



Technical catalogue | November 2015

Enclosures for Automation

Enclosures for automation

General Catalogue

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ABB SACE Division - Quality, ethics and environmental certification

ABB SACE, a division of ABB S.p.A., has always been at the forefront when it comes to dedicating consistent resources for the purpose of attaining its sustainability and environmental protection goals.

A policy confirmed by acquisition of ISO 9001 quality certification and ISO 14001 environmental management system certification by all the corporate plants.

Thanks to use of analysis tools like LCA (Life Cycle Analysis), assessment and improvement of the environmental performance of the entire life cycle of the products is included in ABB SACE's design engineering work right from the very start.

This guarantees technical and energy performance optimization during operation and control, as well as reduction of environmental impact during the manufacturing phase and end of life management process.

The Garbagnate Monastero plant has also obtained certification for its QAS (Quality, Environment, Safety) integrated management system.

All the corporate divisions have always actively pursued policies for environmental management improvement implemented by rationalizing the use of raw materials and energy, preventing pollution, monitoring air and water quality, reducing noise emissions and the waste created by the production processes as well as conducting regular environmental audits with the major suppliers.

Each of these goals and tasks is the result of a farsighted decision to adopt environmental policies and methods for reducing environmental impact. Already a leading enterprise as to the quality of its products, ABB SACE is also a pacesetter in Italy with regard to these issues.



ABB: Energy efficiency for sustainable progress



ABB is actively committed to promoting environmental protection and sustainable development by providing products and solutions that help to improve the energy efficiency and productivity of the installations while reducing CO₂ emissions.

The ABB SACE website: makes your work easier, develops your business

- **News**, to keep you up to date about the latest electrical engineering innovations
- **Products**, just a simple click for an overview of ABB SACE products 24 hours a day
- **Catalogues** that you can consult, download and request
- **Technical documentation** where you can check circuit diagrams, dimensional drawings, instruction sheets, installation manuals
- **Work tools** for designing in complete safety
- **Training**, where you can consult the training catalogue and register for courses online



Technical software Calculation and cost estimate tools e-Design: everyone has a project, ABB has a solution to make it happen.

e-Design is the integrated suite, designed and created by ABB, dedicated to designers, technicians, engineering companies, panel builders and wholesalers. Thanks to e-Design you can design an electrical installation and optimize the processing time, while benefiting from a product portfolio you can use in synergy and with intuitive and simple functions.

We would like to highlight several positive features:

FLEXIBILITY

- Interconnected modules accessible during all stages of the project
- Projects that can be reused by all the professionals involved in their creation

VELOCITY

- You can save, duplicate and edit product and switchboard configurations
- Calculation of single-line diagrams and automatic dimensioning of conductors and control and protection equipment

SIMPLICITY

- You can draw single-line diagrams using predefined macros
- User-friendly configuration of switchboards and products

The software comprises four different modules for different purposes. One single process includes electrical system dimensioning, selection and configuration of products and accessories, switchboard configuration and cost estimates. Everything is much easier than in the past. Each individual module allows you to work on the details, but is also closely connected with the other modules. Using separate modules, design engineers can make a precise calculation of whole electrical system, then select equipment to suit the established electrical requirements and create a switchboard configuration. Finally, if the result is not sufficiently feasible, more detailed calculations can be made with the switchboard engineering module.

Here are some of the new purpose-made properties that make this process enjoyable:

- Easy drawing of single-line diagrams, both as regards power distribution and command and control circuits
- Simple and immediate selection and configuration of products, even for those who are not familiar with ABB products, simply by defining technical features
- The automatic user-friendly design process based on the list of devices simplifies one of the most complex design stages and avoids compatibility errors between products, assembly kits and busbar systems
- Effective product organization with tree views, so that the user can work methodically, view the relevant product immediately and define the switchboards with ease
- Availability of a dedicated module for busbar configuration

Well aware of market requirements, ABB now capitalizes on its experience and presents the new e-Design suite as a practical answer to every critical aspect of the design process.

www.abb.it/lowvoltage

The ABB SACE website will help you in your daily work with an innovative approach to the world of low voltage electrical installations and industrial automation.

e-Design

e-Design suite is structured with integrated functional modules, allowing it to support all planning stages of an electrical installation. All solutions are studied in detail, from electrical network dimensioning, to switchboard configuration, through to the final cost estimate stage.

The registration procedure is very easy and, once completed, you can immediately download installers and upgrades.



- EDS**: Electrical Installation Dimensioning
- EDS**: Switchboard Configuration
- PDC**: Switchboard Engineering
- CAT**: Product Selection and Configuration

The suite's appealing and brand-new look, combined with general optimization of the functions that have always characterized ABB software, make it an innovative tool, up to date with the technologies currently available in the sector.

After only a brief introduction, the user can already design, calculate, archive and perform project planning. No special CAD skills are required. Software operation is based on dialog boxes. The user is led through the program.

ABB SACE Division and its environmental protection commitment

Among the enterprises belonging to the Group, ABB SACE is in the forefront when it comes to dedicating consistent resources to its sustainable development and environmental protection goals. A policy confirmed by acquisition of ISO 9001 quality certification and ISO 14001 environmental management system certification by all the corporate plants as well as Integrated Quality, Environment, Safety Management System certification for the majority of business units.

Each of these goals and tasks is the result of a farsighted decision to adopt environmental policies and methods for reducing environmental impact. Already a leading enterprise as to the quality of its products, ABB SACE is also a pacesetter in Italy with regard to these issues.

Indeed, all the corporate divisions actively pursue policies for environmental management improvement implemented by rationalizing the use of raw materials and energy, preventing pollution, monitoring air and water quality, reducing noise emissions and the waste created by the production processes as well as conducting regular environmental audits with the major suppliers.

Thanks to use of analysis tools like LCA (Life Cycle Analysis), assessment and improvement of the environmental performance of the entire life cycle of the products is included in ABB SACE's design engineering work right from the very start. This with a view to optimizing the technical and energy performance, controlling and reducing environmental impact during the manufacturing phase and allowing the product end of life management process to be defined.



ABB: quality of the certified product



ABB dedicates consistent resources for the purpose of attaining its quality and environmental protection goals, as testified by the following certifications obtained by the company:



Introduction

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Customized directly in the factory	1/5

Enclosure for Automation. Great quality, economically unbeatable.

1



A solution for every application

The ABB range of metal structures for automation was conceived and designed based on many years' experience of working alongside the major switchboard and machine manufacturers in Italy and on the most highly industrialised and technological world markets. The metal structures conform to the IEC 62208 and IEC 60439-1 reference Standards and to the new IEC 61439-1-2 Standard. Their performances are the market reference ones: high IP degrees of protection (according to IEC 60529) and IK (according to IEC 62262), which allow installation in most industrial environments.



Ideal enclosures, special apparatus

Where the new enclosures for automation are the most advanced to be found on the market today, ABB's automation apparatus is also a synonym of technological innovation. The enclosures for automation are, of course, integrated with the various ABB control and operating apparatus, and all the electrical and mechanical values (dissipation, short-time withstand currents, insulation distances, etc.) have been analysed and checked by the manufacturer. They also offer a high level of preparation for assembly of the apparatus, with optimised hole drillings, fixings and overall dimensions.

And all this is to save you time!

The safety provided by a certified product.

1

The law states that all the products must conform to the European Directives and to the reference product Standards, but this is not enough for ABB. We prefer an external organization to certify the quality of our products, especially with regard to the more critical aspects, both in technical and application terms.

All the products in the range are also UL approved to satisfy requests from markets where this mark is compulsory.

The technical characteristics and high degree of protection allow their use in environments with a potentially explosive atmosphere.

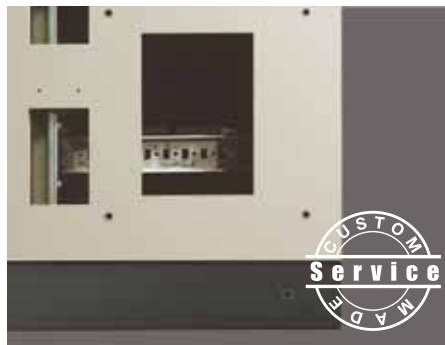
In fact, the switchgear and enclosures conform to the ATEX 99/92/CE and 94/9/CE Directive (suitable for use in areas 2 and 22).

The IS2 panel board versions dedicated to uses where electromagnetic compatibility (EMC) is required, have also obtained the relative certification.



Customized directly in the factory.

CUSTOM MADE SERVICE is ABB's new service for automation metal structures, which, on request, are supplied painted, drilled and, where necessary, assembled according to the customer's specific requirements. All the components in the catalogue marked with the following stamp can use this service.



Painting

A shade of color other than the standard one (grey orange peel RAL 7035) can be requested on the mounted versions of the panel board.

For the various colors/finishes and for details of the painting cycle characteristics, please consult page 7/12 of this catalogue.

Customized drilling

CUSTOM MADE SERVICE offers a drilling service complying with your own specific drawing, made using CAD dwg or dxf format drawings. The useful dimensions for drilling are indicated on page 9/49 and the following.

Enclosure/Accessories assembly

Should you prefer a solution ready to be worked, you can choose the Custom Made Service solution dedicated to battery assembly of several columns.

The accessories can also be supplied already factory-mounted by ABB.

Instruction manuals

Detailed multi-language instruction manuals, including drawings, show the correct way to assemble the structures and the components inside them. User compliance with manufacturer instructions allows the set-up of correctly selected and assembled electrical enclosures which conform to EN 60439-1 and the new 61439-1-2 (CEI 17/13-1) in accordance with the European Community Low Voltage Directive (Directive 2006/95/ EC which substitutes 73/23/EEC and subsequent amendments).



Gemini switchboards

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Gemini switchboards

General

In the preparation of insulating panels in low voltage, the Gemini series of ABB ensures maximum protection and proper operating condition of all equipment modular.

2

ABB SACE's Gemini range is revolutionizing the market of low voltage electric insulating switchboards. The reason for this is that it is the first switchboard made of thermoplastic material, to which the co-injection molding technique gives the same mechanical characteristics as polyester. This means that it is extremely sturdy, with its rigid covering and

expanded internal core. Moreover, it contains no fibreglass, a material that with time rises to the surface, jeopardizing operation and safety of switchboards made of polyester with which it is usually mixed. Gemini switchboards have IP66 degree of protection (IP30 with the door open and with the appropriate components installed) and



Gemini switchboards are made with co-injection, which ABB SACE is the first manufacturer in the electric field to use as a molding technique. This process obtains a “sandwich” of two materials with a compact external covering and an expanded core, guaranteeing the highest level of mechanical protection against impacts (IK10) without the need to add hardening substances.



a very high resistance to chemical and atmospheric agents. This is the reason why Gemini guarantees excellent performances even in particularly severe operating conditions.

In distribution and mixed applications, the Gemini switchboard is designed to be fitted with System pro *M* modular devices and Tmax moulded-case circuit breakers.

Gemini switchboards are designed to be perfectly compatible with ABB components for low voltage control and monitoring.

For these applications they can be equipped with modular devices belonging to the System pro *M* range, with Tmax moulded-case circuit-breakers and control and signaling devices, creating a truly integrated automation system. When deciding the Gemini layout for control and monitoring applications, not only is it

possible to select the box and door in the required size, but you can also select the base plate in one of the three versions in the range. After wiring with the ducts and the Fix-O-Rapid device, the special standard adjustable feet and hooks must be fitted onto the base plate, allowing it to be inserted inside the box at up to seven different depths and three further levels of adjustment: no tools need to be used to carry out these operations. To finish the job, the inner door can be mounted (reversible and made of insulating material), guaranteeing IP30 degree of protection when the switchboard door is open. No tools are needed unless the inner door is equipped with pushbuttons, warning lights, etc.

To complete the job you can mount the door (reversible and made of insulating material), which guarantees the degree of protection IP30 when the cabinet door is opened. There is no need to use tools unless the inner door is not equipped with buttons, lights etc..



Gemini switchboards

General

In compliance with the safety standards, all components of the framework are applicable on the bottom plate or on the frame without the using any tools.

2



The fixing hooks and feet supplied in the standard versions are applied without having to use tools, making it possible to install the base plate at seven different depths inside the switchboard. They can also be adjusted at three further positions.



Application of the inner door guarantees IP40 degree of protection when the switchboard door is open.



The application of the inner door ensures the degree of protection IP30 when the cabinet door is open. The base plate can be snap-mounted inside the switchboard.



Example of a switchboard configuration for an automation application: some ABB control and protection devices are installed on the plate. The inner door is fitted with light signalling devices.

Gemini can be used in any environment, even extreme: it is the first picture in thermoplastic material with a degree of protection IP66.



Technical characteristics

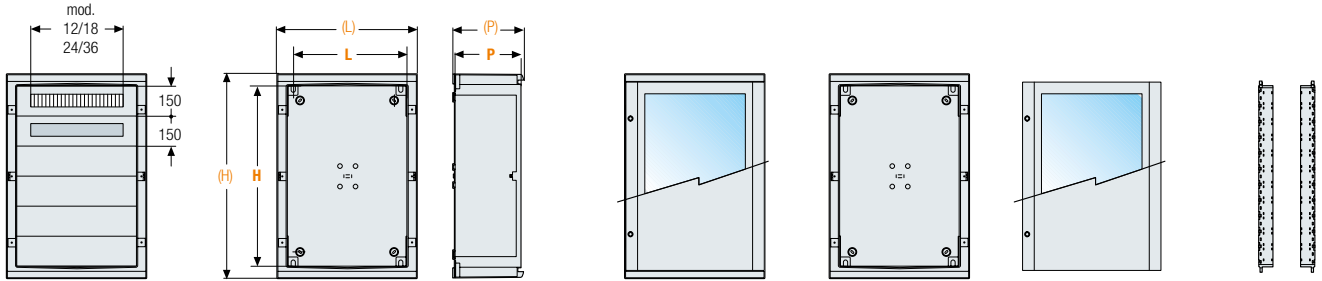
Compliance with Standards	CEI EN 50298, CEI 23-48, CEI 23-49, IEC 60670, CEI EN 60439-1 CEI EN 62208 - IEC 61439-1-2
Rated service voltage	Ue 1000 V AC - 1500 V DC
Operating temperature °C	-25 °C + 100 °C
Resistance to abnormal heat and fire	up to 750 °C
Degree of resistance to impacts	IK10 (IEC 62262)
Degree of protection (CEI EN 60529)	IP 30 open door IP 66 closed door
Recyclable	100%

Gemini switchboards

Rapid selection table

Rapid selection table

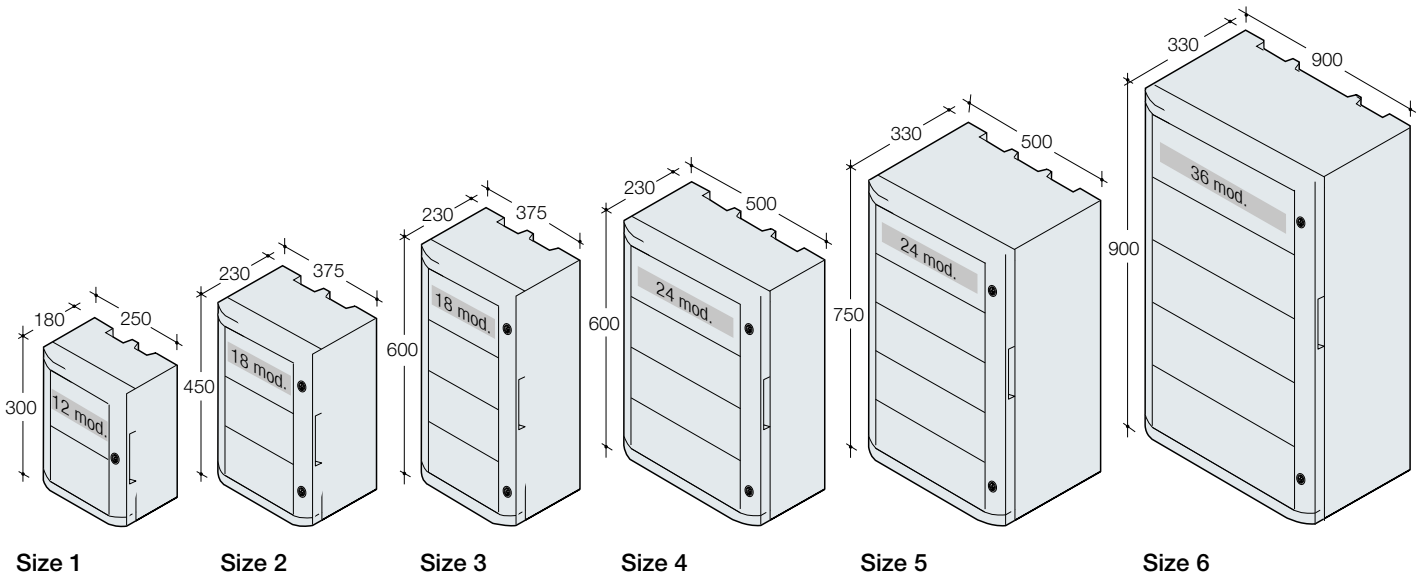
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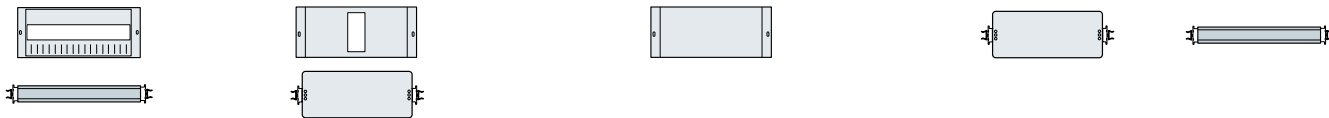


Size	No. of vertical mod. H=150mm	No. of DIN modules installable	External dimensions			Internal dimensions			Complete switchboard door		Box	Door		Uprights
			(H) mm	(W) mm	(D) mm	H mm	W mm	D mm	Transparent	Opaque		Transparent	Opaque	
1	2	24 (12x2)	400	335	210	300	250	180	1SL0211A00	1SL0201A00	1SL0221A00	1SL0241A00	1SL0231A00	1SL0283A00
2	3	54 (18x3)	550	460	260	450	375	230	1SL0212A00	1SL0202A00	1SL0222A00	1SL0242A00	1SL0232A00	1SL0284A00
3	4	72 (18x4)	700	460	260	600	375	230	1SL0213A00	1SL0203A00	1SL0223A00	1SL0243A00	1SL0233A00	1SL0285A00
4	4	96 (24x4)	700	580	260	600	500	230	1SL0214A00	1SL0204A00	1SL0224A00	1SL0244A00	1SL0234A00	1SL0285A00
5	5	120 (24x5)	855	585	360	750	500	330	1SL0215A00	1SL0205A00	1SL0225A00	1SL0245A00	1SL0235A00	1SL0286A00
6	6	216 (36x6)	1005	840	360	900	750	330	1SL0216A00	1SL0206A00	1SL0226A00	1SL0246A00	1SL0236A00	1SL0287A00

Sizes available

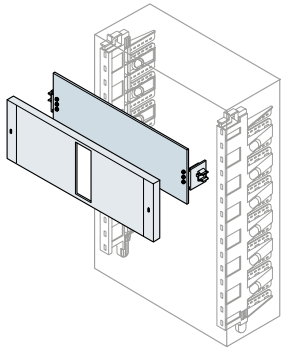
Available in 6 different sizes with transparent or opaque door, the Gemini switchboards are suitable for installation in any application context.





DIN rail kit DIN rail+drilled panel		Kit for Tmax plate+drilled panel		Blank panel			Modular plate		DIN rail
1 mod. H=150mm	1+1/2 mod. H=225mm	1 mod. H=150mm	2 mod. H=300mm	1/2 mod. H=75mm	1 mod. H=150mm	2 mod. H=300mm	1 mod. H=150mm	2 mod. H=300mm	
1SL0307A00	-	-	-	1SL0318A00	1SL0324A00	1SL0330A00	1SL0296A00	-	1SL0290A00
1SL0308A00	1SL0313A00	1SL0336A00	1SL0370A00	1SL0319A00	1SL0325A00	1SL0331A00	1SL0297A00	1SL0302A00	1SL0291A00
1SL0308A00	1SL0313A00	1SL0336A00	1SL0370A00	1SL0319A00	1SL0325A00	1SL0331A00	1SL0297A00	1SL0302A00	1SL0291A00
1SL0309A00	1SL0314A00	1SL0337A00	1SL0371A00	1SL0320A00	1SL0326A00	1SL0332A00	1SL0298A00	1SL0303A00	1SL0292A00
1SL0309A00	1SL0314A00	1SL0337A00	1SL0371A00	1SL0320A00	1SL0326A00	1SL0332A00	1SL0298A00	1SL0303A00	1SL0292A00
1SL0310A00	1SL0315A00	1SL0338A00	1SL0372A00	1SL0321A00	1SL0327A00	1SL0333A00	1SL0299A00	1SL0304A00	1SL0293A00

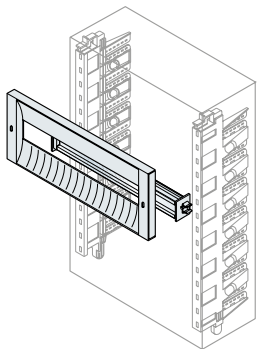
Horizontal installation



Kit for Tmax with pre-drilled holes

Fixed circuit-breaker Size with front terminals	No. poles	Dimensions H (mm)	Size/Codes		
			2/3	4/5	6
Tmax T1	03/4	150	1SL0336A00	1SL0337A00	1SL0338A00
Tmax T2	03/4	150	1SL0336A00	1SL0337A00	1SL0338A00
Tmax T2+diff.le	3	300	1SL0370A00	1SL0371A00	1SL0372A00
Tmax T3	03/4	300	1SL0370A00	1SL0371A00	1SL0372A00

Vertical installation



Installation on DIN rail

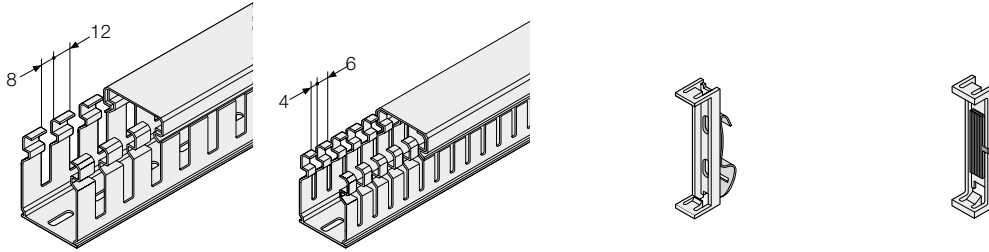
Fixed circuit-breaker Size with front terminals	No. poles	Dimensions H (mm)	Size/Codes			
			1	2/3	4/5	6
System Pro <i>M</i> compact modular apparatus		150	1SL0307A00	1SL0308A00	1SL0309A00	1SL0310A00
		225		1SL0313A00	1SL0314A00	1SL0315A00
Tmax T1-T2-T3	3/4	225		1SL0313A00	1SL0314A00	1SL0315A00

Gemini switchboards

Kit for installing apparatus

Wiring ducts

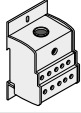
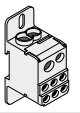
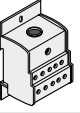

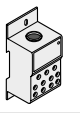
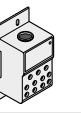
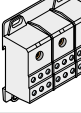









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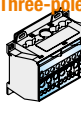
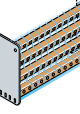
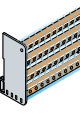
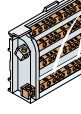


Base (mm)	H (mm)	Wiring ducts		Fix-0-rapid	
		8-12 mm Slots	4-6 mm Slots	Rapid snap-on bases for DIN rail	Rapid snap-on bases for plate
15	17	05 019	05 119	-	-
25	30	05 033	05 133	05 250	05 270
	40	05 043	05 143		
	60	05 063	05 163		
	80	05 083	05 183		
40	100	05 094	05 194	05 252	05 272
	30	05 035	05 135		
	40	05 045	05 145		
	60	05 065	05 165		
	80	05 085	05 185		
60	100	05 095	05 195	05 254	05 274
	30	05 037	05 137		
	40	05 047	05 147		
	60	05 067	05 167		
	80	05 087	05 187		
80	100	05 096	05 196	05 256	05 276
	40	05 049	05 149		
	60	05 069	05 169		
	80	05 089	05 189		
100	100	05 097	05 197	05 258	05 278
	40	05 051	05 151		
	60	05 071	05 171		
	80	05 091	05 191		
120	100	05 098	05 198	05 260	05 280
	40	05 053	05 153		
150	80	05 093	05 193	05 262	05 282
	100	05 099	05 199		

Distribution systems

Modular dividers

		Single-pole						Three-poles	
									
Code		AD1076	AD1080 ⁽¹⁾	AD1007	D1081 ⁽²⁾	AD1030	AD1031	AD1075	AD1006
In	IEC (A)	125	125	160	160	250	400	125	160
	UL (A)	115	115	175	160	230	310	115	175
Icw	(kA)	4.4	4.2	11	1.1	21	21	4.4	11
	Version	pole	1	1	1	1	1	3	3
Installation		DIN35/plate	DIN35/plate	DIN35/plate	DIN35/plate	DIN35/plate	DIN35/plate	DIN35/plate	DIN35/plate
power supply Ø cable (mm ²)	min.	10	6	16	10	35	95	10	16
	max	35	35	70	70	120	185	35	70
No. outgoing feeder Ø cable (mm ²)	1,5÷10					4	4		
	2,5÷16	10	6	10	6	5	5	6	6
	2,5÷25					2	2		
Dimensions HxWxD	(mm)	71x45x42,5	74x27x47	71x45x42,5	92x35x49	95.5x45x49	95.5x45x49	71.5x80x42,5	71.5x80x42,5
No. DIN modules		2,5	1,5	2,5	2	3	3	4,5	4,5
Rated service voltage Ue	(V)	1000 Vac 1500 Vdc	1000 Vac 1500 Vdc	1000 Vac 1500 Vdc	1000 Vac 1500 Vdc	1000 Vac 1500 Vdc	1000 Vac 1500 Vdc	1000 Vac 1500 Vdc	1000 Vac 1500 Vdc
Degree of protection	IP	20	20	20	20	20	20	20	20
Mark									

		Three-poles				
						
Code		AD1004	AD1028	AD1029	AD1027	
In	(A)	125	125	125	160	
	Icw	(kA)	10	4.2	4.2	6.2
Ipk	(kA)	24	25	25	20	
	Version	poles	4.2	4	4	4
Installation		DIN35/plate	DIN35/plate	DIN35/plate	DIN35	
Power supply Ø cable (mm ²)	min.	6	6	6	10	
	max	35	25 with cable terminal	25 with cable terminal	50	
No. outgoing feeder (mm ²) Ø cable	With cable lugs		Rigid cable		Rigid cable	
	5L, 4Nx1,5-6mm ²		7x1,5-10mm ²		9x1,5-10mm ²	
	2L, 6Nx4-10mm ²		2x6-25mm ²		2x1,5-16mm ²	
	1L, 1Nx6-25mm ²		With cable lugs		2x6-25mm ²	
	Without cable lugs		7x1,5-10mm ²		With cable lugs	
	5L, 4Nx1,5-6mm ²		2x6-16mm ²		2x1,5-6mm ²	
	2L, 6Nx4-10mm ²		Without cable lugs		9x1,5-10mm ²	
	1L, 1Nx6-35mm ²		7x2,5-16mm ²		2x6-16mm ²	
			2x6-35mm ²		Without cable lugs	
					11x2,5-16mm ²	
				2x6-35mm ²		
				1x10-35mm ²		
				Without cable lugs		
				8x6-16mm ²		
				3x6-25mm ²		
				1x10-35mm ²		
Dimensions HxWxD	(mm)	74.5x98x45	93x89x48	96x126x48	90x160.5x50	
No. DIN modules		5,5	5	7	9	
Rated service voltage Ue	(V)	1000 Vac 1500 Vdc	440	440	440	
Degree of protection	IP	20	20	20	20	

⁽¹⁾ possibility of putting in parallel with AD1083 connections.

⁽²⁾ possibility of putting in parallel with comb type connections (not supplied).

Gemini switchboards

Distribution systems

Unifix L

Technical characteristics

Unifix L

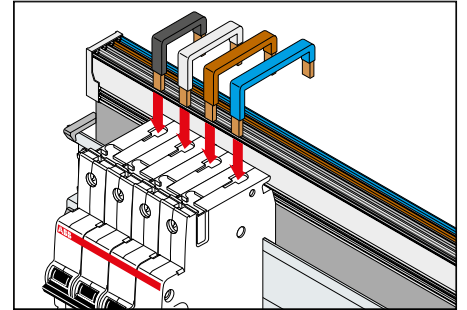
Rated service voltage (U_p)		400V AC
Rated insulation voltage (U)		500V AC
Rated impulse withstand voltage (U_{imp})		6kV
Rated frequency		50/60Hz
Rated current (I_n)	central power supply	100A
	lateral power supply	80A
Rated short-time withstand current (I_{cw})		
Maximum peak current (I_{pk})		
Maximum installable circuit-breaker size		100A
Conditioned short-circuit current (I_{sc})	Tmax T1	
	Tmax T2 N, S	
	Tmax T3	
With circuit-breaker	S200	6kA-400V
	S200M	10kA-400V
	S200P	25kA-400V
Degree of protection		IP20
Characteristics of the insulating material		Self-extinguishing thermoplastic V1 (UL94)
Characteristics of the conductor material		Electrolytic copper
Width (No. modules/mm)		12/400
		18/500
		24/600
		36/800

Circuit-breaker series

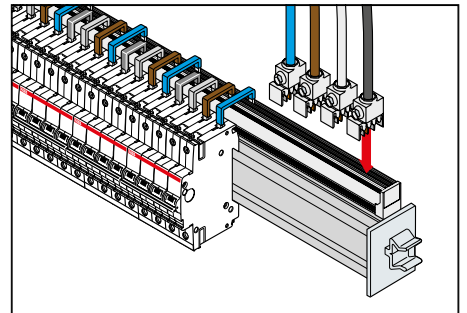
Unifix L

SN201	ED3272	L1/N 40A
DS201	ED3280	L2/N 40A
	ED3298	L3/N 40A
S200	ED3033	L1 100A
F200	ED3041	L2 100A
	ED3058	L3 100A
	ED3066	N 100A
F660-F670-S280 (80-100A)	ED3132	Power supply L1/L2/L3/N - 350mm
E200 - RS370	ED0026	Power supply L1/L2/L3/N - 1500mm
	ED0025	Power supply L1/L2/L3/N - 2500mm
MDRC - Various apparatus	ED3108	Power supply 2 cables L1/N 16A
	ED3116	Power supply 3 cables L1/L2/L3 16A
	ED3124	Power supply 4 cables L1/L2/L3/N 16A
	ED3355	Power supply 2 cables L1/N 40A
	ED3363	Power supply 3 cables L1/L2/L3 40A
	ED3371	Power supply 42 cables L1/L2/L3/N 71A

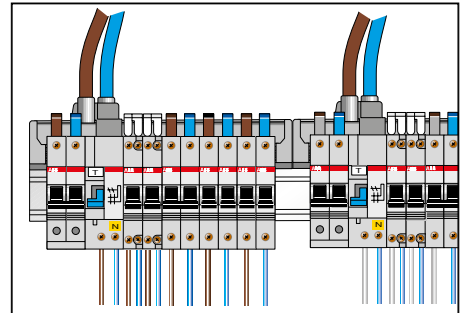
For the DDA locks, order the false module **ED2845** codes separately according to the size of the residual current lock



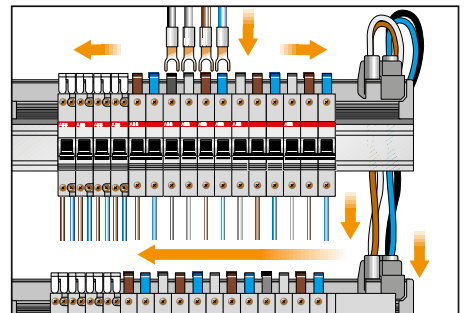
Connections (L1-L2-L3-N) for System Pro M modular apparatus.



Power supply of the busbar with 100A feeder module without cable. Terminal capacity 35mm².



Direct power supply of the busbars by means of feeder module.



Power supply by means of modules and cables in parallel.

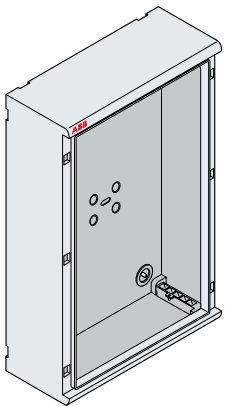
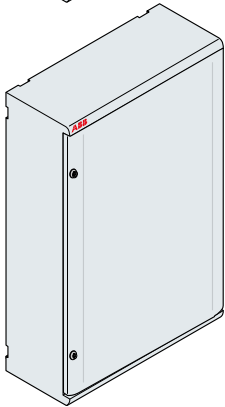
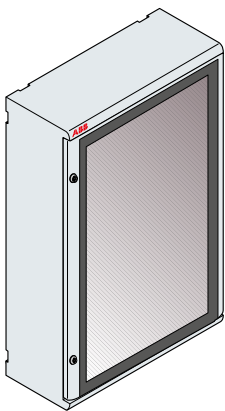
Ordering codes

Boxes and doors

Structures with doors

- Available in 6 sizes
- Single order code combined with box and transparent and opaque door
- Pack with door dismantled and wrapped separately
- Door designed so that it can be hooked onto hinges on both vertical sides and mounted without the use of tools
- To be mounted on the wall using internal holes or fixing brackets supplied as accessories
- Door opening at an angle of more than 180°
- Grey RAL 7035 colour
- Doors supplied with 2 standard double bit locks (3 for sizes 5 and 6) that can be replaced with locks for coded key or with square/triangular impression (the standard triplex key is suitable for use with three types of impression).

2



Structure with transparent door

Size	No. vertical mod. H=150mm	Useful dimensions WxHxD (mm)	Code	Package/ No. of pieces
1	2	250x300x180	1SL0211A00	1/1
2	3	375x450x230	1SL0212A00	1/1
3	4	375x600x230	1SL0213A00	1/1
4	4	500x600x230	1SL0214A00	1/1
5	5	500x750x330	1SL0215A00	1/1
6	6	750x900x330	1SL0216A00	1/1

Structure with opaque door

Size	No. vertical mod. H=150mm	Useful dimensions WxHxD (mm)	Code	Package/ No. of pieces
1	2	250x300x180	1SL0201A00	1/1
2	3	375x450x230	1SL0202A00	1/1
3	4	375x600x230	1SL0203A00	1/1
4	4	500x600x230	1SL0204A00	1/1
5	5	500x750x330	1SL0205A00	1/1
6	6	750x900x330	1SL0206A00	1/1

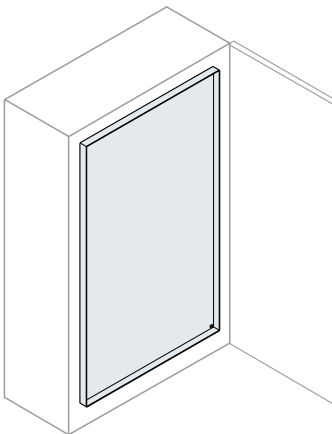
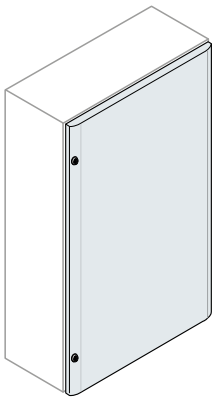
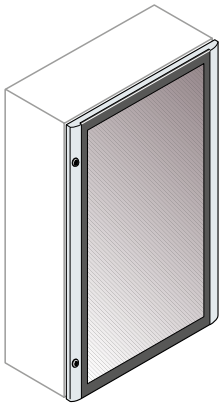
Structures without doors

Size	No. vertical mod. H=150mm	Useful dimensions WxHxD (mm)	Code	Package/ No. of pieces
1	2	250x300x180	1SL0221A00	1/1
2	3	375x450x230	1SL0222A00	1/1
3	4	375x600x230	1SL0223A00	1/1
4	4	500x600x230	1SL0224A00	1/1
5	5	500x750x330	1SL0225A00	1/1
6	6	750x900x330	1SL0226A00	1/1

Gemini switchboards

Ordering codes

2



Structure

Single doors

Transparent door

Size	No. vertical mod. H=150mm	Useful dimensions WxHxD (mm)	Code	Package/ No. of pieces
1	2	250x300x180	1SL0241A00	1/1
2	3	375x450x230	1SL0242A00	1/1
3	4	375x600x230	1SL0243A00	1/1
4	4	500x600x230	1SL0244A00	1/1
5	5	500x750x330	1SL0245A00	1/1
6	6	750x900x330	1SL0246A00	1/1

Opaque door

Size	No. vertical mod. H=150mm	Useful dimensions WxHxD (mm)	Code	Package/ No. of pieces
1	2	250x300x180	1SL0231A00	1/1
2	3	375x450x230	1SL0232A00	1/1
3	4	375x600x230	1SL0233A00	1/1
4	4	500x600x230	1SL0234A00	1/1
5	5	500x750x330	1SL0235A00	1/1
6	6	750x900x330	1SL0236A00	1/1

Inner doors

- Made of insulating material
- IP30 degree of protection with door open
- Designed so that door can be hinged on both vertical sides
- Snap-on mounting and fixing

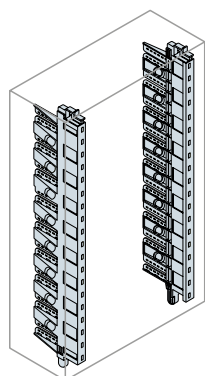
Inner door

Size	No. vertical mod. H=150mm	Useful dimensions WxHxD (mm)	Code	Package/ No. of pieces
1	2	250x300x180	1SL0251A00	1/1
2	3	375x450x230	1SL0252A00	1/1
3	4	375x600x230	1SL0253A00	1/1
4	4	500x600x230	1SL0254A00	1/1
5	5	500x750x330	1SL0255A00	1/1
6	6	750x900x330	1SL0256A00	1/1

Completion structure

Uprights

- Incorporated vertical wiring duct (ABB patent)
- Snap-on mounting of all components (installation pitch of 75 mm)
- Snap-on insertion into box
- Depth of installed components adjusted at a pitch of 12.5 mm (4 positions for uprights of size 1 and 6 positions for the remaining ones)
- Ergonomic grip to make it easy to insert and extract

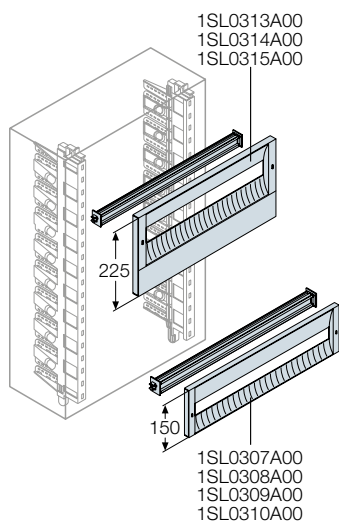


Upright with incorporated wiring duct

Size	Useful dimensions H (mm)	Code	Package/ No. of pieces
1	300	1SL0283A00	1/4
2	450	1SL0284A00	1/4
3	600	1SL0285A00	1/4
4/5	750	1SL0286A00	1/4
6	900	1SL0287A00	1/4

DIN rail Kit

- Front panel + DIN rail complete with supports for press-on fixing onto uprights and adjustable in depth
- Available in two dimensions - 1 module (H 150 mm) and 1+1/2 module (H 225 mm, sizes 2-6)
- Preset for hinging on the two vertical sides
- Snap-on assembly on the uprights (in conformity with the reference Standards, the panel can only be removed using a tool)
- Label-holder box for inserting descriptions of the installed apparatus

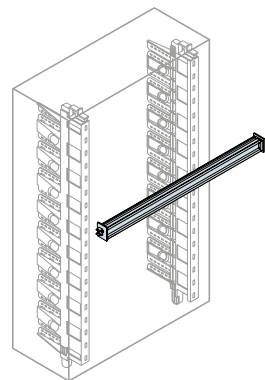


Panel + DIN rail

Size	Panel Dimensions W (mm)	Code	Package/ No. of pieces
1 module			
1	300	1SL0307A00	1/8
2/3	450	1SL0308A00	1/8
4/5	750	1SL0309A00	1/8
6	900	1SL0310A00	1/8
1+1/2 modules			
2/3	450	1SL0313A00	1/8
4/5	750	1SL0314A00	1/8
6	900	1SL0315A00	1/8

DIN rail

- Two-sided version
- Supplied with mounting supports that snap onto uprights
- Depth adjustment on uprights
- Designed so that rapid Unifix L mounting bars can be snapped on



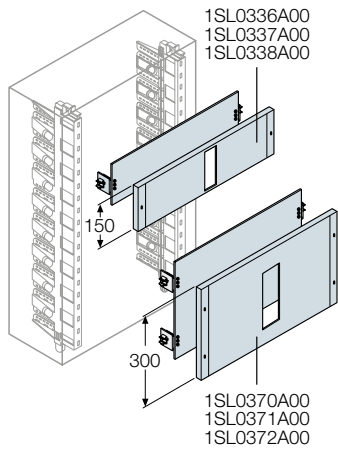
DIN rail

Size	No. mod. horizontal	Dimensions W (mm)	Code	Package/ No. of pieces
1	12	210	1SL0290A00	1/10
2/3	18	318	1SL0291A00	1/10
4/5	24	443	1SL0292A00	1/10
6	36	663	1SL0293A00	1/10

Gemini switchboards

Ordering codes

2



Completion structure

Kit for installing Tmax moulded-case circuit breakers

- For installing Tmax moulded-case circuit breakers in fixed version with front terminals
- Composed of a plate with special drilled holes and a protection panel with vertical slots that can be hinged on both sides and snap-on mounted (in compliance with reference Standards a tool must be used for removing the panel)
- Available for sizes 2-6
- Version H 150 with drillings for Tmax T1 3 poles (with and without residual current release), Tmax T1 4 poles (with and without residual current release), Tmax T2 3 poles (with and without residual current release), Tmax T2 4 poles (without residual current release)
- Version H 300 with drillings for Tmax T2 4 poles (with residual current release), Tmax T3 3 poles (with and without residual current release), Tmax T3 4 poles (with and without residual current release)
- Snap-on mounting onto uprights with the possibility of adjusting the plate depth.

Plate + panel

Size	Dimensions W (mm)	Code	Package/ No. of pieces
1 module H=150mm			
2/3	375	1SL0336A00	1/4
4/5	500	1SL0337A00	1/4
6	700	1SL0338A00	1/2
2 modules H=300mm			
2/3	375	1SL0370A00	1/4
4/5	500	1SL0371A00	1/4
6	700	1SL0372A00	1/2

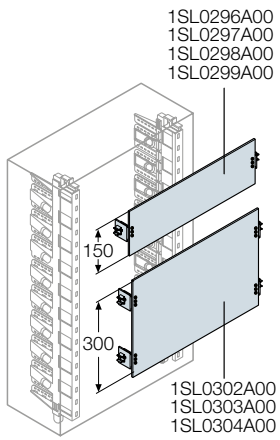
To choose the correct kit, see table on page 2/8.

Kit for installing Tmax XT moulded-case circuit breakers

- For installing Tmax moulded-case circuit breakers in fixed version with front terminals
- Composed of a plate with special drilled holes and a protection panel with vertical slots that can be hinged on both sides and snap-on mounted (in compliance with reference Standards a tool must be used for removing the panel)
- Available for sizes 2-6
- Snap-on mounting onto uprights with the possibility of adjusting the plate depth

Panel + plate

Size	Dimensions W (mm)	Code	Package/ No. of pieces
1 module H=150mm			
2/3	375	1SL0373A00	1/4
4/5	500	1SL0374A00	1/4
6	700	1SL0375A00	1/2
2 modules H=300mm			
2/3	375	1SL0376A00	1/4
4/5	500	1SL0377A00	1/4
6	700	1SL0378A00	1/2



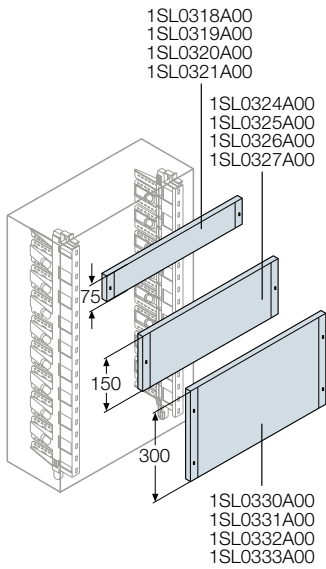
Completion structure

Partial modular plates

- Available in 1 module (H 150 mm) and 2 module (H 300 mm, sizes 2-6) dimensions
- Snap-on mounting onto uprights with depth adjustment

Modular base plate

Size	Dimensions W (mm)	Code	Package/ No. of pieces
1 module H=150mm			
1	210	1SL0296A00	1/6
2/3	318	1SL0297A00	1/4
4/5	443	1SL0298A00	1/4
6	663	1SL0299A00	1/2
2 modules H=300mm			
2/3	318	1SL0302A00	1/4
4/5	443	1SL0303A00	1/4
6	663	1SL0304A00	1/2



Blind front panel

- Available in 1/2 module (H 75 mm), 1 module (H 150 mm) and 2 modules (H 300 mm) dimensions
- H 150 mm and H 300 panels designed to be hinged onto both vertical sides
- Snap-on mounting onto uprights (in compliance with reference Standards a tool must be used for removing the panel)

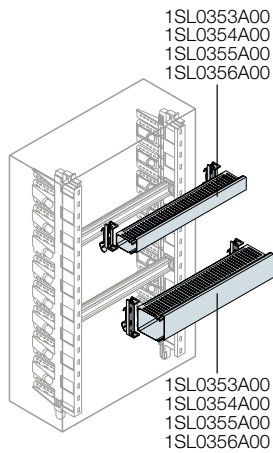
Blind front panel

Size	Dimensions W (mm)	Code	Package/ No. of pieces
1/2 module H=75mm			
1	250	1SL0318A00	1/10
2/3	375	1SL0319A00	1/10
4/5	500	1SL0320A00	1/6
6	700	1SL0321A00	1/4
1 module H=150mm			
1	250	1SL0324A00	1/8
2/3	375	1SL0325A00	1/8
4/5	500	1SL0326A00	1/4
6	700	1SL0327A00	1/4
2 modules H=200mm			
1	250	1SL0330A00	1/6
2/3	375	1SL0331A00	1/6
4/5	500	1SL0332A00	1/4
6	700	1SL0333A00	1/4

Gemini switchboards

Ordering codes

2

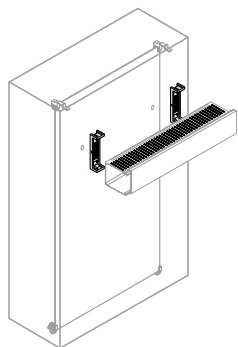


Completion structure

Wiring kit

- Composed of wiring duct in versions 25x60 mm and 40x60 mm (WxH, 8-12 mm slots) and Fix-O-Rapid device for the rapid snap-on hooking of the ducts on the DIN rail
- Snap-on mounting on uprights with depth adjustment

Wiring duct + Fix-O-Rapid				
Size	Dimensions W (mm)	Code		Package/ No. of pieces
Wiring duct 25x60mm				
1	250	1SL0353A00		1/4
2/3	375	1SL0354A00		1/4
4/5	500	1SL0355A00		1/4
6	700	1SL0356A00		1/4
Wiring duct 40x60mm				
1	250	1SL0360A00		1/4
2/3	375	1SL0361A00		1/4
4/5	500	1SL0362A00		1/4
6	700	1SL0363A00		1/4



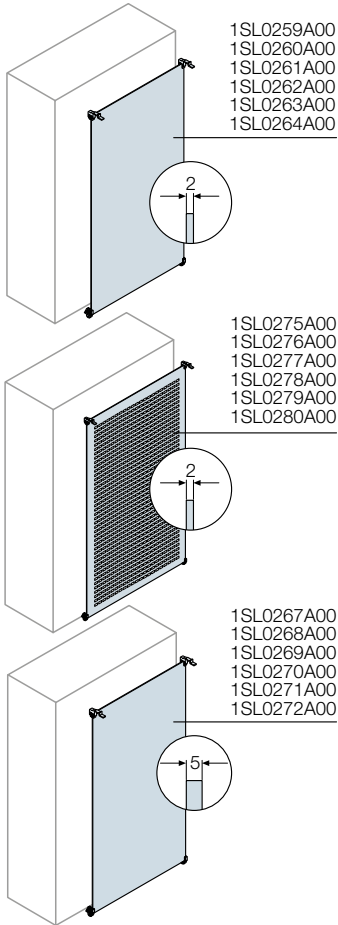
Fix-O-Rapid

Rapid mounting device for attaching wiring ducts to the base plate: it snaps onto the plate after drilling a \varnothing 7 mm hole. Two Fix-O-Rapid devices are enough for each wiring duct section. Fix-O-Rapid guarantees maximum insulation since it does not involve the use of any metal components inside the wiring duct.

If the wrong wiring duct is selected, it can be dismantled and a version with the same base and a different height can be attached to the Fix-O-Rapid.

Description	Code		Package/ No. of pieces
Rapid mounting device for wiring duct 25mm	05 270		20/600
Rapid mounting device for wiring duct 40mm	05 272		20/600
Rapid mounting device for wiring duct 60mm	05 274		20/600
Rapid mounting device for wiring duct 80mm	05 276		20/240
Rapid mounting device for wiring duct 100mm	05 278		20/240
Rapid mounting device for wiring duct 125mm	05 280		20/240
Rapid mounting device for wiring duct 150mm	05 282		20/240

Completion structure



Base plates

- Available in three versions made of blank or drilled metal and insulating material
- Positioning at 3 different depths for size 1, 4 different depths for sizes 2-3-4 and 7 different depths for sizes 5-6 (adjustments with 30 mm pitch)
- Supplied with feet and hooks adjustable at three further positions (with 7.5 mm pitch)
- Snap-on mounting
- Plates can also be mounted directly on the base with the special kit

Base plate

Size	Box dimensions WxHxD (mm)	Code	Package/ No. of pieces
Blank metal			
1	250x300x180	1SL0259A00	1/6
2	375x450x230	1SL0260A00	1/6
3	375x600x230	1SL0261A00	1/4
4	500x600x230	1SL0262A00	1/4
5	500x750x330	1SL0263A00	1/4
6	750x900x330	1SL0264A00	1/2
Drilled metal			
1	250x300x180	1SL0275A00	1/6
2	375x450x230	1SL0276A00	1/6
3	375x600x230	1SL0277A00	1/4
4	500x600x230	1SL0278A00	1/4
5	500x750x330	1SL0279A00	1/4
6	750x900x330	1SL0280A00	1/2
Insulating material			
1	250x300x180	1SL0267A00	1/6
2	375x450x230	1SL0268A00	1/6
3	375x600x230	1SL0269A00	1/4
4	500x600x230	1SL0270A00	1/4
5	500x750x330	1SL0271A00	1/4
6	750x900x330	1SL0272A00	1/2

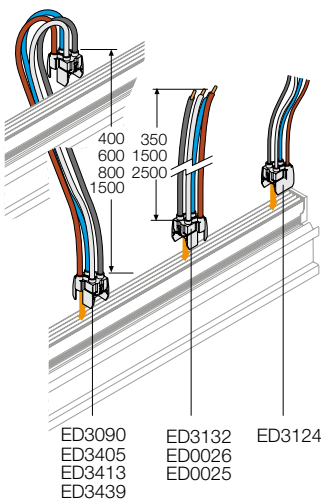
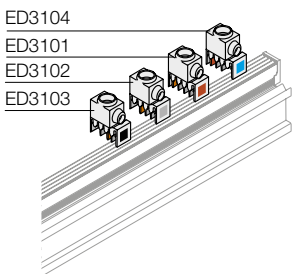
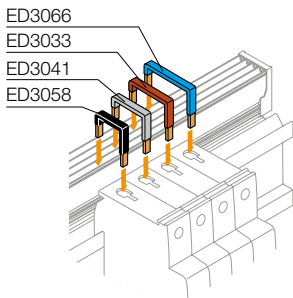
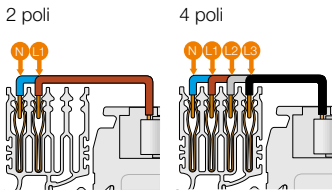
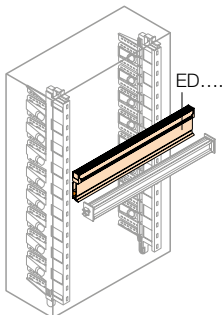
Base mounting kit for metal plate

Description	Code	Package/ No. of pieces
Base mounting kit for metal plate	1SL0383A00	1/10

Gemini switchboards

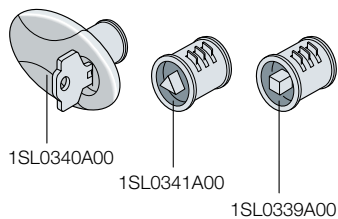
Ordering codes

2



Unifix L

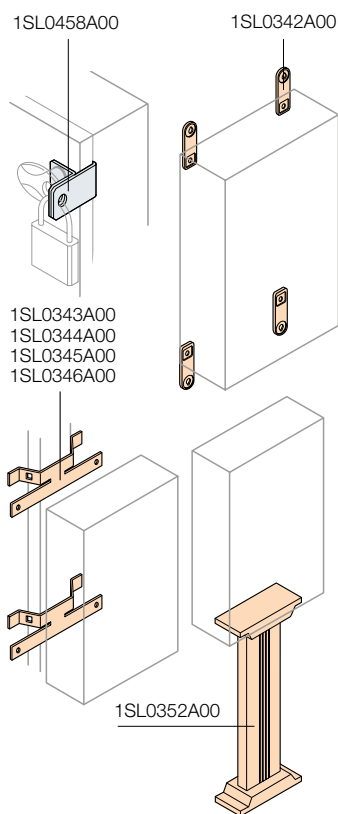
Description	Dimensions W (mm)	Code	Package/ No. of pieces
2-poles busbars			
100A 2P 8 module busbar	400	ED2993	1/6
100A 2P 12 module busbar	450	ED3009	1/6
100A 2P 18 module busbar	600	ED3017	1/6
100A 2P 24 module busbar	800	ED3025	1/6
100A 2P 36 module busbar			
100A 4P 12 module busbar	400	ED2944	1/6
100A 4P 18 module busbar	450	ED2951	1/6
100A 4P 24 module busbar	600	ED2969	1/6
100A 4P 36 module busbar	800	ED2977	1/6
Connections for various apparatus			
Connection with 2 conductors L/N 16A		ED3108	1/6
Connection with 3 conductors L1/L2/L3 16A		ED3116	1/6
Connection with 4 conductors L1/L2/L3/N 16A single phase		ED3124	1/6
Connection with 2 conductors L1/N 40A		ED3355	1/6
Connection with 3 conductors L1/L2/L3 40A		ED3363	1/6
Connection with 4 conductors L1/L2/L3/N 40A		ED3371	1/6
Connections for apparatus			
No.10 connections L1-N 40 A		ED3272	1/10
No.10 connections L2-N 40 A		ED3280	1/10
No.10 connections L3-N 40 A		ED3298	1/10
No.10 connections L 1 100A		ED3033	1/10
No.10 connections L 2 100A		ED3041	1/10
No.10 connections L 3 100A		ED3058	1/10
No.10 connections N 100A		ED3066	1/10
Feeder with 4P 100A cable (W=350mm)		ED3132	1/1
Feeder with 4P 100A cable (W=1500mm)		ED0026	1/1
Feeder with 4P 100A cable (W=1500mm)		ED0025	1/1
Power supply modules with cable			
Parallel module 2P 100A with cable (W=600mm)		ED3082	1/1
Parallel module 4P 100A with cable (W=400mm)		ED3405	1/1
Parallel module 4P 100A with cable (W=600mm)		ED3090	1/1
Parallel module 4P 100A with cable (W=800mm)		ED3413	1/1
Parallel module 4P 100A with cable (W=1500mm)		ED3439	1/1
Power supply modules without cable in 100A			
No.10 single-pole power supply terminals L1		ED3101	1/10
No.10 single-pole power supply terminals L2		ED3102	1/10
No.10 single-pole power supply terminals L3		ED3103	1/10
No.10 single-pole power supply terminals N		ED3104	1/10
Accessories			
No.10 busbar covers W=600mm		ED2961	1/10
No.2 busbar covers W=800mm		ED2962	1/2



Locks

Available in three versions with ciphered key and handle, with triangular and square impressions.

Description	Code		Package/ No. of piece
Lock with Yale type coded key and handle	1SL0340A00		1/10
Lock with triangular impression	1SL0341A00		1/10
Lock with square impression	1SL0339A00		1/10
Kit for vandalproof closure	1SL0458A00		1/10



Mounting elements

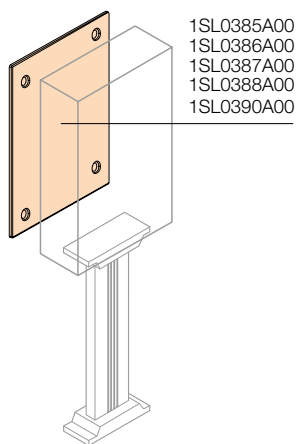
Guarantee optimum wall, pole and floor mounting conditions.

Description	Code		Package/ No. of piece
(4) horizontal and vertical wall brackets ^(*)	1SL0342A00		1/10
Pole mounting kit for sizes 1 switchboards	1SL0343A00		1/4
Pole mounting kit for sizes 2-3 switchboards	1SL0344A00		1/4
Pole mounting kit for sizes 4-5 switchboards	1SL0345A00		1/2
Pole mounting kit for size 6 switchboards	1SL0346A00		1/2
Floor mounting pedestal for sizes 1-4	1SL0352A00		1/1

(*) types of inserts are provided to adapt the ø 6 and 8 mm fixing brackets.

Base cover

For aesthetic as well as functional purposes, in particular for pedestal installations.

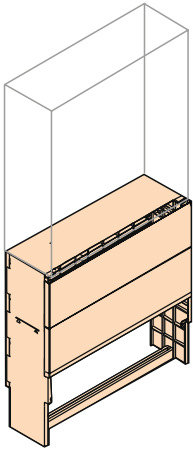


Description	Code		Package/ No. of piece
Back plugging plate	1SL0342A00	1	1/10
Back plugging plate	1SL0343A00	2	1/4
Back plugging plate	1SL0344A00	3	1/4
Back plugging plate	1SL0345A00	4	1/2
Back plugging plate	1SL0346A00	5	1/2
Back plugging plate	1SL0352A00	6	1/1

Gemini switchboards

Ordering codes

2



Accessories

Pedestal

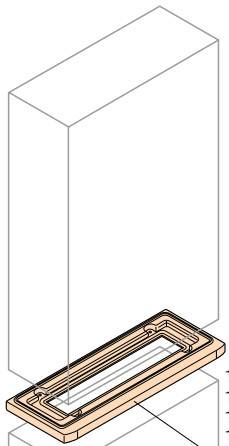
This enables the Gemini switchboard to be secured to the ground without the need to build plinths or foundations in cement since it is the pedestal that is buried.

Size	Description	Code	Package/ No. of pieces
4	Gemini Pedestal size 4	1SL0464A00	1/1
5	Gemini Pedestal size 5	1SL0465A00	1/1
6	Gemini Pedestal size 6	1SL0466A00	1/1

Coupling kit

Follows the aesthetic outline of the boxes. On request, contact ABB for minimum order quantities.

Size	Description	Code	Package/ No. of piece
2/3	Vertical coupling kit for sizes	1SL0413A00	1/2
4	Vertical coupling kit for sizes	1SL0414A00	1/2
5	Vertical coupling kit for sizes	1SL0415A00	1/2
6	Vertical coupling kit for sizes	1SL0416A00	1/2

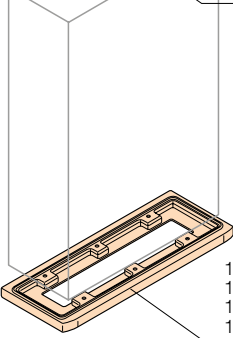


1SL0413A00
1SL0414A00
1SL0415A00
1SL0416A00

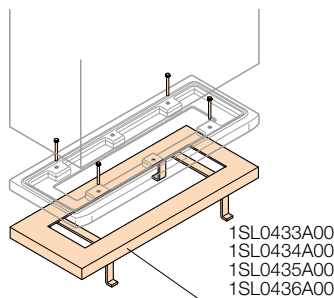
Bottom base H 30

For fixing the Gemini switchboard directly to the floor.

Size	Description	Code	Package/ No. of piece
2/3	Bottom base	1SL0423A00	1/2
4	Bottom base	1SL0424A00	1/2
5	Bottom base	1SL0425A00	1/2
6	Bottom base	1SL0426A00	1/2



1SL0423A00
1SL0424A00
1SL0425A00
1SL0426A00



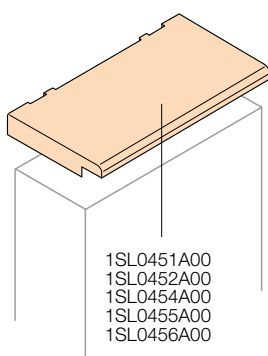
1SL0433A00
1SL0434A00
1SL0435A00
1SL0436A00

Accessories

Fixed frame

In combination with bottom base H 30. For fixing onto poured concrete floors and bases.

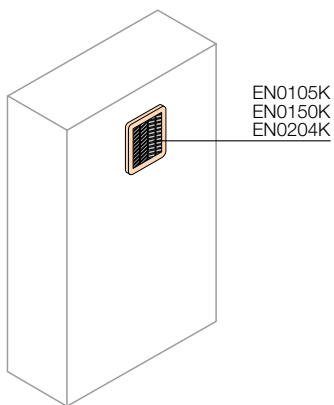
Size	Description	Code	Package/ No. of piece
2/3	Frame for fixing to floor	1SL0433A00	1/2
4	Frame for fixing to floor	1SL0434A00	1/2
5	Frame for fixing to floor	1SL0435A00	1/2
6	Frame for fixing to floor	1SL0436A00	1/2



1SL0451A00
1SL0452A00
1SL0454A00
1SL0455A00
1SL0456A00

Full covers

Description	Code	Package/ No. of pieces
Full cover for size 1 switchboards	1SL0451A00	1/1
Full cover for size 2-3 switchboards	1SL0452A00	1/1
Full cover for size 4 switchboards	1SL0454A00	1/1
Full cover for size 5 switchboards	1SL0455A00	1/1
Full cover for size 6 switchboards	1SL0456A00	1/1



EN0105K
EN0150K
EN0204K

Ventilation kit IP21/54

- Composed of plastic grilles (ABS self-extinguishing UL94V0) and filter
- Degree of protection without filter IP21
- Degree of protection with filter IP54
- Equipped with pre-mounted gasket

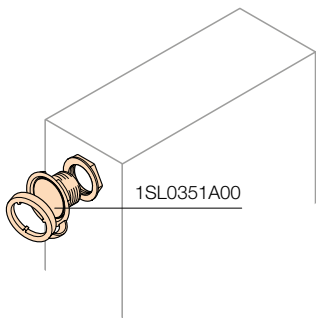
Description	Dimensions WxW (mm)	Code	Package/ No. of pieces
Grille + air filter kit	105x105	EN0105K	1/1
Grille + air filter kit (cannot be used with Size 1)	150x150	EN0150K	1/1
Grille + air filter kit (cannot be used with Size 1)	204x204	EN0204K	1/1

Screws not included, use 4 self-tapping screws 2.9x13 or order Code 1SL0384A00

Gemini switchboards

Ordering codes

2

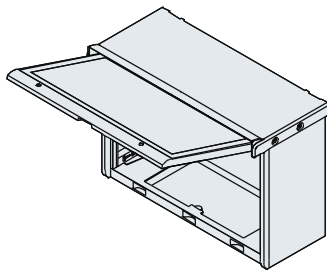


Accessories

Anti-condensation kit

- Kit made of special material to prevent condensation from forming inside the switchboard: it includes **GORE™ MEMBRANE VENTING**
- Impermeable to water (pressure): 0.6 bar/60 sec.
- Air flow: 400 ml/min. (dp = 70 mbar)
- 1 kit for sizes 1-2, 2 kits for sizes 3-4 and 3 kits for sizes 5-6 are recommended to guarantee adequate dissipation. In any case the number of kits to be installed depends on the number and type of devices installed inside the switchboard.

Description	Code	Package/ No. of piece
Anti-condensation kit	1SL0351A00	1/6



Horizontal Gemini kit

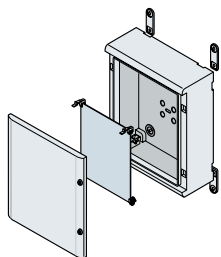
Kit to use for opening switchboard upwards in correct manner.

Description	Code	Package/ No. of pieces
Horizontal Gemini Kit size 2	1SL0470A00	1/1
Horizontal Gemini Kit size 3/4	1SL0471A00	1/1
Horizontal Gemini Kit size 5	1SL0472A00	1/1
Horizontal Gemini Kit size 6	1SL0473A00	1/1

Other accessories

Description	Code	Package/ No. of pieces
Universal drill bit	12 849	1/30
Module covers in grey RAL 7035, 4 modules	12 863	25/300
Deep adapters	12 851	10/80
Small bag containing base plates	1SL0380A00	1/10
Small bag containing DIN supports	1SL0381A00	1/10
Small bag containing partial plate	1SL0382A00	1/10
Small bag containing screws and inserts	1SL0397A00	1/10
Small bag containing ventilation kit fastening screws	1SL0384A00	10/50
Spare spanner	1SL0457A00	1/10

Examples of configurations

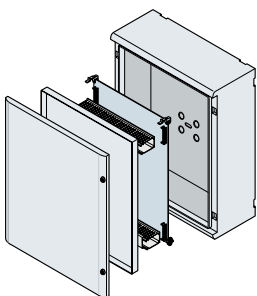


Gemini Switchboard Size 1

Dim. 300x250x180 (400x335x210) mm (external hxwxd) IP66

Description	Code		Q.ty
Enclosure + opaque door	1SL0201A00		1
Metal back plate	1SL0259A00		1
Counterdoor	1SL0251A00		1
Wall fixing brackets	1SL0342A00		1

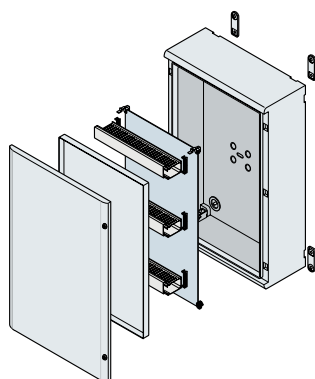
2



Gemini Switchboard Size 2

Dim. 450x375x230 (550x460x260) mm (external hxwxd) IP66

Description	Code		Q.ty
Enclosure + opaque door	1SL0202A00		1
Metal back plate	1SL0260A00		1
Counterdoor	1SL0252A00		1



Gemini Switchboard Size 3

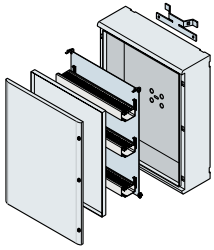
Dim. 600x375x230 (700x460x260) mm (external hxwxd) IP66

Description	Code		Q.ty
Enclosure + opaque door	1SL0203A00		1
Metal back plate	1SL0269A00		1
Counterdoor	1SL0253A00		1
Wall fixing brackets	1SL0342A00		1

Gemini switchboards

Examples of configurations

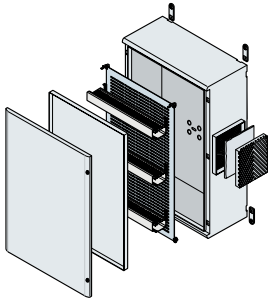
2



Gemini Switchboard Size 4

Dim. 600x500x230 (700x590x260) mm (external hxwxh) IP66

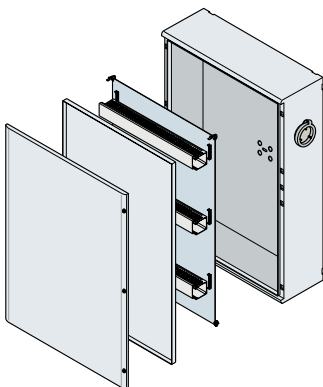
Description	Code			Q.ty
Enclosure + opaque door	1SL0204A00			1
Metal back plate	1SL0262A00			1
Counterdoor	1SL0254A00			1
Kit for fixing to pole	1SL0345A00			1



Gemini Switchboard Size 5

Dim. 750x500x330 (855x590x360) mm (external hxwxh) IP66

Description	Code			Q.ty
Enclosure + opaque door	1SL0205A00			1
Perforated back plate	1SL0279A00			1
Counterdoor	1SL0255A00			1
Wall fixing brackets	1SL0342A00			1
Ventilation Kit	1SL0350A00			1



Gemini Switchboard Size 6

Dim. 900x750x330 (1005x840x360) mm (external hxwxh) IP66

Description	Code			Q.ty
Enclosure + opaque door	1SL0206A00			1
Metal back plate	1SL0264A00			1
Counterdoor	1SL0256A00			1
Triangular lock	1SL0341A00			3
Anticondensation Kit	1SL0351A00			3

SR2 - SR2 EMC Enclosures

SR2 Enclosures

General characteristics	3/2
Selection table	3/5
Ordering codes	3/6

SR2 EMC Enclosures

General characteristics and ordering codes	3/22
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SR2 Enclosures

General characteristics

The range of SR2 enclosures is a complete offer of monobloc enclosures for constructing small and medium-sized electric automation, switching and control switchboards.

3

The SR2 enclosures come from the experience ABB has gained over the years in building IP65 metal structures (in accordance with the IEC 60529 Standard), together with the innovative new production process used for construction and patented by ABB. The typical use of SR2 Enclosures is to make switchgear and controlgear switchboards for a very wide variety of industrial machines: from large machinery with automated production lines or parts of these, down to the typical installations of on-board machine switchboards, boilers, heating plants and so on.

They conform to the EN 62208 Standard "Empty enclosures for low voltage protection switchgear and controlgear assemblies" and allow realization of electrical equipment conforming to the prescriptions of the IEC 60204-1 Standard "Safety of machinery. Electrical equipment of machines" and of the EN 60439- 1 Standard and the new EN 61439-1-2 Standard "Low voltage protection switchgear and controlgear for assemblies". The degree of protection, in accordance with the IEC 60529 Standard

"Degrees of protection of enclosures (IP Code)", is IP65. The SR2 enclosures have also passed the control required to obtain the UL (Underwriters Laboratories) and CSA (Canadian Standards Association) Type 12 marks.

The SR2 enclosures also allow secondary distribution switchboards to be made, thanks to the possibility, in the 400, 600 and 800 mm widths, of installing the whole range of apparatus and modular circuit-breakers on DIN rails combined with special pre-drilled and hinged modular front panels, thereby allowing construction of AS/ANS type electrical switchgear conforming to the IEC 60439-1 Standard and the new EN 61439-1-2 Standard. A single line of metalwork structures therefore allows construction of automation and secondary and end distribution electrical switchboards thanks to the availability of a series of accessories (modular panels, DIN rails) and to the possibility of stacking the enclosures.



The SR2 enclosures are available in two versions (blind door or glazed door) and in 23 different dimensions, as well as a further 19 combinations obtained by stacking the enclosures, up to a maximum height of 2000 mm, which guarantee ample selection possibilities for the various end applications.

The SR2 enclosures have been designed to fulfil all the typical needs of the builder or installer of switchgear in the best way possible and the user is presented with a unique ensemble of functional characteristics:

- wide dimensional range
- certified IP65 degree of protection
- internal galvanised sheet mounting plate with 20/10 thickness (made to allow threaded holes to be made easily), adjustable in depth by using a special accessory
- fairlead plate screwed on (at top and bottom) made of 15/10 thick galvanised sheet, with a sealing gasket applied inside
- complete reversibility of the enclosure, so the door can open either on the right or on the lefthand side
- possibility of installing all the apparatus and modular circuit-breakers on a DIN rail combined with a hinged modular panel.

The standard colour is RAL 7035 orange peel. On request, the SR2 enclosures can be ordered in a wide range of RAL colours (see page 7/12).

Both the enclosures with glazed door or blind door can be stacked: stacking is done simply by removing the fairlead plates and inserting the IP65 sealing gasket (GZ...), made of neoprene with closed cells.

Assembly of the stacked enclosures is carried out by means of the same holes used for the fairlead plates.

The door is supplied with the enclosure (single code) so as to reduce the number of articles and assembly times.



SR2 Enclosures

General characteristics

The range is completed with a series of accessories: brackets for wall assembly, rain shield top cover, locks of various types, internal document pocket, spacers, and spray paint for touching up. It is possible floor fixing by means plinth.

3



Plastic document pocket, RAL 7035, size A4, the pocket is apply within the solid doors wider than 400 mm, with stickers provided.



Many closure systems can replace the standard closures of the external doors. The inserts are interchangeable and easily replaced by loosening a nut.


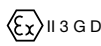


The brackets for wall mounting allows installation of the boxes on the wall using the holes located on the back of the enclosure.



The bars, made of electrolytic copper with M6 threaded holes in 25 mm, can be mounted on mounting plates using the appropriate supports.

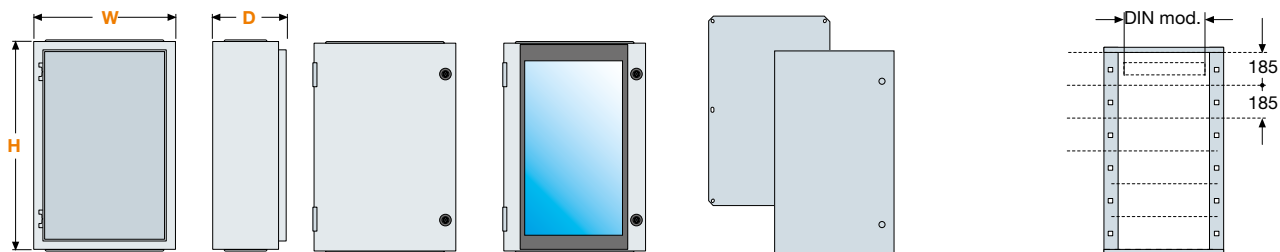
Technical characteristics

Conformity with Standard	IEC 62208, IEC 61439-1-2	
Degree of protection	IP65 (IEC 60529) TYPE 12 (Normativa UL)	
Degree of mechanical strength	IK10 blind door IK09 glazed door (IEC 62262)	
Certifications	 	
Type of material	Metallic	
Installation site	Indoors	
Fixing method	floor/wall	
Normal service conditions - ambient temperature	from -5 up to +40°C	
Operating climate (t°/Ur%)	constant	23°C/83% - 40°C/93%
	variable	23°C/98% - 40°C/98%

SR2 Enclosures

Selection table

Rapid selection table



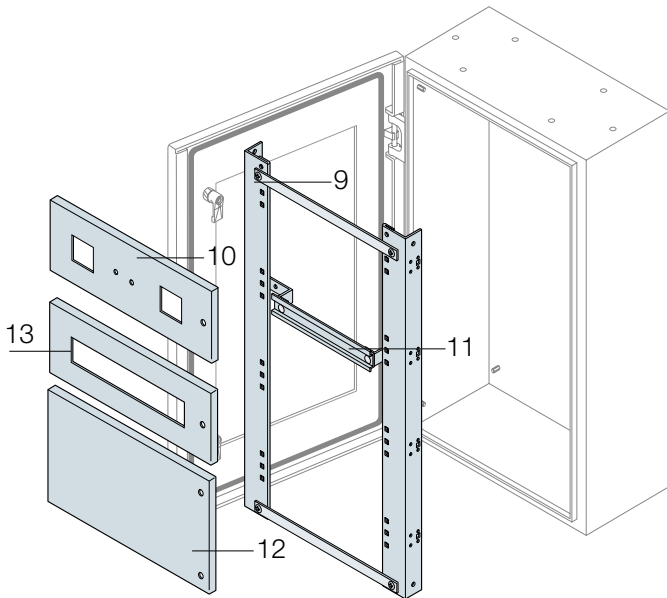
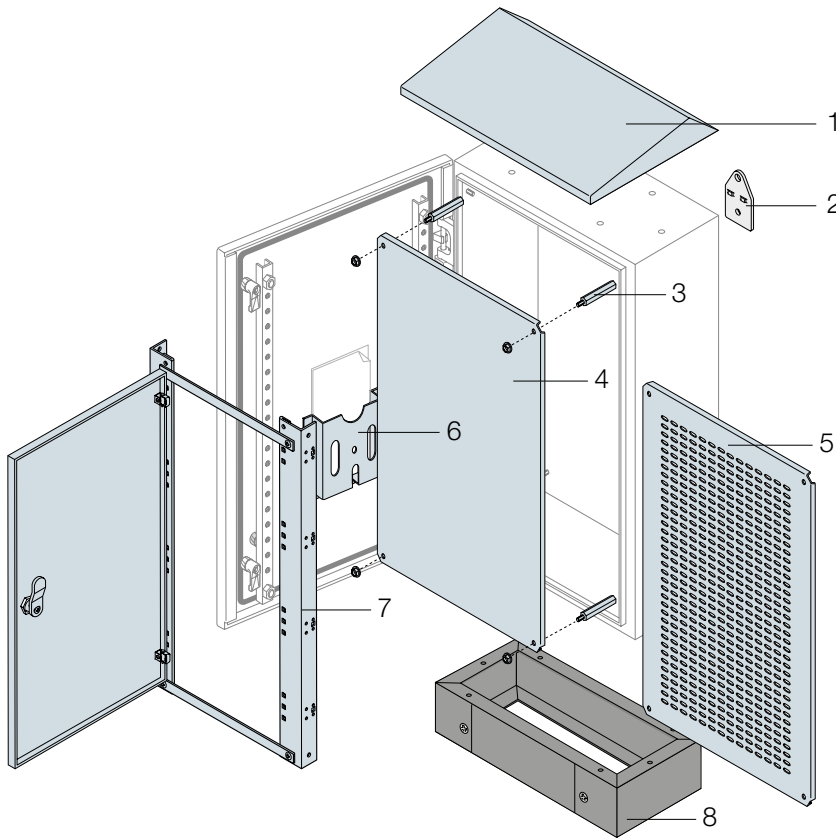
Overall dimensions			Enclosures		Kit for automation		Kit for distribution Supports for mounting modular panels				
H mm	W mm	D mm	Enclosures with blind door + back plate	with glazed door *	Blind counterdoor	Back plate	No. vertical mod. H=185mm	No. DIN mod. per row	Total modules	DIN Supports	
300	200	150	SRN3215K								
	300		SRN3315K								
	400		SRN3415K								
400	300	150	SRN4315K								
	300		SRN4320K								
	400		200	SRN4420K							
	600		SRN4620K								
500	300	200	SRN5320K								
	400		SRN5420K	SRN5420VK*	KC5040K	PF5040	2	14	28	KD5040K	
	400		250	SRN5425K	SRN5425VK*	KC5040K	PF5040	2	14	28	KD5040K
600	400	200	SRN6420K	SRN6420VK*	KC6040K	PF6040	3	14	42	KD6040K	
	400		250	SRN6425K	SRN6425VK*	KC6040K	PF6040	3	14	42	KD6040K
	600		250	SRN6625K							
700	500	200	SRN7520K	SRN7520VK*	KC7050K	PF7050					
	500		250	SRN7525K	SRN7525VK*	KC7050K	PF7050				
800	600	250	SRN8625K	SRN8625VK*	KC8060K	PF8060	4	25	100	KD8060K	
	600		300	SRN8630K	SRN8630VK*	KC8060K	PF8060	4	25	100	KD8060K
	800		300	SRN8830K							
1000	600	250	SRN10625K	SRN10625VK*	KC1060K	PF1060	5	25	125	KD1060K	
	600		300	SRN10630K	SRN10630VK*	KC1060K	PF1060	5	25	125	KD1060K
	800		300	SRN10830K	SRN10830VK*	KC1080K	PF1080	5	36	180	KD1080K
1200	600	300	SRN12630K	SRN12630VK*	KC1260K	PF1260	6	25	150	KD1260K	
	800		300	SRN12830K	SRN12830VK*	KC1280K	PF1280	6	36	216	KD1280K

* The mounting plate must be ordered separately.

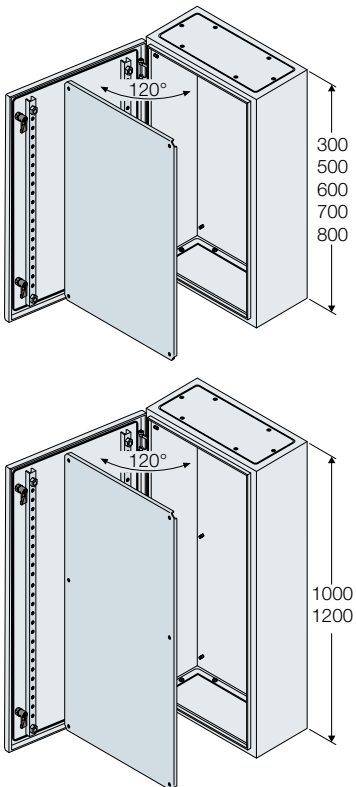
SR2 Enclosures

Ordering codes

3



1	Spray protection roof	
Page.....		3/6
2	Wall-mounting brackets	
Page.....		3/11
3	Spacers for back plates	
Page.....		3/10
4	Blind internal plate	
Page.....		3/9
5	Slotted internal plate	
Page.....		3/10
6	Document pocket	
Page.....		3/16
7	Counterdoor	
Page.....		3/9
8	Plinth	
Page.....		3/11
9	Frame for DIN rail	
Page.....		3/13
10	Modular panels for apparatus	
Page.....		3/14
11	DIN rail	
Page.....		3/14
12	Blind modular panels	
Page.....		3/14
13	Modular panel for DIN rail	
Page.....		3/14



SR2 Enclosures with blind door (internal plate included)

The enclosures with blind door, typically for making automation switchgear, are already fitted with the internal galvanised sheet mounting plate.

Enclosures with blind door (internal plate included)						
Dimensions (mm)			Code	Article	Price EUR	Package/ No. of pieces
H	W	D				
300 ⁽¹⁾	200	150	SRN3215K			1/1
	300	150	SRN3315K			1/1
	400	150	SRN3415K			1/1
400 ⁽¹⁾	300	150	SRN4315K			1/1
	300	200	SRN4320K			1/1
	400	200	SRN4420K			1/1
500 ⁽¹⁾	600	200	SRN4620K			1/1
	300	200	SRN5320K			1/1
	400	200	SRN5420K			1/1
600	400	250	SRN5425K			1/1
	400	200	SRN6420K			1/1
	400	250	SRN6425K			1/1
700	600	250	SRN6625K			1/1
	500	200	SRN7520K			1/1
	500	250	SRN7525K			1/1
800	600	250	SRN8625K			1/1
	600	300	SRN8630K			1/1
	800	300	SRN8830K			1/1
1000*	600	250	SRN10625K			1/1
	600	300	SRN10630K			1/1
	800	300	SRN10830K			1/1
1200*	600	300	SRN12630K			1/1
	800	300	SRN12830K			1/1

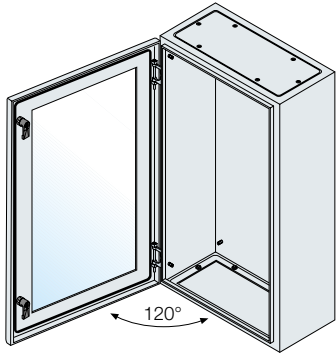
⁽¹⁾ The enclosures with height less or equal to 500mm have only a closing box.

* Plates height 1000 / 1200mm have six mounting points .

SR2 Enclosures

Ordering codes

3



Enclosures with glazed door

The enclosures with glazed door are also used for distribution configurations. The internal equipment is made, alternatively, by selecting the special kits:

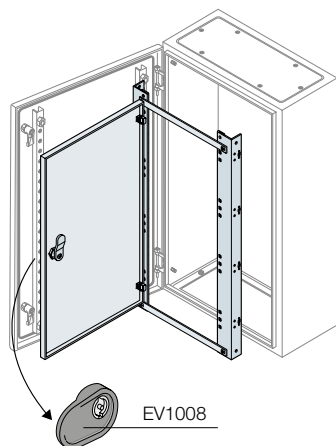
- KD... (Distribution Kit) consisting of a pair of functional uprights for assembly of the modular panels (to be ordered separately) and of any compensation panel (see page 2/8).

The modular panels, which can also be installed on the enclosures with blind door with the help of the KD.. kit itself, are all hinged and have vertical modularity of 185 mm.

Enclosures with glazed door

Dimensions (mm)			Code	Article	Price EUR	Package/ No. of pieces
H	W	D				
500 ⁽¹⁾	400	200	SRN5420VK			1/1
	400	250	SRN5425VK			1/1
600	400	200	SRN6420VK			1/1
	400	250	SRN6425VK			1/1
700	500	200	SRN7520VK			1/1
	500	250	SRN7525VK			1/1
800	600	250	SRN8625VK			1/1
	600	300	SRN8630VK			1/1
1000	600	250	SRN10625VK			1/1
	600	300	SRN10630VK			1/1
	800	300	SRN10830VK			1/1
1200	600	300	SRN12630VK			1/1
	800	300	SRN12830VK			1/1

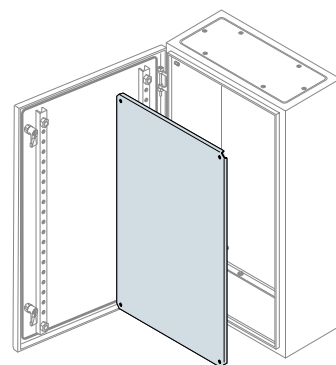
⁽¹⁾ The enclosures with height less or equal to 500mm have only a closing box.



Blind counterdoor

The internal counterdoor guarantees IP20 degree of protection. Made of steel sheet 15/10mm thick, galvanized and painted orange peel RAL 7035 colour, complete with the EV1008 ergonomic box and insert with double tongue.

Blind counterdoor			
Dimensions (mm)			
H	W	Code	Package/ No. of pieces
500	400	KC5040K	1/1
600	400	KC6040K	1/1
700	500	KC7050K	1/1
800	600	KC8060K	1/1
1000	600	KC1060K	1/1
1000	800	KC1080K	1/1
1200	600	KC1260K	1/1
1200	800	KC1280K	1/1



Blind internal mounting plate

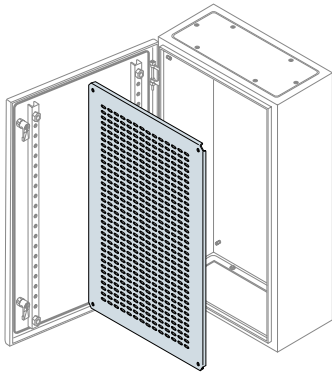
Internal galvanised sheet mounting plate 20/10mm thick complete with fixing with small items provided. Possibility of adjusting the depth with the help of a special spacer kit (to be ordered separately).

Blind back plate for enclosure			
Dimensions (mm)			
H	W	Code	Package/ No. of pieces
300	200	PF3020	1/1
300	300	PF3030	1/1
300	400	PF3040	1/1
400	300	PF4030	1/1
400	400	PF4040	1/1
400	600	PF4060	1/1
500	300	PF5030	1/1
500	400	PF5040	1/1
600	400	PF6040	1/1
600	600	PF6060	1/1
700	500	PF7050	1/1
800	600	PF8060	1/1
800	800	PF8080	1/1
1000	600	PF1060	1/1
1000	800	PF1080	1/1
1200	600	PF1260	1/1
1200	800	PF1280	1/1

SR2 Enclosures

Ordering codes

3

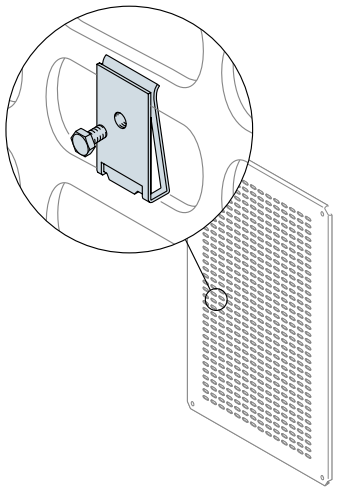


Slotted internal mounting plate

Fixing with small items provided. Possibility of adjusting the depth with the help of a special spacer kit (to be ordered separately).

Back plate for enclosure

Dimensions (mm)		Code	Package/ No. of pieces
W	H		
200	300	TQ3020	1/1
300	300	TQ3030	1/1
400	300	TQ3040	1/1
300	400	TQ4030	1/1
400	400	TQ4040	1/1
600	400	TQ4060	1/1
300	500	TQ5030	1/1
400	500	TQ5040	1/1
400	600	TQ6040	1/1
600	600	TQ6060	1/1
500	700	TQ7050	1/1
600	800	TQ8060	1/1
800	800	TQ8080	1/1
600	1000	TQ1060	1/1
800	1000	TQ1080	1/1
600	1200	TQ1260	1/1
800	1200	TQ1280	1/1



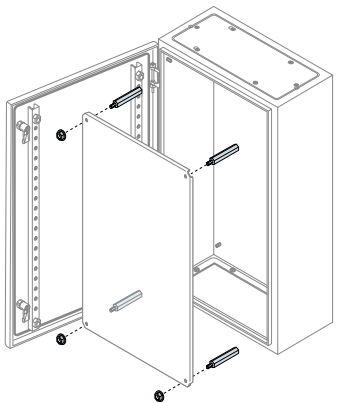
Clip nuts

For slotted plates with M6x10mm hexagonal head screws.

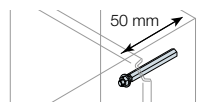
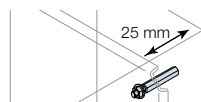
Description	Code	Package/ No. of pieces
No.20 clip nuts	TQ6610	1/20

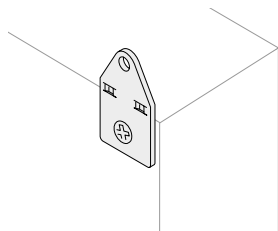
Spacer Kit for adjusting the depth of the back plates

Kit consisting of 12 spacers for fixing the back plate with the possibility of adjusting the depth with 25 mm pitch.



Description	Code	Package/ No. of pieces
Spacers 25mm long	AA8025	1/12
Spacers 50mm long	AA8050	1/12



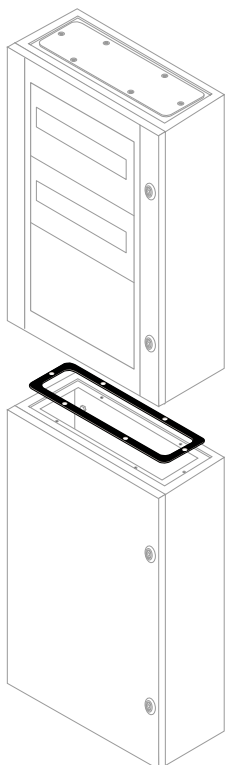


Brackets for wall fixing

These allow wall installation of the enclosures and are mounted by using the special holes positioned on the rear of the enclosures.

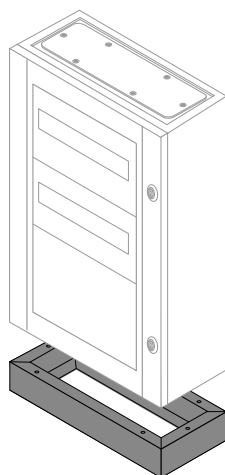
Description	Code	Package/ No. of pieces
Brackets for wall fixing	AA1206	1/4

3



Accessories for stacking

Dimensions (mm)		Code	Package/ No. of pieces
W	D		
IP65 gasket			
400	200	GZ4020	1/1
	250	GZ4025	1/1
600	200	GZ6020	1/1
	250	GZ6025	1/1
	300	GZ6030	1/1
800	300	GZ8030	1/1

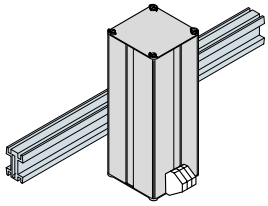


Plinth

Steel plinth 25/10 thick grey RAL7012 color.

Plinth			Code	Package/ No. of pieces
Dimensioni (mm)				
W	D	H		
400	200	100	ZA4020	1/1
	250	100	ZA4025	1/1
600	250	100	ZA6025	1/1
	300	100	ZA6030	1/1
800	300	100	ZA8030	1/1

SR2 Enclosures Ordering codes



3

Temperature management

Heater for IP20 electrical switchboards

Their use prevents condensation in the electric cabinets. They consist of a heating element (PTC thermistor) inserted in an aluminium alloy ground plate. The PTC thermistor is a component which modifies its impedance according to the operating temperature. It is intrinsically stable and ensures primary safety features for the heater and service stability. The main qualities of the heaters using PTC are:

- electrical absorption (or dissipated power) which is almost constant in the range of power supply voltage between 100 and 250V;
- electrical absorption bound by inverse law to the trend of the ambient temperature.

The special tubular geometry of the ground plate allows efficient thermal exchange with the heating element. This allows high powers and limited overall dimensions (especially in width and depth); Snap-on assembly on 35 mm DIN rail. Requires a thermostat.

Description	Dimensions (mm)			Code	Package/ No. of pieces
	H	W	D		
Anti-condensation heater 30W, 110-240 Vac-dc	115	42	42	VA7930	1/1
Anti-condensation heater 50W, 110-240 Vac-dcc	165	42	42	VA7950	1/1
Anti-condensation heater 75W, 110-240 Vac-dc	210	42	42	VA7975	1/1
Anti-condensation heater 100W, 110-240 Vac-dc	165	42	51	VA7910	1/1
Anti-condensation heater 150W, 110-240 Vac-dc	146	82	51	VA7915	1/1
Anti-condensation heater with fan 300W, 230 Vac-dc	148	82	91	VA8300	1/1

All the heaters with PTC absorb a higher power than the rated one on inrush according to a transitory which lasts a few tenths of a second.

If the heaters are to be supplied by means of an auxiliary transformer, its apparent power must be sized taking 1.5 times the rated power of the heaters with natural aeration and twice those with forced ventilation into consideration.

IEC 890 method for calculating the effective cooling surface (CEI 17-43 method)

The total power dissipation P of an enclosure is linked to the exchange effective dissipating surface S, the ΔT difference between the inner and outer temperature and the k coefficient of heat exchange relative to the material of the enclosure:

$$P = k * \Delta T * S$$

$$k = 5,5 \text{ for painted steel}$$

$$\Delta T = T1 - T2;$$

$$T1 = \text{dew point temperature (on average } 25^{\circ}\text{C)}$$

$$T2 = \text{minimum ambient temperature.}$$

The exchange surface S can be calculated using the following table taken from the CEI 17-43.

Disposition of the cabinet	Calculating the enclosure surface S (mm ²)	Dimensions (m)
Detached, exposed on all sides	$S = 1,8 \times H \times (L+P) + 1,4 \times L \times P$	L = width H = height P = depth
For closed to a wall structures	$S = 1,4 \times L \times (H+P) + 1,8 \times P \times H$	
Left or right exposed structure	$S = 1,4 \times P \times (H+L) + 1,8 \times L \times H$	
Left or right closed to a wall structure	$S = 1,4 \times H \times (P+L) + 1,4 \times L \times P$	
Central exposed structure	$S = 1,8 \times L \times H + 1,4 \times L \times P + P \times H$	
Central closed to a wall structure	$S = 1,4 \times L \times (H+P) + P \times H$	
Central closed to a wall structure, with covered roof	$S = 1,4 \times L \times H + 0,7 \times L \times P + P \times H$	

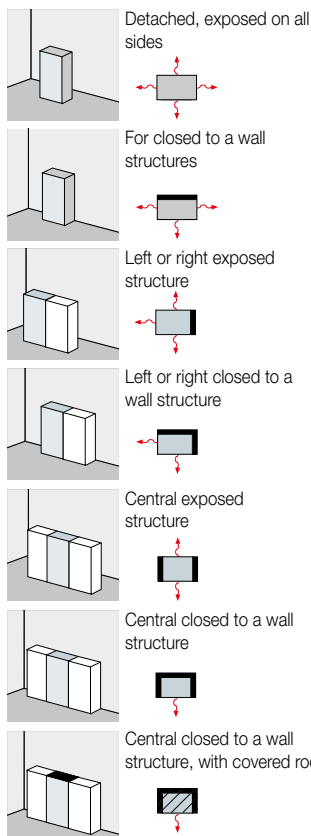
Using a SRN8630K box, in "for closed to a wall structures" case we will obtain:

$$T1 = 25^{\circ}\text{C}; T2 = 20^{\circ}\text{C}; K = 5,5; \Delta T = (25-20) = 5^{\circ}\text{C}; S = 1,4\text{m}^2$$

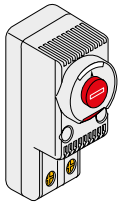
The total power dissipation P obtained will be:

$$P = k * \Delta T * S = 38,5 \text{ W}$$

The recommended heater is VA7950 (50W).



> Rapid selection table page 3/5 > In-depth technical information page 7/1 > Overall dimensions page 9/1



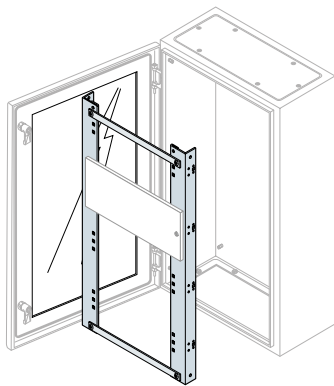
Temperature management

IP20 Thermostat

Conforms to EN 60730-1, CE and cURus standards, IP20 degree of protection. Grey RAL 7035 colour; electrical life 100,000 cycles. Dimensions (HxWxD) 68x29x45mm, can be mounted on DIN rail. The version with NO (normally open) contact allows closure of a circuit activating ventilation, air conditioning, or alarms. The version with NC (normally closed) contact allows opening of a circuit, disconnecting any anti-condensation resistances.

Description	Standard power supply V~/50-60Hz		Code		Package/ No. of pieces
NO ventilation thermostat	12-60 V d.c.; 110-250V a.c.		EN0101K		1/1
NC heating thermostat	12-60 V d.c.; 110-250V a.c.		EN0102K		1/1

Code	Standard power supply V~/50-60Hz	Contact capacity Load Ω	Load L	Temperature scale	Type of contact	Weight
EN0101K	12-60 V d.c.; 110-250V a.c.	10A	2A	-10 +80 °C	NO	54g
EN0102K	12-60 V d.c.; 110-250V a.c.	10A	2A	-10 +80 °C	NC	54g



Frame for DIN rail

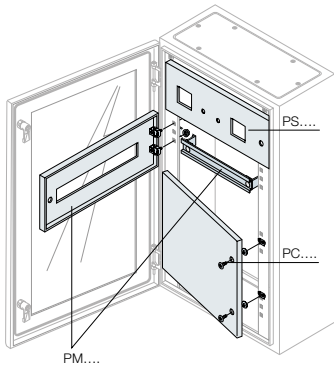
Internal supports for fixing modular panels and DIN rails, colour RAL 7035 orange peel.

Description	Dimensions (mm)		Code		Package/ No. of pieces
	H	W			
Supports 14 mod. DIN x 2 rows	500	400	KD5040K		1/1
Supports 14 mod. DIN x 3 rows	600	400	KD6040K		1/1
Supports 25 mod. DIN x 4 rows	800	600	KD8060K		1/1
Supports 25 mod. DIN x 5 rows	1000	600	KD1060K		1/1
Supports 36 mod. DIN x 5 rows	1000	800	KD1080K		1/1
Supports 25 mod. DIN x 6 rows	1200	600	KD1260K		1/1
Supports 36 mod. DIN x 6 rows	1200	800	KD1280K		1/1

SR2 Enclosures

Ordering codes

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Modular panels

Modular panels made of 12/10mm thick sheet steel painted RAL 7035 colour orange peel. The modular hinged panels can be mounted on the enclosures by using the special kit (KD...) consisting of functional uprights and compensation panel. The hinges patented by ABB, allow automatic earthing for panel contact when it is closed and are also prepared for conventional earthing (with a cable). Each modular panel (PM) has a DIN rail provided (adjustable in depth), the fixing brackets and the relative small items. Modular and circuit-breakers and Tmax moulded-case circuit-breakers up to T3 can be placed side by side on the same DIN rail using the special depth adapter AP6001. To install moulded-case circuit-breakers, it is necessary to fix the DIN rail in a position towards the back. The fixing brackets of the DIN rail allow the wiring duct to be mounted up to a maximum size of 60 x 60 mm.

Modular hinged panels for modular apparatus (DIN rail and fixing brackets included)

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
14 mod. DIN + fixing bracket	185	400	PM1414K	1/1
25 mod. DIN + fixing bracket	185	600	PM1625K	1/1
36 mod. DIN + fixing bracket	185	800	PM1836K	1/1

Modular hinged panels for measuring instruments

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
2 instruments 72 x 72mm	185	400	PS2476K	1/1
2 instruments 72 x 72mm	185	600	PS2676K	1/1
2 instruments 72 x 72mm	185	800	PS2876K	1/1

Modular hinged blind panels

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Blind panel	185	400	PC1406K	1/1
Blind panel	185	600	PC1606K	1/1
Blind panel	185	800	PC1806K	1/1
Blind panel	370	600	PC2606K	1/1
Blind panel	370	800	PC2806K	1/1

DIN rail and fixing brackets

Description	No. of modules	W (mm)	Code	Package/ No. of pieces
DIN rail and fixing brackets	14	400	GD4006	1/1
DIN rail and fixing brackets	25	600	GD6006	1/1
DIN rail and fixing brackets	36	800	GD8006	1/1

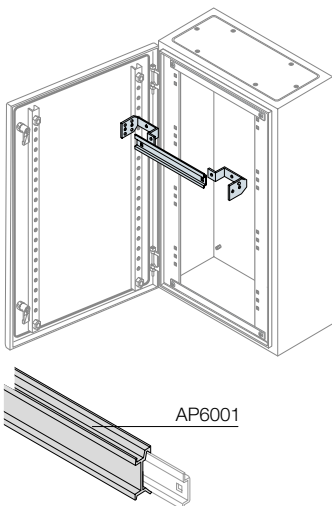
Depth adapter

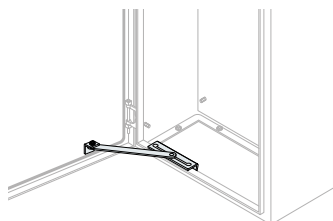
No.1 depth adapter for Tmax T1-T2-T3-XT1-XT3 W=600mm	AP6001		1/4
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Polished flange for DIN-Rail mounting

Description	Code	Package/ No. of pieces
Polished flange for XT1 3P mounted on DIN rail	AD3301	1/1
Polished flange for XT1 4P mounted on DIN rail	AD3302	1/1
Polished flange for XT3 3P mounted on DIN rail	AD3303	1/1
Polished flange for XT3 4P mounted on DIN rail	AD3304	1/1

Already supplied in the DIN-Rail mounting kit for breakers in MCCBs catalogue

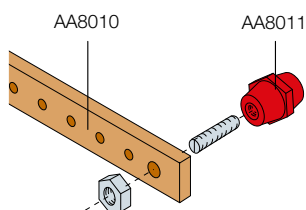




Door anti-closure device

It can't be mounted with the inner-door or with modular/blind panels mounted down in structure and hinged.

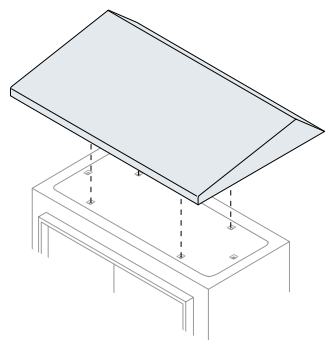
Description	Code	Package/ No. of pieces
Door anti-closure device	EV0015	1/4



Neutral or earthing busbars

The busbars, made of electrolytic copper with M6 threaded holes with 25 mm pitch, can be mounted on the back plates by means of the special supports. They must be sized according to the enclosure and the position they are installed in.

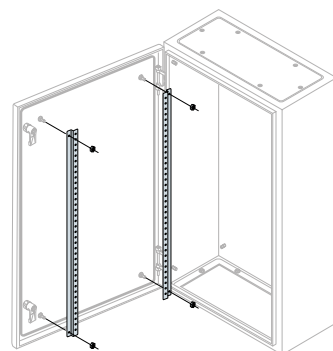
Description	W (mm)	Code	Package/ No. of pieces
No. 4 busbars sect. 20x5mm	1000	AA8010	1/4
No.5 support for busbar		AA8011	1/5



Spray protection roofs

To improve protection against entry of liquids and rain. Made of 15/10mm thick sheet steel, painted RAL 7035 colour orange peel.

Spray protection roof			
Dimensions (mm)			
W	D	Code	Package/ No. of pieces
200	150	TT2015K	1/1
300	150	TT3015K	1/1
400	150	TT4015K	1/1
300	200	TT3020K	1/1
400	200	TT4020K	1/1
500	200	TT5020K	1/1
600	200	TT6020K	1/1
400	250	TT4025K	1/1
500	250	TT5025K	1/1
600	250	TT6025K	1/1
600	300	TT6030K	1/1
800	300	TT8030K	1/1



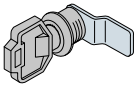
Shaped sections for accessories

These allow fixing of accessories (e.g. wiring ducts) inside the blind doors. They consist of a pair of vertical cross-pieces made of 15/10mm thick white galvanised sheet, pre-drilled with 25 mm pitch. In the enclosures with 1000 and 1200 mm height with blind door, the shaped sections are already provided.

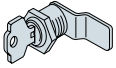
Description	Dimensions (mm) H	Code	Package/ No. of pieces
No. 2 shaped sections for door	600	TS6009	1/2
No. 2 shaped sections for door	700	TS7009	1/2
No. 2 shaped sections for door	800	TS8009	1/2

SR2 Enclosures

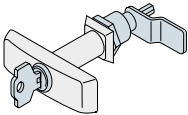
Ordering codes



AA8001



AA8002



AA8003



EV1008

Closing systems

These can replace the standard closures of the external doors. The inserts are interchangeable and easily replaced by loosening a single nut.

Description	Code	Package/ No. of pieces
Box Ø 19 mm double tongue and plastic key (spare part)	AA8001	1/1
Box Ø 19 mm with security insert and Yale type key	AA8002	1/1
Box Ø 19 mm with handle and Yale type key	AA8003	1/1
Box Ø 19 mm with triangular insert	AA5200	1/1
Plastic key for triangular insert AA5200	AA5190	1/1
Ergonomic box complete with double tongue insert	EV1008	1/1
Single code Yale insert	EV1036	1/1
Ronis 455 insert for	EV1037	1/1
3mm Double tongue insert	EV1039	1/1

Document pocket RAL 7035

Made of plastic, RAL 7035 colour, A4 size. The pocket can be glued inside the blind door with a width of more than 400 mm, using the adhesives provided.

Description	Code	Package/ No. of pieces
Plastic document pocket for A4	EV1075K	1/1

Special Painting Service

Special painting service has to manage with code of enclosure SRN....SPEC (e.g. SRN4320SPEC VERNRSR + note about color required). It is necessary specify the color required in the order. Minimum order quantity 4 pieces. For any other component or further information, please contact you local sales network.

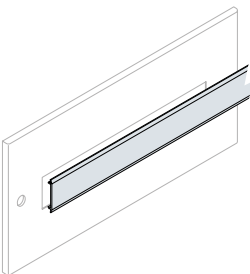
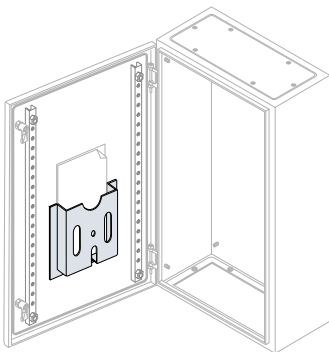
Description	Code	Package/ No. of pieces
Extra cost for special SR painting	VERNSR	

See page 8/13 for the colours available.

Accessories for DIN panel

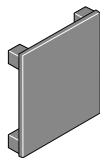
Hole covering strip RAL7035 colour

Description	Code	Package/ No. of pieces
No.10 hole covers W=2000mm, grey	AD1086	1/10
No.3 hole covers 24 DIN modules W=600mm	AD1088	1/3
No.3 hole covers 36 DIN modules W=800mm	AD1089	1/3





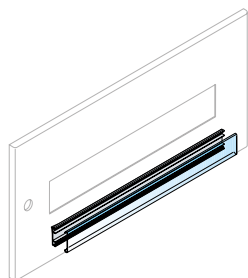
EV1137



EV1135
EV1136

Closing plug for instrument holder panels

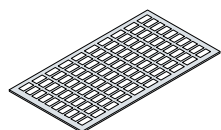
Description	Code	Package/ No. of pieces
No.10 closing plug for instrument holder panels 72x72mm	EV1135	1/10
No.5 closing plug for instrument holder panels 96x96mm	EV1136	1/5
No.50 tappi di chiusura per pulsanti Ø22mm	EV1137	1/50



AD1101-AD1102
AD1103-AD1104

Adhesive name label holders

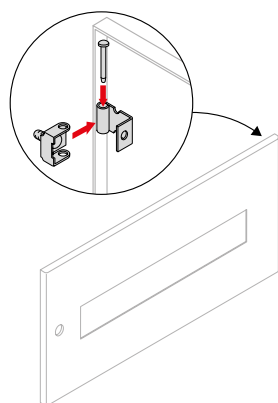
Description	Dimensions (mm) W	Code	Package/ No. of pieces
No. 20 label holders 18 DIN mod	325	EH2118	1/20
No. 20 label holders 29 DIN mod	525	EH2129	1/20
No. 20 label holders 24 DIN mod	432	AD1600	1/20
No. 20 label holders 36 DIN mod	634	AD1800	1/20



EH2118-EH2129
AD1600-AD1800

Etichette scrivibili con sistema Grafoplast compatibile

Description	No. of DIN mod.	Code	Package/ No. of pieces
No. 288 labels 1 DIN mod.	1	AD1101	1/288
No. 192 labels 2 DIN mod.	2	AD1102	1/192
No. 96 labels 3 DIN mod.	3	AD1103	1/96
No. 96 labels 4 DIN mod.	4	AD1104	1/96



Hinges and rapid closures for panels

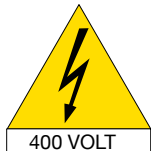
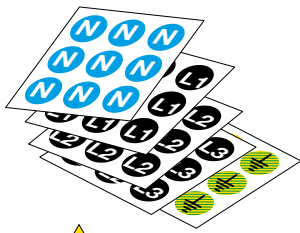
Description	Code	Package/ No. of pieces
No. 10 hinges for panels	EH1889 ⁽¹⁾	1/10
No. 5 rapid closures for front panels	EH1890	1/5

⁽¹⁾ Use No.2 hinges for panel H=150/200/300/400mm, No.3 hinges for panel H=500/600mm.

SR2 Enclosures

Ordering codes

3



Marking

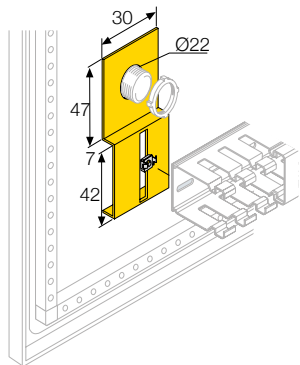
Description	Code	Package/ No. of pieces
No.5 adhesive labels ABB-IS2 W=1000mm	EV1157	1/5
No.490 adhesive labels Ø 12mm N symbol	EV1150	1/490
No.490 adhesive labels Ø 12mm L1 symbol	EV1151	1/490
No.490 adhesive labels Ø 12mm L2 symbol	EV1152	1/490
No.490 adhesive labels Ø 12mm L3 symbol	EV1153	1/490
No.490 adhesive labels Ø 12mm T symbol	EV1154	1/490
No.10 triangular adhesive labels 125mm with 400V lightning arrow symbol	EV1155	1/10
No.100 triangular adhesive labels 50mm with lightning arrow symbol	EV1156	1/100

Screws for apparatus

Description	Code	Package/ No. of pieces
No.1000 perforating screws 4.2x13mm cross slotted head	EV1100	1/1000
No.1000 perforating screws 4.2x19mm cross slotted head	EV1101	1/1000
No.50 trilobed screws M6 L=10mm	AD1033	1/50

Wiring duct support brackets

Description	Code	Package/ No. of pieces
No. 100 wiring duct support brackets on upright structure	EV1131	1/100



Spare parts

Description	Code	Package/ No. of pieces
Ergonomic box complete with double tongue insert (without tongue)	EV1008	1/1
N. 10 hinges for SR2 enclosures + countersunk rivets	AA1204	1/1
N. 16 screws and nuts M6x14 for flange	AA1203	1/2
N. 2 fairlead plates for SRN3215K	FLN3215K	1/2
N. 2 fairlead plates for SRN3315K-SRN4315K	FLN3315K	1/2
N. 2 fairlead plates for SRN3415K	FLN3415K	1/2
N. 2 fairlead plates for SRN4320K-SRN5320K	FLN4320K	1/2
N. 2 fairlead plates for SRN4420K-SRN5420K-SRN6420K	FLN4420K	1/2
N. 2 fairlead plates for SRN5425K-SRN6425K	FLN4425K	1/2
N. 2 fairlead plates for SRN4620K	FLN4620K	1/2
N. 2 fairlead plates for SRN6625K-SRN8625K-SRN10625K	FLN6625K	1/2
N. 2 fairlead plates for SRN7520K	FLN7520K	1/2
N. 2 fairlead plates for SRN7525K	FLN7525K	1/2
N. 2 fairlead plates for SRN8630K-SRN10630K-SRN12630K	FLN8630K	1/2
N. 2 fairlead plates for SRN8830K-SRN10830-SRN12830K	FLN8830K	1/2
Blind door 1000x600mm (hxl)	PRN1066K	1/1
Blind door 1000x800mm (hxl)	PRN1086K	1/1
Blind door 1200x600mm (hxl)	PRN1266K	1/1
Blind door 1200x800mm (hxl)	PRN1286K	1/1
Blind door 300x200mm (hxl)	PRN3026K	1/1
Blind door 300x300mm (hxl)	PRN3006K	1/1
Blind door 300x400mm (hxl)	PRN3046K	1/1
Blind door 400x300mm (hxl)	PRN4036K	1/1
Blind door 400x400mm (hxl)	PRN4046K	1/1
Blind door 400x600mm (hxl)	PRN4066K	1/1
Blind door 500x300mm (hxl)	PRN5036K	1/1
Blind door 500x400mm (hxl)	PRN5046K	1/1
Blind door 600x400mm (hxl)	PRN6046K	1/1
Blind door 600x600mm (hxl)	PRN6066K	1/1
Blind door 700x500mm (hxl)	PRN7056K	1/1
Blind door 800x600mm (hxl)	PRN8066K	1/1
Blind door 800x800mm (hxl)	PRN8086K	1/1
Glazed door 1000x600mm (hxl)	PTN1066K	1/1
Glazed door 1000x800mm (hxl)	PTN1086K	1/1
Glazed door 1200x600mm (hxl)	PTN1266K	1/1
Glazed door 1200x800mm (hxl)	PTN1286K	1/1
Glazed door 500x400mm (hxl)	PTN5046K	1/1
Glazed door 600x400mm (hxl)	PTN6046K	1/1
Glazed door 700x500mm (hxl)	PTN7056K	1/1
Glazed door 800x600mm (hxl)	PTN8066K	1/1
Spray paint color grey RAL7035 for structure	VB7035	1/1
Spray paint color grey RAL7012 for plinth	VB7012	1/1

SR2 Enclosures

Ordering codes



Painting Special Service

Description	Code	Package/ No. of pieces
Extra cost for special SR painting	VERNSR	

Standard size enclosures, standard colour

Special painting service with standard colour (for available colours, see page 8/13) for standard size enclosures in quantities equal to or greater than 4 units with single code to be managed with code SRN ... SPEC + VERNSR overprice equal to the number of enclosures + colour note to be specified in the order.

Example: **SRN4320SPEC** 4
VERNSR 4
COLOUR NOTE

Standard size enclosures, non-standard colour

Request feasibility of implementation by completing the relevant Form for special quotations and send it to the R&D ECS office.

Management is per offer.

If the offer is accepted and after having received it, it will be possible to place the order with the codes indicated in the offer with the following features:

Example: **SRN4320SPEC** 4
VERNSR 4
OFFER REFERENCE IN THE ORDER

Non-standard size enclosures, standard colour

Request feasibility of implementation by completing the relevant Form for special quotations and send it to the R&D ECS office.

Management is per offer.

If the offer is accepted and after having received it, it will be possible to place the order with the codes indicated in the offer, that will not be SRN...SPEC, but dummy ones:

Always remember to indicate the offer reference in the order.

Non-standard size enclosures, non-standard colour

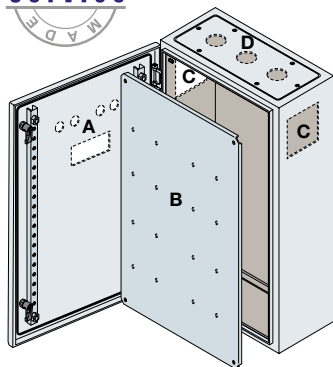
Request feasibility of implementation by completing the relevant Form for special quotations and send it to the R&D ECS office.

Management is per offer.

If the offer is accepted and after having received it, it will be possible to place the order with the codes indicated in the offer, that will not be SRN...SPEC, but dummy ones:

Always remember to indicate the offer reference in the order.

Please note that the minimum quantity is four pieces with a single code.



Special Drilling Service

The overprice amount depends on the number of individual drilled parts and not on the number of holes.

For single part it means: A-door B-plate; C-housing; D-top/bottom part.

Please note that the minimum quantity is 4 pieces with a single code.

The price of the special drilling service depends on the number of parts to be drilled and on the amount of enclosures to be drilled.

Description	Code	No. of enclosures to be drilled
Maggiorazione foratura per singola parte forata (A-B-C-D)	FORSR1	4-5-6
Maggiorazione foratura per singola parte forata (A-B-C-D)	FORSR2	7-8-9
Maggiorazione foratura per singola parte forata (A-B-C-D)	FORSR	≥ 10

3

Standard size enclosures with special drilling

The special drilling service for standard size enclosures in quantities equal to or greater than 4 units with a single code has to be managed with code SRN ... SPEC + overprice FORSR/FORSR1/FORSR2 (see table) equal to the number of enclosures and the number of parts to be drilled + hole layout to be attached to the order (see useful drilling areas, page 9/49)

Example: Enclosure (4 pcs) with door to be drilled (1 part)

Example: **Enclosure (4 pcs) with door and plate to be drilled (1 parts)**

SRN4320SPEC 4

FORSR1 4

DRAWINGS TO BE ATTACHED

Example: **Enclosure (4 pcs) with door and plate to be drilled (2 parts)**

SRN4320SPEC 4

FORSR1 8

DRAWINGS TO BE ATTACHED

Non-standard enclosure sizes, special drilling

Request feasibility of implementation by completing the relevant Form for special quotations and send it together with the drill layout to the R&D ECS office.

Management is per offer.

If the offer is accepted and after having received it, it will be possible to place the order with the codes indicated in the offer, that will not be SRN...SPEC, but dummy ones.

Always remember to indicate the offer reference in the order.

Ricordarsi sempre di indicare nell'ordine il riferimento dell'offerta.

SR2 EMC Enclosures

General characteristics and ordering codes

The range of SR2 Enclosures EMC (Electromagnetic Compatibility) version has undergone shielding efficiency tests with success according to the MIL STD 285: 1956 Standard.

3

This series of products is suitable for making small and medium-sized electric switchboards for automation, operation and control.

The electromagnetic compatibility problem also requires attention when selecting enclosures and cabinets.

The increased number of components in the operation and regulation electronics and the high processing speeds of signals increasingly often leave a possibility of introducing errors which can be attributed to electromagnetic interference.

These interferences may be caused continuously, periodically or at random, from internal or external sources, which generate electric, magnetic or electromagnetic fields.


The suitability tests according to MIL STD 285: 1956 ("Attenuation measurements for enclosures, electromagnetic shielding, for electronic test purposes, method of") have confirmed conformity of the SR2 EMC enclosure with the requirements of the standard.

The attenuation level (measured in dB) remains at high levels for a wide spectrum of frequencies (from 30MHz to 10GHz).

The SR2 EMC galvanized sheet enclosures are painted externally with orange peel RAL 7035 colour.

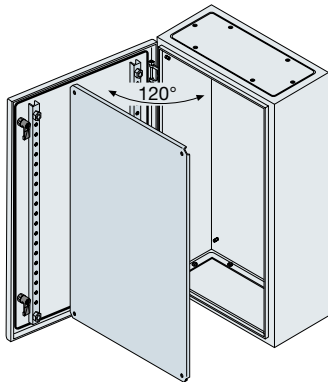
Furthermore, they do not have cable entry flanges on the roof and on the base.

Technical characteristics

Conformity with the Standard	IEC 62208	
Degree of protection	IP54 (IEC 60529)	
Degree of mechanical strength	IK10 blind door (IEC 62262)	
Certifications		
Type of material	Metallic	
Installation site	Indoors	
Fixing method	floor/wall	
Normal service conditions ambient temperature	from -5 up to +40°C	
Operating climate (t°/Ur%)	constant	23°C/83% - 40°C/93%
	variable	23°C/98% - 40°C/98%

> In-depth technical information page 7/1 > Overall dimensions page 9/1

Ordering codes



IP54 - EMC Enclosures with blind door

The enclosures with blind door, typically destined for making automation switchboards, are already provided with the internal galvanized sheet plate.

Enclosures with blind door and mounting plate

Dimensions (mm)				Code	Package/ No. of pieces
H	W	D			
400	600	200		SR4620EMCK	1/1
600	600	250		SR6625EMCK	1/1
1000	800	300		SR10830EMCK	1/1

For completion of the structure, see accessories on page 3/6



AM2 Cabinets

General characteristics and applications	4/2
Selection of the structure	4/6
Ordering codes	4/8
Structure	4/10
Mounting plates	4/19
Structures for modular apparatus	4/22
19" rack structures "L" shaped profile	4/28
Accessories	4/29
Spare parts	4/41

AM2 Cabinets

General characteristics and applications

The range of AM2 cabinets allows construction of electric switchboards for operation and control of technological plants, covering the middle market segment of automation switchboards in particular.

These monobloc enclosures are suitable for making floor-mounted electric switchboards, offering numerous customization possibilities based on individual needs and habits. The AM2 cabinets, within the range of ABB automation

enclosures, take an intermediate position in terms of dimensions, functions and price, in between the SR2 enclosures and the IS2 cabinets, offering a unique ensemble of technical characteristics, along with simplicity of assembly.

4



Versions available

- Panel board with blind door (single for $W \leq 1000\text{mm}$, double with overlapping closure for $W \leq 800\text{mm}$);
- Panel board with glazed door;
- Panel board with 19" fixed rack frame "L" shaped profile;
- Distribution cabinet with DIN rails and panels.



The range of AM2 cabinets is available with 36 different dimensions:

- Height from 1000 to 2000mm
- Width from 600 to 1600mm (the cabinets with width $\geq 1200\text{mm}$ are only supply at the front with double door)
- Depth 300, 400 and 500mm
- Two different versions: with blind door and with glazed door.

The AM2 cabinets can also be installed in environments with risk of explosion due to the presence of dust (ATEX), as foreseen under the European 94/9 CE directive and from the relative EN 50281-3 Standard.

The full compliance with the IEC 62208 Standards (Empty enclosures for low voltage switchgear and controlgear assemblies) and the relative technical characteristics, allow use of the AM2 cabinets in the most varied application contexts, as prescribed by the IEC 60204-1 Standard on electrical equipment, "Safety of electrical equipment of machines", by the EN 60439-1 Standard and by the new EN 61439-1-2 Standard on "Low voltage switchgear and controlgear assemblies".

The whole range of AM2 cabinets is characterised by its IP65 degree of protection, tested and verified according to the EN 60529 Standard. AM2 cabinets have also passed the checks required to obtain the TYPE 12 UL marks (Underwriters Laboratories).

Impact resistance is in conformity with the IEC 62262 Standard and is IK10 for the versions with blind doors and IK09 for those with glass doors. The standard colour is orange peel RAL 7035. On request, it is possible to order the AM2 cabinets in a wide range of RAL colours (see page 7/12) and to use the mounted accessories service.

The above-mentioned versatility features are such as to allow the use of AM2 cabinets as switchgear and controlgear of industrial processing machines and plants, air conditioning plants, up to application such as distribution switchboards for plants, buildings etc.



AM2 Cabinets

General characteristics and applications

Briefly, the main technical and functional characteristics of the AM2 cabinets and their components are as follows:

4



Structure

- Made of steel sheet 15/10mm thick automatically welded by means of a robot, M6 pins for earthing applied inside.
- IP65 degree of protection verified according to the IEC60529 Standard.
- Mounting plate in galvanized sheet 25/10mm thick and such as to therefore guarantee protection even of the parts drilled by the user; the plate is adjustable in depth with a pitch of 25mm.

Assembly of the plates in the cabinets height-wise is facilitated by the presence of two sliding supports at the back of the cabinet.



Cable tightening plates and plinth

- The cable tightening plates, not included in the supply, are of the sliding type, fitted with tightness gasket all depth.
- Palletisable plinths consisting of h=100mm four angle pieces already fixed onto the base of the structure. The four closing flanges must be ordered separately



Door

- Front doors with 120° opening made of steel sheet 15/10mm thick, with internal polyurethane foam gasket, laid using a continuous casting process.
The blind doors are fitted with an internal tube section which increases the rigidity and allows easy assembly of wiring ducts and accessories.
The version with glazed doors are fitted with hardened safety glass 4mm thick glued from the outside and such as to guarantee the IP65 degree of protection. Standard opening is from the left to right with the possibility of only inverting the direction of the handle.
- Lock with double tongue insert and hooking device from two (h=1400mm) to four (h=1600-1800-2000mm) closing points.
- The versions with h=1000 and 1200mm are fitted with two closing points by means of a box with double tongue key.
- Screwed rear panel, made of 15/10mm thick steel sheet, removable and replaceable with a door.
- Internal counterdoor made of 15/10mm thick painted sheet, fixed onto a pair of internal uprights and positioned at a distance of 50mm from the external front door



Distribution switchboard

- The AM2 cabinets can be fitted with modular panels in 600 and 800mm widths made of 15/10mm thick steel sheet as accessories. The modular panels are available in the version with DIN cut-out for one or three rows of modular apparatus, in the blind version and for 72x72mm and 96x96mm measuring instruments.

All the panels have vertical modularity of 200mm and are available in fixed or hinged version (by means of an accessory).

The panels with 600mm wide DIN cut-out, allow installation of 18 or 24 DIN modules, whereas those 800mm wide, allow installation of 29 or 36 DIN modules, according to whether the wiring duct is placed to the front or to the back in relation to the DIN rail. Installation of the modular panels in the AM2 cabinets requires the use of special uprights for modular panels which are screwed onto the cabinet structure.

The useful space for installation of the modular panels is always 100mm less than the nominal dimension of the cabinet. The DIN rails are ordered separately and the kit includes the rail, the supports and the small fixing items. Finally, the modular galvanized internal plates are available in the 600 and 800mm widths and in the heights from 200 to 800mm. The modular plates are fixed using a kit of side crosspieces to be ordered separately according to the depth of the cabinet.






Panel board with 19" rack frame with "L" shaped profile

- Uprights with sections for mounting 19" rack panels and accessories are available for the whole range of AM2 cabinets; this allows various electronic applications or is suitable for making small cabinets for local networks (LAN).

The 19" rack uprights with "L" shaped profile are made of 20/10mm thick galvanized sheet and are applied to the structure of the AM2 cabinets 600mm wide by means of special screws: they are available for all the AM2 cabinet heights, up to a maximum of 42 HE vertical modules.

The buffer panels are available in the dimensions up to 20 HE modules, are blind and are made of natural opaque colour anodized aluminium 30/10mm thick.

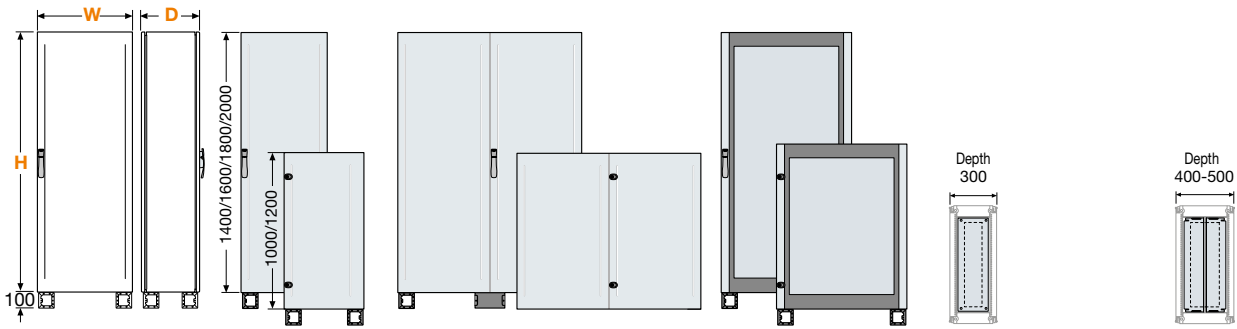
Technical characteristics

Conformity with Standard	IEC 62208, IEC 60439-1, IEC 61439-1-2	
Degree of protection	IP65 (IEC 60529) TYPE 12 (UL Standard)	
Degree of mechanical strength	IK10 blind door IK09 glazed door (IEC 62262)	
Certifications	  	
Type of material	Metallic	
Installation site	Indoors	
Fixing method	floor/wall	
Normal service conditions - ambient temperature	from -5 up to +40°C	
Operating climate (t°/Ur%)	constant	23°C/83% - 40°C/93%
	variable	23°C/98% - 40°C/98%

AM2 Cabinets

Selection of the structure

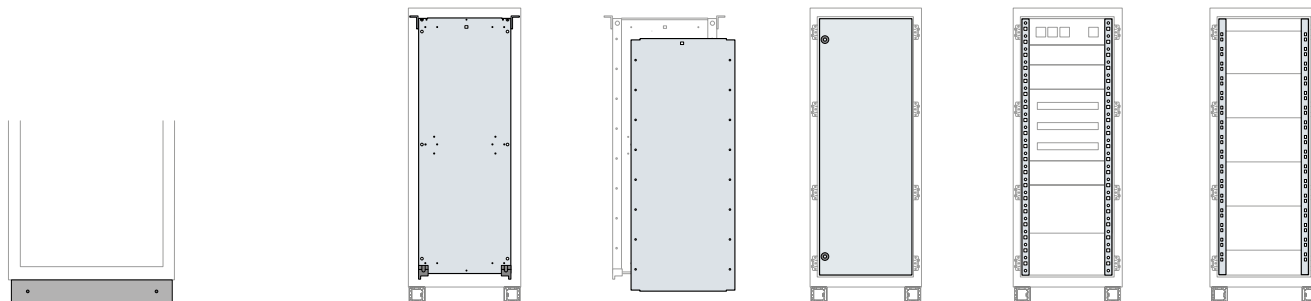
Rapid selection table



4

Overall dimensions			Cabinet with blind door		Cabinet with glazed door	Cable entry flanges		
H ^(*) mm	W mm	D mm	Single blind door	Double blind door with overlapping closure	Single glazed door	Fixed	Sliding	
1000	600	300	TM2063K			EF6032N		
	800		TM2083K	TM2083FV4K		EF8032N		
	1000			TM2003FV5K		EF1032N		
	600	400	TM2064K		TM2064VK	EF6043	EF6040	
	800		TM2084K	TM2084FV4K	TM2084VK	EF8042	EF8040	
	1000		TM2004K	TM2004FV5K		EF1042	EF1040	
1200			TM2024K		2 x EF6043	2 x EF6040		
1600			TM2074K		2 x EF8042	2 x EF8040		
1200	600	300	TM2263K			EF6032N		
	800			TM2283FV4K		EF8032N		
	1200			TM2223K		2 x EF6032N		
	600	400	TM2264K		TM2264VK	EF6043	EF6040	
	800		TM2284K		TM2284VK	EF8042	EF8040	
	1000		TM2204K	TM2204FV5K	TM2204VK	EF1042	EF1040	
1200			TM2224K		2 x EF6043	2 x EF6040		
1400	600	300	TM2463K			EF6032N		
	800		TM2483K	TM2483FV4K	TM2483VK	EF8032N		
	1000		TM2403K			EF1032N		
	600	400	TM2464K		TM2464VK	EF6043	EF6040	
	800		TM2484K	TM2484FV4K	TM2484VK	EF8042	EF8040	
	1000		TM2404K	TM2404FV5K	TM2404VK	EF1042	EF1040	
	1200			TM2424K		2 x EF6043	2 x EF6040	
	600	500	TM2465K			EF6052	EF6050	
	800		TM2485K	TM2485FV4K		EF8052	EF8050	
	1000		TM2405K	TM2405FV5K		EF1052	EF1053	
	1200			TM2425K		2 x EF6052	2 x EF6050	
	1600	600	300	TM2663K			EF6032N	
800		TM2683K				EF8032N		
600		TM2664K			TM2664VK	EF6043	EF6040	
800		400	TM2684K	TM2684FV4K	TM2684VK	EF8042	EF8040	
1000			TM2604K	TM2604FV5K	TM2604VK	EF1042	EF1040	
1200				TM2624K		2 x EF6043	2 x EF6040	
600			500	TM2665K			EF6052	EF6050
800		TM2685K		TM2685FV4K		EF8052	EF8050	
1000		TM2605K		TM2605FV5K		EF1052	EF1053	
1200				TM2625K		2 x EF6052	2 x EF6050	
1800		600	400	TM2864K		TM2864VK	EF6043	EF6040
		800		TM2884K	TM2884FV4K	TM2884VK	EF8042	EF8040
	1000	TM2804K		TM2804FV5K	TM2804VK	EF1042	EF1040	
	1200		TM2824K		2 x EF6043	2 x EF6040		
	600	500	TM2865K		TM2865VK	EF6052	EF6050	
	800		TM2885K		TM2885VK	EF8052	EF8050	
1000	TM2805K			TM2805VK	EF1052	EF1053		
1200			TM2825K		2 x EF6052	2 x EF6050		
2000	600	400	TM2964K		TM2964VK	EF6043	EF6040	
	800		TM2984K		TM2984VK	EF8042	EF8040	
	1000		TM2904K	TM2904FV5K	TM2904VK	EF1042	EF1040	
	1200			TM2924K		2 x EF6043	2 x EF6040	
2000	600	500	TM2965K		TM2965VK	EF6052	EF6050	
	800		TM2985K		TM2985VK	EF8052	EF8050	
	1000		TM2905K		TM2905VK	EF1052	EF1053	
	1200			TM2925K		2 x EF6052	2 x EF6050	

(*) The useful height is always less than 100mm compared to the external dimension of the panel board to which the plinth dimension (H=100mm) must be added.



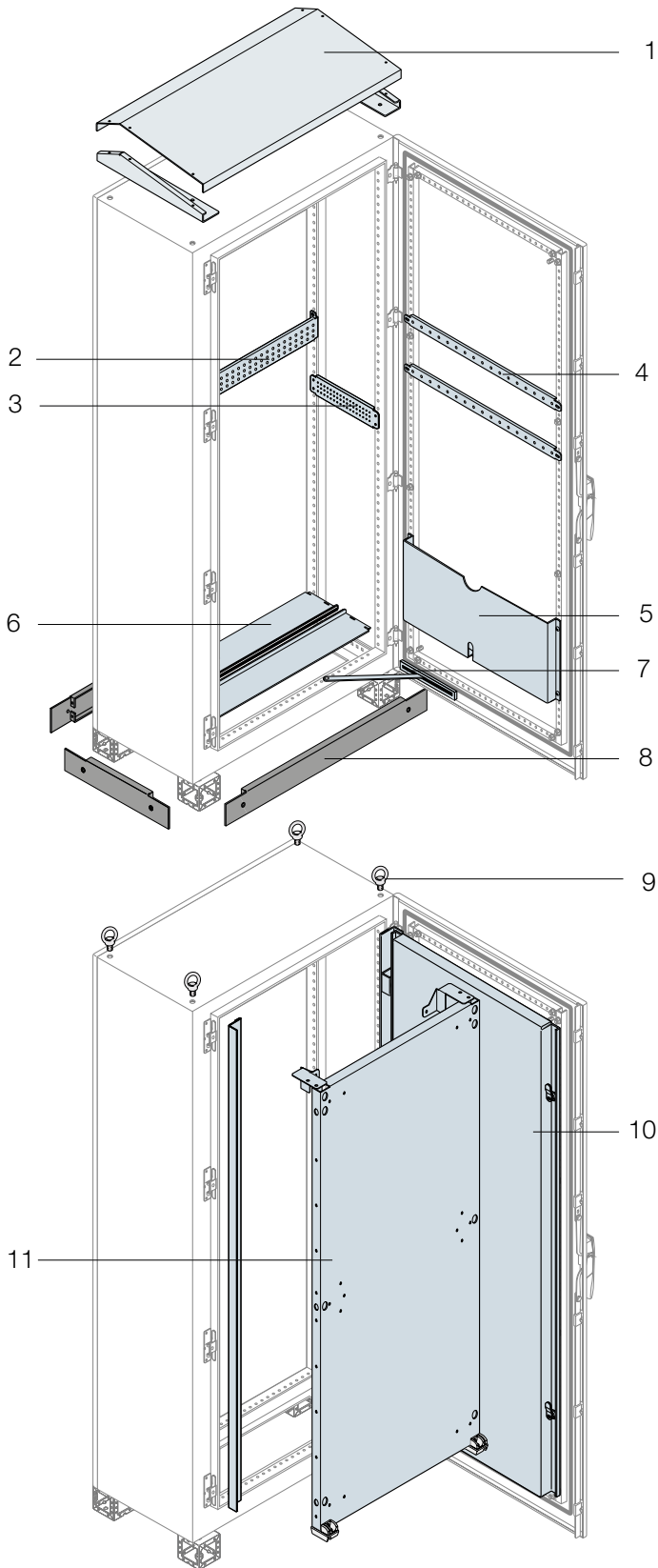
Plinth Flanges		Internal plate		Counterdoor	DIN rail Uprights	19" rack frames "L" shaped profile
front/rear	side	Mounting plate	Opposed plate	RAL7035 orange peel colour		
ZN6000	ZN3011	EA1060	EA5060	TF1060K	MD1000	TK1000
ZN8000		EA1080	EA5082	TF1080K	MD1000	
ZN1000		EA1010	EA5010	TF1010K		
ZN6000	ZN4011	EA1060	EA5060	TF1060K	MD1000	TK1000
ZN8000		EA1080	EA5082	TF1080K	MD1000	
ZN1000		EA1010	EA5010	TF1010K		
ZN1200		EA1012				
2 x ZN8000		EA1016				
ZN6000	ZN3011	EA1260	EA5260	TF1260K	MD1200	TK1200
ZN8000		EA1280	EA5280	TF1280K	MD1200	
ZN1200		EA1213				
ZN6000	ZN4011	EA1260	EA5260	TF1260K	MD1200	TK1200
ZN8000		EA1280	EA5280	TF1280K	MD1200	
ZN1000		EA1210	EA5210	TF1210K		
ZN1200		EA1213				
ZN6000	ZN3011	EA1460	EA5461	TF1460K	MD1400	TK1400
ZN8000		EA1480	EA5480	TF1480K	MD1400	
ZN1000		EA1411	EA5413	TF1410K		
ZN6000	ZN4011	EA1460	EA5461	TF1460K	MD1400	TK1400
ZN8000		EA1480	EA5480	TF1480K	MD1400	
ZN1000		EA1411	EA5413	TF1410K		
ZN1200		EA1412				
ZN6000	ZN5011	EA1460	EA5461	TF1460K	MD1400	TK1400
ZN8000		EA1480	EA5480	TF1480K	MD1400	
ZN1000		EA1411	EA5413	TF1410K		
ZN1200		EA1412				
ZN6000	ZN3011	EA1616	EA5616	TF1660K	MD1600	TK1600
ZN8000		EA1619	EA5620	TF1680K	MD1600	
ZN6000	ZN4011	EA1616	EA5616	TF1660K	MD1600	TK1600
ZN8000		EA1619	EA5620	TF1680K	MD1600	
ZN1000		EA1610	EA5610	TF1610K		
ZN1200		EA1612				
ZN6000	ZN5011	EA1616	EA5616	TF1660K	MD1600	TK1600
ZN8000		EA1619	EA5620	TF1680K	MD1600	
ZN1000		EA1610	EA5610	TF1610K		
ZN1200		EA1612				
ZN6000	ZN4011	EA1860	EA5861	TF1860K	MD1800	TK1800
ZN8000		EA1880	EA5883	TF1880K	MD1800	
ZN1000		EA1810	EA5811	TF1810K		
ZN1200		EA1812				
ZN6000	ZN5011	EA1860	EA5861	TF1860K	MD1800	TK1800
ZN8000		EA1880	EA5883	TF1880K	MD1800	
ZN1000		EA1810	EA5811	TF1810K		
ZN1200		EA1812				
ZN6000	ZN4011	EA2060	EA5063	TF2060K	MD2000	TK2000
ZN8000		EA2080	EA5083	TF2080K	MD2000	
ZN1000		EA2010	EA5011	TF2010K		
ZN1200		EA2013				
ZN6000	ZN5011	EA2060	EA5063	TF2060K	MD2000	TK2000
ZN8000		EA2080	EA5083	TF2080K	MD2000	
ZN1000		EA2010	EA5011	TF2010K		
ZN1200		EA2013				

> Ordering code page 4/8 > In-depth technical information page 8/1 > Overall dimensions page 9/1

AM2 Cabinets

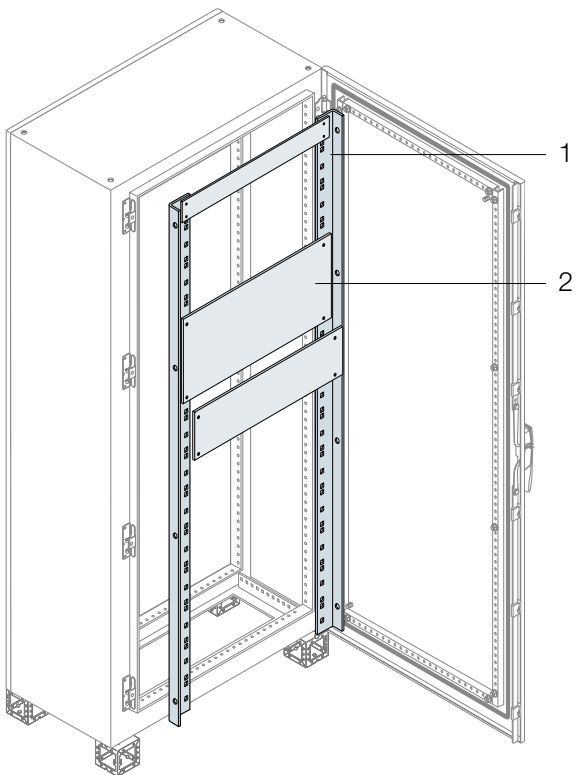
Ordering codes

4



1	Spray protection roof	
	Page.....	4/32
2	Crosspieces for back accessories	
	Page.....	4/17
3	Crosspieces for side accessories	
	Page.....	4/17
4	Door reinforcement profiles	
	Page.....	4/32
5	Document pocket	
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6	Cable entry flanges	
	Page.....	4/15
7	Door anti-closure device	
	Page.....	4/29
8	Plinth covering flanges	
	Page.....	4/13
9	Lifting eyebolts	
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10	Inner door	
	Page.....	4/16
11	Mounting plate	
	Page.....	4/19

> Rapid selection table page 4/6 > In-depth technical information page 8/1 > Overall dimensions page 9/1



1
19" rack frame
 Page..... 4/28

2
Blind compensation panels
 Page..... 4/28

3
Uprights for DIN rail
 Page..... 4/22

4
Panels for measuring instruments
 Page..... 4/25

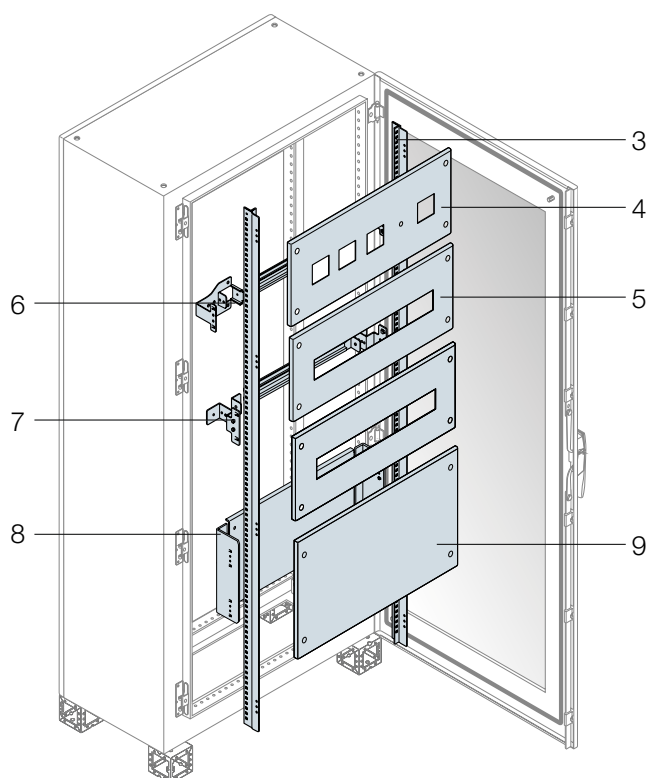
5
Panels for modular equipment
 Page..... 4/23

6
DIN rail kit 18/29 mod.
 Page..... 4/22

7
DIN rail kit 24/36 mod.
 Page..... 4/22

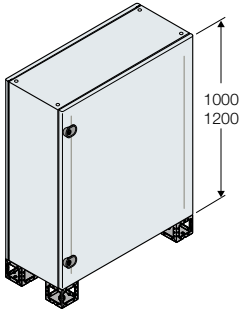
8
Blind apparatus holder back plate
 Page..... 4/23

9
Blind panels for apparatuses
 Page..... 4/24

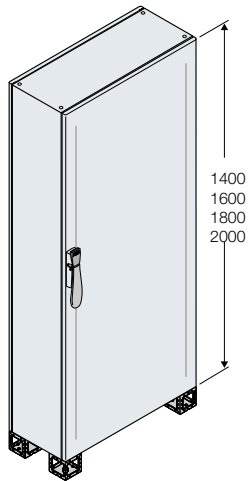


AM2 Cabinets

Ordering codes



4

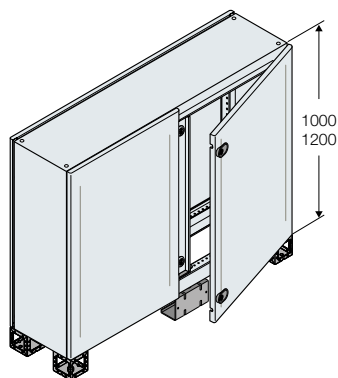


Structures

Cabinet with blind door

Monobloc structure complete with non-removable side panels and roof, reversible blind door, rear panel, plinth H=100mm consisting of four angle pieces. To be completed with plinth flanges, cable entry flanges and mounting plate or other internal equipment.

Cabinet with blind door						
Dimensions (mm)						
H	W	D	Code		Package/ No. of pieces	
1000	600	300	TM2063K		1/1	
	800	300	TM2083K		1/1	
	600	400	TM2064K		1/1	
	800	400	TM2084K		1/1	
	1000	400	TM2004K		1/1	
1200	600	300	TM2263K		1/1	
	600	400	TM2264K		1/1	
	800	400	TM2284K		1/1	
	1000	400	TM2204K		1/1	
1400	600	300	TM2463K		1/1	
	800	300	TM2483K		1/1	
	1000	300	TM2403K		1/1	
	600	400	TM2464K		1/1	
	800	400	TM2484K		1/1	
	1000	400	TM2404K		1/1	
	600	500	TM2465K		1/1	
	800	500	TM2485K		1/1	
	1000	500	TM2405K		1/1	
	1600	600	300	TM2663K		1/1
800		300	TM2683K		1/1	
600		400	TM2664K		1/1	
800		400	TM2684K		1/1	
1000		400	TM2604K		1/1	
600		500	TM2665K		1/1	
800		500	TM2685K		1/1	
1000		500	TM2605K		1/1	
1800		600	400	TM2864K		1/1
		800	400	TM2884K		1/1
	1000	400	TM2804K		1/1	
	600	500	TM2865K		1/1	
	800	500	TM2885K		1/1	
2000	1000	500	TM2805K		1/1	
	600	400	TM2964K		1/1	
	800	400	TM2984K		1/1	
	1000	400	TM2904K		1/1	
	600	500	TM2965K		1/1	
	800	500	TM2985K		1/1	
	1000	500	TM2905K		1/1	



Structures

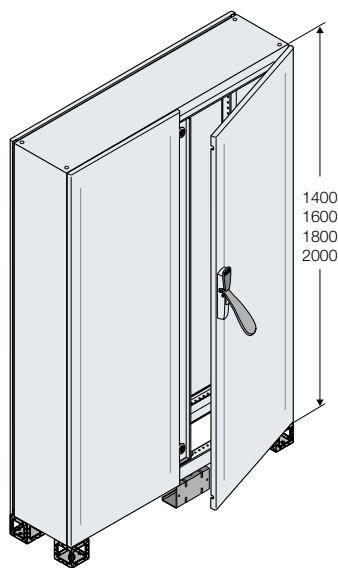
Cabinets with double blind door with overlapping closure

Monobloc structure complete with non-removable side panels and roof, reversible double blind doors with overlapping closure, rear panel, plinth H=100mm consisting of four angle pieces.

To be completed with flanges plinth, cable entry flanges and mounting plate or other internal equipment.

