

Industrial Enclosures Ed. 6

General Purpose Enclosures and LV Distribution Boards up to 4000A



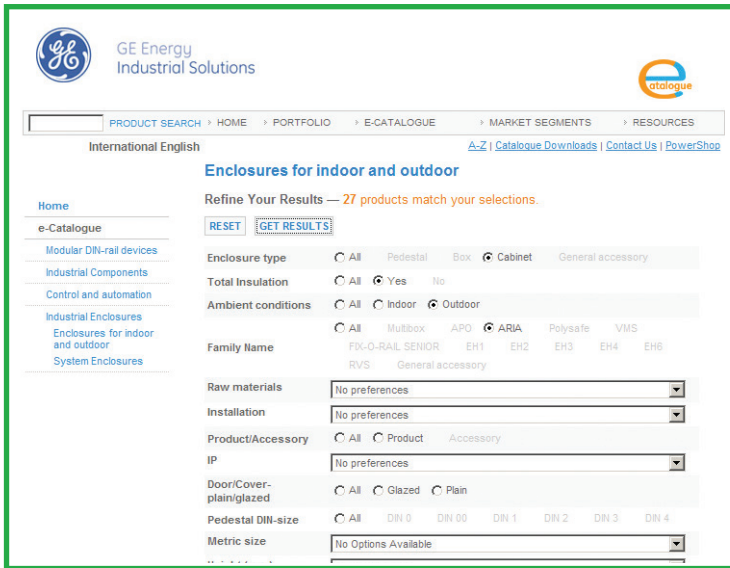
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General Purpose Enclosures

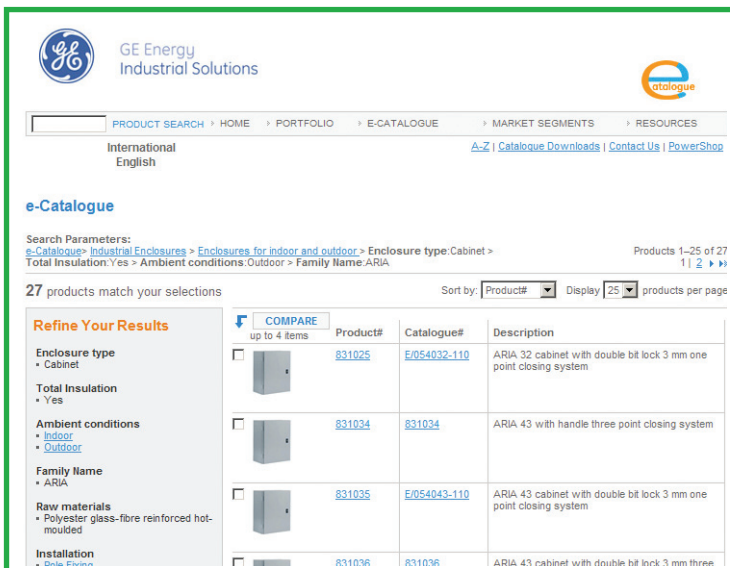
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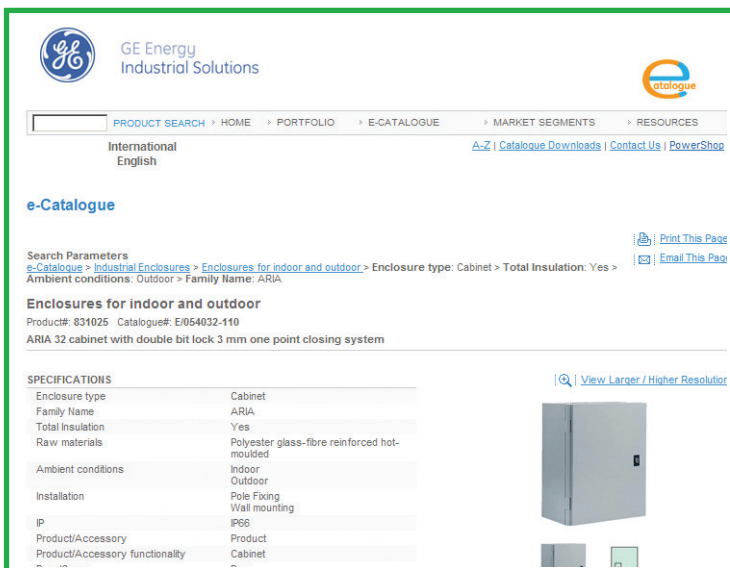


- All product info available in **one central place**
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- The data also displays the **available functions and accessories** for each product



High resolution images available



Housings for all kind of *applications*



Industry

Shipyards, mining, automotive, paper & pulp, food and beverage, petro-chemicals, heavy industry, transformers, system monitoring, ...



Commercial

Leisure (market places, camping sites, harbours for pleasure craft, amusement parks,...), fuel stations, car washes, laundrettes and laundries, service enclosures for construction yards, ...



Utilities

Energy distribution (electricity, gas, water), cable TV, telecommunication, photovoltaic cells, solar energy, ...



Public services

Public transport, public lighting, railways, water treatment plants, waste management, ...

MultiBox



Small multipurpose boxes

Wide range of small to medium size multipurpose boxes for indoor and protected outdoor applications.

- Automation and control applications in industry, machinery, toolshop and OEM.
- Electronic applications in data and telecom industry.
- As commercial and industrial power distribution boxes.

All boxes are made from polystyrene or glass-fibre reinforced polycarbonate, offering a high protection degree of IP66 with mechanical impact strength of IK07 for polystyrene and IK08 for polycarbonate.

MultiBox enclosures can be easily modified and/or customized (coloured, printed, with cut-outs...).

- Overview of the range ● Page A.3
- Product information ● Page A.10
- Dimensional drawings ● Page I.12
- Specifications for tender documents ● Page I.49
- Power dissipation values ● Page I.67

MultiBox Xtra



Medium sized multipurpose boxes

Range of medium to large size multipurpose boxes for indoor and protected outdoor installation.

- Automation and control application in machine and plant construction, general industry and OEM.
- Electronic applications in data and telecom industry.
- Commercial and industrial power distribution boxes.

Enclosures are made out of Polycarbonate and achieve high ingress protection rating of IP66/67 and a mechanical impact strength of IK08.

Enclosures are equipped with a cover to be opened by means of a quick-lock (180 degree opening). Large, smooth and robust sidewalls allow direct cable entry for individual configurations.

MultiBox Xtra enclosures can be easily modified and/or customized.

- Overview of the range ● Page A.3
- Product information ● Page A.14
- Dimensional drawings ● Page I.14
- Specifications for tender documents ● Page I.50

APO



Modular polyester boxes

Range of nine medium sized, modular, multipurpose boxes for in- and outdoor applications.

- Automation and control applications in oil and steel industry, petrochemical plants, breweries.
- Applications in utilities such as public lighting, traffic control, signalisation.
- For installation in aggressive environments such as ship-yards, offshore oil production platforms, mining sites.

All boxes are made of hot moulded, glass-fibre reinforced polyester, offering a high protection degree of IP67 with a mechanical impact strength of IK10.

APO-boxes can be readily worked with conventional tools such as drills, cutting mills, saws, punches, etc.

Overview of the range ● Page A.3

Product information ● Page A.16

Dimensional drawings ● Page I.16

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Power dissipation values ● Page I.68

MultiCab



Medium sized multipurpose cabinets

Range of medium to large size multipurpose cabinets for indoor and protected outdoor applications.

- Automation and control application in machine and plant construction, general industry and OEM.
- Electronic applications in data and telecom industry.
- Commercial and industrial power distribution cabinets.

Enclosures are made out of Polycarbonate and achieve high ingress protection rating of IP65 and a mechanical impact strength of IK08.

Enclosures are equipped with a cover to be opened by means of a quick-lock (latch or double-bit) mounted at the side. This allows a large cover surface for printings, display, switches without disturbing locking elements. Large, smooth and robust sidewalls allow direct cable entry for individual configurations.

MultiCab enclosures can be easily modified and/or customized.

Overview of the range ● blz. B.3

Product information ● blz. B.4

Dimensional drawings ● blz. I.15

Specifications for tender documents ● blz. I.52

ARIA



Universal polyester cabinets

Range of seven universal multipurpose cabinets for in- and outdoor applications. Ideal for high performance applications in

- Heavy industry (pulp & paper mills, mining sites, wood & lumber production, steel mills,...).
- Petroleum refineries, chemical and petrochemical plants.
- Temporary connection (for construction yards, camping sites, harbours for pleasure crafts, market places, fairs, ...).
- Alimentation industry and breweries.
- Waste water treatment, public lighting, traffic control, signalisation.
- For installation in aggressive environments such as shipyards, offshore oil production platforms, mining sites.

All cabinets are made of hot moulded, glass-fibre reinforced polyester, offering a high protection degree of IP66 with a mechanical impact strength of IK10 (IK07 for cabinets with glazed door).

Overview of the range ● Page B.3

Product information ● Page B.6

Dimensional drawings ● Page I.20

Specifications for tender documents ● Page I.53

Power dissipation values ● Page I.70

PolySafe



Multipurpose polyester cabinets

Range of fourteen multipurpose, factory assembled cabinets in one depth 320 mm, for in- and outdoor stationary use. Applications in

- Commercial: leisure (market places, camping sites, harbours for pleasure crafts, amusement parks), fuel stations, car washes, laundrettes and laundries, service enclosures for construction yards, ...
- Industrial: shipyards, mining, automotive, paper & pulp, food and beverage, petrochemicals, transformers, system monitoring, ...
- Utilities: waste water treatment, waste management, telecommunications, traffic signalisation, traffic control, public transport, energy distribution (electricity, gas, water), cable television (CATV), public lighting, railways, ...

All cabinets are made of self-extinguishing, hot moulded, glass-fibre reinforced polyester, offering a high protection degree of IP65 or IP54 with a mechanical impact strength of IK10 (IP54-IK07 for cabinets with glazed door).

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Product information ● Page B.16

Dimensional drawings ● Page I.22

Specifications for tender documents ● Page I.54

Power dissipation values ● Page I.72

VMS



Modular enclosures system

Range of five modular boxes based on a 100mm module. Rapid assembly of any configuration of units without the need for tools. For indoor application. Design verification according EN 61439-2.

- Industry
- Public utilities
- Motor control centers
- Electronic instrumentation
- Low voltage distribution boards

The boxes are made of glass-fibre reinforced polycarbonate. Covers are made of either transparent or opaque polycarbonate. VMS boxes provide a high protection degree of IP65 and a mechanical impact strength of IK08 for the bases and end-plates and IK10 for the covers.

Overview of the range ● Page C.2

Product information ● Page C.3

Dimensional drawings ● Page I.24

Specifications for tender documents ● Page I.55

Power dissipation values ● Page I.74

Fix-o-Rail Senior



Design verified distribution enclosure according to EN 60439-1

Design verified energy distribution enclosure conforms to EN 61439-2. The enclosures are manufactured out of sheet metal and achieve insulation class II by means of plastic insulation shields.

KEMA and CEBEC approved.

The application of the range is ideal for the installation of electrical energy distribution in domestic and commercial markets.

A range of 5 standard enclosures equipped with a removable DIN rail frame and polyester cover plates offers maximum protection thanks to the total insulation.

Easy wiring, due to the flexible, two-component cable entry plates on top and bottom.

Cabinets are available as standard with protection degree IP43 and have high mechanical impact of IK09.

Overview of the range ● Page C.2

Product information ● Page C.28

Dimensional drawings ● Page I.28

Specifications for tender documents ● Page I.56

Power dissipation values ● Page I.75

QuiXtra™ 630



Design verified distribution boards up to 630A according to EN 61439-2

Design verified energy distribution enclosure conforms to EN 61439-2. KEMA approved.

Manufactured in sheet steel and delivered in flat pack format, to be assembled by the PB/Installer.

Designed for 630A - 415/690V 50/60Hz - 30kA/1s eff.

The application of the range makes it ideal for installation in electrical distribution systems in commercial and industrial markets segments.

A range of 24 enclosures, in wall mounting or floor standing versions, equipped with a various range of functional units based on modules of 50 mm, offering maximum possibilities to the installer and panel builder.

Easy wiring, due to the direct mounting of the functional units on the rear panel, used as mounting plate. Several features designed to reduce the total labor time to configure, assembly and wire the distribution panel.

Cabinets are available as standard with protection degree IP40, upgradable to IP43 and a high mechanical impact of IK09 / IK08.

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- Product information ● Page D.2
- Dimensional drawings ● Page I.29
- Specifications for tender documents ● Page I.57
- Power dissipation values ● Page I.76

QuiXtra™ 4000



Design verified distribution boards up to 4000A according to EN 61439-2

Design verified energy distribution enclosure conforms to EN 61439-2. DEKRA approved with KEMA quality testreport.

QuiXtra 4000 is a range of sheet steel system enclosures delivered as flat kit. It is GE's solution for low voltage distribution boards up to 4000A, in commercial and industrial environments.

Designed for 4000A - 415/690V 50/60Hz - 1cw 85kA/1s eff.

The QuiXtra 4000 range consists of 9 different enclosures. These are three enclosure depths available, 450 mm, 600 mm and 800 mm, and three enclosure widths, for functions of 12, 24 and 36 modules. All enclosures have the same useful height of 1800 mm. It is possible to couple enclosures horizontally, and back to back the enclosures with the same width. Additionally, there are corner empty enclosures to allow L and U configurations.

This huge range of enclosures provides the user total flexibility to define the layout of the LV distribution boards. For ease of incoming and outgoing cable connection, the roofs have different types of cable entry plates, for bottom incoming or outgoing.

QuiXtra 4000 can be configured with a protection degree IP30 or IP55, and a segregation form up to Form 4 and a high mechanical impact of IK09 / IK08.

- Overview of the range ● Page D.33
- Product information ● Page D.28
- Dimensional drawings ● Page I.30
- Specifications for tender documents ● Page I.58
- Power dissipation values ● Page I.80

EH1, EH2, EH3, EH4



Non-metallic pedestals

Wide range of DIN-size and non DIN-size pedestals for outdoor application like

- power distribution
- traffic signalling and public lighting
- telecommunication, electronics or cable TV
- waste water treatment
- camping sites and market places

Pedestals are delivered with integrated bases (for non DIN-sizes) or to be mounted on a standard DIN base.

All enclosures are made from hot moulded, glass fibre reinforced polyester and offer protection degree up to IP44 and are ideally suited for outdoor installation.

Overview of the range ● Page E.2

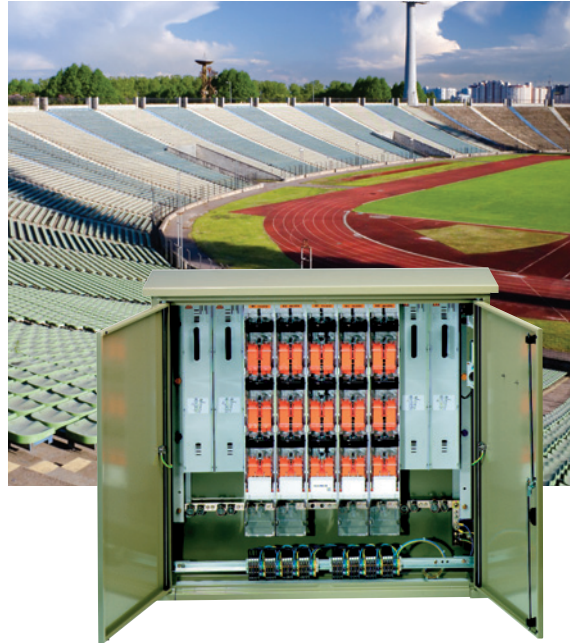
Product information ● Page E.4

Dimensional drawings ● Page I.32

Specifications for tender documents ● Page I.59

Power dissipation values ● Page I.84

RVS



Stainless steel pedestals

A wide range of stainless steel RVS pedestals for outdoor use complies with the standard EN/IEC 61439-5.

The RVS stainless steel pedestals make it possible to offer professional above ground solutions for cable networks, telecommunications, recreation grounds and other general applications.

In stainless steel AISI 304, painted in a polyester coating RAL 7034.

A range from DIN 00 up to DIN 4 in the width and deliverable in 5 different heights and one depth of 355 mm.

The cabinets have partially sunken bases in stainless steel or in concrete.

The pedestals offers maximum protection to the user and equipment thanks to the protection degree IP44 - IK10 according the IEC 60529, EN 60529 and EN/IEC 62262.

Overview of the range ● Page E.3

Product information ● Page E.16

Dimensional drawings ● Page I.42

Specifications for tender documents ● Page I.64

Power dissipation values ● Page I.86

UC-Cabinet



Subterranean enclosures

Stainless steel enclosures with concrete foundation used in underground applications and suitable for installing all kinds of equipment for temporary connectivity.

In concrete and stainless steel AISI 304.

They can remain underground both in active and passive condition.

They avoid obstacles at street level and are vandalism approved.

The enclosure offers maximum protection to the user and equipment due to the high protection degree of the diving bell principle and the very strong structure and cover according to the IEC 60529, EN 124 and EN 1.4452

Used on markets, fairs and other events, but they are also suitable for data connections for IT related applications.

Product information ● Page F.2

Dimensional drawings ● Page I.45

Specifications for tender ● Page I.65
documents

- A.4 **Flex-o-Box** - Junction boxes IP65
- A.6 **Series 55** - Junction boxes IP66
- A.9 **Lighting pole boxes**
- A.10 **MultiBox** - Small multipurpose boxes
- A.14 **MultiBox Xtra** - Medium sized multipurpose boxes
- A.16 **APO** - Modular polyester boxes

e-Catalogue / Application guide




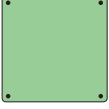

Insulated boxes

Insulated wall mounting cabinets	B
Wall mounting system enclosures	C
Sheet steel distribution boards	D
Pedestals	E
Subterranean enclosures	F
Climate control	G
General accessories	H
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Overview Insulated Boxes

Insulated boxes

Flex-o-Box IP65	Series 55 - IP66
 <p>90.5 x 90.5 x 49</p>	 <p>125 x 125 x 75</p>
 <p>110 x 110 x 49</p>	 <p>175 x 175 x 95</p>
	 <p>225 x 175 x 95</p>

H x W x D in mm

Intro

A

B

C

D

E

F

G














H

I

X



Overview Insulated Boxes

MultiBox IP66	MultiBox Xtra IP66/IP67	APO IP67
 65 x 65 x 57/81	 300 x 200 x 170	 186 x 151 x 140
 94 x 65 x 57/81	 300 x 300 x 170	 302 x 186 x 175
 94 x 94 x 57/81	 400 x 300 x 170/230	 302 x 302 x 175
 110 x 110 x 66/90	 400 x 400 x 170	 372 x 302 x 175
 130 x 94 x 57/81	 600 x 300 x 170	 488 x 302 x 175
 130 x 130 x 75/99	 600 x 400 x 210/270	 558 x 302 x 175
 180 x 94 x 57/81	 603 x 302 x 175	 603 x 372 x 175
 180 x 110 x 90/111/165	 603 x 603 x 175	
 182 x 180 x 90/111/165		
 254 x 180 x 90/111/165		
 361 x 254 x 111/165		

H x W x D in mm

Junction boxes

IP65



Metric entries

Approvals / Marking



Features

Flex-o-Box Junior

Technical data

- Suitable for surface mounting
- 2.5 mm² - 500V
- IP65 protection degree
- Standards and approvals
CEBEC: NBN C 68-685-2-0
NBN C68-685-1
KEMA: EN/IEC 670
- Colour: RAL 7035
- Material: resists the 650°C incandescent wire test
- Halogen-free
- Operating temperature: -5°C to +60°C
- Total insulation: ☐

Eight flexible entries

- 7 x Ø 20 in the side wall
- 1 x Ø 20 in the back
- Suitable for cable max. Ø 18 mm
- Suitable for tubes 5/8" and 3/4"

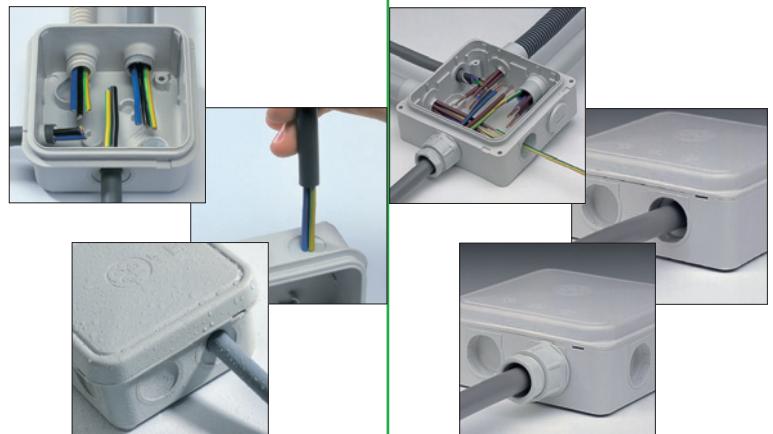
Flex-o-Box JB⁶

Technical data

- Suitable for surface mounting
- 6 mm² - 500V
- IP65 protection degree
- Standards and approvals:
CEBEC: NBN C68-685-2-0
NBN C68-685-1
KEMA: EN/IEC 670
- Colour: RAL 7035
- Material: resists the 650°C incandescent wire test
- Halogen-free
- Operating temperature: -5°C to +60°C
- Total insulation: ☐



Nine flexible entries

- 7 x M20 in the side wall
- 2 x Ø 20 mm max. entries in the back of the base
- Suitable for cable max. Ø 18 mm
- Suitable for tubes 5/8" and 3/4"
- Suitable for cable seals (8 mm min. thread length)






Dimensional drawings ● Page I.10

Flex-o-Box

		Ref. No.	Pack.
	Junior	Junction box 2.5 mm ²	600656 10/100
		Junction box 2.5 mm ² (34 pieces in a red polybox basket)	600314 1
	JB ⁶	Junction box 6 mm ²	600651 10/100
		Junction box 6 mm ² (24 pieces in a grey polybox basket)	600310 1

Accessories

		for Junior and JB ⁶	only for JB ⁶	
	Terminal block	600950 30	851652 50	
		6 mm ² - 500V - pin-type 5-terminal blocks Possible connections per terminal: 6 x 1.5 mm ² 2 x 6 mm ² 4 x 2.5 mm ² 2 x 10 mm ² 3 x 4 mm ²	IP68 - RAL 7035	
	Terminal strip	600650 20/200	851660 50	
		6 mm ² - 500V - hole-type 5-terminal strips Possible connections per terminal: 6 x 1.5 mm ² 3 x 4 mm ² 4 x 2.5 mm ² 2 x 6 mm ²	IP54 - RAL 7035	
	Insulated cap	851674 100		
	Screws	600652 40		
	For cover fastening Stainless steel			

Junction boxes

IP66



Approval



Applications

- As an empty box
- As a junction box (10/16/25 mm²)
- Coupled

Features

- Standard: EN/IEC 529
- Material: thermoplastic high impact polyphenylene oxide
- Total insulation:
- IP66 protection degree

Dimensions

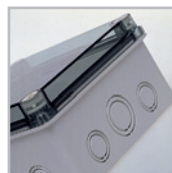
Three sizes - three types

55100 - 125 x 125 x 75 mm

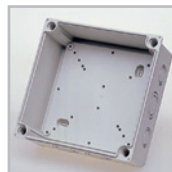
55200 - 175 x 175 x 95 mm

55300 - 225 x 175 x 95 mm

Benefits



The cable entries are selective knockouts placed as close as possible to the wall.



Oval openings in the base allow levelling. Four fixing holes outside the gasket and two fixing holes inside the box.



The raised bottom avoids obstruction while cabling and bending of the cables.



Raised supports for the placement of the mounting plate.



The screws are thermoplastic, captive, full turn, with a big pitch and placed outside the gasket.


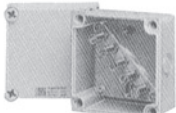


All the boxes are sealable.




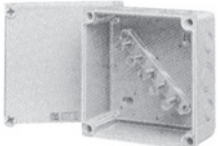
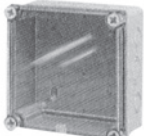
Series 55100 - 10 mm²

☐ IP66 - IK07

	Cover	Entries	Characteristics	Ref. No.	Pack.
	grey	5 x PG 16/21	Empty. Can be equipped with terminal blocks 600516	600514	16
	grey	5 x PG 16/21	Equipped with terminal blocks 600516: 5 clamps with maximum capacity: 5 x 4 mm ² / 4 x 6 mm ² / 3 x 10 mm ²	600515	16

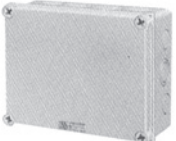
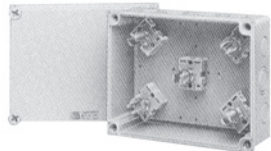
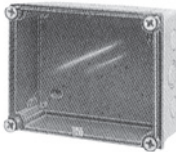
Series 55200 - 16 mm²

☐ IP66 - IK07

	Cover	Entries	Characteristics	Ref. No.	Pack.
	grey	6 x PG 16/21 5 x PG 21/29	Empty. Can be equipped with terminal blocks 600525 600526 (x5) 600544 (x5) 600545 (x5) 600516	600517	9
	grey	6 x PG 16/21 5 x PG 21/29	Equipped with terminal blocks 600525: 5 clamps with maximum capacity: 5 x 6 mm ² / 4 x 10 mm ² / 3 x 16 mm ²	600524	9
	transparent	6 x PG 16/21 5 x PG 21/29	Empty	600523	9

Series 55300 - 25 mm²

☐ IP66 - IK07

	Cover	Entries	Characteristics	Ref. No.	Pack.
	grey	8 x PG 21 6 x PG 21/29	Empty. Can be equipped with terminal blocks 600544 (x5) 600545 (x5) 600525 600526 (x5)	600532	1
	grey	8 x PG 21 6 x PG 21/29	Equipped with terminal blocks 600544 (x5): 5 clamps/nuts with maximum capacity: 4 x 16 mm ² / 3 x 25 mm ² / 2 x 35 mm ²	600543	9
	transparent	8 x PG 21 6 x PG 21/29	Empty	600539	9



Accessories



Terminal blocks 500V 10 mm ²	
600516	6
Set terminal blocks with two fixation screws. With five clamps suitable for Al or Cu connection.	
Maximum cable section per clamp: 5 x 4 mm ² / 5 x 4 mm ² / 5 x 4 mm ² .	
Can be fitted in types 55100 and 55200.	



Terminal blocks 500V 16 mm ²	
600525	6
With five clamps, suitable for Al or Cu connection.	
Maximum cable section per clamp: 5 x 6 mm ² / 4 x 10 mm ² / 3 x 16 mm ² .	
Can be fitted in types 55200 and 55300.	



Terminal blocks 500V 16 mm ²	
600526	24
With one clamp/nut (with nut), suitable for Al or Cu connection.	
Maximum cable section per clamp: 5 x 6 mm ² / 4 x 10 mm ² / 3 x 16 mm ² .	
Can be fitted in types 55200 and 55300.	



Terminal blocks 500V 25 mm ²	
600544	24
With one clamp/nut (with nut), suitable for Al or Cu connection.	
Maximum cable section per clamp: 4 x 16 mm ² / 3 x 25 mm ² / 2 x 35 mm ² .	
Can be fitted in types 55200 and 55300.	



Terminal blocks 500V 25 mm ²	
600545	24
With one clamp/nut (double nut), suitable for Al or Cu connection.	
Maximum cable section per clamp: 4 x 16 mm ² / 3 x 25 mm ² / 2 x 35 mm ² .	
Can be fitted in types 55200 and 55300.	



Insulated cap	
890838	48
Suitable for terminal blocks	
600526	
600544	
600545	

Couplings	
600509	1
Set of two pieces	
PG21	
It is possible to combine types 55200 and 55300	



Compression glands	
600504	25
PG21 with nut in glass fibre reinforced polyamide. Grey.	
600505	25
PG29 with nut in glass fibre reinforced polyamide. Grey.	



Compression glands	
600501	25
PG21 polyamide with nut in glass fibre reinforced polyamide. Brown.	
600502	25
PG29 polyamide with nut in glass fibre reinforced polyamide. Brown.	



Locknuts	
600506	100
Nut in glass fibre reinforced polyamide to connect compression glands PG21. Grey.	
600507	50
Nut in glass fibre reinforced polyamide to connect compression glands PG29. Grey.	






Universal entries (grey)	
610130	25
Cable max. 18 mm, drill 23 mm, PG16	
610132	25
Cable max. 24 mm, drill 29 mm, PG21	
610133	25
Cable max. 32 mm, drill 38 mm, PG29.	



Street lighting pole boxes

- Base and cover in fiberglass reinforced polyester (types A, B and E).
- Base and cover in fiberglass reinforced thermoplast (type D).
- Constructed for mounting in lighting poles or on facades.
- Total insulation IP44 - IK09

Junction boxes

	Description	Equipment	Ref. no.	Pack.
Type A 	Cover with 4 screws M4. - Entries <ul style="list-style-type: none"> • Top: 2 threaded PG16 equipped with universal cable entries (851084) and compression bushes (851047) • Bottom: 2 threaded PG21 of which 1 equipped with an universal entry (610132) 	Includes:	890701	1
		<ul style="list-style-type: none"> • 2 pin fuseholders 20A (619012) • 1 support with 4 terminals 16 mm² (779214) with insulated hood in rubber (890704) 		
Type D 	Cover with 2 triangular screws (TTR) - Entries <ul style="list-style-type: none"> • Top: 1 knock-out with a supplied nut H20 • Bottom: 5 of which 3 knock-outs <ul style="list-style-type: none"> - 3 for Al protection tube Ø 28 mm or 3 EXVB4G 10 mm² or 3 EVAUB4G 10 mm² - 1 VOB st 16 mm² - 1 XVB3G 1.5 mm² or XVB3G 2.5 mm² - non used entries can be sealed from the inside by a supplied blanking plug 	Empty unit	890762	1
		Includes	890764	1
Type E 	Cover with 1 triangular screw 8 mm - Entries: all with knock-out possibility <ul style="list-style-type: none"> • Top: 3 knock-outs for cable glands M20 or M25 • Bottom: 6 knock-outs <ul style="list-style-type: none"> - 3 for cable glands M20 - 2 for earth cable Ø 8 mm - 1 for cable Ø 11 mm 	Empty unit	890728	1
		Box with	890729	1
		<ul style="list-style-type: none"> • 4 clamp terminals 35 mm² each with 2 connection points and 1 isolating cap 		

Accessories



Key for type B		
	851016	30
Triangular key (TTR)		

Key for types D and E		
	832027	1
Triangular key 8 mm		





Small multipurpose boxes

Applications

- Ideal for automation and control applications in industry, machinery, tool-shop and OEM.
- Electronic applications in data and telecom industry.
- Also suitable for use as commercial and industrial distribution boxes.

Standards

IEC 60529	EN 60529
IEC 62208	EN 62208
IEC 62262	EN 62262
DIN VDE 0606 Teil 1/11.84	

Approvals



Only for polycarbonate boxes, available on request



Overview of the range ● Page A.3

Dimensional drawings ● Page I.12

Specifications for tender documents ● Page I.49

Power dissipation values ● Page I.67

Features and benefits

- 11 different basic enclosures (from 65 x 65 mm up to 361 x 254 mm) with up to 3 different cover depths.
- Material: made of polystyrene or glass-fibre reinforced polycarbonate.
- Colour: Grey RAL 7035
- High protection degree, IP66-IPK07 for polystyrene, and IP66-IPK08 for polycarbonate, by means of injected polyurethane seal.
- Polycarbonate boxes are available with smooth side walls (only one entry) or with several metric knock-outs. Polystyrene boxes are available with smooth side walls or with several metric knock-outs.
- Opaque grey or transparent covers.
- Designed for surface mounting.
- Combinations of heights and widths optional.
- Polystyrene boxes (650° glow wire test) are suitable for use in temperatures up to +70°C, polycarbonate boxes (960° glow wire test) are suitable for use in temperatures up to +120°C.
- Total insulation \square
- High resistance to chemical and aggressive influences.
- Halogen-free.
- Self-extinguishing (UL94-V2).
- Rated insulation voltage $U_i = 1000V$






Why MultiBox

Do you prefer something standard or can it be tailor-made?

GE offers you: customerspecific developments for all your applications and requirements, exclusively to meet your needs!

- All colours (environmental aspects, customised, differentiated)
- Painted or screened
- With cut-outs (circular, rectangular, square)
- Coupling facilities in vertical and horizontal direction
- EMC shielded

Small multipurpose boxes

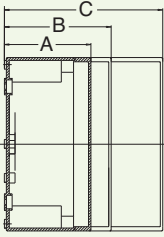


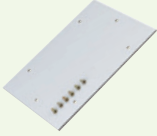

							
		Polystyrene	Polycarbonate (*)		Mounting plate (Insulated)	(for terminals) DIN profile 15x5x1	(for terminals and components) DIN profile 35x7,5x1
Base	Depth	Grey Cover RAL 7035	Grey Cover RAL 7035	Transparent Cover	Ref. No.	Ref. No.	Ref. No.
		Ref. No.	Ref. No.	Ref. No.			
		MB 11 H x W = 65 x 65 mm			45 x 45 mm	L=49,5 long/short side	
With metric knock-outs	A = 57	861612	861500	861501	861730	861741	-
	B = 81	861614	861502	861503			
Smooth	A = 57	861668	861556	861557			
	B = 81	861670	861558	861559			
		MB 21 H x W = 94 x 65 mm			74 x 45 mm	L=49,5 short side	
With metric knock-outs	A = 57	861616	861504	861505	861731	861741	-
	B = 81	861618	861506	861507			
Smooth	A = 57	861672	861560	861561		L=80 long side 861742	-
	B = 81	861674	861562	861563			
		MB 22 H x W = 94 x 94 mm			74 x 74 mm	L=80 long/short side	
With metric knock-outs	A = 57	861620	861508	861509	861732	861742	-
	B = 81	861622	861510	861511			
Smooth	A = 57	861676	861564	861565			
	B = 81	861678	861566	861567			
		MB 33 H x W = 110 x 110 mm			90 x 90 mm	L=92 long/short side	L=81 long/short side
With metric knock-outs	A = 66	861624	861512	861513	861733	861743	861746
	B = 90	861626	861514	861515			
Smooth	A = 66	861680	861568	861569			
	B = 90	861682	861570	861571			
		MB 42 H x W = 130 x 94 mm			110 x 74 mm	L=111 long side	L=106 long side
With metric knock-outs	A = 57	861628	861516	861517	861734	861744	861747
	B = 81	861630	861518	861519			
Smooth	A = 57	861684	861572	861573			
	B = 81	861686	861574	861575			
		MB 44 H x W = 130 x 130 mm			110 x 110 mm	L=111 long/short side	L=106 long/short side
With metric knock-outs	A = 75	861632	861520	861521	861735	861744	861747
	B = 99	861634	861522	861523			
Smooth	A = 75	861688	861576	861577			
	B = 99	861690	861578	861579			
		MB 52 H x W = 180 x 94 mm			160 x 74 mm	L=154 long side	L=144 long side
With metric knock-outs	A = 57	861636	861524	861525	861736	861745	861748
	B = 81	861638	861526	861527			
Smooth	A = 57	861692	861580	861581			
	B = 81	861694	861582	861583			

(*) Smooth = one metric knock-out on short side for power supply cord ! (See dimensional drawings on I.12)

Pack. = 1



Small multipurpose boxes

						 (for terminals and components)
		Polystyrene	Polycarbonate (*)		Mounting plate (Insulated)	DIN profile 35x7,5x1
Base	Depth	Grey Cover RAL 7035	Grey Cover RAL 7035	Transparent Cover	Ref. No.	Ref. No.
		Ref. No.	Ref. No.	Ref. No.		
		MB 53 H x W = 180 x 110 mm			150 x 90 mm	L=144 long side
With metric knock-outs	A = 90	861640	861528	861529	861737	861748
	B = 111	861642	861530	861531		
	C = 165	861644	861532	861533		
Smooth	A = 90	861696	861584	861585		
	B = 111	861698	861586	861587		
	C = 165	861700	861588	861589		
		MB 65 H x W = 182 x 180 mm			150 x 150 mm	L=144 long side
With metric knock-outs	A = 90	861646	861534	861535	861738	861748
	B = 111	861648	861536	861537		
	C = 165	861650	861538	861539		
Smooth	A = 90	861702	861590	861591		
	B = 111	861704	861592	861593		
	C = 165	861706	861594	861595		
		MB 75 H x W = 254 x 180 mm			220 x 150 mm	L=216 long side
With metric knock-outs	A = 90	861654	861542	861543	861739	861749
	B = 111	861656	861544	861545		
	C = 165	861658	861546	861547		
Smooth	A = 90	861710	861598	861599		
	B = 111	861712	861600	861601		
	C = 165	861714	861602	861603		
		MB 87 H x W = 361 x 254 mm			331 x 220 mm	L=336 long side
With metric knock-outs	A = 111	861662	861550	861551	861740	861750
	B = 165	861664	861552	861553		
Smooth	A = 111	861718	861606	861607		
	B = 165	861720	861608	861609		

(*) Smooth = one metric knock-out on short side for power supply cord ! (See dimensional drawings on I.12)

Pack. = 1

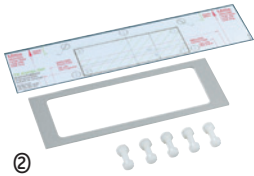
MultiBox Matrix

MB (MultiBox)	Height	Width
11	65	65
21	94	65
22	94	94
33	110	110
42	130	94
44	130	130
52	180	94
53	180	110
65	182	180
75	254	180
87	361	254

Accessories



Combi set		
For joining several boxes horizontal and/or vertical		
①	861753	5
small M20		
①	861754	5
small M25		
①	861755	5
small M32		
②	861756	1
large from MB 53 on		



Thumb grip		
	861763	1
For fixing on to cover screws.		
Available for all MultiBoxes - 1 set = 4 pcs		



Carrying handle		
Used with MultiBoxes for portable purposes (plastic, green).		
	861764	1
with plastic screws		
	861765	1
with self-tapping screws		



Hinges		
Converts removable covers into hinged covers. (incl. drilling template)		
	861757	1
Small up to MB 52		
	861758	1
Large from MB 53 on		

Double membrane nipple IP66		
Special plastic material (elastic and temperature-resistant)		
Secure fitting without locknut, two integrated sealing membranes.		
Cable glands, see p. 12		
	861724	50
M16		
	861725	50
M20		
	861726	50
M25		
	861727	25
M32		

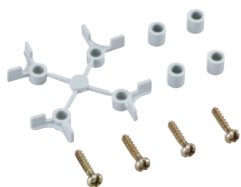


Wall mounting brackets		
	861759	1
For external mounting of all MultiBoxes		
1 set = 4 pieces		

Air vent (IPx4)		
To allow ventilation and prevent condensation. Air vents are preferably mounted in the upper and lower part of the box - M20		
	861728	25



Padlock		
	861761	1
For protection against unauthorised access.		
Available from MB 65 on		



Spacers		
	861762	1
In plastic (6 + 8 mm), determines the distance between PC-boards or mounting plates and the base of the box		
1 set = 8 pieces (incl. fixing screws)		
Available for all MultiBoxes.		

Coverscrews		
	861769	20
Short for grey cover, enclosure depth A		
	861770	20
Long for grey cover, enclosure dept B & C		

Medium sized multipurpose boxes



Xtra large smooth side wall
ideal for maximum cable entry flexibility

Xtra strong side wall
ideal for direct threading

Xtra quick-lock screw
180 degree turn only

Standard

IEC 62208

Approvals

Documents available on request

Features and benefits

- 6 basic dimensions from 300x200 up to 600x400 mm.
- In 4 different depths: 170-210-230-270 mm.
- 16 different boxes in total!
- Made out of strong and reliable polycarbonate.
- Very high surface finish quality.
- High protection degree IP66/IP67 - IK08
- Grey and transparent cover versions.
- Smooth side walls.
- Many fixation possibilities in the base for mounting plate, DIN-rails, etc. by means of self-tapping screws.
- Quick-locking cover screws - 180° turn only.
- Whole cover is transparent, full visibility on built-in components.
- Wide rectangular front opening in base, no edge re-inforcements.
- Sturdy base, material thickness sufficient for direct cable gland threading.
- Customisation possibilities i.e. cut-outs.






Applications

- Automation and control applications
- Electronic application in data and telecom
- Commercial and industrial distribution boxes








Overview of the range ● Page A.3
 Dimensional drawings ● Page I.14
 Specifications for tender documents ● Page I.50

Medium sized multipurpose boxes

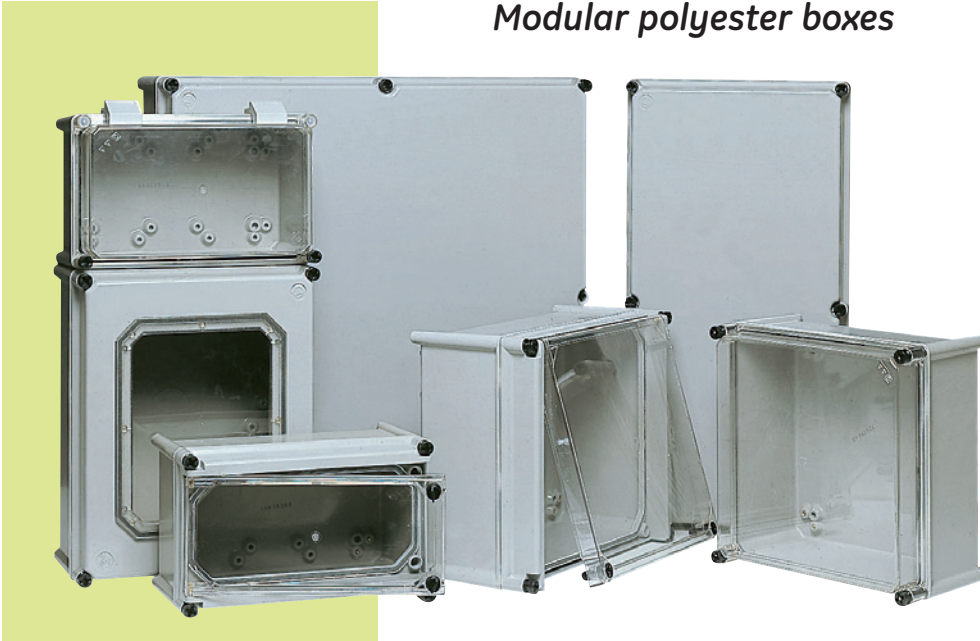
Type	MBX 32	MBX 33	MBX 431	MBX 432	MBX 44	MBX 63	MBX 641	MBX 642
H	300	300	400	400	400	600	600	600
W	200	300	300	300	400	300	400	400
D	170	170	170	250	170	170	210	270
 Polycarbonate, grey cover	Ref. no. 861775	861776	861777	861778	861779	861780	861781	861782
 Polycarbonate, transparent cover	Ref. no. 861783	861784	861785	861786	861787	861788	861789	861790
 Mounting plates Sheet steel, 1.5 mm Pertinax, 5 mm	270 x 170	270 x 270	370 x 270	370 x 270	370 x 370	570 x 270	570 x 370	570 x 370
	Ref. no. 861798	861799	861800	861800	861801	861802 ⁽¹⁾	861803	861803
	Ref. no. 861804	861805	861806	861806	861807	861808 ⁽¹⁾	861809	861809
 DIN-rail Pack = 10 pieces	200	300	300	300	400	300	400	400
	Ref. no. 861810	861811	861811	861811	861812	861811	861812	861812
	300	-	400	400	-	-	-	-
	Ref. no. 861811	-	861812	861812	-	-	-	-
 Aluminium cover plate Fixation set	Ref. no. 861813	861814	861815	861815	861816	861817	861818	861818
	Ref. no. 861819	861819	861819	861819	861819	861819	861819	861819

(1) Order separate spacer set 861824 (pack = 6 pieces)

Accessories

	Wall mounting brackets		
		861820	4
	Cover screws		
	As replacement	861821	4
	External hinge		
	Includes 2 hinges to be mounted at the enclosure/cover side. Drilling of holes is necessary.	861825	1 set
	Manual cover screws		
	In exchange of standard cover screws	861822	12
	Self-tapping screws		
	For mounting components on the bottom of the enclosure	861823	50

Modular polyester boxes



Standards

EN/IEC 61439-2
EN/IEC 60529
EN/IEC 62208

Approvals



- Boxes with polyester cover: types 3, 3R, 4, 4X, 6, 6P, 12 and 13
 - Boxes with polycarbonate cover: types 3, 3R, 4, 4X, 12 and 13
 - Boxes with hinged cover: types 3, 3R, 4, 4X, 6, 12 and 13
- Available on request



- Boxes with polyester cover: types 3, 3R, 4, 4X, 6, 6P, 12 and 13
 - Boxes with polycarbonate cover: types 3, 3R, 4, 4X, 12 and 13
 - Boxes with hinged cover: types 3, 3R, 4, 4X, 6, 12 and 13
- Available on request



Lloyd's Register of Shipping



Germanischer Lloyd

Features

- The range consists of nine boxes based on the 300 and 185 mm modules.
- The bases are made of light grey (RAL 7035), hot moulded glass fibre reinforced polyester, dyed in mass. These come complete with M4 threaded inserts (Dodge) for fixing a mounting plate or mounting frame.
- The cover is made of either transparent polycarbonate or light grey (RAL 7035) hot moulded glass fibre reinforced polyester, dyed in mass.
- APO-boxes provide optimum security to both operators and equipment because they feature total insulation and protection degree IP67 according to EN/IEC 60529
- Protection degree IK10 against external mechanical impacts according to EN/IEC 62262
- Each large box is a multiple of a smaller one. Its fixing points are also a multiple of those of a small box. These fixing points are blind holes for M4 threaded inserts.
- Four to six blind holes for M6 threaded inserts are also provided in each base.
- APO polyester boxes are designed for both wall and pole mounting.
- The box can be readily worked with conventional tools such as drills, cutting mills, saws punches, etc.
- Versatile service conditions: polyester enclosures can withstand continuous temperatures up to 70°C (peak temperatures up to 130°C) and the transparent polycarbonate covers resist service temperature up to 120°C
- Rated insulation voltage $U_i = 1000V$.
- APO boxes are UL listed, as per UL Standard 508. They are also CSA approved.

