DPDT maintained	1 oz.
XMOB-4	XMOBS-4	DPDT momentary	1 oz.

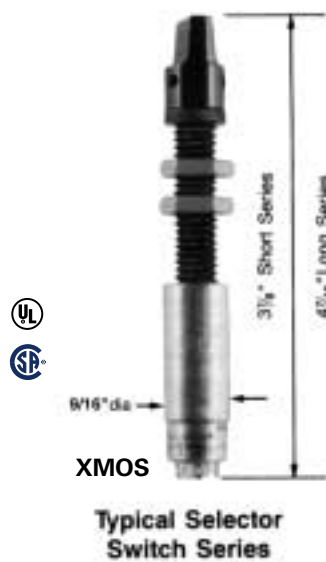
* Not UL or CSA Approved

- Solid silver contacts rated 5 amps at 125 VAC, 3 amps at 250 VAC.
- Insulation resistance 1000 megohm minimum.
- Furnished with contact block having 8" wire leads, other lengths available.

Selector Switches

Catalog No. Panel Mount	Catalog No. Surface Mount	Contact Configurations	Weight Each
XMOS-1	XMOSS-1	Single Pole, 12 position	1 oz.
XMOS-2	XMOSS-2	Double Pole, 5 position	1 oz.
XMOS-3	XMOSS-3	Three Pole, 3 position	1 oz.

- Selector switches provided with internal adjustable stop.
- Silver contacts rated 150 m.a. at 30 VAC, NEC CL 2 circuit.
- Insulation resistance 10,000 megohms minimum.
- Furnished with contact block having solder type wire connectors.



9A-21

Explosionproof and Dust-tight Miniature Operators

CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; NEMA 4, 7, 9 For Explosionproof Control Enclosures

9A-22



Indicator Led Light Description

- Up to 100,000 hours lamp life.
- Standard 12 VDC furnished. Optional 24 VDC, or 12, 24, 120 VAC available.
- Black anodized body and lens cap.
- 3/8" - 16 UNC thread size body.
- One length-accommodates up to 1 5/16" enclosure wall thickness.
- Furnished with 8" flexible wire leads, other lengths available.

Catalog No.	Description	Weight Each
XMOLR	Red Indicator Light	1 oz.
XMOLA	Amber Indicator Light	1 oz.
XMOLG	Green Indicator Light	1 oz.

Close-Up Plugs for Unused Operator Openings



Catalog No.	Weight
XMPP	1/2 oz.

Legend Plates Standard Marking



Catalog No.	Description	Weight Each
XMNP	Specify legend	1/2 oz.

For Push Button			For Selector switches
(BLANK)	SLOW	RESET	RUN-JOG
START	OPEN	IN	HAND-AUTO
INCH	CLOSE	OUT	FWD-REV
STOP	UP	LEFT	FAST-SLOW
RUN	JOG	RIGHT	OPEN-CLOSE
FORWARD	ON	LOW	UP-DOWN
REVERSE	OFF	HIGH	OFF-ON
FAST	BACK		

Compliances:
 NEC Class I, Groups B, C & D
 Class II, Groups E, F & G
 UL Standard 698
 CSA Standard C22.2 No. 30

- Legend plates are anodized aluminum with engraved letters on black background.
- Maximum 10 characters, 5/64" high offered as standard.

NOTE: Special engraved legend plates can be supplied.

Explosionproof and Dust-tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT JUNCTION BOXES CLASS I, GROUPS C & D; CLASS II, GROUPS E, F & G; NEMA 7 & NEMA 9 MULTI-HUB BOXES



XJAB

Designed for general wiring in hazardous locations. For pulling and splicing conductors. Serves as mounting outlets with use of appropriate fixture covers.

Available with dome cover for additional splicing room and mounting of various devices.

Bodies XJAB, XJAD and XJAX 26 thru 46 have two interior mounting bosses, which can be blind tapped.
Bodies XJAC, XJAL and XJAT 26 thru 46 have four interior mounting bosses, which can be blind tapped.
All bodies 570 thru 890 have solid back, can be tapped blind.



XJAC
(No bottom hub)



XJAD

Catalog Number	Conduit Size (In.)	Standard Pkg. Quantity	Standard Pkg. Weight Lbs.
XJAB-26	1/2	10	9
XJAB-36	3/4	10	10
XJAB-46	1	10	12
XJAB-570	1 1/4	5	25
XJAB-690	1 1/2	4	22
XJAB-890	2	4	23
XJAC-26	1/2	10	9
XJAC-36	3/4	10	10
XJAC-46	1	10	12
XJAC-570	1 1/4	5	26
XJAC-690	1 1/2	4	21
XJAC-890	2	4	23
XJAD-36	3/4	10	9
XJAD-46	1	10	15
XJAL-26	1/2	10	9
XJAL-36	3/4	10	10
XJAL-46	1	10	12
XJAL-570	1 1/4	5	26
XJAL-690	1 1/2	4	21
XJAL-890	2	4	23

NEMA 4 WATERTIGHT OPTIONAL:
Consult factory for availability and/or certifications.



Compliances

- NEC Class I, Groups C, D
Class II, Groups E, F, G
- UL Standard 886 - CSA Standard C22.2 No. 30

10A-1

Explosionproof and Dust-tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT JUNCTION BOXES CLASS I, GROUPS C & D; CLASS II, GROUPS E, F & G; NEMA 7 & NEMA 9 MULTI-HUB BOXES



XJAL
(No bottom hub)

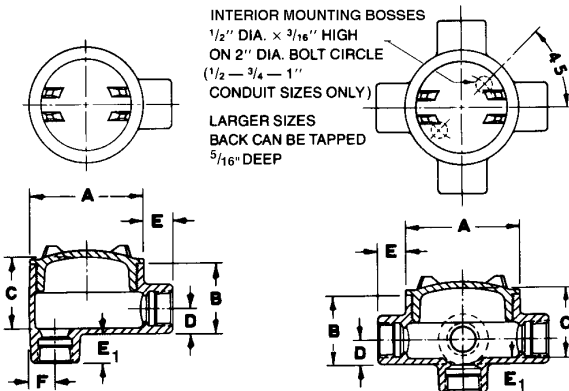


XJAT
(No bottom hub)



XJAX
(No bottom hub)

Catalog Number	Conduit Size (In.)	Standard Pkg. Quantity	Standard Pkg. Weight Lbs.
XJAT-26	1/2	10	10
XJAT-36	3/4	10	10
XJAT-46	1	10	13
XJAT-570	1 1/4	5	27
XJAT-690	1 1/2	4	21
XJAT-890	2	4	23
XJAX-26	1/2	10	12
XJAX-36	3/4	10	14
XJAX-46	1	10	15
XJAX-570	1 1/4	5	27
XJAX-690	1 1/2	4	21
XJAX890	2	4	23



DIMENSIONS (inches)							
Conduit Size	A	B	C	D	E	F	E ₁
1/2	3 1/2	2	2	5/8	7/8	1 1/16	7/8
3/4	3 1/2	2	2	3/4	7/8	1 3/16	7/8
1	3 1/2	2 3/16	2 3/16	7/8	1	1 5/16	1
1 1/4	6 3/8	3 3/16	3 3/4	1 3/32	1 1/16	1 13/32	1
1 1/2	6 3/8	3 9/16	3 3/4	1 9/32	3/4	1 19/32	1
2	6 3/8	3 13/16	4	1 1/16	3/4	1 7/8	1

Compliances

- NEC Class I, Groups C, D
Class II, Groups E, F, G
- UL Standard 886 - CSA Standard C22.2 No. 30

NEMA 4 WATERTIGHT OPTIONAL:
Consult factory for availability and/or certifications.



10A-2

Explosionproof and Dust-tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT JUNCTION BOXES CLASS I, GROUPS C & D; CLASS II, GROUPS E, F & G; NEMA 7 & NEMA 9 MULTI-HUB BOXES



XJA6



XJA6S



XJADC

BLANK COVERS

Catalog Number	Description	St. Pkg.	Std. Pkg. Weight Lbs.
XJA6	For 1/2" - 3/4" - 1" Bodies	10	5
XJA8	For 1 1/4" - 1 1/2" - 2" Bodies	5	11

SEALING COVERS

Catalog Number	Description	St. Pkg.	Std. Pkg. Weight Lbs.
XJA6S	For 1/2" - 3/4" - 1" Bodies	10	7

Entire body must be filled with sealing compound. NEC prohibits splices and taps in sealing fittings.

DOME COVERS

Catalog Number	Description	St. Pkg.	Std. Pkg. Weight Lbs.
XJADC	For 1/2" - 3/4" - 1" Bodies Inside Depth 2 3/8"	10	9
XJAD4	For 1 1/4" - 1 1/2" - 2" Bodies Inside Depth 4 1/8"	1	5
XJAD6	For 1 1/4" - 1 1/2" - 2" Bodies Inside Depth 6"	1	6
XJAD10	For 1 1/4" - 1 1/2" - 2" Bodies Inside Depth 10"	1	8 1/2
XJAD13	For 1 1/4" - 1 1/2" - 2" Bodies Inside Depth 13"	1	9 1/2
XJAO	O-Ring For NEMA 4 watertight For 1/2" - 3/8" - 1" Bodies	1	—
XJTO	O-Ring for NEMA 4 watertight For 1 1/4" - 1 1/2" - 2" Bodies	1	—

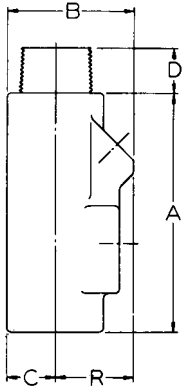
10A-3

Explosionproof and Dust-tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT SEALING FITTINGS CLASS I, GROUPS B*, C & D; CLASS II, GROUPS E, F & G; NEMA 7 & NEMA 9



XYB-XYBM



Sealing Fittings are required in Hazardous Locations and are used to isolate arc-producing devices in conduit and wiring systems, and to prevent the passage of explosive pressures from one area to another.

FOR HORIZONTAL AND VERTICAL MOUNTING - Type XYB and XYBM are suitable for either horizontal or vertical mounting and are provided with threaded plugged openings into which fiber and cement can be placed to form effective seal. XYB has female ends for conduit entrance. The XYBM has female ends with a removable threaded nipple.

*1/2", 3/4", 1" sizes Class I, Group B, C, D, Class II, E, F, G.

1 1/4", 1 1/2", 2", 2 1/2", 3", 3 1/2", 4" sizes Class I, Group C, D Class II, E, F, G

CSA Certified LR27991

UL Listed E10493

10A-4

Catalog No. Description	Conduit Size (In.)	Ounces Req. For Each Sealing Fitting		Standard Package	
		Cement	Fiber	Qty.	Tot. Wt. Lbs.
Female-Female					
XYB-2	1/2	1	1/8	5	2.1
XYB-3	3/4	2	1/4	5	2.6
XYB-4	1	3	1/4	5	3.7
XYB-5	1-1/4	6	3/8	2	2.5
XYB-6	1-1/2	9	1/2	2	3.2
XYB-8	2	18	3/4	2	5.6
XYB-10	2-1/2	23	1-1/2	2	6.2
XYB-12	3	48	3-1/8	1	6.0
XYB-14	3-1/2	70	4-1/2	1	6.8
XYB-16	4	90	6	1	8.3

Catalog No. Description	Conduit Size (In.)	Ounces Req. For Each Sealing Fitting		Standard Package	
		Cement	Fiber	Qty.	Tot. Wt. Lbs.
Male-Female					
XYBM-2	1/2	1	1/8	5	2.2
XYBM-3	3/4	2	1/4	5	2.7
XYBM-4	1	3	1/4	5	3.8
XYBM-5	1-1/4	6	3/8	2	2.6
XYBM-6	1-1/2	9	1/2	2	3.4
XYBM-8	2	18	3/4	2	5.9
XYBM-10	2-1/2	23	1-1/2	2	6.8
XYBM-12	3	48	3-1/8	1	6.3
XYBM-14	3-1/2	70	4-1/2	1	7.3
XYBM-16	4	90	6	1	8.8

Nominal Dimensions (Inches)					
Conduit Size	A	B	C	(XYBM Series Only)	Turn Radius R
				D	
1/2	3-19/32	1-13/16	5/8	11/16	1-3/16
3/4	3-25/32	2-1/16	3/4	15/16	1-5/16
1	4-3/8	2-5/16	7/8	15/16	1-7/16
1-1/4	5-5/32	2-13/16	1-1/16	1-1/16	1-3/4
1-1/2	5-11/16	3-3/16	1-3/16	1-3/16	2
2	6-13/16	3-7/8	1-1/2	1-7/16	2-3/8
2-1/2	7-1/2	4-1/2	1-7/8	1-5/8	2-11/16
3	9-9/16	5-1/2	2-3/16	1-7/8	3-5/16
3-1/2	9-1/2	6-1/6	2-3/8	2	3-11/16
4	9-9/16	6-1/2	2-5/8	2-1/8	3-7/8

Compliances

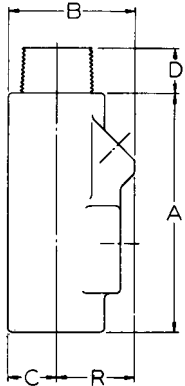
- NEC Class I, Groups B, C, D
Class II, Groups E, F, G
- UL Standard 886 - CSA Standard C22.2 No. 30

Explosionproof and Dust-tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT 40% FILL SEALING FITTINGS CLASS I, GROUPS B*, C & D; CLASS II, GROUPS E, F & G; NEMA 7 & NEMA 9



XYB-XYBM



Sealing Fittings are used for the same application as the standard Adalet sealing fitting but allow up to 40% wire fill in the fitting.

*1/2", 3/4" sizes Class I, Group B, C, D, Class II, E, F, G.
1", 1-1/4", 1-1/2", 2", 2-1/2", 3" sizes Class I, Group C, D,
Class II, E, F, G.

CSA Certified LR27991

UL Listed E10493

Catalog No. Description	Conduit Size (In.)	Ounces Req. For Each Sealing Fitting		Standard Package	
		Cement	Fiber	Qty.	Tot. Wt. Lbs.
Female-Female					
XYB-34	1/2	2	1/4	5	2.6
XYB-44	3/4	3	1/4	5	3.7
XYB-54	1	6	3/8	2	2.5
XYB-84	1-1/4	18	3/4	2	5.6
XYB-104	1-1/2	23	1-1/2	2	6.2
XYB-124	2	48	3-1/8	1	6.0
XYB-144	2-1/2	70	4-1/2	1	6.8
XYB-164	3	90	6	1	8.3

Catalog No. Description	Conduit Size (In.)	Ounces Req. For Each Sealing Fitting		Standard Package	
		Cement	Fiber	Qty.	Tot. Wt. Lbs.
Male-Female					
XYBM-34	1/2	2	1/4	5	2.7
XYBM-44	3/4	3	1/4	5	3.8
XYBM-54	1	6	3/8	2	2.6
XYBM-84	1-1/4	18	3/4	2	5.9
XYBM-104	1-1/2	23	1-1/2	2	6.8
XYBM-124	2	48	3-1/8	1	6.3
XYBM-144	2-1/2	70	4-1/2	1	7.3
XYBM-164	3	90	6	1	8.8

Nominal Dimensions (Inches)					
Conduit Size	A	B	C	(XYBM Series Only)	Turn Radius R
				D	
1/2	3-25/32	2-1/16	3/4	15/16	1-5/16
3/4	4-3/8	2-5/16	7/8	15/16	1-7/16
1	5-5/32	2-13/16	1-1/16	1-1/16	1-3/4
1-1/4	6-13/16	3-7/8	1-1/2	1-7/16	2-3/8
1-1/2	7-1/2	4-1/2	1-7/8	1-5/8	2-11/16
2	9-9/16	5-1/2	2-3/16	1-7/8	3-5/16
2-1/2	9-1/2	6-1/16	2-3/8	2	3-11/16
3	9-9/16	6-1/2	2-5/8	2-1/8	3-7/8

Compliances

- NEC Class I, Groups B, C, D
Class II, Groups E, F, G
- UL Standard 886 - CSA Standard C22.2 No. 30

10A-5

Explosionproof and Dust-tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT SEALING FITTINGS CLASS I, GROUP D; CLASS II, GROUPS E, F & G; NEMA 7 & NEMA 9

Adalet Sealing Fittings are used to isolate arc-producing devices from wiring systems and to prevent the spread of explosive gases.

FOR VERTICAL MOUNTING

Types XY and XYM Fittings are for vertical mounting, and are provided with threaded plugged openings into which the sealing cement is poured. Sizes 1-1/4" x 1-1/2" have large plugged openings in the lower hub to facilitate packing fiber around the wires to form a dam. Type XYM's have removable threaded nipples. The two hubs are tapped simultaneously to assure alignment of the conduits, especially important to equipment manufacturers using short runs of conduit.

FOR HORIZONTAL & VERTICAL MOUNTING

Type XYC Fittings are for horizontal mounting only, with the cover opening in an upright position. XYCS fittings are for vertical or horizontal mounting, with removable threaded covers which can be turned to the desired position for pouring in the sealing cement. The covers are interchangeable. The male-to-female types have removable threaded nipple.



XY 2-3-4



XYM 2-3-4



XY 5-6



XYM 5-6



XYC



XYCM



XYCS



XYCSM

CSA Certified LR27991

UL Listed E10493

Compliances

- NEC Class I, Group D Class II, Groups E, F, G
- UL Standard 886 - CSA Standard C22.2 No. 30

Catalog Number		Conduit Size (In.)	Ounces Required per Fitting		Standard Package	
Female/Female	Male/Female		Sealing Cement	Packing Fiber	Qty	Weight Lbs.
XY2	XYM2	1/2	1	1/8	25	10
XY3	XYM3	3/4	1	1/4	25	10
XY4	XYM4	1	2	1/4	25	12-1/2
XY5	XYM5	1-1/4	4	3/8	10	7-1/2
XY6	XYM6	1-1/2	5	1/2	10	10
XYC2	XYC2M	1/2	2	1/8	25	13
XYC3	XYC3M	3/4	2	1/4	25	13
XYC4	XYC4M	1	4-1/2	1/4	25	15
XYC5	XYC5M	1-1/4	8-1/2	3/8	10	10
XYC6	XYC6M	1-1/2	11-1/2	1/2	10	11
XYC8	XYC8M	2	13-1/2	3/4	10	12
XYC10	XYC10M	2-1/2	15	1-1/2	1	2
XYC12	XYC12M	3	31-1/2	3-1/8	1	3
XYC14	XYC14M	3-1/2	42-1/2	4-1/2	1	4
XYC16	XYC16M	4	51	6	1	5
XYC2S	XYC2SM	1/2	2	1/8	25	13
XYC3S	XYC3SM	3/4	2	1/4	25	13
XYC4S	XYC4SM	1	3	1/4	25	15
XYC5S	XYC5SM	1-1/4	6-1/2	3/8	10	10
XYC6S	XYC6SM	1-1/2	10	1/2	10	11
XYC8S	XYC8SM	2	12-1/2	3/4	10	12
XYC10S	XYC10SM	2-1/2	13-1/2	1-1/2	1	2
XYC12S	XYC12SM	3	29-1/2	3-1/8	1	3
XYC14S	XYC14SM	3-1/2	40	4-1/2	1	4
XYC16S	XYC16SM	4	48-1/2	6	1	5

Explosionproof and Dust-tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT 40% FILL SEALING FITTINGS CLASS I, GROUP D; CLASS II, GROUPS E, F & G; NEMA 7 & NEMA 9



XY 34, 44



XYM 34, 44



XY 54



XYM 54



XYC 34-
XYC 164



XYC 34M-
XYC 164M



XYC 34S-
XYC 164S



XYC 34SM-
XYC 164SM

Adalet 40% Fill Sealing Fittings are used for the same applications as the standard Adalet Sealing Fittings, but allow up to 40% wire fill in the fitting.

Catalog Number		Conduit Size (In.)	Ounces Required per Fitting		Standard Package	
Female/Female	Male/Female		Sealing Cement	Packing Fiber	Qty	Weight Lbs.
XY34	XYM34	1/2	1	1/4	25	10
XY44	XYM44	3/4	2	1/4	25	12-1/2
XY54	XYM54	1	4	3/8	10	7-1/2
XYC34	XYC34M	1/2	2	1/4	25	13
XYC44	XYC44M	3/4	4-1/2	1/4	25	15
XYC54	XYC54M	1	8-1/2	3/8	10	10
XYC84	XYC84M	1-1/4	13-1/2	3/4	10	12
XYC104	XYC104M	1-1/2	15	1-1/2	1	2
XYC124	XYC124M	2	31-1/2	3-1/8	1	3
XYC144	XYC144M	2-1/2	42-1/2	4-1/2	1	4
XYC164	XYC164M	3	51	6	1	5
XYC34S	XYC34SM	1/2	2	1/4	25	13
XYC44S	XYC44SM	3/4	3	1/4	25	15
XYC54S	XYC54SM	1	6-1/2	3/8	10	10
XYC84S	XYC84SM	1-1/4	12-1/2	3/4	10	12
XYC104S	XYC104SM	1-1/2	13-1/2	1-1/2	1	2
XYC124S	XYC124SM	2	29-1/2	3-1/8	1	3
XYC144S	XYC144SM	2-1/2	40	4-1/2	1	4
XYC164S	XYC164SM	3	48-1/2	6	1	5

10A-7

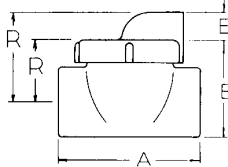
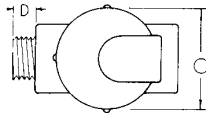
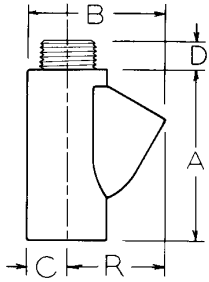
Compliances

- NEC Class I, Group D
Class II, Groups E, F, G
- UL Standard 886 - CSA Standard C22.2 No. 30

CSA Certified LR27991
 UL Listed E10493

Explosionproof and Dust-tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT SEALING FITTINGS CLASS I, GROUP D; CLASS II, GROUPS E, F & G; NEMA 7 & NEMA 9



10A-8

Catalog Number		Conduit Size	Dimensions (In.)					R = Turning Radius (Inches)		
Female/ Female	Male/ Female		Nominal Dimensions, (In.)					Plain Cover	Sealing Cover	No Cover
			A	B	C	D	E			
XY2	XYM2	1/2	3-1/16	2-7/16	3/4	11/16				1-13/16
XY3	XYM3	3/4	3-1/16	2-7/16	3/4	1				1-13/16
XY4	XYM4	1	3-3/4	2-15/16	15/16	15/16				2-1/8
XY5	XYM5	1-1/4	4-15/16	3-3/16	1-3/16	1-1/8				2-1/8
XY6	XYM6	1-1/2	4-7/8	3-7/16	1-5/16	1-5/16				2-1/4
XYC2	XYC2M	1/2	3-1/16	2-9/16	2-1/6	5/8	13/16	1-7/8	2-11/16	
XYC2S	XYC2SM									
XYC3	XYC3M	3/4	3-1/6	2-9/16	2-1/16	15/16	13/16	1-7/8	2-11/16	
XYC3S	XYC3SM									
XYC4	XYC4M	1	3-11/16	2-11/16	2-3/8	15/16	1	2-1/8	3-1/16	
XYC4	XYC4SM									
XYC5	XYC5M	1-1/4	4-1/2	3-3/16	3-3/8	1-1/16	7/8	2-11/16	3-1/16	
XYC5S	XYC5SM									
XYC6	XYC6M	1-1/2	4-1/2	3-7/16	3-3/8	1-1/8	7/8	2-11/16	3-1/16	
XYC6S	XYC6SM									
XYC8	XYC8M	2	4-11/16	4	3-3/8	1-3/8	7/8	3	3-5/16	
XYC8S	XYC8SM									
XYC10	XYC10M	2-1/2	5-5/16	4-5/8	3-3/8	1-5/8	7/8	3-1/4	3-3/4	
XYC10S	XYC10SM									
XYC12	XYC12M	3	6-7/16	5-7/16	3-15/16	1-3/4	1-3/8	4	4-5/8	
XYC12S	XYC12SM									
XYC14	XYC14M	3-1/2	6-9/16	6-3/8	4-3/4	1-5/8	1-5/16	4-5/8	5	
XYC14S	XYC14SM									
XYC16	XYC16M	4	6-15/16	6-13/16	4-3/4	2	1-5/16	4-3/4	5-3/8	

CSA Certified LR27991
UL Listed E10493

ADACO SEALING CEMENT AND ADACO PACKING FIBER CLASS I, GROUPS B, C & D; CLASS II, GROUPS E, F & G; NEMA 7 & NEMA 9



XSC

XAF

Catalog No.	Description	Net Weight
XSC-8	ADACO No. 1	8 oz.
XSC-16	Sealing	16 oz.
XSC-160	Cement	10 lbs.
XAF-6	ADACO	1-1/2 oz.
XAF-24	Packing	6 oz.
XAF-64	Fiber	1 lb.

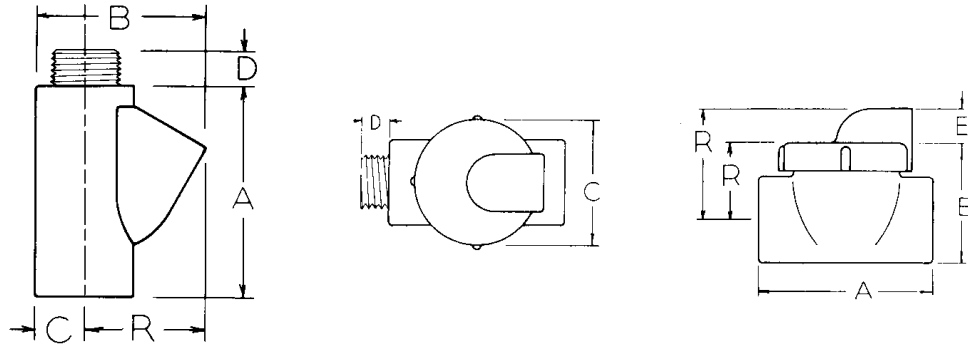
ADACO SEALING CEMENT is the easiest-to-use sealing cement on the market. The powder is contained in a polyethylene bag within an outer container. To mix, remove the bag of powder, fill the outside container with water up to the marked "water line" and pour in the powder. Simple...no guesswork about how much water to use. The mixing container is right there...and clean. The largest unit package offered contains one pound of powder. The XSC-160 (10-pound quantity) consists of 10, one-pound packages (at the ten-pound price) so that every mix is correct. This cement has been especially prepared for use in Adalet Sealing Fittings. It is not an insulating compound, and is not affected by gasoline, alcohol, benzol, oils, acetone or lacquer solvents.

ADACO PACKING FIBER is used with Adaco Sealing Cement for plugging conduit openings in fittings. Alumina Silica based long fiber non-asbestos for use as a packing at the hubs of sealing units to prevent the Sealing Cement in the liquid state from entering the conduit lines. The Fiber is tamped between the wires and the hub before the Sealing Cement is poured into the fitting.

300

Explosionproof and Dust-tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT 40% FILL SEALING FITTINGS CLASS I, GROUP D; CLASS II, GROUPS E, F & G; NEMA 7 & NEMA 9



Catalog Number		Conduit Size	Dimensions (In.)					R = Turning Radius (Inches)		
			Nominal Dimensions, (In.)					Plain Cover	Sealing Cover	No Cover
Female/Female	Male/Female	A	B	C	D	E				
XY34	XYM34	1/2	3-1/6	2-7/16	3/4	1			1-13/16	
XY44	XYM44	3/4	3-3/4	2-15/16	15/16	15/16			3-1/8	
XY54	XYM54	1	4-15/16	3-3/16	1-3/16	1-1/8			2-1/8	
XYC34	XYC34M	1/2	3-1/6	2-9/16	2-1/16	15/16	13/16	1-7/8	2-11/16	
XYC34S	XYC34SM									
XYC44	XYC44M	3/4	3-11/16	2-11/16	2-3/8	15/16	1	2-1/8	3-1/16	
XYC4S	XYC44SM									
XYC54	XYC54M	1	4-1/2	3-3/16	3-3/8	1-1/16	7/8	2-11/16	3-1/16	
XYC54S	XYC54SM									
XYC84	XYC84M	1-1/4	4-11/16	4	3-3/8	1-3/8	7/8	3	3-5/16	
XYC84S	XYC84SM									
XYC104	XYC104M	1-1/2	5-5/16	4-5/8	3-3/8	1-5/8	7/8	3-1/4	3-3/4	
XYC104S	XYC104SM									
XYC124	XYC124M	2	6-7/16	5-7/16	3-15/16	1-3/4	1-3/8	4	4-5/8	
XYC124S	XYC124SM									
XYC144	XYC144M	2-1/2	6-9/16	6-3/8	4-3/4	1-5/8	1-5/16	4-5/8	5	
XYC144S	XYC144SM									
XYC164	XYC164M	3	6-15/16	6-13/16	4-3/4	2	1-5/16	4-3/4	5-3/8	
XYC164S	XYC164SM									

10A-9

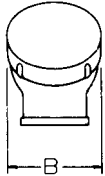
Explosionproof and Dust-tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT SHORT RADIUS PULL ELBOWS

CLASS I, GROUP D; CLASS II, GROUPS E, F & G; NEMA 7 & 9



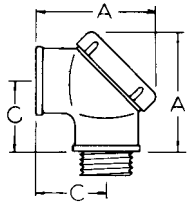
FL



This versatile and inexpensive explosion-proof fitting with a threaded cover will easily and compactly handle 90° conduit runs. FL series have two female entrances. MFL series has one female entrance and one removable threaded nipple.



MFL



Catalog Number	Conduit Size (In.)	Nominal Dimensions Inches			Standard Package	
		A	B	C	Quantity	Weight Pounds
FL92	1/2	2-5/8	2-1/8	1-3/8	25	8
FL93	3/4	2-13/16	2-1/8	1-1/2	25	10-1/2
FL94	1	3-1/4	2-7/16	1-7/8	25	11
FL95	1-1/4	3-3/4	3-1/2	2-1/4	25	24
*FL96	1-1/2	4-5/8	4-3/16	2-5/8	25	30
MFL92	1/2	2-5/8	2-1/8	1-3/8	25	9
MFL93	3/4	2-13/16	2-1/8	1-1/2	25	12
MFL94	1	3-1/4	2-7/16	1-7/8	25	13
MFL95	1-1/4	3-3/4	3-1/2	2-1/4	25	26
*MFL96	1-1/2	4-5/8	4-3/16	2-5/8	25	34

Compliances

- NEC Class I, Group D
Class II, Groups E, F, G
- UL Standard 886 - CSA Standard C22.2 No. 30

* Fitting not UL Listed or CSA Certified

CSA Certified LR27991

UL Listed E10493

10A-10

EXPLOSIONPROOF AND DUST-TIGHT REMOVABLE PLUGS

CLASS I, GROUPS A, B, C & D; CLASS II, GROUPS E, F & G; NEMA 7 & NEMA 9

Tapered thread close-up plugs for explosionproof conduit entrances. Provides 5 full threads of engagement. Made of aluminum alloy, these plugs have screw-driver slots and fit practically flush when installed.



OX

Catalog Number	Conduit Size (In.)	Standard Package		Catalog Number	Conduit Size (In.)	Standard Package	
		Qty	Weight Pounds			Qty	Weight Pounds
OX2	1/2	250	6-3/4	OX8	2	50	12
OX3	3/4	250	10-1/4	OX10	2-1/2	50	20-1/2
OX4	1	150	9	OX12	3	50	30
OX5	1-1/4	100	12	OX14	3-1/2	50	40
OX6	1-1/2	100	14-1/2	OX16	4	50	52

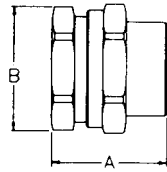
Explosionproof and Dust-tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT CONDUIT UNIONS CLASS I, GROUPS A, B, C & D; CLASS II, GROUPS E, F & G; NEMA 7 & NEMA 9

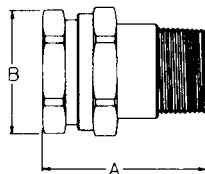
Explosionproof unions for use in conduit piping systems for ease of installation and removal of fittings, boxes and equipment enclosures in hazardous atmosphere areas. Parts are steel, cadmium plated for corrosion protection. Style XU has two female NPT threads. Style XUM has two female NPT threads and one plated threaded nipple.



XU



XUM



Catalog Number	Conduit Size		Standard Package	
			Qty	Weight Pounds
XU2	1/2"	Female-Female	50	19
XU3	3/4"	Female-Female	50	21
XU4	1"	Female-Female	25	13-1/2
XUM2	1/2"	Female-Male	50	22
XUM3	3/4"	Female-Male	50	26
XUM4	1"	Female-Male	25	16-1/2

DIMENSIONS

	Conduit Size	A	B
Series	1/2"	1-3/4"	1-1/2"
XU	3/4"	1-3/4"	1-3/4"
	1"	1-15/16"	2"
Series	1/2"	2-9/16"	1-1/2"
XUM	3/4"	2-3/4"	1-3/4"
	1"	3"	2"

CSA Certified LR27991
UL Listed E10493

Compliance
• NEC Class I, Groups A, B, C, D
Class II, Groups E, F, G
• UL Standard 886 - CSA Standard C22.2 No.30

10A-11

Explosionproof and Dust-tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT FLEXIBLE COUPLINGS

***CLASS I, GROUPS A, B, C & D;**

CLASS II, GROUPS E, F & G; NEMA 7 & NEMA 9

Application: XFC couplings are for use in Hazardous Atmospheres where a flexible connection is required for motor and equipment installation where movement and vibration are present. Also for difficult bends and connections.

Material: Brass and bronze end fittings. Bronze wire flexible braid covering over flexible bronze core with insulating liner. INCLUDES TWO REMOVABLE ZINC CLEAR COATED NIPPLES.

NOTE: For stainless steel in 1/2" and 3/4" sizes add SS suffix (XFCSS-) nipples not included.



10A-12

Nominal Dimensions (inches)							
Catalog Number	Conduit Size	Flex Length	Weight Pounds	Catalog Number	Conduit Size	Flex Length	Weight Pounds
XFC-24	1/2	4	1-3/4	XFC-410	1	10	2-5/8
XFC-26	1/2	6	2	XFC-412	1	12	2-3/4
XFC-28	1/2	8	2-1/2	XFC-415	1	15	3
XFC-210	1/2	10	2-3/8	XFC-418	1	18	3-1/4
XFC-212	1/2	12	2-1/2	XFC-421	1	21	3-1/2
XFC-215	1/2	15	2-5/8	XFC-424	1	24	3-3/4
XFC-218	1/2	18	3	XFC-427	1	27	4-1/8
XFC-221	1/2	21	3-1/8	XFC-430	1	30	4-1/2
XFC-224	1/2	24	3-1/4	XFC-433	1	33	4-7/8
XFC-227	1/2	27	3-3/8	XFC-436	1	36	5-1/4
XFC-230	1/2	30	3-1/2	XFC-512	1-1/4	12	6-1/2
XFC-233	1/2	33	3-3/4	XFC-515	1/4	15	7
XFC-236	1/2	36	4	XFC-518	1-1/4	18	7-1/2
XFC-34	3/4	4	2	XFC-521	1-1/4	21	8-1/4
XFC-36	3/4	6	2-1/4	XFC-524	1-1/4	24	8-3/4
XFC-38	3/4	8	2-3/8	XFC-527	1-1/4	27	9-1/2
XFC-310	3/4	10	2-1/2	XFC-530	1-1/4	30	10-1/4
XFC-312	3/4	12	2-5/8	XFC-533	1-1/4	33	10-3/4
XFC-315	3/4	15	3	XFC-536	1-1/4	36	11-1/4
XFC-318	3/4	18	3-1/8	XFC-612	1-1/2	12	8-1/4
XFC-321	3/4	21	3-1/4	XFC-615	1-1/2	15	9
XFC-324	3/4	24	3-3/8	XFC-618	1-1/2	18	10
XFC-327	3/4	27	3-1/2	XFC-621	1-1/2	21	11
XFC-330	3/4	30	3-3/4	XFC-624	1-1/2	24	12
XFC-333	3/4	33	4	XFC-627	1-1/2	27	13
XFC-336	3/4	36	4-1/2	XFC-630	1-1/2	30	14
XFC-46	1	6	2-1/4	XFC-633	1-1/2	33	15
XFC-48	1	8	2-1/2	XFC-636	1-1/2	36	16

Nominal Dimensions (inches)						
Catalog Number	Conduit Size	Classification*	A	B	C	Min. Radius Bend
Series XFC	1/2	Class I & II	1-11/16	2-5/16	1-7/16	12
	3/4	Group A, B, C, D, E, F & G	1-3/4	2-5/8	1-7/8	14
	1	Class I & II	2	3	2-5/16	14
		Group C, D, E, F & G				
	1-1/4	Class I & II	2-1/8	3-3/8	2-3/4	16
1-1/2	Group D, E, F & G	2-1/2	3-7/8	3-5/16	16	

CSA Certified LR27991

UL Listed E10493

Compliances

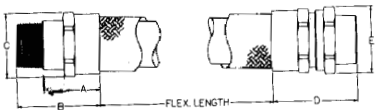
- NEC Class I, Groups A, B, C, D
Class II, Groups E, F, G
- UL Standard 886 - CSA Standard C22.2 No. 30

Explosionproof and Dust-tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT FLEXIBLE COUPLINGS *CLASS I, GROUPS A, B, C & D; CLASS II, GROUPS E, F & G; NEMA 7 & NEMA 9

Application: XFCU couplings are for use in Hazardous Atmospheres where a flexible connection is required for motor and equipment installation where movement and vibration are present. Also for difficult bends and connections.

Material: Brass and bronze end fittings. Bronze wire flexible braid covering over flexible bronze core with insulating liner. INCLUDES ONE REMOVABLE ZINC CLEAR COATED NIPPLE ON ONE SIDE AND ONE UNION FITTING ON THE OTHER SIDE.