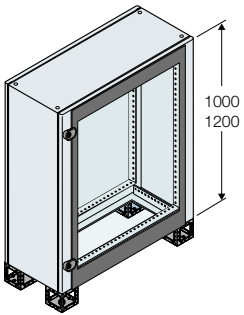
Cabinet with double blind door

Dimensions (mm)					
H	W	D	Code		Package/ No. of pieces
1000	800	300	TM2083FV4K		1/1
	1000	300	TM2003FV5K		1/1
	800	400	TM2084FV4K		1/1
	1000	400	TM2004FV5K		1/1
	1200	400	TM2024K		1/1
	1600	400	TM2074K		1/1
1200	800	300	TM2283FV4K		1/1
	1200	300	TM2223K		1/1
	1000	400	TM2204FV5K		1/1
	1200	400	TM2224K		1/1
1400	800	300	TM2483FV4K		1/1
	800	400	TM2484FV4K		1/1
	1000	400	TM2404FV5K		1/1
	1200	400	TM2424K		1/1
	800	500	TM2485FV4K		1/1
	1000	500	TM2405FV5K		1/1
	1200	500	TM2425K		1/1
1600	800	400	TM2684FV4K		1/1
	1000	400	TM2604FV5K		1/1
	1200	400	TM2624K		1/1
	800	500	TM2685FV4K		1/1
	1000	500	TM2605FV5K		1/1
	1200	500	TM2625K		1/1
1800	800	400	TM2884FV4K		1/1
	1000	400	TM2804FV5K		1/1
	1200	400	TM2824K		1/1
	1200	500	TM2825K		1/1
2000	1000	400	TM2904FV5K		1/1
	1200	400	TM2924K		1/1
	1200	500	TM2925K		1/1

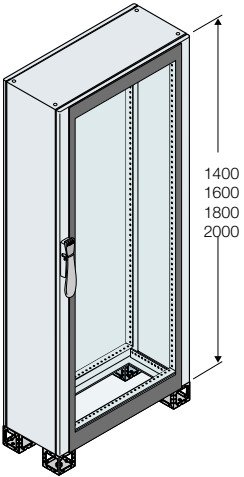


AM2 Cabinets

Ordering codes



4

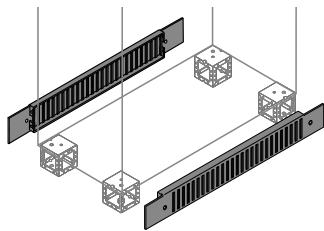
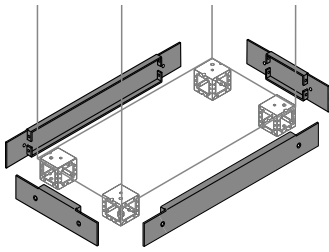


Structures

Cabinets with glazed door

Monobloc structure complete with non-removable side panels and roof, reversible type glazed door, rear panel, plinth H=100mm consisting of four angle pieces. To be completed with plinth flanges, cable entry flanges and mounting plate or other internal equipment.

Cabinet with glazed door					
Dimensions (mm)					
H	W	D	Code		Package/ No. of pieces
1000	600	400	TM2064VK		1/1
	800	400	TM2084VK		1/1
1200	600	400	TM2264VK		1/1
	800	400	TM2284VK		1/1
	1000	400	TM2204VK		1/1
1400	800	300	TM2483VK		1/1
	600	400	TM2464VK		1/1
	800	400	TM2484VK		1/1
	1000	400	TM2404VK		1/1
1600	600	400	TM2664VK		1/1
	800	400	TM2684VK		1/1
	1000	400	TM2604VK		1/1
1800	600	400	TM2864VK		1/1
	800	400	TM2884VK		1/1
	1000	400	TM2804VK		1/1
	600	500	TM2865VK		1/1
	800	500	TM2885VK		1/1
2000	1000	500	TM2805VK		1/1
	600	400	TM2964VK		1/1
	800	400	TM2984VK		1/1
	1000	400	TM2904VK		1/1
	600	500	TM2965VK		1/1
	800	500	TM2985VK		1/1
	1000	500	TM2905VK		1/1



Structures

Flanges front/rear H=100mm

Removable flanges made of 10/10 sheet painted orange peel RAL 7012 colour (not self-supporting).

Dimensions (mm)					
H	W	D	Code		Package/ No. of pieces
Blind flanges					
Pair of flanges, front/back	100	600	ZN6000*		1/2
Pair of flanges, front/back		800	ZN8000*		1/2
Pair of flanges, front/back		1000	ZN1000		1/2
Pair of flanges, front/back		1200	ZN1200		1/2
Pair of side flanges	100	300	ZN3011		1/2
Pair of side flanges		400	ZN4011		1/2
Pair of side flanges		500	ZN5011		1/2
Aerated flanges					
Pair of aerated flanges, front/back	100	600	ZN0006 **		1/2
Pair of aerated flanges, front/back		800	ZN0008 **		1/2
Pair of aerated flanges, front/back		1000	ZN0010		1/2

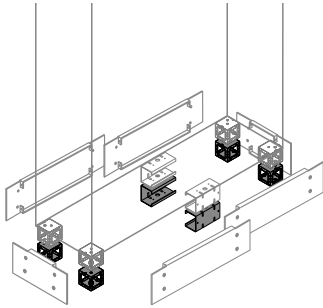
* AM2 structure W=1200/1600mm are not provided with intermediate plinth. It is possible to use No.2 flanges ZN6000/ZN8000 only in combination with code ZN1020 (intermediate plinth).

** AM2 structure W=1200/1600mm are not provided with intermediate plinth. It is possible to use No.2 flanges ZN0006/ZN0008 only in combination with code ZN1020 (intermediate plinth).

AM2 Cabinets

Ordering codes

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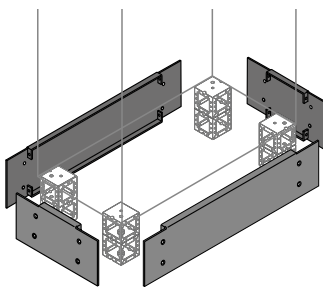


Structure

Additional Plinth

To obtain a plinth 200mm high, order a kit of angle pieces H=100mm to be added to the angle pieces already present on the structure. Complete with 2 covering flanges (H=100mm) for each side of the structure.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	H		
No. 4 angle pieces 25/10 thick	100		ZN1010	1/4
No. 2 angle pieces 25/10 thick for intermediate plinth	100		ZN1020	1/2



Plinth Covering Flanges H=200mm

Removable flanges made of 10/10 sheet painted orange peel RAL 7012 colour (not self-supporting).

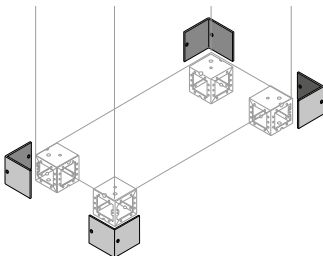
Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Blind flanges H=200mm for additional plinth				
Pair of flanges, front/back		600	ZN6002 *	1/2
Pair of flanges, front/back	200	800	ZN8002 *	1/2
Pair of flanges, front/back		1000	ZN1002	1/2

* for structure W=1200/1600 order No.2 flanges ZN6002/ZN8002 with intermediate plinth.

* AM2 structures W=1200/1600mm are not provided with intermediate plinth. In order to complete a plinth with H=200mm flanges, it is possible to use ZN6002/ZN8002 (H=200mm) in addition to code ZN1020 (2 pcs.)

As an alternative, it is possible to use No. 2 pairs of flanges ZN1200/ZN1600 (H=100mm).

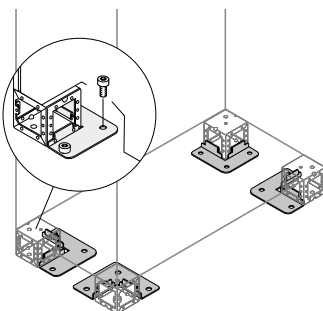
Side flanges are only available with H=100mm.



Covers "L" shape for singol plinth

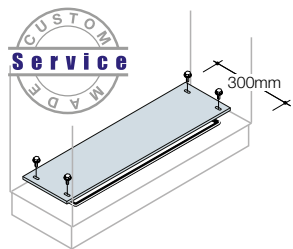
It allows to cover the sides of the plinth in case of non-use of plinth flanges.

Descrizione	Dimensioni (mm)		Codice	Package/ No. of pieces
	H	W		
No.4 cover for plinth	100		ZN1040	1/4

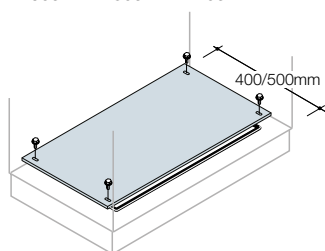


Brackets for floor fixing

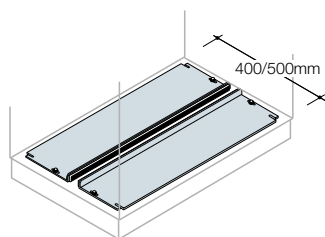
Description	Code	Package/ No. of pieces
No.4 brackets for floor fixing	ZN1041	1/4



EF6032N-EF8032N-EF1032N



EF6043-EF8042-EF1042-EF6052
EF8052-EF1052



EF6040-EF8040-EF1040-EF6050
EF8050-EF1050

Structure

Cable entry flanges

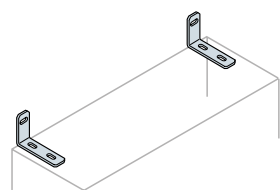
Flanges in 20/10 galvanized sheet of sliding type for the 400/500mm depth and fixed for the 300/400/500mm depth. The thickness of the modular flanges of modular is 15/10mm, while it is of 20/10mm for fixed/sliding flanges.

Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
L	P			
Sliding cable entry flanges				
600	400	EF6040	EF6040MT	1/1
800	400	EF8040	EF8040MT	1/1
1000	400	EF1040	EF1040MT	1/1
1200	400	2 x EF6040	2 x EF6040MT	1/1
1600	400	2 x EF8040	2 x EF8040MT	1/1
600	500	EF6050	EF6050MT	1/1
800	500	EF8050	EF8050MT	1/1
1000	500	EF1053	EF1053MT	1/1
1200	500	2 x EF6050	2 x EF6050MT	1/1
1600	500	2 x EF8050	2 x EF8050MT	1/1
Fixed cable entry flanges				
600	300	EF6032N	EF6032NM	1/1
800	300	EF8032N	EF8032NM	1/1
1000	300	EF1032N	EF1032NM	1/1
1200	300	2 x EF6032	2 x EF6032MT	1/1
1600	300	2 x EF8032	2 x EF8032MT	1/1
600	400	EF6043		1/1
800	400	EF8042		1/1
1000	400	EF1042		1/1
1200	400	2 x EF6042	2 x EF6042MT	1/1
1600	400	2 x EF8042	2 x EF8042MT	1/1
600	500	EF6052		1/1
800	500	EF8052		1/1
1000	500	EF1052		1/1
1200	500	2 x EF6052	2 x EF6052MT	1/1
1600	500	2 x EF8052	2 x EF8052MT	1/1

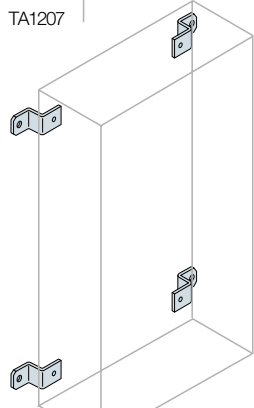
* Code only valid for factory-assembled panel boards.

Brackets for wall fixing

Allow installation on the wall of the more compact versions or wall fixing of the floor versions.



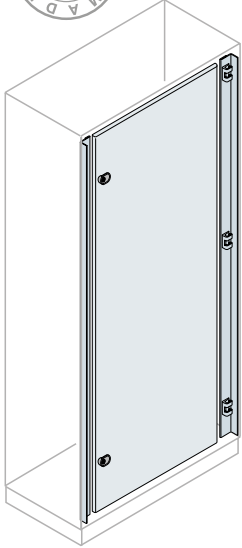
TA1207



Descrizione	Code	Package/ No. of pieces
No. 2 anti-tilting brackets	TA1207	1/2
No. 4 supporting brackets, 250 kg of capacity	TA1208	1/4

AM2 Cabinets

Ordering codes



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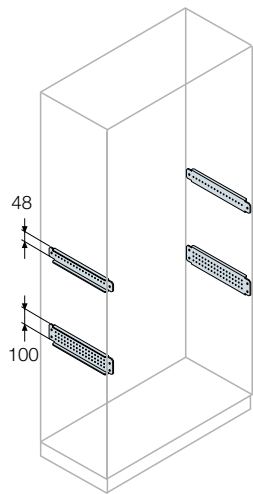
Structure

Inner doors

Internal door made of 15/10 thick steel sheet, complete with reinforcement tube, frame, hinges and No. 2 boxes with interchangeable key with double tongue inserts (see page 4/38). Only for single door versions.

Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
H	W			
Internal counterdoor				
1000	600	TF1060K	TF1060KMT	1/1
	800	TF1080K	TF1080KMT	1/1
	1000	TF1010K	TF1010KMT	1/1
1200	600	TF1260K	TF1260KMT	1/1
	800	TF1280K	TF1280KMT	1/1
	1000	TF1210K	TF1210KMT	1/1
1400	600	TF1460K	TF1460KMT	1/1
	800	TF1480K	TF1480KMT	1/1
	1000	TF1410K	TF1410KMT	1/1
1600	600	TF1660K	TF1660KMT	1/1
	800	TF1680K	TF1680KMT	1/1
	1000	TF1610K	TF1610KMT	1/1
1800	600	TF1860K	TF1860KMT	1/1
	800	TF1880K	TF1880KMT	1/1
	1000	TF1810K	TF1810KMT	1/1
2000	600	TF2060K	TF2060KMT	1/1
	800	TF2080K	TF2080KMT	1/1
	1000	TF2010K	TF2010KMT	1/1

* Code only valid for factory-assembled panel boards.

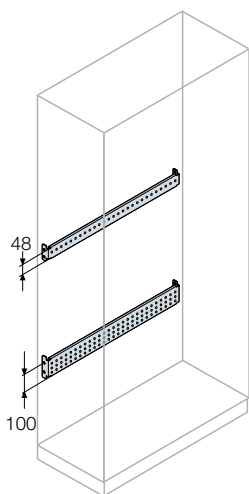


Structure

Side crosspieces

Multi-purpose crosspieces made of 20/10 thick galvanized sheet H=48/100mm drilled with round hole and square hole with 25mm pitch. They are mounted on the side of the panel board according to the depth.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	D			
Side crosspieces H=48mm				
No. 2 side crosspieces for fixing accessories	300		TS1003	1/2
No. 2 side crosspieces for fixing accessories	400		TS1004	1/2
No. 2 side crosspieces for fixing accessories	500		TS1005	1/2
Side crosspieces H=100mm				
No. 2 crosspieces for fixing front accessories	300		TS2003	1/2
No. 2 crosspieces for fixing front accessories	400		TS2004	1/2
No. 2 crosspieces for fixing front accessories	500		TS2005	1/2



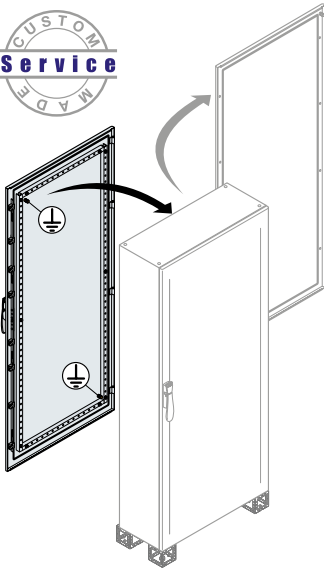
Back crosspieces

Multi-purpose crosspieces made of 20/10 thick galvanized sheet.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W			
Back crosspieces H=48mm				
No. 2 crosspieces for fixing front accessories	600		EB0600	1/2
No. 2 crosspieces for fixing front accessories	800		EB0800	1/2
No. 2 crosspieces for fixing front accessories	1000		EB1000	1/2
No. 2 crosspieces for fixing front accessories	1200		EB1200	1/2
Back crosspieces H=100mm				
No. 2 crosspieces for fixing front accessories	600		EB0660	1/2
No. 2 crosspieces for fixing front accessories	800		EB0880	1/2
No. 2 crosspieces for fixing front accessories	1000		EB1010	1/2
No. 2 crosspieces for fixing front accessories	1200		EB1020	1/2

AM2 Cabinets

Ordering codes



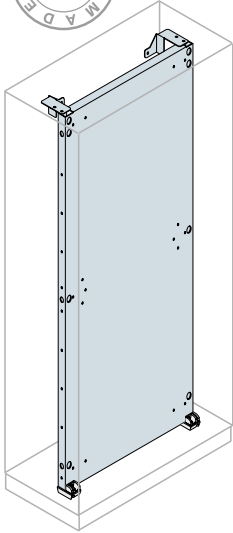
Structure

Replacement of rear panel with door

The supply foresees replacement of the rear panel with a blind door mounted directly in the factory (or double doors where this is foreseen).

Description	Dimensions (mm)		Custom Made Service	Package/ No. of pieces
	H	W		
Replacement rear panel/blind door	1000	600	TC1006KMT	1/1
Replacement rear panel/blind door		800	TC1008KMT	1/1
Replacement rear panel/blind door		1000	TC1010KMT	1/1
Replacement rear panel/double blind door		400+400	TC1008DKMT	1/1
Replacement rear panel/double blind door		500+500	TC1010DKMT	1/1
Replacement rear panel/double blind door		600+600	TC1012DKMT	1/1
Replacement rear panel/double blind door		800+800	TC1016DKMT	
Replacement rear panel/blind door	1200	600	TC1206KMT	1/1
Replacement rear panel/blind door		800	TC1208KMT	1/1
Replacement rear panel/blind door		1000	TC1210KMT	1/1
Replacement rear panel/double blind door		400+400	TC1208DKMT	1/1
Replacement rear panel/double blind door		500+500	TC1210DKMT	1/1
Replacement rear panel/double blind door		600+600	TC1212DKMT	1/1
Replacement rear panel/blind door	1400	600	TC1406KMT	1/1
Replacement rear panel/blind door		800	TC1408KMT	1/1
Replacement rear panel/blind door		1000	TC1410KMT	1/1
Replacement rear panel/double blind door		400+400	TC1408DKMT	1/1
Replacement rear panel/double blind door		500+500	TC1410DKMT	1/1
Replacement rear panel/double blind door		600+600	TC1412DKMT	1/1
Replacement rear panel/blind door	1600	600	TC1606KMT	1/1
Replacement rear panel/blind door		800	TC1608KMT	1/1
Replacement rear panel/blind door		1000	TC1610KMT	1/1
Replacement rear panel/double blind door		400+400	TC1608DKMT	1/1
Replacement rear panel/double blind door		500+500	TC1610DKMT	1/1
Replacement rear panel/double blind door		600+600	TC1612DKMT	1/1
Replacement rear panel/blind door	1800	600	TC1806KMT	1/1
Replacement rear panel/blind door		800	TC1808KMT	1/1
Replacement rear panel/blind door		1000	TC1810KMT	1/1
Replacement rear panel/double blind door		400+400	TC1808DKMT	1/1
Replacement rear panel/double blind door		500+500	TC1810DKMT	1/1
Replacement rear panel/double blind door		600+600	TC1812DKMT	1/1
Replacement rear panel/blind door	2000	600	TC2006KMT	1/1
Replacement rear panel/blind door		800	TC2008KMT	1/1
Replacement rear panel/blind door		1000	TC2010KMT	1/1
Replacement rear panel/double blind door		500+500	TC2010DKMT	1/1
Replacement rear panel/double blind door		600+600	TC2012DKMT	1/1

* Code only valid for factory-assembled panel boards.



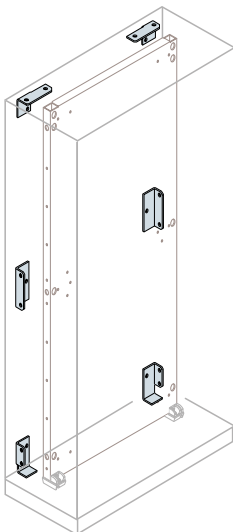
Mounting plates

Mounting plate

Plates in 25/10 galvanized steel which can be inserted at the front and/ or at the back. Complete with supports for sliding and fixing.

Dimensions (mm)		Code	Custom Made Service		Package/ No. of pieces
H	W				
Mounting plate					
1000	600	EA1060	EA1060MT		1/1
	800	EA1080	EA1080MT		1/1
	1000	EA1010	EA1010MT		1/1
	1200	EA1012	EA1012MT		1/1
	1600	EA1016	EA1016MT		1/1
1200	600	EA1260	EA1260MT		1/1
	800	EA1280	EA1280MT		1/1
	1000	EA1210	EA1210MT		1/1
	1200	EA1213	EA1213MT		1/1
1400	600	EA1460	EA1460MT		1/1
	800	EA1480	EA1480MT		1/1
	1000	EA1411	EA1411MT		1/1
	1200	EA1412	EA1412MT		1/1
1600	600	EA1616	EA1616MT		1/1
	800	EA1619	EA1619MT		1/1
	1000	EA1610	EA1610MT		1/1
	1200	EA1612	EA1612MT		1/1
1800	600	EA1860	EA1860MT		1/1
	800	EA1880	EA1880MT		1/1
	1000	EA1810	EA1810MT		1/1
	1200	EA1812	EA1812MT		1/1
2000	600	EA2060	EA2060MT		1/1
	800	EA2080	EA2080MT		1/1
	1000	EA2010	EA2010MT		1/1
	1200	EA2013	EA2013MT		1/1

* Code only valid for factory-assembled panel boards.

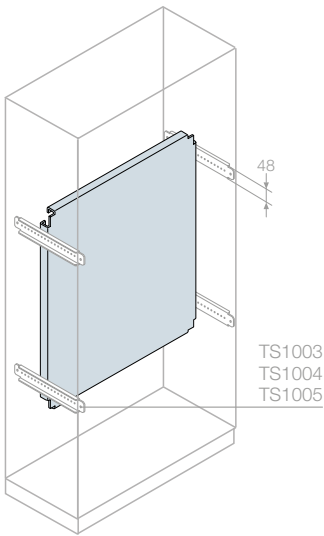


Kit for recessing mounting plate

Description	Code	Package/ No. of pieces
Kit recessing mounting plate	EA5100	1/1

AM2 Cabinets

Ordering codes

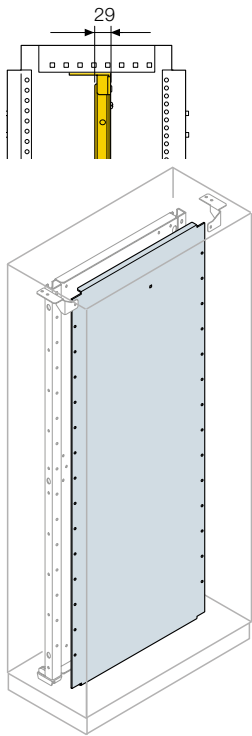


Mounting plates

Partial height Mounting plate

Plate made of 25/10 galvanized steel can be inserted on the front and/or rear according to the width of the cabinet. It is fixed to the structure by means of the crosspieces H=48mm (TS....).

Description	Dimensions (mm)		Code	Package/ No. of pieces	
	H	W			
Partial height mounting plate	200	600	EA2062	1/1	
Partial height mounting plate	300		EA3061	1/1	
Partial height mounting plate	400		EA4061	1/1	
Partial height mounting plate	500		EA5061	1/1	
Partial height mounting plate	600		EA6061	1/1	
Partial height mounting plate	800		EA8061	1/1	
Partial height mounting plate	1000		EA1061	1/1	
Partial height mounting plate	200		800	EA2081	1/1
Partial height mounting plate	300			EA3081	1/1
Partial height mounting plate	400	EA4081		1/1	
Partial height mounting plate	500	EA5081		1/1	
Partial height mounting plate	600	EA6081		1/1	
Partial height mounting plate	800	EA8081		1/1	
Partial height mounting plate	1000	EA1081		1/1	



Mounting plates

Opposed mounting plate

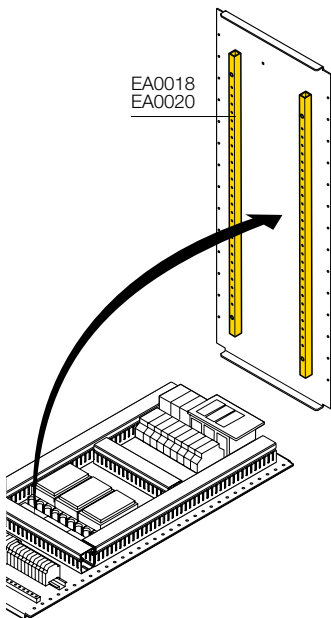
Mounting plate with extremely reduced overall dimensions in depth, able to mount components on both sides (front and rear). Made of 25/10 galvanized steel, they can be inserted on the front and/or rear. Complete with supports for sliding and fixing.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Opposed mounting plate	1000	600	EA5060	1/1
Opposed mounting plate		800	EA5082	1/1
Opposed mounting plate		1000	EA5010	1/1
Opposed mounting plate	1200	600	EA5260	1/1
Opposed mounting plate		800	EA5280	1/1
Opposed mounting plate		1000	EA5210	1/1
Opposed mounting plate	1400	600	EA5461	1/1
Opposed mounting plate		800	EA5480	1/1
Opposed mounting plate		1000	EA5413	1/1
Opposed mounting plate	1600	600	EA5616	1/1
Opposed mounting plate		800	EA5620	1/1
Opposed mounting plate		1000	EA5610	1/1
Opposed mounting plate	1800	600	EA5861	1/1
Opposed mounting plate		800	EA5883	1/1
Opposed mounting plate		1000	EA5811	1/1
Opposed mounting plate		1200	EA5822	1/1
Opposed mounting plate	2000	600	EA5063	1/1
Opposed mounting plate		800	EA5083	1/1
Opposed mounting plate		1000	EA5011	1/1
Opposed mounting plate		1200	EA5022	1/1

It is necessary also order a standard mounting plate.

Reinforcement for opposed mounting plate

The reinforcing profiles allow the wiring of the opposed plate well as vertically also horizontally. The fastening of the profiles to the plate takes place by means of special pressure pins without drilling the plate.

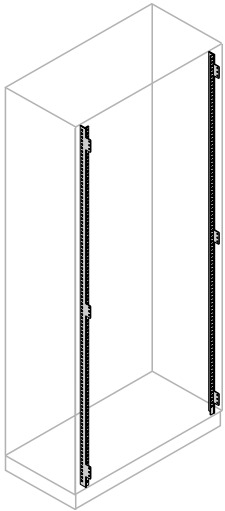


Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
No. 2 reinforcement opposed mounting plate	1800		EA0018	1/2
No. 2 reinforcement opposed mounting plate	2000		EA0020	1/2

AM2 Cabinets

Ordering codes

4



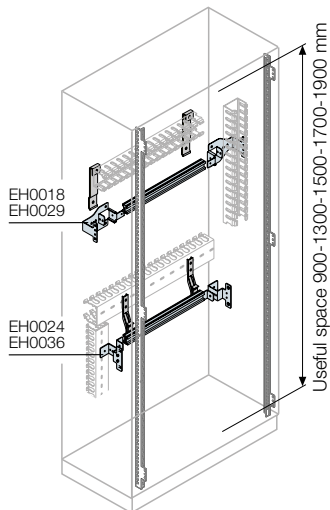
Structures for modular apparatus

Uprights for DIN rails

The fixed uprights are made of 20/10 thick galvanized steel, and are fixed onto the front of the structure. Structures 600 and 800mm wide can be equipped.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H			
No.2 uprights for modular apparatus	1000		MD1000	1/2
No.2 uprights for modular apparatus	1200		MD1200	1/2
No.2 uprights for modular apparatus	1400		MD1400	1/2
No.2 uprights for modular apparatus	1600		MD1600	1/2
No.2 uprights for modular apparatus	1800		MD1800	1/2
No.2 uprights for modular apparatus	2000		MD2000	1/2

With the uprights for DIN rail it is not possible to mount the crosspieces depthwise (TS.... on page 4/17).



DIN rail Kit 18/29 DIN modules

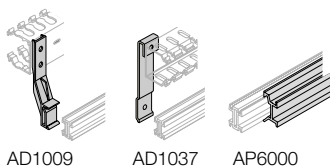
Kit consisting of double aluminium section (DIN 35), complete with shaped brackets for fixing the wiring ducts (60x80mm max). The DIN rails are fixed directly onto the uprights MD.... and are able to hold 18 and 29 modules for 600 and 800mm width respectively guaranteeing front wiring access. Adjustable in depth it allows installation of moulded-case circuit-breakers up to T3. The useful dimension of the panel board is still 100mm less in relation to the total height of the panel board.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W			
DIN rail kit complete with supports for fixing front duct (max 60x80mm)				
DIN rail and fixing supports (18 DIN mod.)	600		EH0018	1/1
DIN rail and fixing supports (29 DIN mod.)	800		EH0029	1/1

DIN rail Kit 24/36 DIN modules

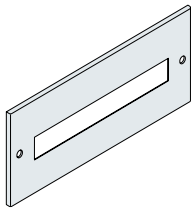
These keep the characteristics of the previous ones, with the difference of the 24 and 36 module modular capacity and with rear assembly/access of the wiring ducts.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W			
DIN rail kit complete with supports for fixing front duct (max 60x80mm)				
DIN rail and fixing supports (24 DIN mod.)	600		EH0024	1/1
DIN rail and fixing supports (36 DIN mod.)	800		EH0036	1/1

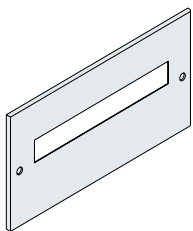


Accessories for DIN rail

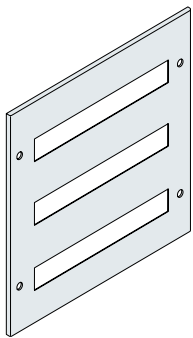
Description	Code	Package/ No. of pieces
Supports for horizontal wiring ducts		
No. 4 plastic supports for horizontal wiring ducts	AD1009	1/4
No. 4 metal supports for horizontal wiring ducts	AD1037	1/4
Depth adapter		
No.1 depth adapter W=600mm	AP6000	1/4



EH1518K-EH2018K-EH1529K
EH2029K-EH1524K-EH2024K
EH1536K-EH2036K



EH3018K-EH3029K



EH6018K-EH6029K-EH6025K
EH6036K

Structures for modular apparatus

Panels for modular apparatus

Panel with modular cut-out in sheet 12/10 (W=600mm) painted RAL7035 colour with rapid fixing, prepared for hinges EH1889 (accessory). The useful dimension of the panel board is always 100mm less than the total height of the panel board.

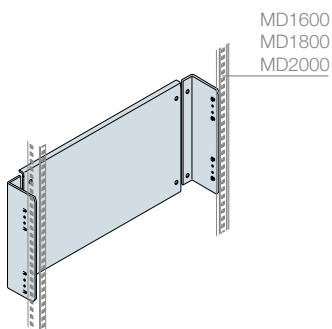
Description	Dimensions (mm)		Code	Package/No. of pieces
	H	W		
Panel 18 DIN mod.	150	600	EH1518K	1/1
	200	600	EH2018K	1/1
Panel 18 DIN mod. off-centre	300	600	EH3018K	1/1
Panel 54 DIN mod. (3 rows x 18 DIN mod.)	600	600	EH6018K	1/1
Panel 29 DIN mod.	150	800	EH1529K	1/1
	200	800	EH2029K	1/1
Panel 29 DIN mod. off-centre	300	800	EH3029K	1/1
Panel 87 DIN mod. (3 rows x 29 DIN mod.)	600	800	EH6029K	1/1
Panel 24 DIN mod.	150	600	EH1524K	1/1
	200	600	EH2024K	1/1
Panel 72 DIN mod. (3 rows x 24 DIN mod.)	600	600	EH6025K	1/1
Panel 36 DIN mod.	150	800	EH1536K	1/1
	200	800	EH2036K	1/1
Panel 108 DIN mod. (3 rows x 36 DIN mod.)	600	800	EH6036K	1/1

Tmax XT cover plate for DIN rail

Description	Code	Package/No. of pieces
Cover plate for Tmax XT1 3P mounted on DIN rail	AD3301	1/1
Cover plate for Tmax XT1 4P mounted on DIN rail	AD3302	1/1
Cover plate for Tmax XT3 3P mounted on DIN rail	AD3303	1/1
Cover plate for Tmax XT3 4P mounted on DIN rail	AD3304	1/1

Blind apparatus holder back plates

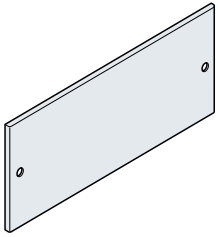
Blind apparatus holder back plate, 15/10 thick. It is fixed directly onto the uprights MD1800 or MD2000. The useful dimension is always 100mm less than the total height of the panel board.



Description	Dimensions (mm)		Codice	Package/No. of pieces
	H	W		
Blind apparatus holder back plate	200		EH2065	1/1
Blind apparatus holder back plate	300	600	EH3065	1/1
Blind apparatus holder back plate	400		EH4065	1/1
Blind apparatus holder back plate	200		EH2085	1/1
Blind apparatus holder back plate	300	800	EH3085	1/1
Blind apparatus holder back plate	400		EH4085	1/1

AM2 Cabinets

Ordering codes

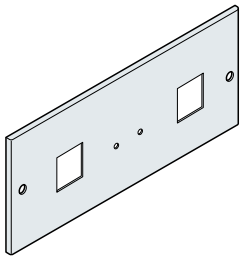


Structures for modular apparatus

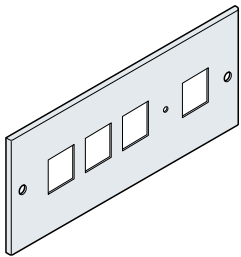
Blind panels for apparatus

Blind panel in 12/10 (W=600mm) sheet painted RAL7035 colour with rapid fixing, prepared for hinges EH1889 (accessory). The useful dimension of the panel board is always 100mm less than the total height of the panel board.

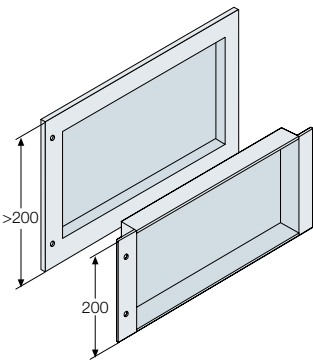
Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Blind panel	50	600	EH0562K	1/1
Blind panel	100		EH1062K	1/1
Blind panel	150		EH1562K	1/1
Blind panel	200		EH2062K	1/1
Blind panel	300		EH3063K	1/1
Blind panel	400		EH4062K	1/1
Blind panel	500		EH5062K	1/1
Blind panel	600		EH6062K	1/1
Blind panel	50	800	EH0582K	1/1
Blind panel	100		EH1082K	1/1
Blind panel	150		EH1582K	1/1
Blind panel	200		EH2082K	1/1
Blind panel	300		EH3082K	1/1
Blind panel	400		EH4082K	1/1
Blind panel	500		EH5082K	1/1
Blind panel	600		EH6082K	1/1



EH2272K-EH2297K-EH3272K
EH3296K



EH2472K-EH3472K-EH3496K



Structures for modular apparatus

Panel for square measuring instruments

Panel with cut-outs for measuring instruments made of 12/10 sheet painted RAL7035 colour with rapid fixing, prepared for hinges EH1889 (accessory). The useful dimension of the panel board is always 100mm less than the total height of the panel board.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Panel No. 2 instruments 72x72mm	200		EH2272K	1/1
Panel NO. 4 instruments 72x72mm	200	600	EH2472K	1/1
Panel No. 2 instruments 96x96mm	200		EH2297K	1/1
Panel No. 2 instruments 72x72mm	200	800	EH3272K	1/1
Panel No. 2 instruments 96x96mm	200		EH3296K	1/1
Panel No. 2 instruments 72x72mm	200		EH3472K	1/1
Panel No. 2 instruments 96x96mm	200		EH3496K	1/1

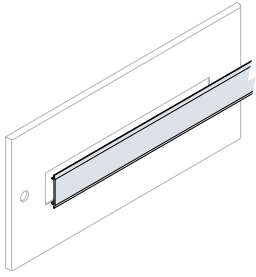
Recessed blind panels

Blind panel in sheet 12/10 (W=600mm) painted RAL7035 colour with rapid fixing, prepared for EH1889 hinges (accessory). The useful dimension of the panel board is always 100mm less than the total height of the panel board.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Recessed blind panel	200	600	EH2063K	1/1
Recessed blind panel		800	EH2083K	1/1
Recessed blind panel	300	600	EH3064K	1/1
Recessed blind panel		800	EH3083K	1/1
Recessed blind panel	400	600	EH4064K	1/1
Recessed blind panel		800	EH4083K	1/1
Recessed blind panel	500	600	EH5063K	1/1
Recessed blind panel		800	EH5084K	1/1
Recessed blind panel	600	600	EH6063K	1/1
Recessed blind panel		800	EH6084K	1/1

AM2 Cabinets

Ordering codes



Structures for modular apparatus

Accessoris for modular panel

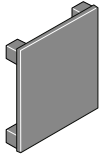
Hole covering strip RAL7035 colour

Description	Code	Package/ No. of pieces
No.10 hole covers W=2000mm, grey	AD1086	1/10
No.3 hole covers 24 DIN modules W=600mm	AD1088	1/3
No.3 hole covers 36 DIN modules W=800mm	AD1089	1/3

4



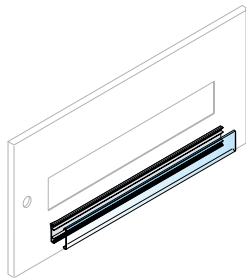
EV1137



EV1135
EV1136

Closing plug for instrument holder panels

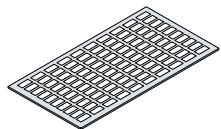
Description	Code	Package/ No. of pieces
No.10 closing plug for instrument holder panels 72x72mm	EV1135	1/10
No.5 closing plug for instrument holder panels 96x96mm	EV1136	1/5
No.50 closing plugs for pushbuttons Ø22mm	EV1137	1/50



AD1101-AD1102
AD1103-AD1104

Adhesive name label holders

Description	Dimensions (mm) W	Code	Package/ No. of pieces
No. 20 label holders 18 DIN mod	325	EH2118	1/20
No. 20 label holders 29 DIN mod	525	EH2129	1/20
No. 20 label holders 24 DIN mod	432	AD1600	1/20
No. 20 label holders 36 DIN mod	634	AD1800	1/20

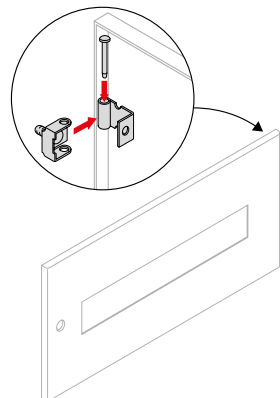


EH2118-EH2129
AD1600-AD1800

Labels can be written using compatible Grafoplast system

Description	No. of DIN mod.	Code	Package/ No. of pieces
No. 288 labels 1 DIN mod.	1	AD1101 ⁽²⁾	1/288
No. 192 labels 2 DIN mod.	2	AD1102 ⁽²⁾	1/192
No. 96 labels 3 DIN mod.	3	AD1103 ⁽²⁾	1/96
No. 96 labels 4 DIN mod.	4	AD1104 ⁽²⁾	1/96
N.5 ABB-AM2 adhesive strips W=1000mm		TL1157	1/5

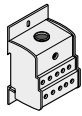
⁽²⁾ Labels can be written using compatible Grafoplast system.



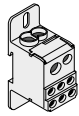
Hinges and rapid closures for panels

Description	Code	Package/ No. of pieces
No. 10 hinges for panels	EH1889 ⁽¹⁾	1/10
No. 5 rapid closures for front panels	EH1890	1/5

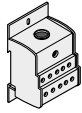
⁽¹⁾ Use No.2 hinges for panel H=150/200/300/400mm, No.3 hinges for panel H=500/600mm.



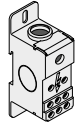
AD1076



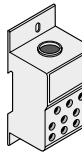
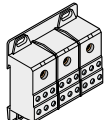
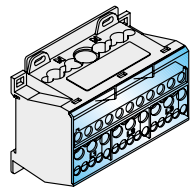
AD1080



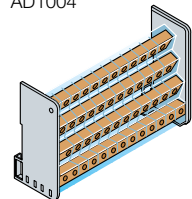
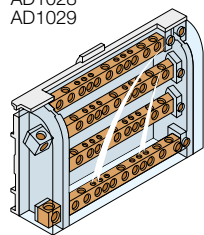
AD1007



AD1081

AD1031
AD1030AD1075
AD1006

AD1004

AD1028
AD1029

AD1027

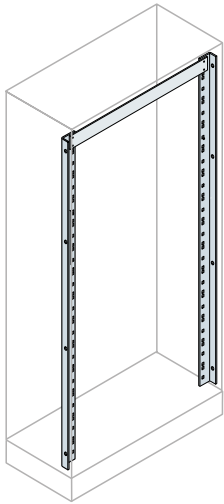
Structures for modular apparatus

Modular distribution blocks

Description	Code	Item	Price	Package/ No. of pieces
Single-pole				
Modular distribution block 125A 10 outputs	US	AD1076		1/1
Modular distribution block 125A 6 outputs	US	AD1080		1/1
Modular distribution block 175A 10 outputs	US	AD1007		1/1
Modular distribution block 175A 6 outputs		AD1081		1/1
Modular distribution block 250A		AD1030		1/1
Modular distribution block 400A		AD1031		1/1
Three-pole				
Modular distribution block 125A	US	AD1075		1/1
Modular distribution block 175A	US	AD1006		1/1
Four-pole				
Modular distribution block 125A		AD1004		1/1
Modular distribution block 125A Medium 93x89x48mm (HxWxD)		AD1028		1/1
Modular distribution block 125A Large 96x126x48mm (HxWxD)		AD1029		1/1
Modular distribution block 160A		AD1027		1/1

AM2 Cabinets

Ordering codes



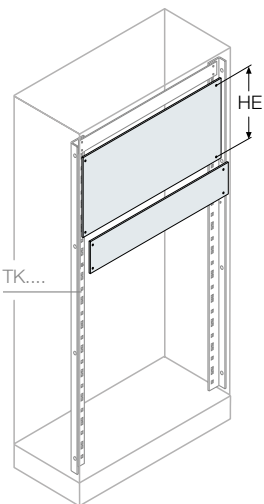
19" rack frames

Fixed 19" rack frames

The fixed uprights are made of 20/10 galvanized steel and are fixed onto the front of the structure W=600mm.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H			
Pair of uprights fixed rack 20HE	1000		TK1000	1/2
Pair of uprights fixed rack 24HE	1200		TK1200	1/2
Pair of uprights fixed rack 28HE	1400		TK1400	1/2
Pair of uprights fixed rack 34HE	1600		TK1600	1/2
Pair of uprights fixed rack 38HE	1800		TK1800	1/2
Pair of uprights fixed rack 42HE	2000		TK2000	1/2

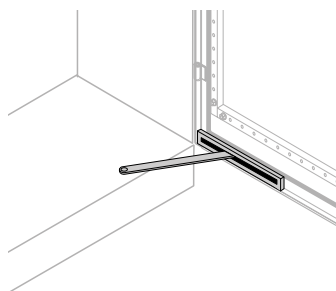
4



Blind panels made of aluminium for rack frame 19"

Blind compensation panels made of opaque colour natural anodized aluminium 30/10 thick, with 465mm centre distances between the holes.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H			
Aluminium panel for 19" rack frame 1HE	44,45		EG1991	1/1
Aluminium panel for 19" rack frame 2HE	89		EG1902	1/1
Aluminium panel for 19" rack frame 3HE	133		EG1903	1/1
Aluminium panel for 19" rack frame 4HE	177,5		EG1904	1/1
Aluminium panel for 19" rack frame 5HE	222		EG1905	1/1
Aluminium panel for 19" rack frame 6HE	266,5		EG1906	1/1
Aluminium panel for 19" rack frame 7HE	311		EG1907	1/1
Aluminium panel for 19" rack frame 8HE	355,5		EG1908	1/1
Aluminium panel for 19" rack frame 9HE	400		EG1909	1/1
Aluminium panel for 19" rack frame 10HE	444,5		EG1910	1/1
Aluminium panel for 19" rack frame 11HE	488		EG1911	1/1
Aluminium panel for 19" rack frame 12HE	533		EG1912	1/1
Aluminium panel for 19" rack frame 13HE	577,5		EG1913	1/1
Aluminium panel for 19" rack frame 14HE	622		EG1914	1/1
Aluminium panel for 19" rack frame 15HE	666		EG1915	1/1
Aluminium panel for 19" rack frame 16HE	711		EG1916	1/1
Aluminium panel for 19" rack frame 17HE	755,5		EG1917	1/1
Aluminium panel for 19" rack frame 18HE	800		EG1918	1/1
Aluminium panel for 19" rack frame 19HE	844,5		EG1999	1/1
Aluminium panel for 19" rack frame 20HE	889		EG1920	1/1



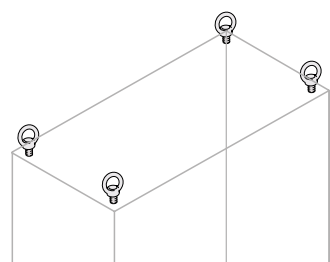
Accessories

Anti-closing device for door

Device which can only be mounted in the versions with blind door; in the case of double door versions, two devices are needed. Keeps the door in the open position.

Description	Code	Package/ No. of pieces
Anti-closing device for door	TA5510	1/1

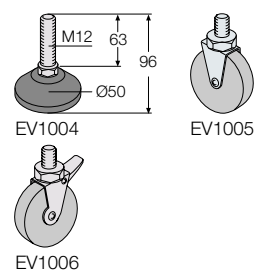
Cannot be mounted where there is a counterdoor, glass door and modular panel.



Lifting eyebolts

Allow panel board handling by means of a bridge crane. They are fixed directly on the panel board roof. Made of steel and coated with white galvanization treatment.

Description	Code	Package/ No. of pieces
No. 2 eyebolts M12 for structures D=300mm	TA9600	1/2
No. 4 eyebolts M12 for structures D=300mm	TA9601	1/4

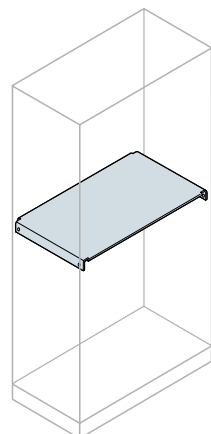


Feet and wheels

Description	Code	Package/ No. of pieces
No. 4 anti-vibration levelling feet M12, 500 kg capacity each	EV1004	1/4
No. 4 free wheels Ø 80mm, 70 kg capacity each	EV1005	1/4
No. 4 braked wheels Ø 80mm, 70 kg capacity each	EV1006	1/4

Horizontal division panels

Panel made of galvanized steel sheet 15/10 thick, allows the different components to be separated horizontally inside the structure.

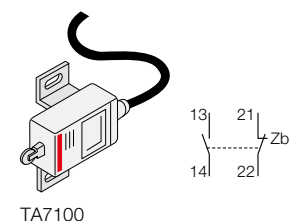


Description	Dimensions (mm)		Code	Package/ No. of pieces
	L	D		
Horizontal shelf	600	300	TE6031	1/1
		400	TE6041	1/1
		500	TE6051	1/1
Horizontal shelf	800	300	TE8031	1/1
		400	TE8041	1/1
		500	TE8051	1/1
Horizontal shelf	1000	300	TE1031	1/1
		400	TE1041	1/1
		500	TE1051	1/1

Do not be mounted with double door W=800/1000mm.

Position switch

Conforming to the EN 50047 Standard, IP65 degree of protection, UL/CSA approved, can be assembled in all the positions directly on the panel board structure by means of the accessory supplied. Technical data: Ui=500V Dimensions: 84x30x30mm. Aux. contact In =3A at 230V≈ or 1.8A at 400V≈ (in AC-15 EN 60947-5-1).

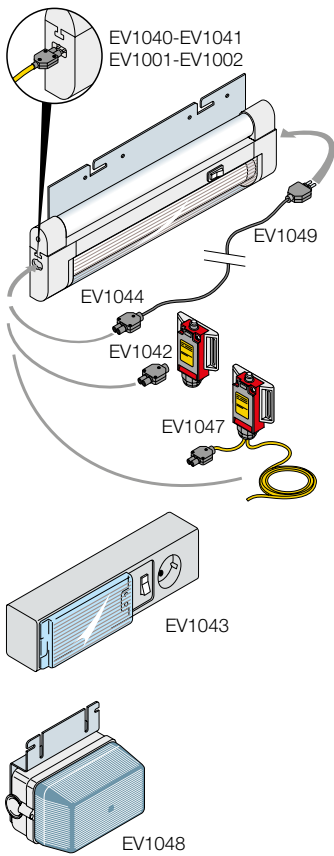


Description	Code	Package/ No. of pieces
Door position device	 TA7100	1/1

AM2 Cabinets

Ordering codes

4



Accessories

Led electronic lamp/fluorescent lamps

The electronic led lamps 3.6 W and 6.5 W and fluorescent lamps 8 W and 13 W are complete with mounting brackets and can be integrated with devices for voltage indicator.

The lamps have the following characteristics:

- Rotatable 180 degrees on the axis of the aluminum bracket
- Possibility of being mounted in series up to 5 elements (Fig. 1), the chain of lamps can be controlled by a single micro switch simplifying the installation and reducing the number of cables for connecting of the elements.

Moreover, the conformation of the electronic led lamps provides a very wide light emission and an increase of 70% compared to traditional lamps. So a lamp 8W is comparable with a 14W, and 13W with a version from 18/21W.

Description	Code	Package/ No. of pieces
Led electronic lamp		
Led electronic lamp 3,6W-24V AC/DC L=342mm	EV1001	1/1
Led electronic lamp 6,5W-24V AC/DC L=574mm	EV1002	1/1
Fluorescent lamps		
Fluorescent lamp 8W-220/240V L=342mm	EV1040	1/1
Fluorescent lamp 13W-220/240V L=574mm	EV1041	1/1
Fluorescent lamp + socket 11W-230V L=355mm, complete with magnetic support	EV1043	1/1
Lamp holder		
Lamp holder E27 220V max 60W (without lamp)	EV1048	1/1

Accessories for lamps

Description	Code	Package/ No. of pieces
System for positioning limit switch + connector (to be cabled)	EV1042	1/1
5 female two-pole connectors	EV1044	1/5
Two-pole cable L=10 metres	EV1045	1/1
Limit switch and cabled two-pole connector	EV1047*	1/1
No. 4 Male double poles connector for sequential lamps wiring	EV1049	1/4

* There are two cables L=1900mm and L=380mm in the pack.

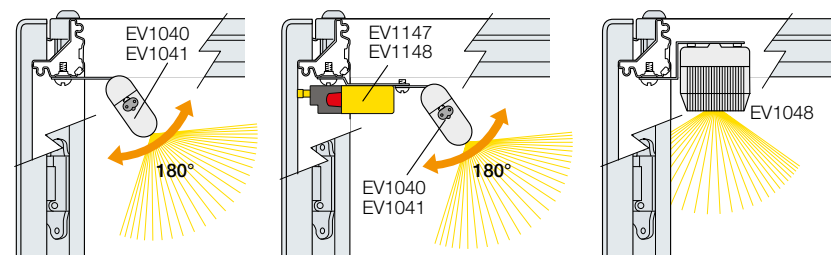
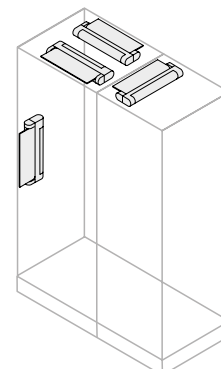
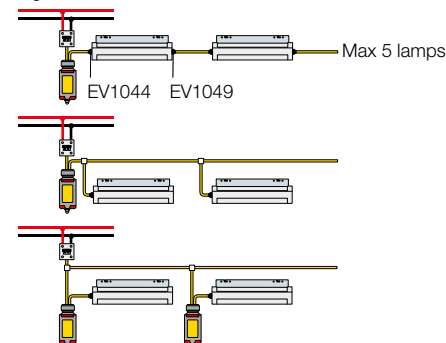


Fig. 1



Accessories

Voltage detector device

Allows the passive safety level to be increased inside the electric panel boards, flashing when the door is opened. The basic version consists of a three-phase flashing light, three-pole limit switch and fixing bracket.

Compared to the basic version, the one with an auxiliary circuit is completed with a mechanical interlock which activates the electric contacts to control the auxiliary circuits. The interlock is always fitted with a NC contact code EV1144 (NC installed with door closed) which allows supply of a current launching coil. A NC contact can be added code EV1144 (NC installed with door closed) to allow opening of an undervoltage coil. It is also possible to supply circuits relative to internal lighting and/or to turn off fans/air conditioners. NO contact EV1145 (NC installed with door closed) available. Order the fixing screws W=46mm code EV1146 separately for the additional contact. Possibility of exclusion during the testing stage with relative automatic recover when the door has been closed. Conforms to the EN60947- 5-1 Standards, UL/CSA approved, operating temperature from -25 °C to +65 °C.

Flashing: terminal capacity max. 3mm², Ue/Ie auxiliary contact capacity:

110V/6A, 230V/3A, 400V/2A, 600V/1.2A.

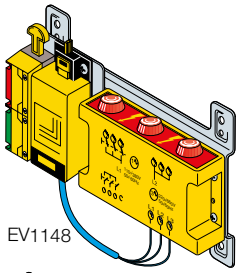
Rated thermal current Ith: 10 A

Max. terminal capacity: 2x1.5mm² / 1x3mm²

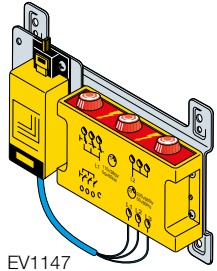
Flashing signalling device:

- Single phase 110-400V DC/AC 50/60Hz power supply voltage

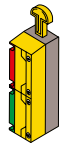
- Three-phase AC 220-690V 50/60Hz



EV1148

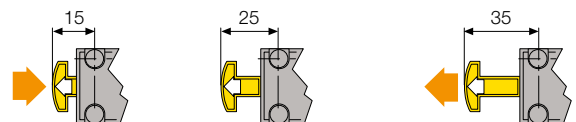


EV1147



EV1143

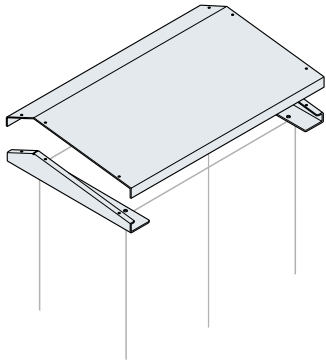
Description	Ue (V)	Ui (V)		Code	Package/ No. of pieces
Voltage detector device	380/600	690		EV1147	1/1
Voltage detector device + interlock + 1 NC contact	380/600	690		EV1148	1/1
Interlock + 1 NC contact				EV1143	1/1
1 NC contact				EV1144	1/1
1 NO contact				EV1145	1/1
Screw L=46mm x 2 contacts				EV1146	1/1



	Code	Closed door	Open door	Open door By pass
Position of contacts	EV1144			
	EV1145			

AM2 Cabinets

Ordering codes



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Accessories

Spray protection roofs

To improve protection against entry of liquids and rain. Made of 15/10mm thick sheet steel, painted RAL 7035 colour orange peel.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	L	D		
Spray protection roof	600	300	TP6030K	1/1
	600	400	TP6040K	1/1
	600	500	TP6050K	1/1
	800	300	TP8030K	1/1
	800	400	TP8040K	1/1
	800	500	TP8050K	1/1
	1000	300	TP1030K	1/1
	1000	400	TP1040K	1/1
	1000	500	TP1050K	1/1
	1200	300	TP1230K	1/1
	1200	400	TP1240K	1/1
	1200	500	TP1250K	1/1

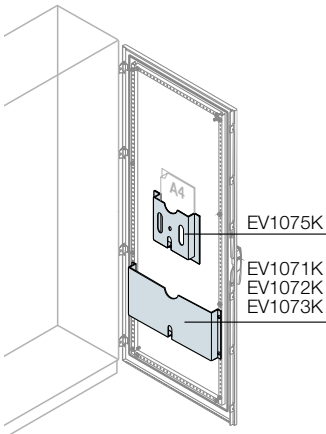
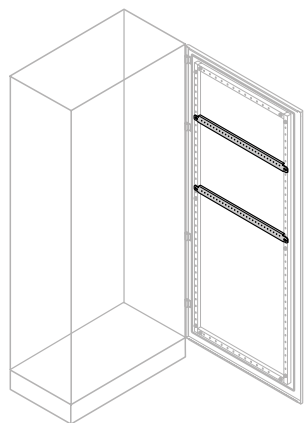


Diagram holder pockets RAL 7035

Fixed inside the door by means of adhesive parts in the case of the plastic version EV1075K, or directly by means of screws to the sections of the door for the metal versions. Both versions are RAL 7035 colour.

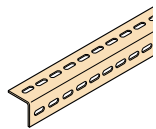
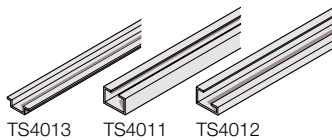
Description	Code	Package/ No. of pieces
Metal diagram holder pocket for door l=600mm	EV1071K	1/1
Metal diagram holder pocket for door l=800mm	EV1072K	1/1
Metal diagram holder pocket for door l=1000mm	EV1073K	1/1
Plastic diagram holder pocket for A4	EV1075K	1/1



Horizontal reinforcement sections for door

Crosspieces made of galvanized sheet with drilling with 25mm pitch, these allow fixing of accessories (e.g. wiring ducts) inside the blind doors. They are fixed on the door reinforcement tube.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	h		
No. 2 horizontal sections h=35mm	600	35	EB1041	1/2
No. 2 horizontal sections h=35mm	800	35	EB1042	1/2
No. 2 horizontal sections h=35mm	1000	35	EB1043	1/2



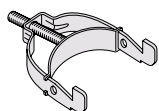
TS4000-TS4001-TS4002
TS4003-TS4004

Accessories

Sections for accessories

Universal sections of different types for mounting any component or for cable locking.

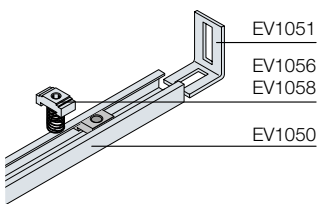
Description	Dimensions (mm)		Code	Package/ No. of pieces
	W			
No. 2 EN sections 5002 C30	2000		TS4011	1/2
No. 2 EN sections G32	2000		TS4012	1/2
No. 2 DIN EN sections 5022 35x7.5	2000		TS4013	1/2
No. 2 sections for structures	600		TS4000	1/2
No. 2 sections for structures	800		TS4001	1/2
No. 2 sections for structures	1000		TS4002	1/2
No. 2 sections for structures	1200		TS4003	1/2
No. 2 sections for structures	1600		TS4004	1/2



Brackets for anchoring cables

Adjustable cable clamping bracket. Can be mounted on sections with 10mm slot EV1050.

Description	Code	Package/ No. of pieces
No. 10 cable clamping brackets $\varnothing 9 \div 16$ mm min÷max	EV1090	1/10
No. 10 cable clamping brackets $\varnothing 16 \div 30$ mm min÷max	EV1091	1/10
No. 5 cable clamping brackets $\varnothing 30 \div 48$ mm min÷max	EV1092	1/5
No. 5 cable clamping brackets $\varnothing 48 \div 72$ mm min÷max	EV1093	1/5



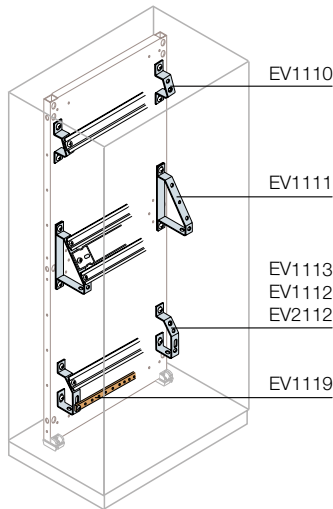
Sliding aluminium rails for general purposes

Description	Code	Package/ No. of pieces
No. 10 aluminium sections 30x15x1,8 - L=2000mm	EV1050	1/10
No. 25 fixing brackets for EV1050	EV1051	1/25
No. 100 M6 aluminium nuts for EV1050	EV1056	1/100
No. 100 M8 aluminium nuts for EV1050	EV1058	1/100

AM2 Cabinets

Ordering codes

4

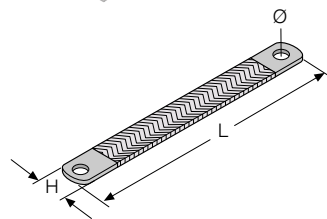


Accessories

Angled supports for terminal boxes and earthing busbars

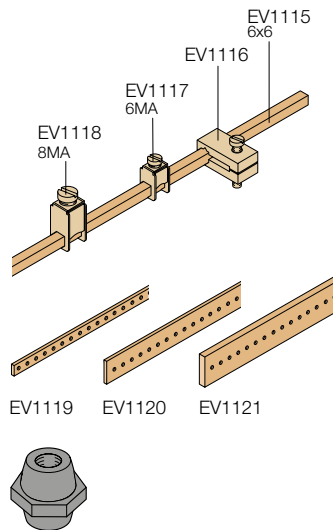
Description	Code	Package/ No. of pieces
No.50 angled supports 1 row of terminals	EV1110	1/50
No.10 angled supports 1 row of terminals	EV2110	1/10
No.50 angled supports 1 row of terminals + earth	EV1112	1/50
No.10 angled supports 1 row of terminals + earth	EV2112	1/10
No.2 angled supports 1 row of terminals + earth	EV1113	1/2
No.10 angled supports double row of terminals	EV1111	1/10

Cables for earthing



Description	Dimensioni (mm)		Code	Package/ No. of pieces
	H	L		
No.5 earthing cables sect. 16mm	17	200	AA6840	1/5
No.5 earthing cables sect. 16mm	17	300	AA6850	1/5
No.5 earthing cables sect. 25mm	22	200	AA6880	1/5
No.5 earthing cables sect. 25mm	22	300	AA6890	1/5

Neutral/earthing copper busbars



EV1122-EV1123
EV1124-EV1125

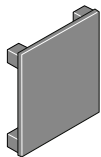
Description	Code	Package/ No. of pieces
Neutral/earthing busbar 6x6mm W=2000mm	EV1115	1/1
No. 50 insulators for neutral/earthing busbar for EV1115	EV1116	1/50
No. 100 terminals for cable ø0.5-16mm ² for EV1115	EV1117	1/100
No. 100 terminals for cable ø4-35mm ² for EV1115	EV1118	1/100
No. 2 drilled and threaded 20x5mm busbars M6 W=2000mm	EV1119	1/2
No. 2 drilled and threaded 25x5mm busbars M6 W=2000mm	EV1120	1/2
No. 2 drilled and threaded 50x5mm busbars M6 W=2000mm	EV1121	1/2
No.50 hexagonal insulators 30x30mm M6	EV1122	1/50
No.50 hexagonal insulators 30x30mm M8	EV1123	1/50
No.25 hexagonal insulators 36x50mm M6	EV1124	1/25
No.25 hexagonal insulators 36x50mm M8	EV1125	1/25

Screws for apparatus

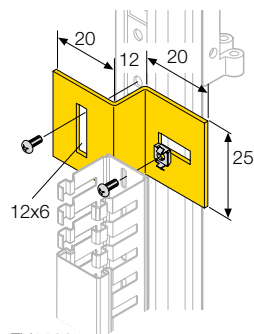
Description	Code	Package/ No. of pieces
No.1000 perforating screws 4.2x13mm cross slotted head	EV1100	1/1000
No.1000 perforating screws 4.2x19mm cross slotted head	EV1101	1/1000
No.50 trilobed screws M6 L=10mm	AD1033	1/50



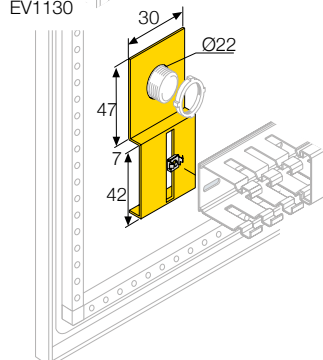
EV1137



EV1135
EV1136

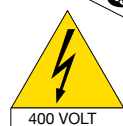
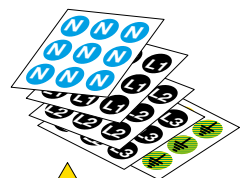
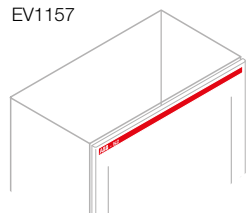


EV1130



EV1131

EV1157



Accessories

Hole cover cap

Description	Code	Package/ No. of pieces
No. 10 closing caps for instrument panel 72x72mm	EV1135	1/10
No. 5 closing caps for instrument panel 96x96mm	EV1136	1/5
No. 50 closing caps for pushbuttons ø 22mm	EV1137	1/50

Wiring duct support brackets

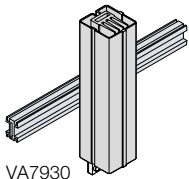
Description	Code	Package/ No. of pieces
No. 100 wiring duct support brackets on upright structure	EV1130	1/100
No. 100 wiring duct support brackets on pushbuttons ø 22	EV1131	1/100

Marking

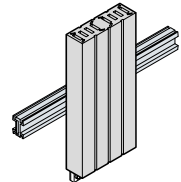
Description	Code	Package/ No. of pieces
No.5 adhesive labels ABB-IS2 W=1000mm	EV1157	1/5
No.490 adhesive labels Ø 12mm N symbol	EV1150	1/490
No.490 adhesive labels Ø 12mm L1 symbol	EV1151	1/490
No.490 adhesive labels Ø 12mm L2 symbol	EV1152	1/490
No.490 adhesive labels Ø 12mm L3 symbol	EV1153	1/490
No.490 adhesive labels Ø 12mm T symbol	EV1154	1/490
No.10 triangular adhesive labels 125mm with 400V lightning arrow symbol	EV1155	1/10
No.100 triangular adhesive labels 50mm with lightning arrow symbol	EV1156	1/100

AM2 Cabinets

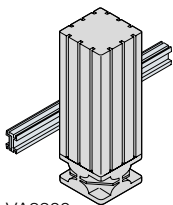
Ordering codes



VA7930
VA7950
VA7975
VA7910



VA7915



VA8300

4

Temperature management

Heater for IP20 electrical switchboards

Their use prevents condensation in the electric cabinets. They consist of a heating element (PTC thermistor) inserted in an aluminium alloy ground plate. The PTC thermistor is a component which modifies its impedance according to the operating temperature. It is intrinsically stable and ensures primary safety features for the heater and service stability.

The main qualities of the heaters using PTC are:

- electrical absorption (or dissipated power) which is almost constant in the range of power supply voltage between 100 and 250V;
- electrical absorption bound by inverse law to the trend of the ambient temperature.

The special tubular geometry of the ground plate allows efficient thermal exchange with the heating element. This allows high powers and limited overall dimensions (especially in width and depth); Snap-on assembly on 35 mm DIN rail. Requires a thermostat.

Description	Dimensions (mm)			Code	Package/ No. of pieces
	H	W	D		
Anti-condensation heater 30W, 110-240 Vac-dc	115	42	42	VA7930	1/1
Anti-condensation heater 50W, 110-240 Vac-dcc	165	42	42	VA7950	1/1
Anti-condensation heater 75W, 110-240 Vac-dc	210	42	42	VA7975	1/1
Anti-condensation heater 100W, 110-240 Vac-dc	165	42	51	VA7910	1/1
Anti-condensation heater 150W, 110-240 Vac-dc	146	82	51	VA7915	1/1
Anti-condensation heater with fan 300W, 230 Vac-dc	148	82	91	VA8300	1/1

All the heaters with PTC absorb a higher power than the rated one on inrush according to a transitory which lasts a few tenths of a second.

If the heaters are to be supplied by means of an auxiliary transformer, its apparent power must be sized taking 1.5 times the rated power of the heaters with natural aeration and twice those with forced ventilation into consideration.

IEC 890 method for calculating the effective cooling surface (CEI 17-43 method)

The total power dissipation P of an enclosure is linked to the exchange effective dissipating surface S, the ΔT difference between the inner and outer temperature and the k coefficient of heat exchange relative to the material of the enclosure:

$$P = k * \Delta T * S$$

$$k = 5,5 \text{ for painted steel}$$

$$\Delta T = T1 - T2;$$

$$T1 = \text{dew point temperature (on average } 25^{\circ}\text{C)}$$

$$T2 = \text{minimum ambient temperature.}$$

The exchange surface S can be calculated using the following table taken from the CEI 17-43.

Disposition of the cabinet	Calculating the enclosure surface S (mm ²)	Dimensions (m)
Detached, exposed on all sides	$S = 1,8 \times H \times (L+P) + 1,4 \times L \times P$	L = width H = height P = depth
For closed to a wall structures	$S = 1,4 \times L \times (H+P) + 1,8 \times P \times H$	
Left or right exposed structure	$S = 1,4 \times P \times (H+L) + 1,8 \times L \times H$	
Left or right closed to a wall structure	$S = 1,4 \times H \times (P+L) + 1,4 \times L \times P$	
Central exposed structure	$S = 1,8 \times L \times H + 1,4 \times L \times P + P \times H$	
Central closed to a wall structure	$S = 1,4 \times L \times (H+P) + P \times H$	
Central closed to a wall structure, with covered roof	$S = 1,4 \times L \times H + 0,7 \times L \times P + P \times H$	

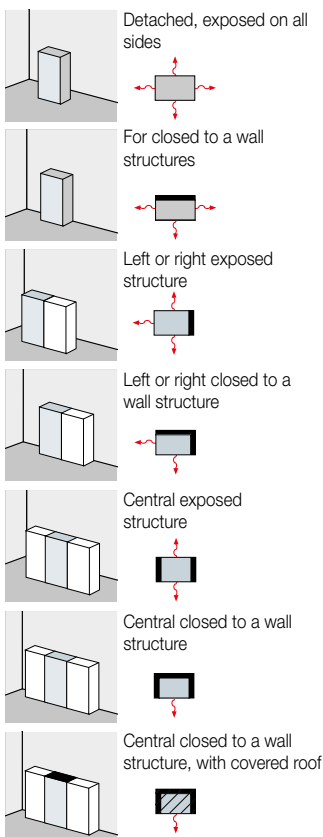
Using a TM2665K enclosure, in "for closed to a wall structures" case we will obtain:

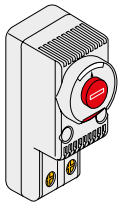
$$T1 = 25^{\circ}\text{C}, T2 = 20^{\circ}\text{C}, K = 5,5, \Delta T = (25-20) = 5^{\circ}\text{C}, S = 3,2\text{m}^2$$

The total power dissipation P obtained will be:

$$P = k * \Delta T * S = 88\text{W}$$

The recommended heater is VA7910 (100W)







Temperature management

IP20 Thermostat

Conforms to EN 60730-1, CE and cURus standards, IP20 degree of protection. Grey RAL 7035 colour; electrical life 100,000 cycles. Dimensions (HxWxD) 68x29x45mm, can be mounted on DIN rail. The version with NO (normally open) contact allows closure of a circuit activating ventilation, air conditioning, or alarms. The version with NC (normally closed) contact allows opening of a circuit, disconnecting any anti-condensation resistances.

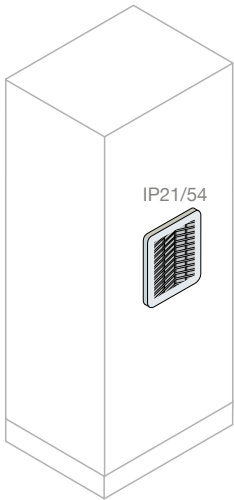
Description	Standard power supply V~/50-60Hz		Code		Package/ No. of pieces
NO ventilation thermostat	12-60 V d.c.; 110-250V a.c.		EN0101K		1/1
NC heating thermostat	12-60 V d.c.; 110-250V a.c.		EN0102K		1/1

Code	Standard power supply V~/50-60Hz	Contact capacity Load Ω	Load L	Temperature scale	Type of contact	Weight
EN0101K	12-60 V d.c.; 110-250V a.c.	10A	2A	-10 +80 °C	NO	54g
EN0102K	12-60 V d.c.; 110-250V a.c.	10A	2A	-10 +80 °C	NC	54g

AM2 Cabinets

Ordering codes

4

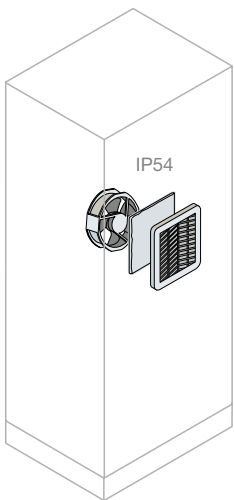


Temperature management

IP21/54 natural ventilation kit

Gratings made of insulating material (self-extinguishing ABS UL94V-0) RAL7035 colour, complete with high dust collection capacity filter cloth (600g/m²), able to reduce maintenance interventions (cleaning by means of washing in water or by beating). Degree of protection IP21 without filter, IP54 with filter according to IEC 60529, Type 1 without filter, Type 12 with filter according to UL approval 508 fitted with pre-assembled gasket seal. CE and cURus approval.

Description	Air entry surface for ventilation		Dimensions (mm)		Code	Package/No. of pieces
	Without filter cm ²	With filter cm ²	W	H		
Grille+air passage filter kit	27	6	105	105	EN0105K	1/1
Grille+air passage filter kit	53	10	150	150	EN0150K	1/1
Grille+air passage filter kit	121	22	204	204	EN0204K	1/1
Grille+air passage filter kit	225	32	250	250	EN0250K	1/1
Grille+air passage filter kit	317	55	325	325	EN0325K	1/1

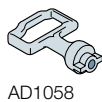
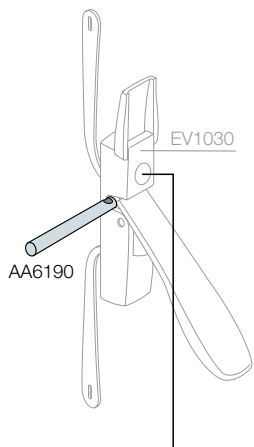


IP54 forced ventilation Kit

Grilles made of insulating material (ABS self-extinguishing UL94V-0) RAL7035 colour, complete with filter cloth with high dust accumulation capacity (600g/m²), able to reduce maintenance interventions (cleaning by washing with water or beating). IP54 degree of protection with filter according to UL approval 508 fitted with pre-mounted tightness gasket. Operating temperature -10 °C + 50 °C, for noise values see page 8/50. The fans allow reversible flow of air. CE and cURus (see mark) approval.

Description	Consumption 50/60Hz (W)	Capacity 50/60Hz (m ³ /h)	Dimensions (mm)		Code	Package/No. of pieces
			W	H		
With IP54 230V ~ fan						
Ventilation filter	10/8	23/30	105	105	EN1105K	1/1
Ventilation filter	20/19	57/61	150	150	EN1150K	1/1
Ventilation filter	17/15	120/135	204	204	EN1204K	1/1
Ventilation filter	29/29	240/270	250	250	EN1250K	1/1
Ventilation filter	67/87	520/580	325	325	EN2325K	1/1
With IP 54 1150V~ fan						
Ventilation filter	9/7	23/30	105	105	EN2105K	1/1
Ventilation filter	20/18	57/61	150	150	EN2150K	1/1
Ventilation filter	17/15	120/135	200	200	EN2204K	1/1
Ventilation filter	30/30	240/270	250	250	EN2250K	1/1
Ventilation filter	50/64	520/580	325	325	EN3325K	1/1

In any forced ventilation kit, the fan wheel is balanced. In the larger sizes (cod. EN2325K and cod. EN3325K) there is the balancing clip. The balanced fan wheel ensures less noise and absorption.



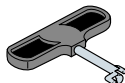
AD1058



AA6200
AA8004



AA6160



AA1570



AA6120



AA1560



AA6140



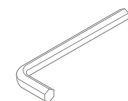
AA6141



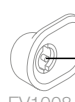
AA6180



AA6180



AA8003



EV1008



EV1036
EV1037

Accessories

Closing systems

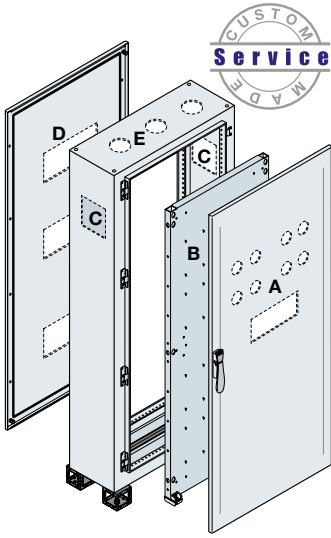
Inserts interchangeable with the double tongue ones supplied as standard, complete with relative key.

Description	Code	Custom Made Service	Package/ No. of pieces
Spare parts and accessories for EV1030 handle			
Handle complete with lock	EV1030		1/1
Zamak (Zn+Al+Mg) alloy key for double tongue insert, for external door, single door version	AD1058		1/1
Yale insert and key for external door, single door version	AA6200	■	1/1
Ronis E739 insert and key for external door, single door version	AA8004	■	1/1
Ronis insert 455 and key	PIRH0455		1/1
Ronis insert 2432E and key	PIRH2432		1/1
Ronis insert 1242E and key	PIRH1242		1/1
Ronis insert 405 and key	PIRH0405		1/1
FIST (FIAT) insert for external door, single door version	AA6160	■	1/1
FIAT key for external door, single door version	AA1570		1/1
Triangular insert, 6.4 male on Ø7.6, for external door, single door version	AA6120	■	1/1
Key for triangular insert for external door, single door version	AA1560		1/1
Square insert, 7 male, for external door, single door version	AA6140	■	1/1
Key for square insert for external door, single door version	AA6141		1/1
Hexagonal insert, 8mm socket type; key not available; for external door, single door version	AA6180	■	1/1
Plastic key for triangular insert AA5200 for external door, double doors version	AA6190		1/1
Spare parts and accessories for EV1008 box			
Box with double tongue insert made of plastic with key for inner door	EV1008		1/1
Single code Yale insert for inner door	EV1036		1/1
Ronis 455 insert for inner door	EV1037		1/1
3mm double tongue insert for inner door	EV1039		1/1
Double tongue insert for handle/closing box	AA6100		1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

AM2 Cabinets

Ordering codes



4

Accessories

Special Painting Service

Special painting service has to be managed with code of enclosure TM....SPEC (e.g. TM2605SPEC VERN02 + note about color required). It is necessary to specify the color required in the order. For any other component or further information, please contact your local sales network.

Description	Code	W (mm)
Increase for special painting AM2	VERN01	600-800-1000
Increase for special painting AM2	VERN02	1200-1600

See page 8/13 for the colours available.

Special Drilling service

The price increase depends on the number of individual drilled parts of the enclosure, and not on the number of holes to be drilled. For single parts it means: A-door plate B-, C sides, D rear, E roof/bottom. The special drilling service has to be managed by code TM ...SPEC + code for the part drilled required (eg TM2605KSPEC FOR02, predrilled roof). You must include the layout of of the holes (see chapter 9 for useful drilling areas).

Description	Code	Package/ No. of pieces
Increase for special drilling of rear/side/door/ plate panel	FOR01	
Increase for special drilling of roof	FOR02	

For usefull drilling area see page 9/49.

Spare parts

Doors for single door version

Front doors for single door application with 120° opening made of steel sheet 15/10mm thickness.
Order one code according to the dimensions of the structure in which the replacement is needed.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Doors for single door version				
Blind door	1000	600	TC1006K	1/1
Glazed door		600	TT1006K	1/1
Blind door		800	TC1008K	1/1
Glazed door		800	TT1008K	1/1
Blind door	1200	1000	TC1010K	1/1
Blind door		600	TC1206K	1/1
Glazed door		600	TT1206K	1/1
Blind door		800	TC1208K	1/1
Glazed door		800	TT1208K	1/1
Blind door		1000	TC1210K	1/1
Glazed door	1000	TT1210K	1/1	
Blind door	1400	600	TC1406K	1/1
Glazed door		600	TT1406K	1/1
Blind door		800	TC1408K	1/1
Glazed door		800	TT1408K	1/1
Blind door		1000	TC1410K	1/1
Glazed door		1000	TT1410K	1/1
Blind door	1600	600	TC1606K	1/1
Glazed door		600	TT1606K	1/1
Blind door		800	TC1608K	1/1
Glazed door		800	TT1608K	1/1
Blind door		1000	TC1610K	1/1
Glazed door		1000	TT1610K	1/1
Blind door	1800	600	TC1806K	1/1
Glazed door		600	TT1806K	1/1
Blind door		800	TC1808K	1/1
Glazed door		800	TT1808K	1/1
Blind door		1000	TC1810K	1/1
Glazed door		1000	TT1810K	1/1
Blind door	2000	600	TC2006K	1/1
Glazed door		600	TT2006K	1/1
Blind door		800	TC2008K	1/1
Glazed door		800	TT2008K	1/1
Blind door		1000	TC2010K	1/1
Glazed door		1000	TT2010K	1/1

Spare parts

Doors for double door version

Front doors for double door application with 120° opening made of steel sheet 15/10mm thickness. Symmetrical doors (same width): order one code for the door with handle and one code for the door with overlapping closing according to the dimensions of the structure in which the replacement is needed. Asymmetrical doors (different width): order the codes for the doors (one door with handle and one with overlapping closing) according to the dimensions of the structure, adjusting the blocks of the doors manually.

Double door enclosure TM.... is provided as standard with symmetrical doors. For asymmetrical doors ask for special offer.

4

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Doors for double door version				
Blind door with handle	1000	400	TC1008DK	1/1
Blind door with overlapping closing		400	TC1008SK	1/1
Blind door with handle		500	TC1010DK	1/1
Blind door with overlapping closing		500	TC1010SK	1/1
Blind door with handle		600	TC1012DK	1/1
Blind door with overlapping closing		600	TC1012SK	1/1
Blind door with handle		800	TC1016DK	1/1
Blind door with overlapping closing		800	TC1016SK	1/1
Blind door with handle	1200	400	TC1208DK	1/1
Blind door with overlapping closing		400	TC1208SK	1/1
Blind door with handle		500	TC1210DK	1/1
Blind door with overlapping closing		500	TC1210SK	1/1
Blind door with handle		600	TC1212DK	1/1
Blind door with overlapping closing		600	TC1212SK	1/1
Blind door with handle	1400	400	TC1408DK	1/1
Blind door with overlapping closing		400	TC1408SK	1/1
Blind door with handle		500	TC1410DK	1/1
Blind door with overlapping closing		500	TC1410SK	1/1
Blind door with handle		600	TC1412DK	1/1
Blind door with overlapping closing		600	TC1412SK	1/1
Blind door with handle	1600	400	TC1608DK	1/1
Blind door with overlapping closing		400	TC1608SK	1/1
Blind door with handle		500	TC1610DK	1/1
Blind door with overlapping closing		500	TC1610SK	1/1
Blind door with handle		600	TC1612DK	1/1
Blind door with overlapping closing		600	TC1612SK	1/1
Blind door with handle	1800	400	TC1808DK	1/1
Blind door with overlapping closing		400	TC1808SK	1/1
Blind door with handle		500	TC1810DK	1/1
Blind door with overlapping closing		500	TC1810SK	1/1
Blind door with handle		600	TC1812DK	1/1
Blind door with overlapping closing		600	TC1812SK	1/1
Blind door with handle	2000	500	TC2010DK	1/1
Blind door with overlapping closing		500	TC2010SK	1/1
Blind door with handle		600	TC2012DK	1/1
Blind door with overlapping closing		600	TC2012SK	1/1

Spare parts

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Pannelli posteriori				
Rear panel	1000	600	TE1060K	1/1
Rear panel		800	TE1080K	1/1
Rear panel		1000	TE1010K	1/1
Rear panel		1200	TE1012K	1/1
Rear panel		1600	TE1016K	1/1
Rear panel	1200	600	TE1260K	1/1
Rear panel		800	TE1280K	1/1
Rear panel		1000	TE1210K	1/1
Rear panel		1200	TE1212K	1/1
Rear panel	1400	600	TE1460K	1/1
Rear panel		800	TE1480K	1/1
Rear panel		1000	TE1410K	1/1
Rear panel		1200	TE1412K	1/1
Rear panel	1600	600	TE1660K	1/1
Rear panel		800	TE1680K	1/1
Rear panel		1000	TE1610K	1/1
Rear panel		1200	TE1612K	1/1
Rear panel	1800	600	TE1860K	1/1
Rear panel		800	TE1880K	1/1
Rear panel		1000	TE1810K	1/1
Rear panel		1200	TE1812K	1/1
Rear panel	2000	600	TE2060K	1/1
Rear panel		800	TE2080K	1/1
Rear panel		1000	TE2010K	1/1
Rear panel		1200	TE2012K	1/1
Various spare parts				
Zamak Zn + Al + Mg alloy key with double tongue			AD1058	1/1
Handle complete with lock			EV1030	1/1
Double tongue insert for EV1030 handle			AA6100	1/1
Box with double tongue insert made in plastic with key for inner door			EV1008	1/1
Double tongue insert for EV1090 box			EV1039	1/1
No.2 hooking device rods H=1400mm			CA1402	1/1
No.2 hooking device rods H=1600mm			CA1602	1/1
No.2 hooking device rods H=1800mm			CA1802	1/1
No.2 hooking device rods H=2000mm			CA2002	1/1
Spray paint color grey RAL7035 for structure			VB7035	1/1
Spray paint color grey RAL7012 for plinth			VB7012	1/1

IS2 - IS2 EMC Enclosures

IS2 enclosure

Main characteristics	5/2
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Composition of the series	5/10
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Selection of the structure – pre-assembled cabinets

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Selection of the structure – kit version cabinets

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Ordering codes

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IS2 EMC enclosure

Main characteristics	5/130
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Ordering codes

Pre-assembled structures	5/137
Completion of structures	5/138

IS2 Enclosures

Main characteristics

ABB completes its offer of cabinets for automation with the IS2 series, also available in the kit versions. The IS2 panel boards are suitable for making electrical automation, control and operation panel boards.



5

Versions available

The IS2 cabinets are available in the following versions:

- Cabinet with blind door
- Cabinet with glazed door
- Cabinet with 19" rack frame "L" shaped profile, full height fixed and full height or partial swing
- Cabinet with 19" full height or partial fixed rack cranked shaped uprights and full height swing "C" shaped profile
- Cabinet for PC
- Cabinet with console
- Cabinet with compartments
- Cabinet for modular apparatus

The IS2 panel boards are suitable for making electrical automation, control and operation panel boards, with the possibility of constructing batteries of cabinets side by side to control complex industrial plants. They are suitable for floor mounting with the possibility of lateral and rear access and adjustment of the back plate position.



IS2 Enclosures

Main characteristics

Main characteristics and applications for IS2 enclosures.

5



Cabinet with blind or glazed door

The skeleton of the panel board consists of galvanised sheet uprights and pickled sheet panelling with a min. thickness of 1.5/1.0. The parts made of pickled sheet are painted with 60÷70 micron thick polyester epoxy powder paint of standard medium orange peel grey RAL 7035. The painting can be worked (drilled) without chipping. Other colours are also available on request.

Equipotentiality of the structure is obtained automatically during the assembly stage.

Placing two or more structures side by side is a simple operation, using the least possible number of accessories. The structure can be fitted with accessories as follows:

- Vertical blind separator between columns, which ensures the degree of protection
- Separator for 24-pole connectors (staggered assembly between the rows) and relative accessories (closure plates, reduction for the 16-10-6 pole versions).
- Lateral incoming cable structure W=300mm D=500-600-800mm- 1000mm – can be fitted with the separators described above.

The dimensions referred to conform to DIN 41488, and should be considered as external.



Uprights

The upright section is of the closed type and provides excellent resistance to mechanical stresses whilst still keeping the max. dimensions of 47x47mm.

They are drilled with 25mm pitch (in conformity with the DIN 43660 Standard) and allow the accessories to be fixed using M6 self-threading screws and cage nuts. The multi-purpose hinges for fixing the doors allow several structures to be placed side by side, and also to make corner batteries.

There is also an intermediate upright, which allows structures with various compartments to be made (e.g. structure W=800 divided into 600+200mm).

For the structures with width ≥ 1000 mm, the upright can be removed to facilitate access.

The roof is of the removable type and can be fitted with air conditioner, ventilation hoods, top cable connection compartment. The flanges are supplied loose and their assembly is carried out from the front of the panel board, using two screws.



Base, top and plinth

The base has openings which allow cable entry from below, and has different types of flanges:

- guillotine sliding, complete with gasket
 - in several pieces of different sizes to be removed or drilled
 - completely closed by a single large flange (20/10 thickness), which can be drilled to house fairlead membranes or for direct entry of large cable bundles.
- It can also be fitted with supporting crosspieces for heavy users (e.g. transformers max. 500Kg)

Various types of plinths are available:

- **Standard:** 25/10 angle pieces + 10/10 flange made of pickled sheet and painted grey orange peel RAL 7012 colour, H=100mm.
The flanges are supplied loose. Their assembly is carried out from the front of the panel board, using two self-threading screws. The angle pieces are fixed to the structure with two bolts placed diagonally to prevent any rotations during handling. Handling can be carried out using transpallet even when there are two structures side by side.
- **Raised H=200mm:** this keeps the same characteristics as the previous one and consists of two superimposed angle pieces H=100mm and relative cover flange H=100mm.
- **Supporting:** able to support the weight of the structure (\approx 300kg loaded) and handle it by means of rollers. Versions H=100mm.

The plinth can be replaced by the following series of accessories:

- Levelling feet (500kg max. weight)
- Free and braked type wheels (70kg max. weight)
- Single: on request the plinth can be made in a single piece, equal to the whole perimeter of the panel boards mounted in a battery.

The angle pieces are provided with M12 holes for fixing to the floor.

IS2 Enclosures

Main characteristics

The blind door is fitted with reinforced galvanised tube and drilled with 25mm pitch, earthing pins (M6) located in the two corners close to the hinges. The transparent door is fitted with safety glass 4 mm thick screen-printed and with earthed pins.

5



Door

The reversible type doors (right or left opening) are made of 20/10 thick pickled sheet, and can be mounted on the four sides with an opening angle of 120° for the front ones, even in the case of several structures side by side. The side doors have a maximum opening angle of 100°.

Both handles are fitted with different types of key locks.

Furthermore the doors are fitted with the following series of accessories:

- Hinges with 180° opening
- Door stop in the open position for the 180° version as well
- Release microswitch
- Voltage indication lamp
- Ventilation Kit
- Swivel work surface (only for doors W=600 and 800mm), which can be mounted on the reinforcement bar
- RAL7035 colour vertical and horizontal A3 format metal document pocket (only for doors W=600-800-1000mm), which can be mounted on the reinforcement bar
- A4 format plastic document pocket
- Crosspieces on inside of door, for horizontal connection between reinforcement tubes for fixing the wiring duct or other accessories.
- Aluminium openable windows for control panels fitted with door and key.
- Counterdoor, to be mounted at the same time as the front door.

This can house the main components, such as handles for switch-disconnectors/circuit-breakers, mushroom-head pushbuttons and various different pushbuttons.

Large functional plate

The structure of the large plate is particularly sturdy it can support loads up to a total of 300kg without undergoing any deformation.

Made of galvanised sheet (25/10 thick), it is mounted on sliding blocks, which facilitate its insertion in the panel board in any one of the following ways:

- From the front
- From the side
- From the rear
- Two "back-to-back" plates; also in the version with opposite plate
- Fully to the rear, placed inside the uprights on the same plane as these.

The plates, which can be adjusted in depth every 25mm, have the same heights and can be in one of the following versions:

- Standard: with insertion from the front or rear. Joining with another plate is carried out using the special kit. Insertion from the side is possible by means of sliding tracks.
- Oversized: in this case the useful width is the same as the width of the structure. Assembly can only be from the side and is carried out thanks to the special tracks. The oversized plate can be adjusted in depth to exploit the useful space to the maximum without interfering with the side-by-side kit. It can be joined to other plates with the help of a few accessories which can be mounted from the front.
- Partial: adjustable in depth, this is installed using accessories. The back plates can be fitted with rear reinforcement crosspieces.



In the cabinets with glazed doors, the useful space between the glass and panels/ counterdoor allows assembly of most of the components, among which: fixed circuit-breakers with transmitted rotary operation, OESA-OETL switch-disconnectors, Tmax circuit-breakers, and various pushbuttons.



Cabinet with 19" rack frame

The following types of frame are available:

- Fixed: adjustable in depth with 25mm pitch, able to support a maximum load of 90Kg. With 38, 42, 47 HE module capacity for panel boards 1800, 2000, 2200mm high respectively, width 600, 800mm.
- Swing: in the versions for off-centre mounting in structures with W=800mm and centred in structures with W=600mm with a capacity of 36, 40, 45 HE modules respectively for 1800, 2000 and 2200mm heights.
- Partial swing: with 9, 18, 27 HE module capacity, for frames 500, 900, 1300mm high respectively.

The rack frames are completed with the special blind closure panels with dimensions from 1 HE to 20 HE.

Cabinet with 19" rack frame fixed with cranked shaped profile, swing decentralized "C" shaped profile and accessories

Other fastening systems for rack 19" are available, provided with new accessories on catalogue:

- Fixed: fastening systems for rack 19" with fixed cranked shaped profile uprights at full height in enclosure W=600mm and W=800mm, capacity 38/42/47 HE
- Partial fixed: fastening systems for rack 19" with fixed cranked shaped profile uprights at partial height in enclosure W=600mm and W=800mm, capacity 9/18/27 HE
- Swing: decentralized rack frame with swing decentralized "C" shaped profile for W=800mm, capacity 36/41/45 HE.

Brackets for fixing in W=600mm and W=800mm are available, crosspieces have dedicated slots for the passage of cables and for the ducts fixing. Support for accessories, universal fixed, adjustable in deep or removable shelves plus DIN-rail codes are included in ABB offer for those codes.

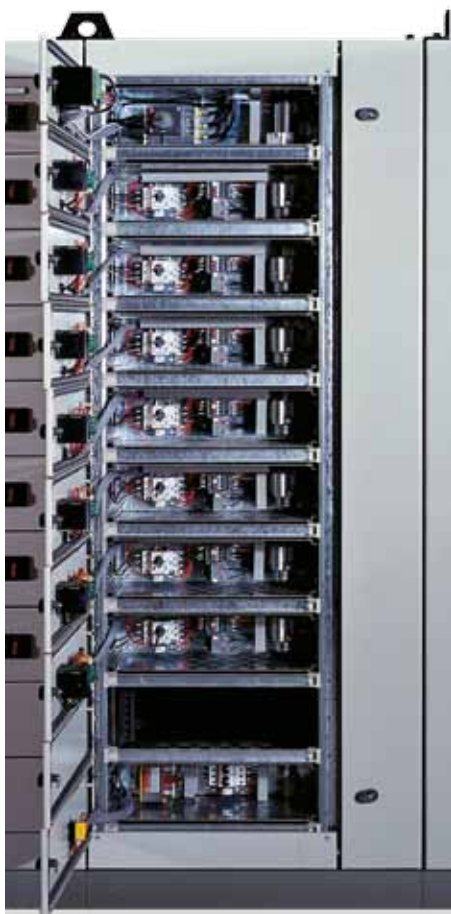
Cabinet with compartments

The IS2 range also covers construction of versions with cells or compartments.

The compartments, available in heights multiples of 100mm up to a maximum of 800mm, allow Form 3a type segregation to be obtained.

The galvanised sheet back plate can be removed to facilitate assembly of the apparatus.

The side parts of the compartment are pre-sheared for passage of the conductors.



IS2 Enclosures

Main characteristics

The cabinet is fitted with a glazed door for the video part and can take screens up to 17" in size.

5



Cabinet for PC

In this configuration, the cabinet is fitted with a glazed door for the video part and can take screens up to 17" in size. The window only regards the screen part. The part relative to the CPU is located behind the keyboard surface, accessible through a lift-up top fitted with a key lock.

The PC cabinet can be placed alongside the basic structures. Available in 1800/2000/2200mm heights, 600mm width, and 600/800mm depth.

Cabinet with console

The structure is fitted with a section dedicated to a console. The versions available are with blind or glazed door.



Cabinet for modular configurations

In the 600 and 800mm widths (24 and 36 DIN modules) without cable riser and in the 800/1000/1200mm widths with internal cable riser $W=200$ or 400mm, the IS2 cabinets can be fitted with modular panels. The modular panels are available in the version with DIN drilling (for one or three rows of modular apparatus), in the blind version and for 72x72mm and 96x96mm measuring instruments. All the panels have vertical modularity of 150 or 200mm and are available in the fixed or hinged version by means of an accessory. Installation of Tmax moulded-case circuit-breakers is possible by means of a back plate and blind panels.

Installation of the modular panels in the IS2 cabinets requires the use of the special uprights for IS2 Enclosures for Automation General characteristics and applications Cabinet for PC In this configuration, the cabinet is fitted with a glazed door for the video part and can take screens up to 17" in size. The window only regards the screen part. The part relative to the CPU is located behind the keyboard surface, accessible through a lift-up top fitted with a key lock.

The PC cabinet can be placed alongside the basic structures.

Available in 1800/2000/2200mm heights, 600mm width, and 600/800mm depth.

Cabinet with console The structure is fitted with a section dedicated to a console. The versions available are with blind or glazed door.

modular panels which are screwed onto the structure of the cabinet. Alternatively assembly of the apparatus on an oversized back plate is possible by means of dedicated uprights.

The modular versions are also fitted with the following series of accessories:

- Hole cover $W=2000$ mm grey RAL 7035 colour
- Adhesive circuit identification label holders
- Distribution frames

In the 600 and 800mm widths (24 and 36 DIN modules) without cable riser and in the 800/1000/1200mm widths with internal cable riser W=200 or 400mm, the IS2 cabinets can be fitted with modular panels.



Air conditioners/fans

There are several solutions for air conditioning and ventilation cabinets:



- Air conditioners, ultra-thin (max depth 105 mm) for wall mounting, IP54, 230 V, 50/60 Hz, 400 V 50 Hz, 460 V 60 Hz, RAL 7035, with a cooling capacity from 1900 W to 2940 W.
- Air conditioners for wall or door mounting, 230V 50/60Hz, RAL 7035 with cooling power of 600 W to 2200 W.
- Heat exchangers (air - air) for wall mounting, IP54, 230 V 50/60 Hz, RAL 7035 with cooling power from 35 W to 85 W.
- Kit natural ventilation through Kit for the raising of the roof IP 20 and grid
- Natural ventilation kit through grid IP21 / IP54
- Forced ventilation kit through input grid and output fan on the wall or hood outlet on the roof, IP23 / IP54, 7035, 230V / 115V, 50/60Hz with reversible flow, flow rate of 23 m3/h 590 m3/h.
- Heater IP20, with 110/230V power supply 50 / 60 Hz
- Thermostat with 110V, 250V power supply 50 / 60 Hz

Accessories

Apart from the accessories dedicated to making up some versions, the following are available for the whole range:

- Reinforcement crosspieces for transformers, able to support weights of 500kg. They are placed at the back of the structure in depth
- Reinforcement crosspieces/various applications, which can be mounted both in depth and in width (H=48-100mm). They are independent of the dimensions of the structure and can be positioned both inside and outside the uprights
- Guide a "C" guides in depth for mounting DIN rails and blind back plates
- Blind panels (H=50-100-150-200-400-600mm) and DIN cut-outs (H=150- 200mm)
- Lamps for panel board internal lighting, to be installed directly on the upright placed under the roof. They can be of two types: 8-13W fluorescent tube with 220-240V 50/60Hz power supply, or 11W version with integrated UNEL socket
- "Duct" type accessory able to shield the power cables from the signal cables
- Busbar system

Technical characteristics

Conformity with the Standard	IEC62208, IEC60439-1, IEC 61439-1-2	
Degree of protection	IP65 (IEC60529) with fixed flange TYPE 12 (UL Standard)	
Degree of mechanical strength	IK10 blind door IK09 glazed door (IEC 62262)	
Certifications	 	
Type of material	Metallic	
Installation site	Indoors	
Fixing method	floor	
Normal service conditions – ambient temperature	from -5 to +40° C	
Operating climate (t°/rh%)	constant	23°C/83% - 40°C/93%
	variable	23°C/98% - 40°C/98%
Vibration test	In accordance with Standard IEC 60068-2-57	
Seismic withstand capability test	In accordance with Standard IEE Std 693	

IS2 Enclosures

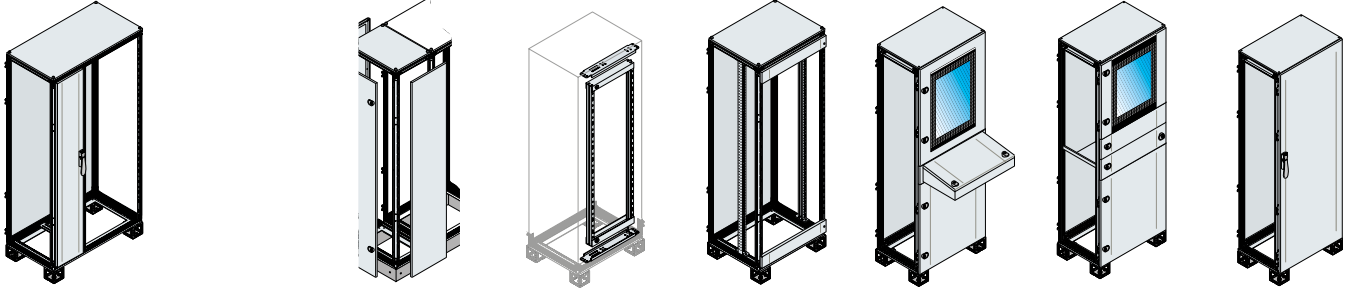
Main characteristics

Composition of the series



5

Dimensions (mm)			Back plates		Counterdoor	Top cable connection cont.	Modular DIN structure	
H	D	W	Standard	Oversized				
1800 2000 2200	400	300						
		400	•			•		
		600	•	•	•	•	•	
		800	•	•	•	•	•	
		1000	•	•	•	•	• + cable cont.	
		1200	•	•	•	•	• + cable cont.	
	500	300						
		400	•	•		•		
		600	•	•	•	•	•	•
		800	•	•	•	•	•	•
		1000	•	•	•	•	•	• + cable cont.
		1200	•	•	•	•	•	• + cable cont.
	600	300						
		400	•	•		•		
		600	•	•	•	•	•	•
		800	•	•	•	•	•	•
		1000	•	•	•	•	•	• + cable cont.
		1200	•	•	•	•	•	• + cable cont.
	800	300						
		400	•	•		•		
		600	•	•	•	•	•	•
		800	•	•	•	•	•	•
		1000	•	•	•	•	•	• + cable cont.
		1200	•	•	•	•	•	• + cable cont.
1000	300							
	400	•	•		•			
	600	•	•	•	•	•	•	
	800	•	•	•	•	•	•	
	1000	•	•	•	•	•	•	



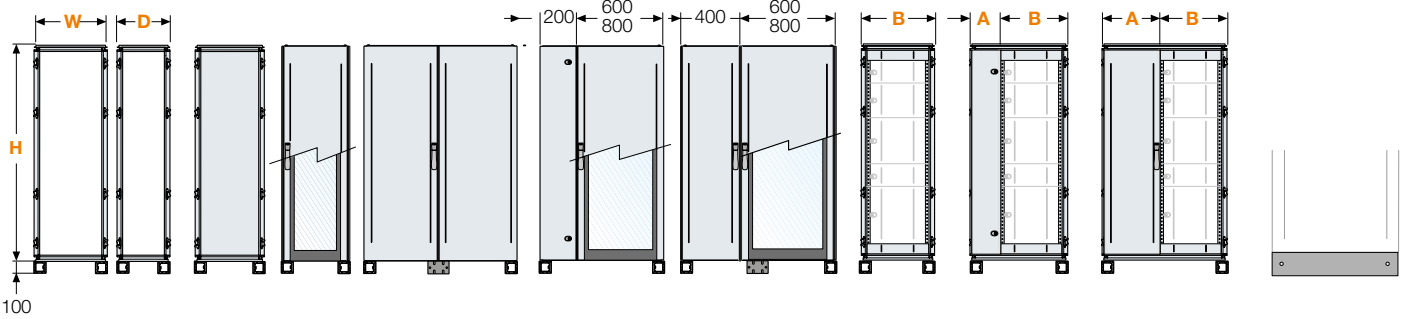
Cable container Internal W=200mm	Internal W=400mm	External W=300mm	19" rack structures	Structures with compartments	Cabinet with console	Cabinet for computer	IS2 EMC
		•					
•			•	•	•		
•	•		•	•	•		
	•			• + cable cont.			
	•			• + cable cont.			
		•					
•			•	•	•		
•	•		•	•	•		
	•			• + cable cont.			
	•			• + cable cont.			
		•					
•			•	•	•		• ⁽¹⁾
•	•		•	•	•		• ⁽¹⁾
	•			• + cable cont.			
	•			• + cable cont.			
		•					
•			•	•	•		• ⁽¹⁾
•	•		•	•	•		• ⁽¹⁾
	•			• + cable cont.			
	•			• + cable cont.			
		•					
•			•	•			
•	•		•	•			
	•			• + cable cont.			

⁽¹⁾ Only H=2000mm

Pre-assembled IS2 Cabinets

Selection of the structure - H=1800 mm

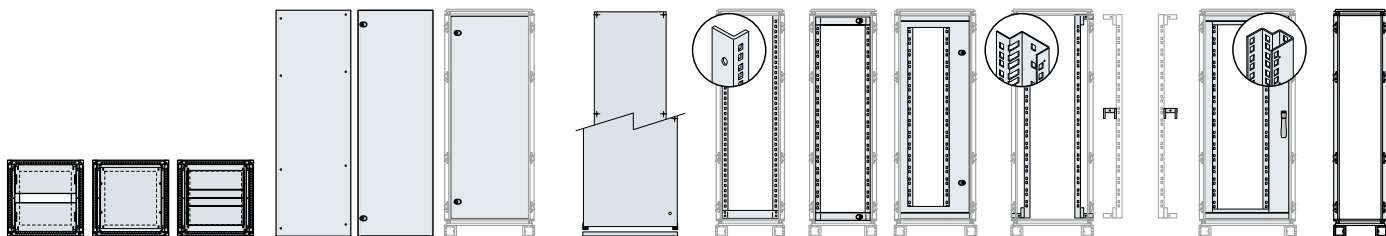
Rapid selection table



5

External dimensions H=1800 ⁽¹⁾ mm		Cabinet with door				Cabinet with cable container				Cabinet with compartments ⁽¹⁾				Flanges for plinth			
W (mm)	D (mm)	Cabinet without door	Blind door	Double blind with overload closure ⁽¹⁾	Glazed door	Blind door with cable container W=200mm	Blind door with cable container W=400mm	Glazed door with cable container W=200mm	Glazed door with cable container W=400mm	Width		Width		Front/ rear	Side		
										A (mm)	B (mm)	A (mm)	B (mm)				
400			ES1844K												ZN4000		
600		ES1864SPK	ES1864K		ES1864VK					ES1864MFK	-	600			ZN6000		
800	400	ES1884SPK	ES1884K		ES1884VK	ES1884FV2K		ES1884VC2K		ES1884MF2K	200	600	ES1884MFK	-	800	ZN8000	ZN4000
1000			ES1804K	ES1814BK	ES1804VK	ES1804FV2K	ES1804FV4K	ES1804VC2K	ES1804VC4K	ES1804MF4K	400	600	ES1804MF2K	200	800	ZN1000	
1200				ES1824BK	ES1824VK ⁽²⁾		ES1824FV4K		ES1824VC4K				ES1824MF4K	400	800	2xZN6000	
400			ES1845K												ZN4000		
600		ES1865SPK	ES1865K		ES1865VK					ES1865MFK	-	600			ZN6000		
800	500		ES1885K		ES1885VK	ES1885FV2K		ES1885VC2K		ES1885MF2K	200	600	ES1885MFK	-	800	ZN8000	ZN5000
1000			ES1805K	ES1815BK	ES1805VK	ES1805FV2K	ES1805FV4K	ES1805VC2K	ES1805VC4K	ES1805MF4K	400	600	ES1805MF2K	200	800	ZN1000	
1200				ES1825BK	ES1825VK ⁽²⁾		ES1825FV4K		ES1825VC4K				ES1825MF4K	400	800	2xZN6000	
1600 ⁽³⁾				ES1875BK											2xZN8000		
400			ES1846K												ZN4000		
600		ES1866SPK	ES1866K		ES1866VK					ES1866MFK	-	600			ZN6000		
800	600	ES1886SPK	ES1886K		ES1886VK	ES1886FV2K		ES1886VC2K		ES1886MF2K	200	600	ES1886MFK	-	800	ZN8000	ZN6000
1000			ES1806K	ES1816BK	ES1806VK	ES1806FV2K	ES1806FV4K	ES1806VC2K	ES1806VC4K	ES1806MF4K	400	600	ES1806MF2K	200	800	ZN1000	
1200				ES1826BK	ES1826VK ⁽²⁾		ES1826FV4K		ES1826VC4K				ES1826MF4K	400	800	2xZN6000	
1600 ⁽³⁾				ES1876BK											2xZN8000		
400			ES1848K												ZN4000		
600			ES1868K		ES1868VK					ES1868MFK	-	600			ZN6000		
800	800		ES1888K		ES1888VK	ES1888FV2K		ES1888VC2K		ES1888MF2K	200	600	ES1888MFK	-	800	ZN8000	ZN8000
1000			ES1808K	ES1818BK	ES1808VK	ES1808FV2K	ES1808FV4K	ES1808VC2K	ES1808VC4K	ES1808MF4K	400	600	ES1808MF2K	200	800	ZN1000	
1200				ES1828BK	ES1828VK ⁽²⁾		ES1828FV4K		ES1828VC4K				ES1828MF4K	400	800	2xZN6000	
1600 ⁽³⁾				ES1878BK											2xZN8000		
400			ES1840K												ZN4000		
600			ES1860K		ES1860VK					ES1860MFK	-	600			ZN6000		
800	1000		ES1880K		ES1880VK					ES1880MF2K	200	600	ES1880MFK	-	800	ZN8000	ZN1000
1000			ES1800K	ES1810BK	ES1800VK					ES1800MF4K	400	600	ES1800MF2K	200	800	ZN1000	

⁽¹⁾ The useful height is always 100mm less than the external dimension of the panel board. For the version with compartments, the useful height is 200mm less.
⁽²⁾ Implies mounting the intermediate upright EM1801. The doors have overlapping closure on the intermediate upright (removable) fixed onto the crosspieces mounted in depth.
⁽³⁾ Also available with double blind doors with closing on intermediate upright (eliminate the suffix B from the code).
⁽⁴⁾ Standard plate joining kit: EA1800 (H=1800mm); EA2000 (H=2000mm); EA2200 (H=2200mm). Possibility of lateral insertion with tracks (see pag. 5/57).
⁽⁵⁾ EA2113 oversized plate joining kit H=1800/2000/2200mm.
⁽⁶⁾ Kit consisting of 2 oversized back plates with relative insertion tracks + plate joining kit.
⁽⁷⁾ In case of structures with internal cable container, select the correct rack frame which takes into account the W=200 or W=400mm of the cable container; and leaves W=600mm or W=800mm structure compartment.
⁽⁸⁾ W=1600mm enclosures are only available in pre-assembled version with blind door (with overlapping door or intermediate upright).
⁽⁹⁾ Examples of configuration and technical characteristics at page 5/114 and 5/115



Incoming cable flanges			Side covers		Counterdoor	Back plates		Rack frames 19" "L" shaped profile ⁶⁾			Rack frames 19"		External cable container		
Sliding	Fixed	Modular	No. 2 Blind panel ¹⁰⁾	Side door with closing box		Standard ²⁾	Oversize + tracks ³⁾	Fixed Centred	Swing Centred W=600mm	Eccentric W=800mm	Fixed ⁸⁾ cranked shaped uprights	Optional central fixing kit	Swing ⁹⁾ "C" shaped profile	W=300mm	
											Frame+ Fixing kit		Frame+ Fixing kit		
EF4040	EF4042	EF4041	EL1840K	EC1841K		EA1841	EA1940	EG1800	EG1801K		EG1805+ EB6000	EB0400	EG1804K+ EV0007	ER3040K	
EF6040	EF6043	EF6041				EE1860K	EA1860	EA1960	EG1880		EG1803K	EG1805+ EB8000			EB8001 + EB0400
EF8040	EF8042	EF8041				EE1880K	EA1880	EA1981							
EF1040	EF1042	EF1041				EE1810K	EA1810	EA1910							
2xEF6040	2xEF6043	2xEF6041				EA1812	EA1912								
EF4050	EF4052	EF4051	EL1850K	EC1851K		EA1841	EA1940	EG1800	EG1801K		EG1805+ EB6000	EB0500	EG1804K+ EV0007	ER3050K	
EF6050	EF6052	EF6051				EE1860K	EA1860	EA1960	EG1880		EG1803K	EG1805+ EB8000			EB8001 + EB0500
EF8050	EF8052	EF8051				EE1880K	EA1880	EA1981							
EF1053	EF1052	EF1051				EE1810K	EA1810	EA1910							
2xEF6050	2xEF6052	2xEF6051				EA1812	EA1912								
2xEF8050	2xEF8052	2xEF8051				EA1817	EA1916 ⁴⁾								
EF4060	EF4063	EF4061	EL1860K	EC1861K		EA1841	EA1940	EG1800	EG1801K		EG1805+ EB6000	EB0600	EG1804K+ EV0007	ER3060K	
EF6060	EF6062	EF6061				EE1860K	EA1860	EA1960	EG1880		EG1803K	EG1805+ EB8000			EB8001 + EB0600
EF8060	EF8062	EF8061				EE1880K	EA1880	EA1981							
EF1060	EF1062	EF1061				EE1810K	EA1810	EA1910							
2xEF6060	2xEF6062	2xEF6061				EA1812	EA1912								
2xEF8060	2xEF8062	2xEF8061				EA1817	EA1916 ⁴⁾								
EF4080	EF4082	EF4081	EL1880K	EC1881K		EA1841	EA1940	EG1800	EG1801K		EG1805+ EB6000	EB0800	EG1804K+ EV0007	ER3080K	
EF6080	EF6082	EF6081				EE1860K	EA1860	EA1960	EG1880		EG1803K	EG1805+ EB8000			EB8001 + EB0800
EF8080	EF8082	EF8081				EE1880K	EA1880	EA1981							
EF1080	EF1082	EF1081				EE1810K	EA1810	EA1910							
2xEF6080	2xEF6082	2xEF6081				EA1812	EA1912								
2xEF8080	2xEF8082	2xEF8081				EA1817	EA1916 ⁴⁾								
EF4010	EF4012	EF4011	EL1810K	EC1811K		EA1841	EA1940	EG1800	EG1801K		EG1805+ EB6000	EB1000	EG1804K+ EV0007	ER3010K	
EF6010	EF6012	EF6011				EE1860K	EA1860	EA1960	EG1880		EG1803K	EG1805+ EB8000			EB8001 + EB1000
EF8010	EF8012	EF8011					EA1880	EA1981							
EF1010	EF1012	EF1011				EE1810K	EA1810	EA1910							

⁶⁾ Rack frame W=600mm needs fixing brackets EB6000 and for an optional central fixing order a couple of crosspieces EB... see page 5/63 according to switchboard depth. Accessories from page 5/84. Rack frame W=800mm needs fixing brackets EB8000 and for an optional central fixing order a couple of crosspieces EB... see page 5/63 according to switchboard depth. Moreover, fixing kits replacing brackets and crosspieces according to switchboard depth are available, codes on page 5/80. Accessories from page 5/84.

⁸⁾ Only available for W=800mm (even in structures with cable container and W=800mm structure compartment). Order specific fixing kit EV0007.

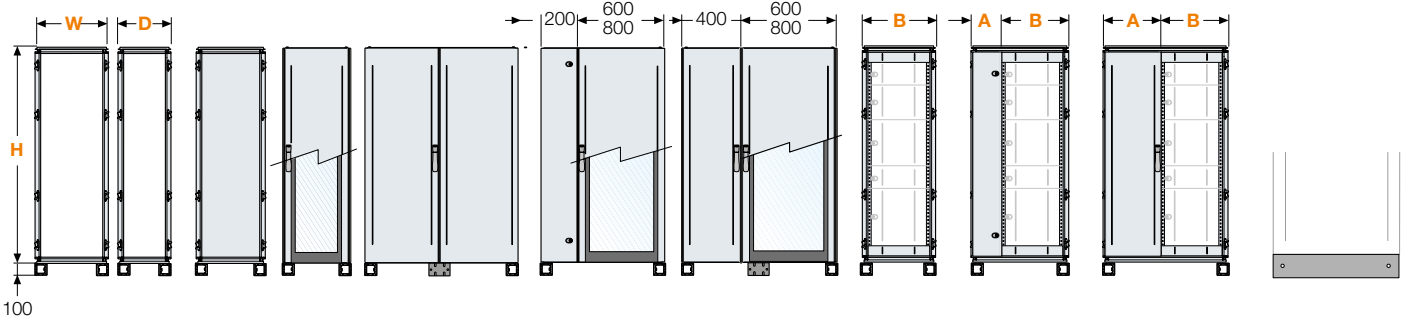
¹⁰⁾ Single side panel available on page 5/49.

Kit for placing structures side by side EV0002/EV0003/EV0006 see page 5/70.

Pre-assembled IS2 Cabinets

Selection of the structure - H=2000 mm

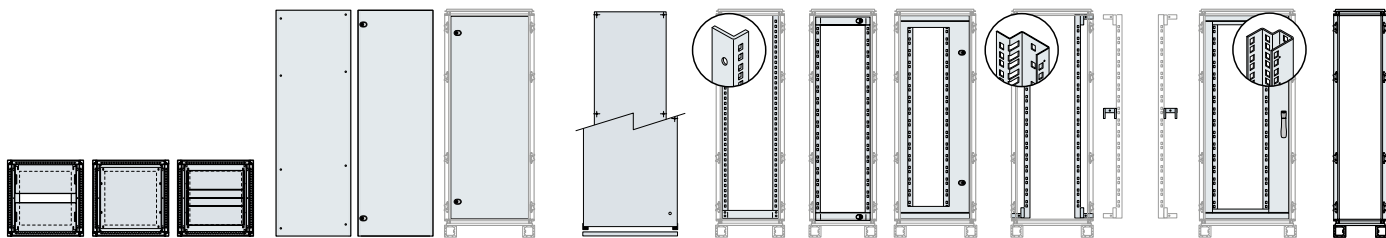
Rapid selection table



5

External dimensions H=2000 ⁽¹⁾ mm		Cabinet with door				Cabinet with cable container				Cabinet with compartments ⁽⁷⁾				Flanges for plinth		
W (mm)	D (mm)	Cabinet without door	Blind door	Double blind with overload closure ⁽¹⁾	Glazed door	Blind door with cable container W=200mm	Blind door with cable container W=400mm	Glazed door with cable container W=200mm	Glazed door with cable container W=400mm	Width		Width		Front/ rear	Side	
										A (mm)	B (mm)	A (mm)	B (mm)			
400			ES2044K												ZN4000	
600		ES2064SPK	ES2064K		ES2064VK					ES2064MFK	-	600			ZN6000	
800	400	ES2084SPK	ES2084K		ES2084VK	ES2084FV2K		ES2084VC2K		ES2084MF2K	200	600	ES2084MFK	-	800	ZN8000
1000			ES2004K	ES2014BK	ES2004VK	ES2004FV2K	ES2004FV4K	ES2004VC2K	ES2004VC4K	ES2004MF4K	400	600	ES2004MF2K	200	800	ZN1000
1200				ES2024BK	ES2024VK ⁽²⁾		ES2024FV4K		ES2024VC4K				ES2024MF4K	400	800	2xZN6000
400			ES2045K												ZN4000	
600		ES2065SPK	ES2065K		ES2065VK					ES2065MFK	-	600			ZN6000	
800	500		ES2085K		ES2085VK	ES2085FV2K		ES2085VC2K		ES2085MF2K	200	600	ES2085MFK	-	800	ZN8000
1000			ES2005K	ES2015BK	ES2005VK	ES2005FV2K	ES2005FV4K	ES2005VC2K	ES2005VC4K	ES2005MF4K	400	600	ES2005MF2K	200	800	ZN1000
1200				ES2027BK	ES2025VK ⁽²⁾		ES2025FV4K		ES2025VC4K				ES2025MF4K	400	800	2xZN6000
1600 ⁽³⁾				ES2075BK											2xZN8000	
400			ES2046K												ZN4000	
600		ES2066SPK	ES2066K		ES2066VK					ES2066MFK	-	600			ZN6000	
800	600	ES2086SPK	ES2086K		ES2086VK	ES2086FV2K		ES2086VC2K		ES2086MF2K	200	600	ES2086MFK	-	800	ZN8000
1000			ES2006K	ES2016BK	ES2006VK	ES2006FV2K	ES2006FV4K	ES2006VC2K	ES2006VC4K	ES2006MF4K	400	600	ES2006MF2K	200	800	ZN1000
1200				ES2026BK	ES2026VK ⁽²⁾		ES2026FV4K		ES2026VC4K				ES2026MF4K	400	800	2xZN6000
1600 ⁽³⁾				ES2076BK											2xZN8000	
400			ES2048K												ZN4000	
600			ES2068K		ES2068VK					ES2068MFK	-	600			ZN6000	
800	800		ES2088K		ES2088VK	ES2088FV2K		ES2088VC2K		ES2088MF2K	200	600	ES2088MFK	-	800	ZN8000
1000			ES2008K	ES2020BK	ES2008VK	ES2008FV2K	ES2008FV4K	ES2008VC2K	ES2008VC4K	ES2008MF4K	400	600	ES2008MF2K	200	800	ZN1000
1200				ES2028BK	ES2028VK ⁽²⁾		ES2028FV4K		ES2028VC4K				ES2028MF4K	400	800	2xZN6000
1600 ⁽³⁾				ES2078BK											2xZN8000	
400			ES2040K												ZN4000	
600			ES2060K		ES2060VK					ES2060MFK	-	600			ZN6000	
800	1000		ES2080K		ES2080VK					ES2080MF2K	200	600	ES2080MFK	-	800	ZN8000
1000			ES2000K	ES2010BK	ES2000VK					ES2000MF4K	400	600	ES2000MF2K	200	800	ZN1000

⁽¹⁾ The useful height is always 100mm less than the external dimension of the panel board. For the version with compartments, the useful height is 200mm less.
⁽²⁾ Implies mounting the intermediate upright EM1801. The doors have overlapping closure on the intermediate upright (removable) fixed onto the crosspieces mounted in depth.
⁽³⁾ Also available with double blind doors with closing on intermediate upright (eliminate the suffix B from the code).
⁽⁴⁾ Standard plate joining kit: EA1800 (H=1800mm); EA2000 (H=2000mm); EA2200 (H=2200mm). Possibility of lateral insertion with tracks (see pag. 5/57).
⁽⁵⁾ EA2113 oversized plate joining kit H=1800/2000/2200mm.
⁽⁶⁾ Kit consisting of 2 oversized back plates with relative insertion tracks + plate joining kit.
⁽⁷⁾ In case of structures with internal cable container, select the correct rack frame which takes into account the W=200 or W=400mm of the cable container; and leaves W=600mm or W=800mm structure compartment.
⁽⁸⁾ W=1600mm enclosures are only available in pre-assembled version with blind door (with overlapping door or intermediate upright).
⁽⁹⁾ Examples of configuration and technical characteristics at page 5/114 and 5/115



Incoming cable flanges			Side covers		Counterdoor	Back plates		Rack frames 19" "L" shaped profile ⁽⁵⁾			Rack frames 19"		External cable container		
Sliding	Fixed	Modular	No. 2 Blind panel ⁽¹⁰⁾	Side door with closing box		Standard ⁽²⁾	Oversize + tracks ⁽⁶⁾	Fixed Centred	Swing Centred W=600mm	Eccentric W=800mm	Fixed ⁽⁸⁾ cranked shaped uprights	Swing ⁽⁹⁾ "C" shaped profile	W=300mm		
											Frame+ Fixing kit	Optional central fixing kit	Frame+ Fixing kit		
EF4040	EF4042	EF4041	EL2040K	EC2041K		EA2040	EA2140								
EF6040	EF6043	EF6041			EE2060K	EA2060	EA2160	EG2000	EG2001K			EG2005+ EB6000	EB0400		
EF8040	EF8042	EF8041			EE2080K	EA2080	EA2181	EG2080		EG2003K		EG2005+ EB8000	EB8001 + EB0400	EG2004K+ EV0007	ER3041K
EF1040	EF1042	EF1041			EE2010K	EA2010	EA2110								
2xEF6040	2xEF6043	2xEF6041			EA2012	EA2112									
EF4050	EF4052	EF4051	EL2050K	EC2051K		EA2040	EA2140								
EF6050	EF6052	EF6051			EE2060K	EA2060	EA2160	EG2000	EG2001K			EG2005+ EB6000	EB0500		
EF8050	EF8052	EF8051			EE2080K	EA2080	EA2181	EG2080		EG2003K		EG2005+ EB8000	EB8001 + EB0500	EG2004K+ EV0007	ER3051K
EF1053	EF1052	EF1051			EE2010K	EA2010	EA2110								
2xEF6050	2xEF6052	2xEF6051			EA2012	EA2112									
2xEF8050	2xEF8052	2xEF8051	EA2017	EA2116 ⁽⁴⁾											
EF4060	EF4063	EF4061	EL2060K	EC2061K		EA2040	EA2140								
EF6060	EF6062	EF6061			EE2060K	EA2060	EA2160	EG2000	EG2001K			EG2005+ EB6000	EB0600		
EF8060	EF8062	EF8061			EE2080K	EA2080	EA2181	EG2080		EG2003K		EG2005+ EB8000	EB8001 + EB0600	EG2004K+ EV0007	ER3061K
EF1060	EF1062	EF1061			EE2010K	EA2010	EA2110								
2xEF6060	2xEF6062	2xEF6061			EA2012	EA2112									
2xEF8060	2xEF8062	2xEF8061	EA2017	EA2116 ⁽⁴⁾											
EF4080	EF4082	EF4081	EL2080K	EC2081K		EA2040	EA2140								
EF6080	EF6082	EF6081			EE2060K	EA2060	EA2160	EG2000	EG2001K			EG2005+ EB6000	EB0800		
EF8080	EF8082	EF8081			EE2080K	EA2080	EA2181	EG2080		EG2003K		EG2005+ EB8000	EB8001 + EB0800	EG2004K+ EV0007	ER3081K
EF1080	EF1082	EF1081			EE2010K	EA2010	EA2110								
2xEF6080	2xEF6082	2xEF6081			EA2012	EA2112									
2xEF8080	2xEF8082	2xEF8081	EA2017	EA2116 ⁽⁴⁾											
EF4010	EF4012	EF4011	EL2010K	EC2011K		EA2040	EA2140								
EF6010	EF6012	EF6011			EE2060K	EA2060	EA2160	EG2000	EG2001K			EG2005+ EB6000	EB1000		
EF8010	EF8012	EF8011			EE2080K	EA2080	EA2181	EG2080		EG2003K		EG2005+ EB8000	EB8001 + EB1000	EG2004K+ EV0007	ER3011K
EF1010	EF1012	EF1011			EE2010K	EA2010	EA2110								

⁽⁸⁾ Rack frame W=600mm needs fixing brackets EB6000 and for an optional central fixing order a couple of crosspieces EB... see page 5/63 according to switchboard depth. Accessories from page 5/84. Rack frame W=800mm needs fixing brackets EB8000 and for an optional central fixing order a couple of crosspieces EB... see page 5/63 according to switchboard depth. Moreover, fixing kits replacing brackets and crosspieces according to switchboard depth are available, codes on page 5/80. Accessories from page 5/84.

⁽⁹⁾ Only available for W=800mm (even in structures with cable container and W=800mm structure compartment). Order specific fixing kit EV0007.

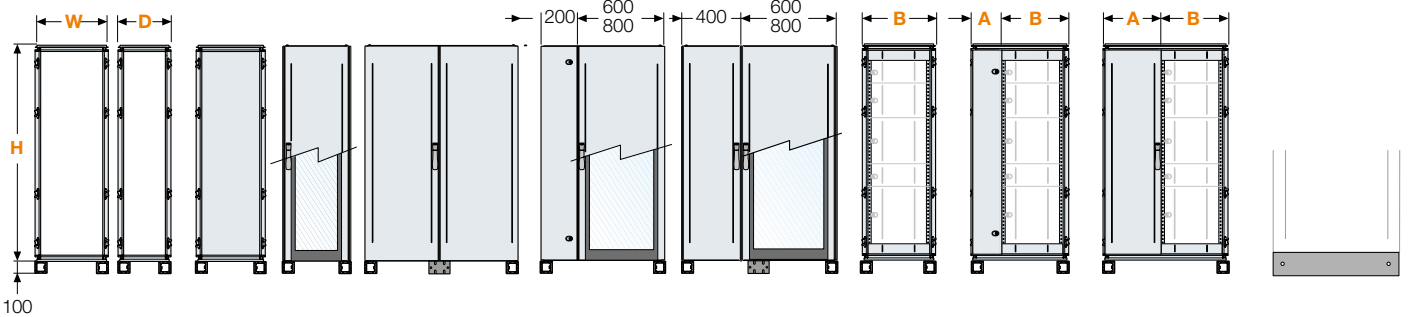
⁽¹⁰⁾ Single side panel available on page 5/49.

Kit for placing structures side by side EV0002/EV0003/EV0006 see page 5/70.

Pre-assembled IS2 Cabinets

Selection of the structure - H=2200 mm

Rapid selection table



5

External dimensions H=2200 ⁽¹⁾ mm		Cabinet with door			Cabinet with cable container				Cabinet with compartments ⁽⁷⁾				Flanges for plinth				
W (mm)	D (mm)	Cabinet without door	Blind door	Double blind with overload closure ⁽¹⁾	Glazed door	Blind door with cable container W=200mm	Blind door with cable container W=400mm	Glazed door with cable container W=200mm	Glazed door with cable container W=400mm	Width		Width		Front/ rear	Side		
										A (mm)	B (mm)	A (mm)	B (mm)				
400			ES2244K												ZN4000		
600		ES2264SPK	ES2264K		ES2264VK					ES2264MFK	-	600			ZN6000		
800	400	ES2284SPK	ES2284K		ES2284VK	ES2284FV2K		ES2284VC2K		ES2284MF2K	200	600	ES2284MFK	-	800	ZN8000	ZN4000
1000			ES2204K	ES2214BK	ES2204VK	ES2204FV2K	ES2204FV4K	ES2204VC2K	ES2204VC4K	ES2204MF4K	400	600	ES2204MF2K	200	800	ZN1000	
1200			ES2224BK	ES2224VK ⁽⁷⁾		ES2224FV4K		ES2224VC4K		ES2224MF4K		400	800	2xZN6000			
400			ES2245K												ZN4000		
600		ES2265SPK	ES2265K		ES2265VK					ES2265MFK	-	600			ZN6000		
800	500		ES2285K		ES2285VK	ES2285FV2K		ES2285VC2K		ES2285MF2K	200	600	ES2285MFK	-	800	ZN8000	ZN5000
1000			ES2205K	ES2215BK	ES2205VK	ES2205FV2K	ES2205FV4K	ES2205VC2K	ES2205VC4K	ES2205MF4K	400	600	ES2205MF2K	200	800	ZN1000	
1200			ES2227BK	ES2227VK ⁽⁷⁾		ES2227FV4K		ES2227VC4K		ES2227MF4K		400	800	2xZN6000			
1600 ⁽⁸⁾			ES2275BK												2xZN8000		
400			ES2246K												ZN4000		
600		ES2266SPK	ES2266K		ES2266VK					ES2266MFK	-	600			ZN6000		
800	600	ES2286SPK	ES2286K		ES2286VK	ES2286FV2K		ES2286VC2K		ES2286MF2K	200	600	ES2286MFK	-	800	ZN8000	ZN6000
1000			ES2206K	ES2216BK	ES2206VK	ES2206FV2K	ES2206FV4K	ES2206VC2K	ES2206VC4K	ES2206MF4K	400	600	ES2206MF2K	200	800	ZN1000	
1200			ES2226BK	ES2226VK ⁽⁷⁾		ES2226FV4K		ES2226VC4K		ES2226MF4K		400	800	2xZN6000			
1600 ⁽⁸⁾			ES2276BK												2xZN8000		
400			ES2248K												ZN4000		
600			ES2268K		ES2268VK					ES2268MFK	-	600			ZN6000		
800	800		ES2288K		ES2288VK	ES2288FV2K		ES2288VC2K		ES2288MF2K	200	600	ES2288MFK	-	800	ZN8000	ZN8000
1000			ES2208K	ES2222BK	ES2208VK	ES2208FV2K	ES2208FV4K	ES2208VC2K	ES2208VC4K	ES2208MF4K	400	600	ES2208MF2K	200	800	ZN1000	
1200			ES2228BK	ES2228VK ⁽⁷⁾		ES2228FV4K		ES2228VC4K		ES2228MF4K		400	800	2xZN6000			
1600 ⁽⁸⁾			ES2278BK												2xZN8000		
400			ES2240K												ZN4000		
600			ES2260K		ES2260VK					ES2260MFK	-	600			ZN6000		
800	1000		ES2280K		ES2280VK					ES2280MF2K	200	600	ES2280MFK	-	800	ZN8000	ZN1000
1000			ES2200K	ES2210BK	ES2200VK					ES2200MF4K	400	600	ES2200MF2K	200	800	ZN1000	

⁽¹⁾ The useful height is always 100mm less than the external dimension of the panel board. For the version with compartments, the useful height is 200mm less.

⁽⁷⁾ Implies mounting the intermediate upright EM1801. The doors have overlapping closure on the intermediate upright (removable) fixed onto the crosspieces mounted in depth.

⁽⁸⁾ Also available with double blind doors with closing on intermediate upright (eliminate the suffix B from the code).

⁽²⁾ Standard plate joining kit: EA1800 (H=1800mm); EA2000 (H=2000mm); EA2200 (H=2200mm). Possibility of lateral insertion with tracks (see pag. 5/57).

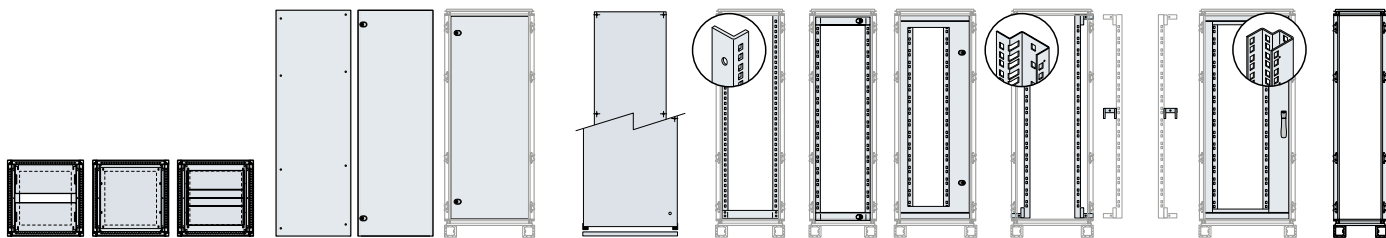
⁽³⁾ EA2113 oversized plate joining kit H=1800/2000/2200mm.

⁽⁴⁾ Kit consisting of 2 oversized back plates with relative insertion tracks + plate joining kit.

⁽⁵⁾ In case of structures with internal cable container, select the correct rack frame which takes into account the W=200 or W=400mm of the cable container; and leaves W=600mm or W=800mm structure compartment.

⁽⁶⁾ W=1600mm enclosures are only available in pre-assembled version with blind door (with overlapping door or intermediate upright).

⁽⁷⁾ Examples of configuration and technical characteristics at page 5/114 and 5/115



Incoming cable flanges			Side covers		Counterdoor	Back plates		Rack frames 19" "L" shaped profile ⁽⁵⁾			Rack frames 19"		External cable container							
Sliding	Fixed	Modular	No. 2 Blind panel ⁽¹⁰⁾	Side door with closing box		Standard ⁽²⁾	Oversize + tracks ⁽³⁾	Fixed Centred	Swing Centred W=600mm	Eccentric W=800mm	Fixed ⁽⁶⁾ cranked shape uprights	Swing ⁽⁹⁾ "C" shaped profile	W=300mm							
											Frame+ Fixing kit	Optional central fixing kit	Frame+ Fixing kit							
EF4040	EF4042	EF4041	EL2240K	EC2241K		EA2240	EA2340	EG2200	EG2201K		EG2205+ EB6000	EB0400		ER3042K						
EF6040	EF6043	EF6041				EE2260K	EA2260								EA2360	EG22280	EG22203K	EG2205+ EB8000	EB8001 + EB0400	EG2204K+ EV0007
EF8040	EF8042	EF8041				EE2280K	EA2280								EA2381					
EF1040	EF1042	EF1041				EE2210K	EA2210								EA2310					
2xEF6040	2xEF6043	2xEF6041					EA2212								EA2312					
EF4050	EF4052	EF4051	EL2250K	EC2251K		EA2240	EA2340	EG2200	EG2201K		EG2205+ EB6000	EB0500		ER3052K						
EF6050	EF6052	EF6051				EE2260K	EA2260								EA2360	EG22280	EG22203K	EG2205+ EB8000	EB8001 + EB0500	EG2204K+ EV0007
EF8050	EF8052	EF8051				EE2280K	EA2280								EA2381					
EF1053	EF1052	EF1051				EE2210K	EA2210								EA2310					
2xEF6050	2xEF6052	2xEF6051					EA2212								EA2312					
2xEF8050	2xEF8052	2xEF8051		EA2217	EA2316 ⁽⁴⁾															
EF4060	EF4063	EF4061	EL2260K	EC2261K		EA2240	EA2340	EG2200	EG2201K		EG2205+ EB6000	EB0600		ER3062K						
EF6060	EF6062	EF6061				EE2260K	EA2260								EA2360	EG22280	EG22203K	EG2205+ EB8000	EB8001 + EB0600	EG2204K+ EV0007
EF8060	EF8062	EF8061				EE2280K	EA2280								EA2381					
EF1060	EF1062	EF1061				EE2210K	EA2210								EA2310					
2xEF6060	2xEF6062	2xEF6061					EA2212								EA2312					
2xEF8060	2xEF8062	2xEF8061		EA2217	EA2316 ⁽⁴⁾															
EF4080	EF4082	EF4081	EL2280K	EC2281K		EA2240	EA2340	EG2200	EG2201K		EG2205+ EB6000	EB0800		ER3082K						
EF6080	EF6082	EF6081				EE2260K	EA2260								EA2360	EG22280	EG22203K	EG2205+ EB8000	EB8001 + EB0800	EG2204K+ EV0007
EF8080	EF8082	EF8081				EE2280K	EA2280								EA2381					
EF1080	EF1082	EF1081				EE2210K	EA2210								EA2310					
2xEF6080	2xEF6082	2xEF6081					EA2212								EA2312					
2xEF8080	2xEF8082	2xEF8081		EA2217	EA2316 ⁽⁴⁾															
EF4010	EF4012	EF4011	EL2210K	EC2211K		EA2240	EA2340	EG2200	EG2201K		EG2205+ EB6000	EB1000		ER3012K						
EF6010	EF6012	EF6011				EE2260K	EA2260								EA2360	EG22280	EG22203K	EG2205+ EB8000	EB8001 + EB1000	EG2204K+ EV0007
EF8010	EF8012	EF8011					EA2280								EA2381					
EF1010	EF1012	EF1011				EE2210K	EA2210								EA2310					

⁽⁸⁾ Rack frame W=600mm needs fixing brackets EB6000 and for an optional central fixing order a couple of crosspieces EB... see page 5/63 according to switchboard depth. Accessories from page 5/84. Rack frame W=800mm needs fixing brackets EB8000 and for an optional central fixing order a couple of crosspieces EB... see page 5/63 according to switchboard depth. Moreover, fixing kits replacing brackets and crosspieces according to switchboard depth are available, codes on page 5/80. Accessories from page 5/84.

⁽⁹⁾ Only available for W=800mm (even in structures with cable container and W=800mm structure compartment). Order specific fixing kit EV0007.

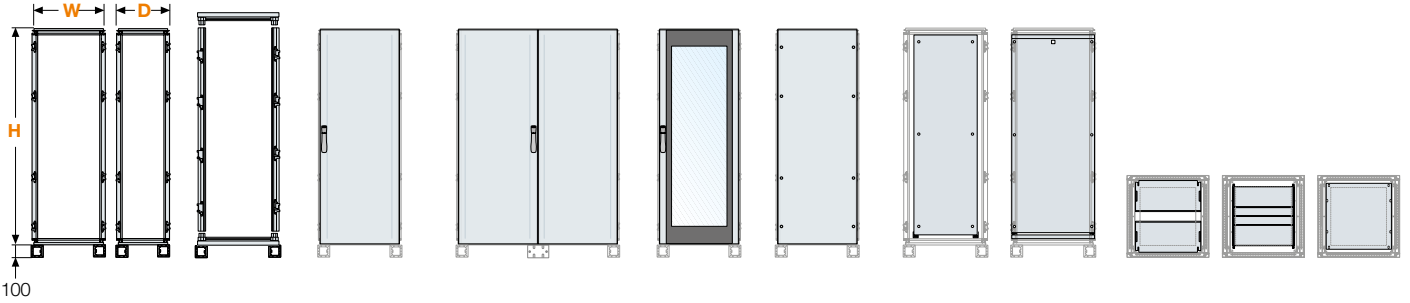
⁽¹⁰⁾ Single side panel available on page 5/49.

Kit for placing structures side by side EV0002/EV0003/EV0006 see page 5/70.

IS2 kit version cabinets

Selection of the structure - H=1800 mm

Rapid selection table



5

Overall dimensions H=1800mm ⁽¹⁾		Base/ Top/ Plinth	Uprights For structure	Front/rear covers			Back plates		Incoming cable flanges			
W (mm)	D (mm)			IP65 blind door	Blind doors for version with double door with overlapping closing ⁽¹⁾	IP65 Glazed door	IP65 Blind panel	Standard	Oversized + tracks	Sliding	Removable	Fixed
400	400	EK4040KN	EM1800	EC1840K	-	-	EP1840K	EA1841	EA1940	EF4040	EF4041	EF4042
600		EK6040KN		EC1860K	-	ET1860K	EP1860K	EA1860	EA1960	EF6040	EF6041	EF6043
800		EK8040KN		EC1880K	ED1804SK+ EC1880VC4K	ET1880K	EP1880K	EA1880	EA1981	EF8040	EF8041	EF8042
1000		EK1040KN		EC1810K	ED1810SK+ EC1880FC5K	ET1810K	EP1811K	EA1810	EA1910	EF1040	EF1041	EF1042
1200		EK1240KN		-	ED1812SK+ EC1880FC6K	-	EP1812K	EA1812	EA1912	2xEF6040	2xEF6041	2xEF6043
400	500	EK4050KN	EM1800	EC1840K	-	-	EP1840K	EA1841	EA1940	EF4050	EF4051	EF4052
600		EK6050KN		EC1860K	-	ET1860K	EP1860K	EA1860	EA1960	EF6050	EF6051	EF6052
800		EK8050KN		EC1880K	ED1804SK+ EC1880VC4K	ET1880K	EP1880K	EA1880	EA1981	EF8050	EF8051	EF8052
1000		EK1050KN		EC1810K	ED1810SK+ EC1880FC5K	ET1810K	EP1811K	EA1810	EA1910	EF1053	EF1051	EF1052
1200		EK1250KN		-	ED1812SK+ EC1880FC6K	-	EP1812K	EA1812	EA1912	2xEF6051	2xEF6051	2xEF6052
400	600	EK4060KN	EM1800	EC1840K	-	-	EP1840K	EA1841	EA1940	EF4060	EF4061	EF4063
600		EK6060KN		EC1860K	-	ET1860K	EP1860K	EA1860	EA1960	EF6060	EF6061	EF6062
800		EK8060KN		EC1880K	ED1804SK+ EC1880VC4K	ET1880K	EP1880K	EA1880	EA1981	EF8060	EF8061	EF8062
1000		EK1060KN		EC1810K	ED1810SK+ EC1880FC5K	ET1810K	EP1811K	EA1810	EA1910	EF1060	EF1061	EF1062
1200		EK1260KN		-	ED1812SK+ EC1880FC6K	-	EP1812K	EA1812	EA1912	2xEF6060	2xEF6061	2xEF6062
400	800	EK4080KN	EM1800	EC1840K	-	-	EP1840K	EA1841	EA1940	EF4080	EF4081	EF4082
600		EK6080KN		EC1860K	-	ET1860K	EP1860K	EA1860	EA1960	EF6080	EF6081	EF6082
800		EK8080KN		EC1880K	ED1804SK+ EC1880VC4K	ET1880K	EP1880K	EA1880	EA1981	EF8080	EF8081	EF8082
1000		EK1080KN		EC1810K	ED1810SK+ EC1880FC5K	ET1810K	EP1811K	EA1810	EA1910	EF1080	EF1081	EF1082
1200		EK1280KN		-	ED1812SK+ EC1880FC6K	-	EP1812K	EA1812	EA1912	2xEF6080	2xEF6081	2xEF6082
400	1000	EK4010KN	EM1800	EC1840K	-	-	EP1840K	EA1841	EA1940	EF4010	EF4011	EF4012
600		EK6010KN		EC1860K	-	ET1860K	EP1860K	EA1860	EA1960	EF6010	EF6011	EF6012
800		EK8010KN		EC1880K	ED1804SK+ EC1880VC4K	ET1880K	EP1880K	EA1880	EA1981	EF8010	EF8011	EF8012
1000		EK1010KN		EC1810K	ED1810SK+ EC1880FC5K	ET1810K	EP1811K	EA1810	EA1910	EF1010	EF1011	EF1012

⁽¹⁾ The useful height is always 100mm less than the external dimension of the panel board. For the version with compartments, the useful height is 200mm less.

For versions with compartments see page 5/71, for modular versions see page 5/74.

⁽¹⁾ Double blind doors with intermediate upright EM1801, double glass doors with intermediate upright EM1801, and combinations of structures with internal cable container W=200/400mm available (see pag. 5/24, 5/25, 5/46 and 5/47).

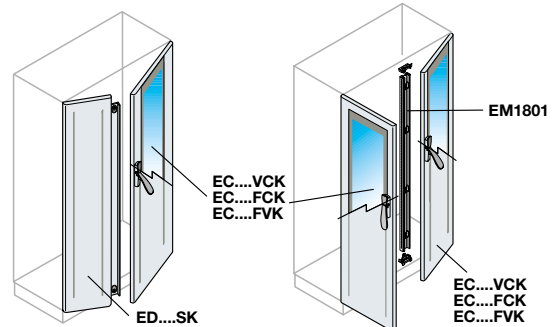
⁽²⁾ In the case of structures with internal cable container, select the correct rack frame which takes into account the 200/400mm of the cable container. For the new rack 19" and relative accessories see page 5/80.

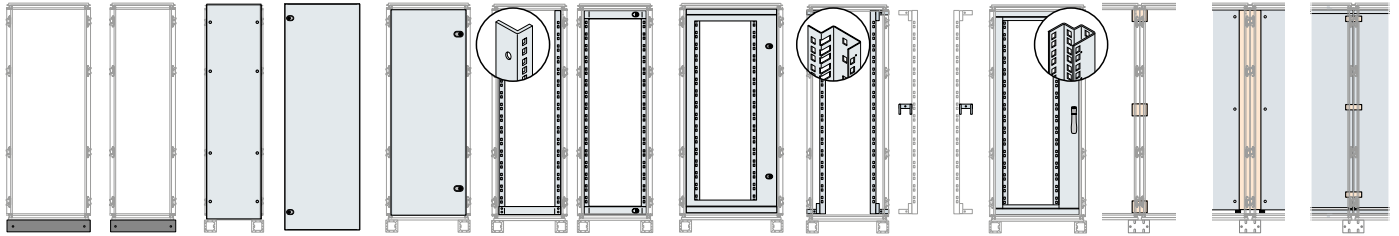
W=1600mm enclosures are only available in pre-assembled version with blind door (with overlapping door or intermediate upright).