Applications

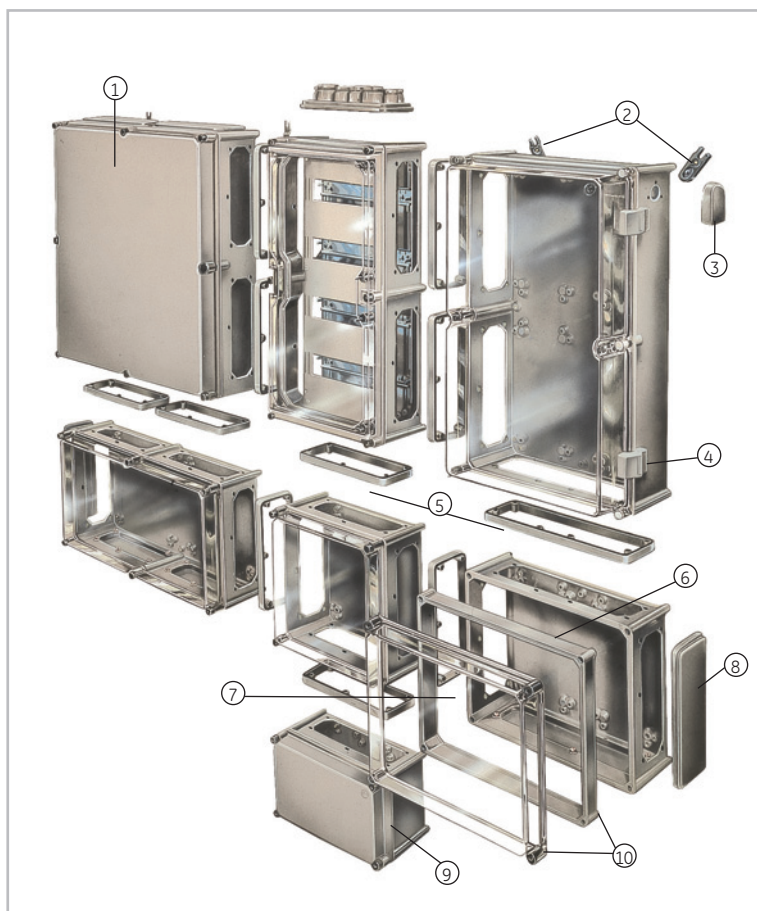
- Industry
- Oil refineries
- Shipyards
- Steel works
- Breweries
- Petro-chemical plants
- Public utilities
- Photovoltaic



- Overview of the range ● Page A.3
- Dimensional drawings ● Page I.16
- Specifications for tender documents ● Page I.51
- Power dissipation values ● Page I.68



Modular panel building



- ① Polyester cover
- ② Wall mounting feet, stainless steel or non-metallic
- ③ Ventilator
- ④ Non-metallic hinge
- ⑤ Coupling collar
- ⑥ Depth extension frame
- ⑦ Clear polycarbonate cover
- ⑧ Coupling cover plate
- ⑨ Twist lock latch
- ⑩ Foamed polyurethane gaskets with tongue and groove labyrinths at all seal points

Optimal use of the modular design

The unique modular concept of APO boxes enables mounting of different standard functions in coupled boxes.








Technical data

Ingress protection according IEC 60529	
Single enclosure	
with polyester cover	IP67
with transparent cover	IP66
with hinged cover	IP67
Enclosure with flange plate	IP67 ⁽¹⁾
Enclosure combination	IP67 ⁽¹⁾
Enclosure with depth extension frame	IP66

(1) dependent on cover version used





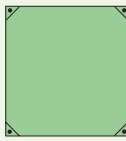
Modular polyester boxes

Insulated boxes

Type	APO 1	APO 31	APO 41	APO 71	
 <p>Box with polyester cover □ IP67 Light-grey cover with fixing screws</p>	<p>H x W x D 186 x 151 x 140</p> <p>Ref. No. 856048</p> <p>Weight (kg)</p>	<p>H x W x D 302 x 186 x 175</p> <p>Ref. No. 856049</p> <p>Weight (kg)</p>	<p>H x W x D 302 x 302 x 175</p> <p>Ref. No. 856050</p> <p>Weight (kg)</p>	<p>H x W x D 372 x 302 x 175</p> <p>Ref. No. 856051</p> <p>Weight (kg)</p>	
	 <p>Box with polycarbonate cover □ IP66 Transparent cover with fixing screws</p>	<p>H x W x D 186 x 151 x 140</p> <p>Ref. No. 856057</p> <p>Weight (kg)</p>	<p>H x W x D 302 x 186 x 175</p> <p>Ref. No. 856058</p> <p>Weight (kg)</p>	<p>H x W x D 302 x 302 x 175</p> <p>Ref. No. 856059</p> <p>Weight (kg)</p>	<p>H x W x D 372 x 302 x 175</p> <p>Ref. No. 856060</p> <p>Weight (kg)</p>
		 <p>Box with hinged cover □ IP67 Transparent cover with thumb screws for the door</p>	<p>H x W x D -</p> <p>Ref. No. -</p> <p>Weight (kg)</p>	<p>H x W x D 302 x 186 x 175</p> <p>Ref. No. 856066</p> <p>Weight (kg)</p>	<p>H x W x D 302 x 302 x 175</p> <p>Ref. No. 856067</p> <p>Weight (kg)</p>
 <p>Box with hinged cover □ IP55 Light-grey cover</p>			<p>H x W x D 186 x 151 x 140</p> <p>Ref. No. 856071</p> <p>Weight (kg)</p>	<p>H x W x D 302 x 186 x 175</p> <p>Ref. No. 856072</p> <p>Weight (kg)</p>	<p>H x W x D 302 x 302 x 175</p> <p>Ref. No. 856073</p> <p>Weight (kg)</p>
	 <p>Box with hinged cover and lock (ventilated) □ IP44 Light-grey cover</p>		<p>H x W x D -</p> <p>Ref. No. -</p> <p>Weight (kg)</p>	<p>H x W x D 302 x 186 x 175</p> <p>Ref. No. 856080</p> <p>Weight (kg)</p>	<p>H x W x D 302 x 302 x 175</p> <p>Ref. No. 856081</p> <p>Weight (kg)</p>

Pack: 1



				
APO 51	APO 81	APO 61	APO 11	APO 12
488 x 302 x 175 856052	558 x 302 x 175 856053	603 x 302 x 175 856054	603 x 372 x 175 856055	603 x 603 x 175 856056
488 x 302 x 210 856061	558 x 302 x 210 856062	603 x 302 x 210 856063	603 x 372 x 210 856064	603 x 603 x 210 856065
488 x 302 x 175 856069	-	603 x 302 x 175 856070	-	-
488 x 302 x 175 856075	558 x 302 x 175 856076	603 x 302 x 175 856077	603 x 372 x 175 856078	603 x 603 x 175 856079
488 x 302 x 175 856083	558 x 302 x 175 856084	603 x 302 x 175 856085	603 x 372 x 175 856086	-

Modular boxes

Intro

A

B

C

D

E

F

G

H




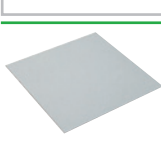
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X



Modular polyester boxes

Insulated boxes

		Type	APO 1	APO 31	APO 41	APO 71
	Base with plain sides	H x W x D Ref. No. Pack	186 x 151 x 85 856000 4	302 x 186 x 131 856001 4	302 x 302 x 131 856002 4	372 x 302 x 131 856003 4
	Base with 1 open side Sizes in box refer to location of open side panel	H x W x D Ref. No. Pack	-	302 x 186 x 131 852057 4	302 x 302 x 131 852079 4	372 x 302 x 131 852135 4
	Base with 2 open sides Sizes in box refer to location of open side panel	H x W x D Ref. No. Pack	-	302 x 186 x 131 856009 4	302 x 302 x 131 856010 4	372 x 302 x 131 856011 4
	Base with 4 open sides	H x W x D Ref. No. Pack	-	302 x 186 x 131 856017 4	302 x 302 x 131 856018 4	372 x 302 x 131 856019 4
	Polyester cover Light-grey cover with fixing screws	H x W x D Ref. No. Pack	186 x 151 x 45 856025 4	302 x 186 x 45 856026 4	302 x 302 x 45 856027 4	372 x 302 x 45 856028 4
	Polycarbonate cover Transparent cover with fixing screws	H x W x D Ref. No. H x W x D Ref. No. Pack	186 x 151 x 45 851196 - 4	302 x 186 x 45 851173 - 4	302 x 302 x 45 851277 - 4	372 x 302 x 45 851176 - 4
	Hinged cover Transparent cover with thumb screws for the door	H x W x D Ref. No. Pack	-	302 x 186 x 45 856034 4	302 x 302 x 45 856035 4	372 x 302 x 45 856036 4
	Depth extension frame Glass fibre reinforced polyamide PA6	H x W x D Ref. No. Pack	186 x 151 x 35 856040 4	302 x 186 x 35 856041 4	302 x 302 x 35 856042 4	372 x 302 x 35 856043 4
	Mounting plate Pertinax 5 mm Sendzimir zinc coated sheet steel 2 mm Perforated 1.5 mm (For sliding nuts, see I.13)	H x W Ref. No. H x W Ref. No. H x W Ref. No. Pack	140 x 105 851190 134 x 99 851191 134 x 99 852874 1	228 x 139 851187 249 x 134 851188 249 x 134 852875 1	254 x 228 851278 249 x 249 851279 249 x 249 852876 1	298 x 254 851181 319 x 249 851185 319 x 249 852877 1
	Blind cover plate Covidur 1.5 mm	H x W Ref. No. Pack	150 x 115 851189 1	265 x 150 851186 1	265 x 265 851281 1	335 x 265 851180 1



APO 51	APO 81	APO 61	APO 11	APO 12
488 x 302 x 131 856004 2	558 x 302 x 131 856005 2	603 x 302 x 131 856006 2	603 x 372 x 131 856007 2	603 x 603 x 131 856008 2
488 x 502 x 131 854103 2	558 x 502 x 131 852436 2	603 x 502 x 131 852117 2	603 x 572 x 131 852446 2	603 x 603 x 131 852451 2
488 x 502 x 131 856012 2	558 x 502 x 131 856013 2	603 x 502 x 131 856014 2	603 x 572 x 131 856015 2	603 x 603 x 131 856016 2
488 x 302 x 131 856020 2	558 x 302 x 131 856021 2	603 x 302 x 131 856022 2	603 x 372 x 131 856023 2	603 x 603 x 131 856024 2
488 x 302 x 45 856029 2	558 x 302 x 45 856030 2	603 x 302 x 45 856031 2	603 x 372 x 45 856032 2	603 x 603 x 45 856033 2
488 x 302 x 80 852092 2	558 x 302 x 80 851193 2	603 x 302 x 80 851282 2	603 x 372 x 80 851290 2	603 x 603 x 80 852280 2
- 2	- 2	603 x 302 x 45 851283 2	- 2	- 2
488 x 302 x 45 856037 2	-	603 x 302 x 45 856038 2	603 x 372 x 115 856039 (1) 2	-
-	558 x 302 x 60 856044 2	603 x 302 x 60 856045 2	603 x 372 x 60 856046 2	603 x 603 x 60 856047 2
413 x 254 852091 435 x 249 852095 435 x 249 852878 1	484 x 254 851170 505 x 249 851171 505 x 249 852879 1	528 x 254 851286 550 x 249 851287 550 x 249 852880 1	528 x 324 851289 550 x 319 851292 550 x 319 852881 1	555 x 555 852174 550 x 555 852178 550 x 555 852882 1
450 x 265 852090 1	-	-	-	-

(1) **856039** 1
Hinged cover with side flange



Modular boxes

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Accessories

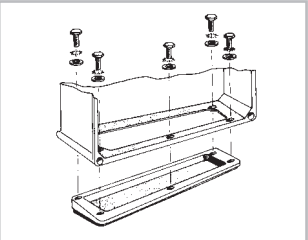
Combi end-plates in polystyrene			
	Width		
4 x M20/16 + 1 x M32/25	185	856096	1
2 x M32/25 + 3 x M25/M20 + 4 x M20/16	300	856131	1
9 x M25/20	300	856097	1
2 x M50/40 + 2 x M25/20	300	856098	1
13 x M20/16	300	856099	1
3 x M40/32 + 2 x M20/16	300	856100	1
1 x M40/32 + 10 x M25/20	370	856101	1
13 x M25/20	370	856102	1



Cable glands, see p. H.2

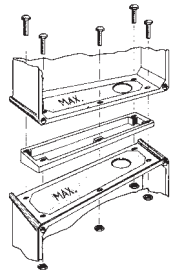
Blind end-plates in polyester			
	Width		
	185	856103	1
	300	856104	1
	370	856105	1






For dimensions of maximum opening, see page I.18

Coupling frames			
Coupling frames are made of polyamide (rubber).			
- Complete with template.			
- The smallest side of the coupling frame fits the front side of the box.			
- The maximum passage between two coupled boxes can be marked off with the aid of the template. Within this mark, any desired opening can be made.			
Width			
185	856106		1
300	856107		1
370	856108		1







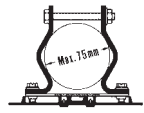
For dimensions of maximum opening, see page I.18


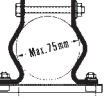
Cable-end boxes					
In polyester (funnel-shaped in polystyrene)		For side	Type	Max Ø cable (mm)	Nr. of clamps provided
856115	1	300	APO31	1 x 75	1
856116	1	300	APO31	2 x 75	2
856117	1	300	APO41	1 x 75	1
781936	1	300	APO61	1 x 75	1
781937	1	300	APO71	1 x 71	1
856118	1	370	APO71	3 x 75	1

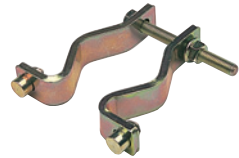
Dimensions, see page I.19



Cable clamps ⁽¹⁾	
851105	1
For direct mounting to cable end box. Max. Ø cable: 75 mm Used in APO 31 and APO 71 Enclosure side 185, 300, 370 mm	
851110	1
Universal stress relieving cable clamp. Max. Ø cable: 75 mm Used in APO 41 Enclosure side 300, 370, 600 mm	
851111	1
For mounting to universal stress relieving attachment Max. Ø cable: 75 mm Spare part	



(1) See drawing on page I.19

Accessories

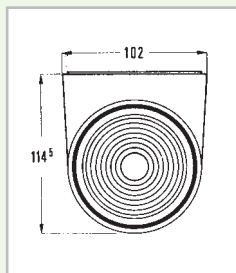
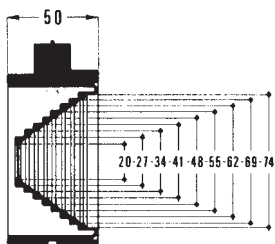
Rubber cable sleeves

- For direct mounting
- Complete with template

851106 1

For use as a sealing gland on cable end boxes.

Max. Ø cable: 75 mm



Air vents IP44

Two air vents must be mounted per enclosure to ensure sufficient air circulation and prevent water condensation.

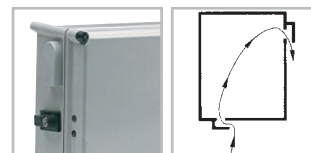
Complete with template and screws.

The air vents are preferably mounted in the upper and lower part of the base.

833677 1

Set of 2 pieces in polyamide.

RAL 7035



Bridges

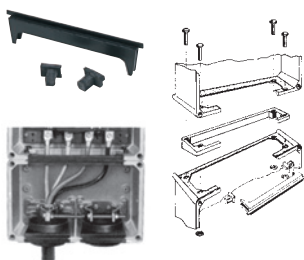
Make heavy connections easier whilst guaranteeing that the original degree of protection is maintained.

851103 1

Fits the 300 mm side.

851112 1

Fits the 370 mm side.



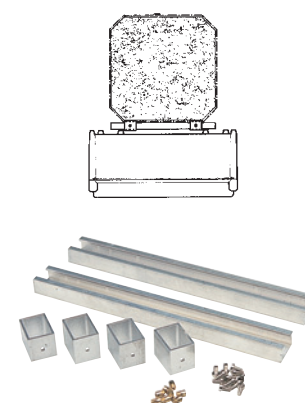
Pole mounting

- At the rear of enclosure, C-profiles are installed.

- Around the pole, a fixation (holding) band is installed. On the C-profile, clamps are placed to catch the holding band securely.

890510 1

Set of 2 C-profiles for side 300 and 370 mm (fixation band not included).



Safety locks with handle*

Complete with drilling template, keys and mounting hardware.

852020 1

2 keys V 2432E

Safety locks without handle

852021 1

Square key 8 mm

852022 1

Triangular key 8 mm

852024 1

Triangular key 11 mm

852023 1

Double-bit yale key 3 mm

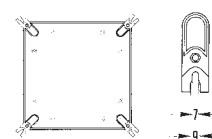


Mounting brackets

851266 1

Set of 4 pieces in glass fibre reinforced polyamide

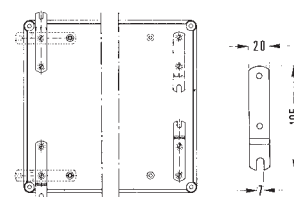
- For external fixing points.
- Direct fixing through the four corner holes of the enclosure.
- If extension frames are to be used, the mounting brackets shall be mounted before the frames.
- Maximum permissible component weight: 150 kg.



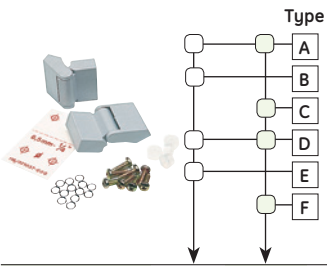
852025 1

Set of 4 pieces in stainless steel (type 304)

- For extremely severe working conditions.
- For band iron fixation to round poles.
- The four brackets are mounted directly at the rear of the box in reinforcements provided for that purpose.
- Fixing by M4 threaded bushes (supplied).
- Maximum permissible component weight: 150 kg.



Accessories



Selection	Base	
	APO 1	31-41-71-51
		81-61-11-12
Polyester cover	A	A
Polyester cover + depth extension	B	C
Polycarbonate cover	D	D
Polycarbon. cover + depth extension	E	F

Type	Hinges		
A	856109	1	
B	856110	1	
C	856111	1	
D	856112	1	
E	856113	1	
F	856114	1	

- In order to enable hinge mounting, holes must be drilled in the cover and in either the base or the extension frame. Templates for drilling these holes are supplied with each set. The type of hinge depends on the required combination.

- Hence six sets of hinges are available. Each set consists of two hinges, screws, a drilling template, the mounting instructions and, if necessary, spacer shims.

Hinge screw		
	851256	1

Set of 2 pieces
Remark: the box must be mounted prior to fitting the hinge screw.



Triangular TTR sealing screw		
	851262	1

For screwed cover.
Set of 2 pieces.



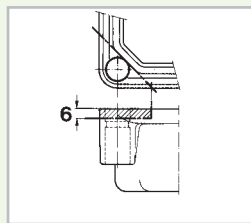
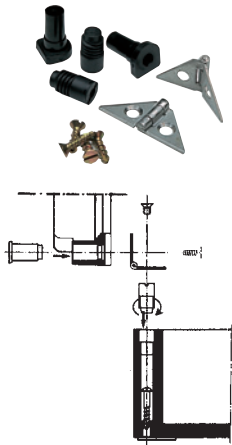
	852016	1
--	--------	---

For hinged cover.
Set of 2 pieces.



Cover hinges		
	851268	1

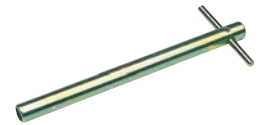
Set of 2 pieces in stainless steel (complete with fixing hardware)



Cover must be milled along the dotted line to a depth of 6 mm prior to hinge mounting.

Spanner		
	851016	1

For triangular TTR sealing screw.



Sealing plate		
	851260	1

Set of 2 pieces.

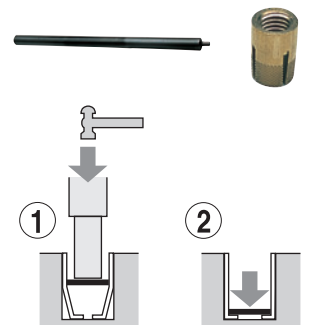


Padlocking set		
	852004	1




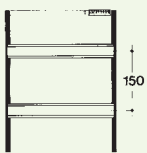
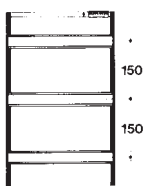
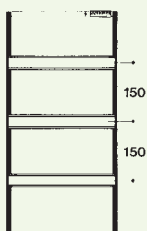

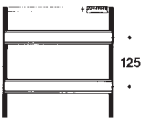

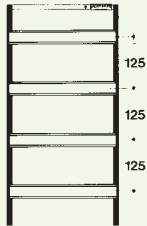
Max. diameter of padlock: 8 mm.



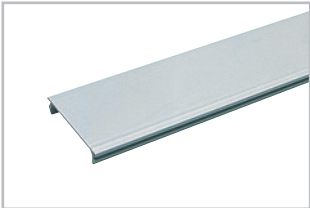



Threaded inserts		
	851026	100
M4 Dodge type inserts		
	851371	100
M6 Dodge type inserts x 12, 50 mm		
	851027	1
M4 special tool for securing		
	852003	1
M6 special tool for securing		





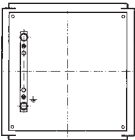
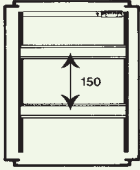
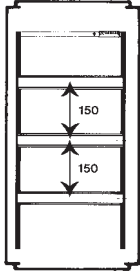
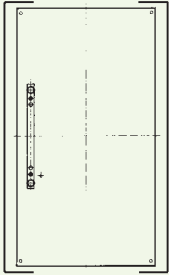

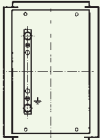
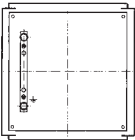

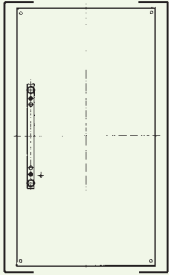
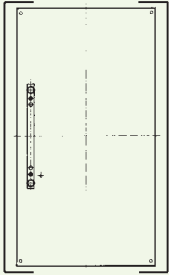
Universal fuseboard frames

Type	APO 31	APO 41	APO 71	APO 51	APO 61
 <p>Universal fuseboard frames</p> <p>Includes:</p> <ul style="list-style-type: none"> - Empty frames fitted with an earth terminal and cover plate. - The packaging includes fixing screws and height extension studs. 					
	302 x 186 14 modules 851326	302 x 302 14 modules 851336	372 x 302 28 modules 851353	488 x 302 42 modules 852283	603 x 302 42 modules 851345
					
	302 x 186 14 modules 851330	302 x 302 28 modules 851338	372 x 302 36 modules 851358	603 x 302 56 modules 851347	

Accessories


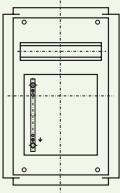
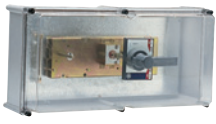
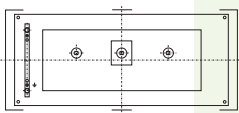
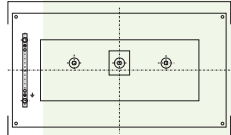
	Blank plate for screening off rectangular openings	828056 1m For cutout of 45 mm		Marking strip self adhesive	851321 1m
	Blanking plate	610142 4 For 4 modules		610484 500 For 4 modules	Branch terminals 6 x 10 mm ² + 2 x 16 mm ² to clip on 12 x 2 mm bar
					

Equipped individual units

Type	APO 31	APO 41	APO 71	APO 61	APO 11
 <p>Enclosures for DIN-rail equipment</p> <p>Includes:</p> <ul style="list-style-type: none"> - base with two open sides - with combi end plates top: 13 x M20/16 bottom: 2 x M32/25 + 3 x M25/20 + 4 x M20/16 - base frame with earth connector and coverplate - transparent pivoting cover 	 <p>186 x 302 x 175 14 modules 856119</p>	 <p>302 x 302 x 175</p>	 <p>372 x 302 x 175 28 modules 856120</p>	 <p>603 x 302 x 175 42 modules 856121</p>	 <p>603 x 372 x 270</p>
 <p>Enclosures for disconnecter loadbreak switches (Dilos) and fused disconnecter loadbreak switches (Fulos)</p> <p>Includes:</p> <ul style="list-style-type: none"> - base with two open sides - combi end plates: APO 31 on top and bottom: side 185: 4 x M20/16 + 1 x M32/25 APO 41 on top and bottom: side 300: 2 x M50/40 + 2 x M25/20 APO 71 and APO 11 are with 2 open sides, cable entry plates are to be ordered separately, see p. A.19 - mounting plate with threaded holes and earthing connector - transparent cover with handle cut-out and with screws - extension shaft and operating handle <p>Disconnecter loadbreak switches and fused disconnecter loadbreak switches are to be ordered separately</p>	 <p>302 x 186 x 175 DILOS 1 40/63/80/100/125A 3P/4P + ⊕ 856122</p>	 <p>302 x 302 x 175 DILOS 2 160/200A 3P/4P + ⊕ 856123</p>	 <p>372 x 302 x 175 DILOS 3 160/200/250/315A 3P/4P + ⊕ 856125</p>	 <p>603 x 372 x 270 DILOS 4 400/500/630A 3P/4P + ⊕</p>	 <p>603 x 372 x 270 FULOS 1 250A 3P/4P + ⊕ FULOS 2 400A 3P/4P + ⊕ 856127</p>



Equipped individual units

Type	APO 31	APO 41	APO 71	APO 61	APO 11	
 <p>Enclosures for loadbreak switches (Dilos) and fuse bases</p> <p>Includes:</p> <ul style="list-style-type: none"> - base with two open sides - with combi end plates top and bottom: 4 x M20/16 + 1 x M32/25 - one DIN-rail and mounting plate with earthing - transparent cover with handle cut-out and with screws - extension shaft and operating handle <p>Disconnecter loadbreak switches, fuse bases and fuses are to be ordered separately</p>	 <p>302 x 186 x 175 DILOS 1 40/63/80A 3P/4P + N 856128</p>					
 <p>Enclosures for changeover switches (Dilos/Fulos)</p> <p>Includes:</p> <ul style="list-style-type: none"> - base with two open sides - cable entry plates are optional, see p. A.22 - mounting plate with changeover system (I-O-II) and earth bar - transparent cover with handle cut-out and with screws - extension shaft and operating handle <p>Changeover switches are to be ordered separately</p>				  <p>603 x 302 x 210 DILOS 1H 125A 3P/4P + N FULOS 000 32/63/100A 3P/4P + N 856129</p> <p>603 x 372 x 270 DILOS 3 160/200/250/315A 3P/4P + N FULOS 00 160A 3P/4P + N FULOS 0 160A 3P/4P + N 856130</p>		

Notes

Insulated boxes

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Grid of dotted lines for notes.



- B.4 **MultiCab** - Medium sized multipurpose cabinets
- B.6 **ARIA** - Universal polyester cabinets
- B.16 **PolySafe** - Multipurpose polyester cabinets

e-Catalogue / Application guide

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Insulated wall mounting cabinets

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Insulated wall mounting cabinets

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Insulated wall mounting cabinets

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



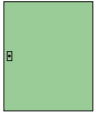







X

Grid area for notes.



Insulated wall mounting cabinets

Overview insulated wall mounting cabinets

MultiCab IP65	ARIA IP66	PolySafe IP65
 300 x 200 x 180	 315 x 215 x 170	 500 x 500 x 320
 300 x 300 x 180	 415 x 315 x 170	 500 x 750 x 320
 400 x 300 x 180	 515 x 415 x 230	 750 x 500 x 320
 500 x 400 x 200	 615 x 415 x 230	 750 x 750 x 320
 600 x 400 x 220	 735 x 535 x 270	 750 x 1000 x 320
	 835 x 635 x 300	 1000 x 500 x 320
	 1035 x 835 x 300	 1000 x 750 x 320
		 1000 x 1000 x 320
		 1000 x 1000 x 320
		 1000 x 1250 x 320
		 1250 x 750 x 320
		 1250 x 1000 x 320
		 1250 x 1000 x 320

H x W x D in mm

Overview

A

B

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Medium sized multipurpose cabinets

Quick-lock cover
latch or double bit

Smooth cover
no disturbing lock-elements

Many variations
39 different versions

Standard

IEC 62208

Approvals

Documents available on request

Features and benefits

- 5 basic dimensions from 300x200 up to 600x400 mm.
- In 3 different depths: 180-200-220 mm.
- 26 different cabinets in total!
- Made out of strong and reliable polycarbonate.
- Very high surface finish quality.
- High protection degree IP65 - IK08
- Grey and transparent cover versions.
- Smooth side walls.
- Many fixation possibilities in the base for mounting plate, DIN-rails, etc. by means of self-tapping screws.
- Hinged cover with latch or double-bit locking.
Lock installed at coverside, guaranteeing full visibility on components installed.
- Whole cover in transparent material, full visibility on built-in components.
- Wide rectangular front opening in base, no edge re-inforcements.
- Sturdy base, material thickness sufficient for direct cable gland threading.
- Customisation possibilities i.e. cut-outs.

Applications

- Automation and control applications
- Electronic application in data and telecom
- Commercial and industrial distribution boxes

Overview of the range ● Page B.3
 Dimensional drawings ● Page I.15
 Specifications for tender documents ● Page I.52



Medium sized multipurpose cabinets

	Type	MC 32	MC 33	MC 43	MC 54	MC 64
	H x W x D	300 x 200 x 180	300 x 300 x 180	400 x 300 x 180	500 x 400 x 200	600 x 400 x 220
	Polycarbonate, grey cover Latch locking on <u>short</u> side	Ref. No. 834000	-	834005	834008	-
	Polycarbonate, grey cover Latch locking on <u>long</u> side	Ref. No. 834001	834003	834006	834009	834011
	Polycarbonate, grey cover Double-bit locking on <u>long</u> side	Ref. No. 834002	834004	834007	834010	834012
	Polycarbonate, transparent cover Latch locking on <u>short</u> side	Ref. No. 834013	-	834018	834021	-
	Polycarbonate, transparent cover Latch locking on <u>long</u> side	Ref. No. 834014	834016	834019	834022	834024
	Polycarbonate, transparent cover Double-bit locking on <u>long</u> side	Ref. No. 834015	834017	834020	834023	834025
	Mounting plates Sheet steel, 1,5 mm Pertinax, 5 mm	Ref. No. 270 x 170	270 x 270	370 x 270	470 x 370	570 x 370
		Ref. No. 861798	861799	861800	834039	861803
	DIN-rail Pack = 10 pieces	Ref. No. 200	300	300	400	400
		Ref. No. 861810	861811	861811	861812	861812
		Ref. No. 300	-	400	500	-
	Aluminium cover plate	Ref. No. 861813	861814	861815	834042	861818
	Fixation set	Ref. No. 861819	861819	861819	861819	861819
	Wall mounting brackets Pack = 4 pieces	Ref. No. 861820	861820	861820	861820	861820

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Universal polyester cabinets



Standards

EN/IEC 61439-2
EN/IEC 60529
EN/IEC 62208

Approvals



UL types 3, 3R, 3S, 4, 4X,
12 and 13
Available on request



CSA types 3, 3R, 3S, 4, 4X,
12 and 13
Available on request



Lloyd's Register of Shipping

Features

- The range is available in seven sizes, ranging from 315 x 215 to 1035 x 835 mm.
- The cabinets are made of light-grey (RAL 7035) hot moulded, glass fibre reinforced polyester, dyed in mass. The enclosure is furnished with four threaded studs and bolts for mounting plate or mounting frame installation.
- The enclosure provides total insulation and a protection degree of **IP65/66** following EN/IEC 60529.
- Protection degree IK10 against external mechanical impacts according to EN/IEC 62262 (IK07 for cabinets with glazed door).
- Resists temperatures up to 70°C in continuous use (peak temperatures up to 130°C).
- Self extinguishing and halogen-free.
- Rated insulation voltage $U_i = 1000V$.

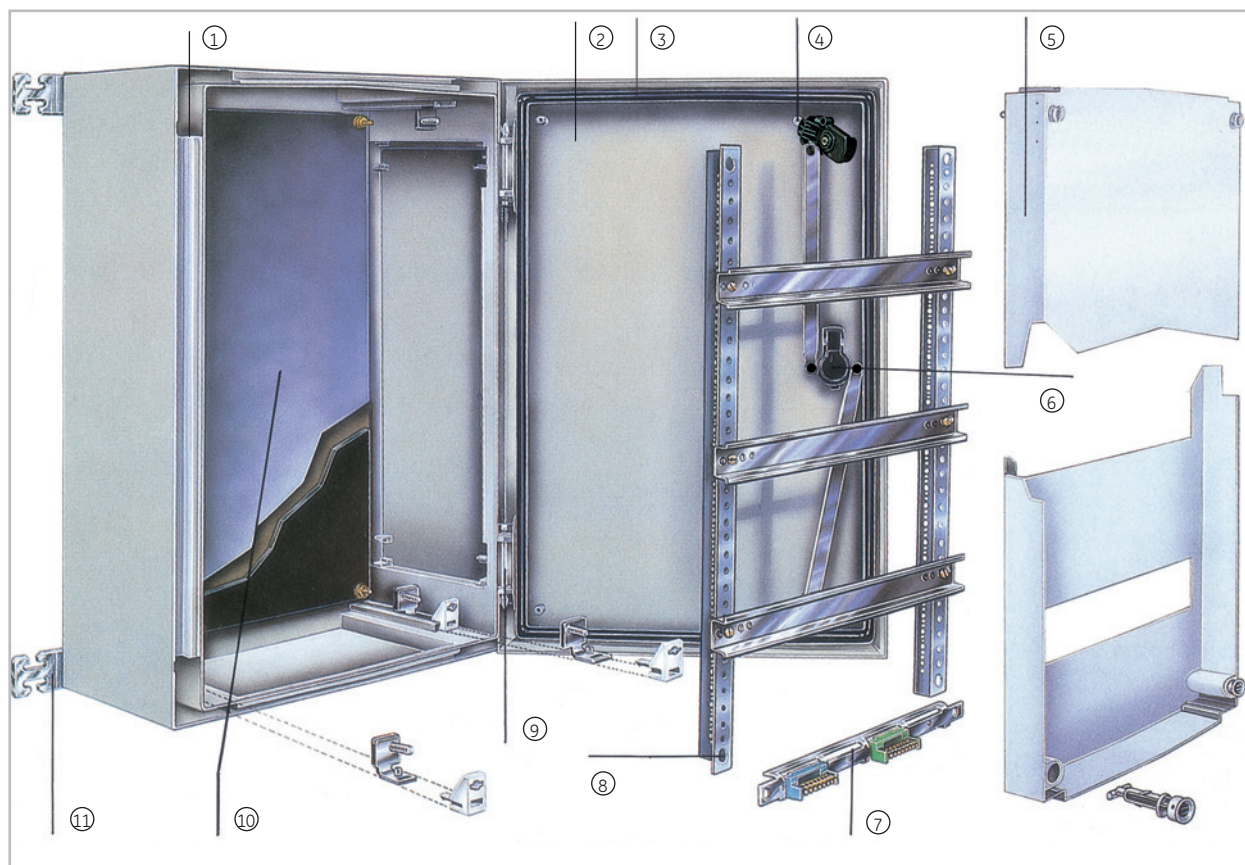
Applications

- | | |
|---|------------------------|
| - Heavy industry | - Brewery |
| - Steel mills | - Public services |
| - Petrochemical plants | - Street signalisation |
| - Temporary connection (for construction sites) | - Telecom |
| | - Photovoltaic energy |



- Overview of the range ● Page B.3
- Dimensional drawings ● Page I.20
- Specifications for tender documents ● Page I.53
- Power dissipation values ● Page I.70



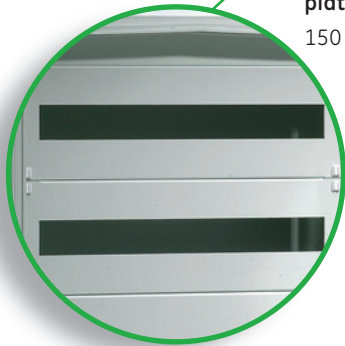
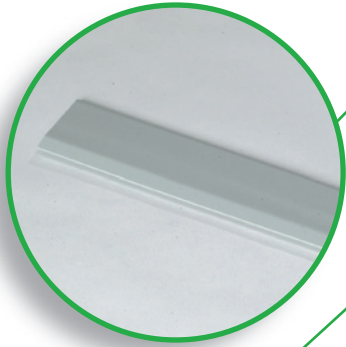


- ① Housing in one piece
- ② Removable door: left- or right-hand hinged (not for version with swing-handle)
- ③ Slightly curved gasket-slot avoiding stagnant water
- ④ Fixing points at rear of door
- ⑤ Cover plate:
 - polyester RAL 7035
 - hinged
 - independent
 - reversible
 - sealable
 - with snap-on fixing
- ⑥ Three point closing system with one lock. Exchangeable locks.
- ⑦ Independent rail for terminal blocks
- ⑧ Mounting frame
 - removable
 - predrilled
 - reinforced DIN-rails
- ⑨ Integrated hinges. Door opens 180°
- ⑩ Mounting plate
 - metal
 - pertinax
 - perforated
- ⑪ Direct wall fixing points or wall fixing lugs in plastic material or stainless steel.

- Monobloc type of cabinet
- In and outdoor use
- 7 dimensions 315x215x170 up to 1035x835x300 mm
- 1, 2 or 3 point locking mechanism
- Glass fibre reinforced polyester
- Protection degree **IP65/66**-IK10 (plain door)
- Fitted for mounting plate and modular mounting frame
- Wall mounting/pole fixing
- Execution on base (metal or concrete)
- Approvals: UL/CSA/Lloyd's Register

Self-adhesive rainhood

(as a standard accessory with each cabinet)
avoiding dripping water drops while opening the door



Mounting frame with individual modular cover plates for DIN-rail equipment

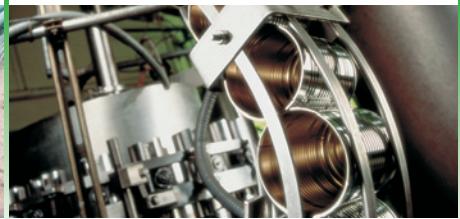
150 mm between centres, up to 180 modules !



Construction



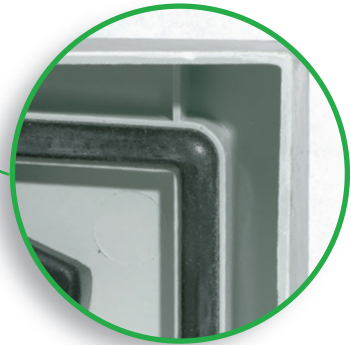
Petrochemicals



Conveyer belts



Durable polyurethane gasket



Ergonomic new closing mechanism

- Reducing closing force by 25%
- Can also be operated by swing-handle



Patented doorlifter for bigger dimensions (ARIA 75 and larger) ensuring the door takes it's center position during closing



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Traffic



Water treatment



Camping and Hotels



Universal polyester cabinets



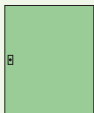
		Type	ARIA 32	ARIA 43	ARIA 54	ARIA 64
		H x W x D	315 x 215 x 170	415 x 315 x 170	515 x 415 x 230	615 x 415 x 230
	Cabinet ☑ IP65 - IK10 With double bit lock 3 mm	Ref. No.	-	-	831809 2-point	831810 2-point
		Cabinet ☑ IP66 - IK10 With central double bit lock 3 mm	Ref. No.	831025 ⁽¹⁾	831036	831052
	Cabinet ☑ IP66 - IK10 With central swing handle for profile half cylinder	Ref. No.	-	831034	831051	831064
		Glazed door cabinet ☑ IP65 - IK07 With double bit lock 3 mm	Ref. No.	-	-	831812 2-point
		Glazed door cabinet ☑ IP66 - IK07 With central double bit lock 3 mm	Ref. No.	-	831815	831129
		Glazed door cabinet ☑ IP66 - IK07 With central swing handle for profile half cylinder	Ref. No.	-	-	831284

(1) 1 point locking mechanism, no closing rod
Pack: 1



Applications

- Industry
- Steel works
- Oil refineries
- Breweries
- Shipyards
- Public utilities
- Photovoltaic energy
- Heavy industry



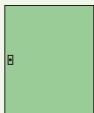
		
ARIA 75	ARIA 86	ARIA 108
735 x 535 x 270	835 x 635 x 300	1035 x 835 x 300
831811 2-point	-	-
831081	831098	831112
831080	831097	831111
831814 2-point	-	-
831131	831132	831133
831286	831287	831288

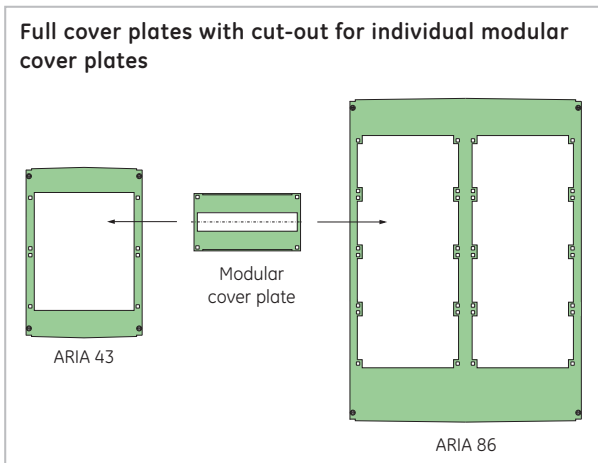


Universal polyester cabinets - Accessories

						
	Type		ARIA 32	ARIA 43	ARIA 54	ARIA 64
	H x W x D		315 x 215 x 170	415 x 315 x 170	515 x 415 x 230	615 x 415 x 230
	Mounting plates	H x W	250 x 150	350 x 250	450 x 350	550 x 350
	Pertinax 5 mm	Ref. No.	831027	831038	831054	831067
	Sendzimir zinc coated sheet steel 2 mm	Ref. No.	831026	831037	831053	831066
	Metal perforated 1.5 mm	Ref. No.	831332	831333	831334	831335
	Mounting frame	Ref. No.	831030	831041	831057	831070
	Banks		2	2	3	3
	Modules		12	24	54	54
	Rail for terminal blocks	Ref. No.	831018	831019	831020	831020
	Available spaces for terminal		2	3	4	4
	Full cover plates					
	Plain	Ref. No.	831028	831039	831055	831068
	With cut-outs for DIN-rail equipment	Ref. No.	831029	831040	831056	831069
	With cut-out for individual modular cover plates	Ref. No.	-	831790	831791	831792
	Number of ind. mod. cover plates containable		-	2	3	3
	Individual modular cover plates IP20 (PVC)	H x W	-	150 x 239	150 x 343	150 x 343
	Plain	Ref. No.	-	831797	831799	831801
	With cut-out for DIN-rail equipment	Ref. No.	-	831796	831798	831800
	Modules		-	12	17	18

Pack: 1

		
ARIA 75	ARIA 86	ARIA 108
735 x 535 x 270	835 x 635 x 300	1035 x 835 x 300
650 x 450	750 x 550	950 x 750
831083 831082	831100 831099	831114 831113
831336	831337	831338
831086	831103	831117
4 88	4 96	5 180
831021	831022	831023
6	7	10
831084	831101	831115
831085	831102	831116
831793	831794	831795
4	8	10
150 x 423	150 x 239	150 x 343
831803	831797	831801
831802	831796	831800
22	12	18



The cabinets ARIA 43 and 86 (*) as well as ARIA 64 and 108 (**) contain the same individual modular cover plates (plain and with cut-out).