CSA Certified LR27991

UL Listed E10493

Nominal Dimensions (inches)							
Catalog Number	Conduit Size	Flex Length	Weight Pounds	Catalog Number	Conduit Size	Flex Length	Weight Pounds
XFCU-24	1/2	4	2	XFCU-410	1	10	3
XFCU-26	1/2	6	2-1/4	XFCU-412	1	12	3-1/8
XFCU-28	1/2	8	2-1/2	XFCU-415	1	15	3-3/8
XFCU-210	1/2	10	2-5/8	XFCU-418	1	18	3-5/8
XFCU-212	1/2	12	2-3/4	XFCU-421	1	21	3-7/8
XFCU-215	1/2	15	3-1/8	XFCU-424	1	24	4-1/8
XFCU-218	1/2	18	3-1/4	XFCU-427	1	27	4-1/2
XFCU-221	1/2	21	3-3/8	XFCU-430	1	30	4-5/8
XFCU-224	1/2	24	3-1/2	XFCU-433	1	33	5-1/8
XFCU-227	1/2	27	3-5/8	XFCU-436	1	36	5-1/2
XFCU-230	1/2	30	3-3/4				
XFCU-233	1/2	33	4				
XFCU-236	1/2	36	4-1/4				
XFCU-34	3/4	4	2-1/4				
XFCU-36	3/4	6	2-1/2				
XFCU-38	3/4	8	2-5/8				
XFCU-310	3/4	10	2-3/4				
XFCU-312	3/4	12	3-1/8				
XFCU-315	3/4	15	3-1/4				
XFCU-318	3/4	18	3-3/8				
XFCU-321	3/4	21	3-1/2				
XFCU-324	3/4	24	3-5/8				
XFCU-327	3/4	27	3-3/4				
XFCU-330	3/4	30	4				
XFCU-333	3/4	33	4-1/4				
XFCU-336	3/4	36	4-3/4				
XFCU-46	1	6	2-5/8				
XFCU-48	1	8	2-7/8				

10A-13

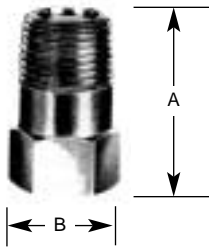
Nominal Dimensions (inches)								
Catalog Number	Conduit Size	Classification*	A	B	C	D	E	Min. Radius Bend
Series XFCU	1/2	Class I & II	1-11/16	2-5/16	1-7/16	2-7/16	1-1/2	12
	3/4	Group A,B,C,D,E,F & G	1-3/4	2-5/8	1-7/8	2-1/2	1-3/4	14
	1	Class I & II Group C,D,E,F & G	2	3	2-5/16	2-13/16	2	14

Compliances

- NEC Class I, Groups A, B, C, D
Class II, Groups E, F, G
- UL Standard 886 - CSA Standard C22.2 No. 30

Explosionproof and Dust-tight Fittings and Accessories

EXPLOSIONPROOF AND DUST-TIGHT COMBINATION BREATHER/DRAIN CLASS I, GROUPS C & D; CLASS II, GROUPS F & G; NEMA 7 & NEMA 9



XDB2

Stainless steel combination breather drain. Install in top of enclosures as breather. Install in bottom of enclosure as drain.

Nominal Dimensions (inches)			
Catalog Number	Thread	A	B
XDB2	1/2 NPT	1-5/8	7/8 hex

Compliances

- NEC Class I, Groups C, D Class II, Groups E, F, G - Class III
- UL Standard 886 - CSA Standard C22.2 No. 30

- CSA Certified LR27991
- UL Listed E10493

10A-14

EXPLOSIONPROOF AND DUST-TIGHT COMBINATION BREATHER/DRAIN CLASS I, GROUPS A, B, C & D; CLASS II, GROUPS E, F & G; NEMA 7 & NEMA 9



XDBH2

Nominal Dimensions (inches)				
Catalog Number	Thread	A	B	C
XDBH2	1/2 NPT	2-7/16	7/8 HEX	1-1/4

Flow Rate:

- .01 CFM air
- .5 cc/minute water

Certifications

- Class I, Groups A, B, C and D Class II, Groups E, F & G - Class III

UL and CSA

UL Standard 886 - CSA Standard C22.2 No. 30

- CENELEC EExd IIB DEMKO 00E.004127U

- CSA Certified LR27991
- UL Listed E10493

306

Explosionproof and Dust-tight Fittings and Accessories

EXPLOSIONPROOF FLAME ARRESTOR FITTING CLASS I, GROUPS B*, C & D NEMA 7



Typical XFA2



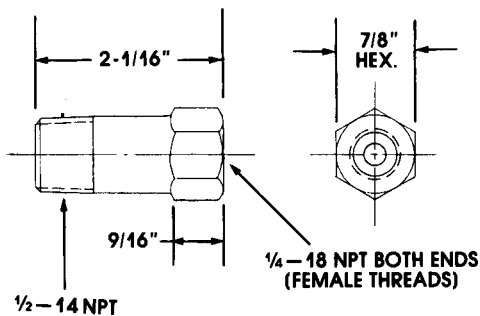
Typical XFA2X

APPLICATION: Provides thru-wall connections of tubing systems for electro/pneumatic and gas analysis devices installed within Adalet's explosion proof enclosures.

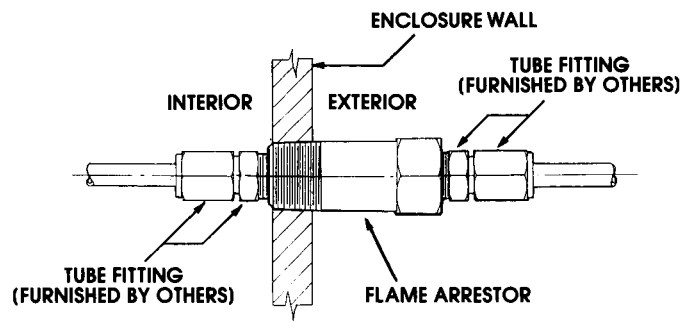
The flame arrestor fitting is designed to prevent flame propagation thru tubing systems with minimum flow restrictions of control pressures.

MATERIAL: Stainless steel

Catalog Number	Description	Weight
XFA2	1/2" NPT	4 oz.
XFA2X	1/2" NPT	4 oz.



TYPICAL FIELD INSTALLATION



Exterior enclosure wall counter boring may be required to maintain 1/2" enclosure wall thickness for ease of field connections.

XFA2

Approximate Control Restrictions

- * 0.5 PSI drop at 20 CFH airflow
- * 1.3 PSI drop at 34 CFH airflow

- * NEC Class I, Groups C & D
- * UL Recognized Component
- * CSA Certified Component
- * CENELEC EExd Group IIB

*XFA2X

Approximate Control Restrictions

- 1 PSI drop at 18 CFH airflow
- 5 PSI drop at 53 CFH airflow

- UL and CSA Class I, Groups B, C & D
- CENELEC EExd Group IIB
- DEMKO 00E.0041270

CSA Certified LR27991
 UL Recognized E10493

10A-15

Fittings and Accessories

SALI INSULATING BUSHINGS (SUPERIOR ADALET LAMINATED INSULATION)

Sali bushings are machined from paper laminated phenolic material and comply with NEMA-X phenolic material specifications.

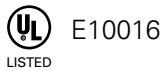


Specifications:

- 11,000 psi tensile
- 17,000 flexural
- 450v/mil dielectric
- Heat resistance - 150° C, continuous
- Moisture absorption - 1/2 of 1%
- Listed by Underwriters Laboratories for your quality assurance.
- Sali bushings have been repeatedly proved in a wide variety of applications over a 25 year period.

TYPE PE-FEMALE-DEEP-THREADED

Catalog Number	Conduit Size (Inches)	Carton Qty.	Wt. Per Hundred (Lbs.)	Nominal Dimensions (Inches)		
				I.D.	O.D.	Height
PE-2	1/2	50	1-1/2	5/8	1-1/8	5/8
PE-3	3/4	50	2	13/16	1-5/16	5/8
PE-4	1	50	3-1/2	1	1-5/8	25/32
PE-5	1-1/4	25	4-1/2	1-3/8	2	25/32
PE-6	1-1/2	25	5-1/2	1-5/8	2-1/4	25/32
PE-8	2	10	7-1/2	2	2-3/4	25/32
PE-10	2-1/2	5	12	2-7/16	3-1/4	1
PE-12	3	5	16	3	3-7/8	1-1/16
PE-14	3-1/2	5	19	3-1/2	4-3/8	1-1/16
PE-16	4	2	24	4	5	1-1/16

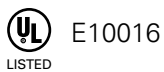


Recommended for rigid conduit or in combination with male type PEM when maximum thread engagement is required.

10A-16

TYPE PES-FEMALE-SHALLOW-THREADED

Catalog Number	Conduit Size (Inches)	Carton Qty.	Wt. Per Hundred (Lbs.)	Nominal Dimensions (Inches)		
				I.D.	O.D.	Height
PES-2	1/2	50	1-1/2	5/8	1-1/8	1/2
PES-3	3/4	50	2	13/16	1-5/16	1/2
PES-4	1	50	3	1	1-5/8	5/8
PES-5	1-1/4	25	4	1-3/8	2	5/8
PES-6	1-1/2	25	4-1/2	1-5/8	2-1/4	5/8
PES-8	2	10	7	2	2-3/4	5/8
PES-10	2 1/2	5	11	2-7/16	3-1/4	13/16
PES-12	3	5	14	3	3-7/8	7/8
PES-14	3-1/2	5	16-1/2	3-1/2	4-3/8	7/8
PES-16	4	2	25	4	5	7/8



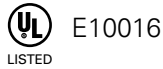
Designed for general use on rigid conduit, connectors, and similar installations where the additional mechanical strength of the deep type bushings is not needed.

Fittings and Accessories

TYPE PET-THREADLESS-FOR RIGID CONDUIT-FEMALE-SET SCREW THREADLESS

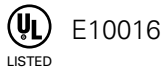


For threadless rigid conduit on all free conduit terminals such as terminating behind or within switchboards, switchgear, etc.



Catalog Number	Conduit Size (Inches)	Carton Qty.	Wt. Per Hundred (Lbs.)	Nominal Dimensions (Inches)			
				I.D. 1	O.D.	Height	I.D. 2
PET-2	1/2	50	1-1/2	5/8	1-1/8	5/8	7/8
PET-3	3/4	50	2	13/16	1-5/16	5/8	1-1/16
PET-4	1	50	3-1/2	1	1-5/8	25/32	1-11/32
PET-5	1-1/4	25	4-1/2	1-3/8	2	25/32	1-11/16
PET-6	1-1/2	25	5-1/2	1-5/8	2-1/4	25/32	1-15/16
PET-8	2	10	7-1/2	2	2-3/4	25/32	2-13/32
PET-10	2-1/2	5	12	2-7/16	3-1/4	1	2-29/32
PET-12	3	5	14	3	3-7/8	1-1/16	3-17/32
PET-14	3-1/2	5	17	3-1/2	4-3/8	1-1/16	4-1/32
PET-16	4	2	25	4	5	1-1/16	4-17/32

TYPE SPE-THREADLESS-FOR EMT-FEMALE-SET SCREW



For use directly on thin wall conduit.

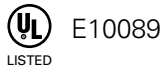
Catalog Number	Conduit Size (Inches)	Carton Qty.	Wt. Per Hundred (Lbs.)	Nominal Dimensions (Inches)			
				I.D. 1	O.D.	Height	I.D. 2
SPE-2	1/2	50	1-3/4	5/8	1-1/8	5/8	23/32
SPE-3	3/4	50	2-1/4	13/16	1-5/16	5/8	15/16
SPE-4	1	50	3-3/4	1	1-5/8	25/32	1-3/16
SPE-5	1-1/4	25	5-1/4	1-3/8	2	25/32	1-17/32
SPE-6	1-1/2	25	6	1-5/8	2-1/4	25/32	1-25/32
SPE-8	2	10	8-1/4	2	2-3/4	25/32	2-7/32

For EMT sizes 2-1/2 thru 4" use type PET.

TYPE PEM



A high strength resilient male bushing recommended to protect wires passing through steel cabinet walls, metal partitions and similar applications. For additional strength it is recommended this bushing be secured with type PE deep threaded female bushing.



Catalog Number	Conduit Size (Inches)	Carton Qty.	Wt. Per Hundred (Lbs.)	Nominal Dimensions (Inches)		
				I.D.	O.D.	Height
PEM-2	1/2	50	1	5/8	1-1/8	5/8
PEM-3	3/4	50	1-1/2	13/16	1-5/16	5/8
PEM-4	1	50	2-1/2	1	1-5/8	25/32
PEM-5	1-1/4	25	3	1-3/8	2	25/32
PEM-6	1-1/2	25	4	1-5/8	2-1/4	25/32
PEM-8	2	10	6	2	2-3/4	25/32
PEM-10	2-1/2	5	10	2-7/16	3-1/4	1-1/16
PEM-12	3	5	14	3	3-7/8	1-1/16
PEM-14	3-1/2	5	16-1/2	3-1/2	4-3/8	1-1/16
PEM-16	4	2	21	4	5	1-1/16

10A-17

Fittings and Accessories

TYPE PEML WITH LOCKNUT



A high strength resilient male bushing recommended to protect wires passing through metal walls, partitions and similar applications. Furnished with metallic locknuts.

Catalog Number	Conduit Size (Inches)	Carton Qty.	Wt. Per Hundred (Lbs.)	Nominal Dimensions (Inches)		
				I.D.	O.D.	Height
PEML-2	1/2	50	2-1/2	5/8	1-1/8	5/8
PEML-3	3/4	50	3-1/2	13/16	1-5/16	5/8
PEML-4	1	50	6	1	1-5/8	25/32
PEML-5	1-1/4	25	6-1/2	1-3/8	2	25/32
PEML-6	1-1/2	25	9	1-5/8	2-1/4	25/32
PEML-8	2	10	11	2	2-3/4	25/32
PEML-10	2-1/2	5	30	2-7/16	3-1/4	1-1/16
PEML-12	3	5	34	3	3-7/8	1-1/16
PEML-14	3-1/2	5	39	3-1/2	4-3/8	1-1/16
PEML-16	4	2	56	4	5	1-1/16

10A-18


Poly PRECISION MOLDED INSULATING BUSHINGS



A rugged, high strength molded bushing for general use on rigid conduit connectors and similar installations.

Listed by Underwriters Laboratories Inc. for 105° C (221° F). Meets all requirements of National Electrical Code for insulating bushings.

Catalog Number	Conduit Size (Inches)	Carton Qty.	Wt. Per Hundred (Lbs.)	Nominal Dimensions (Inches)		
				I.D.	O.D.	Height
PM-2	1/2	100	1	19/32	1-1/16	13/32
PM-3	3/4	100	1	25/32	1-5/16	13/32
PM-4	1	50	2	1	1-5/8	1/2
PM-5	1-1/4	25	3	1-5/16	2	1/2
PM-6	1-1/2	25	3	1-17/32	2-7/32	9/16
PM-8	2	10	6	1-31/32	2-21/32	9/16
PM-10	2-1/2	5	11	2-5/16	3-5/16	5/8
PM-12	3	5	14	2-7/8	3-15/16	11/16
PM-14	3-1/2	5	22	3-5/16	4-7/16	11/16
PM-16	4	5	23	3-25/32	4-29/32	11/16
PM-20	5	2	40	4-13/16	6-3/16	31/32
PM-24	6	2	50	5-3/4	7-9/32	31/32

 E25237
LISTED

Fittings and Accessories

FIXTURE HANGERS SWIVEL SELF ALIGNING OUTLET BOX COVERS

Types SA-342 and SA-42

Adalet self-aligning covers provide flexible suspension assuring plumb alignment of the lighting fixture regardless of ceiling structure or angle. Fixtures hung from these aligner covers can be hit or bumped without damage that would be caused if rigidly mounted.

Made of stamped steel, these Aligner Covers are equipped with ball joint allowing the fixture to swing through an angle of 20° in any direction of the perpendicular. The SA-342 has two sets of supporting screw hole centers for 3-1/4" and 4" octagonal outlet boxes and covers are spotted for 2-3/4" mounting centers. Type SA-42 has two sets of supporting screw holes for 4" square outlet boxes and covers are spotted for 3-1/2" and 2-3/4" centers for 4" and 3-1/2" octagonal boxes.

Catalog Number	Unit Carton Qty.	Standard Package	Approx Wt. Std. Pkg.
*SA-342	25	100	41
SA-42	25	100	50

Ball tapped for 1/2" stem.



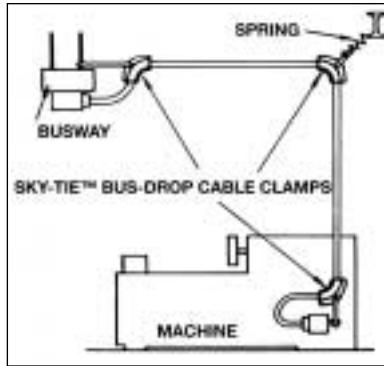
SA-342



SA-42

*  UL Listed E88804

Sky-Tie™ — Bus-Drop Cable Clamps



Supports...

Cable up to 1-1/8" diameter. Uniform "lap" design of each clamp-half results in support along the entire quarter bend.

Anchors...

Cable for 90° angle transitions using a simple, two-piece construction of interchangeable clamp-halves.

Loops...

Excess cable for convenient handling and out-of-the-way storage, via the Sky-Tie™ SHD Duplex Converter. The SHD reduces the need to cut cable when machines are moved to new locations. The SHD converter simply fits between the two halves of the Sky-Tie™ SH cable clamps.

Perfect For:

- Machine Tools
- Portable Tools
- Air Lines
- Other heavy-cable support applications.

Sky-Tie™ Springs

Heavy-duty Sky-Tie™ Springs insure tautness of the cable, while absorbing vibrations and shocks. Each spring slips into the Sky-Tie™ clamp at its outside bend (or, if using the SHD Duplex, the converter's outside bend), and ties back to a structural member. Three spring models with maximum load capacities of 60, 70 and 160 pounds.

Sky-Tie™ Springs

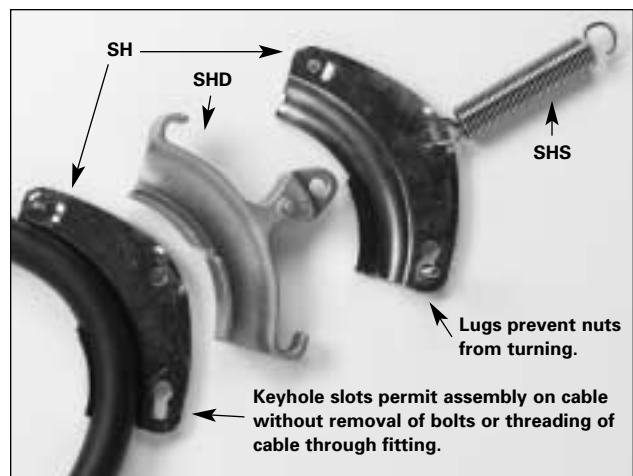
Catalog Number	Max. Spring Load	Carton Qty.	Approx. Wt.	Std. Pkg. Qty.	Approx. Wt.
SHS-50	60 lbs.	10	2.2	50	11
SHS-75	70 lbs.	10	2.7	50	14
SHS-1125	160 lbs.	10	11	10	11

Sky-Tie™ Two-In-One Cable Clamps

Catalog Number	Cable OD (Inches)	Typical Multi-Conductor Cable Size	Carton Qty.	Approx. Wt.	Std. Pkg. Qty.	Approx. Wt.
SH-50	1/2 to 3/4	14/4 thru 8/4	10	3.5	50	18.5
SH-75	3/4 to 1-1/8	8/4 thru 3/4 or (1) 500 MCM	10	7	50	36
SH-1125	1-1/8 to 1-11/16	Special Applications	5	10	25	50

Sky-Tie™ "Duplex" Component

Catalog Number	Cable OD (Inches)	Typical Multi-Conductor Cable Size	Carton Qty.	Approx. Wt.	Std. Pkg. Qty.	Approx. Wt.
SHD-50	1/2 to 3/4	14/4 thru 3/4	10	3.25	50	17.25
SHD-75	3/4 to 1-1/2	8/4 thru 3/4 or (1) 500 MCM	10	7	50	36



10A-20

Cable Couplers

Portable Cable Systems Couplers/Plugs-Receptacles Cable Couplers Identification & Application

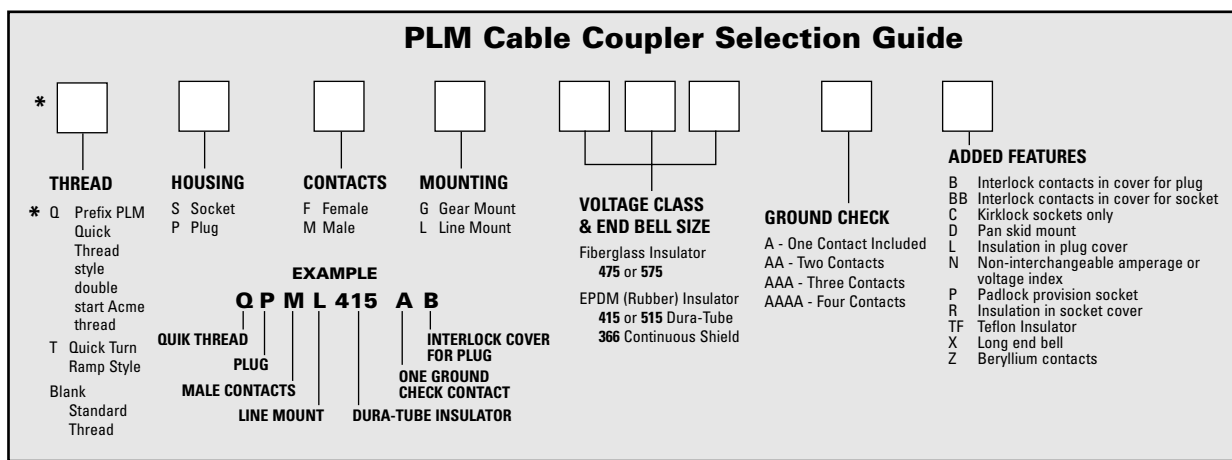
Basic nomenclature identifies the metallic shell (Plug or Socket) first, the type of contact (Male or Female) second. For switchgear or other non-cable mounted units, the letter G suffix designation is added. Example of the PLM Catalog number system is as listed:

- PMG 415A** Plug, male contacts, switchgear mount, with ground check contact.
- PML 415A** Plug, male contacts, line mount, with ground check contact.
- SFL 415A** Socket, female contacts, line mount, with ground check contact.
- SFG 415A** Socket, female contacts, switchgear mounted, with ground check contact.

Other added options available for the coupler and catalog number identification is listed.

Spare part requirements are minimized by widely interchangeable components.

Suggested application of cable couplers is a plug on one end of a cable and a socket on the other end. Common usage has the socket being on the source end and the plug on the load end.



Applications

- Extending Portable Cables
- Mine Power Centers
- Electric Shovels, Drills, Draglines
- Tunneling Machines
- Transformer Connections
- Barge, Ship-Dock Applications
- Turbine Generators
- Motor Disconnect 600V-15kV to 500 Amp.

Features

- Corrosion-Resistant Aluminum
- Electrically Tested Insulator
- Silver-Plated Copper Contacts
- Ground Check System
- Portable Cable Connections
- Switchgear or Equipment Mounting
- Standard Cover Included
- FSD Terminations Included
- Interlock Covers Available
- Filling Compounds

Benefits

- Physical, Electrical Protection
- Quick, Connect-Disconnect
- Provides Proper Phase Alignment
- Longer Coupler Life
- Entirely Watertight
- Easy Installation

Compliance

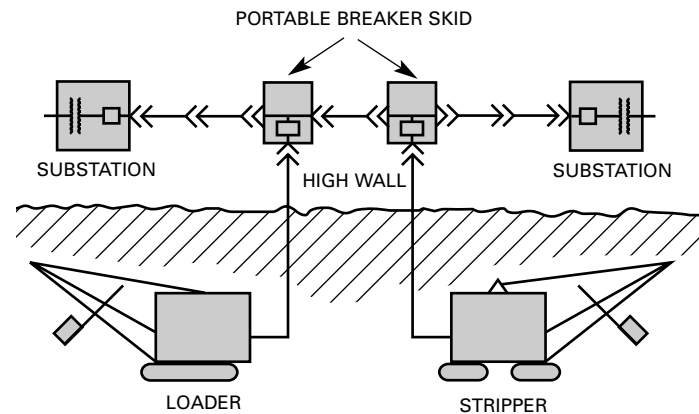
- Pennsylvania Bureau of Deep Mine Safety

Typical Surface Mine

1. Female sockets on source side of substations, line, and portable skids.
2. Male plugs on load side of skids, loader and stripper.

To Order, Provide:

1. Catalog numbers.
2. Voltage requirements.
3. Conductor sizes of phase, ground wires, and ground check wire.
4. Overall cable diameter. Also on 366 series, diameter over each phase conductor insulation.



11A-1

Portable High-Voltage Cable Couplers 415, 515

EPDM Insulators — Dura-TubeSM 500 Amperes • 15,000 Volts Maximum

Features

- Corrosion-resistant aluminum
- Rigid, non-breakable EPDM insulators
- 500 Amp contacts
- Portable cable mounting
- Switchgear or equipment mounting
- Standard cover, stress control kit, instructions included

Benefits

- Superior electrical and physical protection
- Fewer mating problems
- Quicker installation
- Quick connect-disconnect
- Versatile application

Compound is not included and is not required up to 7,500 volts. Above 7,500 Volts and when compound is required, use COLDDPOUR® Compound. Do not use asphalt compound with EPDM style couplers. Compound mandatory for 15kv.

Electrical Characteristics

	No Compound	With Compound
Maximum Voltage Phase-to-Ground	5.5 KV rms	8.7 KV rms
1 Minute Dry Withstand AC	35.0 KV rms	45.0 KV rms
6 Hour Dry Withstand DC	25.0 KV rms	35.0 KV rms
15 Minute Dry Withstand DC	65.0 KV rms	75.0 KV rms
Corona Extinction Level	7.5 KV rms	11.0 KV rms
Basic Impulse Level	75.0 KV crest	95.0 KV crest

All tests per IEEE Standard 48-1990



SFL 415 A

Catalog Number Standard Threads	Catalog Number Acme Quik-Thread	Description	Ship Wt. (lbs.)
SFG 415 A PMG 415 A	QSFG 415A QPMG 415A	<i>Equipment-mounted couplers</i>	
		Socket, Female Contacts	34
		Plug, Male Contacts	34
SFL 415 A PML 415 A	QSFL 415A QPML 415A	<i>Line-mounted couplers</i>	
		<i>1.50-3.50 O.D. Cables</i>	
		Socket, Female Contacts	51
		Plug, Male Contacts	51
SFL 515 A PML 515 A	QSFL 515A QPML 515A	<i>3.50-4.50 O.D. Cables</i>	
		Socket, Female Contacts	53
		Plug, Male Contacts	53



Options Available at Additional Cost

Catalog Number Suffix	Additional Options
-A	Ground check circuit contact (1) included
-AA	Two ground check circuit contacts
-B	Cover interlock for plug
-BB	Cover interlock for socket
-C	Kirk interlock (key type)—sockets only
-E	Electrolytic copper contacts—female
-L	Cover/insulator assembly for plug
-N	Non-interchangeable amperage or voltage index
-P	Padlock provision-socket
-R	Cover/insulator assembly for socket
-X	Extended end bell for larger cable sizes
-Z	Beryllium contacts—male
-TF	Teflon Insulator

Series 415 and 515 are recommended for all existing installations where 375, 475, 575, 154 and 155 series couplers have been used and will interface with these couplers. The Q prefix 2 1/2 turn Quik-thread is suggested for new applications or those customers presently using Quik-thread applications. Quik-thread, Quick-turn and 8 pitch couplers will not interface.

Note: Male/Female insulator and contact assemblies are interchangeable within coupler housings.

Specify PF or SM in catalog selection or consult factory.

On initial orders, one coupling wrench and one contact wrench will be required. See page 11A-9. For aluminum conductors, consult factory.

11A-2

Couplers Teflon Insulators

415TF/515TF Portable High-Voltage Cable Couplers

ADALET-PLM NOW OFFERS AN IMPROVED HIGH VOLTAGE MINING COUPLER INSULATOR SYSTEM

Combining a non-tracking, easy-to-clean hydrophobic material with an internal o-ring seal between tubes.

500 AMPERES 15,000 VOLTS MAXIMUM

Features

- Corrosion-Resistant Aluminum
- Rigid, Non-Breakable TEFLON® Insulators
- 500 Amp Contacts
- Portable Cable Mounting
- Switchgear or Equipment Mounting
- Standard Cover, Stress Control Kit, Instructions Included
- Solid Polyester Fiberglass Flange
- Teflon Tubes O-ring Sealed to Flange
- Nylon Lock Nuts for Positive Seal



SFL 415ATF

Electrical Characteristics

	No Compound	With Compound
Maximum Voltage Phase-to-Ground	5.5 kV rms	8.7 kV rms
1 Minute Dry Withstand AC	35.0 kV rms	45.0 kV rms
6 Hour Dry Withstand AC	25.0 kV rms	35.0 kV rms
15 Minute Dry Withstand DC	65.0 kV aver	75.0 kV aver
Corona Extinction Level	7.5 kV rms	11.0 kV rms
Basic Impulse Level	75.0 kV crest	95.0 kV crest

All tests per IEEE Standard 48-1990

Benefits

- Superior Electrical and Physical Protection
- Fewer Mating Problems
- Quicker Installation
- Quick Connect-Disconnect
- Versatile Application

Compound is NOT included and is not required up to 7,500 Volts. ABOVE 7,500 Volts and when compound is required, use COLDPOUR® Compound, Do NOT use asphalt compound.

Series 415 and 515 are recommended for all existing installations where 375, 475, 575, 154, and 155 series couplers have been used and will interface with these couplers. The Q prefix 2 1/2 turn Quik-Thread or threadless Quik-Turn is suggested for new applications or those customers presently using such couplers. Quik-Thread, Quik-Turn and 8 pitch couplers will not interface.

NOTE: Male/Female insulator and contact assemblies are interchangeable within coupler housings. Specify PF or SM in catalog selection or consult factory. On initial orders, one coupling wrench and one contact wrench will be required. See page 11A-9. For aluminum conductors, consult factory.

Teflon® is a registered trademark of E.I. DuPont de Nemours and Company

Options Available at Additional Cost

Catalog Number Suffix	Additional Options
-A	Ground Check Circuit Contact (1) Included
-AA	Two Ground Check Circuit Contacts
-B	Cover Interlock for Plug
-BB	Cover Interlock for Socket
-C	Kirk Interlock (Key Type)-Sockets Only
-E	Electrolytic Copper Contacts-Female
-L	Cover/Insulator Assembly for Plug
-N	Non-Interchangeable Amperage or Voltage Index
-P	Padlock Provision-Socket
-R	Cover/Insulator Assembly for Socket
-X	Extended End Bell for Larger Cable Sizes
-Z	Beryllium Contacts-Male

Catalog Number and Description

Catalog No. Stand. Threads	Catalog No. Quik-Thread	Catalog No. Quik-Turn	Description	Ship Wt.
EQUIPMENT-MOUNTED COUPLERS				
SFG 415ATF	QSFG 415ATF	TSFG 415ATF	Socket, Female Contacts	34
PMG 415ATF	QPMG 415ATF	TPMG 415ATF	Plug, Male Contacts	34
LINE-MOUNTED COUPLERS				
1.50-3.50 O.D. Cables				
SFL 415ATF	QSFL 415ATF	TSFL 415ATF	Socket, Female Contacts	51
PML 415ATF	QPML 415ATF	TSFL 415ATF	Plug, Male Contacts	51
3.50-4.50 O.D. Cables				
SFL 515ATF	QSFL 515ATF	TSFL 515ATF	Socket, Female Contacts	53
PML 515ATF	QPML 515ATF	TPML 515ATF	Plug, Male Contacts	53

11A-3

Cable Couplers T415, T515

Quik-Turn

Application

- New installations where maximum convenience and speed is required
- Existing installations where abusive conditions cause thread damage

Features (Quik-Turn Couplers)

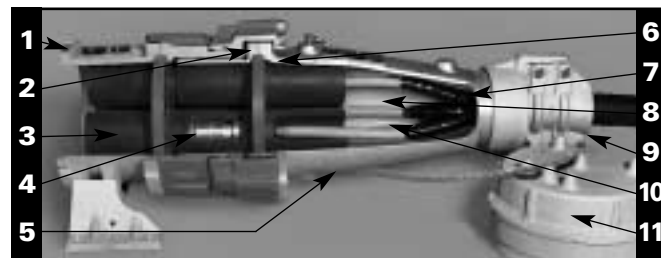
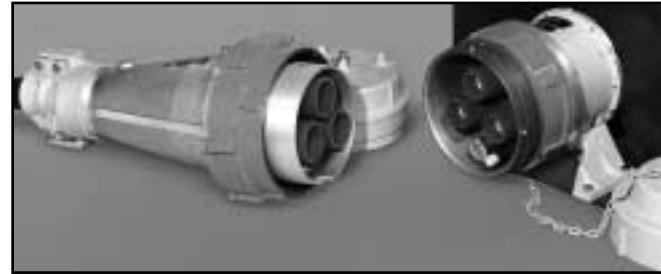
- 1/4 turn engagement for fast connection.
- Stainless steel pin and sleeve for corrosion resistance.
- Color coded orange for high visibility identification.
- Fully interchangeable with other threadless couplers using EPDM insulators.
- Spare parts common to PLM 8 pitch and Quik-Thread coupler designs.

Ratings

500 Amperes, 15,000 Volts Max.

Approvals

Pennsylvania Bureau of Deep Mines Safety – BOTE 1363-92



Features (Common to All PLM Couplers)

- 1 Heavy duty Ecoalube coated aluminum castings for high strength and corrosion protection.
- 2 Completely metal enclosed insulators, O-ring sealed.
- 3 Rigid non-breakable DURATUBE EPDM insulator tubes eliminate mating problems. Grey color provides easy check of cleanliness.
- 4 Close tolerance, silver plated contacts provide reliable connections and assured conductivity.
- 5 Smooth profile end bell resists snags.
- 6 Solid one piece flame retardant flange with O-rings on both sides insures against the entrance of moisture.
- 7 FSD stress relief pads provide fast, safe, dependable cable terminations within coupler housing.
- 8 Easy access chamber for COLDPOUR® filling compound when required.
- 9 Rugged cable entrance clamp and thick neoprene gasket for excellent moisture seal at cable entrance.
- 10 Ground check circuit contact is included. Additional contacts available.
- 11 Captive metal covers to keep insulators clean and dry when disconnected.

Catalog Number Quik-Turn	Description	Ship Wt. (lbs.)
<i>Equipment-mounted Couplers</i>		
TSFG 415A	Socket, Female Contacts	34
TPMG 415A	Plug, Male Contacts	34
<i>Line-mounted Couplers 1.50-3.50" O.D. Cables</i>		
TSFL 415A	Socket, Female Contacts	51
TPML 415A	Plug, Male Contacts	51
<i>3.50-4.50" O.D. Cables</i>		
TSFL 515A	Socket, Female Contacts	53
TPML 515A	Plug, Male Contacts	53

Electrical Characteristics

	No Compound	With Compound
Maximum Voltage Phase-to-Ground	5.5 KV rms	8.7 KV rms
1 Minute Dry Withstand AC	35.0 KV rms	45.0 KV rms
6 Hour Dry Withstand DC	25.0 KV rms	35.0 KV rms
15 Minute Dry Withstand DC	65.0 KV rms	75.0 KV rms
Corona Extinction Level	7.5 KV rms	11.0 KV rms
Basic Impulse Level	75.0 KV crest	95.0 KV crest

All tests per IEEE Standard 48-1990

Portable High-Voltage Cable Couplers 475, 575

Polyester Fiberglass Insulator 500 Amperes • 7,500 Volts Maximum

This series is the same as the 415 and 515 series except the insulator is polyester fiberglass rather than EPDM. COLDPOUR® compound must be ordered as a separate item.



SFL 475 A



Electrical Characteristics*

Maximum Voltage, Phase-to-Ground	5.5 kV rms
15 Minute Dry Withstand D.C.	65.0 kV aver
1 Minute Dry Withstand 60Hz	35.0 kV rms
6 Hour Dry Withstand 60Hz	25.0 kV rms
Corona Extinction Level	7.5 kV rms

*All tests per IEEE Standard 48-1962.
* Filled with compound*

Catalog Number	Description	Ship Wt. (lbs.)
SFG 375 A	<i>Equipment-mounted couplers</i>	
	Socket, Female Contacts	32
PMG 375 A	Plug, Male Contacts	32
SFL 475 A	<i>Line-mounted couplers</i>	
	<i>1.50-3.50 O.D. Cables</i>	
	Socket, Female contacts	50
PML 475 A	Plug, Male contacts	50
SFL 575 A	<i>3.50-4.50 O.D. Cables</i>	
	Socket, Female contacts	52
PML 575 A	Plug, Male contacts	52

Options Available at Additional Cost

Catalog Number Suffix	Additional Options
-A	Ground check circuit contact (1) included
-AA	Two ground check circuit contacts
-B	Cover interlock for plug
-BB	Cover interlock for socket
-C	Kirk interlock (key type)-sockets only
-E	Electrolytic copper contacts-female
-L	Cover/insulator assembly for plug
-N	Non-interchangeable amperage or voltage index
-P	Padlock provision-socket
-R	Cover/insulator assembly for socket
-X	Extended end bell for larger cable sizes
-Z	Beryllium contacts-male

Data Required on Order

- Sizes and number of ground checks
- Phase conductor size
- Catalog number
- Overall O.D. of cable
- Sizes and number of ground wires
- Voltage class

Note: Male/Female insulator and contact assemblies are interchangeable within coupler housings.

Specify PF or SM in catalog selection or consult factory.

On initial orders, one coupling wrench and one contact wrench will be required. See page 11A-9. For aluminum conductors, consult factory.

11A-5

Portable High-Voltage Cable Couplers 366

EPDM Insulators — *Continu-Shield*SM 200 Amperes • 6,600 Volts Maximum

Features

- Corrosion-resistant aluminum
- Compact design
- Unbreakable molded EPDM insulators
- Continuous shield design
- Airtight insulator connection
- Double start Acme thread

Benefits

- No compound required
- Small size, lightweight
- More economical
- Better fault protection
- Better electrical characteristics

Electrical Characteristics

Maximum Voltage, Phase-to-Ground	3.8 kV rms
1 Minute Dry Withstand AC	35.0 kV rms
6 Hour Dry Withstand AC	25.0 kV rms
15 Minute Dry Withstand DC	65.0 kV aver
Corona Extinction Level	7.5 kV rms
Basic Impulse Level	75.0 kV crest

All tests per IEEE Standard 48-1962



SFL 366A

Catalog Number	Description	Ship Wt. (lbs.)
SFG 366 A	<i>Equipment-mounted couplers</i> Socket, Female Contacts	11
PMG 366 A	Plug, Male Contacts	11
SFL 366 A	<i>Line-mounted couplers</i> Socket, Female contacts	17
PML 366 A	Plug, Male contacts	17



Options Available at Additional Cost

Catalog Number Suffix	Additional Options
-A	Ground check circuit contact (1) included
-AA	Two ground check circuit contacts
-BL	Cover interlock for plug
-BBR	Cover interlock for socket
-P	Padlock provision-socket
-C	Kirk interlock (keytype) sockets only

Note: On initial orders, one coupling wrench will be required. See page 11A-9.

Maximum diameter over phase insulation .840".

Maximum conductor size 4/0 Awg.

For use on copper cable only. For aluminum cables, consult factory.

Data Required on Order

- Catalog number
- Sizes and number of ground wires
- O.D. over insulation of phase conductors
- Voltage class
- Sizes and number of ground checks
- O.D. of cable over jacket
- Phase conductor size and type
- Class of stranding
- For unshielded cables, order kit #A1746

11A-6

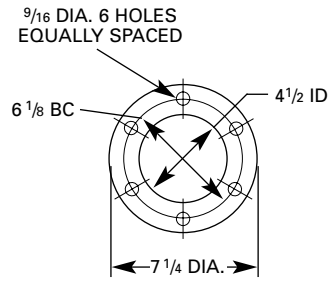
Other Portable Cable Products PCF, WACS

Cable Strain Relief PCF

Flange-mounted cable strain reliefs provide gasket-sealed, strain-relief entrance of portable cables into metal-clad equipment. All hardware, fasteners and gaskets are included.