Example of double door enclosure

Doors with overlapping closure

Doors closing on intermediate upright





Plinth flanges		Sides covers		Rack frames 19" "L" shaped profile ⁽²⁾				Rack frames 19"			Side-by-side structure Kit	Standard plate joining Kit	Oversized plate joining Kit
Front/rear	Side	Pair of blind panels	Side door with closing box	Counterdoor	Fixed Centred	Swing Centred W=600mm	Eccentric W=800mm	Fixed ⁽³⁾ Frame+ Fixing kit	Optional central fixing kit	Swing ⁽⁴⁾ Frame+ Fixing kit			
ZN4000				-	-	-	-	-	-	-			
ZN6000				EE1860K	EG1800	EG1801K	-	EG1805+ EB6000	EB0400	-			
ZN8000	ZN4000	EL1840K	EC1841K	EE1880K	EG1880	-	EG1803K	EG1805+ EB8000	EB8001 + EB0400	EG1804K+ EV0007	EV0002 EV0003 EV0006		
ZN1000				EE1810K	-	-	-	-	-	-			
2xZN6000				-	-	-	-	-	-	-			
ZN4000				-	-	-	-	-	-	-			
ZN6000	ZN5000	EL1850K	EC1851K	EE1860K	EG1800	EG1801K	-	EG1805+ EB6000	EB0500	-	EV0002 EV0003 EV0006		
ZN8000				EE1880K	EG1880	-	EG1803K	EG1805+ EB8000	EB8001 + EB0500	EG1804K+ EV0007			
ZN1000				EE1810K	-	-	-	-	-	-			
2xZN6000				-	-	-	-	-	-	-			
ZN4000				-	-	-	-	-	-	-			
ZN6000	ZN6000	EL1860K	EC1861K	EC1861K	EG1800	EG1801K	-	EG1805+ EB6000	EB0600	-	EV0002 EV0003 EV0006	EA1800	EA2113
ZN8000				EE1880K	EG1880	-	EG1803K	EG1805+ EB8000	EB8001 + EB0600	EG1804K+ EV0007			
ZN1000				EE1810K	-	-	-	-	-	-			
2xZN6000				-	-	-	-	-	-	-			
ZN4000				-	-	-	-	-	-	-			
ZN6000	ZN8000	EL1880K	EC1881K	EE1860K	EG1800	EG1801K	-	EG1805+ EB6000	EB0800	-	EV0002 EV0003 EV0006		
ZN8000				EC1881K	EG1880	-	EG1803K	EG1805+ EB8000	EB8001 + EB0800	EG1804K+ EV0007			
ZN1000				EE1810K	-	-	-	-	-	-			
2xZN6000				-	-	-	-	-	-	-			
ZN4000				-	-	-	-	-	-	-			
ZN6000	ZN1000	EL1810K	EC1811K	EE1860K	EG1800	EG1801K	-	EG1805+ EB6000	EB1000	-	EV0002 EV0003 EV0006		
ZN8000				EE1880K	EG1880	-	EG1803K	EG1805+ EB8000	EB8001 + EB1000	EG1804K+ EV0007			
ZN1000				EC1811K	-	-	-	-	-	-			

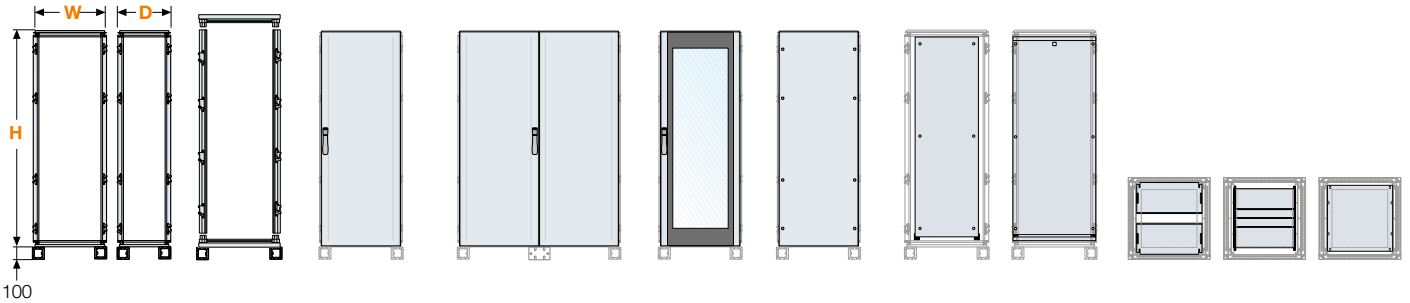
⁽²⁾ Rack frame W=600mm needs fixing brackets EB6000 and for an optional central fixing order a couple of crosspieces EB... see page 5/63 according to switchboard depth. Accessories from page 5/84. Rack frame W=800mm needs fixing brackets EB8000 and for an optional central fixing order a couple of crosspieces EB... see page 5/63 according to switchboard depth. Moreover, fixing kits replacing brackets and crosspieces according to switchboard depth are available, codes on page 5/80. Accessories from page 5/84.

⁽⁴⁾ Only available for W=800mm (even in structures with cable container with W=800mm available structure compartment). Order specific fixing kit EV0007. Kit for placing structures side by side EV0002/EV0003/EV0006 see page 5/70.

IS2 kit version cabinets

Selection of the structure - H=2000 mm

Rapid selection table



5

Overall dimensions H=2000mm ⁽¹⁾		Base/ Top/ Plinth	Uprights For structure	Front/rear covers			Back plates		Incoming cable flanges			
W (mm)	D (mm)			IP65 blind door	Blind doors for version with double door with overlapping closing ⁽¹⁾	IP65 Glazed door	IP65 Blind panel	Standard	Oversized + tracks	Sliding	Removable	Fixed
400	400	EK4040KN	EM2000	EC2040K	-	-	EP2041K	EA2040	EA2140	EF4040	EF4041	EF4042
600		EK6040KN		EC2060K	-	ET2060K	EP2060K	EA2060	EA2161	EF6040	EF6041	EF6043
800		EK8040KN		EC2080K	ED2004SK+ EC2080VC4K	ET2080K	EP2080K	EA2080	EA2180	EF8040	EF8041	EF8042
1000		EK1040KN		EC2012K	ED2010SK+ EC2080FC5K	ET2010K	EP2010K	EA2010	EA2110	EF1040	EF1041	EF1042
1200		EK1240KN		-	ED2012SK+ EC2080FC6K	-	EP2012K	EA2013	EA2112	2xEF6040	2xEF6041	2xEF6043
400	500	EK4050KN		EC2040K	-	-	EP2041K	EA2040	EA2140	EF4050	EF4051	EF4052
600		EK6050KN		EC2060K	-	ET2060K	EP2060K	EA2060	EA2161	EF6050	EF6051	EF6052
800		EK8050KN		EC2080K	ED2004SK+ EC2080VC4K	ET2080K	EP2080K	EA2080	EA2180	EF8050	EF8051	EF8052
1000		EK1050KN		EC2012K	ED2010SK+ EC2080FC5K	ET2010K	EP2010K	EA2010	EA2110	EF1053	EF1051	EF1052
1200		EK1250KN		-	ED2012SK+ EC2080FC6K	-	EP2012K	EA2013	EA2112	2xEF6051	2xEF6051	2xEF6052
400	600	EK4060KN		EC2040K	-	-	EP2041K	EA2040	EA2140	EF4060	EF4061	EF4063
600		EK6060KN		EC2060K	-	ET2060K	EP2060K	EA2060	EA2161	EF6060	EF6061	EF6062
800		EK8060KN		EC2080K	ED2004SK+ EC2080VC4K	ET2080K	EP2080K	EA2080	EA2180	EF8060	EF8061	EF8062
1000		EK1060KN		EC2012K	ED2010SK+ EC2080FC5K	ET2010K	EP2010K	EA2010	EA2110	EF1060	EF1061	EF1062
1200		EK1260KN		-	ED2012SK+ EC2080FC6K	-	EP2012K	EA2013	EA2112	2xEF6060	2xEF6061	2xEF6062
400	800	EK4080KN	EC2040K	-	-	EP2041K	EA2040	EA2140	EF4080	EF4081	EF4082	
600		EK6080KN	EC2060K	-	ET2060K	EP2060K	EA2060	EA2161	EF6080	EF6081	EF6082	
800		EK8080KN	EC2080K	ED2004SK+ EC2080VC4K	ET2080K	EP2080K	EA2080	EA2180	EF8080	EF8081	EF8082	
1000		EK1080KN	EC2012K	ED2010SK+ EC2080FC5K	ET2010K	EP2010K	EA2010	EA2110	EF1080	EF1081	EF1082	
1200		EK1280KN	-	ED2012SK+ EC2080FC6K	-	EP2012K	EA2013	EA2112	2xEF6080	2xEF6081	2xEF6082	
400	1000	EK4010KN	EC2040K	-	-	EP2041K	EA2040	EA2140	EF4010	EF4011	EF4012	
600		EK6010KN	EC2060K	-	ET2060K	EP2060K	EA2060	EA2161	EF6010	EF6011	EF6012	
800		EK8010KN	EC2080K	ED2004SK+ EC2080VC4K	ET2080K	EP2080K	EA2080	EA2180	EF8010	EF8011	EF8012	
1000		EK1010KN	EC2012K	ED2010SK+ EC2080FC5K	ET2010K	EP2010K	EA2010	EA2110	EF1010	EF1011	EF1012	

⁽¹⁾ The useful height is always 100mm less than the external dimension of the panel board. For the version with compartments, the useful height is 200mm less.

For versions with compartments see page 5/71, for modular versions see page 5/74.

⁽²⁾ Double blind doors with intermediate upright EM2001, double glass doors with intermediate upright EM2001, and combinations of structures with internal cable container W=200/400mm available (see pag. 5/24, 5/25, 5/46 and 5/47).

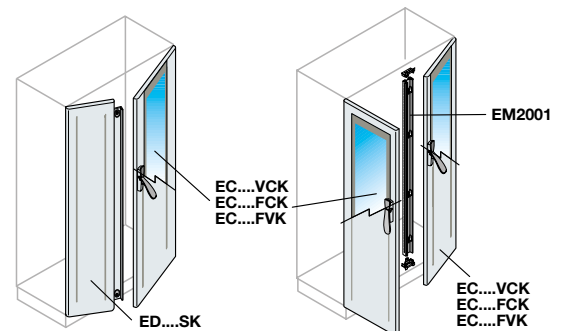
⁽³⁾ In the case of structures with internal cable container, select the correct rack frame which takes into account the 200/400mm of the cable container. For the new rack 19" and relative accessories see page 5/80.

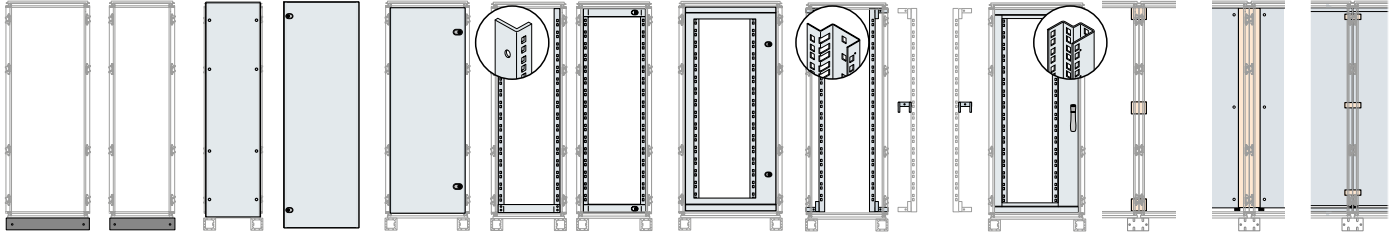
W=1600mm enclosures are only available in pre-assembled version with blind door (with overlapping door or intermediate upright).

Example of double door enclosure

Doors with overlapping closure

Doors closing on intermediate upright





Plinth flanges		Sides covers ⁽²⁾		Counterdoor	Rack frames 19" "L" shaped profile ⁽³⁾			Rack frames 19"			Side-by-side structure Kit	Standard plate joining Kit	Oversized plate joining Kit
Front/rear	Side	Pair of blind panels	Side door with closing box		Fixed Centred	Swing Centred W=600mm	Eccentric W=800mm	Fixed ⁽⁴⁾ Frame+ Fixing kit	Optional central fixing kit	Swing ⁽⁵⁾ Frame+ Fixing kit			
ZN4000				-	-	-	-	-	-	-			
ZN6000				EE2060K	EG2000	EG2001K	-	EG2005+ EB6000	EB0400	-			
ZN8000	ZN4000	EL2040K	EC 2041K	EE2080K	EG2080	-	EG2003K	EG2005+ EB8000	EB8001 + EB0400	EG2004K+ EV0007	EV0002 EV0003 EV0006		
ZN1000				EE2010K	-	-	-	-	-	-			
2xZN6000				-	-	-	-	-	-	-			
ZN4000				-	-	-	-	-	-	-			
ZN6000				EE2060K	EG2000	EG2001K	-	EG2005+ EB6000	EB0500	-			
ZN8000	ZN5000	EL2050K	EC 2051K	EE2080K	EG2080	-	EG2003K	EG2005+ EB8000	EB8001 + EB0500	EG2004K+ EV0007	EV0002 EV0003 EV0006		
ZN1000				EE2010K	-	-	-	-	-	-			
2xZN6000				-	-	-	-	-	-	-			
ZN4000				-	-	-	-	-	-	-			
ZN6000				EE2060K	EG2000	EG2001K	-	EG2005+ EB6000	EB0600	-			
ZN8000	ZN6000	EL2060K	EC 2061K	EE2080K	EG2080	-	EG2003K	EG2005+ EB8000	EB8001 + EB0600	EG2004K+ EV0007	EV0002 EV0003 EV0006	EA2000	EA2113
ZN1000				EE2010K	-	-	-	-	-	-			
2xZN6000				-	-	-	-	-	-	-			
ZN4000				-	-	-	-	-	-	-			
ZN6000				EE2060K	EG2000	EG2001K	-	EG2005+ EB6000	EB0800	-			
ZN8000	ZN8000	EL2080K	EC 2081K	EE2080K	EG2080	-	EG2003K	EG2005+ EB8000	EB8001 + EB0800	EG2004K+ EV0007	EV0002 EV0003 EV0006		
ZN1000				EE2010K	-	-	-	-	-	-			
2xZN6000				-	-	-	-	-	-	-			
ZN4000				-	-	-	-	-	-	-			
ZN6000				EE2060K	EG2000	EG2001K	-	EG2005+ EB6000	EB1000	-			
ZN8000	ZN1000	EL2012K	EC 2011K	EE2080K	EG2080	-	EG2003K	EG2005+ EB8000	EB8001 + EB1000	EG2004K+ EV0007	EV0002 EV0003 EV0006		
ZN1000				EE2010K	-	-	-	-	-	-			

⁽³⁾ Rack frame W=600mm needs fixing brackets EB6000 and for an optional central fixing order a couple of crosspieces EB... see page 5/63 according to switchboard depth. Accessories from page 5/84. Rack frame W=800mm needs fixing brackets EB8000 and for an optional central fixing order a couple of crosspieces EB... see page 5/63 according to switchboard depth. Moreover, fixing kits replacing brackets and crosspieces according to switchboard depth are available, codes on page 5/80. Accessories from page 5/84.

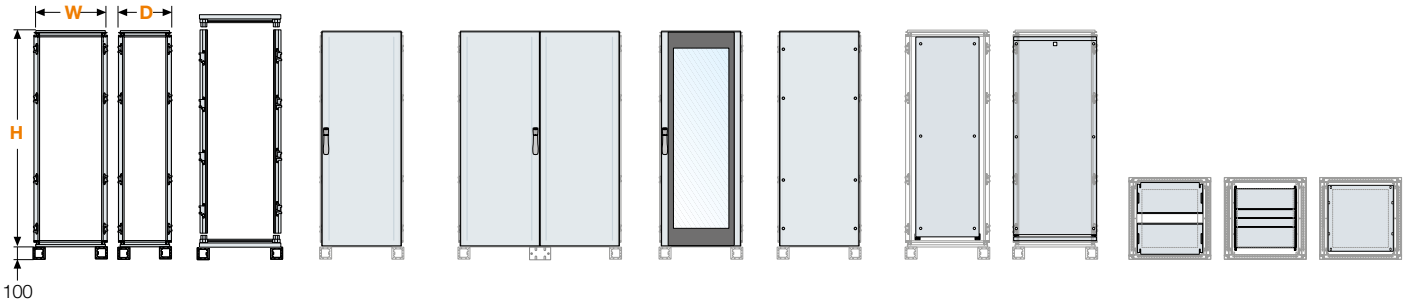
⁽⁴⁾ Only available for W=800mm (even in structures with cable container with W=800mm available structure compartment). Order specific fixing kit EV0007.

Kit for placing structures side by side EV0002/EV0003/EV0006 see page 5/70.

IS2 kit version cabinets

Selection of the structure - H=2200 mm

Rapid selection table



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Overall dimensions H=2200mm ⁽¹⁾			Uprights For structure	Front/rear covers			Back plates			Incoming cable flanges		
W (mm)	D (mm)	Base/ Top/ Plinth		IP65 blind door	Blind doors for version with double door with overlapping closing ⁽¹⁾	IP65 Glazed door	IP65 Blind panel	Standard	Oversized + tracks	Sliding	Removable	Fixed
400		EK4040KN	EM2200	EC2240K	-	-	EP2240K	EA2240	EA2340	EF4040	EF4041	EF4042
600		EK6040KN		EC2260K	-	ET2260K	EP2260K	EA2260	EA2360	EF6040	EF6041	EF6043
800	400	EK8040KN		EC2280K	ED2204SK+ EC2280VC4K	ET2280K	EP2280K	EA2280	EA2380	EF8040	EF8041	EF8042
1000		EK1040KN		EC2210K	ED2210SK+ EC2280FC5K	ET22110K	EP2210K	EA2210	EA2310	EF1040	EF1041	EF1042
1200		EK1240KN		-	ED2212SK+ EC2280FC6K	-	EP2212K	EA2212	EA2312	2xEF6040	2xEF6041	2xEF6043
400		EK4050KN		EC2240K	-	-	EP2240K	EA2240	EA2340	EF4050	EF4051	EF4052
600		EK6050KN		EC2260K	-	ET2260K	EP2260K	EA2260	EA2360	EF6050	EF6051	EF6052
800	500	EK8050KN		EC2280K	ED2204SK+ EC2280VC4K	ET2280K	EP2280K	EA2280	EA2380	EF8050	EF8051	EF8052
1000		EK1050KN		EC2210K	ED2210SK+ EC2280FC5K	ET2211K	EP2210K	EA2210	EA2310	EF1053	EF1051	EF1052
1200		EK1250KN		-	ED2212SK+ EC2280FC6K	-	EP2212K	EA2212	EA2312	2xEF6050	2xEF6051	2xEF6052
400		EK4060KN		EC2240K	-	-	EP2240K	EA2240	EA2340	EF4060	EF4061	EF4063
600		EK6060KN		EC2260K	-	ET2260K	EP2260K	EA2260	EA2360	EF6060	EF6061	EF6062
800	600	EK8060KN	EC2280K	ED2204SK+ EC2280VC4K	ET2280K	EP2280K	EA2280	EA2380	EF8060	EF8061	EF8062	
1000		EK1060KN	EC2210K	ED2210SK+ EC2280FC5K	ET22110K	EP2210K	EA2210	EA2310	EF1060	EF1061	EF1062	
1200		EK1260KN	-	ED2212SK+ EC2280FC6K	-	EP2212K	EA2212	EA2312	2xEF6060	2xEF6061	2xEF6062	
400		EK4080KN	EC2240K	-	-	EP2240K	EA2240	EA2340	EF4080	EF4081	EF4082	
600		EK6080KN	EC2260K	-	ET2260K	EP2260K	EA2260	EA2360	EF6080	EF6081	EF6082	
800	800	EK8080KN	EC2280K	ED2204SK+ EC2280VC4K	ET2280K	EP2280K	EA2280	EA2380	EF8080	EF8081	EF8082	
1000		EK1080KN	EC2210K	ED2210SK+ EC2280FC5K	ET2211K	EP2210K	EA2210	EA2310	EF1080	EF1081	EF1082	
1200		EK1280KN	-	ED2212SK+ EC2280FC6K	-	EP2212K	EA2212	EA2312	2xEF6080	2xEF6081	2xEF6082	
400		EK4010KN	EC2240K	-	-	EP2240K	EA2240	EA2340	EF4010	EF4011	EF4012	
600		EK6010KN	EC2260K	-	ET2260K	EP2260K	EA2260	EA2360	EF6010	EF6011	EF6012	
800	1000	EK8010KN	EC2280K	ED2204SK+ EC2280VC4K	ET2280K	EP2280K	EA2280	EA2380	EF8010	EF8011	EF8012	
1000		EK1010KN	EC2210K	ED2210SK+ EC2280FC5K	ET2211K	EP2210K	EA2210	EA2310	EF1010	EF1011	EF1012	

⁽¹⁾ The useful height is always 100mm less than the external dimension of the panel board. For the version with compartments, the useful height is 200mm less.

For versions with compartments see page 5/71, for modular versions see page 5/74.

⁽²⁾ Double blind doors with intermediate upright EM2201, double glass doors with intermediate upright EM2201, and combinations of structures with internal cable container W=200/400mm available (see pag. 5/24, 5/25, 5/46 and 5/47).

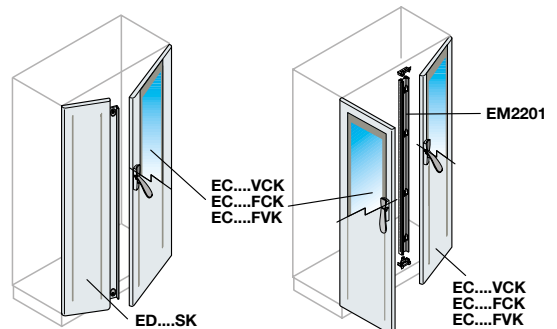
⁽³⁾ In the case of structures with internal cable container, select the correct rack frame which takes into account the 200/400mm of the cable container. For the new rack 19" and relative accessories see page 5/80.

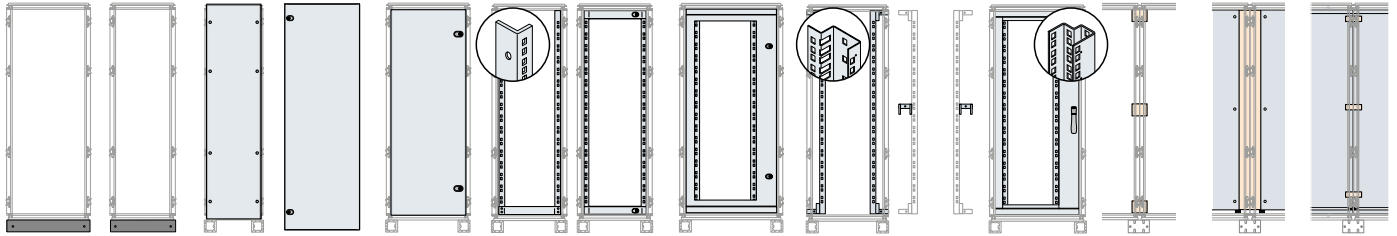
W=1600mm enclosures are only available in pre-assembled version with blind door (with overlapping door or intermediate upright).

Example of double door enclosure

Doors with overlapping closure

Doors closing on intermediate upright





Plinth flanges		Sides covers ⁽²⁾		Counterdoor	Rack frames 19" "L" shaped profile ⁽³⁾			Rack frames 19"			Side-by-side structure Kit	Standard plate joining Kit	Oversized plate joining Kit
Front/rear	Side	Pair of blind panels	Side door with closing box		Fixed Centred	Swing Centred W=600mm	Eccentric W=800mm	Fixed ⁽⁴⁾ Frame+ Fixing kit	Optional central fixing kit	Swing ⁽⁵⁾ Frame+ Fixing kit			
ZN4000				-	-	-	-						
ZN6000				EE2260K	EG2220	EG2201K	-	EG2205+ EB6000	EB0400		EV0002		
ZN8000	ZN4000	EL2240K	EC 2241K	EE2280K	EG2280	-	EG2203K	EG2205+ EB8000	EB8001 + EB0400	EG2204K+ EV0007	EV0003		
ZN1000				EE2210K	-	-	-				EV0006		
2xZN6000				-	-	-	-						
ZN4000				-	-	-	-						
ZN6000				EE2260K	EG2200	EG2201K	-	EG2205+ EB6000	EB0500		EV0002		
ZN8000	ZN5000	EL2250K	EC 2251K	EE2280K	EG2280	-	EG2203K	EG2205+ EB8000	EB8001 + EB0500	EG2204K+ EV0007	EV0003		
ZN1000				EE2210K	-	-	-				EV0006		
2xZN6000				-	-	-	-						
ZN4000				-	-	-	-						
ZN6000				EE2260K	EG2200	EG2201K	-	EG2205+ EB6000	EB0600		EV0002	EA2200	EA2113
ZN8000	ZN6000	EL2260K	EC 2261K	EE2280K	EG2280	-	EG2203K	EG2205+ EB8000	EB8001 + EB0600	EG2204K+ EV0007	EV0003		
ZN1000				EE2210K	-	-	-				EV0006		
2xZN6000				-	-	-	-						
ZN4000				-	-	-	-						
ZN6000				EE2260K	EG2200	EG2201K	-	EG2205+ EB6000	EB0800		EV0002		
ZN8000	ZN8000	EL2280K	EC 2281K	EE2280K	EG2280	-	EG2203K	EG2205+ EB8000	EB8001 + EB0800	EG2204K+ EV0007	EV0003		
ZN1000				EE2210K	-	-	-				EV0006		
2xZN6000				-	-	-	-						
ZN4000				-	-	-	-						
ZN6000				EE2260K	EG2200	EG2201K	-	EG2205+ EB6000	EB1000		EV0002		
ZN8000	ZN1000	EL2210K	EC 2211K	EE2280K	EG2280	-	EG2203K	EG2205+ EB8000	EB8001 + EB1000	EG2204K+ EV0007	EV0003		
ZN1000				EE2230K	-	-	-				EV0006		

⁽³⁾ Rack frame W=600mm needs fixing brackets EB6000 and for an optional central fixing order a couple of crosspieces EB... see page 5/63 according to switchboard depth. Accessories from page 5/84. Rack frame W=800mm needs fixing brackets EB8000 and for an optional central fixing order a couple of crosspieces EB... see page 5/63 according to switchboard depth. Moreover, fixing kits replacing brackets and crosspieces according to switchboard depth are available, codes on page 5/80. Accessories from page 5/84.

⁽⁴⁾ Only available for W=800mm (even in structures with cable container with W=800mm available structure compartment). Order specific fixing kit EV0007.

Kit for placing structures side by side EV0002/EV0003/EV0006 see page 5/70.

IS2 kit version cabinets

Single doors for making the double door version

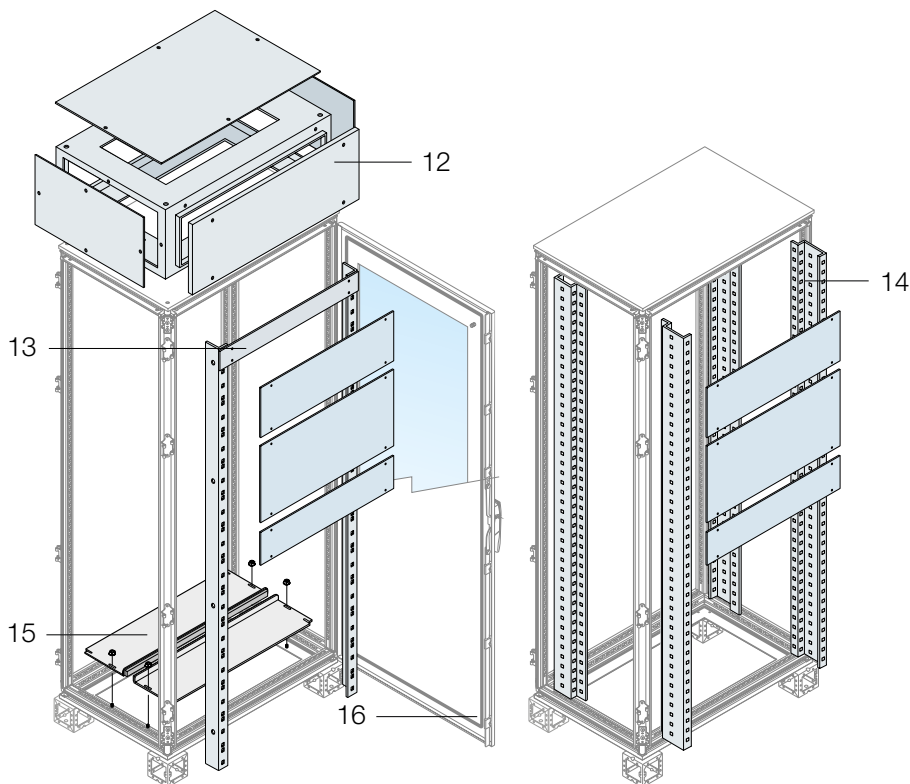
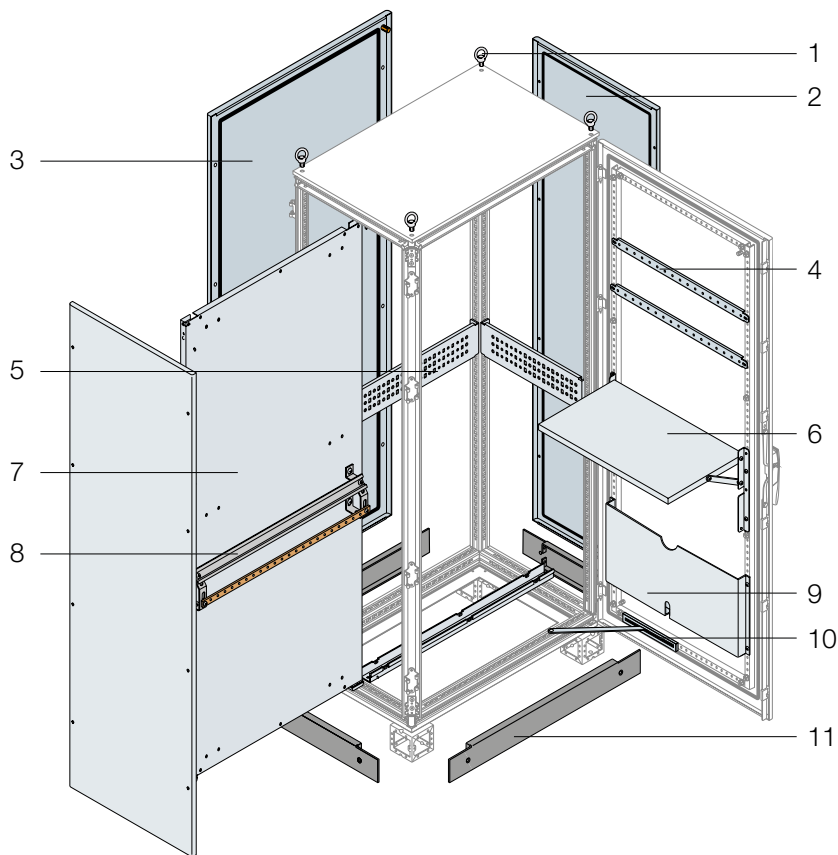
		Double doors Closure on door with overlapping (without intermediate upright)		Double doors Closure on door with intermediate upright			
Structure W=600mm		Door W=200mm	Door W=400mm	Door W=200mm	Door W=400mm	Intermediate upright	
	H=1800mm	blind glazed	ED1802SK EV1880VC4K	EC1880VC2K EC1880VC4K		+ EM1801	
	H=2000mm	blind glazed	ED2002SK EV2080VC4K	EC2080VC2K EC2080VC4K		+ EM2001	
	H=2200mm	blind glazed	ED2202SK EV2280VC4K	EC2280VC2K EC2280VC4K		+ EM2201	
	Structure W=800mm						
		H=1800mm	blind glazed	ED1802SK EC1880FC6K EC1880FV6K	EC1880VC2K EC1880FC6K EC1880FV6K		+ EM1801
		H=2000mm	blind glazed	ED2002SK EC2080FC6K EC2080FV6K	EC2080VC2K EC2080FC6K EC2080FV6K		+ EM2001
H=2200mm		blind glazed	ED2202SK EC2280FC6K EC2280FV6K	EC2280VC2K EC2280FC6K EC2280FV6K		+ EM2201	
Structure W=800mm							
		H=1800mm	blind glazed	ED1804SK EC1880VC4K	EC1880VC4K EC1880VC4K		+ EM1801
		H=2000mm	blind glazed	ED2004SK EC2080VC4K	EC2080VC4K EC2080VC4K		+ EM2001
	H=2200mm	blind glazed	ED2204SK EC2280VC4K	EC2280VC4K EC2280VC4K		+ EM2201	

		Double doors Closure on door with overlapping (without intermediate upright)		Double doors Closure on door with intermediate upright		
Structure W=1000mm		Door W=200mm	Door W=800mm	Door W=800mm	Door W=800mm	Intermediate upright
	H=1800mm	blind ED1802SK	EC1880FC8K	EC1880VC2K	EC1880FC8K	EM1801
		glazed	EC1880FV8K		EC1880FV8K	
	H=2000mm	blind ED2002SK	EC2080FC8K	EC2080VC2K	EC2080FC8K	EM2001
		glazed	EC2080FV8K		EC2080FV8K	
	H=2200mm	blind ED2202SK	EC2280FC8K	EC2280VC2K	EC2280FC8K	EM2201
		glazed	EC2280FV8K		EC2280FV8K	
		Door W=400mm	Door W=600mm	Door W=400mm	Door W=600mm	Intermediate upright
	H=1800mm	blind ED1804SK	EC1880FC6K	EC1880VC4K	EC1880FC6K	EM1801
		glazed	EC1880FV6K		EC1880FV6K	
	H=2000mm	blind ED2004SK	EC2080FC6K	EC2080VC4K	EC2080FC6K	EM2001
		glazed	EC2080FV6K		EC2080FV6K	
	H=2200mm	blind ED2204SK	EC2280FC6K	EC2280VC4K	EC2280FC6K	EM2201
		glazed	EC2280FV6K		EC2280FV6K	
		Door W=500mm	Door W=500mm	Door W=500mm	Door W=500mm	Intermediate upright
	H=1800mm	blind ED1810SK	EC1880FC5K	EC1880FC5K	EC1880FC5K	EM1801
		glazed				
	H=2000mm	blind ED2010SK	EC2080FC5K	EC2080FC5K	EC2080FC5K	EM2001
		glazed				
	H=2200mm	blind ED2210SK	EC2280FC5K	EC2280FC5K	EC2280FC5K	EM2201
		glazed				
Structure W=1200mm		Door W=400mm	Door W=800mm	Door W=400mm	Door W=800mm	Intermediate upright
	H=1800mm	blind ED1804SK	EC1880FC8K	EC1880VC4K	EC1880FC8K	EM1801
		glazed	EC1880FV8K		EC1880FV8K	
	H=2000mm	blind ED2004SK	EC2080FC8K	EC2080VC4K	EC2080FC8K	EM2001
		glazed	EC2080FV8K		EC2080FV8K	
	H=2200mm	blind ED2204SK	EC2280FC8K	EC2280VC4K	EC2280FC8K	EM2201
		glazed	EC2280FV8K		EC2280FV8K	
		Door W=600mm	Door W=600mm	Door W=600mm	Door W=600mm	Intermediate upright
	H=1800mm	blind ED1812SK	EC1880FC6K	EC1880FC6K	EC1880FC6K	EM1801
		glazed	EC1880FV6K	EC1880FV6K	EC1880FV6K	
	H=2000mm	blind ED2012SK	EC2080FC6K	EC2080FC6K	EC2080FC6K	EM2001
		glazed	EC2080FV6K	EC2080FV6K	EC2080FV6K	
	H=2200mm	blind ED2012SK	EC2280FC6K	EC2280FC6K	EC2280FC6K	EM2201
		glazed	EC2280FV6K	EC2280FV6K	EC2280FV6K	
Structure W=1600mm		W=1600mm enclosures are only available in pre-assembled version with blind door (with overlapping door or intermediate upright).				

IS2 kit version cabinets

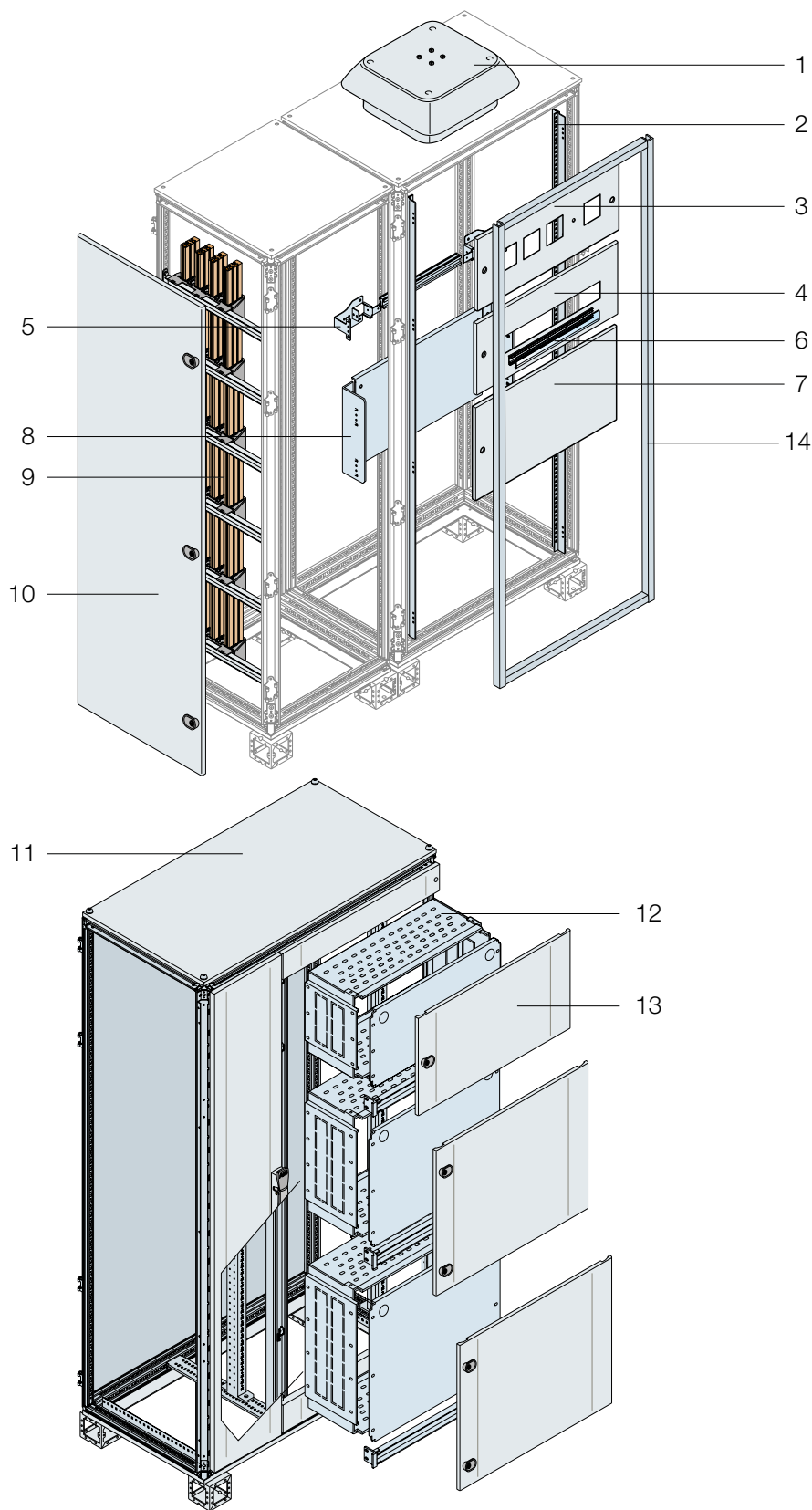
Ordering codes

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2	Side panels	Pag. 5/49
3	Rear panels	Pag. 5/48
4	Reinforcement profiles for door	Pag. 5/103
5	Crosspieces for accessories	Pag. 5/63
6	Folding shelf for door	Pag. 5/104
7	Mounting plate	Pag. 5/57
8	Angled supports for terminal boxes and earthing busbars	Pag. 5/92
9	Document pocket	Pag. 5/104
10	Anti-closing device for door	Pag. 5/104
11	Cover flanges for plinth	Pag. 5/55
12	Top container for cable connection	Pag. 5/68
13	Rack frame 19" "L" shaped profile	Pag. 5/79
14	"Rack frame 19" cranked shape uprights and other rack 19"	Pag. 5/80
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Pre-assembled structures

Cabinets with blind door

Structure with removable roof, complete with blind door and rear panel, plinth H=100mm consisting of four angle pieces. To be completed with plinth flanges, cable entry flanges and side panels.

Examples of configuration and technical characteristics at page 5/112

Dimensions (mm)				Code	Package/ No. of pieces
H	W	D			
1800	400	400		ES1844K	1/1
	600	400		ES1864K	1/1
	800	400		ES1884K	1/1
	1000	400		ES1804K	1/1
	400	500		ES1845K	1/1
	600	500		ES1865K	1/1
	800	500		ES1885K	1/1
	1000	500		ES1805K	1/1
	400	600		ES1846K	1/1
	600	600		ES1866K	1/1
	800	600		ES1886K	1/1
	1000	600		ES1806K	1/1
	400	800		ES1848K	1/1
	600	800		ES1868K	1/1
	800	800		ES1888K	1/1
	1000	800		ES1808K	1/1
400	1000		ES1840K	1/1	
600	1000		ES1860K	1/1	
800	1000		ES1880K	1/1	
1000	1000		ES1800K	1/1	
2000	400	400		ES2044K	1/1
	600	400		ES2064K	1/1
	800	400		ES2084K	1/1
	1000	400		ES2004K	1/1
	400	500		ES2045K	1/1
	600	500		ES2065K	1/1
	800	500		ES2085K	1/1
	1000	500		ES2007K	1/1
	400	600		ES2046K	1/1
	600	600		ES2066K	1/1
	800	600		ES2086K	1/1
	1000	600		ES2006K	1/1
	400	800		ES2048K	1/1
	600	800		ES2068K	1/1
	800	800		ES2089K	1/1
	1000	800		ES2008K	1/1
400	1000		ES2040K	1/1	
600	1000		ES2060K	1/1	
800	1000		ES2080K	1/1	
1000	1000		ES2000K	1/1	

CONTINUED

Pre-assembled structures

Cabinets with blind door

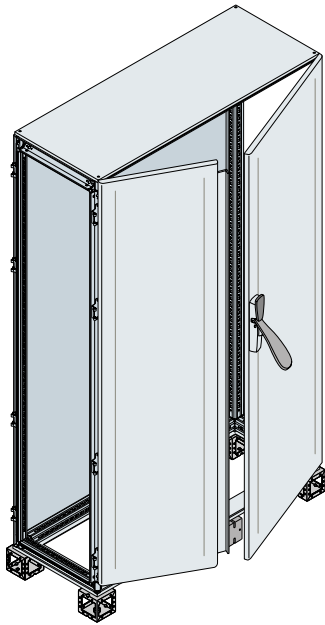
Examples of configuration and technical characteristics at page 5/112



Dimensions (mm)					
H	W	D	Code		Package/ No. of pieces
2200	400	400	ES2244K		1/1
	600	400	ES2264K		1/1
	800	400	ES2284K		1/1
	1000	400	ES2204K		1/1
	400	500	ES2245K		1/1
	600	500	ES2265K		1/1
	800	500	ES2285K		1/1
	1000	500	ES2205K		1/1
	400	600	ES2246K		1/1
	600	600	ES2266K		1/1
	800	600	ES2287K		1/1
	1000	600	ES2206K		1/1
	400	800	ES2248K		1/1
	600	800	ES2268K		1/1
	800	800	ES2288K		1/1
	1000	800	ES2208K		1/1
	400	1000	ES2240K		1/1
	600	1000	ES2260K		1/1
	800	1000	ES2280K		1/1
	1000	1000	ES2200K		1/1

IS2 Enclosures

Ordering codes



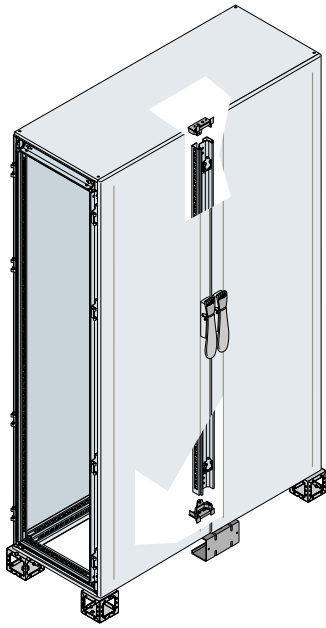
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Pre-assembled structures

Cabinets with double blind door with overlapping closure

Structure with removable roof complete with double blind door and rear panel, plinth H=100mm made up of four angle pieces. The versions with double door include a pair of crosspieces mounted in depth and an intermediate upright (removable) for door closure. The cabinets 1200/1600mm wide include the intermediate plinth. To be completed with plinth flanges, cable entry flanges and side panels.

Dimensions (mm)						
H	W	D	Code			Package/ No. of pieces
1800	1000	400	ES1814BK			1/1
	1200	400	ES1824BK			1/1
	1000	500	ES1815BK			1/1
	1200	500	ES1827BK			1/1
	1600	500	ES1875BK			1/1
	1000	600	ES1816BK			1/1
	1200	600	ES1826BK			1/1
	1600	600	ES1876BK			1/1
	1000	800	ES1818BK			1/1
	1200	800	ES1828BK			1/1
	1600	800	ES1878BK			1/1
		1000	1000	ES1810BK		
2000	1000	400	ES2014BK			1/1
	1200	400	ES2024BK			1/1
	1000	500	ES2015BK			1/1
	1200	500	ES2025BK			1/1
	1600	500	ES2075BK			1/1
	1000	600	ES2016BK			1/1
	1200	600	ES2026BK			1/1
	1600	600	ES2076BK			1/1
	1000	800	ES2018BK			1/1
	1200	800	ES2028BK			1/1
	1600	800	ES2078BK			1/1
		1000	1000	ES2010BK		
2200	1000	400	ES2214BK			1/1
	1200	400	ES2224BK			1/1
	1000	500	ES2215BK			1/1
	1200	500	ES2225BK			1/1
	1600	500	ES2275BK			1/1
	1000	600	ES2216BK			1/1
	1200	600	ES2226BK			1/1
	1600	600	ES2276BK			1/1
	1000	800	ES2218BK			1/1
	1200	800	ES2228BK			1/1
	1600	800	ES2279BK			1/1
		1000	1000	ES2210BK		



Pre-assembled structures

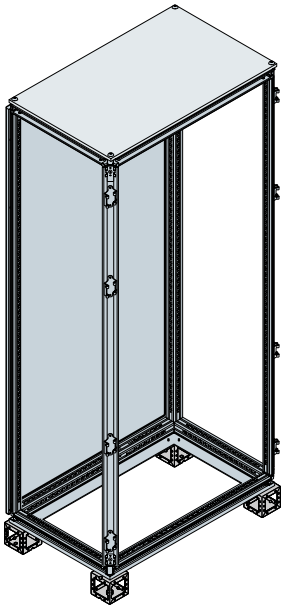
Cabinets with double blind door with overlapping closure on intermediate upright

Structure with removable roof complete with double blind door and rear panel, plinth H=100mm made up of four angle pieces. The versions with double door include a pair of crosspieces mounted in depth and an intermediate upright (removable) for door closure. The cabinets 1200/1600mm wide include the intermediate plinth. To be completed with plinth flanges, cable entry flanges and side panels.

Dimensions (mm)			Code	Package/ No. of pieces
H	W	D		
1800	1000	400	ES1814K	1/1
	1200	400	ES1824K	1/1
	1000	500	ES1815K	1/1
	1200	500	ES1827K	1/1
	1600	500	ES1875K	1/1
	1000	600	ES1816K	1/1
	1200	600	ES1826K	1/1
	1600	600	ES1876K	1/1
	1000	800	ES1818K	1/1
	1200	800	ES1828K	1/1
	1600	800	ES1878K	1/1
2000	1000	1000	ES1810K	1/1
	1000	400	ES2014K	1/1
	1200	400	ES2024K	1/1
	1000	500	ES2015K	1/1
	1200	500	ES2025K	1/1
	1600	500	ES2075K	1/1
	1000	600	ES2016K	1/1
	1200	600	ES2026K	1/1
	1600	600	ES2076K	1/1
	1000	800	ES2018K	1/1
	1200	800	ES2028K	1/1
1600	800	ES2078K	1/1	
1000	1000	ES2010K	1/1	
2200	1000	400	ES2214K	1/1
	1200	400	ES2224K	1/1
	1000	500	ES2215K	1/1
	1200	500	ES2225K	1/1
	1600	500	ES2275K	1/1
	1000	600	ES2216K	1/1
	1200	600	ES2226K	1/1
	1600	600	ES2276K	1/1
	1000	800	ES2218K	1/1
	1200	800	ES2228K	1/1
	1600	800	ES2279K	1/1
1000	1000	ES2210K	1/1	

IS2 Enclosures

Ordering codes



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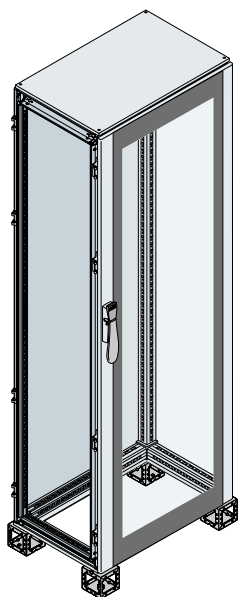
Pre-assembled structures

Cabinets without front door

Structures with removable roof complete with rear panel, plinth H=100mm made up of four angle pieces. To be completed with door, plinth flanges, cable entry flanges and side panels.

Dimensions (mm)			Code		Package/ No. of pieces
H	W	D			
1800	600	400	ES1864SPK		1/1
	600	500	ES1865SPK		1/1
	600	600	ES1866SPK		1/1
	800	400	ES1884SPK		1/1
	800	600	ES1886SPK		1/1
2000	600	400	ES2064SPK		1/1
	600	500	ES2065SPK		1/1
	600	600	ES2066SPK		1/1
	800	400	ES2084SPK		1/1
	800	500	ES2085SPK		1/1
	800	600	ES2086SPK		1/1
	800	800	ES2089SPK		1/1

For the codes listed, the Custom Made Service (assembly of accessories/special painting/special drilling) is not provided.



Pre-assembled structures

Cabinet with glazed door

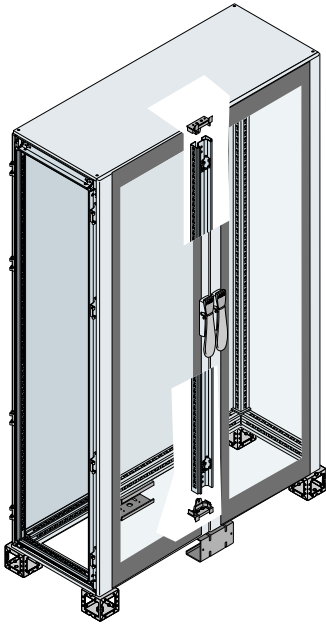
Structure with removable roof, complete with glazed door and rear panel, plinth H=100mm consisting of four angle pieces. To be completed with plinth flanges, cable entry flanges and side panels.

Dimensions (mm)				Code	Package/ No. of pieces
H	W	D			
1800	600	400		ES1864VK	1/1
		800	400	ES1884VK	1/1
		1000	400	ES1804VK	1/1
		600	500	ES1865VK	1/1
		800	500	ES1885VK	1/1
		1000	500	ES1805VK	1/1
		600	600	ES1866VK	1/1
		800	600	ES1886VK	1/1
		1000	600	ES1806VK	1/1
		600	800	ES1868VK	1/1
		800	800	ES1888VK	1/1
		1000	800	ES1808VK	1/1
		600	1000	ES1860VK	1/1
		800	1000	ES1880VK	1/1
		1000	1000	ES1800VK	1/1
2000	600	400		ES2064VK	1/1
		800	400	ES2084VK	1/1
		1000	400	ES2004VK	1/1
		600	500	ES2065VK	1/1
		800	500	ES2085VK	1/1
		1000	500	ES2005VK	1/1
		600	600	ES2066VK	1/1
		800	600	ES2086VK	1/1
		1000	600	ES2006VK	1/1
		600	800	ES2068VK	1/1
		800	800	ES2088VK	1/1
		1000	800	ES2008VK	1/1
		600	1000	ES2060VK	1/1
		800	1000	ES2080VK	1/1
		1000	1000	ES2000VK	1/1
2200	600	400		ES2264VK	1/1
		800	400	ES2284VK	1/1
		1000	400	ES2204VK	1/1
		600	500	ES2265VK	1/1
		800	500	ES2285VK	1/1
		1000	500	ES2205VK	1/1
		600	600	ES2266VK	1/1
		800	600	ES2286VK	1/1
		1000	600	ES2206VK	1/1
		600	800	ES2268VK	1/1
		800	800	ES2288VK	1/1
		1000	800	ES2208VK	1/1
		600	1000	ES2260VK	1/1
		800	1000	ES2280VK	1/1
		1000	1000	ES2200VK	1/1

IS2 Enclosures

Ordering codes

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Pre-assembled structures

Cabinets with double glazed door with overlapping closure on intermediate upright

Structure with removable roof complete with glazed door and rear panel, plinth H=100mm made up of six angle pieces. The versions with double door include a pair of crosspieces mounted in depth and an intermediate upright (removable) for door closure. To be completed with plinth flanges, cable entry flanges and side panels.

Dimensions (mm)							Package/ No. of pieces
H	W	D	Code				
1800	1200	400	ES1824VK				1/1
	1200	500	ES1825VK				1/1
	1200	600	ES1826VK				1/1
	1200	800	ES1828VK				1/1
2000	1200	400	ES2024VK				1/1
	1200	500	ES2025VK				1/1
	1200	600	ES2026VK				1/1
	1200	800	ES2028VK				1/1
2200	1200	400	ES2224VK				1/1
	1200	500	ES2225VK				1/1
	1200	600	ES2226VK				1/1
	1200	800	ES2228VK				1/1



Blind door cabinets with cable container W=200-400mm

Structure with removable roof, complete with blind door, + cable container door, upright, intermediate crosspiece and rear panel, plinth H=100mm consisting of four angle pieces. The cabinets with 1200mm width include the intermediate plinth. To be completed with plinth flanges, cable entry flanges and side panels.

Structure (mm)			Internal cable container				Package/ No. of pieces
H	W	D	(mm) W	Code			
1800	800	400	200	ES1884FV2K			1/1
	1000	400	200	ES1804FV2K			1/1
	800	500	200	ES1885FV2K			1/1
	1000	500	200	ES1805FV2K			1/1
	800	600	200	ES1886FV2K			1/1
	1000	600	200	ES1806FV2K			1/1
	800	800	200	ES1888FV2K			1/1
	1000	800	200	ES1808FV2K			1/1
	1000	400	400	ES1804FV4K			1/1
	1200	400	400	ES1824FV4K			1/1
	1000	500	400	ES1805FV4K			1/1
	1200	500	400	ES1825FV4K			1/1
	1000	600	400	ES1806FV4K			1/1
	1200	600	400	ES1826FV4K			1/1
	1000	800	400	ES1808FV4K			1/1
	1200	800	400	ES1828FV4K			1/1

CONTINUED



Pre-assembled structures

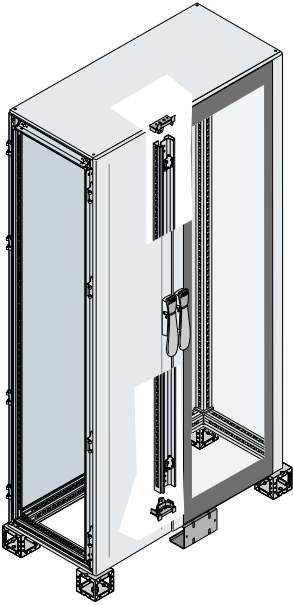
Blind door cabinets with internal cable container W=200-400mm

Structure (mm)			Internal cable container	Code	Package/ No. of pieces
H	W	D	(mm) W		
2000	800	400	200	ES2084FV2K	1/1
	1000	400	200	ES2004FV2K	1/1
	800	500	200	ES2085FV2K	1/1
	1000	500	200	ES2005FV2K	1/1
	800	600	200	ES2086FV2K	1/1
	1000	600	200	ES2006FV2K	1/1
	800	800	200	ES2088FV2K	1/1
	1000	800	200	ES2008FV2K	1/1
	1000	400	400	ES2004FV4K	1/1
	1200	400	400	ES2024FV4K	1/1
	1000	500	400	ES2005FV4K	1/1
	1200	500	400	ES2025FV4K	1/1
	1000	600	400	ES2006FV4K	1/1
	1200	600	400	ES2026FV4K	1/1
	1000	800	400	ES2008FV4K	1/1
	1200	800	400	ES2028FV4K	1/1
2200	800	400	200	ES2284FV2K	1/1
	1000	400	200	ES2204FV2K	1/1
	800	500	200	ES2285FV2K	1/1
	1000	500	200	ES2205FV2K	1/1
	800	600	200	ES2286FV2K	1/1
	1000	600	200	ES2206FV2K	1/1
	800	800	200	ES2288FV2K	1/1
	1000	800	200	ES2208FV2K	1/1
	1000	400	400	ES2204FV4K	1/1
	1200	400	400	ES2224FV4K	1/1
	1000	500	400	ES2205FV4K	1/1
	1200	500	400	ES2225FV4K	1/1
	1000	600	400	ES2206FV4K	1/1
	1200	600	400	ES2226FV4K	1/1
	1000	800	400	ES2208FV4K	1/1
	1200	800	400	ES2228FV4K	1/1

The cable container can be mounted on the right or left side in the structure. Specify this at the time of ordering or enclose a drawing.

IS2 Enclosures

Ordering codes



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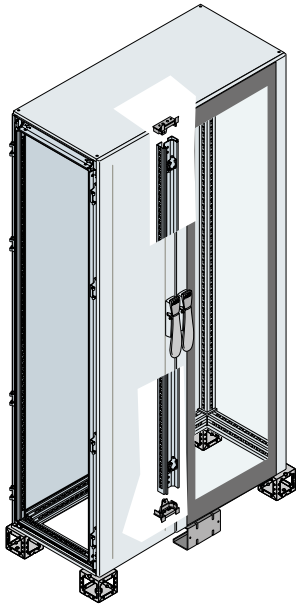
Pre-assembled structures

Glazed door cabinets with internal cable container W=200-400mm

Structure with removable roof, complete with blind door, + cable container door, upright, intermediate crosspiece and rear panel, plinth H=100mm consisting of four angle pieces. The cabinets with 1200mm width include the intermediate plinth. To be completed with plinth flanges, cable entry flanges and side panels.

Structure (mm)			Internal cable container	Code			
H	W	D	(mm) W				
1800	800	400	200	ES1884VC2K			1/1
	1000	400	200	ES1804VC2K			1/1
	800	500	200	ES1885VC2K			1/1
	1000	500	200	ES1805VC2K			1/1
	800	600	200	ES1886VC2K			1/1
	1000	600	200	ES1806VC2K			1/1
	800	800	200	ES1888VC2K			1/1
	1000	800	200	ES1808VC2K			1/1
	1000	400	400	ES1804VC4K			1/1
	1200	400	400	ES1824VC4K			1/1
	1000	500	400	ES1805VC4K			1/1
	1200	500	400	ES1825VC4K			1/1
	1000	600	400	ES1806VC4K			1/1
	1200	600	400	ES1826VC4K			1/1
	1000	800	400	ES1808VC4K			1/1
	1200	800	400	ES1828VC4K			1/1
2000	800	400	200	ES2084VC2K			1/1
	1000	400	200	ES2004VC2K			1/1
	800	500	200	ES2085VC2K			1/1
	1000	500	200	ES2005VC2K			1/1
	800	600	200	ES2086VC2K			1/1
	1000	600	200	ES2006VC2K			1/1
	800	800	200	ES2088VC2K			1/1
	1000	800	200	ES2008VC2K			1/1
	1000	400	400	ES2004VC4K			1/1
	1200	400	400	ES2024VC4K			1/1
	1000	500	400	ES2005VC4K			1/1
	1200	500	400	ES2025VC4K			1/1
	1000	600	400	ES2006VC4K			1/1
	1200	600	400	ES2026VC4K			1/1
	1000	800	400	ES2008VC4K			1/1
	1200	800	400	ES2028VC4K			1/1

CONTINUED



Pre-assembled structures

Glazed door cabinets with cable container W=200-400mm

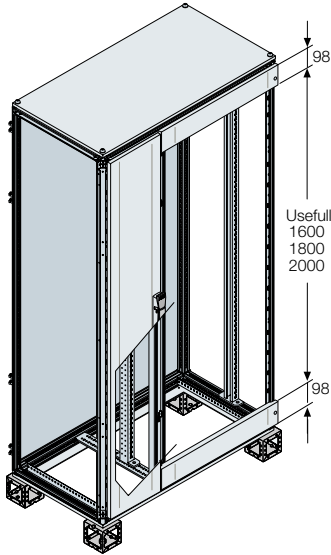
Structure (mm)			Internal cable container	Code	Package/ No. of pieces
H	W	D	(mm) W		
2200	800	400	200	ES2284VC2K	1/1
	1000	400	200	ES2204VC2K	1/1
	800	500	200	ES2285VC2K	1/1
	1000	500	200	ES2205VC2K	1/1
	800	600	200	ES2286VC2K	1/1
	1000	600	200	ES2206VC2K	1/1
	800	800	200	ES2288VC2K	1/1
	1000	800	200	ES2208VC2K	1/1
	1000	400	400	ES2204VC4K	1/1
	1200	400	400	ES2224VC4K	1/1
	1000	500	400	ES2205VC4K	1/1
	1200	500	400	ES2225VC4K	1/1
	1000	600	400	ES2206VC4K	1/1
	1200	600	400	ES2226VC4K	1/1
	1000	800	400	ES2208VC4K	1/1
	1200	800	400	ES2228VC4K	1/1

The cable container can be mounted on the right or left side in the structure. Specify this at the time of ordering

IS2 Enclosures

Ordering codes

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Pre-assembled structures

Cabinets for configuration with compartments

Pre-assembled self-supporting structure made of galvanised steel, consisting of a closed section drilled with 25mm pitch preset for mounting the compartment cubicles and partial doors. Removable roof, plinth H=100mm (consisting of four angle pieces 25/10), complete with rear panel. The structures with internal compartment W=200mm are supplied complete with blind door with opposite opening (standard hinging on the left), double box with double tongue key.

The structures with internal compartment W=400mm are supplied complete with blind door with opposite opening (standard hinging on the left), fixed handle with double tongue key. Both versions are complete with removable intermediate upright and pair of top/bottom crosspieces and uprights.

The useful dimension is always 200mm less than the total height of the panel board. To be completed with plinth flanges, cable entry flanges and side panels. Compensation panels H=100mm are included in the supply. Maximum segregation Form 3a.

Examples of configuration and technical characteristics at page 5/114

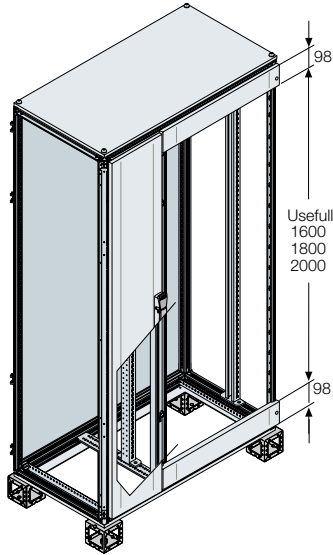
Cabinet for compart. (mm)		Comp. (mm)		Cable cont. * (mm)	Code	Package/ No. of pieces
H	D	W	W	W		
1800	400	600	600	-	ES1864MFK	1/1
	400	800	800	-	ES1884MFK	1/1
	400	800	600	200	ES1884MF2K	1/1
	400	1000	800	200	ES1804MF2K	1/1
	400	1000	600	400	ES1804MF4K	1/1
	400	1200	800	400	ES1824MF4K	1/1
	500	600	600	-	ES1865MFK	1/1
	500	800	800	-	ES1885MFK	1/1
	500	800	600	200	ES1885MF2K	1/1
	500	1000	800	200	ES1805MF2K	1/1
	500	1000	600	400	ES1805MF4K	1/1
	500	1200	800	400	ES1825MF4K	1/1
	600	600	600	-	ES1866MFK	1/1
	600	800	800	-	ES1886MFK	1/1
	600	800	600	200	ES1886MF2K	1/1
	600	1000	800	200	ES1806MF2K	1/1
	600	1000	600	400	ES1806MF4K	1/1
	600	1200	800	400	ES1826MF4K	1/1
	800	600	600	-	ES1868MFK	1/1
	800	800	800	-	ES1888MFK	1/1
800	800	600	200	ES1888MF2K	1/1	
800	1000	800	200	ES1808MF2K	1/1	
800	1000	600	400	ES1808MF4K	1/1	
800	1200	800	400	ES1828MF4K	1/1	
1000	600	600	-	ES1860MFK	1/1	
1000	800	800	-	ES1880MFK	1/1	
1000	800	600	200	ES1880MF2K	1/1	
1000	1000	800	200	ES1800MF2K	1/1	
1000	1000	600	400	ES1800MF4K	1/1	
2000	400	600	600	-	ES2064MFK	1/1
	400	800	800	-	ES2084MFK	1/1
	400	800	600	200	ES2084MF2K	1/1
	400	1000	800	200	ES2004MF2K	1/1
	400	1000	600	400	ES2004MF4K	1/1
	400	1200	800	400	ES2024MF4K	1/1
	500	600	600	-	ES2065MFK	1/1
	500	800	800	-	ES2085MFK	1/1
	500	800	600	200	ES2085MF2K	1/1
	500	1000	800	200	ES2005MF2K	1/1
	500	1000	600	400	ES2005MF4K	1/1

CONTINUED

Pre-assembled structures Cabinets for configuration with compartments

Maximum segregation Form 3a.

Examples of configuration and technical characteristics at page 5/114



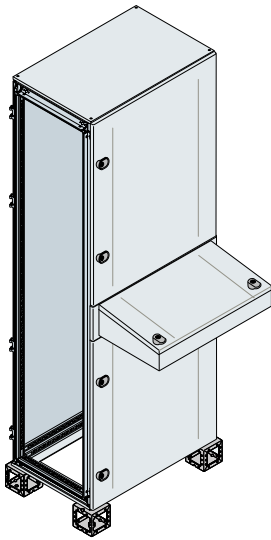
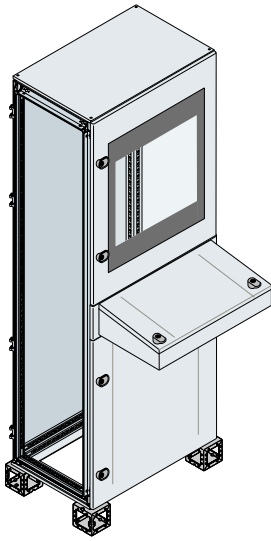
Cabinet for compart. (mm)	Comp. (mm)			Cable cont. * (mm)	Code	Package/ No. of pieces
	H	D	W	W		
2000	500	1200	800	400	ES2025MF4K	1/1
	600	600	600	-	ES2066MFK	1/1
	600	800	800	-	ES2086MFK	1/1
	600	800	600	200	ES2086MF2K	1/1
	600	1000	800	200	ES2006MF2K	1/1
	600	1000	600	400	ES2006MF4K	1/1
	600	1200	800	400	ES2026MF4K	1/1
	800	600	600	-	ES2068MFK	1/1
	800	800	800	-	ES2088MFK	1/1
	800	800	600	200	ES2088MF2K	1/1
	800	1000	800	200	ES2008MF2K	1/1
	800	1000	600	400	ES2008MF4K	1/1
	800	1200	800	400	ES2028MF4K	1/1
	1000	600	600	-	ES2060MFK	1/1
	1000	800	800	-	ES2080MFK	1/1
	1000	800	600	200	ES2080MF2K	1/1
	1000	1000	800	200	ES2000MF2K	1/1
	1000	1000	600	400	ES2000MF4K	1/1
2200	400	600	600	-	ES2264MFK	1/1
	400	800	800	-	ES2284MFK	1/1
	400	800	600	200	ES2284MF2K	1/1
	400	1000	800	200	ES2204MF2K	1/1
	400	1000	600	400	ES2204MF4K	1/1
	400	1200	800	400	ES2224MF4K	1/1
	500	600	600	-	ES2265MFK	1/1
	500	800	800	-	ES2285MFK	1/1
	500	800	600	200	ES2285MF2K	1/1
	500	1000	800	200	ES2205MF2K	1/1
	500	1000	600	400	ES2205MF4K	1/1
	500	1200	800	400	ES2225MF4K	1/1
	600	600	600	-	ES2266MFK	1/1
	600	800	800	-	ES2286MFK	1/1
	600	800	600	200	ES2286MF2K	1/1
	600	1000	800	200	ES2206MF2K	1/1
	600	1000	600	400	ES2206MF4K	1/1
	600	1200	800	400	ES2226MF4K	1/1
	800	600	600	-	ES2268MFK	1/1
	800	800	800	-	ES2288MFK	1/1
	800	800	600	200	ES2288MF2K	1/1
	800	1000	800	200	ES2208MF2K	1/1
	800	1000	600	400	ES2208MF4K	1/1
	800	1200	800	400	ES2228MF4K	1/1
	1000	600	600	-	ES2260MFK	1/1
	1000	800	800	-	ES2280MFK	1/1
	1000	800	600	200	ES2281MF2K	1/1
	1000	1000	800	200	ES2200MF2K	1/1
	1000	1000	600	400	ES2200MF4K	1/1

* Versions inclusive of pair of crosspieces mounted depth-wise and of intermediate upright for door closure.
The cable container can be mounted on the right or left side in the structure. Specify this at the time of ordering.

IS2 Enclosures

Ordering codes

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Pre-assembled structures

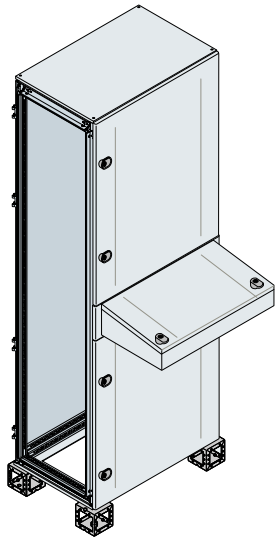
Cabinets with console

Structure with removable roof, plinth H=100mm consisting of four angle pieces, complete with glazed or blind top door + blind bottom door, console, rear panel and box with key.

To be completed with plinth flanges, cable entry flanges and side panels.

Dimensions (mm)						
H	W	D	Code			
Cabinet with glazed upper door with console						
1800	600	400	ES1864LK			1/1
	800	400	ES1884LK			1/1
	600	500	ES1865LK			1/1
	800	500	ES1885LK			1/1
	600	600	ES1866LK			1/1
	800	600	ES1886LK			1/1
	600	800	ES1868LK			1/1
	800	800	ES1888LK			1/1
2000	600	400	ES2064LK			1/1
	800	400	ES2084LK			1/1
	600	500	ES2065LK			1/1
	800	500	ES2085LK			1/1
	600	600	ES2066LK			1/1
	800	600	ES2086LK			1/1
	600	800	ES2068LK			1/1
	800	800	ES2088LK			1/1
2200	600	400	ES2264LK			1/1
	800	400	ES2284LK			1/1
	600	500	ES2265LK			1/1
	800	500	ES2285LK			1/1
	600	600	ES2266LK			1/1
	800	600	ES2286LK			1/1
	600	800	ES2268LK			1/1
	800	800	ES2288LK			1/1
Cabinet with blind upper door with console						
1800	600	400	ES1864CK			1/1
	800	400	ES1884CK			1/1
	600	500	ES1865CK			1/1
	800	500	ES1885CK			1/1
	600	600	ES1866CK			1/1
	800	600	ES1886CK			1/1
	600	800	ES1868CK			1/1
	800	800	ES1888CK			1/1

CONTINUED

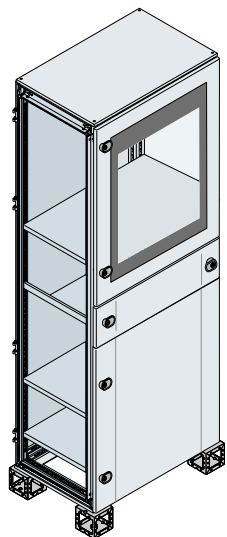


Pre-assembled structures

Cabinets with console

Dimensions (mm)			Code	Package/ No. of pieces
H	W	D		
Cabinet with blind upper door with console				
2000	600	400	ES2064CK	1/1
	800	400	ES2084CK	1/1
	600	500	ES2065CK	1/1
	800	500	ES2085CK	1/1
	600	600	ES2066CK	1/1
	800	600	ES2086CK	1/1
	600	800	ES2068CK	1/1
	800	800	ES2088CK	1/1
2200	600	400	ES2264CK	1/1
	800	400	ES2284CK	1/1
	600	500	ES2265CK	1/1
	800	500	ES2285CK	1/1
	600	600	ES2266CK	1/1
	800	600	ES2286CK	1/1
	600	800	ES2268CK	1/1
	800	800	ES2288CK	1/1

For glass dimension, please refer to the table at page 9/20.



PC cabinets

Structure with removable roof, plinth H=100mm consisting of four angle pieces, complete with glazed top door (able to hold monitors up to 17") + blind bottom door, slide-out computer shelf and rear panel.

Complete with 4 shelves for monitor, keyboard, printer and paper. To be completed with plinth flanges, cable entry flanges and side panels

Dimensions (mm)			Code	Package/ No. of pieces
H	W	D		
1800	600	600	ES1866PCK	1/1
	600	800	ES1868PCK	1/1
2000	600	600	ES2066PCK	1/1
	600	800	ES2068PCK	1/1
2200	600	600	ES2266PCK	1/1
	600	800	ES2268PCK	1/1

IS2 Enclosures

Ordering codes

Kit versions structures

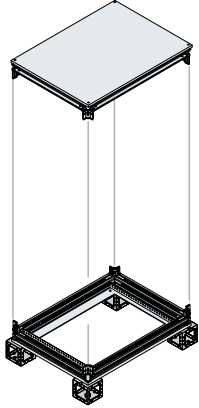
Base/Top

Base, top and plinth angle pieces H=100mm, to be completed with cable entry flanges and plinth flanges. The bases with 1200mm width include the intermediate plinth. The bases W= 300mm are suitable for constructing side container for cable connection and include bottom closure flanges.

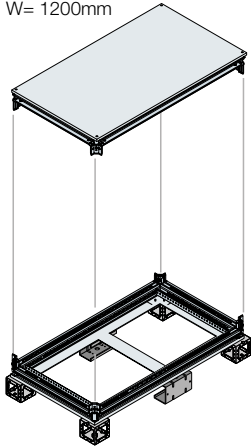
Examples of configuration and technical characteristics at page 5/120

Dimensions (mm)		Code	Package/ No. of pieces
W	D		
STRUCTURE - Base/Top			
400	400	EK4040KN	1/1
	500	EK4050KN	1/1
	600	EK4060KN	1/1
	800	EK4080KN	1/1
	1000	EK4010KN	1/1
600	400	EK6040KN	1/1
	500	EK6050KN	1/1
	600	EK6060KN	1/1
	800	EK6080KN	1/1
	1000	EK6010KN	1/1
800	400	EK8040KN	1/1
	500	EK8050KN	1/1
	600	EK8060KN	1/1
	800	EK8080KN	1/1
	1000	EK8010KN	1/1
1000	400	EK1040KN	1/1
	500	EK1050KN	1/1
	600	EK1060KN	1/1
	800	EK1080KN	1/1
	1000	EK1010KN	1/1
1200	400	EK1240KN	1/1
	500	EK1250KN	1/1
	600	EK1260KN	1/1
	800	EK1280KN	1/1
EXTERNAL CABLER CONTAINER - Base/Top			
300	400	EK3040KN	1/1
	500	EK3050KN	1/1
	600	EK3060KN	1/1
	800	EK3080KN	1/1

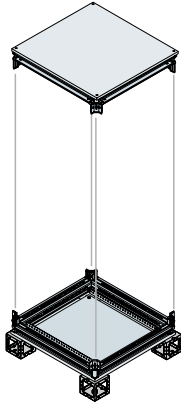
W= 400 ÷ 1000mm

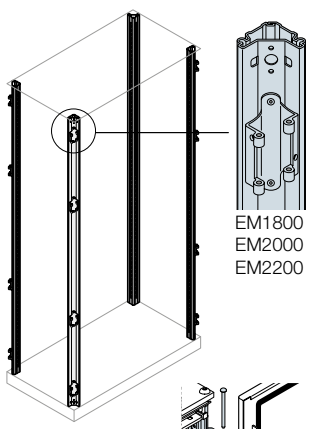


W= 1200mm



W= 300mm

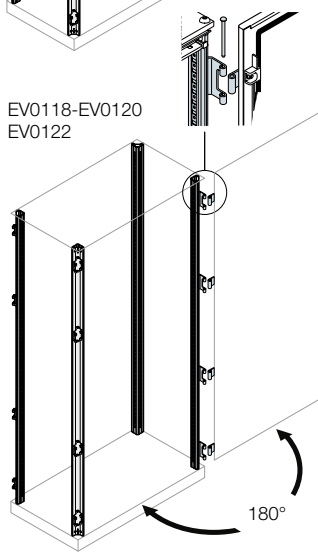




Kit versions structures
Uprights for standard structures

Structure of the closed section type, drilled with 25mm pitch, galvanised, complete with No.4 multi-purpose hinges already mounted.

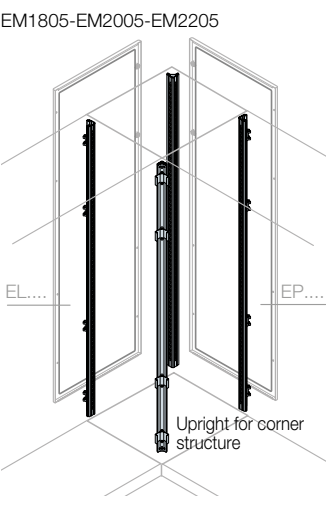
Description	Dimensions (mm)		Package/ No. of pieces
	H	Code	
Uprights with hinges	1800	EM1800	1/4
Uprights with hinges	2000	EM2000	1/4
Uprights with hinges	2200	EM2200	1/4



Uprights for structure with hinges for 180° door opening

Mounted on standard base and top, these allow the door to be opened 180° (door to be drilled).

Description	Dimensions (mm)		Package/ No. of pieces
	H	Code	
Uprights + hinges opening 180°	1800	EV0118	1/4
Uprights + hinges opening 180°	2000	EV0120	1/4
Uprights + hinges opening 180°	2200	EV0122	1/4

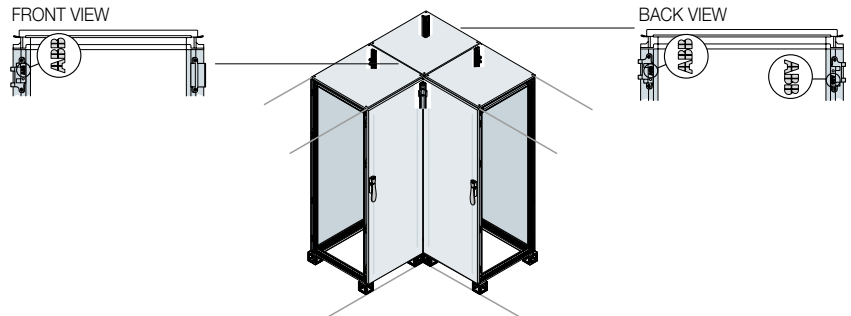


Uprights for corner structures

Mounted on standard base and top, these allow batteries of corner panel boards to be built.

Description	Dimensions (mm)		Package/ No. of pieces
	H	Code	
Uprights for corner structure + 3 standard uprights	1800	EM1805	1/4
Uprights for corner structure + 3 standard uprights	2000	EM2005	1/4
Uprights for corner structure + 3 standard uprights	2200	EM2205	1/4

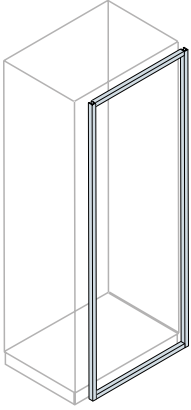
For a composition of a corner structure please order: No.1 EK..0K (base/top); No.1 EM..05 (upright for corner structure + 3 standard uprights); No.1 EP... (rear panel); No. 1 EL... (side panel).



IS2 Enclosures

Ordering codes

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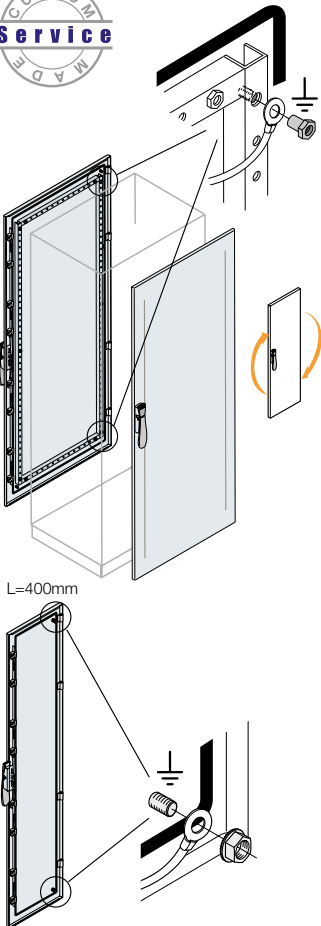


Kit Structure

NEW Horizontal/Vertical IP31 profiles

IP31 closing profiles. In place of standard doors.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	H		
IP31 horizontal profile				
N°2 IP31 closure horizontal profile	400		EP0400H	1/1
N°2 IP31 closure horizontal profile	600		EP0600H	1/1
N°2 IP31 closure horizontal profile	800		EP0800H	1/1
N°2 IP31 closure horizontal profile	1000		EP1000H	1/1
IP31 vertical profile				
N°2 IP31 closure vertical profile		1800	EP1800V	1/1
N°2 IP31 closure vertical profile		2000	EP2000V	1/1
N°2 IP31 closure vertical profile		2200	EP2200V	1/1



Kit versions structures

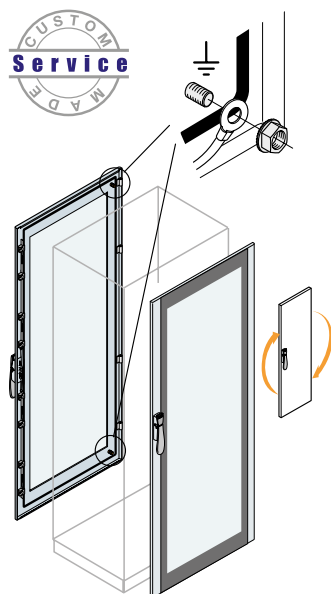
IP65 blind front or rear doors

Door made of 20/10 thick sheet, fitted with polyurethane gasket, complete with handle with double tongue keys (interchangeable with other types of inserts, see page 5/102). Reversible (standard hinging on the right), with 4 closure points and complete with internal reinforcement frame and earthing pins.

Description	Dimensions (mm)			Custom Made Service	Package/ No. of pieces
	H	W	Code		
Blind front/rear door external cable container	1800	300	EC1831K ⁽¹⁾	■	1/1
Blind door		400	EC1840K ⁽¹⁾	■	1/1
Blind door		600	EC1860K	■	1/1
Blind door		800	EC1880K	■	1/1
Blind door		1000	EC1810K	■	1/1
Blind front/rear door external cable container	2000	300	EC2031K ⁽¹⁾	■	1/1
Blind door		400	EC2040K ⁽¹⁾	■	1/1
Blind door		600	EC2060K	■	1/1
Blind door		800	EC2080K	■	1/1
Blind door		1000	EC2012K	■	1/1
Blind front/rear door external cable container	2200	300	EC2232K ⁽¹⁾	■	1/1
Blind door		400	EC2240K ⁽¹⁾	■	1/1
Blind door		600	EC2260K	■	1/1
Blind door		800	EC2280K	■	1/1
Blind door		1000	EC2210K	■	1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

⁽¹⁾ The versions with W=300/400mm do not foresee the internal reinforcement frame.



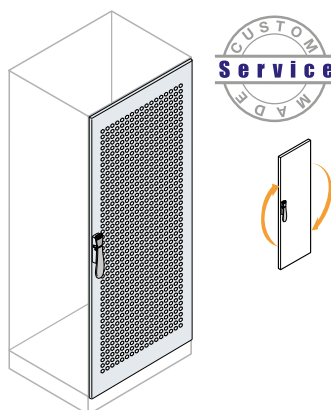
Kit versions structures

IP65 glazed front or rear doors

Door made of 20/10 thick sheet with 4 mm thick safety glass, fitted with polyurethane gasket, complete with handle with double tongue key (interchangeable with other types of inserts, see page 5/102). Reversible (standard hinging on the right) with 4 closing points and complete with earthing pins.

Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
H	W			
1800	600	ET1860K	■	1/1
	800	ET1880K	■	1/1
	1000	ET1810K	■	1/1
2000	600	ET2060K	■	1/1
	800	ET2080K	■	1/1
	1000	ET2010K	■	1/1
2200	600	ET2260K	■	1/1
	800	ET2280K	■	1/1
	1000	ET2211K	■	1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



Aerated door IP20

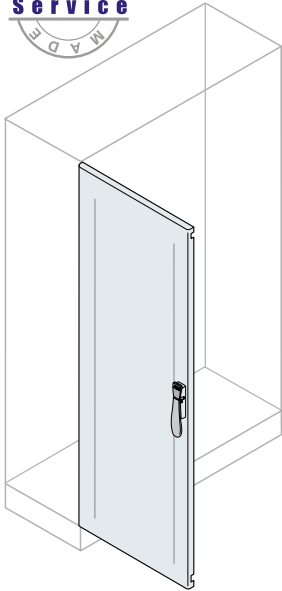
Aerated door made of 20/10 thick sheet, fitted with polyurethane gasket, complete with handle with double tongue key (interchangeable with other types of inserts, see pag. 5/102). Reversible, with 4 closing points and complete with internal reinforcement frame and earthing pins.

Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
H	W			
Aerated door for server cabinet				
1800	800	EC1882	■	1/1
2000	800	EC2082	■	1/1
2200	800	EC2282	■	1/1
Aerated door for server cabinet with 180° opening				
1800	800	EC1884	■	1/1
2000	800	EC2084	■	1/1
2200	800	EC2284	■	1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

IS2 Enclosures

Ordering codes



5

Kit versions structures

Door with special profile for making cabinets with double doors

The selection of the double door structure in the IS2 enclosures (kit version) can be realised in two different ways:
 - without intermediate upright, using one door with a special profile and one door with overlapping closure.
 - with intermediate upright, using two doors with special profile closing on intermediate upright.

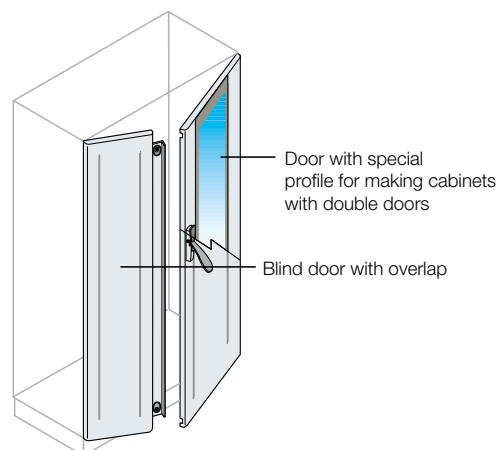
Dimensions (mm)		Code	Custom Made Service		Package/ No. of pieces
H	W				
Blind door for cable container					
1800	200	EC1880VC2K ⁽¹⁾			1/1
2000		EC2080VC2K ⁽¹⁾			1/1
2200		EC2280VC2K ⁽¹⁾			1/1
1800	400	EC1880VC4K ⁽¹⁾	■		1/1
2000		EC2080VC4K ⁽¹⁾	■		1/1
2200		EC2280VC4K ⁽¹⁾	■		1/1
Blind door					
1800	500	EC1880FC5K ⁽¹⁾	■		1/1
2000		EC2080FC5K ⁽¹⁾	■		1/1
2200		EC2280FC5K ⁽¹⁾	■		1/1
1800	600	EC1880FC6K	■		1/1
2000		EC2080FC6K	■		1/1
2200		EC2280FC6K	■		1/1
1800	800	EC1880FC8K	■		1/1
2000		EC2080FC8K	■		1/1
2200		EC2280FC8K	■		1/1
Glazed door					
1800	600	EC1880FV6K	■		1/1
2000		EC2080FV6K	■		1/1
2200		EC2280FV6K	■		1/1
1800	800	EC1880FV8K	■		1/1
2000		EC2080FV8K	■		1/1
2200		EC2280FV8K	■		1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

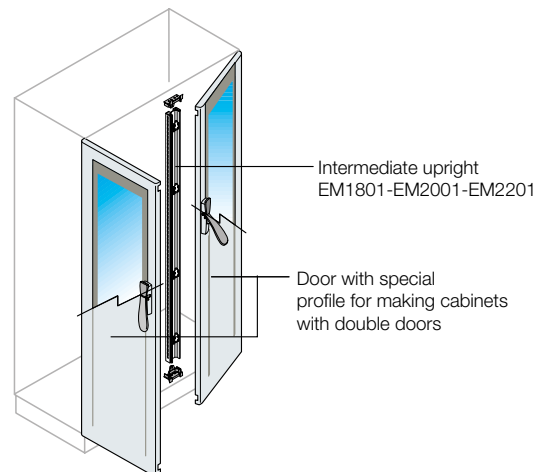
⁽¹⁾ The versions with W=200/300/400/500mm do not foresee the internal reinforcement frame.

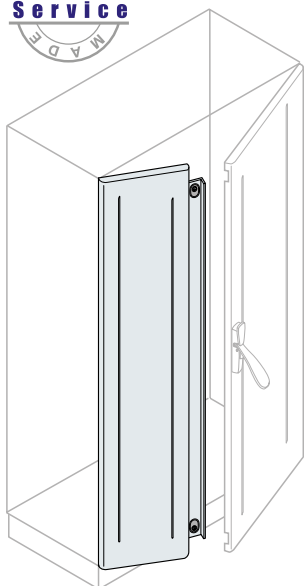
Example of double door enclosures

Doors with overlapping closure



Doors closing on intermediate upright





Kit versions structures

Blind door with overlap

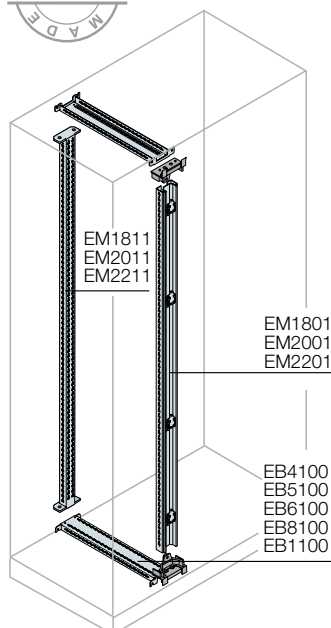
Blind door with overlap side by side with other blind or glazed door without overlap. Allows the panel board with double door to be made without the use of the upright.

Dimensions (mm)					
H	W	Code	Custom Made Service		Package/ No. of pieces
Blind door with overlap for double door version/ replacement rear panel with door					
1800	200	ED1802SK ⁽¹⁾			1/1
	400	ED1804SK ⁽¹⁾	ED1808DPKM		1/1
	500	ED1810SK ⁽¹⁾	ED1810DPKM		1/1
	600	ED1812SK	ED1812DPKM		1/1
	800	ED1816SK	ED1816DPKM		1/1
2000	200	ED2002SK ⁽¹⁾			1/1
	400	ED2004SK ⁽¹⁾	ED2008DPKM		1/1
	500	ED2010SK ⁽¹⁾	ED2010DPKM		1/1
	600	ED2012SK	ED2012DPKM		1/1
	800	ED2016SK	ED2016DPKM		1/1
2200	200	ED2202SK ⁽¹⁾			1/1
	400	ED2204SK ⁽¹⁾	ED2208DPKM		1/1
	500	ED2210SK ⁽¹⁾	ED2210DPKM		1/1
	600	ED2212SK	ED2212DPKM		1/1
	800	ED2216SK	ED2216DPKM		1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

⁽¹⁾ The versions with W=200/400/500mm do not foresee the internal reinforcement frame.

5



Intermediate uprights for cable container or double door

These allow the structure to be divided into two parts

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H			
Intermediate upright for structure	1800		EM1801	1/1
Intermediate upright for structure	2000		EM2001	1/1
Intermediate upright for structure	2200		EM2201	1/1
Intermediate tear upright for cable container	1800		EM1811 ⁽¹⁾	1/1
Intermediate tear upright for cable container	2000		EM2011 ⁽¹⁾	1/1
Intermediate tear upright for cable container	2200		EM2211 ⁽¹⁾	1/1

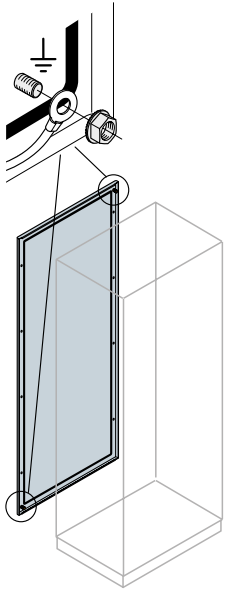
⁽¹⁾ To be fixed directly on the structure.

Intermediate crosspieces for cable container (mounted depth-wise)

Description	Dimensions (mm)		Code	Package/ No. of pieces
	D			
Pair of crosspieces for base	400		EB4100	1/2
Pair of crosspieces for base	500		EB5100	1/2
Pair of crosspieces for base	600		EB6100	1/2
Pair of crosspieces for base	800		EB8100	1/2
Pair of crosspieces for base	1000		EB1100	1/2

IS2 Enclosures

Ordering codes



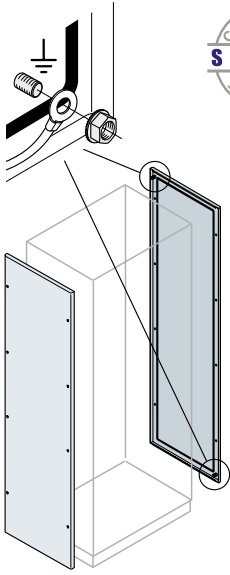
5

Kit versions structures

IP65 Rear panels

Panel made of 15/10 thick sheet, fitted with polyurethane basket, complete with earthing pins. Can be replaced with front/rear doors.

Dimensions (mm)		Code	Package/ No. of pieces
H	W		
Rear panel external cable container			
1800		EP1830K	1/1
2000	300	EP2030K	1/1
2200		EP2231K	1/1
Rear panel			
1800	300	EP1830K	1/1
	400	EP1840K	1/1
	600	EP1860K	1/1
	800	EP1880K	1/1
	1000	EP1811K	1/1
	1200	EP1812K	1/1
2000	300	EP2030K	1/1
	400	EP2041K	1/1
	600	EP2060K	1/1
	800	EP2080K	1/1
	1000	EP2010K	1/1
	1200	EP2012K	1/1
2200	300	EP2231K	1/1
	400	EP2240K	1/1
	600	EP2260K	1/1
	800	EP2280K	1/1
	1000	EP2210K	1/1
	1200	EP2212K	1/1



Kit versions structures

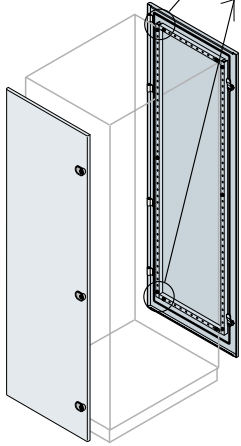
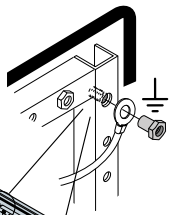
IP65 Side blind panels

Panel made of 15/10 thick sheet, fitted with polyurethane gasket, complete with earthing pins. Replaceable with side doors.

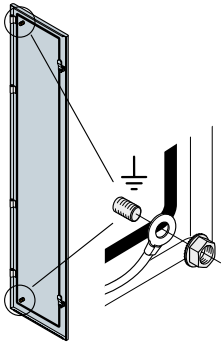
Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
H	W			
No. 1 Blind side panel				
1800	400	EL1841K	■	1/1
	500	EL1851K	■	1/1
	600	EL1861K	■	1/1
	800	EL1881K	■	1/1
	1000	EL1811K	■	1/1
2000	400	EL2041K	■	1/1
	500	EL2051K	■	1/1
	600	EL2061K	■	1/1
	800	EL2081K	■	1/1
	1000	EL2011K	■	1/1
2200	400	EL2241K	■	1/1
	500	EL2251K	■	1/1
	600	EL2261K	■	1/1
	800	EL2281K	■	1/1
	1000	EL2211K	■	1/1
No. 2 Blind side panels				
1800	400	EL1840K	■	1/2
	500	EL1850K	■	1/2
	600	EL1860K	■	1/2
	800	EL1880K	■	1/2
	1000	EL1810K	■	1/2
2000	400	EL2040K	■	1/2
	500	EL2050K	■	1/2
	600	EL2060K	■	1/2
	800	EL2080K	■	1/2
	1000	EL2012K	■	1/2
2200	400	EL2240K	■	1/2
	500	EL2250K	■	1/2
	600	EL2260K	■	1/2
	800	EL2280K	■	1/2
	1000	EL2210K	■	1/2

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

IS2 Enclosures Ordering codes



L=400mm



5

Completion of structures

IP65 blind side doors

Reversible 15/10 thick sheet door, fitted with polyurethane gasket, complete with n 2 box with key-with double tongue (interchangeable with other types of inserts, see page 5/102) complete with internal reinforcement frame and earthing pins.

Dimensions (mm)		D Structure	Code	Custom Made Service		Package/ No. of pieces
H	W					
Blind side door						
1800	400	400	EC1841K	■		1/1
	500	500	EC1851K	■		1/1
	600	600	EC1861K	■		1/1
	800	800	EC1881K	■		1/1
	1000	1000	EC1811K	■		1/1
2000	400	400	EC2041K	■		1/1
	500	500	EC2051K	■		1/1
	600	600	EC2061K	■		1/1
	800	800	EC2081K	■		1/1
	1000	1000	EC2011K	■		1/1
2200	400	400	EC2241K	■		1/1
	500	500	EC2251K	■		1/1
	600	600	EC2261K	■		1/1
	800	800	EC2281K	■		1/1
	1000	1000	EC2211K	■		1/1

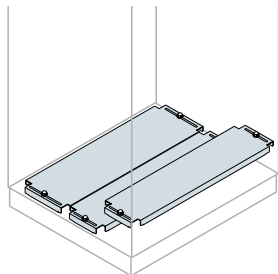
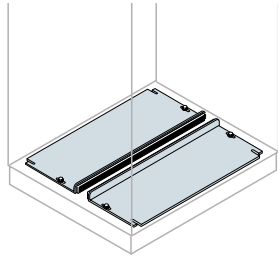
■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



Completion of structures

Cable entry flanges

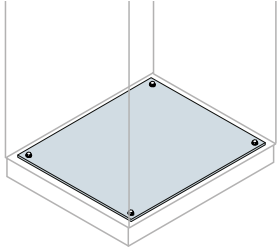
The thickness for the sliding/fixed cable entry flanges is 15/10, for the built-up flanges is 20/10 mm.



Dimensions (mm)		Cod	Custom Made Service	Package/ No. of pieces
W	D			
Sliding cable entry flanges IP40				
400	400	EF4040	■	1/1
600		EF6040	■	1/1
800		EF8040	■	1/1
1000		EF1040	■	1/1
1200		2xEF6040	■	1/1
1600		2xEF8040	■	1/1
400	500	EF4050	■	1/1
600		EF6050	■	1/1
800		EF8050	■	1/1
1000		EF1053	■	1/1
1200		2xEF6050	■	1/1
1600		2xEF8050	■	1/1
400	600	EF4060	■	1/1
600		EF6060	■	1/1
800		EF8060	■	1/1
1000		EF1060	■	1/1
1200		2xEF6060	■	1/1
1600		2xEF8060	■	1/1
400	800	EF4080	■	1/1
600		EF6080	■	1/1
800		EF8080	■	1/1
1000		EF1080	■	1/1
1200		2xEF6080	■	1/1
1600		2xEF8080	■	1/1
400	1000	EF4010	■	1/1
600		EF6010	■	1/1
800		EF8010	■	1/1
1000		EF1010	■	1/1
1200		2xEF6010	■	1/1
1600		2xEF8010	■	1/1
Built-up cable entry flanges IP40				
400	400	EF4041	■	1/1
600		EF6041	■	1/1
800		EF8041	■	1/1
1000		EF1041	■	1/1
1200		2xEF6041	■	1/1
1600		2xEF8041	■	1/1
400	500	EF4051	■	1/1
600		EF6051	■	1/1
800		EF8051	■	1/1
1000		EF1051	■	1/1
1200		2xEF6051	■	1/1
1600		2xEF8051	■	1/1
400	600	EF4061	■	1/1
600		EF6061	■	1/1
800		EF8061	■	1/1
1000		EF1061	■	1/1
1200		2xEF6061	■	1/1
1600		2xEF8061	■	1/1
400	800	EF4081	■	1/1
600		EF6081	■	1/1
800		EF8081	■	1/1
1000		EF1081	■	1/1
1200		2xEF6081	■	1/1
1600		2xEF8081	■	1/1
400	1000	EF4011	■	1/1
600		EF6011	■	1/1
800		EF8011	■	1/1
1000		EF1011	■	1/1
1200		2xEF6011	■	1/1
1600		2xEF8011	■	1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

IS2 Enclosures Ordering codes



Completion of structures

Cable entry flanges

Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
W	D			
Fixed cable entry flanges				
400	400	EF4042	■	1/1
600		EF6043	■	1/1
800		EF8042	■	1/1
1000		EF1042	■	1/1
1200		2xEF6043	■	1/1
1600		2xEF8042	■	1/1
400	500	EF4052	■	1/1
600		EF6052	■	1/1
800		EF8052	■	1/1
1000		EF1052	■	1/1
1200		2xEF6052	■	1/1
1600		2xEF8052	■	1/1
400	600	EF4063	■	1/1
600		EF6062	■	1/1
800		EF8062	■	1/1
1000		EF1062	■	1/1
1200		2xEF6062	■	1/1
1600		2xEF8062	■	1/1
400	800	EF4082	■	1/1
600		EF6082	■	1/1
800		EF8082	■	1/1
1000		EF1082	■	1/1
1200		2xEF6082	■	1/1
1600		2xEF8082	■	1/1
400	1000	EF4012	■	1/1
600		EF6012	■	1/1
800		EF8012	■	1/1
1000		EF1012	■	1/1
1200		2xEF6012	■	1/1
1600		2xEF8012	■	1/1

■ The “Custom Made Service” is valid only for structures assembled at the factory, for more information please contact your local sales network.

Completion of structures

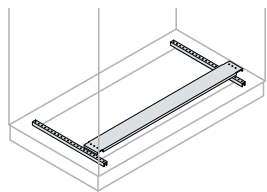
NEW Modular base plates

Using the modular plates it is possible change the configuration of the base of the enclosure, favoring a high level of customization.

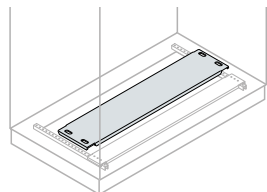
Different solutions are available:

- single blind plate
- single aerated plate
- single plate with plastic cable entry flange
- single plate with gasket for cable entry

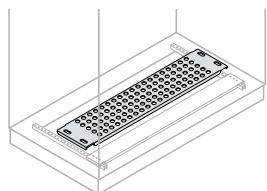
To complete the IS2 base with single modular plates it is necessary order the fixing profiles, that are made up of two profile and a compensation blind plate.



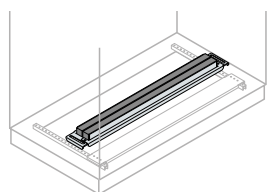
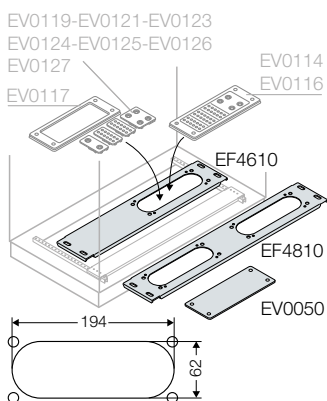
EV0132-EV0133-EV0134
EV0135-EV0136-EV0137



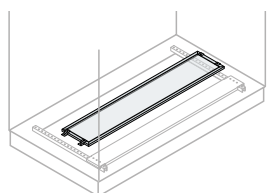
EF2610-EF2810-EF2620-EF2820



EF3610-EF3810



EF6610-EF6810



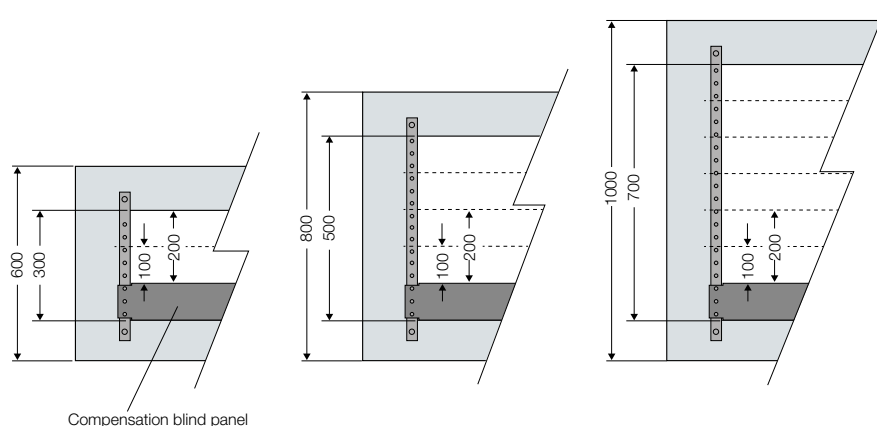
EF9620-EF9820

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
Kit for mounting single modular plate				
Kit for fixing bottom plate	600	600	EV0132	1/1
Kit for fixing bottom plate		800	EV0133	1/1
Kit for fixing bottom plate		1000	EV0134	1/1
Kit for fixing bottom plate	800	600	EV0135	1/1
Kit for fixing bottom plate		800	EV0136	1/1
Kit for fixing bottom plate		1000	EV0137	1/1
Single blind bottom plate				
Single blind bottom plate	600	100	EF2610	1/1
Single blind bottom plate	800		EF2810	1/1
Single blind bottom plate	600	200	EF2620	1/1
Single blind bottom plate	800		EF2820	1/1
Single aerated bottom plate				
Single aerated bottom plate	600	100	EF3610	1/1
Single aerated bottom plate	800		EF3810	1/1
Single bottom plate for cable entry flange				
Single plate 1 cable entry flange	600	100	EF4610	1/1
Single plate 2 cable entry flanges	800		EF4810	1/1
No.1 closure plate			EV0050	1/1
Single bottom plate with gasket				
Single bottom plate with gasket	600	100	EF6610	1/1
Single bottom plate with gasket	800		EF6810	1/1
Single filter bottom plate*				
Single filter bottom plate	600	200	EF9620	1/1
Single filter bottom plate	800		EF9820	1/1

* Available from May 2013

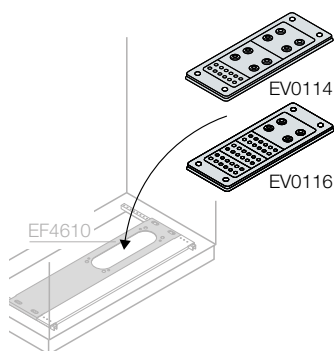
Useful space in the base of enclosure

Example: base 600x600mm (LxP): order No.1 kit for mounting single modular plate EV0132 + No.1 EF2610 + No.1 EF4610.



IS2 Enclosures

Ordering codes



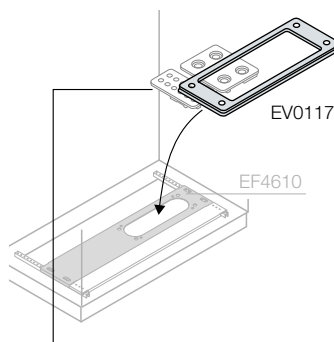
Completion of structures

NEW Modular preconfigured cable entry flange IP65

The cable glands allow to install several cables and ensure the protection of the components within the enclosures. The inserts are equipped with a membrane that can be easily perforated by the cable. There is the possibility of installing cable glands and flange with clamp. Colour gray RAL 7035, operating temperature from -20 ° C to +125 ° C, IP65 according to EN 60529 specifications.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
Modular preconfigured cable entry gland IP65				
No.10 preconfigured cable entry flanges for 18 cables Ø min/max 7/14 and 10 cables Ø min/max 4/10mm	214	90	EV0114	1/10
No.10 preconfigured cable entry flanges for 30 cables Ø min/max 4/10, 2 for M20 Ø min/max 6/13mm and 2 cables M25 Ø min/max 8/17mm	214	90	EV0116	1/10

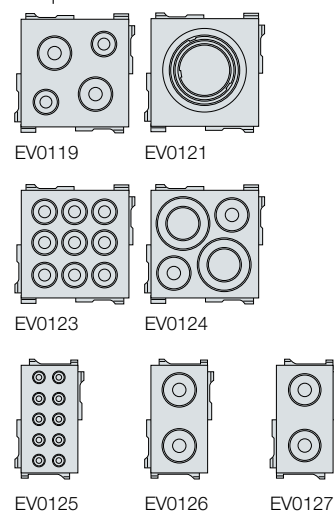
5



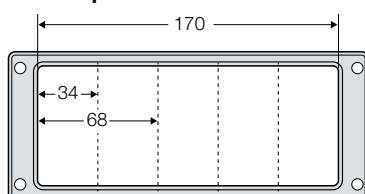
NEW Cable entry flanges configurable with single inserts IP65

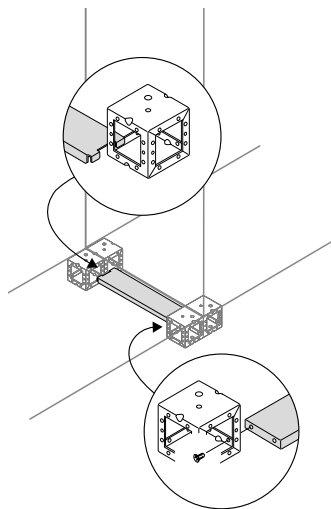
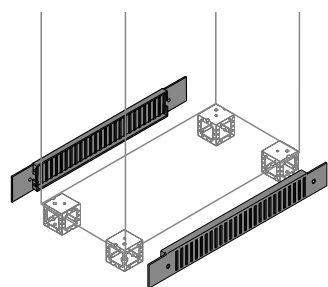
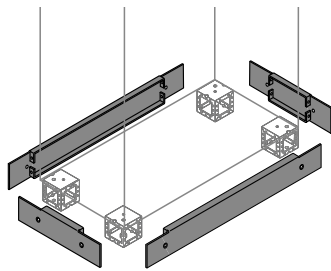
Thanks to the frame and to the inserts available, it is possible to customize the flange according to the size, quantity of the cables to be installed. The inserts are equipped with a membrane that can be easily perforated by the cable without the need to use any tool. There is the possibility of installing cable frames and cable with clamp. Colour gray RAL 7035, operating temperature from -20 ° C to +125 ° C, IP 65 according to EN 60529 specifications.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
Configurable modular flange				
No.1 Cable entry gland frame to configure with single insert	214	90	EV0117	1/1
Inserts for configurable modular flange				
No.10 inserts 68x68mm for entry No.4 cables, 2 cables M25 (Ø min/max 8/17mm) 2 Cables M16 (Ø min/max 5/10mm)	68	68	EV0119	1/10
No.10 inserts 68x68mm for entry No.1 cable M32 / M40 / M50	68	68	EV0121	1/10
No.10 inserts 68x68mm for entry No.9 cables (Ø min/max 7/14mm)	68	68	EV0123	1/10
No.10 inserts 68x68mm for entry No.4 cables, 2 Ø min/max 10/20 e 2 Ø min/max 20/30mm	68	68	EV0124	1/10
No.10 inserts 34x68mm for entry No.2 cables Ø min/max 8/17mm	34	68	EV0125	1/10
No.10 inserts 34x68mm for entry No.2 cables Ø min/max 6/13mm	34	68	EV0126	1/10
No.10 inserts 34x68mm for entry No.10 cables Ø min/max 4/10mm	34	68	EV0127	1/10



Useful space for inserts





Completion of structures

NEW Flanges front/rear H=100mm

Removable flanges made of 10/10 sheet painted orange peel RAL 7012 colour (not self-supporting).

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Flange cieche				
Pair of side flanges	100	300	ZN3000	1/2
Pair of side flanges		400	ZN4000	1/2
Pair of side flanges		500	ZN5000	1/2
Pair of flanges, front/back		600	ZN6000	1/2
Pair of flanges, front/back		800	ZN8000	1/2
Pair of flanges, front/back		1000	ZN1000	1/2
Pair of flanges, front/back		1200	ZN1200	1/2
Pair of flanges, front/back		1200	2xZN6000*	1/2
Pair of flanges, front/back		1600	2xZN8000*	1/2
Aerated flanges				
Pair of aerated flanges, front/back	100	600	ZN0006	1/2
Pair of aerated flanges, front/back		800	ZN0008	1/2
Pair of aerated flanges, front/back		1000	ZN0010	1/2
Pair of aerated flanges, front/back		1200	2xZN0006*	1/2
Pair of aerated flanges, front/back		1600	2xZN0008*	1/2

* IS2 structures W=1200/1600mm are provided with intermediate plinth.

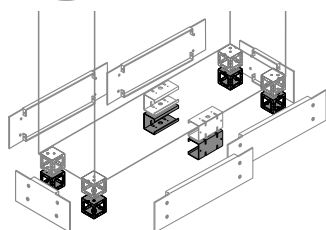
NEW Flange in depth for cable supporting and structure reinforcement.

The flange in depth for cable supporting and structure reinforcement has the purpose of holding the cables from the ground in the enclosure batteries during handling and to create a link between the front plinth and rear plinth of the batteries, in order to reinforce the structure.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	H		
Support flange for cable	400	100	ZN4001	1/1
Support flange for cable	500	100	ZN5001	1/1
Support flange for cable	600	100	ZN6001	1/1
Support flange for cable	800	100	ZN8001	1/1
Support flange for cable	1000	100	ZN1001	1/1

IS2 Enclosures

Ordering codes



Completion of structures

NEW Additional Plinth

To obtain a plinth 200mm high, order a kit of angle pieces H=100mm to be added to the angle pieces already present on the structure. Complete with 2 covering flanges (H=100mm) for each side of the structure.

Description	Dimensions (mm) H	Code	Custom Made Service	Package/ No. of pieces
No. 4 angle pieces 25/10 thick	100	ZN1010	■	1/4
No. 2 angle pieces 25/10 thick for intermediate plinth	100	ZN1020	■	1/2

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

NEW Plinth Covering Flanges H=200mm

Removable flanges made of 10/10 sheet painted orange peel RAL 7012 colour (not self-supporting).

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Blind flanges H=200mm for additional plinth				
Pair of flanges, front/back/side	200	400	ZN4002	1/2
Pair of flanges side		500	ZN5002	1/2
Pair of flanges, front/back/side		600	ZN6002	1/2
Pair of flanges, front/back/side		800	ZN8002	1/2
Pair of flanges, front/back/side		1000	ZN1002	1/2
Pair of flanges, front/back		1200	2xZN6002	1/2
Pair of flanges, front/back		1600	2xZN8002	1/2

NEW Covers "L" shaped for singol plinth

It allows to cover the sides of the plinth in case of non-use of plinth flanges.

Description	Dimensions (mm) H	Code	Package/ No. of pieces
No.4 cover for plinth	100	ZN1040	1/4

NEW Brackets for floor fixing

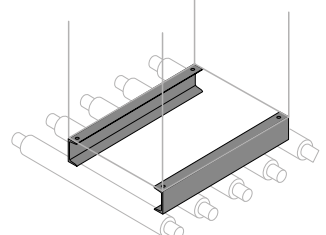
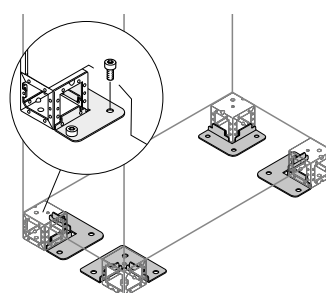
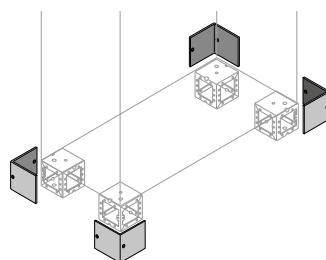
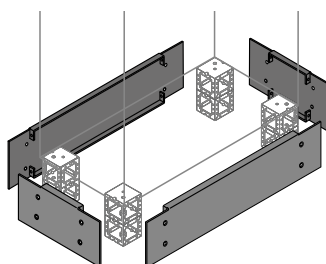
Description	Code	Package/ No. of pieces
No.4 brackets for floor fixing	ZN1041	1/4

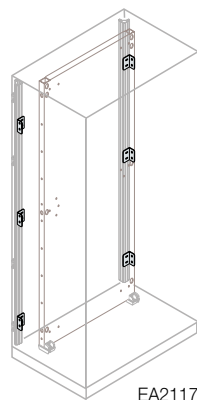
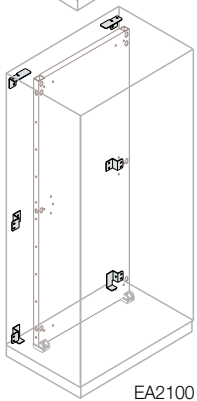
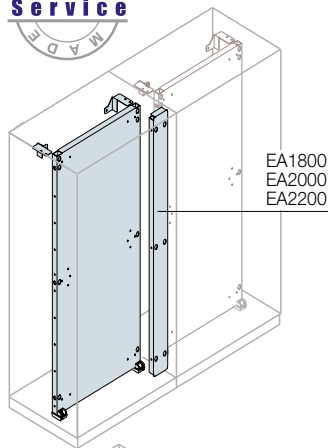
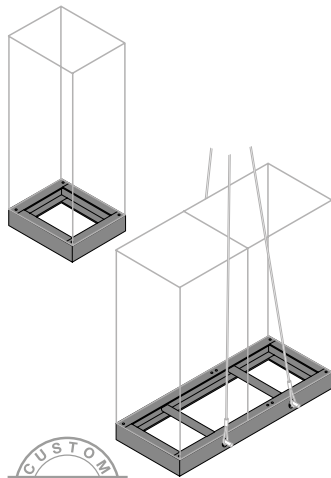
Reinforced plinth H=100mm

Shaped steel beam, to be mounted in replacement of the angle pieces. Allows handling by means of rollers. The lateral covering flanges cannot be mounted. Grey RAL 7012 colour. 25/10mm thick.

Description	Dimensions (mm) W	Code	Package/ No. of pieces
No.2 steel beams H=100mm	400	EZ4001	1/2
No.2 steel beams H=100mm	600	EZ6001	1/2
No.2 steel beams H=100mm	800	EZ8001	1/2
No.2 steel beams H=100mm	1000	EZ1001	1/2
No.2 steel beams H=100mm	1200	EZ1201	1/2
No.2 steel beams H=100mm	1600	EZ1601	1/2

5





Completion of structures

Single plinth for panel boards side by side

Plinth in a single piece fitted with reinforcement tubes mounted in depth, allows lifting of side-by-side panel boards and those fitted with particularly heavy accessory components. Height: 100/200mm, length up to 6 metres. Grey RAL 7012 colour orange peel. The number of reinforcement tubes depends on the width of the battery (see page 9/36). 25/10mm thick. Available also for single structures but without reinforcement profiles.

Descriptions	Dimensions (mm)		Code	Service Custom Made	Package/ No. of pieces
	H				
Single plinth	100		ZU1100		1/1
Single plinth	200		ZU2100		1/1
Single plinth	100		ZU1101	■	1/1
Single plinth	200		ZU2101	■	1/1

- The drawing of the front view of the panel board battery must always be enclosed, specifying the width, depth and sequence of the panel boards for each column.
- Unit of measurement for the order: METRE.
- Maximum length of 6m.

Standard back plates

Galvanised 25/10 steel plate, can be inserted from the front (standard) or from the side with tracks (to be ordered separately). Complete with supports for sliding and fixing. Possibility of being placed side by side and further to the rear by means of the special kits.

Descriptions	Dimensions (mm)		Code	Service Custom Made	Package/ No. of pieces
	H	W			
Mounting plate	1800	400	EA1841	■	1/1
Mounting plate		600	EA1860	■	1/1
Mounting plate		800	EA1880	■	1/1
Mounting plate		1000	EA1810	■	1/1
Mounting plate		1200	EA1812	■	1/1
Mounting plate		1600	EA1817	■	1/1
Kit for joining plates				EA1800	
Mounting plate	2000	400	EA2040	■	1/1
Mounting plate		600	EA2060	■	1/1
Mounting plate		800	EA2080	■	1/1
Mounting plate		1000	EA2010	■	1/1
Mounting plate		1200	EA2013	■	1/1
Mounting plate		1600	EA2016	■	1/1
Kit for joining plates				EA2000	
Mounting plate	2200	400	EA2240	■	1/1
Mounting plate		600	EA2260	■	1/1
Mounting plate		800	EA2280	■	1/1
Mounting plate		1000	EA2210	■	1/1
Mounting plate		1200	EA2212	■	1/1
Mounting plate		1600	EA2216	■	1/1
Kit for joining plates				EA2200	

Kit for moving back plates back

Kit for moving back plates back H=1800-2000-2200mm	EA2100*			1/1
Kit for mounting back plates at reduced height	EA2102**			1/1
No.6 intermediate reinforcements for fixing back plate	EA2117			1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

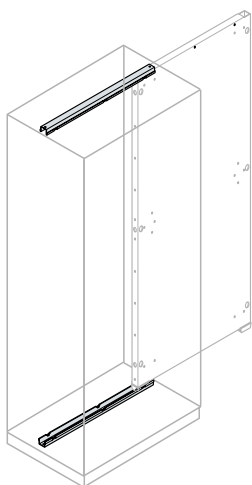
*This kit can be used to fix the standard mounting plate on the side of the enclosure.

**For mounting of plate it's necessary to order EB...crosspieces (see page 5/63).

IS2 Enclosures

Ordering codes

5

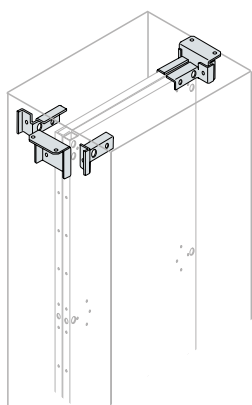


Completion of structures

Tracks for plate insertion

These allow lateral insertion of the standard and oversized mounting plates. They consist of two sections (one top and one bottom one).

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	H		
Tracks for plate insertion	400	100	EA0400	1/2
Tracks for plate insertion	600	100	EA0600	1/2
Tracks for plate insertion	800	100	EA0802	1/2
Tracks for plate insertion	1000	100	EA1000	1/2
Tracks for plate insertion	1200	100	EA1200	1/2
Tracks for plate insertion	1600	100	EA1602	1/2



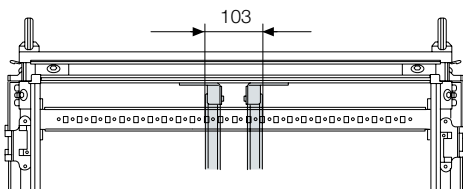
Kit back to back

This kit allows to pair two standard plates with a small footprint.

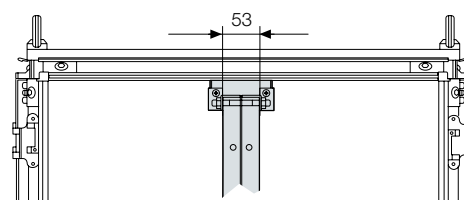
Description	Code	Package/ No. of pieces
Kit standard plates back to back	EA2118	1/1

Back to back application

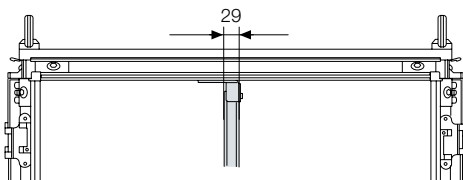
Traditional side by side: standard plate + standard plate.

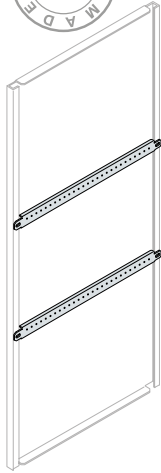


Side by side with EA2118 : standard plate + standard plate + kit EA2118.



Single standard plate + opposite mounting plate





Completion of structures

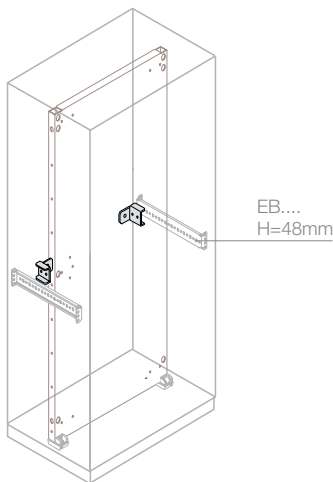
Back plate reinforcement sections

Galvanised 20/10 thick sections to be used as reinforcement on the standard back plates, recommended in the case of particularly heavy components fixed onto the back plate.

Description	Dimensions (mm) W	Code	Custom Made Service		Package/ No. of pieces
No.2 plate horizontal reinforcement	600	EA6003	■		1/2
No.2 plate horizontal reinforcement	800	EA8003	■		1/2
No.2 plate horizontal reinforcement	1000	EA1003	■		1/2
No.2 plate horizontal reinforcement	1200	EA1203	■		1/2
No.2 plate horizontal reinforcement	1600	EA1603	■		1/2
No.6 plate fixing intermediate reinforcement		EA2117			1/6

■ The “Custom Made Service” is valid only for structures assembled at the factory, for more information please contact your local sales network.

5



Kit for fixing back plate in the middle

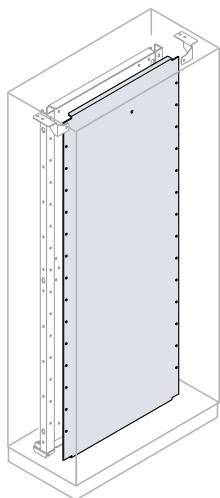
This allows further fixing of the back plate in the middle as well, in addition to side crosspieces H=48mm (see page 5/63).

Description	Code		Package/ No. of pieces
Kit for fixing standard back plate	EA2115		1/1

IS2 Enclosures

Ordering codes

5



Completion of structures

Opposite mounting plate

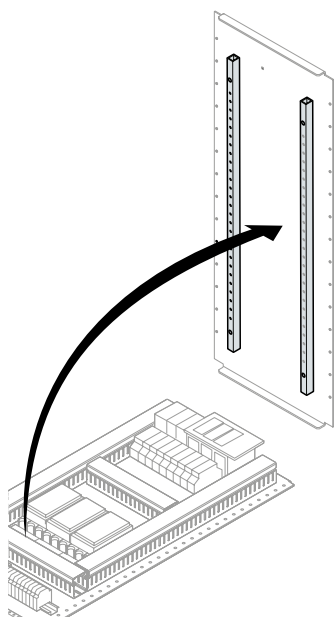
Mounting plate with extremely small depth dimensions, able to mount the components on both sides (front and rear). Made of 25/10 galvanized steel they can be inserted in the front and/or in the rear. Complete with supports for sliding and fixing.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Opposite mounting plate	1800	600	EA5861	1/1
Opposite mounting plate		800	EA5883	1/1
Opposite mounting plate		1000	EA5811	1/1
Opposite mounting plate		1200	EA5822	1/1
Opposite mounting plate	2000	600	EA5063	1/1
Opposite mounting plate		800	EA5083	1/1
Opposite mounting plate		1000	EA5011	1/1
Opposite mounting plate		1200	EA5022	1/1
Opposite mounting plate	2200	600	EA5360	1/1
Opposite mounting plate		800	EA5380	1/1
Opposite mounting plate		1000	EA5310	1/1
Opposite mounting plate		1200	EA5322	1/1

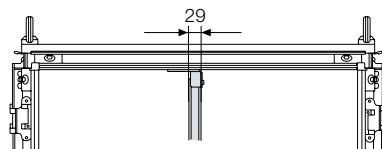
Opposite mounting plate reinforcement sections

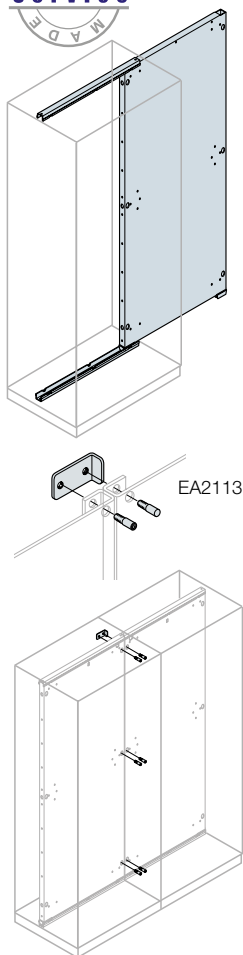
The reinforcement sections allow both vertical and horizontal opposite mounting plate cabling. The sections are fixed to the plate using special pressure pins, without drilling the plate.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
No.2 reinforcements for opposite plate	1800		EA0018	1/2
No.2 reinforcements for opposite plate	2000		EA0020	1/2
No.2 reinforcements for opposite plate	2200		EA0022	1/2



Single standard plate + opposite mounting plate





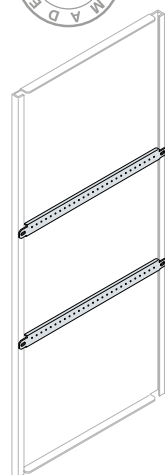
Completion of structures

Oversized mounting plates

Galvanised 25/10 steel plate, can only be inserted laterally by sliding, by means of balls with tracks included in the Kit. Possibility of being placed side by side by means of the special Kit.

Description	Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
	H	W			
Oversized mounting plates+tracks	1800	400	EA1940	■	1/1
Oversized mounting plates+tracks		600	EA1960	■	1/1
Oversized mounting plates+tracks		800	EA1981	■	1/1
Oversized mounting plates+tracks		1000	EA1910	■	1/1
Oversized mounting plates+tracks		1200	EA1912	■	1/1
No. 2 oversized mounting plates + track + joining kit		1600	EA1916	■	1/1
Oversized mounting plates+tracks	2000	400	EA2140	■	1/1
Oversized mounting plates+tracks		600	EA2161	■	1/1
Oversized mounting plates+tracks		800	EA2180	■	1/1
Oversized mounting plates+tracks		1000	EA2110	■	1/1
Oversized mounting plates+tracks		1200	EA2112	■	1/1
No. 2 oversized mounting plates + track + joining kit		1600	EA2116	■	1/1
Oversized mounting plates+tracks	2200	400	EA2340	■	1/1
Oversized mounting plates+tracks		600	EA2360	■	1/1
Oversized mounting plates+tracks		800	EA2380	■	1/1
Oversized mounting plates+tracks		1000	EA2310	■	1/1
Oversized mounting plates+tracks		1200	EA2312	■	1/1
No. 2 oversized mounting plates + track + joining kit		1600	EA2316	■	1/1
Kit for joining oversized plates			EA2113		1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



Back plate reinforcement sections

Galvanised 20/10 thick sections to be used as reinforcement on the standard back plates, recommended in the case of particularly heavy components fixed onto the back plate.

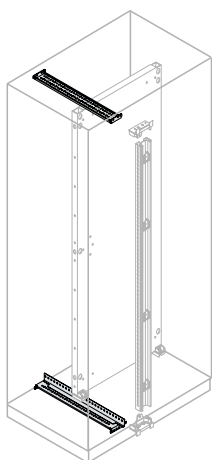
Description	Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
	W	H			
No.2 plate horizontal reinforcement	600		EA6002	■	1/2
No.2 plate horizontal reinforcement	800		EA8002	■	1/2
No.2 plate horizontal reinforcement	1000		EA1002	■	1/2
No.2 plate horizontal reinforcement	1200		EA1202	■	1/2

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

IS2 Enclosures

Ordering codes

5

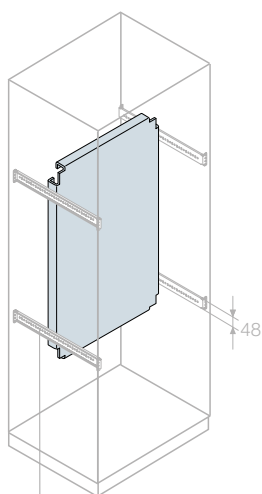


Completion of structures

Sliding guides for insertion of back plate with partial width

These allow insertion from the front of the standard back plate in structures with cable container or in the case of partial use of the structure with double door by means of a special sliding track inserted into the bottom crosspiece.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	D			
No.1 sliding guide and No.1 crosspiece of back plate	400		EB4101	1/2
No.1 sliding guide and No.1 crosspiece of back plate	500		EB5101	1/2
No.1 sliding guide and No.1 crosspiece of back plate	600		EB6101	1/2
No.1 sliding guide and No.1 crosspiece of back plate	800		EB8101	1/2
No.1 sliding guide and No.1 crosspiece of back plate	1000		EB1101	1/2



EB0400-EB0500-EB0600-EB0800
EB1000-EB1200

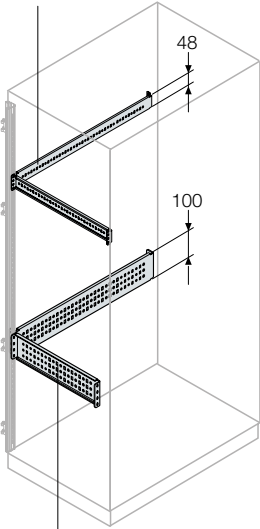
Partial back plates

Galvanised 25/10 thick back plates. These are fixed onto the crosspieces H=48mm. (TS....).

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Partial back plate	200		EA2062	1/1
Partial back plate	300		EA3061	1/1
Partial back plate	400		EA4061	1/1
Partial back plate	500	600	EA5061	1/1
Partial back plate	600		EA6061	1/1
Partial back plate	800		EA8061	1/1
Partial back plate	1000		EA1061	1/1
Partial back plate	200		EA2081	1/1
Partial back plate	300		EA3081	1/1
Partial back plate	400		EA4081	1/1
Partial back plate	500	800	EA5081	1/1
Partial back plate	600		EA6081	1/1
Partial back plate	800		EA8081	1/1
Partial back plate	1000		EA1081	1/1
Kit for moving partial back plates back			EA2101	1/1

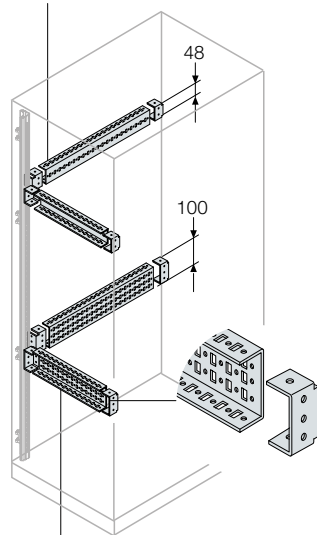


EB0400-EB0500-EB0600-EB0800
EB1000-EB1200



EB0440-EB0550-EB0660-EB0880
EB1010-EB1220

EB4860-EB4880-EB4810



EB1060-EB1080-EB1011

Completion of structures

Crosspieces for fixing accessories and partial plate

Multi-purpose galvanised 20/10 thick sheet crosspieces, these are fixed between the uprights and allow the partial back plates and busbar holders for flat and shaped section busbars (to be drilled).

Description	Dimensions (mm) W/D	Code	Custom Made Service	Package/ No. of pieces
Crosspieces H=48mm for fixing accessories and partial plate				
No.2 crosspieces back/side	400	EB0400	■	1/2
No.2 crosspieces back	500	EB0500	■	1/2
No.2 crosspieces back/side	600	EB0600	■	1/2
No.2 crosspieces back/side	800	EB0800 ⁽¹⁾	■	1/2
No.2 crosspieces back/side	1000	EB1000	■	1/2
No.2 crosspieces back	1200	EB1200	■	1/2
Crosspieces H=100mm for fixing accessories and partial plate				
No.2 crosspieces back/side	400	EB0440	■	1/2
No.2 crosspieces back	500	EB0550	■	1/2
No.2 crosspieces back/side	600	EB0660	■	1/2
No.2 crosspieces back/side	800	EB0880 ⁽¹⁾	■	1/2
No.2 crosspieces back/side	1000	EB1010	■	1/2
No.2 crosspieces back	1200	EB1020	■	1/2

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

⁽¹⁾ For structures W=1600mm, order 2 pieces

NEW Crosspieces "C" shaped*

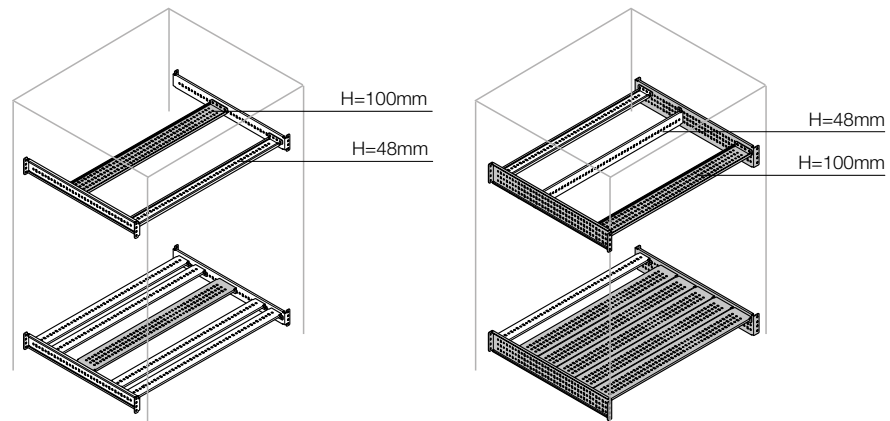
Multi-purpose galvanised 20/10 thick sheet crosspieces with 3 fixing plane, these are fixed between the uprights and allow the partial back plates and busbar holders for flat and shaped section busbars (to be drilled).

Description	Dimensions (mm) W/D	Code	Package/ No. of pieces
Crosspieces "C" shaped H=48mm for fixing accessories and partial plate			
No.2 crosspieces "C" front/side	600	EB4860 ⁽¹⁾	1/2
No.2 crosspieces "C" front/side	800	EB4880 ⁽²⁾	1/2
No.2 crosspieces "C" front/side	1000	EB4810	1/2
Crosspieces "C" shaped H=100mm for fixing accessories and partial plate			
No.2 crosspieces "C" front/side	600	EB1060 ⁽¹⁾	1/2
No.2 crosspieces "C" front/side	800	EB1080 ⁽²⁾	1/2
No.2 crosspieces "C" front/side	1000	EB1011	1/2

⁽¹⁾ For structures W=1200mm, order 2 pieces

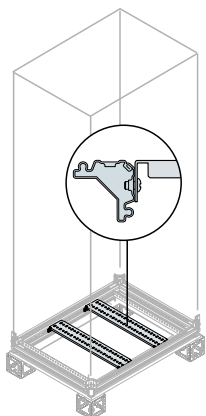
⁽²⁾ For structures W=1600mm, order 2 pieces

Example of using crosspieces H=48/100mm



IS2 Enclosures

Ordering codes

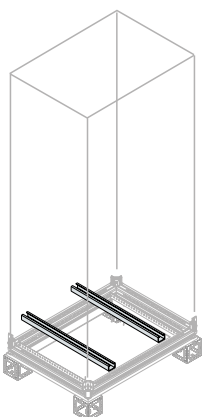


Completion of structures

Crosspieces for fixing heavy accessories (mounted in depth)

Description	Dimensions (mm) D	Code	Package/ No. of pieces
No. 2 crosspieces mounted for base	400	EB4100	1/2
No. 2 crosspieces mounted for base	500	EB5100	1/2
No. 2 crosspieces mounted for base	600	EB6100	1/2
No. 2 crosspieces mounted for base	800	EB8100	1/2
No. 2 crosspieces mounted for base	1000	EB1100	1/2

5



Transformer holder crosspieces

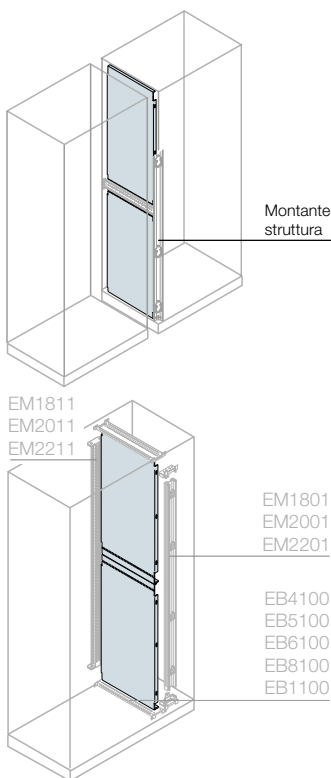
Transformer holder crosspieces made of 35/10 steel treated with white galvanization, complete of No.4 Lifting eyebolts M12, W=50mm.

Description	Dimensions (mm) D	Code	Package/ No. of pieces
Pair of transformer holder crosspieces	600	ED6102	1/2
Pair of transformer holder crosspieces	800	EB8102	1/2
Pair of transformer holder crosspieces	1000	EB1102	1/2

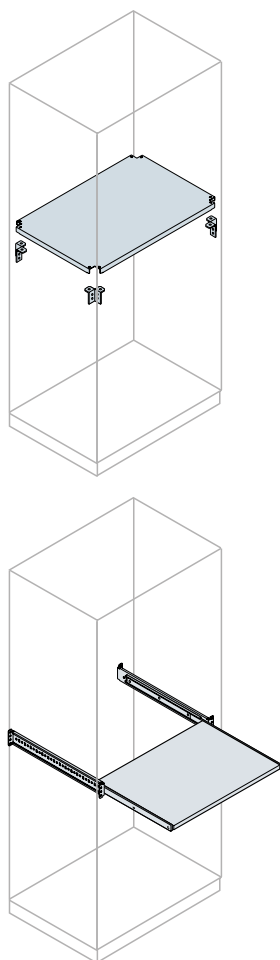
Completion of structures

Vertical partition panels for side-by-side structures

Panel made of 12/10 thick galvanised steel sheet divided into two parts. When there is the lateral crosspiece H=48mm, use pre-shearing.



Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	D		
Vertical partition panels	1800	400	EE1841	1/1
Vertical partition panels		500	EE1851	1/1
Vertical partition panels		600	EE1861	1/1
Vertical partition panels		800	EE1881	1/1
Vertical partition panels		1000	EE1811	1/1
Vertical partition panels	2000	400	EE2041	1/1
Vertical partition panels		500	EE2051	1/1
Vertical partition panels		600	EE2061	1/1
Vertical partition panels		800	EE2081	1/1
Vertical partition panels		1000	EE2011	1/1
Vertical partition panels	2200	400	EE2241	1/1
Vertical partition panels		500	EE2251	1/1
Vertical partition panels		600	EE2261	1/1
Vertical partition panels		800	EE2281	1/1
Vertical partition panels		1000	EE2211	1/1



Completion of structures

Horizontal partition panels

Panel made of 15/10 thick galvanised steel sheet. This allows horizontal separation of the different components inside the structure.

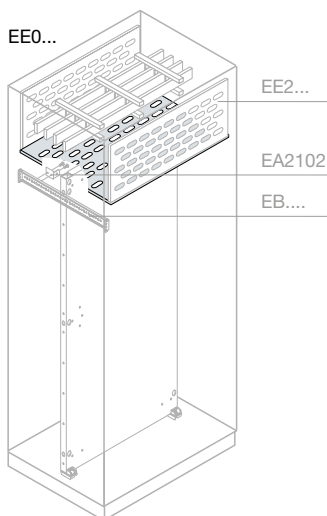
Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	D		
Horizontal fixed partition panels				
Horizontal fixed partition panels	400	400	EE4041	1/1
Horizontal fixed partition panels	600		EE6041	1/1
Horizontal fixed partition panels	800		EE8041	1/1
Horizontal fixed partition panels	1000		EE1041	1/1
Horizontal fixed partition panels	400	500	EE4051	1/1
Horizontal fixed partition panels	600		EE6051	1/1
Horizontal fixed partition panels	800		EE8051	1/1
Horizontal fixed partition panels	1000		EE1051	1/1
Horizontal fixed partition panels	600	600	EE6061	1/1
Horizontal fixed partition panels	800		EE8061	1/1
Horizontal fixed partition panels	1000		EE1061	1/1
Horizontal fixed partition panels	800	800	EE8081	1/1
Horizontal fixed partition panels	1000		EE1081	1/1
Horizontal fixed partition panels	1000	1000	EE1011	1/1
Horizontal sliding partition panels				
Horizontal sliding partition panels ⁽¹⁾	600	600	EE1003K	1/1
Horizontal sliding partition panels ⁽¹⁾		800	EE1001K	1/1
Horizontal sliding partition panels ⁽¹⁾	800	600	EE1004K	1/1
Horizontal sliding partition panels ⁽¹⁾		800	EE1002K	1/1

⁽¹⁾ Including the crosspieces for fixing and relative accessories.

Can not be mounted with double door in structures W=800/1000/1200/1600mm with overlapping doors closing.

IS2 Enclosures

Ordering codes



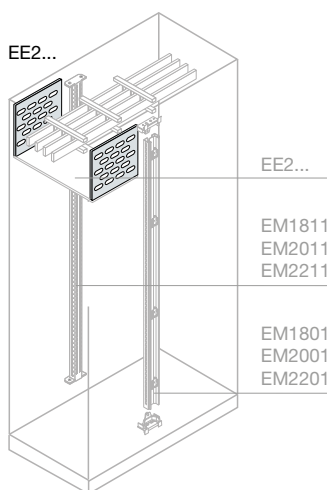
Completion of structures

Horizontal busbar segregations

Drilled sheet panels (IP20). Allow segregation of the busbar system. Cannot be mounted in cabinets with compartments, or with DIN frame.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	D		
Internal cable container				
Horizontal busbar segregation	200	400	EE0240 ⁽¹⁾	1/1
Horizontal busbar segregation		500	EE0250 ⁽¹⁾	1/1
Horizontal busbar segregation		600	EE0260 ⁽¹⁾	1/1
Horizontal busbar segregation		800	EE0280 ⁽¹⁾	1/1
Horizontal busbar segregation	400	400	EE0440 ⁽¹⁾	1/1
Horizontal busbar segregation		500	EE0450 ⁽¹⁾	1/1
Horizontal busbar segregation		600	EE0460 ⁽¹⁾	1/1
Horizontal busbar segregation		800	EE0480 ⁽¹⁾	1/1
External cable container				
Horizontal busbar segregation	300	400	EE0340	1/1
Horizontal busbar segregation		500	EE0355	1/1
Horizontal busbar segregation		600	EE0360	1/1
Horizontal busbar segregation		800	EE0380	1/1
Structure				
Horizontal busbar segregation	600	400	EE0640	1/1
Horizontal busbar segregation		500	EE0650	1/1
Horizontal busbar segregation		600	EE0660	1/1
Horizontal busbar segregation		800	EE0680	1/1
Horizontal busbar segregation	800	400	EE0840	1/1
Horizontal busbar segregation		500	EE0850	1/1
Horizontal busbar segregation		600	EE0860	1/1
Horizontal busbar segregation		800	EE0880	1/1
Horizontal busbar segregation	1000	400	EE1040	1/1
Horizontal busbar segregation		500	EE1050	1/1
Horizontal busbar segregation		600	EE1060	1/1
Horizontal busbar segregation		800	EE1080	1/1

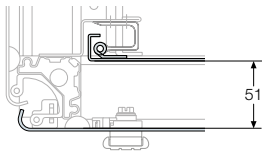
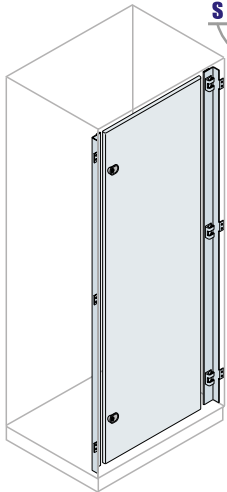
⁽¹⁾ To be used with rear upright EM..11.



Vertical busbar segregations

Drilled sheet panels (IP20). Allow segregation of the busbar system.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	D		
Internal cable container				
Vertical busbar segregation	200	200	EE2020	1/2
Vertical busbar segregation		400	EE2040	1/2
External cable container				
Vertical busbar segregation	200	300	EE2030	1/2
Structure				
Vertical busbar segregation	200	600	EE2600	1/2
Vertical busbar segregation		800	EE2800	1/2
Vertical busbar segregation		1000	EE2100	1/2



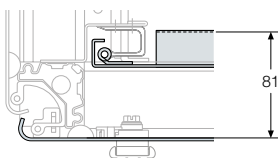
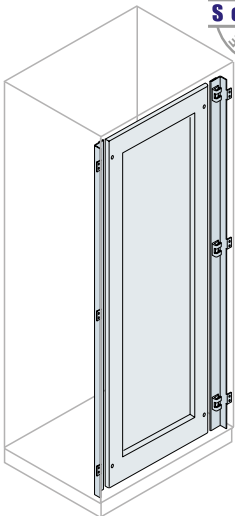
Completion of structures

Counterdoors

Internal door made of 15/10 thick galvanised steel sheet, complete with reinforcement tube, frame, hinges and No.2 boxes with double tongue key interchangeable with inserts (see page 5/102). Maximum opening angle of 100°.

Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
H	W			
Internal counterdoor				
1800	600	EE1860K	■	1/1
	800	EE1880K	■	1/1
	1000	EE1810K	■	1/1
2000	600	EE2060K	■	1/1
	800	EE2080K	■	1/1
	1000	EE2010K	■	1/1
2200	600	EE2260K	■	1/1
	800	EE2280K	■	1/1
	1000	EE2210K	■	1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



Recessed counterdoors

Internal door made of 15/10 thick steel sheet, complete with frame, hinges and No.2 boxes with double tongue key interchangeable with inserts (see page 4/36). Maximum opening angle of 100°.

Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
H	W			
Recessed counterdoor				
1800	600	EE1906K	■	1/1
	800	EE1908K	■	1/1
	1000	EE1910K	■	1/1
2000	600	EE2106K	■	1/1
	800	EE2108K	■	1/1
	1000	EE2110K	■	1/1
2200	600	EE2306K	■	1/1
	800	EE2308K	■	1/1
	1000	EE2310K	■	1/1

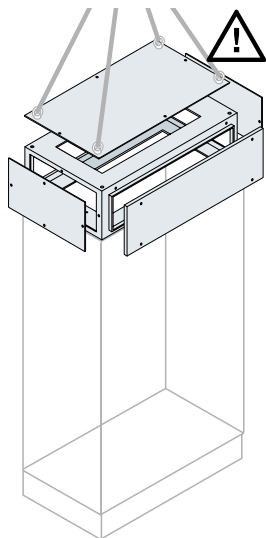
■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

For structures W=1200/1600mm, mount two counterdoors with W=600mm and W=800mm respectively plus intermediate upright EM... as overlap.