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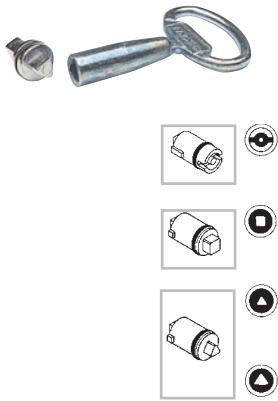
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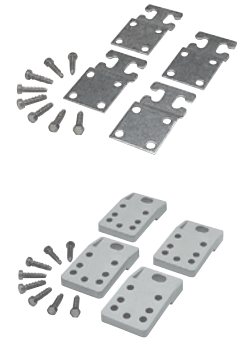


Common accessories



Lock inserts		
To replace double-bit inserts from standard delivery		
	831008	1
3 mm		
	831005	1
8 mm		
	831006	1
8 mm		
	831007	1
11 mm		
Other locks on request.		

Fixing lugs		
	831000	1
Set of 4 fixing lugs. 304 stainless steel.		
	831001	1
Set of 4 fixing lugs in polyamide		

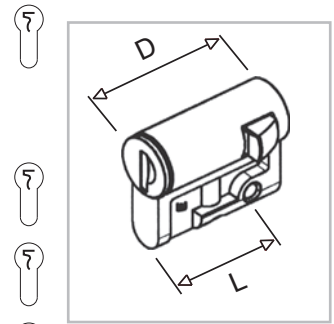


Hinge supports for inner door		
	831010	1
Set of 2 hinge supports for cover plate. Together with a closed cover plate an inner door can be realised.		



Handles*		
	831003	1
Neutral handle		
	831004	1
Handle with lock and 2 keys V2432E		
	831180	1
Handle with lock and 2 keys 1242E		
	831152	1
Handle with lock and 2 keys 405E		
	831153	1
Handle with lock and 2 keys 455E		

Profile half cylinder locks		
Standard: D = 40 mm - L = 30,5 mm		
	832030	1
With 2 keys V2432-E		
	832741	2
Spare keys for 832030		
	832031	1
With 2 keys 1242-E		
	832465	1
With 2 keys 455-E		
	832466	1
With 2 keys 405-E		
	843435	1
With 1 square key, 6 mm		
	832032	1
With 1 square key, 8 mm		
	832033	1
With 1 triangular key, 8 mm		
	832034	1
With 1 triangular key, 11 mm		
	832029	1
With 1 double-bit key, 3 mm		



	831821	1
Handle for profile half cylinder, 40 mm (As spare part or replacement for ARIA 54 and larger - in case of new replacing double-bit lock a mechanical operation at the door is necessary)		



	843000	1
Handle for profile half cylinder, 45 mm (As spare part or replacement for ARIA 54 and larger - in case of new replacing double-bit lock a mechanical operation at the door is necessary)		

	831822	1
Handle for profile half cylinder for padlocking (As spare part or replacement for ARIA 54 and larger - in case of new replacing double-bit lock a mechanical operation at the door is necessary)		

* Handles type 1 can be mounted instead of the double-bit insert without mechanical modification of the door cut-out.

Ventilation grids		
(IP44 when mounted in the double corner on ARIA)		
	831009	1
Set of two ventilation grids Drilling Ø 34,9 mm		
Please refer to chapter G for more ventilation options.		



Common accessories (continued)



Supporting chair		
	891854	1

For ARIA 75 and 86, for temporary connections

Blanking plate		
	610142	4

For 4 modules

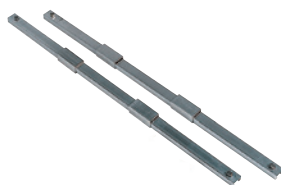
	610484	500
--	---------------	------------

For 4 modules



Marking strip		
	851321	1m

Self adhesive



Pole mounting set		
	891608	1

For ARIA 54/64

Stainless steel fixing lugs are included.

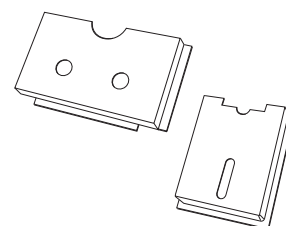
Pole mounting with steel band (not included)

Document pocket		
	811516	1

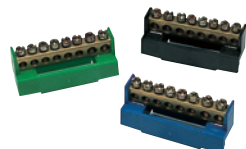
DIN A4 - W x H = 325 x 180 mm

	832000	1
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DIN A5 - W x H = 155 x 225 mm



Branch terminals		
6 x 10 mm ² + 2 x 16 mm ²		
to clip on 12 x 2 mm bar		



	610185	4
--	---------------	----------

Phase bar - black

	610186	4
--	---------------	----------

Earth bar - green

	610187	4
--	---------------	----------

Neutral bar - blue

Nuts		
For perforated mounting plates		

	831328	50
--	---------------	-----------

M4

	831329	50
--	---------------	-----------

M5

	831330	50
--	---------------	-----------

M6



Multipurpose polyester cabinets



Standards

EN/IEC 60529
EN/IEC 62208
EN/IEC 62262

Approvals



- Cabinets with one door:
type 3, 3R, 3S, 4, 4X, 12, 12K and 13
 - Cabinets with two doors:
type 3, 3R, 3S, 4, 4X, 12, 12K and 13
 - Coupled cabinets:
type 3, 3R, 3S, 12, 12K and 13
- Available on request



Lloyd's Register of Shipping

Ambient conditions

Indoor and outdoor stationary use,
at temperatures between -35°C and
70°C in continuous use and at peak
temperatures up to +150°C

Features

- 14 standard dimensions (from 500 x 500 up to 1250 x 1000) in one depth 320 mm
- Cabinets are standard factory assembled (empty or equipped)
- High protection degree **IP65 & IP54**-IK10 (20 J) according to IEC 60529 and EN/IEC 62262 (IP54 - IK07 for cabinets with glazed door)
- Material: self-extinguishing, hot moulded, halogen-free, fiberglass reinforced polyester (environment friendly)
- Colour: grey RAL7035, dyed in mass
- Designed for wall mounting, floor standing and pole fixing
- Coupling possibilities in height, width and depth
- Total insulation
- Door with 5-point latching mechanism
- Execution as pedestal possible
- Rated insulation voltage $U_i = 1000V$
- Easy recyclable: no moulded-in metal parts



- Overview of the range ● Page B.3
- Dimensional drawings ● Page I.22
- Specifications for tender documents ● Page I.54
- Power dissipation values ● Page I.72



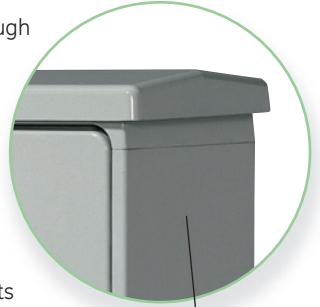
Applications

- Commercial**
 Leisure (market places, camping sites, harbours for pleasure crafts, amusement parks), fuel stations, car washes, laundrettes and laundries, service enclosures for construction yards, ...
- Industrial**
 Shipyards, mining, automotive, paper and pulp, food and beverage, petro-chemicals, heavy industry, transformers, system monitoring, ...
- Utilities**
 Water treatment plants, waste management, telecommunications, traffic signaling systems, traffic management, public transport, energy distribution (electricity, gas, water), cable television (CATV), public lighting, railways, ...



Rainhood for outdoor use

- Up to IP65, not necessary
- Possibility of ventilation through cut-outs in top panel and air vents on side panels (to prevent internal condensation)
- Protection degree: IP44/IP54 in case of ventilation
- Moulded-in markings on the inside top panel shows the cut-out and fixation points



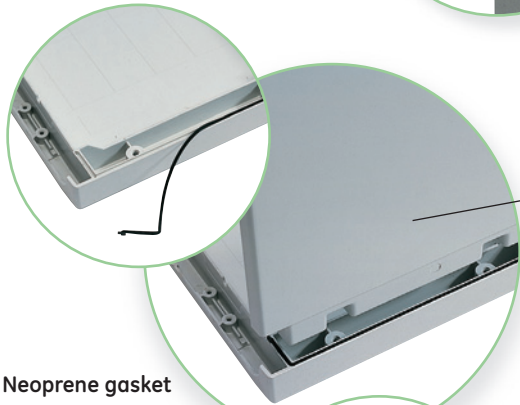
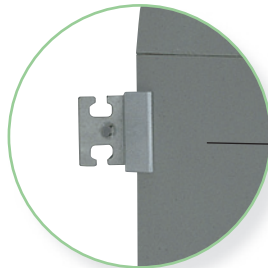
Backpanel

- Enclosed in main structure
- Has a seamless top panel as a result
- No inserts
- PUR sealing directly injected and responsible for high protection degree IP65/54



Wall mounting brackets

- No mounting screws necessary
- Can be mounted vertical or horizontal



Neoprene gasket

- Preformed and premounted

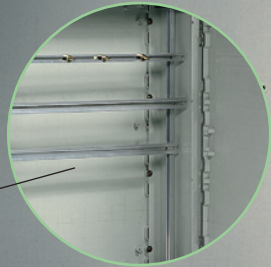


Side panels

- Integrated into top and bottom
- Provide a very solid and stable construction

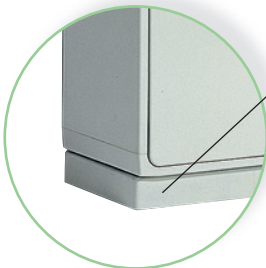
Mounting frame

- In Alu with standard horizontal Alu C-profiles for all four widths
- Regulation in depth possible for all sizes
- Offering a complete solution (no more sawing necessary)



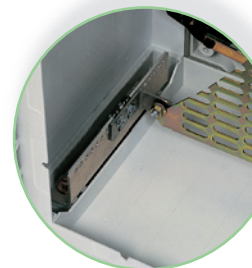
Floor mounting frame

- Base in polyester (height 65 mm)
- For anchoring the cabinet with the floor
 - Moulded-in markings on the inside bottom panel shows the cut-out and fixation points for anchoring



Mounting plates

- Metal 2 mm
- Pertinax 5 mm
- Metal perforated 2 mm
- Fixed (by means of HiLo) as well as adjustable in depth for all sizes



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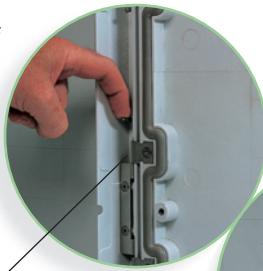
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Self tapping HiLo screws
(no inserts)

- For assembling main structure and fixation of the back panel
- Makes the cabinet easily dismantled for recycling



Hinges

- Mounted directly on the side panels, each step of 250 mm
- Direct access outside the functional part of the cabinet

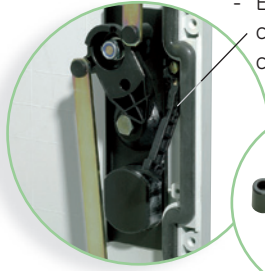
Standard ergonomic operating handle

- Premounted on the door
- Suitable for all types of profile half cylinder locks (standard depth 40 mm/ alt. depth 45 mm)
- Possibility of padlocking (no access to unauthorised persons)



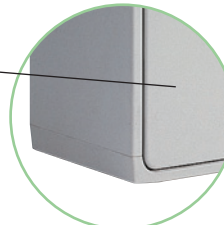
Doorlifter

- For bigger dimensions
- Ensuring the door takes its center position during closing



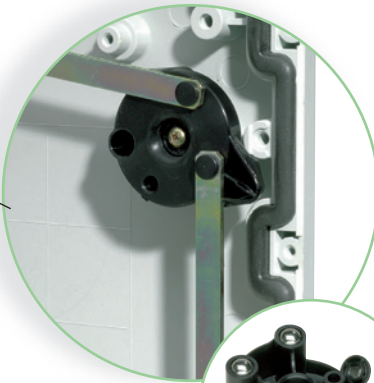
Door

- Flush mounted
- Plain or glazed
- No inserts (HiLo screws)
- Inclosed in main structure
- Has a seamless top panel as a result
- Injected PUR sealing (IP54) or EPDM sealing (IP65)
- Opening angle 100°



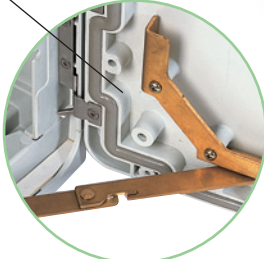
Standard 5 point latching mechanism

- Operated by one handle
- Provides secure closing (IP65)



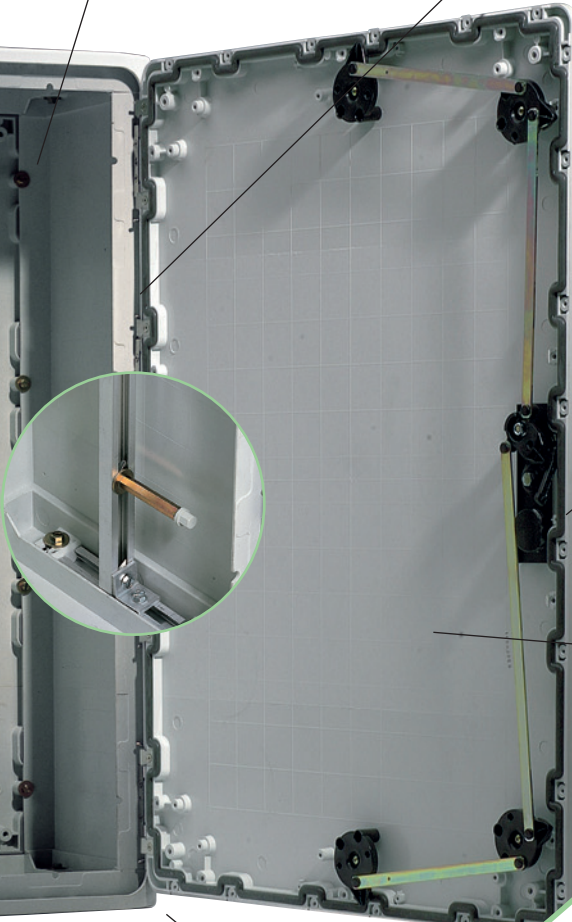
Doorstop

Prevents stressing the door hinges caused by wind in outside use.
For enclosure width 750 mm and larger.



Door conducting

For exact door positioning in the main structure



Customisation



Cabinet can be ordered with preformed cut-outs to suit your application: ease and speed of mounting.



Lay-out in compartments and internal separations as a flexible solution for the end customer (e.g. separation of distribution and instrumentation sections).



Coupling in depth by means of a depth extension kit (unlimited).



Cabinet also available with inset polycarbonate window: visibility of operating components, internal signalisation.



Coupling in height and width by means of a coupling kit (see accessories): ease of extension.



Cabinet can be factory equipped and wired according to the customers requirements: ready to install and operate.

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Customisation

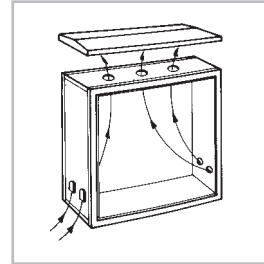
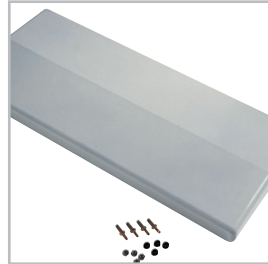


Cabinet also available in kit-form on demand: ease of transportation, space saving storage.

Mounting applications

Rainhoods

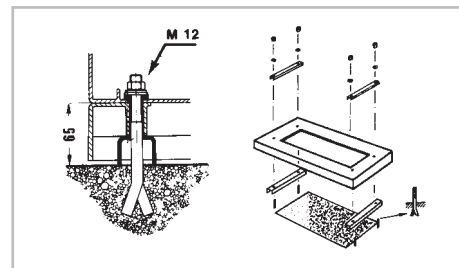
Four fixing points for securing rainhood are marked off in top panel. By drilling holes in the top panel and by fitting air vents (Ref. No. 833677) on the side panels, the cabinet with rainhood will be efficiently ventilated. (IP44)
For extra depth or extra width, please contact us.



Cabinet can be provided with door on the front and at the rear: easy access, two different individual compartments.

Plinth

Easily mounted in accordance with the enclosed instructions



Cabinet can be supplied painted in other colours or with personal identification: environmental influence adaptation, ease of recognition, anti-graffiti.



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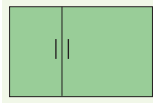
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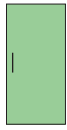
X

Multipurpose polyester cabinets

	Depth = 320 mm	PS 220	PS 230	PS 320	PS 330	PS 340
	<p>Factory-assembled cabinet Complete with handle and wall mounting brackets of AISI 304 stainless steel (without cylinder lock) Dimensions (H x W)</p>	500 x 500	500 x 750	750 x 500	750 x 750	750 x 1000
	IP54 Cabinet with plain door	833745	833746	833747	833748	833749
	IP54 Cabinet with glazed door (polycarbonate window)	833850	833851	833852	833853	833854
	IP65 Cabinet with plain door	833000	833004	833008	833012	833016
	Weight (kg)	16	19	20	25	30
	<p>Cabinet with door on the front and at the back</p>					
	IP54	833863	833864	833865	833866	833867
	IP65	833076	833086	833219	833373	833077
	<p>Mounting plate Dimensions (H - 110 mm x W - 110 mm)</p>					
	Sendzimir zinc coated sheet steel 2 mm	833500	833501	833501	833502	833504
	Perforated 2 mm	833516	833517	833518	833519	833520
	Pertinax 5 mm	833508	833509	833509	833510	833512
	Pertinax 10 mm	-	-	-	-	-
	<p>IP54 Depth extension kit IP65 Depth extension kit To increase the standard depth 320 mm of the cabinet up to 640 mm. The kit consists out of two side panels, one top and bottom panel and two open backpanels.</p>	833877 833584	833878 833585	833879 833586	833880 833587	833881 833588
	<p>Rainhood For an efficient ventilation (IP44) in outdoor use by drilling holes in the top panel.</p>	833566	833568	833566	833568	833570
	As the standard enclosure is IP65, a rainhood is not necessary. In case of extra width or depth, see B.24.					
	<p>Plinth or floor mounting frame. Cabinet and plinth are anchored together in the flooring - H = 65 mm</p>	833574	833575	833574	833575	833576
	<p>Adaptor frame for DIN-base mounting Cabinet and adaptor frame are anchored on the DIN base (polyester or concrete)</p>	-	833582	-	833582	833583
	DIN-base Polyester base - kit-form	-	842100	-	842100	842101
	<p>Mounting frame in Alu Consisting out of: four attachment brackets, two vertical C-profiles. Horizontal profiles to be ordered separately, see B.19</p>					
	Continuously adjustable	833533	833533	833534	833534	833534
	Adjustable in steps of 12,5 mm	833529	833529	833530	833530	833530
	Length of horizontal profile (mm)	468	718	468	718	968



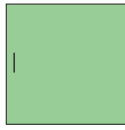
PS 352



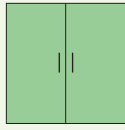
PS 420



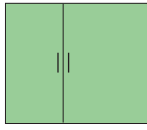
PS 430



PS 440



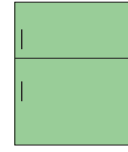
PS 442



PS 452



PS 530



PS 542



PS 546

750 x 1250	1000 x 500	1000 x 750	1000 x 1000	1000 x 1000	1000 x 1250	1250 x 750	1250 x 1000	1250 x 1000
833754	833750	833751	833752	833755	833756	833753	833757	833758
833855	833856	833857	-	833858	833859	833860	833861	833862
833020	833024	833028	833032	833036	833040	833044	833052	833056
38	25	30	36	39	41	37	45	45
833868	833869	833870	833871	833872	833873	833874	833875	833876
833374	833375	833085	833376	833377	833378	833379	833380	833381
833506	833503	833504	833505	833505	833507	833506	833507	833507
833521	833522	833523	833524	833524	833525	833526	833527	833527
833514	833511	833512	833513	833513	833515	833514	833515	833515
833385	-	-	833386	833386	833387	833385	833387	833387
833882	833883	833884	833885	833885	833886	833887	833888	833888
833589	833590	833591	833592	833592	833593	833594	833595	833595
833572	833566	833568	833570	833570	833572	833568	833570	833570
833577	833574	833575	833576	833576	833577	833575	833576	833576
-	-	833582	833583	833583	-	833582	833583	833583
-	-	842100	842101	842101	-	842100	842101	842101
833534	833535	833535	833535	833535	833535	833536	833536	833536
833530	833531	833531	833531	833531	833531	833532	833532	833532
1218	468	718	968	968	1218	718	968	968

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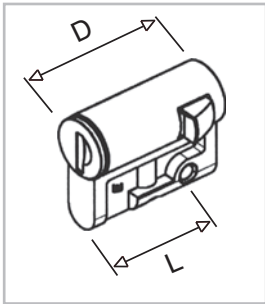
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Accessories



Profile half cylinder locks	
Standard: D = 40 mm - L = 30,5 mm	
832030	1
With 2 keys V2432-E	
832741	2
Spare keys for 832030	
832031	1
With 2 keys 1242-E	
832465	1
With 2 keys 455-E	
832466	1
With 2 keys 405-E	
843435	1
With 1 square key, 6 mm	
832032	1
With 1 square key, 8 mm	
832033	1
With 1 triangular key, 8 mm	
832034	1
With 1 triangular key, 11 mm	
832029	1
With 1 double-bit key, 3 mm	



Handle	
833629	1
For profile half cylinder locks with length of 40 mm (as replacement)	



Handle	
833290	1
Jumbo version, for profile half cylinder locks with length of 45 mm	



Handle	
783148	1
For two profile half cylinder locks. For utility applications.	



Padlocking handle	
833630	1
For padlocking (max. Ø 10 mm)	



Depth adjustment kit	
833528	1
Set of four brackets for depth adjustment of mounting plate (step 12,5 mm).	

Door stop / Canopy stop	
100° opening angle of the door or the canopy	
833649	1
Left turning	
833650	1
Right turning	



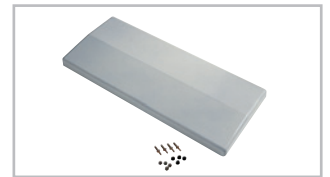
Wall mounting brackets for standard cabinets	
833651	1
(as replacement)	
Kit of four brackets for clip fixation at the rear of the cabinet.	
Made of stainless steel type 304	



Wall mounting brackets for cabinets with rainhood	
833624	1
Kit of four special brackets for clip fixation at the rear of the cabinet.	



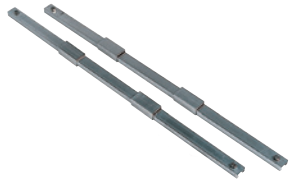
Rainhood	
Rainhoods for enclosure combinations.	
Standard rainhoods on page B.22	



833656	1	1500 x 320 mm
833657	1	1750 x 320 mm
833658	1	2000 x 320 mm
833659	1	2250 x 320 mm
833660	1	2500 x 320 mm
833689	1	2750 x 320 mm
833661	1	3000 x 320 mm
833693	1	500 x 640 mm
833692	1	750 x 640 mm
833783	1	1000 x 640 mm
833784	1	1250 x 640 mm
833743	1	1750 x 640 mm
833691	1	2000 x 640 mm
833764	1	2500 x 640 mm



Accessories (continued)



Pole mounting

	833625	1
--	---------------	---

500 mm width

	833626	1
--	---------------	---

750 mm width

At the rear of the enclosure, C-profiles are mounted on the wall mounting brackets (delivered with the enclosure).

Around the pole, a steel holding band is installed (not delivered with the enclosure)

On the C-profiles, clamps are placed to fix the holding band securely.



Indoor IP20

H x W		
--------------	--	--

500 x 500 mm	833556	1
--------------	---------------	---

500 x 750 mm	833557	1
--------------	---------------	---

750 x 500 mm	833558	1
--------------	---------------	---

750 x 750 mm	833559	1
--------------	---------------	---

1000 x 500 mm	833561	1
---------------	---------------	---

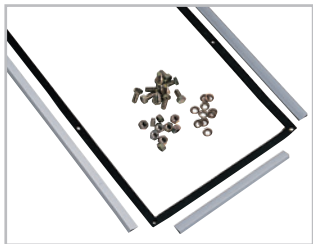
1000 x 750 mm	833562	1
---------------	---------------	---

Frame and door with 2 double-bit locks.
For controls and automation applications.

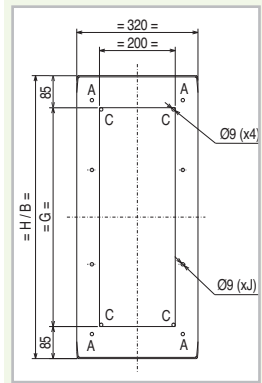


Coupling kit IP65

H/B	G	J	Depth 320 mm		
500	330	6		833608	1
750	580	8		833610	1
1000	830	12		833612	1
1250	1080	14		833614	1



Vertical and/or lateral coupling.
Package includes the neoprene gasket, coupling bolts and nuts, and the protection profiles.



19"/ETSI swing frame

For direct fixing of 19" or ETSI modular chassis to the standard drillings.

	833680	1
--	---------------	---

For cabinets H x W = 500 x 750
6 units 19" - 12 units ETSI

	833681	1
--	---------------	---

For cabinets H x W = 750 x 750
12 units 19" - 22 units ETSI

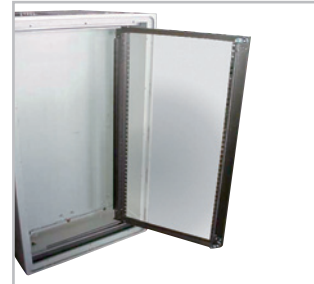
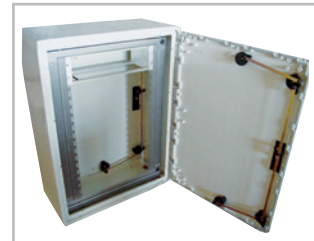
	833682	1
--	---------------	---

For cabinets H x W = 1000 x 750
18 units 19" - 32 units ETSI

	833683	1
--	---------------	---

For cabinets H x W = 1250 x 750
23 units 19" - 42 units ETSI

Metal frame: epoxycoating RAL 7035
19"/ETSI-profiles: galvanised bichromated metal



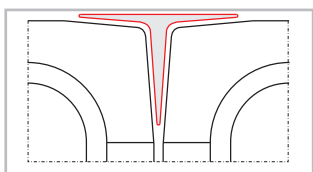
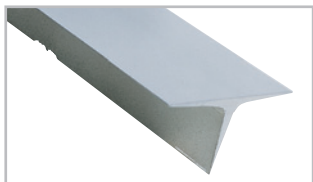
Corner profile

	833653	1
--	---------------	---

To fill up the corner between two coupled enclosures

Length = 308 mm

Use 2 profiles when coupling 4 enclosures



Blind coverplates for 19"/ETSI swing frames

To fill up the remaining free space

	833684	1
--	---------------	---

For cabinets H x W = 500 x 750
Height of the coverplate = 32 mm

	833685	1
--	---------------	---

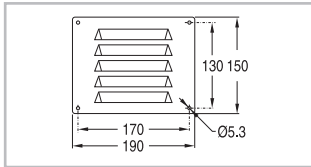
For cabinets H x W = 750 x 750
Height of the coverplate = 15 mm

	833686	1
--	---------------	---

For cabinets H x W = 1250 x 750
Height of the coverplate = 28 mm

Metal: epoxycoating RAL 7035
Remark: not necessary for cabinet
H x W = 1000 x 750

Accessories (continued)

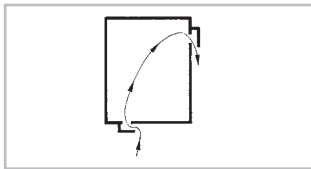


Louvre plate	
832019	1

Fits on ventilation opening.
Package includes 2 grids and 4 nylon nails.

Supporting chair	
891854	1

For PS220 and PS320
For enclosures for temporary connections



Air vents IP44
Two air vents must be mounted per enclosure to ensure sufficient air circulation and prevent condensation water.
Complete with template and screws.
Air vents are preferably mounted in the upper and lower part of the enclosure.

833677	1
---------------	----------

Set of 2 pieces in polyamide.
RAL 7035

Please refer to chapter G for more ventilation options.

Filling pellets	
422902	1

Pellets made out of clay as humidity barrier between ground and enclosure.
Recommended filling height 200-300 mm.
DIN 00-1: 1 bag
DIN 2-3: 2 bags



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Notes

A large grid of small dots for taking notes, covering most of the page.

Multipurpose cabinets

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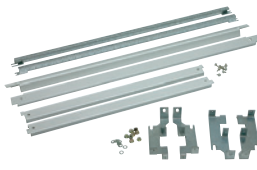
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Modular framework for DIN-rail equipment - IP20

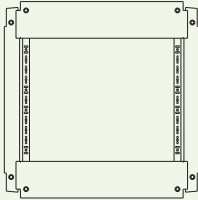
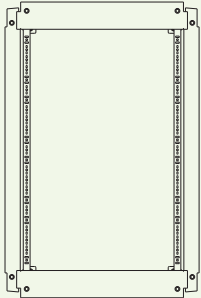
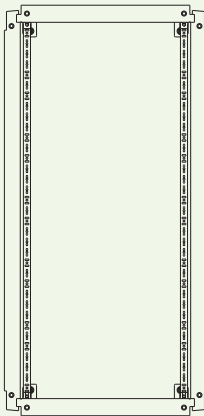
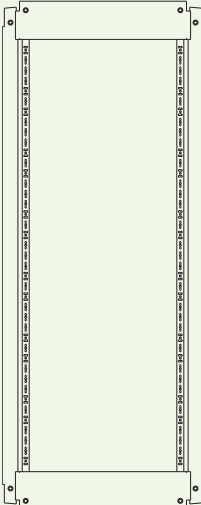


Delivered in kit-form

Content of the kit:

- 2 x support for left vertical profile
- 2 x support for right vertical profile
- 2 x vertical mounting profile
- 2 x insulated vertical cover for IP20
- 2 x insulated horizontal cover for IP20
- all screws and nuts for assembly



2 rows			4 rows		
Description	Ref. No.		Description	Ref. No.	
40 mod. - HxW = 500x500	833264		80 mod. - HxW = 750x500	833266	
68 mod. - HxW = 500x750	833265		136 mod. - HxW = 750x750	833267	
6 rows			7 rows		
Description	Ref. No.		Description	Ref. No.	
120 mod. - HxW = 1000x500	833268		238 mod. - HxW = 1250x750	833270	
204 mod. - HxW = 1000x750	833269				

Modular functions and accessoires, see B.29



Modular functions for DIN-rail equipment (to be mounted on the modular framework)



- Consists of:
- DIN-rail
 - coverplate with rectangular cut-out
 - accessories for assembly

Centre distance 150 mm				
Height	Width	500 mm	750 mm	
150 mm				
		Modules (1 mod. = 18 mm) Ref. No.	20 833272	34 833278

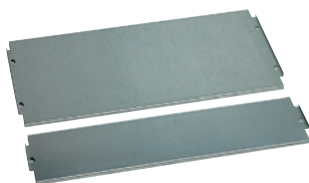
Modular functions for terminals or other equipment (to be mounted on the modular framework)



- Consists of:
- DIN-rails
 - plain coverplate
 - accessories for assembly

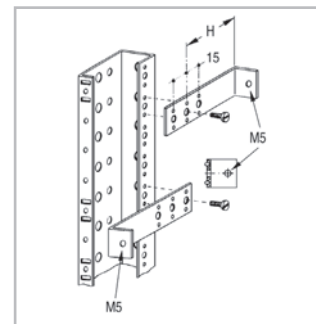
Centre distance 150 mm				
Height	Width	500 mm	750 mm	
150 mm				
		Ref. No.	833271	833277
300 mm				
		Ref. No.	833274	833280

Accessories (to be mounted on the modular framework)

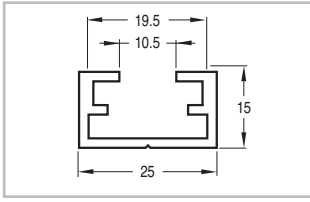


Metal mounting plates	
	833275 1
H x W = 150 x 500 mm	
	833281 1
H x W = 150 x 750 mm	
	833276 1
H x W = 300 x 500 mm	
	833282 1
H x W = 300 x 750 mm	

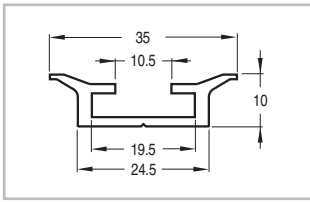
Depth extension studs for metal mounting plates with 2 screws M5 x 10 (1 set = 2 pieces)	
	828059 1 set
Length (mm): 20-35-50	
	828060 1 set
Length (mm): 25-40-55	
	828061 1 set
Length (mm): 30-45-60	
	828062 1 set
Length (mm): 65-80-95	
	828063 1 set
Length (mm): 70-85-100	
	828064 1 set
Length (mm): 75-90-105	
	828031 1 set
Length (mm): 110-125-140	



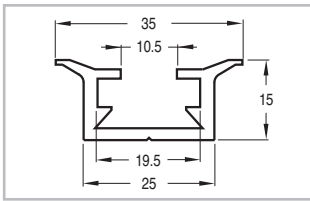
Accessories for Alu mounting frame



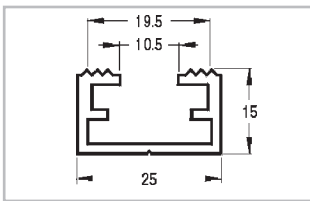
Aluminium profiles (mm)	
833537	1
Enclosure width 500 - Profile length 468	
833538	1
Enclosure width 750 - Profile length 718	
833539	1
Enclosure width 1000 - Profile length 968	
833540	1
Enclosure width 1250 - Profile length 1218	



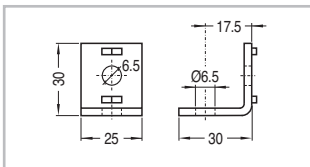
833545	1
Enclosure width 500 - Profile length 468	
833546	1
Enclosure width 750 - Profile length 718	
833547	1
Enclosure width 1000 - Profile length 968	
833548	1
Enclosure width 1250 - Profile length 1218	



833541	1
Enclosure width 500 - Profile length 468	
833542	1
Enclosure width 750 - Profile length 718	
833543	1
Enclosure width 1000 - Profile length 968	
833544	1
Enclosure width 1250 - Profile length 1218	



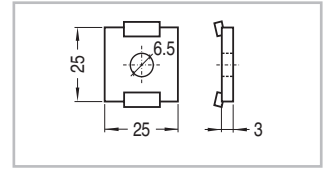
811417	1
Profile length 3000	



Fixing brackets	
811463	100

Support for studs

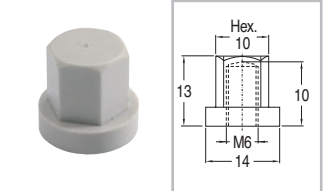
811462	100
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Insulated nut

601225	100
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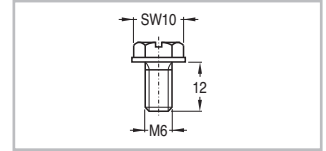
RAL 7035



Screws

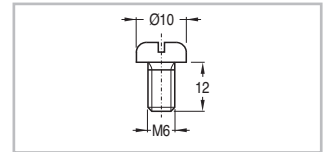
811483	100
---------------	-----

Screw M6 with flange



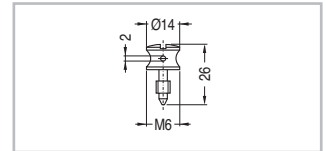
833655	100
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Screw M6 x 12



811451	100
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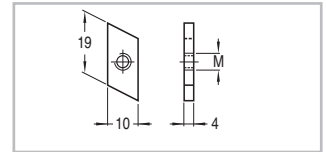
Screw M6 in PVC for coverplate (sealable)



Nuts in metal

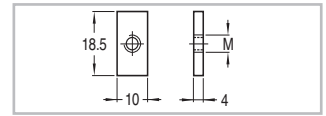
811435	100
---------------	-----

M6



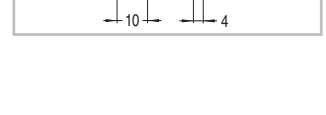
811438	100
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M4



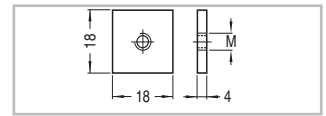
811442	100
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M6



811446	100
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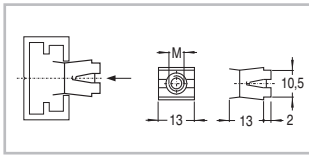
M6



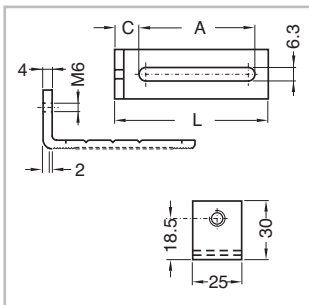
811447	100
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M8

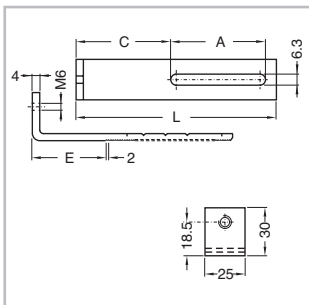
Accessories for Alu mounting frame (continued)



Nuts in PVC	
	811443 100
M6	

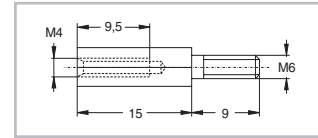


Brackets	
	811477 100
$L = 25 - A = 10 - C = 9,5$	
	811478 100
$L = 40 - A = 24 - C = 9,5$	
	811479 100
$L = 80 - A = 64 - C = 9,5$	

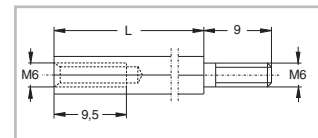
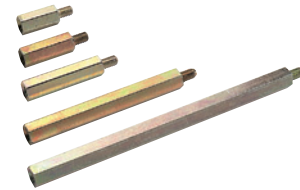


	811480 100
$L = 120 - A = 64 - C = 49,5 - E = 41,5$	

Studs	
Type 1 - M4-M6	
	811336 100
L = 15	



Type 2 - M6-M6	
	811337 100
L = 15	
	811338 100
L = 20	
	811454 100
L = 25	

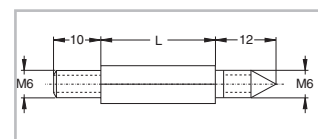


	811339 100
L = 30	
	811455 100
L = 35	
	811456 100
L = 45	
	811457 100
L = 55	

	811458 100
L = 65	
	811340 100
L = 70	
	811460 100
L = 80	
	811461 100
L = 100	

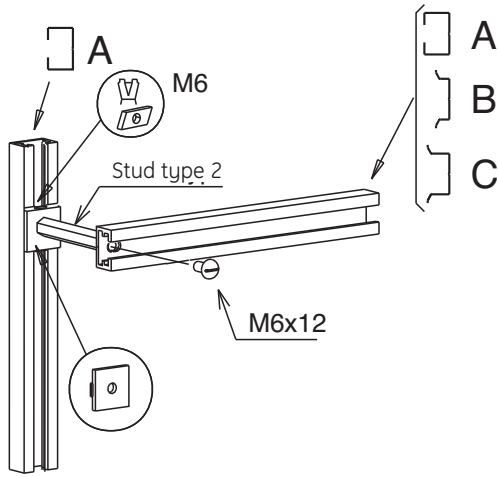
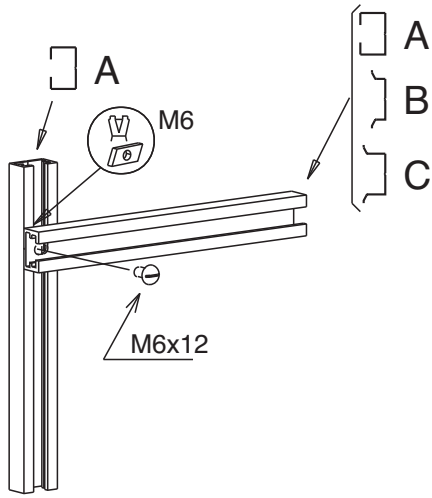
	811341 100
L = 120	

Type 3 - M6-M6	
	811342 100
L = 60	
	811343 100
L = 30	

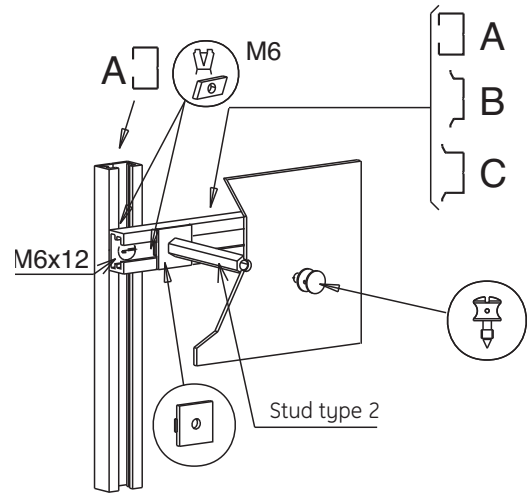
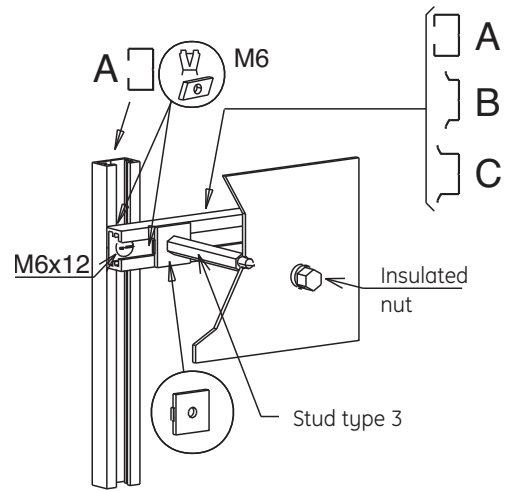


Mounting applications for Alu mounting frame

Continuously adjustable Alu mounting frame

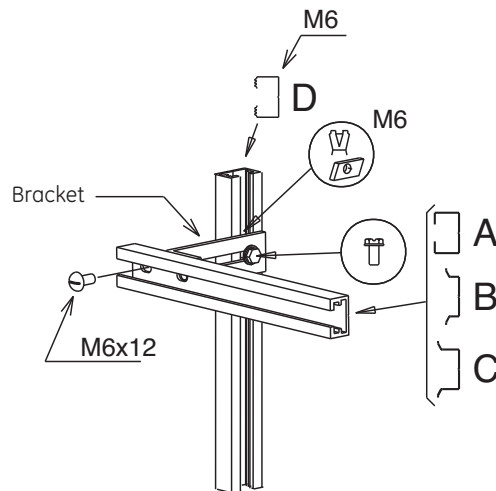


Use of coverplate



Note:
Same way of mounting for coverplate as mounting plate

Adjustable Alu mounting frame in steps of 12.5 mm



- C.3 **VMS** - Modular enclosures system
- C.28 **Fix-o-Rail Senior** - Type tested distribution cabinets

e-Catalogue / Application guide	Intro
Insulated boxes	A
Insulated wall mounting cabinets	B
Wall mounting system enclosures	C

Sheet steel distribution boards

Pedestals

Subterranean enclosures

Climate control

General accessories


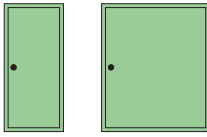


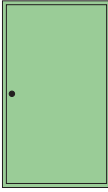

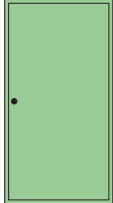
General characteristics

Index



Wall mounting system enclosures

Overview wall mounting system enclosures

VMS (Modular) IP65	Fix-o-Rail Senior IP41
 <p>320 x 220 x 179</p>	 <p>650 x 300 x 210 650 x 550 x 210</p>
 <p>320 x 320 x 179</p>	 <p>800 x 300 x 210 800 x 550 x 210</p>
 <p>440 x 320 x 179</p>	 <p>950 x 550 x 210</p>
 <p>640 x 320 x 179</p>	 <p>1100 x 550 x 210 1100 x 800 x 210</p>
 <p>640 x 440 x 179</p>	 <p>1250 x 550 x 210 1250 x 800 x 210</p>

H x W x D in mm





Modular enclosures system

Applications

- Industry
- Public utilities
- Multi motor panels
- Electronic instrumentation
- Low voltage panelboards

Standards

EN/IEC 60439-2
EN/IEC 60529
EN/IEC 62208
DIN VDE 0660

Approvals



- Single boxes: types 2, 3, 3R, 3S, 5, 12 and 12K



- Modular system: types 2, 3, 3R, 3S, 5, 12 and 12K available on request
- Modular system using 853063: types 2 and 3R
- Boxes with internal hinged cover: types 2, 5, 12 and 12K
- Boxes with external hinges: type 2 available on request



- Overview of the range ● Page C.2
- Dimensional drawings ● Page I.24
- Specifications for tender documents ● Page I.55
- Power dissipation values ● Page I.74

Features

- The range consists of five boxes based on a 100 mm module.
- The innovative coupling concept allows easy, rapid assembly of any combination of units without the need for tools.
- The open bases offer excellent accessibility and wiring space for installation, mounting and cable connection, even after coupling.
- The side panel openings can be closed by either blind or combi end plates. Once mounted, end plates fit perfectly flush with the side panels of the base.
- Each large box is a multiple of a smaller one. Its fixing points in increments of 25 mm in bottom plate and top end are also a multiple of those of a small box.
- The base and end plates are made of light grey (RAL 7035) glassfiber reinforced polycarbonate. The cover is made of either transparent or opaque light grey (RAL 7035) polycarbonate.
- A multiple of accessories like mounting plates, cover plates, depth extension frame, ... makes the VMS a complete system for electrical distribution and control applications.
- VMS boxes are halogen-free.
- VMS boxes provide optimum security to both operations and equipment because they feature total insulation \square and protection degree IP65 according to EN/IEC 60529.