Type PCF and PCFL

Round Cables	
Catalog Number	Cable Range
PCF 175	1.50-1.75
PCF 200	1.75-2.00
PCF 225	2.00-2.25
PCF 250	2.25-2.50
PCF 275	2.50-2.75
PCF 300	2.75-3.00
PCF 325	3.00-3.25
PCF 350	3.25-3.50
PCF 375	3.50-3.75
PCF 400	3.75-4.00



MOUNTING DIMENSIONS

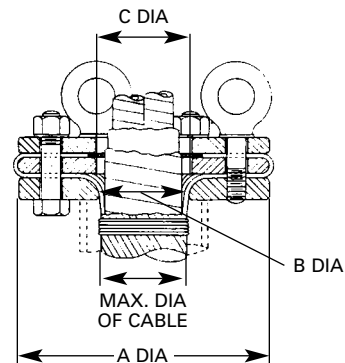
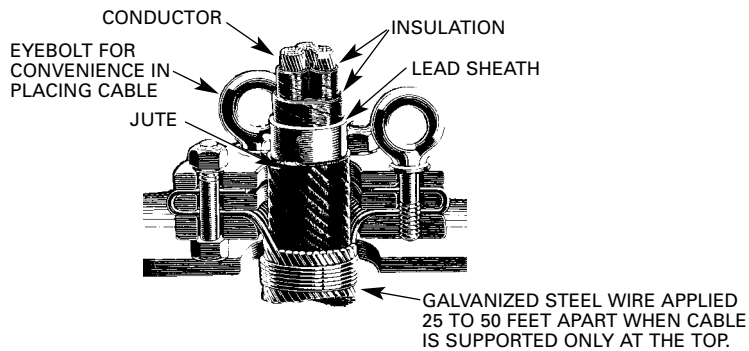


For Blind Tap mounting holes add suffix "L". On all orders Cable Diameter must be specified.

Wire Armored Cable Support WACS

Type WACS Cable Supports are designed for use as supports for wire armored cable in borehole or vertical wireways. In such applications, the cables are usually wire armored and supported at the top by the wire armor. Single support systems are particularly useful for primary distribution in high-rise buildings where permissible. In accessible locations the cable may be clamped to the side wall in addition to the top support. The supports should be chosen first on the basis of weight to be supported and secondly, on diameter of cable. Fabricated from steel plate and hot-dip galvanized.

Order by catalog number and include description and O.D. of cable.



Discount Schedule A

Catalog Number	Weight Capacity (lbs.)	Max. Cable O.D.	Dimensions (Inches)			Ship Weight (lbs.)
			A	B	C	
WACS238	7500	2.37	9.75	2.60	3.00	50
WACS288	7500	2.87	9.75	3.10	3.50	50
WACS338	7500	3.37	9.75	3.60	4.00	50
WACS388	7500	3.87	9.75	4.10	4.50	50
WACS330	10000	3.37	12.00	3.60	4.00	80
WACS380	10000	3.87	12.00	4.10	4.50	80
WACS420	10000	4.25	12.00	4.50	4.90	80

11A-7

Other Portable Cable Products CP, PCK

COLDPOUR® Compound* CP

Compound filling can prevent condensation and provide added protection in wet locations. Asphaltic compounds cannot be used with EPDM insulations. For those customers who may wish to use compound, ADALET offers a COLDPOUR® compound which does not require heating for installation or removal. Suitable for all couplers. No shrinkage or waste. Approximately 2-hour gel time.

Catalog Number	Description	Shipping Weight (lbs.)
CP-40	1 5/8 gal. 2-part mix for one LINE mount or two GEAR mount couplers, Series 415 or 475 coupler.	13
CP-50	1 7/8 gal. 2-part mix for one LINE mount, Series 515 or 575 coupler	14
CP-55	2 1/4-gal. 2-part mix for one Suffix-X LINE mount coupler with extended end bell.	24



*Shelf life, 6 mos. Should be installed at normal room temperature.

Coupler Contact Insulation Cleaning Kit

Dirt contamination can cause electrical failures. The mating contact insulators can be efficiently cleaned with the PCK100 Cleaning Kit.

Kit consists of 16-oz. aerosol can of non-flammable electrical parts cleaner, bristle brush, two white wiping cloths and polyethylene glove. Ozone-safe spray can contains no fluorocarbons.

Catalog Number	Description	Shipping Weight (lbs.)
PCK-100	Cleaning Kit	1 1/2



Replacement Coupler Insulators

Insulator kits to replace polyester fiberglass and cone seal style insulators

Complete package includes rigid, unbreakable insulator tubes with flame-retardant flange and all necessary conductor and insulation shield terminating material except contacts. May be used with existing PLM Couplers. Add COLDPOUR® for 15kV applications.

Catalog Number	Description	Shipping Weight (lbs.)
K 415 F	For female line plugs or sockets	10
K 415 M	For male line plugs or sockets	10
K 415 FG	For female gear-mount plugs or sockets	8
K 415 MG	For male gear-mount plugs or sockets	8



11A-8

Other Portable Cable Products Type QT

Conversion Kits QT

Any cable coupler line mount or gear mount may be converted to Acme double start Quik-Thread style or Quik-Turn style. These style couplers will not mate with standard 8 pitch thread couplers; therefore, it is necessary to change the socket body, lock ring, and covers. Select the correct conversion plug or socket kit from the table below. Kits include only the thread parts which must be changed, plus new screws and gaskets.

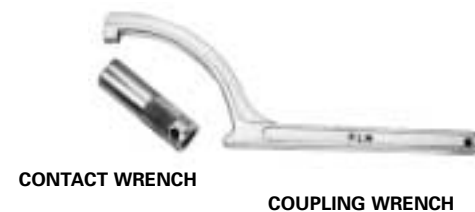
Quik-Thread coupler rings are color-coded green to provide positive identification. Quick-Turn coupler rings are color-coded orange. Conversion kits should be applied to all couplers on any single cable system.



Catalog Number	Acme Thread Parts Furnished	Description
QKP-8 TKP-8	Plug cover and lock ring	Replacement for plug-style couplers. Includes plain cover (without drilling for pilot or ground contacts).
QKP-M/F-8 TKP-M/F-8	Plug cover (drilled for pilot and ground contacts) and lock ring	Replacement for plug-style couplers. Includes cover drilled for ground and pilot contacts (male or female). Customer to use existing contacts.
QKP-M/F-15 TKP-M/F-15	Plug cover (drilled for pilot and ground contacts and for cover insulator assembly) and lock ring	Replacement for plug-style couplers. Includes cover drilled for ground and pilot contacts (male or female) and for cover insulator assembly. Customer to use existing contacts and cover insulator assembly.
QKS-8 TKS-8	Socket cover and socket body	Replacement for socket-style couplers. Includes plain cover (without drilling for pilot or ground contacts).
QKS-M/F-8 TKS-M/F-8	Socket cover ring and socket body	Replacement for socket-style couplers. Includes cover ring to be used with existing cover. Customer to use existing contacts.
QKS-M/F-15 TKS-M/F-15	Socket cover ring and socket body	Replacement for socket-style couplers. Includes cover ring to be used with existing cover and cover insulator assembly. Customer to use existing contacts.

Coupler Wrenches

Catalog Number	Description	Shipping Weight (lbs.)
WR	Contact wrench for 415, 515, 475, 575 series	1
C-1008	Coupling wrench (Aluminum) for 415, 515, 475, 575 series	1
C-1008-S	Coupling wrench (Steel) for 415, 515, 475, 575 series	3
C-1678-S	Coupling wrench (Steel) for 366 series	3



11A-9

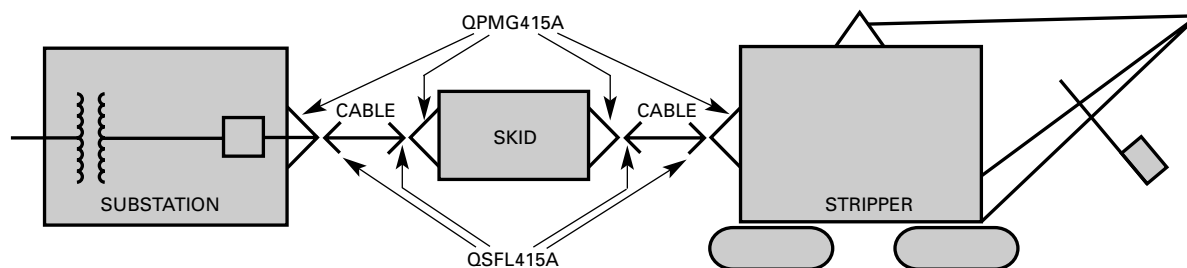
Other Portable Cable Products Skids

Adalet Cable Couplers – Surface Mining Application

Because of operational convenience, economics, and added safety, many surface mining operations use Adalet Couplers in conjunction with handling trailing cables. Adalet Couplers are designed so that the first circuit to open and the last to close is the ground check, so that the circuit breakers cannot be operated until the ground and phase contacts are connected. Furthermore all live parts are enclosed in the housing. Thus couplers provide a compact, safe, watertight, and dust-tight connection.

For rugged surface conditions, Adalet has designed features and products to utilize couplers and provide rapid, safe means for handling trailing cables.

For high inrush currents associated with surface mining equipment, Adalet provides high conductivity split copper, silver plated, male contacts with pressure maintaining elastomeric inserts. Female contacts are silver plated high conductivity copper.



QPMG ON SUBSTATION, SKIDS, STRIPPER.
QSFL (LESS FEET) ON BOTH CABLE ENDS.

11A-10

Type Q – Quik-Thread

Coupling rings with double start Acme thread permits couplers to be connected or disconnected in only 2 1/2 turns. Special hardened and permanently lubricated threads are recessed from the end of the coupler to prevent damage and eliminate clogging and seizing. Adalet Quik-Thread Style Couplers are color coded green to provide positive identification.

Type JB-1 Coupler Box

Compact, rugged steel plate box protects couplers from rock fall and offers double environmental protection for electrical connection. Fast connect-disconnect even in the most adverse conditions. The coupler is positioned on mounting pins, inside the skid house. For removal, simply raise cover and lift out coupler and cable. Mounted on skids, the skid house is equipped with tow hooks providing rapid means of moving skid, coupler & cable.

Type EP-1 Coupler Skid

For moving cables and support of cable couplers. Couplers are mounted on a turntable positioned on skid. A steel cable support in the center of the sled supports cable loops which are fed off the back of the skid as the equipment moves forward. Ten inch high posts on each back corner of skid provide a tie point for pulling loops when picking up cables, and prevent the cables from sliding under the skid.

Type JB Skids

For cable handling ease and for two to three feeder junction boxes. Normally wired with 1, 2, or 3 sockets for outgoing power and one plug incoming. May be utilized as illustrated above.

Type HB Sleds

Same as above, mounted on high runners for clearing rubble.

Other Portable Cable Products Skids

Lowboy Skids 2-way, 3-way or 4-way

Factory-wired for 15 kV–500 ampere service includes ground and ground check wiring. Lowboy skids are used for two-way, three-way or four-way connections of portable cables. Boxes are wired internally and compound-filled. Prices do not include couplers – order separately.

Catalog Number	Application
LB-2	2-way
LB-3	3-way
LB-4	4-way



Hi-Boy Sleds 2-way, 3-way or 4-way

Factory-wired for 15 kV–500 ampere service includes ground and ground check wiring. Hi-boy sleds offer tubular runners suitable for clearing rubble or keeping couplers out of mud, water or snow. Boxes are wired internally and compound-filled. Prices do not include couplers – order separately.

Catalog Number	Application
HB-2	2-way
HB-3	3-way
HB-4	4-way



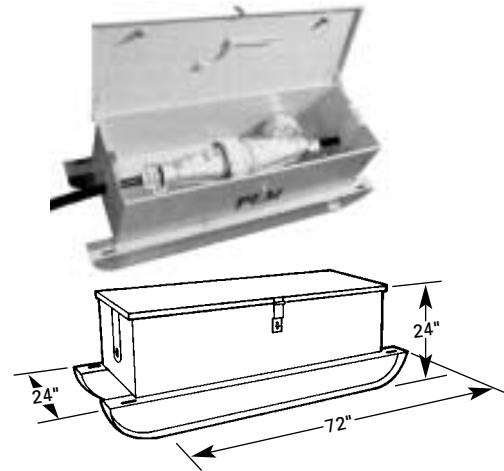
JB-1 Coupler Box

Features

- 3/16" steel plate fabrication
- Compact design
- Skid-mounted
- Cable entry seal and support
- Painted safety yellow
- Hinged cover with provision for padlock

Benefits

- Maximum physical protection of coupler
- Protects coupler from environment
- Simplifies cable movement
- Labor and material cost savings when compared with high-voltage connection boxes



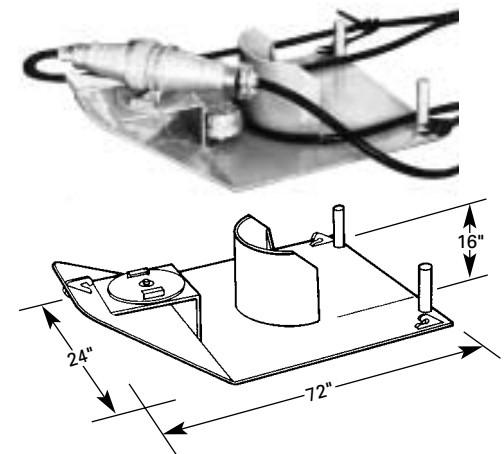
EP-1 Coupler Skid

Features

- 1/2" steel plate construction
- Compact design
- Turntable coupler mount
- Steel cable support
- Protects cable from sharp bends

Benefits

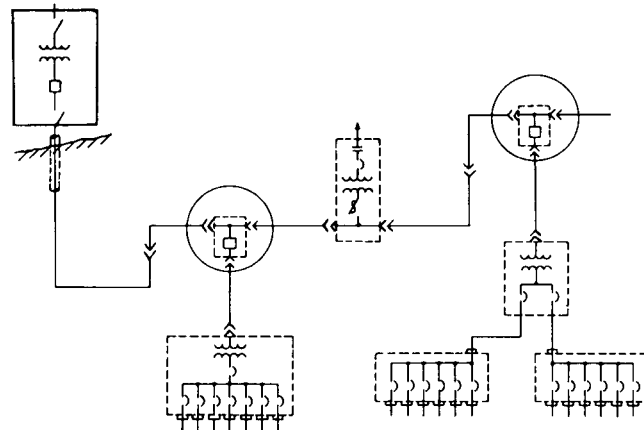
- Rugged design prevents couplers from snagging when moving equipment in rough terrain
- Simplifies the movement of trailing cables
- Reduced cable handling downtime
- Offers superior electrical features of using cable couplers



Systems

Voltage Selection

In many mining systems the original and replacement costs of cable can become a major item of expense. From an economic standpoint, the distribution voltage should be as high as possible. At 7500 volts, the cost of cables is approximately half of the cost of cables required to handle the same load at 2300 or 4160 volts with very little extra cost on the other electrical equipment. 13.2kV equipment is considerably more expensive than 7500 volt equipment, but in boreholes, or where long cable runs are necessary in open pit mines, the use of 15kV cables and couplers can be advantageous.



TYPICAL SYSTEM FOR A-C POWER IN DEEP MINING

Ground Check and Key Interlock Methods

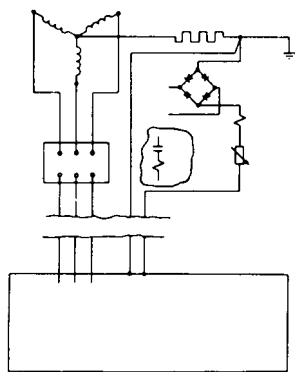
With a total of four pilot wire contacts available, the Adalet Coupler is adaptable to any presently used ground check system. In addition to the electrical interlock (ground check system), mechanical key type locks may be used to insure no voltage disconnection of couplers.

Coupler Covers

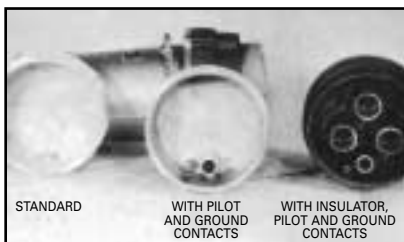
The Adalet Coupler is furnished with the Standard Cover. This prevents moisture and contamination from coming in contact with the coupler insulator and contacts.

When it is desired to have the Cover equipped with a Pilot contact and a Ground contact, add the suffix letter "B" to the catalog number for Plug style coupler and letter "BB" for Socket style coupler. With these contacts installed it is then possible to check the integrity of the Ground Check circuit.

The covers are available with an insulator, pilot contact, and ground contact. It is then possible to energize the cable without the coupler being connected to another coupler. Add the suffix letters "BL" to the catalog number for Plug style coupler and letters "BBR" for Socket style coupler.



SCHEMATIC OF TYPICAL GROUND CHECK SYSTEM



11A-12

Couplers

PLM: The Leading Coupler in the Mining Industry

A History

PLM products began in 1951 as a supplier of cable accessories for high voltage cables. Although Cable Couplers had been used in the mining industry, it was not until 1957 when requirements began to develop for voltages higher than 5kV and Amperages greater than 200 Ampere that the first 7.5kV 500 AMP Coupler was developed by PLM Products.

Published test values backed by a high voltage laboratory and continuous innovations have kept PLM Products, now known as Adalet, as a world leader of cable couplers.

Design

From the beginning, PLM designed Couplers to standards subsequently incorporated into mine safety codes in the United States. All PLM Couplers are completely metal enclosed with the outer shell grounded to the ground wires in the cable. Couplers are designed so that the first contact to make and last to break is the ground contact. With ground check circuits the Coupler ground check circuit is the last to make and first to break. The ground contact is also grounded to the housing assuring the operator that the Coupler is grounded.

Use

Couplers have been utilized in underground, strip, and pit operations on every continent in the world, and for coal and hard rock mining operations of every type. Adalet Cable Couplers provide safe, convenient means for connecting portable cable rated up to 15,000 volt and up to 500 Amperes, copper or aluminum conductor to mining equipment, electric shovels, draglines, loaders, barges, tunneling machines, portable substations, portable junction boxes, or for joining lengths of high voltage cables.

Housings are of rugged, corrosion resistant cast aluminum providing high strength with light weight. Thorough gasketing makes the coupler entirely watertight. Tight fitting covers for plug and socket, protect contacts and insulators from moisture when disconnected.

Positive thread engagement of the metal housing prevents accidental disconnecting and insures proper opening and closing sequence. For further safeguard, optional electrical and mechanical (key type) systems are available.

Other Couplers Available Upon Request

Note: Male/Female assemblies are interchangeable within housings. Specify PF or SM or consult factory.

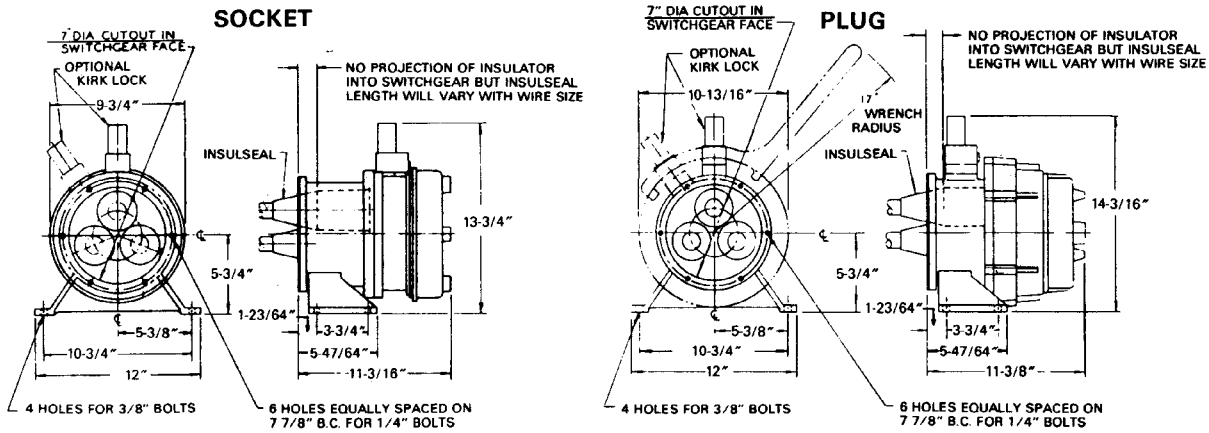
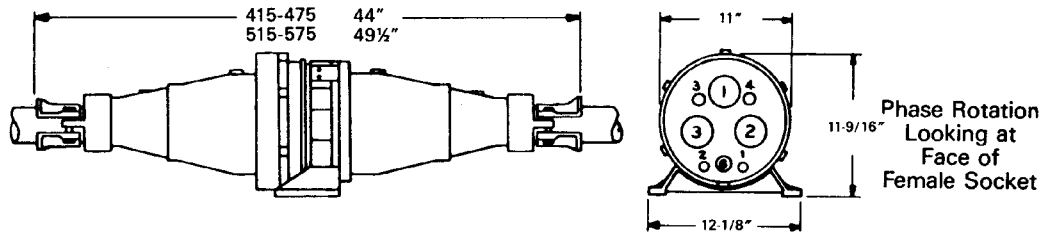
All additional options are available for the above coupler.

Couplers Dimensional Data

CABLE COUPLERS DATA SHEET

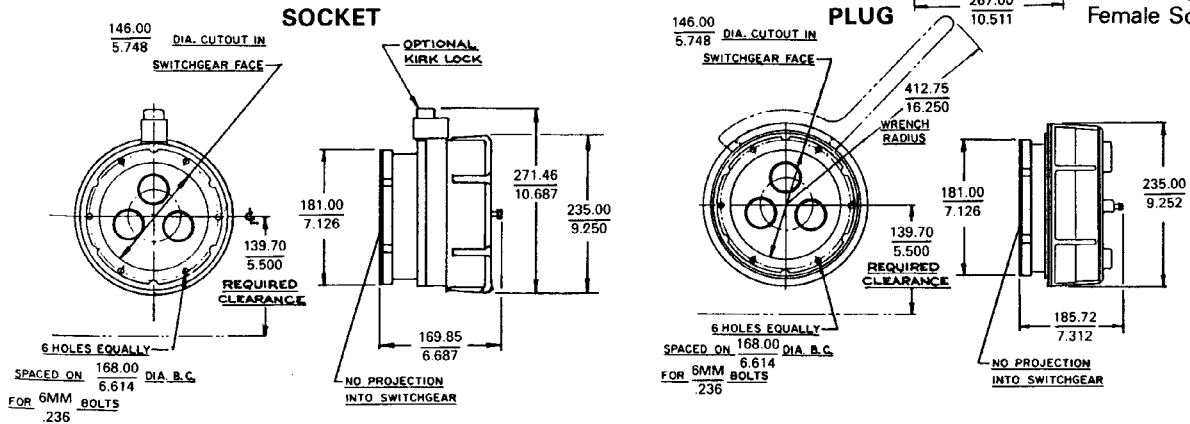
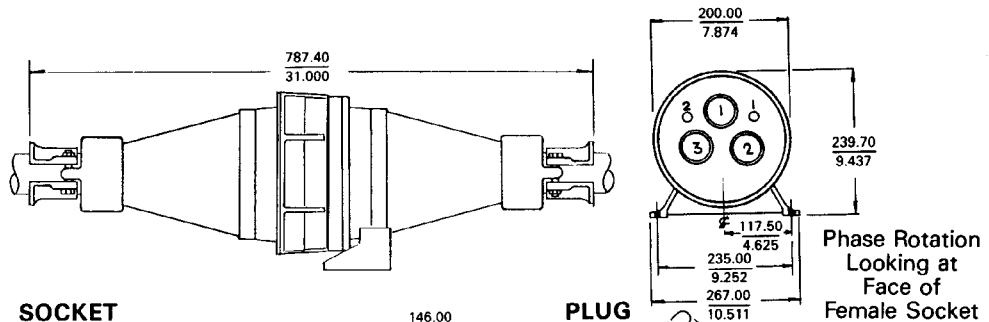
415, 515, 475, 575 Series

Mounting and Clearance Dimensions of Assembled Coupler



366 SERIES

Example:
146.00 — MILLIMETERS
5.748 — INCHES



11A-14

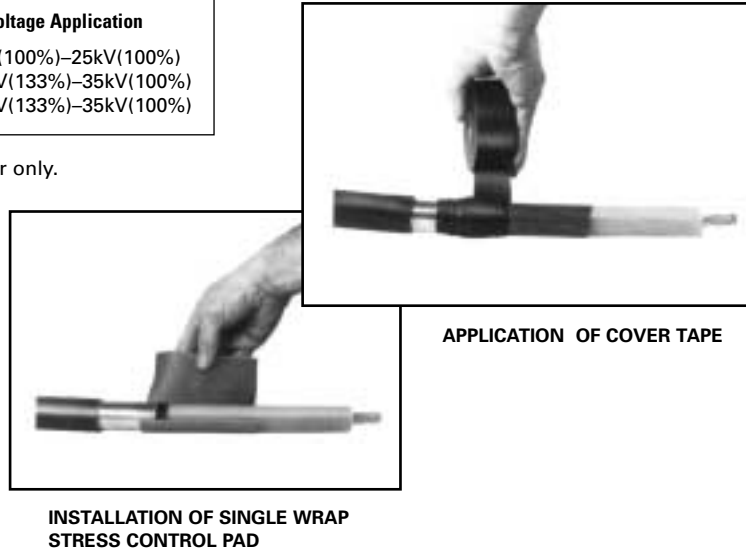
Indoor Termination Kits 5 - 35 kV

For Use on Solid Dielectric Cable

Each indoor kit includes material to make three single- or one three-conductor termination. Kit includes three FSD pads, high voltage tape, abrasive cloth and instructions.

Catalog No.	Cable Range	Voltage Application
FSD	#8-600MCM	5kV(100%)-25kV(100%)
FSD35	#1-1000MCM	25kV(133%)-35kV(100%)
FSDS35*	#1-1000MCM	25kV(133%)-35kV(100%)

* Silicone overwrap for contaminated areas – indoor only.



Outdoor Termination Kits 5 kV - 25 kV

For Use on Solid Dielectric Cable

Each outdoor kit includes material to make three single- or one three-conductor termination. Kit includes three FSD pads, high voltage tape, abrasive cloth, silicone tape, PVC all-weather tape and instructions.

Catalog No.	Cable Range	Voltage Application
FSDS1	#8-600MCM	5kV(100%)-15kV(100%)
FSDS2	#8-600MCM	15kV(133%)-25kV(100%)



Grounding Kits & Pads

Catalog No.	Cable Range	Voltage Application
FSDP3	3 Extra Pads	5kV(100%)-25kV(100%)
FSDP35	3 Extra Pads	25kV(133%)-35kV(100%)
FSD35*	3 Extra Pads	25kV(133%)-35kV(100%)



11A-15

PowerSpec™

Features

- Fast, simple installation
- 360° grounding system provides superior conductivity
- Durable seal prohibits cable twisting or pull-out
- Watertight (UL-50 listed as a Type 4 cable fitting)
- Compact design
- Lightweight and corrosion resistant

Material/Finish

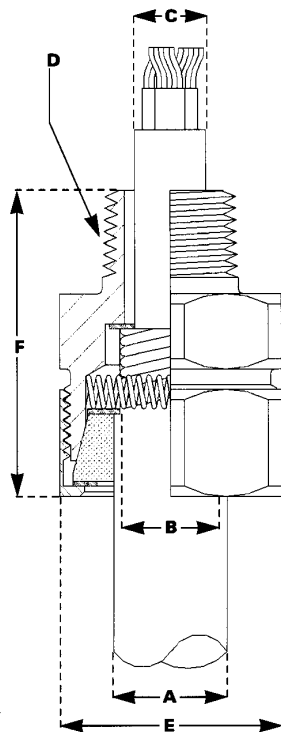
- Body, Nut: Copper-Free Aluminum
- Flange Gasket, Grommet: Neoprene
- Armor Stop: Phenolic
- Spring: Phosphur Bronze

Standard Sizes

.55" - 2.18"

PowerSpec for ordinary locations, PowerSpecX for hazardous locations - there's one suited for your application

- power plants
- paper mills
- oil refineries
- offshore drilling platforms
- waste treatment facilities
- chemical plants



Type PS Description

Use where jacketed metal clad (MC) cable is installed in a non-hazardous or Division 2 area when sealing is not required. The connector is hexagonally designed for easy wrenching with a minimal overall length. The connector is UL listed according to UL 514B and does not require any disassembly to install.

Applications

For terminating TECK and jacketed Metal Clad cable. For vertical or horizontal runs.

Certifications



Applicable Standard

Meets UL standard for raintight armored cable fitting.

PowerSpecX (Class I, Div. 1 and 2, Haz. Locations)

Type PSX Description

Use where jacketed MC cable is installed in a Class I, Division 1 area or a Class I, Division 2 area when sealing is required, i.e. enclosures containing arcing or sparking devices. The connector is hexagonally designed for easy wrenching with a minimal overall length. An epoxy type sealing compound is used and the connector is UL listed according to UL 2225.

Applications

Terminates and seals jacketed continuous corrugated MC cable in Class I, Div. 1 and 2 and TECK and jacketed interlocked MC cable in Class I, Div. 2 locations. For vertical or horizontal runs. Provides seal for cable core where armor is removed and between the jacket and armor.

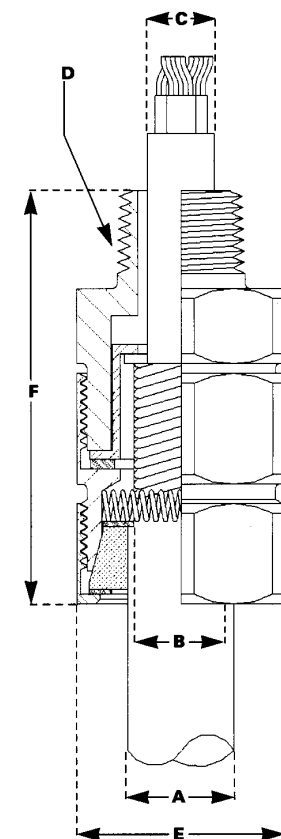
Certifications



- Class I, Groups A, B, C, D
- Class II, Groups E, F, G

Applicable Standard

Meets NEC Sec. 501-5(e) requirements for sealing of MC cable in Class I, Div. 1, and 2 hazardous locations. Also meets UL standards for rain tight fitting in hazardous locations.



11A-16

PowerSpec™

Catalog Number	Diameter Over Jacket		Diameter Over Armor		Maximum Cable Core Diameter	Conduit Size	Fitting O.D.	Length Overall	Ship Weight (lbs.)
	min.	max.	min.	max.					
PS-065-05	0.55"	0.65"	0.45"	0.56"	0.56"	1/2"	1 5/8"	2 1/6"	1/4
PS-075-05	0.65"	0.75"	0.55"	0.66"	0.56"	1/2"	1 5/8"	2 1/6"	1/4
PS-085-05	0.75"	0.85"	0.65"	0.76"	0.56"	1/2"	1 5/8"	2 1/6"	1/4
PS-100-07	0.85"	1.00"	0.72"	0.90"	0.82"	3/4"	2"	2 3/16"	1/3
PS-115-07	1.00"	1.15"	0.87"	1.05"	0.82"	3/4"	2"	2 3/16"	1/3
PS-125-10	1.13"	1.25"	1.00"	1.15"	1.00"	1"	2 3/16"	2 7/16"	1/2
PS-138-10	1.25"	1.38"	1.12"	1.28"	1.00"	1"	2 3/16"	2 7/16"	1/2
PS-150-12	1.33"	1.50"	1.23"	1.40"	1.33"	1 1/4"	2 7/8"	2 7/8"	2/3
PS-168-12	1.50"	1.68"	1.40"	1.58"	1.33"	1 1/4"	2 7/8"	2 7/8"	2/3
PS-183-15	1.68"	1.83"	1.58"	1.73"	1.61"	1 1/2"	3 1/4"	3 5/8"	1
PS-200-15	1.83"	2.00"	1.73"	1.90"	1.61"	1 1/2"	3 1/4"	3 5/8"	1
PS-218-15	2.00"	2.18"	1.90"	2.08"	1.61"	1 1/2"	3 1/4"	3 5/8"	1

Catalog Number	Diameter Over Jacket		Diameter Over Armor		Maximum Cable Core Diameter	Conduit Size	Fitting O.D.	Length Overall	Ship Weight (lbs.)
	min.	max.	min.	max.					
PSX-065-05	0.55"	0.65"	0.45"	0.56"	0.56"	1/2"	1 5/8"	2 3/4"	5/8
PSX-075-05	0.65"	0.75"	0.55"	0.66"	0.56"	1/2"	1 5/8"	2 3/4"	5/8
PSX-085-05	0.75"	0.85"	0.65"	0.76"	0.56"	1/2"	1 5/8"	2 3/4"	5/8
PSX-100-07	0.85"	1.00"	0.72"	0.90"	0.82"	3/4"	2"	3 1/8"	7/8
PSX-115-07	1.00"	1.15"	0.87"	1.05"	0.82"	3/4"	2"	3 1/8"	7/8
PSX-125-10	1.13"	1.25"	1.00"	1.15"	1.00"	1"	2 3/16"	3 1/2"	1
PSX-138-10	1.25"	1.38"	1.12"	1.28"	1.00"	1"	2 3/16"	3 1/2"	1
PSX-150-12	1.33"	1.50"	1.23"	1.40"	1.33"	1 1/4"	2 7/8"	4 1/8"	1 1/4
PSX-168-12	1.50"	1.68"	1.40"	1.58"	1.33"	1 1/4"	2 7/8"	4 1/8"	1 1/4
PSX-183-15	1.68"	1.83"	1.58"	1.73"	1.61"	1 1/2"	3 1/4"	4 11/16"	1 3/4
PSX-200-15	1.83"	2.00"	1.73"	1.90"	1.61"	1 1/2"	3 1/4"	4 11/16"	1 3/4
PSX-218-15	2.00"	2.18"	1.90"	2.08"	1.61"	1 1/2"	3 1/4"	4 11/16"	1 3/4

To Order: Select fitting based on diameter over jacket and armor by using the table above. For locknut and bushing, add suffix LB.

11A-17

Fittings for Metal Clad Cables Jacket over Armor

Features/Benefits:

- Slip-on design with no disassembly for easy installation
- Neoprene bushing for raintight seal
- Locknuts, bushings and flange gasket included – no additional materials to purchase
- Flange gasket prevents moisture penetration through threads
- Made from copper-free aluminum alloy for corrosion resistance
- Fits broad range – .351-4.62 cable O.D.

Application:

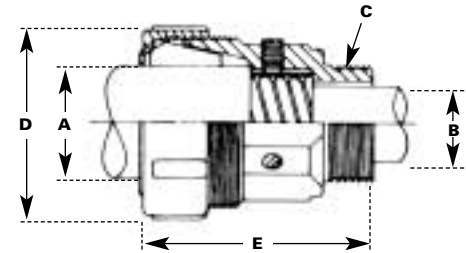
- For terminating metal clad cable

Certification:



To Order:

Determine satisfactory fit by checking cable dimensions A and B.
If cable dimensions do not fall within acceptable range, consult factory.