IS2 Enclosures

Ordering codes



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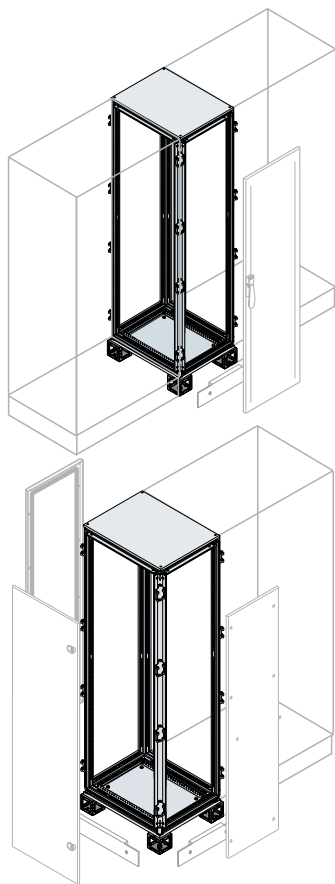
Completion of structures

Top container for cable connection (not for handling)

This is a completely segregated container H=200mm to be mounted on the roof of the structure, dedicated to circulation of conductors. Fully accessible from all sides. Degree of protection IP41.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
Height 200mm				
Top container for cable connection	400	400	ER4040K	1/1
Top container for cable connection	600		ER6040K ⁽¹⁾	1/1
Top container for cable connection	800		ER8040K ⁽¹⁾	1/1
Top container for cable connection	1000		ER1041K	1/1
Top container for cable connection	400	500	ER4050K	1/1
Top container for cable connection	600		ER6050K ⁽¹⁾	1/1
Top container for cable connection	800		ER8050K ⁽¹⁾	1/1
Top container for cable connection	1000		ER1050K	1/1
Top container for cable connection	400	600	ER4060K	1/1
Top container for cable connection	600		ER6060K ⁽¹⁾	1/1
Top container for cable connection	800		ER8061K ⁽¹⁾	1/1
Top container for cable connection	1000		ER1060K	1/1
Top container for cable connection	400	800	ER4080K	1/1
Top container for cable connection	600		ER6080K ⁽¹⁾	1/1
Top container for cable connection	800		ER8080K ⁽¹⁾	1/1
Top container for cable connection	1000		ER1080K	1/1
Top container for cable connection	400	1000	ER4011K	1/1
Top container for cable connection	600		ER6010K ⁽¹⁾	1/1
Top container for cable connection	800		ER8010K ⁽¹⁾	1/1
Top container for cable connection	1000		ER1010K	1/1
Kit for placing cable connection container at side			ER1000	1/1

⁽¹⁾ For structures with W=1200/1600mm, order two pieces with W=600 and W=800mm respectively plus relative joining Kit ER1000.



Completion of structures

Container for external cable connection W=300mm

Structure to be completed with blind door placed frontally or laterally, front and rear panel, plinth and relative flanges. Can be placed side-by-side with the basic structure by means of side-by-side positioning Kit EV0002-EV0003-EV0006.

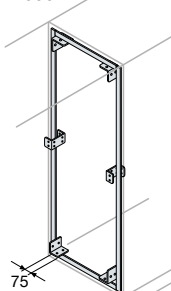
Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
Width 300mm				
Container for external cable container	1800	400	ER3040K	1/1
Container for external cable container		500	ER3050K	1/1
Container for external cable container		600	ER3060K	1/1
Container for external cable container		800	ER3080K	1/1
Container for external cable container		1000	ER3010K	1/1
Container for external cable container	2000	400	ER3041K	1/1
Container for external cable container		500	ER3051K	1/1
Container for external cable container		600	ER3061K	1/1
Container for external cable container		800	ER3081K	1/1
Container for external cable container		1000	ER3011K	1/1
Container for external cable container	2200	400	ER3042K	1/1
Container for external cable container		500	ER3052K	1/1
Container for external cable container		600	ER3062K	1/1
Container for external cable container		800	ER3082K	1/1
Container for external cable container		1000	ER3012K	1/1

IS2 Enclosures

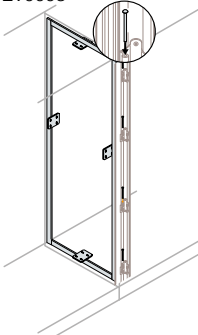
Ordering codes



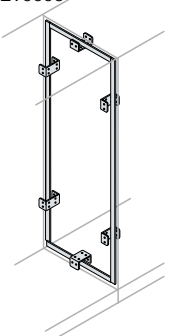
EV0002



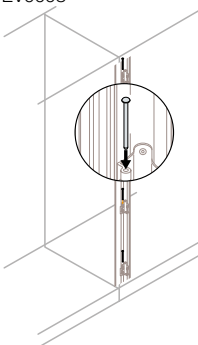
EV0003



EV0006



EV0008



Completion of structures

Kit for placing structures side by side

Adhesive high density polyurethane gasket – guarantees the degree of protection on several columns side by side. Columns can be coupled side by side or back to back.

Description	Code	Custom Made Service	Package/ No. of pieces
Kit for joining reinforcement angle piece for lifting	EV0002 ⁽¹⁾	■	1/1
Cabinet joining kit	EV0003	■	1/1
Internal cabinet joining kit	EV0006 ⁽¹⁾	■	1/1
No.8 small pins for placing structures side by side	EV0008		1/1

■ The “Custom Made Service” is valid only for structures assembled at the factory, for more information please contact your local sales network.

⁽¹⁾ Can be fitted with EV0008 accessory

EV0003 internal external panel board joining Kit

The kit is made up of 4 squares, adhesive gasket and 8 small pins. Joining takes place:
 - from the inside using the 4 squares which can be mounted the whole height or depth of the panel boards
 - from the outside using the 8 small pins inserted in the hinges (they require the rear panel to be dismantled).

Internal panel board joining Kit

EV0006

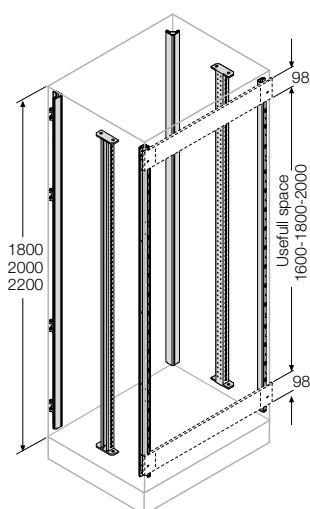
The kit is made up of 6 squares and an adhesive gasket. Joining takes place from the inside using the 6 squares which can be mounted the whole height or depth of the panel board.

EV0002

The kit is made up of 6 squares (4 “L”-shaped and two “C”-shaped) and an adhesive gasket. Joining takes place from the inside using the 4 “L”-shaped squares which can be mounted in the corners and the 2 “C”-shaped squares for the whole height of the panel board. Does not allow maximum moving back of the standard and oversized back plate (75mm less).

Mounting possibilities

EV0003	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
EV0002	OK	OK		OK	OK	OK		OK	OK	OK
EV0006	OK		OK			OK				



Configuration with compartments

Uprights for configuration with compartments

Uprights made of galvanised steel, consisting of a closed section drilled with 25 mm pitch preset for mounting compartment cubicles and partial doors. Can be assembled on base and top (see page 4/31). The useful dimension is always 200mm less than the total height of the panel board.

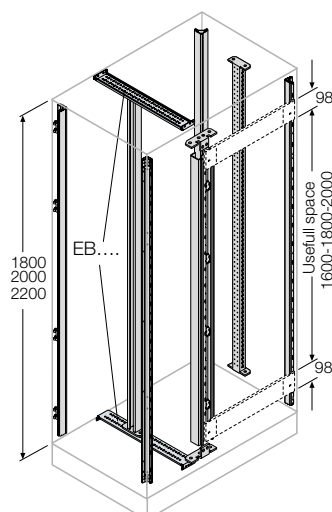
Examples of configuration and technical characteristics at page 5/114

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H			
Uprights for configuration with compartments	1800		EM1802	1/6
Uprights for configuration with compartments	2000		EM2002	1/6
Uprights for configuration with compartments	2200		EM2202	1/6

Order compensation panels H=100mm (EH6010/EH8010) page 5/83.

Uprights for configuration with compartments + internal cable container

No.7 uprights made of galvanized steel, consisting of a closed section drilled with 25 mm pitch preset for mounting compartment cubicles and internal cable container W=200/400 mm. The useful dimension is always 200mm less than the total height of the panel board.



Description	Dimensions (mm)		Code	Package/ No. of pieces
	H			
Uprights for configuration with compartments + int. cable container	1800		EM1803	1/7
Uprights for configuration with compartments + int. cable container	2000		EM2003	1/7
Uprights for configuration with compartments + int. cable container	2200		EM2203	1/7

For the version with cable container, both the code of the crosspieces (EB...) and the code of the uprights (EM1803-EM2003-EM2203) must be ordered.

Order compensation panels H=100mm (EH6010K/EH8010K). See page 5/73.

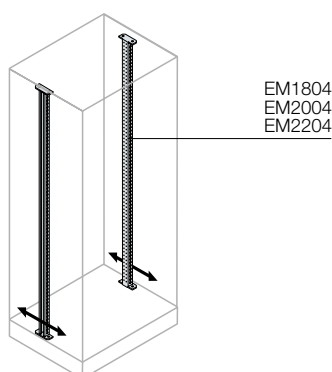
Crosspieces for intermediate uprights (mounted depth-wise)

Description	Dimensions (mm)		Code	Package/ No. of pieces
	D			
Couple of crosspieces for base	400		EB4100	1/2
Couple of crosspieces for base	500		EB5100	1/2
Couple of crosspieces for base	600		EB6100	1/2
Couple of crosspieces for base	800		EB8100	1/2
Couple of crosspieces for base	1000		EB1100	1/2

For the version with cable container, both the code of the crosspieces (EB...) and the code of the uprights (EM1803-EM2003-EM2203) must be ordered.

Intermediate uprights (mounted in depth)

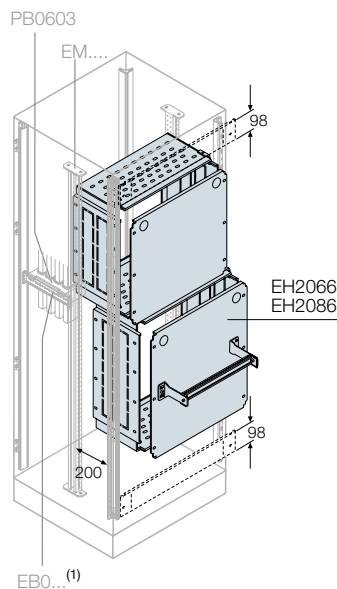
No.2 uprights made of galvanized steel, consisting of a closed section drilled with 25 mm pitch preset for mounting compartment cubicles.



Description	Dimensions (mm)		Code	Package/ No. of pieces
	H			
Pair of uprights for mounting compartment cubicles in depth	1800		EM1804	1/2
Pair of uprights for mounting compartment cubicles in depth	2000		EM2004	1/2
Pair of uprights for mounting compartment cubicles in depth	2200		EM2204	1/2

IS2 Enclosures

Ordering codes



5

Configuration with compartments

Compartment cubicle

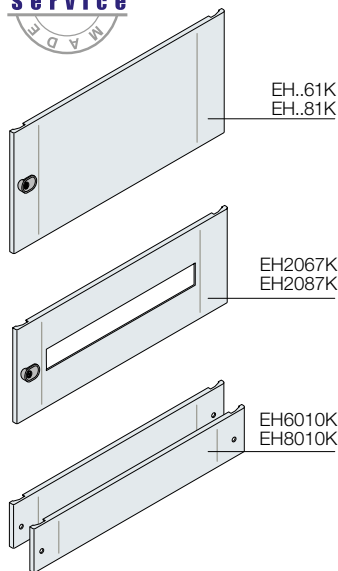
Made of 15/10 galvanised sheet, able to construct Form 3 segregations, it is pre-sheared on the sides and bottom for use as conductor passage. Complete with withdrawable back plate for bench assembly of the apparatus, reversible, to obtain 2 different depths. The useful dimension is always 200mm less than the total height of the panel board.

Examples of configuration and technical characteristics at page 5/114

Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
H	W			
Compartment cubicle				
200	600	EH2060	■	1/1
300		EH3060	■	1/1
400		EH4063	■	1/1
500		EH5060	■	1/1
600		EH6060	■	1/1
800		EH8060	■	1/1
1000		EH1060	■	1/1
200	800	EH2180	■	1/1
300		EH3080	■	1/1
400		EH4080	■	1/1
500		EH5080	■	1/1
600		EH6080	■	1/1
800		EH8080	■	1/1
1000		EH1080	■	1/1
Compartment cubicle with DIN rail, adjustable in depth				
200	600	EH2066		
	800	EH2086		

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

⁽¹⁾ The dimension of the crosspieces EBO... (see page 4/46) is always 200mm less than the total height of the panel board.



Configuration with compartments

Front panels for compartments

Made of 20/10 complete with box with double tongue key interchangeable with inserts (see page 5/102). The front panels are fitted with a horizontal profile which keeps the IP41 degree of protection.

Examples of configuration and technical characteristics at page 5/114

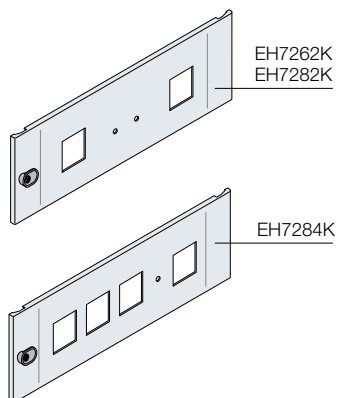
Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
H	W			
Panels for compartment cubicle				
200		EH2061K	■	1/1
300		EH3061K	■	1/1
400		EH4061K	■	1/1
500	600	EH5061K	■	1/1
600		EH6061K	■	1/1
800		EH8062K	■	1/1
1000		EH1061K	■	1/1
200		EH2081K	■	1/1
300		EH3081K	■	1/1
400		EH4081K	■	1/1
500	800	EH5081K	■	1/1
600		EH6083K	■	1/1
800		EH8081K	■	1/1
1000		EH1081K	■	1/1
No.2 compensation panels				
100	600	EH6010K ⁽¹⁾		1/2
	800	EH8010K ⁽¹⁾		1/2
Single front panel for compartment cubicle with DIN rail				
200	600 (18 mod.DIN)	EH2067K		1/1
	800 (29 mod.DIN)	EH2087K		1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

⁽¹⁾ Service only valid for factory pre-assembled panel boards

Panels for square measuring instruments

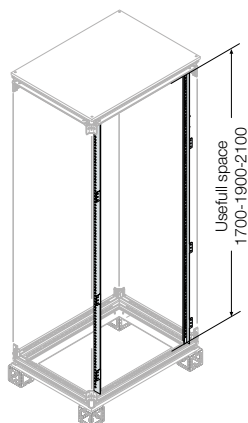
Made of 20/10 painted steel colour RAL 7035, complete with box with double tongue key interchangeable with inserts (see page 5/102).



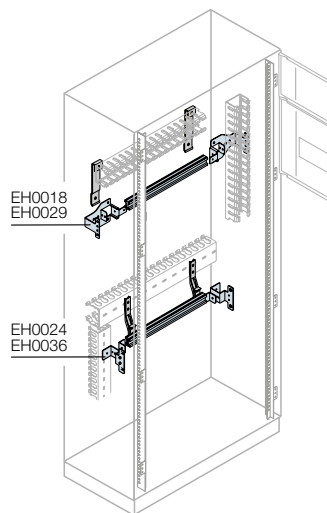
Dimensions (mm)		Code	Package/ No. of pieces
H	W		
No.2 72x72mm instrument panels for compartments			
200	600	EH7262K	1/1
	800	EH7282K	1/1
	800	EH7284K	1/1

IS2 Enclosures

Ordering codes



5



Structures for modular apparatus

Uprights for modular panels

Uprights made of in galvanised steel drilled with 50mm pitch, preset for mounting apparatus holder blind plates, DIN rails and front panels. To be fixed onto the front uprights of the structure. The useful dimension is always 100mm less than the total height of the panel board.

Examples of configuration and technical characteristics at page 5/116

Description	Dimensions (mm) H	No.DIN rows/ centre dist. mm	Code	Package/ No. of pieces
No.2 uprights for modular panels	1800	8/200 o 11/150	EH1800	1/1
No.2 uprights for modular panels	2000	9/200 o 12/150	EH2000	1/1
No.2 uprights for modular panels	2200	10/200 o 14/150	EH2200	1/1

DIN rail Kit with front wiring duct

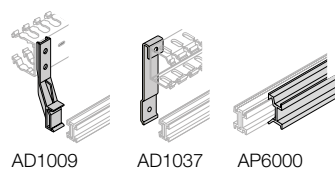
Kit consisting of double aluminium section (DIN 35), complete with shaped brackets for front fixing of the wiring duct (max. 60x80mm). It is fixed directly onto the uprights EH1800, EH2000 or EH2200. The useful dimension is always 100mm less than the total height of the panel board.

Description	Dimensions (mm) W	Code	Package/ No. of pieces
Guida DIN e supporti di fissaggio			
DIN rail and fixing supports (18 DIN mod.)	600	EH0018	1/1
DIN rail and fixing supports (29 DIN mod.)	800	EH0029	1/1

DIN rail Kit with rear wiring duct

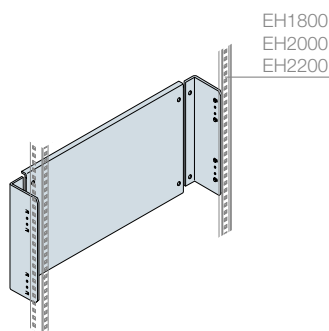
Kit consisting of double aluminium section (DIN 35), complete with shaped brackets for rear fixing of the wiring duct (W≥40mm) and total exploitation of the space for apparatus. It is fixed directly onto the uprights EH1800, EH2000 or EH2200. The useful dimension is always 100mm less than the total height of the panel board.

Description	Dimensions (mm) W	Code	Package/ No. of pieces
DIN rail and fixing supports			
DIN rail and fixing supports (24 DIN mod.)	600	EH0024	1/1
DIN rail and fixing supports (36 DIN mod.)	800	EH0036	1/1



Accessories for DIN rail

Description	Code	Package/ No. of pieces
Supports for horizontal wiring ducts		
No. 4 plastic supports for horizontal wiring ducts	AD1009	1/4
No. 4 metal supports for horizontal wiring ducts	AD1037	1/4
Depth adapter		
No.1 depth adapter W=600mm	AP6000	1/4



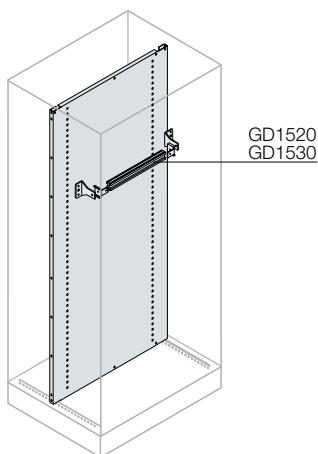
EH1800
EH2000
EH2200

Structures for modular apparatus

Blind apparatus holder back plates

Blind apparatus holder back plate, 15/10 thick. It is fixed directly onto the uprights MD1800 or MD2000. The useful dimension is always 100mm less than the total height of the panel board.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Blind apparatus holder back plate	200	600	EH2065	1/1
Blind apparatus holder back plate	300		EH3065	1/1
Blind apparatus holder back plate	400	800	EH4065	1/1
Blind apparatus holder back plate	200		EH2085	1/1
Blind apparatus holder back plate	300		EH3085	1/1
Blind apparatus holder back plate	400	EH4085	1/1	



GD1520
GD1530

DIN rail Kit on back plate (bench cabling)

Kit consisting of double aluminium section (DIN 35), complete with shaped brackets for fixing the wiring duct Kit. The useful dimension is always 100mm less than the total height of the panel board.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
DIN rail and fixing supports (24 DIN mod.)	600		GD1520	1/1
DIN rail and fixing supports (36 DIN mod.)	800		GD1530	1/1

For all the components which cannot be mounted on DIN rails, e.g. T3, T4, OT and OETL, mounting is made directly on a plate.

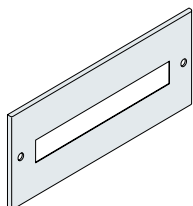
Back plate for bench cabling

Back plate drilled with 25mm pitch for direct fixing of the GD1520, GD1530 DIN rails. Insertion takes place from the front of the panel boards and the position in depth is also adjustable at a pitch of 25mm. The centre distance between the DIN rails can be either 150 or 200mm. This solution is completed with the front panels with 24 and 36 modules for W=600mm and 800mm respectively.

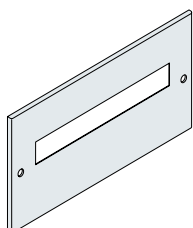
Description	Dimensions (mm)		Code	Confezione/ No.pezzi
	H	W		
Back plate for bench cabling	1800	600	EX1860	1/1
Back plate for bench cabling	2000		EX2060	1/1
Back plate for bench cabling	2200		EX2260	1/1
Back plate for bench cabling	1800	800	EX1880	1/1
Back plate for bench cabling	2000		EX2080	1/1
Back plate for bench cabling	2200		EX2280	1/1

IS2 Enclosures

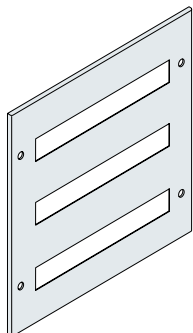
Ordering codes



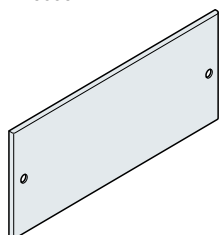
EH1518K-EH2018K-EH1529K
EH2029K-EH1524K-EH2024K
EH1536K-EH2036K



EH3018K-EH3029K



EH6018K-EH6029K-EH6025K
EH6036K



Structures for modular apparatus

Panels for modular apparatus

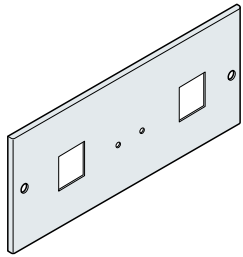
Panel with modular cut-out in sheet 12/10 (W=600mm) painted RAL7035 colour with rapid fixing, prepared for hinges EH1889 (accessory). The useful dimension of the panel board is always 100mm less than the total height of the panel board.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Panel 18 DIN mod.	150	600	EH1518K	1/1
	200		EH2018K	1/1
Panel 18 DIN mod. off-centre	300	600	EH3018K	1/1
Panel 54 DIN mod. (3 rows x 18 DIN mod.)	600	600	EH6018K	1/1
Panel 29 DIN mod.	150	800	EH1529K	1/1
	200		EH2029K	1/1
Panel 29 DIN mod. off-centre	300	800	EH3029K	1/1
Panel 87 DIN mod. (3 rows x 29 DIN mod.)	600	800	EH6029K	1/1
Panel 24 DIN mod.	150	600	EH1524K	1/1
	200		EH2024K	1/1
Panel 72 DIN mod. (3 rows x 24 DIN mod.)	600	600	EH6025K	1/1
Panel 36 DIN mod.	150	800	EH1536K	1/1
	200		EH2036K	1/1
Panel 108 DIN mod. (3 rows x 36 DIN mod.)	600	800	EH6036K	1/1

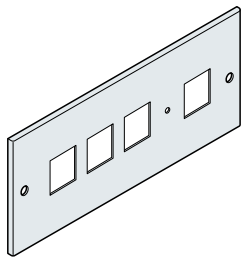
Blind panels for apparatus

Blind panel in 12/10 (W=600mm) painted RAL7035 colour with rapid fixing, prepared for hinges EH1889 (accessory). The useful dimension of the panel board is always 100mm less than the total height of the panel board.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Blind panel	50	600	EH0562K	1/1
Blind panel	100		EH1062K	1/1
Blind panel	150		EH1562K	1/1
Blind panel	200		EH2062K	1/1
Blind panel	300		EH3063K	1/1
Blind panel	400		EH4062K	1/1
Blind panel	500		EH5062K	1/1
Blind panel	600		EH6062K	1/1
Blind panel	50	800	EH0582K	1/1
Blind panel	100		EH1082K	1/1
Blind panel	150		EH1582K	1/1
Blind panel	200		EH2082K	1/1
Blind panel	300		EH3082K	1/1
Blind panel	400		EH4082K	1/1
Blind panel	500		EH5082K	1/1
Blind panel	600		EH6082K	1/1



EH2272K-EH2297K-EH3272K
EH3296K



EH2472K-EH3472K-EH3496K

Structures for modular apparatus

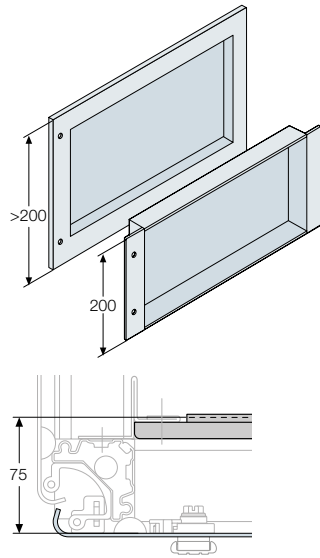
Panel for square measuring instruments

Panel with cut-outs for measuring instruments made of 12/10 sheet painted RAL7035 colour with rapid fixing, prepared for hinges EH1889 (accessory). The useful dimension of the panel board is always 100mm less than the total height of the panel board.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Panel No. 2 instruments 72x72mm	200	600	EH2272K	1/1
Panel No. 4 instruments 72x72mm	200		EH2472K	1/1
Panel No. 2 instruments 96x96mm	200	800	EH2297K	1/1
Panel No. 2 instruments 72x72mm	200		EH3272K	1/1
Panel No. 2 instruments 96x96mm	200		EH3296K	1/1
Panel No. 2 instruments 72x72mm	200		EH3472K	1/1
Panel No. 2 instruments 96x96mm	200	EH3496K	1/1	

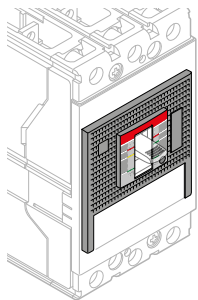
Recessed blind panels

Blind panel in sheet 12/10 (W=600mm) painted RAL7035 colour with rapid fixing, prepared for EH1889 hinges (accessory). The useful dimension of the panel board is always 100mm less than the total height of the panel board.



Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Recessed blind panel	200	600	EH2063K	1/1
Recessed blind panel		800	EH2083K	1/1
Recessed blind panel	300	600	EH3064K	1/1
Recessed blind panel		800	EH3083K	1/1
Recessed blind panel	400	600	EH4064K	1/1
Recessed blind panel		800	EH4083K	1/1
Recessed blind panel	500	600	EH5063K	1/1
Recessed blind panel		800	EH5084K	1/1
Recessed blind panel	600	600	EH6063K	1/1
Recessed blind panel		800	EH6084K	1/1

The panels with a height of 200 or 300mm, can be used for fixed Tmax T1- T2-T3 with front terminals with direct rotary handle operating mechanism, where the panels with a height of 400-500-600mm can be used for OETL switchdisconnectors from 1000 to 1600 A.



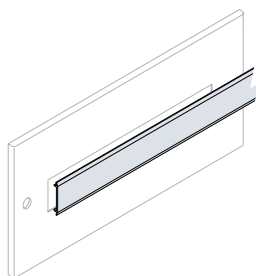
AD3301
AD3302
AD3303
AD3304

Tmax XT cover plate for DIN rail

Description	Code	Item	Price	Package/ No. of pieces
Cover plate for Tmax XT1 3P mounted on DIN rail	AD3301			1/1
Cover plate for Tmax XT1 4P mounted on DIN rail	AD3302			1/1
Cover plate for Tmax XT3 3P mounted on DIN rail	AD3303			1/1
Cover plate for Tmax XT3 4P mounted on DIN rail	AD3304			1/1

IS2 Enclosures

Ordering codes



Structures for modular apparatus

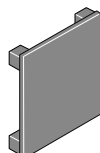
Accessoris for modular panel

Hole covering strip RAL7035 colour

Description	Code	Package/ No. of pieces
No.10 hole covers W=2000mm, grey	AD1086	1/10
No.3 hole covers 24 DIN modules W=600mm	AD1088	1/3
No.3 hole covers 36 DIN modules W=800mm	AD1089	1/3



EV1137



EV1135
EV1136

Closing plug for instrument holder panels

Description	Code	Package/ No. of pieces
No.10 closing plug for instrument holder panels 72x72mm	EV1135	1/10
No.5 closing plug for instrument holder panels 96x96mm	EV1136	1/5
No.50 closing plugs for pushbuttons Ø22mm	EV1137	1/50

Adhesive name label holders

Description	Dimensions (mm) W	Code	Package/ No. of pieces
No. 20 label holders 18 DIN mod	325	EH2118	1/20
No. 20 label holders 29 DIN mod	525	EH2129	1/20
No. 20 label holders 24 DIN mod	432	AD1600	1/20
No. 20 label holders 36 DIN mod	634	AD1800	1/20

Labels can be written using compatible Grafoplast system

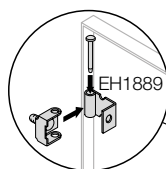
Description	No. of DIN mod.	Code	Package/ No. of pieces
No. 288 labels 1 DIN mod.	1	AD1101 ⁽²⁾	1/288
No. 192 labels 2 DIN mod.	2	AD1102 ⁽²⁾	1/192
No. 96 labels 3 DIN mod.	3	AD1103 ⁽²⁾	1/96
No. 96 labels 4 DIN mod.	4	AD1104 ⁽²⁾	1/96
N.5 ABB-AM2 adhesive strips W=1000mm		TL1157	1/5

⁽²⁾ Labels can be written using compatible Grafoplast system.

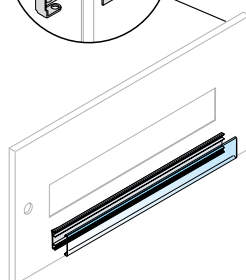
Hinges and rapid closures for panels

Description	Code	Package/ No. of pieces
No. 10 hinges for panels	EH1889 ⁽¹⁾	1/10
No. 5 rapid closures for front panels	EH1890	1/5

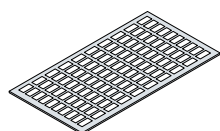
⁽¹⁾ Use No.2 hinges for panel H=150/200/300/400mm, No.3 hinges for panel H=500/600mm.



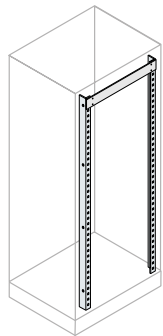
EH1889



AD1101-AD1102
AD1103-AD1104



EH2118-EH2129
AD1600-AD1800



19" rack structure

19" uprights "L" shaped

The 19" uprights "L" shaped are made of 20/10mm galvanized steel. No.1 compensation panel included.

Examples of configuration and technical characteristics at page 5/118

Description	No. HE	Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
		H	W			
"L" shaped uprights for 19" fixed frame						
No.2 "L" shaped	38	1800		EG1800	■	1/2
No.2 "L" shaped	42	2000	600	EG2000	■	1/2
No.2 "L" shaped	47	2200		EG2200	■	1/2
No.2 "L" shaped	38	1800		EG1880		1/2
No.2 "L" shaped	42	2000	800	EG2080		1/2
No.2 "L" shaped	47	2200		EG2280		1/2

Upright for depth adjustment of the fixed rack frame "L" shaped (25mm pitch)

No.2 uprights for depth adjustment of the fixed rack frame		1800		EM1804		1/2
No.2 uprights for depth adjustment of the fixed rack frame		2000		EM2004		1/2
No.2 uprights for depth adjustment of the fixed rack frame		2200		EM2204		1/2

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

19" Swing rack frame

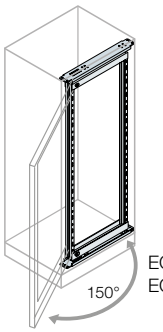
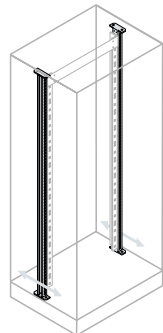
The centred and off-centre swing frames are made of 20/10 galvanised steel painted RAL 7035 and are complete with handle and lock with double tongue key.

Description	No. HE	Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
		H	W			
Centred swing rack frame						
Centred swing rack frame	36	1800		EG1801K	■	1/1
Centred swing rack frame	40	2000	600	EG2001K	■	1/1
Centred swing rack frame	45	2200		EG2201K	■	1/1
Eccentric swing rack frame						
Eccentric swing rack frame	33	1800		EG1803K	■	1/1
Eccentric swing rack frame	38	2000	800	EG2003K	■	1/1
Eccentric swing rack frame	42	2200		EG2203K	■	1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

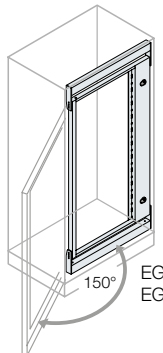
Partial swing rack frame

Description	No. HE	Dimensions (mm)		Code	Package/ No. of pieces
		H	W		
Partial swing rack frame 19"					
Partial swing rack frame	9	500		EG0500K	1/1
Partial swing rack frame	18	900	600	EG0900K	1/1
Partial swing rack frame	27	1300		EG1300K	1/1



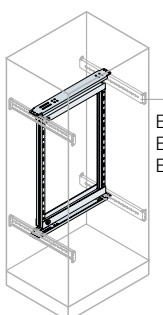
EG1801K-EG2001K
EG2201K

150°



EG1803K-EG2003K
EG2203K

150°

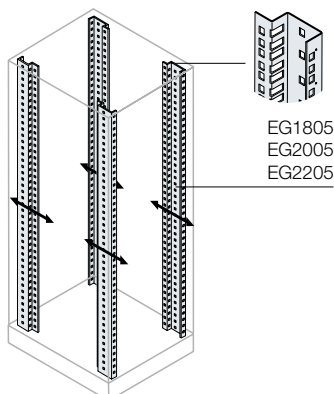


EB...
H=48mm

EG0500K
EG0900K
EG1300K

IS2 Enclosures

Ordering codes



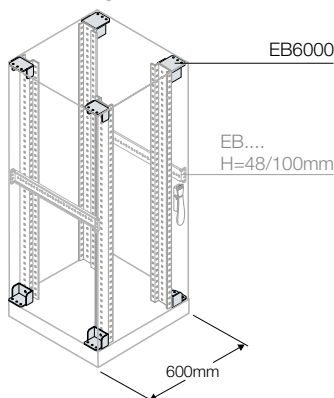
19" rack structure

NEW 19" cranked shaped uprights

Cranked shaped uprights are made of 20/10mm galvanized steel sheet and are fixed by brackets or crosspieces and are adjustable in depth (25mm pitch).

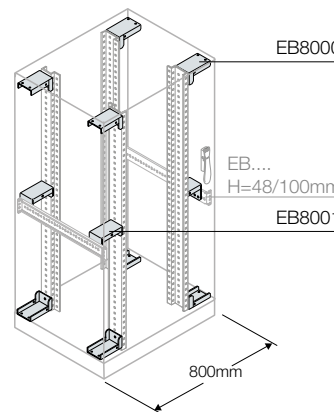
Description	No. HE	Description (mm) H	Code	Package/ No. of pieces
No.2 19" cranked shaped uorights	38	1800	EG1805	1/1
No.2 19" cranked shaped uorights	42	2000	EG2005	1/1
No.2 19" cranked shaped uorights	47	2200	EG2205	1/1

5



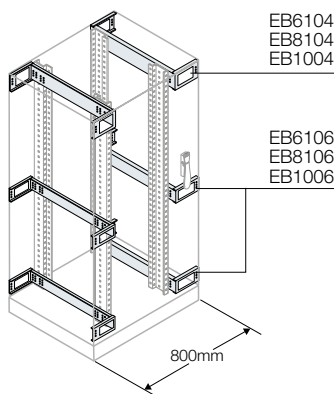
NEW Brackets for fixing 19" cranked shaped uprights (top bottom position)

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
Brackets for fixing 19" cranked shaped uprights (W=600/800mm enclosures)				
No.4 brackets for fixing total/partial cranked shaped uprights	600		EB6000 ⁽¹⁾	1/4
No.4 brackets for fixing total/partial cranked shaped uprights	800		EB8000	1/4



NEW Brackets for fixing 19" cranked shaped uprights (intermediate position)

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
Brackets for fixing 19" cranked shaped uprights (W=600/800mm enclosures)				
No.2 intermediate brackets for fixing total/partial cranked shaped uprights	800		EB8001 ⁽²⁾	1/2

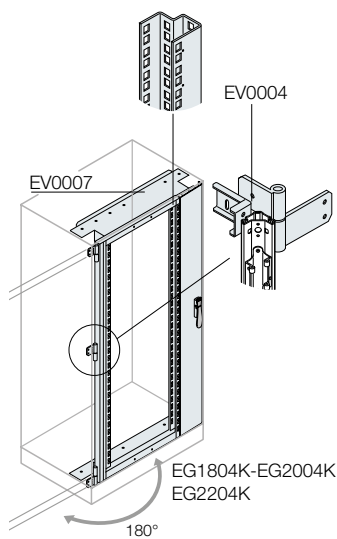


NEW Crosspieces for fixing 19" cranked shaped uprights

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
Crosspieces for fixing 19" cranked shaped uprights (only W=800mm enclosures)				
No.2 top crosspieces	800	600	EB6104	1/2
No.2 top crosspieces		800	EB8104	1/2
No.2 top crosspieces		1000	EB1004	1/2
No.2 central/bottom crosspieces		600	EB6106	1/2
No.2 central/bottom crosspieces		800	EB8106	1/2
No.2 central/bottom crosspieces		1000	EB1006	1/2

⁽¹⁾ In enclosures 600 mm wide, the cranked shaped rack uprights can be fixed in the middle height of the enclosures by means of standard crosspieces EB.... see page 5/63.

⁽²⁾ To be combined with the standard cross EB.... see page 5/63.



19" rack frames

NEW 19" Swing rack frame with "C" shaped profile

The off-center swing frames are made of 20/10 galvanised steel painted RAL 7035 and are complete with handle and lock with double tongue key. EV0004 assembling kit to be used in order to mount the frame.

Description	No. HE	Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
		H	W			
Off-center swing rack frame "C" shaped upright profile						
Swing "C" shaped rack frame	36	1800		EG1804K		1/1
Swing "C" shaped rack frame	41	2000	800	EG2004K		1/1
Swing "C" shaped rack frame	45	2200		EG2204K		1/1
180° opening hinge for swing rack frame and braket				EV0004		1/1
kit for fixing swing rack frame "C" shaped				EV0007 ⁽¹⁾		1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

⁽¹⁾ To be ordered always with new off-center swing rack frame with "C" shaped uprights EG1804K, EG2004K, EG2204K..

5

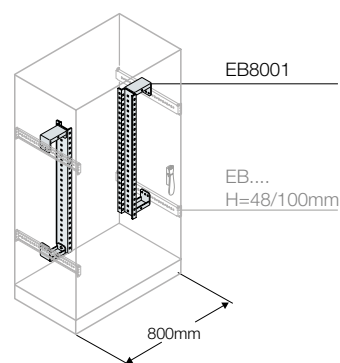
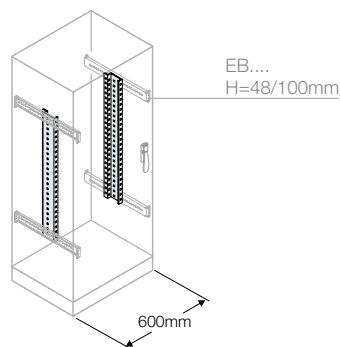
NEW Screws and nuts parts

Description	Code	Package/ No. of pieces
No.50 screws M6 x 13mm cross rounded head	EV6130	1/50
No.50 cage nut M6 for square hole 9,2 x 9,2mm	EV6131	1/50
No.20 cage nut M5 for square hole 9,2 x 9,2mm	EV0102	1/50
No.20 Torx M5 screws with nylon washer L=16mm	EV0103	1/20
No.20 Torx M6 screws with nylon washer L=16mm	EV0104	1/20

IS2 Enclosures

Ordering codes

EG1500K-EG1900K-EG1130K



5

19" rack structure

NEW Partial 19" cranked shaped uprights

Description	No. HE	Dimensions (mm)		Code	Package/ No. of pieces
		H	W		
Partial 19" cranked shaped uprights					
Partial shaped uprights	9	500		EG1500K ⁽¹⁾	1/1
Partial shaped uprights	18	900	600/800	EG1900K ⁽¹⁾	1/1
Partial shaped uprights	27	1300		EG1130K ⁽¹⁾	1/1
No.2 brackets for fixing total/partial cranked shaped uprights			800	EB8001 ⁽²⁾	1/2

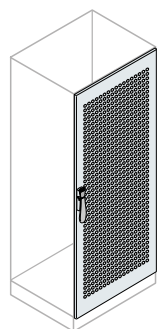
⁽¹⁾ In enclosures 600 mm wide, the cranked shaped rack uprights can be fixed in the middle height of the enclosures by means of standard crosspieces EB.... see page 5/63.

⁽²⁾ To be combined with the standard cross EB.... see page 5/63.

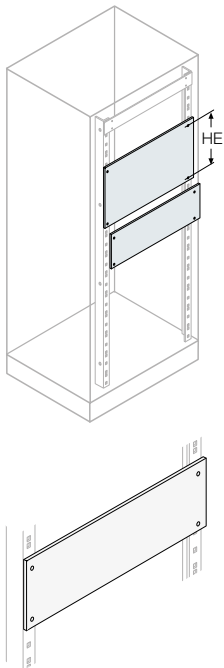
19" rack structure accessories

Aerated door IP20

Aerated door made of RAL 7035 colour 12/10 thick sheet, fitted with polyurethane gasket, complete with handle with double tongue key (interchangeable with other types of inserts, see pag. 5/102). Reversible (hinged on the right as standard) with 4 closing points and complete with internal reinforcement frame and earthing pins.



Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Aerated door for server cabinet				
Aerated door for server cabinet	1800		EC1082	1/1
Aerated door for server cabinet	2000	800	EC2082	1/1
Aerated door for server cabinet	2200		EC2282	1/1
Aerated door for server cabinet with 180° opening				
Aerated door for server cabinet with 180° opening	2000		EC2084	1/1
Aerated door for server cabinet with 180° opening	2000	800	EC2284	1/1
Aerated door for server cabinet with 180° opening	2200		EC2284	1/1



Equipment for 19" rack frame

Panel for 19" rack frames aluminium

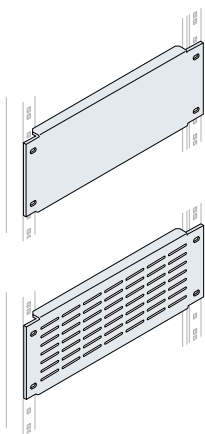
Panels made of 30/10 Aluminium

Description	No. HE	Dimensions (mm) H	Code	Package/ No. of pieces
Blind aluminium panel for 19" rack frame				
Blind panel rack 19"	1HE	44,45	EG1991	1/1
Blind panel rack 19"	2HE	89	EG1902	1/1
Blind panel rack 19"	3HE	133	EG1903	1/1
Blind panel rack 19"	4HE	177,5	EG1904	1/1
Blind panel rack 19"	5HE	222	EG1905	1/1
Blind panel rack 19"	6HE	266,5	EG1906	1/1
Blind panel rack 19"	7HE	311	EG1907	1/1
Blind panel rack 19"	8HE	355,5	EG1908	1/1
Blind panel rack 19"	9HE	400	EG1909	1/1
Blind panel rack 19"	10HE	444,5	EG1910	1/1
Blind panel rack 19"	11HE	488	EG1911	1/1
Blind panel rack 19"	12HE	533	EG1912	1/1
Blind panel rack 19"	13HE	577,5	EG1913	1/1
Blind panel rack 19"	14HE	622	EG1914	1/1
Blind panel rack 19"	15HE	666	EG1915	1/1
Blind panel rack 19"	16HE	711	EG1916	1/1
Blind panel rack 19"	17HE	755,5	EG1917	1/1
Blind panel rack 19"	18HE	800	EG1918	1/1
Blind panel rack 19"	19HE	844,5	EG1999	1/1
Blind panel rack 19"	20HE	889	EG1920	1/1

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NEW Blind and aerated panel in steel sheet 15/10 for 19" rack frame RAL 7035

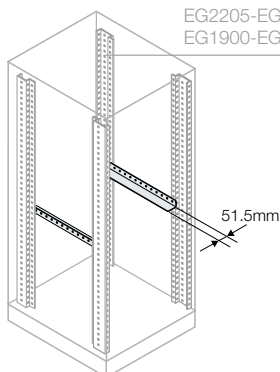
Description	No. HE	Dimensions (mm) H	Code	Package/ No. of pieces
Blind panel RAL 7035 for rack 19"				
Blind panel for rack 19"	1HE	44,45	EG0119	1/1
Blind panel for rack 19"	2HE	89	EG0219	1/1
Blind panel for rack 19"	3HE	133	EG0319	1/1
Blind panel for rack 19"	4HE	177,5	EG0419	1/1
Blind panel for rack 19"	5HE	222	EG0519	1/1
Blind panel for rack 19"	6HE	266,5	EG0619	1/1
Blind panel for rack 19"	7HE	311	EG0719	1/1
Blind panel for rack 19"	9HE	400	EG0919	1/1
Blind panel for rack 19"	10HE	444,5	EG1019	1/1
Blind panel for rack 19"	12HE	533	EG1219	1/1
Blind panel for rack 19"	14HE	622	EG1419	1/1
Blind panel for rack 19"	15HE	666	EG1519	1/1
Blind panel for rack 19"	16HE	711	EG1619	1/1
Blind panel for rack 19"	18HE	800	EG1819	1/1
Blind panel for rack 19"	20HE	889	EG2019	1/1
Aerated panel RAL 7035 for rack 19"				
Aerated panel for rack 19"	1HE	44,45	EH1991	1/1
Aerated panel for rack 19"	2HE	89	EH1992	1/1
Aerated panel for rack 19"	3HE	133	EH1993	1/1



IS2 Enclosures

Ordering codes

EG1805-EG2005
EG2205-EG1500
EG1900-EG1130



Equipment for 19" rack frame

NEW "L" shaped accessories support for 19" cranked shaped upright

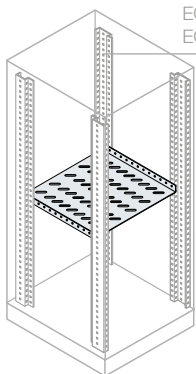
"L" shaped accessories support couple in galvanized sheet 20/10, fixing at 25mm pitch in depth on front and rear uprights..

Description	D (mm) Structure	Code	Package/ No. of pieces
"L" support couple - W=500mm	600	EV0020	1/2
"L" support couple - W=600mm	800	EV0021	1/2
"L" support couple - W=800mm	1000	EV0022	1/2

Accessories compatible with: rack 19" cranked shaped uprights, off-center swing rack frame with "C" shaped uprights and partial 19" cranked shaped uprights.

5

EG1805-EG2005
EG2205-EG1500
EG1900-EG1130



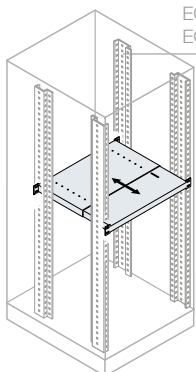
NEW Universal shelves for 19" cranked shaped uprights

Universal shelves in galvanized sheet 20/10mm, fixing at 25mm pitch in depth. Mounting on front and rear uprights.

Description	D (mm) Structure	Code	Package/ No. of pieces
Universal fixed shelf- 450x400mm (WxD)	600	EV0400	1/1
Universal fixed shelf- 450x600mm (WxD)	800	EV0600	1/1
Universal fixed shelf- 450x800mm (WxD)	1000	EV0800	1/1

Accessories compatible with: rack 19" cranked shaped uprights, off-center swing rack frame with "C" shaped uprights and partial 19" cranked shaped uprights.

EG1805-EG2005
EG2205-EG1500
EG1900-EG1130



NEW Adjustable in depth shelf for 19" cranked shaped uprights

Adjustable in depth shelf 1 HE in galvanized sheet 20/10mm, RAL 7035. Mounting on front and rear uprights.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
Adjustable in depth shelf 1HE (distance between fixing plans 440-665mm)	450	450	EV0041	1/1

Accessories compatible with: rack 19" cranked shaped uprights, off-center swing rack frame with "C" shaped uprights and partial 19" cranked shaped uprights.

NEW Withdrawable shelves for cranked and "C" shaped uprights profile

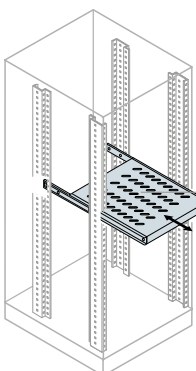
Withdrawable shelves for accessories 1HE/2HE RAL 7035. Mounting on front and rear uprights.

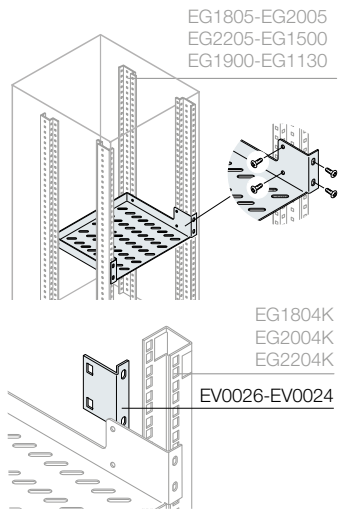
Description	Dimensions (mm) D		Code	Package/ No. of pieces
	W	D		
Withdrawable shelf D=350mm with telescopic slides and fixing accessories	350		EV3500*	1/1
Withdrawable shelf D=500mm with telescopic slides and fixing accessories	500		EV5000**	1/1

* For cranked shaped uprights and "C" shaped swing frame.

** Only for cranked shaped uprights.

EV3500
EV5000





NEW Fixed shelf for apparatus

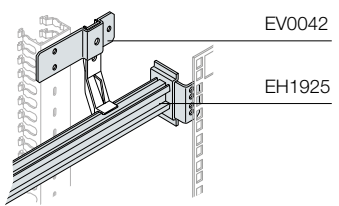
Fixed shelves 2HE and 1HE to be mounted at the front (rear upright are not necessary, only for additional fixing point) on 19" cranked shaped uprights and on "C" shaped swing frames with 2 adaptation brackets (EV0026/ EV0024).

Description	Dimensions (mm) D	Code	Package/ No. of pieces
1 fixed shelf 1HE front/back	385	EV1385	1/1
1 fixed shelf 2HE front/back		EV2385	1/1
No.2 brackets for 1HE shelf on "C" shaped swing frame		EV0026	1/2
No.2 brackets for 2HE shelf on "C" shaped swing frame		EV0024	1/2

Accessories compatible with: rack 19" cranked shaped uprights, off-center swing rack frame with "C" shaped uprights and partial 19" cranked shaped uprights.

NEW Din rail and support for cable duct

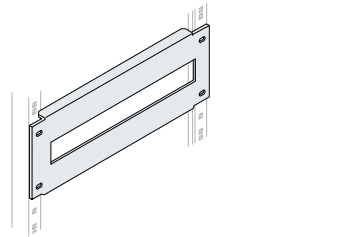
DIN rail and support for cable duct for cranked shaped upright and on "C" shaped swing frame.



Description	Code	Package/ No. of pieces
DIN rail for rack 19" frame 25 mod. and fixing brackets	EH1925	1/1
Horizontal/vertical support for cable duct	EV0042	1/1

Accessories compatible with: rack 19" cranked shaped uprights, off-center swing rack frame with "C" shaped uprights and partial 19" cranked shaped uprights.

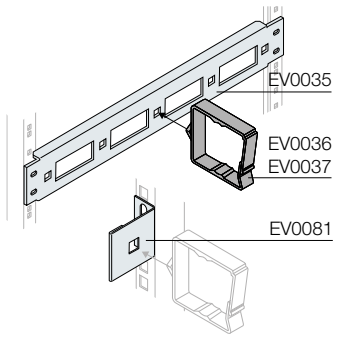
NEW Steel panels for modular apparatus 19" rack frame RAL 7035



Description	No. HE	Dimensions (mm) H	Code	Package/ No. of pieces
Steel panels for modular apparatus 19" rack frame RAL 7035				
DIN panel	3HE	133	EH0003	1/1
DIN panel	4HE	177,5	EH0004	1/1

Accessories compatible with: rack 19" cranked shaped uprights, off-center swing rack frame with "C" shaped uprights and partial 19" cranked shaped uprights.

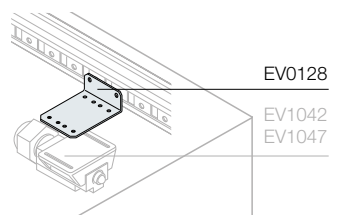
NEW Universal cable holder panel



Description	Code	Package/ No. of pieces
Cable holder panel 1 HE RAL 7035	EV0035	1/1
No.5 bracket for cable holder	EV0081	1/5
No.5 cable holder D=28,5mm	EV0036	1/5
No.5 cable holder D=55mm	EV0037	1/5

Accessories compatible with: rack 19" cranked shaped uprights, off-center swing rack frame with "C" shaped uprights and partial 19" cranked shaped uprights.

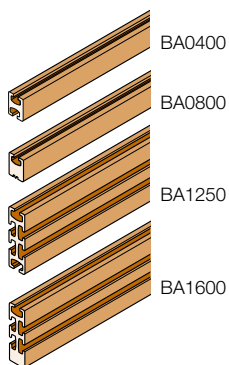
NEW Limit kit switch for swing frame



Description	Code	Package/ No. of pieces
Limit kit switch for swing frame	EV0128	1/1

IS2 Enclosures

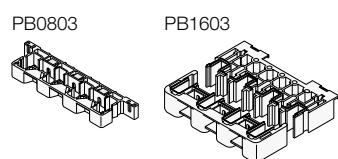
Ordering codes



Distribution and earthing system

Distribution busbars with shaped section

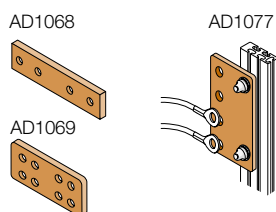
Description	Dimensions (mm) W	Code	Package/ No. of pieces
Busbar In=400A	1730	BA0400	1/1
Busbar In=800A	1730	BA0800	1/1
Busbar In=1250A	1730	BA1250	1/1
Busbar In=1600A	1730	BA1600	1/1



Busbars holder for busbar with shaped section

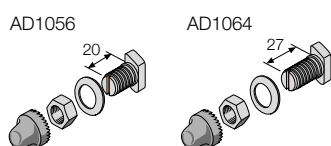
To be used with crosspieces H 48mm to be drilled (see page 5/63).

Description	Code	Package/ No. of pieces
Linear busbar holder In=800A - 35kA	PB0803	1/1
Linear busbar holder In=1600A - 65kA	PB1603	1/1



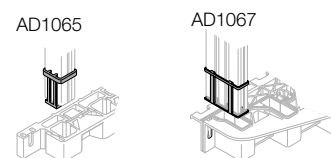
Joints for busbars

Description	Code	Package/ No. of pieces
No.4 800A joints for busbars with shaped section (with 800/1250/1600A busbars)	AD1068	1/4
No.4 1250/1600A joints for busbars with shaped section (with 1250/1600A busbars)	AD1069	1/4
No.4 copper 400A branch joints	AD1077	1/4



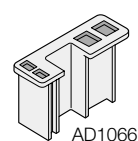
Hammer seal screws

Description	Code	Package/ No. of pieces
No.12 screws M8 - W=20mm for cable terminal	AD1056	1/12
No.12 screws M8 - W=27mm for flats up to 10 mm, complete with screwcovering cap	AD1064	1/12



Resting bases

Description	Code	Package/ No. of pieces
No.4 400/800A busbar resting bases	AD1065	1/4
No.4 1250/1600A busbar resting bases	AD1067	1/4



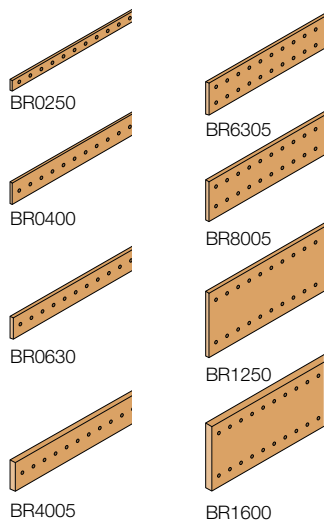
Adapters for busbars

Description	Code	Package/ No. of pieces
No.4 adapters for busbars In =400/800A with busbar holder (PB1603)	AD1066	1/4

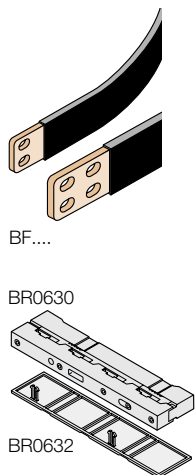
> Rapid selection table page 5/12 > In-depth technical information page 8/1 > Overall dimensions page 9/1

Distribution and earthing system

Flat busbars



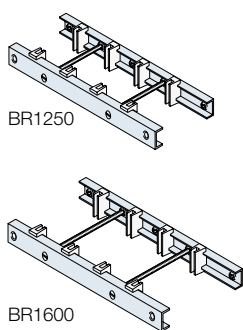
Description	Dimensions (mm) W	Code	Package/ No. of pieces
No.2 busbars In=250A section: 15x5mm	1750	BR0250	1/2
No.2 busbars In=400A section: 25x5mm	1750	BR0400	1/2
No.2 busbars In=630A section: 30x10mm	1750	BR0630	1/2
No.2 busbars In=400A, section: 32x5mm	1750	BR4005	1/2
No.2 busbars In=630A, section: 50x5mm	1750	BR6305	1/2
No.2 busbars In=800A, section: 63x5mm	1750	BR8005	1/2
No.2 busbars In=1250A, section: 100x5mm	1750	BR1250	1/2
No.2 busbars In=1600A, section: 100x10mm	1750	BR1600	1/2



Flexible busbars

Description	Dimensions (mm) W	Code	Package/ No. of pieces
No.2 flexible busbars, section 20x3 In=250A	2000	BF1602	1/2
No.2 flexible busbars, section 20x5 In=400A	2000	BF2502	1/2
No.2 flexible busbars, section 20x6 In=500A	2000	BF4002	1/2
No.2 flexible busbars, section 32x5 In=630A	2000	BF4012 ⁽¹⁾	1/2
No.2 flexible busbars, section 40x8 In=1000A	2000	BF6302	1/2
No.2 flexible busbars, section 50x10 In=1250A	2000	BF8002	1/2

⁽¹⁾ Only for circuit-breakers with extended front terminals or rear terminals.



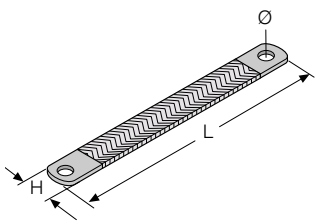
Busbar holder

To use with crosspieces H=48mm to drill (see page 5/63)

Description	Code	Package/ No. of pieces
No.2 linear busbar holders In=630A - 32kA	BP0630	1/2
No.2 terminal covers for linear busbar holders BP0630	BP0632	1/2
No.2 busbar holder for busbars 5mm thick	BP1250	1/2
No.2 busbar holder for busbars 10mm thick	BP1600	1/2

IS2 Enclosures

Ordering codes

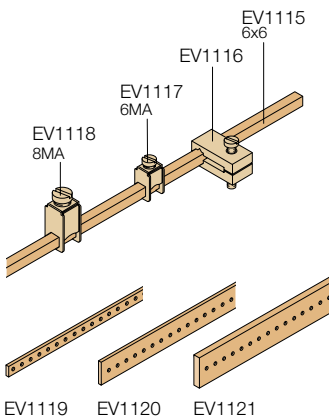


Distribution and earthing system

Cables for earthing

Description	Dimensioni (mm)		Code	Package/ No. of pieces
	H	L		
No.5 earthing cables sect. 16mm	17	200	AA6840	1/5
No.5 earthing cables sect. 16mm	17	300	AA6850	1/5
No.5 earthing cables sect. 25mm	22	200	AA6880	1/5
No.5 earthing cables sect. 25mm	22	300	AA6890	1/5

5

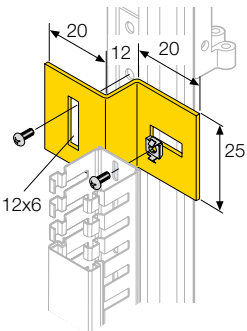


Neutral/earthing copper busbars

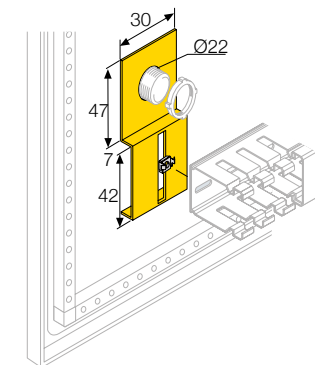
Description	Code	Package/ No. of pieces
Neutral/earthing busbar 6x6mm W=2000mm	EV1115	1/1
No. 50 insulators for neutral/earthing busbar for EV1115	EV1116	1/50
No. 100 terminals for cable ø0.5-16mm ² for EV1115	EV1117	1/100
No. 100 terminals for cable ø4-35mm ² for EV1115	EV1118	1/100
No. 2 drilled and threaded 20x5mm busbars M6 W=2000mm	EV1119	1/2
No. 2 drilled and threaded 25x5mm busbars M6 W=2000mm	EV1120	1/2
No. 2 drilled and threaded 50x5mm busbars M6 W=2000mm	EV1121	1/2
No.50 hexagonal insulators 30x30mm M6	EV1122	1/50
No.50 hexagonal insulators 30x30mm M8	EV1123	1/50
No.25 hexagonal insulators 36x50mm M6	EV1124	1/25
No.25 hexagonal insulators 36x50mm M8	EV1125	1/25



EV1122-EV1123
EV1124-EV1125



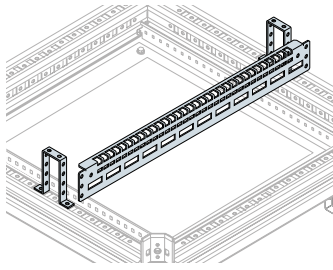
EV1130



EV1131

Screws for apparatus

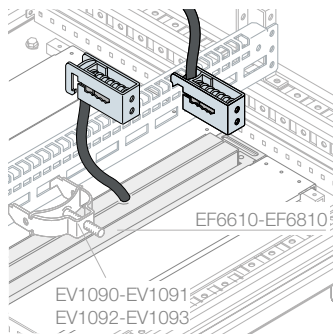
Description	Code	Package/ No. of pieces
No.1000 perforating screws 4.2x13mm cross slotted head	EV1100	1/1000
No.1000 perforating screws 4.2x19mm cross slotted head	EV1101	1/1000
No.50 trilobed screws M6 L=10mm	AD1033	1/50



Distribution and earthing system

NEW Bracket for EMC clamps and anchor cables

Description	Dimensions (mm) W	Code	Package/ No. of pieces
Bracket for EMC clamps and anchor cables	600	EV0068	1/1
Bracket for EMC clamps and anchor cables	800	EV0069	1/1

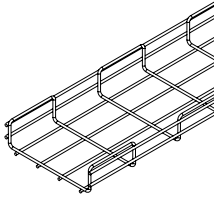


NEW Morsetti EMC clamps

Description	Code	Package/ No. of pieces
No.10 EMC clamps for cables Ø min 10 mm max 20 mm	EV0108	1/10
No.10 EMC clamps for cables Ø min 15 mm max 28 mm	EV0109	1/10
No.10 EMC clamps for cables Ø min 4 mm max 15 mm	EV0110	1/10
No.10 EMC clamps for cables Ø min 3 mm max 10 mm	EV0111	1/10
No.10 EMC clamps for cables Ø min 20 mm max 37 mm	EV0112	1/10

IS2 Enclosures

Ordering codes

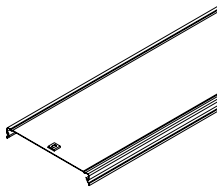


Distribution and earthing system

Steel wire sendzimir painted trays W=3000mm

Description	Code		Conf. imb./metri
H=35mm			
Straight element B 75mm	1SL9816A00		24
Straight element B 100mm	1SL9817A00		24
Straight element B 150 mm	1SL9818A00		24
Straight element B 200mm	1SL9819A00		12
Straight element B 300mm	1SL9820A00		12
H=50mm			
Straight element B 75mm	1SL9836A00		24
Straight element B 100mm	1SL9037A00		24
Straight element B 150 mm	1SL9838A00		24
Straight element B 200mm	1SL9839A00		12
Straight element B 300mm	1SL9840A00		12
Straight element B 400mm	1SL9841A00		6
Straight element B 500mm	1SL9842A00		6
H=75mm			
Straight element B 75mm	1SL9860A00		24
Straight element B 100mm	1SL9861A00		24
Straight element B 150 mm	1SL9862A00		24
Straight element B 200mm	1SL9863A00		12
Straight element B 300mm	1SL9864A00		12
Straight element B 400mm	1SL9865A00		6
Straight element B 500mm	1SL9866A00		6

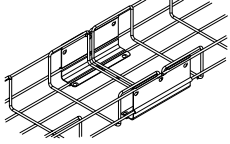
5



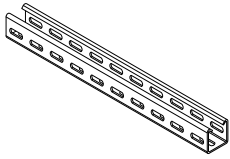
Sendzimir covers W=3000mm

Description	Code		Conf. imb./metri
Straight cover B 75mm	07241		24
Straight cover B 100mm	07242		24
Straight cover B 150mm	07243		24
Straight cover B 200mm	07244		12
Straight cover B 300mm	07245		12
Straight cover B 400mm	07246		6
Straight cover B 500mm	07247		6

1SL9907A00-1SL9886A0
1SL9887A000



1SL9910A00÷1SL9915A00



1SL9893A00



Distribution and earthing system

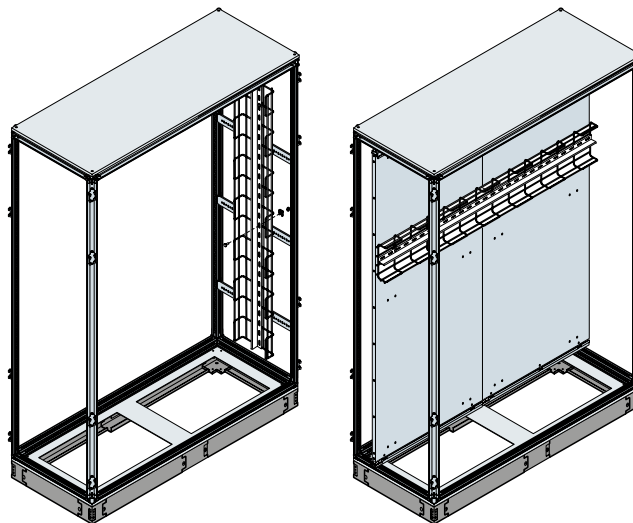
Straight sendzimir separator sections

Description	Code	Package/ No. of pieces
Separator section W 2000 mm for trays H 35 mm	1SL9904A00	1/20
Separator section W 2000 mm for trays H 50 mm	06652	1/20
Separator section W 2000 mm for trays H 75 mm	07855	1/20

Sendzimir accessories

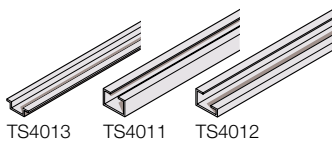
Description	Code	Package/ No. of pieces
Linear joint	1SL9880A00	1/2
Snap-on linear joint for trays H 35mm	1SL9907A00	1/2
Snap-on linear joint for trays H 50mm	1SL9886A00	1/2
Snap-on linear joint for trays H 75mm	1SL9887A00	1/2
Fixing element for shelf complete with screws	1SL9893A00	1/10
Crosspiece L 150mm for trays B 75-100mm	1SL9910A00	1/10
Crosspiece L 200mm for trays B 150mm	1SL9911A00	1/10
Crosspiece L 250mm for trays B 200mm	1SL9912A00	1/10
Crosspiece L 350mm for trays B 300mm	1SL9913A00	1/10
Crosspiece L 450mm for trays B 400mm	1SL9914A00	1/10
Crosspiece L 550mm for trays B 500mm	1SL9915A00	1/10

Note: The steel wire trays are also available in the following versions: unpainted sendzimir; electro-galvanisation; hot galvanisation after processing.

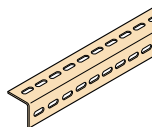


IS2 Enclosures

Ordering codes



TS4013 TS4011 TS4012



TS4000-TS4001-TS4002
TS4003-TS4004

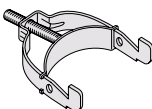
Distribution and earthing system

Sections for accessories

Universal sections of different types for mounting any component or for cable locking.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	L			
No. 2 EN sections 5002 C30	2000		TS4011	1/2
No. 2 EN sections G32	2000		TS4012	1/2
No. 2 DIN EN sections 5022 35x7.5	2000		TS4013	1/2
No. 2 sections for structures	600		TS4000	1/2
No. 2 sections for structures	800		TS4001	1/2
No. 2 sections for structures	1000		TS4002	1/2
No. 2 sections for structures	1200		TS4003	1/2
No. 2 sections for structures	1600		TS4004	1/2

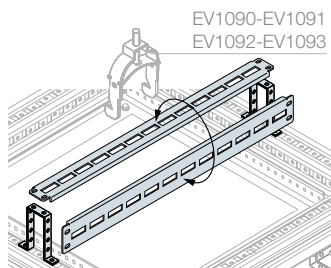
5



Brackets for anchoring cables

Adjustable cable clamping bracket. Can be mounted on sections with 10mm slot EV1050.

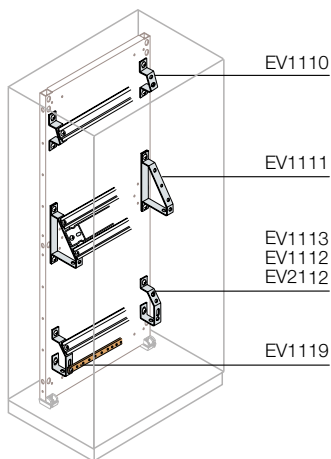
Description	Code	Package/ No. of pieces
No. 10 cable clamping brackets $\varnothing 9 \div 16$ mm min÷max	EV1090	1/10
No. 10 cable clamping brackets $\varnothing 16 \div 30$ mm min÷max	EV1091	1/10
No. 5 cable clamping brackets $\varnothing 30 \div 48$ mm min÷max	EV1092	1/5
No. 5 cable clamping brackets $\varnothing 48 \div 72$ mm min÷max	EV1093	1/5



EV1090-EV1091
EV1092-EV1093

Rail for anchoring cables

Description	Dimensions (mm) L	Code	Package/ No. of pieces
Rail for anchoring cables	600	EV0070	1/1
Rail for anchoring cables	800	EV0071	1/1



EV1110

EV1111

EV1113

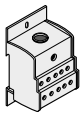
EV1112

EV2112

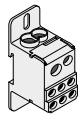
EV1119

Angled supports for terminal boxes and earthing busbars

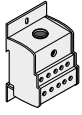
Description	Code	Package/ No. of pieces
No.50 angled supports 1 row of terminals	EV1110	1/50
No.10 angled supports 1 row of terminals	EV2110	1/10
No.2 angled supports 1 row of terminals + earth	EV1113	1/2
No.50 angled supports 1 row of terminals + earth	EV1112	1/50
No.10 angled supports 1 row of terminals + earth	EV2112	1/10
No.10 angled supports double row of terminals	EV1111	1/10



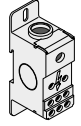
AD1076



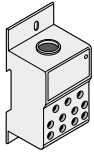
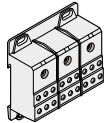
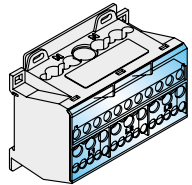
AD1080



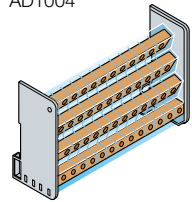
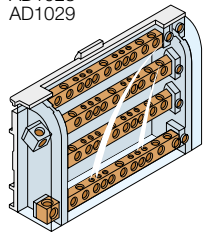
AD1007



AD1081

AD1031
AD1030AD1075
AD1006

AD1004

AD1028
AD1029

AD1027

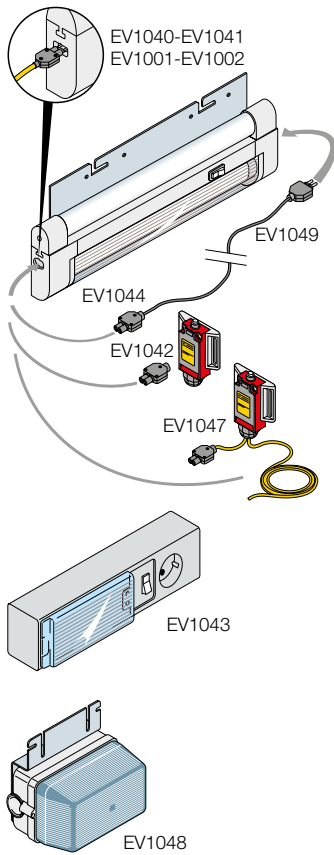
Distribution and earthing system

Modular distribution blocks

Description	Code	Item	Price	Package/ No. of pieces
Single-pole				
Modular distribution block 125A 10 outputs	US	AD1076		1/1
Modular distribution block 125A 6 outputs	US	AD1080		1/1
Modular distribution block 175A 10 outputs	US	AD1007		1/1
Modular distribution block 175A 6 outputs		AD1081		1/1
Modular distribution block 250A		AD1030		1/1
Modular distribution block 400A		AD1031		1/1
Three-pole				
Modular distribution block 125A	US	AD1075		1/1
Modular distribution block 175A	US	AD1006		1/1
Four-pole				
Modular distribution block 125A		AD1004		1/1
Modular distribution block 125A Medium 93x89x48mm (HxWxD)		AD1028		1/1
Modular distribution block 125A Large 96x126x48mm (HxWxD)		AD1029		1/1
Modular distribution block 160A		AD1027		1/1

IS2 Enclosures Ordering codes

5



Lighting and signalling devices

Led electronic lamp/fluorescent lamps

The electronic led lamps 3.6 W and 6.5 W and fluorescent lamps 8 W and 13 W are complete with mounting brackets and can be integrated with devices for voltage indicator.

The lamps have the following characteristics:

- Rotatable 180 degrees on the axis of the aluminum bracket
- Possibility of being mounted in series up to 5 elements (Fig. 1), the chain of lamps can be controlled by a single micro switch simplifying the installation and reducing the number of cables for connecting of the elements.

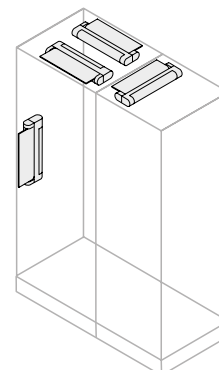
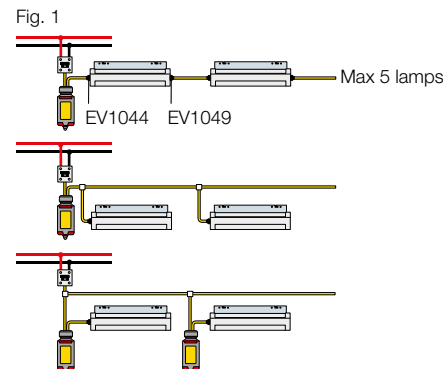
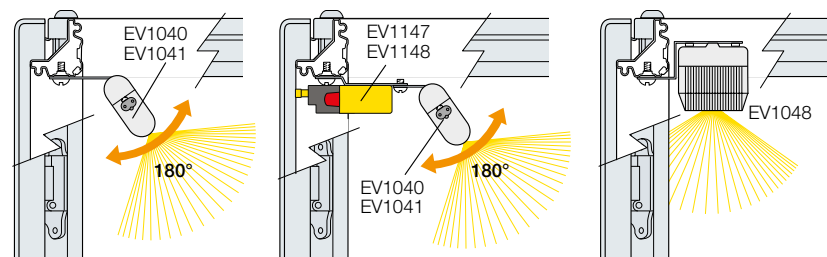
Moreover, the conformation of the electronic led lamps provides a very wide light emission and an increase of 70% compared to traditional lamps. So a lamp 8W is comparable with a 14W, and 13W with a version from 18/21W.

Description	Code	Package/ No. of pieces
Led electronic lamp		
Led electronic lamp 3,6W-24V AC/DC L=342mm	EV1001	1/1
Led electronic lamp 6,5W-24V AC/DC L=574mm	EV1002	1/1
Fluorescent lamps		
Fluorescent lamp 8W-220/240V L=342mm	EV1040	1/1
Fluorescent lamp 13W-220/240V L=574mm	EV1041	1/1
Fluorescent lamp + socket 11W-230V L=355mm, complete with magnetic support	EV1043	1/1
Lamp holder		
Lamp holder E27 220V max 60W (without lamp)	EV1048	1/1

Accessories for lamps

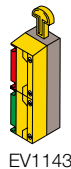
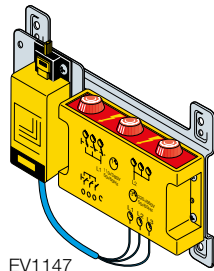
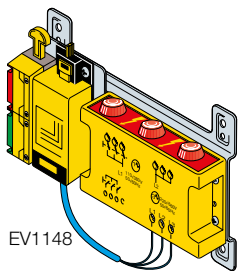
Description	Code	Package/ No. of pieces
System for positioning limit switch + connector (to be cabled)	EV1042	1/1
5 female two-pole connectors	EV1044	1/5
Two-pole cable L=10 metres	EV1045	1/1
Limit switch and cabled two-pole connector	EV1047*	1/1
No. 4 Male double poles connector for sequential lamps wiring	EV1049	1/4

* There are two cables L=1900mm and L=380mm in the pack.



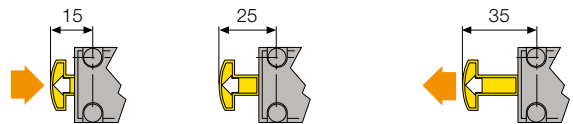
Lighting and signalling devices

Voltage detector device

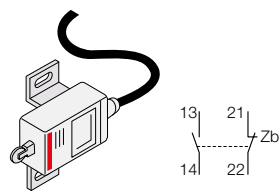


Allows the passive safety level to be increased inside the electric panel boards, flashing when the door is opened. The basic version consists of a three-phase flashing light, three-pole limit switch and fixing bracket. Compared to the basic version, the one with an auxiliary circuit is completed with a mechanical interlock which activates the electric contacts to control the auxiliary circuits. The interlock is always fitted with a NC contact code EV1144 (NC installed with door closed) which allows supply of a current launching coil. A NC contact can be added code EV1144 (NC installed with door closed) to allow opening of an undervoltage coil. It is also possible to supply circuits relative to internal lighting and/or to turn off fans/air conditioners. NO contact EV1145 (NC installed with door closed) available. Order the fixing screws W=46mm code EV1146 separately for the additional contact. Possibility of exclusion during the testing stage with relative automatic recover when the door has been closed. Conforms to the EN60947- 5-1 Standards, UL/CSA approved, operating temperature from -25 °C to +65 °C. Flashing: terminal capacity max. 3mm², Ue/Ie auxiliary contact capacity: 110V/6A, 230V/3A, 400V/2A, 600V/1.2A. Rated thermal current Ith: 10 A Max. terminal capacity: 2x1.5mm² / 1x3mm² Flashing signalling device:
 - Single phase 110-400V DC/AC 50/60Hz power supply voltage
 - Three-phase AC 220-690V 50/60Hz

Description	Ue (V)	Ui (V)		Code	Package/ No. of pieces
Voltage detector device	380/600	690		EV1147	1/1
Voltage detector device + interlock + 1 NC contact	380/600	690		EV1148	1/1
Interlock + 1 NC contact				EV1143	1/1
1 NC contact				EV1144	1/1
1 NO contact				EV1145	1/1
Screw L=46mm x 2 contacts				EV1146	1/1



	Code	Closed door	Open door	Open door By pass
Position of contacts	EV1144	:]	:
	EV1145	[:	[



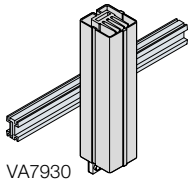
Position switch

Conforming to the EN50047 Standard, IP65 degree of protection, UL/CSA approved, can be assembled in all the positions directly on the panel board structure by means of the accessory supplied. Technical data: Ui=500V Dimensions: 84x30x30mm. Aux. contact In =3A at 230V≈ or 1.8A at 400V≈ (in AC-15 EN 60947-5-1).

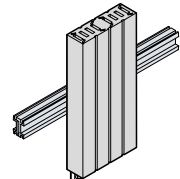
Description	Code	Package/ No. of pieces
Door position device	EV1140	1/1

IS2 Enclosures

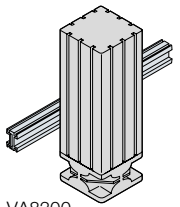
Ordering codes



VA7930
VA7950
VA7975
VA7910



VA7915



VA8300

Temperature management

Heater for IP20 electrical switchboards

Their use prevents condensation in the electric cabinets. They consist of a heating element (PTC thermistor) inserted in an aluminium alloy ground plate. The PTC thermistor is a component which modifies its impedance according to the operating temperature. It is intrinsically stable and ensures primary safety features for the heater and service stability.

The main qualities of the heaters using PTC are:

- electrical absorption (or dissipated power) which is almost constant in the range of power supply voltage between 100 and 250V;
- electrical absorption bound by inverse law to the trend of the ambient temperature.

The special tubular geometry of the ground plate allows efficient thermal exchange with the heating element. This allows high powers and limited overall dimensions (especially in width and depth); Snap-on assembly on 35 mm DIN rail. Requires a thermostat.

Description	Dimensions (mm)			Code	Package/ No. of pieces
	H	W	D		
Anti-condensation heater 30W, 110-240 Vac-dc	115	42	42	VA7930	1/1
Anti-condensation heater 50W, 110-240 Vac-dcc	165	42	42	VA7950	1/1
Anti-condensation heater 75W, 110-240 Vac-dc	210	42	42	VA7975	1/1
Anti-condensation heater 100W, 110-240 Vac-dc	165	42	51	VA7910	1/1
Anti-condensation heater 150W, 110-240 Vac-dc	146	82	51	VA7915	1/1
Anti-condensation heater with fan 300W, 230 Vac-dc	148	82	91	VA8300	1/1

All the heaters with PTC absorb a higher power than the rated one on inrush according to a transitory which lasts a few tenths of a second.

If the heaters are to be supplied by means of an auxiliary transformer, its apparent power must be sized taking 1.5 times the rated power of the heaters with natural aeration and twice those with forced ventilation into consideration.

IEC 890 method for calculating the effective cooling surface (CEI 17-43 method)

The total power dissipation P of an enclosure is linked to the exchange effective dissipating surface S, the ΔT difference between the inner and outer temperature and the k coefficient of heat exchange relative to the material of the enclosure:

$$P = k * \Delta T * S$$

$$k = 5,5 \text{ for painted steel}$$

$$\Delta T = T1 - T2$$

T1 = dew point temperature (on average 25°C)

T2 = minimum ambient temperature

The exchange surface S can be calculated using the following table taken from the CEI 17-43.

Disposition of the cabinet	Calculating the enclosure surface S (mm ²)	Dimensions (m)
Detached, exposed on all sides	$S = 1,8 \times H \times (L+P) + 1,4 \times L \times P$	L = width H = height P = depth
For closed to a wall structures	$S = 1,4 \times L \times (H+P) + 1,8 \times P \times H$	
Left or right exposed structure		
Left or right closed to a wall structure	$S = 1,4 \times H \times (P+L) + 1,4 \times L \times P$	
Central exposed structure	$S = 1,8 \times L \times H + 1,4 \times L \times P + P \times H$	
Central closed to a wall structure	$S = 1,4 \times L \times (H+P) + P \times H$	
Central closed to a wall structure, with covered roof	$S = 1,4 \times L \times H + 0,7 \times L \times P + P \times H$	

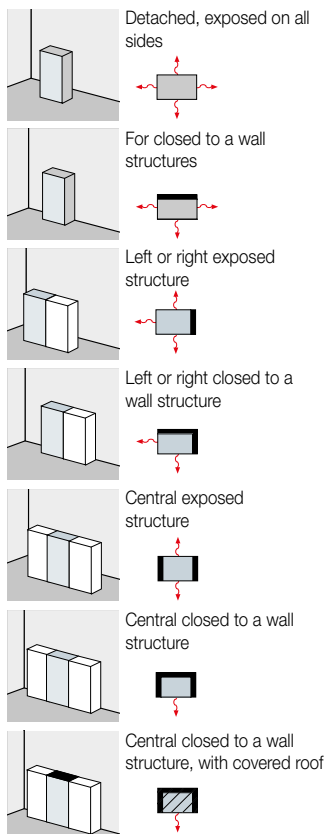
Using a ES1804K enclosure, in "for closed to a wall structures" case we will obtain:

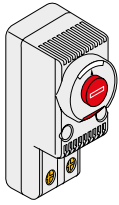
$$T1 = 25 \text{ °C}, T2 = 20 \text{ °C}, K = 5,5, \Delta T = (25-20) = 5 \text{ °C}, S = 4,4\text{m}^2$$

The total power dissipation P obtained will be:

$$P = k * \Delta T * S = 121\text{W}$$

The recommended heater is VA7915 (150W)







Temperature management

IP20 Thermostat

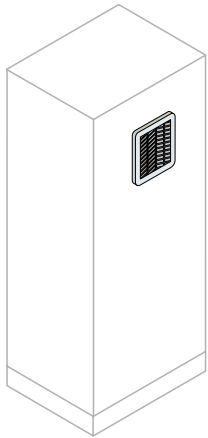
Conforms to EN 60730-1, CE and cURus standards, IP20 degree of protection. Grey RAL 7035 colour; electrical life 100,000 cycles. Dimensions (HxWxD) 68x29x45mm, can be mounted on DIN rail. The version with NO (normally open) contact allows closure of a circuit activating ventilation, air conditioning, or alarms. The version with NC (normally closed) contact allows opening of a circuit, disconnecting any anti-condensation resistances.

Description	Standard power supply V~/50-60Hz		Code		Package/ No. of pieces
NO ventilation thermostat	12-60 V d.c.; 110-250V a.c.		EN0101K		1/1
NC heating thermostat	12-60 V d.c.; 110-250V a.c.		EN0102K		1/1

Code	Standard power supply V~/50-60Hz	Contact capacity Load Ω	Load L	Temperature scale	Type of contact	Weight
EN0101K	12-60 V d.c.; 110-250V a.c.	10A	2A	-10 +80 °C	NO	54g
EN0102K	12-60 V d.c.; 110-250V a.c.	10A	2A	-10 +80 °C	NC	54g

IS2 Enclosures

Ordering codes



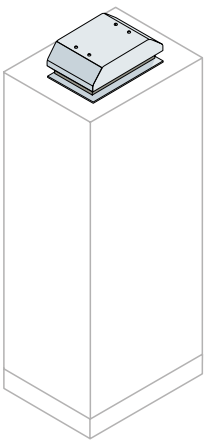
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Temperature management

IP21/54 natural ventilation kit

Gratings made of insulating material (self-extinguishing ABS UL94V-0) RAL7035 colour, complete with high dust collection capacity filter cloth (600g/m²), able to reduce maintenance interventions (cleaning by means of washing in water or by beating). Degree of protection IP21 without filter, IP54 with filter according to IEC 60529, Type 1 without filter, Type 12 with filter according to UL approval 508 fitted with pre-assembled gasket seal. CE and cURus approval.

Description	Air entry surface for ventilation		Dimensions (mm)		Code	Package/No. of pieces
	Without filter cm ²	With filter cm ²	W	W		
Grille+air pas-sage filter kit	27	6	105	105	EN0105K	1/1
Grille+air pas-sage filter kit	53	10	150	150	EN0150K	1/1
Grille+air pas-sage filter kit	121	22	204	204	EN0204K	1/1
Grille+air pas-sage filter kit	225	32	250	250	EN0250K	1/1
Grille+air pas-sage filter kit	317	55	325	325	EN0325K	1/1

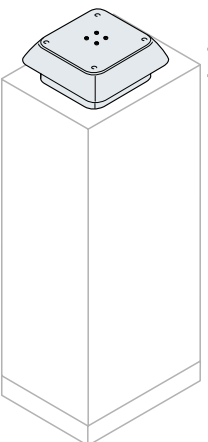


IP23 aeration hood

Structure made of steel painted RAL7035 colour, complete with selfadhesive gasket seal. Useful aeration section 128 cm².

Description	Dimensions (mm)			Code	Custom Made Service	Package/No. of pieces
	W	W	D			
Roof aeration kit	375	295	119	EN0481K		1/2

■ The “Custom Made Service” is valid only for structures assembled at the factory, for more information please contact your local sales network.

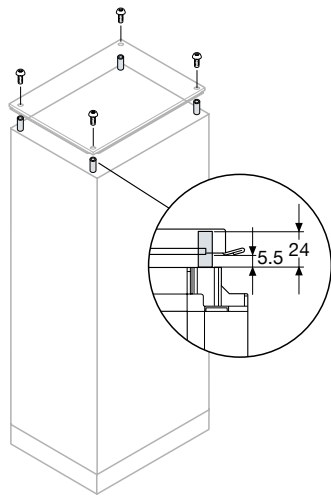


IP54 ventilation hood

Structure made up of plastic PC/ABS and aluminium (PC/ABS selfextinguishing according to UL 94V-0) painted RAL 7035 with polyuretanic foam gasket. CE and cURus approval.

Description	Dimensions (mm)			Code	Custom Made Service	Package/No. of pieces
	W	W	D			
Roof aeration kit	324	324	94	EN0483K		1/1

■ The “Custom Made Service” is valid only for structures assembled at the factory, for more information please contact your local sales network.

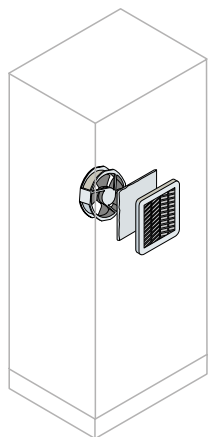


Temperature management

IP20 natural aeration Kit

Allows the roof of the cabinet to be raised, increasing natural ventilation, keeping the IP20 degree of protection. This Kit must not be mounted when the lifting eyebolts are mounted for handling the panel board.

Description	Code	Package/ No. of pieces
Roof aeration Kit (IP20)	AE1015	1/1



IP54 forced ventilation Kit

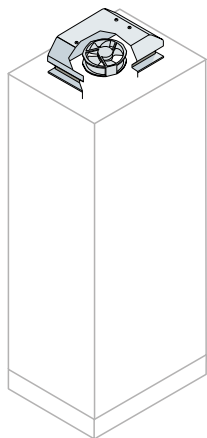
Grilles made of insulating material (ABS self-extinguishing UL94V-0) RAL7035 colour, complete with filter cloth with high dust accumulation capacity (600g/m²), able to reduce maintenance interventions (cleaning by washing with water or beating). IP54 degree of protection with filter according to UL approval 508 fitted with pre-mounted tightness gasket. Operating temperature -10 °C + 50 °C, for noise values see page 8/50. The fans allow reversible flow of air. CE and cURus (see mark) approval.

Description	Consumption 50/60Hz (W)	Capacity 50/60Hz (m ³ /h)	Dimensions (mm)		Code	Package/ No. of pieces
			W	W		
With IP54 230V ~ fan						
Ventilation filter	10/8	23/30	105	105	EN1105K	1/1
Ventilation filter	20/19	57/61	150	150	EN1150K	1/1
Ventilation filter	17/15	120/135	204	204	EN1204K	1/1
Ventilation filter	29/29	240/270	250	250	EN1250K	1/1
Ventilation filter	67/87	520/580	325	325	EN2325K	1/1
With IP 54 1150V~ fan						
Ventilation filter	9/7	23/30	105	105	EN2105K	1/1
Ventilation filter	20/18	57/61	150	150	EN2150K	1/1
Ventilation filter	17/15	120/135	200	200	EN2204K	1/1
Ventilation filter	30/30	240/270	250	250	EN2250K	1/1
Ventilation filter	50/64	520/580	325	325	EN3325K	1/1

In any forced ventilation kit, the fan wheel is balanced. In the larger sizes (cod. EN2325K and cod. EN3325K) there is the balancing clip. The balanced fan wheel ensures less noise and absorption.

IS2 Enclosures

Ordering codes



Temperature management

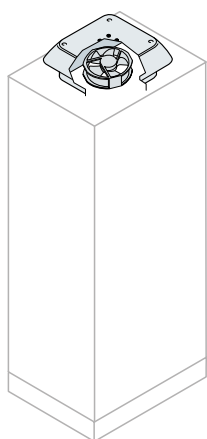
IP23 forced ventilation hood

Allows suction from the roof of the cabinet. RAL 7035 colour, complete with self-adhesive gasket; consumption 58/78W, capacity 550/590m³/h. Operating temperature from -20 °C to + 60 °C, noise 68/71dB(A).

Description	Dimensions (mm)			Code	Custom Made Service	Package/ No. of pieces
	W	W	D			
Ventilation hoods 230V - 50/60Hz	375	295	119	EN0480K	■	1/1
Ventilation hoods 115V - 50/60Hz	375	295	119	EN0482K	■	1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

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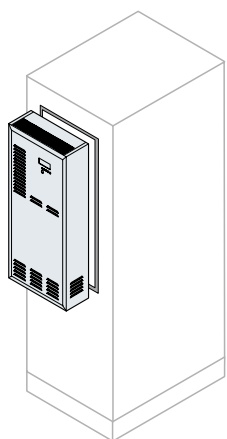


IP54 Forced ventilation hood

This hood allows the aspiration of the heat from the roof of the cabinet. Structure made up of plastic PC/ABS (PC/ABS self-extinguishing according to UL 9V-0), with the top part in aluminium, painted RAL 7035 with polyurethane foam gasket. CE omologation.

Description	Dimensions (mm)			Code	Package/ No. of pieces
	W	W	D		
Cappa di ventilazione 115V - 50/60Hz	324	324	94	EN0484K	1/1
Cappa di ventilazione 230V - 50/60Hz	324	324	94	EN0485K	1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

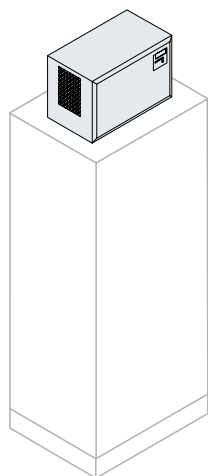


IP54 air conditioners for wall mounting

Dimensions (mm)			Refrigerating yield (W)	Capacity (m ³ /h)		Assorbed power (W)	Code	Package/ No. of pieces
W	W	D		Evaporat.	Condens.			
Wall mounting - Power supply 230V AC								
1025	380	198	605	380	400	330	VZ1550K	1/1
1025	380	198	810	350	400	400	VZ1850K	1/1
Wall mounting+switchboard - Power supply 230V AC								
1025	380	198	1300	350	600	650	VZ1400K	1/1
1200	380	230	1926	500	950	800	VZ2000K	1/1

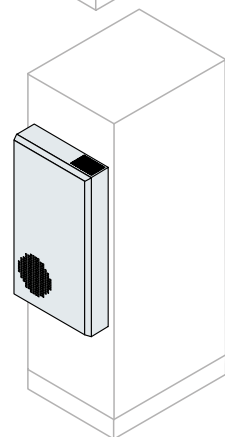
The filters are not included.

Temperature management IP54 air conditioners for roof mounting



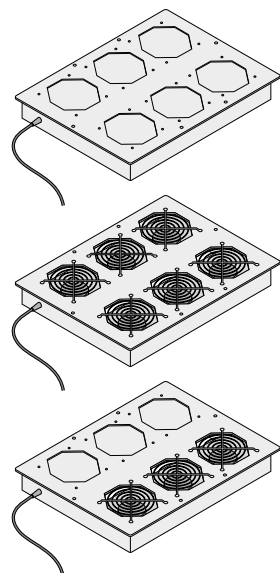
Dimensions (mm)			Refrigerating yield (W)	Capacity (m³/h)		Code	Package/ No. of pieces
H	W	D		Evaporat.			
Roof mounting- Power supply 230V AC							
350	600	400	810	350	400	VZ8501K	1/1
Roof mounting+switchboard- Power supply 230V AC							
350	600	400	1300	350	600	VZ1401K	1/1

* Not suitable for enclosure W=600 mm
Filters are not included.



IP54 heat exchangers (air-air) for wall mounting

Dimensions (mm)			Refrigerating yield (W)	Capacity (m³/h)		Code	Package/ No. of pieces
H	W	D		External			
Wall mounting- Power supply 230V AC							
710	370	130	35	200		VS4235K	1/1
900	435	175	85	300		VS6285K	1/1



NEW Ventilation roof module

The ventilation roof module is composed of a galvanized steel sheet base 20/10 and a steel painted cover RAL7035, that hosts the fans.

There are two available products:

Empty ventilation module, that has a pre-cut in order to accommodate the fans

Ventilation module with 3 fans powered by 48V dc

Each figure has an internal pre-wired terminal block for wiring the fans and a power cord L=2.5 m. The increase of the air flow is possible through the addition of a ventilation kit (Code EV0061 / EV0062); each ventilation kit has the tools for the wiring and installation in the ventilation roof module.

Description	Code	Package/ No. of pieces
Ventilation empty roof module	EV0058	1/1
Ventilation roof module 3 fans 48V d.c.	EV0065	1/1
No.1 fan 230V a.c. 50/60 Hz wiring material	EV0061	1/1
No.1 fan 48V d.c. wiring material	EV0062	1/1

Technical characteristics

EV0061	EV0062
Standard power supply: 230V 50/60 Hz	Standard power supply: 48V d.c.
Total power consumption: 15W	Total power consumption: 7,7 W
Capacity air of the fan: 150 m3/h	Capacity air of the fan: 184 m3/h
Noise: 37-41 dB (A)	Noise: 42,5 dB (A)

Drilling template 9/45.

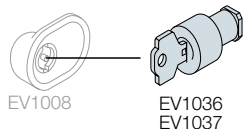
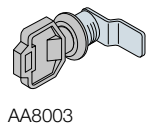
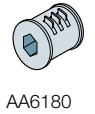
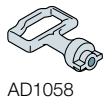
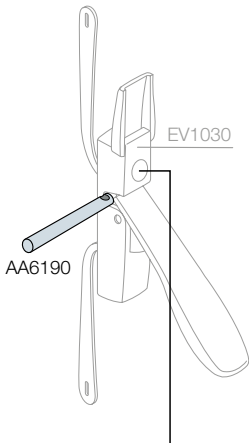
Available from September 2013

IS2 Enclosures

Ordering codes



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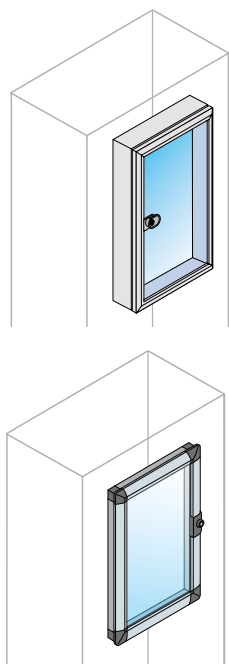
Accessories

Closing systems

Inserts interchangeable with the double tongue ones supplied as standard, complete with relative key.

Description	Code	Custom Made Service	Package/ No. of pieces
Spare parts and accessoried for EV1030 handle			
Handle complete with lock	EV1030		1/1
Zamak (Zn+Al+Mg) alloy key for double tongue insert, for external door, single door version	AD1058		1/1
Yale insert and key for external door, single door version	AA6200	■	1/1
Ronis E739 insert and key for external door, single door version	AA8004	■	1/1
Ronis insert 455 and key	PIRH0455		1/1
Ronis insert 2432E and key	PIRH2432		1/1
Ronis insert 1242E and key	PIRH1242		1/1
Ronis insert 405 and key	PIRH0405		1/1
FIST (FIAT) insert for external door, single door version	AA6160	■	1/1
FIAT key for external door, single door version	AA1570		1/1
Triangular insert, 6.4 male on Ø7.6, for external door, single door version	AA6120	■	1/1
Key for triangular insert for external door, single door version	AA1560		1/1
Square insert, 7 male, for external door, single door version	AA6140	■	1/1
Key for square insert for external door, single door version	AA6141		1/1
Hexagonal insert, 8mm socket type; key not available; for external door, single door version	AA6180	■	1/1
Plastic key for triangular insert AA5200 for external door, double doors version	AA6190		1/1
Spare parts and accessoried for EV1008 box			
Box with double tongue insert made of plastic with key for inner door	EV1008		1/1
Single code Yale insert for inner door	EV1036		1/1
Ronis 455 insert for inner door	EV1037		1/1
3mm double tongue insert for inner door	EV1039		1/1
Double tongue insert for handle/closing box	AA6100		1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



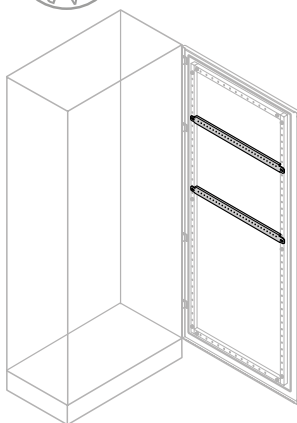
Accessories

IP54 protective windows with glass with or without frame

Made of aluminium, complete with pre-assembled gasket and closure box with interchangeable double tongue key. Can hold components with 38 and 69mm depth. The dimension of the frame 30mm. 140° door opening.

Dimensions (mm)			Code	Package/ No. of pieces
H	W	Usable D		
Protection windows IP20 with frame				
400	400	79	EV1081	1/1
600	200	48	EV1082	1/1
600	200	79	EV1083	1/1
600	400	79	EV1085	1/1
600	600	79	EV1087	1/1
Protection windows IP20 without frame				
400	400	26	EV8880	1/1
600	600	26	EV8881	1/1
600	400	26	EV8882	1/1

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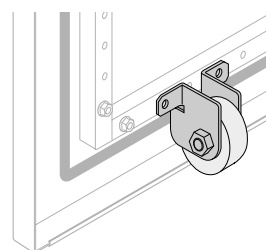


Horizontal reinforcement profiles for door

Crosspieces made of galvanised sheet with 25 mm pitch drilling, allow accessories to be fixed inside the blind doors. They are fixed onto the door reinforcement tube.

Description	Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
	W	H			
No.2 horizontal profiles H=35mm	600	35	EB1041	■	1/2
No.2 horizontal profiles H=35mm	800	35	EB1042	■	1/2
No.2 horizontal profiles H=35mm	1000	35	EB1043	■	1/2

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



NEW Well for supporting door

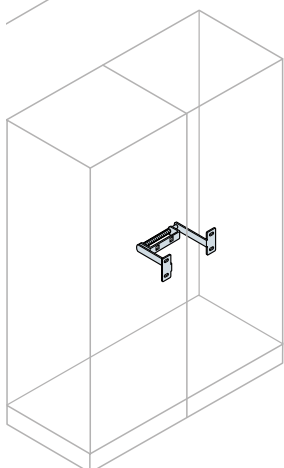
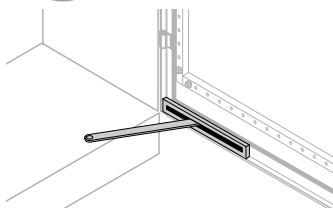
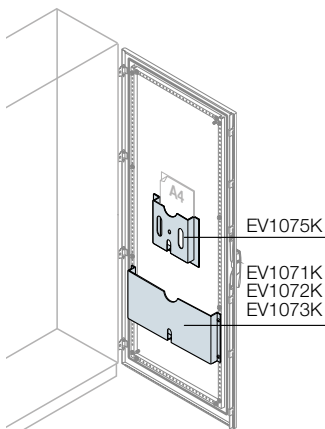
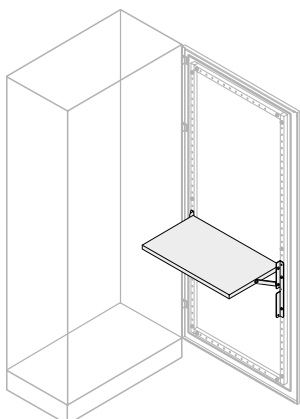
Use in case of heavy loads on blind doors (e.g. air conditioner).

Description	Code	Package/ No. of pieces
Well for supporting door W≥600mm	EV1000	1/1

IS2 Enclosures

Ordering codes

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Accessories

Folding shelves for door

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
Shelf 280x250mm (WxD) for door W=600mm	600	250	EV1060K	1/1
Shelf 480x250mm (WxD) for door W=800mm	800	250	EV1061K	1/1

Document pockets RAL 7035

Fixed inside the door by means of adhesive parts in the case of the plastic version EV1075K, or directly by means of screws to the sections of the door for the metal versions. Both versions are RAL 7035 colour.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	D		
Metal document pocket for door W=600mm	600	250	EV1071K	1/1
Metal document pocket for door W=800mm	800	250	EV1072K	1/1
Metal document pocket for door W=1000mm	1000	250	EV1073K	1/1
Plastic document pocket for A4			EV1075K	1/1

Door anti-closure and locking device

Device which can only be mounted in the versions with blind door; in the case of double door versions, two devices are needed. Keeps the door in the open position.

Description	Code	Custom Made Service	Package/ No. of pieces
Door anti-closure device	EV0005	■	1/1

For blind doors $W \geq 600$ mm. Cannot be mounted with glazed doors, with counterdoor and with modular panel installed in the last available position.

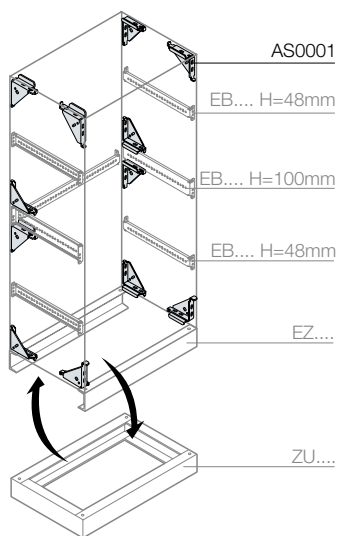
■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

Door lock

In the case of several cabinets side by side, this prevents a door being opened before the adjacent door has been opened. It is therefore possible to bind opening the doors of an entire battery of cabinets side by side to opening of a single door. Can be mounted on doors with the same opening direction.

Description	Code	Custom Made Service	Package/ No. of pieces
Door lock	EV1160	■	1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.



Accessories

KIT for seismic zone

Antiseismic tests

Tests constitute a reference base for similar structures for dimensions and for load. IS2 enclosures 2000x800x800mm (HxWxD) with uniform distributed load of 435 kg.

Enclosures have been tested according to the Standards CEI EN 60068-2-6 and IEC 60068-2-57 "Environmental testing Part. 2: Tests method. Vibration - Time history method" and to the Standard IEEE Std 693 "Recommended Practice for Seismic Design of Substation".

Similar application fields*

Enclosure without specific accessories

According to the Standard IEC 60068-2-57 - IEEE Std 693	Seismic Zone IEC 68-3-3	Richter scale	Mercalli scale
Shock level test up to 0.5 g	Zone 4	7	9

Enclosure with specific accessories AS0001+crosspieces+reinforced plinth

According to the Standard IEC 60068-2-57 - IEEE Std 693	Seismic Zone IEC 68-3-3	Richter scale	Mercalli scale
Shock level test up to 0.75 g	Zone 4	7,5	10

* Values of different scales are indicative.

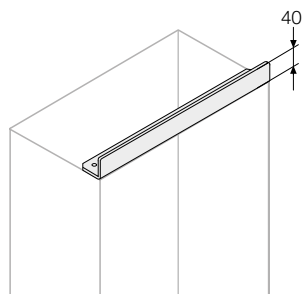
Codes of structures for seismic zone

Antiseismic kit is made of n.12 reinforced angles to be mounted on the side and in the corners of structure and in correspondence of the crosspieces... H=100mm to be ordered. Enclosure must be completed with other crosspieces EB...H=48mm and with the reinforced plinth or the single plinth.

Description	Code	Package/ No. of pieces
No.12 reinforced antiseismic angles	AS0001	1/12
Crosspieces H=48mm (see pag. 5/63)	EB...	
Crosspieces H=100mm (see pag. 5/63)	EB...	
Reinforced plinth H=100mm (see pag. 5/56)	EZ...	
Single plinth H=100mm (see pag. 5/57)	ZU...*	

* Maximum length of 6m.

For single cabinet use reinforced plinth.



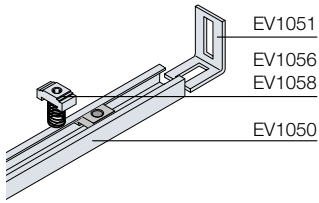
NEW Dust guard trim in metal sheet 15/10 RAL 7035

Dust guard trim avoids the deposit of dust on the upper edge of the door and between the door and the roof of the cabinet. On the dust guard trim is possible fix labels, buttons or lights.

Description	Dimensions (mm) W	Code	Package/ No. of pieces
Metal dust guard trim RAL 7035	600	EV0063	1/1
Metal dust guard trim RAL 7035	800	EV0064	1/1

IS2 Enclosures

Ordering codes

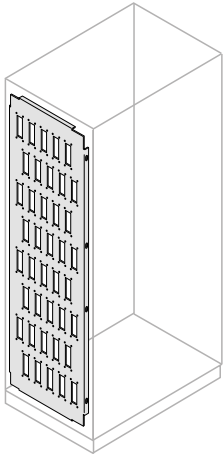


Accessories

Sliding aluminium rails for general purposes

Description	Code	Package/ No. of pieces
No. 10 aluminium sections 30x15x1,8 - L=2000mm	EV1050	1/10
No. 25 fixing brackets for EV1050	EV1051	1/25
No. 100 M6 aluminium nuts for EV1050	EV1056	1/100
No. 100 M8 aluminium nuts for EV1050	EV1058	1/100

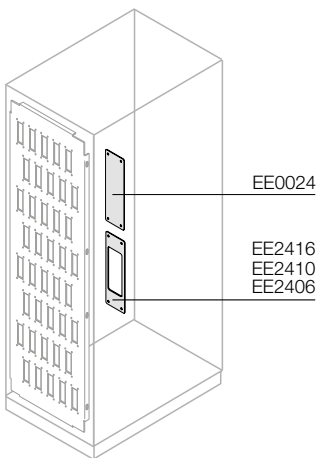
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Connector holder panel

Panel made of 20/10 thick galvanised steel sheet prepared with drillings for 24-pole connectors.

Dimensions (mm)		total No.holes	No.lines/holes	Code	Package/ No. of pieces
H	D				
1800	500	36 holes	9/4	EE1852	1/1
	600	45 holes	9/5	EE1862	1/1
2000	500	40 holes	10/4	EE2052	1/1
	600	50 holes	10/5	EE2062	1/1
2200	500	48 holes	12/4	EE2252	1/1
	600	60 holes	12/5	EE2262	1/1



Connector plates

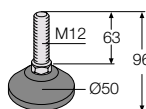
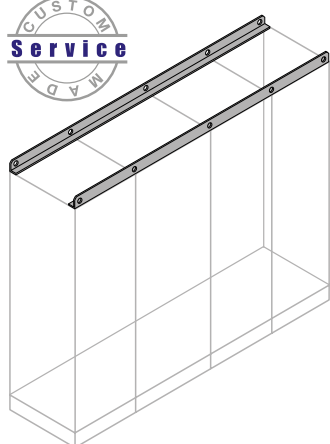
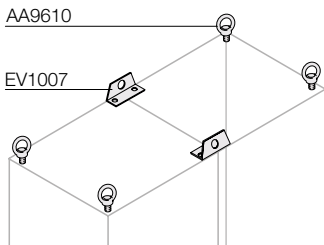
These allow closure of the unused holes on the connector holder panels.

Description	Code	Package/ No. of pieces
No.10 24-pole connector closure plates	EE0024	1/10
No.5 plates for reducing connectors from 24 to 16 poles	EE2416	1/5
No.5 plates for reducing connectors from 24 to 10 poles	EE2410	1/5
No.5 plates for reducing connectors from 24 to 6 poles	EE2406	1/5

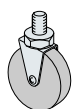


AA9610

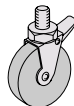
EV1007



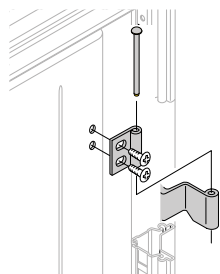
EV1004



EV1005



EV1006



Accessories

Lifting eyebolts and lifting reinforcements

These allow the cabled panel boards to be handled. The lifting eyebolts are made of steel treated with white pas-sivated galvanisation, the lifting reinforcements are painted grey RAL 7012 colour.

Description	Code	Custom Made Service	Package/ No. of pieces
No.4 lifting eyebolts M12	AA9610	■	1/4
No.2 lifting reinforcements	EV1007	■	1/2

■ The “Custom Made Service” is valid only for structures assembled at the factory, for more information please contact your local sales network.

Lifting beams

The beam is prepared with holes for lifting tools. Length up to 6 metres. Grey RAL 7012 colour orange peel.

Description	Code	Custom Made Service	Package/ No. of pieces
A pair of lifting beams for panel boards side by side	TU1000	■	1/2
A pair of lifting beams for panel boards side by side - Assembled	TU1001	■	1/2

- Service only valid for factory pre-assembled panel boards.
- The drawing of the front view of the panel board battery must always be enclosed, specifying the width, depth and sequence of the panel boards for each column.
- Unit of measurement for the order: METRE.
- Maximum width of 6m.

■ The “Custom Made Service” is valid only for structures assembled at the factory, for more information please contact your local sales network.

Feet and wheels

Description	Code	Package/ No. of pieces
No.4 M12 levelling feet (500kg each)	EV1004	1/4
No.4 Ø 80mm free wheels (70kg each)	EV1005	1/4
No.4 Ø 80mm braked wheels (70kg each)	EV1006	1/4

NEW Hinges opening 180°

Made of 25/10mm thick sheet, allow the door to be opened 180° also for battery assembled panel boards.

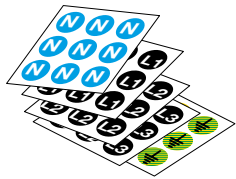
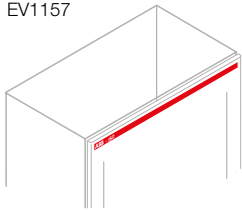
Description	Code	Custom Made Service*	Package/ No. of pieces
No.4 hinges opening 180°	CR0181	CR0180M	1/4

* Code only valid for factory-assembled panel boards.

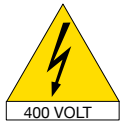
IS2 Enclosures

Ordering codes

EV1157



5



Accessories

Marking

Description	Code	Package/ No. of pieces
No.5 adhesive labels ABB-IS2 W=1000mm	EV1157	1/5
No.490 adhesive labels Ø 12mm N symbol	EV1150	1/490
No.490 adhesive labels Ø 12mm L1 symbol	EV1151	1/490
No.490 adhesive labels Ø 12mm L2 symbol	EV1152	1/490
No.490 adhesive labels Ø 12mm L3 symbol	EV1153	1/490
No.490 adhesive labels Ø 12mm T symbol	EV1154	1/490
No.10 triangular adhesive labels 125mm with 400V lightning arrow symbol	EV1155	1/10
No.100 triangular adhesive labels 50mm with lightning arrow symbol	EV1156	1/100

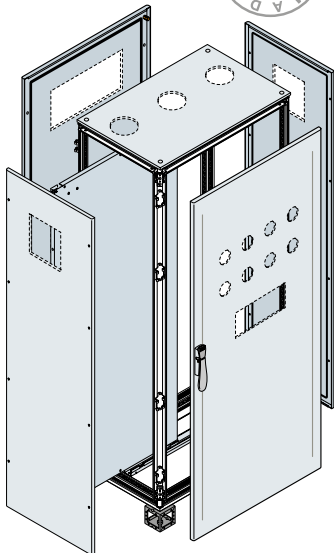


Special Painting Service

Special painting service has to be managed contacting your local sales network. It is necessary to specify the required color in the order. For any other component or further information, please contact your local sales network.

Special Drilling Service

Special drilling service has to be managed contacting your local sales network. It is necessary to attach the drawing of the drillings (in .dwg format) along with the order. For any other component or further information, please contact your local sales network.



Spare parts and mounting hardware

Description	Code	Package/ No. of pieces
Top 400x400mm (WxD)	EK4040RK	1/1
Top 400x500mm (WxD)	EK4050RK	1/1
Top 400x600mm (WxD-DxW)	EK4060RK	1/1
Top 400x800mm (WxD-DxW)	EK4080RK	1/1
Top 400x1000mm (WxD-DxW)	EK4010RK	1/1
Top 600x500mm (WxD)	EK6050RK	1/1
Top 600x600mm (WxD)	EK6060RK	1/1
Top 600x800mm (WxD-DxW)	EK6080RK	1/1
Top 600x1000mm (WxD-DxW)	EK6010RK	1/1
Top 800x500mm (WxD)	EK8050RK	1/1
Top 800x800mm (WxD)	EK8080RK	1/1
Top 800x1000mm (WxD-DxW)	EK8010RK	1/1
Top 1000x500mm (WxD)	EK1050RK	1/1
Top 1000x1000mm (WxD)	EK1010RK	1/1
Top 1200x400mm (WxD)	EK1240RK	1/1
Top 1200x500mm (WxD)	EK1250RK	1/1
Top 1200x600mm (WxD)	EK1260RK	1/1
Top 1200x800mm (WxD)	EK1280RK	1/1
Door closing lever mechanisms H=1800mm	EV1802	1/1
Door closing lever mechanisms H=2000mm	EV2002	1/1
Door closing lever mechanisms H=2200mm	EV2202	1/1
Door closing box complete with double tongue insert	EV1030	1/1
3mm double tongue insert	AA6100	1/1
Standard handle complete with double tongue insert (without tab)	EV1008	1/1
Double tongue insert for EV1030	EV1039	1/1
Zn + Al + Mg alloy double tongue key	AD1058	1/1
Spray paint colour grey RAL7035 for structure	VB7035	1/1
Spray paint colour grey RAL7012 for plinth	VB7012	1/1

IS2 Enclosures

Ordering codes

Spare parts and mounting hardware

Description	Code		Package/ No. of pieces
Blind side panel 1800x400 (HxW)	EL1841K		1/1
Blind side panel 1800x500 (HxW)	EL1851K		1/1
Blind side panel 1800x600 (HxW)	EL1861K		1/1
Blind side panel 1800x800 (HxW)	EL1881K		1/1
Blind side panel 1800x1000 (HxW)	EL1811K		1/1
Blind side panel 2000x400 (HxW)	EL2041K		1/1
Blind side panel 2000x500 (HxW)	EL2051K		1/1
Blind side panel 2000x600 (HxW)	EL2061K		1/1
Blind side panel 2000x800 (HxW)	EL2081K		1/1
Blind side panel 2000x1000 (HxW)	EL2011K		1/1
Blind side panel 2200x400 (HxW)	EL2241K		1/1
Blind side panel 2200x500 (HxW)	EL2251K		1/1
Blind side panel 2200x600 (HxW)	EL2261K		1/1
Blind side panel 2200x800 (HxW)	EL2281K		1/1
Blind side panel 2200x1000 (HxW)	EL2211K		1/1

Spare parts Spare parts and mounting hardware

Descrizione	Codice		Confezione/ No.pezzi
Track for front plate insertion D=400mm	EA0401		1/1
Track for front plate insertion D=500mm	EA0501		1/1
Track for front plate insertion D=600mm	EA0601		1/1
Track for front plate insertion D=800mm	EA0801		1/1
Track for front plate insertion D=1000mm	EA1001		1/1
No.5 sliding back plate kits with front insertion	EV0001		1/5
Cloth for filter 105x105mm (HxW)	EN3105		1/6
Cloth for filter 150x150mm (HxW)	EN3150		1/6
Cloth for filter 204x204mm (HxW)	EN3204		1/6
Cloth for filter 250x250mm (HxW)	EN3250		1/6
Cloth for filter 325x325mm (HxW)	EN3326		1/6
"IS2 survival kit" accessories and spare part items	EV1057 ⁽¹⁾		1/1

⁽¹⁾ Kit consisting of: No.10 mounting kits for plinth flanges H=100mm; No.10 kits for mounting uprights; No.10 mounting kits for rear/side panels; No.5 kits for mounting plate, No.10 kits for door accessories, No.4 hinges for IP on intermediate upright; No.10 squares box door with overlapping closure; No.5 kits of 50 pcs refill screws, No. 5 kits of 20 pcs cage nuts; No. 6 blocks for mounting door with overlapping closure.

NEW Fixing accessories for apparatus

Description	Code		Package/ No. of pieces
No.1000 cross-cut head piercing screws 4.2x13mm	EV1100		1/1000
No.1000 cross-cut head piercing screws 4.2x19mm	EV1101		1/1000
No.50 screws M6 x 13mm cross rounded head	EV6130		1/50
No.50 cage nut M6 for square hole 9,2 x 9,2mm	EV6131		1/50
No.20 M5 cage nuts - insertion from the front ⁽¹⁾	EV0102		1/20
No.20 M6 cage nuts - insertion from the front ⁽²⁾	AD1036		1/20
No.50 trilobed screws M6 L=10mm	AD1033		1/50
No.20 Torx screws M5 and nylon washer L=16mm	EV0103		1/20
No.20 Torx screws M6 and nylon washer L=16mm	EV0104		1/20
No.500 special screws for IS2 side and rear panels	EV1102		1/500
No.8 Hinges and rivets for IS2 standard uprights	EV1103		1/8

⁽¹⁾ For rack frames' squared holes and cage nuts 9.2x9.2mm.

⁽²⁾ For rectangular holes 13x8,2mm.

IS2 Enclosures

Examples of configurations

Composition of the supply

Width $\leq 1000\text{mm}$

- Self-supporting galvanised steel structure consisting of a closed section drilled with 25mm pitch
- Removable roof
- Plinth H=100mm consisting of four angle pieces (25/10)
- Rear panel
- Blind door made of 20/10 thick sheet, fitted with polyurethane gasket, complete with fixed handle with double tongue key. Reversible with 4 closure points and complete with internal reinforcement frame for $W \geq 600\text{mm}$ and earthing pins.
- Glazed door made of 20/10 thick sheet, with 4mm thick safety glass, fitted with polyurethane gasket, complete fixed handle with double tongue key. Reversible with 4 closure points and complete with internal reinforcement frame and earthing pins.
- Cable container door (20/10) with opposite opening (standard hinging on the left) complete with double box with double tongue key (interchangeable) for cable container $W=200\text{mm}$ or flange for cable container $W=400\text{mm}$, intermediate removable crosspiece and upright
- Packed separately

- Glazed doors (20/10) with 4mm thick safety glass and with opposite opening, complete with fixed handles with double tongue key (interchangeable) and lever closing mechanisms in four points, removable intermediate crosspiece and upright
- Packed separately

Completion items

- Standard and oversized back plates with front and lateral insertion pag. 5/57
- Cable entry flanges pag. 5/51
- Plinth covering flanges H=100/200mm and reinforced plinth..... pag. 5/55
- Side panels pag. 5/49
- Crosspieces pag.5/63
- 19" rack frames pag.5/79
- Lifting eyebolts and reinforcements pag.5/107
- Key inserts pag.5/102
- Fans, air conditioners..... pag.5/98
- Uprights, panels and DIN rails pag.5/74

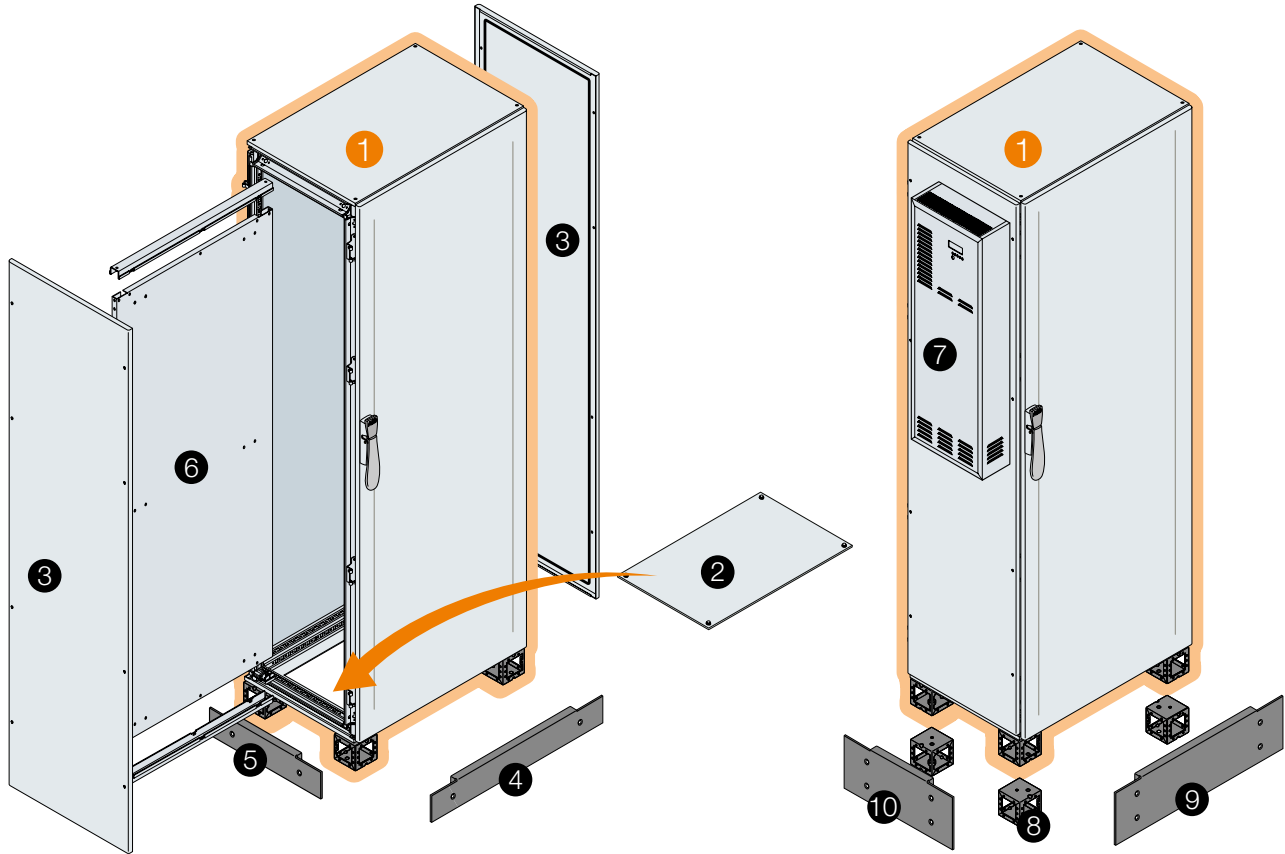
Width $\geq 1200\text{mm}$

- Self-supporting galvanised steel structure consisting of a closed section drilled with 25mm pitch
- Removable roof
- Plinth H=100mm consisting of four angle pieces plus intermediate support (30/10) and relative covering flanges
- Rear panel with 15/10 thickness (two panels with $W=800\text{mm}$ for the version $W=1600\text{mm}$)
- Blind doors (20/10) with opposite opening complete with internal reinforcement frame and lever closing mechanisms in four points, removable intermediate crosspiece and upright for improved access

Technical characteristics

Conformity with Standard		IEC EN 62208, IEC EN 60439-1, IEC62208
Degree of protection		IP65 (IEC60529) with fixed flanges
Degree of mechanical strength	blind door	IK10 (IEC 62262)
	glazed door	IK09 (IEC 62262)
Colour	internal structure	galvanized white
	external panelling	RAL 7035 orange peel
	plinth	RAL 7012 orange peel

Example of completion of pre-assembled structure



- 1** ES2065K
Structure 2000x600x500 (HxWxD) complete with blind door and rear panel

Completion items

- 2** EF6052 Bottom closure
- 3** EL2050K No. 2 side panels
- 4** ZN6000 No. 2 plinth flanges H=100mm front/rear
- 5** ZN5000 No. 2 plinth flanges H=100mm side
- 6** EA2161 Oversize back plate + tracks for lateral insertion
- 7** VZ1000K Super thin wall-mounted IP54 air conditioned
- 8** ZN1010 No. 4 plinth angle pieces H=100mm
- 9** ZN6002 No. 2 plinth flanges H=200mm front/rear
- 10** ZN5002 No. 2 plinth flanges H=200mm side

IS2 Enclosures

Examples of configurations

Configuration with compartments

Building the configuration with compartments

The cabinets with configuration with compartments can be constructed starting from pre-assembled structures, or from structure kits. The useful dimension is always 200mm less than the total height of the panel board.

Composition of the supply with pre-assembled cabinet

- Pre-assembled self-supporting structure made of galvanised steel consisting of a closed section drilled with 25mm pitch preset for mounting the compartment cubicles and partial doors.
- Removable roof, plinth H=100mm (consisting of four angle pieces 25/10) and rear panel.
- The structures with internal compartment W=200mm are supplied complete with blind door with opposite opening (standard hinging on the left), double box with double tongue key. The structures with internal compartment W=400mm are supplied complete with blind door with opposite opening (standard hinging on the left), handle with double tongue key. Both versions are complete with removable intermediate upright and pair of crosspieces (top/bottom) for fixing the latter

Composition of the supply with built-up cabinet

For construction of the cabinet kits, the base, top, uprights, panelling, doors, plinth flanges, cable entry flanges and internal accessories must be ordered separately.

Base and top:

completely pre-assembled by means of 3-way joint complete with plinth angle pieces (25/10) H=100mm. Removable roof.

Uprights:

made of galvanised steel consisting of a closed section drilled with 25 mm pitch preset for mounting compartment cubicles and partial doors, which can be mounted with just 8 screws at the base/top

Rear panel:

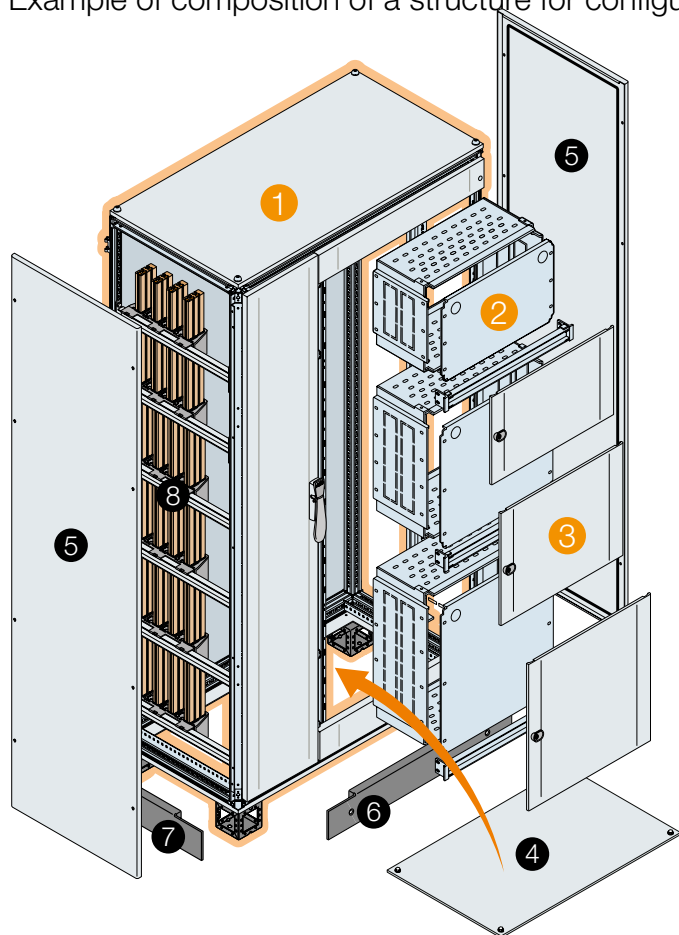
made of 15/10 thick sheet, fitted with polyurethane gasket

Cable container door:

(20/10) opposite opening (standard hinging on the left) complete with double box with double tongue key (interchangeable), crosspiece and intermediate upright to be ordered separately for version with cable container montante intermedio da ordinare a parte in caso di versione con vano cavi.

5

Example of composition of a structure for configuration with compartments



Composition of pre-assembled structure 2000x800x600 (HxLxP)

- 1 ES2086MF2K Pre assembled cabinet with cable container and partial blind panels
- 2 2 EH... Cubicles for compartments
- 3 EH...K Partial front panels for compartments

Completion items

- 4 EF8062 Bottom closure
- 5 EL2060K No. 2 side panels
- 6 ZN8000 No. 2 plinth flanges H=100mm front/rear
- 7 ZN6000 No. 2 plinth flanges H=100mm side
- 8 Busbar system with shaped section

> Rapid selection table page 5/12 > In-depth technical information page 8/1 > Overall dimensions page 9/1

Completion items

- Cubicle for compartments pag. 5/72
- Partial front doors pag. 5/73
- Distribution system pag. 5/86
- Cable entry flanges pag. 5/51
- Plinth covering flanges H=100/200mm and reinforced plinth pag. 5/55
- Side panels pag. 5/49
- Crosspieces pag. 5/63
- Lifting eyebolts and reinforcements pag. 5/107
- Key inserts pag. 5/102

Technical characteristics

Conformity with Standard	IEC EN 62208, EN60439-1 - IEC 61439-1-2	
Rated service voltage Ue	up to 690 V	
Rated insulation voltage Ui	up to 1000 V	
Rated impulse withstand voltage Uimp	8 kV	
Rated current In	up to 1600 A	
Rated short-time short-circuit withstand	up to 65 kA	
Rated peak short-circuit current Ipk	143 kA	
Degree of protection	IP41 (IEC60529)	
Degree of mechanical strength	IK10 (IEC 62262)	
Obtainable segregation forms	up to Form 3a	
Colour:	internal structure	galvanised white
	external panelling	Orange peel RAL 7035
	plinth	Orange peel RAL 7012

MCC version with fixed drawers

Compartment selection according to the type of starting/power

Type of starter	Power diagram	Power 400-50Hz		Type of circuit-breaker	Type of contactor	Type of thermal relay	Compartment dimensions HxW mm		
		kW	A				200x600	200x800	300x800
Direct		0.37÷11	1.1÷22	T2	A9÷A30	TA25÷TA42	•		
		15÷45	28.5÷83			TA75÷TA110		•	
		0.37÷11	1.1÷22	XT2	A9÷A30	TA25÷TA42	•		
		15÷45	28.5÷83		A50÷A95	TA75÷TA110		•	
		55÷90	98÷158	T3	A110÷A185	TA110÷TA200		•	
		55÷90	98÷158	XT3	A110÷A185	TA110÷TA200		•	
		110	193	T4	A210	TA450/E320			•
		110	193	XT4	A210	TA450/E320			•
		132÷160	232÷282	T5	A260÷A300	TA450/E320		•	

Type of starter	Power diagram	Power 400-50Hz		Type of circuit-breaker	Type of contactor	Type of thermal relay	Compartment dimensions HxW mm		
		kW	A				400x600	600x800	800x800
Star Delta		18.5÷55	36÷98	T2	A50÷A26÷A75÷A40	TA75	•		
		18.5÷55	36÷98	XT2	A50÷A26÷A75÷A40	TA75	•		
		75÷110	135÷193	T3	A95÷A75÷A145÷A95	TA110÷TA200		•	
		75÷110	135÷193	XT3	A95÷A75÷A145÷A95	TA110÷TA200		•	
		132	232	T4	A145÷A110	TA200			•
		132	232	XT4	A145÷A110	TA200			•
		160÷200	282÷349	T5	A210÷A145÷A210÷A185	TA200÷TA450			•

Segregated Form 3 PC version

Compartment selection according to the type of circuit-breaker

Type of circuit-breaker	Installation	H comp. (mm)	Version		Type of circuit-breaker	Installation	H comp. (mm)	Version	
			fixed	fixed				fixed	fixed
Tmax T1 - 3/4P	horizontal	200	•		Tmax XT1 - 3/4P	horizontal	200	•	•
Tmax T2/T3 - 3P	horizontal	200	•	•	Tmax XT1 - 3/4P	vertical	300	•	•
Tmax T2/T3 - 4P	horizontal	300	•	•	Tmax XT2 - 3P	horizontal	200	•	•
Tmax T3 - 3/4P	vertical	300	•	•	Tmax XT2 - 4P	horizontal	300	•	•
Tmax T4 - 3P	horizontal	300	•	•	Tmax XT2 - 3/4P	vertical	300	•	•
Tmax T4 - 3/4P	vertical	400	•	•	Tmax XT3 - 3P	horizontal	200	•	•
Tmax T5 - 3/4P	horizontal	300	•	•	Tmax XT3 - 4P	horizontal	300	•	•
Tmax T5 - 3P	horizontal	300		•	Tmax XT3 - 3/4P	vertical	300	•	
Tmax T5 - 4P	horizontal	400		•	Tmax XT3 - 3/4P	vertical	400		•
Tmax T5 - 3/4P (400A)	vertical	400	•	•	Tmax XT4 - 3P	horizontal	200	•	•
Tmax T5 - 3/4P	vertical	500		•	Tmax XT4 - 4P	horizontal	300	•	•
					Tmax XT4 - 3/4P	vertical	300	•	
					Tmax XT4 - 3/4P	vertical	400		•

> Rapid selection table page 5/12 > In-depth technical information page 8/1 > Overall dimensions page 9/1

IS2 Enclosures

Examples of configurations

Construction of modular configurations

Making up configurations with DIN panels and rails is possible by means of the pre-assembled cabinet or cabinet Kit solution. The useful dimension is always 100mm less than the total height of the panel board.

Composition of the supply with pre-assembled cabinet

- Pre-assembled self-supporting structure made of galvanised steel consisting of a closed section drilled with 25mm pitch preset for mounting the modular uprights.
- Removable roof, plinth H=100mm (consisting of four angle pieces 25/10) and rear panel.
- Blind door made of 20/10 thick sheet, fitted with polyurethane gasket, complete with ergonomic handle and other types of inserts, see page 4/36). Reversible (standard hinging on the right) with 4 closure points and complete with internal reinforcement frame for $W \geq 600$ mm and earthing pins.
- Glazed door made of 20/10 thick sheet, with 4mm thick safety glass, fitted with polyurethane gasket, complete with fixed handle with double tongue key interchangeable with other types of inserts, see page 4/36. Reversible (standard hinging on the right) with 4 closure points and complete with earthing pins.
- The structures with internal cable container W=200mm are supplied complete with blind door with opposite opening (standard hinging on the left), double box with double tongue key. The structures with internal cable container W=400mm are supplied complete with blind door with opposite opening (standard hinging on the left), handle with double tongue key. Both versions are complete with removable intermediate upright.

Composition of the supply with built-up cabinet

For construction of the cabinet kits, the base, top, uprights, panelling, doors, plinth flanges, cable entry flanges and internal accessories must be ordered separately.

Base, top and plinth:

completely pre-assembled by means of a 3-way joint complete with plinth angle pieces (25/10) H=100mm. Removable roof.

Uprights:

made of galvanised steel consisting of a closed section drilled with 25 mm pitch preset for mounting compartment cubicles and

partial doors, which can be mounted with just 8 screws at the base/top

Rear panel:

made of 15/10 thick sheet, fitted with polyurethane gasket

Cable container door

The doors for internal cable container W=200mm with opposite opening (standard hinging on the left) are complete with double box with double tongue key. The doors for internal cable container W=400mm with opposite opening (standard hinging on the left) are complete with handle with double tongue key. Both versions require the removable intermediate upright

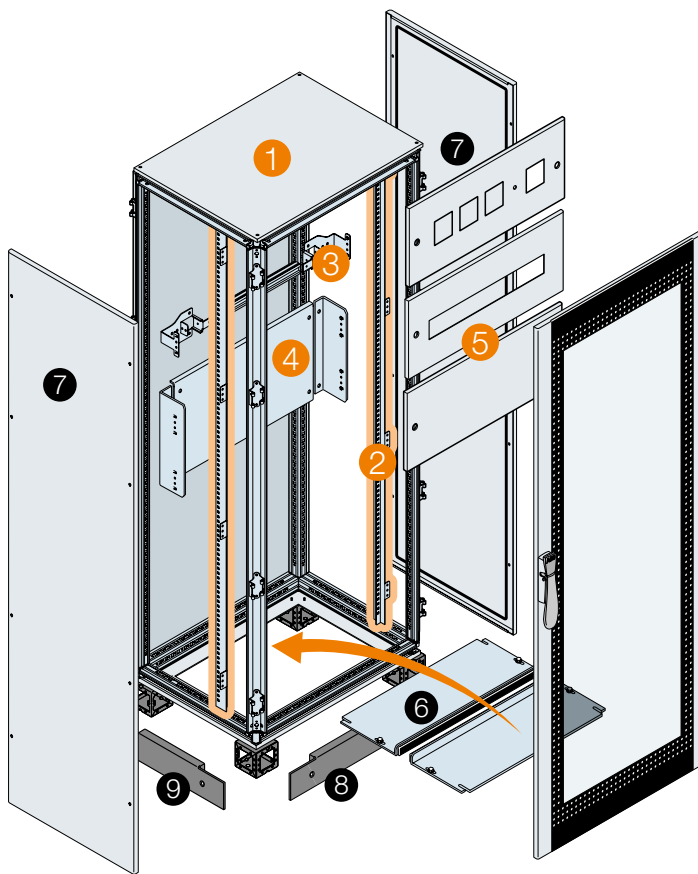
Completion items

- Uprights for apparatus pag. 5/74
- DIN rails and modular panels pag. 5/74
- Distribution system..... pag. 5/86
- Cable entry flanges pag. 5/51
- Plinth covering flanges H=100/200mm and reinforced plinth pag. 5/55
- Side panels pag. 5/49
- Crosspieces pag. 5/63
- Lifting eyebolts and reinforcements pag. 5/107
- Key inserts pag. 5/102

Technical characteristics

Conformity with Standard	IEC 62208 IEC 60439-1, IEC 61439-1-2	
Rated service voltage Ue	up to 690 V	
Rated insulation voltage Ui	up to 1000 V	
Rated impulse withstand voltage Uimp	8 kV	
Rated current In	up to 1600 A	
Rated short-time short-circuit withstand current Icw	up to 65 kA	
Rated peak short-circuit current Ipk	143kA	
Degree of protection	IP65 (IEC60529)	
Degree of mechanical strength	blind door	IK10 (IEC 62262)
	glazed door	IK09 (IEC 62262)
Colour	internal structure	galvanised white
	external panelling	Orange peel RAL 7035
	plinth	Orange peel RAL 7012

Example of composition of a structure for power factor correction

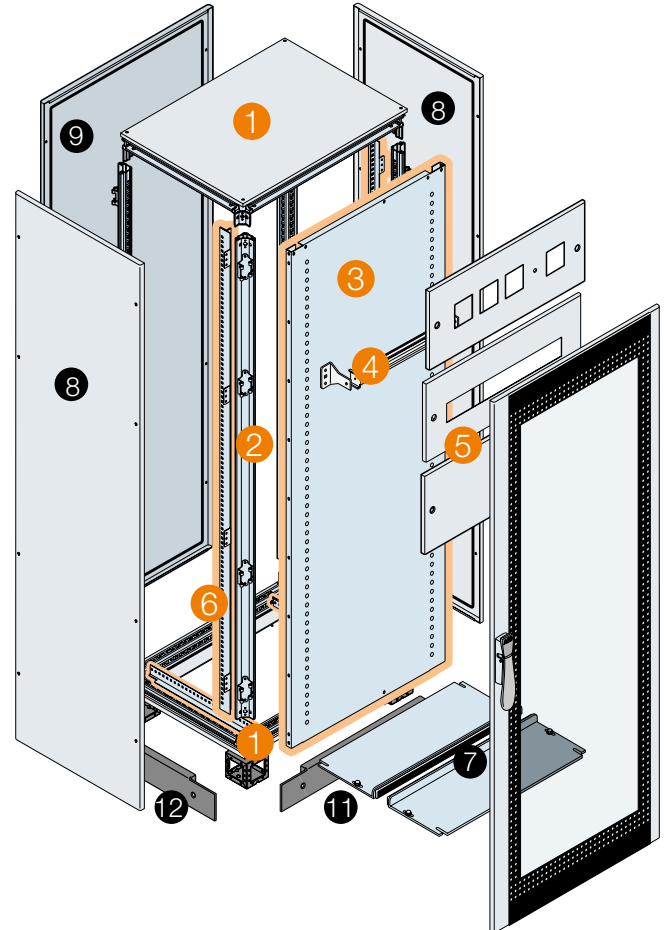


Composition of pre-assembled structure
2000x600x600 (HxWxD) for apparatus

- 1 ES2066VK Pre-assembled cabinet with glazed door
- 2 EH2000 Uprights for apparatus
- 3 EH0018 Kit for modular apparatus
- 4 EH.... Blind back plates for apparatus
- 5 EH....K Blind front panels, with cut-outs for modular items and instrument holder

Completion items

- 6 EF6060 Cable entry sliding flanges
- 7 EL2060K No. 2 side panels
- 8 ZN6000 No. 2 plinth flanges H=100mm front/rear
- 9 ZN6000 No. 2 plinth flanges H=100mm side



Composition of a structure Kit 2000x600x500 (HxWxD)
for apparatus mounted on the back plate

- 1 EK6050K Base top
- 2 EM2000 Uprights
- 3 EX2060 Oversized back plate
- 4 EH1018 Kit for modular apparatus
- 5 EH....K Blind front panels with cut-outs for modular items and instruments holder
- 6 EH2000 Kit for modular apparatus

Completion items

- 7 EF6050 Cable entry sliding flanges
- 8 EL2050K No. 2 side panels
- 9 EP2060K Rear panel
- 10 ET2060K Glazed door
- 11 ZN6000 No. 2 plinth flanges H=100mm front/rear
- 12 ZN5000 No.2 plinth flanges H=100mm side

IS2 Enclosures

Examples of configurations

Constructing the 19" rack structures

Making up the 19" rack structures is possible by means of the pre-assembled or cabinet Kit solution, using a rack 19" with "L" profile or a rack 19" with cranked shaped frame profile.

Composition of the supply with pre-assembled cabinet

- Pre-assembled self-supporting structure made of galvanised steel consisting of a closed section drilled with 25mm pitch.
- Removable roof, plinth H=100mm (consisting of four angle pieces 25/10) and rear panel.
- Blind door made of 20/10 thick sheet, fitted with polyurethane gasket, complete with handle with double tongue key interchangeable with other types of inserts, see page 4/36. Reversible (standard hinging on the right) with 4 closure points and complete with internal reinforcement frame and earthing pins.
- Glazed door made of 20/10 thick sheet, with 4mm thick safety glass, fitted with polyurethane gasket, complete with handle with double tongue key interchangeable with other types of inserts, see page 5/36. Reversible (standard hinging on the right) with 4 closure points and complete with earthing pins.

Composition of the supply with built-up cabinet

For construction of the cabinet kits, the base, top, uprights, panelling, doors, plinth flanges, cable entry flanges and internal accessories must be ordered separately.

Base, top and plinth:

completely pre-assembled by means of 3-way joint complete with plinth angle pieces (25/10) H=100mm. Removable roof.

Uprights:

made of galvanised steel consisting of a closed section drilled with 25mm pitch preset for mounting the rack frames.

19" rack frame with "L" profile:

made of galvanised steel, this is able to support a maximum load of 90kg, and is available in the fixed and swing versions.

It can hold 38 to 47 HE in the fixed version, 36 to 45 HE in the swing version and 9 to 27 HE in the partial version. The structure is completed with the aluminium dummy panels.

Rack 19" with cranked and "C" shaped frame profile:

Fastening systems with fixed cranked shaped profile uprights in enclosure W=600mm and W=800mm available. Adjustable 25mm pitch brackets and crosspieces. All eight and partial fixed frame available. Rack frame with swing decentralized "C" shaped profile for W=800mm available.

New brackets, crosspieces and useful accessories have been included into ABB offer; crosspieces have dedicated slots for the passage of cables and for the ducts fixing. Support for accessories, universal fixed, adjustable in deep or removable shelves plus DIN-rail codes are now available.

Rear panel:

made of 15/10 thick sheet, fitted with polyurethane gasket.