Intro

A

B

C

D

E

F

G

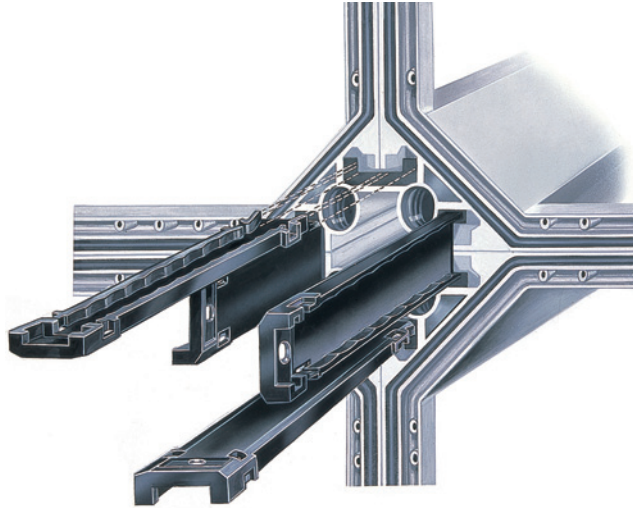
H

I

X

Coupling system

The enclosures are coupled by means of vertical dowels, inserted into the corner shafts. These dowels are universal to all sizes.

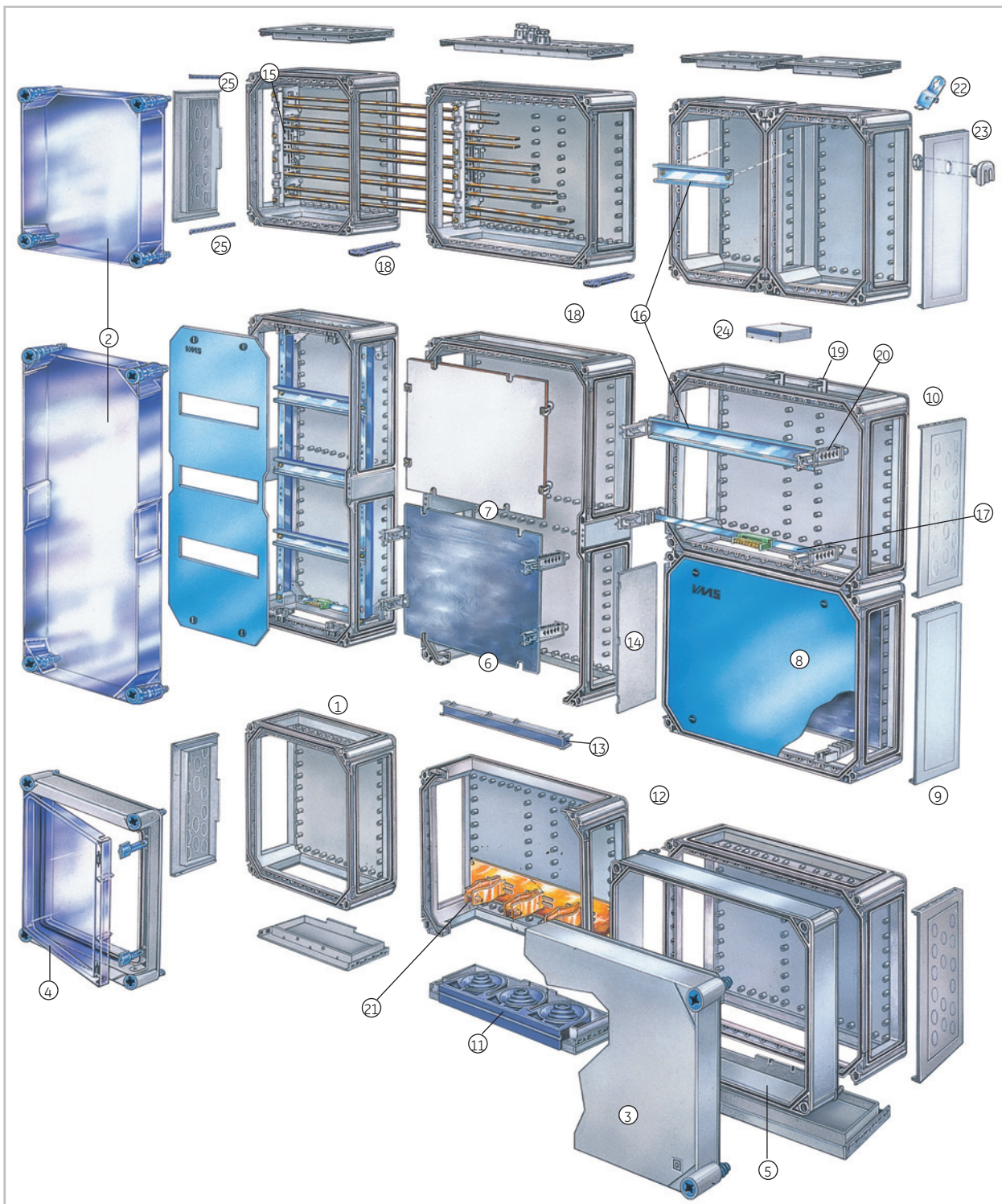


End-plates installation

End-plates, combi or blind, are snapped on from the outside and fixed by means of vertically inserted dowels.



Modular insulated enclosures system



- ① Base
- ② Transparent cover
- ③ Opaque cover
- ④ Hinged cover
- ⑤ Depth extension frame
- ⑥ Mounting plate in metal
- ⑦ Mounting plate in pertinax
- ⑧ Blind cover plate
- ⑨ Blind end-plate
- ⑩ Combi end-plate
- ⑪ Cable end-plate
- ⑫ Cable stress release
- ⑬ Bridge
- ⑭ Partition plate
- ⑮ Busbar support
- ⑯ DIN-profile
- ⑰ Mounting rail 12 x 2 mm
- ⑱ Coupling dowels
- ⑲ Coupling clamp
- ⑳ Universal support
- ㉑ Stress relieving cable clamp
- ㉒ Fixing bracket
- ㉓ Air vent
- ㉔ Coupling set 2 x 220 mm
- ㉕ Locking key

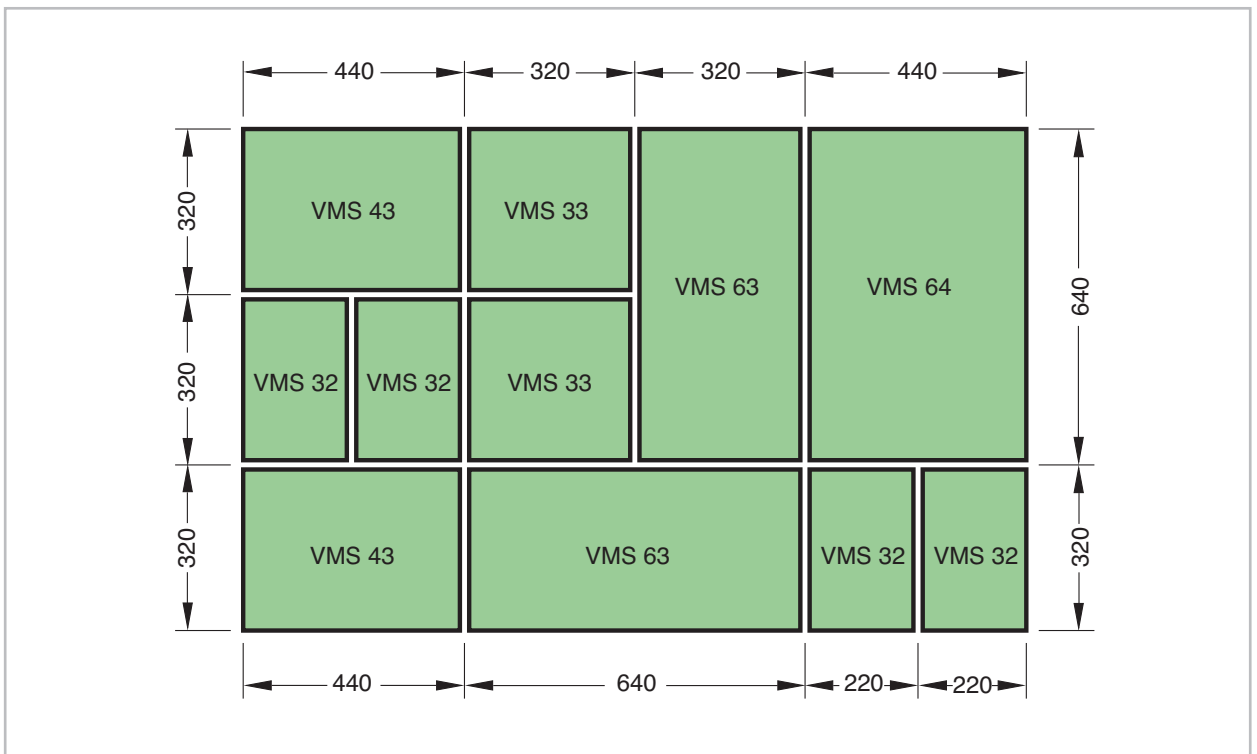
Intro
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X



Technical specifications

Protection degree according to IEC 60529	
individual and coupled	IP65
with coupling set 2 x 220	IP44
with extension frame	IP65
with cable entries	IP43
with bridges	IP55
Protection degree against external mechanical impacts according to EN 62262 and IEC 62262	
base + end plates + covers	IK08
hinged cover	IK07
Materials	
bases + end plates	reinforced fibre-glass polycarbonate
covers	polycarbonate
cover screws	polyamide
gaskets	PUR, neoprene
Temperature resistance	
materials	see page I.6
continuous use	-20°C up to +80°C
Colours	
bases + end plates	RAL 7035
covers	RAL 7035 / transp.
Protection	Total isolation <input checked="" type="checkbox"/>
Rated voltage	690VAC / 800VDC
Rated insulation voltage	690VAC
Rated current	max. 1250A
Rated short time withstand current	max. 30kA (0.3 s.)
Rated peak short-circuit current	max. 65kA peak
Standards	
	EN 60439-2
	DIN VDE 0660
	IEC 60439-2

Recommended configuration for optimal modularity



Features and Benefits

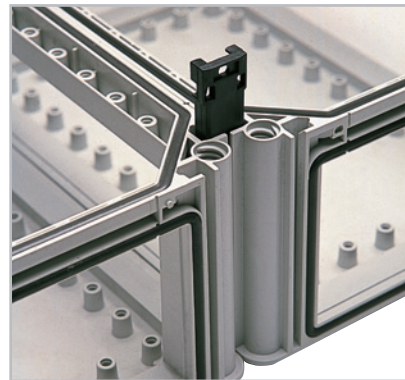


Modular dimensions in increments of 100 mm in height and width, available in five sizes:

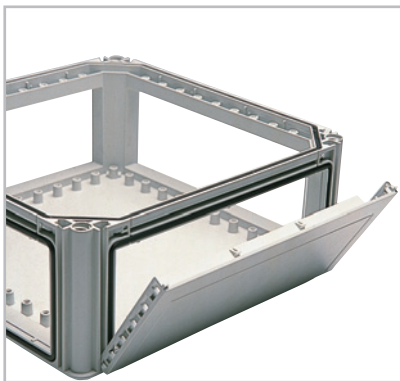
- 320 x 220 mm 320 x 320 mm
- 440 x 320 mm 640 x 320 mm
- 640 x 440 mm



Assorted covers: transparent, opaque, or hinged, common design and depth.



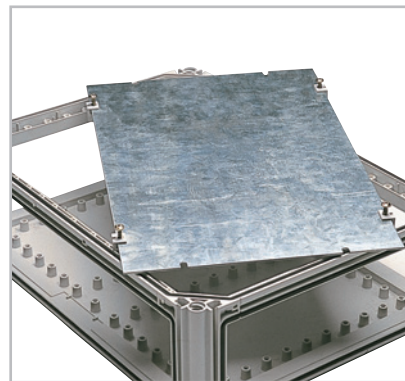
Time saving coupling by means of vertical dowels, inserted into corner slots.



End-plates, combi or blind, are snapped on from the outside and fixed by means of vertically sunk keys.



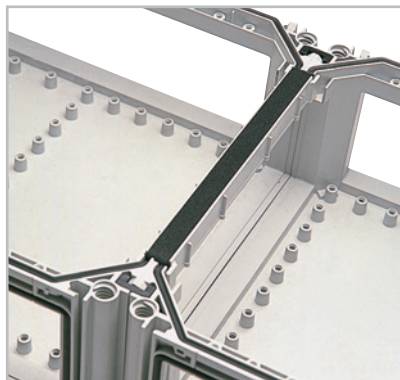
Once mounted, end-plates fit perfectly flush with the side panels of the base.



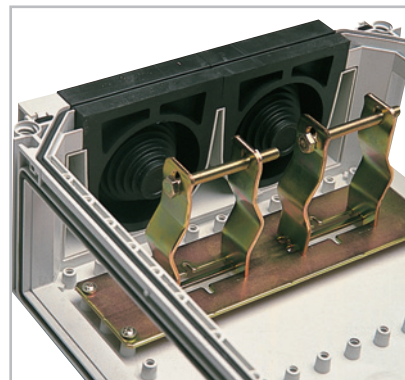
Rectangular mounting plates (2 mm in metal or 5 mm in laminated pertinax) with mounting set. Usable mounting depth is maximised and not dependant on plate thickness.



Universal support for screwless and depth adjustable installation of component rails. The support is simply clicked over the base.



Bridges are inserted after connection of cables (320 and 440 mm sides).



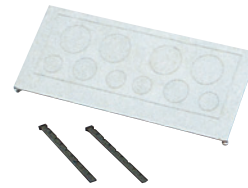
Universal cable entries and stress relieving cable clamps for cables up to Ø 75 mm can be located in any base on side 320 mm (for two cables) or on side 440 mm (for three cables). Not suitable for 640 mm side.

Modular system components

		Type	VMS 32	VMS 33	VMS 43	VMS 63	VMS 64	
	Base With four open sides	H x W x D	320 x 220 x 130	320 x 320 x 130	440 x 320 x 130	640 x 320 x 130	640 x 440 x 130	
		Ref. No.	853000	853001	853002	853003	853004	
		Pack.	4	2	2	1	1	
	Transparent cover With slotted screws	H x W x D	320 x 220 x 50	320 x 320 x 50	440 x 320 x 50	640 x 320 x 50	640 x 440 x 50	
		Ref. No.	853005	853006	853007	853008	853009	
		Pack.	4	2	2	1	1	
	Opaque cover With slotted screws	H x W x D	320 x 220 x 50	320 x 320 x 50	440 x 320 x 50	640 x 320 x 50	640 x 440 x 50	
		Ref. No.	853010	853011	853012	853013	853014	
		Pack.	4	2	2	1	1	
	Hinged cover With double closure system 215° opening angle	H x W x D	-	320 x 320 x 50	440 x 320 x 50	-	-	
		Ref. No.	-	853015	853016	-	-	
		Pack.	-	2	2	-	-	
	Depth extension frame With fixing screws	H x W x D	320 x 220 x 75	320 x 320 x 75	440 x 320 x 75	640 x 320 x 75	640 x 440 x 75	
		Ref. No.	853030	853031	853032	853033	853034	
		Pack.	4	2	2	1	1	
	Mounting plate Metal, 2 mm With mounting set	H x W	260 x 160	260 x 260	380 x 260	580 x 260	580 x 380	
		Ref. No.	853068	853069	853070	853071	853072	
	Pertinax, 5 mm With mounting set	H x W	260 x 160	260 x 260	380 x 260	580 x 160	580 x 380	
		Ref. No.	853113	853114	853115	853116	853117	
			Pack.	1-10	1-10	1-10	1-10	1-10
		Plain cover plate Grey Blue	H x W	301 x 201	301 x 301	421 x 301	621 x 301	621 x 421
Ref. No.			855009	855010	855011	855012	855013	
		Ref. No.	853103	853104	853105	853106	853107	
Insulated material, 2 mm With mounting set		Pack.	1-10	1-10	1-10	1-10	1-10	

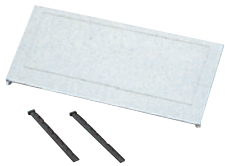
Accessories

Combi end-plates			
Side (mm)	Characteristics Metric	Ref. No.	Pack.
220	3 x M32/M25 + 3 x M20	855029	1/10
220	1 x M50/M40 + 4 x M25/M20	855030	1/10
320	3 x M50/M40 + 4 x M16	855032	1/10
320	17 x M20	855033	1/10
320	1 x M50/M40 + 2 x M32/M25 + 4 x M25/M20	855034	1/10
320	12 x M25/M20	855035	1/10
320	4 x M40/M32 + 3 x M20	855036	1/10
440	1 x M40/M32 + 16 x M25/M20	855037	1/10
440	1 x M50/M40 + 2 x M40/M32 + 8 x M25/M20	855038	1/10



Blind end-plates

Side (mm)	Ref. No.	Pack.
220	853017	1/10
320	853020	1/10
440	853027	1/10



Coupling key

Side (mm)	Ref. No.	Pack.
220	853059	20

For base coupling

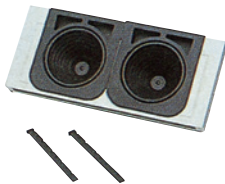


Cable entries

Side (mm)	Ref. No.	Pack.
320	853082	1/5
440	853083	1/5

Ø max. of cable: 2 x 75 mm

Ø max. of cable: 3 x 75 mm

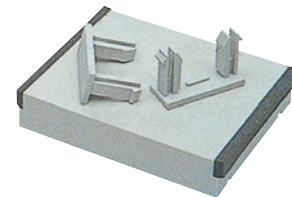


Coupling set 2 x 220

Ref. No.	Pack.
853063	1

To couple 2 sides of 220 mm to one side of 440 mm

With mounting accessories

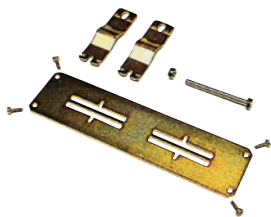


Cable stress release

Side (mm)	Ref. No.	Pack.
320	853036	1/5
440	853037	1/5

With one clamp

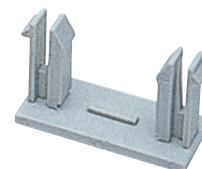
Ø max. of cable: 75 mm



Coupling clamp

Ref. No.	Pack.
853062	10

For coupling with coupling set and in special cases as reinforcement

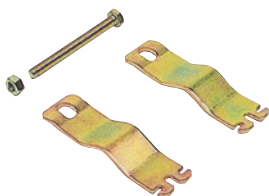


Cable clamp

Ref. No.	Pack.
853035	1

To mount on cable stress release

Ø max. of cable: 75 mm

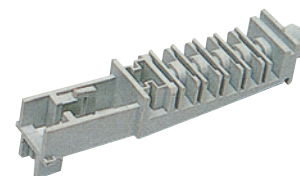


Universal support

Ref. No.	Pack.
853060	10

To fit - mounting plates (metal or synthetic)

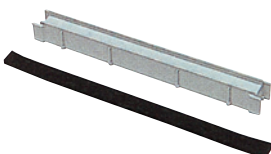
- cover plates
- copper rail 15 x 3
- copper rail 9 x 6.5
- mounting rail 12 x 2 mm



Bridges

Side (mm)	Ref. No.	Pack.
320	853073	1
440	853074	1

For large cross-section cables



Universal support

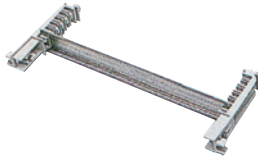
Side 320 mm	Ref. No.	Pack.
	855084	1

To fit mounting plates and cover plates, DIN-rails and copper rails

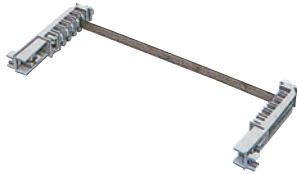
Fixation screws to be used: 853100 (5x13)



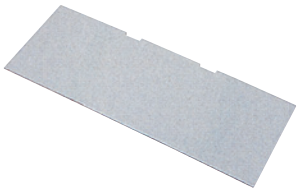
Accessories (continued)



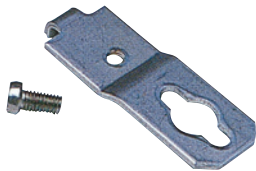
Symmetrical DIN-profiles		
Always supplied with two universal supports		
	853094	1
Side 220 mm		
	853095	1
Side 320 mm		
	853096	1
Side 440 mm		
	853269	1
Side 640 mm		



Mounting rail 12 x 2 mm		
To fit connection terminal blocks		
Always supplied with two universal supports		
Branch terminals, see p. H.4		
	853097	1
Side 220 mm		
	853098	1
Side 320 mm		
	853099	1
Side 440 mm		



Partition plates		
For full compartmentalisation of coupled bases		
	853065	1
Side 220 mm		
	853066	1
Side 320 mm		
	853067	1
Side 440 mm		



Wall fixing brackets		
	853064	1
Set of four brackets with screws		
- Stainless steel		
- For external fixing points		
- Direct fitting through the corner shafts of the base		
- To be installed prior to extension frame or hinge installation		
- Three optional mounting positions (0°, 45°, 90°)		



Pressure compensation plug - IP55		
	818078	1
Kit of two pieces. The plug permits a controlled change in pressure caused by temperature variations		

Hinge screw		
	853061	1
Base must be fixed prior to hinge installation		
Set of 2 pieces.		



Hinges		
	853340	1
In order to enable hinge mounting, holes must be drilled in the cover and in the base. Templates for drilling are supplied with each set. Each set consists of two hinges, screws, a drilling template, the mounting instructions and spacer shims.		
Set of 2 pieces.		



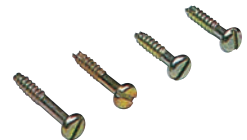
Thumb grip		
	853058	1
For cover screw or hinge screw.		
Set of 4 pieces.		



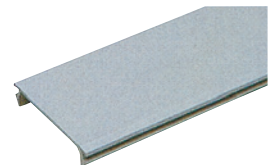
Self-tapping screws		
5 x 13	853100	50
5 x 16	853101	50
5 x 22	853102	50
For fixation in the base.		



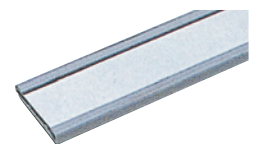
6 x 16	851384	500
6 x 22	851385	500
To fasten components to metallic mounting plates.		






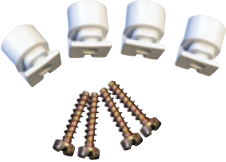


Blanking plate		
	828056	1m
For 45 mm cut-out		



Marking strip		
	851321	1m
Self-adhesive		



Accessories (continued)



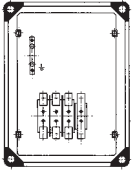
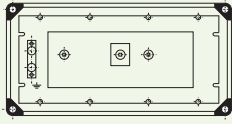
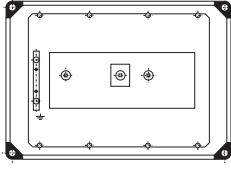

	<p>Screws for depth extension frame</p> <table border="1"> <tr> <td>853056</td> <td>4</td> </tr> </table> <p>As replacement</p>	853056	4	<p>Cover plates for DIN-rail enclosures</p> <table border="1"> <tr> <td>853325</td> <td>1</td> </tr> </table> <p>VMS32 1 row. For 853124, 853125 and 853159.</p> <table border="1"> <tr> <td>853326</td> <td>1</td> </tr> </table> <p>VMS33 1 row. For 853126.</p> <table border="1"> <tr> <td>853327</td> <td>1</td> </tr> </table> <p>VMS33 2 rows. For 853127.</p> <table border="1"> <tr> <td>853330</td> <td>1</td> </tr> </table> <p>VMS43 2 rows horizontal. For 853266.</p> <table border="1"> <tr> <td>853328</td> <td>1</td> </tr> </table> <p>VMS43 2 rows vertical. For 853128 and 853160.</p> <table border="1"> <tr> <td>853329</td> <td>1</td> </tr> </table> <p>VMS43 3 rows vertical. For 853129.</p> <table border="1"> <tr> <td>853333</td> <td>1</td> </tr> </table> <p>VMS63 2 rows horizontal. For 853267.</p> <table border="1"> <tr> <td>853331</td> <td>1</td> </tr> </table> <p>VMS63 3 rows vertical. For 853130 and 843161.</p> <table border="1"> <tr> <td>853332</td> <td>1</td> </tr> </table> <p>VMS63 4 rows. For 853131.</p> <table border="1"> <tr> <td>853334</td> <td>1</td> </tr> </table> <p>VMS64 4 rows. For 853268.</p>	853325	1	853326	1	853327	1	853330	1	853328	1	853329	1	853333	1	853331	1	853332	1	853334	1	
853056	4																								
853325	1																								
853326	1																								
853327	1																								
853330	1																								
853328	1																								
853329	1																								
853333	1																								
853331	1																								
853332	1																								
853334	1																								
	<p>Fixation set for cover plate</p> <table border="1"> <tr> <td>853053</td> <td>1</td> </tr> </table> <p>As replacement</p>	853053	1																						
853053	1																								
	<p>Fixation set for mounting plate</p> <table border="1"> <tr> <td>853054</td> <td>1</td> </tr> </table> <p>As replacement, for steel or Pertinax</p>	853054	1																						
853054	1																								
	<p>Locking pin</p> <table border="1"> <tr> <td>853055</td> <td>10</td> </tr> </table> <p>For cable end-plates (spare part)</p>	853055	10																						
853055	10																								
	<p>Cover screw</p> <table border="1"> <tr> <td>853057</td> <td>1</td> </tr> </table> <p>Set of 4 pieces</p>	853057	1																						
853057	1																								

Pre-assembled units for panelboards

Type	VMS 32	VMS 33	VMS 43	VMS 63	VMS 64
<p>Enclosures for DIN-rail equipment</p> <p>Without cover and end plates for assembly of modular devices Includes: - base with 4 open sides - mounting frame with earth-rail and cover plate - including PE terminal DIN-rail distance 125 mm</p>			 	 	
	320 x 220	320 x 320	320 x 440 (horizontal)	320 x 640 (horizontal)	640 x 440
	14 modules 853125	28 modules 853127	40 modules 853266	56 modules 853267	80 modules 853268
			440 x 320 (vertical)	640 x 320 (vertical)	
			42 modules 853129	56 modules 853131	
 <p>Enclosures for DIN-rail equipment</p> <p>Includes: - base with four open sides - base frame with earth bar and coverplate - transparent hinged cover (VMS 33 - VMS 43) - transparent cover with screws (VMS 32 - VMS 63)</p>			 	 	
	320 x 220 x 179	320 x 320 x 179	440 x 320 x 179	640 x 320 x 179	
	14 modules 853124	14 modules 853126	28 modules 853128	42 modules 853130	
 <p>Enclosures for DIN-rail equipment including end-plates</p> <p>Includes: - base with four closed sides - with combi end plates: top: 17 x M20 bottom: 1 x M50/40 + 2 x M40/32 + 8 x 25/20 side: plain - bare frame with earth connector and cover plate - transparent pivoting cover (VMS 43) - transparent cover with screws (VMS 32 - VMS 63)</p>			 	 	
	320 x 220 x 179		440 x 320 x 179	640 x 320 x 179	
	14 modules 853159		28 modules 853160	42 modules 853161	



Pre-assembled units for panelboards

Type	VMS 32	VMS 43	VMS 63	VMS 64
 <p>Enclosures for loadbreak switches (Dilos) and fuse bases</p> <p>Includes:</p> <ul style="list-style-type: none"> - base with four open sides - transparent cover with handle opening and screws - extension shaft and operating handle - for VMS 32: two DIN-rails with earthing (without equipment) - for VMS 43 and VMS 63: mounting plate with threaded holes for loadbreak switches, fuse bases and earthing connectors 	 <p>320 x 220 x 179</p> <p>DILOS 1 40/63/80A 3P/4P + \neq E27 / E33 MCB 853140</p>	 <p>440 x 320 x 179</p> <p>DILOS 1 63/80/100/125A 3P/4P + \neq 3 DIN 00 + N 853141</p> <p>DILOS 2 160A 3P/4P + \neq 3 DIN 00 + N 853170</p>	 <p>640 x 320 x 179</p> <p>DILOS 1H 125A 3P/4P + \neq 853876</p> <p>FULOS 000 32/63/100A 3P/4P + \neq 853877</p>	 <p>640 x 440 x 179</p> <p>DILOS 3 160/200/250/315A 3P/4P + \neq 853878</p> <p>FULOS 00 160A 3P/4P + \neq 853879</p>
<p>Miniature circuit breakers, loadbreak switches and fuses are to be ordered separately</p>				
 <p>Enclosures for changeover switches (Dilos/Fulos)</p> <p>Includes:</p> <ul style="list-style-type: none"> - base with four open sides - mounting plate with changeover system (I-O-II) and earth bar - transparent cover with handle opening and screws - extension shaft and operating handle 				
<p>Dilos and Fulos switches are to be ordered separately</p>				

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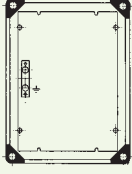
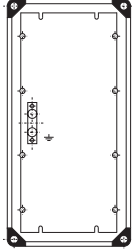

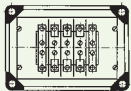
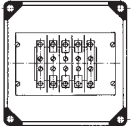
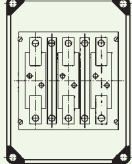
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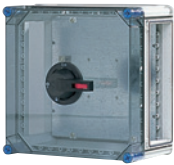
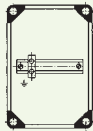
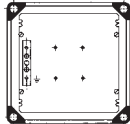
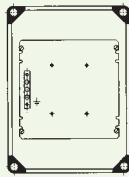
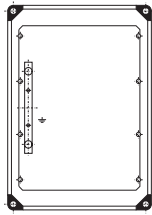
Pre-assembled units for panelboards

Type	VMS 32	VMS 33	VMS 43	VMS 63	VMS 64
 <p>Enclosures for MCCB's type Record Plus⁽¹⁾</p> <p>Includes:</p> <ul style="list-style-type: none"> - base with four open sides - mounting plate with threaded holes and earth connector - transparent cover with operating handle for moulded case circuit breakers - transparent cover with operating handle and push-buttons for moulded case circuit breakers with earth-leakage device <p>The use of short or long terminal covers for the breaker is mandatory. Breaker and terminal covers always have to be ordered separately.</p>			 <p>440 x 320 x 254</p> <p>FD160 (+RCD) 3P/4P F 855085</p> <p>FE160 3P/4P F 855087</p> <p>FE250 3P/4P F 855087</p>	 <p>640 x 320 x 254</p> <p>FE160 +RCD 3P/4P F 855088</p> <p>FE250 + RCD 3P/4P F 855088</p>	
 <p>Enclosures with H.R.C. fuse plates</p> <p>Includes:</p> <ul style="list-style-type: none"> - base with four open sides - mounting plate with H.R.C. bases - transparent cover with screws <p>Fuses are to be ordered separately</p>	 <p>320 x 220 x 179</p> <p>125A 3 DIN 00 + N + ≍ 853132</p>	 <p>320 x 320 x 179</p> <p>125A 3 DIN 00 + N + ≍ 853133</p>	 <p>440 x 320 x 179</p> <p>250A 3 DIN 1 + N + ≍ 853134⁽¹⁾</p> <p>400A 3 DIN 2 + N + ≍ 853135⁽¹⁾</p> <p>630A 3 DIN 3 + N + ≍ 853136⁽²⁾</p>		


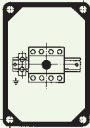
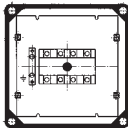
(1) Short-circuit resistance 20kA eff. at 440V


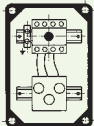
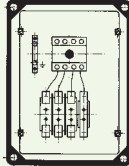
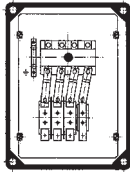
(2) To the functional units DIN 1/2/3 the mounting plate can be rotated 90°, in the way that the enclosure can be coupled with the units DILOS 4 - FULOS 1/2 (side 440).

Pre-assembled individual units

Type	VMS 32	VMS 33	VMS 43	VMS 64
				
Enclosures for loadbreak switches and fused disconnector loadbreak switches (Dilos/Fulos)	320 x 220 x 179	320 x 320 x 179	440 x 320 x 179	640 x 440 x 179
Includes: - base with four open sides - DIN rail with earthing connector (VMS 32) - mounting plate with threaded holes and earthing connector (VMS 33 - VMS 43) - transparent cover with handle cut out and with screws - extension shaft and operating handle	DILOS 1 40/63/80/100/125A 3P/4P + \neq 853137	DILOS 2 160/200A 3P/4P + \neq 853138	DILOS 3 160/200/250/315A 3P/4P + \neq 853139	DILOS 4 400/500/630A 3P/4P + \neq 853875
		DILOS 1H 3P/4P + \neq 40/63/125A 853874		FULOS 1 250A 3P/4P + \neq 853875
		FULOS 000 32/63/100A 3P/4P + \neq 853874	FULOS 00 160A 3P/4P + \neq 853139	FULOS 2 400A 3P/4P + \neq 853875

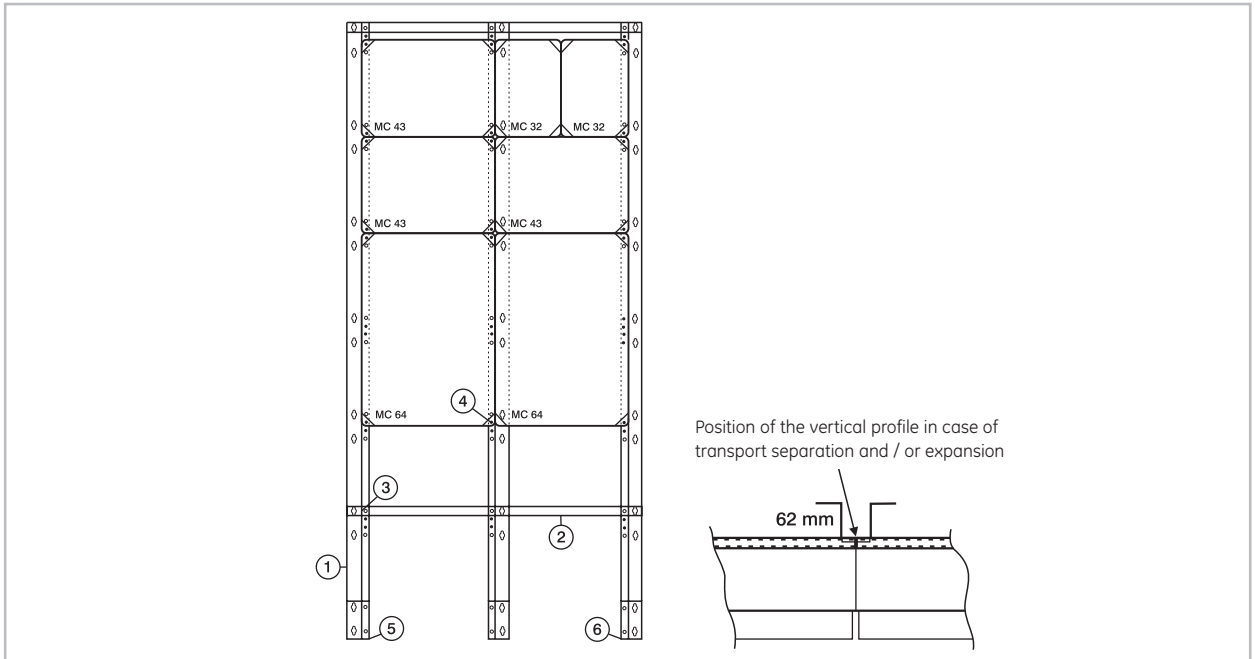
Loadbreak switches and fused disconnector loadbreak switches are to be ordered separately

Type	VMS 32	VMS 33	VMS 43	VMS 64
				
Enclosures with loadbreak switches (Dilos)	320 x 220 x 179	320 x 320 x 179		
Includes: - base with four closed sides - with combi end plates: top: side 220: 1xM50/M40 4xM25/M20 side 320: 1xM50/M40 2xM32/M25 4xM25/M20 bottom: side 220: 3xM32M25 2xM20 side 320: 3xM50/M40 4xM16 - four pole loadbreak switch 660V - transparent cover and screws - extension shaft and operating handle	DILOS 1 63A - 4P + \neq 853162	DILOS 2 160A - 4P + \neq 853164		
	DILOS 1 125A - 4P + \neq 853163			

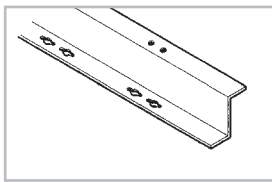
				
Enclosures with loadbreak switches (Dilos) and fuse bases	320 x 220 x 179		440 x 320 x 179	
Includes: - base with four closed sides - with combi end plates: top: side 220: 1xM50/M40 4xM25/M20 side 320: 1xM50/M40 2xM32/M25 4xM25/M20 bottom: side 220: 3xM32M25 2xM20 side 320: 3xM50/M40 4xM16 - four pole loadbreak switch 660V - partition plates between adjacent bases - transparent cover and screws - extension shaft and operating handle	DILOS 1 63A - 4P + \neq 3 fuse screw holders E33 853165		DILOS 1 63A - 4P + \neq 3 DIN 00 + N 853166	
			DILOS 1 125A - 4P + \neq 3 DIN 00 + N 853167	
			DILOS 2 160A - 4P + \neq 3 DIN 00 + N 853168	



Supporting frame for floor standing



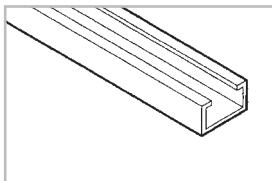
Accessories



1	Vertical Z-profile - RAL 9001	
	853866	1
	Aluzink - L = 2360 mm, for 6 x 320	
	853867	1
Aluzink - L = 2040 mm, for 5 x 320		
853868		1
Aluzink - L = 1080 mm, for 3 x 320		
853869		1
Aluzink - L = 760 mm, for 2 x 320		

Fixation bracket		
853870	1	3
For connection of vertical with horizontal profile		

Screw		
853871	50	4
M5 x 16 DIN 7500-C - TORX		



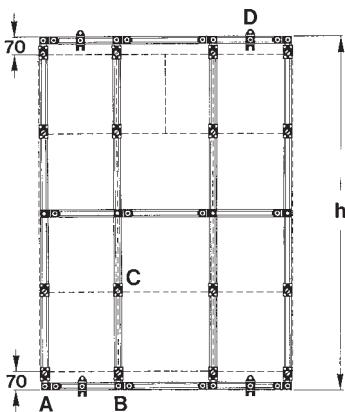
2	Horizontal - C-profile	
	853865	1
	Length = 2500 mm	
	870384	1
Length = 6000 mm		

Stand support		
853872	1	5
Left		
853873	1	6
Right		



Supporting frame for wall mounting

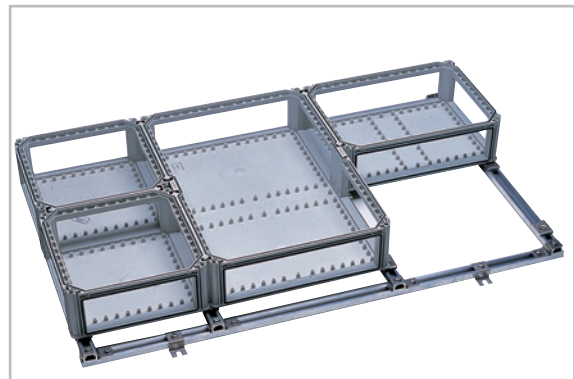
- Wall mounting of small units can be made using stainless steel fixing brackets (see chapter J). For mounting and handling of units of more than five enclosures, a supporting frame is compulsory.
- The supporting frame consists of at least two horizontal C-profiles (= the length of the assembly width) and a number of two vertical C-profiles (equal to the number of vertical sections +1).
- If the unit height is greater than 1000 mm, three horizontal C-profiles will be used.
- The vertical C-profiles are 140 mm longer than the height of the assembled panel.
- The frame and the enclosure assembly should be mounted simultaneously.