Catalog Number	Dimensions (Inches)					Ship Wt. (Lbs.)	
	A Dia. Over Jacket Min. Max.		B Max. Cable Core Dia.	C Conduit Size	D Fitting O.D.		E Length Overall
JAG 45-05	.35	.45	.61	1/2	1 5/8	2 1/4	1/4
JAG 55-05	.45	.55	.61	1/2	1 5/8	2 1/4	1/4
JAG 65-05	.55	.65	.61	1/2	1 5/8	2 1/4	1/4
JAG 75-05	.65	.75	.61	1/2	1 5/8	2 1/4	1/4
JAG 85-05	.75	.85	.61	1/2	1 5/8	2 1/4	1/4
JAG 95-05	.85	.95	.61	1/2	1 5/8	2 1/4	1/4
JAG 99-07	.85	.99	.81	3/4	2	2 5/8	1/3
JAG 107-07	.92	1.07	.81	3/4	2	2 1/4	1/3
JAG 113-07	.98	1.13	.81	3/4	2	2 1/4	1/3
JAG 121-07	1.07	1.21	.81	3/4	2	2 1/4	1/3
JAG 112-10	1.00	1.12	1.00	1	2 3/8	3 1/16	1/2
JAG 125-10	1.12	1.25	1.00	1	2 3/8	3 1/16	1/2
JAG 138-10	1.22	1.38	1.00	1	2 3/8	3 1/16	1/2
JAG 138-12	1.28	1.38	1.25	1 1/4	2 7/8	3 3/8	2/3
JAG 156-12	1.38	1.56	1.25	1 1/4	2 7/8	3 3/8	2/3
JAG 174-12	1.56	1.74	1.25	1 1/4	2 7/8	3 3/8	2/3
JAG 188-12	1.74	1.88	1.25	1 1/4	2 7/8	3 3/8	2/3
JAG 174-15	1.60	1.74	1.63	1 1/2	3 1/4	4 1/16	1
JAG 188-15	1.74	1.88	1.63	1 1/2	3 1/4	4 1/16	1
JAG 200-15	1.88	2.00	1.63	1 1/2	3 1/4	4 1/16	1
JAG 218-15	2.00	2.18	1.63	1 1/2	3 1/4	4 1/16	1
JAG 219-20	2.05	2.19	2.09	2	4	4 5/16	1 1/2
JAG 236-20	2.19	2.36	2.09	2	4	4 5/16	1 1/2
JAG 247-20	2.35	2.47	2.09	2	4	4 5/16	1 1/2
JAG 261-20	2.47	2.61	2.09	2	4	4 5/16	1 1/2
JAG 263-25	2.46	2.63	2.49	2 1/2	4 23/32	5 7/16	2 1/2
JAG 280-25	2.62	2.80	2.49	2 1/2	4 23/32	5 7/16	2 1/2
JAG 296-25	2.80	2.96	2.49	2 1/2	4 23/32	5 7/16	2 1/2
JAG 297-30	2.80	2.97	3.11	3	5 3/32	5 3/4	3
JAG 311-30	2.95	3.11	3.11	3	5 3/32	5 3/4	3
JAG 327-30	3.10	3.27	3.11	3	5 3/32	5 3/4	3
JAG 343-30	3.26	3.43	3.11	3	5 3/32	5 3/4	3
JAG 359-30	3.42	3.59	3.11	3	5 3/32	5 3/4	3
JAG 375-35	3.52	3.75	3.61	3 1/2	5 11/16	5 13/16	3 1/4
JAG 392-35	3.75	3.92	3.61	3 1/2	5 11/16	5 13/16	3 1/4
JAG 412-35	3.90	4.12	3.61	3 1/2	5 11/16	5 13/16	3 1/4
JAG 423-40	4.05	4.23	4.11	4	6 3/32	5 13/16	3 1/2
JAG 437-40	4.20	4.37	4.11	4	6 3/32	5 13/16	3 1/2
JAG 451-40	4.34	4.51	4.11	4	6 3/32	5 13/16	3 1/2
JAG 462-40	4.43	4.62	4.11	4	6 3/32	5 13/16	3 1/2



11A-18

Fittings for Metal Clad Cables Unjacketed Armor Dry Location

Features/Benefits:

- Wide armor range – sizes on .200 intervals
- Raised boss in strap offers excellent pullout protection
- Copper-free aluminum for corrosion resistance and suitability with aluminum or galvanized steel armor

Application:

For terminating metal clad cable with unjacketed armor in dry locations

Certifications:



Note:

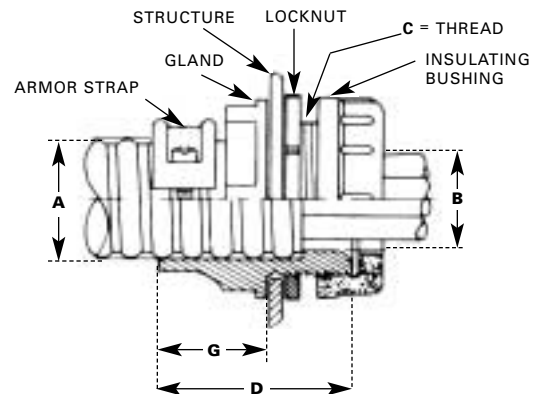
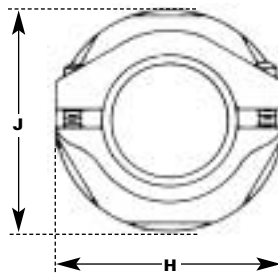
For use with Cable O.D. over armor

To Order:

Select fitting based on diameter over armor

Catalog Number	Dimensions (Inches)								Ship Wt. (Lbs.)
	For Use With Cable O.D. Over Armor		A	B	C Conduit Size	D	G	H-J	
	Min.	Max.							
AC6	.45	.64	.65	.40	3/4	1 3/8	7/8	1 3/8	1/2
AC8	.65	.84	.85	.60	1	1 13/16	1 1/8	1 11/16	1/2
AC10	.85	1.04	1.05	.80	1 1/4	1 7/8	1 1/8	2	1/2
AC12	1.05	1.24	1.25	1.00	1 1/4	2	1 1/4	2	1/2
AC14	1.25	1.44	1.45	1.20	1 1/2	2 1/16	1 5/16	2 5/16	3/4
AC16	1.45	1.64	1.65	1.40	2	2 3/8	1 1/2	2 5/8	1 1/2
AC18	1.65	1.84	1.85	1.60	2	2 3/8	1 1/2	2 5/8	1 1/2
AC20	1.85	2.04	2.05	1.80	2 1/2	2 5/8	1 5/8	3 1/4	1 3/4
AC22	2.05	2.24	2.25	2.00	2 1/2	2 5/8	1 5/8	3 1/4	1 3/4
AC24	2.25	2.44	2.45	2.20	3	2 3/4	1 3/4	3 3/4	2
AC26	2.45	2.64	2.65	2.40	3	2 3/4	1 3/4	3 3/4	2
AC28	2.65	2.84	2.85	2.60	3	2 3/4	1 3/4	3 3/8	2
AC30	2.85	3.04	3.05	2.80	3 1/2	3 1/8	2	4 7/16	2 3/4
AC32	3.05	3.24	3.25	3.00	3 1/2	3 1/8	2	4 3/8	2 3/4
AC34	3.25	3.44	3.45	3.20	3 1/2	3 1/8	2	4 9/16	2 3/4
AC36	3.45	3.64	3.65	3.40	4	3 1/8	1 15/16	5 1/8	3
AC38	3.65	3.84	3.85	3.60	5	3 1/4	2 1/16	6	4
AC40*	3.85	4.04	4.05	3.80	5	3 5/16	2 1/8	6	4 1/2
AC42*	4.05	4.24	4.25	4.00	5	3 1/4	2 1/4	6 1/8	4 1/2
AC44*	4.25	4.44	4.45	4.20	5	3 1/4	2 1/4	6 1/8	4 1/2
AC46*	4.45	4.64	4.65	4.40	5	3 1/4	2 1/4	6 1/8	4 1/2
AC48*	4.65	4.84	4.85	4.60	5	3 1/4	2 1/4	6 1/8	4 1/2

*CSA only



11A-19

Fittings for Metal Clad Cables Jacket under Armor

Features/Benefits:

- Clamping action ensures a positive mechanical and ground connection without damage to cable construction
- Fits broad armor range – sizes on .200" intervals
- Raised boss in strap offers excellent pull out protection
- Copper-free aluminum alloy for corrosion resistance and suitability with aluminum or galvanized steel armor
- Gland provides watertight cable seal in all positions

Certification:



Note:

For use with cable O.D. over armor

To Order:

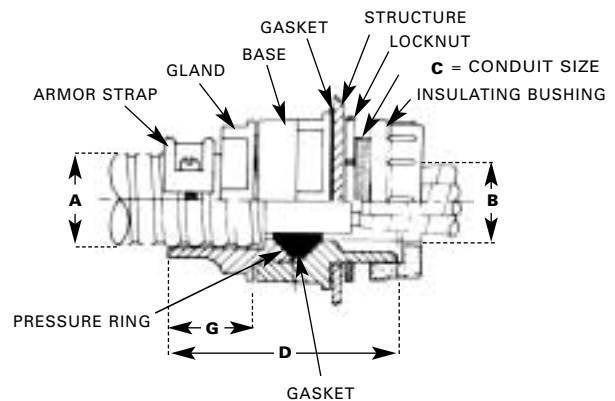
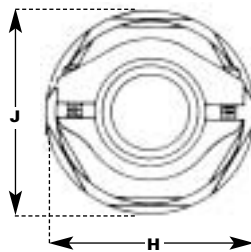
Select fitting based on diameter over bare armor

Application:

For terminating metal clad cable with jacket under armor

Catalog Number	Dimensions (Inches)								Ship Wt. (Lbs.)
	Dia Over Armor Min.	Dia Over Armor Max.	A	B	C Conduit Size	D	G	H-J	
ACS6	.45	.64	.65	.50	3/4	2 1/2	7/8	1 1/2	1
ACS8	.65	.84	.85	.70	1	3	1 1/8	2	1
ACS10	.85	1.04	1.05	1.10	1 1/4	3 1/16	1 1/8	2 1/4	1 1/2
ACS12	1.05	1.24	1.25	1.10	1 1/4	3 5/16	1 1/4	2 1/4	1 1/2
ACS14	1.25	1.44	1.45	1.35	1 1/2	3 3/8	1 5/16	2 3/8	1 1/2
ACS16	1.45	1.64	1.65	1.70	2	3 3/4	1 1/2	3 1/16	1 3/4
ACS18	1.65	1.84	1.85	1.70	2	3 3/4	1 1/2	3 1/16	1 3/4
ACS20	1.85	2.04	2.05	2.12	2 1/2	4 3/8	1 5/8	3 1/2	2 1/2
ACS22	2.05	2.24	2.25	2.12	2 1/2	4 3/8	1 5/8	3 1/2	2 1/2
ACS24	2.25	2.44	2.45	2.75	3	4 1/2	1 3/4	4 3/16	3
ACS26	2.45	2.64	2.65	2.75	3	4 1/2	1 3/4	4 3/16	3
ACS28	2.65	2.84	2.85	2.75	3	4 1/2	1 3/4	4 3/16	3
ACS30	2.85	3.04	3.05	3.30	3 1/2	4 7/8	2	4 11/16	4
ACS32	3.05	3.24	3.25	3.30	3 1/2	4 7/8	2	4 11/16	4
ACS34	3.25	3.44	3.45	3.30	3 1/2	4 7/8	2	4 11/16	4
ACS36	3.45	3.64	3.65	3.50	4	5 1/8	1 15/16	5 1/4	5
ACS38	3.65	3.84	3.85	3.85	5	5 1/2	2 1/16	6 9/16	6 1/2
ACS40	3.85	4.04	4.05	3.85	5	5 3/8	2 1/8	6 9/16	6 1/2
ACS42	4.05	4.24	4.25	4.44	5	5 3/8	2 1/4	6 9/16	6 1/2
ACS44	4.25	4.44	4.45	4.44	5	5 3/8	2 1/4	6 9/16	6 1/2
ACS46	4.45	4.64	4.65	4.44	5	5 3/8	2 1/4	6 9/16	6 1/2
ACS48	4.65	4.84	4.85	4.44	5	5 3/8	2 1/4	6 9/16	6 1/2

11A-20



Cord Grip Fittings (Straight Body)

Features/Benefits:

- Aluminum body and nut for exceptional corrosion resistance
- Tapered rubber bushing (grommet) provides raintight, dust-tight seal and provides resistance to cutting oils, age hardening, compression set and normal temperature extremes
- Anti-friction washer is supplied between the nut and bushing for ease in compression
- Machine cut threads prevent cross threading, ensure smooth compression and watertight make-up in conduit hubs
- Mesh option available in most sizes for additional support

Applications:

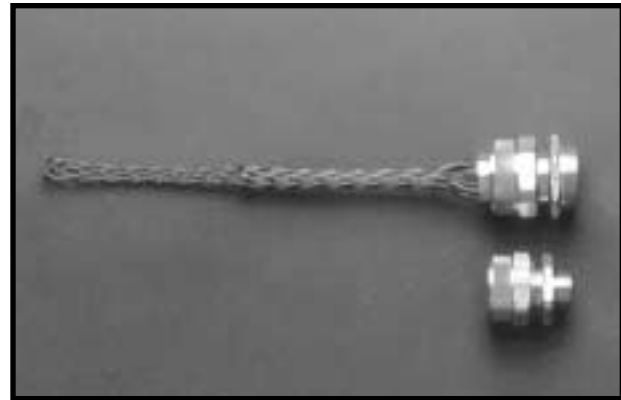
For terminating cable in conduit hubs or knock-outs and for providing relief from strain on cable

Certifications:



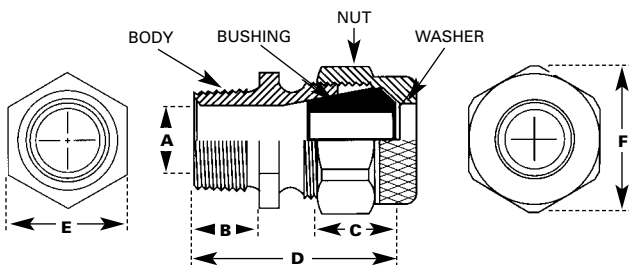
Note:

Consult factory for alternate materials (i.e., stainless steel)



CGP (Straight Body)

Conduit Size (Inches)	Cable Range (Inches)	Catalog Number Cord Grip Only	Catalog Number Cord Grip with Mesh	Conduit Size (Inches)	Cable Range (Inches)	Catalog Number Cord Grip Only	Catalog Number Cord Grip with Mesh
1/2	.125-.188	CGP 2188*	—	1 1/4	.750-.875	CGP 5875	—
1/2	.188-.250	CGP 2250	CGP 2250-M	1 1/4	.875-1.000	CGP 51000	CGP 51000-M
1/2	.250-.312	CGP 2312	CGP 2312-M	1 1/4	1.000-1.125	CGP 51125	CGP 51125-M
1/2	.312-.375	CGP 2375	CGP 2375-M	1 1/4	1.125-1.250	CGP 51250	CGP 51250-M
1/2	.375-.438	CGP 2438	CGP 2438-M	1 1/4	1.250-1.375	CGP 51375	CGP 51375-M
1/2	.438-.500	CGP 2500	CGP 2500-M	1 1/2	.750-.875	CGP 6875	—
1/2	.500-.562	CGP 2562	CGP 2562-M	1 1/2	.875-1.000	CGP 61000	CGP 61000-M
1/2	.562-.625	CGP 2625	CGP 2625-M	1 1/2	1.000-1.125	CGP 61125	CGP 61125-M
3/4	.438-.562	CGP 3562	CGP 3562-M	1 1/2	1.125-1.250	CGP 61250	CGP 61250-M
3/4	.500-.625	CGP 3625	CGP 3625-M	1 1/2	1.250-1.375	CGP 61375	CGP 61375-M
3/4	.562-.688	CGP 3688	CGP 3688-M	1 1/2	1.312-1.438	CGP61438	CGP61438-M
3/4	.625-.750	CGP 3725	CGP 3725-M	2	1.250-1.375	CGP 81250	—
3/4	.688-.812	CGP 3812	—	2	1.438-1.562	CGP 81562	CGP 81562-M
1	.438-.562	CGP 4562	CGP 4562-M	2	1.562-1.688	CGP 81688	CGP 81688-M
1	.500-.625	CGP 4625	CGP 4625-M	2	1.688-1.812	CGP 81812	CGP 81812-M
1	.562-.688	CGP 4688	CGP 4688-M				
1	.625-.750	CGP 4750	CGP 4750-M				
1	.688-.812	CGP 4812	CGP 4812-M				
1	.750-.875	CGP 4875	CGP 4875-M				
1	.812-.938	CGP 4938	CGP 4938-M				



*Not UL listed

Dimension Table (Straight Body)

Conduit Size	Dimensions (Inches)					
	A	B	C	D	E	F
1/2	0.58	0.53	0.72	1.81	1.09	1.33
3/4	0.81	0.56	0.86	2.06	1.38	1.52
1	1.00	0.62	0.97	2.31	1.56	1.70
1 1/4	1.31	0.69	1.25	2.78	2.16	2.50
1 1/2	1.50	0.69	1.25	2.78	2.16	2.50
2	1.84	0.84	1.72	3.75	2.83	3.25

11A-21

Cord Grip Fittings (90 Degree Body)

Features/Benefits:

- Aluminum body and nut for exceptional corrosion resistance
- Tapered rubber bushing (grommet) provides raintight, dust-tight seal and provides resistance to cutting oils, age hardening, compression set and normal temperature extremes
- Anti-friction washer is supplied between the nut and bushing for ease in compression
- Machine cut threads prevent cross threading, ensure smooth compression and watertight make-up in conduit hubs
- Mesh option available in most sizes for additional support

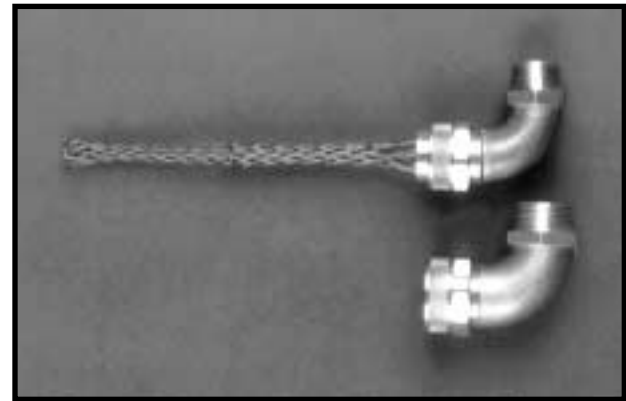
Note:

Consult factory for alternate materials (i.e., stainless steel)

Applications:

For terminating cable in conduit hubs or knock-outs and for providing relief from strain on cable

Certifications:



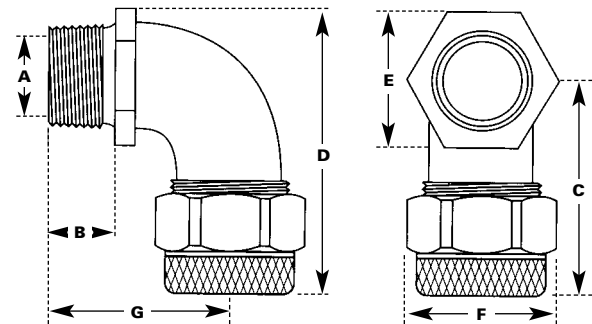
CGP (90 Degree Body)

11A-22

Conduit Size (Inches)	Cable Range (Inches)	Catalog Number Cord Grip Only	Catalog Number Cord Grip with Mesh	Conduit Size (Inches)	Cable Range (Inches)	Catalog Number Cord Grip Only	Catalog Number Cord Grip with Mesh
1/2	.125-.188	CGP 92188*	-	1 1/4	.750-.875	CGP 95875	-
1/2	.188-.250	CGP 92250	CGP 92250-M	1 1/4	.875-1.000	CGP 951000	CGP 951000-M
1/2	.250-.312	CGP 92312	CGP 92312-M	1 1/4	1.000-1.125	CGP 951125	CGP 951125-M
1/2	.312-.375	CGP 92375	CGP 92375-M	1 1/4	1.125-1.250	CGP 951250	CGP 951250-M
1/2	.375-.438	CGP 92438	CGP 92438-M	1 1/4	1.250-1.375	CGP 951375	CGP 951375-M
1/2	.438-.500	CGP 92500	CGP 92500-M	1 1/2	.750-.875	CGP 96875	-
1/2	.500-.562	CGP 92562	CGP 92562-M	1 1/2	.875-1.000	CGP 961000	CGP 961000-M
1/2	.562-.625	CGP 92625	CGP 92625-M	1 1/2	1.000-1.125	CGP 961125	CGP 961125-M
3/4	.438-.562	CGP 93562	CGP 93562-M	1 1/2	1.125-1.250	CGP 961250	CGP 961250-M
3/4	.500-.625	CGP 93625	CGP 93625-M	1 1/2	1.250-1.375	CGP 961375	CGP 961375-M
3/4	.562-.688	CGP 93688	CGP 93688-M	1 1/2	1.312-1.438	CGP961438	CGP961438-M
3/4	.625-.750	CGP 93725	CGP 93725-M	2	1.250-1.375	CGP 981250	-
3/4	.688-.812	CGP 93812	CGP 93812-M	2	1.438-1.562	CGP 981562	CGP 981562-M
1	.438-.562	CGP 94562	CGP 94562-M	2	1.562-1.688	CGP 981688	CGP 981688-M
1	.500-.625	CGP 94625	CGP 94625-M	2	1.688-1.812	CGP 981812	CGP 981812-M
1	.562-.688	CGP 94688	CGP 94688-M				
1	.625-.750	CGP 94750	CGP 94750-M				
1	.688-.812	CGP 94812	CGP 94812-M				
1	.750-.875	CGP 94875	CGP 94875-M				
1	.812-.938	CGP 94938	CGP 94938-M				

Dimension Table (90 Degree Body)

Conduit Size	Dimensions (Inches)						
	A	B	C	D	E	F	G
1/2	0.58	0.56	1.88	2.39	1.03	1.33	1.50
3/4	0.76	0.63	2.25	2.88	1.25	1.52	1.94
1	0.99	0.63	2.41	3.13	1.44	1.70	2.00
1 1/4	1.28	0.69	3.19	4.41	2.13	2.55	2.69
1 1/2	1.40	0.69	3.19	4.41	2.13	2.55	2.69
2	1.90	0.81	4.03	5.56	2.81	3.25	3.19



*Not UL listed

Cable Grip Fittings

Features/Benefits:

- Neoprene bushing provides raintight seal
- Smooth bored for passage of the cable straight into the metal clad equipment or through a bulkhead

Note:

Provides cable support for multiple conductor and/or large single conductor cables entering metal cabinets or passage through metal plates, switchgear, etc.

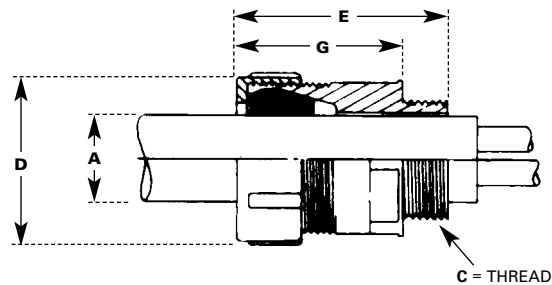
Application:

For terminating cable in all locations

To Order:

Select fitting based on diameter of cable

Catalog Number	Dimensions (Inches)					Ship Wt. (Lbs.)	
	A Dia. Over Jacket Min. Max.		C Conduit Size	D Fitting O.D.	E Overall Length		G
CG 138-15 CG 155-15	1.28 1.38	1.38 1.55	1 1/2 1 1/2	2 7/8 2 7/8	3 1/4 3 1/4	2 1/2 2 1/2	1 1
CG 174-20 CG 188-20 CG 195-20	1.54 1.66 1.73	1.74 1.88 1.95	2 2 2	3 1/4 3 1/4 3 1/4	4 4 4	3 3 3	1 1/4 1 1/4 1 1/4
CG 219-25 CG 236-25	1.95 2.16	2.19 2.36	2 1/2 2 1/2	4 4	4 1/2 4 1/2	3 3/8 3 3/8	2 2
CG 263-30 CG 280-30 CG 296-30	2.35 2.61 2.74	2.63 2.80 2.96	3 3 3	4 13/16 4 13/16 4 13/16	4 7/8 4 7/8 4 7/8	3 3/4 3 3/4 3 3/4	3 3 3
CG 297-35 CG 311-35 CG 327-35 CG 343-35	2.74 2.94 3.09 3.20	2.97 3.11 3.27 3.43	3 1/2 3 1/2 3 1/2 3 1/2	5 3/16 5 3/16 5 3/16 5 3/16	5 1/4 5 1/4 5 1/4 5 1/4	4 1/8 4 1/8 4 1/8 4 1/8	3 3/4 3 3/4 3 3/4 3 3/4
CG 364-40 CG 369-40 CG 387-40	3.31 3.52 3.64	3.64 3.69 3.87	4 4 4	5 13/16 5 3/16 5 3/16	5 3/8 5 3/8 5 3/8	4 3/16 4 3/16 4 3/16	4 1/4 4 1/4 4 1/4



11A-23

Boots - Protective Covering For AC Type Fittings

Because of superior holding strength, AC fittings are sometimes used with jacketed cables in wet or contaminated areas. For these applications, boots are available.

End fitting clamping is made on the bare armor and the boot protects the fitting and exposed cable armor. Boots are used on cable splice entrance fittings and AC or ACS type terminations.

Application:

Protects AC fittings in wet or contaminated areas

Note:

50 piece minimum

To Install:

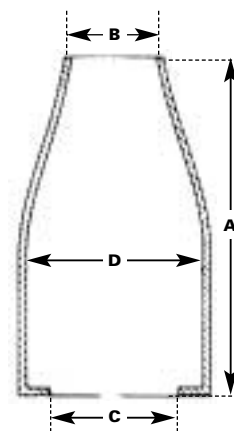
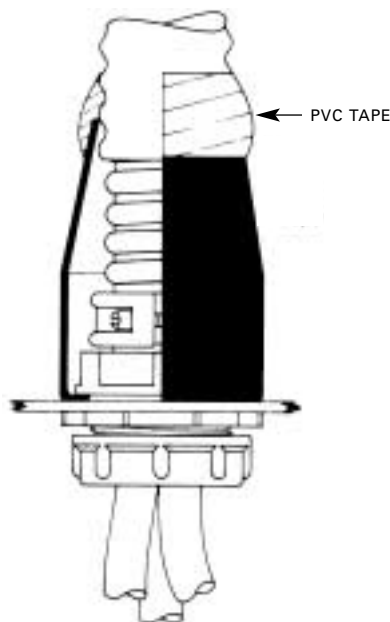
Measure O.D. over jacket. Turn boot inside out and cut to diameter 1/4" less than measured O.D. Leaving boot inside out, push back over cable. Install fitting with jacket removed as shown. Tighten clamp. Pull boot into place snapping rim around flange of fitting. Tighten locknut and, if desired, apply wrap of PVC tape around junction of jacket and boot.

To Order:

Select boot based on selected AC fitting (see page 11A-19 for AC fittings)

Catalog Number	For Use With Fitting Catalog Number	Dimensions (Inches)				Ship Wt. (Ozs.)
		A	B	C	D	
BT3	AC 6-8	5 1/2	1 1/16	1 1/8	2 1/2	5
BT15	AC 10-14	5 1/4	1 3/16	1 5/8	2 1/2	5
BT20	AC 16-18	6 1/2	1 5/16	2 3/8	3 1/4	7
BT25	AC 20-22	7	1 7/8	2 7/8	3 5/8	8
BT30	AC 24-28	7	2	3 1/2	4 1/4	10
BT35	AC 30-34	7 1/2	2 5/8	4	4 1/2	12
BT40	AC 36	8	3 3/16	4 1/2	5 1/4	13
BT50	AC 38-48	8 1/2	3 3/8	5 9/16	6 5/8	15

11A-24



BT neoprene boot installed on Type AC fitting to provide moisture and corrosion protection

Flange Supports for Cable Connector Fittings

Features/Benefits:

- Flanges complete with hardware and gaskets
- Copper free aluminum alloy for excellent corrosion resistance
- Provides threaded hub for terminators

Application:

For added support on switchgear or entrances to metallic enclosures

Notes:

- For use with JAG, AC(S) and CG
- For blind tap, use suffix L

FS Cat. No.	FS5 Cat. No.	Conduit Size (Inches)	Ship Wt. (Lbs.)
FS20	-	2	2 ³ / ₄
FS25	FS525	2 1/2	2 ³ / ₄
FS30	FS530	3	2 ³ / ₄
FS35	FS535	3 1/2	2 ³ / ₄
FS40	FS540	4	2 ³ / ₄
FS50	-	5	2 ³ / ₄
*FS60L	-	6	2 ³ / ₄

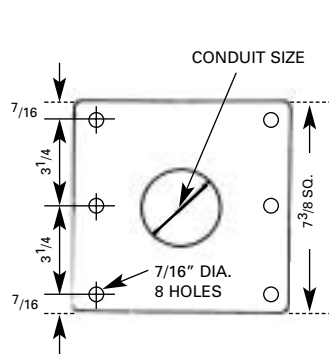
*Available in blind tap only



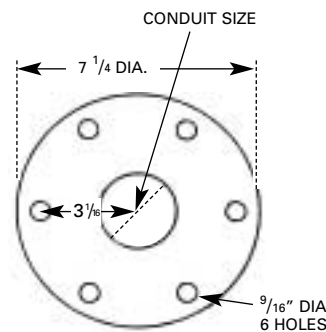
FS for JAG, AC(S) and CG



FS5 for JAG, AC(S) and CG



TYPE FS STYLE



TYPE FS5 STYLE

11A-25

Brackets

Features/Benefits:

- Aluminum alloy for excellent corrosion resistance
- Provide rigid support and effectively prevent movement of cables at termination point

Applications:

For mounting of connectors and terminators on walls, ceilings or structures.

Type BAC Brackets provide convenient means for installing and terminating armored cable inside switchgear and control compartments. They may also be used to terminate cable parallel to wall, ceiling, or other surfaces, when desired.

Certification:

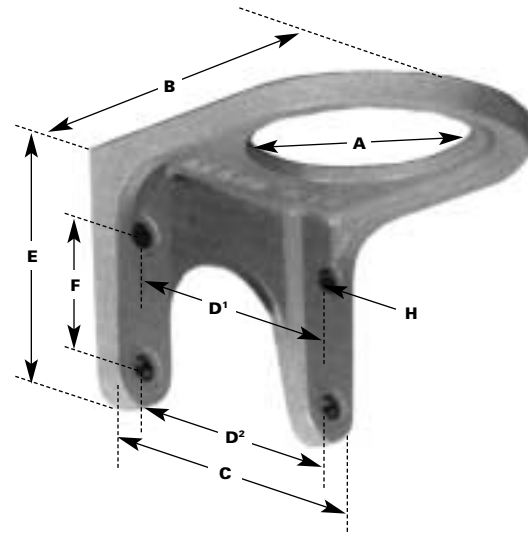


Note:

For use with all Adalet Fittings

To Order:

Order BAC based on conduit size of the fittings to be used



11A-26

Catalog Number	Dimensions (Inches)								Ship Wt. (Lbs.)
	A Conduit Size	B	C	D ¹	D ²	E	F	H	
BAC12	1 1/4	4	3 1/2	2 3/4	2 3/4	2 3/4	17/16	9/32	2
BAC15	1 1/2	4	3 1/2	2 3/4	2 3/4	2 3/4	17/16	9/32	2
BAC20	2	4 1/8	4 1/8	3 5/16	3 5/16	3	1 1/2	9/32	2
BAC25	2 1/2	5	4 1/2	3 3/4	3 3/4	3 1/4	1 1/2	9/32	2 1/2
BAC30	3	5 5/8	5 1/8	4 3/8	4 3/8	3 9/16	1 3/4	9/32	3
BAC35	3 1/2	6 1/8	5 5/8	4 7/8	4 7/8	3 13/16	2	11/32	3 1/2
BAC40	4	6 1/2	6 1/2	4 5/8	5 5/8	4 1/2	3 1/8	11/32	3 1/2
BAC50	5	7 9/16	7 1/2	5 1/2	6 5/8	4 3/4	3 3/8	11/32	4
BAC60	6	9 1/4	9 1/8	7 1/8	8 1/4	6	4 1/2	11/32	6

Flanged Angle Adapter for Metal Clad Terminators

Features/Benefits:

- Terminate armor at a 45° angle and permit bending single conductors in a reduced space
- Adapters are supplied complete with gaskets and fasteners
- Aluminum alloy for excellent corrosion resistance

Application:

For angle mounting of connectors and terminators to boxes and equipment

Certification:



Note:

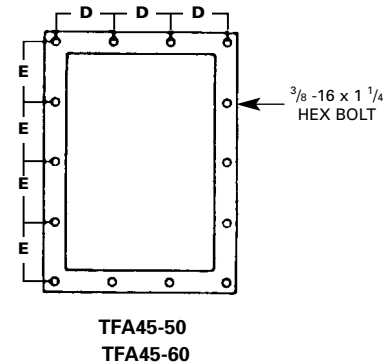
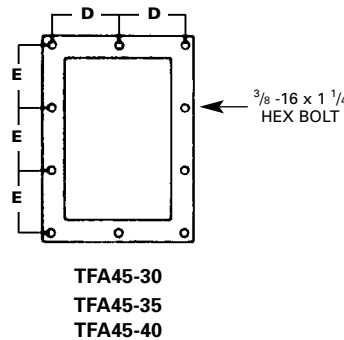
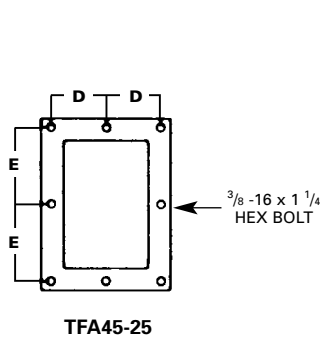
Type TFA Terminating Fitting Adapters are designed for use with Type AC, ACS, or JAG fittings in conduit sizes from 2 1/2" to 6"

To Order:

Base selection on fitting conduit size from Column C of fitting catalog page



Catalog Number	For Fittings Having Conduit Size	Dimensions (Inches)					Ship Wt. (Lbs.)
		A Length	B Width	C Height	D	E	
TFA45-25	2 1/2	8 3/4	6 1/2	3 9/16	2 13/16	3 15/16	3
TFA45-30	3	10	6 3/4	4 1/4	2 15/16	3	3 1/2
TFA45-35	3 1/2	10 1/2	7 5/8	4 3/8	3 3/8	3 3/16	3 3/4
TFA45-40	4	11 1/4	8 1/8	4 3/4	3 5/8	3 7/16	4
TFA45-50	5	13 5/16	9 3/4	5 7/8	2 5/16	3 1/16	5 1/2
TFA45-60	6	15 7/16	11 1/8	6 3/4	3 3/8	3 5/8	9



11A-27

Conduit Ventilating Cable Supports

Features/Benefits:

- Helps reduce temperatures in conduit, improving service life and load carrying capacity of the cable
- Neoprene packing gland provides watertight seal and cable support
- Set screws secure the ventilator to conduit

Application:

For supporting and sealing cable risers and allowing escape of heated air from conduit

Note:

Type CV Supports are designed for use at top of conduit where cable extends into air

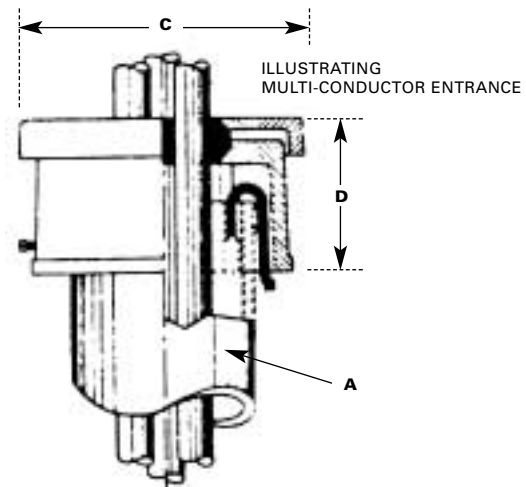
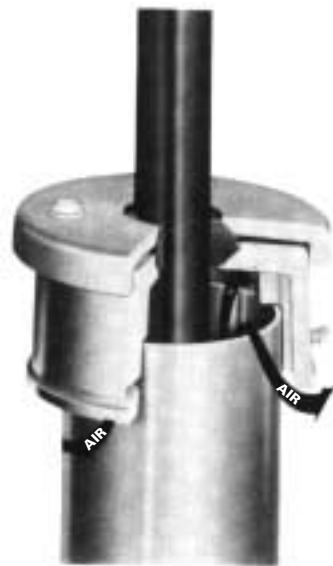
To Order:

1. Select catalog number of fitting
2. Indicate number and diameter of cables
3. Where used with interlocked armored cable, specify whether gasket to fit over jacket or over armor

Catalog Number	Dimensions (Inches)				Ship Wt. (Lbs.)	
	A*	B		C		D
	Conduit Size	1-3/C	Max. Cable O.D. 3-1/C**			
CV20	2	1.60	.74	4 11/16	2 5/8	2 1/2
CV25	2 1/2	1.91	.93	5 5/32	2 5/8	2 1/2
CV30	3	2.37	1.19	5 13/16	2 3/4	3
CV35	3 1/2	2.75	1.41	6 3/16	2 3/4	3 1/2
CV40	4	3.12	1.63	6 13/16	2 7/8	4
CV50	5	3.82	2.13	8 1/8	3 3/8	5
CV60	6	4.42	2.55	9 5/8	3 3/4	6

* Metallic conduit - fitting can be adapted for other materials
 ** Additional holes can be supplied - consult factory

11A-28



Bottom Conduit Ventilators

Features/Benefits:

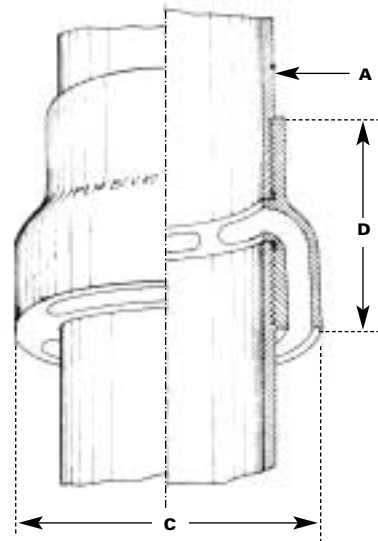
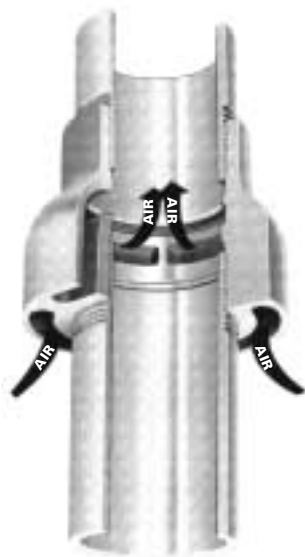
- Castings are aluminum, anodized and Teflon sealed for maximum corrosion resistance
- Helps reduce temperature in conduit riser, improving service life and load carrying capacity of the cable

Application:

Used in conduit system to allow air to enter conduit riser

Catalog Number	Dimensions (Inches)			Ship Wt. (Lbs.)
	A Conduit Size*	C	D	
BCV 20	2	3 5/8	2 7/8	2
BCV 25	2 1/2	5 1/8	4	3
BCV 30	3	5 9/16	4 1/4	3 1/2
BCV 35	3 1/2	6 1/8	4 1/2	4
BCV 40	4	6 1/2	4 1/2	4
BCV 50	5	8 1/4	4 7/8	6
BCV 60	6	9 5/16	5 1/4	8

* Metallic conduit. Fitting can be adapted for other types.



11A-29

Split Conduit Ventilating Cable Supports

Feature/Benefit:

- Split to permit insulation after cable has been pulled or where cable extends some distance from ventilator mounting

Application:

Used where existing XLP or EPR cables are installed in conduit

Note:

For installation after pulling cable

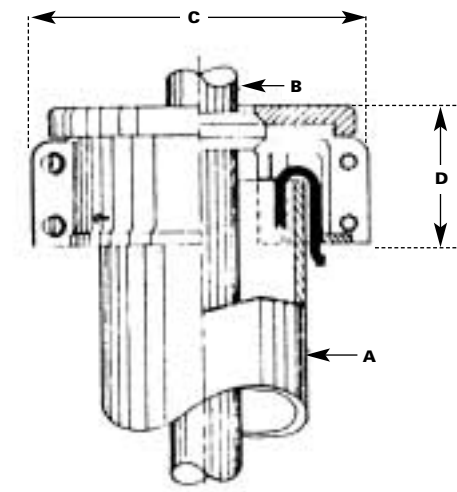
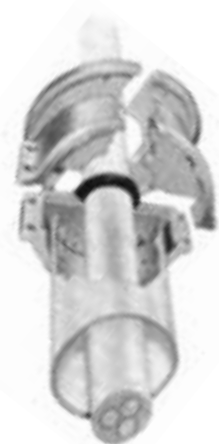
To Order:

1. Select catalog number of fitting
2. Indicate number and diameter of cables
3. Where used with interlocked armored cable, specify whether gasket to fit over jacket or over armor

Catalog Number	Dimensions (Inches)				Ship Wt. (Lbs.)	
	A	B		C		D
	Conduit Size*	Max. Cable O.D.				
CVS 20	2	1.50	.54	4 5/8	2 3/8	2
CVS 25	2 1/2	1.80	.75	5 1/4	2 3/8	2
CVS 30	3	2.23	1.00	5 3/4	2 3/8	3
CVS 35	3 1/2	2.60	1.25	6 1/8	2 5/8	3 1/2
CVS 40	4	2.92	1.44	6 3/4	2 5/8	4
CVS 50	5	3.68	1.87	7 3/4	2 3/4	5
CVS 60	6	4.42	2.18	9	2 3/4	6

* Metallic conduit - fitting can be adapted for other materials
 ** Additional hole can be supplied - consult factory

11A-30



Splicing Kits

For Use on Solid Dielectric Cable 600 V to 35 kV 100%

Kits include all tapes, braids, abrasive cloth, instructions (connectors not included) for one straight splice of 1/C or 3/C cable.

Notes

- Catalog system provides five kits to cover most sizes from #8 AWG through 1000 MCM. Suffix provides voltage information.
- For aluminum conductors or other than straight two way splices, see other options available.
- Splice kits are designed for cables having standard insulation thickness and concentric strand conductors. Consult factory if insulation or stranding differs.
- Reference on connectors indicate splice design. Connectors also available.
- Kits suitable for tapered high voltage compression or solder connectors to standard TD-160 (not furnished).

To Order

Select catalog number not to exceed maximum conductor size shown. Add voltage suffix.