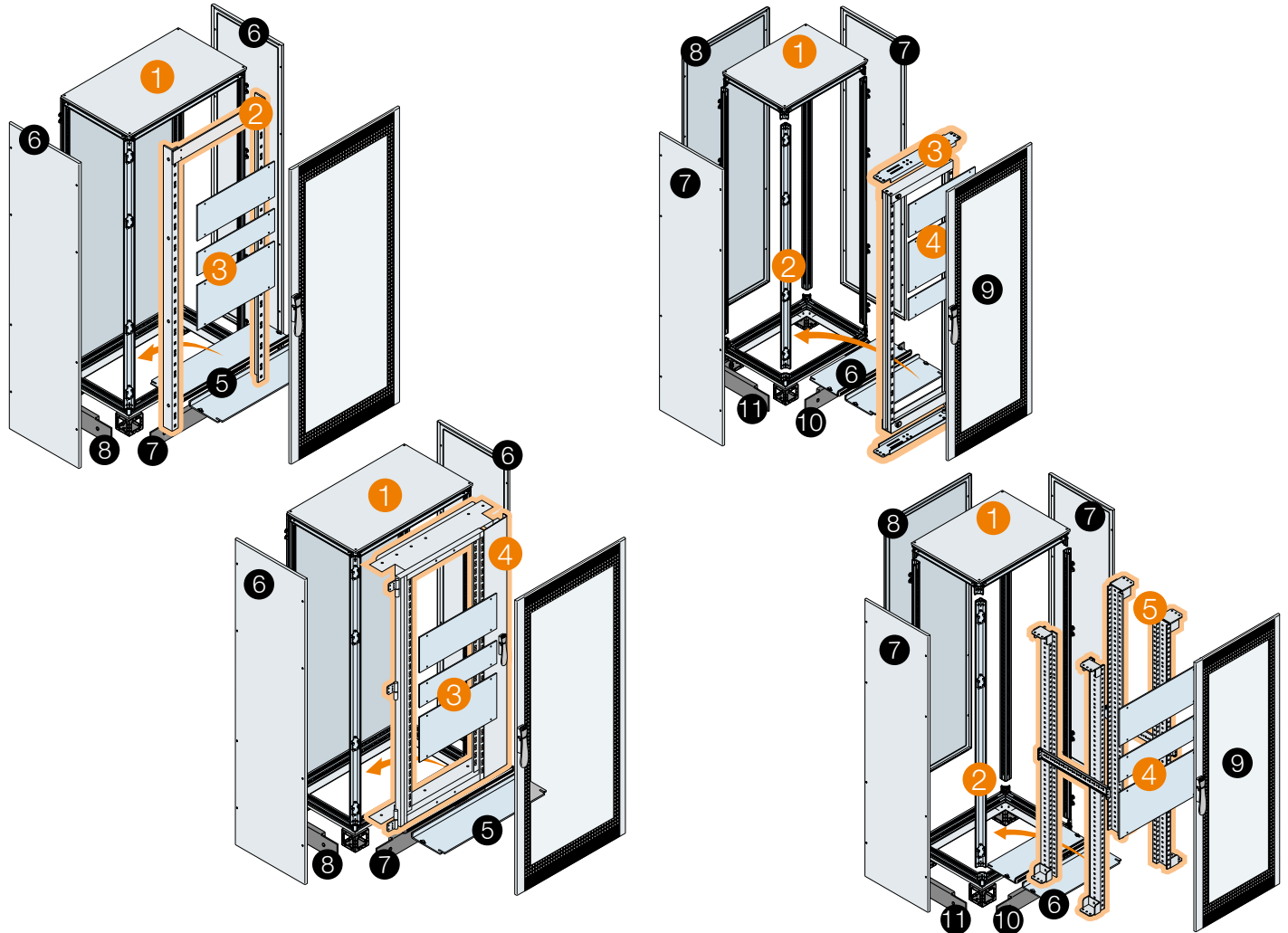
Completion items

- 19" rack frames with "L" profile pag. 5/79
- 19" fixed rack frames with cranked shaped profile..... pag. 5/80
- 19" swing rack frames with "C" shaped profile..... pag. 5/81
- Accessories pag. 5/84
- Dummy panels..... pag. 5/83
- Cable entry flanges pag. 5/51
- Plinth covering flanges H=100/200mm and reinforced plinth pag. 5/55
- Side panels pag. 5/49
- Crosspieces pag. 5/63
- Lifting eyebolts and reinforcements pag. 5/107
- Key inserts pag. 5/102

Technical characteristics

Conformity with Standard		IEC 62208, IEC 60439-1, IEC 61439-1-2
Degree of protection		IP65 (IEC60529) with fixed flanges
Degree of mechanical strength	blind door	IK10 (IEC 62262)
	glazed door	IK09 (IEC 62262)
Colour	internal structure	galvanised white
	external panelling	Orange peel RAL 7035
	plinth	Orange peel RAL 7012

Example of composition of a structure with 19" rack frame



5

Making up a pre-assembled structure 2000x800x600 (HxWxD) for 19" rack frames

- 1 ES2086VK Pre-assembled cabinet with glazed door
- 2 EG2080 Telaio rack fisso con profilo a "L"
- 3 EG.... Panels for rack frame
- 4 EG2004K Swing "C" shaped rack frame and EV0007 kit for fixing swing rack frame "C" shaped

Completion items

- 5 EF8060 Cable entry sliding flanges
- 6 EL2060K No.2 blind side panels
- 7 ZN8000 No. 2 plinth flanges H=100mm front/rear
- 8 ZN6000 No. 2 plinth flanges H=100mm side

Composition of a structure Kit 2000x600x500 (HxWxD) for 19" rack frames

- 1 EK6050K Base top
- 2 EM2000 Uprights
- 3 EG2001K Centred swing rack frame
- 4 EG.... Panels for rack frame
- 5 EG2005 Cranked shape uorights EB6000 kit for fixing and EB0500 crosspieces

Completion items

- 6 EF6050 Cable entry sliding flanges
- 7 EL2050K No. 2 side panels
- 8 EP2060K Rear panel
- 9 ET2060K Glazed door
- 10 ZN6000 No. 2 plinth flanges H=100mm front/rear
- 11 ZN5000 No. 2 plinth flanges H=100mm side

IS2 Enclosures

Examples of configurations

Construction of cabinet kits

For construction of the cabinet kits, the base, top, uprights, paneling, door, plinth flanges, cable entry flanges and internal accessories must be ordered separately.

Components to be ordered:

Base, top and plinth:

completely pre-assembled by means of 3-way joint complete with plinth angle pieces (25/10) H=100mm; removable roof

Uprights:

made of galvanised steel consisting of a closed section drilled with 25 mm pitch, which can be mounted with just 8 screws at the base/top

Rear/side panel:

made of 15/10 thick sheet, fitted with polyurethane gasket

Blind door:

made of 20/10 thick sheet, fitted with polyurethane gasket, complete with fixed handle with double tongue key. Reversible with 4 closing points, and complete with internal reinforcement frame for $W \geq 600$ mm and earthing pins.

Glazed door:

made of 20/10 thick sheet with 4 mm thick safety glass, fitted with polyurethane gasket, complete with handle with double tongue key interchangeable with other types of inserts. Reversible with 4 closure points and complete with earthing pins.

Cable container door:

((20/10) opposite opening (standard hinging on the left) complete with double box with double tongue key (interchangeable), intermediate removable crosspiece and upright.

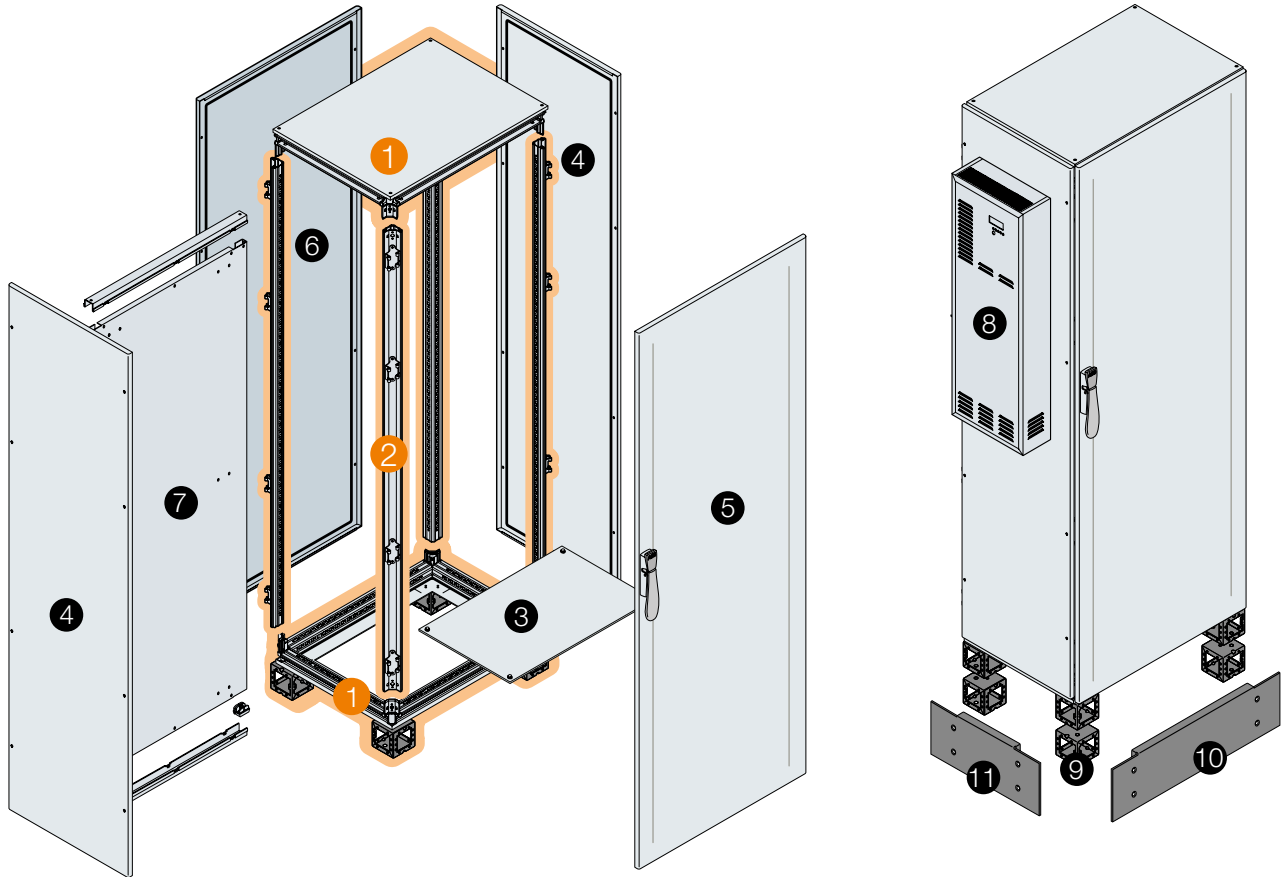
Completion items

- Standard and oversized back plates with front and lateral insertion pag. 5/57
- Cable entry flanges pag. 5/51
- Plinth covering flanges H=100/200mm and reinforced plinth pag. 5/55
- Crosspieces pag. 5/63
- 19" rack frames pag. 5/79
- Lifting eyebolts and reinforcements pag. 5/107
- Key inserts pag. 5/102
- Fans, air conditioners pag. 5/98
- Uprights, panels and DIN rails pag. 5/74

Technical characteristics

Conformity with Standard	IEC 62208 IEC 60439-1, IEC 61439-1-2	
Degree of protection	IP65 (IEC60529) with fixed flanges	
Degree of mechanical strength	blind door	IK10 (IEC 62262)
	glazed door	IK09 (IEC 62262)
Colour	internal structure	galvanised white
	external panelling	Orange peel RAL 7035
	plinth	Orange peel RAL 7012

Example of composition of a structure Kit



Composition of a structure 2000x600x500 (HxWxD)

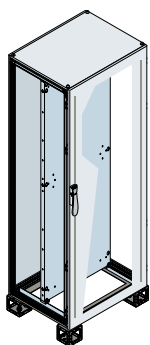
- 1 EK6050K Base, top and plinth
- 2 EM2000 N°4 uprights

Completion items

- 3 EF6052 Bottom closure
- 4 EL2050K No. 2 side panels
- 5 EC2060K Blind door
- 6 EP2060K Rear panel
- 7 EA2161 Oversized back plate + tracks for lateral insertion
- 8 VZ1850K Super thin wall air conditioner IP54
- 9 ZN1010 No. 4 plinth angle pieces H=100mm
- 10 ZN6002 No. 2 plinth flanges H=200mm front/rear
- 11 ZN5002 No. 2 plinth flanges H=200mm side

IS2 Enclosures

Examples of configurations

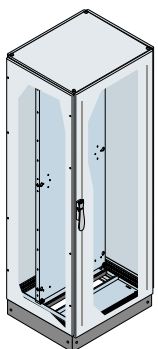


Pre-assembled structures

IS2 series pre-assembled structure dim.: 1800x600x400 (1905x594x410)mm (external HxWxD) IP65 with blind door, back plate and plinth H=100mm (side panels, cable entry flanges and plinth flanges excluded).

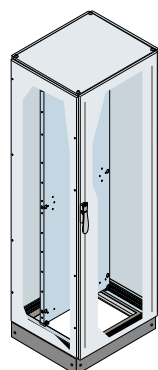
Description	Code			Q.ty
Blind door cabinet 1800x600x400mm	ES1864K			1
Back plate 1800x600mm (HxW)	EA1860			1

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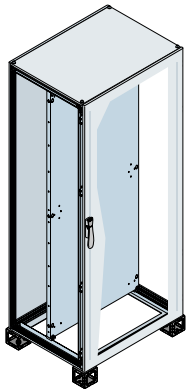
IS2 series pre-assembled structure dim.: 1800x600x500 (1905x610x510)mm. (external HxWxD) IP65 with blind door, back plate, side panels, cable entry flanges and plinth flanges H=100mm

Description	Code			Q.ty
Blind door cabinet 1800x600x500mm	ES1865K			1
Back plate 1800x600mm (HxW)	EA1860			1
No.2 blind side panels 1800x500mm (HxD)	EL1850K			1
No.2 plinth flanges W=600mm	ZN6000			1
No.2 plinth flanges D=500mm	ZN5000			1
Sliding cable entry flanges 600x500mm	EF6050			1



IS2 series pre-assembled structure dim.: 2000x600x500 (2105x610x510)mm. (external HxWxD) IP65 with blind door, back plate, side panels, plinth and flange H=100mm (cable entry flanges excluded)

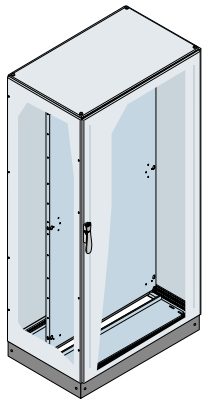
Description	Code			Q.ty
Blind door cabinet 2000x600x500mm	ES2065K			1
Back plate 2000x600mm (HxW)	EA2060			1
No.2 blind side panels 2000x500mm (HxD)	EL2050K			1
No.2 plinth flanges W=600mm	ZN6000			1
No.2 plinth flanges D=500mm	ZN5000			1



Pre-assembled structures

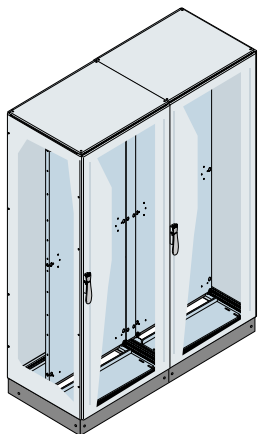
IS2 series pre-assembled structure dim.: 2000x800x600 (2105x794x610)mm. (external HxWxD) IP65 with blind door, back plate and plinth H=100mm (flange excluded)

Description	Code			Q.ty
Blind door cabinet 2000x800x600mm	ES2086K			1
Back plate 2000x800mm (HxW)	EA2080			1



IS2 series pre-assembled structure dim.: 2000x1000x600 (2105x1010x610)mm. (external HxWxD) IP65 with blind door, back plate, side panels, sliding cable entry flanges and plinth H=100mm (flanges included)

Description	Code			Q.ty
Blind door cabinet 2000x1000x600mm	ES2006K			1
No.2 blind side panels 2000x600mm (HxD)	EL2060K			1
Sliding flanges 1000x600mm	EF1060			1
No.2 plinth flanges W=1000mm	ZN1000			1
No.2 plinth flanges D=600mm	ZN6000			1



No.2 IS2 series pre-assembled structures dim.: 2000x600x600 2105x1204x610mm external HxWxD) IP65 with blind door, back plate, side panels, sliding cable entry flanges, structure/plates and plinth joining kit H=100mm (flanges included).

Description	Code			Q.ty
Blind door cabinet 2000x600x600mm	ES2066K			2
Back plate 2000x600mm (HxW)	EA2060			2
No.2 blind side panels 2000x600mm (HxD)	EL2060K			1
Sliding flanges 600x600mm	EF6060			2
Back plate joining kit H=2000mm	EA2000			1
Kit for joining cabinets	EV0003			1
No.2 plinth flanges W=600mm	ZN6000			3

IS2 Enclosures

Examples of configurations

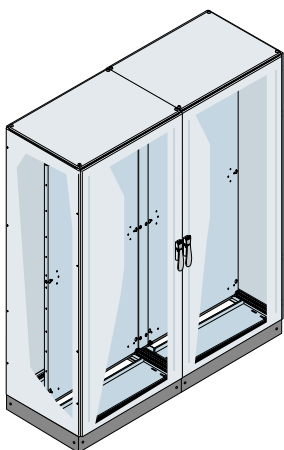


Pre-assembled structures

IS2 series pre-assembled structure dim.: 2000x1200x600 (2105x1210x610)mm. (external HxWxD) IP65 with blind door, back plate, side panels, sliding cable entry flanges and plinth H=100mm (flanges included).

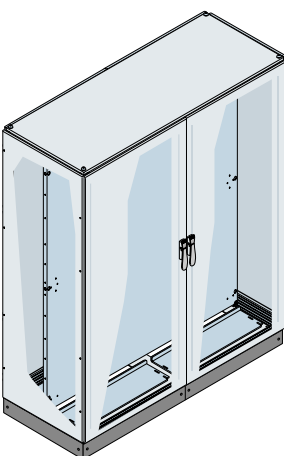
Description	Code		Q.ty
Cabinets with blind door 2000x1200x600mm	ES2026K		1
Black plate 2000x1200mm (HxW)	EA2013		1
No.2 side blind panels 2000x600mm (HxD)	EL2060K		1
Sliding flanges 600x600mm	EF6060		2
No.2 plinth flanges W=600mm	ZN6000		3

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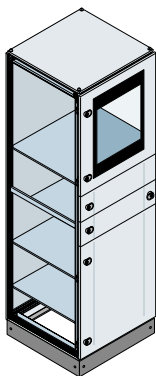
No.2 IS2 series pre-assembled structures dim.: 2000x800x600 (2105x1604x610) mm. (external HxWxD) IP65 with blind door, back plate, side panels, sliding cable entry flanges, structure/plates and plinth joining kit H=100mm (flanges included).

Description	Code		Q.ty
Blind door cabinet 2000x800x600mm	ES2086K		2
Back plate 2000x800mm (HxW)	EA2080		2
Back plate joining kit H=2000mm	EA2000		1
No.2 blind side panels 2000x600mm (HxD)	EL2060K		1
Sliding flanges 800x600mm	EF8060		2
Kit for joining cabinets	EV0003		1
No.2 plinth flanges W=800mm	ZN8000		2
No.2 plinth flanges D=600mm	ZN6000		1



IS2 series pre-assembled structure dim.: 2000x1600x600 (2105x1610x610)mm (external HxWxD) IP65 with blind door, back plate, side panels, sliding cable entry flanges and plinth H=100mm (flanges included).

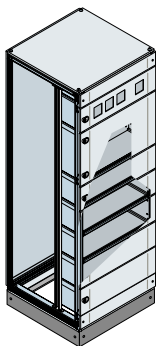
Description	Code		Q.ty
Blind door cabinet 2000x1600x600mm	ES2076K		1
Back plate 2000x1600mm (HxW)	EA2016		1
No.2 blind side panels 2000x600mm (HxD)	EL2060K		1
Sliding flanges 800x600mm	EF8060		2
No.2 plinth flanges W=800mm	ZN8000		2
No.2 plinth flanges D=600mm	ZN6000		1



Pre-assembled structures

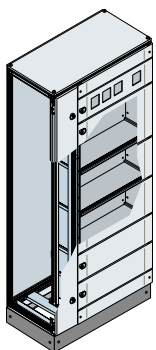
IS2 series pre-assembled structure dim.: 2000x600x600 (2105x610x610)mm (external HxWxD) IP65 PC version with glazed door for monitor, keyboard shelf, CPU module, side panels and plinth H=100mm (flanges included)

Description	Code		Q.ty
Cabinet for computer 2000x600x600mm	ES2066PCK		1
No.2 blind side panels 2000x600mm (HxD)	EL2060K		1
No.2 plinth flanges W=600mm	ZN6000		2



IS2 series pre-assembled structure dim.: 1800x600x600 (1805x594x610)mm (external HxWxD) IP65 version with Form 3 segregated compartments, with instrument panel and blind doors for PC-MCC, plinth H=100mm (flanges included)

Description	Code		Q.ty
Cabinet with compartments 1800x600x600mm (HxWxD)	ES1864VK		1
No.2 plinth flanges 100x600mm (HxW)	ZN6000		1
Back plate x compartments 400x600mm (HxW)	EH1800		1
Back plate x compartments 200x600mm (HxW)	EH2272K		1
Panel for No.2 72x72 instruments - 200x600mm(HxW)	EH3063K		1
Front panel for compartments 400x600mm (HxW)	EH0018		6
Front panel for compartments 200x600mm (HxW)	EH6018K		2
No.2 flange zoccolo 100x400mm (hxl)	ZN4000		1

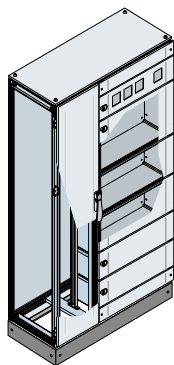


IS2 series pre-assembled structure dim.: 1800x800x400 (1805x794x410)mm. (external HxWxD) IP65 version with Form 3 segregated compartments, cable riser W=200mm, with instrument panel and blind doors for PC-MCC, plinth H=100mm (flanges included)

Description	Code		Q.ty
Cabinet with compartments 1800x800x400+cable cont. W=200	ES1884MF2K		1
Back plate x compartments 400x600mm (hwx)	EH4063		1
Back plate x compartments 300x600mm (hwx)	EH3060		2
Back plate x compartments 200x600mm (HxW)	EH2060		3
Panel for No.2 72x72 instruments - 200x600mm(HxW)	EH7262K		1
Front panel for compartments 200x600mm (HxW)	EH2061K		2
Front panel for compartments 300x600mm (HxW)	EH3061K		2
Front panel for compartments 400x600mm (HxW)	EH4061K		1
No.2 plinth flanges 100x800mm (HxW)	ZN8000		1
No.2 plinth flanges 100x400mm (HxW)	ZN4000		1

IS2 Enclosures

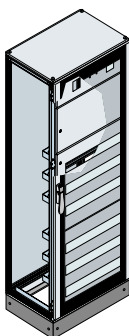
Examples of configurations



Pre-assembled structures

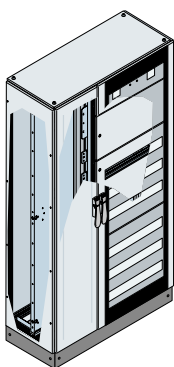
IS2 series pre-assembled structure dim.: 1800x1000x400 (1805x994x410)mm. (external HxWxD) IP65 version with Form 3 segregated compartments, cable riser W=400mm, with instrument panel and blind doors for PC-MCC, plinth H=100mm (flanges included).

Description	Code	Q.ty
Cabinet with compartments 1800x1000x400+cable container W=400	ES1804MF4K	1
Back plate x compartments 400x600mm (HxW)	EH4063	1
Back plate x compartments 300x600mm (HxW)	EH3060	2
Back plate x compartments 200x600mm (HxW)	EH2060	3
Panel for No.2 72x72 instruments - 200x600mm (HxW)	EH7262K	1
Front panel for compartments 200x600mm (HxW)	EH2061K	2
Front panel for compartments 300x600mm (HxW)	EH3061K	2
Front panel for compartments 400x600mm (HxW)	EH4061K	1
No.2 plinth flanges 100x1000mm (HxW)	ZN1000	1
No.2 plinth flanges 100x1000mm (HxW)	ZN4000	1



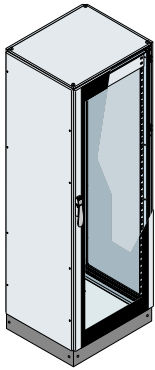
IS2 series pre-assembled structure dim.: 1800x600x400 (1805x594x410)mm. (external HxWxD) IP65 modular version, with instrument panel and glazed door, DIN panels, plinth H=100mm (flanges included).

Description	Code	Q.ty
Glazed door cabinet 1800x600x400mm	ES1864VK	1
No.2 plinth flanges 100x600mm (HxW)	ZN6000	1
No.2 uprights H=1800mm x DIN panels	EH1800	1
Panel for No.2 72x72 instruments - 200x600mm(HxW)	EH2272K	1
Blind panel 300x600mm (HxW)	EH3063K	1
DIN rail W=600mm (18 mod.)+front supp.	EH0018	6
Panel 3x18 DIN mod. 600x600mm (HxW)	EH6018K	2
No.2 plinth flanges 100x400mm (HxW)	ZN4000	1



IS2 series mounted structure, dimensions: 1800x1200x400mm (1805x1210x410mm external HxWxD). IP65 modular version with cable riser W=400mm, instrument panel, DIN panels, cabling on mounting plate and plinth H=100mm (flanges included).

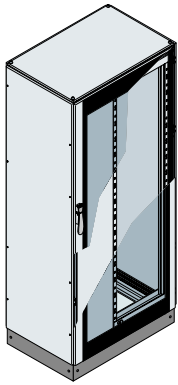
Description	Code	Q.ty
Cabinet+Cable container W=400 transparent door 1800x1200x400	ES1824VC4K	1
No.2 plinth flanges 100x600mm (HxW)	ZN6000	2
No.2 plinth flanges 100x400mm (HxW)	ZN4000	1
Back plate for bench cabling 1800x800mm (HxW)	EX1880	1
DIN rail l=800mm (18 mod.)+ rear support	GD1530	6
Panel x No.2 instruments 72x72-200x800mm (HxW)	EH3272K	1
Blind panel 300x800mm (HxW)	EH3082K	1
Panel 3x18 DIN mod. 600x800mm (HxW)	EH6029K	2
No.2 blind side panels 1800x400mm (HxD)	EL1840K	1
No.2 rails for sliding back plate	EB4101	1
No.2 uprights for modular apparatus	EH1800	1



Pre-assembled structures

IS2 series pre-assembled structure dim.: 2000x600x500 (2105x610x510)mm. (external HxWxD) IP65 version 19" rack with 42 fixed HE, side panels, glazed door, plinth H=100mm (flanges included).

Description	Code		Q.ty
Glazed door cabinet 2000x600x500mm	ES2065VK		1
19" rack frame 2000x600mm 42 fixed HE	EG2000		1
No.2 blind side panels 2000x500mm (HxD)	EL2050K		1
No.2 plinth flanges 100x600mm (HxW)	ZN6000		1
No.2 plinth flanges 100x500mm (HxW)	ZN5000		1

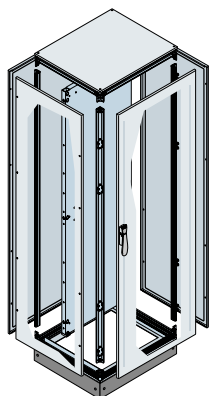


IS2 series mounted structure, 2000x800x500mm dimensions (2105x810x510mm external HxWxD), IP65 19" 40 HE swing off-centre rack version, side panels, transparent door, plinth H=100mm (flanges included).

Description	Code		Q.ty
Cabinet with transparent door 2000x800x500mm	ES2085VK		1
40HE swing off-centre rack frame 2000x800mm	EG2003K		1
No.2 blind side panels 2000x500mm (HxD)	EL2050K		1
No.2 plinth flanges 100x800mm (HxW)	ZN8000		1
No.2 plinth flanges 100x500mm (HxW)	ZN5000		1

IS2 Enclosures

Examples of configurations

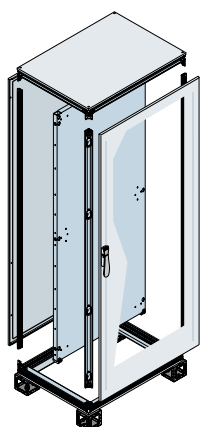


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Built-up structures

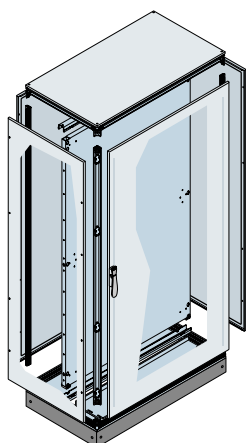
IS2 series structure kit dim.: 2000x600x500 (2105x610x510)mm. (external HxWxD) IP65 with blind door, back plate, side panels, plinth and flange H=100mm (cable entry flanges excluded).

Description	Code		Q.ty
Base/Top 600x500mm (WxD)	EK6050KN		1
No.4 uprights H=2000mm	EM2000		1
Back plate 2000x600mm (HxW)	EA2060		1
No.2 blind side panels 2000x500mm (HxD)	EL2050K		1
No.2 plinth flanges W=600mm	ZN6000		1
No.2 plinth flanges D=500mm	ZN5000		1
Blind door 2000x600mm (HxW)	EC2060K		1
Rear panel 2000x600mm (HxW)	EP2060K		1



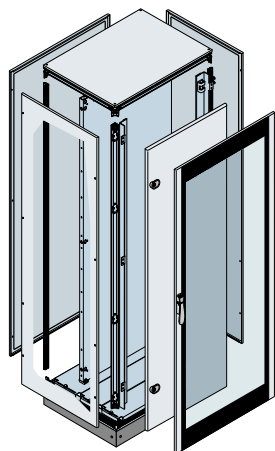
IS2 series structure kit dim.: 2000x800x600 (2105x794x610) mm. (external HxWxD) IP65 with blind door, back plate and plinth H=100mm (flange excluded).

Description	Code		Q.ty
Base/Top 800x600mm (WxD)	EK8060KN		1
No.4 uprights H=2000mm	EM2000		1
Back plate 2000x800mm (HxW)	EA2080		1
Blind door 2000x800mm (HxW)	EC2080K		1
Rear panel 2000x800mm (HxW)	EP2080K		1



IS2 series structure kit dim.: 2000x1000x600 (2105x1010x610) mm. (external HxWxD) IP65 with blind door, oversized back plate, side panels, sliding cable entry flanges and plinth H=100mm (flanges included).

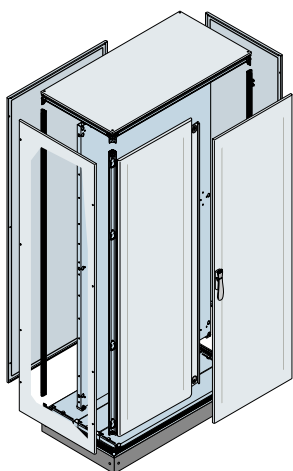
Description	Code		Q.ty
Base/Top 1000x600mm (WxD)	EK1060KN		1
No.4 uprights H=2000mm	EM2000		1
Oversized back plate+tracks 2000x1000mm(HxW)	EA2110		1
No.2 blind side panels 2000x600mm (HxD)	EL2060K		1
Sliding flanges 1000x600mm	EF1060		1
No.2 plinth flanges W=1000mm	ZN1000		1
No.2 plinth flanges D=600mm	ZN6000		1
Blind door 2000x1000mm (HxW)	EC2012K		1
Rear panel 2000x1000mm (HxW)	EP2010K		1



Built-up structures

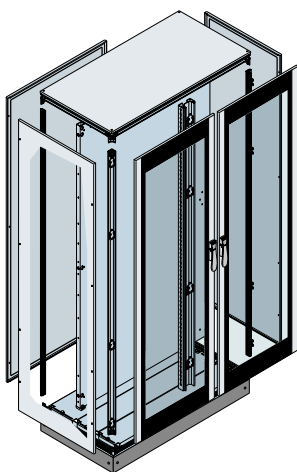
IS2 series structure kit dim.: 2200x800x600 (2305x810x610)mm. (external HxWxD) IP65 with glazed door, counterdoor, back plate, side panels, removable cable entry flanges and plinth H=100mm (flanges included).

Description	Code	Q.ty
Base/Top 800x600mm (WxD)	EK8060KN	1
No.4 uprights H=2200mm	EM2200	1
No.2 blind side panels 2200x600mm (HxD)	EL2260K	1
Glazed door 2200x800mm (HxW)	ET2280K	1
Counterdoor 2200x800mm (HxW)	EE2280K	1
Back plate 2200x800mm (HxW)	EA2280	1
Removable flanges 800x600mm	EF8061	1
No.2 plinth flanges W=800mm	ZN8000	1
No.2 plinth flanges D=600mm	ZN6000	1
Rear panel 2200x800mm (HxW)	EP2280K	1



IS2 series structure kit dim.: 2000x1000x600mm (2105x1010x610mm external HxWxD) IP65 with double doors closing with overlap, back plate, side panels, built-up cable entry flanges and plinth H=100mm (flanges included).

Description	Code	Q.ty
Base/Top 1000x600mm (WxD)	EK1060KN	1
No.4 uprights H=2000mm	EM2000	1
No.2 blind side panels 2000x600mm (HxD)	EL2060K	1
Blind door for double door version	EC2080FC5K	1
Blind door with overlap	ED2010SK	1
Back plate 2000x1000mm (HxW)	EA2010	1
Removable flanges 1000x600mm	EF1061	1
No.2 plinth flanges W=1000mm	ZN1000	1
No.2 plinth flanges D=600mm	ZN6000	1
Rear panel 2000x600mm (HxW)	EP2010K	1



IS2 series structure kit dim.: 2000x1000x600mm (2105x1010x610mm external HxWxD) IP65 with double doors closing with overlap on intermediate upright, back plate, side panels, built-up cable entry flanges and plinth H=100mm (flanges included).

Description	Code	Q.ty
Base/Top 1000x600mm (WxD)	EK1260KN	1
No.4 uprights H=2000mm	EM2000	1
No.2 blind side panels 2000x600mm (HxD)	EL2060K	1
Glazed door for double door version	EC2080FV6K	2
Intermediate upright H=2000mm	EM2001	1
Pair of intermediate crosspieces	EB6100	1
Back plate 2000x1000mm (HxW)	EA2013	1
Removable flanges 1000x600mm	EF6061	2
No.2 plinth flanges D=600mm	ZN6000	3
Rear panel 2000x600mm (HxW)	EP2012K	1

IS2 Enclosures EMC

General characteristics and applications

The range of IS2 enclosures has been enriched with the EMC (Electromagnetic Compatibility) version. The new version has undergone shielding efficiency tests with success according to the MIL STD 285: 1956 Standard.

This series of products is suitable for making small and medium-sized electric switchboards installed on the floor, whose range is available in 4 different dimensions:

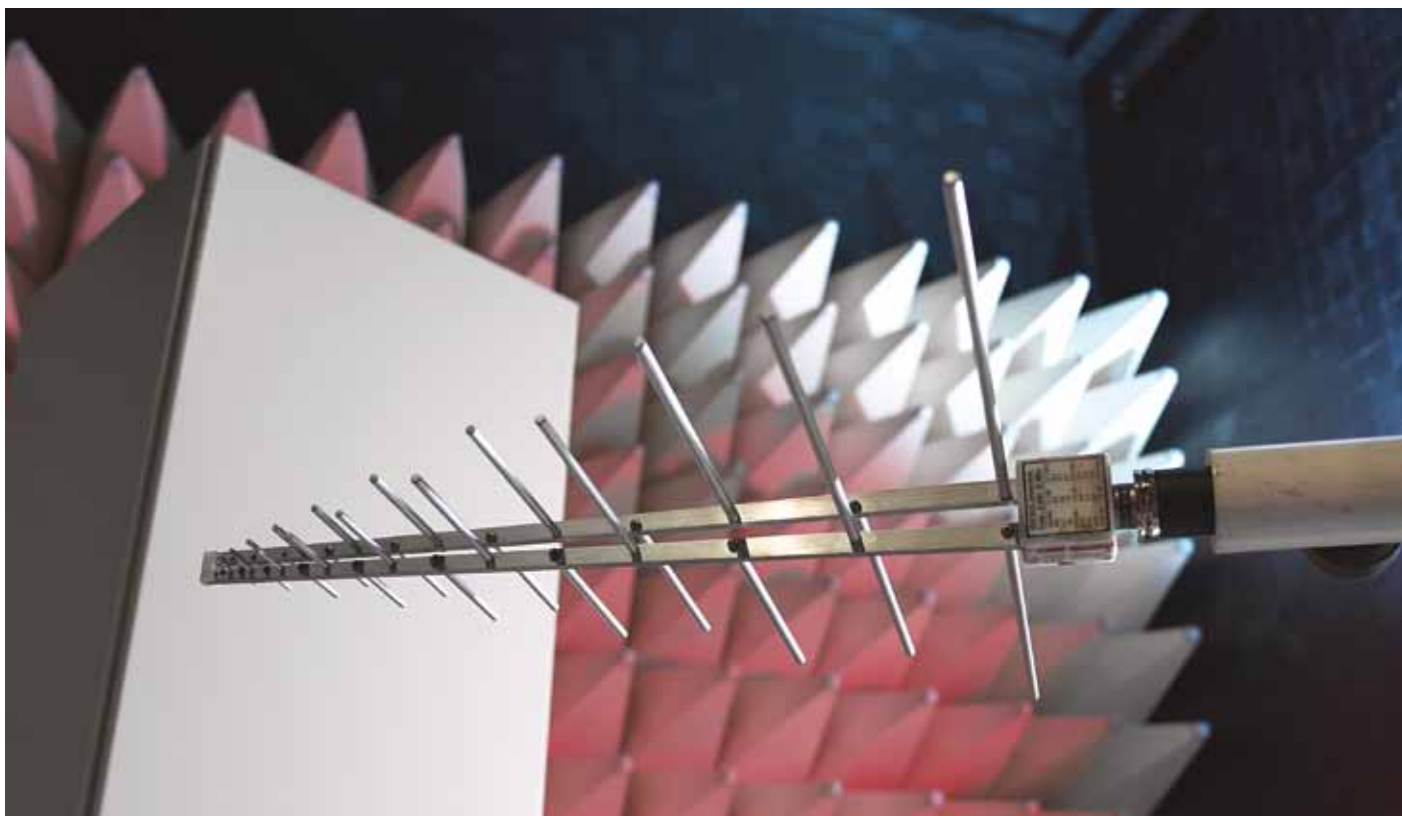
- height 2000mm
- width 600 and 800mm
- depth 600 and 800mm
- version: with blind door/glazed door

of components in the operation and regulation electronics and the high processing speeds of signals increasingly often leave a possibility of introducing errors which can be attributed to electromagnetic interference. These interferences may be caused continuously, periodically or at random, from internal or external sources, which generate electric, magnetic or electromagnetic fields.

5

The electromagnetic compatibility problem also requires attention when selecting enclosures and cabinets. The increased number

The suitability tests according to MIL STD 285: 1956 ("Attenuation measurements for enclosures, electromagnetic shielding, for



The range of IS2 EMC enclosures is characterized by the IP54 degree of protection, tested and checked according to the EN 60529 Standard.

electronic test purposes, method of") have confirmed conformity of the IS2 metalwork structures with the requirements of the standard. The attenuation level (measured in dB) remains at high levels for a wide spectrum of frequencies (from 30MHz to 10GHz).

The steel sheet enclosures are particularly suited to making EMC version operating mechanisms and plants.

The panel board is painted both externally and internally to guarantee greater resistance to oxidation. The standard colour is orange peel RAL7035.

Special attention has been paid in selecting the conductible materials for the gaskets and in making the conductive connection, as free of holes and slots as possible which can considerably reduce the efficiency value of the cabinet shielding.

The high shielding characteristics are such as to allow the use of the IS2 EMC enclosures in the telephone, aerospace, naval, medical, military and information technology fields, as well as in all uses where there are active components sensitive to electromagnetic pollution.



IS2 Enclosures EMC

General characteristics and applications

Front doors with 120° opening made of galvanized and painted steel sheet 20/10mm thick. They have an internal conductive gasket made of neoprene foam coated with a conductive cloth.



Structure

- Made of galvanized steel sheet.
- Painted steel panelling 15/10mm thick and 20/10mm doors.
- IP54 degree of protection verified according to the IEC60529 Standard.
- Galvanized sheet internal plate 25/10mm thick. The plate can be adjusted in depth with a pitch of 25mm.
- Placing two or more structures side by side is possible using a special conductive basket able to guarantee both the degree of protection and continuity of the conductive electrical parts.



Door

- Front doors with 120° opening made of galvanized and painted steel sheet 20/10mm thick. They have an internal conductive gasket made of neoprene foam coated with a conductive cloth. The blind doors are fitted with an internal tube section which increases the rigidity and allows simple assembly of wiring ducts and other accessories. The standard opening is from left to right, with the possibility of modification (inverting the assembly and changing the direction the handle opens). The glazed door is made up of standard glass, metallic mesh and hardened glass 3mm thick. The metallic mesh, placed between the two pieces of glass, guarantees high electromagnetic shielding thanks to contact with the metallic part of the door.
- Lock with double tongue insert and hooking device with four closing points.
- Screwed rear panel, made of galvanized and painted steel sheet 15/10mm thick. It has an internal conductive gasket made of neoprene foam coated with a conductive cloth. The panel can be removed and replaced with a door.
- Internal counterdoor made of galvanized painted steel sheet 20/10mm thick, fixed onto a pair of internal uprights and positioned at a distance of 74mm from the external front door. The door and the side panels can be fitted with natural and forced ventilation kits, which are EMC approved as well.

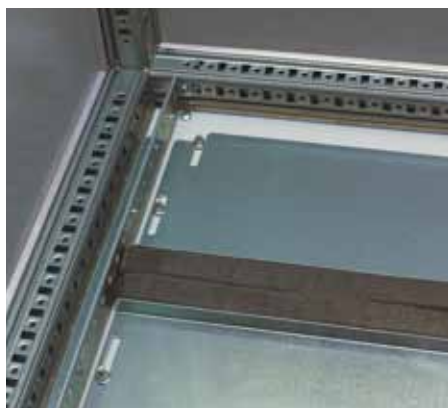
The IS2 EMC panel boards can be fitted with modular panel accessories in widths 600 and 800mm made of steel sheet 15/10mm thick.



Distribution panel board

- The modular panels are available in the version with DIN cut-out for one or three rows of modular apparatus, in the blind version and for measuring instruments 72x72mm and 96x96mm. All the panels have 200mm vertical modularity and are available in the fixed or hinged (using an accessory) version. The panels with 600mm wide DIN cut-out allow installation of 18 or 24 DIN modules, whereas those 800mm wide allow installation of 29 or 36 DIN modules according to whether the wiring duct is placed at the front or rear in relation to the DIN rail. Installation of the modular panels in the IS2 panel boards requires the use of special uprights for modular panels which are screwed onto the panel board structure. The useful space for installation of the modular panels is always 100mm less than the nominal dimension of the cabinet. The DIN rails are ordered separately and the kit includes the rail, the supports and the small fixing items. Finally, the modular galvanized internal plates are available (in the 600 and 800mm widths and in the 200, 300 and 400mm heights). The modular plates are fixed using a kit of side crosspieces to be ordered separately according to the depth of the panel board.

5



Cable entry and plinth

- The cable entry flanges are of the sliding type and are fitted with a basket coated with a special conductive netting to limit dispersions as far as possible even in the areas with possible openings.
- Palletisable plinths made up of four angle pieces H=100mm already fixed to the base of the structure. The four closing flanges must be ordered separately.

IS2 Enclosures EMC

General characteristics and applications

For the range of IS2 EMC panel boards, the uprights with the section dedicated to mounting the panels and 19" Rack accessories are available, destined for various applications such as installation of electronic cards or to make small panel boards for local networks (LAN).

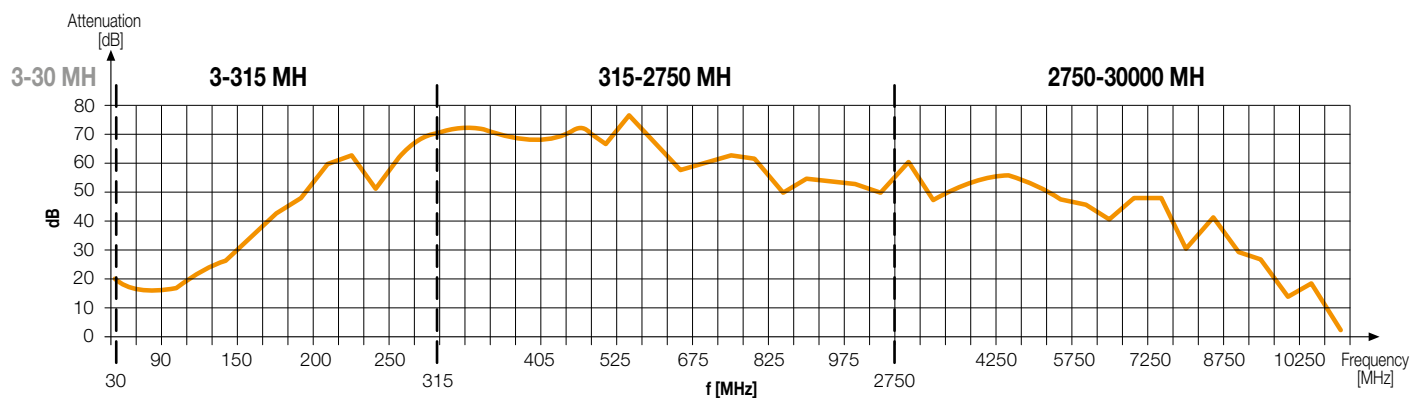
5




Panel board with 19" rack frame

- The fixed 19" rack uprights, swing type and of partial height are made of galvanized sheet 20/10mm thick and are applied onto the structure of the IS2 panel boards with 600-800mm width using special screws: it is possible to install up to a maximum of 40 HE vertical modules. The buffer panels are available with dimensions up to 20 HE modules, are blind and made of opaque natural colour anodized aluminium 30/10mm thick.

Attenuation values



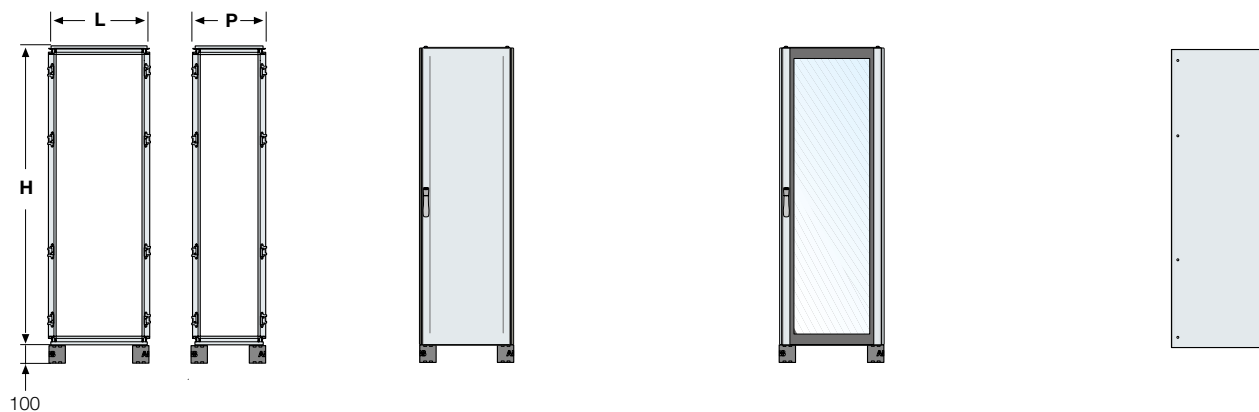
Technical characteristics

Conformity with the Standard	IEC62208	
Degree of protection	IP54 (IEC60529)	
Operating climate (t°/rh%)	constant	23°C/83% - 40°C/93%
	variable	23°C/98% - 40°C/98%
Certifications		
Type of material	Metallic	
Installation site	Indoors	
Fixing method	floor	
Normal service conditions		
- ambient temperature	da -5 a +40°C	

IS2 Enclosures EMC

Selection of the structure

Rapid selection tables



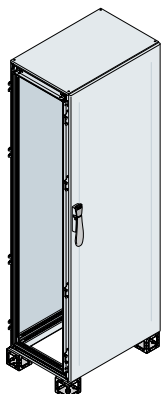
Overall dimensions			Cabinet with blind door	Cabinet with blind door	Blind side panel IP54
H mm	W mm	D mm			
2000	600	600	ES2066EMCK	ES2066VEMCK	2 x EL2060EMCK
	800		ES2086EMCK	ES2086VEMCK	
	600	800	ES2068EMCK	ES2068VEMCK	2 x EL2080EMCK
	800		ES2089EMCK	ES2089VEMCK	

Versions available

- Cabinet with blind/glazed door
- Panel board with fixed and swing 19" rack frame
- Distribution panel board with DIN rails and panels

IS2 Enclosures EMC

Ordering codes



Pre-assembled structures

IP54 - EMC Cabinets with blind door

Structure with removable roof complete with blind door, screwed-on rear panel, sliding fairlead flanges and plinth H=100mm made up of four angle pieces. Painted orange peel RAL 7035 colour inside/outside. To be completed with plinth flanges, cable tightening plates, side panels and internal equipment.

Description	Dimensions (mm)		Code	Confezione/ No.pezzi
	H	WxD		
Cabinet with blind door	2000	600x600	ES2066EMCK	1/1
Cabinet with blind door		800x600	ES2086EMCK	1/1
Cabinet with blind door		600x800	ES2068EMCK	1/1
Cabinet with blind door		800x800	ES2089EMCK	1/1

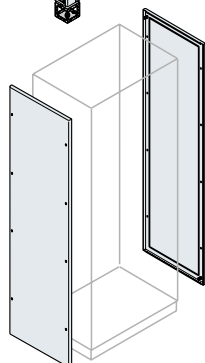
5



IP54 - EMC Cabinets with glazed door

Structure with removable roof complete with glazed door, screwed-on rear panel, sliding fairlead flanges and plinth H=100mm made up of four angle pieces. Painted orange peel RAL 7035 colour inside/outside. To be completed with plinth flanges, cable tightening plates, side panels and internal equipment.

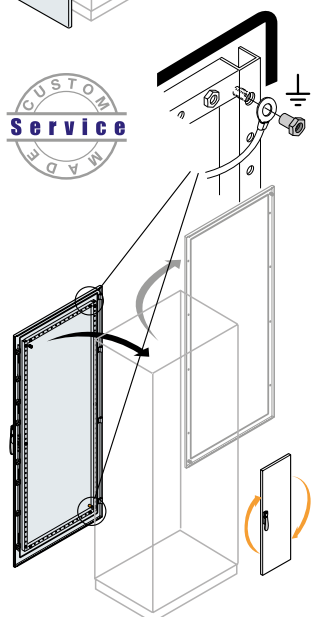
Description	Dimensions (mm)		Code	Confezione/ No.pezzi
	H	WxD		
Cabinet with glazed door	2000	600x600	ES2066VEMCK	1/1
Cabinet with glazed door		800x600	ES2086VEMCK	1/1
Cabinet with glazed door		600x800	ES2068VEMCK	1/1
Cabinet with glazed door		800x800	ES2089VEMCK	1/1



IP54 - EMC Blind side panel

Panel made of sheet 15/10 thick, fitted with polyurethane gasket, painted orange peel RAL 7035 colour inside/outside, complete with earthing pins.

Description	Dimensions (mm)		Code	Confezione/ No.pezzi
	H	D		
Blind side panel	2000	600	EL2060EMCK	1/1
Blind side panel		800	EL2080EMCK	1/1



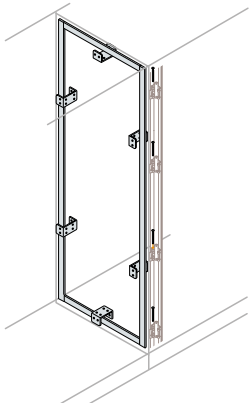
Replacement of rear panel with door

La fornitura prevede la sostituzione del pannello posteriore con porta cieca/vetro montata direttamente in fabbrica.

Description	Dimensions (mm)		Code	Custom Made Service	Package/ No. of pieces
	H	D			
Replacement of rear panel with blind door	2000	600	EC2060EMCKM	■	1/1
Replacement of rear panel with blind door		800	EC2080EMCKM	■	1/1
Replacement of rear panel with blind door		600	ET2060EMCKM	■	1/1
Replacement of rear panel with blind door		800	ET2080EMCKM	■	1/1

■ The "Custom Made Service" is valid only for structures assembled at the factory, for more information please contact your local sales network.

> Rapid selection table page 5/135 > In-depth technical information page 8/1 > Overall dimensions page 9/1

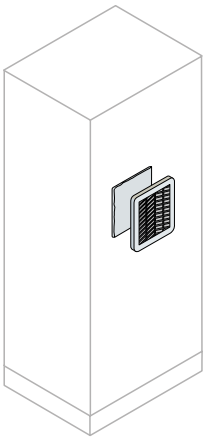


Pre-assembled structures

Kit for joining cabinets - EMC

The kit consists of 6 squares and adhesive EMC conductive gasket. Joining is made from the inside by means of the 6 squares which can be mounted for the full height or depth of the panel board.

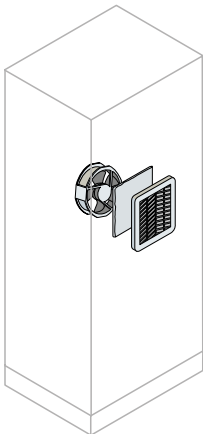
Description	Code	Package/ No. of pieces
Kit for joining EMC cabinets	EV0006EMC	1/1



IP21/54 shielded EMC natural ventilation Kit

Grilles made of insulating material (PC/ABS self-extinguishing UL94V-0) RAL7035 colour, complete with filter cloth with high dust accumulation capacity (600g/m²), able to reduce maintenance interventions (cleaning by washing with water or beating). IP21 degree of protection without filter, IP54 with filter, fitted with pre-mounted EMC tightness gasket.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	H		
Panel + air passage filter kit	150	150	EN0150EMCK	1/1
Panel + air passage filter kit	250	250	EN0250EMCK	1/1



IP54 shielded EMC forced ventilation Kit

Grilles made of insulating material (PC/ABS self-extinguishing UL94V-0), RAL7035 colour, complete with filter cloth with high dust accumulation capacity (600g/m²), able to reduce maintenance interventions (cleaning by washing with water or beating). IP54 degree of protection with filter, fitted with pre-mounted EMC tightness gasket. Operating temperature -20 °C + 70 °C, noise 50 dB (A). The fans allow reversible flow of air by means of the fan rotation.

Description	Consumption (W)	Power (m ³ /h)	Dimensions (mm)		Code	Package/ No. of pieces
			W	H		
With fan at 230V - IP54						
Grille+air passage filter Kit	20	57	150	150	EN1150EMCK	1/1
Grille+air passage filter Kit	59	240	250	250	EN1250EMCK	1/1
With fan at 115V - IP54						
Grille+air passage filter Kit	20	57	150	150	EN2150EMCK	1/1
Grille+air passage filter Kit	59	240	250	250	EN2250EMCK	1/1

To complete the structure, see accessories from page 5/26

C2 console - IP 55

General characteristics	6/2
Selection of the structure	6/7
Ordering codes	6/8
Accessories	6/13
Spare parts	6/17

C2 console - IP 55

General Characteristics

Aesthetically it has been harmonized with the IS2 and AM2 automation cabinets, taking on not only their appearance but also several of the existing Accessorieses.

The new C2 console range is inserted to complete the offer of automation switchboards and is available in the monobloc version (codes CM...K) Aesthetically it has been harmonized with the IS2 and AM2 automation cabinets, taking on not only their appearance but also several of the existing Accessorieses.

The C2 consoles are built of steel sheet 15/10 mm thick. The range, characterised by the IP55 degree of protection, has passed the controls needed to obtain the UL (Underwriters Laboratories) and CSA (Canadian Standards Association) Type 12

marks. The standard colour is orange peel RAL7035. On request, it is possible to order the console in a wide range of RAL colours (see page 8/13). The plinth is RAL 7012 colour..

Technical characteristics

Conformity with the IEC 62208 Standard
IP55 degree of protection (IEC 60529) TYPE 12 (UL Regulations)
IK10 degree of mechanical impact (IEC 62262)

6



The range, characterised by the IP55 degree of protection, has passed the controls needed to obtain the UL (Underwriters Laboratories) and CSA (Canadian Standards Association) Type 12 marks.

Versions available

The C2 consoles are divided into two versions:

- monobloc H=1000mm version
- monobloc version with H=1400mm raised back with panel or rear door

The H=1000mm version is managed on a single depth of the base D=400mm and in 5 widths which are W=600-800-1000mm with single door and 1200-1600mm with double door. They are used, in particular, as monobloc control pulpits for small on-board machine systems.

The H=1400mm version is managed with two depths of the base which are D=400-500mm and in 5 widths which are W=600-800-1000mm with single door and 1200-1600mm with double door. Both versions are fitted with 4 angle pieces correctly sized to facilitate handling and must then be completed with the plinth flanges.

Many of the completion Accessorieses are in common with the existing IS2 and AM2 automation ranges so as to simplify and optimise code management.



C2 console - IP 55

General Characteristics

Structure built of steel sheet 15/10mm thick, welded by means of an automatic process,

Briefly, the main technical and functional characteristics of the C2 console and of its components are as follows:

- structure built of steel sheet 15/10mm thick, welded by means of an automatic process, M6 pins for earthing applications inside on the side wall, rear panel integrated in the structure for monobloc H=1000mm version and screwed for monobloc H=1400mm version; door for base, door for console and any door for the raised back are of the blind type and mounted on the front of the structure;
- degree of protection IP55 verified according to the EN 60529 Standard;
- internal plate made of 25/10mm thick galvanised sheet, adjustable in depth with 25mm pitch. Mounting it inside the console is facilitated by two sliding supports on the bottom of the cabinet

- palletisable plinth made up of four angle pieces h=100mm already fixed to the base of the structure; the four closing flanges must be ordered separately; it is also possible to obtain the H=200mm plinth by means of adding 4 angle pieces and relative flanges.
- front door with 100° opening made of steel sheet 20/10mm thick, with internal polyurethane foam seal. The blind doors are fitted with an internal tubular section which increases their rigidity and allows simple assembly of wiring ducts and any apparatus.

Accessories

- Plate: in both the H=1000-1400mm versions, the internal plates which must be ordered separately, are available in the galvanised version with 20÷25/10mm thickness and are adjustable in depth by means of a special guide with 25mm



Doors: all the doors and panels are fitted with a polyurethane foam seal applied automatically by means of a robot in continuous casting.

- pitch. This makes it possible to select between a plate with full height and a plate with partial height which is fixed on special uprights for the H=1400mm console.
 - Plinth: the 4 plinth angle pieces are always provided mounted on the base of the structure and are completed with four flanges 100mm high (to be ordered separately) or, alternatively, with four additional angle pieces and four flanges 200mm high; the plinth flanges are in common with the IS2 and AM2 range.
 - Cable entry flanges: the cable entry flanges are always for completion of the structure and are of sliding type with polyurethane foam seal and with cable entry in the middle;
 - Doors: all the doors and panels are fitted with a polyurethane foam seal applied automatically by means of a robot in continuous casting.
 - The locks provided are of the type with double tongue.
 - The flap cover of the raised back, normally hinged onto the base, allows easier insertion of the plate from above. Furthermore, it is of the reversible type and can therefore also be hinged onto the top part of the raised back according to application requirements.
- The composition of the supply includes:
- for H=1000mm version: base, lectern and plinth angle pieces; to be completed with cable entry flanges, plate and plinth flanges
 - for H=1400mm version: rear with removable panel/door, base, raised back and plinth angle pieces. It can be completed with: lectern (code CL...K) which includes an anti-tilting plinth which increases the stability of the structure or, alternatively, a cover plate (CP...K), cable entry flanges, plate (partial or full height) and plinth flanges.



Mounting plate



Plate made up of 25/10 galvanised sheet which can be inserted from the front according to the width of cabinet. It is fixed to the structure on the crosspieces present inside the console.



Sliding cable entry flanges

Flanges made of 15/10 galvanised sheet.

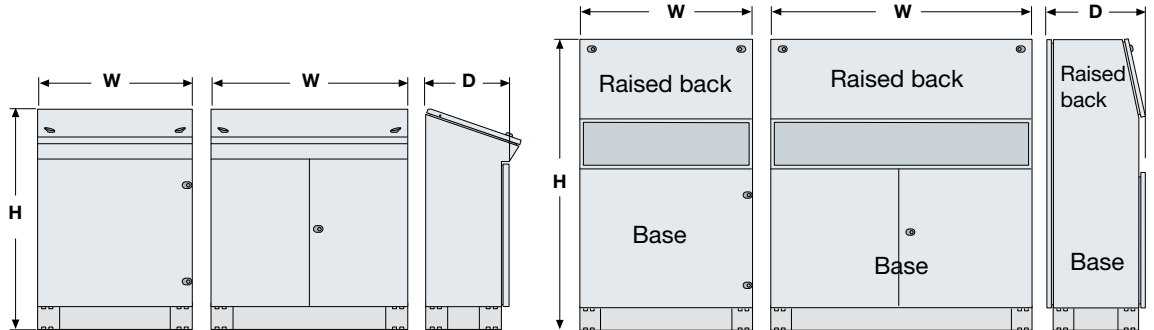
Technical characteristics

Conformity with Standard	IEC 62208	
Degree of mechanical impact	IP55 (IEC 60529) TYPE 12 (UL Standard)	
Degree of mechanical impact	IK10 (IEC 62262)	
Certifications	 	
Type of material	Metal	
Installation site	Indoors	
Method of fixing	floor	
Normal service conditions	from -5 to +40° C	
- ambient temperature		
Operating climate (t°/rh%)	constant	23°C/83% - 40°C/93%
	variable	23°C/98% - 40°C/98%

C2 console - IP 55

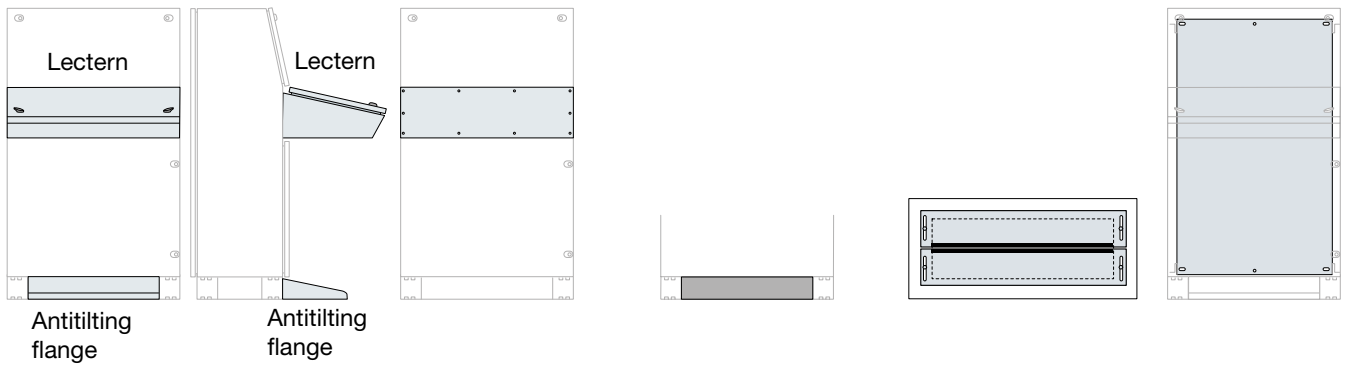
Selection table

Rapid selection table



6

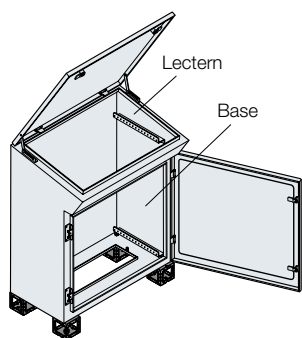
Overall dimensions			Console with lectern		Console, raised back and rear panel		Console, raised back and rear door	
H mm	W mm	D mm	No. 1 front door	No. 2 front doors with overlapping closure	No. 1 front door	No. 2 front doors with overlapping closure	No. 1 front door	N°2 front and rear doors with overlapping closure
1000	600	400	CM1064K					
	800		CM1084K					
	1000		CM1104K					
	1200			CM1124K				
	1600			CM1164K				
1400	600	400			CM4064K		CM4064PK	
	800				CM4084K		CM4084PK	
	1000				CM4104K		CM4104PK	
	1200					CM4124K		CM4124PK
	1600					CM4164K		CM4164PK
	600	500			CM4065K		CM4065PK	
	800				CM4085K		CM4085PK	
	1000				CM4105K		CM4105PK	
	1200					CM4125K		CM4125PK
	1600					CM4165K		CM4165PK



Lectern desk for console	Lectern hole cover panel	Plinth covering flanges		Cable entry flanges	Mounting plates
Lectern desk to be combined with the H=1400mm console complete with antitilting flange	Lectern hole cover panel to be combined with the H=1400mm consoles	Front/rear H=100mm	Side H=100mm	Sliding	Standard back plate
		ZN6000	ZN4000	CF6040	EA8061
		ZN8000		CF8040	EA8081
		ZN1000		CF1040	EA8101
		ZN1200		CF1240	EA8121
		ZN1600		CF1640	EA8161
CN0060	CP0060	ZN6000	ZN4011	CF6040	EA1460
CN0080	CP0080	ZN8000		CF8040	EA1480
CN0010	CP0010	ZN1000		CF1040	EA1411
CN0012	CP0012	ZN1200		CF1240	EA1412
CN0016	CP0016	ZN1600		CF1640	EA1416
CN0060	CP0060	ZN6000	ZN5011	CF6050	EA1460
CN0080	CP0080	ZN8000		CF8050	EA1480
CN0010	CP0010	ZN1000		CF1050	EA1411
CN0012	CP0012	ZN1200		CF1250	EA1412
CN0016	CP0016	ZN1600		CF1650	EA1416

C2 console - IP 55

Ordering codes



Monobloc structures

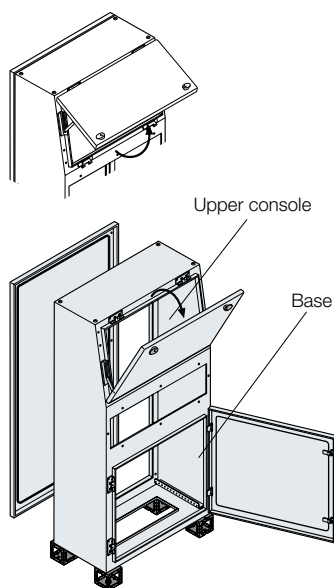
Monobloc console H=1000mm

Monobloc console complete with non-removable sides, non-removable rear, door for base, lectern flap cover, plinth H=100mm made up of four angle pieces. The W=1200 and 1600mm versions are fitted with double blind door with overlapping closure on the base. To be completed with plinth flanges, cable entry flanges and back plate or other internal equipment; orange peel RAL7035 colour.

Console with desk switchboard					
Dimensions (mm)					
H	W	D	Code		Package/ No. of pieces
1000	600	400	CM1064K		1/1
	800		CM1084K		1/1
	1000		CM1104K		1/1
	1200		CM1124K		1/1
	1600		CM1164K		1/1

The consoles W=1200, 1600mm are fitted with two front doors with overlapping closure.

6

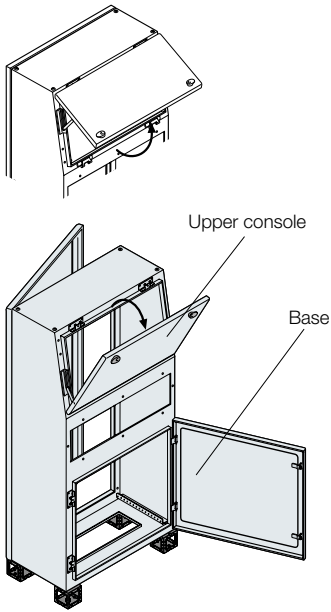


Monobloc console H=1400mm with rear panel

Monobloc console complete with non-removable sides, rear panel, door for base, reversible flap cover opening, plinth H=100mm made up of four angle pieces. The W=1200 and 1600mm versions are fitted with double blind door with overlapping closure on the base. To be completed with lectern or front cover plate, plinth flanges, cable entry flanges and back plate or other internal equipment; orange peel RAL7035 colour.

Console, upper console and rear panel					
Dimensions (mm)					
H	W	D	Code		Package/ No. of pieces
1400	600	400	CM4064K		1/1
	800		CM4084K		1/1
	1000		CM4104K		1/1
	1200		CM4124K		1/1
	1600		CM4164K		1/1
1400	600	500	CM4065K		1/1
	800		CM4085K		1/1
	1000		CM4105K		1/1
	1200		CM4125K		1/1
	1600		CM4165K		1/1

The consoles W=1200, 1600mm are fitted with two front doors with overlapping closure.



Monobloc structures

Monobloc console H=1400mm with rear door

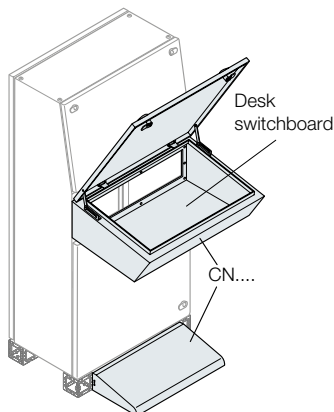
Monobloc console complete with non-removable sides, rear door, door for base, reversible lid opening, plinth H=100mm made up of four angle pieces. The versions of W=1200 and 1600mm are fitted with double blind door with overlapping closure on the base. To be completed with lectern or front cover plate, plinth flanges, cable entry flanges and back plate or other internal equipment; orange peel RAL7035 colour.

Console, upper console and rear door					
Dimensions (mm)					
H	W	D	Code		Package/ No. of pieces
1400	600	400	CM4064PK		1/1
	800		CM4084PK		1/1
	1000		CM4104PK		1/1
	1200		CM4124PK		1/1
	1600		CM4164PK		1/1
1400	600	400	CM4065PK		1/1
	800		CM4085PK		1/1
	1000		CM4105PK		1/1
	1200		CM4125PK		1/1
	1600		CM4165PK		1/1

The consoles W=1200, 1600mm are fitted with two front doors with overlapping closure.

C2 console - IP 55

Ordering codes



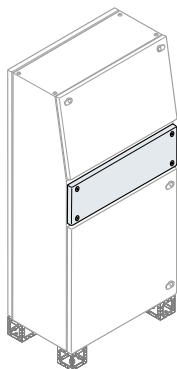
Completion of structures

Lectern desk for console H=1400mm

The flap closing panel of the lectern desk is provided with a special supporting rod to keep it open. The supply also includes a special anti-tilting flange (RAL 7035 colour) to be mounted on the front of the structure.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Desk switchboard for console	1400	600	CN0060	1/1
Desk switchboard for console		800	CN0080	1/1
Desk switchboard for console		1000	CN0010	1/1
Desk switchboard for console		1200	CN0012	1/1
Desk switchboard for console		1600	CN0016	1/1

6



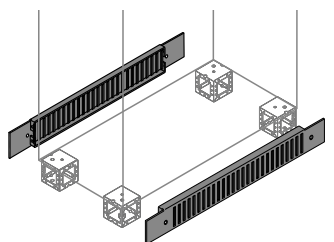
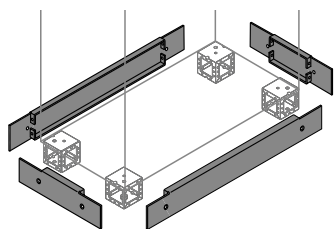
Lectern hole covering panel for console H=1400mm

Covering panel to be mounted instead of the lectern.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Frontal cover panel for console	1400	600	CP0060	1/1
Frontal cover panel for console		800	CP0080	1/1
Frontal cover panel for console		1000	CP0010	1/1
Frontal cover panel for console		1200	CP0012	1/1
Frontal cover panel for console		1600	CP0016	1/1

Flanges front/rear H=100mm

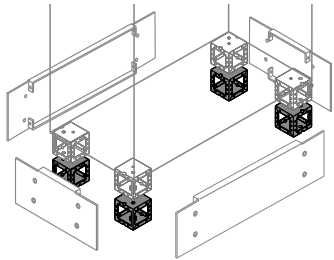
Removable flanges made of 10/10 sheet painted orange peel RAL 7012 colour (not self-supporting).



Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Blind flanges				
Pair of flanges, front/back	100	600	ZN6000	1/2
Pair of flanges, front/back		800	ZN8000	1/2
Pair of flanges, front/back		1000	ZN1000	1/2
Pair of flanges, front/back		1200	ZN1200	1/2
Pair of flanges, front/back		1600	ZN1600	1/2
Pair of side flanges	100	400	ZN4000 ⁽¹⁾	1/2
Pair of side flanges		400	ZN4011 ⁽²⁾	1/2
Pair of side flanges		500	ZN5011	1/2
Flange aerate				
Pair of aerated flanges, front/back	100	600	ZN0006	1/2
Pair of aerated flanges, front/back		800	ZN0008	1/2
Pair of aerated flanges, front/back		1000	ZN0010	1/2

⁽¹⁾ Only for structures H=1000mm

⁽²⁾ Only for structures H=1400mm

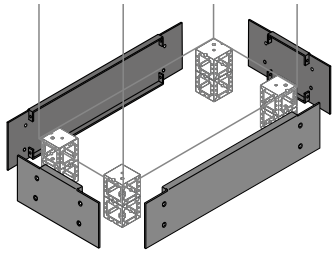


Completion of structures

Additional Plinth

To obtain a plinth 200mm high, order a kit of angle pieces H=100mm to be added to the angle pieces already present on the structure. Complete with 2 covering flanges (H=100mm) for each side of the structure.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H			
No. 4 angle pieces 25/10 thick	100		ZN1010	1/4

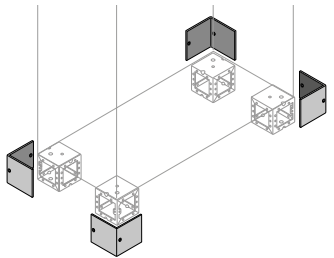


Plinth Covering Flanges H=200mm

Removable flanges made of 10/10 sheet painted orange peel RAL 7012 colour (not self-supporting).

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Blind flanges H=200mm for additional plinth				
Pair of flanges, front/back	200	600	ZN6002	1/2
Pair of flanges, front/back		800	ZN8002	1/2
Pair of flanges, front/back		1000	ZN1002	1/2
Pair of flanges, front/back		1200	ZN1202	1/2
Pair of flanges, front/back		1600	ZN1602	1/2
Pair of side flanges		400	ZN4002 ⁽¹⁾	1/2

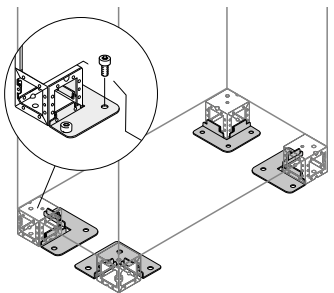
⁽¹⁾ Only for structures H=1000mm



Covers "L" shape for singol plinth

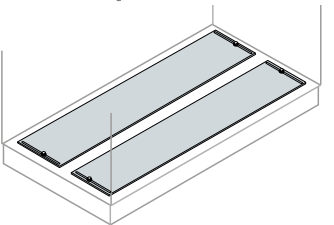
It allows to cover the sides of the plinth in case of non-use of plinth flanges.

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H			
No.4 cover for plinth	100		ZN1040	1/4



Brackets for floor fixing

Description	Code	Package/ No. of pieces
No.4 brackets for floor fixing	ZN1041	1/4



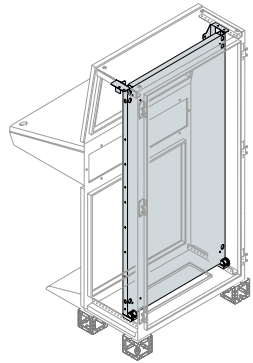
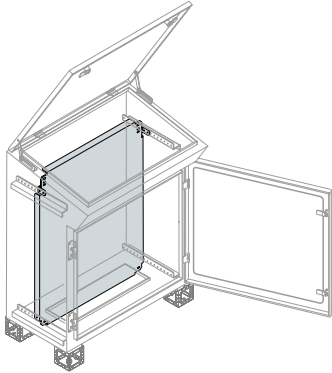
Sliding cable entry flanges

Flanges made of 15/10 galvanised sheet.

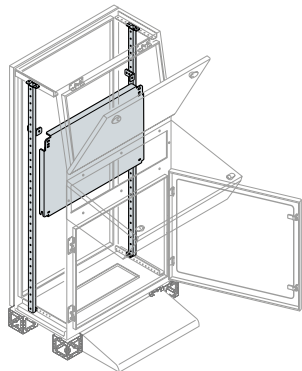
Dimensions (mm)		Code	Package/ No. of pieces
W	D		
Sliding flanges			
600	400	CF6040	1/1
800		CF8040	1/1
1000		CF1040	1/1
1200		CF1240	1/1
1600		CF1640	1/1
600		500	CF6050
800	CF8050		1/1
1000	CF1050		1/1
1200	CF1250		1/1
1600	CF1650		1/1

C2 console - IP 55

Ordering codes



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Completion of structures

Mounting plate

Plate made up of 25/10 galvanised sheet wich can be inserted from the front according to the width of cabinet. It is fixed to the structure on the crosspieces present inside the console.

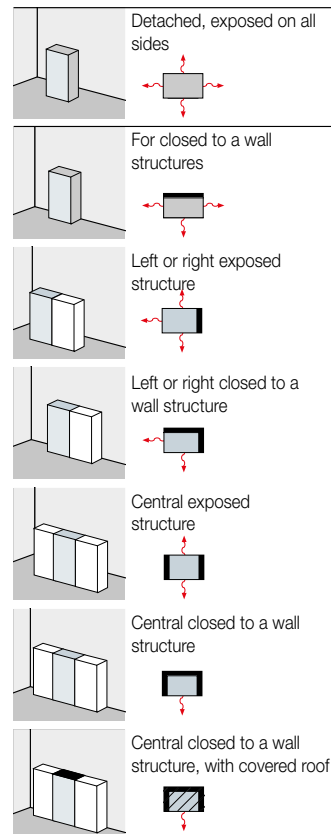
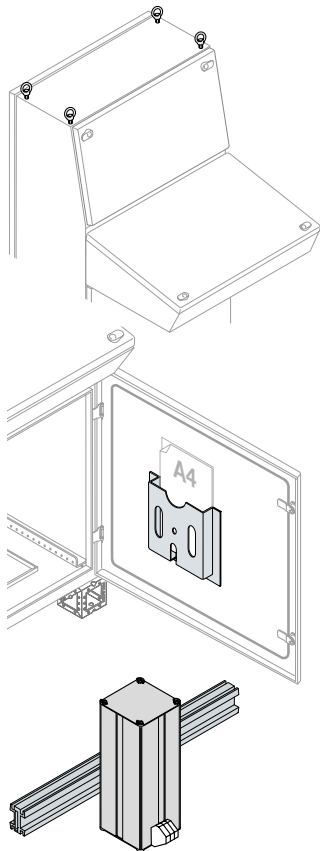
Description	Dimensions (mm)		Code	Package/ No. of pieces
	W	H		
Back plate for structures H=1000mm				
Back plate	600		EA8061	1/1
Back plate	800		EA8081	1/1
Back plate	1000		EA8101	1/1
Back plate	1200		EA8121	1/1
Back plate	1600		EA8161	1/1
Back plate for structures H=1400mm				
Back plate	600		EA1460	1/1
Back plate	800		EA1480	1/1
Back plate	800		EA1411	1/1
Back plate	1200		EA1412	1/1
Back plate	1600		EA1416	1/1

Back plate for structures H=1000mm

Plate made up of 25/10 galvanised sheet wich can be inserted from the front according to the width of cabinet. It is fixed on the appropriate upright EM1404.

Description	Dimensions piastra (mm)		Code	Package/ No. of pieces
	L	H		
Back plate for structures H=1000mm				
Partial back plate		200	EA2062	1/1
Partial back plate		300	EA3061	1/1
Partial back plate		400	EA4061	1/1
Partial back plate	600	500	EA5061	1/1
Partial back plate		600	EA6061	1/1
Partial back plate		800	EA8061	1/1
Partial back plate		1000	EA1061	1/1
Partial back plate		200	EA2081	1/1
Partial back plate		300	EA3081	1/1
Partial back plate		400	EA4081	1/1
Partial back plate	800	500	EA5081	1/1
Partial back plate		600	EA6081	1/1
Partial back plate		800	EA8081	1/1
Partial back plate		1000	EA1081	1/1
Partial back plate	1000	800	EA8101	1/1
Partial back plate	1200	800	EA8121	1/1
Partial back plate	1600	1800	EA8161	1/1
Uprights for fixing and adjustment in depth of the partial height plate				
No. 2 uprights for mounting partial back plates		1400	EM1404	1/2

> Rapid selection table page 6/8 > In-depth technical information page 8/1 > Overall dimensions page 9/1



Accessories

Lifting eyebolts

Allow panel board handling by means of a gantry. They are fixed directly onto the roof of the panel board. They are made of steel and coated with white galvanising treatment.

Description	Code	Package/No. of pieces
N°4 eyebolts M12 for structures	TA9601	1/4

Diagram pockets

These are fixed inside the door by means of adhesive parts.

Description	Code	Package/No. of pieces
Plastic diagram pocket for A4	EV1075K	1/1

Heater for IP20 electrical switchboards

This eliminates any condensation inside the switchboard and consists of a thermistor/PTC (with positive temperature coefficient) which does not give out constant heat, but heat proportional to the temperature inside the switchboard. Snap-on mounting on DIN rail. Requires a thermostat.

Description	Dimensions (mm)			Code	Package/No. of pieces
	H	W	D		
Anti-condensation heater 30W, 110-240 Vac-dc	115	42	42	VA7930	1/1
Anti-condensation heater 50W, 110-240 Vac-dcc	165	42	42	VA7950	1/1
Anti-condensation heater 75W, 110-240 Vac-dc	210	42	42	VA7975	1/1
Anti-condensation heater 100W, 110-240 Vac-dc	165	42	51	VA7910	1/1
Anti-condensation heater 150W, 110-240 Vac-dc	146	82	51	VA7915	1/1
Anti-condensation heater with fan 300W, 230 Vac-dc	148	82	91	VA8300	1/1

All the heaters with PTC absorb a higher power than the rated one on inrush according to a transitory which lasts a few tenths of a second.

If the heaters are to be supplied by means of an auxiliary transformer, its apparent power must be sized taking 1.5 times the rated power of the heaters with natural aeration and twice those with forced ventilation into consideration.

IEC 890 method for calculating the effective cooling surface (CEI 17-43 method)

The total power dissipation P of an enclosure is linked to the exchange effective dissipating surface S, the ΔT difference between the inner and outer temperature and the k coefficient of heat exchange relative to the material of the enclosure:

$$P = k \cdot \Delta T \cdot S; k = 5,5 \text{ for painted steel};$$

$$\Delta T = T_1 - T_2;$$

T1 = dew point temperature (on average 25°C);

T2 = minimum ambient temperature

The exchange surface S can be calculated using the following table taken from the CEI 17-43.

Disposition of the cabinet	Calculating the enclosure surface S S (mm ²)	Dimensions (m)
Detached, exposed on all sides	$S = 1,8 \times H \times (L+P) + 1,4 \times L \times P$	L = width H = height P = depth
For closed to a wall structures	$S = 1,4 \times L \times (H+P) + 1,8 \times P \times H$	
Left or right exposed structure	$S = 1,4 \times P \times (H+L) + 1,8 \times L \times H$	
Left or right closed to a wall structure	$S = 1,4 \times H \times (P+L) + 1,4 \times L \times P$	
Central exposed structure	$S = 1,8 \times L \times H + 1,4 \times L \times P + P \times H$	
Central closed to a wall structure	$S = 1,4 \times L \times (H+P) + P \times H$	
Central closed to a wall structure, with covered roof	$S = 1,4 \times L \times H + 0,7 \times L \times P + P \times H$	

Using a CM1064K console, in "for closed to a wall structures" case we will obtain:

$$T_1 = 25 \text{ °C}, T_2 = 20 \text{ °C}, K = 5,5, \Delta T = (25-20) = 5 \text{ °C}, S = 1,9\text{m}^2$$

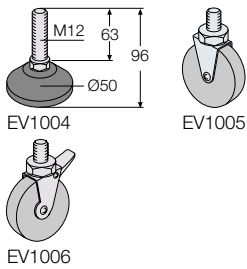
The total power dissipation P obtained will be:

$$P = k \cdot \Delta T \cdot S = 52,25\text{W}$$

The recommended heater is VA7975 (75W)

C2 console - IP 55

Ordering codes



Accessories

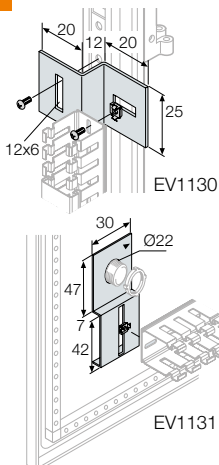
Feet and wheels

Description	Code	Package/ No. of pieces
N°4 anti-vibration levelling feet M12, load capacity 500kg each	EV1004	1/4
N°4 free wheels Ø 80mm, load capacity 70kg cad.	EV1005	1/4
N°4 braking wheels Ø 80mm, load capacity 70kg cad.	EV1006	1/4

Screws for apparatus

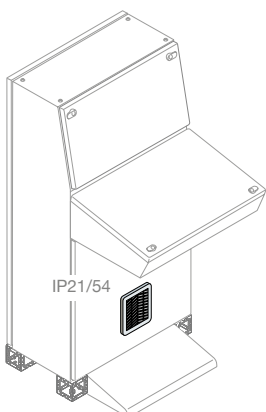
Description	Code	Package/ No. of pieces
N°1000 perforating screws 4.2x13mm cross-slotted head	EV1100	1/1000
N°1000 perforating screws 4.2x19mm cross-slotted head	EV1101	1/1000
No.50 trilobed screws M6 L=10mm	AD1033	1/50

6



Wiring duct support brackets

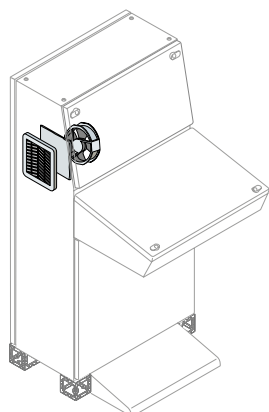
Description	Code	Package/ No. of pieces
N°100 wiring duct support brackets on structure uprights	EV1130	1/100
N°100 wiring duct support brackets on Ø 22 pushbuttons	EV1131	1/100



IP21/54 natural ventilation kit

Gratings made of insulating material (self-extinguishing ABS UL94V-0) RAL7035 colour, complete with high dust collection capacity filter cloth (600g/m²), able to reduce maintenance interventions (cleaning by means of washing in water or by beating). Degree of protection IP21 without filter, IP54 with filter according to IEC 60529, Type 1 without filter, Type 12 with filter according to UL approval 508 fitted with pre-assembled gasket seal. CE and cURus approval.

Description	Air entry surface for ventilation		Dimensions mm (WxW)		Code	Package/ No. of pieces
	with filter cm ²	without filter cm ²	W	W		
Air passage grating+filter Kit	27	6	105	105	EN0105K	1/1
Air passage grating+filter Kit	53	10	150	150	EN0150K	1/1
Air passage grating+filter Kit	121	22	204	204	EN0204K	1/1
Air passage grating+filter Kit	225	32	250	250	EN0250K	1/1
Air passage grating+filter Kit	317	55	325	325	EN0325K	1/1



Accessories

IP54 forced ventilation Kit

Grilles made of insulating material (ABS self-extinguishing UL94V-0) RAL7035 colour, complete with filter cloth with high dust accumulation capacity (600g/m²), able to reduce maintenance interventions (cleaning by washing with water or beating). IP54 degree of protection with filter according to UL approval 508 fitted with pre-mounted tightness gasket. Operating temperature -10 °C + 50 °C, for noise values see page 8/50. The fans allow reversible flow of air. CE and cURus (see mark) approval.

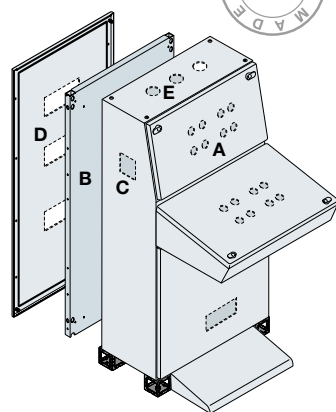
Description	Consumption (W)	Capacity (m ³ /h)	Dimensions (mm)		Code	Package/ No. of pieces
			W	W		
With 230V ~ IP54 fan						
Ventilation filter	10	23	105	105	EN1105K	1/1
Ventilation filter	20	57	150	150	EN1150K	1/1
Ventilation filter	23	120	204	204	EN1204K	1/1
Ventilation filter	59	240	250	250	EN1250K	1/1
Ventilation filter	59/72	520/580	325	325	EN2325K	1/1
With 150 ~ IP 54 fan						
Ventilation filter	10	23	105	105	EN2105K	1/1
Ventilation filter	20	57	150	150	EN2150K	1/1
Ventilation filter	23	120	200	200	EN2204K	1/1
Ventilation filter	59	240	250	250	EN2250K	1/1
Ventilation filter	71/122	520/580	325	325	EN3325K	1/1

In any forced ventilation kit, the fan wheel is balanced. In the larger sizes (cod. EN2325K and cod. EN3325K) there is the balancing clip. The balanced fan wheel ensures less noise and absorption.



Special Painting Service

Special painting service to be managed with cabinet code CM....SPEC. Remember to specify the shade of colour in the order.



Description	Code	W (mm)
Increase for special painting	VERN01	600-800-1000
Increase for special painting	VERN02	1200-1600

See page 8/13 for the colours available.

Special Drilling service

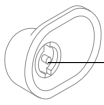
The price increase depends on the number of individual drilled parts of the enclosure, and not on the number of holes to be drilled. For single parts it means: A-door plate B-, C sides, D rear, E roof/bottom. Special drilling service to be managed with cabinet code CM....SPEC. It is necessary to include the drilling layout drawing (see pag. 9/37 for useful drilling areas). Special drilling and painting service to be managed with cabinet code CM....SPEC. It is necessary to include the drilling layout drawing and specify the shade of colour in the order. For request of fins it's necessary the management with offer. For any other component or further information, please contact your local sales network.

Description	Code	Package/ No. of pieces
Increase for special drilling of rear/side/door/ plate panel	FOR01	
Increase for special drilling of roof	FOR02	

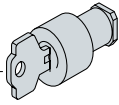
For the overall dimensions see page 9/37.

C2 console - IP 55

Ordering codes



EV1008



EV1036
EV1037

Accessories

Closing systems

Inserts interchangeable with the double tongue ones supplied as standard, complete with relative key.

Description	Code			Package/ No. of pieces
Door closure box complete with insert with double tongue	EV1008			1/1
Single coded Yale insert for closure box	EV1036			1/1
Ronis 455 insert for closure box	EV1037			1/1
Insert with 3mm double tongue for closure box	EV1039			1/1

Spare parts

Description	Dimensions (mm)		Code	Package/ No. of pieces
	H	W		
Rear panel	1400	600	TE1460K	1/1
Rear panel	1400	800	TE1480K	1/1
Rear panel	1400	1000	TE1410K	1/1
Rear panel	1400	1200	TE1412K	1/1
Rear panel	1400	1600	TE1416K	1/1
Door for base of console	700	600	CB7006K	1/1
Door for base of console	700	800	CB7008K	1/1
Door for base of console	700	1000	CB7010K	1/1
Door for base with handle for double door version	700	600	CB7012DK	1/1
Door for base with handle for double door version	700	800	CB7016DK	1/1
Door for base with handle for double door version	700	600	CB7012SK	1/1
Door for base with handle for double door version	700	800	CB7016SK	1/1
Door for lectern CM1064K and counter CN0060 for console H=1400mm	500	600	CC5006K	1/1
Door for lectern CM1084K and counter CN0080 for console H=1400mm	500	800	CC5008K	1/1
Door for lectern CM1104K and counter CN0010 for console H=1400mm	500	1000	CC5010K	1/1
Door for lectern CM1124K and counter CN0012 for console H=1400mm	500	1200	CC5012K	1/1
Door for lectern CM1164K and counter CN0016 for console H=1400mm	500	1600	CC5016K	1/1
Door for upper console	400	600	CA4006K	1/1
Door for upper console	400	800	CA4008K	1/1
Door for upper console	400	1000	CA4010K	1/1
Door for upper console	400	1200	CA4012K	1/1
Door for upper console	400	1600	CA4016K	1/1
RAL 7035 colour spray paint for touching up (400 ml. can)			VB7035	1/1
Grey RAL7012 colour spray paint for plinth			VB7012	1/1
N°6 cloths for filter 105x105mm (HxW)			EN3105	1/6
N°6 cloths for filter 150x150mm (HxW)			EN3150	1/6
N°6 cloths for filter 204x204mm (HxW)			EN3204	1/6
N°6 cloths for filter 250x250mm (HxW)			EN3250	1/6
N°6 cloths for filter 325x325mm (HxW)			EN3326	1/6

Wiring ducts

General characteristics

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Ordering codes

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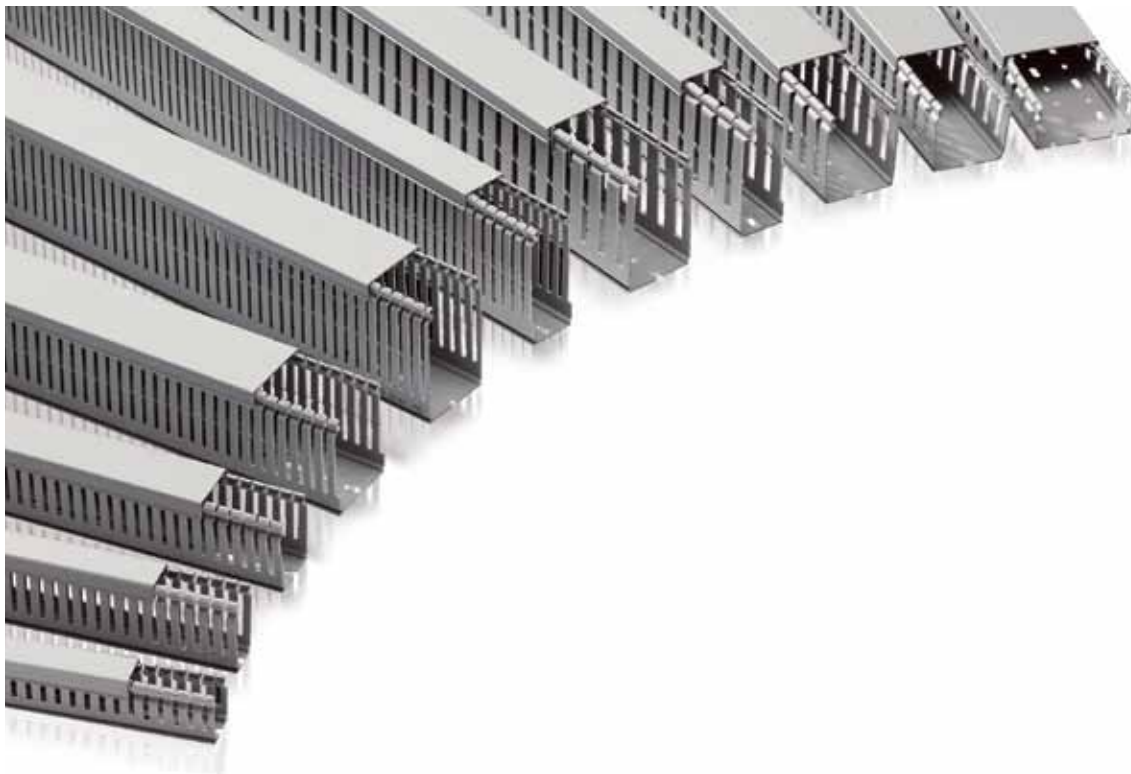
Wiring ducts

General characteristics

Halogen-free thermoplastic material in compliance with VDE 0472 Part 815
Standard: Br + Cl < 0.2 %, F < 0.1 %

- colour RAL 7035 grey
- halogen-free thermoplastic material in compliance with VDE 0472 Part 815 Standard: Br + Cl < 0.2 %, F < 0.1 %
- smoke toxicity index: 18.0 according to NF X70-100 and NF F16-101 Standards
- smoke opacity index*: Dm 377.0 (2.3 mm) V0F4 386.2 (2.3 mm) in compliance with NF X10-702 Standard (reference NF F16-101)* in the event of fire, it is extremely important for the smoke opacity level to be as low as possible during the first 4 minutes in order to allow people to move away from the areas of risk
- on the basis of the values obtained during the smoke opacity and toxicity tests, the material falls within class F2 (in compliance with NF F16-101 Standard)
- in conformity with the UNI EN ISO 11925-2 Standard (test with use of a single flame)
- insulating, shock-proof, self-extinguishing material in compliance with UL 94 V0 Standard and resistant to abnormal heat and fire up to 850°C (glow wire test) in compliance with IEC 695-2-1 Standard
- dimensional stability from -40 to +100 °C
- resistant to acids, oils and greases
- absence of burrs, rounded internal edges
- dimensions and resilience of ribs guarantee repeated splaying during the wiring phase
- controlled splaying of sides for guaranteeing a perfect seal of the cover in vertical sections and in the case of high temperatures
- two prearranged trimming lines: one line at the basis of ribs in order to remove them by bending them towards the outside direction and another line at the basis of the wall in order to cut the edge when two connection ducts are used
- cable holder mouldings halfway along the straight section of the ribs in 80 mm high ducts
- standard 2-metre length
- trunkings comply with the EN 50085-2-3 European Standard
- fields of application: residential, industrial and commercial
- compliance to RoHS directive

7



Thermoplastic wiring ducts with vertical slots. Plastic, insulating, shock-proof, self-extinguishing material in compliance with UL 94 V0 Standard and resistant to abnormal heat and fire up to 960 °C (glow wire test) in compliance with IEC 695-2-1 Standard

- colour RAL 7030 grey
- minimum storage/transport temperature -5 °C
- minimum installation and usage temperature -15 °C
- maximum usage temperature +60 °C
- resistant to acids, oils and greases
- no burr, rounded-off inner edges
- new rib profile makes it easy to open and close the cover and guarantees that it clips on more safely
- designed to snap onto the Fix-O-rapid special accessory, suitable to be fastened both to DIN rail and base plate
- the ribs are cut using a special pressing process (rounding of the edges) producing wiring ducts completely free of burr and rough edges
- the dimensions and resilience of the ribs ensure repeated splaying during cabling
- controlled splaying of sides to ensure a perfect seal of the cover in the vertical sections and at high temperatures
- double trimming line, one at the base of the ribs so that they can be removed by bending them outwards and one at the base of the lateral sides so that the edge can be cut when two wiring ducts are branched
- cable holder mouldings half-way up the straight section of the ribs in 80 and 100-mm high wiring ducts
- cover can be opened without having to use a special tool
- can be mounted on horizontal or vertical surfaces even when the cover is on the bottom
- standard 2-metre length
- industrial application
- compliance to RoHS directive

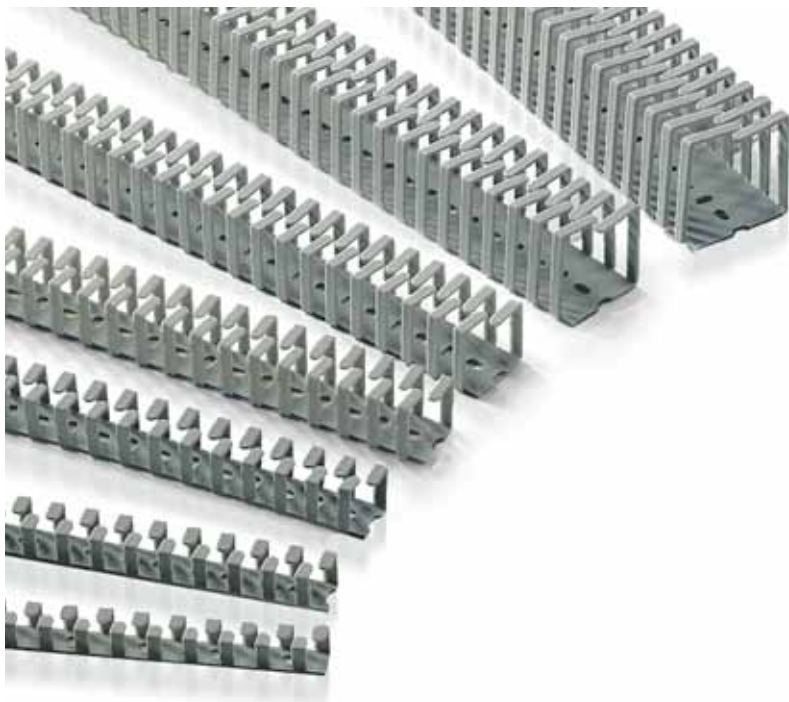


Wiring ducts

General characteristics

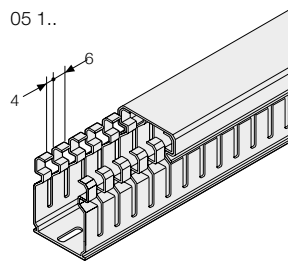
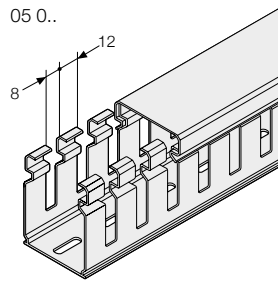
Flexible thermoplastic wiring ducts. Suitable for connecting panels and doors with compass-opening mechanisms and in general for applications where cabling is subject to bending and twisting.

- colour RAL 7040 grey
- plastic, insulating, shock-proof, self-extinguishing material in compliance with UL 94 V2 Standard and resistant to permanent temperature of 80 °C and peaks up to 110 °C in compliance with IEC 216 Standards
- resistant to acids, oils and greases
- ribs alternate and angle slightly inwards to make it easier to insert and extract cables
- no covers so that cables can be constantly monitored
- possibility of fastening using screws and rivets or bi-adhesive tape which sticks strongly to the steel (pre-mounted)
- standard 500-mm length
- industrial application



Wiring ducts

Ordering codes



Halogen free wiring ducts with vertical slots

Halogen free wiring ducts with vertical slot grey RAL 7035

Dimensioni (mm)		Slot 8x12mm	Slot 4x6mm	Unit/ packmeters
B	H	Code	Code	
15	17	1SL9019A00	1SL9119A00	46
25	30	1SL9033A00	1SL9133A00	58
40	30	1SL9035A00	1SL9135A00	38
60	30	1SL9037A00	1SL9137A00	52
25	40	1SL9043A00	1SL9143A00	48
40	40	1SL9045A00	1SL9145A00	30
60	40	1SL9047A00	1SL9147A00	40
80	40	1SL9049A00	1SL9149A00	32
100	40	1SL9051A00	1SL9151A00	24
120	40	1SL9053A00	1SL9153A00	20
25	60	1SL9063A00	1SL9163A00	34
40	60	1SL9065A00	1SL9165A00	22
60	60	1SL9067A00	1SL9167A00	32
80	60	1SL9069A00	1SL9169A00	24
100	60	1SL9071A00	1SL9171A00	20
120	60	1SL9073A00	1SL9173A00	14
25	80	1SL9083A00	1SL9183A00	28
40	80	1SL9085A00	1SL9185A00	36
60	80	1SL9087A00	1SL9187A00	24
80	80	1SL9089A00	1SL9189A00	16
100	80	1SL9091A00	1SL9191A00	16
120	80	1SL9093A00	1SL9193A00	12

7

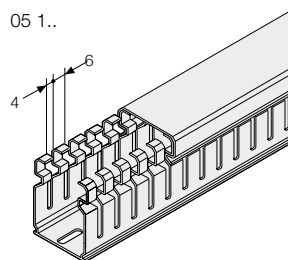
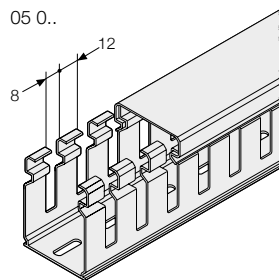
Spare covers

Description	Code	Unit/ packmeters
Trunking base 15mm	1SL5316A00	2/200
Trunking base 25mm	1SL5317A00	2/60
Trunking base 40mm	1SL5318A00	2/40
Trunking base 60mm	1SL5319A00	2/24
Trunking base 80mm	1SL5320A00	2/16
Trunking base 100mm	1SL5321A00	2/48
Trunking base 120mm	1SL5322A00	2/36

For further information on the wiring ducts, please contact the Products for installation division of ABB SACE

Wiring ducts

Ordering codes



Lead free thermoplastic wiring ducts with vertical slots

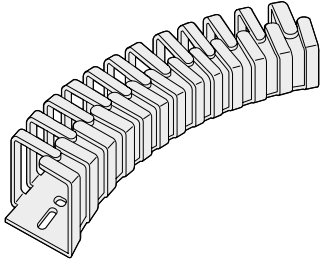
Wiring ducts made of lead free thermoplastic material with grey RAL 7030 slots

Dimensioni (mm)		Slot 8x12mm	Slot 4x6mm	Unit/pack-
B	H	Code	Code	meters
15	17	05 019	05 119	92
25	30	05 033	05 133	116
40	30	05 035	05 135	80
60	30	05 037	05 137	52
25	40	05 043	05 143	96
40	40	05 045	05 145	60
60	40	05 047	05 147	40
80	40	05 049	05 149	32
100	40	05 051	05 151	24
120	40	05 053	05 153	20
25	60	05 063	05 163	68
40	60	05 065	05 165	44
60	60	05 067	05 167	32
80	60	05 069	05 169	24
100	60	05 071	05 171	18
120	60	05 073	05 173	14
25	80	05 083	05 183	56
40	80	05 085	05 185	36
60	80	05 087	05 187	24
80	80	05 089	05 189	16
100	80	05 091	05 191	16
120	80	05 093	05 193	12
25	100	05 094	05 194	40
40	100	05 095	05 195	28
60	100	05 096	05 196	20
80	100	05 097	05 197	14
100	100	05 098	05 198	8
150	100	05 099	05 199	8

Spare covers

Description	Code	Imballo/metri
Trunking base 15mm	05 300	2/200
Trunking base 25mm	05 302	2/60
Trunking base 40mm	05 304	2/40
Trunking base 60mm	05 306	2/24
Trunking base 80mm	05 308	2/16
Trunking base 100mm	05 310	2/48
Trunking base 120mm	05 312	2/36
Trunking base 150mm	05 314	2/28

For further information on the wiring ducts, please contact the Products for installation division of ABB SACE



exible thermoplastic wiring ducts

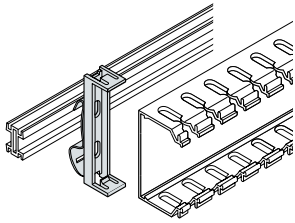
Flexible wiring duct

Dimensioni (mm)		Code		Unit/pack-pieces
B	H			
Slot pitch 7.5/5 - Standard length 500 mm.				
12.5	12.5	05 400		112
16	16	05 402		84
20	20	05 405		112
25	25	05 410		70
30	30	05 415		50
40	40	05 420		50
50	50	05 425		32

For further information on the wiring ducts, please contact the Products for installation division of ABB SACE

Wiring ducts

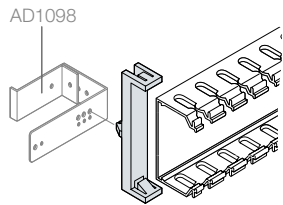
Ordering codes



Accessories

Fix-O-rapid Rapid clip for DIN rail

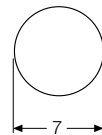
Description	Code	Unit/pack-pieces
Trunking base 25 mm	05 250	20/600
Trunking base 40 mm	05 252	20/600
Trunking base 60 mm	05 254	20/600
Trunking base 80 mm	05 256	20/240
Trunking base 100 mm	05 258	20/240
Trunking base 120 mm	05 260	20/240
Trunking base 150 mm	05 262	20/240



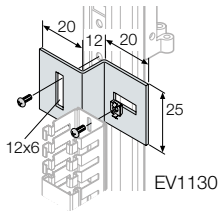
Rapid clip for base plate

Description	Code	Unit/pack-pieces
Trunking base 25 mm	05 270	20/600
Trunking base 40 mm	05 272	20/600
Trunking base 60 mm	05 274	20/600
Trunking base 80 mm	05 276	20/240
Trunking base 100 mm	05 278	20/240
Trunking base 120 mm	05 280	20/240
Trunking base 150 mm	05 282	20/240

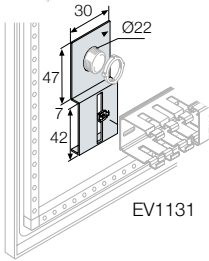
Can be snapped onto holes as shown:



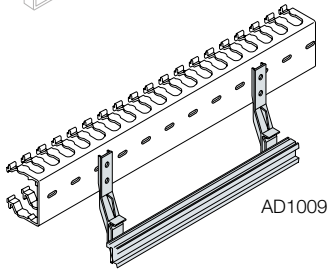
For further information on the wiring ducts, please contact the Products for installation division of ABB SACE



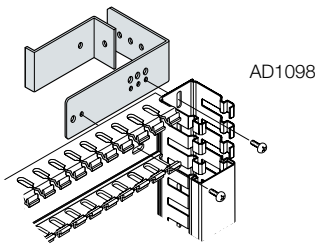
EV1130



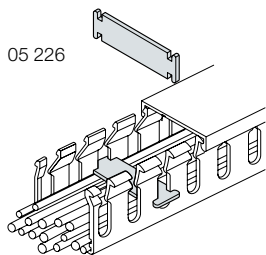
EV1131



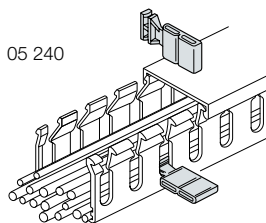
AD1009



AD1098



05 226



05 240

Accessories

Wiring duct support brackets

Description	Code	Unit/pack-pieces
N°100 wiring duct support brackets on structure uprights	EV1130	1/100
N°100 wiring duct support brackets on pushbuttons Ø22mm	EV1131	1/100

Supports for wiring duct

Description	Code	Unit/pack-pieces
N°4 plastic supports for horizontal wiring duct	AD1009	1/4
N°4 metal supports for horizontal/vertical wiring duct	AD1098	1/4

Duct shears

Description	Code	Unit/pack-pieces
Duct shears	05 265	1/1

Rivet fastener

Description	Code	Unit/pack-pieces
For ø 6 mm rivets (black colour)	05 266	1/12
For ø 4 mm rivets (green colour)	05 268	1/12

Plastic rivet

Description	Code	Unit/pack-pieces
05 214 Ø 4mm	05 214	1/100
05 216 Ø 6mm	05 216	1/100

Plastic cable retainer

Description	Code	Unit/pack-pieces
Trunking base 40 mm	05 224	1/100
Base duct 60mm	05 226	1/100
Base duct 80mm	05 228	1/100
Base duct 100/120mm	05 230	1/100

Plastic label tag

Description	Code	Unit/pack-pieces
Suitable for wiring ducts with 8/12 mm slots only.	05 240	1/100

For further information on the wiring ducts, please contact the Products for installation division of ABB SACE

In-depth technical information

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In-depth technical information

Gemini switchboards

Conformity with standards and technical characteristics

Reference Standards

Standard IEC 62208 (“Empty enclosures for low voltage switch-gear and control gear assemblies. General requirements.”), that has implemented at an international level the Standard IEC 62208, is the prescriptive reference for Gemini switchboards.

The object of Standard IEC 62208 is to formulate definitions, classifications, characteristics and test prescriptions for cases designed to be used as part of protection and operating equipment (switchboards) in compliance with the Standards of the IEC 60439 – IEC 61439-1-2 series, that have a maximum rated voltage of 1000 V in alternating current for maximum frequencies of 1000 Hz or 1500 V in direct current and are suitable for general use in both internal and external applications.

The Standard applies to empty enclosures, before the user has installed protection and operating devices inside them.

The Standard does not apply to enclosures which, due to their construction and functional characteristics, are subject to other prescriptions (e.g. enclosures for domestic and similar installations). In this case, the IEC 60670 – CEI 23-48 Standards are the reference (“Enclosures for apparatus for fixed electrical installations for domestic and similar uses.

Part 1: general prescriptions”) and CEI 23-49 (“Enclosures for apparatus for fixed electrical installations for domestic and similar uses.

Part 2: special prescriptions for enclosures destined to contain protection devices and apparatus which dissipate a power that is not negligible”).

On the basis of what is indicated by ABB SACE in the table of technical characteristics, if, necessary, the installer must certify conformity with the CEI 23-51 (“Prescriptions for constructing, checking and testing distribution switchboards for fixed installations for domestic and similar use”) or IEC 60439-1/IEC 61439-1-2 Standards.

Conformity with standards and technical characteristics

Table of Gemini switchboards' technical characteristics

Size	1	2	3	4	5	6
Gemini with transparent door	1SL0211A00	1SL0212A00	1SL0213A00	1SL0214A00	1SL0215A00	1SL0216A00
Gemini with opaque door	1SL0201A00	1SL0202A00	1SL0203A00	1SL0204A00	1SL0205A00	1SL0206A00
External dimensions WxHxD (mm)	335x400x210	460x550x260	460x700x260	590x700x260	590x855x360	840x1005x360
Internal dimensions WxHxD (mm)	250x300x180	375x450x230	375x600x230	500x600x230	500x750x330	750x900x330
IP degree	IP66	IP66	IP66	IP66	IP66	IP66
Double isolation	yes	yes	yes	yes	yes	yes
IK degree	10	10	10	10	10	10
GWT (°C)	750	750	750	750	750	750
Operating temperature	-25 °C ... +100 °C	-25 °C ... +100 °C	-25 °C ... +100 °C	-25 °C ... +100 °C	-25 °C ... +100 °C	-25 °C ... +100 °C
No. of DIN modules	24 (12x2)	54 (18x3)	72 (18x4)	96 (24x4)	120 (24x5)	216 (36x6)
No. of vertical modules (H=150 mm)	2	3	4	4	5	6
Material	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic
Color	Grey RAL7035	Grey RAL7035	Grey RAL7035	Grey RAL7035	Grey RAL7035	Grey RAL7035
Fast wiring system	Unifix L	Unifix L	Unifix L	Unifix L	Unifix L	Unifix L
No. of locks	2	2	2	2	3	3
Rated frequency	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
NORMA CEI 23-51⁽¹⁾ - IEC 61439-1-2						
Max. dispersible power ⁽²⁾	45 W	72 W	85 W	102 W	156 W	248 W
STANDARD IEC 60439-1						
Over-temperature (par. 8.2.1) ⁽³⁾						
Max. dispersible power with over-temperature of 25 °C	40 W	65 W	77 W	91 W	133 W	205 W
Max. dispersible power with over-temperature of 30 °C	45 W	72 W	85 W	102 W	156 W	248 W
Max. dispersible power with over-temperature of 35 °C	52 W	85 W	100 W	121 W	187 W	299 W
Max. dispersible power with over-temperature of 40 °C	62 W	100 W	118 W	143 W	221 W	355 W
Impulse withstand (par. 8.2.2)						
- Rated service voltage	≤ 690 V	≤ 690 V	≤ 690 V	≤ 690 V	≤ 690 V	≤ 690 V
- Rated insulation voltage AC	≤ 1000 V	≤ 1000 V	≤ 1000 V	≤ 1000 V	≤ 1000 V	≤ 1000 V
- Rated insulation voltage DC	≤ 1500 V	≤ 1500 V	≤ 1500 V	≤ 1500 V	≤ 1500 V	≤ 1500 V
- Rated impulse withstand voltage	8 kV	8 kV	8 kV	8 kV	8 kV	8 kV

⁽¹⁾ **Limits of Applicability of the CEI 23-51 Standard**

The Standard is only applicable if the cabled switchboard fulfils all the following conditions:

fixed installation with average ambient temperature up to 25 °C, occasionally up to 35 °C;

alternating current with rated voltage up to 440 V;

rated incoming current up to 125 A;

rated prospective short-circuit current up to 10 kA or protection using current-limiting devices with limited current up to 15 kA in correspondence with their rated breaking capacity.

⁽²⁾ The data on the maximum dissipated power were taken following the indications in the CEI 23-49 Standard, with a temperature difference of $\Delta t=30$ °C.

⁽³⁾ **Note to paragraph 8.2.1 of Standard IEC 60439-1**

The table gives the thermal dissipation values of Gemini switchboards when they are wall-mounted. The dispersible power figures (in Watts) vary according to the overtemperature allowed in the accessible parts of the switchboard and must be compared with the total amount of power dissipated by all the components installed inside the switchboard taking into due account the factor of contemporaneity.

In-depth technical information

Gemini switchboards

IP degree of protection

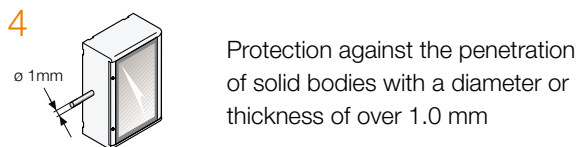
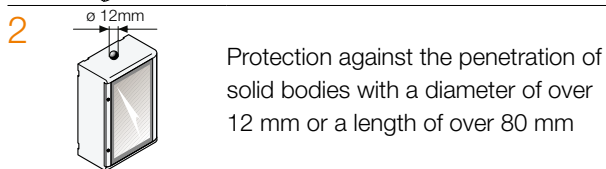
1st number according to IEC 60529 Standard

As indicated in the following table, the IP degree of protection is expressed by two characteristic numbers depending on the behavior of the product to which it refers according to the prescriptions of CEI 70-1 and IEC60529Standards.

1st Number: protection against the penetration of solid bodies

0

No protection



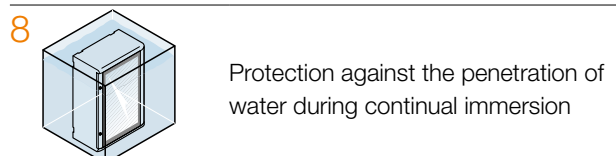
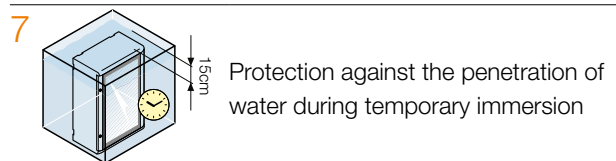
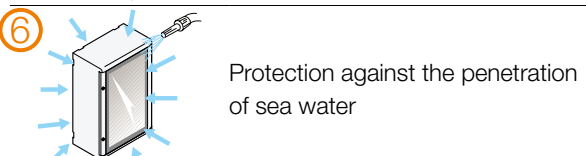
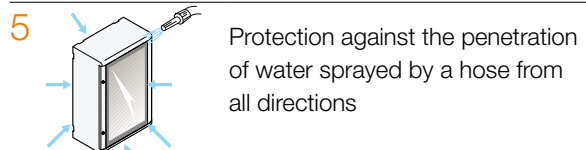
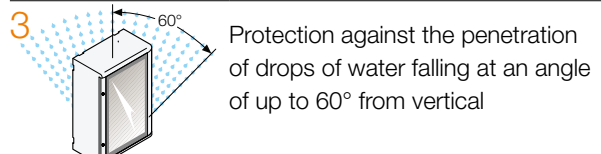
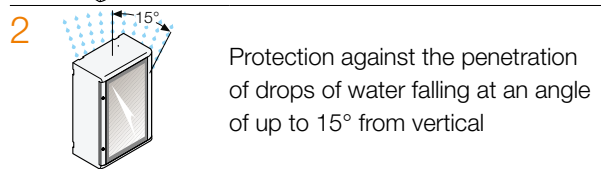
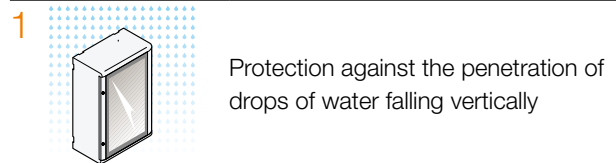
2nd number according to CEI 70-1 IEC 60529 Standard

With IP66 degree of protection, Gemini switchboards are totally protected against the penetration of dusts and sprays of seawater.

2nd Number: protection against the penetration of water

0

No protection



IK degree of resistance to impacts

K degree according to IEC 62262 reference Standard.

The method specified in the IEC 62262 Standard to determine the IK degree of resistance to impact is indicated in the table below. It specifies the resistance of equipment to impact. The proof

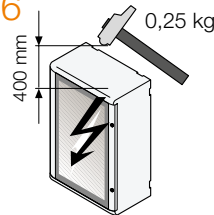
consists in let a weight falling down from a pre-established height. The degree of resistance to impacts is therefore obtained and it is expressed in Joules.

IK 0



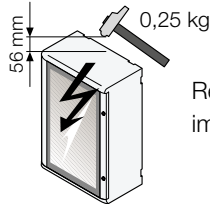
No protection against impacts

IK 06



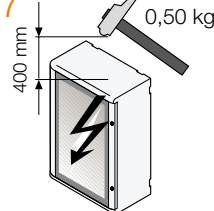
Resistance to impacts with impact energy up to **1,00 J**

IK 01



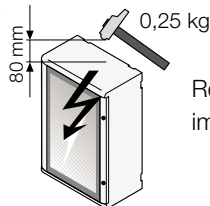
Resistance to impacts with impact energy up to **0,150 J**

IK 07



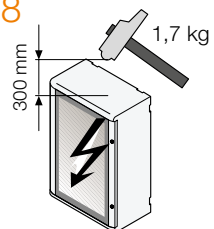
Resistance to impacts with impact energy up to **2,00 J**

IK 02



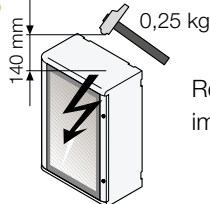
Resistance to impacts with impact energy up to **0,200 J**

IK 08



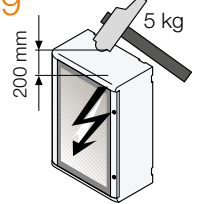
Resistance to impacts with impact energy up to **5,00 J**

IK 03



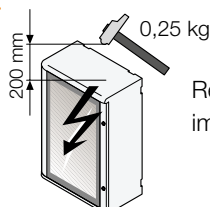
Resistance to impacts with impact energy up to **0,350 J**

IK 09



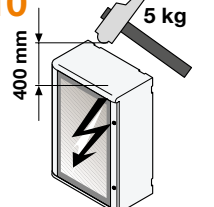
Resistance to impacts with impact energy up to **10,00 J**

IK 04



Resistance to impacts with impact energy up to **0,500 J**

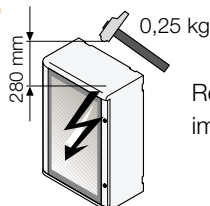
IK 10



Gemini

Resistance to impacts with impact energy up to **20,00 J**

IK 05



Resistance to impacts with impact energy up to **0,700 J**

In-depth technical information

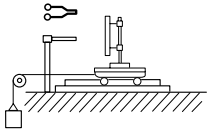
Gemini switchboards

Double insulation



Double insulation guarantees that Gemini is protected against indirect contacts on condition that the manufacturer's instructions are observed when carrying out mounting and wiring operations on the switchboard and that the appropriate accessories are used (e.g. screw-cover caps).

Self-extinguishing tests

Test text	Equipment required	Compliance with Standards	Purpose of the test	Test results	Test conditions		
					Heat source	Length of test	Character. elements
Glow wire (GLOWWIRE TEST)		IEC 695-2-1 CEI 50-11	To assess the danger of fire by simulating thermal stresses produced by heat sources or by ignition (e.g. glowing elements, resistances overloaded for short intervals)	If a flame is generated, it must go out within 30 seconds of removing the glow wire. The test is conducted at temperatures of: - 650°C - 750°C - 850°C - 960°C	Glow wire ø 4 mm	30 sec.	Assessment of the time it takes for the flame to go out

Resistance to chemical agents

The behavior of Gemini switchboards in the presence of chemical agents is indicated in the table with the symbols:

	High resistance	Limited resistance
Cold water	•	
Hot water	•	
Sulfuric acid 50%	•	
Hydrochloric acid 36%	•	
Acetic acid 60%	•	
Benzol		•
Gasoline		•
Acetone	•	
Ethyl alcohol	•	
Ammonia	•	
Dichloromethane		•
Diesel oil - naphtha		•
Mineral oils and greases	•	
Food oils and greases	•	
Perchloroethylene		•
Trichlorethene		•
Ethylether	•	
Toluene		•
Methanol	•	
Wine	•	
Fruit juices	•	
Laundry lye	•	
Detergents	•	

In-depth technical information

Gemini switchboards

Disposal instructions

Information about how to dispose of Gemini switchboards when they reach the end of their life




Instructions are given below about the procedures to adopt when disposing of Gemini switchboards at the end of their life cycle. The text is drafted in the form of a table referring to Standard CEI 308-1 "Information table concerning the end of life of electric and electronic products and a compilation guide", 2002-04, ed. 1, pamphlet number 308-1 6454.

Section I – Global product specification

Name	Type of product			
	Size	With transparent door	With opaque door	Rated weight [kg]
1	1SL0211A00	1SL0201A00	4,3	335x400x210
2	1SL0212A00	1SL0202A00	7,9	460x550x260
3	1SL0213A00	1SL0203A00	9,5	460x700x260
4	1SL0214A00	1SL0204A00	12,0	590x700x260
5	1SL0215A00	1SL0205A00	17,8	590x855x360
6	1SL0216A00	1SL0206A00	21,1	840x1005x360

Section II – Global product table

General code: CER 17 02 03 plastic (more than 95% of the product's weight)

No. of the component part P1, P2, etc.)	Diagram	Quantity % over total weight	Material description	Symbol	Dangerousness (Yes/No)	CER Code
P1/BOX		~ 80%	Polypropylene	 >PP<	No	17 02 03
P2/ROOF			Polypropylene	 >PP<	No	17 02 03
P3/DOOR		~ 20%	Polycarbonate	 >PC<	No	17 02 03
P4/ACCESSORIES		< 5%	Steel	-	No	17 04 05
P5/ACCESSORIES		< 5%	Brass	-	No	17 04 01

Disposal instructions

Section III – Components to be removed from the product and sent for separate treatment

Refer to section II of the table for a description of the materials.

Notes for recovery and disposal

At the end of its life, after separating it from components, the product can be sent to be recovered.

The product is not biodegradable: do not dispose of it in the environment.

The product/waste product is assimilable as solid urban waste. It must be incinerated or disposed of in compliance with current EEC, national and local regulations. You are recommended to check all reutilization possibilities.

Other recommendations

The information in this table relates to the product in the condition it was supplied. Assembled parts coming from different supplies must be treated separately according to the reference specifications of the respective manufacturers.

Section IV – Safety instructions

Handling

No special instructions. Refer to the general regulations concerning hygiene on the workplace when using.

The product's main components contain mineral additives and coloring agents in concentrations that comply with current European Directives at the time this catalogue went to press: they do not contain substances classified as dangerous.

Transport

No special instructions.

Storage

No gas or harmful vapors are released during storage. Thermal decomposition in the event of fire or combustion may release dangerous products: if this should occur, specific means of protection must be used. In the event of fire, conventional fire extinguishing instruments are recommended (atomized water, foam, carbon dioxide, powder).

Empty packages are not contaminated by the product and can therefore be recycled or reused.

Utilization

No special instructions.

Other instructions

The information given in this section is based on current ABB SACE know-how and is aimed at describing the product only for environmental, health and safety purposes. It must not, therefore, be considered as a guarantee of specific properties. ABB SACE assumes no responsibility for the behavior of buyers that do not comply with the information given in this table and for incorrect or improper usages of the product or usages that cannot reasonably be envisaged.

In-depth technical information

Mechanical characteristics

Material

	Structure	Kit panels	Structure panels	Doors		Plates
	Galvanized Steel sheet [mm]	Pickled steel sheet [mm]	Pickled steel sheet [mm]	Pickled steel sheet [mm]	Safety glass external thickness [mm]	Galvanized Steel sheet [mm]
SR2 Enclosures	12/10	12/10	-	12/10	4	20/10
AM2 cabinets	15/10	12/10	-	15/10	4	25/10
IS2 - IS2 EMC Enclosures	15/10	12/10	15/10	15/10	4	25/10
Consòlle C2	15/10	-	-	15/10	-	25/10

Painting

Structure colour	Grey orange peel RAL 7035	
Plinth colour	Grey orange peel RAL 7012	
Standard cycle	Sheet washing Phosphating with ferrous salt base Tunnel drying at 100°C External and internal painting with electrostatic application of powder thermosetting coat with epoxy polyester binders, orange peel RAL 7035 colour, 60/70 micron total thickness. Oven polymerisation at 180° C.	
Characteristics of the paint	Binder:	epoxy polyester
	Specific gravity:	1,61g/cm3
	Theoretical spread:	10.4 m2/kg with 60 micron average film thickness
	Melting point:	85-95° C (Kofler bench method)
	Granulometry:	standard distribution from 5 to 100 micron with average particle size between 30 and 40 micron. Hardening 12 min x 190° C (object temperature).
	Hardness:	1H - 2H
	Bending elasticity DIN 53152:	unaltered on 1/4" spindle
	Reticle adhesion DIN 53151:	GT O (100%)
	Erichem elasticity:	SEN DIN 53156: > 6mm
	Gardner impact strength:	25 Kg. x cm.

Tests carried out on degreased and phosphated plates with 60/70 micron film thickness.

The painting has passed the saline mist resistance tests (193 hours).

Environmental characteristics according to the IEC 62208 Standard

Type of installation	indoor	
Installation conditions	floor	
Operating climate (t°/rh %)	constant	23°C/83% - 40°C/93%
	variable	23°C/98% - 40°C/98%
Environmental temperature limits	operating	-5°C +40°C
	storage	-25°C +55°C

Mechanical characteristics

IS2 cabinet vibration tests

The results of the vibration tests which our standard IS2 automation enclosures have undergone are significant, above all when the enclosures are installed on ships, in seismic areas and in military areas.

The vibration tests on the standard IS2 enclosures have produced the following positive result: with respect to a stress 0.1 g in a range of frequencies between 10 and 500Hz, the maximum acceleration found inside the panel board is less than 0.5 g.

Range of frequency 10-500Hz	10-500Hz
Stress 0,1 g	0,1 g
Maximum acceleration reached (inside the enclosure) <0,5 g	<0,5 g

We have also verified that the IS2 standard enclosure has linear behaviour even when the level of acceleration is increased up to 1 g in the same range of frequencies.

Antiseismic tests enclosures IS2

Enclosure IS2 dimensions 2000x800x800mm (HXDXW) with 435 kh of load. Enclosures have been tested according with the Standard IEC 60068-2-57 "Environmental testing Part. 2: Tests method. Vibration - Time history method" and with the Standard IEEE Std 693 "Recommended Practice for Seismic Design of Substation".

Similar application fields*

Enclosure without specific accessories			
According to the Standard IEC 60068-2-57 - IEEE Std 693	Seismic Zone IEC 68-3-3	Richter scale	Mercalli scale
Shock level test up to 0.5 g	Zona 4	7	9

* Values of different scales are indicative.

Enclosure with specific accessories AS0001+crosspieces+reinforced plinth			
According to the Standard IEC 60068-2-57 - IEEE Std 693	Seismic Zone IEC 68-3-3	Richter scale	Mercalli scale
Shock level test up to 0.75 g	Zona 4	7,5	10

In-depth technical information

ABB SACE declaration of conformity

Conformity with the IEC 62208, IEC 60439-1 and new EN61439-1 and 2 standards
 The enclosures have undergone the type tests foreseen by the IEC 62208 and IEC 60439-1 and new 61439-1 and 2 standards at the ABB laboratories. The results of these tests guarantee the performances of the IS2 enclosures and allow the end panel board builder not to carry out any further type tests by respecting the selection criteria and assembly instructions of the various components. These results, given below, can be referred to for making out the declaration of conformity for the electric panel board.

CEI IEC 62208 Standard

“Empty enclosures for low voltage switchgear and controlgear assemblies”.

EN 60439-1 and new 61439-1 and 2 standards

“Low voltage protection switchgear and controlgear assemblies”.

IS2 Enclosure

Nominal characteristics:

Rated service voltage Un	up to 1000V AC - 1500V DC
Rated insulation voltage Ui	up to 1000V AC - 1500V DC
Rated impulse withstand voltage Uimp	8 kV
Rated frequency fn	50-60Hz
Degree of protection	IP65 with door and fixed flanged IP54 with ventilated/air-conditioned door and panels - with EMC door version
Mechanical impact strength IK	10 with blind door 09 with glazed door - 08 EMC version glazed door
Rated short-time current Icw	65 kA
Rated max.peak current Ipk	143 kA
Installation condition	Internal cabinet

8

Efficiency of the protection circuit (Ref. par. 8.2.4. of the Standard)

By respecting the assembly indications for the metal components, the effective electrical continuity between the conductive electrical parts has been verified, with negligible resistance values.

Insulation distances (Ref. par. 8.2.5. of the Standard)

The insulation distances are guaranteed by following the ABB SACE metalwork structure and circuit-breaker assembly and mounting instruction.

Mechanical operation (Ref. par. 8.2.6. of the Standard)

By respecting the assembly instructions for the structures and ABB SACE circuit-breakers, mechanical operation is verified.

	SR2	C2	AM2
Rated service voltage Un	up to 1000V AC - 1500V DC	up to 1000V AC - 1500V DC	up to 1000V AC - 1500V DC
Rated insulation voltage Ui	up to 1000V AC - 1500V DC	up to 1000V AC - 1500V DC	up to 1000V AC - 1500V DC
Rated frequency fn	50-60Hz	50-60Hz	50-60Hz
IP Degree of protection	with door 65 EMC version 54	55	65
Mechanical impact strength IK	with blind door 10 with glazed door 09	10	10 09

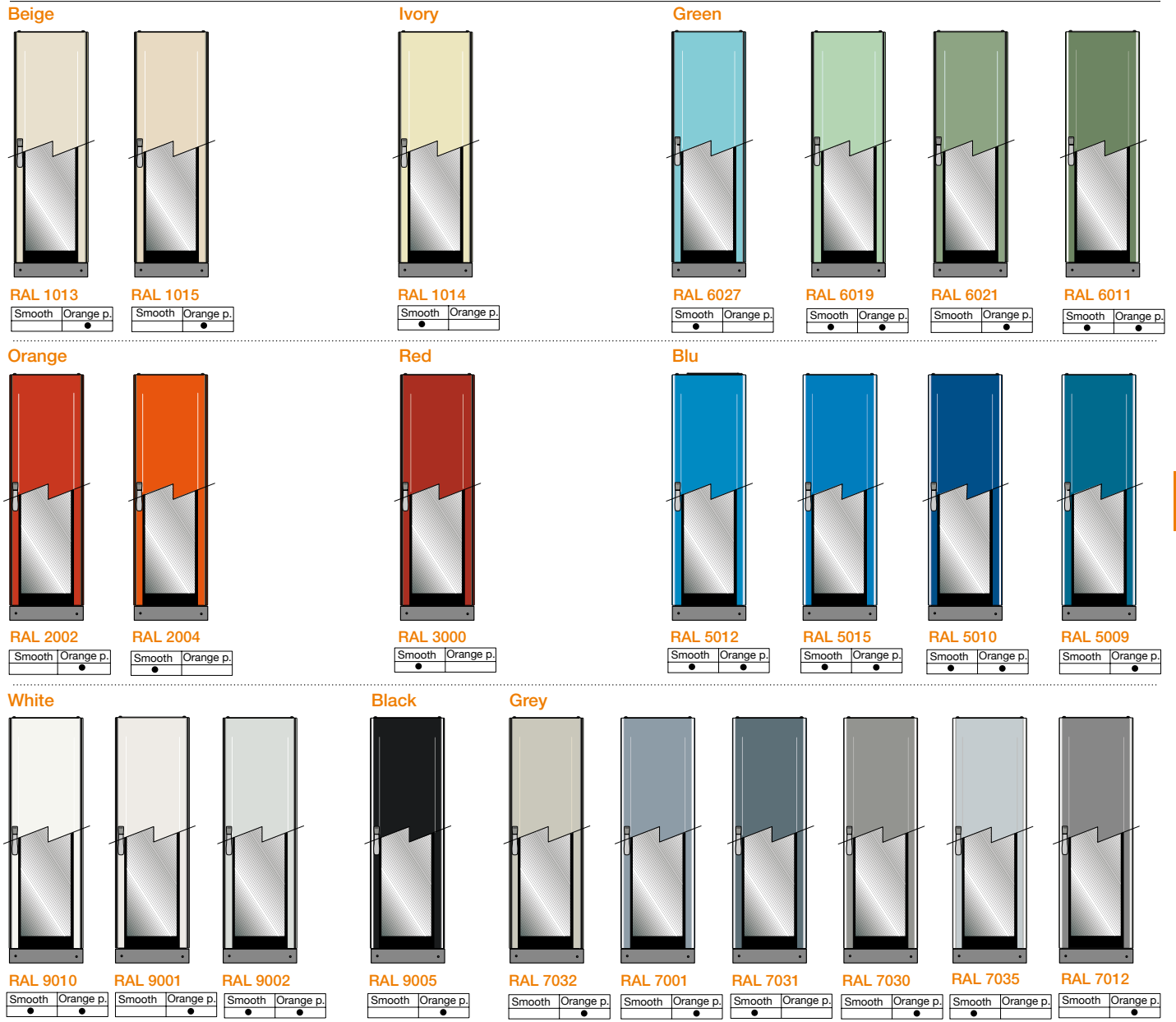
When correctly selected and assembled, as per the indications given in the catalogue and in the instruction manual, they allow of electrical panel boards complying with the IEC 60439-1 Standard and the new IEC 61439-1 and 2 Standard “Low voltage controlgear and switchgear for assemblies” and the IEC 60204-1 “Standard “Safety of machinery – Electrical equipment of machines”, to be built, based on what is foreseen under the Low Voltage Directive of the European Community 2006/95/CE (which takes place of 73/23/CEE directive).

The above is valid if the electrical panel board is designed and constructed:

- selecting the materials based on the performances indicated in the ABB catalogues;
- sizing the conductors according to the prescriptions of the IEC 60439-1 Standard and the new IEC 61439-1 and 2 Standard, and Standard and CEI 64-8;
- carrying out the individual tests foreseen under the IEC 60439-1 Standard and the new Standard IEC 61439-1 and 2 Standard with a positive outcome.

Standardised RAL colours (on request)

On request, colours other than the standard RAL 7035 orange peel one are available, using the same painting cycle (for other types of colours or paints, please contact ABB).



Other types of colours are available on request.

Corrosion test in saline mist

(Ref. Standard UNI ISO 9227, CEI50-5/4, IEC 60068-2-30)

Treatment time (hours)	24	48	72	96	120	144	168	192
Rust penetration	no	no	no	no	no	no	no	193 ⁽¹⁾
Blistering	no	no	no	no	no	no	no	no

⁽¹⁾ When a tearing test with adhesive tape is carried out after 193 hours of exposure, about 3 mm of paint detachment can be noted from the notch area with 1-1.5 mm rust penetration.

In-depth technical information

IS2/IS2EMC enclosures

Dissipating power

Temperature-rise (Ref. Standard IEC 60439-1 par. 8.2.1 and new IEC 61439-1-2 Standard).

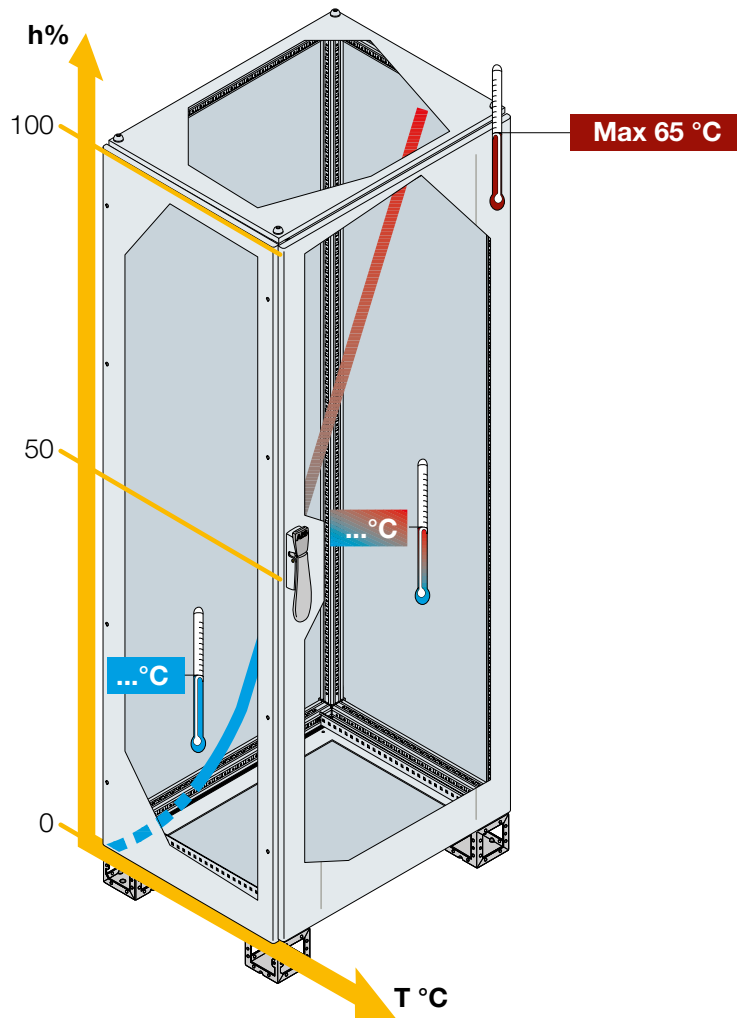
The following tables show the thermal dissipation values referred to all the dimensions of the enclosures and to the type of installation, coming from the type tests carried out. The dissipating power data (in Watts) depend on the admissible overtemperature inside the panel board in the upper Part, and must be compared with the sum of the powers dissipated by all the components installed inside the panel board.

Use of the dissipated power tables

The dissipated power value of a cabinet depends on the maximum temperature (T_{max}) and on the admissible overtemperatures (EN60439-1 Standard and new IEC 61439-1-2 Standard).

Example

If an ambient temperature of 35 °C is considered, the value of dissipating admissible overtemperature (ΔT), which is 30 °C if a temperature at the top of the panel board of 65 °C is acceptable.



Dissipating power

IS2/IS2EMC enclosures - H = 1800mm

Maximum dissipation power (W)

Code	Dimensions			Overtemperature values ΔT																															
	H (mm)	W (mm)	D (mm)	25 °C				30 °C				35 °C				40 °C				25 °C				30 °C				35 °C				40 °C			
				25 °C	30 °C	35 °C	40 °C	25 °C	30 °C	35 °C	40 °C	25 °C	30 °C	35 °C	40 °C	25 °C	30 °C	35 °C	40 °C	25 °C	30 °C	35 °C	40 °C	25 °C	30 °C	35 °C	40 °C	25 °C	30 °C	35 °C	40 °C				
ES1844K	1800	400	400	161	202	245	289	147	185	224	264	145	182	220	260	132	166	201	237	130	163	197	233	119	149	180	213								
ES1845K	1800	400	500	190	238	289	341	177	222	268	317	170	213	259	305	157	197	239	282	149	187	227	268	139	174	211	250								
ES1846K	1800	400	600	219	275	333	393	207	259	314	371	195	244	296	349	182	229	277	327	169	212	257	303	159	200	242	286								
ES1848K	1800	400	800	283	355	430	508	270	339	411	485	248	311	377	445	236	296	358	423	211	264	320	378	203	254	308	364								
ES1840K	1800	400	1000	346	435	526	621	336	421	510	602	301	377	457	540	289	363	439	519	252	317	384	453	247	310	375	443								
ES1864K	1800	600	400	219	275	333	393	197	247	300	354	204	256	310	366	182	229	277	327	188	235	285	337	169	212	257	304								
ES1865K	1800	600	500	256	321	389	460	233	293	355	419	236	296	359	423	214	268	325	383	214	268	325	383	196	246	298	351								
ES1866K	1800	600	600	292	367	444	524	269	337	409	483	267	335	406	479	244	306	371	438	239	299	362	428	221	278	337	397								
ES1868K	1800	600	800	367	461	558	659	346	434	526	621	328	412	499	589	309	387	469	554	292	366	443	523	277	347	420	496								
ES1860K	1800	600	1000	425	533	646	762	421	529	640	756	392	492	596	704	375	470	569	672	344	432	523	618	331	416	503	594								
ES1884K	1800	800	400	283	355	430	508	250	314	380	449	268	336	407	481	236	296	358	423	250	314	380	449	224	281	340	402								
ES1885K	1800	800	500	323	406	492	580	291	365	443	523	303	381	461	544	271	339	411	485	281	352	427	504	255	320	388	458								
ES1886K	1800	800	600	367	461	558	659	335	420	509	601	339	425	515	608	309	387	469	554	313	393	476	562	288	361	438	517								
ES1888K	1800	800	800	431	541	655	774	422	529	641	757	413	518	628	741	383	480	582	687	375	470	569	672	351	441	534	630								
ES1880K	1800	800	1000	482	605	733	865	471	590	715	844	454	570	691	815	450	565	684	808	435	546	661	780	413	518	627	741								
ES1804K	1800	1000	400	346	435	526	621	304	382	463	546	332	416	504	595	289	363	439	519	315	395	478	565	280	351	426	502								
ES1805K	1800	1000	500	395	496	601	709	353	443	537	634	373	468	567	669	333	417	506	597	353	443	537	634	319	400	484	572								
ES1806K	1800	1000	600	425	533	646	762	401	503	609	719	412	517	627	740	375	470	569	672	389	488	592	699	355	446	540	637								
ES1808K	1800	1000	800	482	605	733	865	464	583	706	833	461	578	700	826	450	565	684	808	446	560	678	801	425	534	646	763								
ES1800K	1800	1000	1000	543	681	825	974	520	653	791	934	509	639	774	913	496	622	754	890	485	609	737	870	485	608	737	870								
ES1824K	1800	1200	400	403	506	613	723	362	454	550	650	396	497	603	711	347	436	528	623	384	482	583	689	340	426	517	610								
ES1827K	1800	1200	500	438	549	665	786	415	520	630	744	427	536	650	767	395	495	600	708	423	530	642	758	382	480	581	686								
ES1826K	1800	1200	600	471	591	715	845	448	562	680	803	456	572	693	818	440	552	669	789	448	562	680	803	422	530	642	758								
ES1828K	1800	1200	800	538	674	817	964	508	637	772	911	511	642	777	918	491	616	747	882	494	620	751	886	487	611	740	873								
ES1875K	1800	1600	500	533	669	810	956	466	585	708	836	517	648	785	927	449	563	682	805	497	624	755	892	442	554	671	793								
ES1876K	1800	1600	600	592	743	900	1063	524	658	797	941	566	710	861	1016	502	630	763	901	546	685	829	979	491	615	745	880								
ES1878K	1800	1600	800	705	884	1071	1264	636	798	966	1141	667	837	1013	1197	603	757	917	1082	636	798	966	1141	582	730	885	1044								

Valori validi anche per le versioni con porta vetro.

In-depth technical information

IS2/IS2EMC enclosures

Dissipating power

IS2/IS2EMC enclosures - H = 2000mm

Maximum dissipation power (W)

Code	Dimensions			Overtemperature values ΔT																							
	H (mm)	W (mm)	D (mm)	25 °C				30 °C				35 °C				40 °C											
				25 °C	30 °C	35 °C	40 °C	25 °C	30 °C	35 °C	40 °C	25 °C	30 °C	35 °C	40 °C	25 °C	30 °C	35 °C	40 °C	25 °C	30 °C	35 °C	40 °C				
ES2044K	2000	400	400	174	218	264	312	158	199	240	284	155	195	236	279	141	177	215	254	139	175	212	250	127	159	193	228
ES2045K	2000	400	500	206	258	313	369	191	239	290	342	183	230	278	329	169	212	257	304	161	202	245	289	149	187	227	268
ES2046K	2000	400	600	237	297	360	425	223	280	339	400	210	264	320	377	197	247	299	353	182	228	277	326	171	215	260	307
ES2048K	2000	400	800	305	382	463	547	291	365	442	522	266	334	405	478	253	317	385	454	226	283	343	405	217	272	330	389
ES2040K	2000	400	1000	372	467	566	668	361	453	549	648	324	407	493	582	311	391	473	559	270	339	411	485	264	331	401	473
ES2064K	2000	600	400	237	297	360	425	213	267	323	382	221	277	335	396	197	247	299	353	202	254	308	363	182	228	277	327
ES2065K	2000	600	500	275	346	419	494	251	315	381	450	253	318	385	454	229	287	348	411	229	288	348	411	209	263	318	376
ES2066K ⁽¹⁾	2000	600	600	315	395	479	565	290	364	440	520	287	360	436	515	262	329	399	471	257	322	390	460	237	298	361	426
ES2068K ⁽²⁾	2000	600	800	387	486	588	694	370	464	562	663	351	440	533	629	329	413	500	591	311	390	473	558	294	369	447	528
ES2060K	2000	600	1000	438	550	666	786	432	542	656	775	411	515	624	737	401	503	609	719	368	462	559	660	353	443	537	634
ES2084K	2000	800	400	305	382	463	547	269	338	409	483	288	361	437	517	253	317	385	454	269	338	409	483	240	301	365	430
ES2085K	2000	800	500	349	438	531	627	313	392	475	561	327	410	497	587	291	365	442	522	301	378	458	541	273	342	414	489
ES2086K ⁽³⁾	2000	800	600	387	486	588	694	358	449	544	642	362	455	551	650	329	413	500	591	334	420	508	600	307	385	466	550
ES2089K ⁽⁴⁾	2000	800	800	445	559	677	799	432	542	657	776	423	531	643	760	410	514	623	735	401	503	610	720	375	471	570	673
ES2080K	2000	800	1000	506	635	769	908	489	613	743	877	471	591	716	845	463	581	703	830	446	560	678	801	442	554	671	792
ES2004K	2000	1000	400	372	467	566	668	327	410	497	587	358	449	544	642	311	391	473	559	338	424	514	607	300	376	455	537
ES2007K	2000	1000	500	404	507	614	725	378	474	574	678	393	494	598	706	355	446	540	637	378	474	574	678	340	426	516	610
ES2006K	2000	1000	600	438	550	666	786	419	526	637	752	423	531	643	759	401	503	609	719	413	519	628	742	380	476	577	681
ES2008K	2000	1000	800	506	635	769	908	481	604	732	864	479	601	727	859	463	581	703	830	460	577	699	825	456	572	693	819
ES2000K	2000	1000	1000	579	726	880	1039	548	687	832	982	536	672	814	961	516	647	784	926	505	633	767	905	499	626	758	895
ES2024K	2000	1200	400	414	519	628	742	387	486	589	695	405	508	616	727	371	466	564	666	401	504	610	720	363	455	551	651
ES2025K	2000	1200	500	454	569	690	814	427	536	649	766	441	553	670	791	420	527	639	754	433	544	659	778	409	513	622	734
ES2026K	2000	1200	600	493	618	749	884	462	580	702	829	474	595	720	850	451	566	686	809	462	580	702	829	451	566	686	810
ES2028K	2000	1200	800	573	719	871	1028	533	668	810	956	539	677	820	968	511	641	776	916	516	647	784	925	502	629	762	900
ES2075K	2000	1600	500	574	720	872	1030	499	625	758	895	556	697	845	997	481	604	732	864	532	668	809	955	471	591	715	845
ES2076K	2000	1600	600	632	793	961	1135	558	700	848	1001	604	758	918	1084	533	669	811	957	581	729	883	1043	520	653	791	934
ES2078K	2000	1600	800	755	947	1147	1354	679	851	1031	1218	713	895	1084	1279	643	806	976	1153	679	851	1031	1218	619	776	941	1110

⁽¹⁾ Values also valid for ES2066EMCK.