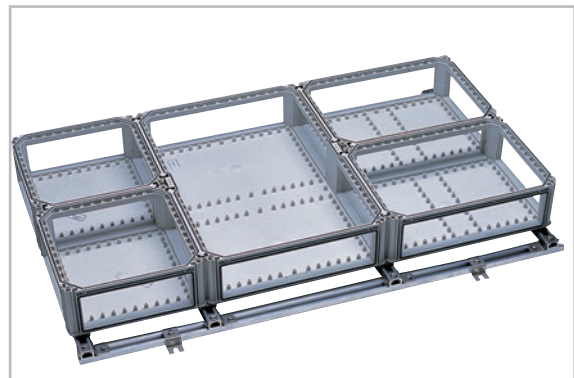
Horizontal and vertical C-profiles of the first row of enclosures are assembled together by clamping brackets and sliding nuts. The next clamping brackets are mounted on the horizontal profile.



The first row of enclosures is then mounted on the vertical profiles with the clamping plates.

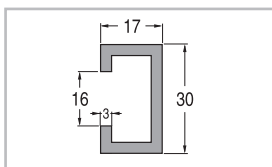


Following rows are then assembled the same way.

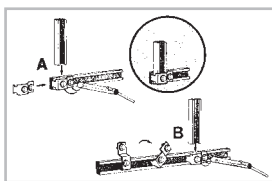


Frame and enclosure assemblies are mounted simultaneously.

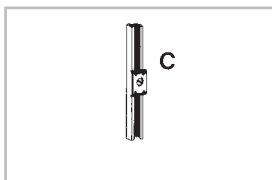
Accessories



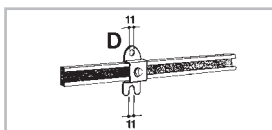
Aluminium C-profile	
851254	1
30 x 17 x 3 mm	
Length = 3 m	



Frame clamping brackets	
851253	10
Complete with 2 bolts and 2 M8 sliding nuts. For clamping top and bottom horizontal C-profiles to vertical profiles.	



Clamping plate	
851415	10
Complete with screw and M8 sliding nut. For fitting the enclosures onto vertical C-profiles of the frame.	



Wall mounting bracket	
851249	10

Bolt M6 x 12 DIN 84	
853256	50
To fit clamping plate on the enclosure	

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Notes

Grid area for notes.

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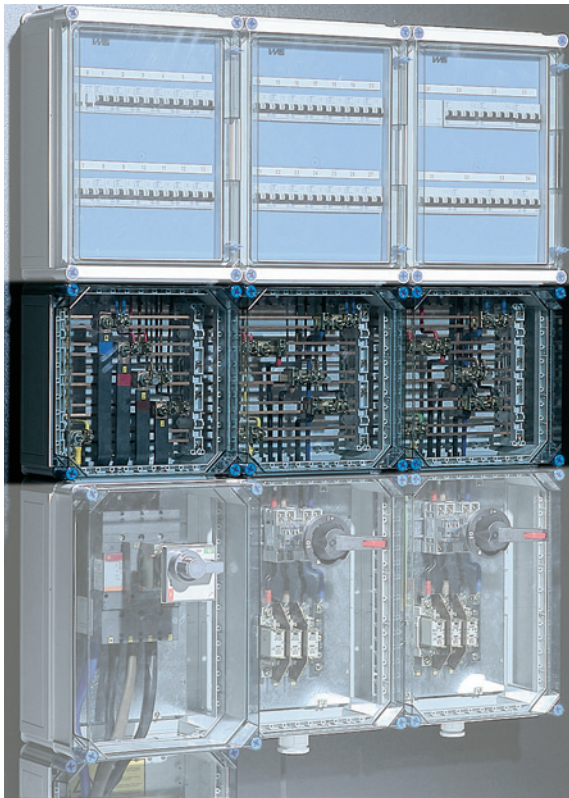
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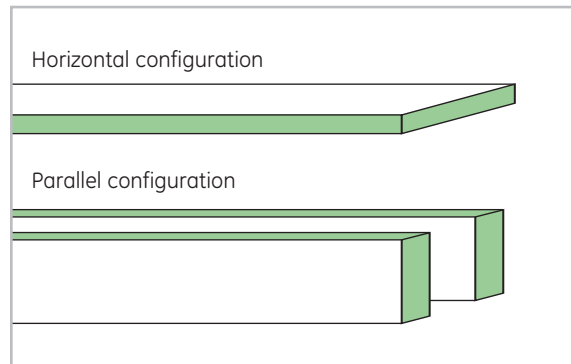
X



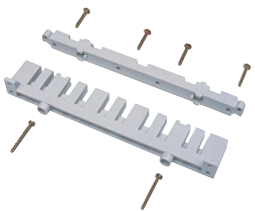
Busbar system



Universal busbar system 125A-1250A
KEMA approved according to EN 61439-2

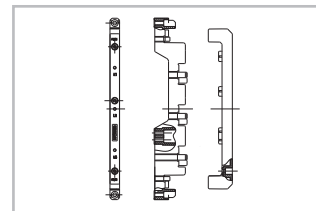


Accessories



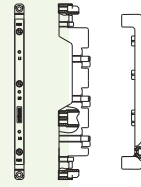
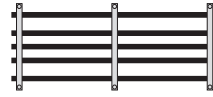
853077 10
Parallel arrangement 630A/1250A

828322 10
Horizontal configuration 160A/630A



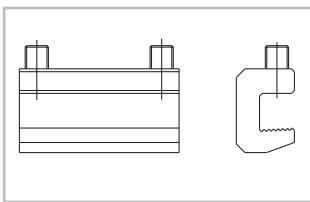
Busbar system 200A-630A

Horizontal configuration



Rated nominal current In	200A	230A	300A	450A	400A	630A
Busbar supports						
Ref. No.	828322	828322	828322	828322	828322	828322
Pack	1	1	1	1	1	1
Centre distance of phase bars (mm)	60	60	60	60	60	60
Distance between N or \neq - bar and adjacent phase bar (mm)	38/55	38/55	38/55	38/55	38/55	38/55
Busbars						
Ref. No. for phase bar	858034	858035	858036	858037	858038	858039
Pack of length 3 m	1	1	1	1	1	1
Number and dimensions of phase bars (L1 - L2 - L3)	12 x 5	12 x 10	20 x 5	20 x 10	30 x 5	30 x 10
Number and dimensions of bars N - \neq	12 x 5	12 x 10	20 x 5	20 x 10	25 x 10	25 x 10
Total phase section (mm ²)	60	120	100	200	150	300
Total section N - \neq (mm ²)	60	120	100	200	125	250
Characteristics						
Centre distance of busbar supports (mm)	250	250	250	250	250	250
Dynamic short-circuit resistance (kA peak)	48	42	42	48	48	63

Accessories



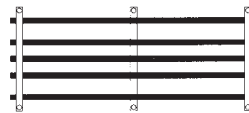
Busbar connector	
Enclosure-Enclosure	
783267	1
Up to 630A	



Busbar system 630A-1250A

	Parallel arrangement			
Rated nominal current In	630A	630A	1250A	1250A
Busbar supports				
Ref. No.	853077	853077	853077	853077
Pack	1	1	1	1
Centre distance of phase bars (mm)	50	50	50	50
Distance between N or \neq - bar and adjacent phase bar (mm)	45	45	45	45
Busbars				
Ref. No. for phase bar	858037	858036	858039	858038
Ref. No. for bars N - \neq	858036	858036	858038	858038
Pack for length 3 m	1	1	1	1
Number and dimensions of phase bars (L1 - L2 - L3)	2 x (20 x 10)	4 x (20 x 5)	2 x (30 x 10)	4 x (30 x 5)
Number and dimensions of bars N - \neq	2 x (20 x 5)	2 x (20 x 5)	2 x (30 x 5)	2 x (30 x 5)
Total phase section (mm ²)	400	400	600	600
Total section N - \neq (mm ²)	200	200	300	300
Characteristics				
Centre distance of busbar supports (mm)	320/290	320/290	320	320
Dynamic short-circuit resistance (kA peak)	43/54	40/52.5	53	52.5
Thermal short-circuit resistance (kA eff.)	20/26	20/25	25	25

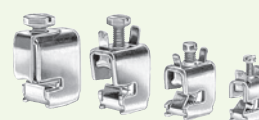
Horizontal configuration



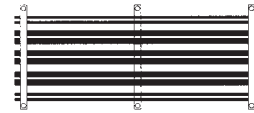
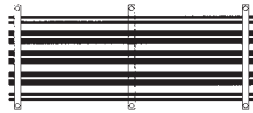
Connection with flat copper					
Branching bar width (mm)	Main bar width (mm)	Total thickness of clamped bars (mm)		Clamp	
		Min.	Max.		
12	12	5	15		851125 10
15-20-30	12	5	25		858025 10



Connection with cable directly on copper 12 x 5 / 12 x 10						
Cable clamp	Ref. No.	Main bar	Cable section (mm ²)		Clamp width (mm)	
			Min.	Max.		
	858026	20	5	1.5	16	11.5
	858028	10	5	1.5	35	15.5
	858032	10	5	16	70	20.5
	858033	10	5	16	120	23.5
	858027	20	10	1.5	16	11.5
	858029	10	10	1.5	35	15.5
	858030	10	10	16	70	20.5
	858031	10	10	16	120	30.5



Parallel arrangement



Connection with flat copper or cable-shoe to bars

Connecting block

For flat copper with widths 25, 30 or 40

858003	10
--------	----

For flat copper with widths 20 or 25

858004	10
--------	----

For flat copper with widths 15 or 20

858005	10
--------	----

Connection for cables - 16-35-70-120 mm² to bars

Wing contactblocks

858006	10
--------	----

858007	10
--------	----



Bolts

For 5 mm thick bars

M10 x 60	858008	10
M10 x 80	858010	10

For 10 mm thick bars

M10 x 60	858013	10
M10 x 80	858011	10

b	s	x	L
12	5	40	60
12	10	45	60
20	5	48	60
20	10	53	60
30	5	58	60
30	10	63	80

Bolts

For 5 mm thick bars

M10 x 60	858008	10
M10 x 80	858010	10

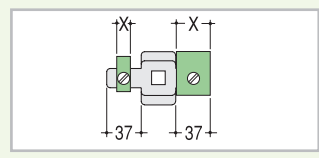
For 10 mm thick bars

M10 x 60	858013	10
M10 x 80	858011	10

b	s	x	L
12	-	42	60
12	5	47	60
12	10	52	60
20	-	50	60
20	5	55	60
20	10	60	60
30	-	60	60
30	5	65	80
30	10	70	80



Cable clamps for mounting on to wing contactblocks	Cable section (mm ²)		Clamp width X (mm)
	Min.	Max.	
858026	20	1.5 - 16	11.5
858028	10	1.5 - 35	15.5
858032	10	16 - 70	20.5
858033	10	16 - 120	23.5



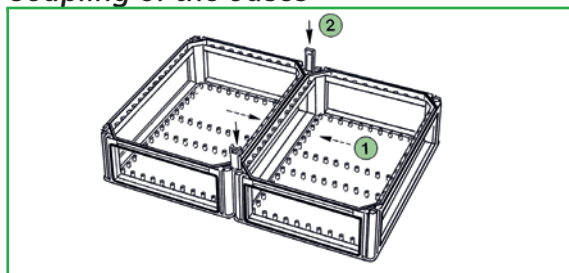
Legend

- b: height of the rectangular bars
- s: height of the horizontal, rectangular bars or of the connection with cables or flat copper
- x: minimal required bolt length
- L: length of the fitting hookbolt



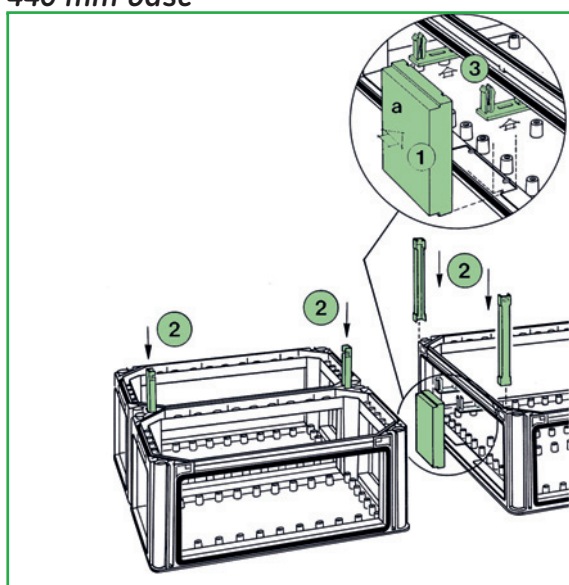
Mounting instructions

Coupling of the bases



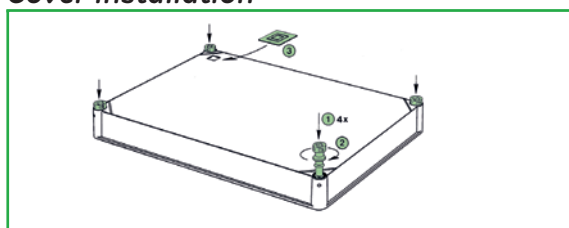
- ① Set the two bases against each other
- ② Couple with dowels, insert them simultaneously

Coupling of two 220 mm bases to one 440 mm base



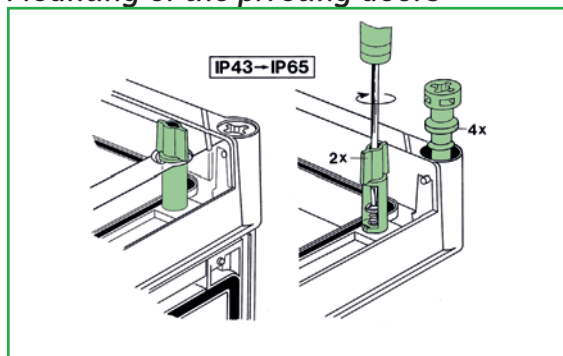
- ① Install the bridge (a) in the 440 mm side. Exact location is defined by the slots
- ② Couple the bases with the four dowels, insert them simultaneously
- ③ Snap coupling clamps in the openings below the upper base lip

Cover installation



- ① Snap the screws in the four cover corners. The screws are then captive.
- ② Fit the cover on the base (one turn on screws, max. 2.5Nm).
- ③ If necessary, stick the total isolation symbol on the cover.

Mounting of the pivoting doors



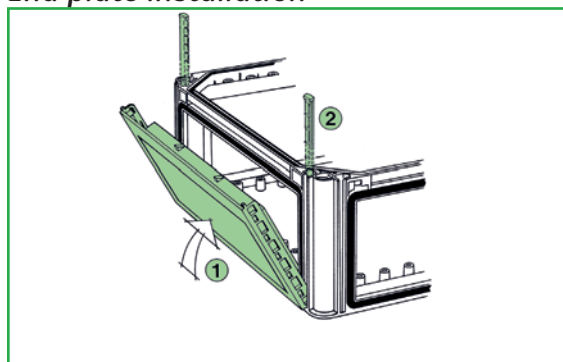
Install the door locking screws on the door frame with self tapping screws.

Protection degree:

IP43: door locking screws open

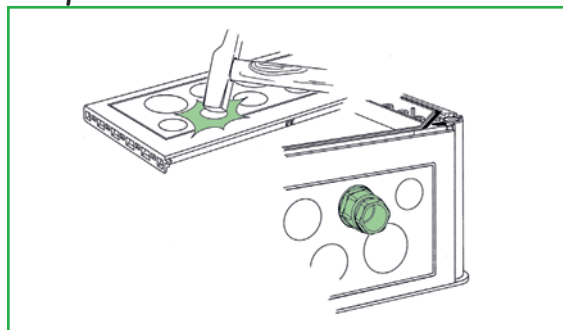
IP65: door locking screws closed

End plate installation



- ① Position the end plate in the base opening bottom. Snap the plate completely in the opening.
- ② Lock the end plate by means of two locking pins, insert them simultaneously.

Cable gland installation in the combi end plate



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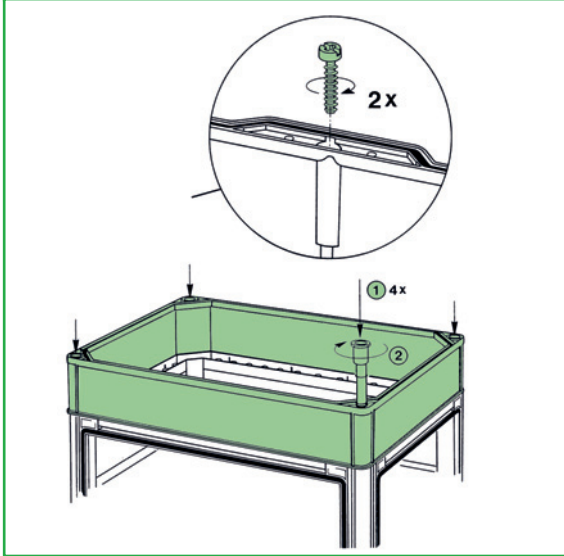
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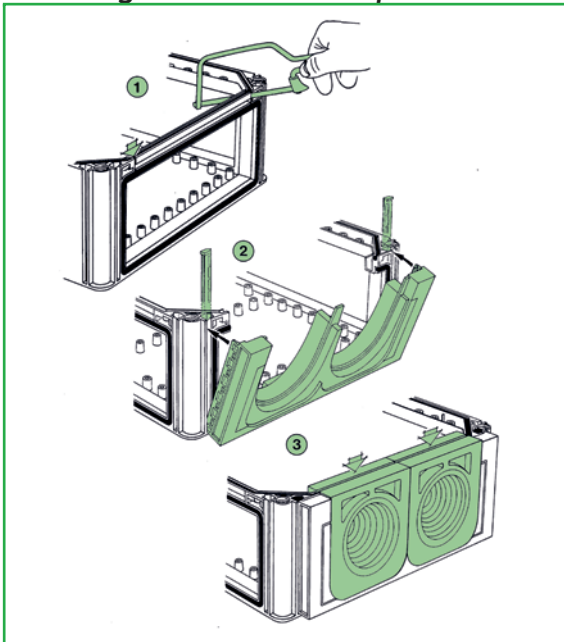
Installation of depth extension frame



- ① Snap the screws frame corners. The screws are then captive
- ② Tighten the frame onto the base with the screws.

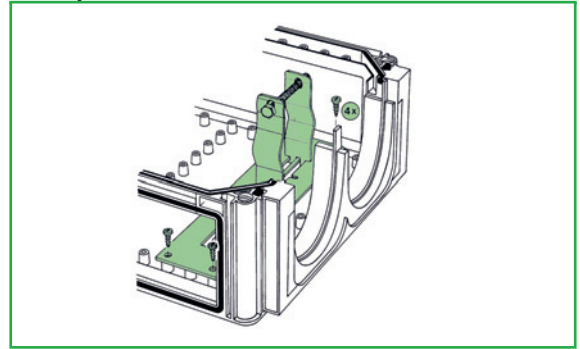
For the extension frames with 640 mm side, additional fixation with two self tapping screws.

Mounting of the cable end plates



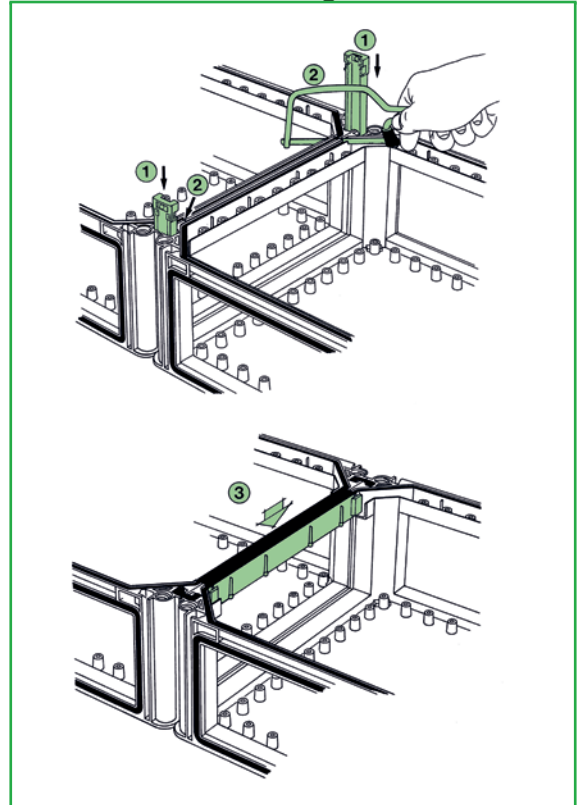
- ① Cut the top base lip following the marks.
Side 320 - opening is 220 mm.
Side 440 - opening is 320 mm.
- ② Install the end plate in the channel of the base bottom, then press against the side wall.
Lock with the locking pins.
- ③ Insert the rubber cable entries in the end plates.

Installation of the stress relieving cable clamp



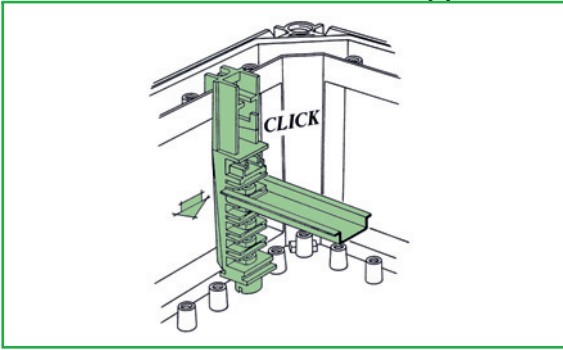
Install the stress release support with the four self tapping screws.
Install the stress release clamps in the sleeve.
Lock with the bolt and nut.

Installation of the bridge



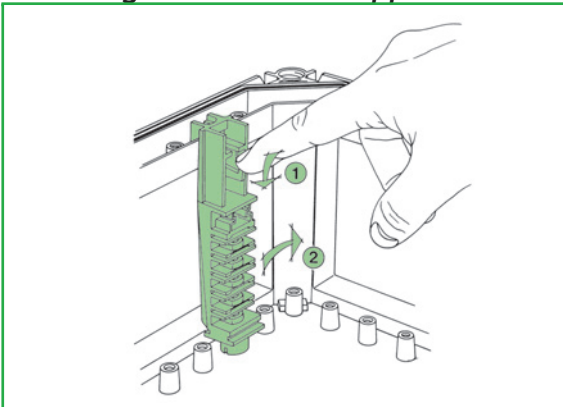
- ① Couple the two bases with dowels.
- ② Cut the top adjacent side lips following the markings.
- ③ Stick the self-adhesive gasket and press it into the bridge gutter. Install the bridge between the two bases.

Installation of the universal support



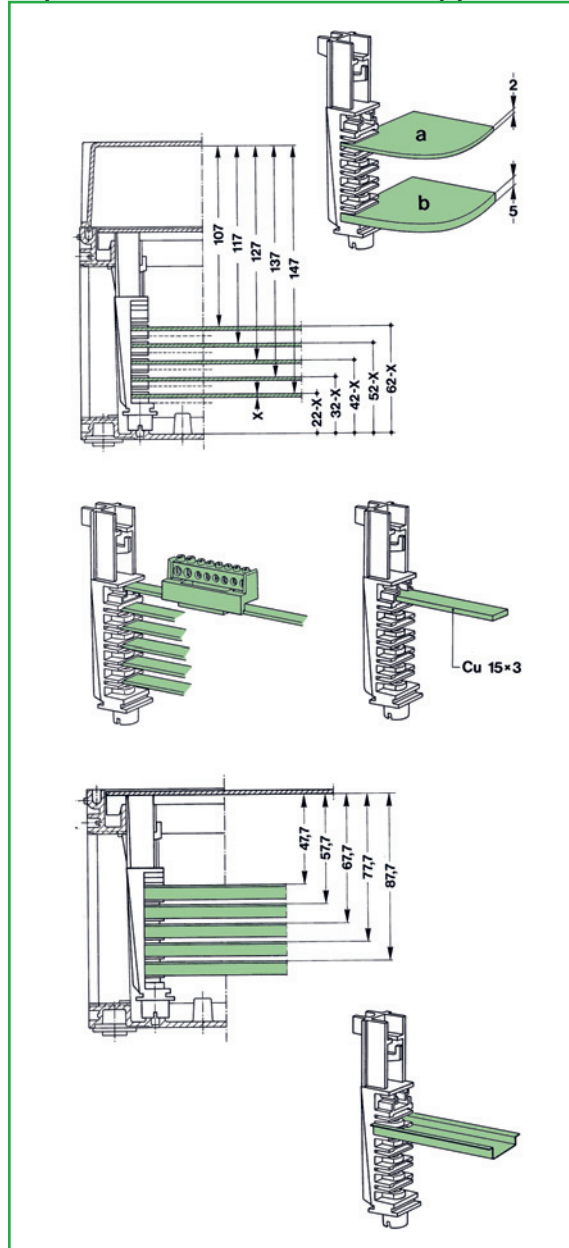
Insert the universal support on the base insert. Simultaneously fit the support on the inner lip. Press completely.

Unlocking the universal support



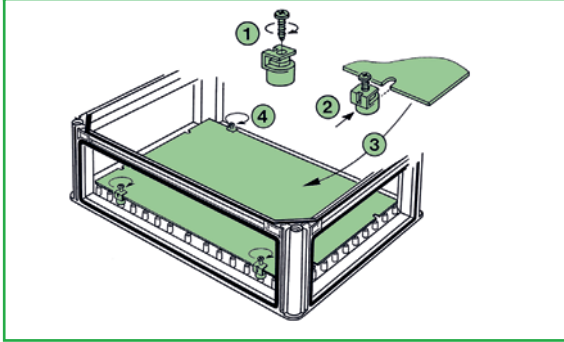
Press the locking latch towards the bottom. Lift the support.

Capabilities of the universal support



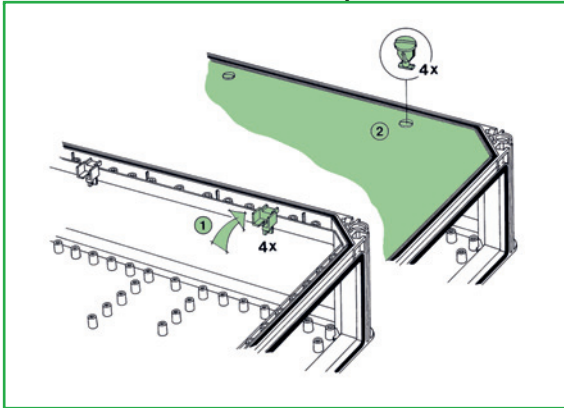
- Metal mounting plates (a) or pertinax plates (b)
- Copper rails 15 x 3
- Flat bar 12 x 2 mm
- Symmetrical DIN-profile

Installation of the mounting plates



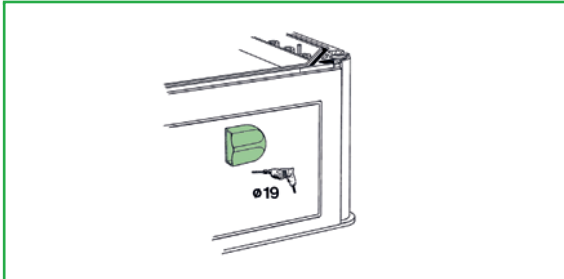
- ① Rotate the screws one turn in each support.
- ② Insert the four supports in the mounting plate slots.
- ③ Install the plate with the supports in the bottom of the base.
- ④ Tighten the screws.

Installation of the cover plates



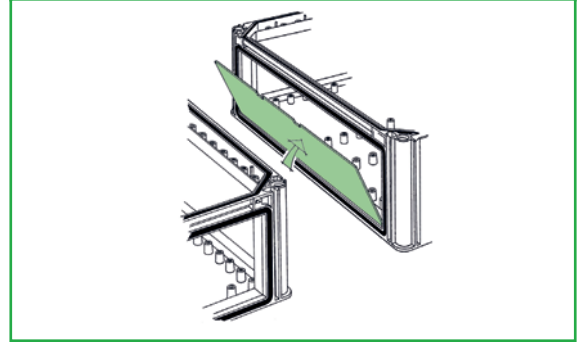
- ① Snap the four supports on the base inner lip.
- ② Install the four quarter-turn fasteners on the cover plate. Fit the cover plate on the supports by turning the fasteners.

Installation of the air vents



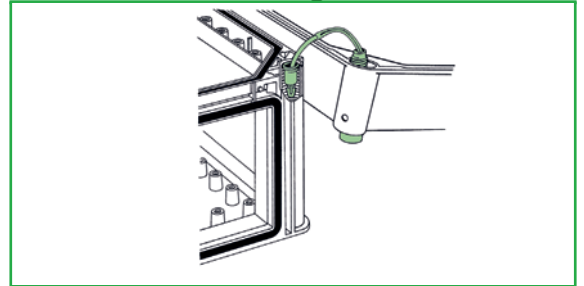
Drill a $\varnothing 19$ mm hole, install the air vent and screw the nut.

Installation of the partition plates



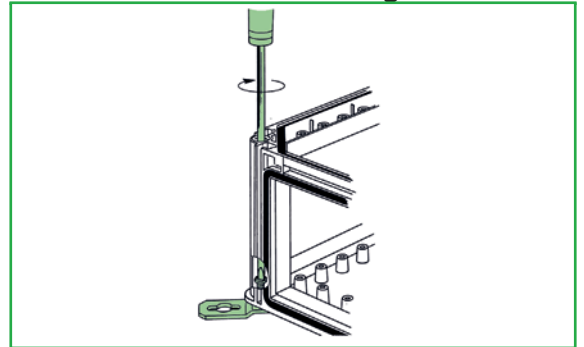
Install the partition plate between the two bases to be coupled.
The plate must be mounted with the slots on the top.

Installation of the hinges



Before the hinge installation, install the mounting brackets on the base, or install the enclosure on the wall or on the supporting frame.
Introduce the hinges in the screw holes of the cover. Insert in the base corners. Turn the screw until locked (360°).

Installation of the mounting brackets



Fit the brackets in the proper orientation (0°, 45°, 90°).
Screw through the base corner holes.

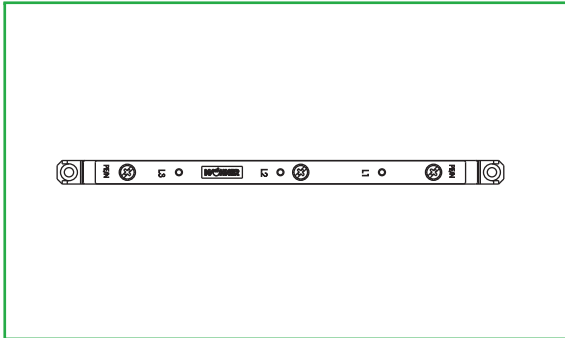
Installation of the busbar support

Define the required rated current.

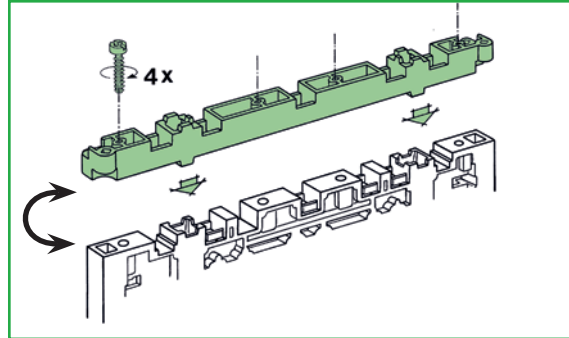
Install the busbar supports on the fixing points located in the base bottom.

Tighten with two screws. Introduce the copper bars in the support and set with the reversible top plate and four screws.

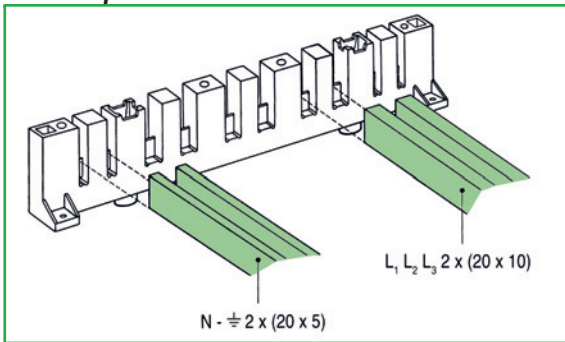
630A - horizontal



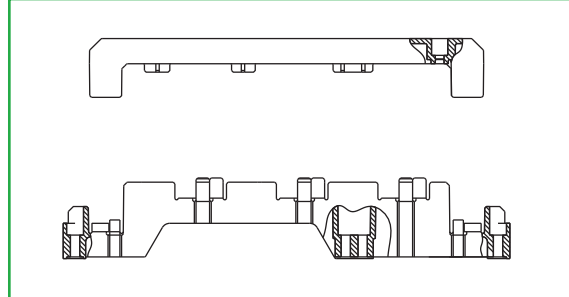
Fixing upper part busbar support



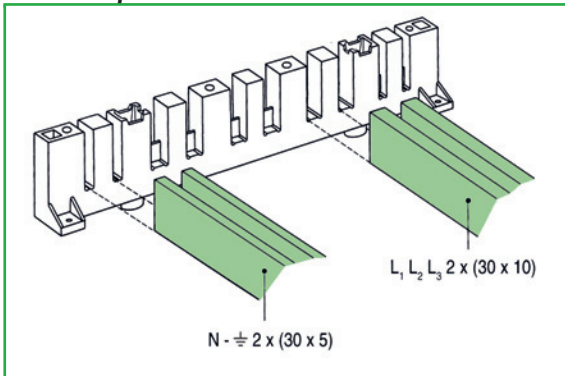
630A - parallel



Fixing upper part busbar support



1250A - parallel



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Type tested distribution cabinet

Features

- Secure: total insulation
- Protection degree: IP43-IP09 (IP05 for window door)
- Design verification according EN 61439-2
- Double wall: a sheet steel outer wall plus an inner insulated extruded wall
- Universal: for DIN-rail equipment up to 92.5 mm
- Installation friendly: ample wiring room and a removable mounting frame
- Flexible cable entries, integrated in the base

Components

The Fix-o-Rail Senior cabinet includes:

- base in RAL 9016
- mounting frame
- labels for circuit indication
- coverplates
- a transparent or grey door in RAL 9016
- closed by handle without lock
- sealing option

Approvals/Marking



Applications

As an elegant insulated cabinet in:

- restaurants and hotels
- workshops
- hospitals
- shopping centers
- offices
- commercial buildings
- leisure and sport locations

Overview of the range ● Page C.2



Dimensional drawings ● Page I.28

Specifications for tender documents ● Page I.56



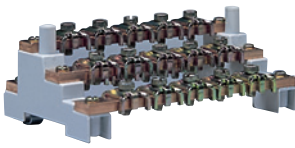
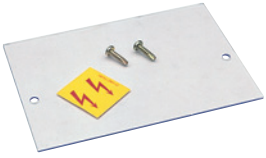



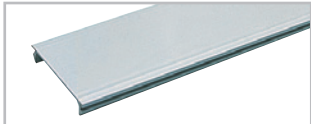
Power dissipation values ● Page I.75



Fix-o-Rail Senior

		H x W x D	Number of modules	Number of rows	Ref. No.	Pack.
	Plain door	650 x 300 x 210	48	4	610239	1
		800 x 300 x 210	60	5	610248	1
		650 x 550 x 210	96	4	610240	1
		800 x 550 x 210	120	5	610249	1
		950 x 550 x 210	144	6	610257	1
		1100 x 550 x 210	168	7	610241	1
		1250 x 550 x 210	192	8	610242	1
		1100 x 800 x 210	252	7	610243	1
		1250 x 800 x 210	288	8	610244	1
			Transparent door	650 x 300 x 210	48	4
800 x 300 x 210	60			5	610330	1
650 x 550 x 210	96			4	610329	1
800 x 550 x 210	120			5	610331	1
950 x 550 x 210	144			6	610332	1

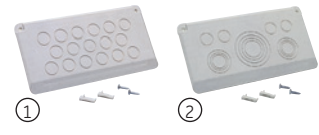
Accessories

	4 pole terminals 63A	
	610022	12
Rail section 6.5 x 9		
	4 pole terminals 160A	
	617992	1
With cover - for DIN-rail mounting		
	4 pole terminals 160A	
	610020	15
Rail section 12 x 5 Short-circuit capacity 35kA peak 10 ms		
	Protective shroud	
	610021	1
For 160A terminal		
	Earth bar	
	828152	1
For enclosure width 300 mm		
	828153	1
	For enclosure width 550 mm	
	828149	1
	For enclosure width 800 mm Length 684 mm	
	Blank plate	
	828056	1m
For screening off rectangular openings For cut out of 45 mm		

Plain plate	
815094	1



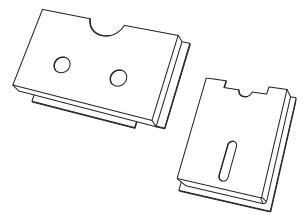
Pre-drilled plates	
① 815093	1
17 x PG13,5	
② 815092	1
1 x PG21 - PG48 / 2 x PG13,5 2 x PG29 / 4 x PG13,5	



Label for circuit indication	
610232	10
For enclosure width 300 mm	
610233	10
For enclosure width 550 mm	

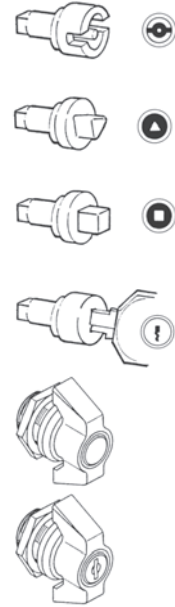


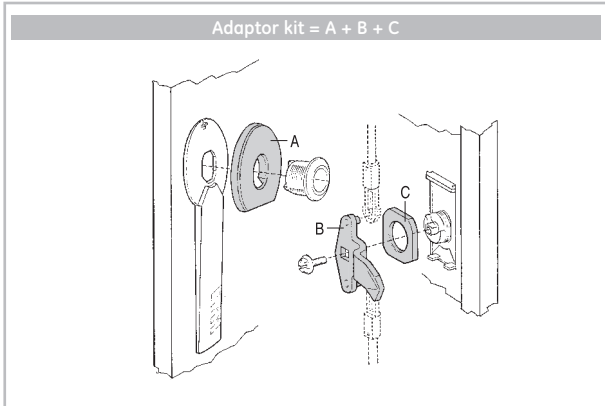
Document pocket	
811516	1
DIN A4 - W x H = 325 x 180 mm	
832000	1
DIN A5 - W x H = 155 x 225 mm	



Locking device	
815105	1
Adaptor kit +	
811327	1
Insert 3 mm double bit Key 832028 to be ordered separately	
811326	1
Insert 8 mm triangle Key 832027 to be ordered separately	
811325	1
Insert 8 mm square Key 832026 to be ordered separately	
811331	1
Cylinder lock with 2 keys V2432-E	
813146	1
Neutral handle	
813156	1
Handle with key on V2432-E	

The standard handle can be replaced by adaptor + insert or handle





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Notes

Wall mounting system enclosures

Grid area for notes.

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- D.2 **QuiXtra™ 630** - LV Distribution Boards up to 630A
- D.28 **QuiXtra™ 4000** - LV Distribution Boards up to 4000A
- D.70 **PowerDesign** - Design and quotations software

e-Catalogue / Application guide	Intro
Insulated boxes	A
Insulated wall mounting cabinets	B
Wall mounting system enclosures	C

Sheet steel distribution boards

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Subterranean enclosures	F
Climate control	G
General accessories	H
General characteristics	I
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Safe

- Verification tested system enclosure
- Certified according to the new IEC 61439-2
- IP43 with door and IP43 profile
- Internal segregation up to Form 2
- Tempered glass for transparent door



Simple and Flexible

- Enclosures widths for 12, 24 and 36 modules
- Enclosures heights from 3 up to 12 rows of 150mm
- Horizontal coupling
- 1 functional unit = 1 reference, including all parts to mount LV devices
- Modular concept: all functional units in steps of 50mm in height



Door ready to mount

- 1 or 3 point locking system already mounted
- Hinges mounted
- Installation without tools
- 135° open angle



QuiXtra™ 630

Low Voltage panel



Attractive design

- Fits perfectly in commercial environments
- Colours RAL 9006 and RAL 7024



Easy and quick to assemble

- Assembly by a single person
- Pre-assembled captive screws
- 90° screws for cover plates
- Click-in supports for functional units and busbar holders. No tools needed
- Frame to remove all cover plates at once!



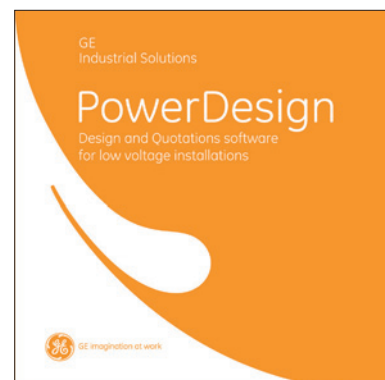
Rigid and sturdy

- Rear panel 1.5 mm thick
- Bent to increase rigidity
- Die-cast aluminium corner parts



PowerDesign

New generation of software to help customers with the configuration, design and quotation of low voltage system enclosures



Applications

QuiXtra 630 has been developed as a range of system enclosures, GE's complete solution for low voltage distribution boards up to 630A for commercial and industrial environments.

QuiXtra 630 is delivered as a flat kit, to be assembled, equipped and wired by a panel builder or installer. The QuiXtra 630 range consists of both wall mounting and floor standing sheet steel enclosures, as well as busbars and functional units to easily integrate all types of low voltage electrical devices up to 630A.

The combination of the QuiXtra 630 enclosure and original GE LV electrical devices are certified according to the new standard IEC 61439-2.

- Industrial
- High commercial
- Low commercial

Industrial

- Plants
- Small factories
- Waste recycling
- OEM
- Components-parts productions
- Printing

High commercial (as a secondary panel)

- Telecommunication
- Data-call centers
- Airports
- Hospitals
- Banks
- Public transportation
- Railways
- Subways
- Government buildings

Low commercial (as a main panel)

- Commercial offices
- Shopping malls
- Schools
- Stores
- Gasoline stations
- Restaurants
- Small shops



- Overview of the range ● Page D.11
- Dimensional drawings ● Page I.29
- Specifications for tender documents ● Page I.57
- Power dissipation values ● Page I.76



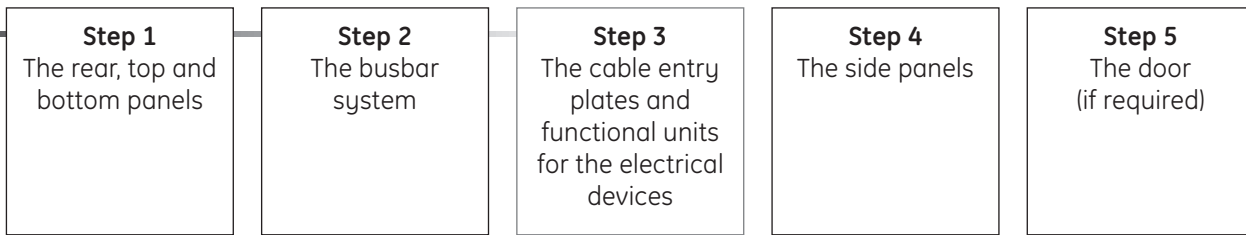
Description

QuiXtra 630 is a range of sheet steel system enclosures, delivered as a flat kit. It is GE's solution for low voltage distribution boards up to 630A, in commercial and industrial environments.