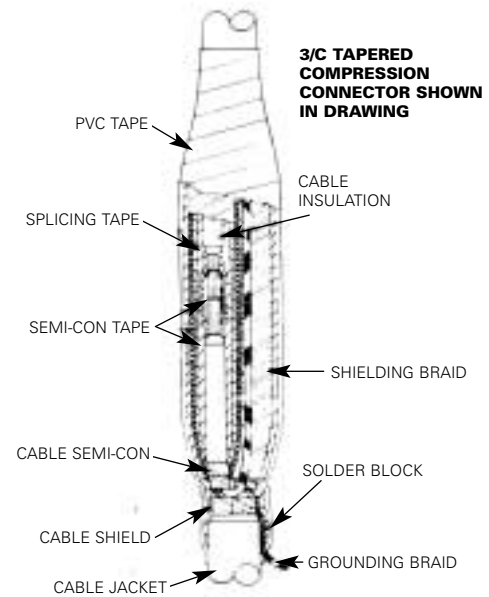
Examples

- 3/C 1/0 AWG copper 5 kV unshielded XLP – CATALOG #3SB-5 1/C 350 MCM copper cable. 175 XLP insulation 15kV 100% – CATALOG #SC-15.
- 3/C 4/0 Aluminum 15kV 133%, T splice – CATALOG #3SB-16AT 1/C 600 MCM Aluminum cable. EPR insulation, 3-way-Y-35kV 100% – CATALOG #SD35AY.

Catalog Number		Maximum Conductor Size
1/C	3/C	
SA	3SA	# 1AWG
SB	3SB	250 MCM
SC	3SC	500 MCM
SD	3SD	750 MCM
SE	3SE	1000 MCM

Voltage Suffix for Catalog Number

Catalog Suffix No.	Shielded & Unshielded	Voltage (kV)
5	Unshielded	600V – 5kV 100%
8	Shielded	5 kV – 8kV 100%
15	Shielded	8 kV 133% – 15 kV 100%
16	Shielded	15 kV 133%
25	Shielded	16 kV – 25 kV 100%
35	Shielded	26 kV – 35 kV 100%



Other Types Available

Suffix	Application
A	Aluminum Conductor–2 way tapered connector
AT	Aluminum Conductor–3 way-T-tapered connector
AY	Aluminum Conductor–3 way-Y-tapered connector
T	Copper–3 way-T-solder connector to TD-160
TC	Copper–3 way-T-tapered compression connector
YC	Copper–3 way-Y-tapered compression connector
X	Copper–4 way-solder full duplex TD-160
Y	Copper–3 way-solder half duplex to TD-160



11A-31

Splicing Kits

For Splicing PILC

Complete materials, instructions, and detailed drawings for making a correctly designed straight splice in varnished cambric or paper-insulated cable are provided. (Connectors available separately.)

Notes

- Splice kits are designed for cables with standard cable insulations and concentric strand. Consult factory for kits varying from standard construction.
- Kits are designed to be used with tapered compression or solder connectors (not furnished). See page 11A-15 to order.
- For larger sizes, higher voltage, X or Y splices, or non-standard dimensions, consult factory.

To Order

Select catalog number for conductor size and voltage. Provide full cable description and dimensions with order.

Example

3/C 350 MCM Copper PILC 15 kV 133% insulation Catalog Number: 3LPC 16

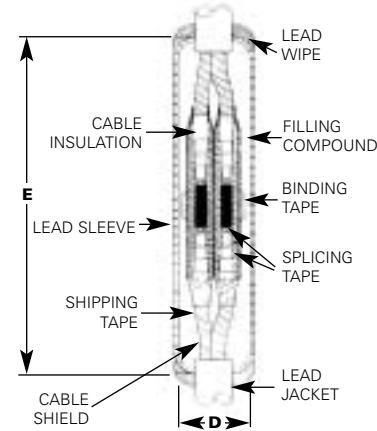
Catalog Number		Maximum Conductor Size
1/C	3/C	
LPA	3LPA	# 1
LPB	3LPB	250 MCM
LPC	3LPC	500 MCM
LPD	3LPD	750 MCM
LPE	3LPE	1000 MCM

Voltage Suffix for Catalog Number

Catalog Suffix No.	Shielded & Unshielded	Voltage (kV)
5	Unshielded	600V - 5kV 100%
8	Shielded	5 kV - 8kV 100%
15	Shielded	8 kV 133% - 15 kV 100%
16	Shielded	15 kV 133%
25	Shielded	16 kV - 25 kV 100%
35	Shielded	26 kV - 35 kV 100%

Other Suffixes Also Available

Suffix	Application
X	Copper - 4-way solder full duplex to TD160
Y	Copper - 3-way solder half duplex to TD160



One Conductor (Copper) Dimensional Data

Catalog No.	Dimensions (Inches)					
	5kV - 8kV		Shielded 15kV - 100%		Shielded 15kV - 133%	
	D	E	D	E	D	E
LPA	1 1/2	13	2	15 1/2	2	21
LPB	2	13 1/2	2	16	2 1/2	21 1/2
LPC	2 1/2	14	2 1/2	16 1/2	3	22
LPD	2 1/2	14 1/2	3	17	3	22 1/2
LPE	3	15 1/2	3	18	3 1/2	23 1/2

Three Conductor (Copper) Dimensional Data

Catalog No.	Dimensions (Inches)					
	Belted 5kV - 8kV		Shielded 15kV - 100%		Shielded 15kV - 133%	
	D	E	D	E	D	E
3 LPA	3	18 1/2	3 1/2	21	4	24 1/2
3 LPB	3 1/2	20	4 1/2	22 1/2	4 1/2	26
3 LPC	4 1/2	21 1/2	5	24	5 1/2	27 1/2
3 LPD	5	22	5 1/2	24 1/2	6	28
3 LPE	5 1/2	24	6	26	6 1/2	30

Type 3AS Splicing Kits

For Splicing Metal Clad Cable 600 V to 35 kV

Kits complete for three copper conductors, jacketed MC cables. Designed for tapered compression or solder connectors. Connectors not included. Aluminum conductor kits available. 3-way or 4-way kits available. Aluminum casings furnished (steel and bronze casings and bronze end castings are available).

Notes

- Consult factory for connectors required for 3-way or 4-way splices.
- Standard design includes taping cone entrances.
- Compound included. If not desired, specify "less compound" on order and jacketing tapes will be furnished at same price. Complete cable description is required with order.
- Reference on connectors indicates splice design. Connectors NOT included.
- Order within range of conductor sizes. 3/C #8 through 3/C #1 use 3ASA kit.
- Splice kits are designed for cables having standard insulation thickness and concentric strand conductors. Consult factory if insulation or stranding differs.
- Kits suitable for tapered high voltage compression or solder connectors to standard TD-160 (not furnished).

To Order

Select catalog number for conductor size and add voltage suffix.

Examples

- Typical 3/C 500MCM copper 15 kV 100% insulation – CATALOG #3ASC15 (Provide O.D. over jacket and over armor with order)
- Above cable Y or 3-way splice – CATALOG #3ASC-15Y
- Above cable – straight splice, armor clamps, no compound – CATALOG #3ASC-15-4 entrance both ends, less compound

Copper Conductor

Catalog No.	Conductor Size	Dimensions (Inches)									
		Unshielded 600 - 1kV		Unshielded 2300 - 5kV		Shielded 5kV - 8kV 100%		Shielded 8kV - 133% - 15kV 100%		Shielded 15kV 133%	
		D	E	D	E	D	E	D	E	D	E
3 ASA	# 1	3 1/2	26	3 1/2	26	3 1/2	29	3 1/2	33	4	33
3 ASB	250 MCM	3 1/2	26	4	29	3 1/2	32	4	33	5	41
3 ASC	500 MCM	4	28	5	29	5	33	5	41	5	41
3 ASD	750 MCM	5	29	5	30	5	33	5	41	6	41
3 ASE	1000 MCM	5	31	6	35	6	41	6	41	6	41

Voltage Suffix for Catalog Number

Catalog Suffix No.	Shielded & Unshielded	Voltage (kV)
1	Unshielded	600V – 1kV 100%
5	Unshielded	2300V – 5kV 100%
8	Shielded	5 kV 133% – 8kV 100%
15	Shielded	8 kV 133% – 15 kV 100%
16	Shielded	15 kV 133%
25	Shielded	16 kV 100% – 25 kV 133%
35	Shielded	26 kV 100% – 35 kV 100%



TYPICAL SPLICING KIT FOR 15kV CABLE

Other Suffixes Also Available

Suffix	Application
A	Aluminum Conductor – 2 way tapered connector
AT	Aluminum Conductor–3 way - T-tapered connector

11A-33

Insulating Compounds for Splices, Potheads, Encapsulating

Type OI Compound

A medium soft, oil-insoluble, resin-base compound for applications where migration of cable oils may be a problem.

Type 3000 Oil

Type 3000 Oil is used for filling cable accessories where ambient temperatures do not fall below 32°F. It is also used to exclude air between layers of varnished cambric or paper tapes.

Physical and Electrical Properties

Property	Unit	OI	3000
Flash Point	°F	490	350
Fire Point	°F	545	395
Softening Point	°F	133	–
Pouring Temp (max.)	°F	356	266
Coefficient of Expansion	°F	.0006	–
Specific Gravity at 77°F	–	1.13	.88
Dielectric Strength			
.050" gap 86°F	Volts	830	–
.050" gap 140°F	Per	586	–
.050" gap 194°F	Mil	444	–
.1" gap 77°F		–	350
Power Factor .050 gap at 60 cycle			
185°F	%	13.0	–
212°F	–	–	.1
Normal State	–	Med. Soft	–

Compound	Catalog No.	Container Size	Net Wt. (Lbs.)
OI Compound	OI-32	1 quart	2
OI Compound	OI-128	1 gallon	8
OI Compound	OI-256	2 gallons	16
OI Compound	OI-640	5 gallons	40
3000 Flushing Oil	3000-8	1/2 pint	3/4
3000 Flushing Oil	3000-16	1 pint	1 1/2
3000 Flushing Oil	3000-32	1 quart	2 1/4
3000 Flushing Oil	3000-128	1 gallon	8
3000 Flushing Oil	3000-640	5 gallons	40



Thermometer for Compound Temperature Control

Thermometer has 1 1/2" diameter dial, with 50°F to 500°F temperature range, 8" stainless steel stem and adjustable clip for supporting thermometer. Used for determining proper pouring temperature of filling compounds and flushing oils.

Catalog No. GT-100F5-50-8



Cable Stripping Tools – Square Cut End of Cable Insulation

Tool and Bushing Selection

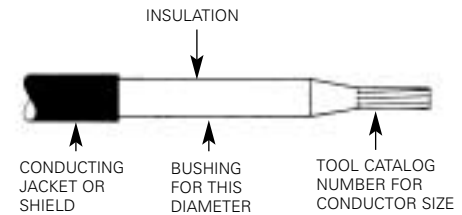
Conductor Size	Tool Catalog Number	Bushing Range Over Insulation Dia.		Extra Bushing Catalog Number	Replacement Blades Catalog Number
		Min.	Max.		
#6-3/0	1 SQ	.375	1.125	1-S	B-1
4/0-500	2 SQ	.766	1.469	2-S	B-1
550-1000	3 SQ	1.109	1.812	3-S	B-1

Note

The Type SQ tool is designed to remove insulations such as PVC, cross-linked polyethylene, EPR or high molecular polyethylene on round conductors. It is NOT recommended for use on rubber, butyl, VC or paper insulations.

Bushing Size for SQ and PT Tools

.375	.625	.875	1.125	1.375	1.625
.390	.640	.890	1.140	1.390	1.640
.406	.656	.906	1.156	1.406	1.656
.421	.671	.921	1.171	1.421	1.671
.437	.687	.937	1.187	1.437	1.687
.453	.703	.953	1.203	1.453	1.703
.468	.718	.968	1.218	1.468	1.718
.484	.734	.984	1.234	1.484	1.734
.500	.750	1.000	1.250	1.500	1.750
.515	.765	1.015	1.265	1.515	1.781
.531	.781	1.031	1.281	1.531	1.796
.546	.796	1.046	1.296	1.546	1.812
.562	.812	1.062	1.312	1.562	
.578	.828	1.078	1.328	1.578	
.593	.843	1.093	1.343	1.593	
.609	.859	1.109	1.359	1.609	



To Order

1. Select tool for conductor size.
2. Diameter over insulation – after semiconducting jacket is removed – must be provided with order.
3. Tool will include two bushings – one based on nearest O.D., the other to accommodate oversize insulation.
4. To obtain additional bushings order size 1S for tool 1SQ, 2S for tool 2SQ, or 3S for tool 3SQ plus diameter from above chart. Then make sure the bushing size fits the available range for the tool.

11A-35

Cable Insulation Penciling Tools

For preparing cable splices and terminations with savings in time and labor.

PT tools are built to guide on the cable connector. Because of close tolerance they will work only on standard stranding indicated below. Tools may be used on XLP, polyethylene, or EPR insulation on voltage range 5 kV 100% through 25 kV 100%.

Note

For intermediate or special sizes or stranding consult factory for price and delivery.

To Order

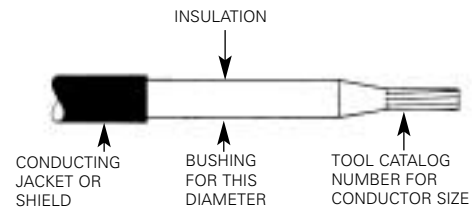
1. Select tool for conductor size. Diameter over insulation – after semiconducting jacket is removed – must be provided with order.
2. Tool will include two bushings – one based on nearest O.D., the other to accommodate oversize insulation – plus one extra blade.
3. To obtain additional bushings, order B bushing for suffix “B” tool, C bushing for suffix “C” tool, D bushing for suffix “D” tool, plus diameter from chart below. Then make sure the bushing size fits the available range for the tool.
4. For extra blades order the correct blade for tool size as noted in the chart.

Tool and Bushing Selection

Catalog No.	Conductor Size Left Hand Lay Standard Strand Concentric Round	Catalog No.	Conductor Size Left Hand Lay Standard Strand Concentric Round
PT 8B	8- 7-Strand	PT 250C	250-37-Strand
PT 6B	6- 7-Strand	PT 300C	300-37-Strand
PT 4B	4- 7-Strand	PT 350C	350-37-Strand
PT 2B	2- 7-Strand	PT 400C	400-37-Strand
PT 1B	1- 19-Strand	PT 500C	500-37-Strand
PT 10B	1/0- 19-Strand	PT 600D PT 700D PT 750D PT 1000D	600-61-Strand
PT 20B	2/0- 19-Strand		700-61-Strand
PT 30B	3/0- 19-Strand		750-61-Strand
PT 40C	4/0- 19-Strand		1000-61-Strand

Suffix

Tool Ending Suffix	Bushing Size Range for B, C, or D tools	
	Min.	Max.
B	.375	1.062
C	.500	1.330
D	.625	1.745



Replacement Parts

Bushing Size	Blade Size
B	.295B
C	.295C
D	.295D



11A-36

Cable Accessories

High Voltage Insulating Tape

High voltage insulating tape used with rubber, cross-linked polyethylene, or EPR insulated cables for terminations or splices up to 69 kV. Properly applied, tape is self amalgamating, providing waterproof seal for direct burial. Tape will provide protection against corona even after repeated load cycles. Suitable for 130°C emergency conditions.

Catalog Number	Thickness	Length (Ft.)	Width (inches)	Standard Packaging Qty.
THVT 3075	.030	30	$\frac{3}{4}$	10 rolls
THVT 3010	.030	30	1	10 rolls
THVT 3015	.030	30	1 $\frac{1}{2}$	10 rolls
THVT 3020	.030	30	2	10 rolls



Semi Conducting Tape

.030 semi conducting EPR tape, self amalgamating. Used for shielding of high-voltage terminations and splices, filling indents on compression connectors, or as a replacement of strand shields.

Catalog Number	Thickness	Length (Ft.)	Width (inches)	Standard Packaging Qty.
TSC-15	.030	15	$\frac{3}{4}$	10 rolls



PVC All Weather Plastic Tape

.085 flame-retardant, weather-resistant, cold temperature tape. Resistant to sunlight, oil, acids, alkalis, and chemicals. Suitable for low-voltage taping or outer jacketing on terminations and splices.

Catalog Number	Thickness	Length (Ft.)	Width (inches)	Standard Packaging Qty.
TPVC-20	.085	20	$\frac{3}{4}$	20 rolls
TPVC-66	.085	66	$\frac{3}{4}$	10 rolls



Silicone Rubber Tape

.015 rectangular, unsupported, self-adhering, track resistant silicone tape used with terminations such as the FSD in contaminated areas or salt atmospheres.

Catalog Number	Thickness	Length (Ft.)	Width (inches)	Standard Packaging Qty.
TSIL-30	.015	30	$\frac{3}{4}$	10 rolls



Neoprene Jacketing Tape

.030 self-amalgamating jacket tape for protection of cable joints exposed to hydrocarbons. Also used for corrosion protection on lead sleeves or splice cases.

Catalog Number	Thickness	Length (Ft.)	Width (inches)	Standard Packaging Qty.
TNJ-3075	.030	30	$\frac{3}{4}$	10 rolls
TNJ-3010	.030	30	1	10 rolls
TNJ-3015	.030	30	1 $\frac{1}{2}$	10 rolls
TNJ-3020	.030	30	2	10 rolls



Cable Accessories

Arc Proofing Tape

Fire resistant tape used for arc proofing and fireproofing cables in manholes, cable trays, switchboxes and substations.

Catalog Number	Length (Ft.)	Width (inches)	Standard Packaging Qty.
TAP-2015	20	1 1/2	10 rolls
TAP-2030	20	3	5 rolls



Friction Tape

.015 cotton weave tape coated both sides with asphalt. Used for mechanical protection against abrasion, bare wire, and to prevent mechanical damage.

Catalog Number	Length (Ft.)	Width (inches)	Standard Packaging Qty.
TFT-6575	60	3/4	10 rolls
TFT-6015	60	1 1/2	10 rolls
TFT-6020	60	2	10 rolls



Varnished Dacron® Glass Tape

Dacron® glass tapes are composed of Dacron® yarn and glass fiber filling thread treated with an oleoresinous varnish. These tapes may be used for splicing paper or varnished cambric and lead cables or for stress cones with pothead terminations. Tapes are dry packed. .012 thickness.

Catalog Number	Length (Yards)	Width (inches)	Standard Packaging Qty.
TVD-1205	4	1/2	100 rolls
TVD-1275	4	3/4	100 rolls
TVD-5475	18	3/4	10 rolls
TVD-1210	4	1	100 rolls
TVD-4810	16	1	10 rolls



*Oil packed .012 X 4 yd. X 1/4, 1/2, 3/4, 1" rolls available. Consult factory.

Cotton Tape

Cotton Tape is one of the more versatile items required in splicing. It can be used to tie cables together, protect insulation when soldering and in extra high-voltage applications, it is used to protect the entire splice and keep it oiled during other operations.

Catalog Number	Length (Yards)	Width (inches)	Standard Packaging Qty.
TCT-2705	9	1/2	50 rolls



Cotton Yarn

Cotton Yarn is utilized to fill the corners in a properly stepped paper insulated cable. These free untwisted strands of pure cotton help to smooth the contour of these steps and effectively change them to a long, smooth taper. This is necessary to provide a surface that can be easily taped with no voids in the corners. Dry packed.

Catalog Number	Length (Feet)	Width (Lbs.)	Standard Packaging Qty.
TCY-8025	80	1/4	50



11A-38

Cable Accessories

Cleaning Kit for Extruded Dielectric Cables

Kit including aluminum oxide abrasive cloth, clean, lint-free rags, and non-chlorinated solvent designated for use in cleaning cables. Each kit will clean three cables from #8 through 1000 MCM in voltage ranges up to 35 kV for either termination or splicing.

Catalog Number	Standard Packaging Qty.
PLCK-35	10



Tinned Grounding Braid

Tinned copper grounding braid used for grounding terminations and splices.

Catalog Number	Length (Ft.)	Width (inches)	Standard Strand	Packaging Qty.
TGB-10025	100	1/4	192/#36 (13 AWG)	1
TGB-20025	200	1/4	192/#36 (13 AWG)	1
TGB-10050	100	1/2	240/#30 (6 AWG)	1



Tinned Shielding Braid

Tinned copper 1" tubular mesh for use with stress cones, terminations and splices.

Catalog Number	Length (Ft.)	Packaging	Standard Packaging Qty.
TSB-15	15	Box	20
TSB-100	100	Spool	1
TSB-432	432	Spool	1



Bar Solder

Each bar is plainly marked as to its tin / lead content. 40/60 solder is recommended for sweating connectors and joints.

Catalog Number	Content (Tin/Lead)	Weight (Lbs.)	Standard Packaging Qty.
SB-4060	38/62	1	50 Lbs.



11A-39

Cable Accessories

Wire Solder

Wire solder is supplied 1/8" diameter, solid. Wire solder is highly desirable for use in the tacking and joining of shielding braid and ground strap.

Catalog Number	Content (Tin/Lead)	Weight (Lbs.)	Standard Packaging Qty.
SW-5050	50/50	1	5 lbs.



Stearine Soldering Flux

An activated Stearic formula flux molded in easy-to-use wickless candle form. Its waxlike texture allows the protection of areas prior to soldering by rubbing on a layer which will melt and clean the surface upon heating. Used for wiping lead joints.

Catalog Number	Form	Weight (Oz.)	Standard Packaging Qty.
SSF-2	Candle	2	10



Rosin Based Soldering Flux

Non-conductive, non-corrosive flux paste for soldering of connectors, ground and shielding braid. Brush Included.

Catalog Number	Form	Can Weight (Oz.)	Standard Packaging Qty.
SSR	Paste	2	12

Miscellaneous Chemicals

Catalog Number	Description	Container	Standard Packaging Qty.
RC-1	A50P68 butyl base rubber cement	1-oz. tube	24
PCL-2	Non-Chlorinated cleaning solvent w/cloth	2-oz. jar	40
PCL-32	Non-Chlorinated cleaning solvent	1-qt. can	10
PCL-128	Non-Chlorinated cleaning solvent	1-gal. can	41
SG-1	Silicone Grease	1/4-oz. tube	50



11A-40

Industry Standards and Definitions

Three popular methods of protection which exist in North America for hazardous electrical locations:

Type of Protection	Method of Protection
1. Explosionproof	Containment
2. Increased Safety	Mechanical
3. Intrinsically Safe	Electrical

North American Classification System for Hazardous Locations

North American hazardous locations are categorized by three criteria: Class - nature of hazardous substance present; Division - frequency of presence; Group - specific type of hazardous material.

Class I	Potentially explosive gas or vapor
Class II	Potentially explosive dust
Class III	Potentially explosive fiber

Division 1	Potentially explosive substance present under normal operating conditions
Division 2	Potentially explosive substance present under abnormal operating conditions

HAZARDOUS (CLASSIFIED) LOCATIONS or Selected Gases, Vapors and Dusts

Group A - Atmospheres acetylene	ethylenimine ethyl mercaptan ethyl sulfide	ethyl acrylate (inhibited) ethylene diamine (anhydrous) ethylene dichloride ethylene glycol monomethyl ether gasoline heptanes hexanes isoprene isopropyl ether mesityl oxide	propane 1-propanol (propyl alcohol) 2-propanol (isopropyl alcohol) propylene styrene toluene vinyl acetate vinyl chloride xylenes
Group B - Atmospheres acrolein (inhibited) (2) arsine butadiene (1) ethylene oxide (2) hydrogen manufactured gases containing more than 30% H ₂ (by volume) propylene oxide (2) propyl nitrate	hydrogen cyanide hydrogen sulfide morpholine 2-nitropropane tetrahydrofuran unsymmetrical dimethyl hydrazine	methane (natural gas) methanol (methyl alcohol) 3-methyl-1 butanol (isoamyl alcohol) methyl ethyl ketone methyl isobutyl ketone 2-methyl-1-propanol (isobutyl alcohol) 2-methyl-2-propanol (tertiary butyl alcohol) petroleum naphtha (4) pyridine octanes pentanes 1-pentanol (amyl alcohol)	Group E - Atmospheres containing metal dust, including aluminum, magnesium, and their commercial alloys, and other metals of similarly hazardous characteristics
Group C - Atmospheres acetaldehyde allyl alcohol n-butyraldehyde carbon monoxide crotonaldehyde cyclopropane diethyl ether diethylamine epichlorohydrinn ethylene	Group D - Atmospheres acetic acid (glacial) acetone acrylonitrile ammonia (3) benzene butane 1-butanol (butyl alcohol) 2-butanol (secondary butyl alcohol) n-butyl acetate isobutyl acetate di-isobutylene ethane ethanol (ethyl alcohol) ethyl acetate		Group F - Atmospheres containing carbon black, coal or coke dust Group G - Atmospheres containing flour, starch or grain dust Note: Carbon disulfide must be treated in a special manner.

Example: An area where hydrogen was present under normal operating conditions would require a product suitable for Class I, Division 1, Group B applications.

12A-1

Industry Standards and Definitions

	NEMA Designation	Underwriters Laboratories Inc. UL 50 and UL 508	Canadian Standards Association CSA Standard C22.2 No 94
Type 1	Indoor use to provide a degree of protection against contact with the enclosed equipment; in locations where unusual service conditions do not exist	Indoor use to provide a degree of protection against contact with the enclosed equipment and against a limited amount of falling dirt	General purpose enclosure; protects against accidental contact with live parts
Type 2	Indoor use to provide a degree of protection against contact with the enclosed equipment and against limited amounts of falling water and dirt	Indoor use to provide a degree of protection against limited amounts of falling water and dirt	Drip proof enclosure same as Type 1; indoor use to provide a degree of protection against dripping and light splashing of non-corrosive liquids and falling dirt
Type 3	Indoor or outdoor use to provide a degree of protection against windblown dust, rain and sleet; undamaged by the formation of ice on the enclosure (not sleet proof)	Indoor or outdoor use to provide a degree of protection against windblown dust, rain and sleet; undamaged by the formation of ice on the enclosure	Weatherproof enclosure; indoor or outdoor use to provide a degree of protection against rain, snow and blown dust; undamaged by the external formation of ice on the enclosure
Type 3R	Indoor or outdoor use to provide a degree of protection against falling rain and sleet; undamaged by the formation of ice on the enclosure	Indoor or outdoor use to provide a degree of protection against falling rain and sleet; undamaged by the formation of ice on the enclosure	Weather proof enclosure; indoor or outdoor use to provide a degree of protection against rain or snow; undamaged by the external formation of ice on the enclosure (CSA does not specify sleet resist)
Type 3S	Indoor or outdoor use to provide a degree of protection against windblown dust, rain and sleet; provides for operation of external mechanisms when ice laden	Indoor or outdoor use to provide a degree of protection against windblown dust, rain and sleet; external mechanisms remain operable while ice laden	Weather proof enclosure; indoor or outdoor use to provide a degree of protection against rain or snow; undamaged by the external formation of ice on the enclosure surface (CSA does not specify sleet proof)
Type 4	Indoor or outdoor use to protect the enclosed equipment against splashing water, seepage of water, falling or hose-directed water, and severe external condensation; these enclosures are sleet resistant but not sleet proof	Indoor or outdoor use to provide a degree of protection against splashing water, windblown dust and rain, and hose directed water; undamaged by the formation of ice on the enclosure	Watertight enclosure; indoor or outdoor use to provide a degree of protection against rain, snow, blown dust, splashing and hose directed water; undamaged by the external formation of ice on the enclosure
Type 4X	Indoor or outdoor use to provide a degree of protection against corrosion, windblown dust and rain, splashing water, and hose-directed water; undamaged by the formation of ice on the enclosure	Indoor or outdoor use to provide a degree of protection against splashing water, windblown dust and rain, and hose directed water; undamaged by the formation of ice on the enclosure; resists corrosion	Watertight enclosure; indoor or outdoor use to provide a degree of protection against rain, snow, blown dust, splashing and hose directed water; undamaged by the external formation of ice on the enclosure; resists corrosion
Type 5	Indoor use to provide a degree of protection against dust, falling dirt, and dripping non-corrosive liquids	Not typically used by UL.	Indoor use, so constructed that dust, readily ignitable fibers or combustible flyings cannot enter the enclosure

12A-2

Industry Standards and Definitions

NEMA Designation	Underwriters Laboratories Inc. UL 50 and UL 508	Canadian Standards Association CSA Standard C22.2 No 94
Type 6 Indoor or outdoor use to provide a degree of protection against the entry of water during occasional temporary submersion at a limited depth	Indoor or outdoor use to provide a degree of protection against the entry of water during temporary submersion at a limited depth; undamaged by the formation of ice on the enclosure	No CSA equivalent
Type 6P Indoor or outdoor use to provide a degree of protection against the entry of water during prolonged submersion at a limited depth	Indoor or outdoor use to provide a degree of protection against the entry of water during prolonged submersion at a limited depth	No CSA equivalent
Type 7 For use in indoor locations classified as Class I, Groups A, B, C and D, as defined in the National Electrical Code	Not typically used by UL	Similar to NEMA designation; refer to Canadian Electric Code C22.1 Sec. 18 (C22.2 No. 30)
Type 8 For use in indoor or outdoor locations classified as Class I, Groups A, B, C and D, as defined in the National Electrical Code – oil immersed	Not typically used by UL	Similar to NEMA designation; refer to Canadian Electric Code C22.1 Sec. 18 (C22.2 No. 30)
Type 9 For use in indoor locations classified as Class II, Groups E, F and G, as defined in the National Electrical Code	Not typically used by UL	Similar to NEMA designation dust tight (hazardous dust); refer to Canadian Electric Code C22.2 No. 25
Type 10 Mining enforcement safety administration approved	Not typically used by UL	No CSA equivalent specified for industrial control applications (See C22.5 for use of electricity in mines)
Type 11 Indoor use to provide, by oil immersion, a degree of protection to enclosed equipment against corrosive effects of liquids and gases	Indoor use to provide, by oil immersion, a degree of protection of the enclosed equipment against corrosive effects of corrosive liquids and gases	No CSA equivalent; similar to Type 4
Type 12 Indoor use to provide a degree of protection against dust, falling dirt and dripping non-corrosive liquids No knockouts	Indoor use to provide a degree of protection against dust, falling dirt and dripping non-corrosive liquids No knockouts	Indoor use to provide a degree of protection against circulating dust, lint, fibers, dripping and light splashes of non-corrosive liquids
Type 12K Indoor enclosure with knockouts to provide a degree of protection against dust, falling dirt and dripping non-corrosive liquids other than at knockouts	Indoor use to provide a degree of protection against dust, falling dirt, and dripping non-corrosive liquids With knockouts	No CSA equivalent
Type 13 Indoor use to provide a degree of protection against lint, dust, seepage, external condensation and spraying of water, oil and non-corrosive coolant	Indoor use to provide a degree of protection against dust and spraying of water, oil and non-corrosive coolants	Indoor use to provide a degree of protection against circulating dust, lint, fibers, seepage and spraying of non-corrosive liquids including oils and coolants

Industry Standards and Definitions

EUROPEAN STANDARDS

Type of Protection	Method of Protection	CENELEC Designation
Flameproof Enclosure	Containment	'd'
Increased Safety	Mechanical	'e'
Intrinsically Safe	Electrical	'i'

These designations are typically preceded by EEx, the designation indicating an apparatus built to a European standard.

European Classification of Hazardous Locations

Zone 0	Explosive gas present continuously
Zone 1	Explosive gas present occasionally under normal operating conditions
Zone 2	Explosive gas present for short period
Zone 20	Explosive dust present continuously
Zone 21	Explosive dust present occasionally under normal operating conditions
Zone 22	Explosive dust present for short period

Explosion Groups

Group I	Electrical equipment for mining applications
Group II	Electrical equipment for all remaining hazardous areas

Ingress Protection (IP rating) defines the degree of protection

Scope of Protection for the IP protection classes

Digit	Physical protection	First Digit	Foreign body protection	Digit	Second digit	Water protection
0	No protection		No protection	0		No protection
1	Protection against back of hand contact		Protection against solid foreign bodies 50 mm diameter	1		Protection against water drops falling vertically
2	Protection against finger contact		Protection against solid foreign bodies 12.5 mm diameter	2		Protection against water drops falling at an angle (15°)
3	Protection against contact from tools		Protection against solid foreign bodies 2.5 mm diameter	3		Protection against water-spray at an angle up to 60°
4	Protection against contact with a wire		Protection against solid foreign bodies 1.0 mm diameter	4		Protection against water-spray from all directions
5	Protection against contact with a wire		Protection against dust	5		Protection against water jets
6	Protection against contact with a wire		Dust-tight	6		Protection against strong water jets
7				7		Protection against intermittent immersion in water
8				8		Protection against continuous immersion in water

12A-4

Industry Standards and Definitions

CLASSIFICATION BY GROUP AND CATEGORY ACCORDING TO INTENDED USE (Surface Industry)

Area	Category of Equipment	Presence or Duration of Explosive Atmosphere	Inflammable Substances	Level of Protection Faults to Allow for	Comparison with Present Practice
Equipment Group II (surface)	1	Continuous Presence Long Periods Frequent	Gas, Vapors, Mist, Dust	Very High Level of Protection 2 types of protection or 2 Independent faults	Group II Zone 0 (gas) Zone 20 (dust)
	2	Likely to Occur	Gas, Vapors, Mist, Dust	High Level of Protection 1 Type of Protection Habitual frequent malfunction	Group II Zone 1 (gas) Zone 21 (dust)
	3	Unlikely to Occur Present for a Short Period	Gas, Vapors, Mist, Dust	Normal Protection Required Level of Protection	Group II Zone 2 (gas) Zone 22 (dust)

Industry Standards and Definitions

TEMPERATURE RATING

The maximum surface temperature of the exposed surface of electrical apparatus must always be lower than the ignition temperature of the gas or vapor mixture.