⁽²⁾ Values also valid for ES2086EMCK.

⁽³⁾ Values also valid for ES2068EMCK.

⁽⁴⁾ Values also valid for ES2089EMCK.

Values also valid for the versions with glazed door.

Dissipating power

IS2/IS2EMC enclosures - H =2200mm

Maximum dissipation power (W)

Code	Dimensions			Overtemperature values ΔT																							
	H (mm)	W (mm)	D (mm)	25 °C				30 °C				35 °C				40 °C											
ES2244K	2200	400	400	186	233	282	333	169	212	256	303	165	207	251	296	150	188	228	269	148	186	225	266	135	169	204	241
ES2245K	2200	400	500	221	277	335	396	204	256	310	366	196	245	297	351	180	226	274	324	172	216	262	309	159	200	242	285
ES2246K	2200	400	600	255	320	388	458	239	300	364	429	225	283	342	404	210	264	320	377	195	245	296	350	183	229	278	328
ES2248K	2200	400	800	325	408	494	583	311	390	472	557	283	355	431	508	269	338	409	483	240	302	365	431	230	289	350	413
ES2240K	2200	400	1000	381	478	580	684	379	476	576	680	346	435	526	622	333	417	506	597	289	362	439	518	281	352	427	504
ES2264K	2200	600	400	255	320	388	458	228	286	347	409	236	296	359	424	210	264	320	377	217	272	330	389	195	244	296	349
ES2265K	2200	600	500	293	368	446	526	267	335	406	479	270	339	411	485	244	307	371	439	244	306	371	438	223	279	338	399
ES2266K	2200	600	600	336	422	511	604	309	388	470	555	306	384	465	549	280	351	425	502	274	343	416	491	253	317	384	453
ES2268K	2200	600	800	397	498	603	712	388	486	589	696	379	475	575	679	351	440	533	629	330	414	502	592	311	390	473	558
ES2260K	2200	600	1000	453	568	689	813	443	556	673	795	420	527	638	753	417	523	633	747	391	490	594	701	374	470	569	672
ES2284K	2200	800	400	325	408	494	583	287	360	436	515	306	385	466	550	269	338	409	483	287	360	436	515	255	320	387	458
ES2285K	2200	800	500	368	462	559	660	334	420	508	600	349	438	531	627	311	390	472	558	322	404	490	578	291	365	442	521
ES2287K	2200	800	600	397	498	603	712	382	479	580	685	385	483	585	690	351	440	533	629	355	446	540	637	324	407	493	582
ES2288K	2200	800	800	461	579	701	827	444	556	674	796	434	545	660	779	424	532	644	761	415	521	631	745	398	499	604	714
ES2280K	2200	800	1000	532	668	809	955	509	639	774	914	490	614	744	879	476	598	724	855	459	575	697	823	459	575	697	823
ES2204K	2200	1000	400	381	478	580	684	350	439	532	628	375	471	570	674	333	417	506	597	362	454	550	650	320	401	486	574
ES2205K	2200	1000	500	416	521	631	746	393	493	597	705	406	509	616	728	376	472	572	675	393	493	597	705	359	451	546	645
ES2206K	2200	1000	600	453	568	689	813	429	538	651	769	434	545	660	779	417	523	633	747	422	529	641	757	402	505	612	722
ES2208K	2200	1000	800	532	668	809	955	500	627	760	897	499	625	758	895	476	598	724	855	474	595	721	851	466	584	708	836
ES2200K	2200	1000	1000	621	779	943	1114	578	725	879	1037	566	710	860	1015	538	674	817	964	526	660	799	944	514	645	782	923
ES2224K	2200	1200	400	428	537	651	768	397	498	603	712	421	528	640	755	394	494	598	706	410	515	623	736	385	483	585	690
ES2225K	2200	1200	500	472	592	717	846	438	549	665	785	455	571	692	817	428	538	651	769	445	558	676	799	430	540	654	772
ES2226K	2200	1200	600	517	649	786	928	478	599	726	857	494	619	750	886	463	581	704	831	478	599	726	857	461	578	700	827
ES2228K	2200	1200	800	614	770	932	1101	561	703	852	1006	571	716	867	1024	532	667	808	954	540	677	820	968	518	649	787	929
ES2275K	2200	1600	500	613	769	932	1100	532	667	808	954	593	744	901	1064	513	643	779	920	568	713	863	1019	501	628	761	898
ES2276K	2200	1600	600	675	846	1025	1210	591	742	898	1061	649	814	986	1164	567	711	861	1016	616	773	936	1106	549	689	835	985
ES2279K	2200	1600	800	794	996	1206	1424	719	902	1093	1291	757	950	1150	1358	680	853	1033	1220	719	902	1093	1291	654	820	993	1173

Values also valid for the versions with glazed door.

In-depth technical information

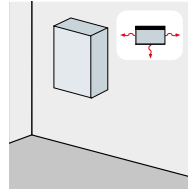
IS2/IS2EMC enclosures

Dissipating power

SR enclosures

Maximum dissipating power (W)

Dissipating power inside the SR enclosures according to the permissible overtemperature (external temperature plus overtemperature = 60 °C max).



Wall-mounted single enclosure

Code	Dimensions			Overtemperature values ΔT			
	H (mm)	W (mm)	D (mm)	25 °C	30 °C	35 °C	40 °C
SRN3215K	300	200	150	18	22	26	31
SRN3315K	300	300	150	23	29	35	42
SRN3415K	300	400	150	34	42	51	60
SRN4315K	400	300	150	30	37	45	53
SRN4320K	400	300	200	33	42	51	60
SRN4420K	400	400	200	42	52	63	74
SRN4620K ⁽¹⁾	400	600	200	59	74	89	105
SRN5320K	500	300	200	39	49	59	69
SRN5420K	500	400	200	47	59	72	85
SRN5420VK	500	400	200	47	59	72	85
SRN5425K	500	400	250	52	66	79	94
SRN5425VK	500	400	250	52	66	79	94
SRN6420K	600	400	200	54	67	82	96
SRN6420VK	600	400	200	54	67	82	96
SRN6425K	600	400	250	59	74	89	105
SRN6425VK	600	400	250	59	74	89	105
SRN6625K ⁽²⁾	600	600	250	79	99	120	141
SRN7520K	700	500	200	68	86	104	122
SRN7520VK	700	500	200	68	86	104	122
SRN7525K	700	500	250	74	93	113	133
SRN7525VK	700	500	250	74	93	113	133
SRN8625K	800	600	250	94	118	143	169
SRN8625VK	800	600	250	94	118	143	169
SRN8630K	800	600	300	107	134	162	191
SRN8630VK	800	600	300	107	134	162	191
SRN8830K	800	800	300	114	142	173	204
SRN10625K	1000	600	250	95	118	143	169
SRN10625VK	1000	600	250	95	118	143	169
SRN10630K	1000	600	300	103	130	156	185
SRN10630VK	1000	600	300	103	130	156	185
SRN10830K ⁽³⁾	1000	800	300	142	178	215	254
SRN10830VK	1000	800	300	142	178	215	254
SRN12630K	1200	600	300	123	155	187	220
SRN12630VK	1200	600	300	123	155	187	220
SRN12830K	1200	800	300	168	210	255	300
SRN12830VK	1200	800	300	168	210	255	300

⁽¹⁾ Values also valid for **SR4620EMCK**.

⁽²⁾ Values also valid for **SR6625EMCK**.

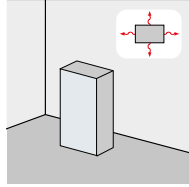
⁽³⁾ Values also valid for **SR10830EMCK**.

Values also valid for the versions with glazed door.

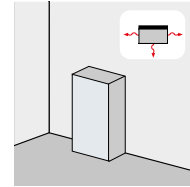
Dissipating power

AM2 cabinets

Maximum dissipating power (W)



Single enclosure exposed on all sides



Wall-mounted single enclosure

Code	Dimensioni			Overtemperature values ΔT							
	H (mm)	W (mm)	D (mm)	25 °C	30 °C	35 °C	40 °C	25 °C	30 °C	35 °C	40 °C
TM2063K	1000	600	300	110	137	166	197	102	128	155	183
TM2064K	1000	600	400	137	171	208	245	129	162	196	231
TM2083K	1000	800	300	146	184	222	263	139	174	211	250
TM2003FV5K	1000	1000	300	190	238	289	341	177	223	270	319
TM2084K	1000	800	400	179	224	272	321	171	215	260	308
TM2004K	1000	1000	400	237	297	360	425	217	273	330	390
TM2024K	1000	1200	400	285	358	434	512	262	329	399	471
TM2074K	1000	1600	400	399	501	607	717	343	430	521	615
TM2263K	1200	600	300	130	163	197	233	118	148	180	212
TM2283FV4K	1200	800	300	176	221	268	317	161	202	245	290
TM2223K	1200	1200	300	281	352	427	504	255	320	387	458
TM2264K	1200	600	400	164	205	249	294	150	188	228	269
TM2284K	1200	800	400	223	280	339	400	202	254	308	363
TM2204K	1200	1000	400	272	341	413	488	253	317	385	454
TM2224K	1200	1200	400	327	411	497	587	301	378	458	541
TM2463K	1400	600	300	148	186	225	266	136	170	206	244
TM2464K	1400	600	400	178	224	271	320	175	220	266	314
TM2465K	1400	600	500	234	294	357	421	211	265	321	379
TM8483K	1400	800	300	195	245	297	350	186	233	282	333
TM2484K	1400	800	400	249	313	379	447	230	289	350	414
TM2485K	1400	800	500	300	376	456	538	271	340	412	487
TM2403K	1400	1000	300	257	323	391	461	236	297	359	424
TM2404K	1400	1000	400	303	380	460	543	284	357	432	511
TM2424K	1400	1200	400	354	444	538	635	332	417	505	596
TM2405K	1400	1000	500	346	434	526	621	325	408	494	584
TM2425K	1400	1200	500	390	489	592	699	362	454	551	650
TM2663K	1600	600	300	176	221	268	316	151	190	230	272
TM2664K	1600	600	400	220	277	335	396	194	244	295	349
TM2665K	1600	600	500	259	325	394	465	234	293	355	420
TM2683K	1600	800	300	244	307	371	439	209	263	318	376
TM2684K	1600	800	400	284	357	432	510	253	317	384	453
TM2685K	1600	800	500	317	398	483	570	295	371	449	530
TM2604K	1600	1000	400	331	415	503	594	308	387	469	554
TM2624K	1600	1200	400	379	476	577	681	347	435	527	622
TM2685FV4K	1600	800	500	317	398	483	570	295	371	449	530
TM2605K	1600	1000	500	366	460	557	657	342	429	520	614
TM2625K	1600	1200	500	416	522	632	746	383	481	582	688
TM2864K	1800	600	400	232	291	353	416	197	247	300	354
TM2865K	1800	600	500	256	321	389	460	233	293	355	419
TM2884K	1800	800	400	293	368	446	526	250	314	380	449
TM2885K	1800	800	500	323	406	492	580	291	365	443	523
TM2804K	1800	1000	400	346	435	526	621	304	382	463	546
TM2824K	1800	1200	400	403	506	613	723	362	454	550	650
TM2805K	1800	1000	500	395	496	601	709	353	443	537	634
TM2825K	1800	1200	500	438	549	665	786	415	520	630	744
TM2964K	2000	600	400	260	327	396	467	213	267	323	382
TM2965K	2000	600	500	275	346	419	494	251	315	381	450
TM2984K	2000	800	400	305	383	463	547	269	338	409	483
TM2985K	2000	800	500	349	438	531	627	313	392	475	561
TM2904K	2000	1000	400	372	467	566	668	327	410	497	587
TM2924K	2000	1200	400	414	519	628	742	387	486	589	695
TM2905K	2000	1000	500	404	507	614	725	378	474	574	678
TM2925K	2000	1200	500	454	569	690	814	427	536	649	766

Values also valid for the versions with glazed door.

In-depth technical information

Conformity with Standards

Reference Standard

- CEI 17-70 "Guide to application of the low voltage panel board standards"
- CEI EN 60439-1 and new IEC 61439-1-2 Standard "Low voltage switchgear and controlgear assemblies (LV panel boards) Part 1: Assemblies subject to type tests (TTA) and assemblies partially subject to type tests (PTTA)"
- CEI EN 60529 (IEC 529-1) "Degrees of protection provided by enclosures (IP Code)"
- IEC 62262 "Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK Code)"
- CEI 17-43 (IEC 60890) "Method of temperature-rise assessment by extrapolation for partially type-tested assemblies (PTTA) of low voltage switchgear and controlgear (LV panel boards) not mass-produced"
- (*) CEI 17-52 (IEC 61117 "Method of assessment of the short-circuit withstand of switchgear and controlgear assemblies not mass-produced (PTTA)"
- CEI EN 62208 "Empty enclosures for low voltage switchgear and controlgear assemblies. General prescriptions"
- CEI EN 60204-1 (IEC 60204-1) "Safety of machinery – Electrical equipment of machines. Part 1: General requirements"
- IEEE Std 693 "Recommended Practice for Seismic Design of Substation"

Laws which have implications for electrical panel boards

The new series of IS2 enclosures comply with the national laws regulating responsibility regarding the matter of electrical apparatus and assemblies.

8

- Law 187/68, in which the following is stated:
 - Art.1. All the materials, apparatus, machinery, assemblies and electrical and electronic plants must be professionally made and constructed.
 - Art.2. The materials, apparatus, machinery, assemblies and electrical plants built according to the Italian Electrotechnical Committee are considered to be constructed professionally.
- The 2006/95/EC Low voltage Directive (which replaces 73/23/EEC and subsequent amendments) indicates what characteristics the electrical material commercialised must have.
In this case, the technical references are the Harmonised European Standards, and in case of their lacking, the IEC publications and, in order, National Standards.
- Legislative Decree n° 626 of 25 November 1996, implementation of the 93/68 EEC Directive on the matter of CE marking for the Low voltage Directive, modified with Legislative Decree n° 227 of 31 July 1997.
- Law 46/90 and Decree of implementation DPR n° 447 of 6 December 1991; introduce the obligation for the installer to issue the customer with a declaration of conformity with the Law relative to the plant and to which a report with the type of components used must be attached.
- Directive 1999/92/EC and 94/9/EC Directive Minimum requirements for improvement of safeguarding the health and safety of workers who may be exposed to the risk of explosive atmospheres

In-depth technical information

SR2 Enclosures - AM2 Cabinets - IS2 Enclosures - C2 Console

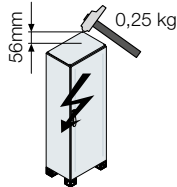
IK degree of resistance to impacts

IK 0



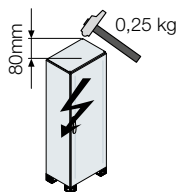
No protection against impacts

IK 01



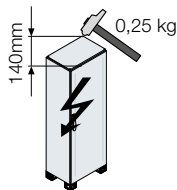
Resistance to impacts with impact energy up to **0,150 J**

IK 02



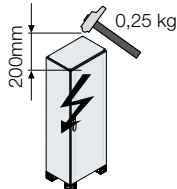
Resistance to impacts with impact energy up to **0,200 J**

IK 03



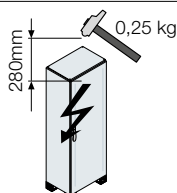
Resistance to impacts with impact energy up to **0,350 J**

IK 04



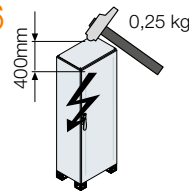
Resistance to impacts with impact energy up to **0,500 J**

IK 05



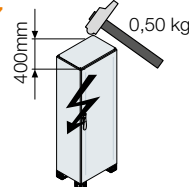
Resistance to impacts with impact energy up to **0,700 J**

IK 06



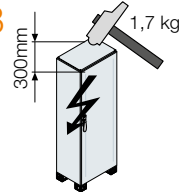
Resistance to impacts with impact energy up to **1,00 J**

IK 07



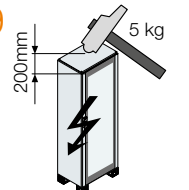
Resistance to impacts with impact energy up to **2,00 J**

IK 08



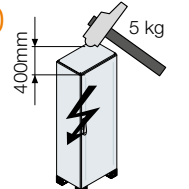
Resistance to impacts with impact energy up to **5,00 J**

IK 09



Resistance to impacts with impact energy up to **10,00 J**

IK 10



Resistance to impacts with impact energy up to **20,00 J**

8

Test performed according to the IEC 62262 Standard.

Degree of protection provided by enclosures for electrical equipment against external mechanical impacts (IK Code).

	With blind door	With glass door
SR2 Enclosures	IK10	IK09
AM2 cabinets	IK10	IK09
IS2 enclosure blind and glass door	IK10	IK09
IS2 enclosure console/PC/compartament	IK10	IK08
IS2 EMC Enclosures	IK10	
C2 Console	IK10	

In-depth technical information

SR2 Enclosures - AM2 Cabinets - IS2 Enclosures - C2 Console

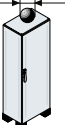
Degrees of protection IP

1st NUMBER: protection against solid bodies

0

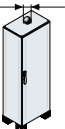
No protection

1 \varnothing 50mm




Protection against the penetration of solid bodies with a diameter of over 50 mm

2 \varnothing 12mm



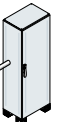
Protection against the penetration of solid bodies with a diameter of over 12 mm or a length of over 80 mm

3 \varnothing 2,5mm



Protection against the penetration of solid bodies with a diameter or thickness of over 2.5 mm

4 \varnothing 1mm




Protection against the penetration of solid bodies with a diameter or thickness of over 1.0 mm

5



Protection against the penetration of dusts

6



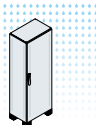
Total protection against the penetration of dusts

2nd NUMBER: protection against liquids

0

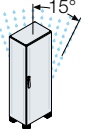
No protection

1



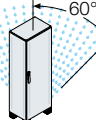
Protection against the penetration of drops of water falling vertically

2 15°



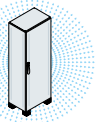
Protection against the penetration of drops of water falling at an angle of up to 15° from vertical

3 60°



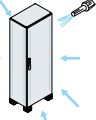
Protection against the penetration of drops of water falling at an angle of up to 60° from vertical

4



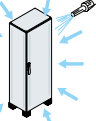
Protection against the penetration of splashes of water from all directions

5



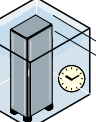
Protection against the penetration of water sprayed by a hose from all directions

6



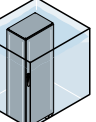
Protection against the penetration of sea water

7 15cm



Protection against the penetration of water during temporary immersion

8



Protection against the penetration of water during continual immersion

Tests carried out in accordance with IEC EN 60529. Degree of protection of the enclosures (IP code).

	With blind door	With cover Hinged/screwed	With door and panel ventilated/air conditioning
SR2 Enclosures	IP65	IP65	
AM2 cabinets	IP65	IP65	
IS2 enclosure blind and glass door, with fixed cable entry flanges	IP65	IP65	IP54
IS2 enclosure console/PC/compartament	IP41	IP41	IP41
IS2 EMC Enclosures	IP54	IP54	
C2 Console	IP55	IP55	

IP degree of protection

Protection against penetration of solid bodies

1st characteristic number	Brief description	Complete description
0	Unprotected	No particular protection
1	Protected against solid bodies larger than 50mm	No large surface of the human must be able to penetrate, for example a hand (voluntary protection is not provided) or solid bodies larger than 50mm in diameter.
2	Protected against solid bodies larger than 12mm	Fingers or similar objects of length not exceeding 80mm or solid bodies of diameter higher than 12 mm must not penetrate
3	Protected against solid bodies larger than 2.5mm	Tools, wires, etc. with diameter or thickness greater than 2.5mm or solid bodies with diameter greater than 2.5mm must not be able to penetrate
4	Protected against solid bodies larger than 1.0mm	Wires or plates thicker than 1.0mm or solid bodies with diameter greater than 1.0mm must not be able to penetrate
5	Protected against dust	Penetration of dust is not totally excluded, but the amount penetrating is not enough to harm correct operation of the material
6	Totally protected against dust	No penetration of dust is allowed

Protection against penetration of water

2nd characteristic number	Brief description	Complete description
0	Unprotected	No particular protection
1	Protected against vertical fall of drops of water	The drops of water which fall vertically must not cause harmful effects
2	Protected against drops of water up to 15° from vertical	The drops of water which fall vertically must not cause harmful effects when the housing is leant at any angle up to 15° in relation to its normal position
3	Protected against rain	The water which falls like rain from a direction with an angle of up to 60° to vertical must not cause harmful effects
4	Protected against the splashes of water	Water splashed over the housing from all directions must not cause harmful effects
5	Protected against jets	Water sprayed with a nozzle onto the housing from all direction must not cause harmful effects
6	Protected against waves	In the case of waves or strong jets of water, the water must not enter the housing in a harmful amount
7	Protected against the effects of temporary immersion	Water in a harmful amount must not be able to penetrate inside the housing immersed in certain pressure and duration conditions
8	Protected against the effects of continual immersion	The material is suited to remaining immersed in water in

In-depth technical information

SR2 Enclosures - AM2 Cabinets - IS2 Enclosures - C2 Console

NEMA “National Electrical Manufacturers Association” Classification

Type	Description	Products classified
1	To be used mainly in indoor environments, to obtain a degree of protection against limited amounts of falling dirt.	SR2 - AM2 - IS2 - C2
2	To be used mainly in indoor environments, to obtain a degree of protection against limited amounts of falling rain and dirt.	
3	To be used mainly in outdoor environments, to obtain a degree of protection against rain, sleet, and dust carried by the wind and against damage caused by ice forming externally.	SR2 - AM2 - IS2 - C2
3R*	To be used mainly in outdoor environments, to obtain a degree of protection against rain and sleet and against damage caused by ice forming externally.	
3S	To be used mainly in outdoor environments, to obtain a degree of protection against rain, sleet, and dust carried by the wind and to guarantee operation of the external mechanisms loaded with ice..	
4	To be used mainly in outdoor environments, to obtain a degree of protection against rain, sleet, and dust carried by the wind, water spray, jets of water and against damage caused by ice forming externally.	
4x	To be used mainly in indoor and outdoor environments, to obtain a degree of protection against dust and rain carried by the wind, water spray, jets of water and against damage caused by ice forming externally.	
5	To be used mainly in indoor environments, to obtain a degree of protection against dust carried on the air, against falling dirt and against drips of noncorrosive liquids.	
6	To be used mainly in indoor and outdoor environments, to obtain a degree of protection against jets of water and against water penetrating during occasional temporary immersions to limited depths and against damage caused by ice forming externally	
6P	To be used mainly in indoor and outdoor environments, to obtain a degree of protection against jets of water and against water penetrating during prolonged immersions at limited depths and against damage caused by ice forming externally.	
12, 12K	To be used mainly in indoor environments, to obtain a degree of protection against circulating dust, against falling dirt and against drips of non-corrosive liquids.	SR2 - AM2 - IS2 - C2
13	To be used mainly in indoor environments, to obtain a degree of protection against dust and water spray, and non-corrosive oil and cooling liquid.	

* Type 3R has been assigned to enclosure provided with protective hood.

ATEX Certification

TABLE 1 - GROUPS, CATEGORIES AND LEVELS OF PROTECTION

(source: Atex Guide – first edition - European Commission DG Enterprises, May 2000)

Level of protection	Group I	Group II	Protection performances	Operating conditions*
Very high	M1		Two independent means of protection or safety guaranteed even when two faults independent of each other occur	The apparatus remains supplied and in operation even in the presence of an explosive atmosphere
Very high		1	Two independent means of protection or safety guaranteed even when two faults independent of each other occur	The apparatus remains supplied and in operation even in areas 0, 1, 2 (G) and/or 20, 21, 22 (D)
High	M2		Protection suited to normal operation and heavy operating conditions (37)	The power supply is cut off to the apparatus in the presence of an explosive atmosphere
High		2	Protection suited to normal operation and to frequent disturbances during which the faults are normally taken into account	The apparatus remains supplied and in operation in areas 1, 2 (G) and/or 21, 22 (D)
SR2 Enclosures - AM2 Cabinets - IS2 Enclosures - C2 Console				
Normal		3	Protection suited to normal operation	The apparatus remains supplied and in operation in areas 2 (G) and/or 22 (D)

* Note: Also see directive 1999/92/CE regarding the minimum prescriptions for improving safety and health of the workers who may be exposed to the hazard of explosive atmospheres ⁽⁶⁹⁾.

⁽⁶⁷⁾ Although the wording of the requirements of apparatus belonging to categories M2 and 2 is different in the relative attachments to directive 94/9/CE, both categories are treated in parallel by the IEC 50014 standard and by the specific regulations. The concepts of technical protection relative to electrical apparatus belonging to category M2 and 2G (gas) in conformity with the IEC 50014 standard are identical. The requirements relative to category 2D (dusts) may, on the other hand, need to be considered separately.

⁽⁶⁸⁾ GU L23, of 28.1.2000.

TABLE 2 - Characteristics and areas corresponding to equipment in group II

(source: "Guide to certification - Directive 94/9/CE - Atex – on the subject of products destined to be used in potentially explosive atmospheres" - Ipsesl)

MANUFACTURER					USER		
DPR 126/98 - Directive 94/9/CE					D.Lgs. 233/03		
Additional requirements for equipment (including the devices and components connected with it)					(Direttiva 1999/92/CE)		
Group	Category	Means of protection			Applicable RES	Presence of explosive atmosphere	Area of use
		Level	Protection characteristics (Annex. I)	Construction characteristic (Annex. II)			
I	1	Very high	In the case of a fault in a means of protection, the level of safety is guaranteed by at least one second independent means of protection. Furthermore, the level of safety is also guaranteed if two anomalies independent of each other occur	Must be designed and constructed so that the ignition sources are not activated, even in the case of anomalies	1.0	Continuous or for long periods of time	0
					1.1		1
					1.2		2
					1.3		
					1.4		20
					1.5		21
					1.6		22
					2.1		
II	2	High	The level of safety is guaranteed even in the presence of recurring anomalies or operating defects of the equipment which must normally be taken into account	Must be designed and constructed so as to preclude the ignition sources even in the case of recurring anomalies or operating defects of the equipment which must normally be taken into account	1.0	Intermediate situation between the previous and the following one	1
					1.1		2
					1.2		
					1.3		21
					1.4		22
					1.5		
					1.6		
					2.2		
SR2 Enclosures - AM2 Cabinets - IS2 Enclosures - C2 Console					1.0	Scarce probability and if it occurs it is of short duration	2
3	Normal	The level of safety is guaranteed during normal operation	Must be designed and constructed so as to preclude the sources of ignition which can be anticipated during normal operation	1.1			
				1.2	22		
					1.3		
					1.4		
					1.5		
					1.6		
					2.3		

In-depth technical information

Electrical continuity

Electrical continuity of the structure and of the fixed and moving parts

Figure 1

Electrical continuity of the structure in the IS2 cabinets is automatically guaranteed just with assembly of the structure, without the use of dedicated accessories.

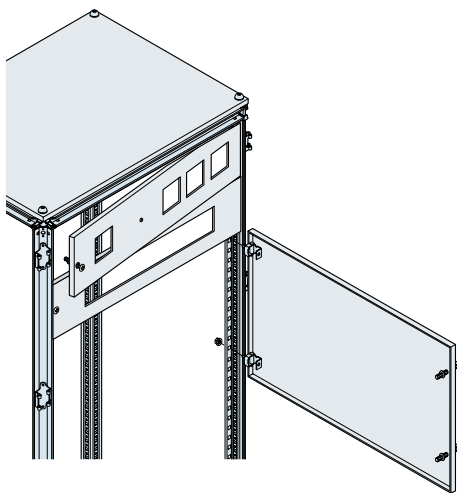


Figure 2

In the case of modular panels, electrical continuity is guaranteed in the closed position by the special shape of the hinge (ABB patent).

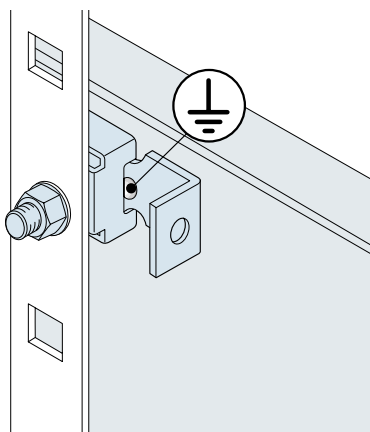


Figure 3

The special shape of the hinges also allows connection by means of traditional copper braids.

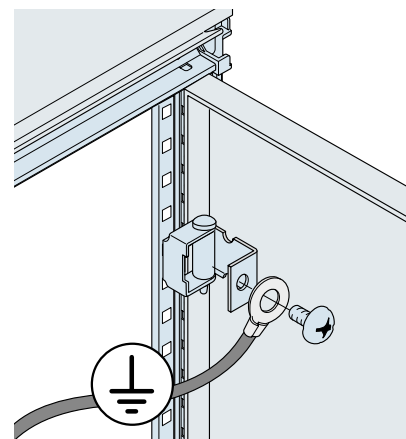
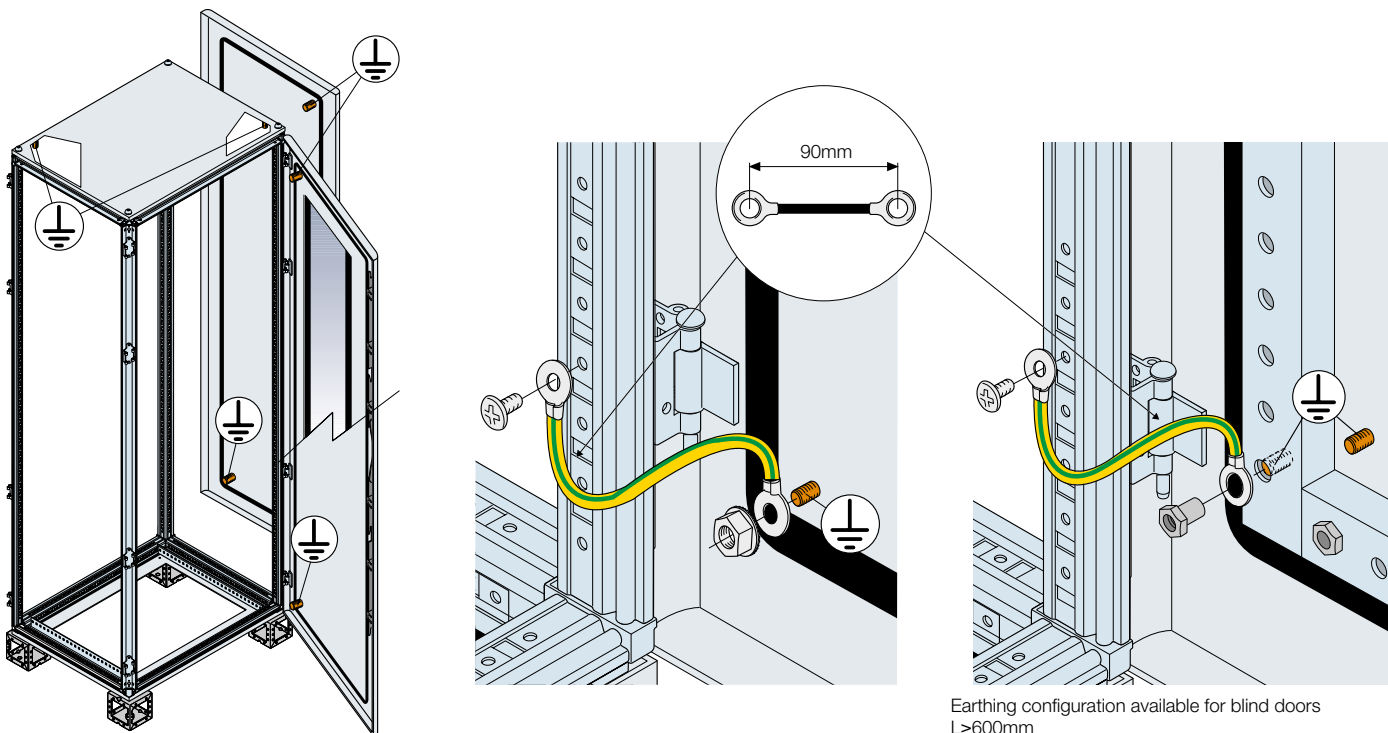


Figure 4

The blind and glazed doors, side panels, rear panels and roofs are fitted with M6 copper captive screws for earthing.



Tests performed according to IEC 62208 (par. 7.7) Standard Empty enclosures for low voltage protection switchgear and controlgear assemblies. General prescriptions

Electrical continuity

Calculation of the PE protection conductor

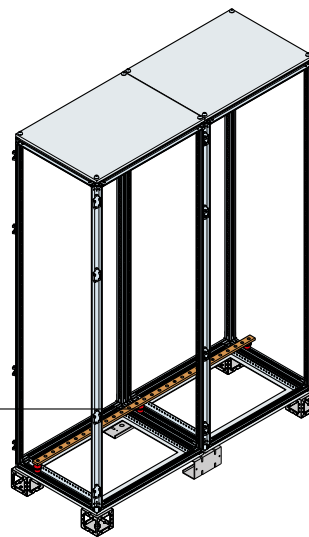
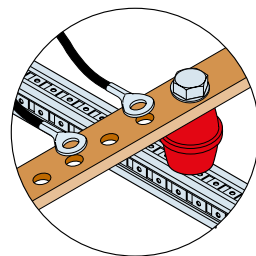
The IEC 60439-1 and new 61439-1-2 standard indicates the methods for calculating the cross-section of the PE protection conductor which must be suitably sized to withstand the thermal and dynamic components of the fault currents. The following conditions must be verified when identifying the fixing position of the busbar:

- the busbar must be connected directly to the earthed parts of the panel board (structure);
- the busbar must be connected in an easily accessible position.

For sizing, use the values in the table, taken from the CEI EN60439-1 Standard and new IEC 61439-1-2 Standard (P.7.4.3.1.7)

S (mm ²)					SP (mm ²)				
		S	≤	16			S		
16	<	S	≤	35			16		
35	<	S	≤	400			S/2		
400	<	S	≤	800			200		
		S	>	800			S/4		

The conductors must be connected individually



Equipotentiality

The accessible conductive parts of a device, which cannot be connected to the protection circuit by means of its own means of connection, must be connected to the protection circuit of the apparatus for equipotentiality of the protection by means of an equipotential conductor, whose cross-section must be selected according to the table given below.

Rated service current I _e (A)					Minimum cross-section of the equipotential protection conductor (mm ²)				
		I _e	≤	20			S		
20	<	I _e	≤	25			2.5		
25	<	I _e	≤	32			4		
32	<	I _e	≤	63			6		
63	<	I _e					10		

S = cross-section of the phase conductor (mm²)

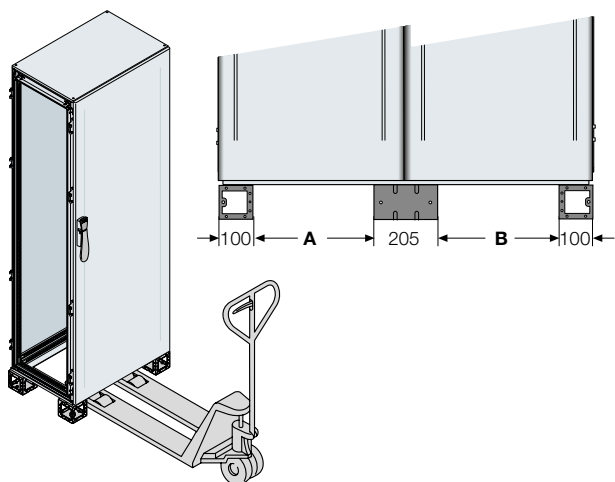
PEN conductor

The cross-section of the PEN conductors of a piece of apparatus must be determined using the same procedure as the one followed for the neutral conductor (N). The minimum cross-section of a copper conductor must be 10mm². The PEN conductor does not need to be insulated. The parts of the structure must not be used as PEN conductors. However, the assembly tracks, either in copper or aluminium, can be used as PEN conductors. For conductors not made of copper, the above cross-sections are replaced with cross-sections of equivalent conductivity, which may require larger sized terminals.

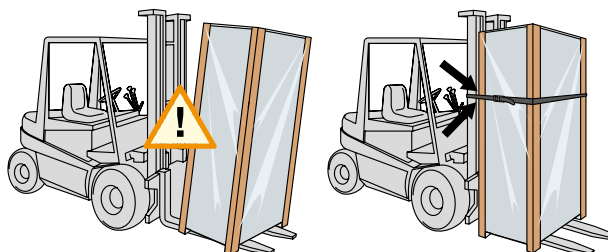
In-depth technical information

Handling

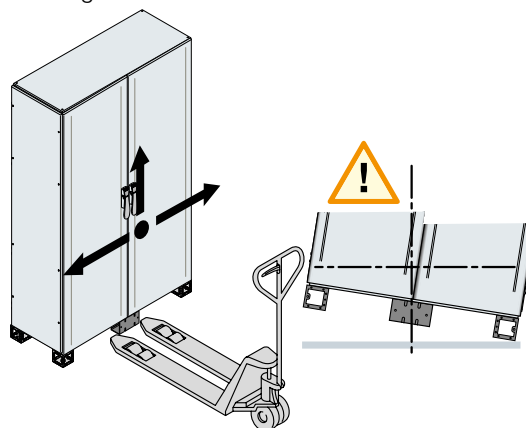
Handling by means of transpallets



For greater safety during transport by means of a fork-lift truck, it is advisable to anchor the panel board to the fork-lift truck:



In the case of W=800mm structures (with internal or external cable container) containing a busbar system, check the centre of gravity before handling.

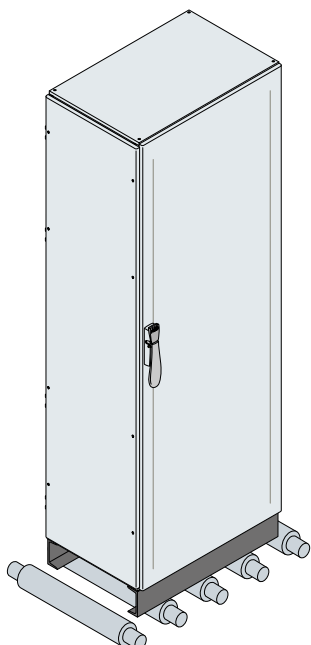


Palletisable plinth

	A (mm)	B (mm)
External cable container W=300mm	88	
Structure W=400mm	188	
Structure W=600mm	388	
Structure W=800mm	588	
Structure W=1000mm	788	
Structure W=1200mm	391.5	391.5
Structure W=1600mm	591.5	591.5

Handling by rollers

Handling IS2 structures by means of rollers: only with EZ... reinforced plinth.



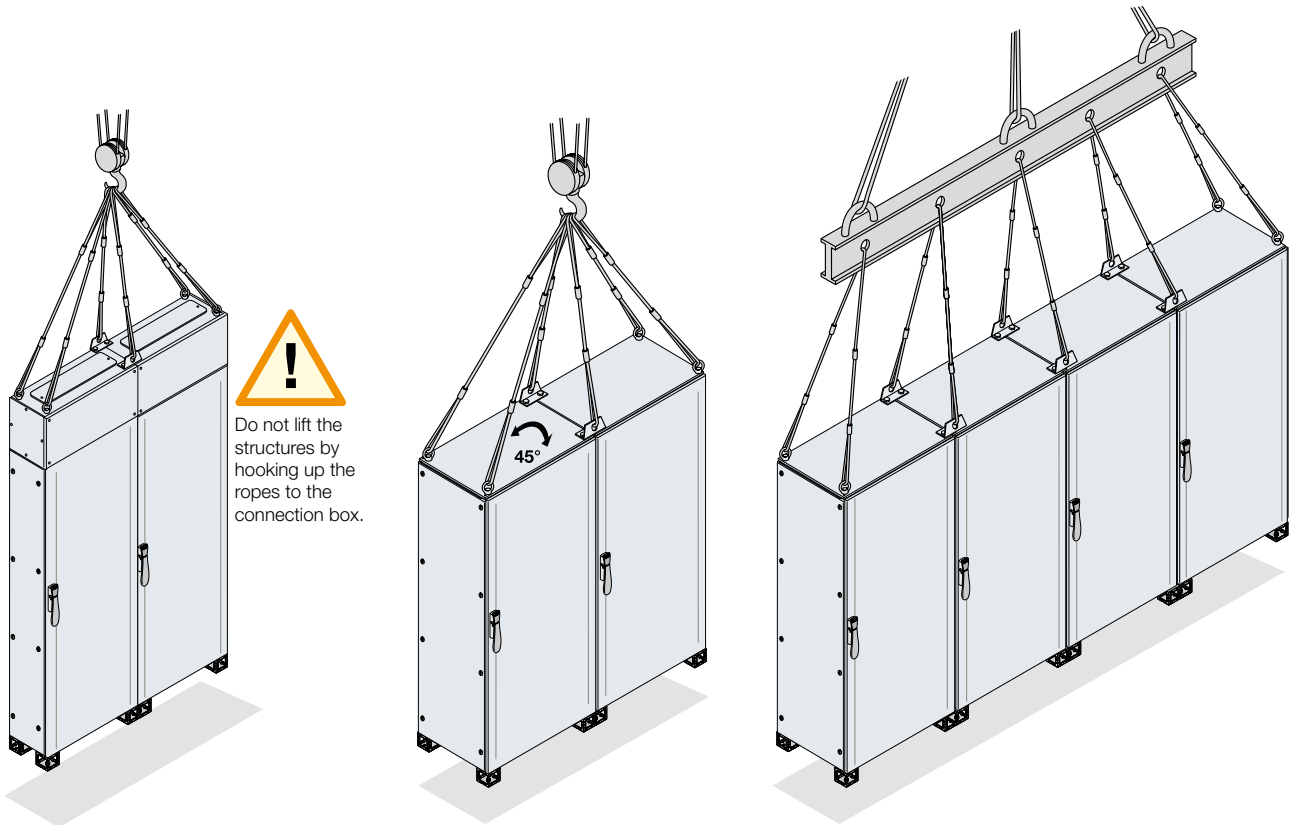
Handling

Handling by means of bridge crane

For handling by means of crane or bridge crane, check the following conditions before lifting the panel board:

- excellent state of the ropes or chains;
- the angle between the lifting ropes and the roof of the switchboard must be $\geq 45^\circ$;
- maximum number of columns which can be transported see pages 8/30;
- maximum weight which can be lifted see pages 8/31.

When there are several columns placed side by side, to respect the above-mentioned conditions, a lifting beam with appropriate characteristics can be used.

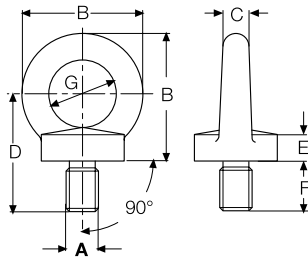


Tests carried out according to IEC 62208 (par. 8.4) Standard

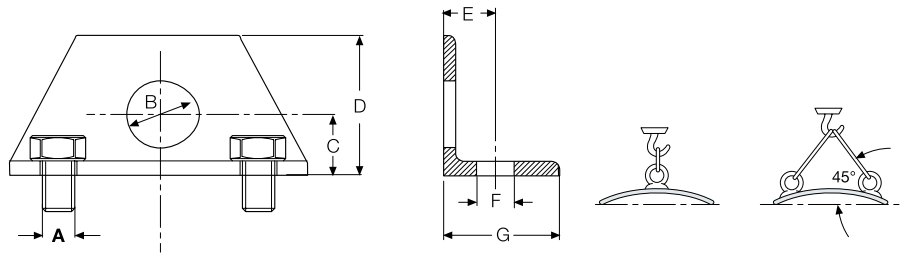
Empty enclosures for low voltage protection switchgear and controlgear assemblies.
General prescriptions.

DIN 580 Standard regarding mechanical connection elements (only for lifting eyebolts)

Lifting eyebolts



Lifting reinforcements



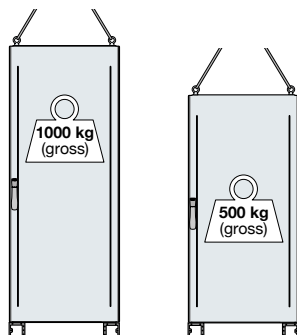
	A	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	Load 1 (kg)	Load 2 (kg)	Serraggio (Nm)
Lifting eyebolts	M12	54	12	28	10	22	30	340	240	8*
Lifting reinforcements	M12	ø20	30	60	28	ø10	40	510	350	40

* Tighten manually without mechanical aids because the latter may cause over-tension in the stem, reducing the eyebolt capacity.

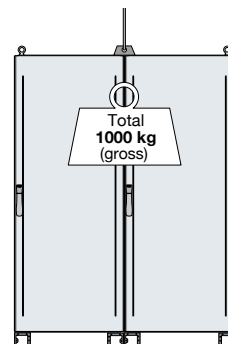
In-depth technical information

Maximum capacities

(in accordance with the IEC 62208 Standard)

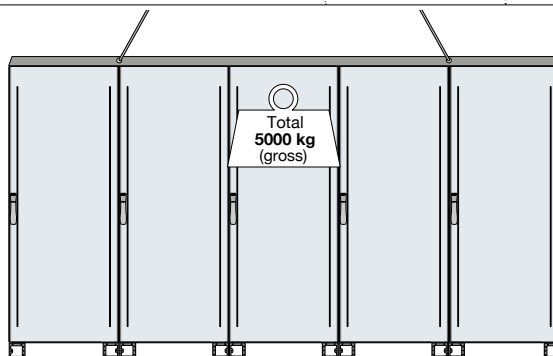


	IS2	AM2
Number of columns	1	1
Weight of single column Kg	1000	500
Total weight of columns Kg	1000	500
Joining Kit		
Lifting Kit	AA9610	TA5510
Number of braces used	4	4

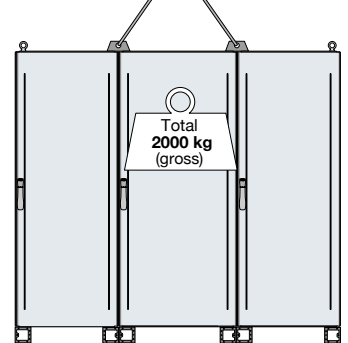
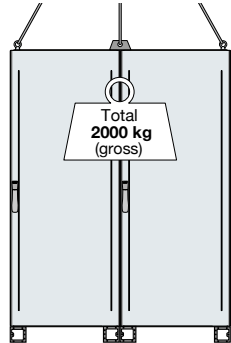


	IS2	IS2 EMC
Number of columns	2	2
Weight of single column Kg	500	500
Total weight of columns Kg	1000	1000
Joining Kit		
The joining of the angle pieces ZN1010 can be obtained by means of M5 screws	EV0002 EV0003	EV0002 EV0006EMC
Lifting Kit	EV1007	EV1007
Number of braces used	2	2

8

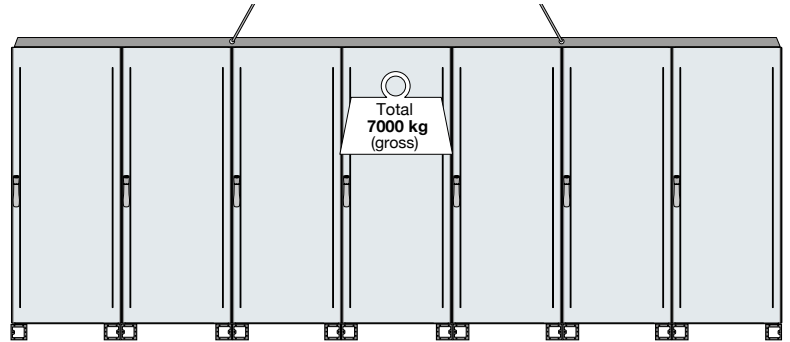


	IS2	IS2 EMC
Number of columns	5	5
Weight of single column Kg	1000	1000
Total weight of columns Kg	5000	5000
Joining Kit	EV0003	EV0006EMC
	By means of TU1000	By means of TU1000
Lifting Kit	4	4
Number of braces used	4	4



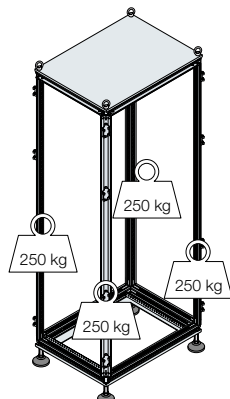
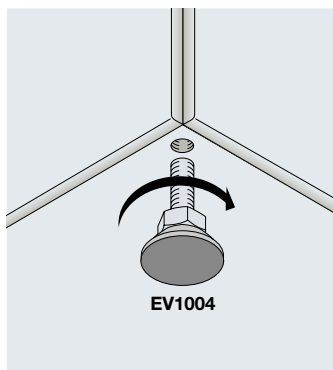
	IS2	IS2 EMC
Number of columns	2	2
Weight of single column Kg	1000	1000
Total weight of columns Kg	2000	2000
Joining Kit	EV0002 EV0003	EV0002 EV0006EMC
Lifting Kit	AA9610 EZ1007	AA9610 EZ1007
Number of braces used	6	6

	IS2	IS2 EMC
Number of columns	3	3
Weight of single column Kg	500	500
Total weight of columns Kg	1500	1500
Joining Kit	EV0002 EV0003	EV0002 EV0006EMC
Lifting Kit	EV1007	EV1007
Number of braces used	4	4

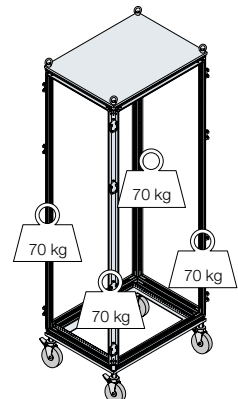
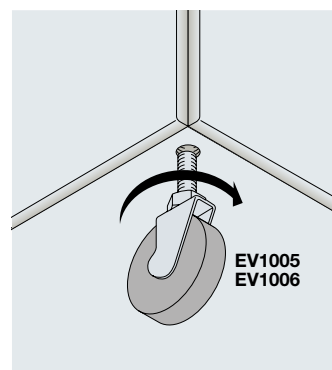


	IS2	IS2 EMC
Number of columns	7	7
Weight of single column Kg	1000	1000
Total weight of columns Kg	7000	7000
Joining Kit	EV0003 TU1000	EV0006EMC TU1000
Lifting Kit	By means of TU1000	By means of TU1000
Number of braces used	4	4

Fitten weels



Braked weels



In-depth technical information

Maximum capacities

(in accordance with the IEC 62208 Standard)

	Door	Side panels	Rear panels	Roof	Standard mounting plate
	Kg	A (mm) Kg	A (mm) Kg	Kg	Kg
SR2	20		> 800 90 ≤ 800 110		50
AM2	50		> 800 90 ≤ 800 110	40	180
IS2	50	> 800 90 ≤ 800 110	> 800 90 ≤ 800 110		500

	Kit for moving back plate back	Oversized mounting plate	Swing rack frame	Fixed rack frame	Horizontal partition panel	Brackets for wall fixing
	Codice Kg	Kg	Kg	Kg	Kg	Codice Kg
SR2					100	AA1206 200
AM2	EA5100 200			90		
IS2	EA2100 600	500	90	90		

Crosspieces H = 48mm			Crosspieces for fixing heavy accessories			Crosspieces H = 100mm			Transformer older crosspieces		
Codice	A/B (mm)	Kg	Codice	B (mm)	Kg	Codice	A/B (mm)	Kg	Codice	A/B (mm)	Kg
EB0400	400	110	EB4100	400	210	EB0440	400	220	EB6102	600	320
EB0500	500	110	EB5100	500	190	EB0550	500	210	EB8102	800	250
EB0600	600	100	EB6100	600	175	EB0660	600	210	EB1102	1000	200
EB0800	800	90	EB8100	800	150	EB0880	800	185			
EB1000	1000	70	EB1100	1200	130	EB1010	1000	160			
EB1200	1200	50				EB1020	1200	140			

In-depth technical information

Busbars with shaped section and flat busbars

Mechanical and electrical characteristics

Conformity with IEC 60439-1 and new IEC 61439-1-2 Standard

The IS2 cabinets have undergone the type tests foreseen by the IEC 60439-1 and new IEC 61439-1-2 Standard in ABB laboratories. The results of these tests guarantee the performances of the IS2 cabinets and, by using ABB SACE metalwork structures and accessories, such as moulded-case and modular circuit-breakers, allow the end panel board builder not to carry out further type tests, as long as the selection criteria and assembly instructions of the various components are respected, just carrying out the individual tests foreseen by the IEC 61439-1-2 Standard. It is possible to make reference to these results, given below, to draw up the declaration of conformity of the electrical panel board.


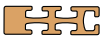
Characteristics of the materials

Components	Material
Busbars	electrolytic copper 99.9% CU-ETP
Busbar holder	self-extinguishing thermoplastic VO
Tightening screws	Material class 8.8
Tightening torque	M6 screws - 10N.m
	M8 screws - 20N.m
	M10 screws - 30N.m

In-depth technical information









Busbars with shaped section and flat busbars

Technical characteristics of busbars with shaped section up to 1600A


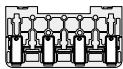
Cross-section	In (A)	Code	N° busbars/ phase	Capacity (A) IP65	Icw max (kA)	IpK (kA)	Dimensions			Weight (kg)
							SxS (mm)	Cross-section (mm²)	Lenght (mm)	
	400	BA0400	1	400	35	74	20x20	200	1730	4
	800	BA0800	1	800	35	74	20x20	283	1730	4.4
	1250	BA1250	1	1250	65	143	20x60	603	1730	9.3
	1600	BA1600	1	1600	65	143	20x60	703	1730	10

8

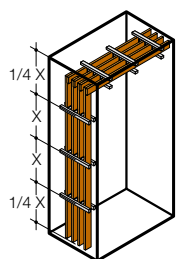
Technical characteristics of flat busbars up to 1600A

Cross-section	In (A)	Code	N° busbars/ phase	Capacity (A) IP65	Icw max (kA)	IpK (kA)	Dimensions		Weight (kg)
							SxS (mm)	Lenght (mm)	
	250	BR0250	1	250	32	48	15X5	1750	1.35
	400	BR0400	1	400	32	48	25X5	1750	3.4
	630	BR0630	1	630	32	68	30X10	1750	4.4
	400	BR4005	1	400	35	74	32X5	1750	2.1
	630	BR6305	1	630	50	105	50X5	1750	3.4
	800	BR8005	1	800	50	105	63X5	1750	4.4
	1250	BR1250	1	1250	50	105	100X5	1750	7.25
	1600	BR1600	1	1600	100	220	100X10	1750	14.5

Busbar holders for busbars with shaped section

Type		I _{cc} (kA)	In (A)	Busbars with shaped section				
				400A	800A	1250A	1600A	
	Linear	35	PB0803	L1-L2-L3	3xBA0400	3xBA0800	-	-
				N 100%	1xBA0400	1xBA0800	-	-
				N reduced	-	1xBA0400	-	-
	Linear	65	PB1603 ⁽¹⁾	L1-L2-L3	-	-	3xBA1250	3xBA1600
				N 100%	-	-	1xBA1250	1xBA1600
				N reduced	-	-	-	1xBA1250

Busbar	Capacity (A)	Busbar holder	N° and distance of the busbar holder according to the max I _{cc}							
			25 kA	X max (mm)	35 kA	X max (mm)	50 kA	X max (mm)	65 kA	X max (mm)
			BA0400	400	PB0803	4	550	5	425	-
		PB1603 ⁽¹⁾	4	550	4	550	-	-	-	-
BA0800	800	PB0803	4	550	5	425	-	-	-	-
		PB1603 ⁽¹⁾	4	550	4	550	-	-	-	-
BA1250	1250	PB1603	4	550	4	550	6	350	9	225
BA1600	1600	PB1603	4	550	4	550	6	350	9	225


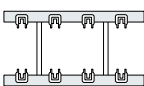
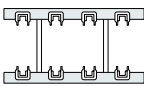


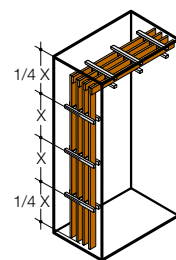
The distance between the first busbar holder and the end of the busbar must not exceed 1/4 of X.

X max = maximum distance not to be exceeded between two consecutive busbar holders.

⁽¹⁾ It is possible to mount the 400/800A busbars with the special adapter AD1066, see example on page 8/32

Busbar holder for flat busbars

Type		I _{cc} (kA)	In (A)	Flat busbars						
				250A	400A	630A	800A	1250A	1600A	
	Linear	32	BP0630	L1-L2-L3	3xBR0250	3xBR0400	3xBR0630	-	-	-
				N 100%	1xBR0250	1xBR0400	1xBR0630	-	-	-
	Linear	50	BP1250	L1-L2-L3	-	3xBR4005	3xBR6305	3xBR8005	3xBR1250	-
				N 100%	-	1xBR4005	1xBR6305	1xBR8005	1xBR1250	-
	Linear	75	BP1600	L1-L2-L3	-	-	-	-	-	3xBR1600
				N 100%	-	-	-	-	-	1xBR1600



The distance between the first busbar holder and the end of the busbar must not exceed 1/4 of X.

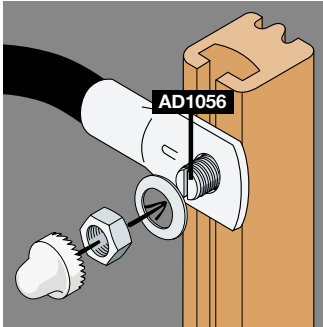
Busbar	Capacity (A)	Busbar holder	N° and distance of the busbar holder according to the max I _{cc}							
			16 kA	X max (mm)	20 kA	X max (mm)	23 kA	X max (mm)	32 kA	X max (mm)
BR0250	250	BP0630	4	500	6	350	10	200	-	-
BR0400	400		4	500	6	350	10	200	-	-
BR0630	630		-	-	4	600	4	600	9	210
Busbar	Portata (A)	Busbar holder	25 kA	X max (mm)	35 kA	X max (mm)	50 kA	X max (mm)	65 kA	X max (mm)
BR4005	400	BP1250	7	300	9	225	-	-	-	-
BR6305	630		6	375	7	275	9	225	-	-
BR8005	800		5	425	7	300	9	225	-	-
BR1250	1250		4	500	6	375	8	250	-	-
BR1250	1600	BP1600	3	1000	3	1000	4	600	6	375

X max = maximum distance not to be exceeded between two consecutive busbar holders.

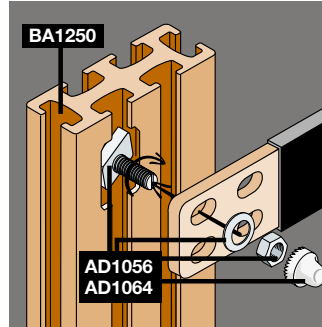
In-depth technical information

Busbars with shaped section and flat busbars

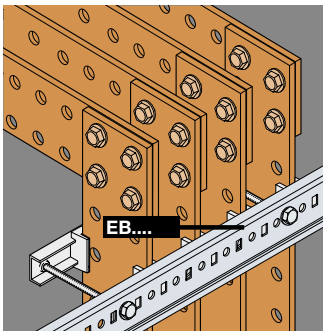
Components



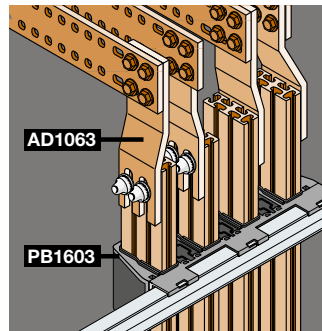
Direct branch by means of cable terminal for cross-section of cable up to 50mm².



M8 self-locking hammer screw for fixing between conductors in any position along the busbar, guarantees a large contact surface.


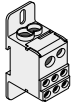
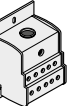

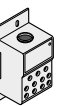
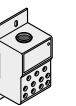
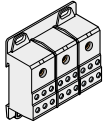
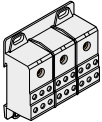










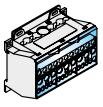
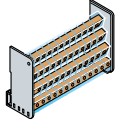
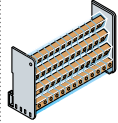
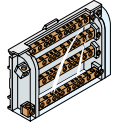
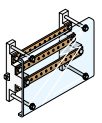
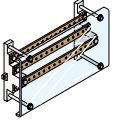
The 25mm drilling pitch allows branches between flat busbars at any point.



Branch between 1600A flat busbars and 1250/1600A busbars with shaped section.

Modular dividers

		Single-pole						Three-poles	
									
Code		AD1076	AD1080 ⁽¹⁾	AD1007	D1081 ⁽²⁾	AD1030	AD1031	AD1075	AD1006
In	IEC (A)	125	125	160	160	250	400	125	160
	UL (A)	115	115	175	160	230	310	115	175
lcw	(kA)	4.4	4.2	11	1.1	21	21	4.4	11
Version	pole	1	1	1	1	1	1	3	3
Installation		DIN35/plate	DIN35/plate	DIN35/plate	DIN35/plate	DIN35/plate	DIN35/plate	DIN35/plate	DIN35/plate
power supply Ø cable (mm ²)	min.	10	6	16	10	35	95	10	16
	max	35	35	70	70	120	185	35	70
No. outgoing feeder Ø cable (mm ²)	1,5÷10					4	4		
	2,5÷16	10	6	10	6	5	5	6	6
	2,5÷25					2	2		
Dimensions HxWxD	(mm)	71x45x42,5	74x27x47	71x45x42,5	92x35x49	95.5x45x49	95.5x45x49	71.5x80x42,5	71.5x80x42,5
No. DIN modules		2,5	1,5	2,5	2	3	3	4,5	4,5
Rated service voltage Ue	(V)	1000 Vac 1500 Vdc	1000 Vac 1500 Vdc	1000 Vac 1500 Vdc	1000 Vac 1500 Vdc	1000 Vac 1500 Vdc	1000 Vac 1500 Vdc	1000 Vac 1500 Vdc	1000 Vac 1500 Vdc
Degree of protection	IP	20	20	20	20	20	20	20	20
Mark									

		Four-pole					
							
Code		AD1004	AD1028	AD1029	AD1027	AD1034	AD1053
In	(A)	125	125	125	160	250	250
lcw	(kA)	10	4.2	4.2	6.2	15	15
l _{pk}	(kA)	24	25	25	20	30	30
Version	poles	4,2	4	4	4	4	4
Installation		DIN35/plate	DIN35/plate	DIN35/plate	DIN35/plate	plate	plate
Power supply Ø cable (mm ²)	min.	6	6	6	10		
	max	35	25 with cable lugs	25 with cable lugs	50		
No. outgoing feeder Ø cable (mm ²)	With cable lugs	Rigid cable	Rigid cable	Rigid cable	Rigid cable		
		5L, 4Nx1,5-6mm ²	7x1,5-10mm ²	9x1,5-10mm ²	8x2,25-25mm ²		
		2L, 6Nx4-10mm ²	2x6-25mm ²	2x1,5-16mm ²	1x10-50mm ²		
		1L, 1Nx6-25mm ²		2x6-25mm ²	3x16-35mm ²		
		Without cable lugs	With cable lugs	With cable lugs	With cable lugs		
		5L, 4Nx1,5-6mm ²	7x1,5-10mm ²	2x1,5-6mm ²	8x2,5-16mm ²		
		2L, 6Nx4-10mm ²	2x6-16mm ²	9x1,5-10mm ²	3x6-25mm ²		
		1L, 1Nx6-35mm ²		2x6-16mm ²	1x10-35mm ²		
			Without cable lugs	Without cable lugs	Without cable lugs		
		7x2,5-16mm ²	11x2,5-16mm ²	8x6-16mm ²			
		2x6-35mm ²	2x6-35mm ²	3x6-25mm ²			
				1x10-35mm ²			
dimensions HxWxD (mm)		74,5x98x45	93x89x48	96x126x48	90x160,5x50	150x600x70	150x800x70
No. DIN modules		5,5	5	7	9	24	36
Rated service voltage Ue	(V)	1000 AC 1500 DC	440	440	440	500	500
Degree of protection	IP	20	20	20	20		

⁽¹⁾ possibility of putting in parallel with AD1083 connections.

⁽²⁾ possibility of putting in parallel with comb type connections (not supplied).

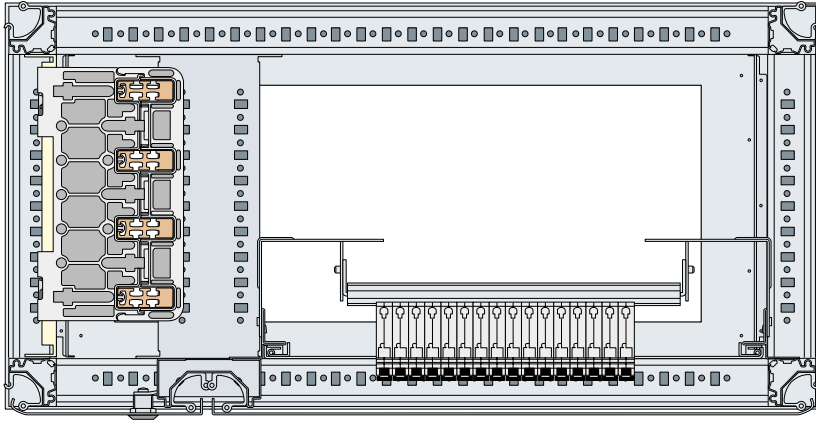
In-depth technical information

Busbars with shaped section

Linear busbar holder PB1603

IS2

Busbars in the internal cable container and DIN rail apparatus holder fixed on the front.

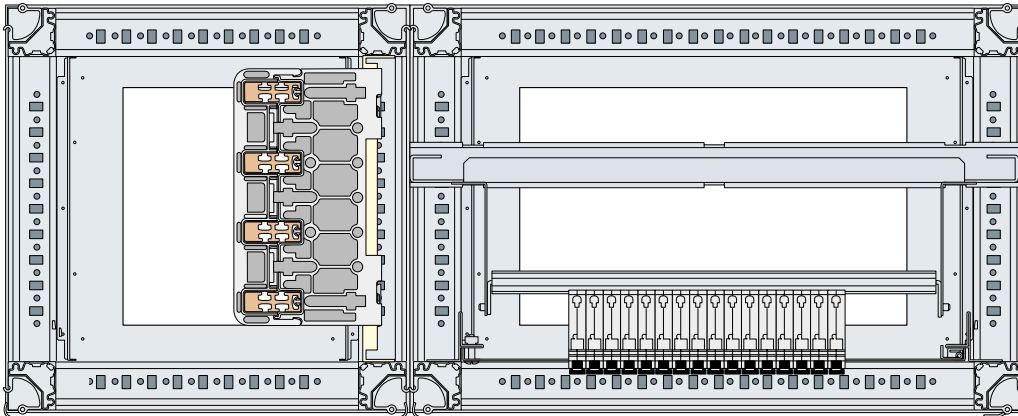


Linear busbar holder PB1603

IS2

Busbars in the additional structure W=400mm and DIN rail apparatus holder fixed on the back plate.

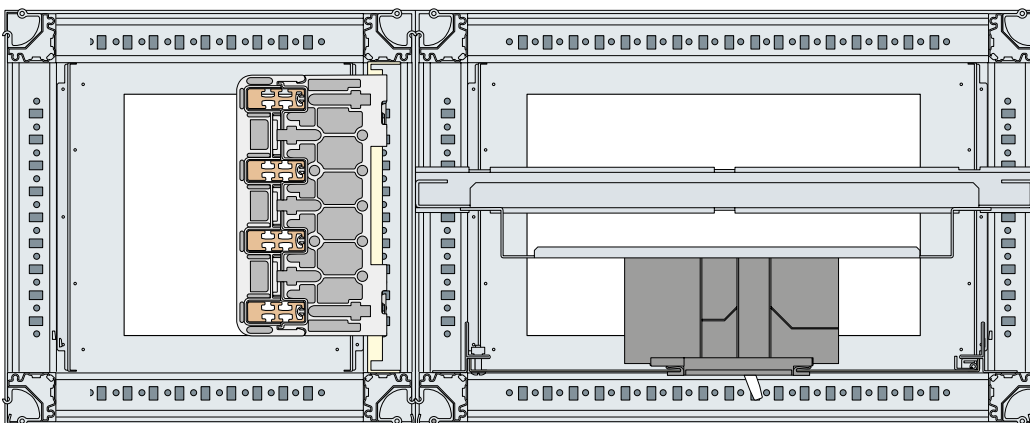
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Linear busbar holder PB1603

IS2

Busbars in the additional structure W=400mm and kit for moulded-case apparatus fixed on the back plate.



In-depth technical information

Ventilation and air conditioning

General characteristics and applications

Heat, dust and humidity are the major causes of incorrect operation of controls and settings in electrical equipment, especially considering the high sensitivity of electronic components which have to record the input of signals and working of logical parts.

There are several methods and products for cooling the electrical panel boards:

- air condensed air conditioners
- water condensed air conditioners
- air-air heat exchangers
- gas pipe heat exchangers
- air-water heat exchangers
- fans with or without filters.

Each of these systems is able to cool in a different way and with different application limits, and consequently with advantages and disadvantages depending on the type of application they are destined for.

To maintain the ideal climatic conditions inside a panel board, ABB has the following solutions:

Ventilation

Natural ventilation together with forced ventilation is used when the temperature inside the electrical panel board exceeds the ambient temperature.

Fans are economical and efficient, making it possible to keep degrees of protection up to IP54, in the case of use of a filter, or IP21 without the latter.

The only precaution needed is periodic cleaning of the filtering elements.

Air conditioners

These systems are able to keep temperatures inside the electrical panel board lower than the ambient, ensuring a high degree of protection against dust and water (IP54).

According to the position of the air conditioner (on the door, wall, roof or side of the panel board) and to the type of installation (outdoor, indoor, or semi-embedded), ABB proposes a wide range of types based on the refrigeration yield required.

Air-air heat exchangers

These systems are suitable when temperatures inside the electrical panel board can be kept higher than ambient temperature, guaranteeing an IP54 degree of protection.

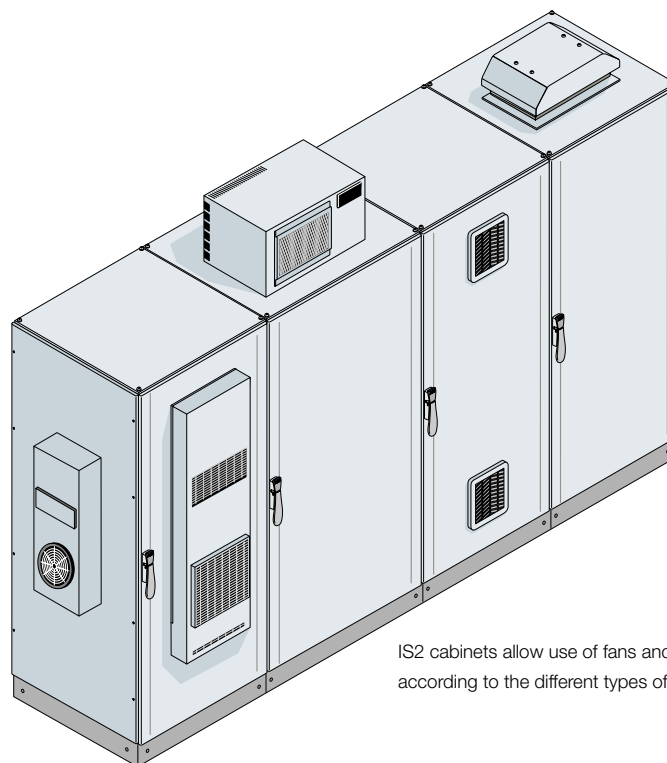
The yield of heat exchangers is indicated in W/K (Watt/Kelvin) – a value which expresses the capacity of removing heat for each centigrade degree of difference between the ambient temperature and the temperature inside the electrical panel board. In some cases heat exchangers can be more expensive than air conditioners.

Under the same conditions air conditioners obtain the same results with lower costs and overall dimensions

Heaters for panel boards

Formation of condensation inside the electrical panel boards is the cause of oxidation of the apparatus contained in it and the consequent loss of insulation and dielectric strength.

By keeping the optimal temperature for operation of the components, anti-condensation heaters eliminate the risk of oxidation.ossidazione.



IS2 cabinets allow use of fans and air conditioners according to the different types of installation.

In-depth technical information

Ventilation and air conditioning

Operation and selection of components

Natural ventilation

Panel board cooling can be obtained by means of simple natural convection.

In fact, it is sufficient to install an aeration kit (in the different ways shown in the diagram) to obtain a fair improvement in panel board cooling.

The following table indicatively provides the increase in percentage of the thermal power value dissipated by the enclosure in relation to the aeration kits used.

The result is obtained by multiplying the dissipation power value of the selected cabinet (page 7/13) by the coefficient indicated in the table corresponding with the size of the aeration grating selected.

Multiplication coefficient of the dissipated power from the enclosure according to the dimensions of the aeration gratings.

Cabinet dimensions			Dimensions of the aeration grating WxW (mm)			
			105x105	150x150	204x204	250x250
H (mm)	W (mm)	D (mm)	Multiplication coefficient			
1800 2000	600-800-1000-1200	400-500-600-800-1000	1,2	1,5	2,1	3
2200	1600	400-500-600-800	-	1,3	1,7	2,2

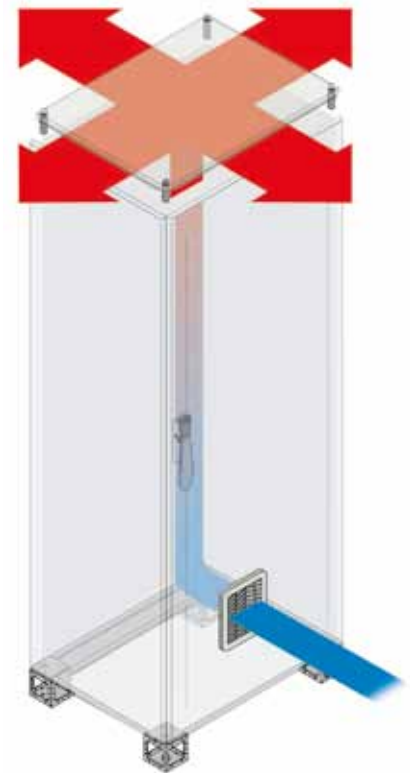
8 Natural aeration with gratings (IP54 with filter or IP21 without filter).



Natural aeration with hood (IP43) and grating.



Natural aeration with roof lifting kit (IP20) and grating.



Forced ventilation

Operation of the ventilation kit is simple: the ambient air - in this case colder than the air inside the panel board - is sucked up from below, filtered of impurities and conveyed inside. It grazes the apparatus cooling it, whilst the warmer air flows towards the upper part and exits through the special air passage. In this way a slight overpressure is created inside, which prevents dust from entering.

Even when the fan is not working, there is no formation of condensation and humidity, since the entry and exit fans are a guarantee of rapid heat exchange.

For correct operation, it is good practice to periodically clean the filtering part by shaking, compressed air or washing in water, or to replace it with a new cloth.

How to calculate the capacities of the fans

Once the value of the power to be dissipated has been calculated, given by the sum of the dissipating power of each device, and by the conductors (taking into account the contemporaneity coefficient as well) and once the maximum temperature inside the panel board has been defined – compatibly with correct operation of the apparatus it contains – the following formula must be applied:

$$Q = \frac{P}{\Delta T} \cdot f$$

where:

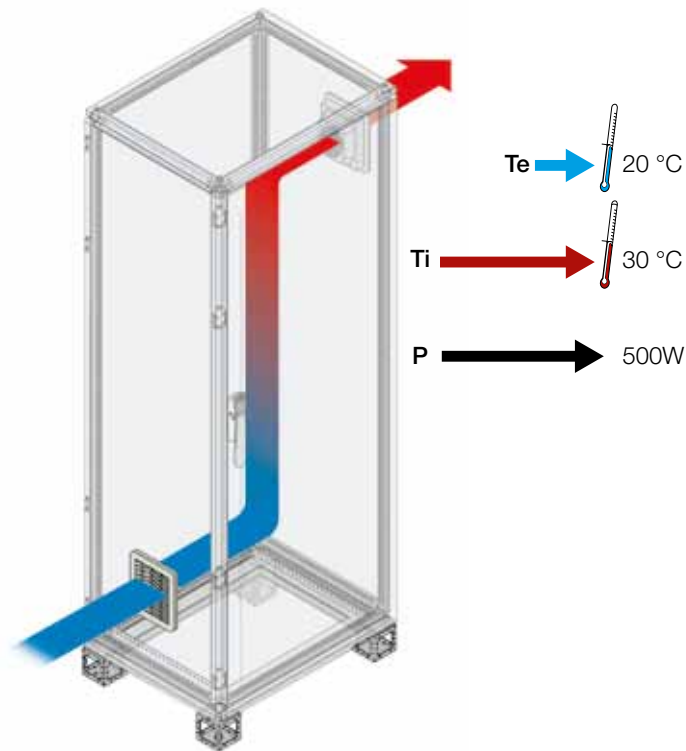
Q = fan capacity (m³/h)

P = power to be dissipated (W)

ΔT = difference in the ambient temperature Te and the temperature inside the panel board Ti

f = coefficient of thermal exchange

Ti > Te



Height m/slm	f m ³ °C/W/h
0 ÷ 100	3.1
100 ÷ 250	3.2
250 ÷ 500	3.3
500 ÷ 700	3.4
750 ÷ 1000	3.5

example:: $Q = \frac{500}{10} \cdot 3.2 = 160 \frac{\text{m}^3}{\text{h}}$

In-depth technical information

Ventilation and air conditioning

How to install the ventilation kit

Use of a ventilator as a means for extracting heat from a cabinet is recommended when an internal temperature higher than the ambient temperature is acceptable.

In both cases (A and B), to improve the thermal performances of the system, it is advisable to use the filter without a fan one size larger than the one with a fan.

The best thermal situations are obtained by installing the aeration kit in the following ways:

Ventilation kit at the top and filter at the bottom on the opposite wall - Fig.1

The fan sucks in hot air from the top area of the cabinet towards the outside, whilst fresh air enters through the filter placed at the bottom. This configuration is recommended for cabinets fitted with gaskets as it is the condition which offers better temperature distribution.

Ventilation kit at the bottom and filter at the top on the opposite wall - Fig.2

The fan sucks in fresh air from the outside towards the bottom area inside the cabinet, whilst hot air exits through the filter placed at the top. This solution is particularly recommended when you want to avoid entry of dust as far as possible, using the delivery fan, so as to put the cabinet under pressure and prevent entry of dust through the gaps between the panels. Entry of dust is prevented by the fan filter.

Hood with fan mounted on the cabinet roof and filter placed at the bottom on a wall - Fig.3

In this configuration, the air flow moves from the bottom towards the top: fresh air enters the cabinet through the filter placed at the bottom and hot air exits to the room through the hood. When the hood is used, what has already been said in the previous cases is valid with regard to selecting to mount the fan on delivery or on suction.

Air flow

8

Fig. 1

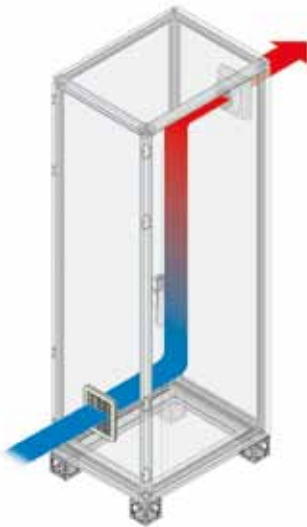


Fig. 2



Fig. 3



Air conditioners

Air conditioners allow the temperature inside the panel board to be kept within an established range and are available in the versions for mounting on a wall or on the panel board roof. There are also four super thin versions available to be mounted on the wall with a thickness of 105mm.

To size the air conditioner, the following data are required:

- **power to be dissipated**
(this depends on the type and number of pieces of apparatus and conductors contained in the panel board);
- **maximum internal temperature;**
- **ambient temperature**
(referring to the place where the panel board is installed);
- **equivalent cooling surface**
(sum of the external surfaces able to transmit heat from/towards the outside). To calculate this, the calculation method of the IEC 60890 Standard can be used;

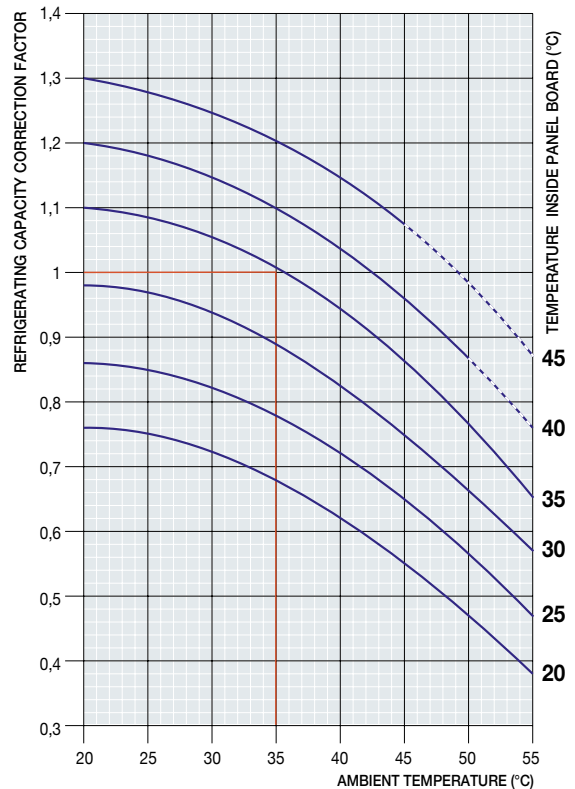
Disposition of the cabinet	Calculating the enclosure surface S (mm ²)	Dimensions (m)
Detached, exposed on all sides	$A_e = 1,8 \times H \times (L+P) + 1,4 \times L \times P$	L = width H = height P = depth
For closed to a wall structures	$A_e = 1,4 \times L \times (H+P) + 1,8 \times P \times H$	
Left or right exposed structure	$A_e = 1,4 \times P \times (H+L) + 1,8 \times L \times H$	
Left or right closed to a wall structure	$A_e = 1,4 \times H \times (P+L) + 1,4 \times L \times P$	
Central exposed structure	$A_e = 1,8 \times L \times H + 1,4 \times L \times P + P \times H$	
Central closed to a wall structure	$A_e = 1,4 \times L \times (H+P) + P \times H$	
Central closed to a wall structure, with covered roof	$A_e = 1,4 \times L \times H + 0,7 \times L \times P + P \times H$	

- **thermal power** absorbed or dissipated by the surface of the cabinet, according to the difference in the existing internal/ external temperature (if the external temperature is lower than the internal one, the heat flows towards the outside and vice versa);

- **nominal characteristics** of the air conditioner and refrigerating yield: in our case, the ABB air conditioners work with outside temperatures between 20 and 55 °C, keeping temperature values between 25 and 45 °C inside the panel board. The nominal reference condition is 35 °C inside and outside the panel board:

as this condition varies, the yielded refrigerating capacity of the air conditioner undergoes modifications which must be taken into account to size the air conditioner correctly (refer to the "Refrigerating capacity correction factor" table given here).

Table 1 - Correction factor



In-depth technical information

Ventilation and air conditioning

Example of selection of an air conditioner

Data:

Internal power to be dissipated 400 W

Internal temperature 35°C

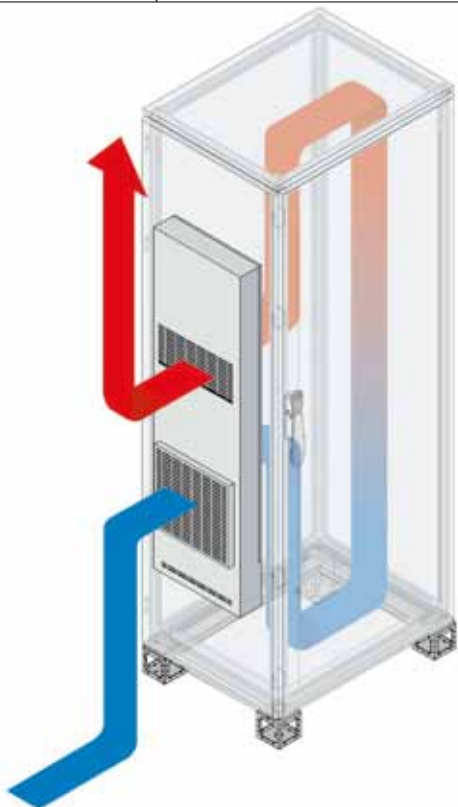
Foreseen ambient temperature 40°C

Equivalent cooling surface (Ae)

(e.g. ES2086K 2000x800x600mm) 5,7 m²

Note: in this case the cooling surface was considered in the hypothesis of installation exposed on all sides. For other types of installation, the effective cooling surface must be calculated using the method illustrated in the IEC 60890 Standard.

Disposition of the cabinet	Calculating the enclosure surface S (mm ²)	Dimensions (m)
Detached, exposed on all sides	$A_e = 1,8 \times H \times (L+P) + 1,4 \times L \times P$	
For closed to a wall structures	$A_e = 1,4 \times L \times (H+P) + 1,8 \times P \times H$	
Left or right exposed structure	$A_e = 1,4 \times P \times (H+L) + 1,8 \times L \times H$	L = width
Left or right closed to a wall structure	$A_e = 1,4 \times H \times (P+L) + 1,4 \times L \times P$	H = height
Central exposed structure	$A_e = 1,8 \times L \times H + 1,4 \times L \times P + P \times H$	P = depth
Central closed to a wall structure	$A_e = 1,4 \times L \times (H+P) + P \times H$	
Central closed to a wall structure, with covered roof	$A_e = 1,4 \times L \times H + 0,7 \times L \times P + P \times H$	



Since the internal temperature is lower than the external temperature, the heat is transmitted from the outside towards the inside of the panel board. To size the air conditioner, the total power to be dissipated derives from the sum of two components: power generated by the apparatus, including that of the copper conductors, (400 W in our example) and the power transmitted by the ambient towards the inside of the panel board through the external sheet steel surfaces, given by the following formula:

$$P = K \cdot Ae \cdot \Delta T = 5,5 \cdot 5,7 \cdot 5 = 156,75W$$

The total power to be dissipated is therefore:

$$P_{tot} = 400 + 156,75 = 556,75W$$

At this point the total power value obtained in this way could be used to select the air conditioner. However, correct sizing must also take into consideration the environmental effects where the conditioner is going to operate. In our example ($T_{int} = 35 \text{ °C}$ and $T_{ext} = 40 \text{ °C}$) the correction coefficient of the refrigerating capacity (0.94) is taken from table 1.

The power to be used for sizing the air conditioner is therefore:

$$P_{resa} = P_{tot} : 0,94 = 556,75 : 0,94 = 592,3 \text{ W}$$

It should be noted how, in the case of an internal temperature higher than the external temperature, to calculate the total power to be dissipated, the heat naturally transmitted to the outside by the walls of the cabinet must be deducted from the power value deriving from the apparatus contained in the panel board, due to the condition of the internal temperature being higher than the external temperature.

Formula for calculating the power transmitted from (or towards) the ambient:

$$P = K \cdot Ae \cdot \Delta T$$

where:

P = power transmitted from the ambient (W)

K = coefficient of thermal exchange for painted sheet
 $K = 5,5 \text{ W/m}^2 \cdot \text{K}$

Ae = free surface of the cabinet (m²)

$\Delta T = (T_i - T_e)$

T_i = internal temperature

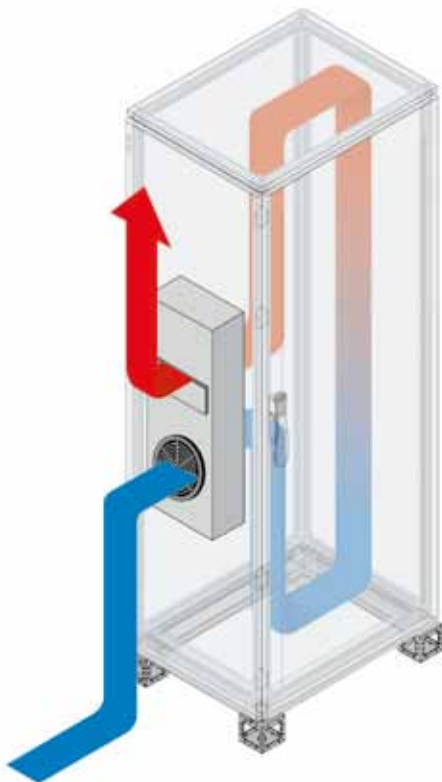
T_e = external temperature

Air-air heat exchangers

Heat exchangers cool the hot air taken up inside the cabinet causing thermal exchange with the colder air coming from the outside, but keeping the two air flows isolated from each other. For this reason, heat exchangers can only be used when the condition $T_{int} > T_{ext}$ exists and their use is recommended in the case of panel board installation in industrial environments with presence of dust.

In fact, heat exchangers allow the air inside the panel board to be cooled without mixing it with the air coming from the outside, keeping an IP54 degree of protection and therefore preventing penetration of impurities into the electrical panel board. The $T_{int} > T_{ext}$ condition still being valid, the power generated by the apparatus installed inside the panel board is dissipated by the heat exchanger and by the surface of the cabinet.

The heat exchanger is sized by means of its specific power W/K (Watt/Kelvin) which expresses the power which can be exchanged for every degree of difference between the external and internal temperature.



Example of selection of a heat exchanger

Data:
Internal power to be dissipated 640 W
Internal temperature 35 °C
Foreseen ambient temperature 25 °C

Equivalent cooling surface (Ae)
(e.g. ES2086K 2000x800x600mm) 5.7 m²

Note: in this case the cooling surface was considered in the hypothesis of installation exposed on all sides. For other types of installation, the effective cooling surface must be calculated using the method illustrated in the IEC 60890 Standard.

Since the internal temperature is higher than the external temperature, the heat is transmitted from the inside towards the

Disposition of the cabinet	Calculating the enclosure surface S (mm ²)	Dimensions (m)
Detached, exposed on all sides	$A_e = 1,8 \times H \times (L+P) + 1,4 \times L \times P$	L = width H = height P = depth
For closed to a wall structures	$A_e = 1,4 \times L \times (H+P) + 1,8 \times P \times H$	
Left or right exposed structure	$A_e = 1,4 \times P \times (H+L) + 1,8 \times L \times H$	
Left or right closed to a wall structure	$A_e = 1,4 \times H \times (P+L) + 1,4 \times L \times P$	
Central exposed structure	$A_e = 1,8 \times L \times H + 1,4 \times L \times P + P \times H$	
Central closed to a wall structure	$A_e = 1,4 \times L \times (H+P) + P \times H$	
Central closed to a wall structure, with covered roof	$A_e = 1,4 \times L \times H + 0,7 \times L \times P + P \times H$	

outside of the panel board and therefore naturally contributes towards a part of the necessary dissipation. The power transmitted to the ambient through the external sheet surfaces of the panel board is calculated with the following formula:

$$P = K \cdot Ae \cdot \Delta T = 5,5 \cdot 5,7 \cdot 10 = 313,5W$$

The total power to be dissipated is therefore:

$$P_{tot} = 640 - 313,5 = 326,5W$$

The heat exchanger must dissipate:

$$P_{spec} = P_{tot} : \Delta T = 326,5 : 10 = 32,65W/K$$

In this case, the heat exchanger suitable for the purpose is the one with 35W/K specific power (code VS 4233).

Formula for calculating the power transmitted towards the ambient:

$$P = K \cdot Ae \cdot \Delta T$$

where:

P = power transmitted from the ambient (W)
K = coefficient of thermal exchange for painted sheet
K=5,5 W/m² . K

Ae = free surface of the cabinet (m²)

$$\Delta T = (T_i - T_e)$$

T_i = internal temperature

T_e = external temperature

In-depth technical information

Ventilation and air conditioning

Heater for panel boards

Heaters prevent condensation of the atmospheric humidity inside the electrical panel board – a phenomenon which can cause slow but progressive alteration of the surface of the materials, jeopardising the insulation.

The temperature that can create condensation may depend on different factors, including atmospheric pressure and air humidity. Generally, if the temperature inside the switchgear is kept over the 15°C limit, the condensation risk is null. In tropical countries, instead, the limit can be risen up to 30-35°C.

The anti-condensation heaters ABB are made of a PTC heating element positioned in an aluminum alloy sink. The use of the PTC heating element guarantees an excellent heater thermal stability and allows the use of it in a wide break of supply voltage (between 110 and 240 V).

The combination of the heater with EN0102K thermostat with NC contact (set at 20°C) is suggested in order to avoid energy waste. Furthermore, it's suggested to position the heaters in the bottom part of the cabinet, keeping the distances advised in the section 9/48, to help the air convection inside the switchgear.

Thermostats for regulating the temperature

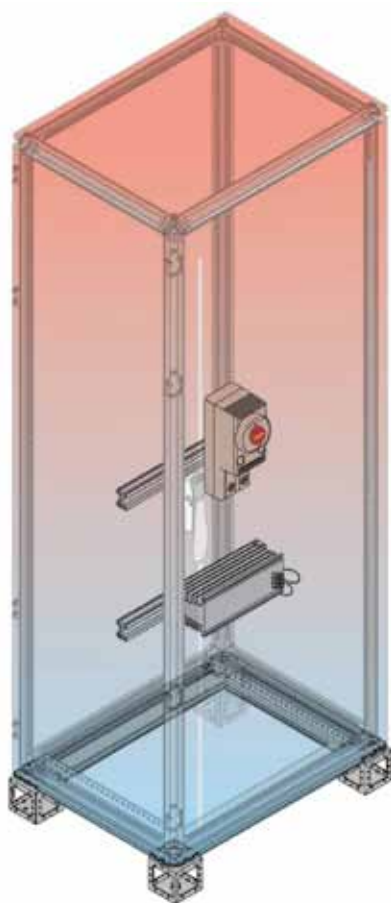
The thermostat is used to control operation of the fans. It has a temperature adjustment range from 10 ÷ 60 °C, with intervention sensitivity of about 1 °C and can be snap-on mounted on DIN EN 50022 rails.

Inside the regulation knob of the thermostat there is a manual device which limits the setting scale (min-max) of the temperature. For correct installation, mount the apparatus so that the ventilation passes from the bottom to the top, but never sideways.

Furthermore, avoid the thermostat being close to direct heat sources and draughts of air.

Conforming to the IEC 60730-1, IEC 60730-2-9 Standards and UL approved, they have IP20 degree of protection. Grey RAL 7035, capacity of the 10 A contact and electrical life of 100000 cycles with resistive load. The version with NO (normally open) contact allows closure of a circuit activating ventilation, air conditioning or alarms.

The version with NC (normally closed) contact allows opening of a circuit, disconnecting any anti-condensation heaters.



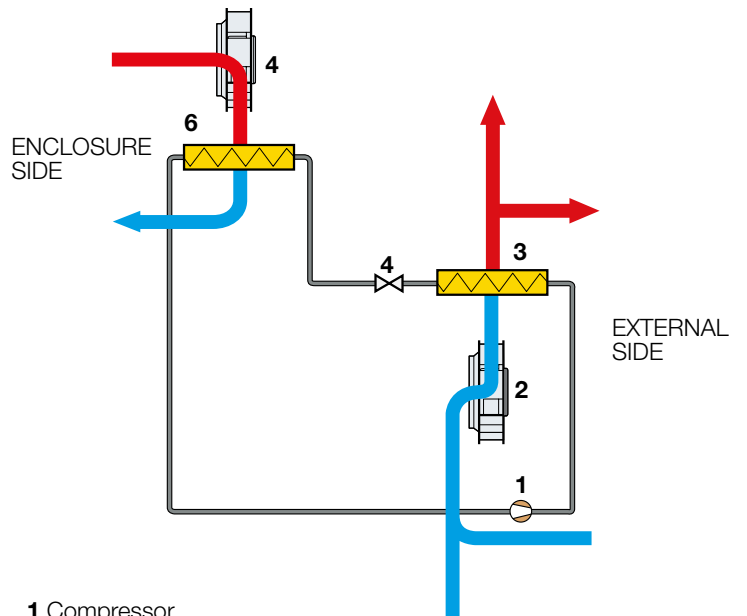
Air conditioner for mounting on wall or on door



Model			VZ1550K		VZ1850K		VZ1400K		VZ2000K	
Standard electrical power supply	V~(single-phase)		230		230		230		230	
Frequency	Hz		50	60	50	60	50	60	50	60
Refrigerating yield	W		605	670	810	900	1300	1480	1926	2200
Total power consumption	W		330	360	400	450	650	720	800	920
Absorbed current	on inrush	A	8		12,5		21		22	
	operating	A	2		2,5		4		4,5	
Current protection	A		4,9		5,9		8		10	
Air evaporator capacity	m³/h		380		350		350		500	
Air condenser capacity	m³/h		400		400		600		950	
Degree of protection on panel board side	IP		54		54		54		54	
Refrigerating gas (standard)			R 134 A		R 134 A		R 134 A		R 134 A	
Permissible external temperature	°C		55		55		55		55	
Noise	dB(A)		64		64		66		66	
Dimensions HxWxD	mm		1025x380x198		1025x380x198		1025x380x198		1100x380x230	
Approximate weight	kg		33		33		36		42	
Standard painting	RAL		7035 orange peel		7035 orange peel		7035 orange peel		7035 orange peel	



Basic cooling circuit diagram



- 1 Compressor
- 2 Condenser section fan
- 3 Condensing coil
- 4 Expansion valve
- 5 Treatment section fan
- 6 Evaporating coil

In-depth technical information

Ventilation and air conditioning

Air conditioner for mounting on roof

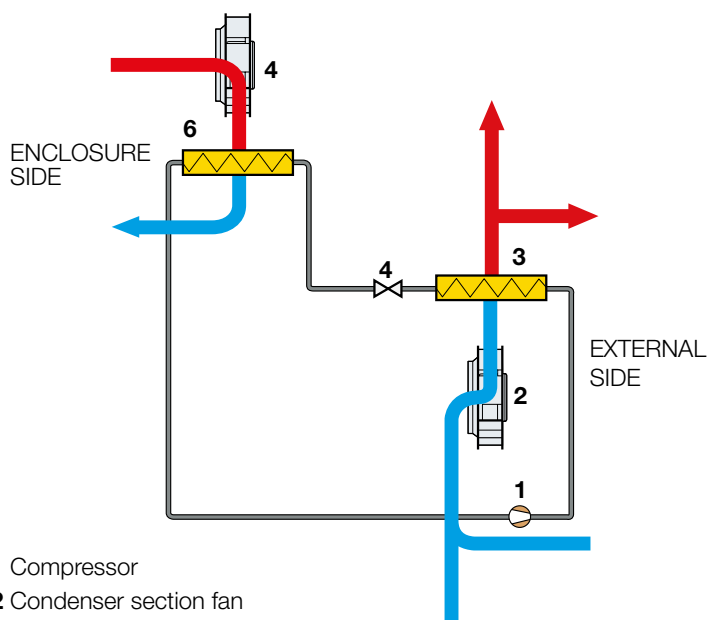


Model		VZ8501K		VZ1401K	
Standard electrical power supply	V~(single-phase)	230		230	
Frequency	Hz	50	60	50	60
Refrigerating yield	W	810	900	1300	1480
Total power consumption	W	400	450	650	720
Absorbed current	on inrush	A		21	
	operating	A		4	
Current protection	A	5,9		8	
Air evaporator capacity	m³/h	350		350	
Air condenser capacity	m³/h	400		600	
Degree of protection on panel board side	IP	54		54	
Refrigerating gas (standard)		R 134 A		R 134 A	
Permissible external temperature	°C	55		55	
Noise	dB(A)	64		66	
Dimensions HxWxD	mm	350x600x400		350x600x400	
Approximate weight	kg	33		34	
Standard painting	RAL	7035 orange peel		7035 orange peel	

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Basic cooling circuit diagram



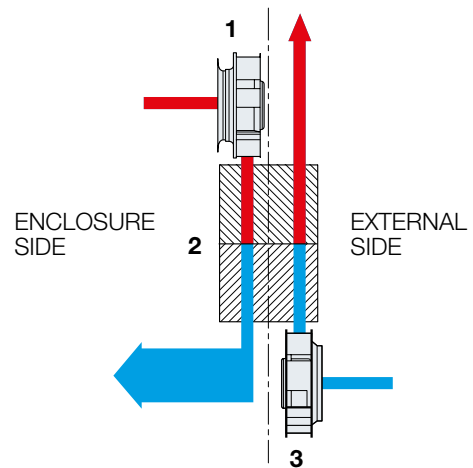
- 1 Compressor
- 2 Condenser section fan
- 3 Condensing coil
- 4 Expansion valve
- 5 Treatment section fan
- 6 Evaporating coil

Heat exchangers

Model		VS4235K	VS6285K
Specific thermal yield	W/K	35	85
Total power consumption	W	117/150	170/180
Power supply standard	V~(monofase)	230	230
Frequency	Hz	50/60	50/60
Absorbed current	A	0,52/0,68	0,77/0,80
Internal circuit fan air capacity	m³/h	200	200
External circuit fan air capacity	m³/h	200	300
Degree of protection on panel board side		IP 54	IP 54
Permissible external temperature	°C	55	55
Dimensions HxWxD	mm	735x370x155	845x475x195
Approximate weight	kg	15	21
Standard painting	RAL	7035 orange peel	7035 orange peel



Basic cooling circuit diagram



In-depth technical information

Ventilation and air conditioning

Fans



Characteristic	U.m.	EN1105K	EN2105K	EN1150K	EN2150K	EN1204K
Capacity air	m³/h	23/30	23/30	57/61	57/61	120/135
Standard power supply (single-phase)	V a.c.	230	115	230	115	230
Frequency	Hz	50/60	50/60	50/60	50/60	50/60
Total power consumption	W	10/8	9/7	20/19	20/19	17/15
Rated current	A	0.07/0.055	0.115/0.092	0.125/0.110	0.210/0.180	0.100/0.090
Rotation speed	rpm	2700	2700	2650	2650	2700
Noise	dB(A)	33/38	33/38	46/49	46/49	46/50
Operating temperature	°C	-10+50	-10+50	-10+50	-10+50	-10+50
Electrical life	h	45.000	45.000	45.000	45.000	45.000
Degree of protection	IP	54	54	54	54	54
Class		I	I	I	I	I
Weight	Kg	0,5	0,5	0,8	0,8	1,1
Protection		Impedance	Impedance	Impedance	Impedance	Impedance
Electric connection		Wires	Wires	2-pole term.	2-pole term.	3-pole term.
Mounting		No screws	No screws	No screws	No screws	No screws
Flow direction		Reversible	Reversible	Reversible	Reversible	Reversible
Bearing		Bearings	Bearings	Bearings	Bearings	Bearings
Dimensions	mm (WxHxD)	105x105x67	105x105x67	150x150x71	150x150x71	204x204x98
Colour	RAL	7035	7035	7035	7035	7035
Approvals		CE, UL	CE, UL	CE, UL	CE, UL	CE, UL

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Characteristic	U.m.	EN2204K	EN1250K	EN2250K	EN2325K	EN3325K
Capacity air	m³/h	120/135	240/270	240/270	520/580	520/580
Standard power supply (single-phase)	V a.c.	115	230	115	230	115
Frequency	Hz	50/60	50/60	50/60	50/60	50/60
Total power consumption	W	17/15	29/29	30/30	67/87	50/64
Rated current	A	0.200/0.160	0.132/0.130	0.265/0.274	0.300/0.382	0.540/0.650
Rotation speed	rpm	2700	2800	2800	2770	3120
Noise	dB(A)	46/50	50/55	50/55	65/68	66/69
Operating temperature	°C	-10+50	-10+50	-10+50	-10+50	-10+55
Electrical life	h	45.000	45.000	45.000	50.000	53.000
Degree of protection	IP	54	54	54	54	54
Class		I	I	I	I	I
Weight	Kg	1,1	1,7	1,7	3,7	3,7
Protection		Impedance	Thermal	Thermal	Thermal	Thermal
Electric connection		3-pole term.	3-pole term.	3-pole term.	3-pole term.	3-pole term.
Mounting		No screws	No screws	No screws	No screws	No screws
Flow direction		Reversible	Reversible	Reversible	Reversible	Reversible
Bearing		Bearings	Bearings	Bearings	Bearings	Bearings
Dimensions	mm (WxHxD)	204x204x98	250x250x121	250x250x121	325x325x161	325x325x161
Colour	RAL	7035	7035	7035	7035	7035
Approvals		CE, UL	CE, UL	CE, UL	CE	CE

In any forced ventilation kit, the fan wheel is balanced. In the larger sizes (cod. EN2325K and cod. EN3325K) there is the balancing clip.

The balanced fan wheel ensures less noise and absorption.



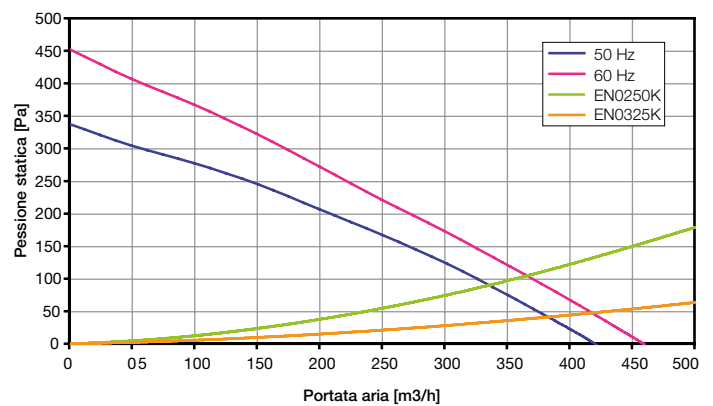
Ventilation towers



Characteristic	U.m.	EN0480K	EN0482K	EN0484K	EN0485K
Capacity air	m ³ /h	550/590	550/590	*420/490	*420/490
Standard power supply (single-phase)	V	230	115	115	230
Frequency	Hz	50/60	50/60	50/60	50/60
Total power consumption	W	62/78	58/71	66/74	70/83
Absorbed current	mA	0.290/0.340	0.530/0.620	0.620/0.640	0.309/0.360
Rotation speed	rpm	2535	2500	2470	2510
Noise	dB(A)	68/71	61	68/71	68/71
Operating temperature	°C	-20+60	-20+60	-10+60	-10+60
Electrical life	h	50.000	50.000	75.000	59.000
Degree of protection	IP	23	23	54	54
Class		I	I	I	I
Weight	Kg	5,29	5,29	2,1	2,1
Protection		Thermal	Thermal	Thermal	Thermal
Electric connection		Wires	Wires	3-pole term.	3-pole term.
Mounting		Screws	Screws	Screws	Screws
Flow direction		Inside-out	Inside-out	Inside-out	Inside-out
Bearing		Bearings	Bearings	Bearings	Bearings
Dimensions	mm (wxdxh)	375x295x99	375x295x99	324x324x94	324x324x94
Colour	RAL	7035	7035	7035	7035
Approvals		CE	CE	CE	CE



* Sample air flow m3/h



In-depth technical information

Ventilation and air conditioning

Declaration of conformity

Air conditioners and heat exchangers

Under their full and exclusive responsibility, ABB declares that the air conditioners and heat exchangers they market comply with the provisions of the following directives 89/392/CEE, 89/337/CEE, 91/368/CEE, 93/47/CEE.

Reference Standards: UNI EN 292, UNI EN 294, CEI 50081-2, IEC 50082-2, IEC 55011, IEC 60204-1.

Thermostats

Under their full and exclusive responsibility, ABB declares that the thermostats for temperature regulation they market comply with the provisions of the following directives 2006/95/CE (which replaces the 73/23/EEC and subsequent amendments).

Reference Standards: IEC 60730, 60730-1 "Automatic electrical controls for household and similar use".

Anti-condensation heaters

ABB declares that anti-condensation heaters are in accordance with what expected by the following EU directives, including all the applicable changes:

- Low Voltage Directive 73/23/CEE (replaced by 2006/95/CEE)
- EMC Directive 2004/108/CEE

And that all the following requirements and/or technical specifics were applied:

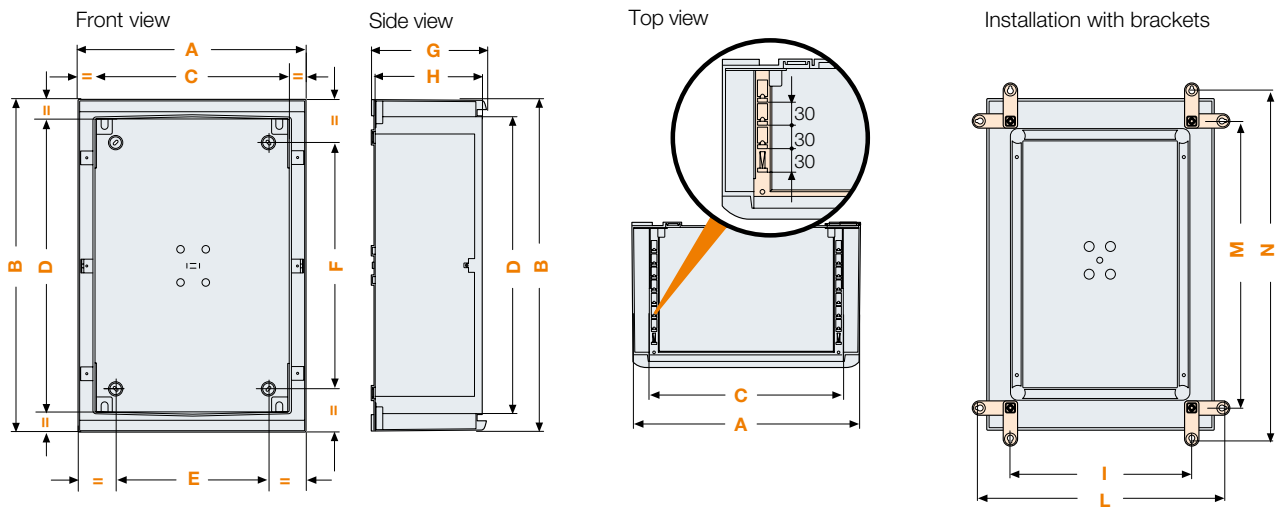
- CEI EN 60335-1, Ed. 04/2004 "Safety of household and similar electrical appliances –part 1: General requirements"
- CEI EN 60335-1/A1/A11, Ed. 01/2006 "Safety of household and similar electrical appliances –Part 1: General requirements" A1:2004-12, A11:2004-02, IEC 60335-1:2002 variants.

Overall dimensions

Gemini Switchboards	9/2
SR2 - SR2 EMC Enclosures	9/6
AM2 Cabinets	9/8
IS2 - IS2 EMC cabinets	9/15
C2 Console	9/37
Wiring ducts	9/40
Aeration/ventilation	9/44
Air conditioners	9/46
Drillings	9/48
Accessories	9/50

Overall dimensions Gemini switchboards

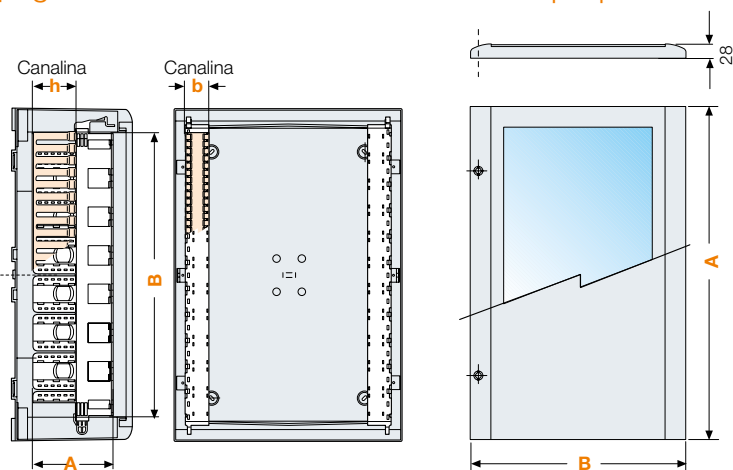
Structures



Size	Code	A	B	C	D	E	F	G	H	I	L	M	N
1	1SL0201A00-1SL0211A00-1SL0221A00	335	400	250	300	150	180	210	180	195	395	263	463
2	1SL0202A00-1SL0212A00-1SL0222A00	460	550	375	450	250	270	260	230	320	520	412	612
3	1SL0203A00-1SL0213A00-1SL0223A00	460	700	375	600	270	475	260	230	320	520	560	760
4	1SL0204A00-1SL0214A00-1SL0224A00	580	700	500	600	286	385	260	230	445	645	562	762
5	1SL0205A00-1SL0215A00-1SL0225A00	585	855	500	750	390	558	360	330	445	645	713	913
6	1SL0206A00-1SL0216A00-1SL0226A00	840	1005	750	900	640	706	360	330	695	895	863	1063

9 Uprights

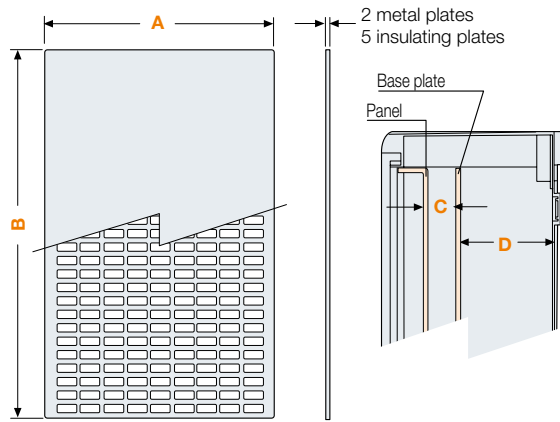
Front opaque and transparent doors



Size	Code	A	B	Duct b	h	Size	Code	A	B
1	1SL0283A00	132	300	18	46	1	1SL0241A00-1SL0231A00	349	325
2	1SL0284A00	152	450	27	46	2	1SL0242A00-1SL0232A00	499	450
3	1SL0285A00	152	600	27	46	3	1SL0243A00-1SL0233A00	649	450
4	1SL0285A00	152	600	27	46	4	1SL0244A00-1SL0234A00	649	575
5	1SL0286A00	152	750	36	46	5	1SL0245A00-1SL0235A00	799	575
6	1SL0287A00	152	900	55	46	6	1SL0246A00-1SL0236A00	949	825

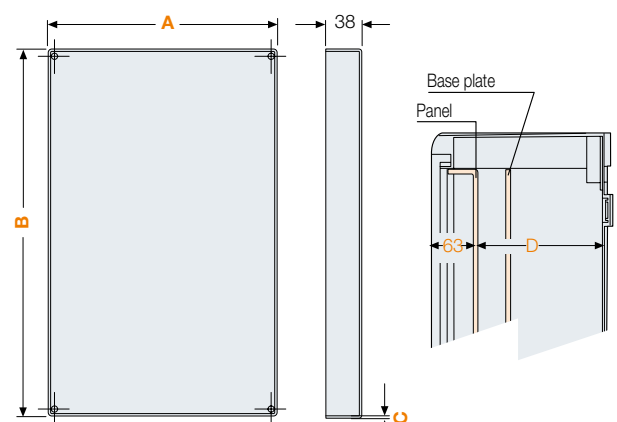
Measurements are in millimetres

Base plates



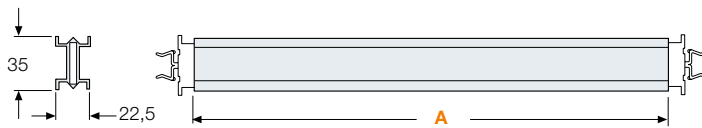
Size	Code	A	B	C	D
1	1SL0259A00-1SL0275A00-1SL0267A00	235	285	16.3÷91	33.5÷110
2	1SL0260A00-1SL0276A00-1SL0268A00	360	435	36.4÷140	33.5÷139
3	1SL0261A00-1SL0277A00-1SL0269A00	360	585	36.4÷140	33.5÷139
4	1SL0262A00-1SL0278A00-1SL0270A00	485	585	36.4÷140	33.5÷139
5	1SL0263A00-1SL0279A00-1SL0271A00	485	735	47÷244	33.5÷228
6	1SL0264A00-1SL0280A00-1SL0272A00	735	885	47÷244	33.5÷228

Inner doors



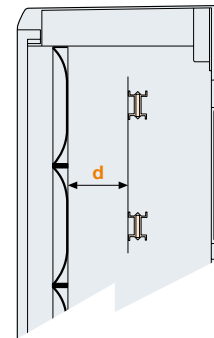
Size	Code	A	B	C	D
1	1SL0251A00	250	300	3	128
2	1SL0252A00	375	450	4	177
3	1SL0253A00	375	600	4	177
4	1SL0254A00	500	600	4	177
5	1SL0255A00	500	750	5	277
6	1SL0256A00	750	900	5	277

DIN rail

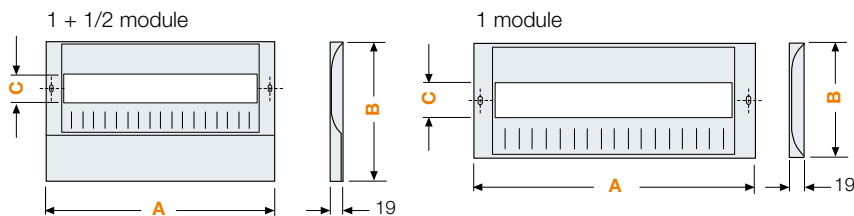


Size	Code	A	d = pos. 1	d = pos. 2	d = pos. 3	d = pos. 4	d = pos. 5	d = pos. 6
1	1SL0290A00	210	51	63,5	76	88,5	-	-
2	1SL0291A00	318	51	63,5	76	88,5	101	113,5
3	1SL0291A00	318	51	63,5	76	88,5	101	113,5
4	1SL0292A00	443	51	63,5	76	88,5	101	113,5
5	1SL0292A00	443	51	63,5	76	88,5	101	113,5
6	1SL0293A00	663	51	63,5	76	88,5	101	113,5

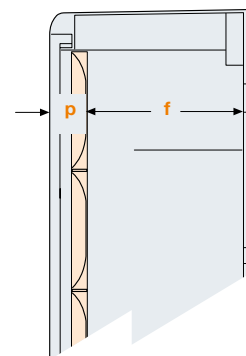
The distances of the DIN rail from the panel depend on the depth at which the DIN rail is regulated by using fixing devices.



Panels for modular apparatus mounted on DIN rail



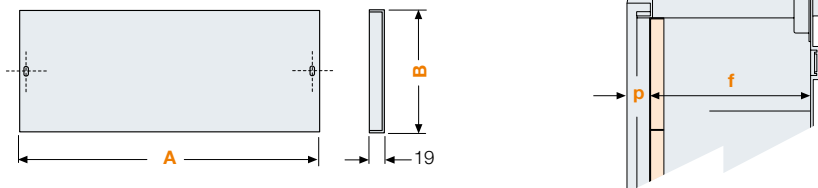
Size	Code	1 mod.		1+1/2 mod.		DIN modules	p	f
		A	B	A	B			
1	1SL0307A00	250	150	-	-	12	44	145
2	1SL0308A00-1SL0313A00	375	150	375	225	18	44	197
3	1SL0308A00-1SL0313A00	375	150	375	225	18	44	197
4	1SL0309A00-1SL0314A00	500	150	500	225	24	44	197
5	1SL0309A00-1SL0314A00	500	150	500	225	24	44	297
6	1SL0310A00-1SL0315A00	750	150	750	225	36	44	297



Measurements are in millimetres

Overall dimensions Gemini switchboards

Blank panels



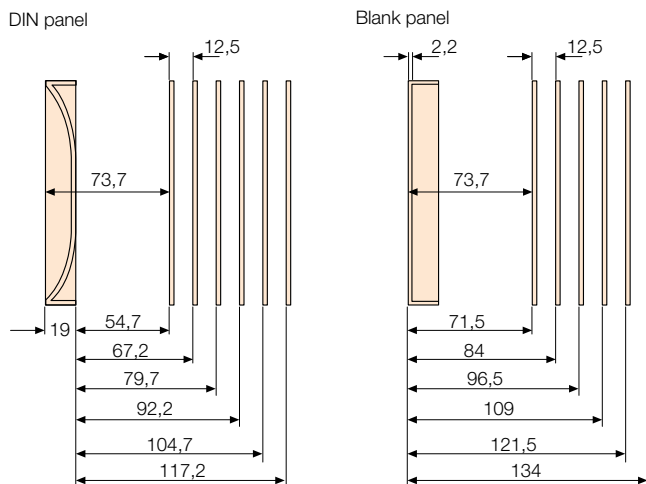
Size	Code	1/2 mod.		1 mod.		2 mod.		p	f
		A	B	A	B	A	B		
1	1SL0318A00-1SL0324A00-1SL0330A00	250	75	250	150	250	300	26,5	162
2	1SL0319A00-1SL0325A00-1SL0331A00	375	75	375	150	375	300	26,5	214
3	1SL0319A00-1SL0325A00-1SL0331A00	375	75	375	150	375	300	26,5	214
4	1SL0320A00-1SL0326A00-1SL0332A00	500	75	500	150	500	300	26,5	214
5	1SL0320A00-1SL0326A00-1SL0232A00	500	75	500	150	500	300	26,5	314
6	1SL0321A00-1SL0327A00-1SL0233A00	750	75	750	150	750	300	26,5	314

Modular plates

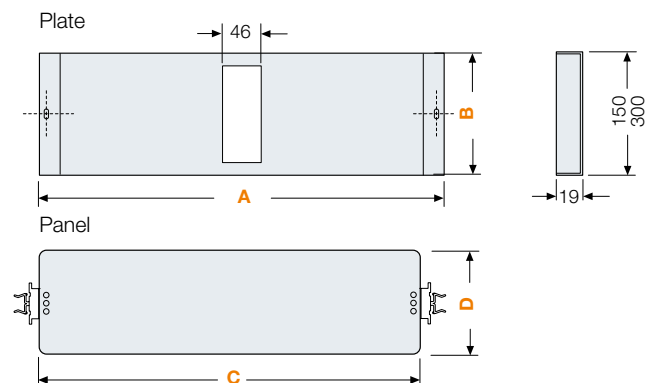


Size	Code	1 mod.		2 mod.	
		A	B	A	B
1	1SL0296A00	210	130		
2	1SL0297A00-1SL0302A00	318	130	318	280
3	1SL0297A00-1SL0302A00	318	130	318	280
4	1SL0298A00-1SL0303A00	443	130	443	280
5	1SL0298A00-1SL0303A00	443	130	443	280
6	1SL0299A00-1SL0304A00	663	130	663	280

Mounting distances between front panel and plate



Kit for Tmax

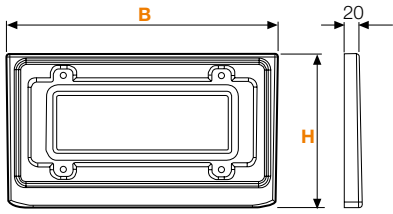


Size	Code	Panel		Plate	
		A	B	A	B
2	1SL0336A00-1SL0370A00	375	150	375	300
3	1SL0336A00-1SL0370A00	375	150	375	300
4	1SL0337A00-1SL0371A00	500	150	500	300
5	1SL0337A00-1SL0371A00	500	150	500	300
6	1SL0338A00-1SL0372A00	750	150	750	300

Size	Code	Plate		Plate	
		C	D	C	D
1	1SL0296A00	210	130		
2	1SL0297A00-1SL0302A00	318	130	318	280
3	1SL0297A00-1SL0302A00	318	130	318	280
4	1SL0298A00-1SL0303A00	443	130	443	280
5	1SL0298A00-1SL0303A00	443	130	443	280
6	1SL0299A00-1SL0304A00	663	130	663	280

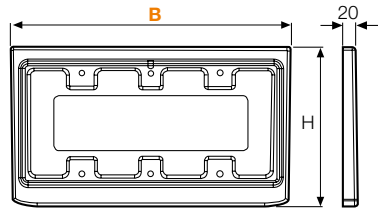
Measurements are in millimetres

Coupling Kit



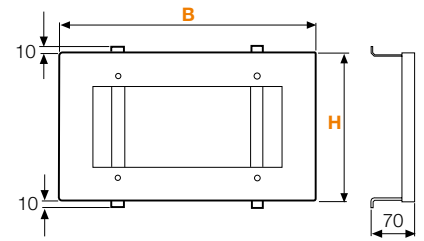
size	B	H
1	-	-
2	455	258
3	455	258
4	583	260
5	583	360
6	834	360

Plinth



size	B	H
1	-	-
2	458	260
3	458	260
4	583	260
5	590	366
6	840	366

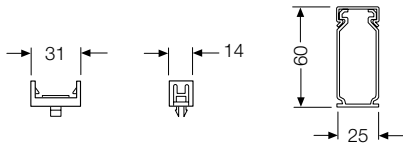
Fixed frame



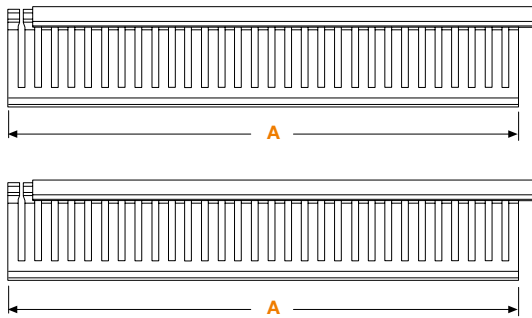
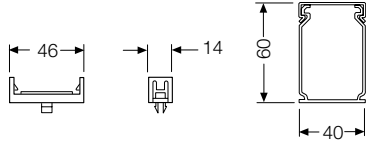
size	B	H
1	-	-
2	415	240
3	415	240
4	540	240
5	584	330
6	834	330

Wiring kit

Duct 25x60 mm

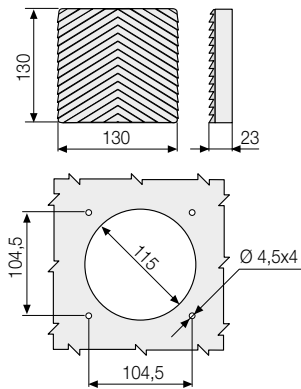


Duct 40x60 mm

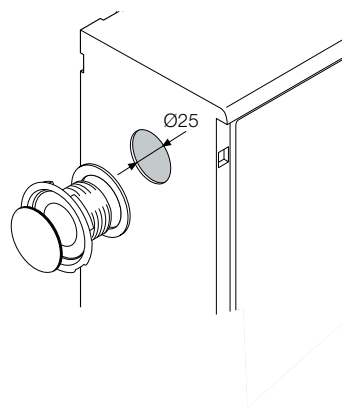


size	A
1	210
2	318
3	318
4	443
5	443
6	663

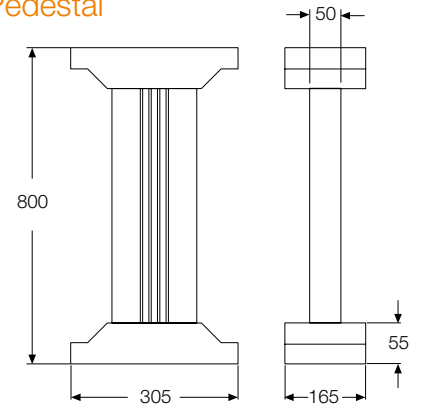
Ventilation kit



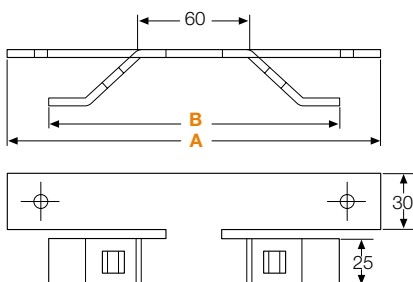
Anti-condensation kit



Pedestal



Pole installation kit



Size	A	B
1	232	206
2-3	358	332
4-5	483	457
6	733	707

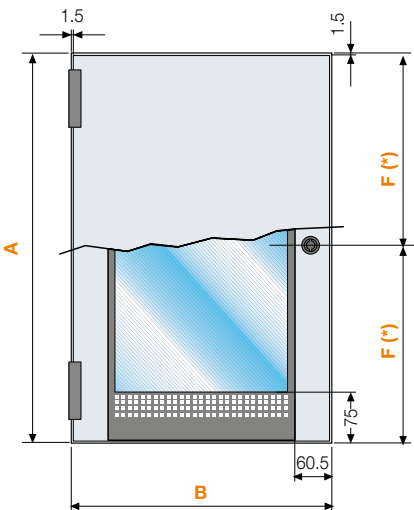
Measurements are in millimetres

Overall dimensions

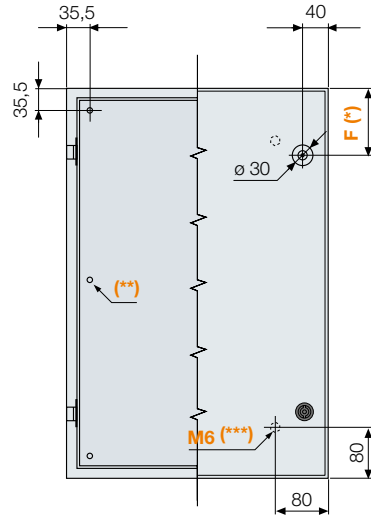
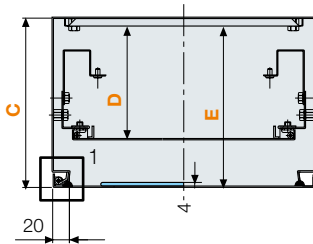
Casse SR2

Basic version

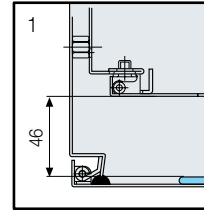
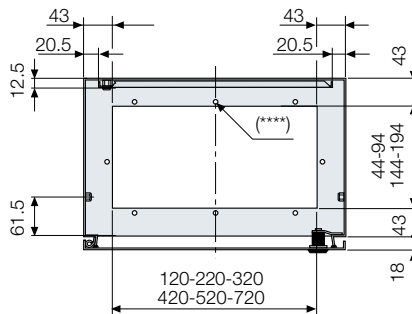
Front



Modular panels and internal counterdoor



Fairlead flange



(*) Locks (F)

- n° 1 central for enclosures from h=303 to 503 mm
- n° 2 for enclosures from h=603 to 703 mm (F=100mm)
- n° 2 for enclosures from h=803 to 1203 mm (F=150mm)

(**) Copper plated nut on the rear only for enclosures from h=1003 to 1203 mm

(***) Copper plated nut on door

- n° 1 for enclosures from h=303 to 503 mm
- n° 4 for enclosures from h=603 to 803 mm
- n° 6 for enclosures from h=1003 to 1203 mm

(****) Flange fixing holes

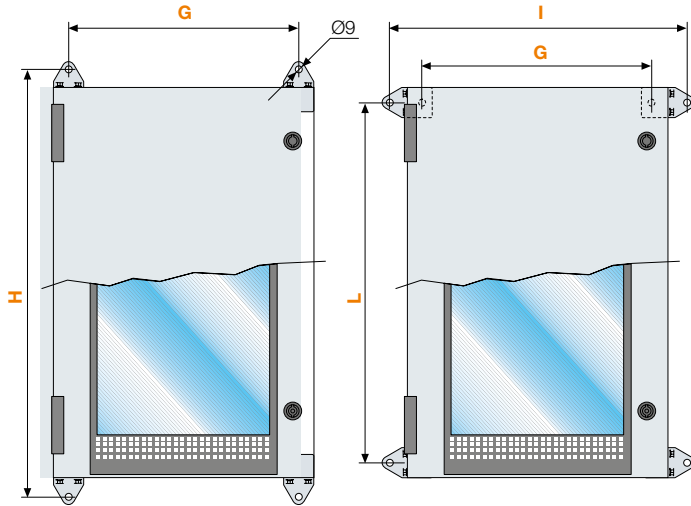
- n° 4 for enclosures from l=203mm
- n° 6 for enclosures from l=303 to 403 mm
- n° 8 for enclosures from l=503 to 1203 mm

or drilling see page 9/47

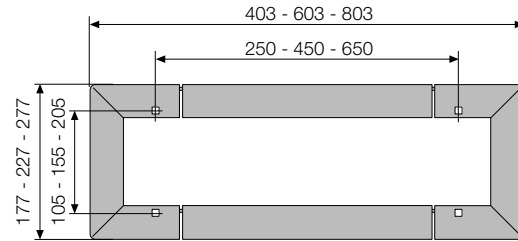
	A	B	C	D	E	F(*)	G	H	I	L
SRN3215K	303	203	147	82	133,5	151,5	163	337	237	263
SRN3315K	303	303	147	82	133,5	151,5	263	337	337	263
SRN3415K	303	403	147	82	133,5	151,5	363	337	437	263
SRN4315K	403	303	147	82	133,5	201,5	263	437	337	363
SRN4320K	403	303	197	132	183,5	201,5	263	437	337	363
SRN4420K	403	403	197	132	183,5	201,5	363	437	437	363
SRN4620K	403	603	197	132	183,5	201,5	563	437	637	363
SRN5320K	503	303	197	132	183,5	251,5	263	537	337	463
SRN5420K	503	403	197	132	183,5	251,5	363	537	437	463
SRN5425K	503	403	247	182	233,5	251,5	363	537	437	463
SRN6420K	603	403	197	132	183,5	100	363	637	437	563
SRN6425K	603	403	247	182	233,5	100	363	637	437	563
SRN6625K	603	603	247	182	233,5	100	563	637	637	563
SRN7520K	703	503	197	132	183,5	100	463	737	537	663
SRN7525K	703	503	247	182	233,5	100	463	737	537	663
SRN8625K	803	603	247	182	233,5	150	563	837	637	763
SRN8630K	803	603	297	232	283,5	150	563	837	637	763
SRN8830K	803	803	297	232	283,5	150	763	837	837	763

	A	B	C	D	E	F(*)	G	H	I	L
SRN10625K	1003	603	247	182	233,5	150	563	1037	637	963
SRN10630K	1003	603	297	232	283,5	150	563	1037	637	963
SRN10830K	1003	803	297	232	283,5	150	763	1037	837	963
SRN12630K	1203	603	297	232	283,5	150	563	1237	637	1163
SRN12830K	1203	803	297	232	283,5	150	763	1237	837	1163
SRN5420VK	503	403	197	132	183,5	150	363	537	437	463
SRN5425VK	503	403	247	182	233,5	150	363	537	437	463
SRN6420VK	603	403	197	132	183,5	150	363	637	437	563
SRN6425VK	603	403	247	182	233,5	150	363	637	437	563
SRN7520VK	703	503	197	132	183,5	150	463	737	537	663
SRN7525VK	703	503	247	182	233,5	150	463	737	537	663
SRN8625VK	803	603	247	182	233,5	150	563	837	637	763
SRN8630VK	803	603	297	232	283,5	150	563	837	637	763
SRN10625VK	1003	603	247	182	233,5	150	563	1037	637	963
SRN10630VK	1003	603	297	232	283,5	150	563	1037	637	963
SRN10830VK	1003	803	297	232	283,5	150	763	1037	837	963
SRN12630VK	1203	603	297	232	283,5	150	563	1237	637	1163
SRN12830VK	1203	803	297	232	283,5	150	763	1237	837	1163

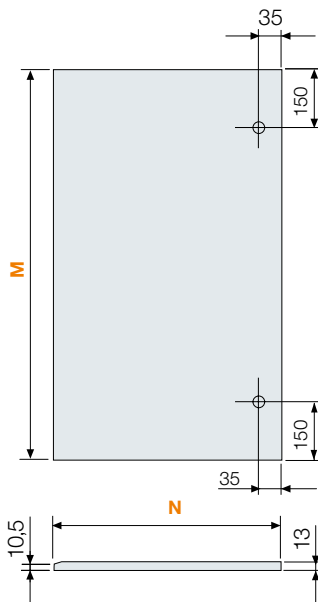
Centre distances for wall fixing



Centre distances for plinth fixing



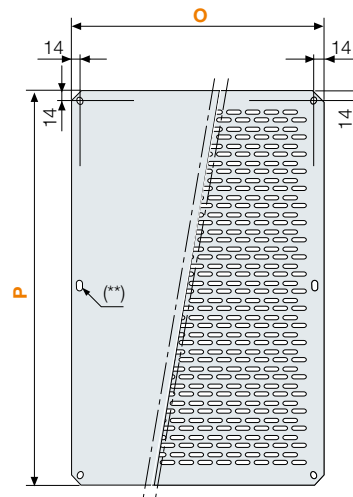
Internal counterdoors



Code	M	N
KC5040K*	456	360
KC6040K*	556	360
KC7050K*	656	460
KC8060K	756	560
KC1060K	956	560
KC1080K	956	760
KC1260K	1156	560
KC1280K	1156	760

* The counterdoors with H 500mm, 600mm and 700mm, only have one hole in the centre for the lock

Internal plates



Code	O	P
PF3020	160	260
PF3030	260	260
PF3040 - PF4030	360	260
PF4040	360	360
PF5030	260	460
PF5040	360	460
PF6040 - PF4060	360	560
PF6060	560	560
PF7050	460	660
PF8060	560	760
PF8080	760	760
PF1060	560	960
PF1080	760	960
PF1260	560	1160
PF1280	760	1160

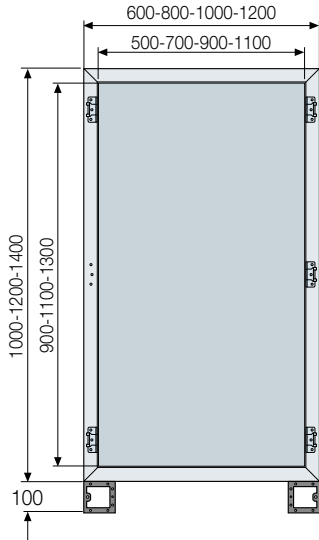
Measurements are in millimetres

Overall dimensions AM2 cabinets

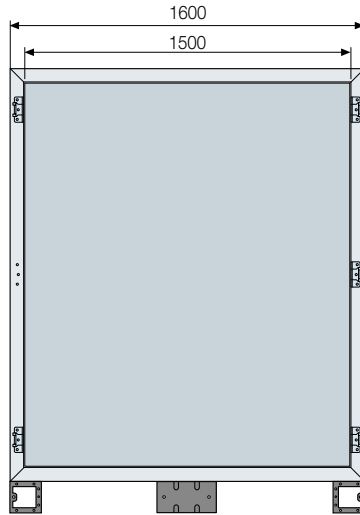
Structure H=1000/1200/1400mm

Structure W ≤ 1200mm

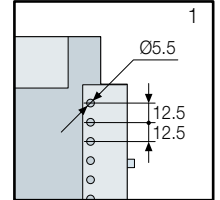
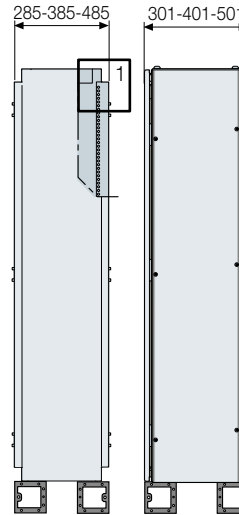
Front view



Structure W=1600mm



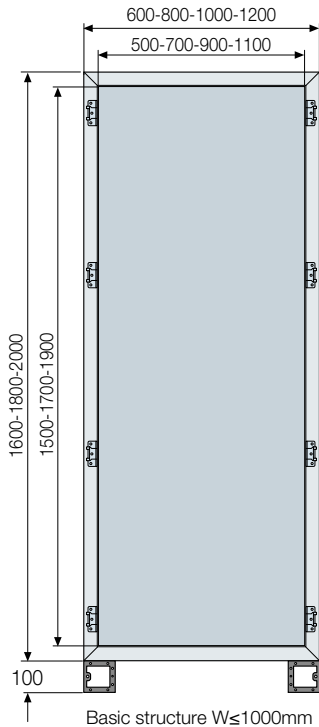
Side view



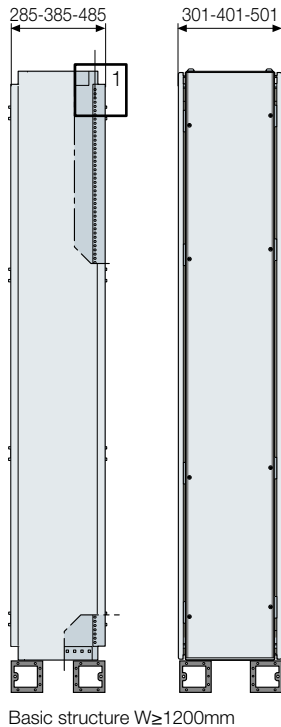
Structure H=1600/1800/2000mm

Structure W ≥ 1200mm

Front view

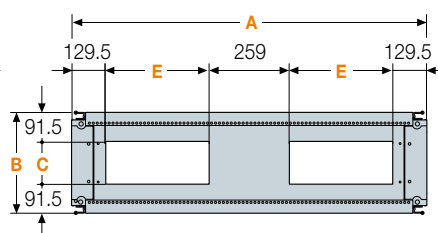
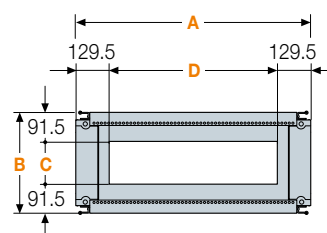


Side view



Basic structure W ≤ 1000mm

Basic structure W ≥ 1200mm

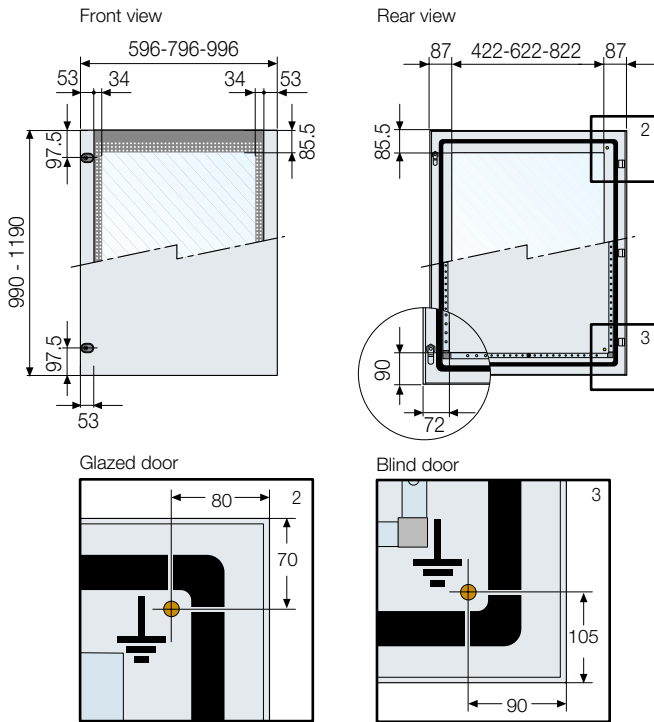


	A	B	C	D	E
600	285	102	341		
	385	202	341		
	485	302	341		
800	285	102	541		
	385	202	541		
	485	302	541		
1000	285	102	741		
	385	202	741		
	485	302	741		
1200	285	102		341	
	385	202		341	
	485	302		341	
1600	285	102		541	
	385	202		541	
	485	302		541	

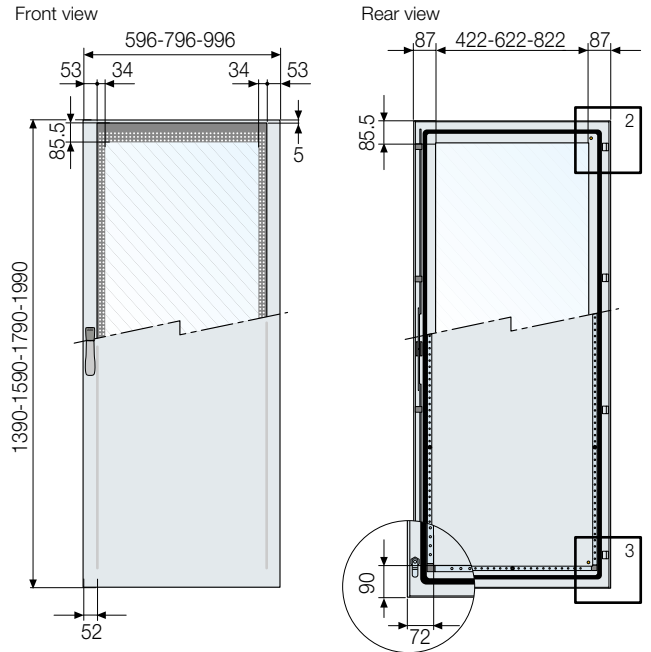
Measurements are in millimetres

Front/Rear covers

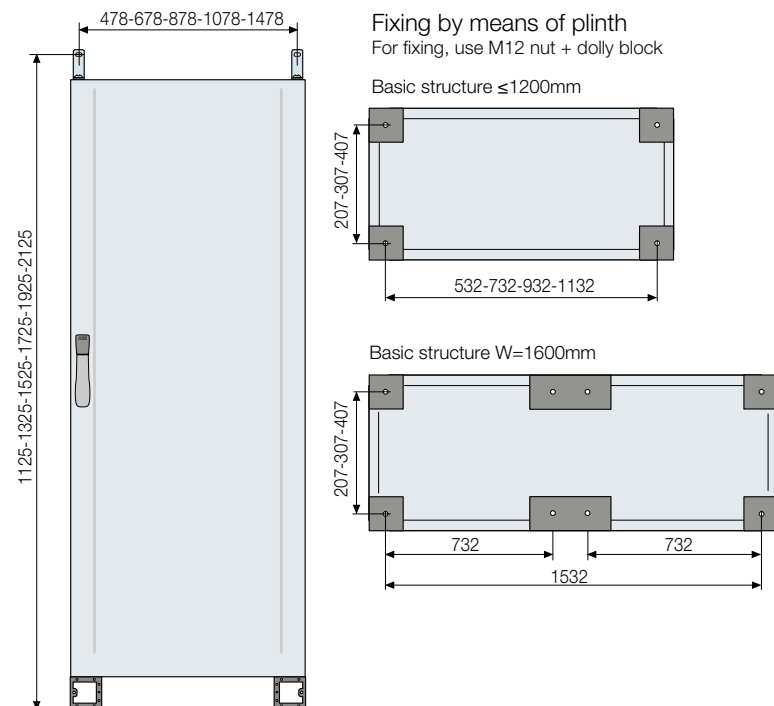
Blind or glazed door H = 1000/1200mm



Blind or glazed door H = 1400/1600/1800/2000mm

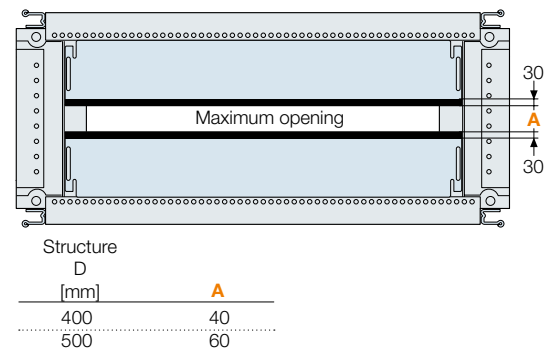


Fixing to wall/floor



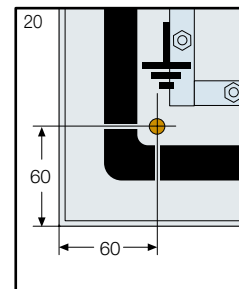
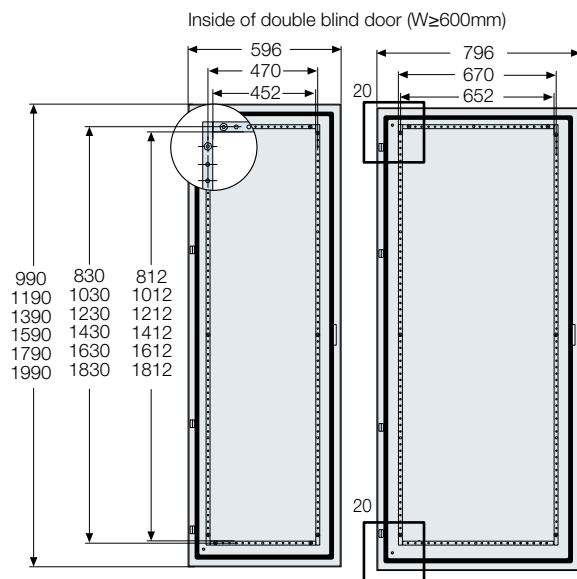
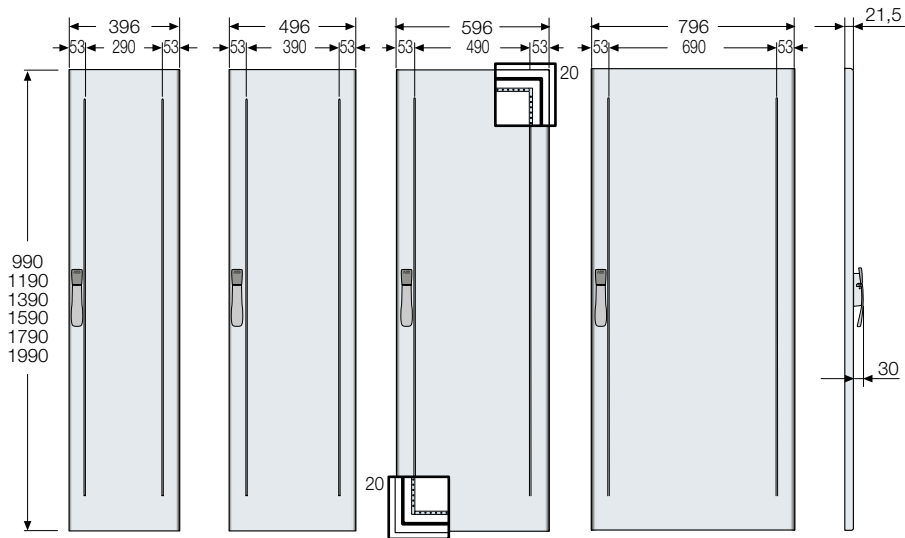
Measurements are in millimetres