QuiXtra 630 is designed to be a reliable, simple, flexible and easy to use system enclosure, with the added value of its fresh and attractive design that integrates perfectly into a commercial environment.

The QuiXtra 630 range consists of 24 different enclosures. There are nine enclosure heights available, from 450mm up to 1800mm, and three enclosure widths, for functions of 12, 24 and 36 modules. All enclosures have the same depth (220mm without door and 250mm with door), allowing horizontal coupling and providing the user total flexibility to define the layout of the LV distribution boards.

A QuiXtra 630 system enclosure is assembled in 5 steps!



Assembling the top, bottom and side panels to the back-panel can be done by a single person. To facilitate this, the panel foresees guide ledges to avoid mistakes during assembly. The QuiXtra 630 enclosures can be coupled horizontally to build any required distribution board layout.

QuiXtra 630 can be installed as a wall mounting or as a floor standing enclosure. For the enclosures with a useful height of 1350mm or higher a 100mm high base needs to be added (ordered separately). For the smaller enclosures, the base is available as an option.

The QuiXtra 630 protection degree is either IP30, IP40 or IP43. IP30 is achieved simply using the coverplates delivered with each functional unit, without the need for a door. Simply adding a door to each enclosure increases the protection degree to IP40, without the need for an additional gasket. Adding the IP43 profile and the door, the protection degree is IP43.

GE's complete solution for low voltage distribution boards up to 630A for commercial and industrial environments.

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Description (continued)

QuiXtra 630 offers plain and transparent (tempered glass) doors, for an easy inspection of the devices installed inside the enclosure. The doors are equipped with a one or a three point closing mechanism (depending on the enclosure height), operated by a central handle. The handle is delivered with a standard lock insert for key 2432E. The opening angle is 135 degrees. Attaching the doors to the enclosure is done without tools, using the simple pin-hinges. The doors are delivered with hinges and locking mechanism already mounted, to reduce assembly time.

All GE LV electrical devices up to 630A can be easily assembled in QuiXtra 630 using the appropriate functional units. Each functional unit kit includes everything necessary for assembly:

- A mounting plate or DIN rail
- A support to attach to the enclosure
- A coverplate (with precise cut-outs)
- The required screws and other fixation parts.

Attaching the mounting plates or DIN rails does not require tools: they are attached to the rear mounting profile using a “click in” support. The coverplates are attached to two profiles using captive 90° screws. By removing these profiles, all cover plates can be removed at the same time.

QuiXtra 630 has sufficient wiring space for any possible layout. Each side has room for a vertical 60mm cable-duct. The vertical and the horizontal cable-ducts can be integrated in different depths to suit the users’ needs. QuiXtra 630 offers a variety of different cable entry plates for the top and bottom panels, to assure enough space for the cable entry and to cover all type of panel installations.

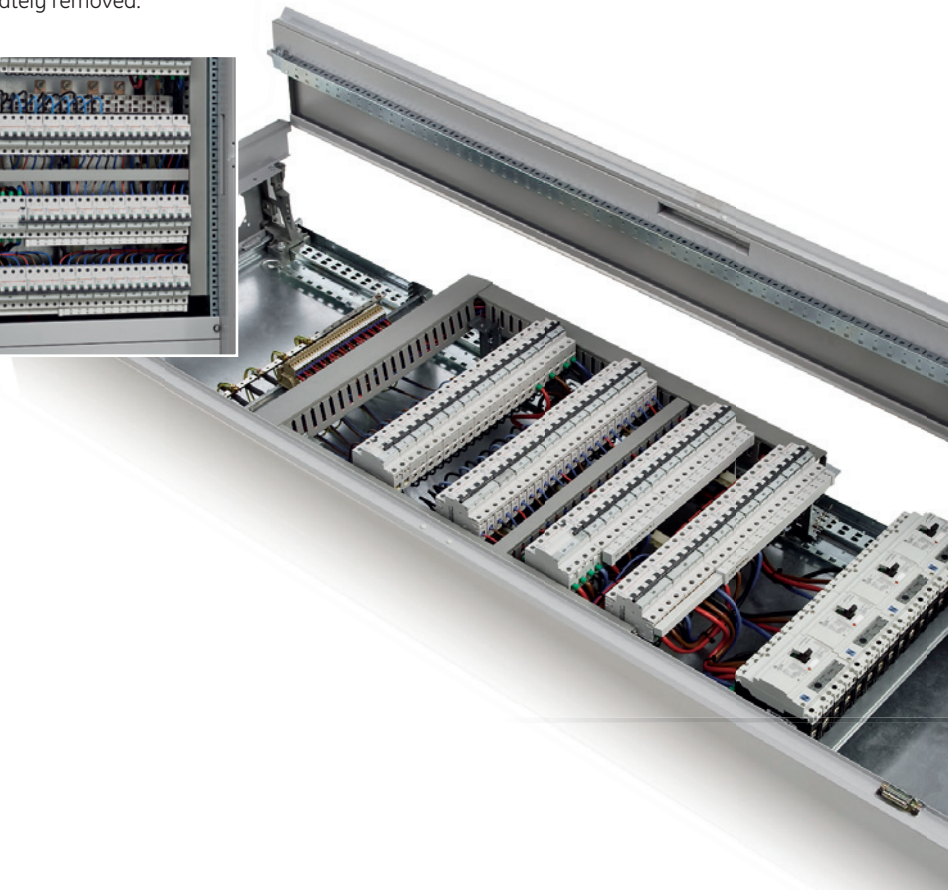
For upgrades and maintenance, the end user has direct access to the *vertical cable ducts* of up to 40 mm (in each side of the functions) in an installed panel, simply by removing the coverplates. If wider space is required, it’s necessary to disassemble the *side panels*, which can be separately removed.

The connectivity in QuiXtra 630 is based on rear mounted and staircase busbars. The *rear busbar* can be mounted horizontally or vertically. For the rear mounted busbar, a single insulator type is suitable for different cross sections of copper bars.



The *staircase busbar* can be installed vertically in the 12 module enclosure and horizontally in the 24 and 36 module enclosures. In either case, functions cannot be mounted on top.

The aesthetics of QuiXtra 630 make it particularly suitable for commercial environments. The QuiXtra 630 colour is white aluminium, RAL 9006. The external corner parts, the handle and the base are in dark grey, RAL 7024. The tempered glass of the transparent door is lightly smoked grey.



Features and Benefits

Simple and flexible

- Enclosures widths for 12, 24 and 36 modules
- Enclosures heights from 3 up to 12 rows of 150mm
- Horizontal coupling of 2 or more enclosures
- Modular concept. All functions in steps of 50mm in height
- Functional kits for GE low voltage electrical devices up to 630A.
Mounting of GE devices in vertical or horizontal position
- The busbars can be assembled in vertically or horizontally
- Accessories to facilitate panel wiring and assembly
- Each functional unit includes all parts necessary for assembly: mounting plate or DIN rail, supporting brackets, cover plate (with precise cut-outs) and all required fixation elements.

Easy and quick to assemble

- Assembly by a single person
- "Click in" supports for functions and busbar holders.
No tools needed
- 90° screws for cover plates
- Pre-assembled captive screws
- Guiding ledges in back panel for top and side panel fixation
- Door assembly without tools. Doors delivered with locking system and hinges pre-mounted (key 2432E)
- Generous wiring space, enough for vertical cable ducts of 60mm on each side
- Frame allowing the removal of all cover plates at the same time
- Markings in the fixation profiles to quickly position the functional units and cover plates
- Pre-punched cable entry glands as option

Safe for users, reliable and sturdy

- Verification tested system enclosure, certified according to the new IEC 61439-2 standard
- IP43 with door, without additional gaskets
- IP40 with door and without IP43 profile
- IP30 without door
- Back panel galvanized sheet steel, 1.5mm
- External panels sheet steel, 1.25mm, power coated
- Aluminium corner parts provide additional rigidity to both stand-alone and coupled enclosures
- Internal segregation: Form 2
- Tempered glass for the transparent door

Attractive design

- Optimal integration in commercial environments
- Combination of two colours:
RAL 9006 (metallic silver) and
RAL 7024 (dark grey)

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Kit structure

QuiXtra 630 is a system enclosure delivered in flat kits, to be assembled, equipped and wired by the panel builder and installer.

1. Basic kit

The kit includes:

- Rear panel
- Top panel
- Bottom panel
- Four die-cast aluminium corner parts
- Two rain profiles
- Two filler plates
- The rear panel already has the two functional mounting profiles integrated, to which the supports for the DIN rails, the mounting plates and the isolators can be attached.
- The filler plates serve to cover the corner parts and receive the door locking mechanism
- The die-cast aluminium corner parts are fixed to the back-panel using two screws.

✓ For enclosures of useful height of 1350, 1500 and 1800mm, the bottom panel is not delivered. It is mandatory to add the floor base of 100mm.

2. Side panel kit

The kit includes:

- Two side panels, with two vertical profiles to fix the coverplates
- Four external corner parts for the wall mounting sizes (between 450 and 1200mm)
- Two external corner parts for the floor standing sizes (1350, 1500 and 1800mm)

An enclosure is built of 3 main kits



3. Door

The kit includes:

- Plain door, available for all enclosure sizes
- Transparent door, for enclosure 24 and 36 modules wide
- The locking mechanism, handle and hinges are delivered mounted on the door
- One lock insert with two keys 2432E is included



Additional options

Cable entry plates

Only one cable size entry plate, in 8 different configurations.

Coupling kit

- Vertical profiles to join the rear panels and U parts to join the aluminium corner parts
- A vertical beam for the front, with two vertical profiles to fix the coverplates
- Two plastic parts to join the top and bottom panels. (Photo 7)

Horizontal reinforcement profiles

Two horizontal profiles reinforce coupled enclosures. (Photo 8)

Floor base

Base and fixation elements. Removable front plate to improve accessibility. Rods can be inserted to transport a finished enclosure with a forklift.

Functional units

DIN rail or mounting plate with two supports to mount into the rear vertical profiles. Includes cover plate with precise cut-outs and all the fixation elements. (Photo 9)

Coverplates

Extra blind plates available.

Busbar supports

The kit includes the busbar holders and the support, delivered with all fixation parts.

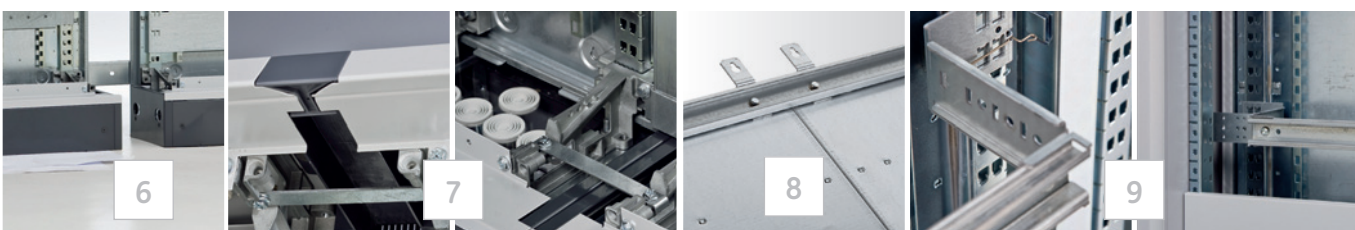
Mounting plates

Includes plain metal mounting plate, supports and fixation elements.

Special functions

Meters, push-buttons P9

- | | |
|---|--|
| 1 | Without the cable entry plates, and with vertical profiles for the coverplates |
| 2 | Enclosure with floor base included |
| 3 | Side panels |
| 4 | Door |
| 5 | Cable entry plates |
| 6 | Coupling of enclosures |
| 7 | Coupling of enclosures (plastic parts) |
| 8 | Coupling the back panels and wall mounting brackets |
| 9 | Functional unit |



Main technical characteristics



Useful and external dimensions (mm)

External height	Useful height	Rows 150mm	External width			Depth with door
			12 modules	24 modules	36 modules	
600	450	3	-	660	-	250
750	600	4	364	660	-	250
900	750	5	364	660	876	250
1050	900	6	364	660	876	250
1200	1050	7	364	660	876	250
1350	1200	8	364	660	876	250
1600	1350	9	364	660	876	250
1750	1500	10	364	660	876	250
2050	1800	12	364	660	876	250


Material and colour

Rear panel & mounting profiles	Sendzimir zinc plated steel 1.5 mm
Side, top and bottom panel	Epoxy-polyester coated sheet steel 1.25 mm
Plain door	Epoxy-polyester coated sheet steel 1.25 mm
Transparent door	Epoxy-polyester coated sheet steel 1.25 mm and smoked safety glass 3 mm.
Cover plates	Epoxy-polyester coated sheet steel 1 mm
External corner and coupling parts	ABS
Internal corner plates	Die-cast aluminium
Enclosure colour	RAL 9006
Floor base colour	RAL 7024

Protection degree and segregation form

Protection class	I
Pollution degree	2
Segregation	Form 1 & Form 2
Protection degree	
Without door	IP30, IK08
With plain door & without IP43 profile	IP40, IK09
With plain door and IP43 profile	IP43, IK09
With transparent door	Same IP as plain door, IK08

Standards and approvals

Standards	IEC 60439-2 EN 60439-2
Approval	
Certification	KEMA
RoHS	Compliant

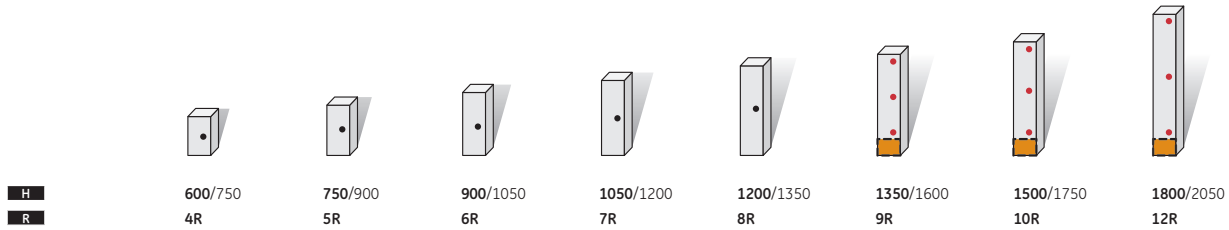
Electrical characteristics

Rated current (In)	630 A
Rated operational voltage (Ue)	415 V
Rated insulation voltage (Ui)	690 V
Rated frequency (fn)	50/60 Hz
Rated short-circuit current (Icw)	30 kA/1s
Rated current of busbar systems	630 A in IP43

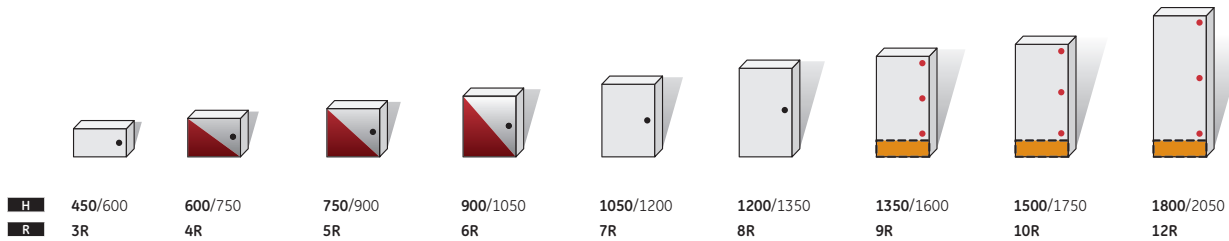


Full enclosure range

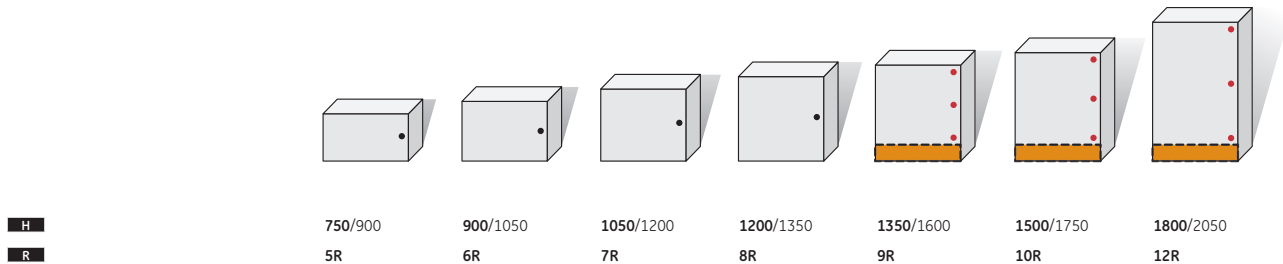
12 modules - width: 364 mm/depth: 250 mm



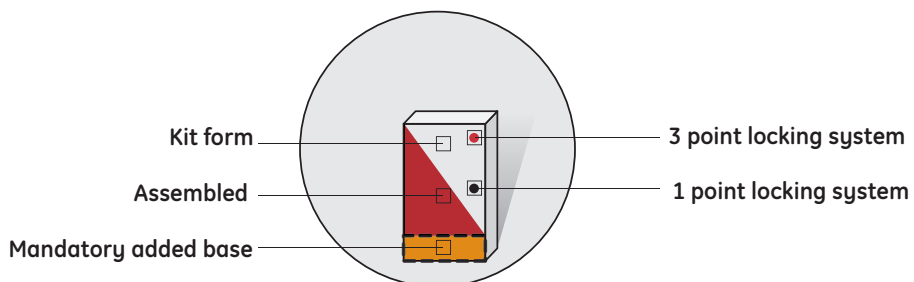
24 modules - width: 660 mm/depth: 250 mm



36 modules - width: 876 mm/depth: 250 mm

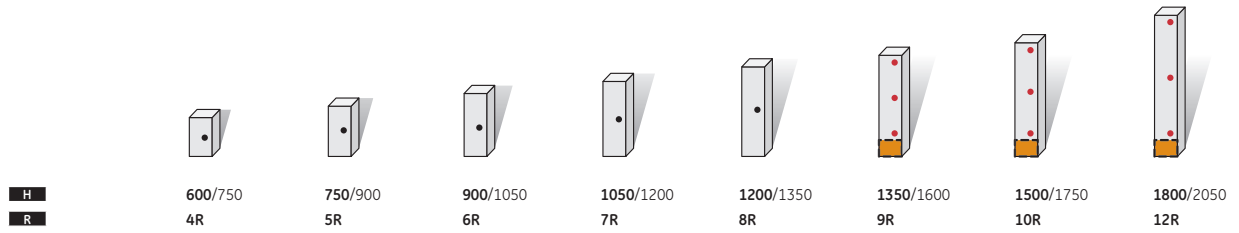


H Useful height/external height
R Number of rows of 150 mm

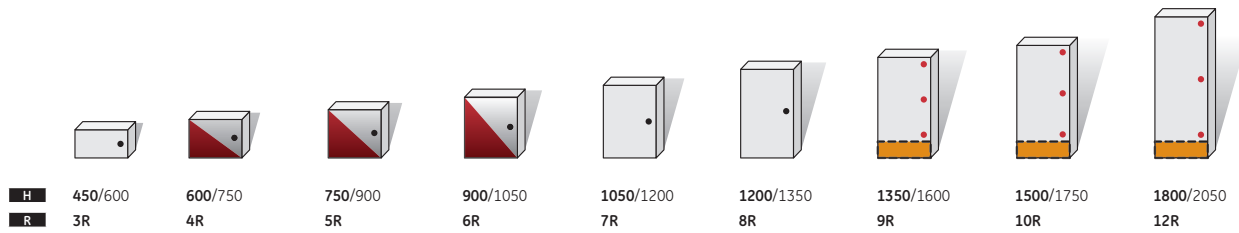


Order codes enclosures in kit form

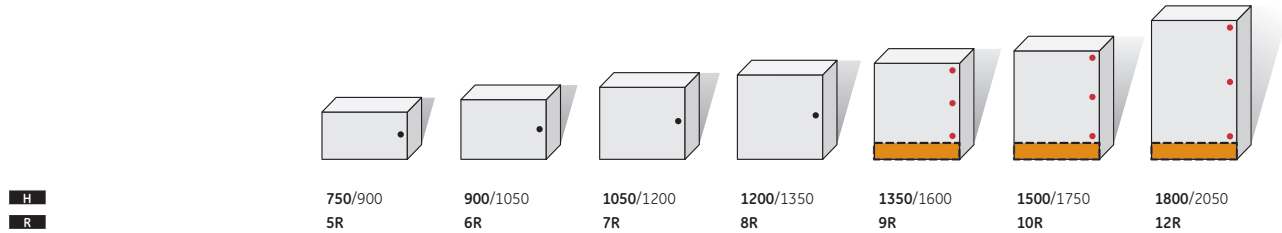
12 modules - width: 364 mm/depth: 250 mm



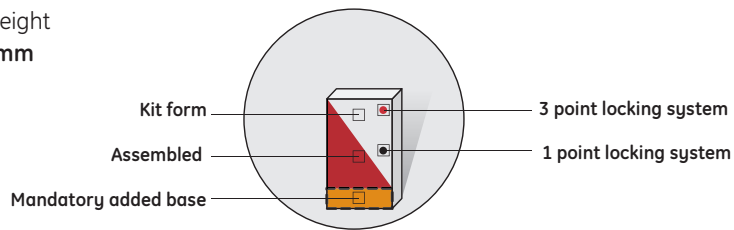
24 modules - width: 660 mm/depth: 250 mm



36 modules - width: 876 mm/depth: 250 mm



H Useful height/external height
R Number of rows of 150 mm



Basic kit

- Rear panel
- Top and bottom panels
- 2 vertical profiles
- 4 aluminium corner parts
- Fixation elements

✓ Mandatory to add floor base for enclosures 9, 10 and 12 rows

Side panel kit

- 2 side panels
- 2 profiles to fix coverplates
- Plastic corner parts
 - 4 units for enclosures up to 8 rows
 - 2 units for 9, 10 & 12 rows enclosures
- Fixation elements

12 modules enclosures - width: 364 mm/depth: 250 mm

External height (mm)	Useful height (mm)	# rows 150mm	# modules	Basic kit ⁽¹⁾		Side panel kit ⁽³⁾		Plain door	Transparent door	Coupling kit ⁽⁴⁾
				12 modules						
600	450	3	36	-		885027		-	-	-
750	600	4	48	885000	+	885028	+	885044	-	885036
900	750	5	60	885001	+	885029	+	885045	-	885037
1050	900	6	72	885002	+	885030	+	885046	-	885038
1200	1050	7	84	885003	+	885031	+	885047	-	885039
1350	1200	8	96	885004	+	885032	+	885048	-	885040
1600	1350	9	108	885005 ⁽²⁾	+	885033	+	885049	-	885041
1750	1500	10	120	885006 ⁽²⁾	+	885034	+	885050	-	885042
2050	1800	12	144	885007 ⁽²⁾	+	885035	+	885051	-	885043
Floor base	-	-	-	885084		-		-	-	-

24 modules enclosures - width: 660 mm/depth: 250 mm

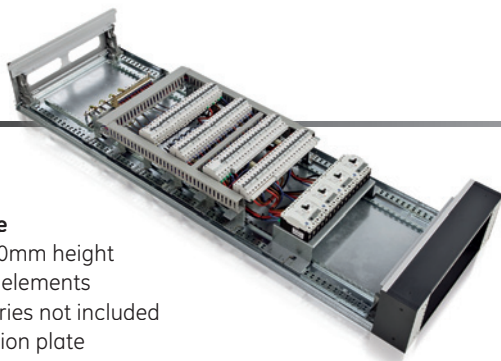
External height (mm)	Useful height (mm)	# rows 150mm	# modules	Basic kit ⁽¹⁾		Side panel kit ⁽³⁾		Plain door	Transparent door	Coupling kit ⁽⁴⁾
				24 modules						
600	450	3	72	885008		885027		885052	885068	-
750	600	4	96	885009	+	885028	+	885053	885069	885036
900	750	5	120	885010	+	885029	+	885054	885070	885037
1050	900	6	144	885011	+	885030	+	885055	885071	885038
1200	1050	7	168	885012	+	885031	+	885056	885072	885039
1350	1200	8	192	885013	+	885032	+	885057	885073	885040
1600	1350	9	216	885014 ⁽²⁾	+	885033	+	885058	885074	885041
1750	1500	10	240	885015 ⁽²⁾	+	885034	+	885059	885075	885042
2050	1800	12	288	885016 ⁽²⁾	+	885035	+	885060	885076	885043
Floor base	-	-	-	885085		-		-	-	-

36 modules enclosures - width: 876 mm/depth: 250 mm

External height (mm)	Useful height (mm)	# rows 150mm	# modules	Basic kit ⁽¹⁾		Side panel kit ⁽³⁾		Plain door	Transparent door	Coupling kit ⁽⁴⁾
				36 modules						
600	450	3	-	-		885027		-	-	-
750	600	4	-	-	+	885028	+	-	-	885036
900	750	5	180	885020	+	885029	+	885061	885077	885037
1050	900	6	216	885021	+	885030	+	885062	885078	885038
1200	1050	7	252	885022	+	885031	+	885063	885079	885039
1350	1200	8	288	885023	+	885032	+	885064	885080	885040
1600	1350	9	324	885024 ⁽²⁾	+	885033	+	885065	885081	885041
1750	1500	10	360	885025 ⁽²⁾	+	885034	+	885066	885082	885042
2050	1800	12	432	885026 ⁽²⁾	+	885035	+	885067	885083	885043
Floor base	-	-	-	885086		-		-	-	-

(1) Includes rear, top and bottom panel (side panels not included).
 (2) Bottom panel not included. Mandatory to order the floor base separately.
 (3) Includes two side panels and external corner parts.
 (4) When coupling 2 or more enclosures, only 2 side panels are necessary.

How to order examples see page D.14



Floor base

- Base 100mm height
- Fixation elements
- Accessories not included
 - Separation plate
 - Cable support

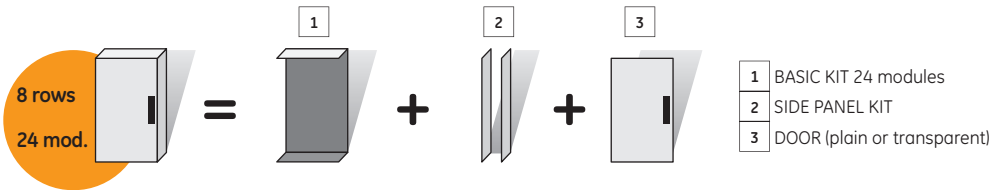
Doors

- Door
- Locking mechanism assembled
- Handle assembled
- Locking insert key 2432E
- Hinges assembled



How to order

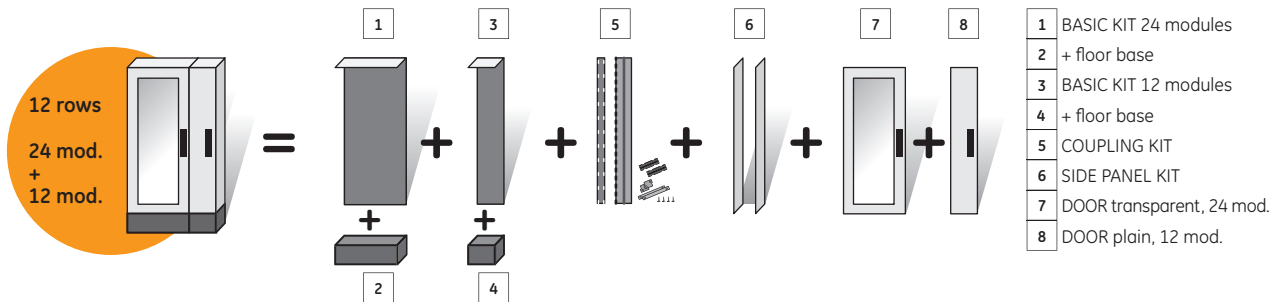
Example of individual 24 modules enclosure



24 modules enclosures - width: 660 mm/depth: 250 mm

External height (mm)	Useful height (mm)	# rows 150mm	# modules	Basic kit ⁽¹⁾		Side panel kit ⁽³⁾		Plain door	Transparent door	Coupling kit ⁽⁴⁾
				24 modules						
600	450	3	72	885008		885027		885052	885068	-
750	600	4	96	885009	+	885028	+	885053	885069	885036
900	750	5	120	885010	+	885029	+	885054	885070	885037
1050	900	6	144	885011	+	885030	+	885055	885071	885038
1200	1050	7	168	885012	+	885031	+	885056	885072	885039
1350	1200	8	192	885013	+	885032	+	885057	885073	885040
1600	1350	9	216	885014 ⁽²⁾	+	885033	+	885058	885074	885041
1750	1500	10	240	885015 ⁽²⁾	+	885034	+	885059	885075	885042
2050	1800	12	288	885016 ⁽²⁾	+	885035	+	885060	885076	885043
Floor base	-	-	-	885085		-		-	-	-

Example of coupled 24 and 12 modules enclosures



24 modules enclosures - width: 660 mm/depth: 250 mm

External height (mm)	Useful height (mm)	# rows 150mm	# modules	Basic kit ⁽¹⁾		Side panel kit ⁽³⁾		Plain door	Transparent door	Coupling kit ⁽⁴⁾
				24 modules						
600	450	3	72	885008		885027		885052	885068	-
750	600	4	96	885009	+	885028	+	885053	885069	885036
900	750	5	120	885010	+	885029	+	885054	885070	885037
1050	900	6	144	885011	+	885030	+	885055	885071	885038
1200	1050	7	168	885012	+	885031	+	885056	885072	885039
1350	1200	8	192	885013	+	885032	+	885057	885073	885040
1600	1350	9	216	885014 ⁽²⁾	+	885033	+	885058	885074	885041
1750	1500	10	240	885015 ⁽²⁾	+	885034	+	885059	885075	885042
2050	1800	12	288	885016 ⁽²⁾	+	885035	+	885060	885076	885043
Floor base	-	-	-	885085		-		-	-	-

12 modules enclosures - width: 364 mm/depth: 250 mm

External height (mm)	Useful height (mm)	# rows 150mm	# modules	Basic kit ⁽¹⁾		Side panel kit ⁽³⁾		Plain door	Transparent door	Coupling kit ⁽⁴⁾
				12 modules						
600	450	3	36	-		885027		-	-	-
750	600	4	48	885000	+	885028	+	885044	-	885036
900	750	5	60	885001	+	885029	+	885045	-	885037
1050	900	6	72	885002	+	885030	+	885046	-	885038
1200	1050	7	84	885003	+	885031	+	885047	-	885039
1350	1200	8	96	885004	+	885032	+	885048	-	885040
1600	1350	9	108	885005 ⁽²⁾	+	885033	+	885049	-	885041
1750	1500	10	120	885006 ⁽²⁾	+	885034	+	885050	-	885042
2050	1800	12	144	885007 ⁽²⁾	+	885035	+	885051	-	885043
Floor base	-	-	-	885084		-		-	-	-

(1) Includes rear, top and bottom panel (side panels not included).
 (2) Bottom panel not included. Mandatory to order the floor base separately.
 (3) Includes two side panels and external corner parts.
 (4) When coupling 2 or more enclosures, only 2 side panels are necessary.





Assembled enclosures

- Rear panel
- Top and bottom panels
- Back profiles
- Front profiles
- Side panels
- ✓ Assembled enclosures are without door

Assembled enclosures - order codes

Useful height (mm)	# rows 150mm	24 modules
		600
750	5	885018
900	6	885019

Reinforcement profiles

Kits to reinforce several coupled enclosures, and to facilitate the transportation of the complete switchboard.

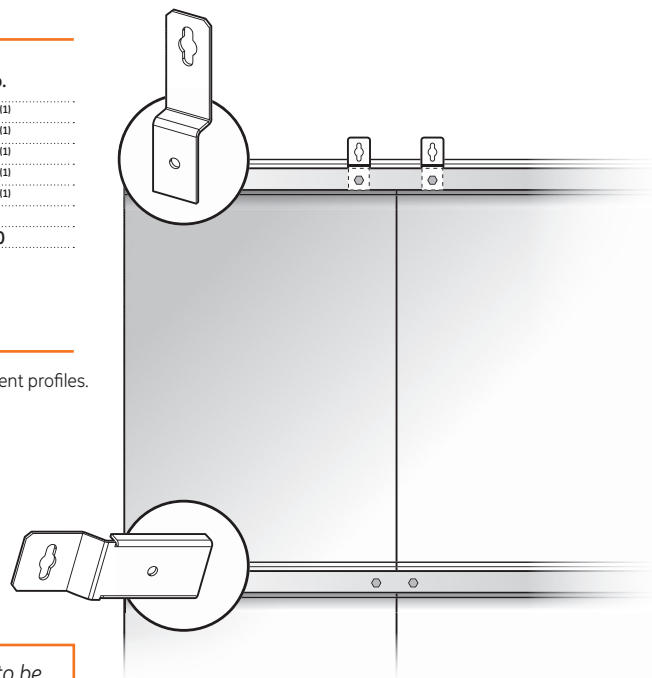
- In each kit are included: Two horizontal profiles for the adequate combinations of enclosures, and the wall mounting brackets (top).
- The profiles are assembled horizontally through the enclosures, as it is shown in the picture.



Reinforcement profiles - order codes

	Ref. No.
For coupled 12 & 24 modules enclosures	885235 ⁽¹⁾
For coupled 12 & 36 modules enclosures	885236 ⁽¹⁾
For coupled 24 & 12 & 24 modules enclosures	885237 ⁽¹⁾
For coupled 36 & 12 & 36 modules enclosures	885238 ⁽¹⁾
For coupled 36 & 12 & 24 modules enclosures	885239 ⁽¹⁾
Hooks to mount on sides (set of 4 hooks)	885240

(1) Vertical wall mounting supports 885256 included in reinforcement profiles.



✓ For side mounting brackets a special set **885240** has to be ordered additionally. Only for horizontal wall mounting.

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Cable entry plates

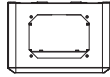
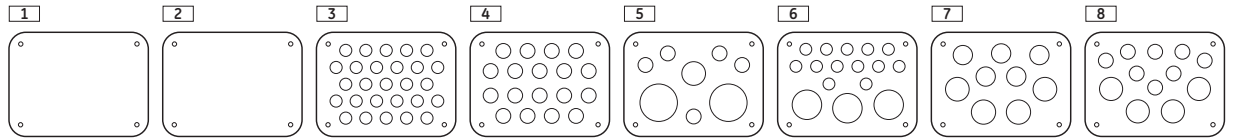
The enclosures are delivered without cable entry plates. The number and type of cable entry plates should be ordered following the table below.

Made in glass fibre reinforced polyester.

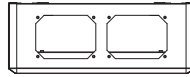


Cable entry plates - order codes

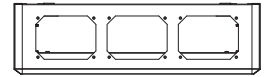
Type		Floor standing			Wall mounting			Ref. No.
		12 modules	24 modules	36 modules	12 modules	24 modules	36 modules	
Plain metal IP40 (RAL 9006)	1	1	2	3	2	4	6	885287
In polyester IP43 (RAL 7035)								
Plain	2	1	2	3	2	4	6	885228
27xM20	3	1	2	3	2	4	6	885229
18xM25	4	1	2	3	2	4	6	885230
2xM63 + 1xM40 + 5xM25	5	1	2	3	2	4	6	885231
3xM50 + 13xM20	6	1	2	3	2	4	6	885232
4xM40 + 5xM32	7	1	2	3	2	4	6	885233
4xM40 + 8xM25	8	1	2	3	2	4	6	885234



12 modules: 1 entry plate

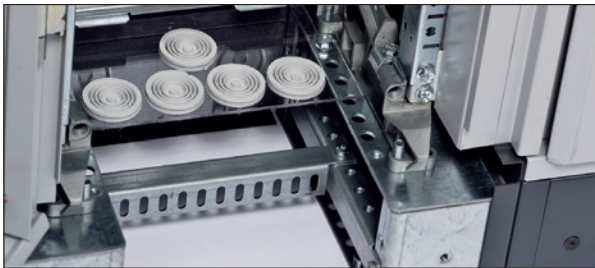


24 modules: 2 entry plates



36 modules: 3 entry plates

Floor bases



Cable fixation



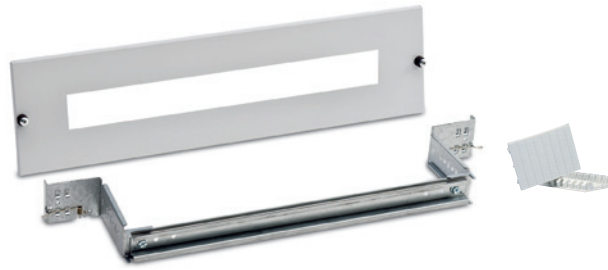
Separation for floor base

	Ref. No.	Ref. No.	Ref. No.
	12 modules	24 modules	36 modules
Floor base height - 100 mm	885084	885085	885086
Horizontal cutted separation (set including cable glands)	885087	885088	885089
Horizontal plain separation (set)	885090	885091	885092
Set of cable fixation	885093	885094	885095

Functional units for modular devices

Content

- DIN rail
- Supports to fix the rear panel profiles
- Coverplate with cut-out
- Blanking plate
- Fixation elements



Functional units for modular devices

	Height (mm)	Ref. No.	Ref. No.	Ref. No.
		12 modules	24 modules	36 modules
DIN rail	150	885098	885100	885103
DIN rail	200	885099	885101	885104
DIN rail for Fixwell™ MCB's	150	-	885102	885105
DIN rail + busbar 160A	150	-	885096	885097

Functional units for terminals

Content

- DIN rail adjustable in height
- Supports to fix the rear panel profiles
- Plain coverplate
- Fixation elements



Functional units for terminals

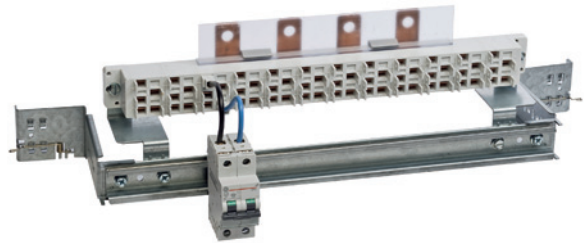
	Height (mm)	Ref. No.	Ref. No.	Ref. No.
		12 modules	24 modules	36 modules
1 horizontal DIN rail for terminals (without coverplate)	150	885241	885242	885243
1 horizontal DIN rail for terminals	150	885149	885150	885151
1 vertical DIN rail for terminals (*)	900	885152	-	-
3/4 vertical DIN rails for terminals(**)	300	-	885153	885154
Earth bar	-	885264*	885138**	885138**

Moduclic plug-in distribution system

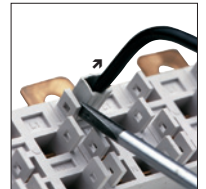
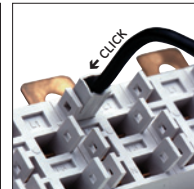
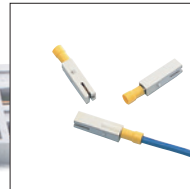
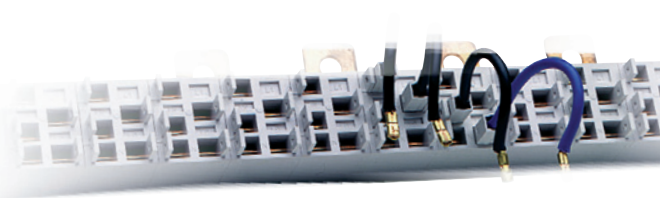
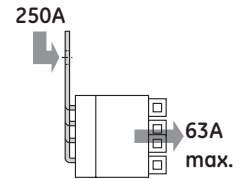
Moduclic is a secondary plug-in distribution system of 250A, 660V~ 60kA peak. Moduclic is a busbar for modular devices and this as well for MCB's as for comfort functions. Moduclic is mounted directly on the DIN-rail and is **independent** the type of **system enclosure**: QuiXtra or VP-System.

The main advantage of Moduclic is the **safety** aspect (IP20): adding or **removing** electrical circuits in a panel board **without disconnecting** the power. All outgoing circuits stay in the operational function, due to the fact that all operations are done using the **insulated click connection**, without touching the live parts, even not when using an insulated tool.