Temperature Class	Maximum Surface Temperature	Ignition Temperature of Combustible Material
T1	450 C	>450 C
T2	300 C	>300 C
T3	200 C	>200 C
T4	135 C	>135 C
T5	100 C	>100 C
T6	85 C	>85 C

Safety characteristics of flammable gases and vapors

Medium	Ignition temperature °C	Temperature class	Explosion group
Acetaldehyde	140	T 4	II A
Acetic acid	485	T 1	II A
Acetic anhydride	330	T 2	II A
Acetone	540	T 1	II A
Acetylene	305	T 2	II C
Ammonia	630	T 1	II A
Amylacetate	380	T 2	II A
Benzene	220	T 3	II A
Benzol	555	T 1	II A
Carbon disulfide	95	T 6	II C
Carbon monoxide	605	T 1	II A
Cyclohexene	430	T 2	II A
1,2-Dichlorethane	440	T 2	II A
Diesel fuel	220 up to 300	T 3	II A
Ethane	515	T 1	II A
Ethylacetate	460	T 1	II A
Ethylalcohol	425	T 2	II B
Ethylchloride	510	T 1	II A
Ethylene	425	T 2	II B
Ethylenoxide	440	T 2	II B
Ethylether	180	T 4	II B
Ethyl glycol	235	T 3	II A
Fuel oil	220 up to 300	T 3	II A
Hydrogen	560	T 1	II C
Hydrogen disulfide	270	T 3	II B
Methane	595 (650)	T 1	II A
Methanol	455	T 1	II A
Methyl chloride	625	T 1	II A
n-Butane	365	T 2	II A
n-Butylalcohol	340	T 2	II A
n-Hexane	240	T 3	II A
n-Propylalcohol	405	T 2	II A
Naphthaline	520	T 1	II A
Oleic acid	360	T 2	II A
Phenol	595	T 1	II A
Propane	470	T 1	II A
Tetraline	425	T 2	II A
Toluole	535	T 1	II A

12A-6

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
.295 B BLADES	.11A	12MF-12-SS	.1C	3 ASC-5A	.11A	3SB-15	.11A
.295 C BLADES	.11A	12P10	.1C	3 ASC-5Y	.11A	3SB-16	.11A
.295 D BLADES	.11A	12P12	.1C	3 ASC-8	.11A	3SB-25	.11A
06P04	.1C	14P08	.1C	3 ASC-8A	.11A	3SB-35	.11A
06P06	.1C	14P12	.1C	3 ASC-8Y	.11A	3SB-5	.11A
07-3323-1100/1000	.3D	16P14	.1C	3 ASD-1	.11A	3SB-8	.11A
07-3323-1100/2000	.3D	1-S BUSHING	.11A	3 ASD-15	.11A	3SC-15	.11A
07-3323-1100/3000	.3D	1-SQ	.11A	3 ASD-15A	.11A	3SC-16	.11A
07-3323-1100/4000	.3D	2-S BUSHING	.11A	3 ASD-15Y	.11A	3SC-25	.11A
07-3323-1100/4100	.3D	2-SQ	.11A	3 ASD-16	.11A	3SC-35	.11A
07-3323-1100/4200	.3D	3 ASA-1	.11A	3 ASD-16A	.11A	3SC-5	.11A
07-3323-1100/4300	.3D	3 ASA-15	.11A	3 ASD-16Y	.11A	3SC-8	.11A
07-3323-1100/5000	.3D	3 ASA-15A	.11A	3 ASD-1A	.11A	3SD-15	.11A
07-3323-1100/6000	.3D	3 ASA-15Y	.11A	3 ASD-1Y	.11A	3SD-16	.11A
07-3323-1100/6100	.3D	3 ASA-16	.11A	3 ASD-5	.11A	3SD-25	.11A
07-3323-1100/6200	.3D	3 ASA-16A	.11A	3 ASD-5A	.11A	3SD-35	.11A
07-3323-1100/6300	.3D	3 ASA-16Y	.11A	3 ASD-5Y	.11A	3SD-5	.11A
07-3323-1200/1000	.3D	3 ASA-1A	.11A	3 ASD-8	.11A	3SD-8	.11A
07-3323-1200/2000	.3D	3 ASA-1Y	.11A	3 ASD-8A	.11A	3SE-15	.11A
07-3323-1200/3000	.3D	3 ASA-5	.11A	3 ASD-8Y	.11A	3SE-16	.11A
07-3323-1200/4000	.3D	3 ASA-5A	.11A	3 ASE	.11A	3SE-25	.11A
07-3323-1200/4100	.3D	3 ASA-5Y	.11A	3 LPA-15	.11A	3SE-35	.11A
07-3323-1200/4200	.3D	3 ASA-8	.11A	3 LPA-16	.11A	3SE-5	.11A
07-3323-1200/4300	.3D	3 ASA-8A	.11A	3 LPA-5	.11A	3SE-8	.11A
07-3323-1200/5000	.3D	3 ASA-8Y	.11A	3 LPA-8	.11A	3-SQ	.11A
07-3323-1200/6000	.3D	3 ASB-1	.11A	3 LPB-15	.11A	AC-10	.11A
07-3323-1200/6100	.3D	3 ASB-15	.11A	3 LPB-16	.11A	AC-12	.11A
07-3323-1200/6200	.3D	3 ASB-15A	.11A	3 LPB-5	.11A	AC-14	.11A
07-3323-1200/6300	.3D	3 ASB-15Y	.11A	3 LPB-8	.11A	AC-16	.11A
07-3323-1400/1000	.3D	3 ASB-16	.11A	3 LPC-15	.11A	AC-18	.11A
07-3323-1400/2000	.3D	3 ASB-16A	.11A	3 LPC-16	.11A	AC-20	.11A
07-3323-1400/3000	.3D	3 ASB-16Y	.11A	3 LPC-5	.11A	AC-22	.11A
07-3323-1400/4000	.3D	3 ASB-1A	.11A	3 LPC-8	.11A	AC-24	.11A
07-3323-1400/4100	.3D	3 ASB-1Y	.11A	3 LPD-15	.11A	AC-26	.11A
07-3323-1400/4200	.3D	3 ASB-5	.11A	3 LPD-16	.11A	AC-28	.11A
07-3323-1400/4300	.3D	3 ASB-5A	.11A	3 LPD-5	.11A	AC-30	.11A
07-3323-1400/5000	.3D	3 ASB-5Y	.11A	3 LPD-8	.11A	AC-32	.11A
07-3323-1400/6000	.3D	3 ASB-8	.11A	3 LPE	.11A	AC-34	.11A
07-3323-1400/6100	.3D	3 ASB-8A	.11A	3000-128	1 GA .11A	AC-36	.11A
07-3323-1400/6200	.3D	3 ASB-8Y	.11A	3000-16	1 PT .11A	AC-38	.11A
07-3323-1400/6300	.3D	3 ASC-1	.11A	3000-32	1 QT .11A	AC-6	.11A
07-3353-1110/1000	.3D	3 ASC-15	.11A	3000-640	1-149 GAL. 5 GA .11A	AC-8	.11A
07-3353-1120/2000	.3D	3 ASC-15A	.11A	3000-640	150 & OVER 5 GA .11A	ACS-10	.11A
07-3353-1130/3000	.3D	3 ASC-15Y	.11A	3000-8	1/2 .11A	ACS-12	.11A
07-3353-1140/4000	.3D	3 ASC-16	.11A	3-S BUSHING	.11A	ACS-14	.11A
07-3353-1150/5000	.3D	3 ASC-16A	.11A	3SA-15	.11A	ACS-16	.11A
08P06	.1C	3 ASC-16Y	.11A	3SA-16	.11A	ACS-18	.11A
08P08	.1C	3 ASC-1A	.11A	3SA-25	.11A	ACS-20	.11A
10P08	.1C	3 ASC-1Y	.11A	3SA-5	.11A	ACS-22	.11A
10P10	.1C	3 ASC-5	.11A	3SA-8	.11A	ACS-24	.11A

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
ACS-26	.11A	AVSS(or AVSS6)-302408	.1A	C-BUSHING	.11A	CGP 4812	.11A
ACS-28	.11A	AVSS(or AVSS6)-302412	.1A	CG 138-15	.11A	CGP 4812-M	.11A
ACS-30	.11A	AVSS(or AVSS6)-302420	.1A	CG 155-15	.11A	CGP 4875	.11A
ACS-32	.11A	AVSS(or AVSS6)-303008	.1A	CG 174-20	.11A	CGP 4875-M	.11A
ACS-34	.11A	AVSS(or AVSS6)-303012	.1A	CG 188-20	.11A	CGP 4938	.11A
ACS-36	.11A	AVSS(or AVSS6)-362408	.1A	CG 195-20	.11A	CGP 4938-M	.11A
ACS-38	.11A	AVSS(or AVSS6)-362412	.1A	CG 219-25	.11A	CGP 51000	.11A
ACS-40	.11A	AVSS(or AVSS6)-363008	.1A	CG 236-25	.11A	CGP 51000-M	.11A
ACS-42	.11A	AVSS(or AVSS6)-363012	.1A	CG 263-30	.11A	CGP 51125	.11A
ACS-44	.11A	AVSS(or AVSS6)-363016	.1A	CG 280-30	.11A	CGP 51125-M	.11A
ACS-46	.11A	AVSS(or AVSS6)-363020	.1A	CG 296-30	.11A	CGP 51250	.11A
ACS-48	.11A	AVSS(or AVSS6)-363608	.1A	CG 297-35	.11A	CGP 51250-M	.11A
ACS-6	.11A	AVSS(or AVSS6)-363612	.1A	CG 311-35	.11A	CGP 51375	.11A
ACS-8	.11A	AVSS(or AVSS6)-423612	.1A	CG 327-35	.11A	CGP 51375-M	.11A
AIPBCAR	.7A	AVSS(or AVSS6)-483612	.1A	CG 343-35	.11A	CGP 5875	.11A
AIPBCBE	.7A	AVSS(or AVSS6)-483616	.1A	CG 364-40	.11A	CGP 61000	.11A
AIPBCCR	.7A	AVSS(or AVSS6)-603612	.1A	CG 369-40	.11A	CGP 61000-M	.11A
AIPBCGN	.7A	B-1 BLADE	.11A	CG 387-40	.11A	CGP 61125	.11A
AIPBCRD	.7A	BAC 12	.11A	CGP 2188	.11A	CGP 61125-M	.11A
AIPBCWE	.7A	BAC 15	.11A	CGP 2250	.11A	CGP 61250	.11A
APLLAR	.7A	BAC 20	.11A	CGP 2250-M	.11A	CGP 61250-M	.11A
APLLBE	.7A	BAC 25	.11A	CGP 2312	.11A	CGP 61375	.11A
APLLCR	.7A	BAC 30	.11A	CGP 2312-M	.11A	CGP 61375-M	.11A
APLLGN	.7A	BAC 35	.11A	CGP 2375	.11A	CGP 6875	.11A
APLLRD	.7A	BAC 40	.11A	CGP 2375-M	.11A	CGP 81250	.11A
APLLWE	.7A	BAC 50	.11A	CGP 2438	.11A	CGP 81562	.11A
AVSS(or AVSS6)-121206	.1A	BAC 60	.11A	CGP 2438-M	.11A	CGP 81562-M	.11A
AVSS(or AVSS6)-161206	.1A	B-BUSHING	.11A	CGP 2500	.11A	CGP 81688	.11A
AVSS(or AVSS6)-161208	.1A	BCV 20	.11A	CGP 2500-M	.11A	CGP 81688-M	.11A
AVSS(or AVSS6)-161606	.1A	BCV 25	.11A	CGP 2562	.11A	CGP 81812	.11A
AVSS(or AVSS6)-161608	.1A	BCV 30	.11A	CGP 2562-M	.11A	CGP 81812-M	.11A
AVSS(or AVSS6)-162008	.1A	BCV 35	.11A	CGP 2625	.11A	CGP 92188	.11A
AVSS(or AVSS6)-201606	.1A	BCV 40	.11A	CGP 2625-M	.11A	CGP 92250	.11A
AVSS(or AVSS6)-201608	.1A	BCV 50	.11A	CGP 3562	.11A	CGP 92250-M	.11A
AVSS(or AVSS6)-202006	.1A	BCV 60	.11A	CGP 3562-M	.11A	CGP 92312	.11A
AVSS(or AVSS6)-202008	.1A	BT-15	.11A	CGP 3625	.11A	CGP 92312-M	.11A
AVSS(or AVSS6)-202012	.1A	BT1A	.9A	CGP 3625-M	.11A	CGP 92375	.11A
AVSS(or AVSS6)-202408	.1A	BT1B	.9A	CGP 3688	.11A	CGP 92375-M	.11A
AVSS(or AVSS6)-241606	.1A	BT2	.9A	CGP 3688-M	.11A	CGP 92438	.11A
AVSS(or AVSS6)-241608	.1A	BT-20	.11A	CGP 3725	.11A	CGP 92438-M	.11A
AVSS(or AVSS6)-242006	.1A	BT-25	.11A	CGP 3725-M	.11A	CGP 92500	.11A
AVSS(or AVSS6)-242008	.1A	BT3	.9A	CGP 3812	.11A	CGP 92500-M	.11A
AVSS(or AVSS6)-242012	.1A	BT-3	.11A	CGP 4562	.11A	CGP 92562	.11A
AVSS(or AVSS6)-242406	.1A	BT-30	.11A	CGP 4562-M	.11A	CGP 92562-M	.11A
AVSS(or AVSS6)-242408	.1A	BT-35	.11A	CGP 4625	.11A	CGP 92625	.11A
AVSS(or AVSS6)-242412	.1A	BT4	.9A	CGP 4625-M	.11A	CGP 92625-M	.11A
AVSS(or AVSS6)-242416	.1A	BT-40	.11A	CGP 4688	.11A	CGP 93562	.11A
AVSS(or AVSS6)-242420	.1A	BT44	.9A	CGP 4688-M	.11A	CGP 93562-M	.11A
AVSS(or AVSS6)-243008	.1A	BT5	.9A	CGP 4750	.11A	CGP 93625	.11A
AVSS(or AVSS6)-302008	.1A	BT-50	.11A	CGP 4750-M	.11A	CGP 93625-M	.11A

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
CGP 93688	.11A	CN4(X or X6)-2016xx	.3D	CVS-60 1-3/C	.11A	FSP 2	.5E
CGP 93688-M	.11A	CN4(X or X6)-2020xx	.3D	CVS-60 3-1/C	.11A	FSP 3	.5E
CGP 93725	.11A	CN4(X or X6)-2024xx	.3D	D-60P48	.1A	FVLU	.7A
CGP 93725-M	.11A	CN4(X or X6)-2412xx	.3D	D-60P60	.1A	FVLU12	.7A
CGP 93812	.11A	CN4(X or X6)-2416xx	.3D	D-72P60	.1A	FVLU120	.7A
CGP 93812-M	.11A	CN4(X or X6)-2420xx	.3D	D-72P72	.1A	FVLU120FS	.7A
CGP 94562	.11A	CN4(X or X6)-2424xx	.3D	D-BUSHING	.11A	FVLU120N	.7A
CGP 94562-M	.11A	CN4(X or X6)-2430xx	.3D	DIF 101406	.5B	FVLU120NFS	.7A
CGP 94625	.11A	CN4(X or X6)-301606	.3D	DIF 164810	.5B	FVLU12FS	.7A
CGP 94625-M	.11A	CN4(X or X6)-3020xx	.3D	DIF 202408	.5B	FVLU24	.7A
CGP 94688	.11A	CN4(X or X6)-3024xx	.3D	DIF 243608	.5B	FVLU24FS	.7A
CGP 94688-M	.11A	CN4(X or X6)-3030xx	.3D	DIF 364808	.5B	FVLU6	.7A
CGP 94750	.11A	CN4(X or X6)-303608	.3D	DJF 061105	.5A	FVLU6FS	.7A
CGP 94750-M	.11A	CN4(X or X6)-3624xx	.3D	DJF 061305	.5A	FVLUFS	.7A
CGP 94812	.11A	CN4(X or X6)-3630xx	.3D	DJF 071805	.5A	FVPPM120-IMCRD-FS	.7A
CGP 94812-M	.11A	CN4(X or X6)-3636xx	.3D	DJF 121806	.5A	FVPPM120-IMCRD-FS/FS	.7A
CGP 94875	.11A	CN4(X or X6)-422408	.3D	DJF 122005	.5A	FVPPM120NR-IMCRD-FS	.7A
CGP 94875-M	.11A	CN4(X or X6)-4230xx	.3D	DJF 122406	.5A	FVPPM120NR-IMCRD-FS/FS	.7A
CGP 94938	.11A	CN4(X or X6)-4236xx	.3D	DJF 122408	.5A	FVPPM12-IMCRD-FS	.7A
CGP 94938-M	.11A	CN4(X or X6)-482408	.3D	DJF 123006	.5A	FVPPM12-IMCRD-FS/FS	.7A
CGP 951000	.11A	CN4(X or X6)-4830xx	.3D	DJF 123208	.5A	FVPPM24-IMCRD-FS	.7A
CGP 951000-M	.11A	CN4(X or X6)-4836xx	.3D	DJF 123608	.5A	FVPPM24-IMCRD-FS/FS	.7A
CGP 951125	.11A	CN4(X or X6)-6036xx	.3D	FDO	.5E	FVPPM6-IMCRD-FS	.7A
CGP 951125-M	.11A	Color adder for legend plates	.7A	FL 92	.10A	FVPPM6-IMCRD-FS/FS	.7A
CGP 951250	.11A	CV-20 1-3/C	.11A	FL 93	.10A	FVPPT120NFS	.7A
CGP 951250-M	.11A	CV-20 3-1/C	.11A	FL 94	.10A	FVPTT120FS	.7A
CGP 951375	.11A	CV-25 1-3/C	.11A	FL 96	.10A	FVPTT12FS	.7A
CGP 951375-M	.11A	CV-25 3-1/C	.11A	FS 21	.5E	FVPTT24FS	.7A
CGP 95875	.11A	CV-30 1-3/C	.11A	FS20	.11A	FVPTT6FS	.7A
CGP 961000	.11A	CV-30 3-1/C	.11A	FS25	.11A	FVPTTF5	.7A
CGP 961000-M	.11A	CV-35 1-3/C	.11A	FS30	.11A	GHG 418 8131 R0014	.3D
CGP 961125	.11A	CV-35 3-1/C	.11A	FS35	.11A	GHG 418 8131 R0015	.3D
CGP 961125-M	.11A	CV-40 1-3/C	.11A	FS40	.11A	GHG 418 8131 R0016	.3D
CGP 961250	.11A	CV-40 3-1/C	.11A	FS-50	.11A	GT-100F 5-50-8	.11A
CGP 961250-M	.11A	CV-50 1-3/C	.11A	FS525	.11A	HV4X6-161606	.3C
CGP 961375	.11A	CV-50 3-1/C	.11A	FS535	.11A	HV4X6-201206	.3C
CGP 961375-M	.11A	CV-60 1-3/C	.11A	FS540	.11A	HV4X6-201407	.3C
CGP 96875	.11A	CV-60 3-1/C	.11A	FSBT	.7A	HV4X6-201610	.3C
CGP 981250	.11A	CVS-20 1-3/C	.11A	FSD	.11A	HV4X6-202006	.3C
CGP 981562	.11A	CVS-20 3-1/C	.11A	FSD-35	.11A	HV4X6-202008	.3C
CGP 981562-M	.11A	CVS-25 1-3/C	.11A	FSDG-31	.11A	HV4X6-202010	.3C
CGP 981688	.11A	CVS-25 3-1/C	.11A	FSDG-32	.11A	HV4X6-241206	.3C
CGP 981688-M	.11A	CVS-30 1-3/C	.11A	FSDP-3	.11A	HV4X6-241606	.3C
CGP 981812	.11A	CVS-30 3-1/C	.11A	FSDP-35	.11A	HV4X6-242006	.3C
CGP 981812-M	.11A	CVS-35 1-3/C	.11A	FSDS-1	.11A	HV4X6-242008	.3C
CN4(X or X6)-1224xx	.3D	CVS-35 3-1/C	.11A	FSDS-2	.11A	HV4X6-242010	.3C
CN4(X or X6)-1612xx	.3D	CVS-40 1-3/C	.11A	FSDS-35	.11A	HV4X6-242010	.3C
CN4(X or X6)-1616xx	.3D	CVS-40 3-1/C	.11A	FSH 2	.5E	HV4X6-242408	.3C
CN4(X or X6)-1620xx	.3D	CVS-50 1-3/C	.11A	FSH 3	.5E	HV4X6-242410	.3C
CN4(X or X6)-2012xx	.3D	CVS-50 3-1/C	.11A	FSO	.5E	HV4X6-242410	.3C

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
HV4X6-251807	.3C	JAG 423-40	.11A	JH 121810	.5D	JN4XSS-101006	.1A
HV4X6-301606	.3C	JAG 437-40	.11A	JH 122406	.5D	JN4XSS-121005	.1A
HV4X6-302010	.3C	JAG 45-05	.11A	JH 122408	.5D	JN4XSS-121008	.1A
HV4X6-302010	.3C	JAG 451-40	.11A	JH 123606	.5D	JN4XSS-121206	.1A
HV4X6-302207	.3C	JAG 462-40	.11A	JH 141406	.5D	JN4XSS-140806	.1A
HV4X6-302410	.3C	JAG 55-05	.11A	JH 151508	.5D	JN4XSS-141206	.1A
HV4X6-302410	.3C	JAG 65-05	.11A	JH 181806	.5D	JN4XSS-141208	.1A
HV4X6-362410	.3C	JAG 75-05	.11A	JH 181808	.5D	JN4XSS-161406	.1A
HV4X6-362410	.3C	JAG 85-05	.11A	JH 181810	.5D	JN4XSS-161408	.1A
HV4X6-362507	.3C	JAG 95-05	.11A	JH 181812	.5D	JN4XSS-161410	.1A
HV4X6-362510	.3C	JAG 99-07	.11A	JH 182408	.5D	JP 020401	.5D
HV4X6-362510	.3C	JF 060604	.5D	JH 183606	.5D	JP 030302	.5D
HV4X6-603610	.3C	JF 060606	.5D	JH 183608	.5D	JP 030303	.5D
HV4X6-603610	.3C	JF 060804	.5D	JH 242408	.5D	JP 040403	.5D
HV4X6-603616	.3C	JF 060806	.5D	JH 243008	.5D	JP 040404	.5D
IPBCAR	.7A	JF 061206	.5D	JH 243606	.5D	JP 040603	.5D
IPBCBE	.7A	JF 080804	.5D	JH 243608	.5D	JP 040604	.5D
IPBCCR	.7A	JF 080806	.5D	JH 243612	.5D	JP 040804	.5D
IPBCGN	.7A	JF 081206	.5D	JN4XHA-060604	.1B	JP 041204	.5D
IPBCRD	.7A	JF 121206	.5D	JN4XHA-080604	.1B	JP 060603	.5D
IPBCWE	.7A	JF 121208	.5D	JN4XHA-100804	.1B	JP 060604	.5D
JAG 107-07	.11A	JF 121810	.5D	JN4XHA-121005	.1B	JP 060606	.5D
JAG 112-10	.11A	JF 122406	.5D	JN4XHA-141206	.1B	JP 060804	.5D
JAG 113-07	.11A	JF 122408	.5D	JN4XHA-161406	.1B	JP 060806	.5D
JAG 121-07	.11A	JF 183608	.5D	JN4XHSS-060403	.1A	JP 061004	.5D
JAG 125-10	.11A	JH 060604	.5D	JN4XHSS-060404	.1A	JP 061204	.5D
JAG 138-10	.11A	JH 060606	.5D	JN4XHSS-060604	.1A	JP 061206	.5D
JAG 138-12	.11A	JH 060804	.5D	JN4XHSS-080604	.1A	JP 080804	.5D
JAG 156-12	.11A	JH 060806	.5D	JN4XHSS-080606	.1A	JP 080806	.5D
JAG 174-12	.11A	JH 061004	.5D	JN4XHSS-080804	.1A	JP 080808	.5D
JAG 174-15	.11A	JH 061204	.5D	JN4XHSS-100804	.1A	JP 081004	.5D
JAG 188-12	.11A	JH 061206	.5D	JN4XHSS-100806	.1A	JP 081006	.5D
JAG 188-15	.11A	JH 080804	.5D	JN4XHSS-101006	.1A	JP 081008	.5D
JAG 200-15	.11A	JH 080806	.5D	JN4XHSS-121005	.1A	JP 081204	.5D
JAG 218-15	.11A	JH 080808	.5D	JN4XHSS-121008	.1A	JP 081206	.5D
JAG 219-20	.11A	JH 081004	.5D	JN4XHSS-121206	.1A	JP 101204	.5D
JAG 236-20	.11A	JH 081006	.5D	JN4XHSS-140806	.1A	JP 101206	.5D
JAG 247-20	.11A	JH 081008	.5D	JN4XHSS-141206	.1A	JP 101208	.5D
JAG 261-20	.11A	JH 081204	.5D	JN4XHSS-141208	.1A	JP 121204	.5D
JAG 263-25	.11A	JH 081206	.5D	JN4XHSS-161406	.1A	JP 121206	.5D
JAG 280-25	.11A	JH 101204	.5D	JN4XHSS-161408	.1A	JP 121208	.5D
JAG 296-25	.11A	JH 101206	.5D	JN4XHSS-161410	.1A	JP 121604	.5D
JAG 297-30	.11A	JH 101208	.5D	JN4XSS-060403	.1A	JP 121606	.5D
JAG 311-30	.11A	JH 121204	.5D	JN4XSS-060404	.1A	JP 121608	.5D
JAG 327-30	.11A	JH 121206	.5D	JN4XSS-060604	.1A	JP 121806	.5D
JAG 343-30	.11A	JH 121208	.5D	JN4XSS-080604	.1A	JP 121810	.5D
JAG 359-30	.11A	JH 121604	.5D	JN4XSS-080606	.1A	JP 122406	.5D
JAG 375-35	.11A	JH 121606	.5D	JN4XSS-080804	.1A	JP 122408	.5D
JAG 392-35	.11A	JH 121608	.5D	JN4XSS-100804	.1A	JP 123606	.5D
JAG 412-35	.11A	JH 121806	.5D	JN4XSS-100806	.1A	JP 141406	.5D

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
JP 151508	.5D	KOSRLRC-KL-FS	.7A	KOSS3-KLR-FS/FS	.7A	N4X(or N4X6)-302408	.1A
JP 181806	.5D	KOSRLRC-KL-FS/FS	.7A	KOSS3-KRC-FS	.7A	N4X(or N4X6)-302410	.1A
JP 181808	.5D	KOSRLRC-KL-FS/FS	.7A	KOSS3-KRC-FS/FS	.7A	N4X(or N4X6)-302412	.1A
JP 181810	.5D	KOSRLRC-KLR-FS	.7A	KOSS3-KR-FS	.7A	N4X(or N4X6)-302416	.1A
JP 181812	.5D	KOSRLRC-KLR-FS	.7A	KOSS3-KR-FS/FS	.7A	N4X(or N4X6)-302420	.1A
JP 182408	.5D	KOSRLRC-KLR-FS/FS	.7A	KOSS4-FS	.7A	N4X(or N4X6)-302424	.1A
JP 183606	.5D	KOSRLRC-KLR-FS/FS	.7A	KOSS4-FS/FS	.7A	N4X(or N4X6)-303008	.1A
JP 183608	.5D	KOSRLRC-KRC-FS	.7A	LP, LPN, LPS	.7A	N4X(or N4X6)-303012	.1A
JP 242408	.5D	KOSRLRC-KRC-FS	.7A	LPB	.11A	N4X(or N4X6)-362406	.1A
JP 242410	.5D	KOSRLRC-KRC-FS/FS	.7A	LPC	.11A	N4X(or N4X6)-362408	.1A
JP 243008	.5D	KOSRLRC-KRC-FS/FS	.7A	LPD	.11A	N4X(or N4X6)-362410	.1A
JP 243606	.5D	KOSRLRC-KR-FS	.7A	LPE	.11A	N4X(or N4X6)-362412	.1A
JP 243608	.5D	KOSRLRC-KR-FS	.7A	M1423	.1C	N4X(or N4X6)-363006	.1A
JP 243612	.5D	KOSRLRC-KR-FS/FS	.7A	MFL 92	.10A	N4X(or N4X6)-363008	.1A
JP 363612	.5D	KOSRLRC-KR-FS/FS	.7A	MFL 93	.10A	N4X(or N4X6)-363010	.1A
JR 040404	.5D	KOSRRC-FS	.7A	MFL 94	.10A	N4X(or N4X6)-363012	.1A
JR 040604	.5D	KOSRRC-FS/FS	.7A	MFL 95	.10A	N4X(or N4X6)-363016	.1A
JR 060604	.5D	KOSRRC-KC-FS	.7A	MFL 96	.10A	N4X(or N4X6)-363020	.1A
JR 060606	.5D	KOSRRC-KC-FS/FS	.7A	N4X(or N4X6)-161206	.1A	N4X(or N4X6)-363608	.1A
JR 060804	.5D	KOSRRC-KLC-FS	.7A	N4X(or N4X6)-161208	.1A	N4X(or N4X6)-363612	.1A
JR 060806	.5D	KOSRRC-KLC-FS/FS	.7A	N4X(or N4X6)-161606	.1A	N4X(or N4X6)-423008	.1A
JR 061006	.5D	KOSRRC-KL-FS	.7A	N4X(or N4X6)-161608	.1A	N4X(or N4X6)-423010	.1A
JR 061206	.5D	KOSRRC-KL-FS/FS	.7A	N4X(or N4X6)-162006	.1A	N4X(or N4X6)-423012	.1A
JR 080804	.5D	KOSRRC-KLR-FS	.7A	N4X(or N4X6)-162008	.1A	N4X(or N4X6)-423608	.1A
JR 080806	.5D	KOSRRC-KLR-FS/FS	.7A	N4X(or N4X6)-201606	.1A	N4X(or N4X6)-423610	.1A
JR 080808	.5D	KOSRRC-KRC-FS	.7A	N4X(or N4X6)-201608	.1A	N4X(or N4X6)-423612	.1A
JR 081206	.5D	KOSRRC-KRC-FS/FS	.7A	N4X(or N4X6)-201610	.1A	N4X(or N4X6)-423616	.1A
JR 101006	.5D	KOSRRC-KR-FS	.7A	N4X(or N4X6)-201612	.1A	N4X(or N4X6)-483608	.1A
JR 121206	.5D	KOSRRC-KR-FS/FS	.7A	N4X(or N4X6)-202006	.1A	N4X(or N4X6)-483610	.1A
JR 121208	.5D	KOSRRL-FS	.7A	N4X(or N4X6)-202008	.1A	N4X(or N4X6)-483612	.1A
JR 121810	.5D	KOSRRL-FS/FS	.7A	N4X(or N4X6)-202010	.1A	N4X(or N4X6)-483616	.1A
JR 122406	.5D	KOSRRL-FS/FS-KL	.7A	N4X(or N4X6)-202406	.1A	N4X(or N4X6)-483620	.1A
JR 161606	.5D	KOSRRL-FS-KL	.7A	N4X(or N4X6)-202408	.1A	N4X(or N4X6)-603610	.1A
JR 161808	.5D	KOSS2-FS	.7A	N4X(or N4X6)-241206	.1A	N4X(or N4X6)-603612	.1A
JR 161810	.5D	KOSS2-FS/FS	.7A	N4X(or N4X6)-241606	.1A	N4X(or N4X6)-603616	.1A
JR 181812	.5D	KOSS2-KL-FS	.7A	N4X(or N4X6)-241608	.1A	N4X(or N4X6)-603620	.1A
JR 183608	.5D	KOSS2-KL-FS/FS	.7A	N4X(or N4X6)-242006	.1A	N4XA-161206	.1B
KOSRLC-FS	.7A	KOSS2-KLR-FS	.7A	N4X(or N4X6)-242008	.1A	N4XA-161608	.1B
KOSRLC-FS/FS	.7A	KOSS2-KLR-FS/FS	.7A	N4X(or N4X6)-242010	.1A	N4XA-201606	.1B
KOSRLRC-FS	.7A	KOSS2-KR-FS	.7A	N4X(or N4X6)-242012	.1A	N4XA-201610	.1B
KOSRLRC-FS/FS	.7A	KOSS2-KR-FS/FS	.7A	N4X(or N4X6)-242016	.1A	N4XA-202006	.1B
KOSRLRC-KC-FS	.7A	KOSS3-FS	.7A	N4X(or N4X6)-242406	.1A	N4XA-242006	.1B
KOSRLRC-KC-FS	.7A	KOSS3-FS/FS	.7A	N4X(or N4X6)-242408	.1A	N4XA-242010	.1B
KOSRLRC-KC-FS/FS	.7A	KOSS3-KC-FS	.7A	N4X(or N4X6)-242410	.1A	N4XA-242408	.1B
KOSRLRC-KC-FS/FS	.7A	KOSS3-KC-FS/FS	.7A	N4X(or N4X6)-242412	.1A	N4XA-302408	.1B
KOSRLRC-KLC-FS	.7A	KOSS3-KLC-FS	.7A	N4X(or N4X6)-242416	.1A	N4XA-302412	.1B
KOSRLRC-KLC-FS	.7A	KOSS3-KLC-FS/FS	.7A	N4X(or N4X6)-243008	.1A	N4XA-362408	.1B
KOSRLRC-KLC-FS/FS	.7A	KOSS3-KL-FS	.7A	N4X(or N4X6)-302006	.1A	N4XA-363008	.1B
KOSRLRC-KLC-FS/FS	.7A	KOSS3-KL-FS/FS	.7A	N4X(or N4X6)-302008	.1A	N4XA-363012	.1B
KOSRLRC-KL-FS	.7A	KOSS3-KLR-FS	.7A	N4X(or N4X6)-302406	.1A	N4XA-483608	.1B

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
N4X-DD-SS-604812	.1A	N4X-FG-201608CH	.2A	PBO-MCGN-FS	.7A	PEML 6	.10A
N4X-DD-SS-606012	.1A	N4X-FG-201608CHQR	.2A	PBO-MCGN-FS/FS	.7A	PEML 8	.10A
N4X-DD-SS-726012	.1A	N4X-FG-201608CHTL	.2A	PBO-MCRD-FS	.7A	PES 10	.10A
N4X-DD-SS-727212	.1A	N4X-FG-201610RCHQR	.2A	PBO-MCRD-FS/FS	.7A	PES 12	.10A
N4X-FG-030302	.2A	N4X-FG-201612CH	.2A	PBO-PPMCBK-FS	.7A	PES 14	.10A
N4X-FG-050302	.2A	N4X-FG-242008CH	.2A	PBO-PPMCBK-FS/FS	.7A	PES 16	.10A
N4X-FG-060404	.2A	N4X-FG-242410CH	.2A	PBO-PPMCGN-FS	.7A	PES 2	.10A
N4X-FG-060604CHQR	.2A	N4X-FG-2PB	.2A	PBO-PPMCGN-FS/FS	.7A	PES 3	.10A
N4X-FG-060604CHSC	.2A	N4X-FG-302410CH	.2A	PBO-PPMCRD-FS	.7A	PES 4	.10A
N4X-FG-060604CHTL	.2A	N4X-FG-302412CH	.2A	PBO-PPMCRD-FS/FS	.7A	PES 5	.10A
N4X-FG-060604SC	.2A	N4X-FG-363010CH	.2A	PBO-PPMCYW-FS	.7A	PES 6	.10A
N4X-FG-070603	.2A	N4X-FG-363012CH	.2A	PBO-PPMCYW-FS/FS	.7A	PES 8	.10A
N4X-FG-080404	.2A	N4X-FG-3PB	.2A	PBO-XCBK-FS	.7A	PET 10	.10A
N4X-FG-080604CHQR	.2A	N4X-FG-483616CH	.2A	PBO-XCBK-FS/FS	.7A	PET 12	.10A
N4X-FG-080604CHSC	.2A	OX 10	.10A	PBO-XCGN-FS	.7A	PET 14	.10A
N4X-FG-080604CHTL	.2A	OX 12	.10A	PBO-XCGN-FS/FS	.7A	PET 16	.10A
N4X-FG-080604SC	.2A	OX 14	.10A	PBO-XCRD-FS	.7A	PET 2	.10A
N4X-FG-080606RCHQR	.2A	OX 16	.10A	PBO-XCRD-FS/FS	.7A	PET 3	.10A
N4X-FG-090603	.2A	OX 2	.10A	PCK-100	.11A	PET 4	.10A
N4X-FG-100804CHQR	.2A	OX 3	.10A	PCL-128	.11A	PET 5	.10A
N4X-FG-100804CHSC	.2A	OX 4	.10A	PCL-2	.11A	PET 6	.10A
N4X-FG-100804CHTL	.2A	OX 5	.10A	PCL-32	.11A	PET 8	.10A
N4X-FG-100804SC	.2A	OX 6	.10A	PE 10	.10A	PLCK-35	.11A
N4X-FG-100806RCHQR	.2A	OX 8	.10A	PE 12	.10A	PLLAR	.7A
N4X-FG-100806RCHTL	.2A	PBO-AFCBK-FS	.7A	PE 14	.10A	PLLBE	.7A
N4X-FG-110404	.2A	PBO-AFCBK-FS/FS	.7A	PE 16	.10A	PLLCR	.7A
N4X-FG-121005CHQR	.2A	PBO-AFCGN-FS	.7A	PE 2	.10A	PLLGN	.7A
N4X-FG-121005CHSC	.2A	PBO-AFCGN-FS/FS	.7A	PE 3	.10A	PLLRD	.7A
N4X-FG-121005CHTL	.2A	PBO-AFCRD-FS	.7A	PE 4	.10A	PLLWE	.7A
N4X-FG-121005SC	.2A	PBO-AFCRD-FS/FS	.7A	PE 5	.10A	PLM Clean	.11A
N4X-FG-121006RCHQR	.2A	PBO-AMCBK-FS	.7A	PE 6	.10A	PM 10	.10A
N4X-FG-121006RCHTL	.2A	PBO-AMCBK-FS/FS	.7A	PE 8	.10A	PM 12	.10A
N4X-FG-141206CHQR	.2A	PBO-AMCGN-FS	.7A	PEM 10	.10A	PM 14	.10A
N4X-FG-141206CHSC	.2A	PBO-AMCGN-FS/FS	.7A	PEM 12	.10A	PM 16	.10A
N4X-FG-141206CHTL	.2A	PBO-AMCRD-FS	.7A	PEM 14	.10A	PM 2	.10A
N4X-FG-141206SC	.2A	PBO-AMCRD-FS/FS	.7A	PEM 16	.10A	PM 20	.10A
N4X-FG-141207RCHQR	.2A	PBO-AXCBK-FS	.7A	PEM 2	.10A	PM 24	.10A
N4X-FG-141207RCHTL	.2A	PBO-AXCBK-FS/FS	.7A	PEM 3	.10A	PM 3	.10A
N4X-FG-161406CHQR	.2A	PBO-AXCGN-FS	.7A	PEM 4	.10A	PM 4	.10A
N4X-FG-161406CHSC	.2A	PBO-AXCGN-FS/FS	.7A	PEM 5	.10A	PM 5	.10A
N4X-FG-161406CHTL	.2A	PBO-AXCRD-FS	.7A	PEM 6	.10A	PM 6	.10A
N4X-FG-161407RCHQR	.2A	PBO-AXCRD-FS/FS	.7A	PEM 8	.10A	PM 8	.10A
N4X-FG-161407RCHTL	.2A	PBO-FCBK-FS	.7A	PEML 10	.10A	PS 065-05	.11A
N4X-FG-181608CHQR	.2A	PBO-FCBK-FS/FS	.7A	PEML 12	.10A	PS 075-05	.11A
N4X-FG-181608CHSC	.2A	PBO-FCGN-FS	.7A	PEML 14	.10A	PS 085-05	.11A
N4X-FG-181608CHTL	.2A	PBO-FCGN-FS/FS	.7A	PEML 16	.10A	PS 100-07	.11A
N4X-FG-181610RCHQR	.2A	PBO-FCRD-FS	.7A	PEML 2	.10A	PS 115-07	.11A
N4X-FG-181610RCHTL	.2A	PBO-FCRD-FS/FS	.7A	PEML 3	.10A	PS 125-10	.11A
N4X-FG-1PB	.2A	PBO-MCBK-FS	.7A	PEML 4	.10A	PS 138-10	.11A
N4X-FG-201606CH	.2A	PBO-MCBK-FS/FS	.7A	PEML 5	.10A	PS 150-12	.11A

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
PS 168-12	.11A	RLU120I	.7A	SROLR-SHWE-FS/FS	.7A	TFG-100804H	.3B
PS 183-15	.11A	RLU120IFS	.7A	SROLR-SLWE-FS	.7A	TFG-100804I	.3E
PS 200-15	.11A	RLU120L	.7A	SROLR-SLWE-FS/FS	.7A	TFG-100806	.3B
PS 218-15	.11A	RLU120LFS	.7A	SRORC-SHWE-FS	.7A	TFG-100806H	.3B
PSX 065-05	.11A	RLU240I	.7A	SRORC-SHWE-FS/FS	.7A	TFG-100806I	.3E
PSX 075-05	.11A	RLU240IFS	.7A	SRORC-SLWE-FS	.7A	TFG-121005	.3B
PSX 085-05	.11A	RLU240L	.7A	SRORC-SLWE-FS/FS	.7A	TFG-121005H	.3B
PSX 100-07	.11A	RLU240LFS	.7A	SRORL-SHWE-FS	.7A	TFG-121005I	.3E
PSX 115-07	.11A	RLU240N	.7A	SRORL-SHWE-FS/FS	.7A	TFG-121006	.3B
PSX 125-10	.11A	RLU240NFS	.7A	SRORL-SLWE-FS	.7A	TFG-121006H	.3B
PSX 138-10	.11A	RLU480N	.7A	SRORL-SLWE-FS/FS	.7A	TFG-121006I	.3E
PSX 150-12	.11A	RLU480NFS	.7A	SSF-2	.11A	TFG-141206	.3B
PSX 168-12	.11A	Round yellow emergency stop	7A	SSO2-SHWE-FS	.7A	TFG-141206H	.3B
PSX 183-15	.11A	RTLU120	.7A	SSO2-SHWE-FS/FS	.7A	TFG-141206I	.3E
PSX 200-15	.11A	RTLU120FS	.7A	SSO2-SLWE-FS	.7A	TFG-141207	.3B
PSX 218-15	.11A	RTLU240	.7A	SSO2-SLWE-FS/FS	.7A	TFG-141207H	.3B
PT 1000-D	.11A	RTLU240FS	.7A	SSO3-SHWE-FS	.7A	TFG-141207I	.3E
PT 10-B	.11A	SA 42	.10A	SSO3-SHWE-FS/FS	.7A	TFG-161406	.3B
PT 1-B	.11A	SD	.11A	SSO3-SLWE-FS	.7A	TFG-161406H	.3B
PT 20-B	.11A	SE-15	.11A	SSO3-SLWE-FS/FS	.7A	TFG-161406I	.3E
PT 250-C	.11A	SE-16	.11A	SSR	.11A	TFG-161407	.3B
PT 2-B	.11A	SE-25	.11A	SW 5050	.11A	TFG-161407H	.3B
PT 300-C	.11A	SE-35	.11A	TAP 2015	.11A	TFG-161407I	.3E
PT 30-B	.11A	SE-5	.11A	TAP 2030	.11A	TFG-181608	.3B
PT 350-C	.11A	SE-8	.11A	TCK-35	.11A	TFG-181608H	.3B
PT 400-C	.11A	SG-1	.11A	TCT-2705	.11A	TFG-181608I	.3E
PT 40-C	.11A	SH 1125	.10A	TCY-8025	.11A	TFG-181610	.3B
PT 4-B	.11A	SH 50	.10A	TFA 45-25	.11A	TFG-181610H	.3B
PT 500-C	.11A	SH 75	.10A	TFA 45-30	.11A	TFG-181610I	.3E
PT 600-D	.11A	SHD 50	.10A	TFA 45-35	.11A	TFG-201608	.3B
PT 6-B	.11A	SHD 75	.10A	TFA 45-40	.11A	TFG-201608H	.3B
PT 700-D	.11A	SHS 1125	.10A	TFA 45-50	.11A	TFG-201608I	.3E
PT 750-D	.11A	SHS 50	.10A	TFA 45-60	.11A	TFG-201610	.3B
PT 8-B	.11A	SHS 75	.10A	TFG-060404	.3B	TFG-201610H	.3B
PTR-TMCBK-FS	.7A	SPE 2	.10A	TFG-060404H	.3B	TFG-201610I	.3E
PTR-TMCBK-FS/FS	.7A	SPE 3	.10A	TFG-060406	.3B	TFLU120	.7A
PTR-TMCGN-FS	.7A	SPE 4	.10A	TFG-060406H	.3B	TFLU120FS	.7A
PTR-TMCGN-FS/FS	.7A	SPE 5	.10A	TFG-060604	.3B	TFLU240	.7A
PTR-TMCRD-FS	.7A	SPE 6	.10A	TFG-060604H	.3B	TFLU240FS	.7A
PTR-TMCRD-FS/FS	.7A	SPE 8	.10A	TFG-060604I	.3E	TFLU240FS	.7A
PTR-TMCYW-FS	.7A	SPLICING BOOK	.11A	TFG-060606	.3B	TFLU277	.7A
PTR-TMCYW-FS/FS	.7A	SROLC-SHWE-FS	.7A	TFG-060606H	.3B	TFLU277FS	.7A
RA1	.7C	SROLC-SHWE-FS/FS	.7A	TFG-060606I	.3E	TFLU480	.7A
RC-1	.11A	SROLC-SLWE-FS	.7A	TFG-080604	.3B	TFLU480FS	.7A
RLPPM120I-IMCRD-FS	.7A	SROLC-SLWE-FS/FS	.7A	TFG-080604H	.3B	TFPPM120-IMCRD-FS	.7A
RLPPM120I-IMCRD-FS/FS	.7A	SROLC-SLWE-FS/FS	.7A	TFG-080604I	.3E	TFPPM120-IMCRD-FS/FS	.7A
RLPPM240I-IMCRD-FS	.7A	SROLC-SHWE-FS	.7A	TFG-080606	.3B	TFPPM240-IMCRD-FS	.7A
RLPPM240I-IMCRD-FS/FS	.7A	SROLC-SHWE-FS/FS	.7A	TFG-080606H	.3B	TFPPM240-IMCRD-FS/FS	.7A
RLPPM240I-IMCRD-FS/FS	.7A	SROLC-SLWE-FS	.7A	TFG-080606I	.3E	TFPPM480-IMCRD-FS	.7A
RLPTT120IFS	.7A	SROLC-SLWE-FS/FS	.7A	TFG-100804	.3B	TFPPM480-IMCRD-FS/FS	.7A
RLPTT120LFS	.7A	SROLC-SHWE-FS	.7A			TFPPM600-IMCRD-FS	.7A