Flanges for sliding cable passage

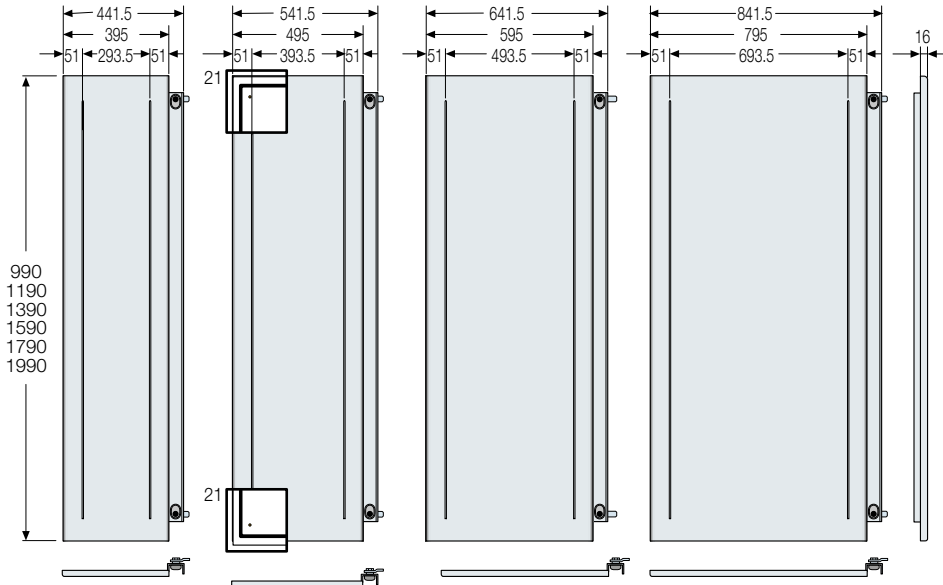


Overall dimensions AM2 cabinets

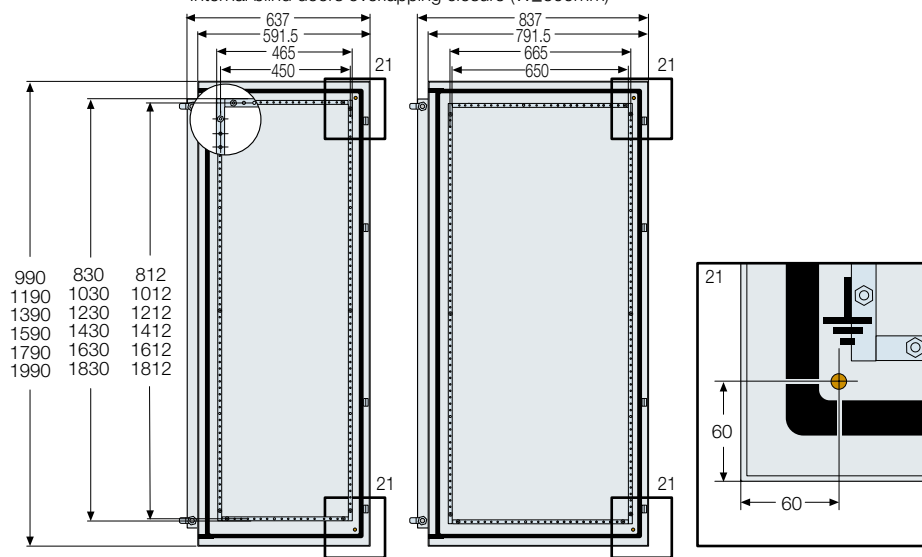
Double front or rear doors



Blind doors with overlapping closure



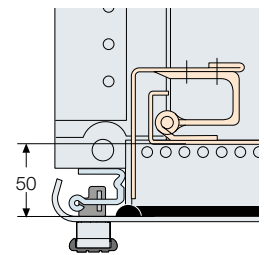
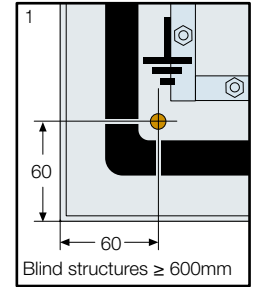
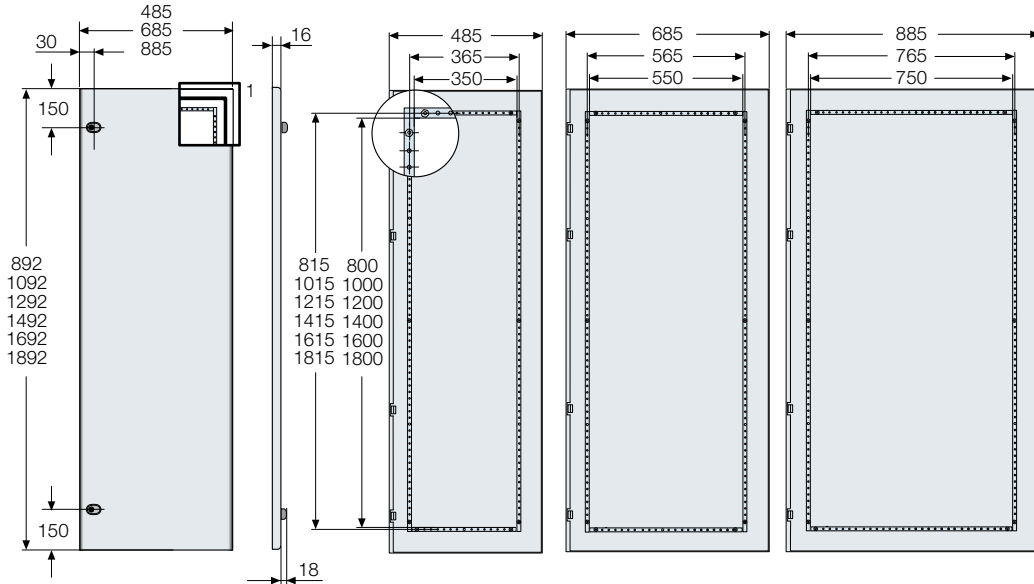
Internal blind doors overlapping closure ($W \geq 600\text{mm}$)



Measurements are in millimetres

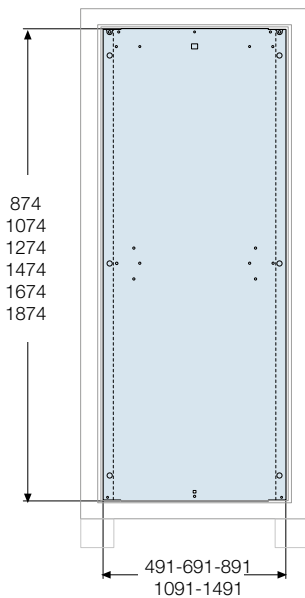
Overall dimensions AM2 cabinets

Internal counterdoor

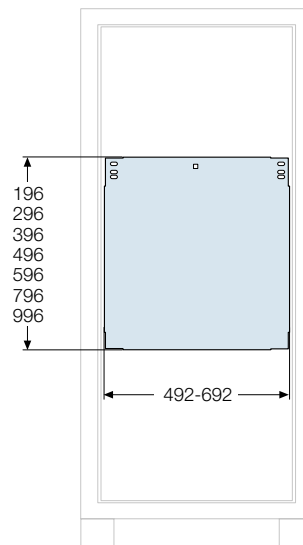


Mounting plates

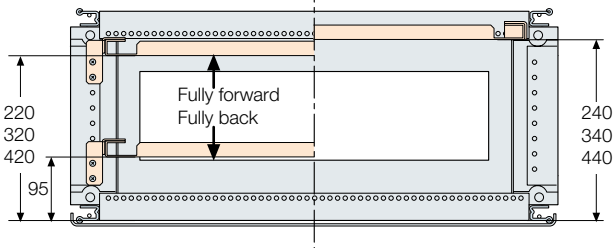
Standard plate



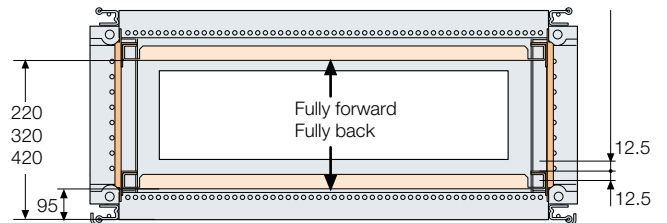
Partial height plate



Mounting with
EA5100

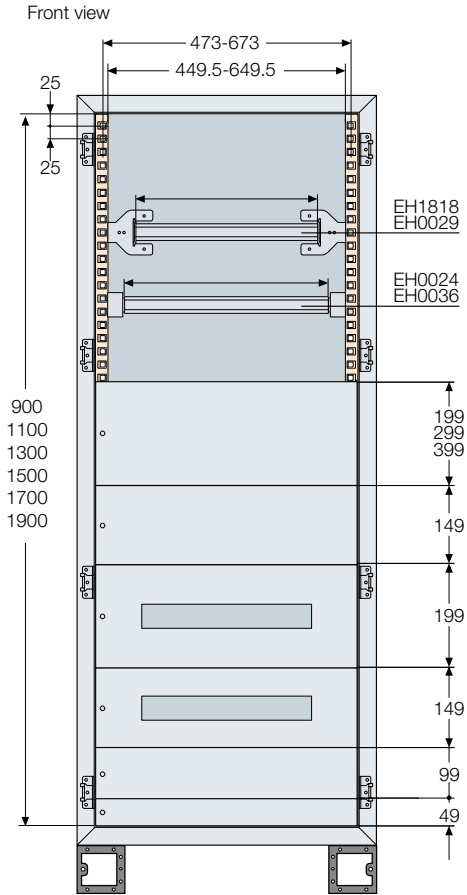


Adjustment of the
pitch at 12.5mm

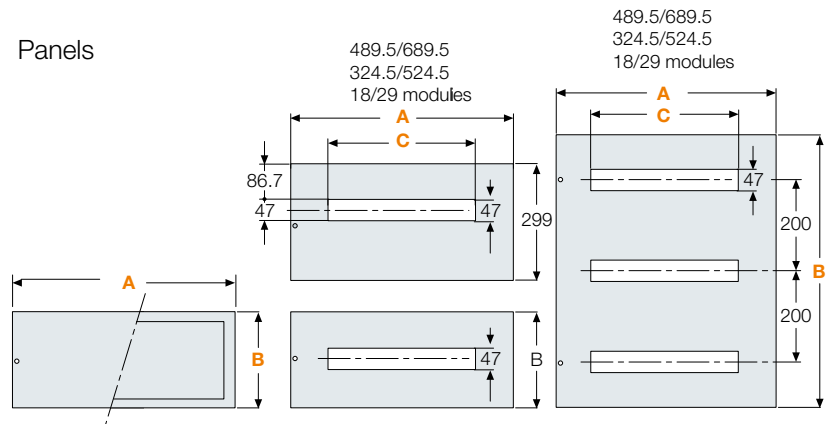


Measurements are in millimetres

Kit modular apparatus



Panels



Flat and recessed blind panels

Flat	Recessed	A	B
EH0562K		489.5	49
EH1062K		489.5	99
EH1562K		489.5	149
EH2062K	EH2063K	489.5	199
EH3063K	EH3064K	489.5	299
EH4062K	EH4064K	489.5	299
EH5062K	EH5063K	489.5	499
EH6062K	EH6063K	489.5	599
EH0582K		689.5	49
EH1082K		689.5	99
EH1582K		689.5	149
EH2082K	EH2083K	689.5	199
EH3082K	EH3083K	689.5	299
EH4082K	EH4083K	689.5	299
EH5082K	EH5084K	689.5	499
EH6082K	EH6084K	689.5	599

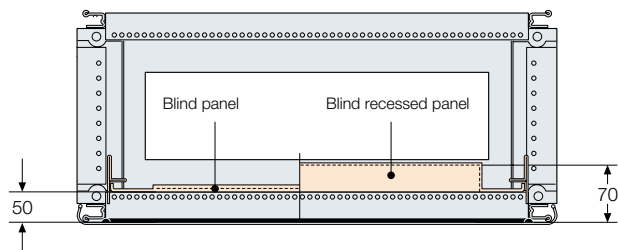
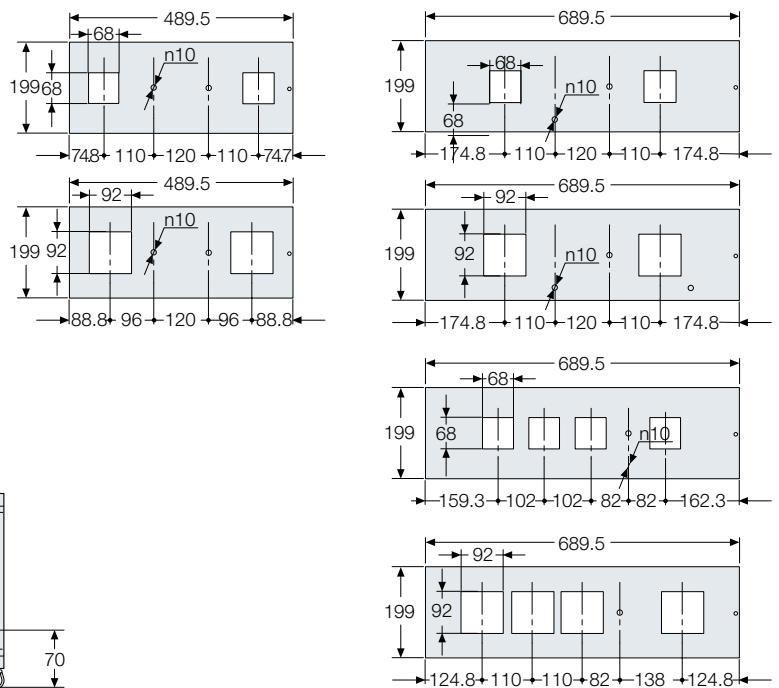
Panels for modular instruments

1 DIN row				No. mod.
Code	A	B	C	
EH1518K	489.5	149	324.5	18
EH2018K	489.5	199	324.5	18
EH3018K	489.5	299	324.5	18
EH1529K	689.5	149	524.5	29
EH2029K	689.5	199	524.5	29
EH3029K	689.5	299	524.5	29
EH1524K	489.5	149	432	24
EH2024K	489.5	199	432	24
EH1536K	689.5	149	634	36
EH2036K	689.5	199	634	36

3 DIN row

EH6018K	489.5	599	324.5	18
EH6029K	689.5	599	524.5	29
EH6025K	489.5	599	324.5	24
EH6036K	689.5	599	524.5	36

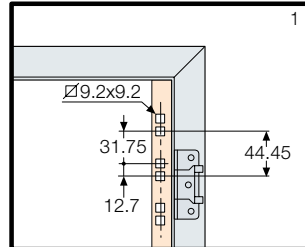
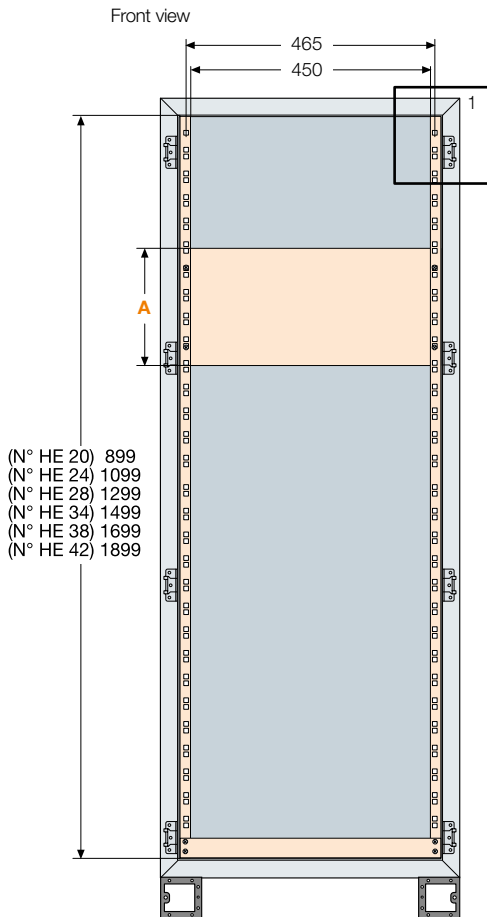
Instrument panels



Measurements are in millimetres

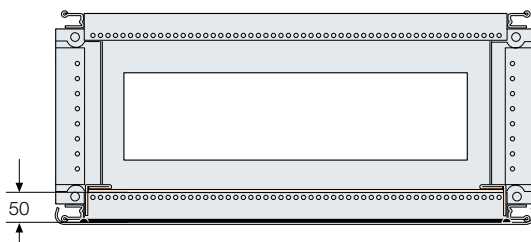
Overall dimensions AM2 cabinets

19" Rack frames



Panels for 19" rack frame

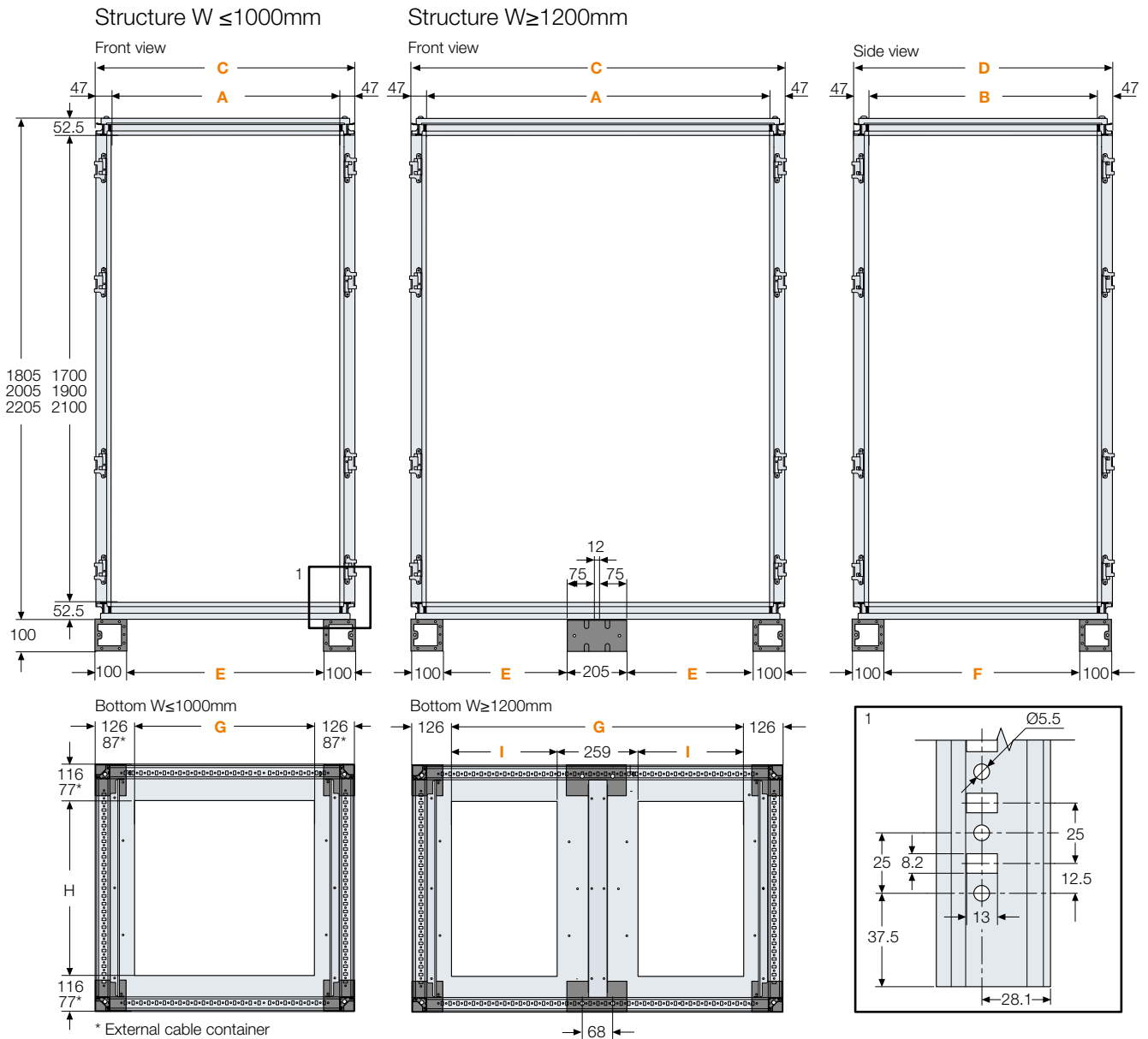
Codice	A	No. E
EG1991	44.45	1
EG1902	89	2
EG1903	133	3
EG1904	177.5	4
EG1905	222	5
EG1906	266.5	6
EG1907	311	7
EG1908	355.5	8
EG1909	400	9
EG1910	444.5	10
EG1911	488	11
EG1912	533	12
EG1913	577.5	13
EG1914	622	14
EG1915	666	15
EG1916	711	16
EG1917	755.5	17
EG1918	800	18
EG1999	844.5	19
EG1920	889	20



Measurements are in millimetres

Overall dimensions IS2 Enclosures

Basic structure/External cable container



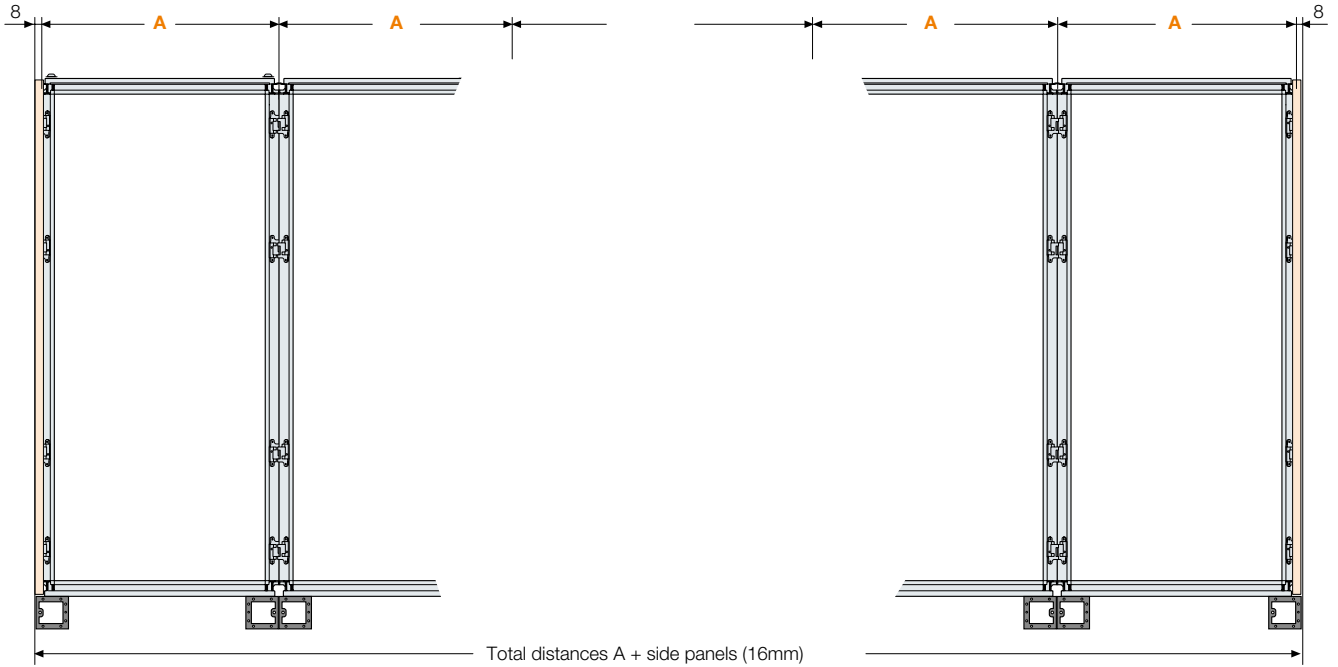
	A	B	C	D	E	F	G	H		A	B	C	D	E	F	G	H	I		
200		300		394		238		239	900		300		394		188		162			
		400		494		338		339			400		494		288		262			
		500	294	594	88	438	120	439			500	994	594	788	388	742	362			
		700		794		638		639			700		794		588		562			
		900		994		838		839			900		994		788		762			
300		300		394		238		162	1100		300		394		188		162			
		400		494		338		262			400		494		288		262			
		500	394	594	188	438	142	362			500	1194	594	391,5	388	942	362	341.5		
		700		794		638		562			700		794		588		562			
		900		994		838		762			900		994		788		762			
500		300		394		238		162	1500		300		394		188		162			
		400		494		338		262			400		494		288		262			
		500	594	594	388	438	342	362			500		594		388		362			
		700		794		638		562			700	1594	794	591,5	588	1342	562	541.5		
		900		994		838		762			900		994		788		762			
700		300		394		238		162			300		394		188		162			
		400		494		338		262			400		494		288		262			
		500	794	594	588	438	542	362			500		594		388		362			
		700		794		638		562			700		794		588		562			
		900		994		838		762			900		994		788		762			

Measurements are in millimetres

Overall dimensions IS2 Enclosures

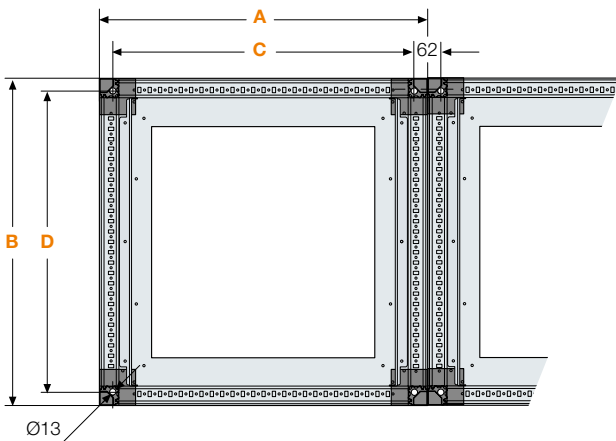
Placing structures side by side and fixing to the floor

Overall dimensions of several structures side by side



9

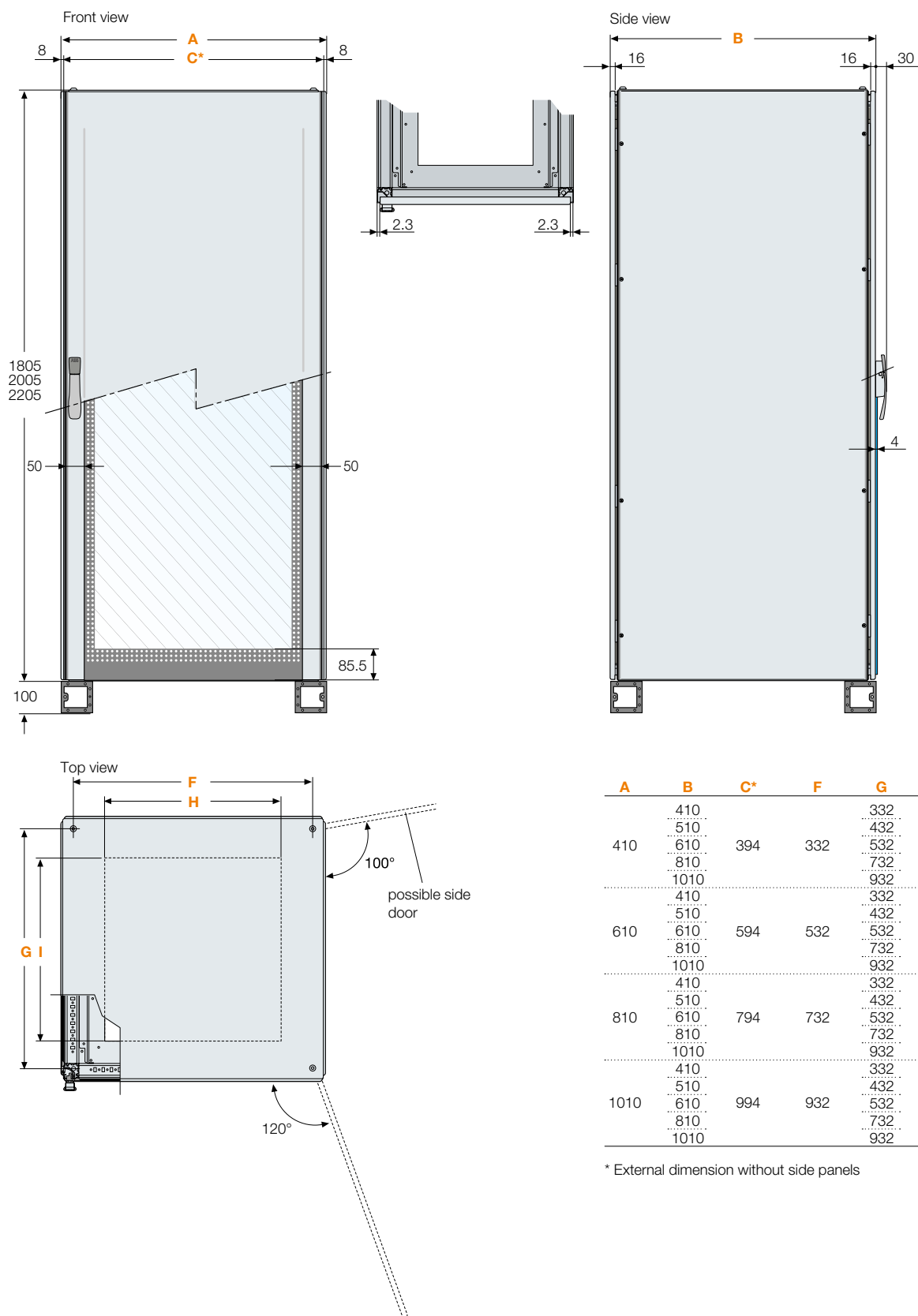
Fixing by means of plinth
For fixing, use M12 nut + dolly block



A	B	C	D
	394		332
	494		432
394	594	332	532
	794		732
	994		932
	394		332
	494		432
594	594	532	532
	794		732
	994		932
	394		332
	494		432
794	594	732	532
	794		732
	994		932
	394		332
	494		432
994	594	932	532
	794		732
	994		932
	394		332
	494		432
1194	594	1132	532
	794		732
	994		932
	394		332
1594	494	1532	432
	594		532
	794		732

Measurements are in millimetres

Version with blind or glazed door

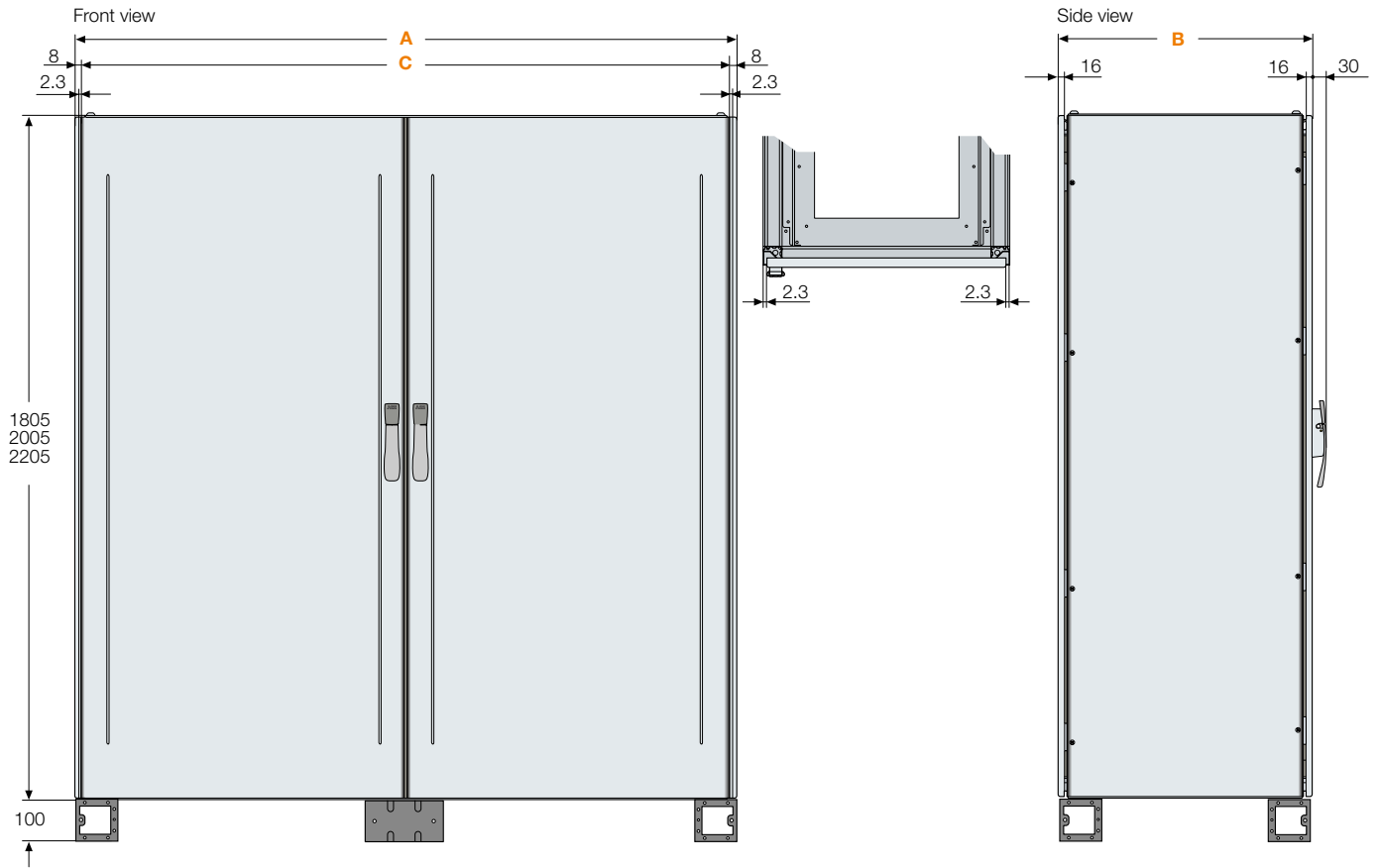


* External dimension without side panels

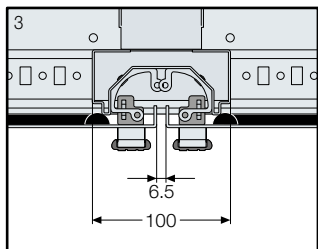
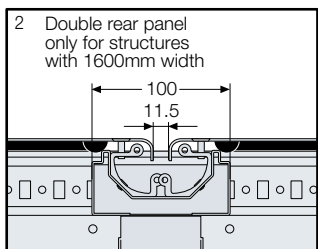
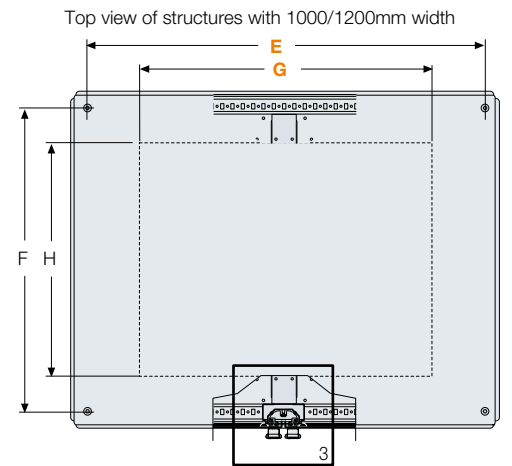
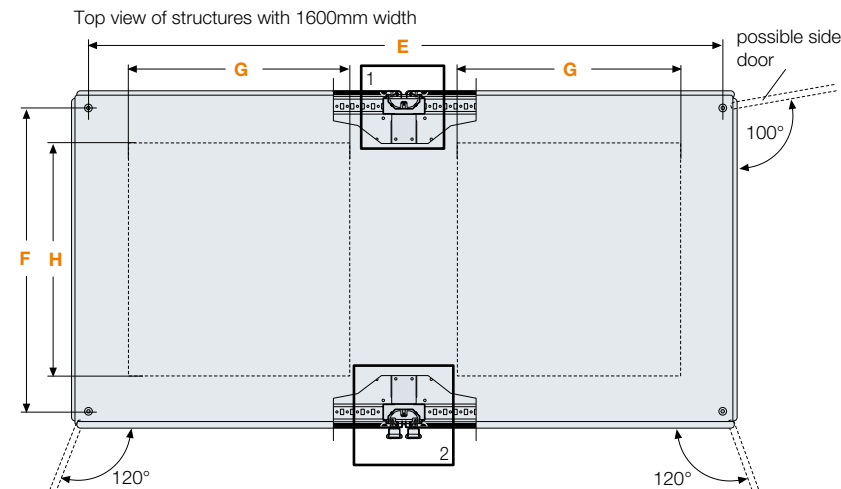
Measurements are in millimetres

Overall dimensions IS2 Enclosures

Version with double blind door



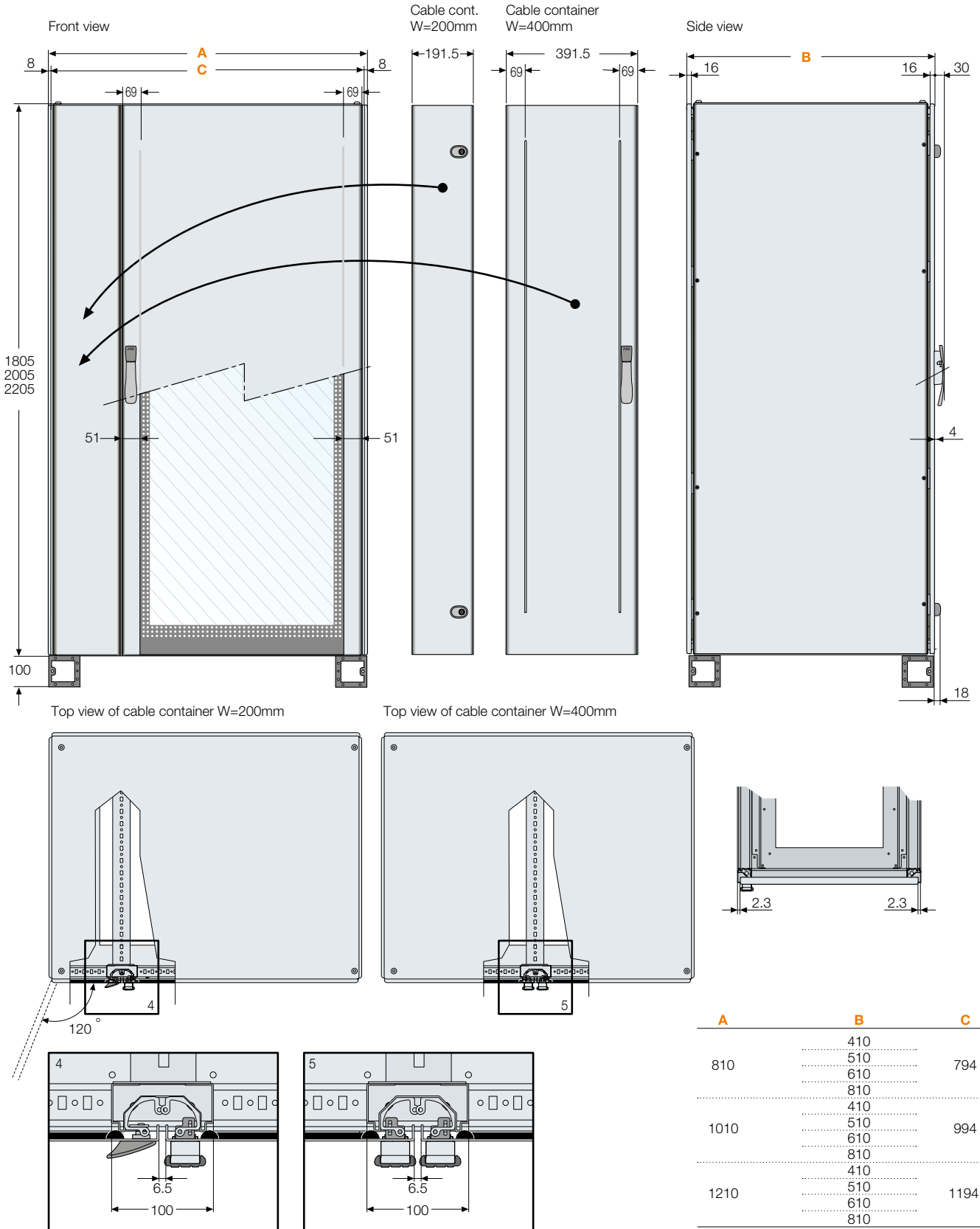
9



	A	B	C	E	F	G	H
1010		410			332		162
		510			432		262
		610	994	932	532	742	362
		810			732		562
1210		1010			932		762
		410			332		162
		510	1194	1132	432	942	262
		610			532		362
1610		810			732		562
		410			332		162
		510	1594	1532	432	1342	262
		620			532		362
	810			732		562	

Measurements are in millimetres

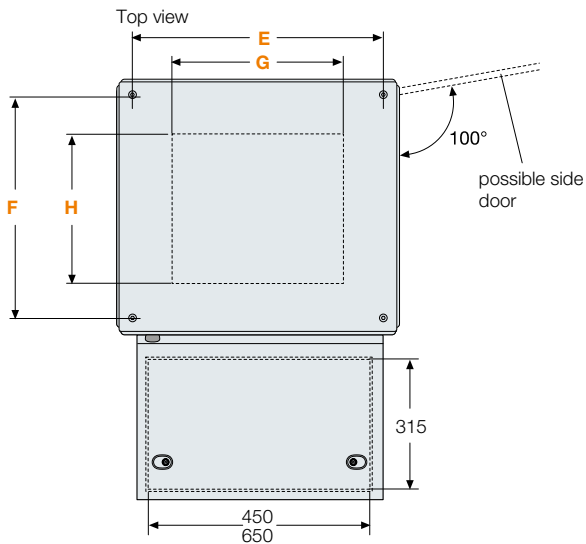
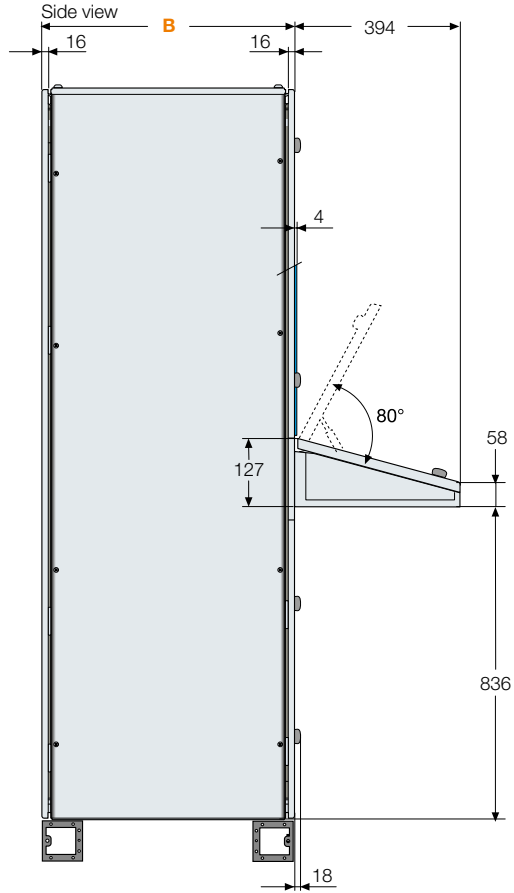
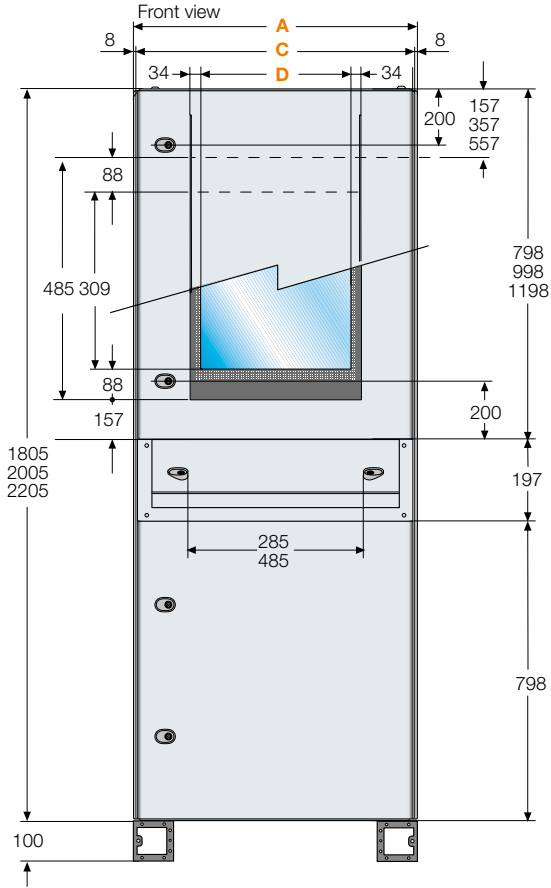
Version with cable container



Overall dimensions IS2 Enclosures

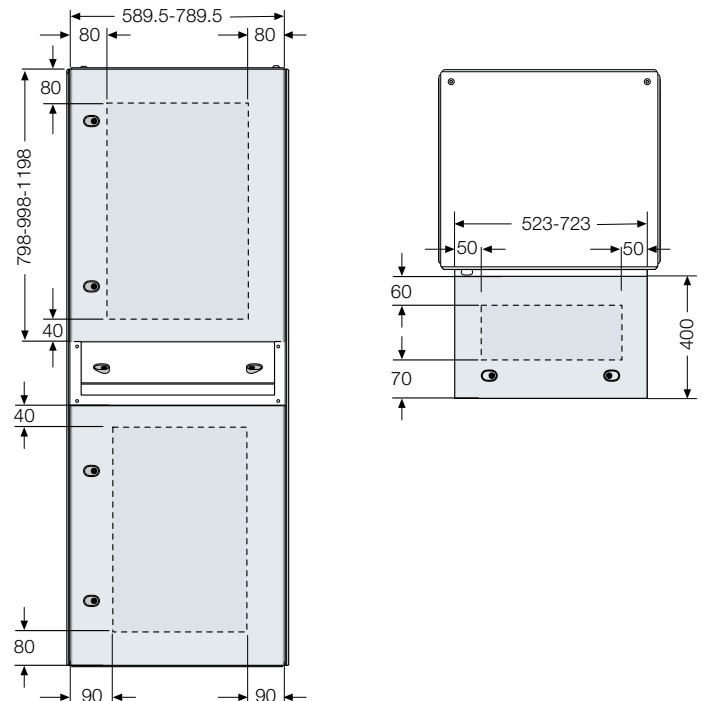
Cabinet with console

Note: for glass dimensions, please refer to the table below.



Cabinet with console drillings

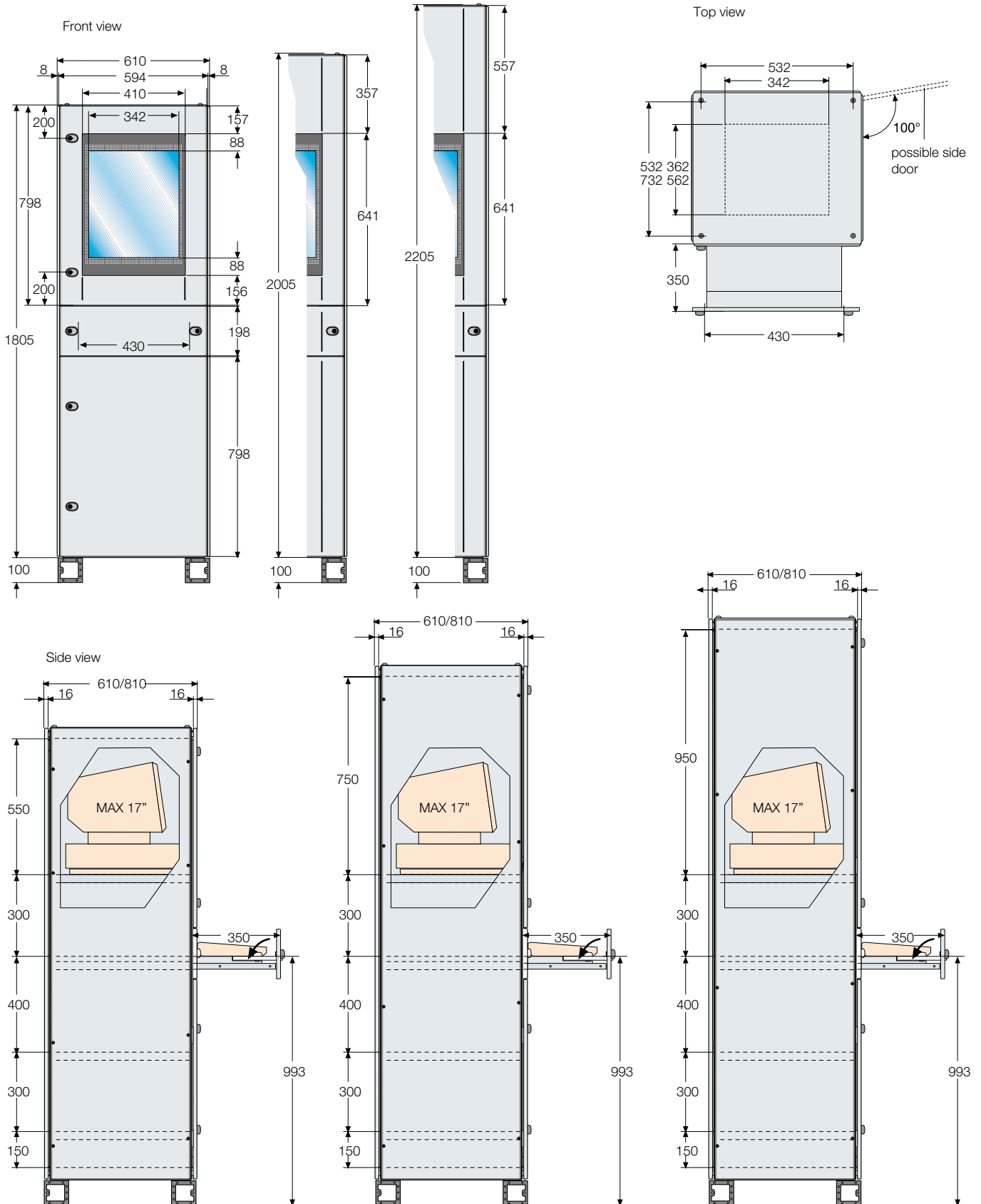
Maximum useful overall dimensions for the drillings



A	B	C	D	E	F	G	H
	410				332		162
605.5	510				432		262
	610	589.5	342	532	532	342	362
	810				732		562
	410				332		162
805.5	510				432		262
	610	789.5	542	732	532	542	362
	810				732		562

Measurements are in millimetres

PC cabinet

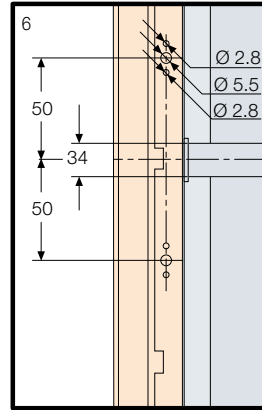
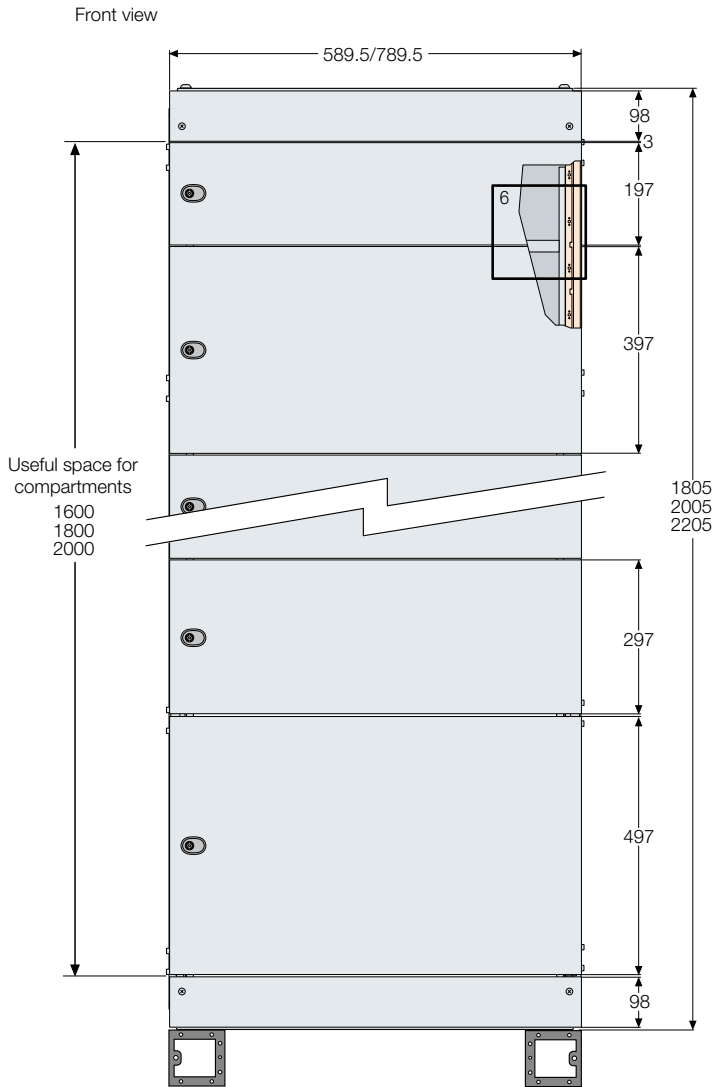


Measurements are in millimetres

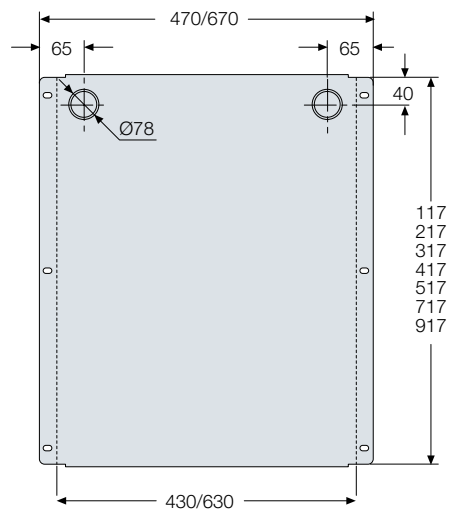
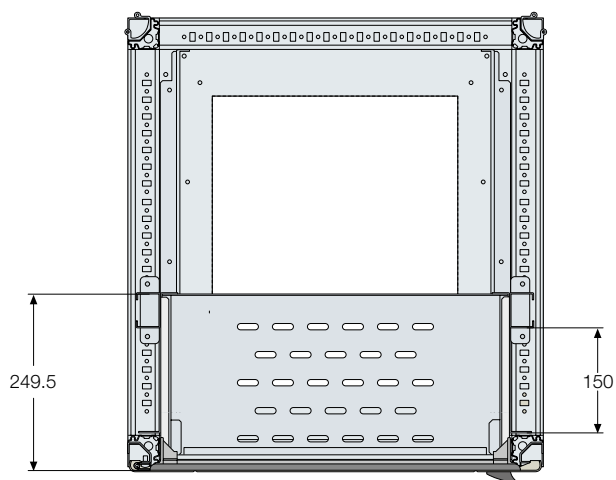
Overall dimensions

IS2 Enclosures

Compartment Configuration



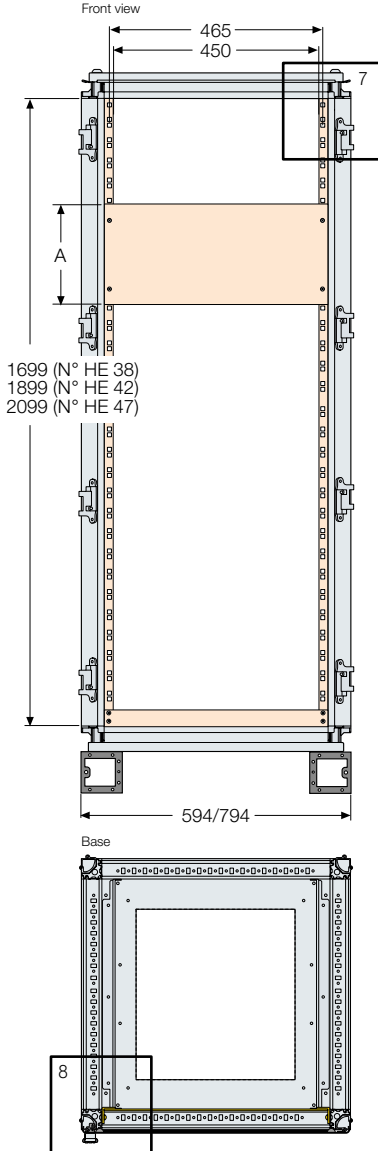
Base



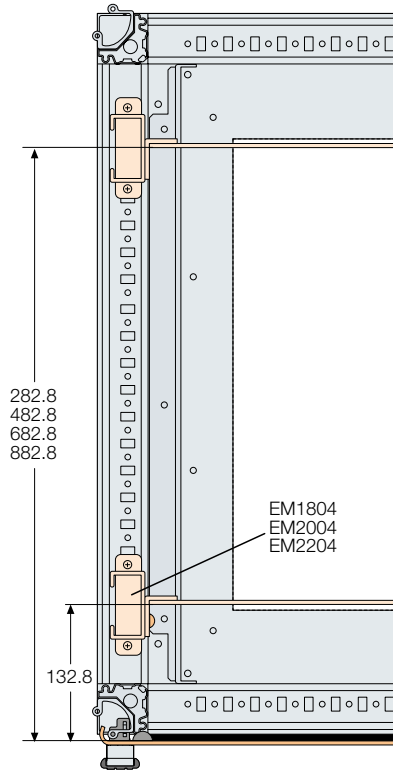
Measurements are in millimetres

19" Rack frames

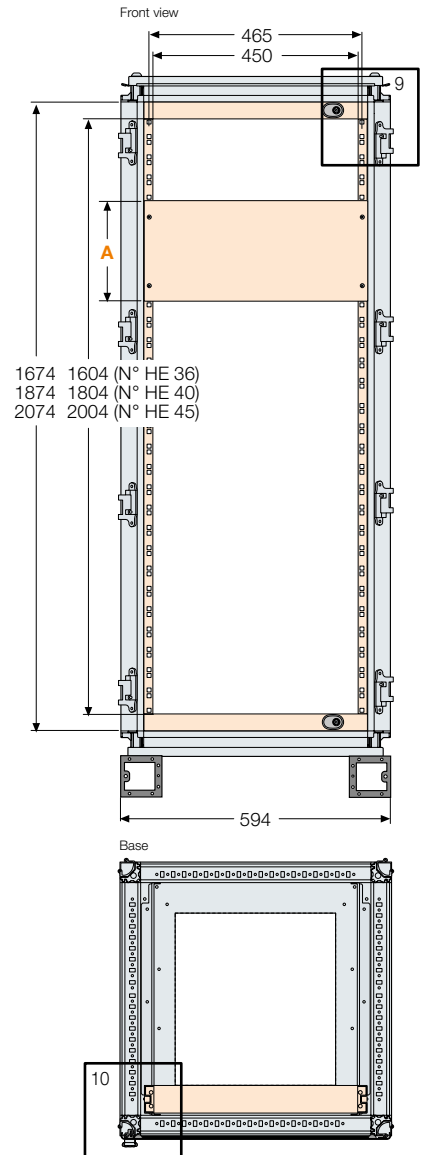
Fixed rack frame



Swing rack frame
fixed rack frame



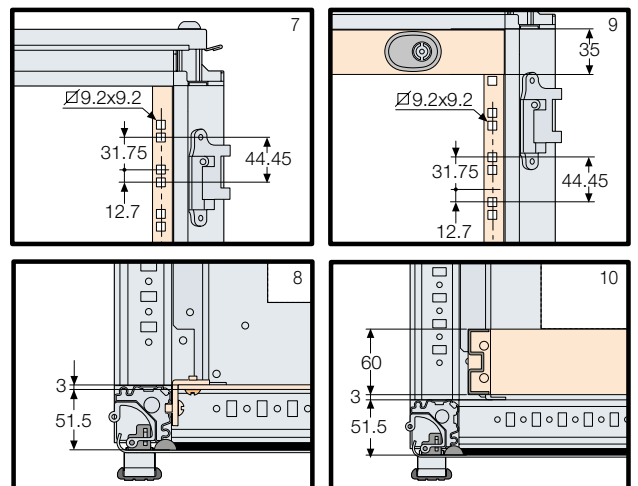
Swing rack frame W=600mm



Panels for 19" rack frames

Code	A	No. HE
EG1991	44.45	1
EG1902	89	2
EG1903	133	3
EG1904	177.5	4
EG1905	222	5
EG1906	266.5	6
EG1907	311	7
EG1908	355.5	8
EG1909	400	9
EG1910	444.5	10
EG1911	488	11
EG1912	533	12
EG1913	577.5	13
EG1914	622	14
EG1915	666	15
EG1916	711	16
EG1917	755.5	17
EG1918	800	18
EG1999	844.5	19
EG1920	889	20

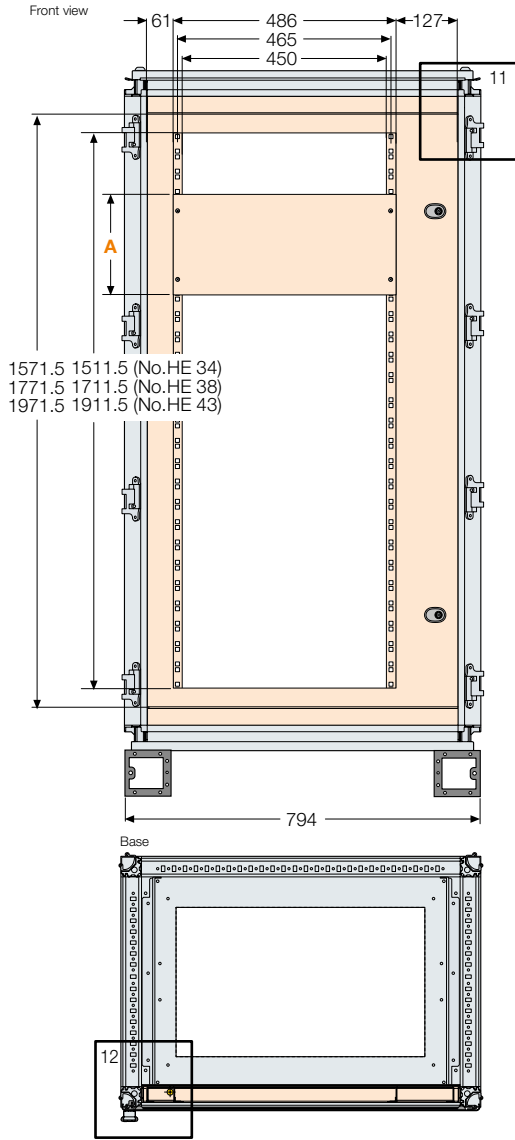
Measurements are in millimetres



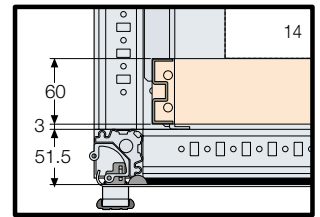
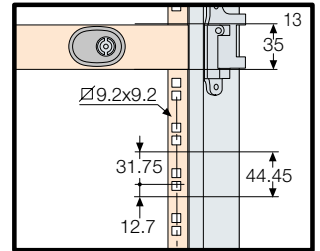
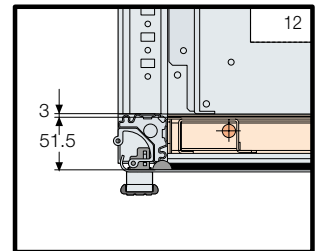
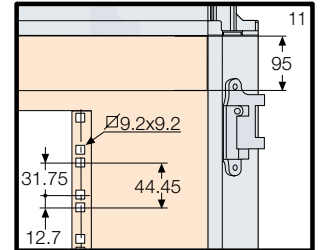
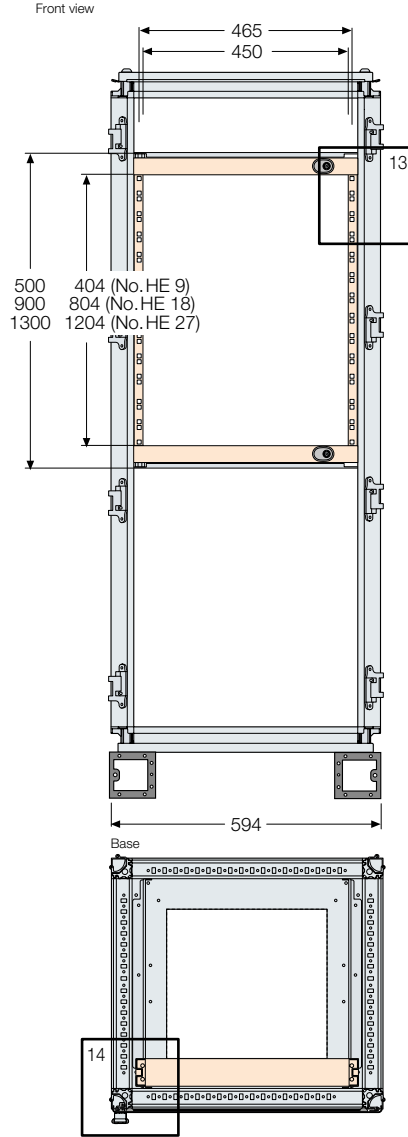
Overall dimensions IS2 Enclosures

19" Rack frames

Rack frame in structure W=800mm



Partial swing rack frame



9

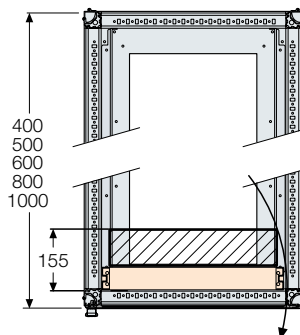
Panels for 19" rack frames

Code	A	No. HE
EG1991	44.45	1
EG1902	89	2
EG1903	133	3
EG1904	177.5	4
EG1905	222	5
EG1906	266.5	6
EG1907	311	7
EG1908	355.5	8
EG1909	400	9
EG1910	444.5	10
EG1911	488	11
EG1912	533	12
EG1913	577.5	13
EG1914	622	14
EG1915	666	15
EG1916	711	16
EG1917	755.5	17
EG1918	800	18
EG1999	844.5	19
EG1920	889	20

Maximum overall apparatus installation dimensions in 19" swing rack frames

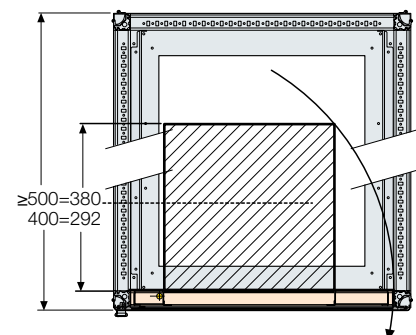
Swing rack frame with 90° opening

Rack frame in structure W=600mm



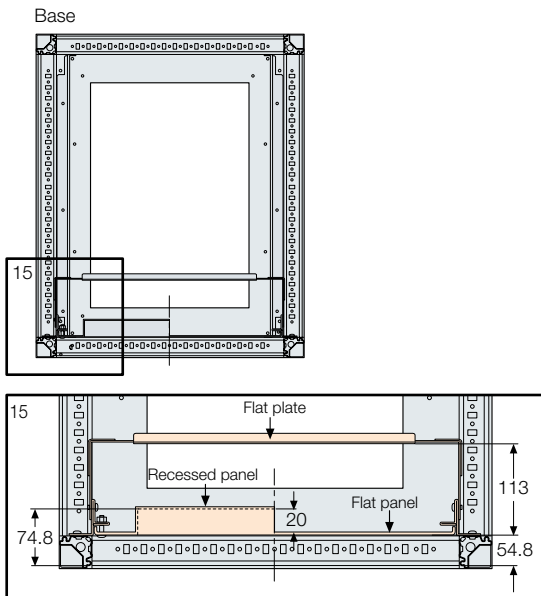
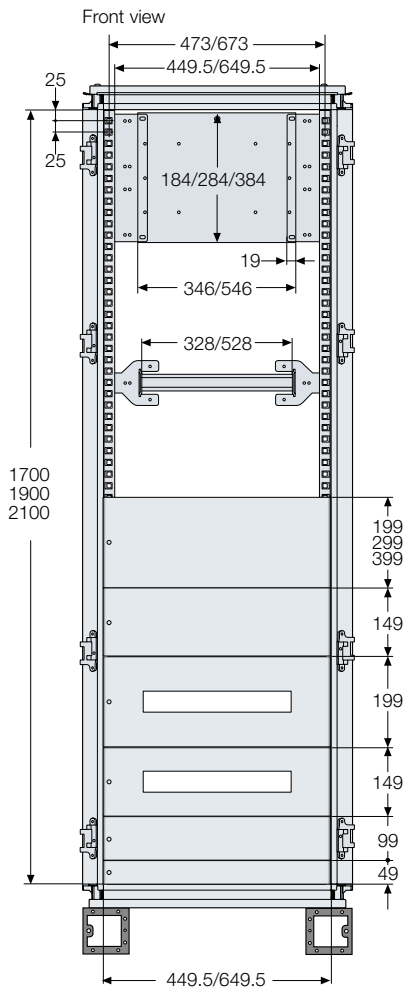
Swing rack frame with 150° opening

TRack frame eccentric in structure W=800mm

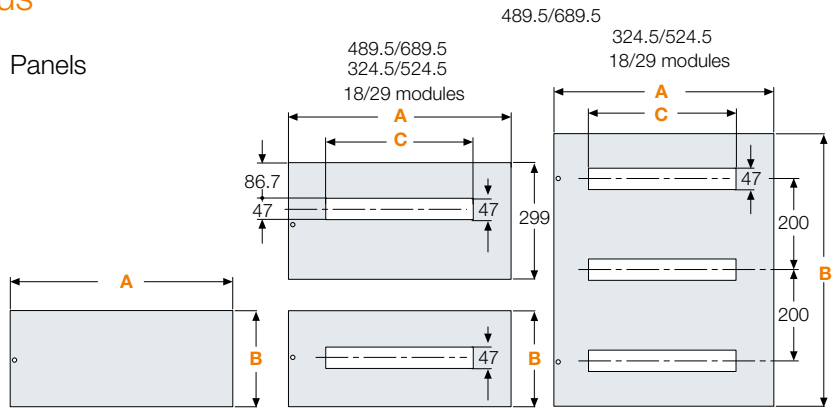


Measurements are in millimetres

Version with kit for modular apparatus



Panels



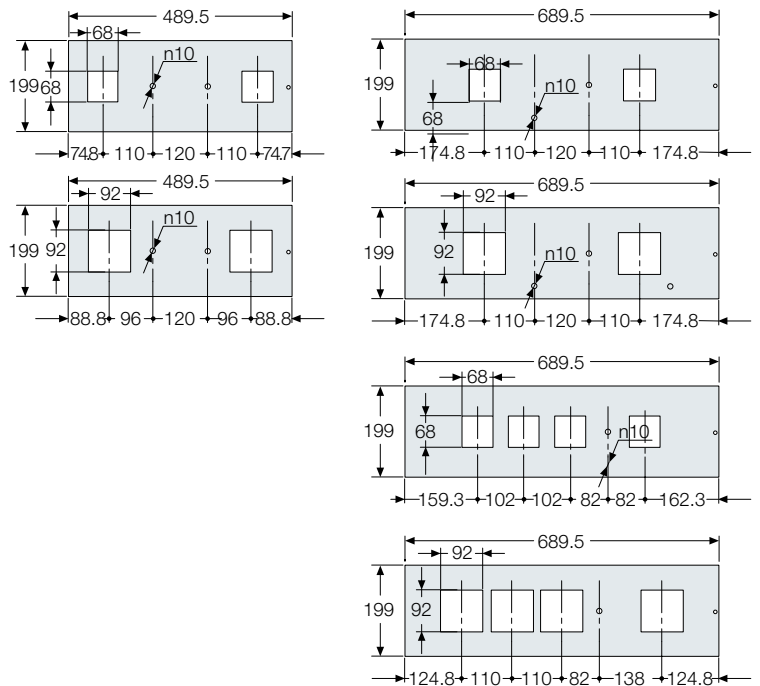
Blind panels

Code	A	B
EH0562K	489.5	49
EH1062K	489.5	99
EH1562K	489.5	149
EH2062K	489.5	199
EH3063K	489.5	299
EH4062K	489.5	399
EH5062K	489.5	499
EH6062K	489.5	599
EH0582K	689.5	49
EH1082K	689.5	99
EH1582K	689.5	149
EH2082K	689.5	199
EH3082K	689.5	299
EH4082K	689.5	399
EH5082K	689.5	499
EH6082K	689.5	599

Panel for modular instruments

1 DIN row						
Code	A	B	C	No. mod.		
EH1518K	489.5	149	324.5	18		
EH2018K	489.5	199	324.5	18		
EH3018K	489.5	299	324.5	18		
EH1529K	689.5	149	524.5	29		
EH2029K	689.5	199	524.5	29		
EH3029K	689.5	299	524.5	29		
EH1524K	489.5	149	432	24		
EH2024K	489.5	199	432	24		
EH1536K	689.5	149	634	36		
EH2036K	689.5	199	634	36		
3 DIN rows						
EH6018K	489.5	599	324.5	18		
EH6029K	689.5	599	524.5	29		
EH6025K	489.5	599	432	24		
EH6036K	689.5	599	634	36		

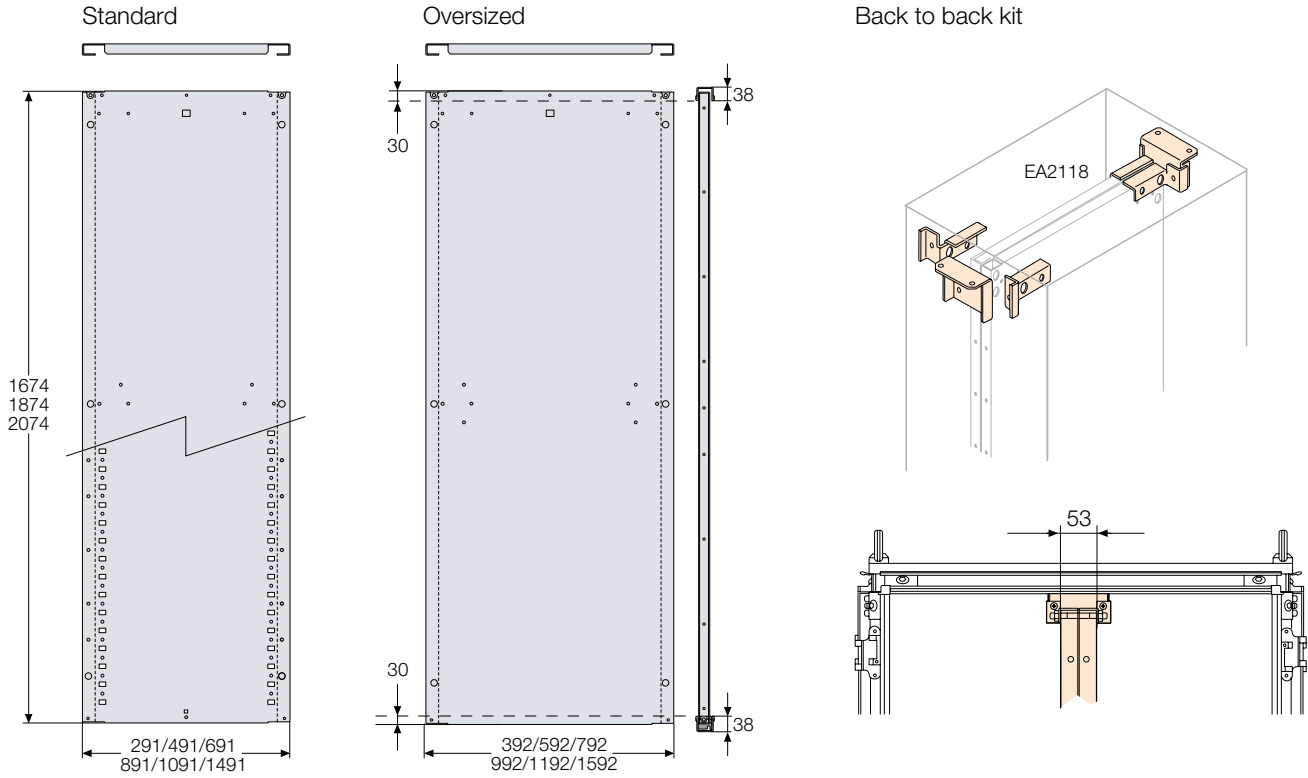
Instruments panels



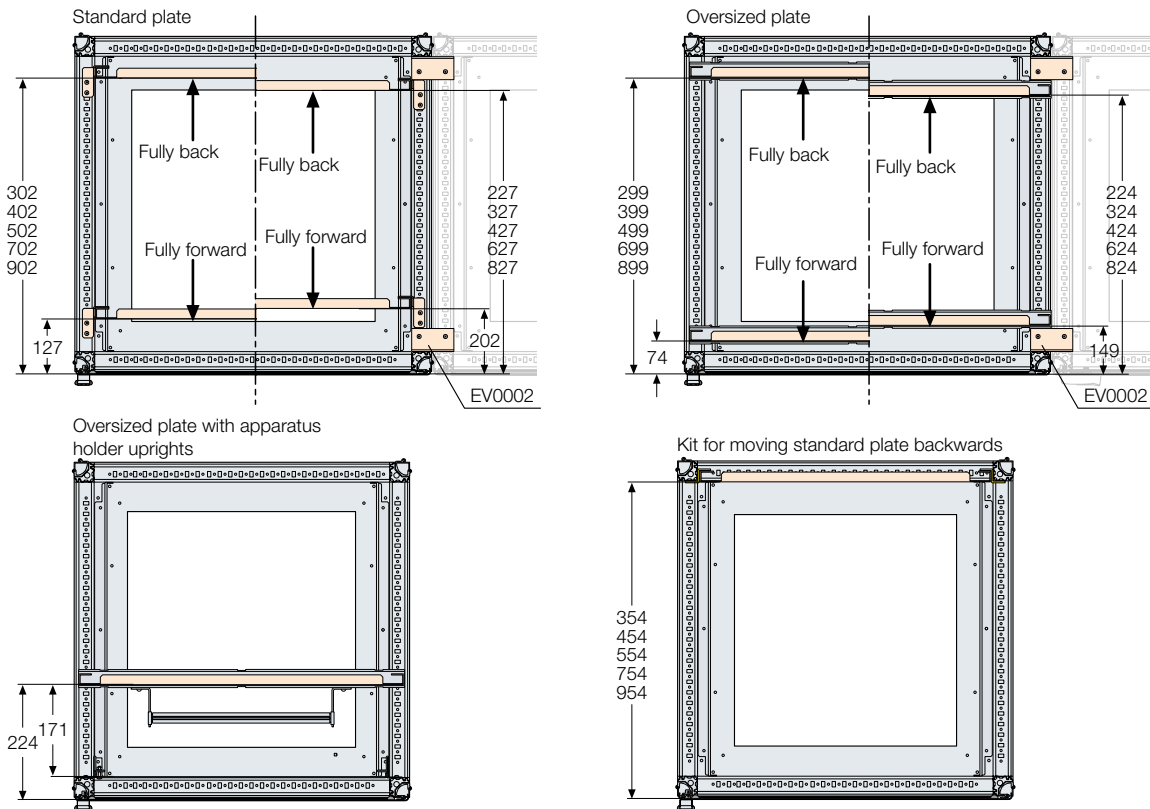
Measurements are in millimetres

Overall dimensions IS2 Enclosures

Back plates



9

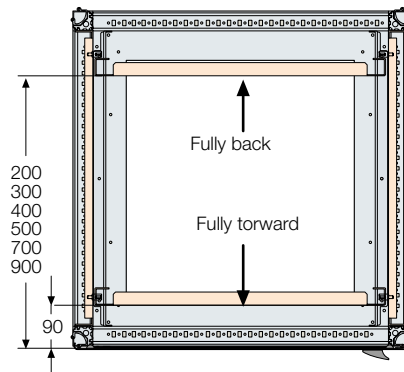
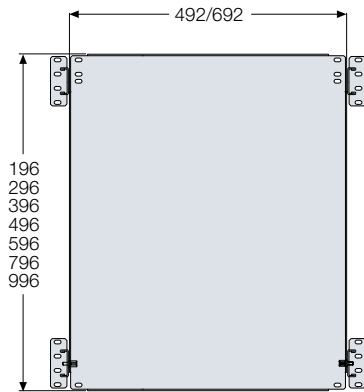


Measurements are in millimetres

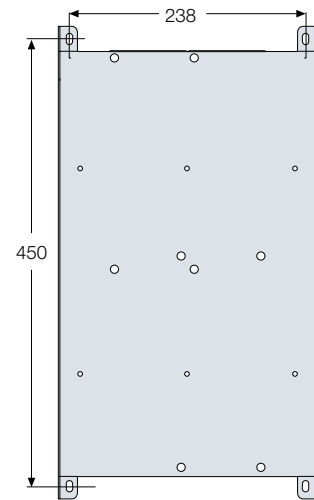
Back plates

Partial back plates

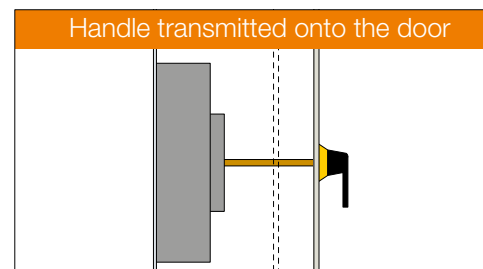
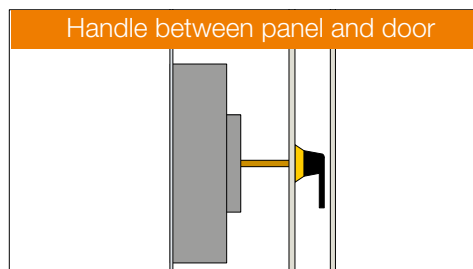
Do not require the depthwise upright



Back plates for condensers



Selection of partial back plate and panels according to the apparatus to be installed



Switch-disconnectors

	Structures W=600mm			Structures W=800mm		
	Partial back plate	Panel	H (mm)	Partial back plate	Panel	H (mm)
OT200/250	EA2062	EH2062K	200	EA2081	EH2082K	200
OT315/400	EA3061	EH3063K	300	EA3081	EH3082K	300
OT630/800	EA4061	EH4062K	400	EA4081	EH4082K	400

	Structures W=600mm			Structures W=800mm		
	Partial back plate	Panel	H (mm)	Partial back plate	Panel	H (mm)
	EH2065 ⁽²⁾	EH2062K	200	EH2085 ⁽²⁾	EH2082K	200
	EA3061	EH3063K	300	EA3081	EH3082K	300
	EA4061	EH4062K	400	EA4081	EH4082K	400

Circuit-breakers

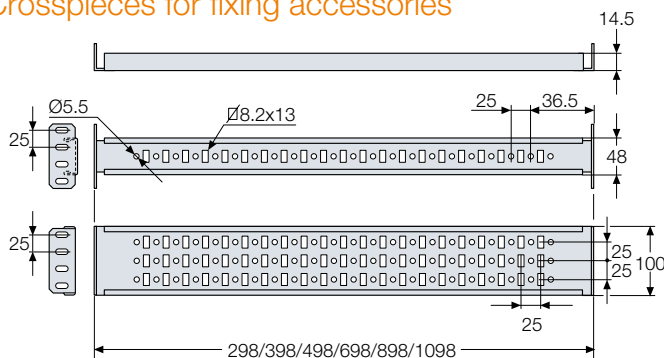
Tmax T1-T2 -T 3	EA2062	EH2063K ⁽¹⁾	200	EA2083 ⁽¹⁾	EH2083K	200
Tmax XT1-XT2-XT3-XT4	EA2062	EH2062K	200	EA2081	EH2082K	200
Tmax T4-T5	EA4061	EH4062K	400	EA4081	EH4082K	200
Tmax T 6	EA5061	EH5062K	500	EA5081	EH5082K	500

	EH2065 ⁽²⁾	EH2062K	200	EH2085 ⁽²⁾	EH2082K	200
	EA4061	EH4062K	400	EA4081	EH4082K	200
	EA5061	EH5062K	500	EA5081	EH5082K	500

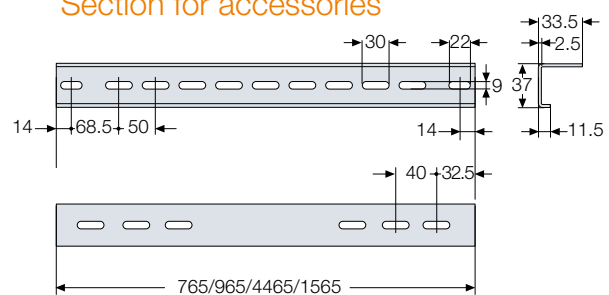
⁽¹⁾ Blind recessed panel

⁽²⁾ Blind apparatus-holder back plate

Crosspieces for fixing accessories



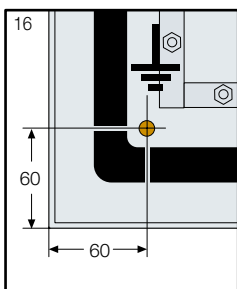
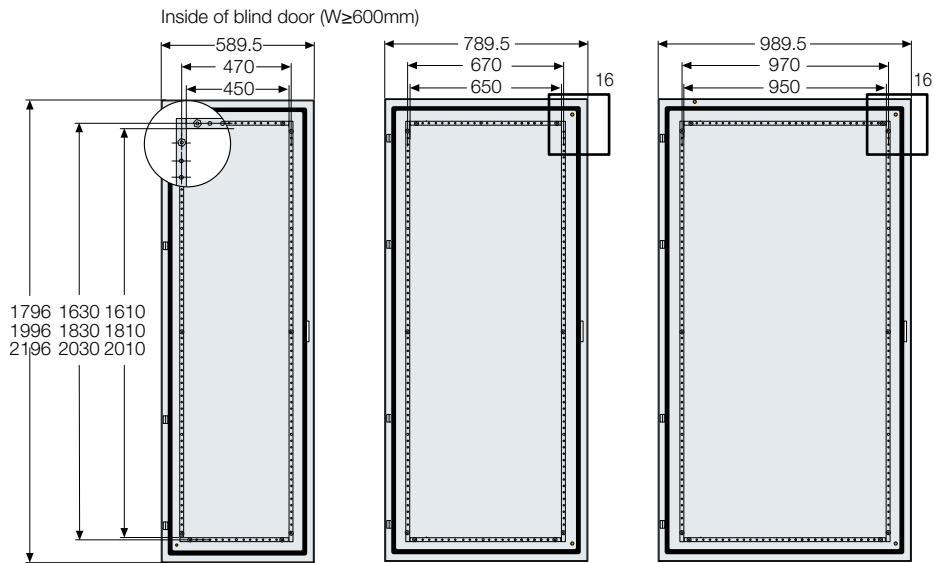
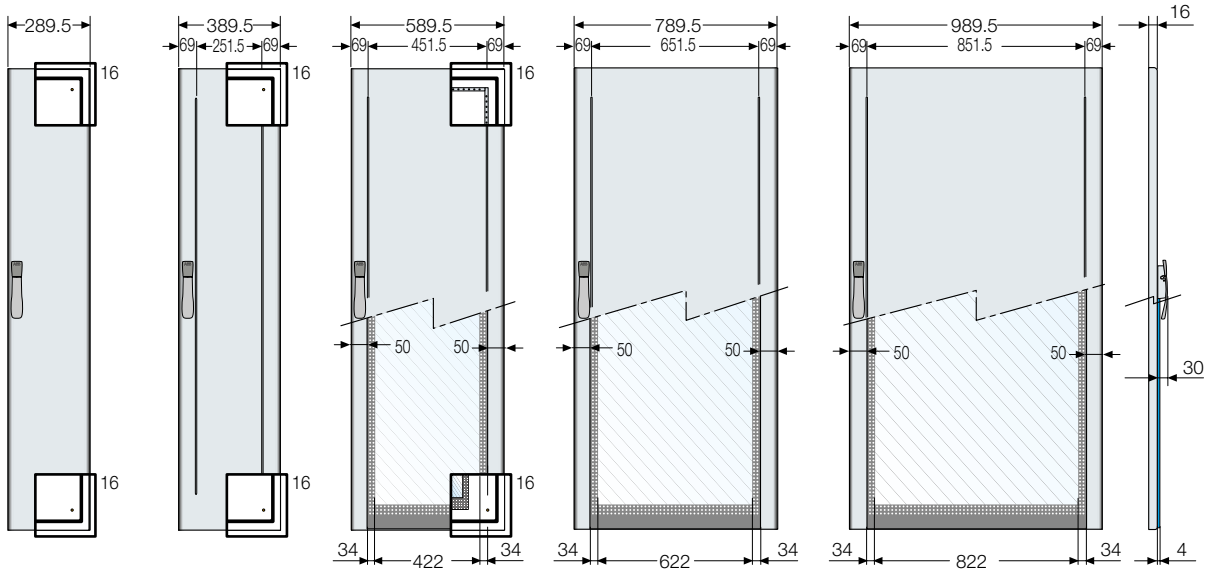
Section for accessories



Measurements are in millimetres

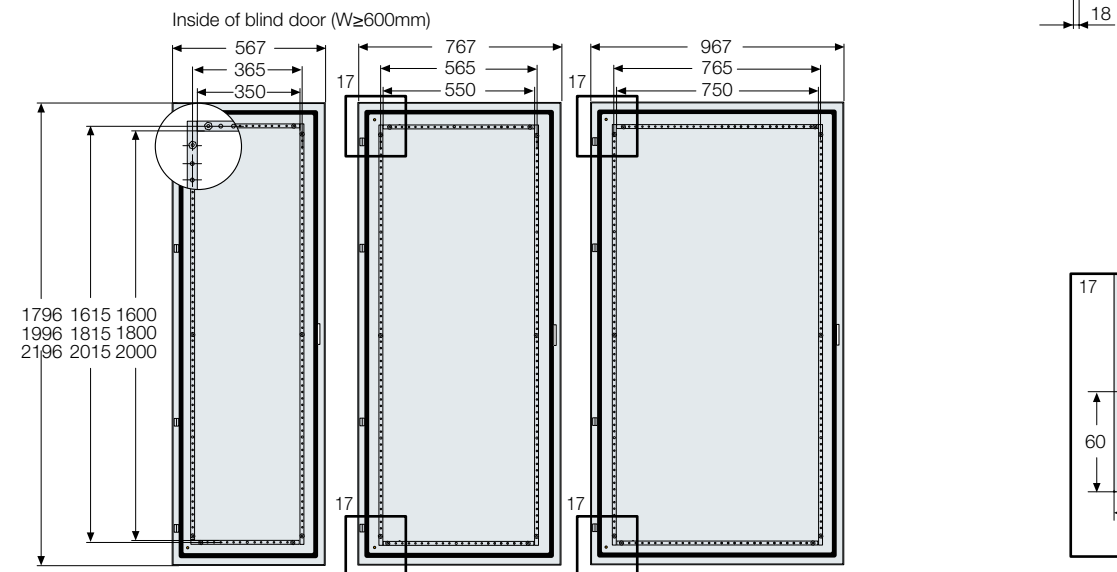
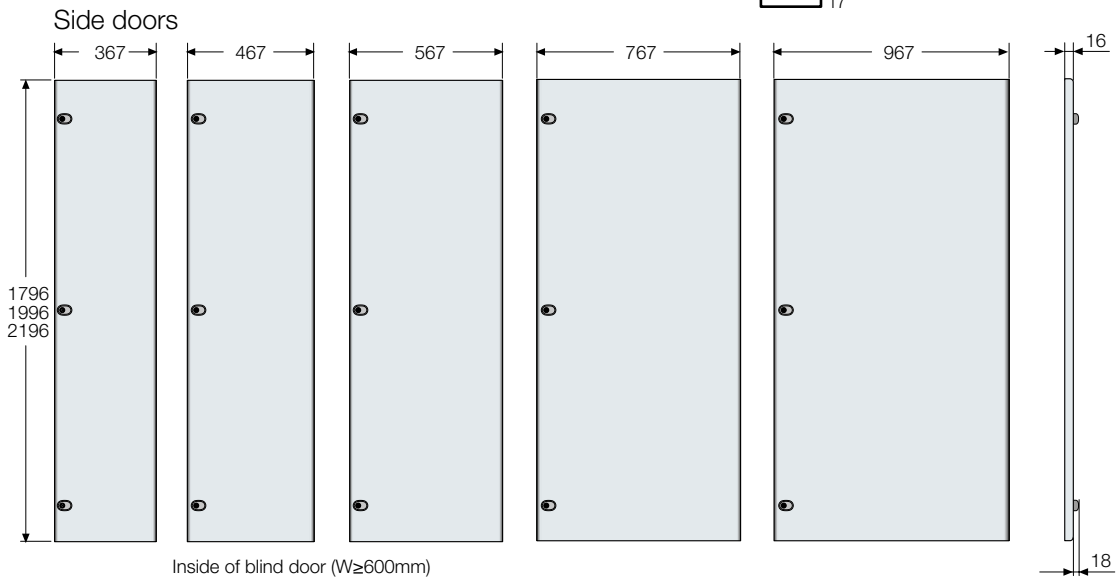
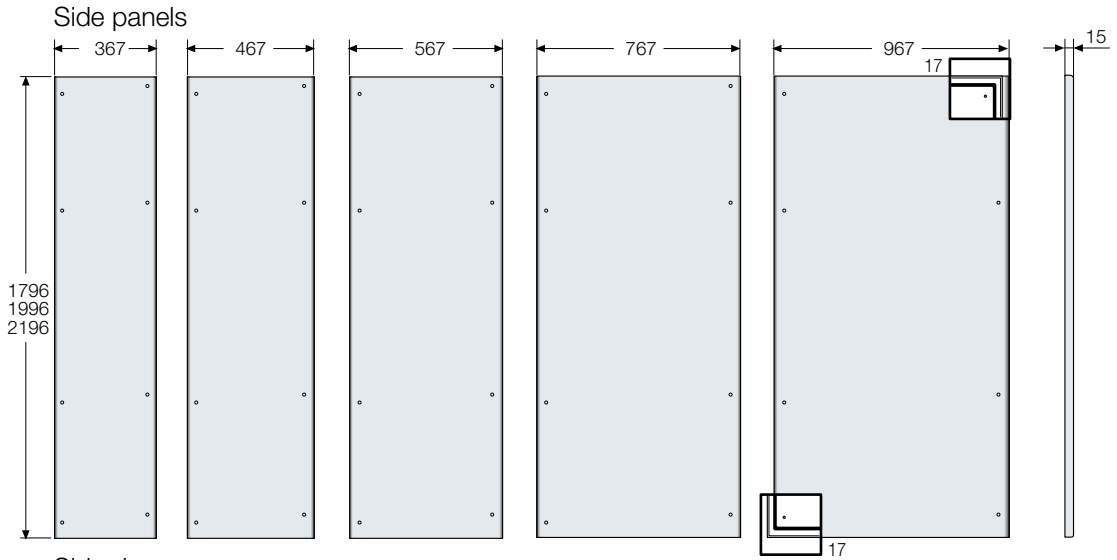
Overall dimensions IS2 Enclosures

Front or rear doors



Measurements are in millimetres

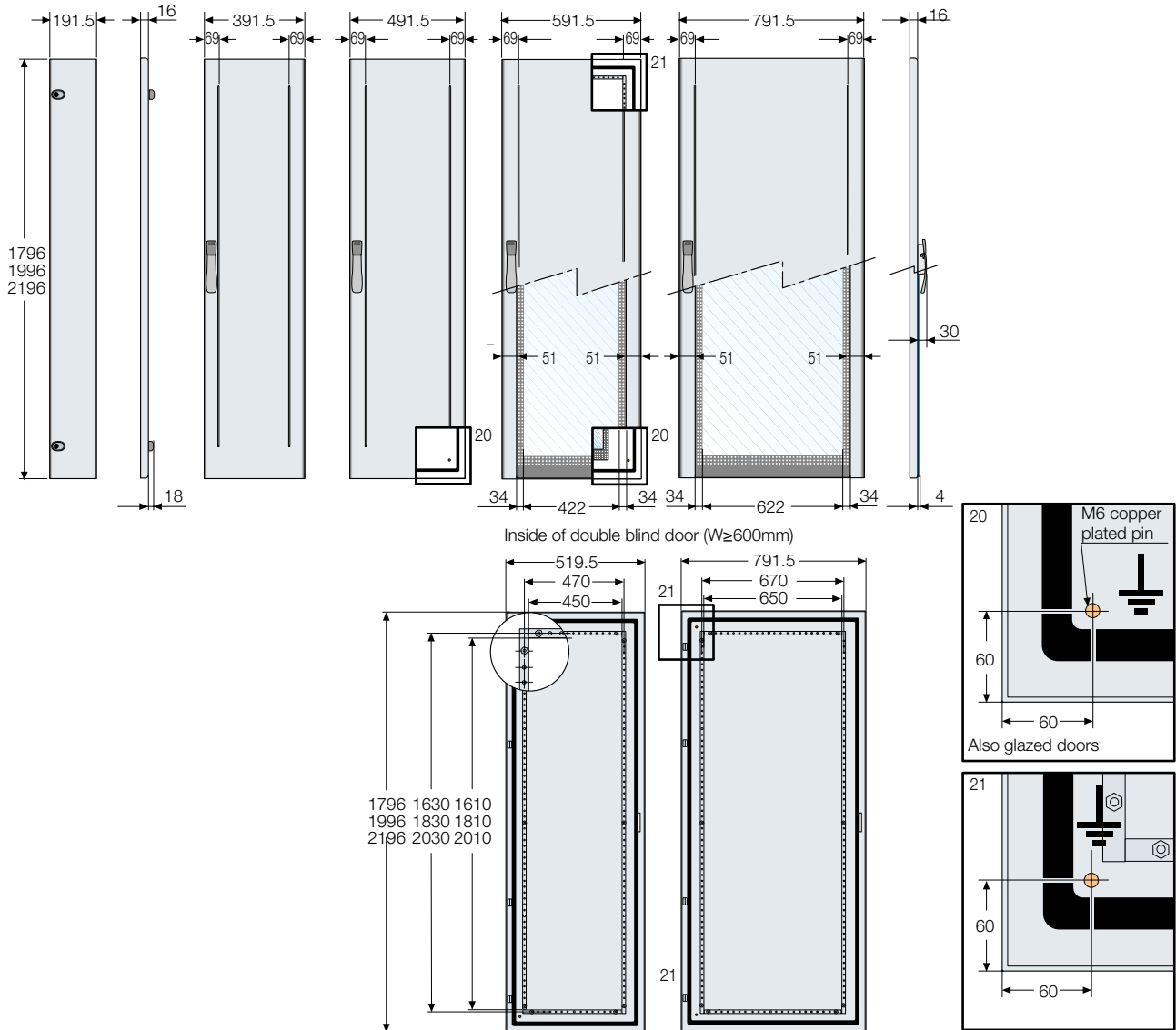
Side covers



Measurements are in millimetres

Overall dimensions IS2 Enclosures

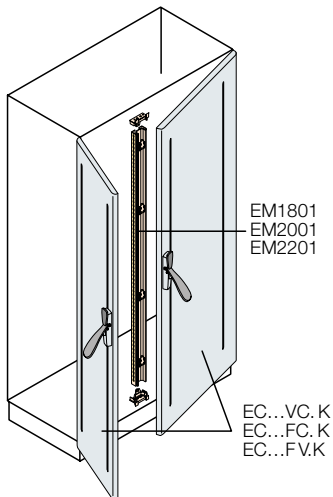
Double front or rear doors



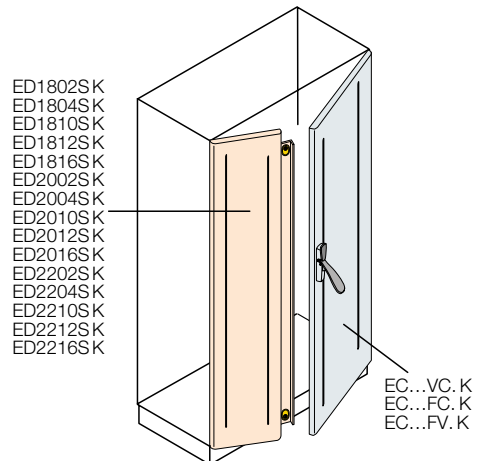
9

Example of use of double doors

Mounting with intermediate upright and crosspieces in depth

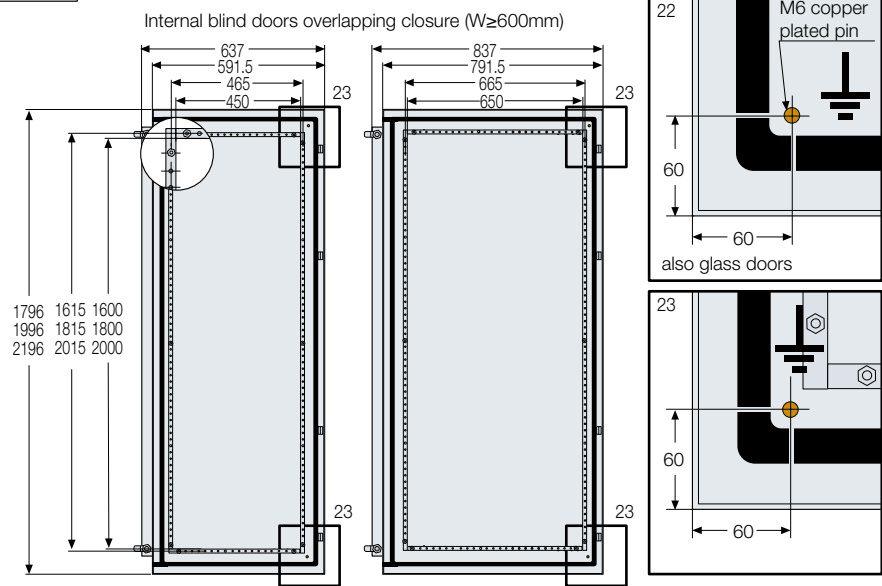
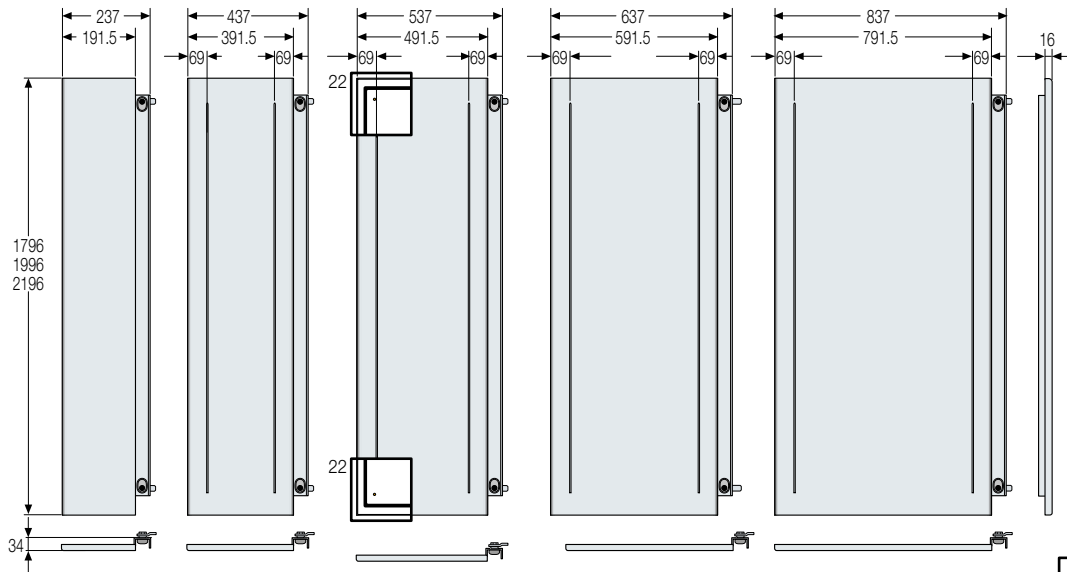


Mounting with blind doors with overlapping cosure (without intermediate upright and crosspieces in depth)

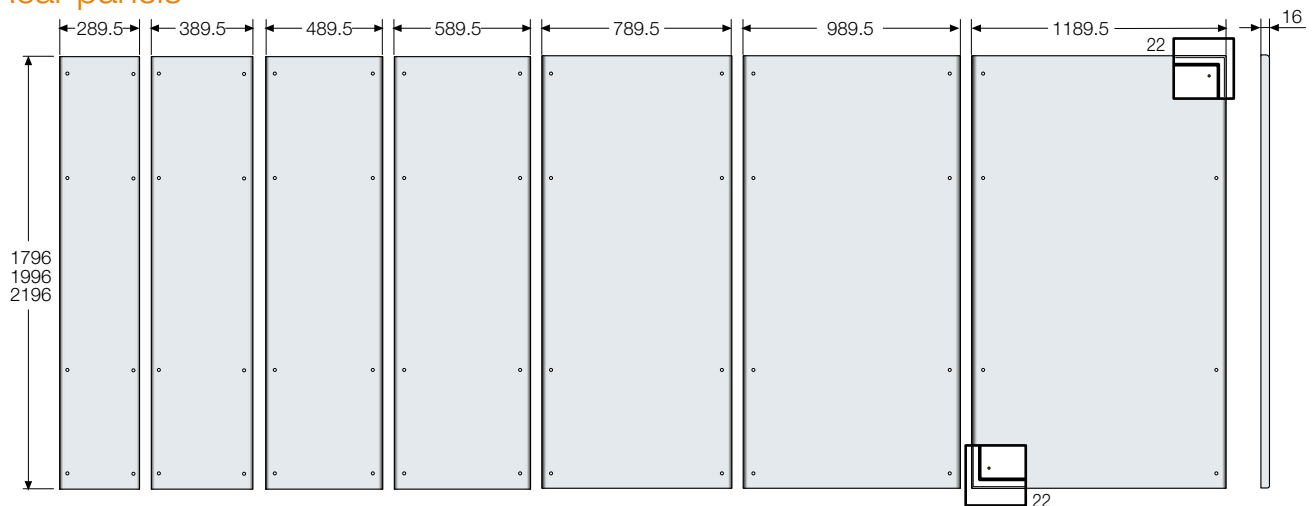


Measurements are in millimetres

Blind doors with overlapping closure



Rear panels

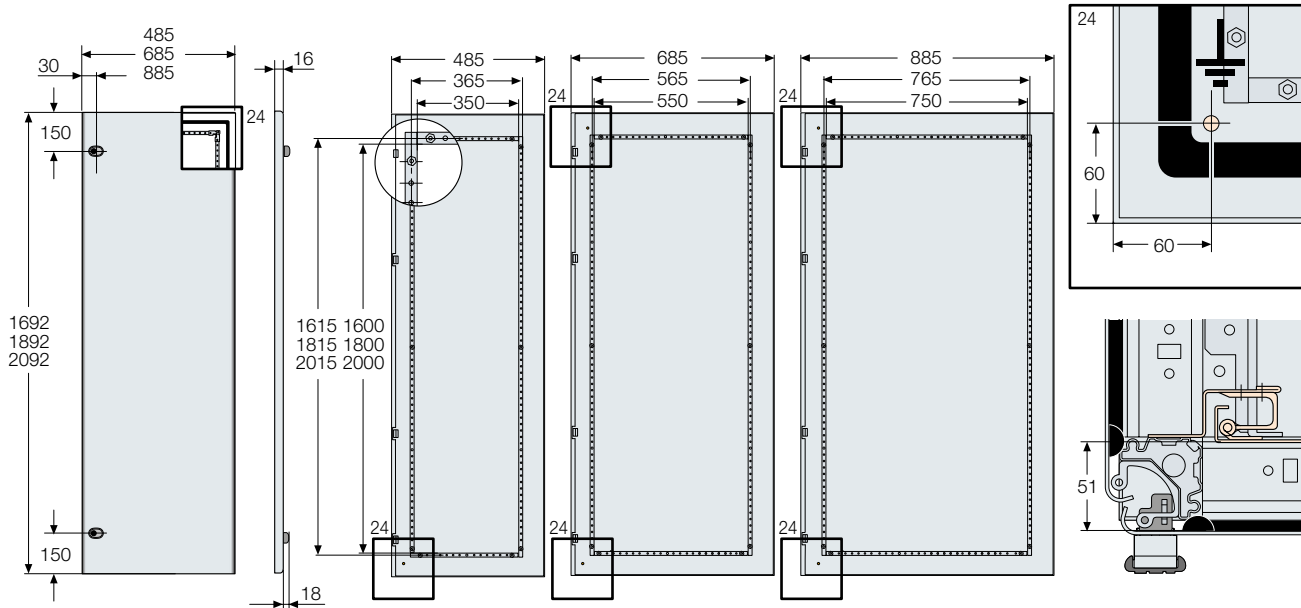


Measurements are in millimetres

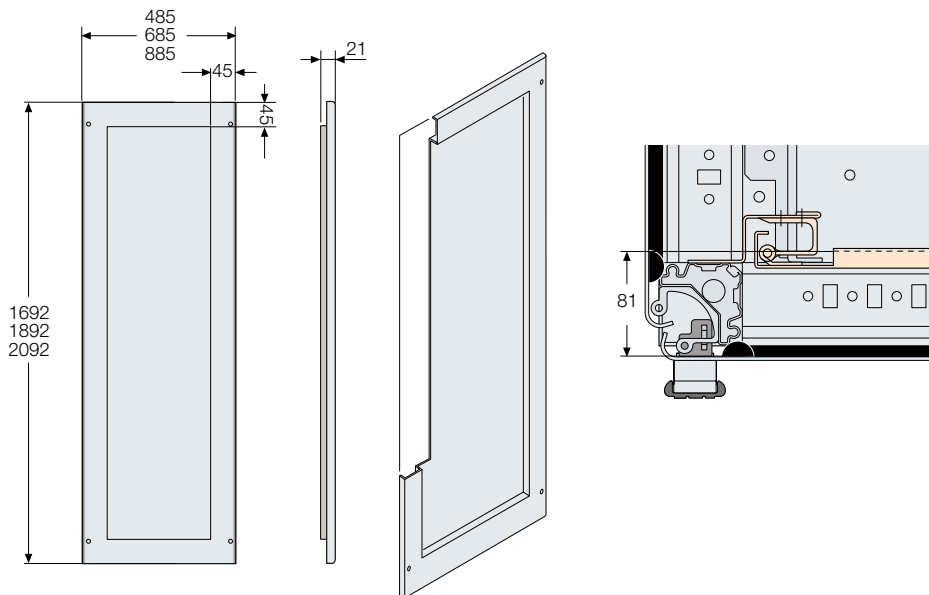
Overall dimensions

IS2 Enclosures

Internal counterdoor



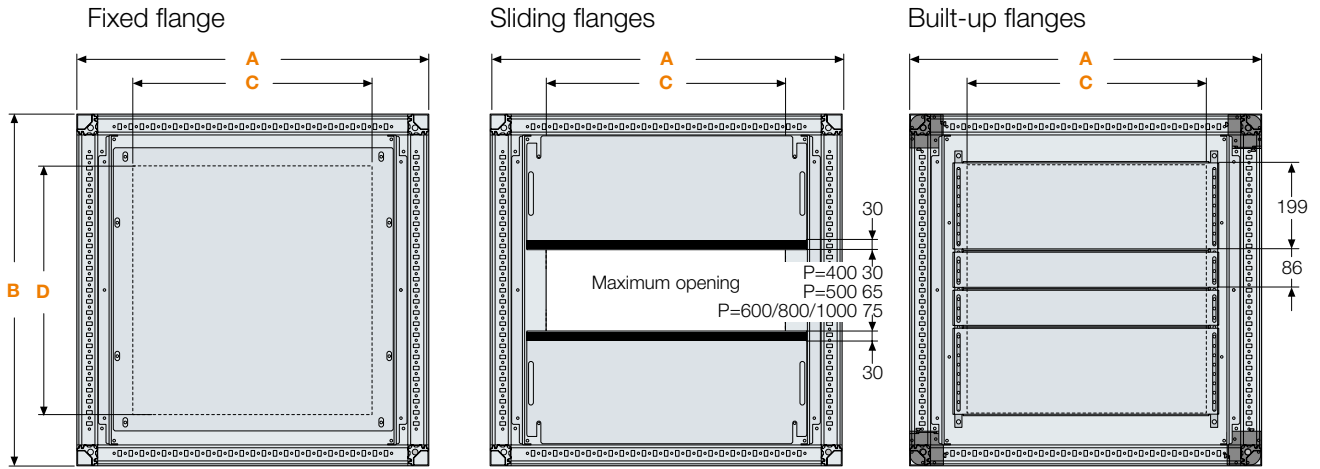
Internal edged counterdoor



9

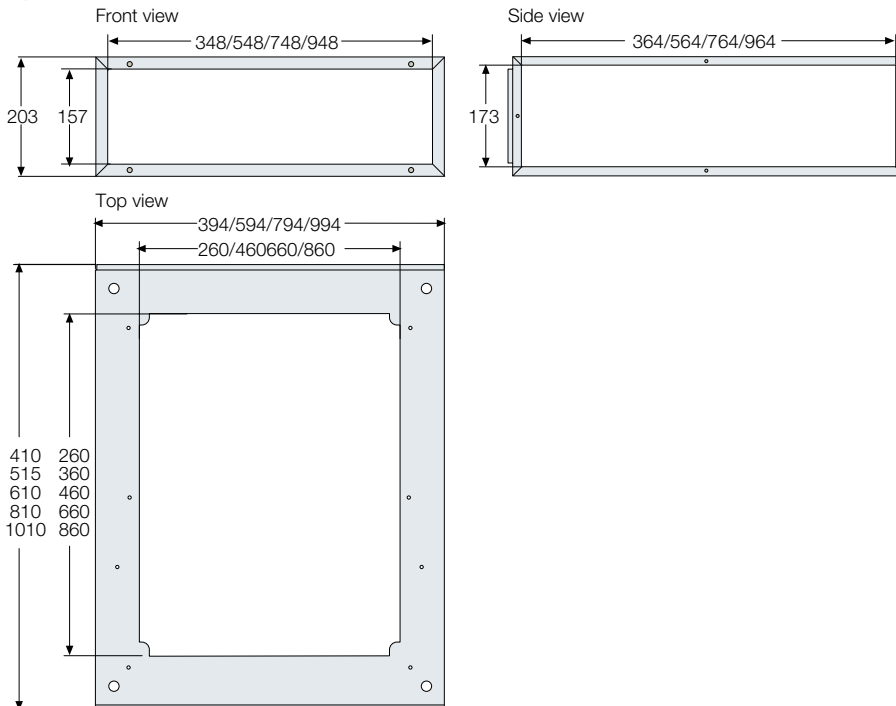
Measurements are in millimetres

Flanges for cable passage



A	B	C	D	Built-up flanges		A	B	C	D	Built-up flanges	
				No. flanges H=199mm	No. flanges H=86mm					No. flanges H=199mm	No. flanges H=86mm
394	394	142	162	-	2	994	394	742	162	-	2
	494		262	1	1		494		262	1	1
	594		362	1	2		594		362	1	2
	794		562	2	2		794		562	2	2
	994		762	3	2		994		762	3	2
594	394	342	162	-	2	1194	394	942	162	-	2
	494		262	1	1		494		262	1	1
	594		362	1	2		594		362	1	2
	794		562	2	2		794		562	2	2
	994		762	3	2		994		762	3	2
794	394	542	162	-	2	1594	394	1342	162	-	2
	494		262	1	1		494		262	1	1
	594		362	1	2		594		362	1	2
	794		562	2	2		794		562	2	2
	994		762	3	2		994		762	3	2

Top container for cable connection



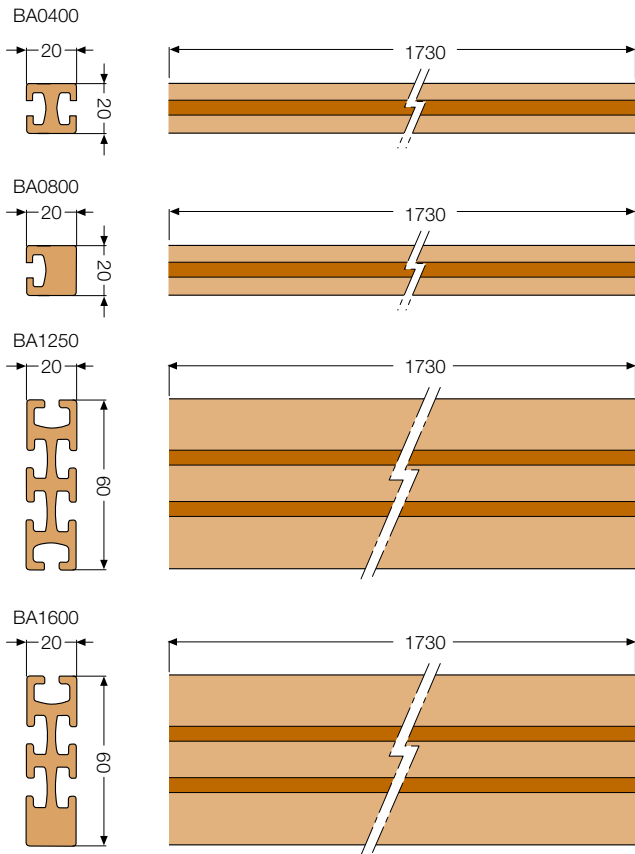
Measurements are in millimetres

Overall dimensions

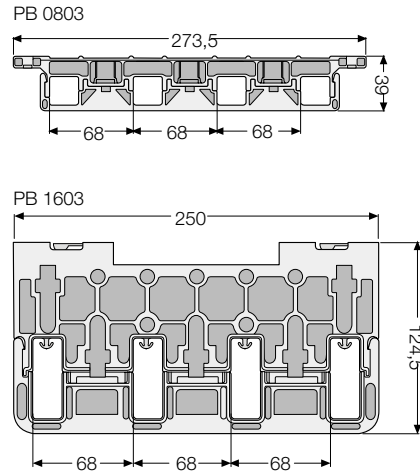
IS2 Enclosures

Busbars with shaped section

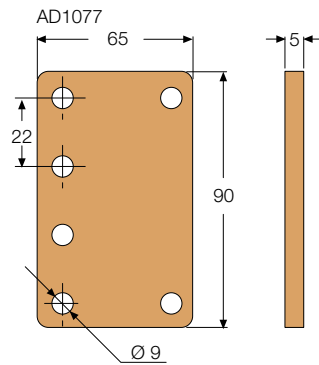
Busbar



Insulator

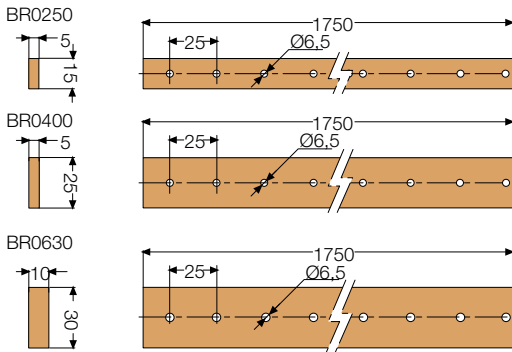


Accessories

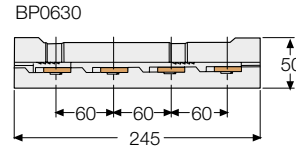


Flat busbars

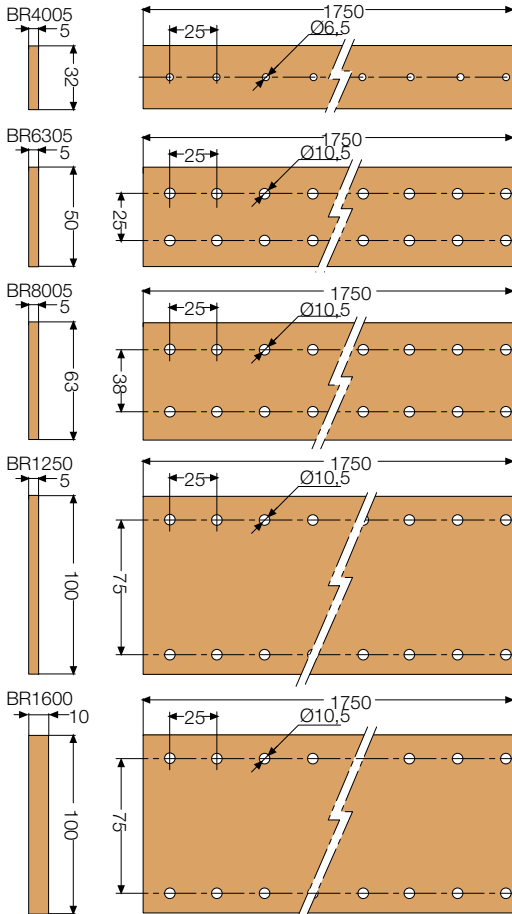
Busbar up to 630A



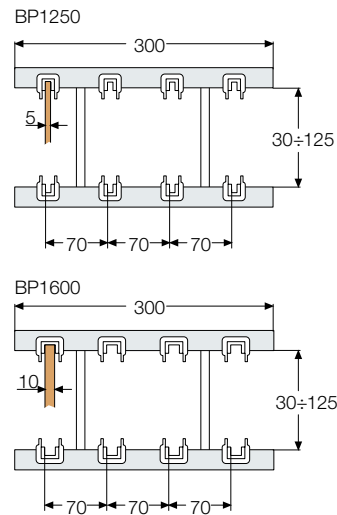
Insulators for busbars up to 630A



Busbar up to 1600A

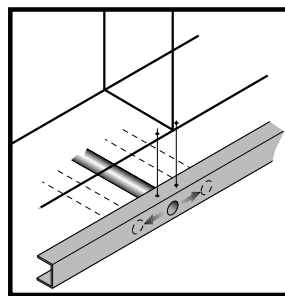
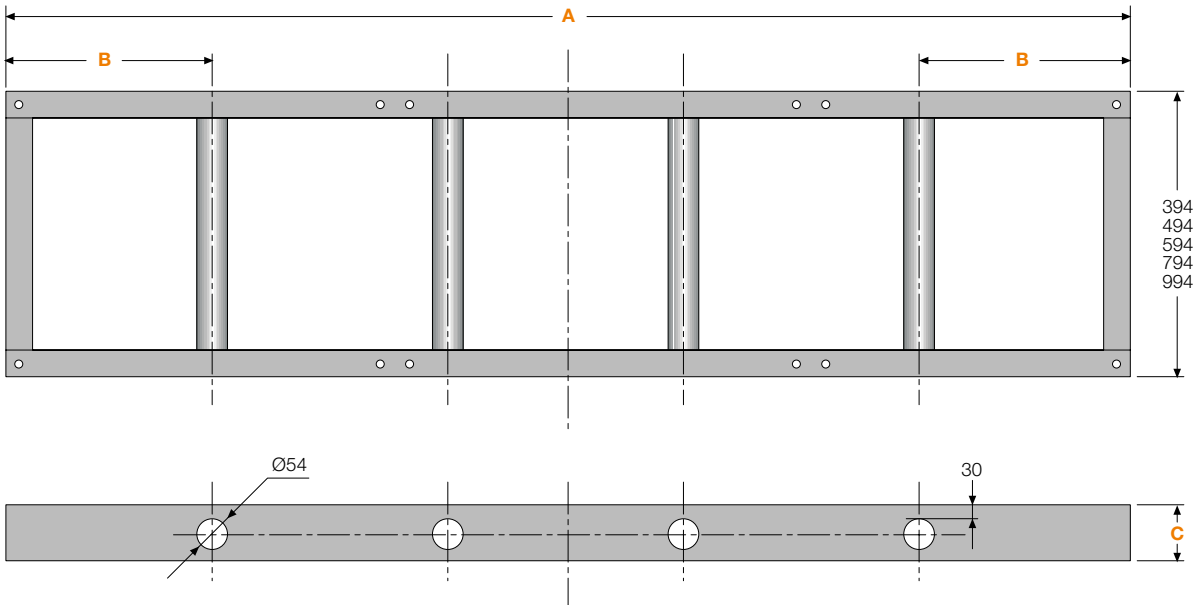


Insulators for busbars up to 1600A



Overall dimensions IS2 Enclosures

Single plinth



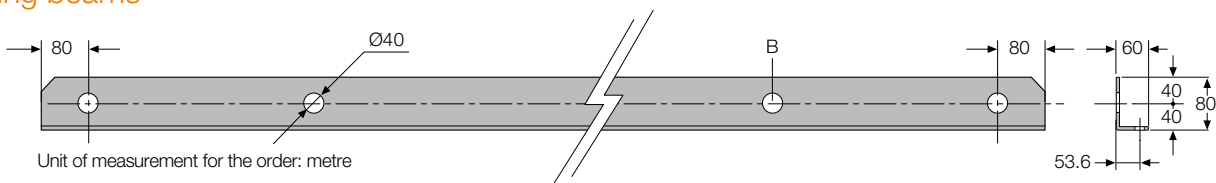
Should the reinforcement tube be in correspondence with switchgear fixing to the plinth, it will be moved at the execution stage.

Reinforcement tube [No.]	A [metres]	B [mm]	C [mm]
2	1.78 ÷ 2.78	665	100/200
2	2.78,1 ÷ 3.78	865	100/200
3	3.78,1 ÷ 4.78	950	100/200
4	4.78,1 ÷ 5.78	1195	100/200

Unit of measurement for the order: metre

9

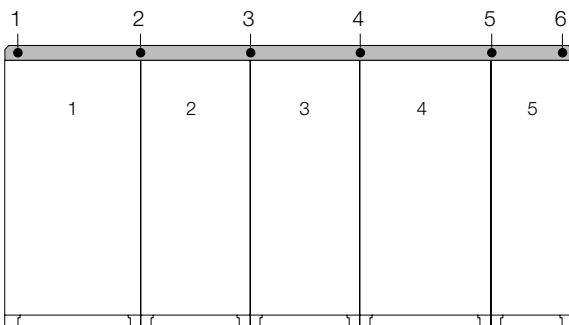
Lifting beams



Unit of measurement for the order: metre

The holes for lifting are positioned in correspondence with the side-by-side position of the switchgear.
The amount of B holes in the beam is equal to the number of structures + 1.

Example: No. 5 structures side by side = No. 6 holes for lifting.

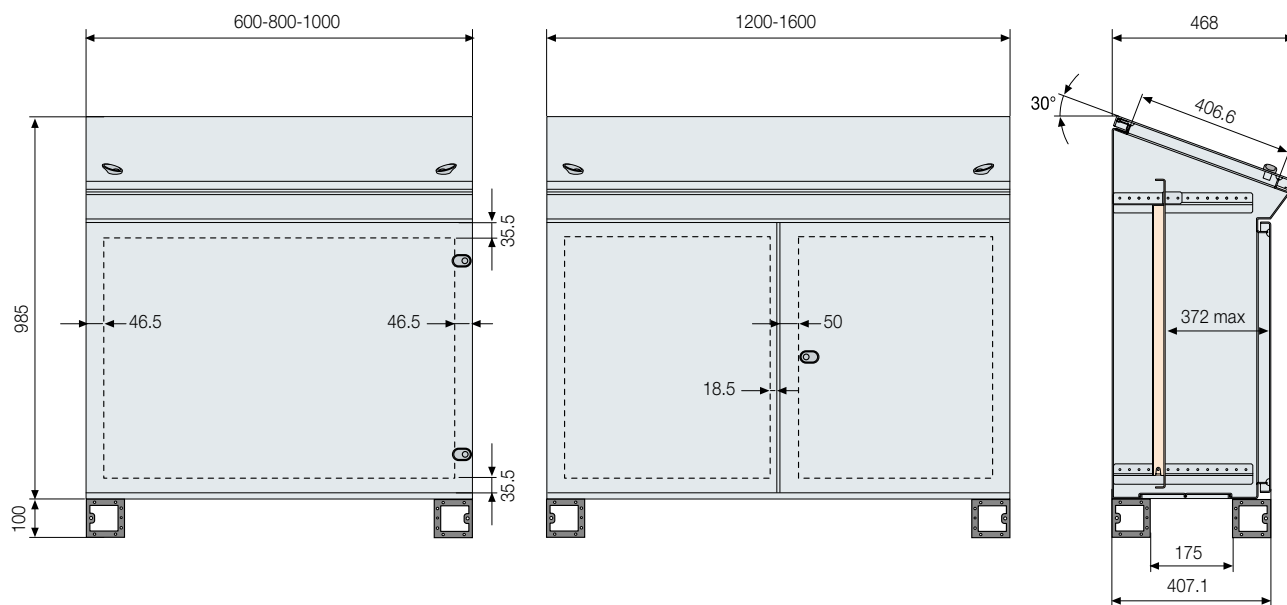


Measurements are in millimetres

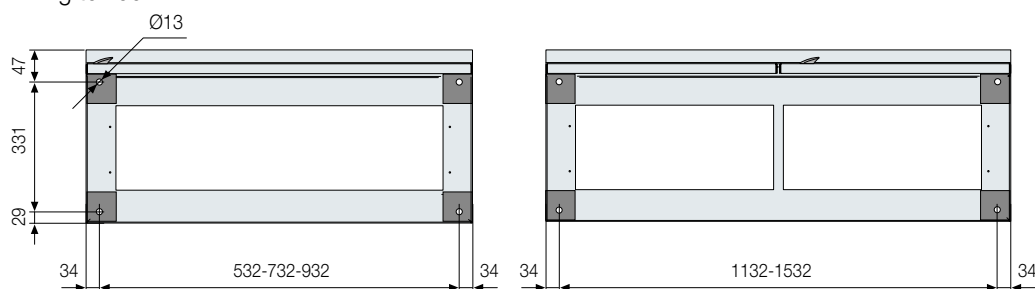
Overall dimensions

Consòlle C2

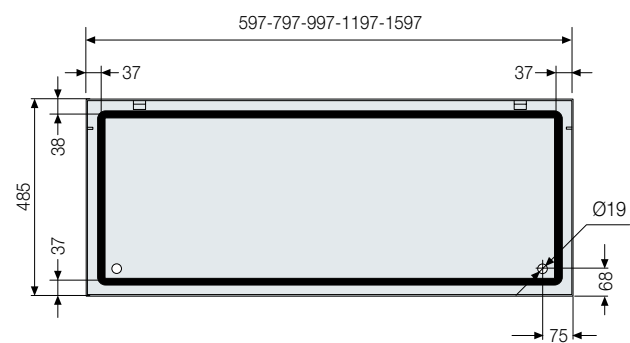
Monobloc console H=1000mm



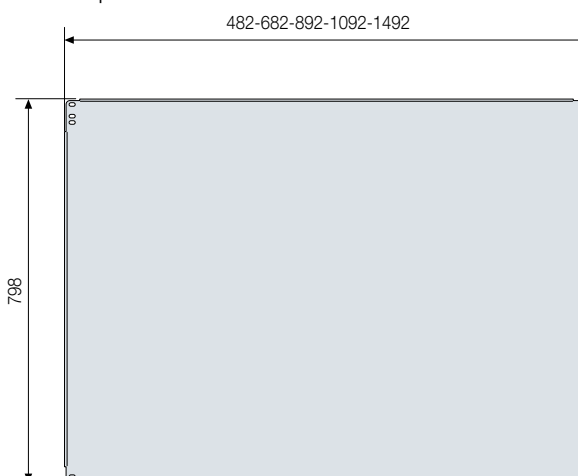
Fixing to floor



Door for desk switchboard



Internal plate



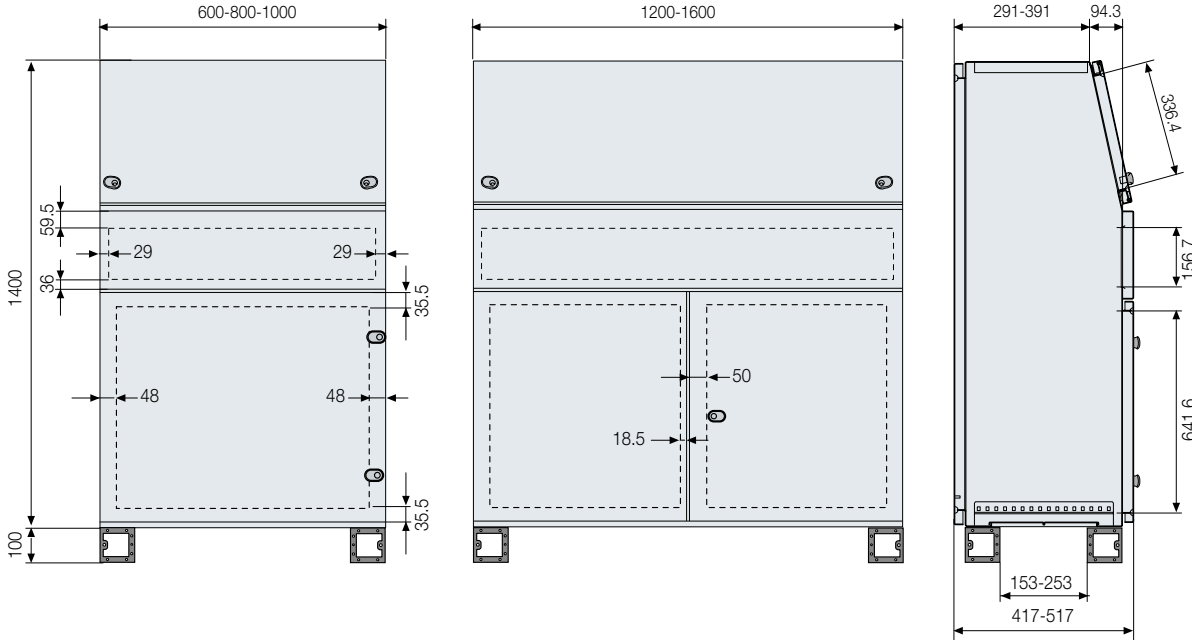
Measurements are in millimetres

Overall dimensions

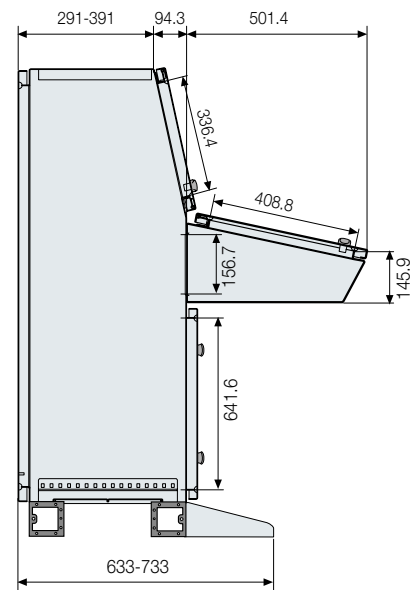
Consòlle C2

Monobloc lectern console H=1400mm

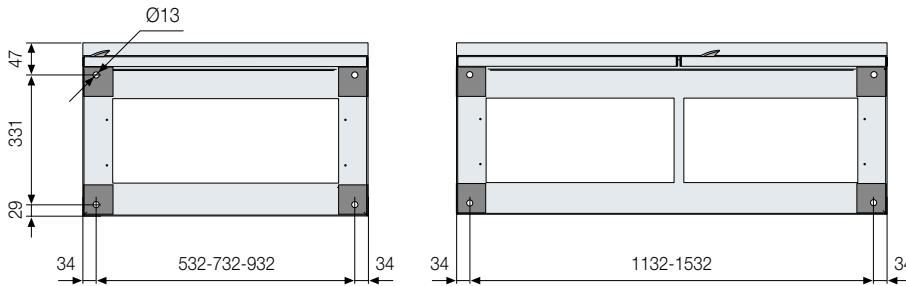
Version without desk switchboard



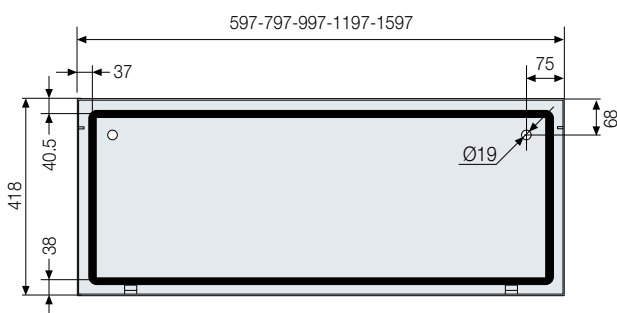
Version with desk switchboard



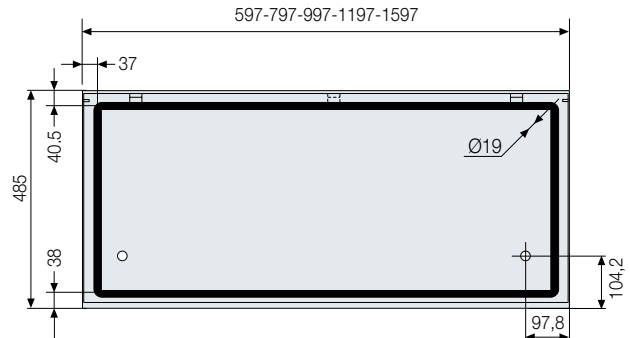
Fixing to floor



Door for upper console



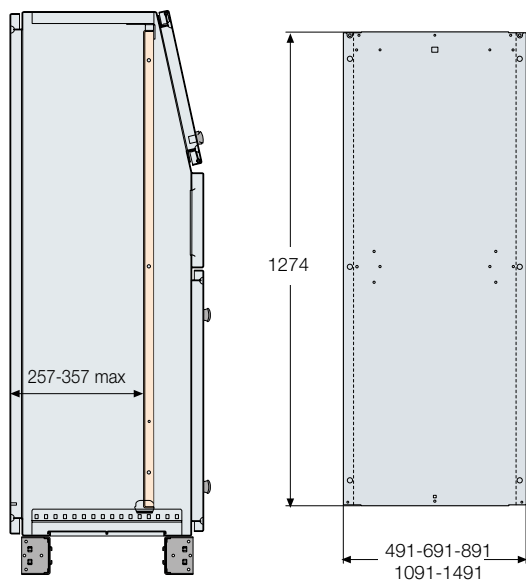
Door for desk switchboards



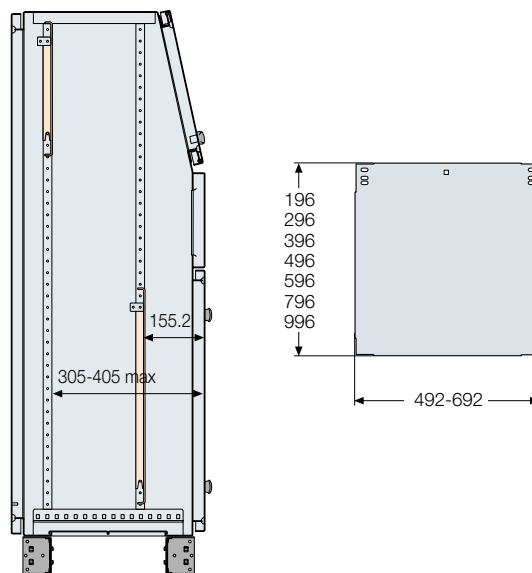
Measurements are in millimetres

Monobloc console H=1400mm

Standard mounting plate



Partial height mounting plate



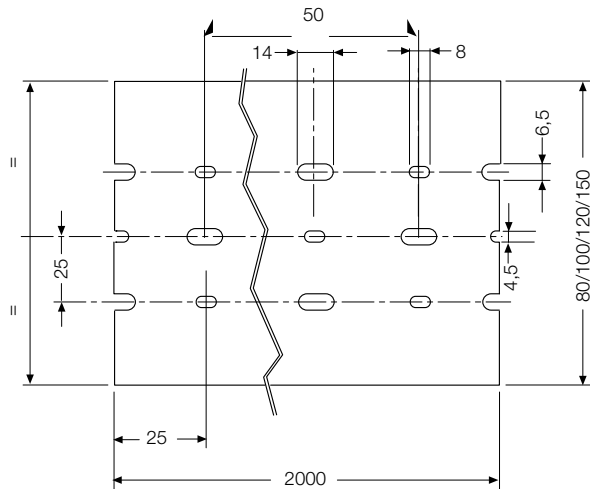
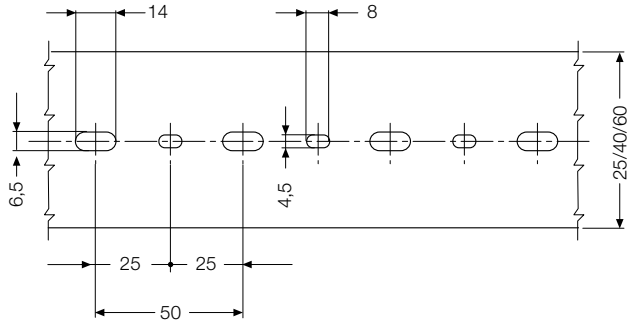
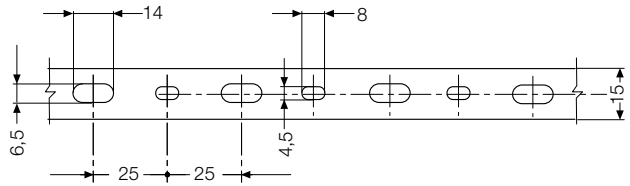
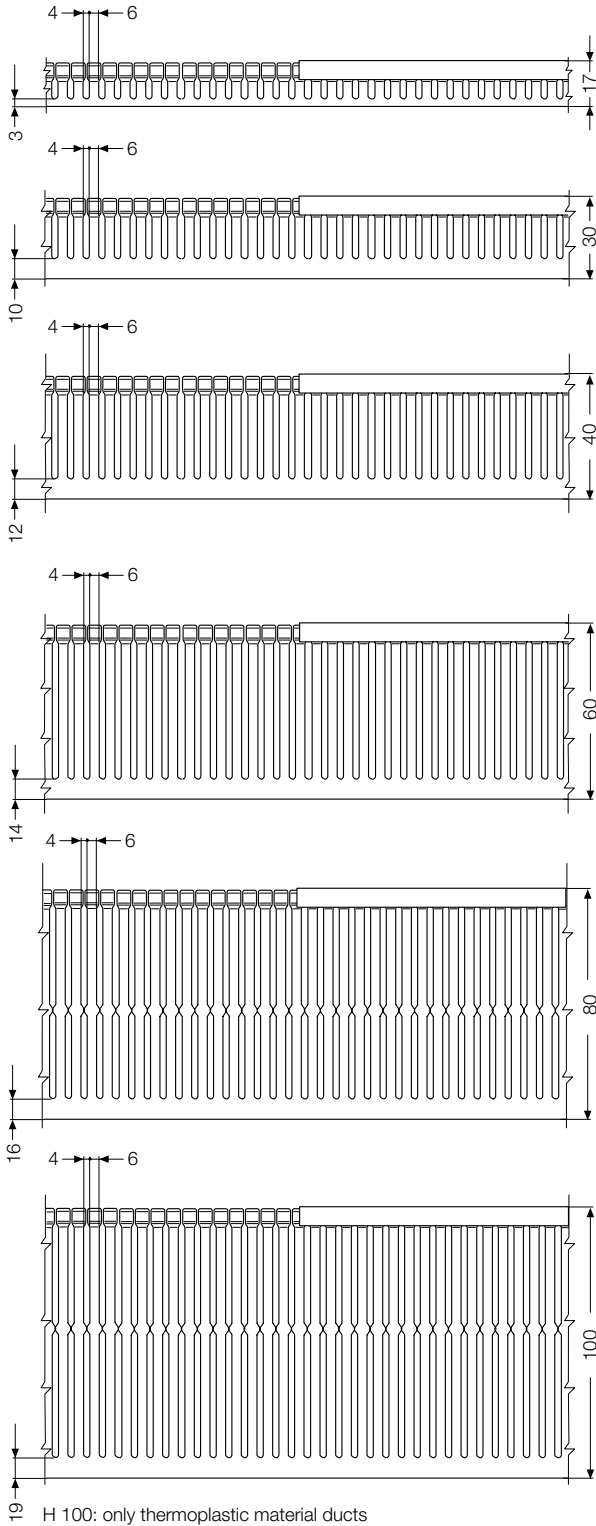
Measurements are in millimetres

Overall dimensions

Wiring ducts

Thermoplastic and halogen free wiring ducts with 4/6 mm slots

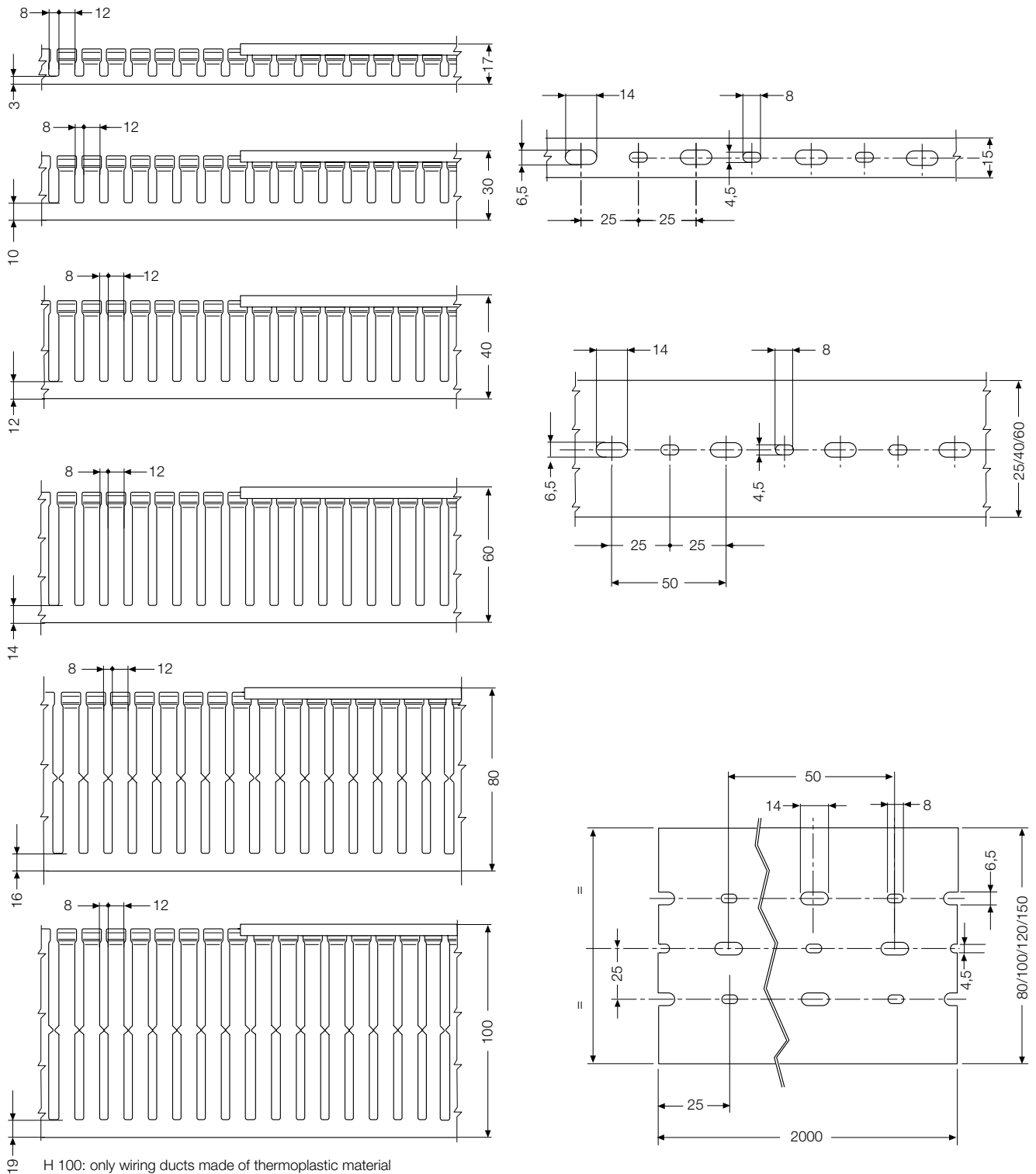
CEI 23-22 Standard applies to plastic wiring ducts and their accessories to be used in the mechanical protection and support of cables in switchboards, in applications with a maximum rated voltage of 1000 V in alternating current and 1500 V in direct current. Thermoplastic wiring ducts have obtained the IMQ certification.



Measurements are in millimetres

Thermoplastic and halogen free wiring duct with 8/12 mm slot

CEI 23-22 Standard applies to plastic wiring ducts and their accessories to be used in the mechanical protection and support of cables in switchboards, in applications with a maximum rated voltage of 1000 V in alternating current and 1500 V in direct current. Thermoplastic wiring ducts have obtained the IMQ certification.