Standard connections of 6 mm² (up to 40A) are shipped with Moduclic. The Moduclic distribution system is suitable for integration in **all system enclosures** conform to IEC 61439-2



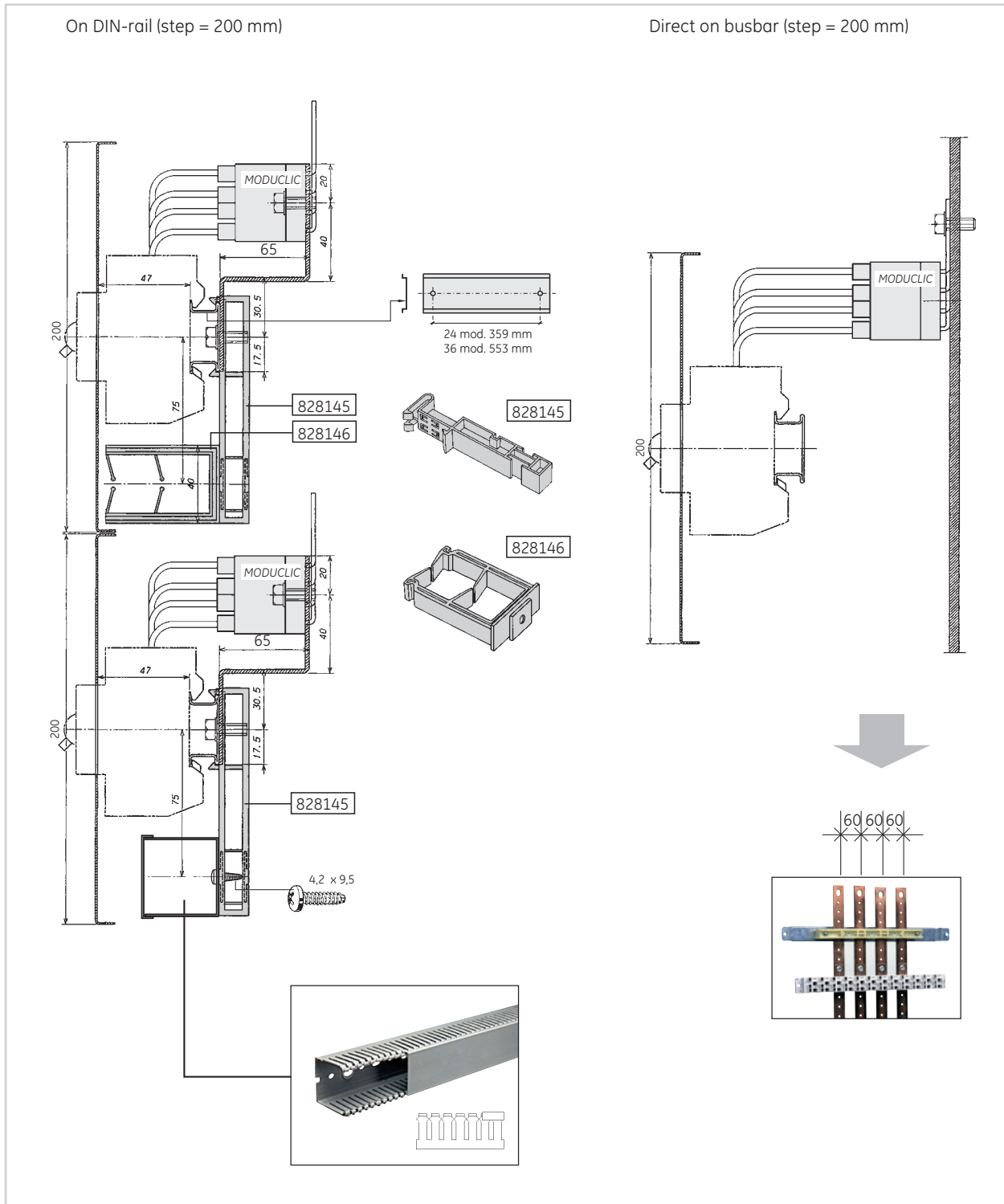
24 and 36 modules - 3P+2N - IP20



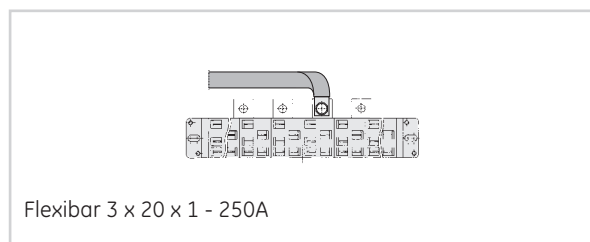
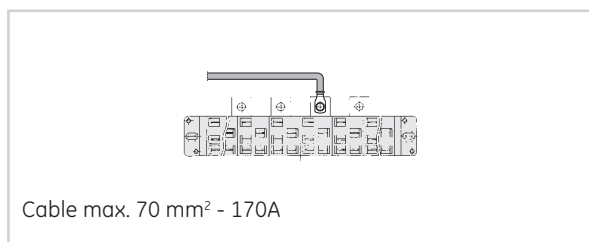
Moduclic distribution system

Description	Cables	Cable section (mm ²)	Cable length (mm)	Ref. No.	Pack
Moduclic 24 modules 3P+2N + cables 3P+N	18 black cables 6 blue cables	6 6	120 120	880884	1
Moduclic 24 modules 3P+2N + cables mono	12 black cables 12 blue cables	6 6	120 120	880885	1
Moduclic 24 modules 3P+2N without cables	-	-	-	880886	1
Moduclic 36 modules 3P+2N + cable 3P+N	27 black cables 9 blue cables	6 6	120 120	885265	1
Moduclic 36 modules 3P+2N + cables mono	18 black cables 18 blue cables	6 6	120 120	885266	1
Moduclic 36 modules 3P+2N without cables	-	-	-	885267	1
Cables with end connector	6 black cables 6 blue cables 6 black cables 6 blue cables	6 6 10 10	120 120 120 120	880887 880888 880889 880890	1 1 1 1
Stripped cables	6 black cables 6 blue cables 6 black cables 6 blue cables	6 6 10 10	320 320 320 320	880891 880892 880893 880894	1 1 1 1
Cables for 2 x 4P MCB's - 6 black & 2 blue	8 cables 8 cables 8 cables 8 cables	6 10 6 10	120 120 320 320	880926 880928 880930 880932	1 1 1 1
Cables for 4 x 2P MCB's - 4 black & 4 blue	8 cables 8 cables 8 cables 8 cables	6 10 6 10	120 120 320 320	880927 880929 880931 880933	1 1 1 1
Plugs	1.5-2.5 mm ² blue, 10 plugs 4-6 mm ² yellow, 10 plugs			880895 880896	1 1

Mounting of Moduclic



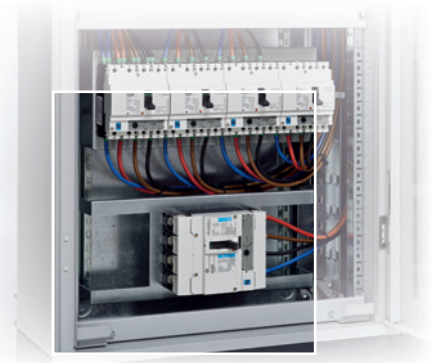
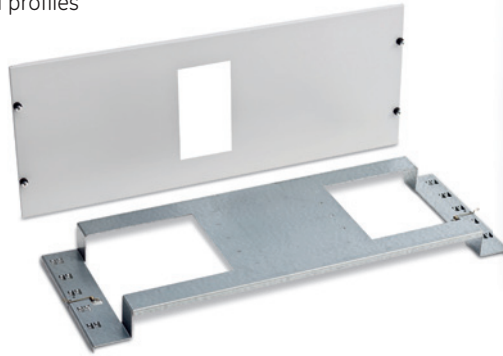
Incoming connections



Functional units for MCCB's - Record Plus

Content

- Mounting plate
- Supports to fix to the rear panel profiles
- Coverplate with cut-out
- Fixation elements



Horizontal assembly

Record Plus frame size	In (A)	Poles	RCD position	Height (mm)	# MCCB's		# MCCB's		# MCCB's	
					Ref. No.	Ref. No.	Ref. No.	Ref. No.		
					12 modules		24 modules		36 modules	
FD	160	3/4 poles	-	150	-	-	1	885117	-	-
FD+RCD	160	3 poles	Bottom	150	-	-	1	885114	-	-
FD+RCD	160	4 poles	Bottom	150	-	-	1	885115	-	-
FE	250	3/4 poles	-	200	-	-	1	885121	1	885131
FE+RCD	250	3/4 poles	Bottom	200	-	-	1	885119	1	885130
FG	630	3 poles	-	300	-	-	-	-	1	885134
FG	630	4 poles	-	300	-	-	-	-	1	885135
FG +RCD	630	3 poles	Bottom	300	-	-	-	-	1	885132
FG +RCD	630	4 poles	Bottom	300	-	-	-	-	1	885133

Vertical assembly

Record Plus frame size	In (A)	Poles	RCD position	Height (mm)	# MCCB's		# MCCB's		# MCCB's	
					Ref. No.	Ref. No.	Ref. No.	Ref. No.		
					12 modules		24 modules		36 modules	
FD	160	3/4 poles	-	300/250 ⁽¹⁾	1	885107	4	885116	6	885127
FD+RCD	160	3/4 poles	Lateral	300/250 ⁽¹⁾	1	885106	2	885116	3	885127
FE	250	3/4 poles	-	450	1	885109	3	885120	4	885129
FE+RCD	250	3/4 poles	Bottom	600	1	885108	3	885118	4	885128
FG	630	3 poles	-	600	1	885112	1	885124	-	-
FG	630	4 poles	-	600	1	885113	1	885125	-	-
FG +RCD	630	3 poles	Bottom	600	1	885110	1	885122	-	-
FG +RCD	630	4 poles	Bottom	600	1	885111	1	885123	-	-

(1) Height 300 mm in 12 modules
Height 250 mm in 24 and 36 modules.

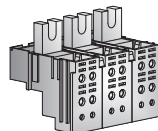
Distribution terminals for Record Plus

Especially designed to allow the use of the moulded case circuit breaker Record Plus FE frame as a mains device with cables distributing the load over multiple outgoing circuits (or lines of multiple outgoing circuits).

The terminals are available as a three or four pole set allowing the line or load side of the breaker to be equipped. The sets consist of a number of fully insulated single pole units that can be assembled into a multipole distribution block before they are mounted on the breaker.

External connectors

Connector 6 copper cable cores 2.5 mm² up to 35 mm²
Set for equipping the line or load side of a breaker



Frame size	Conductors	Size of conductors	Strippable length	Max. torque on lug bolt
FE160/250	max. 6	4 x 2.5 - 35 mm ²	12 mm	6 Nm
	-	2 x 2.5 - 16 mm ²	12 mm	3 Nm

External connectors

	Ref. No.	Pack
Set 3 pole	880954	1
Set 4 pole	880955	1

Functional units for loadbreak disconnectors - Dilos

Content

- Mounting plate
- Supports to fix to the rear panel profiles
- Coverplate with cut-out
- Fixation elements



Horizontal assembly

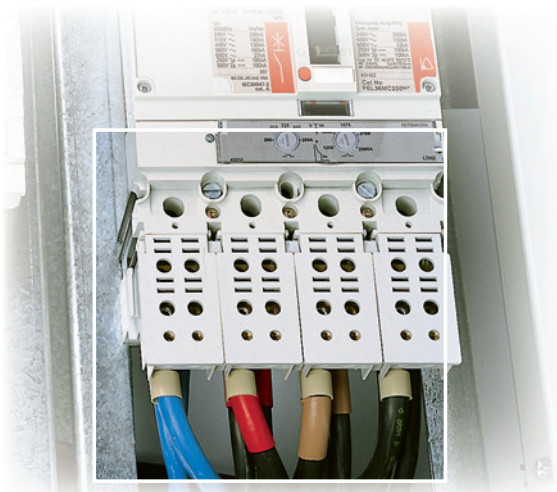
Dilos size	In (A)	Poles	Height (mm)	Ref. No.	Ref. No.	Ref. No.
				12 modules	24 modules	36 modules
Dilos 1H ⁽¹⁾	-	3/4 poles	300	-	885140	-
Dilos 3 ⁽¹⁾	250-315	3/4 poles	300	-	885142	885146
Dilos 4 ⁽²⁾	400-630	3/4 poles	450	-	885144	885147

Vertical assembly

Dilos size	In (A)	Poles	Height (mm)	Ref. No.	Ref. No.	Ref. No.
				12 modules	24 modules	36 modules
Dilos 1/2	-	3/4 poles	300	885148	-	-
Dilos 1H ⁽¹⁾	-	3/4 poles	300	885136	885139	-
Dilos 3 ⁽¹⁾	250-315	3/4 poles	300	885137	885141	885145
Dilos 4 ⁽²⁾	400-630	3/4 poles	600	-	885143	-

(1) Use handle 730649 or 730650

(2) Use handle 730653



Busbars


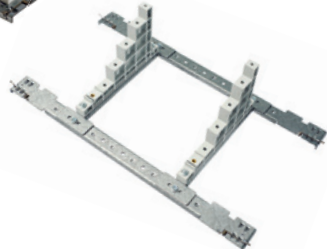
Staircase busbars

The staircase busbar can be assembled in vertical position in the 12 modules enclosure and in horizontal position in the 24 and 36 modules enclosures.

- No electrical device can be mounted at the same level as the staircase busbar. Only a blind coverplate should be mounted over it.
- The kits for the vertical busbars include the metal supports to fix the holder in horizontal position in the enclosure.
- The kits for horizontal busbars includes the support to fix the holders in vertical position in the enclosure and all fixation elements.



Staircase busbars holders

	Ref. No.	Ref. No.	Ref. No.
 Vertical copper bars (support + isolator)	885197	-	-
 Horizontal copper bars (support + isolators)	-	885198	885199



Rear mounted busbars

The rear mounted busbar can be assembled in vertical or in horizontal position in all type of enclosures.

Electrical devices can be mounted over the rear busbars: modular devices, terminals and MCB's Record Plus FD/FE frames⁽¹⁾.

- The kits for the vertical busbars includes the metal supports to fix the holder in horizontal position in the enclosure.
- The kits for horizontal busbars includes the support to fix the holders in vertical position in the enclosure and all fixation elements.

Rear mounted busbars holders

	Ref. No.	Ref. No.	Ref. No.
 Vertical copper bars	885191	885192	885193
 Horizontal copper bars	885194	885195	885196

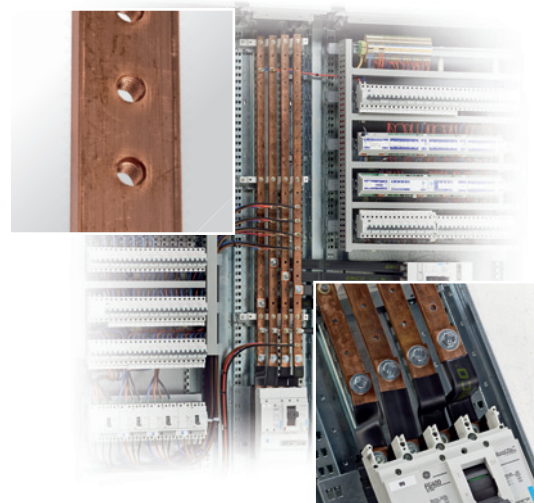
(1) In the 12 modules enclosures no devices can be mounted over the rear busbars.

Copper bars

The copper bars are common for the staircase busbars and for the rear mounted busbars.

The cross-section selection should be done based on the table below:

- Rated nominal current (In)
- Rated short-circuit current (Icw)



Busbar system

Cross section in mm		Type	Connection ⁽¹⁾	Spacing between supports (mm) ⁽²⁾	Spacing between busbars (mm)	Max. Current rating Amp	Short-circuit withstand strength	
Phase bar	Neutral bar						Icw (kA) - sec ⁽²⁾	Ipk (kA)
20x5	20x5	Rear	Plain	300	60	250	17.5 - 0.7	35
30x5	30x5	Rear	Plain	300	60	400	25 - 0.8	50
20x10	20x10	Rear	Plain	300	60	400	20 - 1	40
30x10	30x10	Rear	Plain	300	60	630	30 - 1	63
20x5	20x5	Rear	M6/25	300	60	250	17.5 - 0.35	35
30x5	30x5	Rear	M6/25	300	60	400	25 - 0.35	52.5
20x10	20x10	Rear	M6/25	300	60	400	20 - 0.75	40
30x10	30x10	Rear	M8/25	300	60	630	30 - 0.75	63
20x5	20x5	Staircase	M6/25	300	35	250	20 - 0.35	40
30x5	30x5	Staircase	M6/25	300	35	400	25 - 0.35	52.5
20x10	20x10	Staircase	M6/25	300	35	400	25 - 0.45	52.5
30x10	30x10	Staircase	M8/25	300	35	630	25 - 1	52.5

Copper bars




	Threaded holes ⁽¹⁾	Length (mm)	Ref. No.
Plain copper bar - 20x5mm	no	3000	858036
Plain copper bar - 30x5mm	no	3000	885204
Plain copper bar - 20x10mm	no	3000	885205
Plain copper bar - 30x10mm	no	3000	885206
Threaded copper bar - 20x5mm	M6	2000	885207
Threaded copper bar - 20x10mm	M6	2000	885208
Threaded copper bar - 30x5mm	M6	2000	885209
Threaded copper bar - 30x10mm	M8	2000	885210
4 threaded copper bars length 1m - 20x5 mm	M6	1000	880847
4 threaded copper bars length 1m - 32x5 mm	M6	1000	880850 ⁽³⁾
4 threaded copper bars length 1m - 30x10 mm	M8	1000	880851
Fastener bolts			
Bolts M6x16 mm (40 pcs)			880617
Bolts M8x20 mm (40 pcs)			880852


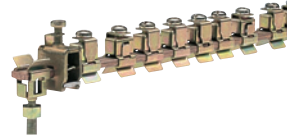
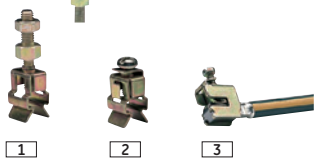
(1) Distance between holes: 25 mm
 (2) Other values on demand
 (3) Only for staircase busbar



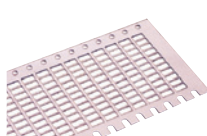
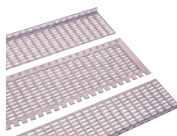

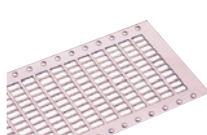
Flexible copper

	Rated current (A)	Length (mm)	Ref. No.
	Flexible copper 6x13x0.5	2000	886530
	Flexible copper 2x20x1	2000	886532
	Flexible copper 3x20x1	2000	828162
	Flexible copper 4x32x1	2000	828163
	Flexible copper connection between Record Plus FG and:		
staircase busbar 400A/630A in cable compartment			885211
staircase busbar 400A in cable compartment on right side from 36 mod. enclosure			885289
staircase busbar 400A in cable compartment on left side from 36 mod. enclosure			885290
staircase busbar 630A in cable compartment on right side from 36 mod. enclosure			885291
staircase busbar 630A in cable compartment on left side from 36 mod. enclosure			885292

Earth bars

		Ref. No.
	Main earth bar 30x10 for enclosure	
	12 modules	885261
	24 modules	885262
	36 modules	885263
	Horizontal earth bar 12x4 with connectors	
	12 modules	885225
	24 modules	885226
	36 modules	885227
	1 Fixation clips M6 (set of 20 pcs)	880637
	2 Connectors 16mm² (set of 20 pcs)	880639
	3 Connectors 35mm² (set of 20 pcs)	880638

Protection shrouds

		Ref. No.
	Frontal schroud for staircase busbar - length 1000mm	885200
	Frontal and lateral (2) schrouds for staircase busbar - length 1000mm	885201
	Top and bottom schroud for staircase busbar	885202
	Frontal schroud for rear mounted busbar - length 1000mm	
	for enclosure 12 modules	885126
	for enclosure 24 and 36 modules	885203

Separation screen Form 2

QuiXtra 630 can be upgraded to internal segregation Form 2 by adding separation screens for the busbars. The vertical separation screen has to be installed between two coupled enclosures, in modules of 150mm.

Form 2 can not be achieved with the rear mounted busbar, if any electrical device is assembled over it.

Form 2 screens



	Ref. No. 12 modules	Ref. No. 24 modules	Ref. No. 36 modules
Vertical separation screen Form 2 - Height 150mm	885212	885212	885212
Horizontal separation screen Form 2	885213	885214	885215
Content			
<ul style="list-style-type: none"> • Isolated screen • Fixation elements 			

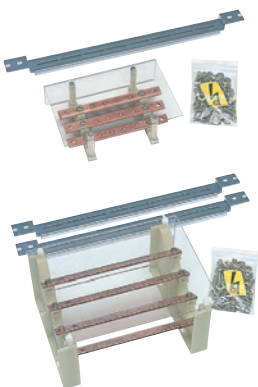
4 Poles terminals

For DIN rail mounting



Terminals	Ref. No.
4P terminals for DIN rail mounting 63A	610022
4P terminals for DIN rail mounting 80A	880614
4P terminals for DIN rail mounting 125A	880742
4P terminals for DIN rail mounting 160A	610020
Shrouding for 4P terminal 160A	610021

For mounting on horizontal supports



	Ref. No. 12 modules	Ref. No. 24 modules	Ref. No. 36 modules
4P terminal 250A - min. height 200 mm	885217	885220	885223
4P terminal 400A	-	885221	885224
Content			
<ul style="list-style-type: none"> • 4P terminals • Fixing supports • Protective plate • Fixation elements 			

Cover plates

Blind cover plates

- Blind cover plate
- Fixation elements



Recessed cover plates

- Recessed 30 mm blind cover plate
- Fixation elements



Meter cover plates

- Cover plate with 1 cut-out and 2 or 4 pre-punched cut-outs
- Hinges
- Fixation elements



Push-buttons cover plates

- Cover plate with pre-punched cut-outs for Series P9 push-buttons: 10 in 24 modules and 12 in 36 modules
- Hinges
- Fixation elements



Cover plates






Height (mm)	Description	Ref. No.	Ref. No.	Ref. No.
		12 modules	24 modules	36 modules
50	Blind	885166	885167	885168
150	Series P9 push-buttons, 10 or 12 cut-outs	-	885189	885190
150	Blind	885169	885170	885171
150	Meters 4 or 6 cut-outs 72x72	-	885185	885186
150	Meters 3 or 5 cut-outs 96x96	-	885187	885188
150	Cut-out for modular devices	885178	885179	885180
150	Recessed & cut-out for cable glands	-	885181	885182
200	Blind	885172	885173	885174
300	Blind	885175	885176	885177
300	Recessed & cut-out for cable glands	-	885183	885184
600	Blind	885161	-	-
750	Blind	885162	-	-
900	Blind	885163	-	-
1050	Blind	885164	-	-
1200	Blind	885165	-	-






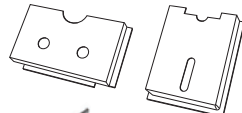



Mounting plates


Height (mm)	Cover plate height (mm)	Ref. No.	Ref. No.	Ref. No.
		12 modules	24 modules	36 modules
130	150	885155	885156	885157
280	300	885158	885159	885160



Accessories/spare parts

	Description	Ref. No.	Ref. No.	Ref. No.
		12 modules	24 modules	36 modules
	DIN rail and adjustable brackets	885241	885242	885243
	Cable support	885244	885245	885246
	Lighting unit - height 50 mm	-	885247	885248
	Adhesive label holder	885249	885250	885251
	Spreader box for enclosure	885282	885283	885284

	Description	Ref. No.
	Paint touch-up kit RAL9006	885252
	Paint touch-up kit RAL7024	885253
	Support for cable duct - max. width 60 x height 80 (set of 4 pcs)	885254
	Blanking strips for 45 mm cut-out - length 1000mm - RAL 7035	828056
	Blanking strips for 45 mm cut-out - length 72mm - RAL 7035 (set of 4 pcs)	610142
	Vertical wall mounting brackets (set of 4 brackets)	885256
	Screw M6x20 (bag of 50)	885257
	Screw M8x25 (bag of 50)	885258
	Captive washer for M6x20 (bag of 100)	885259
	Captive washer for M8x25 (bag of 100)	885260
	Cage nut M6 (bag of 100)	885288
	Set cable tray support - max. width 40 x height 60 (20 supports)	828145
	Set cable tray (10 trays)	828146
	Document pocket DIN A5	832000
	Document pocket DIN A4	811516
	Closing caps for IP43 in backpanel	885286
	Hinges for cover plate (set of 2 pcs)	885285
	Earthing cable for door	885295
	Lifting brackets	885240
	IP43 profile 12 modules	885312
	IP43 profile 24 modules	885313
	IP43 profile 36 modules	885314

	Description	Ref. No.	Ref. No.	Ref. No.
		3 - 4 - 5 rows	6 - 7 - 8 rows	9 - 10 - 12 rows
	Round lock V2432E with key	885300	885304	885308
	Round lock 405E with key	885302	885306	885310
	Round lock 455E with key	885303	885307	885311



QuiXtra™ 4000

Low Voltage Distribution Boards

Sheet steel distribution boards



Intro

A

B

C

D

E

F

G

H

I

X



Safe

- Design verification tested system enclosure
- Certified according to the new IEC 61439-2
- IP55 with door and IP55 panels, IP30 with door and IP30 panels and IP 30 without door.
- Internal segregation up to Form 4
- Tempered glass for transparent door

Simple and flexible

- 1 enclosure height: 12 rows of 150 mm
- 3 enclosures width: 12, 24 and 36 modules
- 3 enclosures depth: 450, 600 and 800 mm
- Side to side and back to back coupling
- 1 functional unit = 1 reference, including all parts to mount LV devices
- Modular concept: all functional units in steps of 50 mm in height
- Corner enclosure for L- or U-shape

Door ready to mount

- 4 point locking system already mounted
- Hinges mounted
- Installation without tools
- 135° open angle

Attractive design

- Fits perfectly in commercial environments
- Colours RAL 9006 and RAL 7024
- One common line QuiXtra 630 and QuiXtra 4000

Easy and quick to assemble

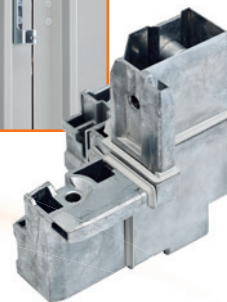
- Assembly by a single person
- Pre-assembled captive screws for coverplates
- 90° screws for cover plates
- Click-in supports for functional units. No tools needed to fix them to the frame
- Reduced number of tools

Rigid and sturdy

- Rigid frame built with open profiles screwed to corner parts
- Sheet metal 1.5 and 2 mm thick
- Die-cast zamak corner parts

PowerDesign

New generation of software to help customers with the configuration, design and quotation of low voltage system enclosures: QuiXtra 630 and QuiXtra 4000



Intro

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Applications

QuiXtra 4000 has been developed as a range of system enclosures, expansion of the line of QuiXtra 630. GE's complete solution for low voltage distribution boards up to 4000A for high commercial and industrial environments.

QuiXtra 4000 is delivered as a flat kits, to be assembled, equipped and wired by a panel builder or installer. The QuiXtra 4000 range consists of 9 floor standing enclosures, combination of 3 different widths and 3 depths, as well as busbars and functional units to easily integrate all types of low voltage electrical devices up to 4000A.

The combination of the QuiXtra 4000 enclosure and original GE LV electrical devices are certified according the new standard IEC 61439-2.

Industrial and Infrastructures

- Construction materials
- Water applications
- Ports
- Tunnels
- Small factories
- Waste recycling
- Cement
- Food and beverage
- OEM
- Components/parts production
- Small assembly lines
- Printing

Commercial

- Large commercial offices
- Shopping malls
- Airports
- Hospitals
- Banks
- Public transport
- Railways
- Subways
- Governmental buildings
- Telecommunication
- Data/call centers

Description

QuiXtra 4000 is a range of sheet steel system enclosures delivered as **flat kit**. It is GE's solution for low voltage distribution boards up to 4000A, in commercial and industrial environments.

QuiXtra 4000 is designed to be a reliable, simple, flexible and easy to use system enclosure, with the added value of its fresh and attractive design, expanding the benefits of QuiXtra 630.

The QuiXtra 4000 range consists of **9 different enclosures**. There are three enclosure depths available, 450 mm, 600 mm and 800 mm, and three enclosure widths, for functions of 12, 24 and 36 modules. All enclosures have the same useful height of 1800 mm. It is possible to couple enclosures of the same depth horizontally, and back to back the enclosures with the same width. Additionally, there are corner empty enclosures to allow L and U configurations. This huge range of enclosures provides the user total flexibility to define the layout of the LV distribution boards.

For ease of incoming and outgoing cable connection, the roofs have different types of cable entry plates available. As well, the bases are available with entry cable plates, for bottom incoming or outgoing.



- Overview of the range ● Page D.33
- Dimensional drawings ● Page I.30
- Specifications for tender documents ● Page I.58
- Power dissipation values ● Page I.80

QuiXtra 4000 offers **2 types of doors**, plain and transparent (tempered glass). In both cases, the 4 points locking mechanism is operated by a central handle with key. The doors are delivered with hinges and locking mechanism already mounted, to reduce assembly time.

QuiXtra 4000 introduce several features to reduce the assembly time of the panel. The **functional units** are fixed to the frame by use of the **“click in” supports**, without the need of additional screws. The cover plates are fixed to the frame using 90° screws and there is the possibility to fix all of them to one functional door to make maintenance operations easier. The doors are ready to assemble to the frame without tools.

All external panels, like rear- or sidepanels as well as the roofplate, may be removed to facilitate assembly and wiring.

All GE LV electrical devices up to 4000A can be easily assembled in QuiXtra 4000 using the appropriate functional units. Each **functional unit kit** includes everything necessary for assembly:

- A mounting plate or DIN-rail
- A support to attach to the enclosure. For some functions, if a depth profile is required, they are delivered separately
- A coverplate (with precise cut-outs)
- The required screws and other fixation parts. Attaching the mounting plates or DIN-rails does not require tools: they are attached to the side mounting profile using a “click in” support. The coverplates are attached to a functional frame using captive 90° screws.

The **busbar system** in QuiXtra 4000 is based on copper bars of 10 mm thickness. The horizontal main busbars is assembled at the rear of the enclosure for the ones of 450 mm in depth and at the rear, on the top or middle in the 600 mm and 800 mm depth. There are 3 possible vertical busbars, with a plain layout, assembled at the rear or in the side of the enclosure, or in staircase, assembled on the integrated cable compartment or in the enclosure 12 modules width. Several ready to install copper connection between the incomers and the main busbars are available.

QuiXtra 4000 can be configured with a protection degree IP30 or IP55, and a segregation form up to **Form 4**.

The QuiXtra 4000 colour is silver grey, **RAL 9006**. The external corner parts, the handle and the base are in dark grey, **RAL 7024**. The tempered glass of the transparent door is lightly smoked grey.



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Features and benefits

Simple and flexible

- Enclosures widths for 12, 24 and 36 modules
- Enclosures depths of 450 mm, 600 mm and 800 mm
- Side by side and back to back coupling
- Modular concept. All functions in steps of 50 mm in height
- Functional kits for GE low voltage electrical devices up to 4000A
- Mounting of GE devices in vertical or horizontal position
- The 10 mm thickness busbars can be assembled on top, at the rear or in vertical
- Each functional unit includes all parts necessary for assembly: mounting plate or DIN- rail, supporting brackets, cover plate (with precise cut-outs) and all required fixation elements
- Corner enclosure with depth 450, 600 and 800 mm for L- and U-shapes.

Easy and quick to assemble

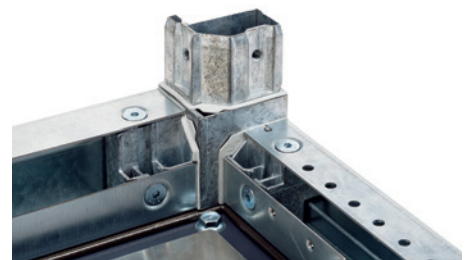
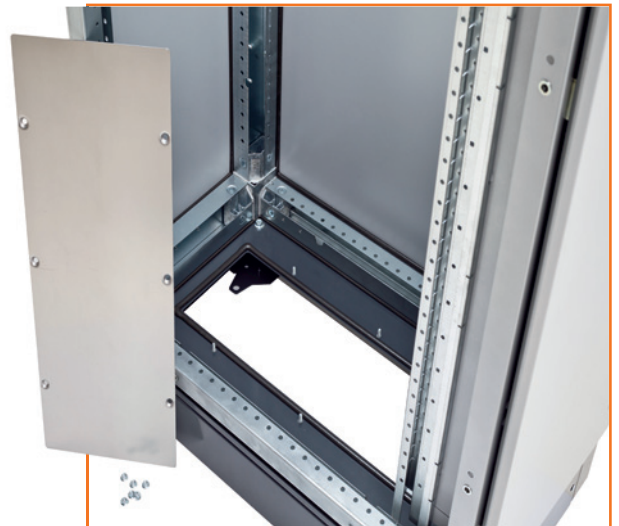
- "Click in" supports for functions. Reduced number of tools needed
- 90° screws for cover plates
- Pre-assembled captive screws for coverplates
- Accessories to facilitate panel wiring and assembly. Ready to assemble copper connections
- Door assembly without tools. Doors delivered with locking system and hinges pre-mounted
- Generous wiring space for all functions
- Optional functional door to fix all the coverplates
- Markings in the fixation profiles to quickly position the functional units and cover plates

Safe for users, reliable and sturdy

- Verification tested system enclosure, certified according to the new IEC 61439-2 standard
- IP55 with door and IP55 panels
- IP30 without door or with door and IP30 panels
- External panels sheet steel, 1.5 mm, powder coated
- Door sheet steel, 1.5 mm, powder coated
- Rigid frame built with bent sheet steel profiles fixed to zamak corner parts
- Internal segregation: Form 4
- Tempered glass for the transparent door

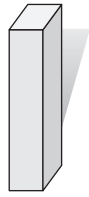
Attractive design

- One common line: QuiXtra 630 and QuiXtra 4000. Same benefits, same aesthetics
- Combination of two colours: RAL 9006 (silver grey) and RAL 7024 (dark grey)

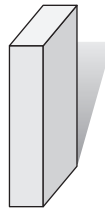


Full enclosure range

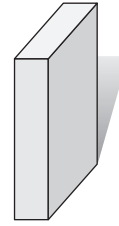
12 modules - external width: 447 mm



H 1800/2155
D 375/450
DA 275

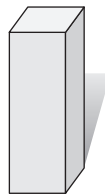


H 1800/2155
D 525/600
DA 425

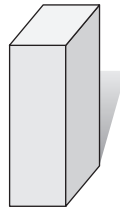


H 1800/2155
D 725/800
DA 625

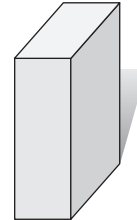
24 modules - external width: 743 mm



H 1800/2155
D 375/450
DA 275

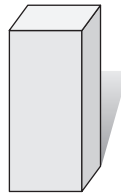


H 1800/2155
D 525/600
DA 425

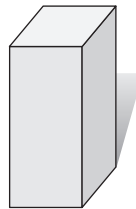


H 1800/2155
D 725/800
DA 625

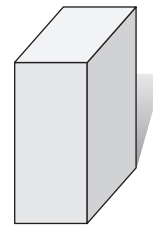
36 modules - external width: 959 mm



H 1800/2155
D 375/450
DA 275

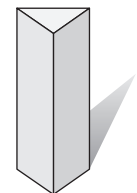


H 1800/2155
D 525/600
DA 425

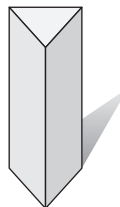


H 1800/2155
D 725/800
DA 625

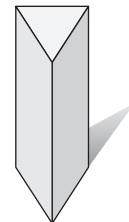
Corner enclosure



H 2155
D 450



H 2155
D 600



H 2155
D 800

- H** Useful height/external height
- D** Useful depth/external depth
- DA** Useful depth behind cover plates

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LV distribution board in flat kits

1 Top/bottom frames

The kit includes the top or bottom frames, with the profiles already mounted in the zamak corner parts. There are 2 versions available, for each of the 9 enclosure dimensions, based on the protection degree IP30 or IP55. Two units of these are required per enclosure.

2 Vertical uprights

4 vertical profiles to complete the frame with the top and bottom frames. One common kit for all the enclosures sizes and IP degrees.

3 Base

The base is split in 3 types of kits: the corners, the front cover and the side covers. The front cover depends on the width of the enclosure and the side cover on the depth.

When several enclosures are coupled, it's required only to cover each side of the panel, not the intermediate positions. It's possible to assemble one accessory in the internal sides of the panel to assure the distance between the corners. The height of the base is 100 mm, but it can be coupled in vertical to achieve 200 mm in height.

4 Top and bottom plates

Top and bottom plates to fix the roof plates with several options as cable entry plates, and the bottom entry plates. They are available in IP30 or IP55 versions.

5 Roof plates

QuiXtra 4000 offers different types of cable entry plates to adapt to a wide range of customer needs. Starting with a plain cover till pre punched cable entry plates. Versions in IP30 and IP55. The cable entry plates can be removed to improve the accessibility for the assembly and wiring of the columns.



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6 Side panels

The kit includes the side panel, right or left side, and all the required fixation screws. There are version IP30 and IP55. Each reference includes just one side panel.

7 Back panel

For each width, the IP30 and IP55 versions are available.

8 Functional frame

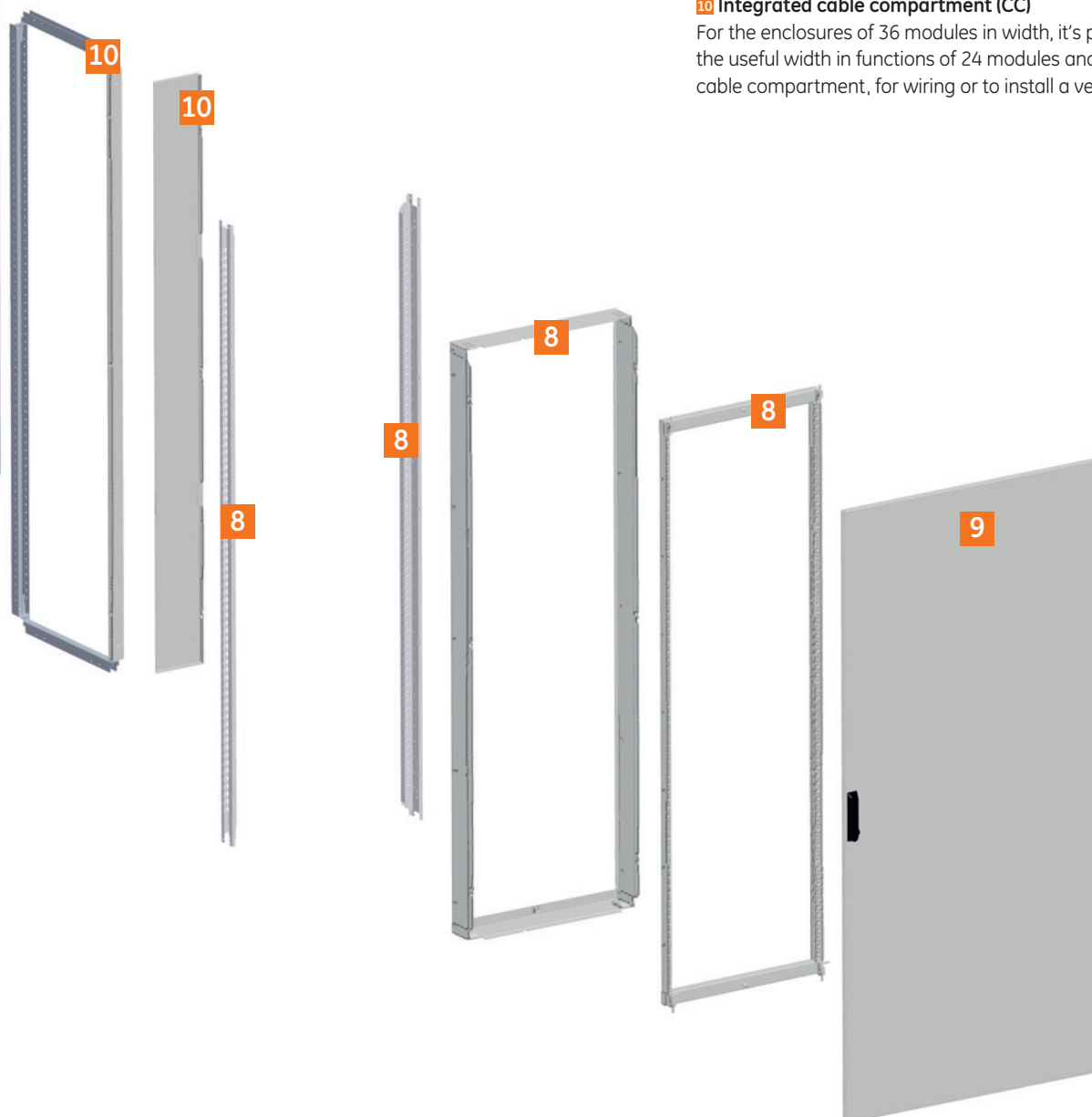
The functional frame, the profiles where are fixed the mounting plates and the DIN-rails for the electrical devices, and the coverplates is to assure the safety of the electrical distribution board. The functional frame depends on the width of the enclosure.

9 Doors

QuiXtra 4000 offers 2 types of doors, plain and transparent (tempered glass). In both cases, the 4 points locking mechanism is operated by a central handle with key. The doors are delivered with hinges and locking mechanism already mounted, to reduce assembly time.

10 Integrated cable compartment (CC)

For the enclosures of 36 modules in width, it's possible to split the useful width in functions of 24 modules and an integrated cable compartment, for wiring or to install a vertical busbars.



Corner enclosure

To allow the panel layout in L- or U-shape, QuiXtra 4000 offers specific corner enclosures. Each corner enclosure has to be coupled by means of 2 coupling kits 887332.

11 Vertical uprights

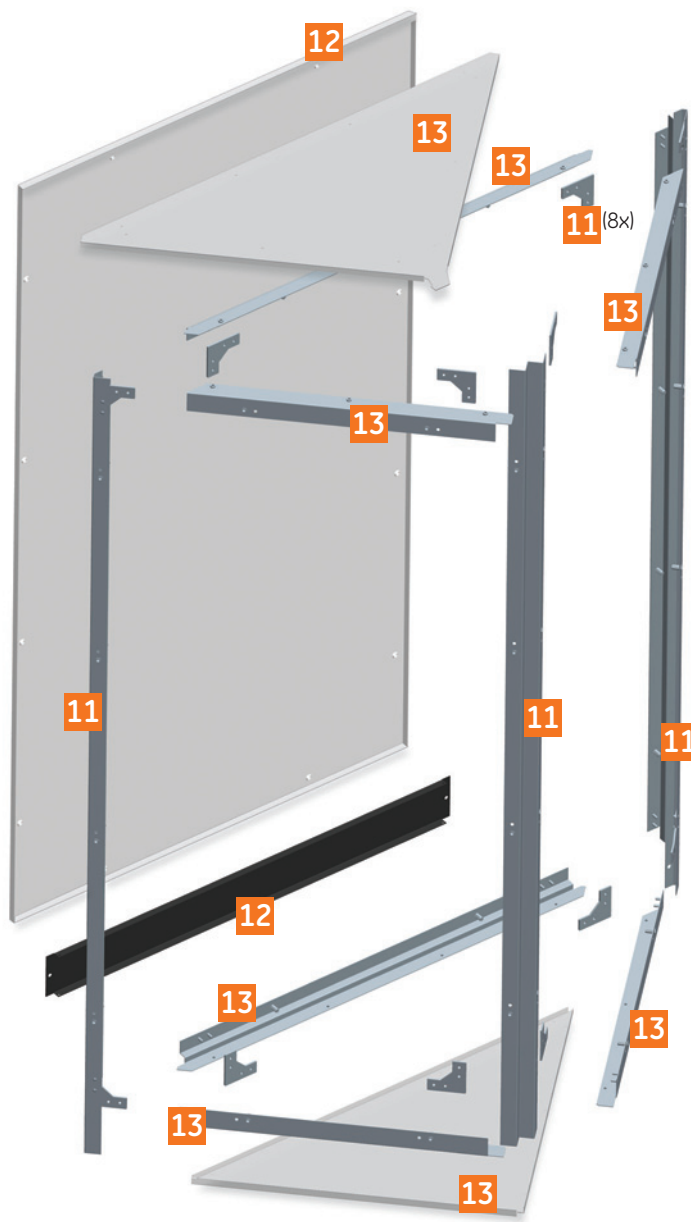
Common profiles for all dimensions to allow the coupling to the adjacent enclosures.

12 Back panel and base

Back panel to cover the rear part of the empty enclosure.

13 Horizontal profiles, roof and bottom plates

Profiles to complete the frame of the empty corner enclosure.



Accessories

QuiXtra 4000 offers a wide range of accessories to the panel builder and installer to provide a higher flexibility and to build the distribution board easier and faster.

Mounting plates

QuiXtra 4000 offers partial mounting plates and full height mounting plates, to provide higher flexibility, especially in the control panels.

Connection kits

The panel builder has the option to order the copper connection bars between the main breaker and the main busbar for some configurations, as well kits for an easy wiring to the main breaker.

Cable entry plates

Wide range of possible cable entry plates, options to fit better the installer needs in each project.

Coupling kits

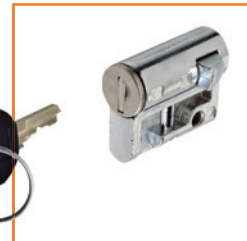
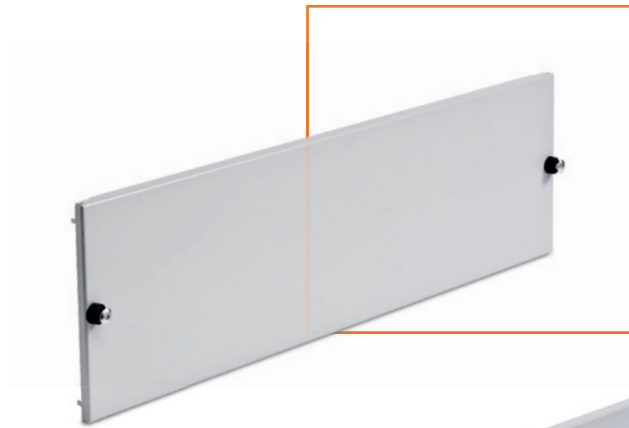
Kits to couple the enclosures of the same depth side by side and the ones of the same width back to back.