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
TFPPM600-IMCRD-FS/FS	.7A	TN4X6-242012	.3B	TN4X6-363008	.3B	TSC4-101006	.3B
TFPTT120FS	.7A	TN4X6-242016	.3B	TN4X6-363010	.3B	TSC4-101008	.3B
TFPTT240FS	.7A	TN4X6-242406	.3B	TN4X6-363012	.3B	TSC4-120604	.3B
TFPTT480FS	.7A	TN4X6-242408	.3B	TN4X6-363016	.3B	TSC4-120605	.3B
TFT-6015	.11A	TN4X6-242410	.3B	TN4X6-363020	.3B	TSC4-120805	.3B
TFT-6020	.11A	TN4X6-242412	.3B	TN4X6-363608	.3B	TSC4-120806	.3B
TFT-6575	.11A	TN4X6-242416	.3B	TN4X6-363612	.3B	TSC4-121206	.3B
TGB-10025	.11A	TN4X6-243008	.3B	TN4X6-392907	.3B	TSC4-121208	.3B
TGB-10050	.11A	TN4X6-251807	.3B	TN4X6-392907-A	.3B	TSC4-151506	.3B
TGB-20025	.11A	TN4X6-251807-A	.3B	TN4X6-392907-AB	.3B	TSC4-151508	.3B
THVT-3010	.11A	TN4X6-251807-AB	.3B	TN4X6-392907-ABCD	.3B	TSC4-161206	.3B
THVT-3015	.11A	TN4X6-251807-ABCD	.3B	TN4X6-392907-B	.3B	TSC4-161208	.3B
THVT-3020	.11A	TN4X6-251807-B	.3B	TN4X6-392907-C	.3B	TSC4-161606	.3B
THVT-3075	.11A	TN4X6-251807-C	.3B	TN4X6-392907-CD	.3B	TSC4-161608	.3B
TN4X6-122406	.3B	TN4X6-251807-CD	.3B	TN4X6-392907-D	.3B	TSC4X-050503	.3B
TN4X6-122408	.3B	TN4X6-251807-D	.3B	TN4X6-422408	.3B	TSC4X-060604	.3B
TN4X6-161206	.3B	TN4X6-301606	.3B	TN4X6-423008	.3B	TSC4X-070704	.3B
TN4X6-161208	.3B	TN4X6-302006	.3B	TN4X6-423012	.3B	TSC4X-080804	.3B
TN4X6-161210	.3B	TN4X6-302008	.3B	TN4X6-423608	.3B	TSC4X-101006	.3B
TN4X6-161606	.3B	TN4X6-302010	.3B	TN4X6-423612	.3B	TSC4X-101008	.3B
TN4X6-161608	.3B	TN4X6-302207	.3B	TN4X6-423616	.3B	TSC4X-120604	.3B
TN4X6-162006	.3B	TN4X6-302207-A	.3B	TN4X6-482408	.3B	TSC4X-120605	.3B
TN4X6-162008	.3B	TN4X6-302207-AB	.3B	TN4X6-483008	.3B	TSC4X-120805	.3B
TN4X6-201206	.3B	TN4X6-302207-ABCD	.3B	TN4X6-483010	.3B	TSC4X-120806	.3B
TN4X6-201208	.3B	TN4X6-302207-B	.3B	TN4X6-483608	.3B	TSC4X-121206	.3B
TN4X6-201407	.3B	TN4X6-302207-C	.3B	TN4X6-483610	.3B	TSC4X-121208	.3B
TN4X6-201407-A	.3B	TN4X6-302207-CD	.3B	TN4X6-483612	.3B	TSC4X-151506	.3B
TN4X6-201407-AB	.3B	TN4X6-302207-D	.3B	TN4X6-483616	.3B	TSC4X-151508	.3B
TN4X6-201407-ABCD	.3B	TN4X6-302406	.3B	TN4X6-483620	.3B	TSC4X-161206	.3B
TN4X6-201407-B	.3B	TN4X6-302408	.3B	TN4X6-483624	.3B	TSC4X-161208	.3B
TN4X6-201407-C	.3B	TN4X6-302410	.3B	TN4X6-603608	.3B	TSC4X-161606	.3B
TN4X6-201407-CD	.3B	TN4X6-302412	.3B	TN4X6-603610	.3B	TSC4X-161608	.3B
TN4X6-201407-D	.3B	TN4X6-302416	.3B	TN4X6-603612	.3B	TSC4X6-050503	.3B
TN4X6-201606	.3B	TN4X6-302420	.3B	TN4X6-603616	.3B	TSC4X6-060604	.3B
TN4X6-201608	.3B	TN4X6-303008	.3B	TN4X6-603620	.3B	TSC4X6-060604I	.3E
TN4X6-201610	.3B	TN4X6-303012	.3B	TN4X6-603624	.3B	TSC4X6-070704	.3B
TN4X6-201612	.3B	TN4X6-303608	.3B	TNJ-3010	.11A	TSC4X6-070704I	.3E
TN4X6-202006	.3B	TN4X6-362406	.3B	TNJ-3015	.11A	TSC4X6-080804	.3B
TN4X6-202008	.3B	TN4X6-362408	.3B	TNJ-3020	.11A	TSC4X6-080804I	.3E
TN4X6-202010	.3B	TN4X6-362410	.3B	TNJ-3075	.11A	TSC4X6-101006	.3B
TN4X6-202406	.3B	TN4X6-362412	.3B	TPVC 20	.11A	TSC4X6-101006I	.3E
TN4X6-202408	.3B	TN4X6-362507	.3B	TPVC 66	.11A	TSC4X6-101008	.3B
TN4X6-241206	.3B	TN4X6-362507-A	.3B	TSB 100	.11A	TSC4X6-101008I	.3E
TN4X6-241208	.3B	TN4X6-362507-AB	.3B	TSB 15	.11A	TSC4X6-120604	.3B
TN4X6-241210	.3B	TN4X6-362507-ABCD	.3B	TSB 432	.11A	TSC4X6-120604I	.3E
TN4X6-241606	.3B	TN4X6-362507-B	.3B	TSC 15	.11A	TSC4X6-120605	.3B
TN4X6-241608	.3B	TN4X6-362507-C	.3B	TSC4-050503	.3B	TSC4X6-120605I	.3E
TN4X6-242006	.3B	TN4X6-362507-CD	.3B	TSC4-060604	.3B	TSC4X6-120805	.3B
TN4X6-242008	.3B	TN4X6-362507-D	.3B	TSC4-070704	.3B	TSC4X6-120805I	.3E
TN4X6-242010	.3B	TN4X6-363006	.3B	TSC4-080804	.3B	TSC4X6-120806	.3B

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
TSC4X6-120806I	.3E	WIF 164810	.5B	X 82 XDC	.5E	X2FG-1B2	.7A
TSC4X6-121206	.3B	WIF 202408	.5B	X 82 XDC N4	.5E	X2FG-1B3	.7A
TSC4X6-121206I	.3E	WIF 202412	.5B	X 8230	.5E	X2FG-1B4	.7A
TSC4X6-121208	.3B	WIF 242414	.5B	X 83	.5E	X2FG-1F2	.7A
TSC4X6-121208I	.3E	WIF 243608	.5B	X 83 C	.5E	X2FG-1F3	.7A
TSC4X6-151506	.3B	WIF 364808	.5B	X 83 N4	.5E	X2FG-1F4	.7A
TSC4X6-151506I	.3E	WJF 061105	.5A	X 83 XDC	.5E	X2FG-1T2	.7A
TSC4X6-151508	.3B	WJF 061305	.5A	X 83 XDC N4	.5E	X2FG-1T3	.7A
TSC4X6-151508I	.3E	WJF 071805	.5A	X 8P	.7B	X2FG-1T4	.7A
TSC4X6-161206	.3B	WJF 121806	.5A	X2CS-1	.7A	X2FG-2	.7A
TSC4X6-161206I	.3E	WJF 122005	.5A	X2CS-1B2	.7A	X2FG-2B2	.7A
TSC4X6-161208	.3B	WJF 122406	.5A	X2CS-1B3	.7A	X2FG-2B3	.7A
TSC4X6-161208I	.3E	WJF 122408	.5A	X2CS-1B4	.7A	X2FG-2B4	.7A
TSC4X6-161606	.3B	WJF 123006	.5A	X2CS-1F2	.7A	X2FG-2F2	.7A
TSC4X6-161606I	.3E	WJF 123208	.5A	X2CS-1F3	.7A	X2FG-2F3	.7A
TSC4X6-161608	.3B	WJF 123608	.5A	X2CS-1F4	.7A	X2FG-2F4	.7A
TSC4X6-161608I	.3E	WSG	.5E	X2CS-1T2	.7A	X2FG-2T2	.7A
TSIL 30	.11A	WSO	.5E	X2CS-1T3	.7A	X2FG-2T3	.7A
TVD 1205	.11A	WTB-1	.11A	X2CS-1T4	.7A	X2FG-2T4	.7A
TVD 1210	.11A	WTB-2	.11A	X2CS-2	.7A	X2FG-3	.7A
TVD 1275	.11A	WTB-3	.11A	X2CS-2B2	.7A	X2FG-3B2	.7A
TVD 4810	.11A	X 1	.7B	X2CS-2B3	.7A	X2FG-3B3	.7A
TVD 5475	.11A	X 12	.7B	X2CS-2B4	.7A	X2FG-3B4	.7A
V-1212	.1C	X 12P	.7B	X2CS-2F2	.7A	X2FG-3F2	.7A
V-1612	.1C	X 15	.7B	X2CS-2F3	.7A	X2FG-3F3	.7A
V-1616	.1C	X 15P	.7B	X2CS-2F4	.7A	X2FG-3F4	.7A
V-2016	.1C	X 18	.7B	X2CS-2T2	.7A	X2FG-3T2	.7A
V-2020	.1C	X 18P	.7B	X2CS-2T3	.7A	X2FG-3T3	.7A
V-2412	.1C	X 1P	.7B	X2CS-2T4	.7A	X2FG-3T4	.7A
V-2416	.1C	X 2	.7B	X2CS-3	.7A	X2FG-4	.7A
V-2420	.1C	X 2P	.7B	X2CS-3B2	.7A	X2FG-4B2	.7A
V-2424	.1C	X 3	.7B	X2CS-3B3	.7A	X2FG-4B3	.7A
V-3020	.1C	X 3P	.7B	X2CS-3B4	.7A	X2FG-4B4	.7A
V-3024	.1C	X 4	.7B	X2CS-3F2	.7A	X2FG-4F2	.7A
V-3030	.1C	X 4P	.7B	X2CS-3F3	.7A	X2FG-4F3	.7A
V-3624	.1C	X 5	.7B	X2CS-3F4	.7A	X2FG-4F4	.7A
V-3630	.1C	X 5P	.7B	X2CS-3T2	.7A	X2FG-4T2	.7A
V-3636	.1C	X 6	.7B	X2CS-3T3	.7A	X2FG-4T3	.7A
V-4230	.1C	X 643	.5E	X2CS-3T4	.7A	X2FG-4T4	.7A
V-4236	.1C	X 643 C	.5E	X2CS-4	.7A	X2SS-1	.7A
V-4836	.1C	X 643 N4	.5E	X2CS-4B2	.7A	X2SS-1B2	.7A
V-6036	.1C	X 643 XDC	.5E	X2CS-4B3	.7A	X2SS-1B3	.7A
WACS 238	.11A	X 643 XDC N4	.5E	X2CS-4B4	.7A	X2SS-1B4	.7A
WACS 288	.11A	X 6P	.7B	X2CS-4F2	.7A	X2SS-1F2	.7A
WACS 330	.11A	X 7	.7B	X2CS-4F3	.7A	X2SS-1F3	.7A
WACS 338	.11A	X 7P	.7B	X2CS-4F4	.7A	X2SS-1F4	.7A
WACS 380	.11A	X 8	.7B	X2CS-4T2	.7A	X2SS-1T2	.7A
WACS 388	.11A	X 82	.5E	X2CS-4T3	.7A	X2SS-1T3	.7A
WACS 420	.11A	X 82 C	.5E	X2CS-4T4	.7A	X2SS-1T4	.7A
WIF 101406	.5B	X 82 N4	.5E	X2FG-1	.7A	X2SS-2	.7A

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
X2SS-2B2	.7A	XCBA H	.8B	XCBB N4 110E63	.8B	XCBC N4 225JN2	.8B
X2SS-2B3	.7A	XCBA N4	.8B	XCBB N4 125E42	.8B	XCBC N4 225JN3	.8B
X2SS-2B4	.7A	XCBA N4 15E22	.8B	XCBB N4 125E43	.8B	XCBC N4 250J12	.8B
X2SS-2F2	.7A	XCBA N4 15E23	.8B	XCBB N4 125E62	.8B	XCBC N4 250J13	.8B
X2SS-2F3	.7A	XCBA N4 15E42	.8B	XCBB N4 125E63	.8B	XCBC N4 250JN2	.8B
X2SS-2F4	.7A	XCBA N4 15E43	.8B	XCBB N4 150E42	.8B	XCBC N4 250JN3	.8B
X2SS-2T2	.7A	XCBA N4 15E62	.8B	XCBB N4 150E43	.8B	XCBC N4 70J12	.8B
X2SS-2T3	.7A	XCBA N4 15E63	.8B	XCBB N4 150E62	.8B	XCBC N4 70J13	.8B
X2SS-2T4	.7A	XCBA N4 20E22	.8B	XCBB N4 150E63	.8B	XCBC N4 70JN2	.8B
X2SS-3	.7A	XCBA N4 20E23	.8B	XCBB N4 80E22	.8B	XCBC N4 70JN3	.8B
X2SS-3B2	.7A	XCBA N4 20E42	.8B	XCBB N4 80E23	.8B	XCBC N4 80J12	.8B
X2SS-3B3	.7A	XCBA N4 20E43	.8B	XCBB N4 80E42	.8B	XCBC N4 80J13	.8B
X2SS-3B4	.7A	XCBA N4 20E62	.8B	XCBB N4 80E43	.8B	XCBC N4 80JN2	.8B
X2SS-3F2	.7A	XCBA N4 20E63	.8B	XCBB N4 80E62	.8B	XCBC N4 80JN3	.8B
X2SS-3F3	.7A	XCBA N4 30DN3	.8B	XCBB N4 80E63	.8B	XCBC N4 90J12	.8B
X2SS-3F4	.7A	XCBA N4 30E22	.8B	XCBB N4 90E22	.8B	XCBC N4 90J13	.8B
X2SS-3T2	.7A	XCBA N4 30E23	.8B	XCBB N4 90E23	.8B	XCBC N4 90JN2	.8B
X2SS-3T3	.7A	XCBA N4 30E42	.8B	XCBB N4 90E42	.8B	XCBC N4 90JN3	.8B
X2SS-3T4	.7A	XCBA N4 30E43	.8B	XCBB N4 90E43	.8B	XCBD H	.8B
X2SS-4	.7A	XCBA N4 30E62	.8B	XCBB N4 90E62	.8B	XCBD N4	.8B
X2SS-4B2	.7A	XCBA N4 30E63	.8B	XCBB N4 90E63	.8B	XCBD N4 100K12	.8B
X2SS-4B3	.7A	XCBA N4 40E22	.8B	XCBC H	.8B	XCBD N4 100K13	.8B
X2SS-4B4	.7A	XCBA N4 40E23	.8B	XCBC N4	.8B	XCBD N4 100KN2	.8B
X2SS-4F2	.7A	XCBA N4 40E42	.8B	XCBC N4 100J12	.8B	XCBD N4 100KN3	.8B
X2SS-4F3	.7A	XCBA N4 40E43	.8B	XCBC N4 100J13	.8B	XCBD N4 125K12	.8B
X2SS-4F4	.7A	XCBA N4 40E62	.8B	XCBC N4 100JN2	.8B	XCBD N4 125K13	.8B
X2SS-4T2	.7A	XCBA N4 40E63	.8B	XCBC N4 100JN3	.8B	XCBD N4 125KN2	.8B
X2SS-4T3	.7A	XCBA N4 50E22	.8B	XCBC N4 110J12	.8B	XCBD N4 125KN3	.8B
X2SS-4T4	.7A	XCBA N4 50E23	.8B	XCBC N4 110J13	.8B	XCBD N4 150K12	.8B
XA 2	.5E	XCBA N4 50E42	.8B	XCBC N4 110JN2	.8B	XCBD N4 150K13	.8B
XA 3	.5E	XCBA N4 50E43	.8B	XCBC N4 110JN3	.8B	XCBD N4 150KN2	.8B
XAF 24	.10A	XCBA N4 50E62	.8B	XCBC N4 125J12	.8B	XCBD N4 150KN3	.8B
XAF 6	.10A	XCBA N4 50E63	.8B	XCBC N4 125J13	.8B	XCBD N4 175K12	.8B
XAF 64	.10A	XCBA N4 60DN3	.8B	XCBC N4 125JN2	.8B	XCBD N4 175K13	.8B
XB 1	.5E	XCBA N4 60E22	.8B	XCBC N4 125JN3	.8B	XCBD N4 175KN2	.8B
XB 2	.5E	XCBA N4 60E23	.8B	XCBC N4 150J12	.8B	XCBD N4 175KN3	.8B
XB 3	.5E	XCBA N4 60E42	.8B	XCBC N4 150J13	.8B	XCBD N4 200K12	.8B
XB 4	.5E	XCBA N4 60E43	.8B	XCBC N4 150JN2	.8B	XCBD N4 200K13	.8B
XBB	.9A	XCBA N4 60E62	.8B	XCBC N4 150JN3	.8B	XCBD N4 200KN2	.8B
XBCB 1	.8A	XCBA N4 60E63	.8B	XCBC N4 175J12	.8B	XCBD N4 200KN3	.8B
XBCB 1 GF	.8A	XCBA N4 70E22	.8B	XCBC N4 175J13	.8B	XCBD N4 225K12	.8B
XBCB 2	.8A	XCBA N4 70E23	.8B	XCBC N4 175JN2	.8B	XCBD N4 225K13	.8B
XBCB 3	.8A	XCBA N4 70E42	.8B	XCBC N4 175JN3	.8B	XCBD N4 225KN2	.8B
XBCC 1 SN	.8A	XCBA N4 70E43	.8B	XCBC N4 200DN3	.8B	XCBD N4 225KN3	.8B
XBG	.9A	XCBA N4 70E62	.8B	XCBC N4 200J12	.8B	XCBE H	.8B
XBPC	.9A	XCBA N4 70E63	.8B	XCBC N4 200J13	.8B	XCBE N4	.8B
XBR	.9A	XCBB H	.8B	XCBC N4 200JN2	.8B	XCBE N4 250K12	.8B
XBSB	.9A	XCBB N4	.8B	XCBC N4 200JN3	.8B	XCBE N4 250K13	.8B
XBSG	.9A	XCBB N4 100DN3	.8B	XCBC N4 225J12	.8B	XCBE N4 250KN2	.8B
XBSR	.9A	XCBB N4 100E22	.8B	XCBC N4 225J13	.8B	XCBE N4 250KN3	.8B

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
XCBE N4 250LI2	.8B	XCBSAQ N4 M6003	.8C	XCE 061105 N4	.5A	XCE 162408 N4	.5A
XCBE N4 250LI3	.8B	XCBSAQ N4 M6007	.8C	XCE 061204 N4	.5A	XCE 162410 N4	.5A
XCBE N4 300KI2	.8B	XCBSAQ N4 M6015	.8C	XCE 061206 N4	.5A	XCE 162806 N4	.5A
XCBE N4 300KI3	.8B	XCBSAQ N4 M6130	.8C	XCE 061305 N4	.5A	XCE 163406 N4	.5A
XCBE N4 300KN2	.8B	XCBSBQ H	.8C	XCE 071004 N4	.5A	XCE 163010 N4	.5A
XCBE N4 300KN3	.8B	XCBSBQ N4	.8C	XCE 071006 N4	.5A	XCE 164610 N4	.5A
XCBE N4 300LI2	.8B	XCBSBQ N4 22100	.8C	XCE 071805 N4	.5A	XCE 181804 N4	.5A
XCBE N4 300LI3	.8B	XCBSBQ N4 22100	.8C	XCE 080804 N4	.5A	XCE 181806 N4	.5A
XCBE N4 350KI2	.8B	XCBSBQ N4 2270	.8C	XCE 080806 N4	.5A	XCE 181808 N4	.5A
XCBE N4 350KI3	.8B	XCBSBQ N4 2270	.8C	XCE 080808 N4	.5A	XCE 182406 N4	.5A
XCBE N4 350KN2	.8B	XCBSBQ N4 4270	.8C	XCE 081004 N4	.5A	XCE 182408 N4	.5A
XCBE N4 350KN3	.8B	XCBSBQ N4 4270	.8C	XCE 081006 N4	.5A	XCE 182410 N4	.5A
XCBE N4 350LI2	.8B	XCBSBQ N4 6250	.8C	XCE 081008 N4	.5A	XCE 183008 N4	.5A
XCBE N4 350LI3	.8B	XCBSBQ N4 6250	.8C	XCE 081204 N4	.5A	XCE 183608 N4	.5A
XCBE N4 400KI2	.8B	XCBSBQ N4 M6250	.8C	XCE 081206 N4	.5A	XCE 183610 N4	.5A
XCBE N4 400KI3	.8B	XCBSBQ N4 M6250	.8C	XCE 081208 N4	.5A	XCE 203606 N4	.5A
XCBE N4 400KN2	.8B	XCBSLQ H	.8C	XCE 091105 N4	.5A	XCE 203612 N4	.5A
XCBE N4 400KN3	.8B	XCBSLQ N4	.8C	XCE 101004 N4	.5A	XCE 204806 N4	.5A
XCBE N4 400LI2	.8B	XCBSLQ N4 23100	.8C	XCE 101006 N4	.5A	XCE 204812 N4	.5A
XCBE N4 400LI3	.8B	XCBSLQ N4 23125	.8C	XCE 101008 N4	.5A	XCE 242408 N4	.5A
XCBE N4 400LI3	.8B	XCBSLQ N4 43100	.8C	XCE 101206 N4	.5A	XCE 242410 N4	.5A
XCBE N4 400MI2	.8B	XCBSLQ N4 4370	.8C	XCE 101404 N4	.5A	XCE 243008 N4	.5A
XCBE N4 400MI3	.8B	XCBSLQ N4 63100	.8C	XCE 101406 N4	.5A	XCE 243608 N4	.5A
XCBE N4 500LI2	.8B	XCBSLQ N4 6370	.8C	XCE 101408 N4	.5A	XCE 243610 N4	.5A
XCBE N4 500LI3	.8B	XCBSLQ N4 M63100	.8C	XCE 121204 N4	.5A	XCE 243612 N4	.5A
XCBE N4 500MI2	.8B	XCBSMQ H	.8C	XCE 121206 N4	.5A	XCE 323612 N4	.5A
XCBE N4 500MI3	.8B	XCBSMQ N4	.8C	XCE 121208 N4	.5A	XCE/XJF 041604	.5A
XCBE N4 600LI2	.8B	XCBSMQ N4 24175	.8C	XCE 121804 N4	.5A	XCE/XJF 060804	.5A
XCBE N4 600LI3	.8B	XCBSMQ N4 24200	.8C	XCE 121806 N4	.5A	XCE/XJF 060805	.5A
XCBE N4 600MI2	.8B	XCBSMQ N4 44175	.8C	XCE 121808 N4	.5A	XCE/XJF 060806	.5A
XCBE N4 600MI3	.8B	XCBSMQ N4 44200	.8C	XCE 122005 N4	.5A	XCE/XJF 061105	.5A
XCBE N4 700MI2	.8B	XCBSMQ N4 64125	.8C	XCE 122404 N4	.5A	XCE/XJF 061204	.5A
XCBE N4 700MI3	.8B	XCBSMQ N4 64150	.8C	XCE 122406 N4	.5A	XCE/XJF 061206	.5A
XCBE N4 800MI2	.8B	XCBSMQ N4 64175	.8C	XCE 122408 N4	.5A	XCE/XJF 061305	.5A
XCBE N4 800MI3	.8B	XCBSN H	.8C	XCE 122410 N4	.5A	XCE/XJF 071004	.5A
XCBE N4 800LI2	.8B	XCBSN N4	.8C	XCE 123006 N4	.5A	XCE/XJF 071006	.5A
XCBE N4 800LI3	.8B	XCBSN N4 25225	.8C	XCE 123604 N4	.5A	XCE/XJF 071805	.5A
XCBE N4 800MI2	.8B	XCBSN N4 25300	.8C	XCE 123606 N4	.5A	XCE/XJF 080804	.5A
XCBE N4 800MI3	.8B	XCBSN N4 25400	.8C	XCE 123608 N4	.5A	XCE/XJF 080806	.5A
XCBE N4 800LI2	.8B	XCBSN N4 45225	.8C	XCE 124608 N4	.5A	XCE/XJF 080808	.5A
XCBE N4 800LI3	.8B	XCBSN N4 45300	.8C	XCE 141404 N4	.5A	XCE/XJF 081004	.5A
XCBE N4 800MI2	.8B	XCBSN N4 45400	.8C	XCE 141406 N4	.5A	XCE/XJF 081006	.5A
XCBE N4 800MI3	.8B	XCBSN N4 65200	.8C	XCE 141408 N4	.5A	XCE/XJF 081008	.5A
XCBE N4 800LI2	.8B	XCBSN N4 65225	.8C	XCE 142210 N4	.5A	XCE/XJF 081204	.5A
XCBE N4 800LI3	.8B	XCBSN N4 65400	.8C	XCE 142213 N4	.5A	XCE/XJF 081206	.5A
XCBE N4 800MI2	.8B	XCBSN N4 M65400	.8C	XCE 142806 N4	.5A	XCE/XJF 081208	.5A
XCBE N4 800MI3	.8B	XCE 041604 N4	.5A	XCE 161604 N4	.5A	XCE/XJF 091105	.5A
XCBE N4 800LI2	.8B	XCE 060804 N4	.5A	XCE 161606 N4	.5A	XCE/XJF 101004	.5A
XCBE N4 800LI3	.8B	XCE 060805 N4	.5A	XCE 161608 N4	.5A	XCE/XJF 101006	.5A
XCBE N4 800MI2	.8B	XCE 060806 N4	.5A	XCE 162406 N4	.5A	XCE/XJF 101008	.5A

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
XCE/XJF 101404	.5A	XCE/XJF 323612	.5A	XCEX 142806	.5A	XCIAD12	.8D
XCE/XJF 101406	.5A	XCEX 041604	.5A	XCEX 161604	.5A	XCIAD18	.8D
XCE/XJF 101408	.5A	XCEX 060804	.5A	XCEX 161606	.5A	XCIAD25	.8D
XCE/XJF 101410	.5A	XCEX 060805	.5A	XCEX 161608	.5A	XCIAD32	.8D
XCE/XJF 121204	.5A	XCEX 060806	.5A	XCEX 162406	.5A	XCIAD37	.8D
XCE/XJF 121206	.5A	XCEX 061105	.5A	XCEX 162408	.5A	XCIAD40	.8D
XCE/XJF 121208	.5A	XCEX 061204	.5A	XCEX 162410	.5A	XCIAD50	.8D
XCE/XJF 121804	.5A	XCEX 061206	.5A	XCEX 162806	.5A	XCIAD65	.8D
XCE/XJF 121806	.5A	XCEX 061305	.5A	XCEX 163010	.5A	XCIAD9	.8D
XCE/XJF 121808	.5A	XCEX 071004	.5A	XCEX 163406	.5A	XCIAH10	.8D
XCE/XJF 122005	.5A	XCEX 071006	.5A	XCEX 164610	.5A	XCIAH12	.8D
XCE/XJF 122404	.5A	XCEX 071805	.5A	XCEX 181804	.5A	XCIAH18	.8D
XCE/XJF 122406	.5A	XCEX 080804	.5A	XCEX 181806	.5A	XCIAH25	.8D
XCE/XJF 122408	.5A	XCEX 080806	.5A	XCEX 181808	.5A	XCIAH32	.8D
XCE/XJF 122410	.5A	XCEX 080808	.5A	XCEX 182406	.5A	XCIAH37	.8D
XCE/XJF 123006	.5A	XCEX 081004	.5A	XCEX 182408	.5A	XCIAH44	.8D
XCE/XJF 123604	.5A	XCEX 081006	.5A	XCEX 182410	.5A	XCIAH60	.8D
XCE/XJF 123606	.5A	XCEX 081008	.5A	XCEX 183008	.5A	XCIAH73	.8D
XCE/XJF 123608	.5A	XCEX 081204	.5A	XCEX 183608	.5A	XCIAS12	.8D
XCE/XJF 124608	.5A	XCEX 081206	.5A	XCEX 183610	.5A	XCIAS17	.8D
XCE/XJF 141404	.5A	XCEX 081208	.5A	XCEX 203606	.5A	XCIAS25	.8D
XCE/XJF 141406	.5A	XCEX 091105	.5A	XCEX 203612	.5A	XCIAS28	.8D
XCE/XJF 141408	.5A	XCEX 101004	.5A	XCEX 204806	.5A	XCIAS32	.8D
XCE/XJF 142210	.5A	XCEX 101006	.5A	XCEX 242408	.5A	XCIAS40	.8D
XCE/XJF 142213	.5A	XCEX 101008	.5A	XCEX 242410	.5A	XCIAS50	.8D
XCE/XJF 142806	.5A	XCEX 101404	.5A	XCEX 243008	.5A	XCIAS9	.8D
XCE/XJF 161604	.5A	XCEX 101406	.5A	XCEX 243608	.5A	XCIBB110	.8D
XCE/XJF 161606	.5A	XCEX 101408	.5A	XCEX 243610	.5A	XCIBB80	.8D
XCE/XJF 161608	.5A	XCEX 101410	.5A	XCEX 243612	.5A	XCIBD80	.8D
XCE/XJF 162406	.5A	XCEX 121204	.5A	XCEX 323612	.5A	XCIBS65	.8D
XCE/XJF 162408	.5A	XCEX 121206	.5A	XCF 1	.9A	XCIBS80	.8D
XCE/XJF 162410	.5A	XCEX 121208	.5A	XCF 1 N4	.9A	XCIBS95	.8D
XCE/XJF 163010	.5A	XCEX 121804	.5A	XCF 2	.9A	XCMRSG H	.8C
XCE/XJF 164610	.5A	XCEX 121806	.5A	XCF 2 N4	.9A	XCMRSG N4	.8C
XCE/XJF 181804	.5A	XCEX 121808	.5A	XCF 3	.9A	XCMRSG N4 2015	.8C
XCE/XJF 181806	.5A	XCEX 122005	.5A	XCF 3 N4	.9A	XCMRSG N4 2020	.8C
XCE/XJF 181808	.5A	XCEX 122404	.5A	XCF 4	.9A	XCMRSG N4 2130	.8C
XCE/XJF 182406	.5A	XCEX 122406	.5A	XCF 4 N4	.9A	XCMRSG N4 2150	.8C
XCE/XJF 182408	.5A	XCEX 122408	.5A	XCF 5	.9A	XCMRSG N4 4015	.8C
XCE/XJF 182410	.5A	XCEX 122410	.5A	XCF 5 N4	.9A	XCMRSG N4 4020	.8C
XCE/XJF 183008	.5A	XCEX 123006	.5A	XCFT	.9A	XCMRSG N4 4130	.8C
XCE/XJF 183608	.5A	XCEX 123604	.5A	XCIAA11	.8D	XCMRSG N4 6015	.8C
XCE/XJF 183610	.5A	XCEX 123606	.5A	XCIAA17	.8D	XCMRSG N4 6020	.8C
XCE/XJF 203612	.5A	XCEX 123608	.5A	XCIAA25	.8D	XCMRSG N4 6130	.8C
XCE/XJF 204812	.5A	XCEX 124608	.5A	XCIAA28	.8D	XCMRSG N4 M6003	.8C
XCE/XJF 242408	.5A	XCEX 141404	.5A	XCIAA32	.8D	XCMRSG N4 M6007	.8C
XCE/XJF 242410	.5A	XCEX 141406	.5A	XCIAA41	.8D	XCMRSG N4 M6015	.8C
XCE/XJF 243008	.5A	XCEX 141408	.5A	XCIAA54	.8D	XCMRSG N4 M6130	.8C
XCE/XJF 243608	.5A	XCEX 142210	.5A	XCIAA65	.8D	XCMRSK H	.8C
XCE/XJF 243612	.5A	XCEX 142213	.5A	XCIAA9	.8D	XCMRSK N4	.8C

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
XCMRSK N4 22100	.8C	XDHLGDCX-6T	.4A	XFC 24	.10A	XFCU 221	.10A
XCMRSK N4 2270	.8C	XDHLGDCX-8T	.4A	XFC 26	.10A	XFCU 224	.10A
XCMRSK N4 4270	.8C	XDHLFCX	.4A	XFC 28	.10A	XFCU 227	.10A
XCMRSK N4 6270	.8C	XDHLFCX-10T	.4A	XFC 310	.10A	XFCU 230	.10A
XCMRSK N4 M6250	.8C	XDHLFCX-12T	.4A	XFC 312	.10A	XFCU 233	.10A
XCMRSP H	.8C	XDHLFCX-2T	.4A	XFC 315	.10A	XFCU 236	.10A
XCMRSP N4	.8C	XDHLFCX-4T	.4A	XFC 318	.10A	XFCU 24	.10A
XCMRSP N4 23100	.8C	XDHLFCX-6T	.4A	XFC 321	.10A	XFCU 26	.10A
XCMRSP N4 23125	.8C	XDHLFCX-8T	.4A	XFC 324	.10A	XFCU 28	.10A
XCMRSP N4 43100	.8C	XDHLFGCX	.4A	XFC 327	.10A	XFCU 310	.10A
XCMRSP N4 43125	.8C	XDHLFGCX-10T	.4A	XFC 330	.10A	XFCU 312	.10A
XCMRSP N4 63100	.8C	XDHLFGCX-12T	.4A	XFC 333	.10A	XFCU 315	.10A
XCMRSP N4 M63100	.8C	XDHLFGCX-2T	.4A	XFC 336	.10A	XFCU 318	.10A
XCMRSP N4 M64150	.8C	XDHLFGCX-4T	.4A	XFC 34	.10A	XFCU 321	.10A
XCS 1	.9A	XDHLFGCX-6T	.4A	XFC 36	.10A	XFCU 324	.10A
XCS 2	.9A	XDHLFGCX-8T	.4A	XFC 38	.10A	XFCU 327	.10A
XCS 2H	.9A	XDHMDCX	.4A	XFC 410	.10A	XFCU 330	.10A
XCS 3	.9A	XDHMDCX-2T	.4A	XFC 412	.10A	XFCU 333	.10A
XCS 4	.9A	XDHMDCX-4T	.4A	XFC 415	.10A	XFCU 336	.10A
XCS 5	.9A	XDHMDCX-6T	.4A	XFC 418	.10A	XFCU 34	.10A
XCWL-GH	.9A	XDHMDCX-8T	.4A	XFC 421	.10A	XFCU 36	.10A
XCWL-GH	.9A	XDHMDGDCX	.4A	XFC 424	.10A	XFCU 38	.10A
XDB 2	.10A	XDHMDGDCX-2T	.4A	XFC 427	.10A	XFCU 410	.10A
XDBH 2	.10A	XDHMDGDCX-4T	.4A	XFC 430	.10A	XFCU 412	.10A
XDC	.10A	XDHMDGDCX-6T	.4A	XFC 433	.10A	XFCU 415	.10A
XDF	.4B	XDHMDGDCX-8T	.4A	XFC 436	.10A	XFCU 418	.10A
XDHDCX	.4A	XDHMFCX	.4A	XFC 46	.10A	XFCU 421	.10A
XDHDCX-2T	.4A	XDHMFCX-2T	.4A	XFC 48	.10A	XFCU 424	.10A
XDHDCX-4T	.4A	XDHMFCX-4T	.4A	XFC 512	.10A	XFCU 427	.10A
XDHDGDCX	.4A	XDHMFCX-6T	.4A	XFC 515	.10A	XFCU 430	.10A
XDHDGDCX-2T	.4A	XDHMFCX-8T	.4A	XFC 518	.10A	XFCU 433	.10A
XDHDGDCX-4T	.4A	XDHMFGCX	.4A	XFC 521	.10A	XFCU 436	.10A
XDHFDCX	.4A	XDHMFGCX-2T	.4A	XFC 524	.10A	XFCU 46	.10A
XDHFDCX-2T	.4A	XDHMFGCX-4T	.4A	XFC 527	.10A	XFCU 48	.10A
XDHFDCX-4T	.4A	XDHMFGCX-6T	.4A	XFC 530	.10A	XFSA2A1	.7C
XDHFGCX	.4A	XDHMFGCX-8T	.4A	XFC 533	.10A	XFSA2A2	.7C
XDHFGCX-2T	.4A	XDIAA17	.8D	XFC 536	.10A	XFSA2A3	.7C
XDHFGCX-4T	.4A	XFA2	.10A	XFC 612	.10A	XFSA2A4	.7C
XDHLDCX	.4A	XFA-2	.10A	XFC 615	.10A	XFSA2A5	.7C
XDHLDCX-10T	.4A	XFAX2	.10A	XFC 618	.10A	XFSA2AB1	.7C
XDHLDCX-12T	.4A	XFC 210	.10A	XFC 621	.10A	XFSA2AB2	.7C
XDHLDCX-2T	.4A	XFC 212	.10A	XFC 624	.10A	XFSA2AB3	.7C
XDHLDCX-4T	.4A	XFC 215	.10A	XFC 627	.10A	XFSA2AB4	.7C
XDHLDCX-6T	.4A	XFC 218	.10A	XFC 630	.10A	XFSA2AB5	.7C
XDHLDCX-8T	.4A	XFC 221	.10A	XFC 633	.10A	XFSA2ABC1	.7C
XDHLGDCX	.4A	XFC 224	.10A	XFC 636	.10A	XFSA2ABC2	.7C
XDHLGDCX-10T	.4A	XFC 227	.10A	XFCU 210	.10A	XFSA2ABC3	.7C
XDHLGDCX-12T	.4A	XFC 230	.10A	XFCU 212	.10A	XFSA2ABC4	.7C
XDHLGDCX-2T	.4A	XFC 233	.10A	XFCU 215	.10A	XFSA2ABC5	.7C
XDHLGDCX-4T	.4A	XFC 236	.10A	XFCU 218	.10A	XFSA2ABCD1	.7C