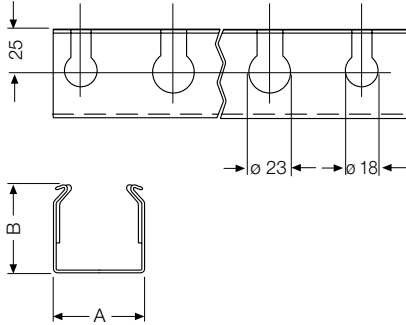


Measurements are in millimetres

Overall dimensions

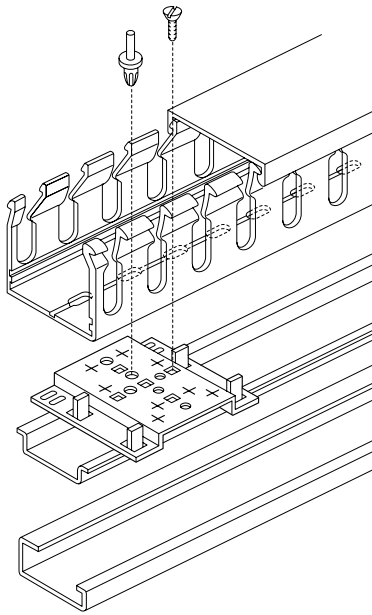
Wiring ducts

Ducts with round holes



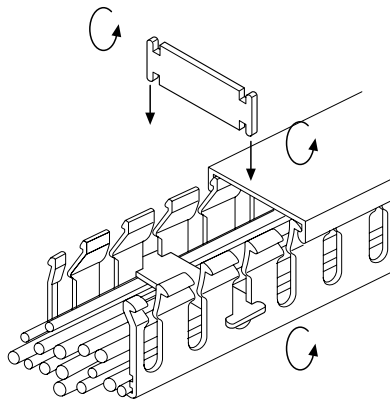
Code	A	B
05 330	50	50
05 331	100	60

Plastic rivets and wiring duct bases



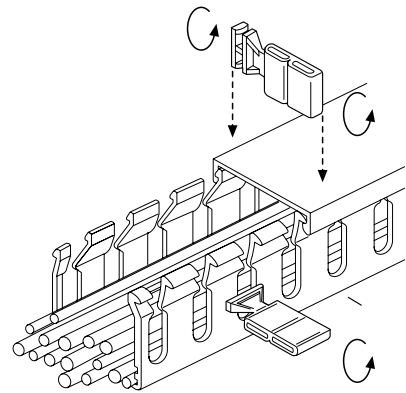
Code
05 214 - 05 216 - 05 210

Plastic cable retainers



Code
05 224 - 05 226 - 05 228 - 05 230

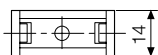
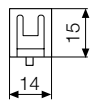
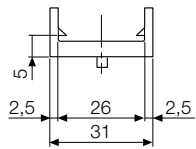
Plastic label tag



Code
05 240

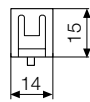
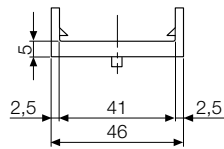
Measurements are in millimetres

Clip for wiring ducts
base 25



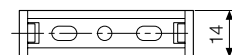
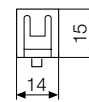
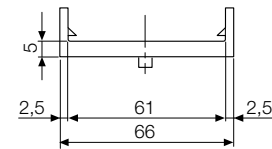
Code _____
05 250

Clip for wiring ducts
base 40



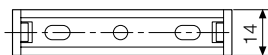
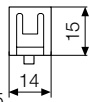
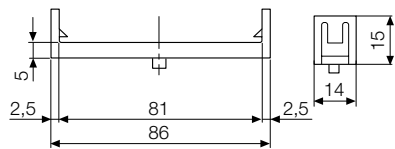
Code _____
05 252

Clip for wiring ducts
base 60



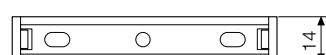
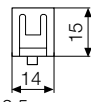
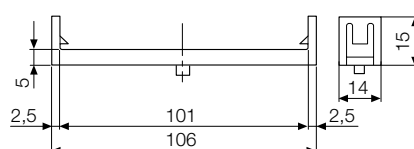
Code _____
05 254

Clip for wiring ducts
base 80



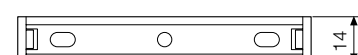
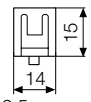
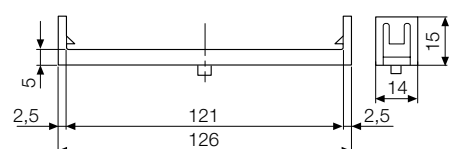
Code _____
05 256

Clip for wiring ducts
base 100



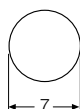
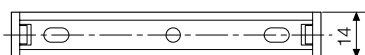
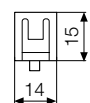
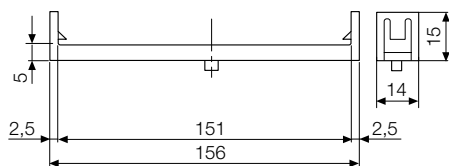
Code _____
05 258

Clip for wiring ducts
base 120



Code _____
05 260

Clip for wiring ducts
base 150



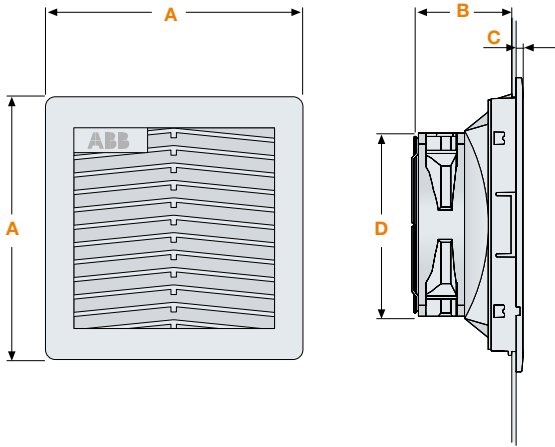
Code _____
05 262

Measurements are in millimetres

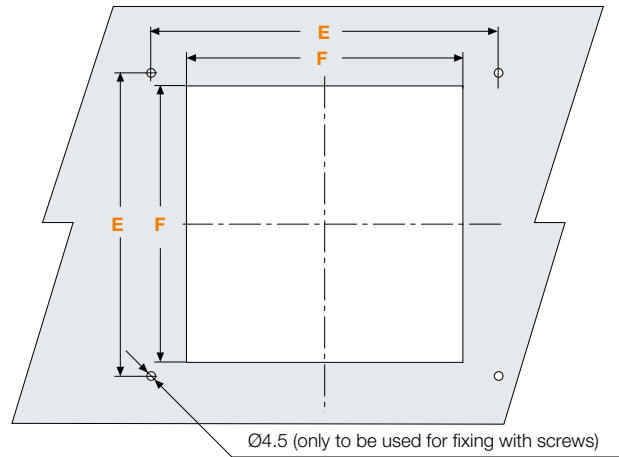
Overall dimensions

Aeration/ventilation

Gratings



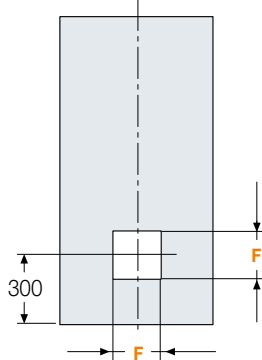
Drilling template



Code	A	B	C	D	E	F
EN0105K						
EN1105K	105	60	7	80	95	92
EN2105K						
EN0150K						
EN1150K	150	64	7	124	131	125
EN2150K						
EN0204K						
EN1204K	204	90	8	127	185	177
EN2204K						
EN0250K						
EN1250K	250	113	8	172	230	223
EN2250K						
EN0325K	325	24	9	255	302	291
EN2325K						
EN3325K	325	152	9	218	302	291

Standard position of drillings

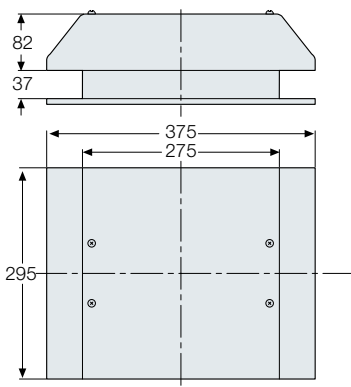
Side panel/Door



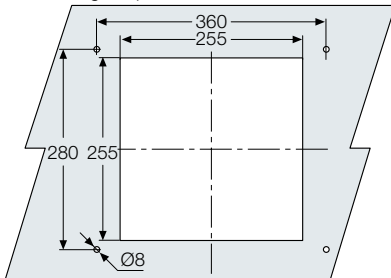
9

Hood

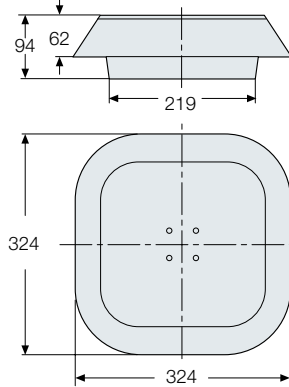
EN0480K-EN0481K-EN0482K



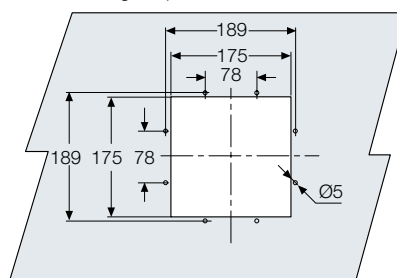
Drilling template



EN0483K-EN0484K-EN0485K



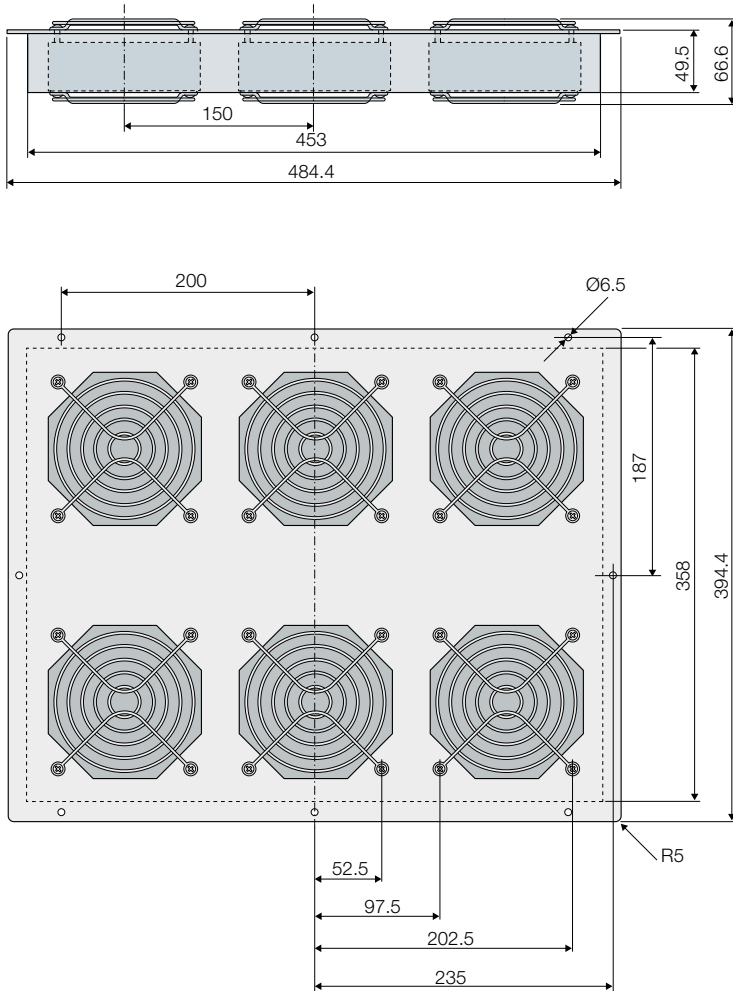
Drilling template



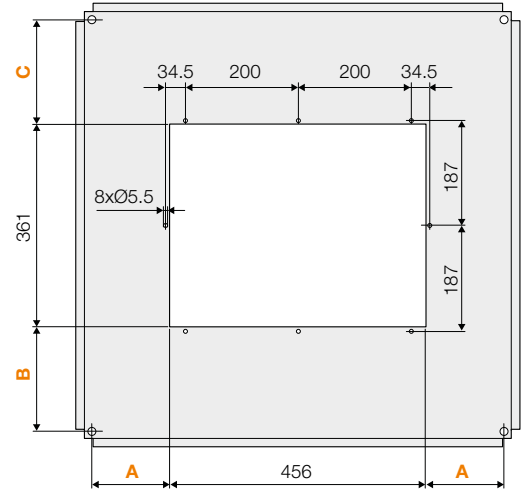
Measurements are in millimetres

Overall dimensions Air conditioner

Ventilation roof module



Drilling template

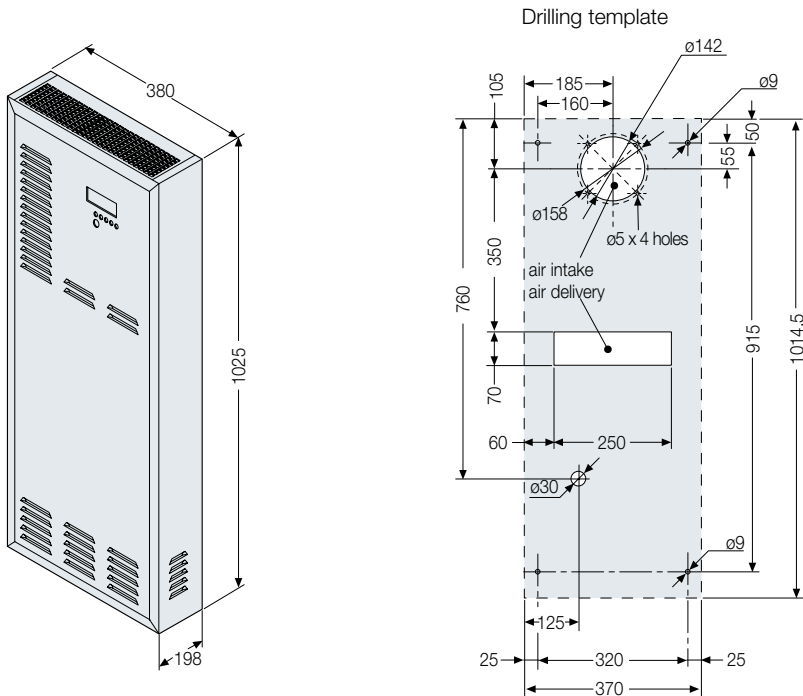


Roof WxDmm	Fix rack frame	Swing rack frame	A	B	C
600X600	■	-	38	85.5	85.5
600X800	■	-	38	185.5	185.5
600X1000	■	-	38	285.5	285.5
800X600	■	■	138	32	139
800X600	■	-	138	85.5	85.5
800X800	■	■	138	185.5	185.5
800X1000	■	■	138	285.5	285.5

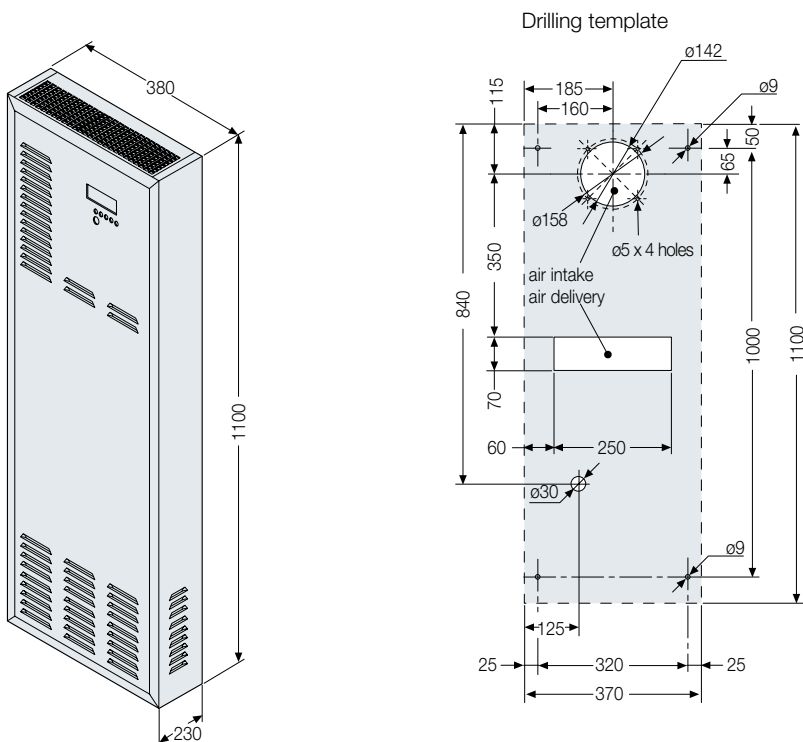
Overall dimensions

Air conditioner

Air conditioners for wall or door mounting VZ1550K - VZ1850K - VZ1400K

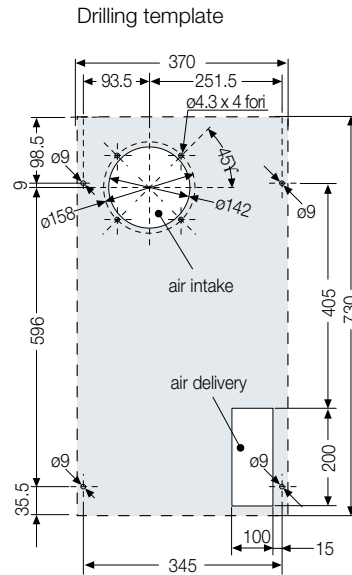
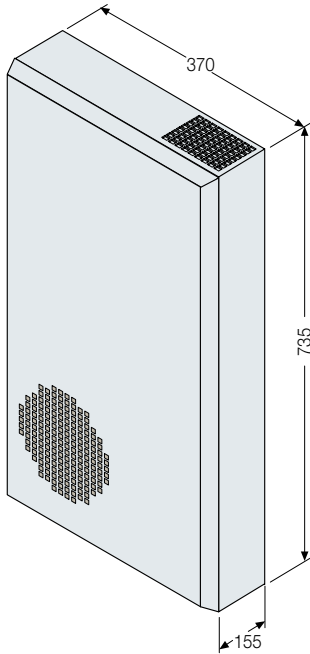


9 Air conditioners for wall or door mounting VZ2000K

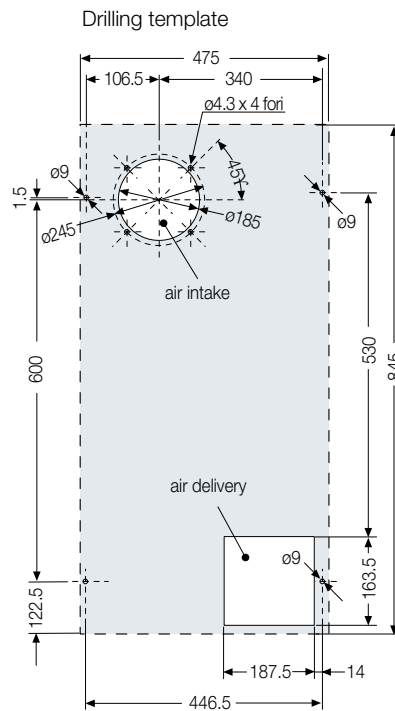
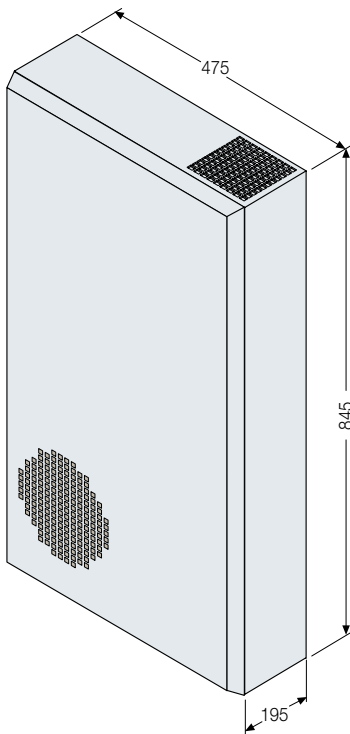


Measurements are in millimetres

Heat exchangers for wall or door mounting VS4235K



Heat exchangers for wall or door mounting VS6285K

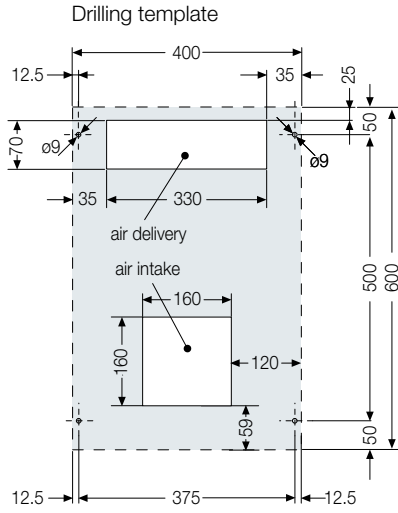
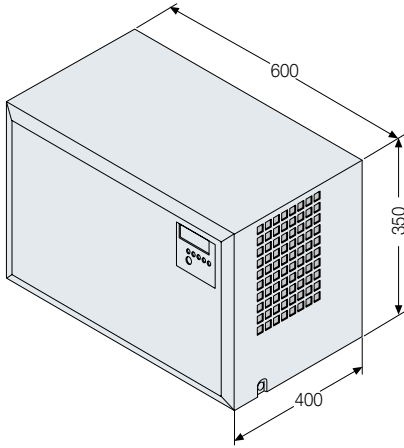


Measurements are in millimetres

Overall dimensions

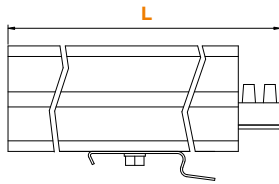
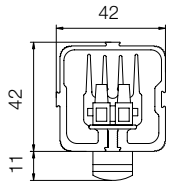
Air conditioner

Air conditioners for mounting on roof VZ8501K-VZ1401K

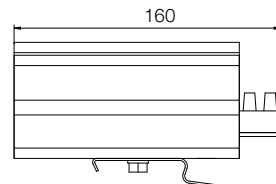
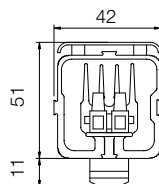


IP20 heaters

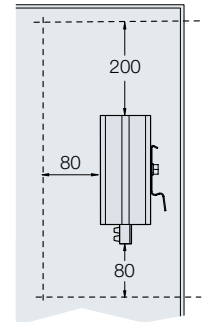
VA7930/VA7950/VA7975



VA7910

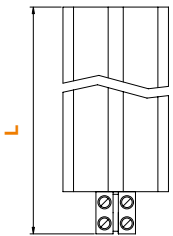


Minimum mounting distances

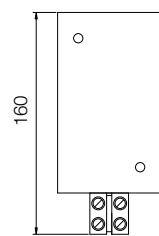


VA7930
VA7950
VA7975

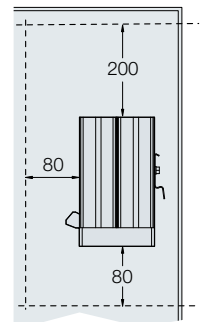
9



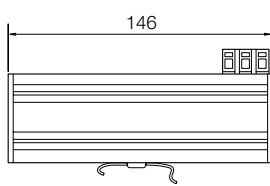
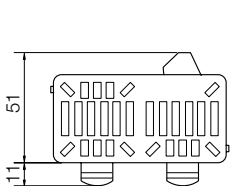
	L (mm)
VA7930	115
VA7950	165
VA7975	210



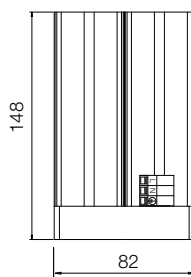
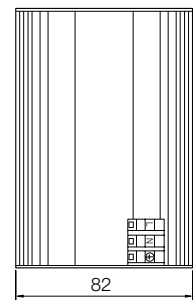
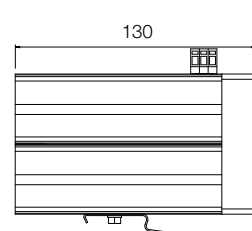
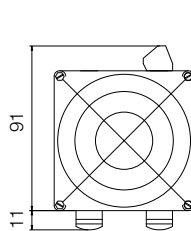
Minimum mounting distances



VA7915



VA8300



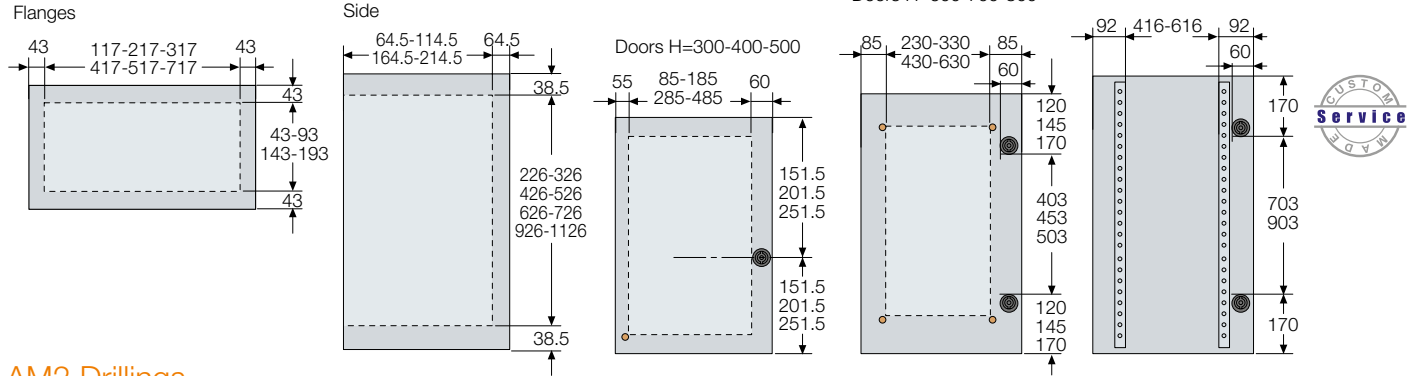
Measurements are in millimetres

Overall dimensions

Drillings

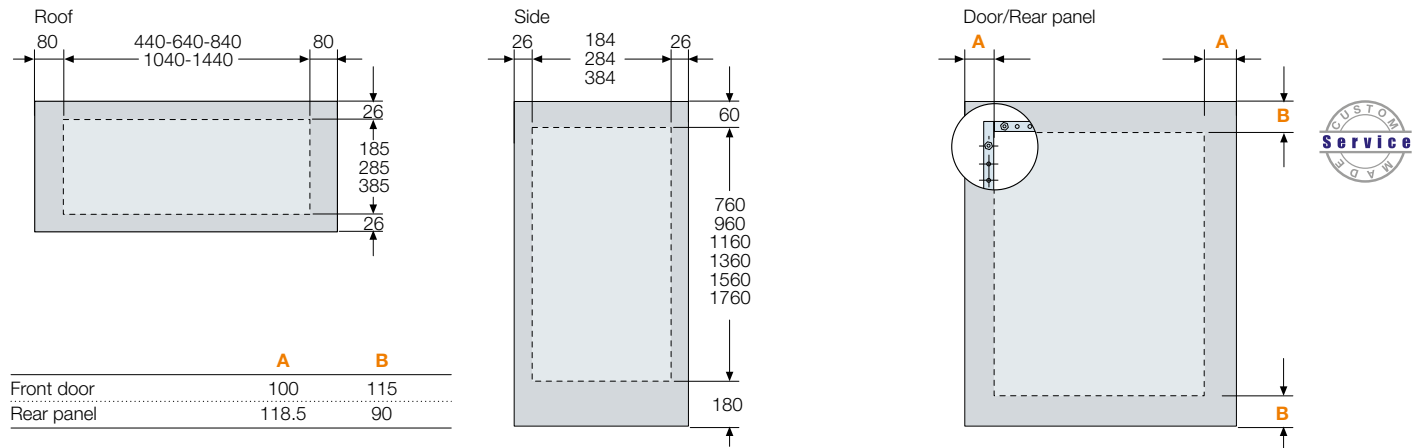
Drillings SR2

Maximum useful overall dimensions for the drillings



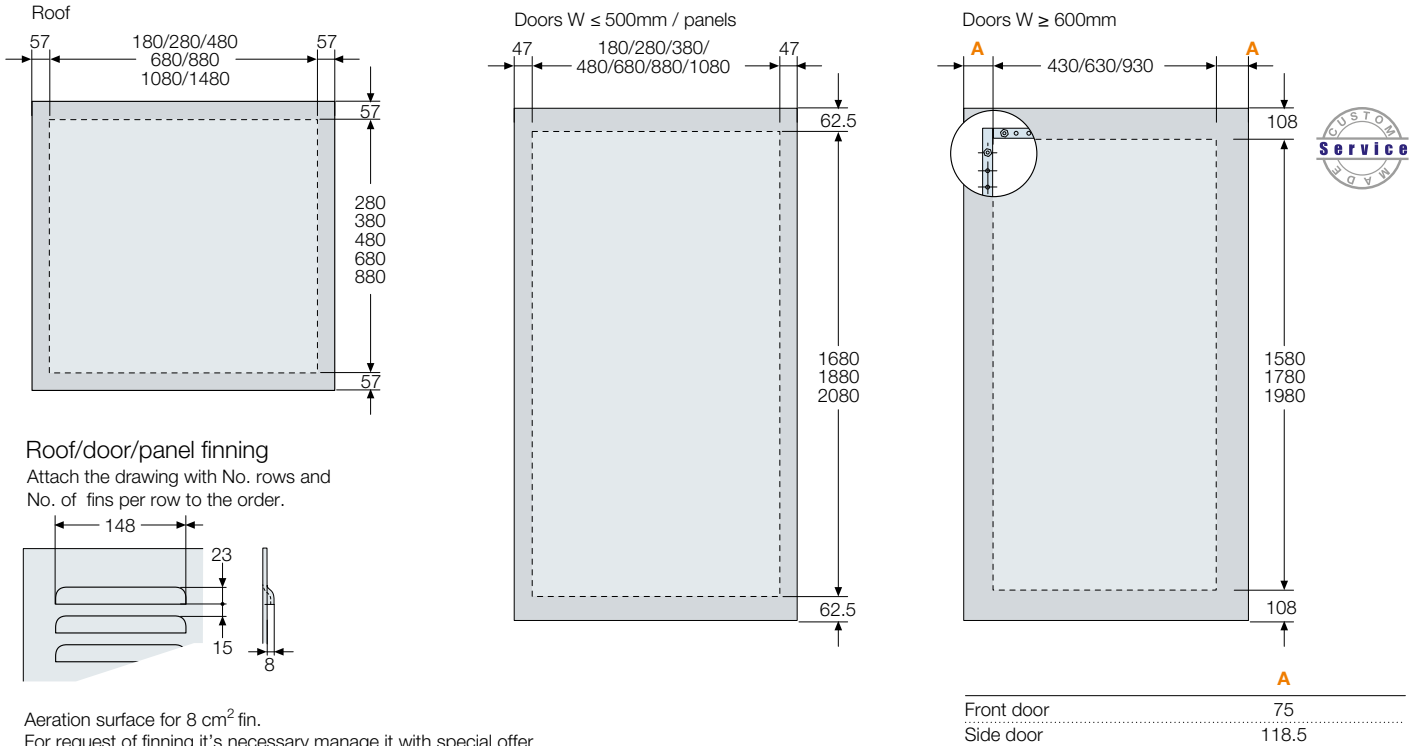
AM2 Drillings

Maximum useful overall dimensions for the drillings



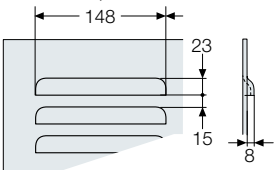
IS2 Enclosure drillings

Maximum useful overall dimensions for the drillings



Roof/door/panel finning

Attach the drawing with No. rows and No. of fins per row to the order.



Aeration surface for 8 cm² fin.

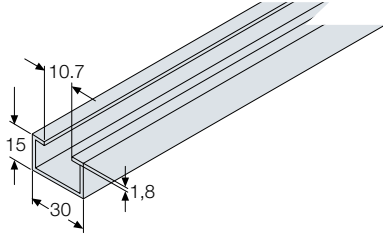
For request of finning it's necessary manage it with special offer

Measurements are in millimetres

Overall dimensions

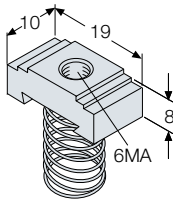
Accessories

Aluminium section EV1050

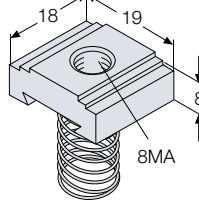


Aluminium nuts for EV1050

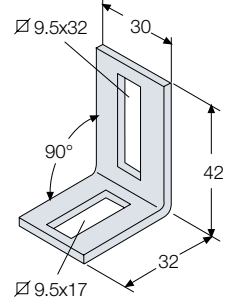
EV1056



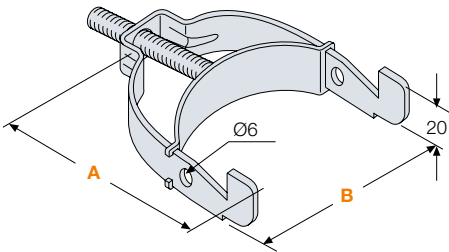
EV1058



Angles for busbars EV1051



Brackets for cables EV1090 / EV1091

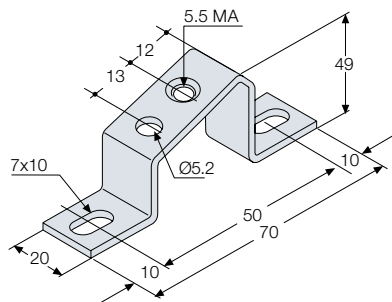


	A	B
EV1090	49	20
EV1091	65	36
EV1092	85	51
EV1093	106	80

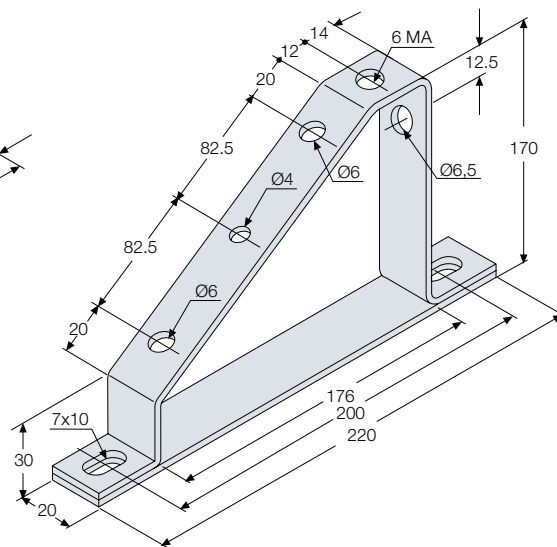
9

Terminal box supports

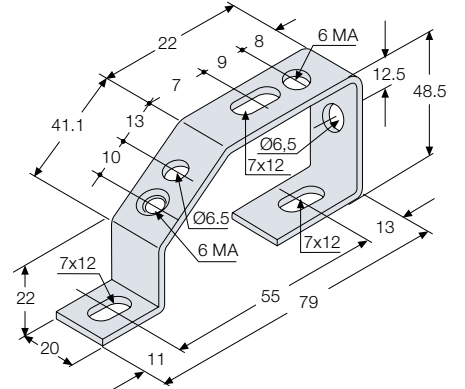
EV1110-EV2110-EV1113



EV1111



EV1112-EV2112

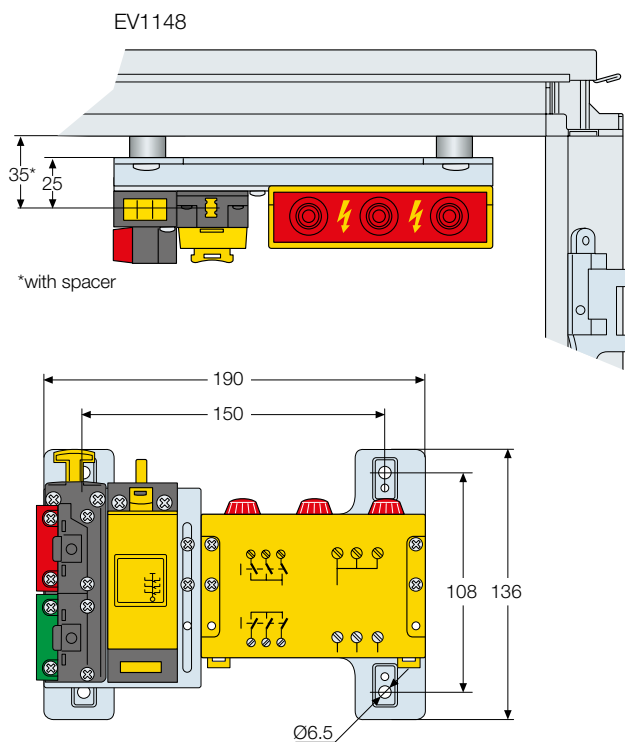
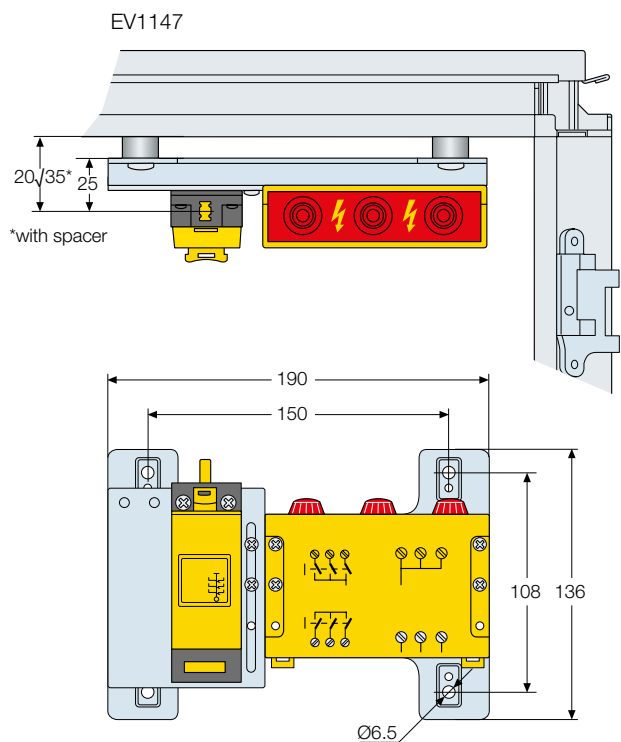


Measurements are in millimetres

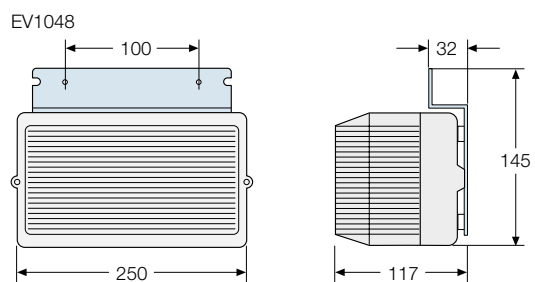
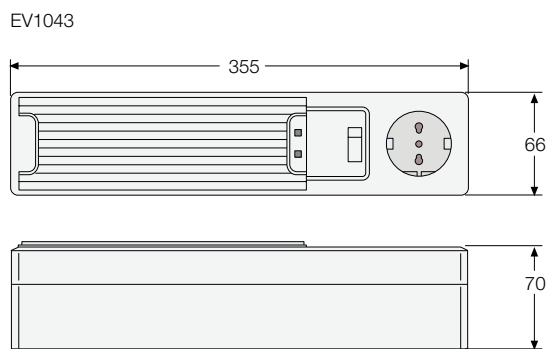
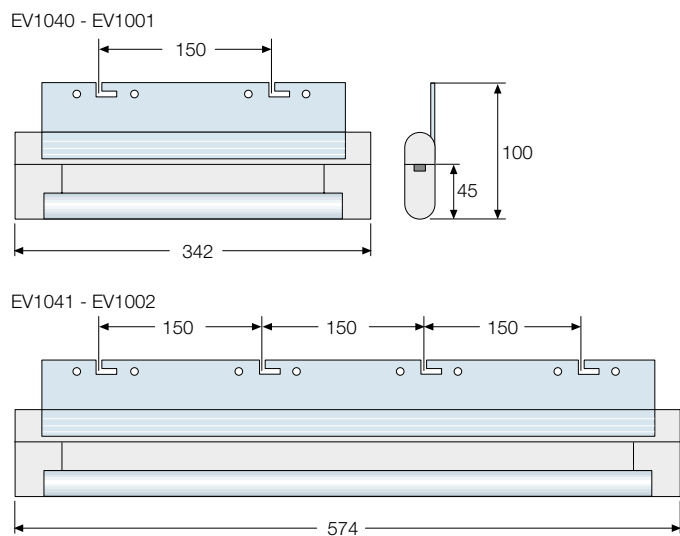
Overall dimensions

Accessories

Voltage indicator



Fluorescent lights

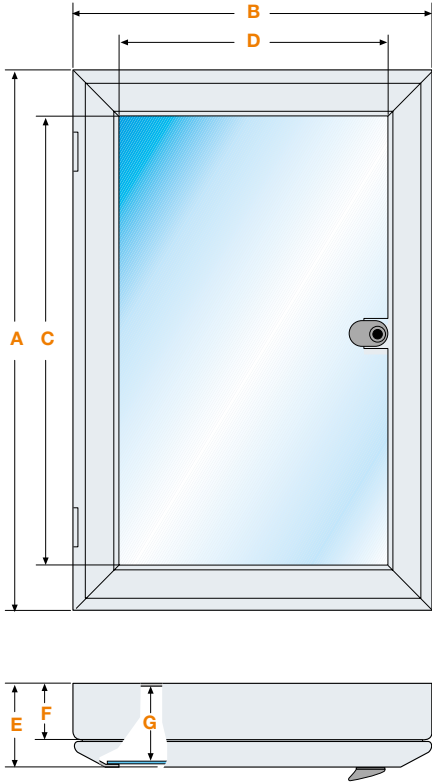


Measurements are in millimetres

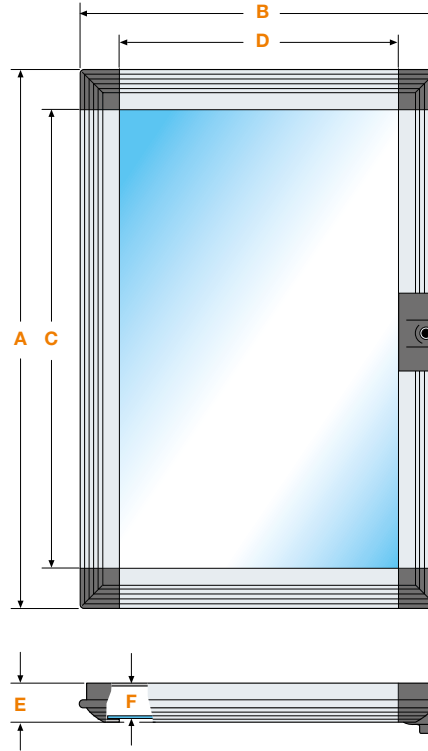
Overall dimensions

Accessories

IP54 protective window with frame



IP54 protective window without frame



9

	A	B	C	D	E	F	G
EV1081	400	400	330	330	79	61	70
EV1082	600	200	530	130	48	30	40
EV1083	600	200	530	130	79	61	70
EV1085	600	400	530	330	79	61	70
EV1087	600	600	530	530	79	61	70

	A	B	C	D	E	F
EV8880	400	400	303	303	26	15
EV8881	600	600	503	503	26	15
EV8882	600	400	503	303	26	15

Measurements are in millimetres

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SR2 - SR2 EMC Enclosures	10/4
AM2 Cabinets	10/6
IS2 - IS2 EMC Enclosures	10/12
C2 Console	10/24
Wiring ducts	10/25

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Gemini switchboards

Code	Structure	Weight Kg	Page	Code	Structure	Weight Kg	Page	Code	Structure	Weight Kg	Page
05 270	Gemini	0,3	2/18	1SL0259A00	Gemini	1,13	2/19	1SL0325A00	Gemini	0,27	2/17
05 272	Gemini	0,2	2/18	1SL0260A00	Gemini	2,65	2/19	1SL0326A00	Gemini	0,14	2/17
05 274	Gemini	0,2	2/18	1SL0261A00	Gemini	3,6	2/19	1SL0327A00	Gemini	0,45	2/17
05 276	Gemini	0,36	2/18	1SL0262A00	Gemini	4,85	2/19	1SL0330A00	Gemini	0,32	2/17
05 278	Gemini	0,36	2/18	1SL0263A00	Gemini	5,98	2/19	1SL0331A00	Gemini	0,41	2/17
05 280	Gemini	0,42	2/18	1SL0264A00	Gemini	10,75	2/19	1SL0332A00	Gemini	0,61	2/17
05 282	Gemini	0,4	2/18	1SL0267A00	Gemini	0,58	2/19	1SL0333A00	Gemini	0,84	2/17
12 849	Gemini	0,31	2/24	1SL0268A00	Gemini	1,35	2/19	1SL0336A00	Gemini	0,95	2/16
12 851	Gemini	0,19	2/24	1SL0269A00	Gemini	1,7	2/19	1SL0337A00	Gemini	1,25	2/16
12 863	Gemini	0,01	2/24	1SL0270A00	Gemini	2,36	2/19	1SL0338A00	Gemini	1,9	2/16
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1SL0206A00	Gemini	24,9	2/13	1SL0278A00	Gemini	2,55	2/19	1SL0344A00	Gemini	0,8	2/21
1SL0211A00	Gemini	4,76	2/13	1SL0279A00	Gemini	3,1	2/19	1SL0345A00	Gemini	1,62	2/21
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1SL0214A00	Gemini	12,5	2/13	1SL0284A00	Gemini	0,75	2/15	1SL0351A00	Gemini	0,03	2/24
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1SL0233A00	Gemini	2,45	2/14	1SL0299A00	Gemini	1,5	2/17	1SL0371A00	Gemini	2,7	2/16
1SL0234A00	Gemini	3,3	2/14	1SL0302A00	Gemini	1,5	2/17	1SL0372A00	Gemini	3,85	2/16
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1SL0416A00	Gemini	1,85	2/22	ED3132	Gemini	0,32	2/20				
1SL0423A00	Gemini	0,8	2/22	ED3272	Gemini	0,1	2/20				
1SL0424A00	Gemini	0,83	2/22	ED3280	Gemini	0,1	2/20				
1SL0425A00	Gemini	1,15	2/22	ED3298	Gemini	0,09	2/20				
1SL0426A00	Gemini	1,83	2/22	ED3355	Gemini	0,06	2/20				
1SL0433A00	Gemini	2,27	2/23	ED3363	Gemini	0,08	2/20				
1SL0434A00	Gemini	2,78	2/23	ED3371	Gemini	0,09	2/20				
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1SL0436A00	Gemini	4,58	2/23	ED3413	Gemini	0,78	2/21				
1SL0451A00	Gemini	0,48	2/23	ED3439	Gemini	1,27	2/21				
1SL0452A00	Gemini	0,77	2/23	EN0105K	Gemini	0,09	2/23				
1SL0454A00	Gemini	0,99	2/23	EN0150K	Gemini	0,18	2/23				
1SL0455A00	Gemini	1,83	2/23	EN0204K	Gemini	0,3	2/23				
1SL0456A00	Gemini	2,13	2/23								
1SL0457A00	Gemini	0,01	2/24								
1SL0458A00	Gemini	0,08	2/21								
1SL0464A00	Gemini	11,8	2/22								
1SL0465A00	Gemini	13,6	2/22								
1SL0466A00	Gemini	16,2	2/22								
1SL0470A00	Gemini	1,35	2/24								
1SL0471A00	Gemini	2	2/24								
1SL0472A00	Gemini	3,05	2/24								
1SL0473A00	Gemini	3,35	2/24								
ED0025	Gemini	1,87	2/20								
ED0026	Gemini	1,3	2/20								
ED2944	Gemini	0,35	2/20								
ED2951	Gemini	0,54	2/20								
ED2969	Gemini	0,74	2/20								
ED2977	Gemini	1,06	2/20								
ED2993	Gemini	0,25	2/20								
ED3009	Gemini	0,38	2/20								
ED3017	Gemini	0,46	2/20								
ED3025	Gemini	0,66	2/20								
ED3033	Gemini	0,08	2/20								
ED3041	Gemini	0,07	2/20								
ED3058	Gemini	0,06	2/20								
ED3066	Gemini	0,08	2/20								
ED3082	Gemini	0,24	2/21								
ED3090	Gemini	0,55	2/21								
ED3101	Gemini	0,29	2/21								
ED3102	Gemini	0,29	2/21								
ED3103	Gemini	0,29	2/21								
ED3104	Gemini	0,29	2/21								
ED3108	Gemini	0,05	2/20								
ED3116	Gemini	0,05	2/20								

Index of codes

SR2 - SR2 EMC Enclosures

Code	Structure	Weight Kg	Page	Code	Structure	Weight Kg	Page	Code	Structure	Weight Kg	Page
AA1004	SR2	0,04	3/19	EV1136	SR2	0,16	3/17	KD6040K	SR2	1,76	3/13
AA1203	SR2	0,01	3/19	EV1137	SR2	0,23	3/17	KD8060K	SR2	1,96	3/13
AA1204	SR2	0,33	3/19	EV1150	SR2	0,09	3/18	PC1406K	SR2	2,74	3/14
AA1206	SR2	0,2	3/11	EV1151	SR2	0,09	3/18	PC1606K	SR2	1,26	3/14
AA5190	SR2	0,01	3/16	EV1152	SR2	0,09	3/18	PC1806K	SR2	1,47	3/14
AA5200	SR2	0,01	3/16	EV1153	SR2	0,09	3/18	PC2606K	SR2	2,45	3/14
AA8001	SR2	0,1	3/16	EV1154	SR2	0,09	3/18	PC2806K	SR2	2,94	3/14
AA8002	SR2	0,01	3/16	EV1155	SR2	0,01	3/18	PF1060	SR2	8,82	3/9
AA8003	SR2	0,01	3/16	EV1156	SR2	0,06	3/18	PF1080	SR2	11,76	3/9
AA8010	SR2	2,94	3/15	FLN3215K	SR2	0,59	3/19	PF1260	SR2	10,78	3/9
AA8011	SR2	0,01	3/15	FLN3315K	SR2	0,88	3/19	PF1280	SR2	14,21	3/9
AA8025	SR2	0,17	3/10	FLN3415K	SR2	1,18	3/19	PF3020	SR2	0,69	3/9
AA8050	SR2	0,01	3/10	FLN4320K	SR2	1,27	3/19	PF3030	SR2	1,05	3/9
AD1033	SR2	0,22	3/18	FLN4420K	SR2	1,76	3/19	PF3040	SR2	1,45	3/9
AD1036	SR2	0,07	3/18	FLN4425K	SR2	2,35	3/19	PF4030	SR2	1,45	3/9
AD1086	SR2	3,44	3/16	FLN4620K	SR2	2,74	3/19	PF4040	SR2	2,01	3/9
AD1088	SR2	1,38	3/16	FLN6625K	SR2	3,63	3/19	PF4060	SR2	3,27	3/9
AD1089	SR2	2,04	3/16	FLN7520K	SR2	2,35	3/19	PF5030	SR2	1,86	3/9
AD1101	SR2	0,04	3/17	FLN7525K	SR2	2,94	3/19	PF5040	SR2	2,57	3/9
AD1102	SR2	0,02	3/17	FLN8630K	SR2	4,51	3/19	PF6040	SR2	3,27	3/9
AD1103	SR2	0,02	3/17	FLN8830K	SR2	6,27	3/19	PF6060	SR2	5	3/9
AD1104	SR2	0,02	3/17	FORSR	SR2	0	3/19	PF7050	SR2	4,85	3/9
AD1600	SR2	0,24	3/17	FORSR1	SR2	0	3/19	PF8060	SR2	6,83	3/9
AD1800	SR2	0,35	3/17	FORSR2	SR2	0	3/19	PF8080	SR2	9,21	3/9
AD3301	SR2	0,15	3/14	GD4006	SR2	0,78	3/14	PM1414K	SR2	2,35	3/14
AD3302	SR2	0,15	3/14	GD6006	SR2	0,88	3/14	PM1625K	SR2	2,94	3/14
AD3303	SR2	0,15	3/14	GD8006	SR2	0,98	3/14	PM1836K	SR2	3,63	3/14
AD3304	SR2	0,15	3/14	GZ4020	SR2	0,05	3/11	PRN1066K	SR2	8,33	3/19
AG1013	SR2	0,07	3/16	GZ4025	SR2	0,05	3/11	PRN1086K	SR2	11,27	3/19
EH1889	SR2	0,21	3/17	GZ6020	SR2	0,07	3/11	PRN1266K	SR2	9,8	3/19
EH1890	SR2	0,12	3/17	GZ6025	SR2	0,05	3/11	PRN1286K	SR2	12,74	3/19
EH2118	SR2	0,06	3/17	GZ6030	SR2	0,05	3/11	PRN3006K	SR2	1,47	3/19
EH2129	SR2	0,08	3/17	GZ8030	SR2	0,05	3/11	PRN3026K	SR2	0,98	3/19
EN0101K	SR2	0,07	3/13	KC1060K	SR2	10,05	3/9	PRN3046K	SR2	1,67	3/19
EN0102K	SR2	0,07	3/13	KC1080K	SR2	13,55	3/9	PRN4036K	SR2	2,06	3/19
EV0015	SR2	0,2	3/15	KC1260K	SR2	12,05	3/9	PRN4046K	SR2	2,56	3/19
EV1008	SR2	0,04	3/16	KC1280K	SR2	16,35	3/9	PRN4066K	SR2	3,43	3/19
EV1008	SR2	0,04	3/16	KC5040K	SR2	3,25	3/9	PRN5036K	SR2	2,45	3/19
EV1036	SR2	0,03	3/16	KC6040K	SR2	3,75	3/9	PRN5046K	SR2	2,94	3/19
EV1037	SR2	0,03	3/16	KC7050K	SR2	5,55	3/9	PRN6046K	SR2	3,43	3/19
EV1039	SR2	0,03	3/16	KC8060K	SR2	8,05	3/9	PRN6066K	SR2	4,9	3/19
EV1075K	SR2	0,2	3/16	KD1060K	SR2	2,35	3/13	PRN7056K	SR2	4,9	3/19
EV1100	SR2	1,13	3/18	KD1080K	SR2	2,89	3/13	PRN8066K	SR2	6,08	3/19
EV1101	SR2	1,25	3/18	KD1260K	SR2	3,14	3/13	PRN8086K	SR2	8,33	3/19
EV1131	SR2	5,77	3/18	KD1280K	SR2	3,63	3/13	PS2476K	SR2	0,98	3/14
EV1135	SR2	0,23	3/17	KD5040K	SR2	1,66	3/13	PS2676K	SR2	1,27	3/14

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PS2876K	SR2	1,76	3/14
PTN1066K	SR2	9,8	3/19
PTN1086K	SR2	14,7	3/19
PTN1266K	SR2	15,68	3/19
PTN1286K	SR2	18,62	3/19
PTN5046K	SR2	6,86	3/19
PTN6046K	SR2	8,82	3/19
PTN7056K	SR2	8,82	3/19
PTN8066K	SR2	10,78	3/19
SR10830EMCK	SR2	49,35	3/21
SR4620EMCK	SR2	10,43	3/21
SR6625EMCK	SR2	23,22	3/21
SRN10625K	SR2	37,4	3/7
SRN10625VK	SR2	27	3/8
SRN10630K	SR2	39	3/7
SRN10630VK	SR2	29	3/8
SRN10830K	SR2	50	3/7
SRN10830VK	SR2	36,7	3/8
SRN12630K	SR2	45,3	3/7
SRN12630VK	SR2	33,7	3/8
SRN12830K	SR2	56,3	3/7
SRN12830VK	SR2	41,7	3/8
SRN3215K	SR2	4,25	3/7
SRN3315K	SR2	5,25	3/7
SRN3415K	SR2	7,1	3/7
SRN4315K	SR2	7,1	3/7
SRN4320K	SR2	7,8	3/7
SRN4420K	SR2	9,5	3/7
SRN4620K	SR2	13,5	3/7
SRN5320K	SR2	9	3/7
SRN5420K	SR2	11,1	3/7
SRN5420VK	SR2	9,1	3/8
SRN5425K	SR2	12,2	3/7
SRN5425VK	SR2	10,1	3/8
SRN6420K	SR2	13,5	3/7
SRN6420VK	SR2	11	3/8
SRN6425K	SR2	14,1	3/7
SRN6425VK	SR2	12	3/8
SRN6625K	SR2	24	3/7
SRN7520K	SR2	22,5	3/7
SRN7520VK	SR2	16	3/8
SRN7525K	SR2	23,5	3/7
SRN7525VK	SR2	19	3/8
SRN8625K	SR2	31	3/7
SRN8625VK	SR2	23	3/8
SRN8630K	SR2	31,7	3/7

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SRN8630VK	SR2	24,5	3/8
SRN8830K	SR2	41	3/7
TQ1060	SR2	8,82	3/10
TQ1080	SR2	11,76	3/10
TQ1260	SR2	10,78	3/10
TQ1280	SR2	14,21	3/10
TQ3020	SR2	0,69	3/10
TQ3030	SR2	1,08	3/10
TQ3040	SR2	1,47	3/10
TQ4030	SR2	1,47	3/10
TQ4040	SR2	2,06	3/10
TQ4060	SR2	3,43	3/10
TQ5030	SR2	1,96	3/10
TQ5040	SR2	2,65	3/10
TQ6040	SR2	3,43	3/10
TQ6060	SR2	5,39	3/10
TQ6610	SR2	0,1	3/10
TQ7050	SR2	4,9	3/10
TQ8060	SR2	6,86	3/10
TQ8080	SR2	9,31	3/10
TS6009	SR2	0,98	3/15
TS7009	SR2	0,98	3/15
TS8009	SR2	0,98	3/15
TT2015K	SR2	0,88	3/15
TT3015K	SR2	0,98	3/15
TT3020K	SR2	1,18	3/15
TT4015K	SR2	1,76	3/15
TT4020K	SR2	1,96	3/15
TT4025K	SR2	1,76	3/15
TT5020K	SR2	2,45	3/15
TT5025K	SR2	1,96	3/15
TT6020K	SR2	2,65	3/15
TT6025K	SR2	2,45	3/15
TT6030K	SR2	3,72	3/15
TT8030K	SR2	4,41	3/15
VA7910	SR2	0,4	3/12
VA7915	SR2	0,55	3/12
VA7930	SR2	0,3	3/12
VA7950	SR2	0,35	3/12
VA7975	SR2	0,45	3/12
VA8300	SR2	0,8	3/12
VB7012	SR2	0,51	3/19
VB7035	SR2	0	3/19
VERNSR	SR2	0	3/19
ZA4020	SR2	5,15	3/11
ZA4025	SR2	5,53	3/11

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ZA6030	SR2	7,31	3/11
ZA8030	SR2	8,76	3/11

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AA1570	AM2	0,03	4/38	AD3301	AM2	0,15	4/23	EA1612	AM2	36,47	4/19
AA6100	AM2	0,01	4/38	AD3302	AM2	0,15	4/23	EA1612MT	AM2	36,47	4/19
AA6100	AM2	0,01	4/38	AD3303	AM2	0,15	4/23	EA1616	AM2	18,67	4/19
AA6120	AM2	0,01	4/38	AD3304	AM2	0,15	4/23	EA1616MT	AM2	18,67	4/19
AA6140	AM2	0,01	4/38	AP6001	AM2	0,18	4/22	EA1619	AM2	24,6	4/19
AA6141	AM2	0,02	4/38	CA1402	AM2	0,4	4/43	EA1619MT	AM2	24,6	4/19
AA6160	AM2	0,02	4/38	CA1602	AM2	0,5	4/43	EA1810	AM2	35,75	4/19
AA6180	AM2	0,02	4/38	CA1802	AM2	0,6	4/43	EA1810MT	AM2	36,48	4/19
AA6190	AM2	0,02	4/38	CA2002	AM2	0,7	4/43	EA1812	AM2	42,99	4/19
AA6200	AM2	0,02	4/38	EA0018	AM2	2,48	4/21	EA1812MT	AM2	43,87	4/19
AA6840	AM2	0,01	4/34	EA0020	AM2	2,78	4/21	EA1860	AM2	20	4/19
AA6850	AM2	0,01	4/34	EA1010	AM2	18,92	4/19	EA1860MT	AM2	21,56	4/19
AA6880	AM2	0,01	4/34	EA1010MT	AM2	18,92	4/19	EA1880	AM2	25,5	4/19
AA6890	AM2	0,57	4/34	EA1012	AM2	22,5	4/19	EA1880MT	AM2	29,09	4/19
AA8004	AM2	0,01	4/38	EA1012MT	AM2	22,5	4/19	EA2010	AM2	39,72	4/19
AD1004	AM2	0,54	4/27	EA1016	AM2	29,65	4/19	EA2010MT	AM2	40,53	4/19
AD1006	AM2	0,54	4/27	EA1016MT	AM2	29,65	4/19	EA2013	AM2	47,77	4/19
AD1007	AM2	0,25	4/27	EA1060	AM2	10,88	4/19	EA2013MT	AM2	48,74	4/19
AD1009	AM2	0,08	4/22	EA1060MT	AM2	11,76	4/19	EA2060	AM2	22	4/19
AD1027	AM2	0,69	4/27	EA1061	AM2	11,6	4/20	EA2060MT	AM2	23,96	4/19
AD1028	AM2	0,31	4/27	EA1080	AM2	15,34	4/19	EA2062	AM2	2,91	4/20
AD1029	AM2	0,41	4/27	EA1080MT	AM2	15,34	4/19	EA2080	AM2	29,9	4/19
AD1030	AM2	1,09	4/27	EA1081	AM2	20,79	4/20	EA2080MT	AM2	32,32	4/19
AD1031	AM2	0,52	4/27	EA1210	AM2	22,79	4/19	EA2081	AM2	3,88	4/20
AD1033	AM2	0,22	4/34	EA1210MT	AM2	22,79	4/19	EA3061	AM2	4,37	4/20
AD1037	AM2	0,34	4/22	EA1213	AM2	27,15	4/19	EA3081	AM2	5,82	4/20
AD1058	AM2	0,01	4/38	EA1213MT	AM2	27,15	4/19	EA4061	AM2	5,82	4/20
AD1058	AM2	0,01	4/38	EA1260	AM2	14,06	4/19	EA4081	AM2	7,76	4/20
AD1075	AM2	0,54	4/27	EA1260MT	AM2	14,06	4/19	EA5010	AM2	16,1	4/21
AD1076	AM2	0,25	4/27	EA1280	AM2	18,43	4/19	EA5011	AM2	31,11	4/21
AD1080	AM2	0,25	4/27	EA1280MT	AM2	18,43	4/19	EA5022	AM2	37,33	4/21
AD1081	AM2	0,25	4/27	EA1411	AM2	26,66	4/19	EA5060	AM2	9,66	4/21
AD1086	AM2	3,44	4/26	EA1411MT	AM2	26,66	4/19	EA5061	AM2	7,28	4/20
AD1088	AM2	1,38	4/26	EA1412	AM2	31,81	4/19	EA5063	AM2	19,28	4/21
AD1089	AM2	2,04	4/26	EA1412MT	AM2	31,81	4/19	EA5081	AM2	9,72	4/20
AD1101	AM2	0,04	4/26	EA1460	AM2	16,36	4/19	EA5082	AM2	12,88	4/21
AD1102	AM2	0,02	4/26	EA1460MT	AM2	16,36	4/19	EA5083	AM2	25,99	4/21
AD1103	AM2	0,02	4/26	EA1480	AM2	21,51	4/19	EA5100	AM2	0,51	4/19
AD1104	AM2	0,02	4/26	EA1480MT	AM2	21,51	4/19	EA5210	AM2	19,33	4/21
AD1600	AM2	0,24	4/26	EA1610	AM2	30,54	4/19	EA5260	AM2	11,59	4/21

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EA5413	AM2	22,22	4/21
EA5461	AM2	13,53	4/21
EA5480	AM2	18,04	4/21
EA5610	AM2	25,39	4/21
EA5616	AM2	15,46	4/21
EA5620	AM2	20,61	4/21
EA5811	AM2	28,57	4/21
EA5822	AM2	34,28	4/21
EA5861	AM2	17,36	4/21
EA5883	AM2	23,19	4/21
EA6061	AM2	8,73	4/20
EA6081	AM2	11,64	4/20
EA8061	AM2	11,64	4/20
EA8081	AM2	15,52	4/20
EB0600	AM2	1,32	4/17
EB0660	AM2	1,67	4/17
EB0800	AM2	1,85	4/17
EB0880	AM2	2,36	4/17
EB1000	AM2	2,45	4/17
EB1010	AM2	4,25	4/17
EB1020	AM2	2,58	4/17
EB1041	AM2	0,54	4/32
EB1042	AM2	0,86	4/32
EB1043	AM2	1,21	4/32
EB1200	AM2	3,76	4/17
EF1032N	AM2	1,52	4/15
EF1032NM	AM2	1,52	4/15
EF1040	AM2	3,1	4/15
EF1040MT	AM2	3,17	4/15
EF1042	AM2	3,38	4/15
EF1052	AM2	4,79	4/15
EF1053	AM2	4,51	4/15
EF1053MT	AM2	4,6	4/15
EF6032N	AM2	0,76	4/15
EF6032NM	AM2	0,76	4/15
EF6040	AM2	1,61	4/15
EF6040MT	AM2	1,65	4/15
EF6043	AM2	1,76	4/15
EF6050	AM2	2,35	4/15
EF6050MT	AM2	2,39	4/15

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EF8032N	AM2	1,14	4/15
EF8032NM	AM2	1,14	4/15
EF8040	AM2	2,36	4/15
EF8040MT	AM2	2,41	4/15
EF8042	AM2	2,57	4/15
EF8050	AM2	3,43	4/15
EF8050MT	AM2	3,5	4/15
EF8052	AM2	3,64	4/15
EG1902	AM2	0,41	4/28
EG1903	AM2	0,61	4/28
EG1904	AM2	0,82	4/28
EG1905	AM2	1,02	4/28
EG1906	AM2	1,23	4/28
EG1907	AM2	1,43	4/28
EG1908	AM2	1,63	4/28
EG1909	AM2	1,84	4/28
EG1910	AM2	2,04	4/28
EG1991	AM2	0,2	4/28
EH0018	AM2	0,84	4/22
EH0024	AM2	0,65	4/22
EH0029	AM2	1,21	4/22
EH0036	AM2	0,89	4/22
EH0562K	AM2	0,37	4/24
EH0582K	AM2	0,54	4/24
EH1062K	AM2	0,63	4/24
EH1082K	AM2	0,87	4/24
EH1518K	AM2	0,89	4/23
EH1524K	AM2	0,89	4/23
EH1529K	AM2	1,23	4/23
EH1536K	AM2	1,23	4/23
EH1562K	AM2	0,89	4/24
EH1582K	AM2	1,23	4/24
EH1889	AM2	0,21	4/26
EH1890	AM2	0,12	4/26
EH2018K	AM2	1,14	4/23
EH2024K	AM2	1,14	4/23
EH2029K	AM2	1,59	4/23
EH2036K	AM2	1,59	4/23
EH2062K	AM2	1,14	4/24
EH2063K	AM2	1,66	4/25

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EH2082K	AM2	1,59	4/24
EH2083K	AM2	2,21	4/25
EH2085	AM2	4,41	4/23
EH2118	AM2	0,06	4/26
EH2129	AM2	0,08	4/26
EH2272K	AM2	1,14	4/25
EH2297K	AM2	1,14	4/25
EH2472K	AM2	1,14	4/25
EH3018K	AM2	1,66	4/23
EH3029K	AM2	2,22	4/23
EH3063K	AM2	1,66	4/24
EH3064K	AM2	2,49	4/25
EH3065	AM2	4,96	4/23
EH3082K	AM2	2,31	4/24
EH3083K	AM2	3,32	4/25
EH3085	AM2	6,61	4/23
EH3272K	AM2	1,59	4/25
EH3296K	AM2	1,59	4/25
EH3472K	AM2	1,59	4/25
EH3496K	AM2	1,59	4/25
EH4062K	AM2	2,18	4/24
EH4064K	AM2	3,32	4/25
EH4065	AM2	6,61	4/23
EH4082K	AM2	3,04	4/24
EH4083K	AM2	4,42	4/25
EH4085	AM2	8,81	4/23
EH5062K	AM2	2,7	4/24
EH5063K	AM2	4,15	4/25
EH5082K	AM2	3,76	4/24
EH5084K	AM2	5,53	4/25
EH6018K	AM2	3,22	4/23
EH6025K	AM2	3,22	4/23
EH6029K	AM2	4,48	4/23
EH6036K	AM2	4,48	4/23
EH6062K	AM2	3,22	4/24
EH6063K	AM2	4,97	4/25
EH6082K	AM2	4,48	4/24
EH6084K	AM2	6,63	4/25
EN0101K	AM2	0,07	4/37
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EN0150K	AM2	0,18	4/38	EV1072K	AM2	2,06	4/32	EV1151	AM2	0,09	4/35
EN0204K	AM2	0,3	4/38	EV1073K	AM2	2,57	4/32	EV1152	AM2	0,09	4/35
EN0250K	AM2	0,51	4/38	EV1075K	AM2	0,2	4/32	EV1153	AM2	0,09	4/35
EN0325K	AM2	0,98	4/38	EV1090	AM2	0,46	4/33	EV1154	AM2	0,09	4/35
EN1105K	AM2	0,42	4/38	EV1091	AM2	0,86	4/33	EV1155	AM2	0,01	4/35
EN1150K	AM2	0,86	4/38	EV1092	AM2	0,54	4/33	EV1156	AM2	0,06	4/35
EN1204K	AM2	0,99	4/38	EV1093	AM2	0,54	4/33	EV2110	AM2	0,55	4/34
EN1250K	AM2	1,62	4/38	EV1100	AM2	1,13	4/34	EV2112	AM2	0,55	4/34
EN2105K	AM2	0,42	4/38	EV1101	AM2	1,25	4/34	FOR01	AM2	0	4/40
EN2150K	AM2	0,86	4/38	EV1110	AM2	2,69	4/34	FOR02	AM2	0	4/40
EN2204K	AM2	0,99	4/38	EV1111	AM2	0,67	4/34	MD1000	AM2	3,08	4/22
EN2250K	AM2	1,62	4/38	EV1112	AM2	2,69	4/34	MD1200	AM2	3,62	4/22
EN2325K	AM2	3,63	4/38	EV1113	AM2	0,12	4/34	MD1400	AM2	4,15	4/22
EN3325K	AM2	3,63	4/38	EV1115	AM2	0,64	4/34	MD1600	AM2	4,68	4/22
EV1001	AM2	0,7	4/30	EV1116	AM2	0,74	4/34	MD1800	AM2	5,22	4/22
EV1002	AM2	1,08	4/30	EV1117	AM2	0,65	4/34	MD2000	AM2	5,75	4/22
EV1004	AM2	0,28	4/29	EV1118	AM2	0,94	4/34	PIRH0405	AM2	0,2	4/38
EV1005	AM2	0,52	4/29	EV1119	AM2	3,53	4/34	PIRH0455	AM2	0,2	4/38
EV1006	AM2	0,62	4/29	EV1120	AM2	4,41	4/34	PIRH1242	AM2	0,2	4/38
EV1008	AM2	0,04	4/38	EV1121	AM2	8,67	4/34	PIRH2432	AM2	0	4/38
EV1008	AM2	0,04	4/38	EV1122	AM2	2,4	4/34	TA1207	AM2	0,34	4/15
EV1030	AM2	0,29	4/38	EV1123	AM2	2,44	4/34	TA1208	AM2	0,24	4/15
EV1030	AM2	0,29	4/38	EV1124	AM2	2,71	4/34	TA5510	AM2	0,26	4/29
EV1036	AM2	0,03	4/38	EV1125	AM2	2,71	4/34	TA7100	AM2	0,15	4/29
EV1037	AM2	0,03	4/38	EV1130	AM2	1,04	4/35	TA9600	AM2	0,49	4/29
EV1039	AM2	0,03	4/38	EV1131	AM2	5,77	4/35	TA9601	AM2	0,97	4/29
EV1039	AM2	0,03	4/38	EV1135	AM2	0,23	4/26	TC1006K	AM2	8,39	4/41
EV1040	AM2	0,37	4/30	EV1135	AM2	0,23	4/26	TC1006KMT	AM2	8,49	4/18
EV1041	AM2	1,08	4/30	EV1136	AM2	0,16	4/26	TC1008DK	AM2	6,15	4/42
EV1042	AM2	0,24	4/30	EV1136	AM2	0,16	4/26	TC1008DKMT	AM2	12,17	4/18
EV1043	AM2	0,73	4/30	EV1137	AM2	0,23	4/26	TC1008K	AM2	11,05	4/41
EV1044	AM2	0,11	4/30	EV1137	AM2	0,23	4/26	TC1008KMT	AM2	11,32	4/18
EV1045	AM2	0,24	4/30	EV1143	AM2	0,07	4/31	TC1008SK	AM2	6,91	4/42
EV1047	AM2	0,48	4/30	EV1144	AM2	0,07	4/31	TC1010DK	AM2	7,66	4/42
EV1048	AM2	0,53	4/30	EV1144	AM2	0,07	4/31	TC1010DKMT	AM2	15,22	4/18
EV1049	AM2	0,06	4/30	EV1145	AM2	0,07	4/31	TC1010K	AM2	14,15	4/41
EV1050	AM2	6,74	4/33	EV1145	AM2	0,07	4/31	TC1010KMT	AM2	14,15	4/18
EV1051	AM2	0,9	4/33	EV1146	AM2	0,02	4/31	TC1010SK	AM2	8,65	4/42
EV1056	AM2	0,31	4/33	EV1147	AM2	0,36	4/31	TC1012DK	AM2	8,39	4/42
EV1058	AM2	0,49	4/33	EV1148	AM2	0,35	4/31	TC1012DKMT	AM2	18,26	4/18

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TC1016DK	AM2	11,05	4/42
TC1016DKMT	AM2	24,34	4/18
TC1016SK	AM2	11,74	4/42
TC1206K	AM2	10,02	4/41
TC1206KMT	AM2	10,19	4/18
TC1208DK	AM2	7,53	4/42
TC1208DKMT	AM2	14,61	4/18
TC1208K	AM2	13,2	4/41
TC1208KMT	AM2	13,58	4/18
TC1208SK	AM2	8,25	4/42
TC1210DK	AM2	9,39	4/42
TC1210DKMT	AM2	18,26	4/18
TC1210K	AM2	16,91	4/41
TC1210KMT	AM2	16,99	4/18
TC1210SK	AM2	10,33	4/42
TC1212DK	AM2	10,02	4/42
TC1212DKMT	AM2	21,91	4/18
TC1212SK	AM2	11,19	4/42
TC1406K	AM2	11,65	4/41
TC1406KMT	AM2	11,89	4/18
TC1408DK	AM2	8,53	4/42
TC1408DKMT	AM2	17,05	4/18
TC1408K	AM2	15,35	4/41
TC1408KMT	AM2	15,85	4/18
TC1408SK	AM2	9,59	4/42
TC1410DK	AM2	10,92	4/42
TC1410DKMT	AM2	21,3	4/18
TC1410K	AM2	19,66	4/41
TC1410KMT	AM2	19,91	4/18
TC1410SK	AM2	12,02	4/42
TC1412DK	AM2	11,65	4/42
TC1412DKMT	AM2	25,56	4/18
TC1412SK	AM2	12,62	4/42
TC1606K	AM2	13,29	4/41
TC1606KMT	AM2	13,59	4/18
TC1608DK	AM2	9,72	4/42
TC1608DKMT	AM2	19,48	4/18
TC1608K	AM2	17,5	4/41
TC1608KMT	AM2	18,11	4/18
TC1608SK	AM2	10,94	4/42

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TC1610DK	AM2	12,45	4/42
TC1610DKMT	AM2	24,34	4/18
TC1610K	AM2	22,42	4/41
TC1610KMT	AM2	22,76	4/18
TC1610SK	AM2	13,69	4/42
TC1612DK	AM2	13,29	4/42
TC1612DKMT	AM2	29,21	4/18
TC1612SK	AM2	14,39	4/42
TC1806K	AM2	14,92	4/41
TC1806KMT	AM2	15,29	4/18
TC1808DK	AM2	10,92	4/42
TC1808DKMT	AM2	21,91	4/18
TC1808KMT	AM2	20,38	4/18
TC1808SK	AM2	12,28	4/42
TC1810DK	AM2	13,98	4/42
TC1810DKMT	AM2	27,39	4/18
TC1810KMT	AM2	25,6	4/18
TC1810SK	AM2	15,18	4/42
TC1812DK	AM2	14,92	4/42
TC1812DKMT	AM2	32,86	4/18
TC1812SK	AM2	16,03	4/42
TC2006KMT	AM2	16,99	4/18
TC2008KMT	AM2	22,65	4/18
TC2010DK	AM2	14,97	4/42
TC2010DKMT	AM2	30,44	4/18
TC2010KMT	AM2	28,45	4/18
TC2010SK	AM2	16,24	4/42
TC2012DK	AM2	16,55	4/42
TC2012DKMT	AM2	36,51	4/18
TC2012SK	AM2	17,83	4/42
TE1010K	AM2	13,9	4/43
TE1012K	AM2	16,58	4/43
TE1016K	AM2	21,94	4/43
TE1031	AM2	3,62	4/29
TE1041	AM2	5,02	4/29
TE1051	AM2	6,41	4/29
TE1060K	AM2	8,55	4/43
TE1080K	AM2	11,22	4/43
TE1210K	AM2	16,59	4/43
TE1212K	AM2	19,79	4/43
TE1260K	AM2	10,2	4/43

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TE1280K	AM2	13,39	4/43
TE1410K	AM2	19,28	4/43
TE1412K	AM2	22,99	4/43
TE1460K	AM2	11,85	4/43
TE1480K	AM2	15,57	4/43
TE1610K	AM2	21,97	4/43
TE1612K	AM2	26,2	4/43
TE1660K	AM2	13,5	4/43
TE1680K	AM2	17,74	4/43
TE1810K	AM2	24,66	4/43
TE1812K	AM2	29,41	4/43
TE1860K	AM2	15,16	4/43
TE1880K	AM2	19,91	4/43
TE2010K	AM2	27,35	4/43
TE2012K	AM2	32,62	4/43
TE2060K	AM2	16,81	4/43
TE2080K	AM2	22,08	4/43
TE6031	AM2	2,01	4/29
TE6041	AM2	2,79	4/29
TE6051	AM2	3,56	4/29
TE8031	AM2	2,82	4/29
TE8041	AM2	3,9	4/29
TE8051	AM2	4,99	4/29
TF1010K	AM2	14,08	4/16
TF1010KMT	AM2	14,08	4/16
TF1060K	AM2	9,29	4/16
TF1060KMT	AM2	9,29	4/16
TF1080K	AM2	11,68	4/16
TF1080KMT	AM2	11,68	4/16
TF1210K	AM2	17,09	4/16
TF1210KMT	AM2	17,09	4/16
TF1260K	AM2	11,26	4/16
TF1260KMT	AM2	11,26	4/16
TF1280K	AM2	14,18	4/16
TF1280KMT	AM2	14,18	4/16
TF1410K	AM2	20,1	4/16
TF1410KMT	AM2	20,1	4/16
TF1460K	AM2	13,24	4/16
TF1460KMT	AM2	13,24	4/16
TF1480K	AM2	16,67	4/16
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TF1610KMT	AM2	23,11	4/16	TM2263K	AM2	50	4/10	TM2685FV4K	AM2	74,8	4/11
TF1660K	AM2	15,21	4/16	TM2264K	AM2	47,38	4/10	TM2685K	AM2	81	4/10
TF1660KMT	AM2	15,21	4/16	TM2264VK	AM2	48,3	4/12	TM2804FV5K	AM2	87,05	4/11
TF1680K	AM2	19,16	4/16	TM2283FV4K	AM2	50,49	4/11	TM2804K	AM2	99	4/10
TF1680KMT	AM2	19,16	4/16	TM2284K	AM2	55,61	4/10	TM2804VK	AM2	89,34	4/12
TF1810K	AM2	26,2	4/16	TM2284VK	AM2	56,81	4/12	TM2805K	AM2	94,02	4/10
TF1810KMT	AM2	26,2	4/16	TM2403K	AM2	72	4/10	TM2805VK	AM2	96,31	4/12
TF1860K	AM2	17,26	4/16	TM2404FV5K	AM2	71,9	4/11	TM2824K	AM2	98,04	4/11
TF1860KMT	AM2	17,26	4/16	TM2404K	AM2	71,9	4/10	TM2825K	AM2	105,45	4/11
TF1880K	AM2	21,73	4/16	TM2404VK	AM2	73,68	4/12	TM2864K	AM2	64,23	4/10
TF1880KMT	AM2	21,73	4/16	TM2405FV5K	AM2	77,93	4/11	TM2864VK	AM2	65,58	4/12
TF2010K	AM2	29,21	4/16	TM2405K	AM2	77,93	4/10	TM2865K	AM2	70,33	4/10
TF2010KMT	AM2	29,21	4/16	TM2424K	AM2	81,02	4/11	TM2865VK	AM2	71,69	4/12
TF2060K	AM2	19,24	4/16	TM2425K	AM2	87,49	4/11	TM2884FV4K	AM2	75,28	4/11
TF2060KMT	AM2	19,24	4/16	TM2463K	AM2	56	4/10	TM2884K	AM2	86	4/10
TF2080K	AM2	24,22	4/16	TM2464K	AM2	53	4/10	TM2884VK	AM2	77,07	4/12
TF2080KMT	AM2	24,22	4/16	TM2464VK	AM2	54,06	4/12	TM2885K	AM2	83	4/10
TK1000	AM2	2,33	4/28	TM2465K	AM2	58,16	4/10	TM2885VK	AM2	83,61	4/12
TK1200	AM2	2,6	4/28	TM2483FV4K	AM2	56,57	4/11	TM2904FV5K	AM2	94,62	4/11
TK1400	AM2	2,87	4/28	TM2483K	AM2	66	4/10	TM2904K	AM2	100	4/10
TK1600	AM2	3,14	4/28	TM2483VK	AM2	57,97	4/12	TM2904VK	AM2	97,16	4/12
TK1800	AM2	3,41	4/28	TM2484FV4K	AM2	62,17	4/11	TM2905K	AM2	110	4/10
TK2000	AM2	3,68	4/28	TM2484K	AM2	69	4/10	TM2905VK	AM2	104,61	4/12
TM2003FV5K	AM2	51,65	4/11	TM2484VK	AM2	63,57	4/12	TM2924K	AM2	106,55	4/11
TM2004FV5K	AM2	56,74	4/11	TM2485FV4K	AM2	67,77	4/11	TM2925K	AM2	114,43	4/11
TM2004K	AM2	56,74	4/10	TM2485K	AM2	67,77	4/10	TM2964K	AM2	69,84	4/10
TM2024K	AM2	63,99	4/11	TM2604FV5K	AM2	79,47	4/11	TM2964VK	AM2	71,35	4/12
TM2063K	AM2	40,55	4/10	TM2604K	AM2	86	4/10	TM2965K	AM2	76,42	4/10
TM2064K	AM2	45,77	4/10	TM2604VK	AM2	81,51	4/12	TM2965VK	AM2	77,92	4/12
TM2064VK	AM2	42,53	4/12	TM2605FV5K	AM2	85,98	4/11	TM2984K	AM2	81,84	4/10
TM2074K	AM2	78,57	4/11	TM2605K	AM2	85,98	4/10	TM2984VK	AM2	83,82	4/12
TM2083FV4K	AM2	44,4	4/11	TM2624K	AM2	89,53	4/11	TM2985K	AM2	92	4/10
TM2083K	AM2	47,4	4/10	TM2625K	AM2	96,47	4/11	TM2985VK	AM2	90,83	4/12
TM2084FV4K	AM2	49,06	4/11	TM2663K	AM2	52,98	4/10	TP1030K	AM2	7,61	4/32
TM2084K	AM2	49,06	4/10	TM2664K	AM2	69	4/10	TP1040K	AM2	9,01	4/32
TM2084VK	AM2	50,06	4/12	TM2664VK	AM2	59,82	4/12	TP1050K	AM2	10,62	4/32
TM2204FV5K	AM2	64,32	4/11	TM2665K	AM2	64,25	4/10	TP1230K	AM2	8,81	4/32
TM2204K	AM2	70	4/10	TM2683K	AM2	74	4/10	TP1240K	AM2	10,42	4/32
TM2204VK	AM2	65,86	4/12	TM2684FV4K	AM2	68,73	4/11	TP1250K	AM2	12,26	4/32
TM2223K	AM2	66,51	4/11	TM2684K	AM2	77	4/10	TP6030K	AM2	5,19	4/32

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TP6050K	AM2	7,31	4/32	ZN0010	AM2	3,17	4/13				
TP8030K	AM2	6,4	4/32	ZN1000	AM2	3,17	4/13				
TP8040K	AM2	7,59	4/32	ZN1002	AM2	5,51	4/14				
TP8050K	AM2	8,96	4/32	ZN1010	AM2	3,54	4/14				
TS1003	AM2	0,45	4/17	ZN1020	AM2	2,38	4/14				
TS1004	AM2	0,64	4/17	ZN1040	AM2	1,04	4/14				
TS1005	AM2	0,83	4/17	ZN1041	AM2	1,37	4/14				
TS2003	AM2	0,92	4/17	ZN1200	AM2	3,8	4/13				
TS2004	AM2	1,22	4/17	ZN1600	AM2	5,07	4/13				
TS2005	AM2	1,61	4/17	ZN3011	AM2	0,86	4/13				
TS4000	AM2	1,47	4/33	ZN4011	AM2	1,18	4/13				
TS4001	AM2	2,5	4/33	ZN5011	AM2	1,5	4/13				
TS4002	AM2	2	4/33	ZN6000	AM2	1,89	4/13				
TS4003	AM2	2	4/33	ZN6002	AM2	3,3	4/14				
TS4004	AM2	5,27	4/33	ZN8000	AM2	2,53	4/13				
TS4011	AM2	2	4/33	ZN8002	AM2	4,41	4/14				
TS4012	AM2	2	4/33	ZN1002	AM2	6,06	4/14				
TS4013	AM2	1,96	4/33	ZN1010	AM2	3,83	4/14				
TT1006K	AM2	9,23	4/41	ZN1020	AM2	2,38	4/14				
TT1008K	AM2	12,16	4/41	ZN1040	AM2	1,04	4/14				
TT1206K	AM2	11,02	4/41	ZN1041	AM2	1,5	4/14				
TT1208K	AM2	14,52	4/41	ZN3011	AM2	0,95	4/13				
TT1210K	AM2	18,6	4/41	ZN4001	AM2	0,66	4/13				
TT1406K	AM2	12,82	4/41	ZN4011	AM2	1,3	4/13				
TT1408K	AM2	16,89	4/41	ZN5001	AM2	0,96	4/13				
TT1410K	AM2	21,63	4/41	ZN5011	AM2	1,65	4/13				
TT1606K	AM2	14,61	4/41	ZN6000	AM2	2,08	4/13				
TT1608K	AM2	19,25	4/41	ZN6002	AM2	3,63	4/14				
TT1610K	AM2	24,66	4/41	ZN8000	AM2	2,78	4/13				
VA7910	AM2	0,4	4/36	ZN8002	AM2	4,85	4/14				
VA7915	AM2	0,55	4/36	ZN6002	AM2	3,63	4/14				
VA7930	AM2	0,3	4/36	ZN8000	AM2	2,78	4/13				
VA7950	AM2	0,35	4/36	ZN8002	AM2	4,85	4/14				
VA7975	AM2	0,45	4/36								
VA8300	AM2	0,8	4/36								
VB7012	AM2	0,51	4/43								
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7242	IS2	0,7	5/90	AA6840	IS2	0,01	5/88	BA0800	IS2	4,41	5/86
7243	IS2	0,93	5/90	AA6850	IS2	0,01	5/88	BA1250	IS2	8,98	5/86
7244	IS2	1,17	5/90	AA6880	IS2	0,01	5/88	BA1600	IS2	10,51	5/86
7245	IS2	1,67	5/90	AA6890	IS2	0,57	5/88	BF1602	IS2	2,65	5/87
7246	IS2	2,81	5/90	AA8004	IS2	0,01	5/102	BF2502	IS2	4,12	5/87
7247	IS2	3,44	5/90	AA9610	IS2	0,65	5/107	BF4002	IS2	2,94	5/87
7855	IS2	0,76	5/91	AD1004	IS2	0,54	5/93	BF4012	IS2	6,37	5/87
1SL9037A00	IS2	0,37	5/90	AD1006	IS2	0,54	5/93	BF6302	IS2	12,25	5/87
1SL9816A00	IS2	0,76	5/90	AD1007	IS2	0,25	5/93	BF8002	IS2	18,72	5/87
1SL9817A00	IS2	0,79	5/90	AD1009	IS2	0,08	5/74	BP0630	IS2	0,39	5/87
1SL9818A00	IS2	0,97	5/90	AD1027	IS2	0,69	5/93	BP0632	IS2	0,54	5/87
1SL9819A00	IS2	1,15	5/90	AD1028	IS2	0,31	5/93	BP1250	IS2	2,74	5/87
1SL9820A00	IS2	1,52	5/90	AD1029	IS2	0,41	5/93	BP1600	IS2	2,55	5/87
1SL9836A00	IS2	1,03	5/90	AD1030	IS2	1,09	5/93	BR0250	IS2	1,27	5/87
1SL9838A00	IS2	1,25	5/90	AD1031	IS2	0,52	5/93	BR0400	IS2	2,74	5/87
1SL9839A00	IS2	1,43	5/90	AD1033	IS2	0,22	5/88	BR0630	IS2	6,08	5/87
1SL9840A00	IS2	1,8	5/90	AD1033	IS2	0,22	5/111	BR1250	IS2	14,21	5/87
1SL9841A00	IS2	2,44	5/90	AD1036	IS2	0,07	5/111	BR1600	IS2	28,42	5/87
1SL9842A00	IS2	2,85	5/90	AD1037	IS2	0,34	5/74	BR4005	IS2	4,31	5/87
1SL9860A00	IS2	1,09	5/90	AD1056	IS2	0,29	5/86	BR6305	IS2	6,37	5/87
1SL9861A00	IS2	1,13	5/90	AD1058	IS2	0,01	5/102	BR8005	IS2	8,43	5/87
1SL9862A00	IS2	1,31	5/90	AD1058	IS2	0,01	5/109	CR0180M	IS2	0,95	5/107
1SL9863A00	IS2	1,49	5/90	AD1064	IS2	0,25	5/86	CR0181	IS2	1,1	5/107
1SL9864A00	IS2	1,86	5/90	AD1065	IS2	0,2	5/86	EA0018	IS2	2,48	5/60
1SL9865A00	IS2	2,5	5/90	AD1065	IS2	0,2	5/86	EA0020	IS2	2,78	5/60
1SL9866A00	IS2	2,91	5/90	AD1066	IS2	0,09	5/86	EA0022	IS2	3,01	5/60
1SL9880A00	IS2	0,14	5/91	AD1067	IS2	0,2	5/86	EA0400	IS2	1,75	5/58
1SL9886A00	IS2	0,11	5/91	AD1068	IS2	1,05	5/86	EA0401	IS2	1,1	5/111
1SL9887A00	IS2	0,14	5/91	AD1069	IS2	2,35	5/86	EA0501	IS2	1,49	5/111
1SL9893A00	IS2	0,01	5/91	AD1075	IS2	0,54	5/93	EA0600	IS2	2,54	5/58
1SL9904A00	IS2	0,31	5/91	AD1076	IS2	0,25	5/93	EA0601	IS2	1,88	5/111
1SL9907A00	IS2	0,15	5/91	AD1077	IS2	1,03	5/86	EA0801	IS2	2,65	5/111
1SL9910A00	IS2	0,23	5/91	AD1080	IS2	0,25	5/93	EA0802	IS2	3,32	5/58
1SL9911A00	IS2	0,3	5/91	AD1081	IS2	0,25	5/93	EA1000	IS2	4,12	5/58
1SL9912A00	IS2	0,38	5/91	AD1086	IS2	3,44	5/78	EA1001	IS2	3,32	5/111
1SL9913A00	IS2	0,53	5/91	AD1088	IS2	1,38	5/78	EA1002	IS2	2,76	5/61
1SL9914A00	IS2	0,68	5/91	AD1089	IS2	2,04	5/78	EA1003	IS2	2,48	5/59
1SL9915A00	IS2	0,83	5/91	AD1101	IS2	0,04	5/78	EA1061	IS2	11,6	5/62
AA1560	IS2	0,02	5/102	AD1102	IS2	0,02	5/78	EA1081	IS2	20,79	5/62
AA1570	IS2	0,03	5/102	AD1103	IS2	0,02	5/78	EA1200	IS2	4,89	5/58
AA6100	IS2	0,01	5/102	AD1104	IS2	0,02	5/78	EA1202	IS2	3,34	5/61
AA6100	IS2	0,01	5/109	AD1600	IS2	0,24	5/78	EA1203	IS2	3,06	5/59
AA6120	IS2	0,01	5/102	AD1800	IS2	0,35	5/78	EA1602	IS2	6,53	5/58
AA6140	IS2	0,01	5/102	AD3301	IS2	0,15	5/77	EA1603	IS2	4,18	5/59
AA6141	IS2	0,02	5/102	AD3302	IS2	0,15	5/77	EA1800	IS2	7,17	5/57
AA6160	IS2	0,02	5/102	AD3303	IS2	0,15	5/77	EA1810	IS2	35,75	5/57
AA6180	IS2	0,02	5/102	AD3304	IS2	0,15	5/77	EA1812	IS2	42,99	5/57
				AE1015	IS2	0,25	5/99	EA1817	IS2	57,32	5/57
				AP6000	IS2	0,01	5/74				

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EA1880	IS2	25,5	5/57
EA1910	IS2	43,36	5/61
EA1912	IS2	51,36	5/61
EA1916	IS2	77,74	5/61
EA1940	IS2	19,32	5/61
EA1960	IS2	27,34	5/61
EA1981	IS2	35,34	5/61
EA2000	IS2	7,97	5/57
EA2000	IS2	7,97	5/123
EA2000	IS2	7,97	5/124
EA2010	IS2	39,72	5/57
EA2010	IS2	39,72	5/129
EA2013	IS2	47,77	5/57
EA2013	IS2	47,77	5/124
EA2013	IS2	47,77	5/129
EA2016	IS2	63,69	5/57
EA2040	IS2	15,45	5/57
EA2060	IS2	22	5/57
EA2060	IS2	22	5/122
EA2060	IS2	22	5/123
EA2060	IS2	22	5/128
EA2062	IS2	2,91	5/62
EA2080	IS2	29,9	5/57
EA2080	IS2	29,9	5/123
EA2080	IS2	29,9	5/124
EA2080	IS2	29,9	5/128
EA2081	IS2	3,88	5/62
EA2100	IS2	1,04	5/57
EA2101	IS2	0,27	5/62
EA2102	IS2	0,08	5/57
EA2110	IS2	48,17	5/61
EA2110	IS2	48,17	5/128
EA2112	IS2	57,06	5/61
EA2113	IS2	0,14	5/61
EA2115	IS2	0,12	5/59
EA2116	IS2	86,38	5/61
EA2117	IS2	0,47	5/57
EA2117	IS2	0,47	5/59
EA2118	IS2	0,48	5/58
EA2140	IS2	21,46	5/61
EA2161	IS2	30,38	5/61
EA2180	IS2	39,26	5/61
EA2200	IS2	8,76	5/57
EA2210	IS2	43,69	5/57
EA2212	IS2	52,54	5/57
EA2216	IS2	70,06	5/57
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EA2310	IS2	52,99	5/61
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EA2316	IS2	95,02	5/61
EA2340	IS2	23,61	5/61
EA2360	IS2	33,41	5/61
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EA3061	IS2	4,37	5/62
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EA4061	IS2	5,82	5/62
EA4081	IS2	7,76	5/62
EA5011	IS2	31,11	5/60
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EA5322	IS2	38,48	5/60
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EA5822	IS2	34,28	5/60
EA5861	IS2	17,36	5/60
EA5883	IS2	23,19	5/60
EA6002	IS2	1,64	5/61
EA6003	IS2	1,36	5/59
EA6061	IS2	8,73	5/62
EA6081	IS2	11,64	5/62
EA8002	IS2	2,22	5/61
EA8003	IS2	1,92	5/59
EA8061	IS2	11,64	5/62
EA8081	IS2	15,52	5/62
EB0400	IS2	0,94	5/63
EB0440	IS2	1,57	5/63
EB0500	IS2	1,15	5/63
EB0550	IS2	2,03	5/63
EB0600	IS2	1,32	5/63
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EB1011	IS2	5,12	5/63
EB1020	IS2	2,58	5/63
EB1041	IS2	0,54	5/103

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EB1060	IS2	3,07	5/63
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EB1100	IS2	4,74	5/47
EB1100	IS2	4,74	5/64
EB1100	IS2	4,74	5/71
EB1101	IS2	6,32	5/62
EB1102	IS2	6,54	5/64
EB1200	IS2	3,76	5/63
EB4100	IS2	1,72	5/47
EB4100	IS2	1,72	5/64
EB4100	IS2	1,72	5/71
EB4101	IS2	1,9	5/62
EB4101	IS2	1,9	5/126
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EB4880	IS2	2,9	5/63
EB5100	IS2	2,16	5/47
EB5100	IS2	2,16	5/64
EB5100	IS2	2,16	5/71
EB5101	IS2	2,53	5/62
EB6000	IS2	0,83	5/80
EB6100	IS2	2,8	5/47
EB6100	IS2	2,8	5/64
EB6100	IS2	2,8	5/71
EB6100	IS2	2,8	5/129
EB6101	IS2	3,79	5/62
EB6102	IS2	3,82	5/64
EB6104	IS2	2,66	5/80
EB6106	IS2	2,02	5/80
EB8000	IS2	0,81	5/80
EB8001	IS2	1,2	5/80
EB8001	IS2	1,2	5/82
EB8100	IS2	3,67	5/47
EB8100	IS2	3,67	5/64
EB8100	IS2	3,67	5/71
EB8101	IS2	5,06	5/62
EB8102	IS2	5,18	5/64
EB8104	IS2	3,38	5/80
EB8106	IS2	2,56	5/80
EC1810K	IS2	31,16	5/44
EC1811K	IS2	22,52	5/50
EC1831K	IS2	9,5	5/44
EC1840K	IS2	12,67	5/44
EC1841K	IS2	9,01	5/50
EC1851K	IS2	11,26	5/50
EC1860K	IS2	18,83	5/44
EC1861K	IS2	13,52	5/50
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EC1880FC8K	IS2	24,99	5/46	EC2282	IS2	22,18	5/45	EE0850	IS2	6,54	5/66
EC1880K	IS2	24,99	5/44	EC2282	IS2	22,18	5/82	EE0860	IS2	7,6	5/66
EC1880VC2K	IS2	7,09	5/46	EC2284	IS2	22,18	5/45	EE0880	IS2	10,82	5/66
EC1880VC4K	IS2	12,67	5/46	EC2284	IS2	22,18	5/82	EE1001K	IS2	6,84	5/65
EC1881K	IS2	18,02	5/50	ED1802SK	IS2	7,11	5/47	EE1002K	IS2	9,12	5/65
EC1882	IS2	18,37	5/45	ED1804SK	IS2	12,55	5/47	EE1003K	IS2	5,22	5/65
EC1882	IS2	18,37	5/82	ED1808DPKM	IS2	25,51	5/47	EE1004K	IS2	6,39	5/65
EC1884	IS2	18,37	5/45	ED1810DPKM	IS2	31,79	5/47	EE1011	IS2	12,04	5/65
EC1884	IS2	18,37	5/82	ED1810SK	IS2	15,69	5/47	EE1040	IS2	7,37	5/66
EC2011K	IS2	25,03	5/50	ED1812DPKM	IS2	33,7	5/47	EE1041	IS2	5,02	5/65
EC2012K	IS2	34,58	5/44	ED1812SK	IS2	18,83	5/47	EE1050	IS2	9,29	5/66
EC2012K	IS2	34,58	5/128	ED1816DPKM	IS2	35,2	5/47	EE1051	IS2	6,19	5/65
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EC2040K	IS2	14,06	5/44	ED2002SK	IS2	7,87	5/47	EE1061	IS2	7,36	5/65
EC2041K	IS2	10,01	5/50	ED2004SK	IS2	13,95	5/47	EE1080	IS2	16,09	5/66
EC2051K	IS2	12,51	5/50	ED2008DPKM	IS2	26,4	5/47	EE1081	IS2	9,7	5/65
EC2060EMCKM	IS2	16,33	5/136	ED2010DPKM	IS2	32,8	5/47	EE1810K	IS2	26,02	5/67
EC2060K	IS2	23,94	5/44	ED2010SK	IS2	17,44	5/47	EE1811	IS2	16,95	5/64
EC2060K	IS2	23,94	5/128	ED2010SK	IS2	17,44	5/129	EE1841	IS2	6,19	5/64
EC2061K	IS2	15,02	5/50	ED2012DPKM	IS2	34,71	5/47	EE1851	IS2	7,98	5/64
EC2080EMCKM	IS2	21,31	5/136	ED2012SK	IS2	27	5/47	EE1852	IS2	12,94	5/106
EC2080FC5K	IS2	17,44	5/46	ED2016DPKM	IS2	36,3	5/47	EE1860K	IS2	17,26	5/67
EC2080FC5K	IS2	17,44	5/129	ED2016SK	IS2	27,9	5/47	EE1861	IS2	9,78	5/64
EC2080FC6K	IS2	20,9	5/46	ED2202SK	IS2	8,65	5/47	EE1862	IS2	15,52	5/106
EC2080FC8K	IS2	27,74	5/46	ED2204SK	IS2	15,34	5/47	EE1880K	IS2	21,64	5/67
EC2080FV6K	IS2	17,76	5/129	ED2208DPKM	IS2	27,6	5/47	EE1881	IS2	16,3	5/64
EC2080K	IS2	32,85	5/44	ED2210DPKM	IS2	33,7	5/47	EE1906K	IS2	17,26	5/67
EC2080K	IS2	32,85	5/128	ED2210SK	IS2	19,18	5/47	EE1908K	IS2	21,64	5/67
EC2080VC2K	IS2	7,88	5/46	ED2212DPKM	IS2	35,7	5/47	EE1910K	IS2	26,02	5/67
EC2080VC4K	IS2	14,06	5/46	ED2212SK	IS2	23,02	5/47	EE2010K	IS2	28,91	5/67
EC2081K	IS2	20,02	5/50	ED2216DPKM	IS2	36,3	5/47	EE2011	IS2	18,87	5/64
EC2082	IS2	20,28	5/45	ED2216SK	IS2	30,69	5/47	EE2020	IS2	0,86	5/66
EC2082	IS2	20,28	5/82	EE0024	IS2	1,29	5/106	EE2030	IS2	1,34	5/66
EC2084	IS2	20,28	5/45	EE0240	IS2	2,12	5/66	EE2040	IS2	2,01	5/66
EC2084	IS2	20,28	5/82	EE0250	IS2	2,27	5/66	EE2041	IS2	6,89	5/64
EC2210K	IS2	38	5/44	EE0260	IS2	2,52	5/66	EE2051	IS2	8,89	5/64
EC2211K	IS2	27,53	5/50	EE0280	IS2	3,51	5/66	EE2052	IS2	14,46	5/106
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EC2241K	IS2	11,01	5/50	EE0360	IS2	3,48	5/66	EE2062	IS2	17,35	5/106
EC2251K	IS2	13,77	5/50	EE0380	IS2	4,85	5/66	EE2080K	IS2	24,05	5/67
EC2260K	IS2	22,97	5/44	EE0440	IS2	3,18	5/66	EE2081	IS2	14,88	5/64
EC2261K	IS2	16,52	5/50	EE0450	IS2	3,73	5/66	EE2100	IS2	5,41	5/66
EC2280FC5K	IS2	19,18	5/46	EE0460	IS2	4,21	5/66	EE2106K	IS2	19,18	5/67
EC2280FC6K	IS2	22,97	5/46	EE0480	IS2	7,03	5/66	EE2108K	IS2	24,04	5/67
EC2280FC8K	IS2	30,48	5/46	EE0640	IS2	4,24	5/66	EE2110K	IS2	28,91	5/67
EC2280K	IS2	30,48	5/44	EE0650	IS2	5,12	5/66	EE2210K	IS2	31,8	5/67
EC2280VC2K	IS2	8,66	5/46	EE0660	IS2	5,91	5/66	EE2211	IS2	20,79	5/64
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EE2262	IS2	19,18	5/106
EE2280K	IS2	26,45	5/67
EE2280K	IS2	26,45	5/129
EE2281	IS2	16,39	5/64
EE2306K	IS2	21,1	5/67
EE2308K	IS2	26,45	5/67
EE2310K	IS2	31,8	5/67
EE2406	IS2	0,61	5/106
EE2410	IS2	0,61	5/106
EE2416	IS2	0,61	5/106
EE2600	IS2	3,13	5/66
EE2800	IS2	4,31	5/66
EE4041	IS2	2,16	5/65
EE4051	IS2	2,64	5/65
EE6041	IS2	3,12	5/65
EE6051	IS2	3,82	5/65
EE6061	IS2	4,53	5/65
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EE8051	IS2	5,01	5/65
EE8061	IS2	5,95	5/65
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EF1011	IS2	8,76	5/51
EF1012	IS2	11,28	5/52
EF1040	IS2	3,1	5/51
EF1041	IS2	2,42	5/51
EF1042	IS2	3,38	5/52
EF1051	IS2	3,51	5/51
EF1052	IS2	4,79	5/52
EF1053	IS2	4,51	5/51
EF1060	IS2	5,92	5/51
EF1060	IS2	5,92	5/123
EF1060	IS2	5,92	5/128
EF1061	IS2	4,71	5/51
EF1061	IS2	4,71	5/129
EF1062	IS2	6,2	5/52
EF1080	IS2	8,74	5/51
EF1081	IS2	7,01	5/51
EF1082	IS2	9,02	5/52
EF2610	IS2	0,85	5/53
EF2620	IS2	1,25	5/53
EF2810	IS2	1,1	5/53
EF2820	IS2	1,68	5/53
EF3610	IS2	0,75	5/53
EF3810	IS2	1	5/53
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EF4042	IS2	0,95	5/52
EF4050	IS2	1,26	5/51
EF4051	IS2	1,08	5/51
EF4052	IS2	1,34	5/52
EF4060	IS2	1,66	5/51
EF4061	IS2	1,3	5/51
EF4063	IS2	1,74	5/52
EF4080	IS2	2,45	5/51
EF4081	IS2	2,13	5/51
EF4082	IS2	2,52	5/52
EF4610	IS2	0,75	5/53
EF4810	IS2	0,9	5/53
EF6010	IS2	5,68	5/51
EF6011	IS2	4,69	5/51
EF6012	IS2	5,86	5/52
EF6040	IS2	1,61	5/51
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EF6043	IS2	1,76	5/52
EF6050	IS2	2,35	5/51
EF6050	IS2	2,35	5/122
EF6051	IS2	1,89	5/51
EF6052	IS2	2,49	5/52
EF6060	IS2	3,08	5/51
EF6060	IS2	3,08	5/123
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EF6061	IS2	2,52	5/51
EF6061	IS2	2,52	5/129
EF6062	IS2	3,22	5/52
EF6080	IS2	4,54	5/51
EF6081	IS2	3,75	5/51
EF6082	IS2	4,69	5/52
EF6610	IS2	0,55	5/53
EF6810	IS2	0,75	5/53
EF8010	IS2	8,3	5/51
EF8011	IS2	6,74	5/51
EF8012	IS2	8,57	5/52
EF8040	IS2	2,36	5/51
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EF8060	IS2	4,5	5/51
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EF9820	IS2	0,83	5/53
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EG0219	IS2	0,75	5/83
EG0319	IS2	0,98	5/83
EG0419	IS2	1,05	5/83
EG0500K	IS2	3,92	5/79
EG0519	IS2	1,55	5/83
EG0619	IS2	1,75	5/83
EG0719	IS2	1,84	5/83
EG0900K	IS2	4,7	5/79
EG0919	IS2	2,55	5/83
EG1019	IS2	2,97	5/83
EG1130K	IS2	2,8	5/82
EG1219	IS2	3,48	5/83
EG1300K	IS2	6,79	5/79
EG1419	IS2	4,15	5/83
EG1500K	IS2	1,32	5/82
EG1519	IS2	4,42	5/83
EG1619	IS2	4,8	5/83
EG1800	IS2	3,31	5/79
EG1801K	IS2	13,32	5/79
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EG1804K	IS2	18,65	5/81
EG1805	IS2	6,98	5/80
EG1819	IS2	5,2	5/83
EG1880	IS2	9,31	5/79
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EG1902	IS2	0,41	5/83
EG1903	IS2	0,61	5/83
EG1904	IS2	0,82	5/83
EG1905	IS2	1,02	5/83
EG1906	IS2	1,23	5/83
EG1907	IS2	1,43	5/83
EG1908	IS2	1,63	5/83
EG1909	IS2	1,84	5/83
EG1910	IS2	2,04	5/83
EG1911	IS2	2,24	5/83
EG1912	IS2	2,45	5/83
EG1913	IS2	2,65	5/83
EG1914	IS2	2,85	5/83
EG1915	IS2	3,06	5/83
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EG1999	IS2	3,88	5/83	EH2029K	IS2	1,59	5/76	EH3472K	IS2	1,59	5/77
EG2000	IS2	3,68	5/79	EH2036K	IS2	1,59	5/76	EH3496K	IS2	1,59	5/77
EG2000	IS2	3,68	5/127	EH2060	IS2	10,36	5/72	EH4061K	IS2	5,56	5/73
EG2001K	IS2	14,8	5/79	EH2060	IS2	10,36	5/125	EH4061K	IS2	5,56	5/125
EG2003K	IS2	18	5/79	EH2060	IS2	10,36	5/126	EH4061K	IS2	5,56	5/126
EG2003K	IS2	18	5/127	EH2061K	IS2	2,78	5/73	EH4062K	IS2	2,18	5/76
EG2004K	IS2	20,5	5/81	EH2061K	IS2	2,78	5/125	EH4063	IS2	19,26	5/72
EG2005	IS2	7,72	5/80	EH2061K	IS2	2,78	5/126	EH4063	IS2	19,26	5/125
EG2019	IS2	5,97	5/83	EH2062K	IS2	1,14	5/76	EH4063	IS2	19,26	5/126
EG2080	IS2	10,4	5/79	EH2063K	IS2	1,66	5/77	EH4064K	IS2	3,32	5/77
EG2200	IS2	4,05	5/79	EH2065	IS2	1,9	5/75	EH4065	IS2	6,61	5/75
EG2201K	IS2	16,28	5/79	EH2066	IS2	6,43	5/72	EH4080	IS2	25,68	5/72
EG2203K	IS2	20	5/79	EH2067K	IS2	2,78	5/73	EH4081K	IS2	7,42	5/73
EG2204K	IS2	22,3	5/81	EH2081K	IS2	3,71	5/73	EH4082K	IS2	3,04	5/76
EG2205	IS2	8,64	5/80	EH2082K	IS2	1,59	5/76	EH4083K	IS2	4,42	5/77
EG2280	IS2	11,5	5/79	EH2083K	IS2	2,21	5/77	EH4085	IS2	8,81	5/75
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EH0018	IS2	0,84	5/74	EH2087K	IS2	3,71	5/73	EH5062K	IS2	2,7	5/76
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EH0018	IS2	0,84	5/126	EH2129	IS2	0,08	5/78	EH5080	IS2	32,1	5/72
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EH0036	IS2	0,89	5/74	EH2272K	IS2	1,14	5/77	EH5084K	IS2	5,53	5/77
EH0562K	IS2	0,37	5/76	EH2272K	IS2	1,14	5/125	EH6010K	IS2	2,88	5/73
EH0582K	IS2	0,54	5/76	EH2272K	IS2	1,14	5/126	EH6018K	IS2	3,22	5/76
EH1060	IS2	20,3	5/72	EH2297K	IS2	1,14	5/77	EH6018K	IS2	3,22	5/125
EH1061K	IS2	13,91	5/73	EH2472K	IS2	1,14	5/77	EH6018K	IS2	3,22	5/126
EH1062K	IS2	0,63	5/76	EH3018K	IS2	1,66	5/76	EH6025K	IS2	3,22	5/76
EH1080	IS2	64,2	5/72	EH3029K	IS2	2,22	5/76	EH6029K	IS2	4,48	5/76
EH1081K	IS2	18,54	5/73	EH3060	IS2	8	5/72	EH6029K	IS2	4,48	5/126
EH1082K	IS2	0,87	5/76	EH3060	IS2	8	5/125	EH6036K	IS2	4,48	5/76
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EH1529K	IS2	1,23	5/76	EH3061K	IS2	4,17	5/125	EH6062K	IS2	3,22	5/76
EH1536K	IS2	1,23	5/76	EH3061K	IS2	4,17	5/126	EH6063K	IS2	4,97	5/77
EH1562K	IS2	0,89	5/76	EH3063K	IS2	1,66	5/76	EH6080	IS2	38,52	5/72
EH1582K	IS2	1,23	5/76	EH3063K	IS2	1,66	5/125	EH6082K	IS2	4,48	5/76
EH1800	IS2	3,5	5/74	EH3063K	IS2	1,66	5/126	EH6083K	IS2	11,12	5/73
EH1800	IS2	3,5	5/125	EH3064K	IS2	2,49	5/77	EH6084K	IS2	6,63	5/77
EH1800	IS2	3,5	5/126	EH3065	IS2	4,96	5/75	EH7262K	IS2	2,78	5/73
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EH1890	IS2	0,12	5/78	EH3081K	IS2	5,56	5/73	EH7262K	IS2	2,78	5/126
EH1925	IS2	0,78	5/85	EH3082K	IS2	2,31	5/76	EH7282K	IS2	3,71	5/73
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EH1992	IS2	0,78	5/83	EH3083K	IS2	3,32	5/77	EH8010K	IS2	3,84	5/73
EH1993	IS2	1,03	5/83	EH3085	IS2	6,61	5/75	EH8060	IS2	38,52	5/72
EH2000	IS2	4,26	5/74	EH3272K	IS2	1,59	5/77	EH8062K	IS2	11,12	5/73
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EK1050KN	IS2	34,38	5/42
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EK1080KN	IS2	45,2	5/42
EK1240KN	IS2	36,6	5/42
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EK1280KN	IS2	53	5/42
EK1280RK	IS2	11,83	5/109
EK3040KN	IS2	15	5/42
EK3050KN	IS2	16,6	5/42
EK3060KN	IS2	18,2	5/42
EK3080KN	IS2	21,37	5/42
EK4010KN	IS2	35,62	5/42
EK4010RK	IS2	5,08	5/109
EK4040KN	IS2	20	5/42
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EK4050KN	IS2	22,13	5/42
EK4050RK	IS2	2,59	5/109
EK4060KN	IS2	24,26	5/42
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EK6010KN	IS2	50,49	5/42
EK6010RK	IS2	7,49	5/109
EK6040KN	IS2	18,4	5/42
EK6050KN	IS2	26,22	5/42
EK6050KN	IS2	26,22	5/128
EK6050RK	IS2	3,62	5/109
EK6060KN	IS2	28,84	5/42
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EK8040KN	IS2	27,18	5/42
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EL1840K	IS2	18,24	5/49
EL1840K	IS2	18,24	5/126
EL1841K	IS2	9,12	5/49
EL1841K	IS2	9,12	5/110
EL1850K	IS2	22,91	5/49
EL1850K	IS2	22,91	5/122
EL1851K	IS2	11,46	5/49
EL1851K	IS2	11,46	5/110
EL1860K	IS2	27,58	5/49
EL1861K	IS2	13,79	5/49
EL1861K	IS2	13,79	5/110
EL1880K	IS2	36,91	5/49
EL1881K	IS2	18,45	5/49
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EL2050K	IS2	25,46	5/127
EL2050K	IS2	25,46	5/128
EL2051K	IS2	12,73	5/49
EL2051K	IS2	12,73	5/110
EL2060K	IS2	30,64	5/49
EL2060K	IS2	30,64	5/123
EL2060K	IS2	30,64	5/124
EL2060K	IS2	30,64	5/125
EL2060K	IS2	30,64	5/128
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EL2061K	IS2	15,32	5/49
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EM1804	IS2	5,86	5/79
EM1805	IS2	15,53	5/43
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EN0102K	IS2	0,07	5/97
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EN0150K	IS2	0,18	5/98
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EN0481K	IS2	3,57	5/98
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EN1105K	IS2	0,42	5/99	ER1000	IS2	0,31	5/68	ES1805FV4K	IS2	109,23	5/34
EN1150EMCK	IS2	0,88	5/137	ER1010K	IS2	52,09	5/68	ES1805K	IS2	100,27	5/28
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EN1250EMCK	IS2	1,65	5/137	ER1060K	IS2	33,22	5/68	ES1805VC2K	IS2	105,03	5/36
EN1250K	IS2	1,62	5/99	ER1080K	IS2	42,66	5/68	ES1805VC4K	IS2	105,36	5/36
EN2105K	IS2	0,42	5/99	ER3010K	IS2	39	5/69	ES1805VK	IS2	95,79	5/33
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EN2150K	IS2	0,86	5/99	ER3012K	IS2	41,85	5/69	ES1806FV4K	IS2	113,93	5/34
EN2204K	IS2	0,99	5/99	ER3040K	IS2	28,81	5/69	ES1806K	IS2	103,74	5/28
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EN2250K	IS2	1,62	5/99	ER3042K	IS2	31,66	5/69	ES1806MF4K	IS2	100,79	5/38
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EN3250	IS2	0,16	5/111	ER3061K	IS2	33,63	5/69	ES1808FV4K	IS2	120,7	5/34
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EP0800H	IS2	2,66	5/44	ER4011K	IS2	23,06	5/68	ES1808VC4K	IS2	115,73	5/36
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EP1880K	IS2	18,91	5/48	ER6060K	IS2	20,94	5/68	ES1816BK	IS2	108,29	5/30
EP2000V	IS2	6,38	5/44	ER6080K	IS2	26,84	5/68	ES1816K	IS2	108,29	5/31
EP2010K	IS2	26,2	5/48	ER8010K	IS2	42,41	5/68	ES1818BK	IS2	110,26	5/30
EP2010K	IS2	26,2	5/128	ER8040K	IS2	19,42	5/68	ES1818K	IS2	110,26	5/31
EP2010K	IS2	26,2	5/129	ER8050K	IS2	23,25	5/68	ES1824BK	IS2	122,82	5/30
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EP2060K	IS2	16,8	5/48	ES1800MF4K	IS2	115,2	5/38	ES1824VC4K	IS2	116,99	5/126
EP2060K	IS2	16,8	5/128	ES1800VK	IS2	117,9	5/33	ES1824VK	IS2	117,4	5/34
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EP2080K	IS2	21,84	5/128	ES1804FV4K	IS2	105,98	5/34	ES1825MF4K	IS2	107,87	5/38
EP2200V	IS2	7,02	5/44	ES1804K	IS2	96,8	5/28	ES1825VC4K	IS2	120,91	5/36
EP2210K	IS2	28,82	5/48	ES1804MF2K	IS2	88,53	5/38	ES1825VK	IS2	121,32	5/34
EP2212K	IS2	34,52	5/48	ES1804MF4K	IS2	93,88	5/38	ES1826BK	IS2	130,7	5/30
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ES1828FV4K	IS2	123,49	5/34
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ES1840K	IS2	65,63	5/28
ES1844K	IS2	55,31	5/28
ES1845K	IS2	57,35	5/28
ES1846K	IS2	59,39	5/28
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ES1864MFK	IS2	58,42	5/38
ES1864SPK	IS2	0	5/32
ES1864VK	IS2	66,43	5/33
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ES1864VK	IS2	66,43	5/126
ES1865CK	IS2	85	5/40
ES1865K	IS2	71,66	5/28
ES1865K	IS2	71,66	5/122
ES1865LK	IS2	83,88	5/40
ES1865MFK	IS2	60,94	5/38
ES1865SPK	IS2	0	5/32
ES1865VK	IS2	66,95	5/33
ES1866CK	IS2	87,52	5/40
ES1866K	IS2	71	5/28
ES1866LK	IS2	86,4	5/40
ES1866MFK	IS2	63,45	5/38
ES1866PCK	IS2	86,48	5/41
ES1866SPK	IS2	0	5/32
ES1866VK	IS2	68,47	5/33
ES1868CK	IS2	92,53	5/40
ES1868K	IS2	79,19	5/28
ES1868LK	IS2	91,41	5/40
ES1868MFK	IS2	68,46	5/38
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ES1868VK	IS2	76,48	5/33
ES1875BK	IS2	152,07	5/30
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ES1876BK	IS2	159,55	5/30

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ES1878K	IS2	165,11	5/31
ES1880K	IS2	100,26	5/28
ES1880MF2K	IS2	97,89	5/38
ES1880MFK	IS2	91,11	5/38
ES1880VK	IS2	96,66	5/33
ES1884CK	IS2	96,32	5/40
ES1884FV2K	IS2	91,33	5/34
ES1884K	IS2	82	5/28
ES1884LK	IS2	95,19	5/40
ES1884MF2K	IS2	80,61	5/38
ES1884MF2K	IS2	80,61	5/125
ES1884MFK	IS2	66,34	5/38
ES1884SPK	IS2	0	5/32
ES1884VC2K	IS2	88,61	5/36
ES1884VK	IS2	79,37	5/33
ES1885CK	IS2	99,31	5/40
ES1885FV2K	IS2	94,32	5/34
ES1885K	IS2	85,96	5/28
ES1885LK	IS2	98,18	5/40
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ES1885MFK	IS2	69,33	5/38
ES1885VC2K	IS2	91,61	5/36
ES1885VK	IS2	78,36	5/33
ES1886CK	IS2	102,3	5/40
ES1886FV2K	IS2	97,31	5/34
ES1886K	IS2	84	5/28
ES1886LK	IS2	101,17	5/40
ES1886MF2K	IS2	72,32	5/38
ES1886MFK	IS2	72,32	5/38
ES1886SPK	IS2	0	5/32
ES1886VC2K	IS2	94,6	5/36
ES1886VK	IS2	80,36	5/33
ES1888CK	IS2	108,27	5/40
ES1888FV2K	IS2	103,27	5/34
ES1888K	IS2	94,92	5/28
ES1888LK	IS2	107,14	5/40
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ES1888MFK	IS2	78,28	5/38
ES1888VC2K	IS2	100,56	5/36
ES1888VK	IS2	81,82	5/33
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ES2000MF2K	IS2	120,83	5/39
ES2000MF4K	IS2	126,72	5/39
ES2000VK	IS2	121,93	5/33
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ES2004FV4K	IS2	116,63	5/35
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ES2005VC2K	IS2	115,54	5/36
ES2005VC4K	IS2	115,89	5/36
ES2005VK	IS2	105,37	5/33
ES2006FV2K	IS2	123,3	5/35
ES2006FV4K	IS2	115,41	5/35
ES2006K	IS2	111,05	5/28
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ES2006MF2K	IS2	105,01	5/39
ES2006MF4K	IS2	110,89	5/39
ES2006VC2K	IS2	119,34	5/36
ES2006VC4K	IS2	119,7	5/36
ES2006VK	IS2	109,18	5/33
ES2007K	IS2	107,58	5/28
ES2008FV2K	IS2	116,39	5/35
ES2008FV4K	IS2	117,24	5/35
ES2008K	IS2	117,96	5/28
ES2008MF2K	IS2	112,61	5/39
ES2008MF4K	IS2	118,5	5/39
ES2008VC2K	IS2	126,95	5/36
ES2008VC4K	IS2	127,3	5/36
ES2008VK	IS2	106,32	5/33
ES2010BK	IS2	127,25	5/30
ES2010K	IS2	127,25	5/31
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ES2014K	IS2	106,1	5/31
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ES2015K	IS2	108,36	5/31
ES2016BK	IS2	112,86	5/30
ES2016K	IS2	112,86	5/31
ES2018BK	IS2	118,72	5/30
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ES2024FV4K	IS2	132,64	5/35
ES2024K	IS2	132,06	5/31
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ES2025BK	IS2	135,98	5/30
ES2025FV4K	IS2	136,96	5/35
ES2025K	IS2	135,98	5/31
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ES2026FV4K	IS2	141,31	5/35	ES2068PCK	IS2	101,33	5/41	ES2088VC2K	IS2	110,62	5/36
ES2026K	IS2	139,95	5/31	ES2068VEMCK	IS2	84,21	5/136	ES2088VK	IS2	90	5/33
ES2026K	IS2	139,95	5/124	ES2068VVK	IS2	84,12	5/33	ES2089EMCK	IS2	101,09	5/136
ES2026MF4K	IS2	123,02	5/39	ES2075BK	IS2	151,7	5/30	ES2089K	IS2	101,09	5/28
ES2026VC4K	IS2	137,35	5/36	ES2075K	IS2	151,7	5/31	ES2089SPK	IS2	0	5/32
ES2026VK	IS2	137,8	5/34	ES2076BK	IS2	159,17	5/30	ES2089VEMCK	IS2	101,09	5/136
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ES2028FV4K	IS2	135,84	5/35	ES2078BK	IS2	164,74	5/30	ES2200MF2K	IS2	132,92	5/39
ES2028K	IS2	147,79	5/31	ES2078K	IS2	164,74	5/31	ES2200MF4K	IS2	139,39	5/39
ES2028MF4K	IS2	131,65	5/39	ES2080K	IS2	106,43	5/28	ES2200VK	IS2	133,67	5/33
ES2028VC4K	IS2	145,98	5/36	ES2080MF2K	IS2	107,69	5/39	ES2204FV2K	IS2	127,24	5/35
ES2028VK	IS2	146,43	5/34	ES2080MFK	IS2	100,21	5/39	ES2204FV4K	IS2	126,99	5/35
ES2040K	IS2	69,5	5/28	ES2080VK	IS2	106,32	5/33	ES2204K	IS2	114,53	5/29
ES2044K	IS2	59,18	5/28	ES2084CK	IS2	105,95	5/41	ES2204MF2K	IS2	107,11	5/39
ES2045K	IS2	61,22	5/28	ES2084FV2K	IS2	100,46	5/35	ES2204MF4K	IS2	113,59	5/39
ES2046K	IS2	63,26	5/28	ES2084K	IS2	89,14	5/28	ES2204VC2K	IS2	122,89	5/37
ES2048K	IS2	67,32	5/28	ES2084LK	IS2	104,71	5/40	ES2204VC4K	IS2	123,28	5/37
ES2060K	IS2	87,98	5/28	ES2084MF2K	IS2	88,67	5/38	ES2204VK	IS2	111,71	5/33
ES2060MFK	IS2	85,73	5/39	ES2084MFK	IS2	72,97	5/38	ES2205FV2K	IS2	131,44	5/35
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ES2064CK	IS2	83,57	5/41	ES2084VC2K	IS2	97,48	5/36	ES2205K	IS2	118,35	5/29
ES2064K	IS2	74,16	5/28	ES2084VK	IS2	87,31	5/33	ES2205MF2K	IS2	111,31	5/39
ES2064LK	IS2	82,33	5/40	ES2085CK	IS2	109,25	5/41	ES2205MF4K	IS2	117,78	5/39
ES2064MFK	IS2	64,26	5/38	ES2085FV2K	IS2	103,75	5/35	ES2205VC2K	IS2	127,09	5/37
ES2064SPK	IS2	0	5/32	ES2085K	IS2	92,13	5/28	ES2205VC4K	IS2	127,47	5/37
ES2064VK	IS2	73,08	5/33	ES2085LK	IS2	108,01	5/40	ES2205VK	IS2	115,9	5/33
ES2065CK	IS2	93,5	5/41	ES2085MF2K	IS2	91,96	5/38	ES2206FV2K	IS2	135,63	5/35
ES2065K	IS2	76,68	5/28	ES2085MFK	IS2	76,26	5/38	ES2206FV4K	IS2	136,3	5/35
ES2065K	IS2	76,68	5/122	ES2085SPK	IS2	83,01	5/32	ES2206K	IS2	122,15	5/29
ES2065LK	IS2	92,26	5/40	ES2085VC2K	IS2	100,77	5/36	ES2206MF2K	IS2	115,51	5/39
ES2065MFK	IS2	67,03	5/38	ES2085VK	IS2	90,61	5/33	ES2206MF4K	IS2	121,98	5/39
ES2065SPK	IS2	0	5/32	ES2085VK	IS2	90,61	5/127	ES2206VC2K	IS2	131,28	5/37
ES2065VK	IS2	75,84	5/33	ES2086CK	IS2	112,54	5/41	ES2206VC4K	IS2	131,68	5/37
ES2065VK	IS2	75,84	5/127	ES2086EMCK	IS2	95,12	5/136	ES2206VK	IS2	120,09	5/33
ES2066CK	IS2	96,28	5/41	ES2086FV2K	IS2	107,04	5/35	ES2208FV2K	IS2	131,41	5/35
ES2066EMCK	IS2	79,99	5/136	ES2086K	IS2	97,5	5/28	ES2208FV4K	IS2	132,31	5/35
ES2066K	IS2	79	5/28	ES2086K	IS2	97,5	5/123	ES2208K	IS2	129,76	5/29
ES2066K	IS2	79	5/123	ES2086K	IS2	97,5	5/124	ES2208MF2K	IS2	123,87	5/39
ES2066LK	IS2	95,03	5/40	ES2086LK	IS2	111,3	5/40	ES2208MF4K	IS2	130,34	5/39
ES2066MFK	IS2	69,8	5/39	ES2086MF2K	IS2	95,25	5/39	ES2208VC2K	IS2	139,65	5/37
ES2066PCK	IS2	95,13	5/41	ES2086MFK	IS2	79,55	5/39	ES2208VC4K	IS2	140,04	5/37
ES2066PCK	IS2	95,13	5/125	ES2086SPK	IS2	0	5/32	ES2208VK	IS2	116,96	5/33
ES2066SPK	IS2	0	5/32	ES2086VC2K	IS2	104,06	5/36	ES2210BK	IS2	139,97	5/30
ES2066VEMCK	IS2	79,99	5/136	ES2086VEMCK	IS2	95,12	5/136	ES2210K	IS2	139,97	5/31
ES2066VK	IS2	78,61	5/33	ES2086VK	IS2	93,9	5/33	ES2214BK	IS2	115,06	5/30
ES2068CK	IS2	101,78	5/41	ES2088CK	IS2	119,09	5/41	ES2214K	IS2	115,06	5/31
ES2068EMCK	IS2	84,21	5/136	ES2088FV2K	IS2	113,6	5/35	ES2215BK	IS2	119,1	5/30
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ES2224BK	IS2	145,27	5/30
ES2224FV4K	IS2	145,91	5/35
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ES2224MF4K	IS2	125,78	5/39
ES2224VC4K	IS2	141,56	5/37
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ES2225BK	IS2	149,58	5/30
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ES2228BK	IS2	162,56	5/30
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ES2228MF4K	IS2	144,81	5/39
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ES2260K	IS2	96,77	5/29
ES2260MFK	IS2	82,86	5/39
ES2260VK	IS2	97,1	5/33
ES2264CK	IS2	91,92	5/41
ES2264K	IS2	81,57	5/29
ES2264LK	IS2	90,56	5/40
ES2264MFK	IS2	70,69	5/39
ES2264VK	IS2	80,38	5/33
ES2265CK	IS2	102,86	5/41
ES2265K	IS2	84,35	5/29
ES2265LK	IS2	101,49	5/40
ES2265MFK	IS2	73,73	5/39
ES2265VK	IS2	83,43	5/33
ES2266CK	IS2	105,9	5/41
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ES2268CK	IS2	111,96	5/41
ES2268K	IS2	92,63	5/29
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ES2284CK	IS2	116,54	5/41
ES2284FV2K	IS2	110,51	5/35
ES2284K	IS2	98,05	5/29
ES2284LK	IS2	115,18	5/40
ES2284MF2K	IS2	97,53	5/39
ES2284MFK	IS2	80,27	5/39
ES2284VC2K	IS2	107,23	5/37
ES2284VK	IS2	96,04	5/33
ES2285CK	IS2	120,17	5/41
ES2285FV2K	IS2	114,13	5/35
ES2285K	IS2	101,34	5/29
ES2285LK	IS2	118,8	5/40
ES2285MF2K	IS2	101,15	5/39
ES2285MFK	IS2	83,89	5/39
ES2285VC2K	IS2	110,85	5/37
ES2285VK	IS2	99,67	5/33
ES2286CK	IS2	123,79	5/41
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ES2286VC2K	IS2	114,46	5/37
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ES2288CK	IS2	131	5/41
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ES2288K	IS2	111,19	5/29
ES2288LK	IS2	129,64	5/40
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ET2211K	IS2	32,3	5/45
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EV0123	IS2	0,2	5/54	EV1081	IS2	2,3	5/103	EV1160	IS2	0,84	5/104
EV0124	IS2	0,2	5/54	EV1082	IS2	1,92	5/103	EV1385	IS2	2,65	5/85
EV0125	IS2	0,13	5/54	EV1083	IS2	2,21	5/103	EV1802	IS2	1,7	5/109
EV0126	IS2	0,13	5/54	EV1085	IS2	4,42	5/103	EV2002	IS2	1,89	5/109
EV0127	IS2	0,13	5/54	EV1087	IS2	8,51	5/103	EV2110	IS2	0,55	5/92
EV0128	IS2	0,25	5/85	EV1090	IS2	0,46	5/92	EV2112	IS2	0,55	5/92
EV0132	IS2	1,33	5/53	EV1091	IS2	0,86	5/92	EV2202	IS2	2,08	5/109
EV0133	IS2	1,5	5/53	EV1092	IS2	0,54	5/92	EV2385	IS2	4,2	5/85
EV0134	IS2	1,66	5/53	EV1093	IS2	0,54	5/92	EV3500	IS2	3,33	5/84
EV0135	IS2	1,58	5/53	EV1100	IS2	1,13	5/88	EV5000	IS2	4,52	5/84
EV0136	IS2	1,75	5/53	EV1100	IS2	1,13	5/111	EV6130	IS2	0,22	5/81
EV0137	IS2	1,91	5/53	EV1101	IS2	1,25	5/88	EV6130	IS2	0,22	5/111
EV0400	IS2	2,75	5/84	EV1101	IS2	1,25	5/111	EV6131	IS2	0,22	5/81
EV0600	IS2	3,9	5/84	EV1102	IS2	3,1	5/111	EV6131	IS2	0,22	5/111
EV0800	IS2	5,1	5/84	EV1103	IS2	1,2	5/111	EV8880	IS2	2	5/103
EV1000	IS2	0,47	5/103	EV1110	IS2	2,69	5/92	EV8881	IS2	5,21	5/103
EV1001	IS2	0,7	5/94	EV1111	IS2	0,67	5/92	EV8882	IS2	6,52	5/103
EV1002	IS2	1,08	5/94	EV1112	IS2	2,69	5/92	EX1860	IS2	21,13	5/75
EV1004	IS2	0,28	5/107	EV1113	IS2	0,12	5/92	EX1880	IS2	29,58	5/75
EV1005	IS2	0,52	5/107	EV1115	IS2	0,64	5/88	EX1880	IS2	29,58	5/126
EV1006	IS2	0,62	5/107	EV1116	IS2	0,74	5/88	EX2060	IS2	23,48	5/75
EV1007	IS2	2,7	5/107	EV1117	IS2	0,65	5/88	EX2080	IS2	32,87	5/75
EV1008	IS2	0,04	5/102	EV1118	IS2	0,94	5/88	EX2260	IS2	25,82	5/75
EV1008	IS2	0,04	5/109	EV1119	IS2	3,53	5/88	EX2280	IS2	36,16	5/75
EV1030	IS2	0,29	5/102	EV1120	IS2	4,41	5/88	EZ1001	IS2	21,3	5/56
EV1030	IS2	0,29	5/109	EV1121	IS2	8,67	5/88	EZ1201	IS2	25,74	5/56
EV1036	IS2	0,03	5/102	EV1122	IS2	2,4	5/88	EZ1601	IS2	34,1	5/56
EV1037	IS2	0,03	5/102	EV1123	IS2	2,44	5/88	EZ4001	IS2	8,46	5/56
EV1039	IS2	0,03	5/102	EV1124	IS2	2,71	5/88	EZ6001	IS2	12,8	5/56
EV1039	IS2	0,03	5/109	EV1125	IS2	2,71	5/88	EZ8001	IS2	17,1	5/56
EV1040	IS2	0,37	5/94	EV1130	IS2	1,04	5/88	GD1520	IS2	0,78	5/75
EV1041	IS2	1,08	5/94	EV1131	IS2	5,77	5/88	GD1530	IS2	1,75	5/75
EV1042	IS2	0,24	5/94	EV1135	IS2	0,23	5/78	GD1530	IS2	1,75	5/126
EV1043	IS2	0,73	5/94	EV1136	IS2	0,16	5/78	PB0803	IS2	0,39	5/86
EV1044	IS2	0,11	5/94	EV1137	IS2	0,23	5/78	PB1603	IS2	1,09	5/86
EV1045	IS2	0,24	5/94	EV1140	IS2	0,18	5/95	PIRH0405	IS2	0,2	5/102

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C2 Console

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AD1033	C2	0,22	6/14	CN0012	C2	27,15	6/10	EN3325K	C2	3,63	6/15
CA4006K	C2	3,25	6/17	CN0016	C2	34,67	6/10	EN3326	C2	0,43	6/17
CA4008K	C2	4,35	6/17	CN0060	C2	15,87	6/10	EV1004	C2	0,28	6/14
CA4010K	C2	5,43	6/17	CN0080	C2	19,52	6/10	EV1005	C2	0,52	6/14
CA4012K	C2	6,52	6/17	CP0010	C2	5,01	6/10	EV1006	C2	0,62	6/14
CA4016K	C2	8,71	6/17	CP0012	C2	5,91	6/10	EV1008	C2	0,04	6/16
CB7006K	C2	5,62	6/17	CP0016	C2	7,73	6/10	EV1036	C2	0,03	6/16
CB7008K	C2	7,38	6/17	CP0060	C2	3,19	6/10	EV1037	C2	0,03	6/16
CB7010K	C2	9,13	6/17	CP0080	C2	4,09	6/10	EV1039	C2	0,03	6/16
CB7012DK	C2	5,62	6/17	EA1061	C2	11,6	6/12	EV1075K	C2	0,2	6/13
CB7012SK	C2	6,23	6/17	EA1081	C2	20,79	6/12	EV1100	C2	1,13	6/14
CB7016DK	C2	7,38	6/17	EA1411	C2	26,66	6/12	EV1101	C2	1,25	6/14
CB7016SK	C2	8,32	6/17	EA1412	C2	31,81	6/12	EV1130	C2	1,04	6/14
CC5006K	C2	4,12	6/17	EA1416	C2	55,15	6/12	EV1131	C2	5,77	6/14
CC5008K	C2	5,39	6/17	EA1460	C2	16,36	6/12	FOR01	C2	0	6/15
CC5010K	C2	6,68	6/17	EA1480	C2	21,51	6/12	FOR02	C2	0	6/15
CC5012K	C2	7,96	6/17	EA2062	C2	2,91	6/12	TA9601	C2	0,97	6/13
CC5016K	C2	10,52	6/17	EA2081	C2	3,88	6/12	TE1410K	C2	19,28	6/17
CF1040	C2	2,78	6/11	EA3061	C2	4,37	6/12	TE1412K	C2	22,99	6/17
CF1050	C2	3,62	6/11	EA3081	C2	5,82	6/12	TE1416K	C2	27,75	6/17
CF1240	C2	3,4	6/11	EA4061	C2	5,82	6/12	TE1460K	C2	11,85	6/17
CF1250	C2	4,42	6/11	EA4081	C2	7,76	6/12	TE1480K	C2	15,57	6/17
CF1640	C2	4,62	6/11	EA5061	C2	7,28	6/12	VA7910	C2	0,4	6/13
CF1650	C2	6,05	6/11	EA5081	C2	9,72	6/12	VA7915	C2	0,55	6/13
CF6040	C2	1,56	6/11	EA6061	C2	8,73	6/12	VA7930	C2	0,3	6/13
CF6050	C2	2,04	6/11	EA6081	C2	11,64	6/12	VA7950	C2	0,35	6/13
CF8040	C2	2,18	6/11	EA8061	C2	11,64	6/12	VA7975	C2	0,45	6/13
CF8050	C2	2,84	6/11	EA8061	C2	11,64	6/12	VA8300	C2	0,8	6/13
CM1064K	C2	31,55	6/8	EA8081	C2	15,52	6/12	VB7012	C2	0,51	6/17
CM1084K	C2	39,97	6/8	EA8081	C2	15,52	6/12	VB7035	C2	0	6/17
CM1104K	C2	46,43	6/8	EA8101	C2	19,27	6/12	VERN01	C2	0	6/15
CM1124K	C2	53,94	6/8	EA8101	C2	19,27	6/12	VERN02	C2	0	6/15
CM1164K	C2	65,91	6/8	EA8121	C2	23,14	6/12	ZN0006	C2	1,89	6/10
CM4064K	C2	45,06	6/8	EA8121	C2	23,14	6/12	ZN0008	C2	2,53	6/10
CM4064PK	C2	47,31	6/9	EA8161	C2	31,45	6/12	ZN0010	C2	3,17	6/10
CM4065K	C2	49,06	6/8	EA8161	C2	31,45	6/12	ZN1000	C2	3,17	6/10
CM4065PK	C2	51,51	6/9	EM1404	C2	7,91	6/12	ZN1002	C2	5,51	6/11
CM4084K	C2	52,26	6/8	EN0105K	C2	0,09	6/14	ZN1010	C2	3,54	6/11
CM4084PK	C2	54,85	6/9	EN0150K	C2	0,18	6/14	ZN1040	C2	1,04	6/11
CM4085K	C2	56,26	6/8	EN0204K	C2	0,3	6/14	ZN1041	C2	1,37	6/11
CM4085PK	C2	59,07	6/9	EN0250K	C2	0,51	6/14	ZN1200	C2	3,8	6/10
CM4104K	C2	59,41	6/8	EN0325K	C2	0,98	6/14	ZN1600	C2	5,07	6/10
CM4104PK	C2	62,38	6/9	EN1105K	C2	0,42	6/15	ZN4000	C2	1,26	6/10
CM4105K	C2	78	6/8	EN1150K	C2	0,86	6/15	ZN4002	C2	2,19	6/11
CM4105PK	C2	66,58	6/9	EN1204K	C2	0,99	6/15	ZN4011	C2	1,18	6/10
CM4124K	C2	67,67	6/8	EN1250K	C2	1,62	6/15	ZN5011	C2	1,5	6/10
CM4124PK	C2	71,05	6/9	EN2105K	C2	0,42	6/15	ZN6000	C2	1,89	6/10
CM4125K	C2	71,74	6/8	EN2150K	C2	0,86	6/15	ZN6002	C2	3,3	6/11
CM4125PK	C2	75,33	6/9	EN2204K	C2	0,99	6/15	ZN8000	C2	2,53	6/10
CM4164K	C2	80,93	6/8	EN2250K	C2	1,62	6/15	ZN8002	C2	4,41	6/11
CM4164PK	C2	84,98	6/9	EN2325K	C2	3,63	6/15	ZN8002	C2	4,85	6/11
CM4165K	C2	84,93	6/8	EN3105	C2	0,04	6/17				
CM4165PK	C2	89,18	6/9	EN3150	C2	0,07	6/17				
CN0010	C2	23,38	6/10	EN3204	C2	0,12	6/17				
				EN3250	C2	0,16	6/17				

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Wiring ducts

Code	Structure	Weight Kg	Page	Code	Structure	Weight Kg	Page	Code	Structure	Weight Kg	Page
05 019	Wiring ducts	0,11	7/6	05 199	Wiring ducts	1,81	7/6	1SL9051A00	Wiring ducts	0,63	7/5
05 033	Wiring ducts	0,29	7/6	05 214	Wiring ducts	0,01	7/9	1SL9053A00	Wiring ducts	0,74	7/5
05 035	Wiring ducts	0,33	7/6	05 216	Wiring ducts	0,01	7/9	1SL9063A00	Wiring ducts	0,33	7/5
05 037	Wiring ducts	0,45	7/6	05 224	Wiring ducts	0,01	7/9	1SL9065A00	Wiring ducts	0,39	7/5
05 043	Wiring ducts	0,33	7/6	05 226	Wiring ducts	0,01	7/9	1SL9067A00	Wiring ducts	0,54	7/5
05 045	Wiring ducts	0,4	7/6	05 228	Wiring ducts	0,01	7/9	1SL9069A00	Wiring ducts	0,68	7/5
05 047	Wiring ducts	0,47	7/6	05 230	Wiring ducts	0,01	7/9	1SL9071A00	Wiring ducts	0,75	7/5
05 049	Wiring ducts	0,64	7/6	05 240	Wiring ducts	0	7/9	1SL9073A00	Wiring ducts	0,94	7/5
05 051	Wiring ducts	0,88	7/6	05 250	Wiring ducts	0,02	7/8	1SL9083A00	Wiring ducts	0,41	7/5
05 053	Wiring ducts	0,97	7/6	05 252	Wiring ducts	0,01	7/8	1SL9085A00	Wiring ducts	0,44	7/5
05 063	Wiring ducts	0,42	7/6	05 254	Wiring ducts	0,01	7/8	1SL9087A00	Wiring ducts	0,58	7/5
05 065	Wiring ducts	0,49	7/6	05 256	Wiring ducts	0,02	7/8	1SL9089A00	Wiring ducts	0,71	7/5
05 067	Wiring ducts	0,63	7/6	05 258	Wiring ducts	0,02	7/8	1SL9091A00	Wiring ducts	0,83	7/5
05 069	Wiring ducts	0,83	7/6	05 260	Wiring ducts	0,02	7/8	1SL9093A00	Wiring ducts	1,08	7/5
05 071	Wiring ducts	0,94	7/6	05 262	Wiring ducts	0,02	7/8	1SL9119A00	Wiring ducts	0,08	7/5
05 073	Wiring ducts	1,21	7/6	05 265	Wiring ducts	0,45	7/9	1SL9133A00	Wiring ducts	0,24	7/5
05 083	Wiring ducts	0,51	7/6	05 266	Wiring ducts	0,45	7/9	1SL9135A00	Wiring ducts	0,27	7/5
05 085	Wiring ducts	0,57	7/6	05 268	Wiring ducts	0,45	7/9	1SL9137A00	Wiring ducts	0,36	7/5
05 087	Wiring ducts	0,69	7/6	05 270	Wiring ducts	0,3	7/8	1SL9143A00	Wiring ducts	0,27	7/5
05 089	Wiring ducts	0,84	7/6	05 272	Wiring ducts	0,2	7/8	1SL9145A00	Wiring ducts	0,3	7/5
05 091	Wiring ducts	1,04	7/6	05 274	Wiring ducts	0,2	7/8	1SL9147A00	Wiring ducts	0,39	7/5
05 093	Wiring ducts	1,25	7/6	05 276	Wiring ducts	0,36	7/8	1SL9149A00	Wiring ducts	0,51	7/5
05 094	Wiring ducts	0,61	7/6	05 278	Wiring ducts	0,36	7/8	1SL9151A00	Wiring ducts	0,65	7/5
05 095	Wiring ducts	0,66	7/6	05 280	Wiring ducts	0,42	7/8	1SL9153A00	Wiring ducts	0,75	7/5
05 096	Wiring ducts	0,9	7/6	05 282	Wiring ducts	0,4	7/8	1SL9163A00	Wiring ducts	0,34	7/5
05 097	Wiring ducts	1,04	7/6	05 300	Wiring ducts	0,03	7/6	1SL9165A00	Wiring ducts	0,41	7/5
05 098	Wiring ducts	1,1	7/6	05 302	Wiring ducts	0,11	7/6	1SL9167A00	Wiring ducts	0,53	7/5
05 099	Wiring ducts	1,81	7/6	05 304	Wiring ducts	0,13	7/6	1SL9169A00	Wiring ducts	0,61	7/5
05 119	Wiring ducts	0,11	7/6	05 306	Wiring ducts	0,24	7/6	1SL9171A00	Wiring ducts	0,76	7/5
05 133	Wiring ducts	0,29	7/6	05 308	Wiring ducts	0,33	7/6	1SL9173A00	Wiring ducts	0,96	7/5
05 135	Wiring ducts	0,33	7/6	05 310	Wiring ducts	0,35	7/6	1SL9183A00	Wiring ducts	0,4	7/5
05 137	Wiring ducts	0,45	7/6	05 312	Wiring ducts	0,42	7/6	1SL9185A00	Wiring ducts	0,47	7/5
05 143	Wiring ducts	0,33	7/6	05 314	Wiring ducts	0,58	7/6	1SL9187A00	Wiring ducts	0,62	7/5
05 145	Wiring ducts	0,4	7/6	05 400	Wiring ducts	0,01	7/7	1SL9189A00	Wiring ducts	0,71	7/5
05 147	Wiring ducts	0,47	7/6	05 402	Wiring ducts	0,01	7/7	1SL9191A00	Wiring ducts	0,83	7/5
05 149	Wiring ducts	0,64	7/6	05 405	Wiring ducts	0,02	7/7	1SL9193A00	Wiring ducts	1,1	7/5
05 151	Wiring ducts	0,88	7/6	05 410	Wiring ducts	0,03	7/7	AD1009	Wiring ducts	0,08	7/9
05 153	Wiring ducts	0,97	7/6	05 415	Wiring ducts	0,04	7/7	AD1098	Wiring ducts	0,94	7/9
05 163	Wiring ducts	0,42	7/6	05 420	Wiring ducts	0,07	7/7	EV1130	Wiring ducts	1,04	7/9
05 165	Wiring ducts	0,49	7/6	05 425	Wiring ducts	0,1	7/7	EV1131	Wiring ducts	5,77	7/9
05 167	Wiring ducts	0,63	7/6	1SL5316A00	Wiring ducts	0,03	7/5				
05 169	Wiring ducts	0,83	7/6	1SL5317A00	Wiring ducts	0,09	7/5				
05 171	Wiring ducts	0,94	7/6	1SL5318A00	Wiring ducts	0,13	7/5				
05 173	Wiring ducts	1,21	7/6	1SL5319A00	Wiring ducts	0,24	7/5				
05 183	Wiring ducts	0,51	7/6	1SL5320A00	Wiring ducts	0,33	7/5				
05 185	Wiring ducts	0,57	7/6	1SL5321A00	Wiring ducts	0,28	7/5				
05 187	Wiring ducts	0,69	7/6	1SL5322A00	Wiring ducts	0,42	7/5				
05 189	Wiring ducts	0,84	7/6	1SL9019A00	Wiring ducts	0,08	7/5				
05 191	Wiring ducts	1,04	7/6	1SL9033A00	Wiring ducts	0,24	7/5				
05 193	Wiring ducts	1,25	7/6	1SL9035A00	Wiring ducts	0,29	7/5				
05 194	Wiring ducts	0,61	7/6	1SL9037A00	Wiring ducts	0,37	7/5				
05 195	Wiring ducts	0,66	7/6	1SL9043A00	Wiring ducts	0,25	7/5				
05 196	Wiring ducts	0,9	7/6	1SL9045A00	Wiring ducts	0,33	7/5				
05 197	Wiring ducts	1,04	7/6	1SL9047A00	Wiring ducts	0,43	7/5				
05 198	Wiring ducts	1,1	7/6	1SL9049A00	Wiring ducts	0,49	7/5				

Note

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