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
XFSA2ABCD2	.7C	XFSA2BD2	.7C	XFSA3ACD1	.7C	XFSA4ABC3	.7C
XFSA2ABCD3	.7C	XFSA2BD3	.7C	XFSA3ACD2	.7C	XFSA4ABC4	.7C
XFSA2ABCD4	.7C	XFSA2BD4	.7C	XFSA3ACD3	.7C	XFSA4ABC5	.7C
XFSA2ABCD5	.7C	XFSA2BD5	.7C	XFSA3ACD4	.7C	XFSA4ABCD1	.7C
XFSA2ABCDRA	.7C	XFSA2BDRA	.7C	XFSA3ACD5	.7C	XFSA4ABCD2	.7C
XFSA2ABCRA	.7C	XFSA2BRA	.7C	XFSA3ACDRA	.7C	XFSA4ABCD3	.7C
XFSA2ABD1	.7C	XFSA30925	.7C	XFSA3ACRA	.7C	XFSA4ABCD4	.7C
XFSA2ABD2	.7C	XFSA3101	.7C	XFSA3AD1	.7C	XFSA4ABCD5	.7C
XFSA2ABD3	.7C	XFSA31208	.7C	XFSA3AD2	.7C	XFSA4ABCDRA	.7C
XFSA2ABD4	.7C	XFSA31209	.7C	XFSA3AD3	.7C	XFSA4ABCRA	.7C
XFSA2ABD5	.7C	XFSA3173	.7C	XFSA3AD4	.7C	XFSA4ABD1	.7C
XFSA2ABDRA	.7C	XFSA3178	.7C	XFSA3AD5	.7C	XFSA4ABD2	.7C
XFSA2ABRA	.7C	XFSA3185	.7C	XFSA3ADRA	.7C	XFSA4ABD3	.7C
XFSA2AC1	.7C	XFSA32089	.7C	XFSA3ARA	.7C	XFSA4ABD4	.7C
XFSA2AC2	.7C	XFSA3223	.7C	XFSA3B1	.7C	XFSA4ABD5	.7C
XFSA2AC3	.7C	XFSA3911	.7C	XFSA3B2	.7C	XFSA4ABDRA	.7C
XFSA2AC4	.7C	XFSA3A1	.7C	XFSA3B3	.7C	XFSA4ABRA	.7C
XFSA2AC5	.7C	XFSA3A2	.7C	XFSA3B4	.7C	XFSA4AC1	.7C
XFSA2ACD1	.7C	XFSA3A3	.7C	XFSA3B5	.7C	XFSA4AC2	.7C
XFSA2ACD2	.7C	XFSA3A4	.7C	XFSA3BC1	.7C	XFSA4AC3	.7C
XFSA2ACD3	.7C	XFSA3A5	.7C	XFSA3BC2	.7C	XFSA4AC4	.7C
XFSA2ACD4	.7C	XFSA3AB1	.7C	XFSA3BC3	.7C	XFSA4AC5	.7C
XFSA2ACD5	.7C	XFSA3AB2	.7C	XFSA3BC4	.7C	XFSA4ACD1	.7C
XFSA2ACDRA	.7C	XFSA3AB3	.7C	XFSA3BC5	.7C	XFSA4ACD2	.7C
XFSA2ACRA	.7C	XFSA3AB4	.7C	XFSA3BCD1	.7C	XFSA4ACD3	.7C
XFSA2AD1	.7C	XFSA3AB5	.7C	XFSA3BCD2	.7C	XFSA4ACD4	.7C
XFSA2AD2	.7C	XFSA3ABC1	.7C	XFSA3BCD3	.7C	XFSA4ACD5	.7C
XFSA2AD3	.7C	XFSA3ABC2	.7C	XFSA3BCD4	.7C	XFSA4ACDRA	.7C
XFSA2AD4	.7C	XFSA3ABC3	.7C	XFSA3BCD5	.7C	XFSA4ACRA	.7C
XFSA2AD5	.7C	XFSA3ABC4	.7C	XFSA3BCDRA	.7C	XFSA4AD1	.7C
XFSA2ADRA	.7C	XFSA3ABC5	.7C	XFSA3BCRA	.7C	XFSA4AD2	.7C
XFSA2ARA	.7C	XFSA3ABCD1	.7C	XFSA3BD1	.7C	XFSA4AD3	.7C
XFSA2B1	.7C	XFSA3ABCD2	.7C	XFSA3BD2	.7C	XFSA4AD4	.7C
XFSA2B2	.7C	XFSA3ABCD3	.7C	XFSA3BD3	.7C	XFSA4AD5	.7C
XFSA2B3	.7C	XFSA3ABCD4	.7C	XFSA3BD4	.7C	XFSA4ADRA	.7C
XFSA2B4	.7C	XFSA3ABCD5	.7C	XFSA3BD5	.7C	XFSA4ARA	.7C
XFSA2B5	.7C	XFSA3ABCDRA	.7C	XFSA3BDRA	.7C	XFSA4B1	.7C
XFSA2BC1	.7C	XFSA3ABCRA	.7C	XFSA3BRA	.7C	XFSA4B2	.7C
XFSA2BC2	.7C	XFSA3ABD1	.7C	XFSA4A1	.7C	XFSA4B3	.7C
XFSA2BC3	.7C	XFSA3ABD2	.7C	XFSA4A2	.7C	XFSA4B4	.7C
XFSA2BC4	.7C	XFSA3ABD3	.7C	XFSA4A3	.7C	XFSA4B5	.7C
XFSA2BC5	.7C	XFSA3ABD4	.7C	XFSA4A4	.7C	XFSA4BC1	.7C
XFSA2BCD1	.7C	XFSA3ABD5	.7C	XFSA4A5	.7C	XFSA4BC2	.7C
XFSA2BCD2	.7C	XFSA3ABDRA	.7C	XFSA4AB1	.7C	XFSA4BC3	.7C
XFSA2BCD3	.7C	XFSA3ABRA	.7C	XFSA4AB2	.7C	XFSA4BC4	.7C
XFSA2BCD4	.7C	XFSA3AC1	.7C	XFSA4AB3	.7C	XFSA4BC5	.7C
XFSA2BCD5	.7C	XFSA3AC2	.7C	XFSA4AB4	.7C	XFSA4BCD1	.7C
XFSA2BCDRA	.7C	XFSA3AC3	.7C	XFSA4AB5	.7C	XFSA4BCD2	.7C
XFSA2BCRA	.7C	XFSA3AC4	.7C	XFSA4ABC1	.7C	XFSA4BCD3	.7C
XFSA2BD1	.7C	XFSA3AC5	.7C	XFSA4ABC2	.7C	XFSA4BCD4	.7C

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
XFSA4BCD5	.7C	XGC 30 L	.5A	XHD-3 NOT INSTALLED	.5A	XHSPL	.9A
XFSA4BCDRA	.7C	XGC 30 L N4	.5A	XHD-4 INSTALLED	.5A	XHSR	.9A
XFSA4BCRA	.7C	XGC 30 N4	.5A	XHD-4 NOT INSTALLED	.5A	XHSS	.9A
XFSA4BD1	.7C	XGC 30 SLF	.5A	XHDMC	.9A	XHSSC	.9A
XFSA4BD2	.7C	XGC 30 SLF N4	.5A	XHDMCS	.9A	XHSSL	.9A
XFSA4BD3	.7C	XGC 40	.5A	XHDPB	.9A	XHSSPL	.9A
XFSA4BD4	.7C	XGC 40 L	.5A	XHDPBS	.9A	XHSSR	.9A
XFSA4BD5	.7C	XGC 40 L N4	.5A	XHDPL	.9A	XHSSS	.9A
XFSA4BDRA	.7C	XGC 40 N4	.5A	XHF-2 INSTALLED	.5A	XHSSSPL	.9A
XFSA4BRA	.7C	XGC 40 SLF	.5A	XHF-2 NOT INSTALLED	.5A	XIF 030303	.5B
XFSAC1	.7C	XGC 40 SLF N4	.5A	XHF-3 INSTALLED	.5A	XIF 030603	.5B
XFSAC2	.7C	XGC 52	.5A	XHF-3 NOT INSTALLED	.5A	XIF 030703	.5B
XFSAC3	.7C	XGC 52 L	.5A	XHF-4 INSTALLED	.5A	XIF 030903	.5B
XFSAC4	.7C	XGC 52 L N4	.5A	XHF-4 NOT INSTALLED	.5A	XIF 031103	.5B
XFSAC5	.7C	XGC 52 N4	.5A	XHFA 31 GB N4	.5C	XIF 031303	.5B
XFSACD1	.7C	XGC 52 SLF	.5A	XHFA 31 N4	.5C	XIF 031503	.5B
XFSACD2	.7C	XGC 52 SLF N4	.5A	XHFA 32 GB N4	.5C	XIF 031803	.5B
XFSACD3	.7C	XGC 66	.5A	XHFA 32 N4	.5C	XIF 032403	.5B
XFSACD4	.7C	XGC 66 L	.5A	XHFA 33 GB N4	.5C	XIF 033003	.5B
XFSACD5	.7C	XGC 66 L N4	.5A	XHFA 33 N4	.5C	XIF 033603	.5B
XFSACDRA	.7C	XGC 66 N4	.5A	XHFA 41 GB N4	.5C	XIF 040604	.5B
XFSACRA	.7C	XGC 66 SLF	.5A	XHFA 41 N4	.5C	XIF 041204	.5B
XFSAD1	.7C	XGC 66 SLF N4	.5A	XHFA 42 GB N4	.5C	XIF 060606	.5B
XFSAD2	.7C	XGC 80	.5A	XHFA 42 N4	.5C	XIF 060608	.5B
XFSAD3	.7C	XGC 80 L	.5A	XHFA 43 GB N4	.5C	XIF 061206	.5B
XFSAD4	.7C	XGC 80 L N4	.5A	XHFA 43 N4	.5C	XIF 061806	.5B
XFSAD5	.7C	XGC 80 N4	.5A	XHFG	.5C	XIF 062406	.5B
XFSADRA	.7C	XGC 80 SLF	.5A	XHKSC	.9A	XIF 063606	.5B
XFSB2	.7C	XGC 80 SLF N4	.5A	XHKSL	.9A	XIF 070704	.5B
XFSB3	.7C	XGW 0303	.5A	XHKSR	.9A	XIF 071603	.5B
XFSB4	.7C	XGW 0305	.5A	XHKSS	.9A	XIF 083206	.5B
XFSC	.7C	XGW 0307	.5A	XHKSSC	.9A	XIFC 030303	.5B
XFSC-1	.7C	XGW 0505	.5A	XHKSSL	.9A	XIFC 030603	.5B
XFSC-2	.7C	XGW 0509	.5A	XHKSSR	.9A	XIFC 030703	.5B
XFSC-3	.7C	XGW 0707	.5A	XHKSSS	.9A	XIFC 030903	.5B
XFSC-4	.7C	XGW 0713	.5A	XHMCD	.9A	XIFC 031103	.5B
XFSC-5	.7C	XGW 0909	.5A	XHMCMD	.9A	XIFC 031303	.5B
XGC 10	.5A	XGW 1111	.5A	XHMCMSD	.9A	XIFC 031503	.5B
XGC 10 L	.5A	XGW 1313	.5A	XHMCS	.9A	XIFC 031803	.5B
XGC 10 L N4	.5A	XHB-2 INSTALLED	.5A	XHPB	.9A	XIFC 032403	.5B
XGC 10 N4	.5A	XHB-2 NOT INSTALLED	.5A	XHPBM	.9A	XIFC 033003	.5B
XGC 10 SLF	.5A	XHB-4 INSTALLED	.5A	XHPBMS	.9A	XIFC 033603	.5B
XGC 10 SLF N4	.5A	XHB-4 NOT INSTALLED	.5A	XHPBPL	.9A	XIFC 040604	.5B
XGC 20	.5A	XHC-2 INSTALLED	.5A	XHPBS	.9A	XIFC 041204	.5B
XGC 20 L	.5A	XHC-3 INSTALLED	.5A	XHPBSPL	.9A	XIFC 060606	.5B
XGC 20 L N4	.5A	XHC-2 NOT INSTALLED	.5A	XHPL	.9A	XIFC 060608	.5B
XGC 20 N4	.5A	XHC-3 NOT INSTALLED	.5A	XHPPM	.9A	XIFC 061206	.5B
XGC 20 SLF	.5A	XHD-2 INSTALLED	.5A	XHPPMS	.9A	XIFC 070704	.5B
XGC 20 SLF N4	.5A	XHD-3 INSTALLED	.5A	XHSC	.9A	XIHDCX 2	.4A
XGC 30	.5A	XHD-2 NOT INSTALLED	.5A	XHSL	.9A	XIHDCX 2L	.4A

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
XIHDCX 3	.4A	XIHSCDGC4	.4A	XJAB 570 N4	.10A	XJAT 890 N4	.10A
XIHDCX 3L	.4A	XIHSCFC2	.4A	XJAB 690	.10A	XJAX 26	.10A
XIHDGCX 2	.4A	XIHSCFC3	.4A	XJAB 690 N4	.10A	XJAX 26 N4	.10A
XIHDGCX 2L	.4A	XIHSCFC4	.4A	XJAB 890	.10A	XJAX 36	.10A
XIHDGCX 3	.4A	XIHSDC3	.4A	XJAB 890 N4	.10A	XJAX 36 N4	.10A
XIHDGCX 3L	.4A	XIHSDDC4	.4A	XJAC 26	.10A	XJAX 46	.10A
XIHFCX 2	.4A	XIHSDDGC3	.4A	XJAC 26 N4	.10A	XJAX 46 N4	.10A
XIHFCX 2L	.4A	XIHSDDGC4	.4A	XJAC 36	.10A	XJAX 570	.10A
XIHFCX 3	.4A	XIHSDFC3	.4A	XJAC 36 N4	.10A	XJAX 570 N4	.10A
XIHFCX 3L	.4A	XIHSDFC4	.4A	XJAC 46	.10A	XJAX 690	.10A
XIHFGCX 2	.4A	XIHSLDC2	.4A	XJAC 46 N4	.10A	XJAX 690 N4	.10A
XIHFGCX 2L	.4A	XIHSLDC3	.4A	XJAC 570	.10A	XJAX 890	.10A
XIHFGCX 3	.4A	XIHSLDC4	.4A	XJAC 570 N4	.10A	XJAX 890 N4	.10A
XIHFGCX 3L	.4A	XIHSLDGC2	.4A	XJAC 690	.10A	XJAY	.5E
XIHLDCX	.4A	XIHSLDGC3	.4A	XJAC 690 N4	.10A	XJAY N4	.5E
XIHLDCGX	.4A	XIHSLDGC4	.4A	XJAC 890	.10A	XJAYRC	.5E
XIHLFCX	.4A	XIHSLFC2	.4A	XJAC 890 N4	.10A	XJBC	.5E
XIHLFCGX	.4A	XIHSLFC3	.4A	XJAD 10	.10A	XJBCC 2	.5E
XIHMDCX	.4A	XIHSLFC4	.4A	XJAD 13	.10A	XJBCC 3	.5E
XIHMDCX2	.4A	XIHSTDC2	.4A	XJAD 36	.10A	XJD	.6A
XIHMDCX2L	.4A	XIHSTDC3	.4A	XJAD 36 N4	.10A	XJD N4	.6A
XIHMDCXL	.4A	XIHSTDC4	.4A	XJAD 4	.10A	XJDA	.6A
XIHMDCGX	.4A	XIHSTDGC2	.4A	XJAD 46	.10A	XJDA N4	.6A
XIHMDCGX2	.4A	XIHSTDGC3	.4A	XJAD 46 N4	.10A	XJDAO	.6A
XIHMDCGX2L	.4A	XIHSTDGC4	.4A	XJAD 6	.10A	XJDFGC	.6A
XIHMDCGXL	.4A	XIHSTFC2	.4A	XJADC	.10A	XJDFGC N4	.6A
XIHMFCX	.4A	XIHSTFC3	.4A	XJAL 26	.10A	XJDGC	.6A
XIHMFCX2	.4A	XIHSTFC4	.4A	XJAL 26 N4	.10A	XJDGC N4	.6A
XIHMFCX2L	.4A	XIHSXDC2	.4A	XJAL 36	.10A	XJDO	.6A
XIHMFCXL	.4A	XIHSXDC3	.4A	XJAL 36 N4	.10A	XJFC 2	.5E
XIHMFCGX	.4A	XIHSXDC4	.4A	XJAL 46	.10A	XJFC 3	.5E
XIHMFCGX2	.4A	XIHSXDGC2	.4A	XJAL 46 N4	.10A	XJFC 3C2	.5E
XIHMFCGX2L	.4A	XIHSXDGC3	.4A	XJAL 570	.10A	XJFC 3C3	.5E
XIHMFCGXL	.4A	XIHSXDGC4	.4A	XJAL 570 N4	.10A	XJFCC 2	.5E
XIHMKFCX	.4A	XIHSXFC2	.4A	XJAL 690	.10A	XJFCC 3	.5E
XIHMKFCGX	.4A	XIHSXFC3	.4A	XJAL 690 N4	.10A	XJHA	.6A
XIHSBDC2	.4A	XIHSXFC4	.4A	XJAL 890	.10A	XJHA N4	.6A
XIHSBDC3	.4A	XIHSYDC23	.4A	XJAL 890 N4	.10A	XJHAB	.6A
XIHSBDC4	.4A	XIHSYDGC23	.4A	XJAO	.10A	XJHAB N4	.6A
XIHSBDGC2	.4A	XIHSYFC23	.4A	XJAT 26	.10A	XJHABGC	.6A
XIHSBDGC3	.4A	XJA 6	.10A	XJAT 26 N4	.10A	XJHABGC N4	.6A
XIHSBDGC4	.4A	XJA 6S	.10A	XJAT 36	.10A	XJHAD 12	.6A
XIHSBFC2	.4A	XJA 8	.10A	XJAT 36 N4	.10A	XJHAD 12 N4	.6A
XIHSBFC3	.4A	XJAB 26	.10A	XJAT 46	.10A	XJHAD 6	.6A
XIHSBFC4	.4A	XJAB 26 N4	.10A	XJAT 46 N4	.10A	XJHAD 6 N4	.6A
XIHSCDC2	.4A	XJAB 36	.10A	XJAT 570	.10A	XJHAD 9	.6A
XIHSCDC3	.4A	XJAB 36 N4	.10A	XJAT 570 N4	.10A	XJHAD 9 N4	.6A
XIHSCDC4	.4A	XJAB 46	.10A	XJAT 690	.10A	XJHAGC	.6A
XIHSCDGC2	.4A	XJAB 46 N4	.10A	XJAT 690 N4	.10A	XJHAGC N4	.6A
XIHSCDGC3	.4A	XJAB 570	.10A	XJAT 890	.10A	XJHB	.6A

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
XJHB N4	.6A	XJLD 4 N4	.6A	XJTD 6 N4	.6A	XLA-GC	.9A
XJHBGC	.6A	XJLD 6	.6A	XJTFCG	.6A	XLA-GCH	.9A
XJHBGC N4	.6A	XJLD 6 N4	.6A	XJTFCG N4	.6A	XLA-GH	.9A
XJHC	.6A	XJLGC	.6A	XJTGC	.6A	XLAH	.9A
XJHC N4	.6A	XJLGC N4	.6A	XJTGC N4	.6A	XLAL-GH	.9A
XJHCD 12	.6A	XJM	.6A	XJTO	.6A	XLAS	.9A
XJHCD 12 N4	.6A	XJM N4	.6A	XJU 23	.5E	XLAS-G	.9A
XJHCD 6	.6A	XJMA	.6A	XJUC 2	.5E	XLAS-GH	.9A
XJHCD 6 N4	.6A	XJMA N4	.6A	XJUC 2 XJUDC	.5E	XLB	.9A
XJHCD 9	.6A	XJMAGC	.6A	XJUC 3	.5E	XLB-G	.9A
XJHCD 9 N4	.6A	XJMAGC N4	.6A	XJUC 3 XJUDC	.5E	XLB-GC	.9A
XJHCGC	.6A	XJMC	.6A	XJUDC	.5E	XLB-GCH	.9A
XJHCGC N4	.6A	XJMC N4	.6A	XJULB 2	.5E	XLB-GH	.9A
XJHO	.6A	XJMCGC	.6A	XJULB 2 XJUDC	.5E	XLBL-G	.9A
XJK	.6A	XJMCGC N4	.6A	XJULB 3	.5E	XLBL-GH	.9A
XJK N4	.6A	XJMGC	.6A	XJULB 3 XJUDC	.5E	XLBS	.9A
XJKA	.6A	XJMGC N4	.6A	XJW 3	.6A	XLBS-G	.9A
XJKA N4	.6A	XJN 12	.6A	XJW 3 N4	.6A	XLBS-GH	.9A
XJKAD 12	.6A	XJN 12 N4	.6A	XJW 5	.6A	XLC	.9A
XJKAD 12 N4	.6A	XJN 6	.6A	XJW 5 N4	.6A	XLC-G	.9A
XJKAD 18	.6A	XJN 6 N4	.6A	XJWH	.6A	XLC-GC	.9A
XJKAD 18 N4	.6A	XJNGC 12	.6A	XJWH 12	.6A	XLC-GCH	.9A
XJKAD 6	.6A	XJNGC 12 N4	.6A	XJWH 12 N4	.6A	XLC-GH	.9A
XJKAD 6 N4	.6A	XJNGC 6	.6A	XJWH 6	.6A	XLCS	.9A
XJKAGC	.6A	XJNGC 6 N4	.6A	XJWH 6 N4	.6A	XLCS-G	.9A
XJKAGC N4	.6A	XJNO	.6A	XJWH 9	.6A	XLCS-GH	.9A
XJKB	.6A	XJOGC	.6A	XJWH 9 N4	.6A	XLG	.9A
XJKB N4	.6A	XJOGC N4	.6A	XJWH N4	.6A	XLG-G	.9A
XJKBGC	.6A	XJS	.6A	XJWHGC N4	.6A	XLG-GC	.9A
XJKBGC N4	.6A	XJS N4	.6A	XJWHGCX	.6A	XLG-GCH	.9A
XJKD 12	.6A	XJSD	.6A	XJWO	.6A	XLG-GH	.9A
XJKD 12 N4	.6A	XJSD N4	.6A	XJWT	.6A	XLGL-GH	.9A
XJKD 18	.6A	XJSO	.6A	XJWT 10	.6A	XLGS	.9A
XJKD 18 N4	.6A	XJSWGC	.6A	XJWT 10 N4	.6A	XLGS-G	.9A
XJKD 6	.6A	XJSWGC N4	.6A	XJWT 13	.6A	XLGS-GH	.9A
XJKD 6 N4	.6A	XJT	.6A	XJWT 13 N4	.6A	XLP 30320	.8C
XJKGC	.6A	XJT N4	.6A	XJWT 4	.6A	XLPA	.9A
XJKGC N4	.6A	XJTB	.5E	XJWT 4 N4	.6A	XLPAS	.9A
XJKO	.6A	XJTB 2	.5E	XJWT 6	.6A	XLPB	.9A
XJL	.6A	XJTB 2 XJUDC	.5E	XJWT 6 N4	.6A	XLPBS	.9A
XJL N4	.6A	XJTB N4	.5E	XJWT N4	.6A	XLPC	.9A
XJLB 2	.5E	XJTBGC	.5E	XJWTGC N4	.6A	XLPCS	.9A
XJLB 2 XJUDC	.5E	XJTBGC N4	.5E	XJWTGCX	.6A	XLPG	.9A
XJLB 3	.5E	XJTD 10	.6A	XJX	.6A	XLPGS	.9A
XJLB 3 XJUDC	.5E	XJTD 10 N4	.6A	XJX N4	.6A	XLPR	.9A
XJLD 10	.6A	XJTD 13	.6A	XJXGC	.6A	XLPRS	.9A
XJLD 10 N4	.6A	XJTD 13 N4	.6A	XJXGC N4	.6A	XLPW	.9A
XJLD 13	.6A	XJTD 4	.6A	XJXO	.6A	XLPWS	.9A
XJLD 13 N4	.6A	XJTD 4 N4	.6A	XLA	.9A	XLR	.9A
XJLD 4	.6A	XJTD 6	.6A	XLA-G	.9A	XLR-G	.9A

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
XLR-GC	.9A	XLSWS	.9A	XMSH 63	.8C	XPB1-N2	.8A
XLR-GCH	.9A	XLSWS-G	.9A	XMSH 64	.8C	XPB2-1	.8A
XLR-GH	.9A	XLSWS-GH	.9A	XMSH N4	.8C	XPB2-12320B1	.8A
XLRL-GH	.9A	XLW	.9A	XMSH-N4	.8C	XPB2-12320L1	.8A
XLRS	.9A	XLW-G	.9A	XMSQ 65	.8C	XPB2-12320L2	.8A
XLRS-G	.9A	XLW-GC	.9A	XMSQ N4	.8C	XPB2-12320L2	.8A
XLRS-GH	.9A	XLW-GCH	.9A	XMSQ-N4	.8C	XPB2-123L1	.8A
XLSA	.9A	XLW-GH	.9A	XMT	.9A	XPB2-18320B1	.8A
XLSA-G	.9A	XLWL-G	.9A	XNP (Special)	.9A	XPB2-18320L1	.8A
XLSA-GH	.9A	XLWS	.9A	XNP (Standard)	.9A	XPB2-183L1	.8A
XLSAH	.9A	XLWS-G	.9A	XNPWB	.9A	XPB2-2	.8A
XLSAL-GH	.9A	XLWS-GH	.9A	XNPWG	.9A	XPB2-24320B1	.8A
XLSAS	.9A	XMB	.9A	XNPWR	.9A	XPB2-24320L1	.8A
XLSAS-G	.9A	XMC	.9A	XPB1-1	.8A	XPB2-24320L2	.8A
XLSAS-GH	.9A	XMMSA1	.8C	XPB1-121	.8A	XPB2-243L1	.8A
XLSB	.9A	XMMSA2	.8C	XPB1-121B1	.8A	XPB2-243L2	.8A
XLSB-G	.9A	XMNP	.9A	XPB1-121L1	.8A	XPB2-3	.8A
XLSB-GH	.9A	XMOB-1	.9A	XPB1-121L2	.8A	XPB2-303L2	.8A
XLSBL-GH	.9A	XMOB-2	.9A	XPB1-123	.8A	XPB2-363L2	.8A
XLSBS	.9A	XMOB-3	.9A	XPB1-123B1	.8A	XPB2-H1	.8A
XLSBS-G	.9A	XMOB-4	.9A	XPB1-123L1	.8A	XPO	.9A
XLSBS-GH	.9A	XMOBS-1	.9A	XPB1-181	.8A	XPOC	.9A
XLSC	.9A	XMOBS-2	.9A	XPB1-181B1	.8A	XPOCH	.9A
XLSC 2 LESS SWITCH	.8C	XMOBS-3	.9A	XPB1-181L1	.8A	XPOCS	.9A
XLSC 3 LESS SWITCH	.8C	XMOBS-4	.9A	XPB1-183	.8A	XPOCSH	.9A
XLSC21	.8C	XMOLA	.9A	XPB1-183B1	.8A	XPOH	.9A
XLSC22	.8C	XMOLG	.9A	XPB1-183L1	.8A	XPOS	.9A
XLSC31	.8C	XMOLR	.9A	XPB1-2	.8A	XPOSH	.9A
XLSC32	.8C	XMOS-1	.9A	XPB1-2411	.8A	XPP	.9A
XLSC-G	.9A	XMOS-2	.9A	XPB1-2412	.8A	XPPH	.9A
XLSC-GH	.9A	XMOS-3	.9A	XPB1-24120B1	.8A	XPPH-N4	.9A
XLSCS	.9A	XMOSS-1	.9A	XPB1-24120L1	.8A	XR	.9A
XLSCS-G	.9A	XMOSS-2	.9A	XPB1-24120L2	.8A	XR	.9A
XLSCS-GH	.9A	XMOSS-3	.9A	XPB1-2431	.8A	XR	.9A
XLSG	.9A	XMPP	.9A	XPB1-2432	.8A	XR	.9A
XLSG-G	.9A	XMRSC 60	.8C	XPB1-24320B1	.8A	XR	.9A
XLSG-GH	.9A	XMRSC 61	.8C	XPB1-24320L1	.8A	XR	.9A
XLGGL-GH	.9A	XMRSC-N4	.8C	XPB1-24320L2	.8A	XR	.9A
XLGGS	.9A	XMRSF 62	.8C	XPB1-3	.8A	XR	.9A
XLGGS-G	.9A	XMRSF-N4	.8C	XPB1-3012	.8A	XR	.9A
XLGGS-GH	.9A	XMRSO 63	.8C	XPB1-3032	.8A	XR	.9A
XLRSR	.9A	XMRSO 64	.8C	XPB1-30320L2	.8A	XR	.9A
XLRSR-G	.9A	XMRSO-N4	.8C	XPB1-3612	.8A	XR	.9A
XLRSR-GH	.9A	XMSB 60	.8C	XPB1-3632	.8A	XR	.9A
XLRL-GH	.9A	XMSB 61	.8C	XPB1-36320L2	.8A	XR	.9A
XLRS	.9A	XMSB N4	.8C	XPB1-G1	.8A	XR	.9A
XLRS-G	.9A	XMSB-N4	.8C	XPB1-G2	.8A	XR	.9A
XLRS-GH	.9A	XMSD 62	.8C	XPB1-H1	.8A	XR	.9A
XLRSW	.9A	XMSD N4	.8C	XPB1-H2	.8A	XR	.9A
XLRSWL-GH	.9A	XMSD-N4	.8C	XPB1-N1	.8A	XR	.9A
						XSB 0303	.5A
						XSB 0306	.5A
						XSB 0307	.5A
						XSB 0309	.5A
						XSB 0311	.5A
						XSB 0313	.5A
						XSB 0315	.5A
						XSB 0318	.5A
						XSB 0324	.5A
						XSB 0330	.5A
						XSB 0336	.5A
						XSB 0406	.5A
						XSB 0412	.5A
						XSB 0416	.5A
						XSB 0606	.5A

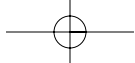
Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section	Catalog Number	Catalog Section
XSB 0608	.5A	XSIAH12	.8D	XSM 0718	.5A	XVHPPMS	.9A
XSB 0611	.5A	XSIAH18	.8D	XSM 0808	.5A	XVHSS	.9A
XSB 0612	.5A	XSIAH25	.8D	XSM 0810	.5A	XVHSSPL	.9A
XSB 0613	.5A	XSIAS	.8D	XSM 0812	.5A	XVHSSS	.9A
XSB 0618	.5A	XSIAS12	.8D	XSM 0911	.5A	XVHSSSPL	.9A
XSB 0624	.5A	XSIAS17	.8D	XSM 1010	.5A	XVPO	.9A
XSB 0636	.5A	XSIAS25	.8D	XSM 1014	.5A	XVPOC	.9A
XSB 0707	.5A	XSIAS9	.8D	XSM 1212	.5A	XVPOCS	.9A
XSB 0710	.5A	XSIBD	.8D	XSM 1218	.5A	XVPOS	.9A
XSB 0716	.5A	XSIBD25	.8D	XSM 1220	.5A	XVS 4	.5D
XSB 0718	.5A	XSIBD32	.8D	XSM 1224	.5A	XVS 5	.5D
XSB 0808	.5A	XSICA	.8D	XSM 1230	.5A	XVS 6	.5D
XSB 0810	.5A	XSICA28	.8D	XSM 1236	.5A	XVS 8	.5D
XSB 0812	.5A	XSICA32	.8D	XSM 1246	.5A	XY 2	.10A
XSB 0832	.5A	XSICA41	.8D	XSM 1414	.5A	XY 3	.10A
XSB 0911	.5A	XSICA54	.8D	XSM 1422	.5A	XY 34	.10A
XSB 1010	.5A	XSICD	.8D	XSM 1428	.5A	XY 4	.10A
XSB 1014	.5A	XSICD37	.8D	XSM 1616	.5A	XY 44	.10A
XSB 1212	.5A	XSICD40	.8D	XSM 1624	.5A	XY 5	.10A
XSB 1218	.5A	XSICD50	.8D	XSM 1630	.5A	XY 54	.10A
XSB 1220	.5A	XSICH	.8D	XSM 1646	.5A	XY 6	.10A
XSB 1224	.5A	XSICH32	.8D	XSM 1818	.5A	XYB 10	.10A
XSB 1230	.5A	XSICH37	.8D	XSM 1824	.5A	XYB 104	.10A
XSB 1236	.5A	XSICH44	.8D	XSM 1830	.5A	XYB 12	.10A
XSB 1246	.5A	XSICH60	.8D	XSM 1836	.5A	XYB 124	.10A
XSB 1414	.5A	XSICS	.8D	XSM 2424	.5A	XYB 14	.10A
XSB 1428	.5A	XSICS28	.8D	XSM 2430	.5A	XYB 144	.10A
XSB 1616	.5A	XSICS32	.8D	XSM 2436	.5A	XYB 16	.10A
XSB 1624	.5A	XSICS40	.8D	XSO 663 B	.5E	XYB 164	.10A
XSB 1646	.5A	XSICS50	.8D	XSO 663 S	.5E	XYB 2	.10A
XSB 1818	.5A	XSIDA	.8D	XSO 884	.5E	XYB 3	.10A
XSB 1824	.5A	XSIDA65	.8D	XSO 884 S	.5E	XYB 34	.10A
XSB 1830	.5A	XSIDA80	.8D	XSO 885	.5E	XYB 4	.10A
XSB 1836	.5A	XSIDD	.8D	XSSL 4P	.9A	XYB 44	.10A
XSB 2424	.5A	XSIDD65	.8D	XSSL 5P	.9A	XYB 5	.10A
XSB 2430	.5A	XSIDD80	.8D	XSSS 4P	.9A	XYB 54	.10A
XSB 2436	.5A	XSIDH	.8D	XSSS 5P	.9A	XYB 6	.10A
XSC 16	.10A	XSIDH73	.8D	XU 2	.10A	XYB 8	.10A
XSC 160	.10A	XSIDS	.8D	XU 3	.10A	XYB 84	.10A
XSC 8	.10A	XSIDS65	.8D	XU 4	.10A	XYBM 10	.10A
XSIAA	.8D	XSIDS80	.8D	XUM 2	.10A	XYBM 104	.10A
XSIAA11	.8D	XSIDS95	.8D	XUM 3	.10A	XYBM 12	.10A
XSIAA25	.8D	XSIEA	.8D	XUM 4	.10A	XYBM 124	.10A
XSIAA9	.8D	XSIEA110	.8D	XVHKSS	.9A	XYBM 14	.10A
XSIAD	.8D	XSM 0416	.5A	XVHKSSS	.9A	XYBM 144	.10A
XSIAD12	.8D	XSM 0608	.5A	XVHPB	.9A	XYBM 16	.10A
XSIAD18	.8D	XSM 0611	.5A	XVHPBM	.9A	XYBM 164	.10A
XSIAD9	.8D	XSM 0612	.5A	XVHPBMS	.9A	XYBM 2	.10A
XSIAH	.8D	XSM 0613	.5A	XVHPBS	.9A	XYBM 3	.10A
XSIAH10	.8D	XSM 0710	.5A	XVHPPM	.9A	XYBM 34	.10A

Index

Catalog Number	Catalog Section	Catalog Number	Catalog Section
XYBM 4	.10A	XYC 34 SM	.10A
XYBM 44	.10A	XYC 4	.10A
XYBM 5	.10A	XYC 4 M	.10A
XYBM 54	.10A	XYC 4 S	.10A
XYBM 6	.10A	XYC 4 SM	.10A
XYBM 8	.10A	XYC 44	.10A
XYBM 84	.10A	XYC 44 M	.10A
XYC 10	.10A	XYC 44 S	.10A
XYC 10 M	.10A	XYC 44 SM	.10A
XYC 10 S	.10A	XYC 5	.10A
XYC 10 SM	.10A	XYC 5 M	.10A
XYC 104	.10A	XYC 5 S	.10A
XYC 104 M	.10A	XYC 5 SM	.10A
XYC 104 S	.10A	XYC 54	.10A
XYC 104 SM	.10A	XYC 54 M	.10A
XYC 12	.10A	XYC 54 S	.10A
XYC 12 M	.10A	XYC 54 SM	.10A
XYC 12 S	.10A	XYC 6	.10A
XYC 12 SM	.10A	XYC 6 M	.10A
XYC 124	.10A	XYC 6 S	.10A
XYC 124 M	.10A	XYC 6 SM	.10A
XYC 124 S	.10A	XYC 8	.10A
XYC 124 SM	.10A	XYC 8 M	.10A
XYC 14	.10A	XYC 8 S	.10A
XYC 14 M	.10A	XYC 8 SM	.10A
XYC 14 S	.10A	XYC 84	.10A
XYC 14 SM	.10A	XYC 84 M	.10A
XYC 144	.10A	XYC 84 S	.10A
XYC 144 M	.10A	XYC 84 SM	.10A
XYC 144 S	.10A	XYM 2	.10A
XYC 144 SM	.10A	XYM 3	.10A
XYC 16	.10A	XYM 4	.10A
XYC 16 M	.10A	XYM 5	.10A
XYC 16 S	.10A	XYM 6	.10A
XYC 16 SM	.10A	Z-1010	.1C
XYC 164	.10A	Z-1011-L	.1C
XYC 164 M	.10A	Z-1011-R	.1C
XYC 164 S	.10A	Z-2011	.1C
XYC 164 SM	.10A	Z-2033	.1C
XYC 2	.10A	Z-2034	.1C
XYC 2 M	.10A		
XYC 2 S	.10A		
XYC 2 SM	.10A		
XYC 3	.10A		
XYC 3 M	.10A		
XYC 3 S	.10A		
XYC 3 SM	.10A		
XYC 34	.10A		
XYC 34 M	.10A		
XYC 34 S	.10A		

378

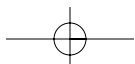


Notes

Lined area for taking notes, consisting of approximately 30 horizontal lines.

NOTES

380



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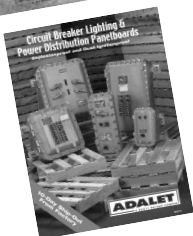
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