Empty corner enclosure

To allow L and U layouts in the distribution board.

Cover plates

Plain, slotted and recessed cover plates are available.



Main technical characteristics

Useful and external dimensions (mm)

		Useful dimensions				External dimensions		
		Mounting plate width	Width for devices	Depth	Height	Width	Depth	Height
Depth 450	12 mod	238	216 (12 mod.)	375	1800	447	450	2155
	24 mod	534	432 (24 mod.)	375	1800	743	450	2155
	36 mod	750	648 (36 mod.)	375	1800	959	450	2155
Depth 600	12 mod	238	216 (12 mod.)	525	1800	447	600	2155
	24 mod	534	432 (24 mod.)	525	1800	743	600	2155
	36 mod	750	648 (36 mod.)	525	1800	959	600	2155
Depth 800	12 mod	238	216 (12 mod.)	725	1800	447	800	2155
	24 mod	534	432 (24 mod.)	725	1800	743	800	2155
	36 mod	750	648 (36 mod.)	725	1800	959	800	2155

Material and colour

Frame profiles	Sendzimir zinc plated steel 1.5 mm
External panels	Epoxy-polyester coated sheet steel 1.5 mm
Plain door	Epoxy-polyester coated sheet steel 1.5 mm
Transparent door	Epoxy-polyester coated sheet steel 1.5 mm and smoked safety glass 3 mm.
Cover plates	Epoxy-polyester coated sheet steel 1 mm
External plastic	ABS
Internal corners	Die-cast aluminium alloy
Enclosure colour	RAL 9006
Floor base colour	RAL 7024

Protection degree and segregation form

Protection class	I
Pollution degree	3
Segregation	Form 1, Form 2b, Form 3b and Form 4a
Protection degree	
Without door	IP30, IK08
With plain door and with IP55 panels	IP55, IK09
With plain door and with IP30 panels	IP30, IK09
With transparent door and with IP55 panels	IP55, IK08
With transparent door and with IP30 panels	IP30, IK08

Standards and approvals

Standards	IEC 61439-2 EN 61439-2
Approval	▶ DEKRA with KEMA quality testreport
Certification	▶ DEKRA with KEMA quality testreport
RoHS compliant	YES
REACH compliant	YES

Electrical characteristics

Rated current (In)	4000A
Rated operational voltage (Ue)	415V, 690V
Rated insulation voltage (Ui)	1000V
Rated frequency (fn) 50/60 Hz	50/60Hz
Rated short-circuit current max (Icw)	85kA/1s
Rated current of busbar systems	4000A in IP30



Notes

Grid of dotted lines for notes.

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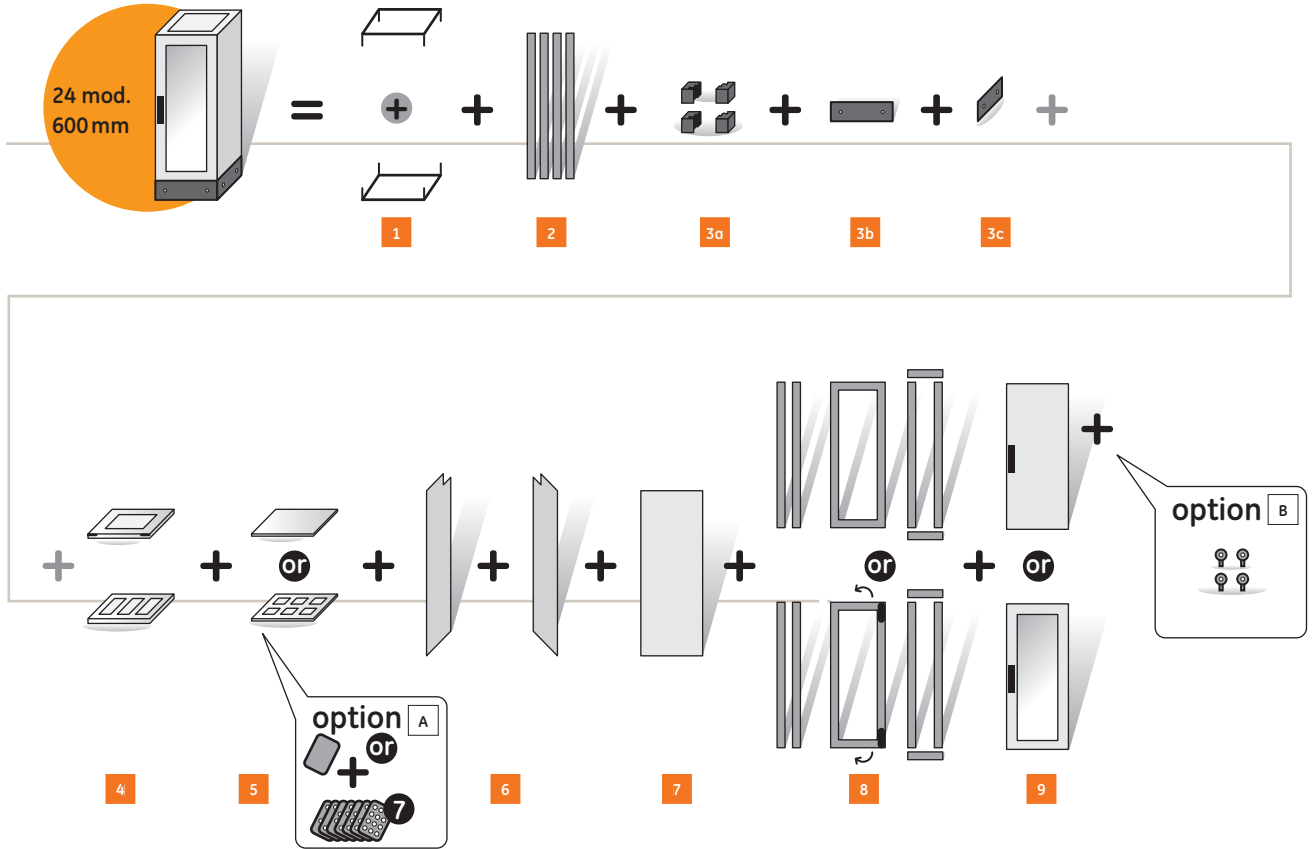
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How to order: example 1

Individual 24 modules/600mm enclosure - IP55



1 887004: top/bottom frame (2 sets/panel)

2 887027: vertical uprights

3a 887064: base corner (set of 4 pcs)

3b 887062: base front or back cover (set of 2 pcs)

3c 887059: base side cover (set of 2 pcs)

4 887013: Roof and bottom plates
(open roof plate + bottom plate with
premounted entry plates)

5 887071: plain roof plate
or
887080: cutted roof plate
+ option **A**

6 887355: left side panel
and
887053: right side panel

7 887047: back panel

8 887031: functional frame
or
887034: functional door

9 887041: plain door
or
887044: transparent door

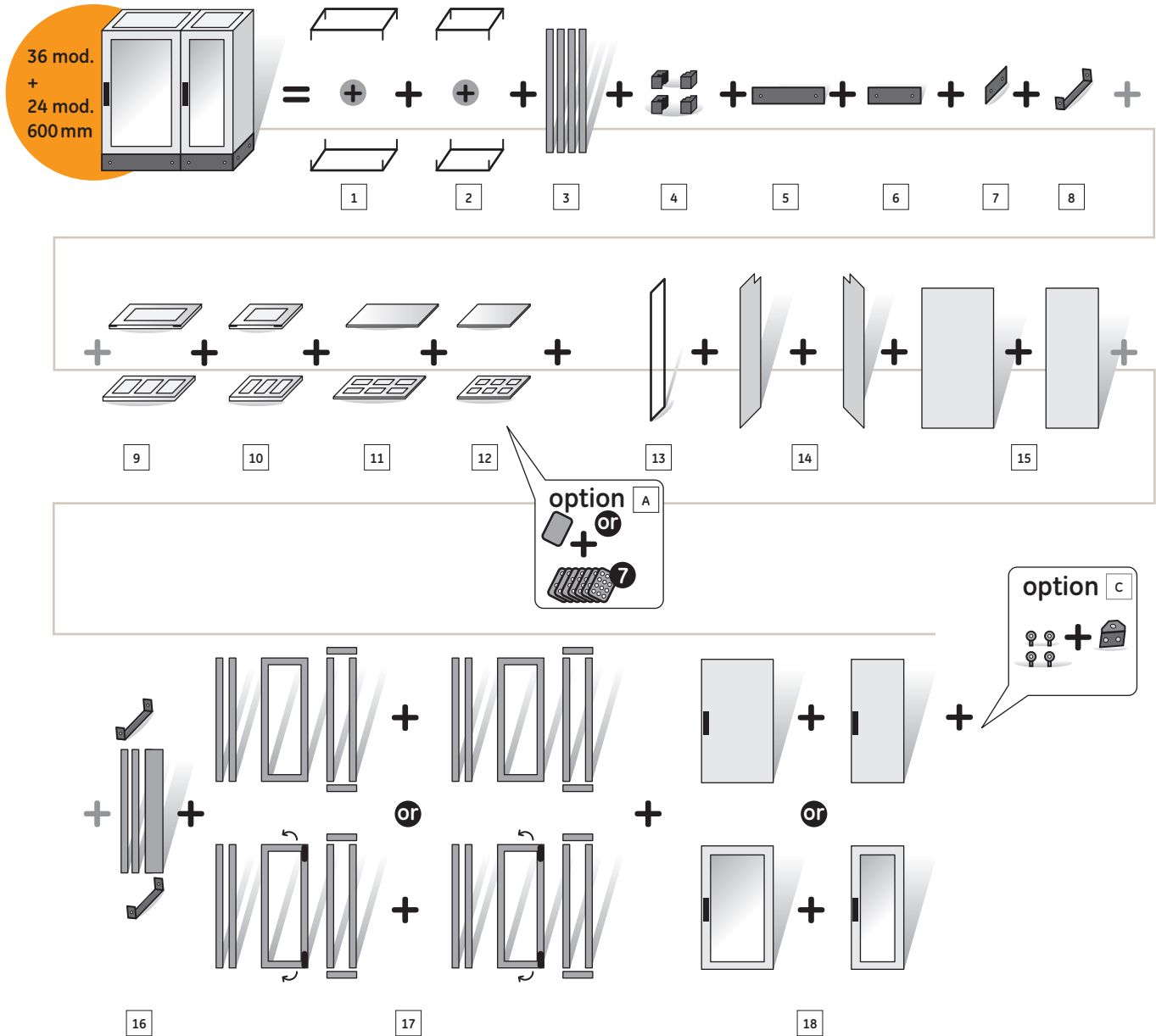
+ option: **B**

Option **A** 885228 → 885234: cable entry plates

Option **B** 884122: standard lifting eyes
or
887339: Heavy Duty lifting eyes

How to order: example 2

36 modules with integrated cable compartment (CC) coupled to
24 modules/600 mm enclosure - IP55



- 1 **887005:** 24 modules + CC top/bottom frame - 600 mm (2 sets/panel)
- 2 **887004:** 24 modules top/bottom frame - 600 mm (2 sets/panel)
- 3 **887027:** vertical profiles (2x)
- 4 **887064:** base/corner set (2x) (set of 4 pcs)
- 5 **887063:** 24 modules + CC front cover (base)
- 6 **887062:** 24 modules front cover (base) (set of 2 pcs)
- 7 **887059:** base side cover - 600 mm
- 8 **887382:** base coupling set
- 9 **887014:** 24 modules + CC top and bottom plate
- 10 **887013:** 24 modules top and bottom plate
- 11 **887072:** plain roof - 24 modules + CC / 600 mm
or
887081: cutted roof for cable entry plates 24 modules + CC / 600 mm
+ option **[A]**

- 12 **887071:** 24 modules plain roof - 600 mm
or
887080: cutted roof 600 mm
+ option **[A]**
- 13 **887332:** coupling kit horizontal
- 14 **887355:** left side panel - 600 mm
and **887053:** right side panel - 600 mm
- 15 **887048 + 887047:** 24 modules backpanels + CC
- 16 **887038:** integrated CC, can be mounted left or right in 36 modules column
- 17 **887031:** 24 modules functional frame
+ **887028:** 24 modules + CC functional frame
or
887034: 24 modules functional door
+ **887029:** 24 modules + CC functional door
- 18 **887042 + 887041:** plain door 24 mod. + CC and 24 mod.
or
887045 + 887044: transparent door 24 mod. + CC and 24 mod.
+ option: **[C]**

- option **[A]** **885228 → 885234:** cable entry plates
- option **[C]** **884122:** standard lifting eyes
or
887339: Heavy Duty lifting eyes
and
887331: lifting brackets for coupled enclosures



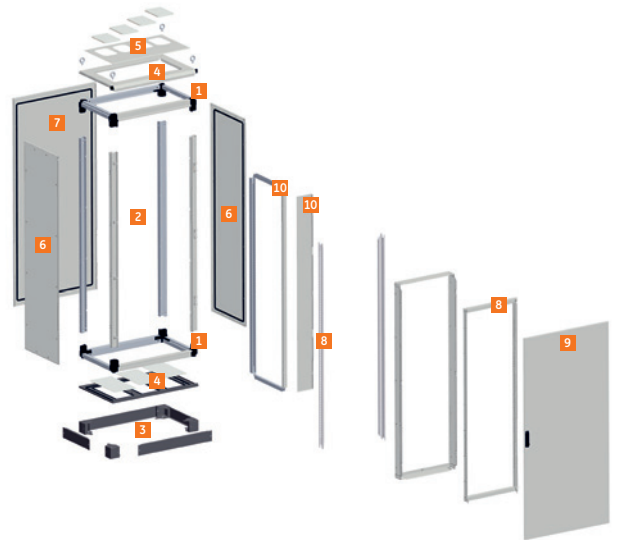
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Enclosure kits

The QuiXtra 4000 enclosures can be offered with the protection degrees IP30 or IP55. The configuration IP30 requires different order codes in top and bottom frames, side panels and rear panels. Additionally, in the configuration IP55, if the door is not assembled, the protection degree drops to IP30.

The order codes for each configuration are defined in the table below, depending on the enclosure depth.



Enclosure basic kits

Protection degree	Width (mod.)	Ref. No.				Ref. No.				
		IP55				IP30				
	Depth (mm) ⁽²⁾	12	24	36	24 + CC ⁽¹⁾	12	32	36	24 + CC ⁽¹⁾	
1 Top/bottom frames (2 sets per column)	450	887000 x2	887001 x2	887002 x2	887002 x2	887364 x2	887365 x2	887366 x2	887366 x2	
	600	887003 x2	887004 x2	887005 x2	887005 x2	887367 x2	887368 x2	887369 x2	887369 x2	
	800	887006 x2	887007 x2	887008 x2	887008 x2	887370 x2	887371 x2	887372 x2	887372 x2	
2 Vertical uprights (set of 4 pcs)		887027	887027	887027	887027	887027	887027	887027	887027	
3 Base 100 mm	Corner	887064	887064	887064	887064	887064	887064	887064	887064	
	Front cover	887061	887062	887063	887063	887061	887062	887063	887063	
	Side cover	887058	887058	887058	887058	887058	887058	887058	887058	
	450	887059	887059	887059	887059	887059	887059	887059	887059	
	600	887059	887059	887059	887059	887059	887059	887059	887059	
	800	887060	887060	887060	887060	887060	887060	887060	887060	
4 Top and bottom plates	450	887009	887010	887011	887011	887018	887019	887020	887020	
	600	887012	887013	887014	887014	887021	887022	887023	887023	
	800	887015	887016	887017	887017	887024	887025	887026	887026	
5 Roof plates	Plain	450	887067	887068	887069	887069	887085	887086	887087	887087
		600	887070	887071	887072	887072	887088	887089	887090	887090
		800	887073	887074	887075	887075	887091	887092	887093	887093
	+ cut-outs for cable entry plates	450	887076	887077	887078	887078	887094	887095	887096	887096
		600	887079	887080	887081	887081	887097	887098	887099	887099
		800	887082	887083	887084	887084	887100	887101	887102	887102
		Ventilated	450	-	-	-	887103	887104	887105	887105
	600	-	-	-	887106	887107	887108	887108		
	800	-	-	-	887109	887110	887111	887111		
6 Side panels	Right	450	887052	887052	887052	887052	887055	887055	887055	
		600	887053	887053	887053	887053	887056	887056	887056	
		800	887054	887054	887054	887054	887057	887057	887057	
	Left	450	887354	887354	887354	887354	887357	887357	887357	
		600	887355	887355	887355	887355	887358	887358	887358	
		800	887356	887356	887356	887356	887359	887359	887359	
7 Back panel		887046	887047	887048	887048	887049	887050	887051	887051	
8 Functional frame		887030	887031	887032	887028	887030	887031	887032	887028	
	Functional door		887033	887034	887035	887029	887033	887034	887035	887029
9 Door	Plain	887040	887041	887042	887042	887040	887041	887042	887042	
	Transparent	-	887044	887045	887045	-	887044	887045	887045	
Coupling kit	Horizontal	887332	887332	887332	887332	887332	887332	887332	887332	
	Back to back	887333	887333	887333	887333	887333	887333	887333	887333	
10 Integrated cable compartment (left or right)	450	-	-	-	887037	-	-	-	887037	
	600	-	-	-	887038	-	-	-	887038	
	800	-	-	-	887039	-	-	-	887039	

(1) CC stands for Cable Compartment

(2) Depth 450 mm: designed for MCCB Record Plus FK incomer
 Depth 600 mm: designed for ACB EntelliGuard and M-PACT Plus frame 1 incomer
 Depth 800 mm: designed for ACB EntelliGuard and M-PACT Plus frame 2 incomer



Corner enclosure kits

To allow the panel layout in L- or U-shape, QuiXtra 4000 offers specific corner enclosures. Each corner enclosure has to be coupled by means of two coupling kits 887332.

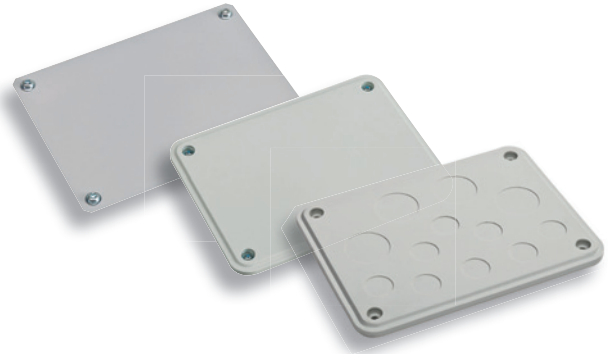


Corner enclosure kits

	Ref. No.	Ref. No.	Ref. No.
Protection degree		IP30	
Depth (mm)	450	600	800
11 Vertical uprights (common profiles)	887363	887363	887363
12 Back panel and base	887360	887361	887362
13 Horizontal profiles, roof and bottom plates	887349	887350	887351

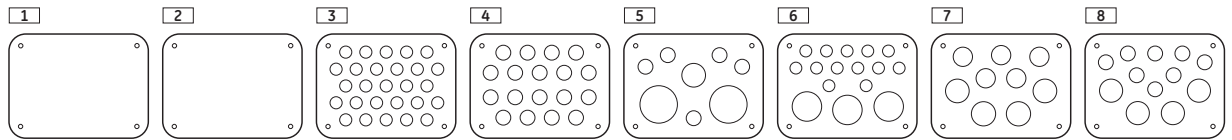
Cable entry plates

QuiXtra 4000 offers a wide range of cable entry plates as options, to allow the adaptation to different installations needs. Table with the different cable entry plate possibilities, and the number of each one per type of enclosure:



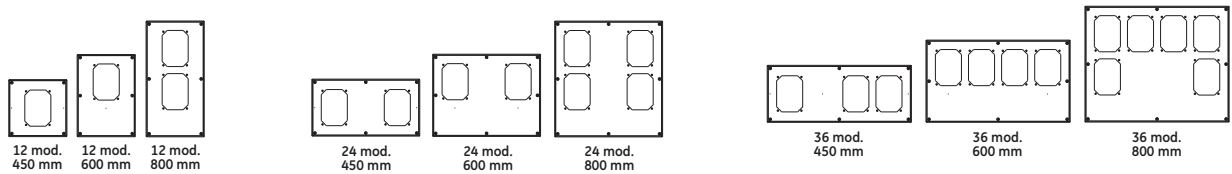
Cable entry plates types

Range	IP protection	Ref. No.
1 Plain metal (RAL 9006)	IP40	885287
2 Plain polyester (RAL 7035)	IP55	885228
3 Polyester 27xM20		885229
4 Polyester 18xM25		885230
5 Polyester 2xM63 + 1xM40 + 5xM25		885231
6 Polyester 3xM50 + 13xM20		885232
7 Polyester 4xM40 + 5xM32		885233
8 Polyester 4xM40 + 8xM25		885234



Number of cable entry plates in cutted roof plates

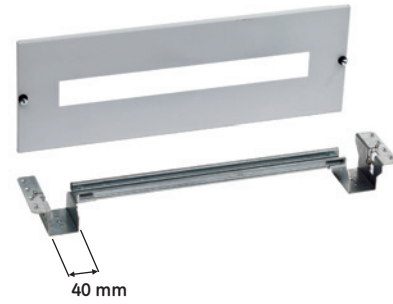
Depth (mm)	12 modules	24 modules	36 modules
450	1	2	3
600	1	2	4
800	2	4	6



Functional units for modular devices

Content

- DIN-rail
- Supports to fix to the functional frame
- Coverplate with cut-out
- Blanking plate
- Fixation elements



Modular devices

	Height (mm)	Ref. No.	Ref. No.	Ref. No.
		12 modules	24 modules	36 modules
DIN-rail for modular devices	150	887148	887149	887150
DIN-rail for modular devices	200	887151	887152	887153
DIN-rail for modular Fixwell devices	150	887154	887155	887156

Functional units for terminals

Content

- DIN-rail
- Supports to fix to the functional frame
- Coverplate
- Fixation elements



Terminals

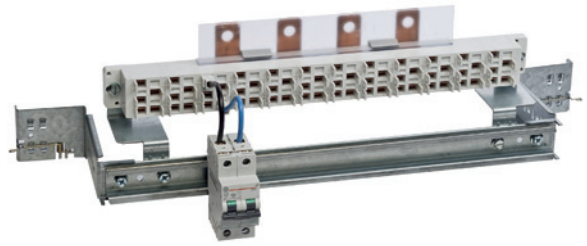
	Height (mm)	Ref. No.	Ref. No.	Ref. No.
		12 modules	24 modules	36 modules
1 horizontal DIN-rail for terminals	150	887142	887143	887144
1 vertical DIN-rail for terminals	900	887145	-	-
3 vertical DIN-rails for terminals	300	-	887146	-
4 vertical DIN-rails for terminals	300	-	-	887147
Earth bar for vertical DIN-rails for terminals	-	885264	885138	885138

Moduclic plug-in distribution system

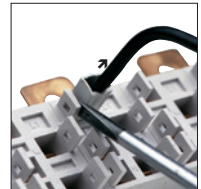
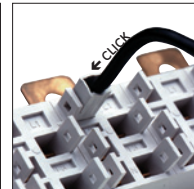
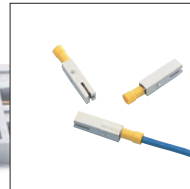
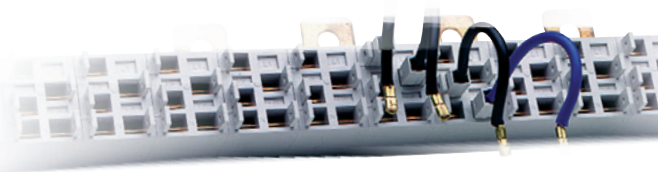
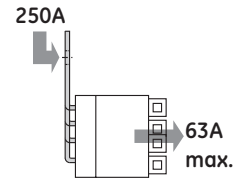
Moduclic is a secondary plug-in distribution system of 250A, 660V~ 60kA peak. Moduclic is a busbar for modular devices and this as well for MCBs as for comfort functions. Moduclic is mounted directly on the DIN-rail and is **independent** of the type of **system enclosure**: QuiXtra or VP-System.

The main advantage of Moduclic is the **safety** aspect (IP20): adding or **removing** electrical circuits in a panel board **without disconnecting** the power. All outgoing circuits stay in the operational function, due to the fact that all operations are done using the **insulated click connection**, without touching the live parts, not even when using an insulated tool.

Standard connections of 6 mm² (up to 40A) are shipped with Moduclic. The Moduclic distribution system is suitable for integration in **all system enclosures** conform to the standard IEC 61439-2



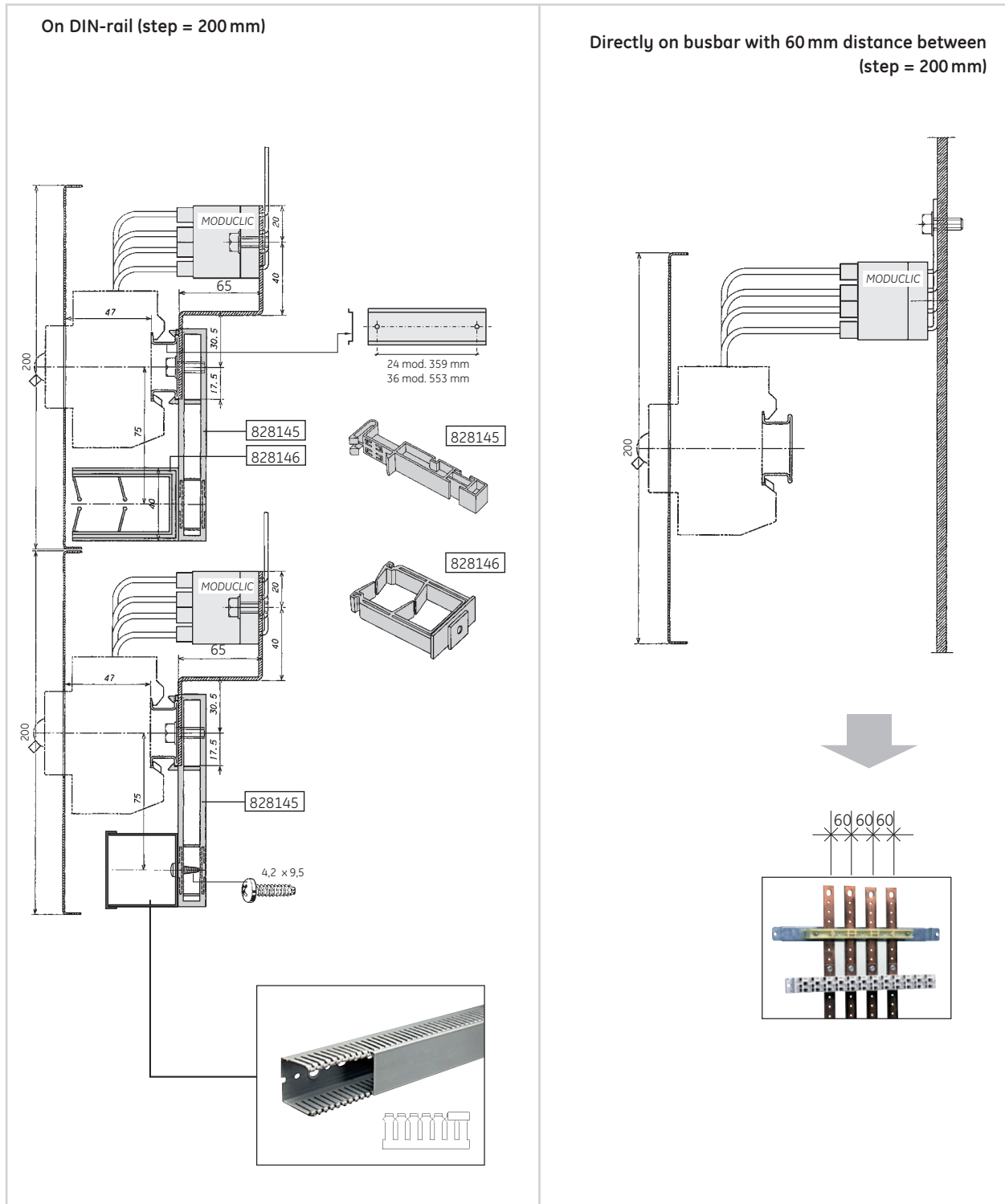
24 and 36 modules - 3P+2N - IP20



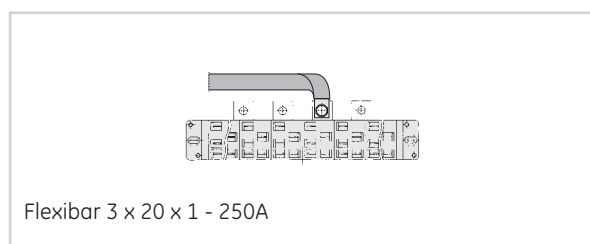
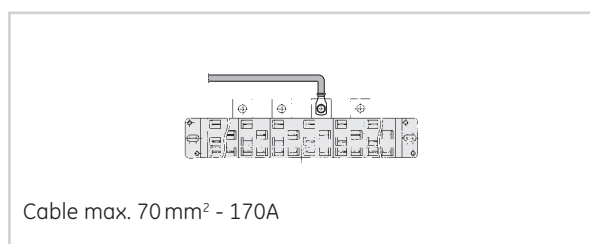
Moduclic distribution system

Description	Cables	Cable section (mm ²)	Cable length (mm)	Ref. No.	Pack
Moduclic 24 modules 3P+2N + cables 3P+N	18 x black 6 x blue	6 6	120 120	880884	1
Moduclic 24 modules 3P+2N + cables mono	12 x black 12 x blue	6 6	120 120	880885	1
Moduclic 24 modules 3P+2N without cables	-	-	-	880886	1
Moduclic 36 modules 3P+2N + cable 3P+N	27x black 9 x blue	6 6	120 120	885265	1
Moduclic 36 modules 3P+2N + cables mono	18 x black 18 x blue	6 6	120 120	885266	1
Moduclic 36 modules 3P+2N without cables	-	-	-	885267	1
Cables with end connector	6 x black 6 x blue 6 x black 6 x blue	6 6 10 10	120 120 120 120	880887 880888 880889 880890	1 1 1 1
Stripped cables	6 x black 6 x blue 6 x black 6 x blue	6 6 10 10	320 320 320 320	880891 880892 880893 880894	1 1 1 1
Cables for 2 x 4P MCBs	6 x black + 2 x blue 6 x black + 2 x blue 6 x black + 2 x blue 6 x black + 2 x blue	6 10 6 10	120 120 320 320	880926 880928 880930 880932	1 1 1 1
Cables for 4 x 2P MCBs	4 x black + 4 x blue 4 x black + 4 x blue 4 x black + 4 x blue 4 x black + 4 x blue	6 10 6 10	120 120 320 320	880927 880929 880931 880933	1 1 1 1
Plugs	1.5-2.5 mm ² blue - 10 plugs 4-6 mm ² yellow - 10 plugs			880895 880896	1 1

Mounting of Moduclic



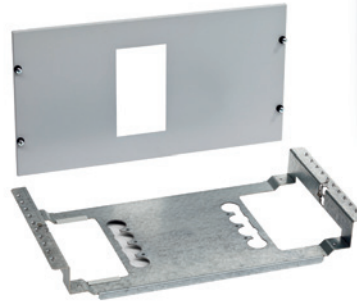
Incoming connections



Functional units for MCCBs – Record Plus – Fixed

Content

- Mounting plate
- Supports to fix to the functional frame
- Coverplate with cut-out
- Fixation elements



Example: horizontal assembly

MCCBs – Record Plus – Manual operation – Toggle

Frame size	In (A)	Poles	RCD position	Height (mm)	# MCCBs		Ref. No.		
					24 modules	36 modules			
Horizontal assembly									
FD	160	3/4		150	1		887157	1	887158
FD+RCD	160	3	Bottom	150	1		887279	1	887166
FD+RCD	160	4	Bottom	150	1		887159	1	887162
FE	250	3/4		200	1		887168	1	887169
FE+RCD	250	3/4	Bottom	200	1		887173	1	887174
FG	630	3		300	1		887183	1	887185
FG	630	4		300	1		887184	1	887186
FG+RCD	630	3	Bottom	300	1		887191	1	887193
FG+RCD	630	4	Bottom	300	1		887192	1	887194
FK	1600	3/4		450	1		887205	-	-
Vertical assembly									
FD	160	3/4		250	4		887160	6	887163
FD	160	3		250	5		887161	-	-
FD+RCD	160	3/4	Side	250	2		887160	3	887163
FE	250	3/4		450	3		887170	-	-
FE	250	3		450	4		887171	-	-
FE	250	3/4		450	-		-	4	887172
FE+RCD	250	3/4	Bottom	600	3		887175	4	887176
FG	630	3		600	1		887187	1	887189
FG	630	4		600	1		887188	1	887190
FG+RCD	630	3	Bottom	600	1		887195	1	887197
FG+RCD	630	4	Bottom	600	1		887196	1	887198
FK	1600	3/4		600	1		887206	1	887207

MCCBs – Record Plus – Manual operation – Rotary handle

Frame size	In (A)	Poles	RCD position	Height (mm)	# MCCBs		Ref. No.		
					24 modules				
Horizontal assembly									
FD	160	3/4		150	1				887167
FD+RCD	160	3/4	Bottom	150	1				887167
FE	250	3/4		200	1				887181
FE+RCD	250	3/4	Bottom	200	1				887181
FG	630	3/4		300	1				887203
FG+RCD	630	3/4	Bottom	300	1				887203
FK	1600	3/4		450	1				887208

MCCBs – Record Plus – Motor operation

Frame size	In (A)	Poles	RCD position	Height (mm)	# MCCBs		Ref. No.		
					24 modules				
Horizontal assembly									
FD	160	3/4		150	1				887167
FD+RCD	160	3/4	Bottom	150	1				887167
FE	250	3/4		200	1				887182
FE+RCD	250	3/4	Bottom	200	1				887182
FG	630	3/4		300	1				887204
FG+RCD	630	3/4	Bottom	300	1				887204
FK	1600	3/4		450	1				887209 ⁽¹⁾

(1) Not every functional unit can be mounted into 450 mm depth enclosures. To know the minimum mounting depth of each functional unit, please consult our calculation software PowerDesign 2.0.

Functional units for MCCBs – Record Plus – Plug-in

Content

- Mounting plate
- Supports to fix to the functional frame
- Coverplate with cut-out
- Fixation elements



MCCBs - Record Plus - Plug-in - Manual operation - Toggle

Frame size	In (A)	Poles	RCD position	Height (mm)	# MCCBs	Ref. No.
Horizontal assembly					24 modules	
FD	160	3/4		150	1	887164
FE	250	3/4		200	1	887177
FE+RDC	250	3/4	Bottom	200	1	887178
FG	630	3		300	1	887199
FG	630	4		300	1	887200

MCCBs - Record Plus - Plug-in - Rotary handle

Frame size	In (A)	Poles	RCD position	Height (mm)	# MCCBs	Ref. No.
Horizontal assembly					24 modules	
FD	160	3/4		150	1	887165
FE	250	3/4		200	1	887179
FG	630	3/4		300	1	887201

MCCBs - Record Plus - Plug-in - Motor operation⁽¹⁾

Frame size	In (A)	Poles	RCD position	Height (mm)	# MCCBs	Ref. No.
Horizontal assembly					24 modules	
FD	160	3/4		150	1	887165
FE	250	3/4		200	1	887180
FG	630	3/4		300	1	887202

(1) To check the minimum required depth of the enclosure, please consult PowerDesign.

Distribution terminals for Record Plus

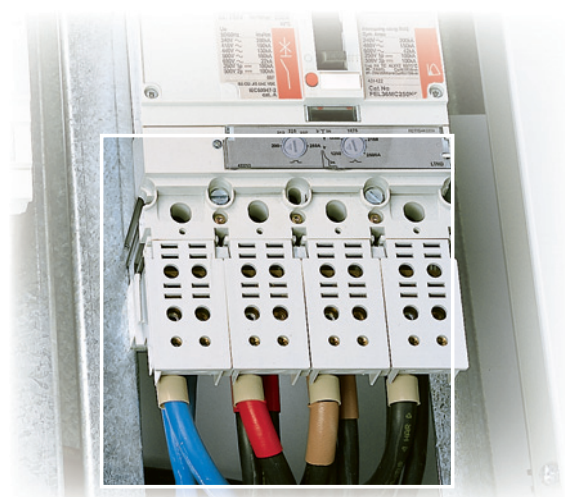
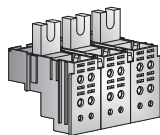
Especially designed to allow the use of the moulded case circuit breaker Record Plus FE frame as a mains device with cables distributing the load over multiple outgoing circuits (or lines of multiple outgoing circuits).

The terminals are available as a three or four pole set allowing the line or load side of the breaker to be equipped.

The sets consist of a number of fully insulated single pole units that can be assembled into a multipole distribution block before they are mounted on the breaker.

External connectors

Connector 6 copper cable cores 2.5 mm² up to 35 mm²
Set for equipping the line or load side of a breaker



External connectors for Record Plus FE

Frame size	Conductors	Size of conductors	Strippable length	Max. torque on lug bolt
FE160/250	max. 6	4 x 2.5 - 35 mm ²	12 mm	6 Nm
	-	2 x 2.5 - 16 mm ²	12 mm	3 Nm

	Ref. No.	Pack
Set 3 pole	880954	1
Set 4 pole	880955	1



Functional units for MCCBs – Record Plus – Withdrawable

Content

- Mounting plate
- Supports to fix to the functional frame
- Coverplate with cut-out
- Fixation elements

MCCBs – Record Plus – Withdrawable – Toggle

Frame size	In (A)	Poles	RCD position	Height (mm)	# MCCBs	Ref. No.
Vertical assembly					24 modules	
FK	1600	3/4		600	1	887210 ⁽¹⁾

MCCBs – Record Plus – Withdrawable – Rotary handle

Frame size	In (A)	Poles	RCD position	Height (mm)	# MCCBs	Ref. No.
Vertical assembly					24 modules	
FK	1600	3/4		600	1	887211 ⁽¹⁾

MCCBs – Record Plus – Withdrawable – Motor operation

Frame size	In (A)	Poles	RCD position	Height (mm)	# MCCBs	Ref. No.
Vertical assembly					24 modules	
FK	1600	3/4		600	1	887212 ⁽¹⁾

(1) Two depth profile sets required:
 600 mm: 887329
 800 mm: 887330.
 (min. depth 600 mm).

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Functional units for MCCBs – Record Plus – Changeover

Content

- Mounting plate
- Supports to fix to the functional frame
- Coverplate with cut-out
- Fixation elements

Automatic changeover - Record Plus - Rotary handle

Frame size	In (A)	Poles	RCD position	Heigth (mm)	# MCCBs	Ref. No.
Horizontal assembly					24 modules	
FE-FE	250/250	3	-	600	2	887213
FE-FE	250/250	4	-	600	2	887218
FG/FE	630/250	3	-	600	2	887215
FG/FE	630/250	4	-	600	2	887219
FG/FG	630/630	3/4	-	600	2	887214
FK/FG	1600/630	3/4	-	600	2	887217
FK/FK	1600/1600	3/4	-	600	2	887216

Automatic changeover - Record Plus - Motor operation⁽¹⁾

Frame size	In (A)	Poles	RCD position	Heigth (mm)	# MCCBs	Ref. No.
Horizontal assembly					24 modules	
FE-FE	250/250	3	-	600	2	887220
FE/FE	250/250	4	-	600	2	887256
FG/FE	630/250	3	-	600	2	887222
FG/FE	630/250	4	-	600	2	887225
FG/FG	630/630	3/4	-	600	2	887221
FK/FG	1600/630	3/4	-	600	2	887224
FK/FK	1600/1600	3/4	-	600	2	887223
Functional unit for automatic controller			-	250		887226

(1) To check the minimum required depth of the enclosure, please consult PowerDesign.



Functional units for LBSs – Dilos / Fulos

Content

- Mounting plate
- Supports to fix to the functional frame
- Coverplate with cut-out
- Fixation elements

Loadbreak disconnectors

Frame size	In (A)	Poles	Height (mm)	# LBSs	Ref. No.		
						# LBSs	Ref. No.
				24 modules		36 modules	
Horizontal assembly							
Dilos 3	160-315	3/4	300	1	887229	-	-
Dilos 4	400-630	3/4	450	1	887231 ⁽¹⁾	-	-
Dilos 6S 35 kA	800-1250	3/4	600	1	887233 ⁽¹⁾	-	-
Dilos 6S 50 kA 7S and 8S	800-1250	3/4	700	-	-	1	887235 ⁽¹⁾
Vertical assembly							
Dilos 1-2	40-200	3/4	200	1	887227	-	-
Dilos 1H	40-200	3/4	300	1	887228	-	-
Dilos 3	160-315	3/4	300	1	887230	-	-
Dilos 4	400-630	3/4	450	1	887232 ⁽¹⁾	-	-
Dilos 6S 35 kA	800-1250	3/4	450	1	887234 ⁽¹⁾	-	-
Dilos 6S 50 kA 7S and 8S	800-1250	3/4	600	-	-	1	887236 ⁽¹⁾

Fused loadbreak disconnectors

Frame size	In (A)	Poles	Height (mm)	# LBSs	Ref. No.		
						# LBSs	Ref. No.
				24 modules			
Horizontal assembly							
Fulos 1-2	250-400	3/4	400	1	887238 ⁽¹⁾	-	-
Fulos 3S	630	3/4	600	1	887233 ⁽¹⁾	-	-
Vertical assembly							
Fulos 0/00/000	32-160	3/4	250	1	887237	-	-
Fulos 3S	630	3/4	450	1	887234 ⁽¹⁾	-	-

Functional units for insulated fuse Cosmo

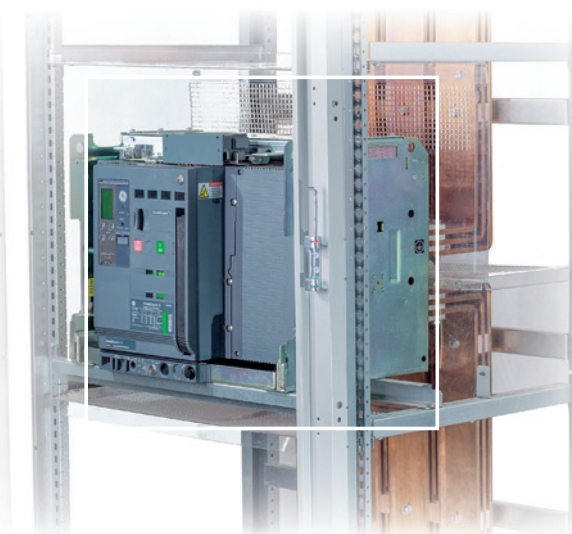
Cosmo type	In (A)	Poles	Height (mm)	# of fuse bases	Ref. No.		
						# of fuse bases	Ref. No.
				24 modules			
Vertical assembly							
D01/D1/D2			300	1	887239	-	-

(1) Two depth profile sets required:
 600 mm: 887329x2
 800 mm: 887330x2
 (min. depth 600 mm).

Functional units for ACBs – EntelliGuard™ / M-PACT Plus

Content

- Support profiles to fix to the depth profiles
- Coverplate with cut-out
- Fixation elements



Functional units for ACB EntelliGuard™ L

Frame size	Type	Poles	Height (mm)	# ACBs	Ref. No.	# ACBs	Ref. No.
Vertical assembly				24 modules		36 modules	
Frame 1	Fixed	3/4	700	1	887432 ⁽¹⁾		
Frame 1	Withdrawable	3/4	700	1	887433 ⁽¹⁾		
Frame 1/2	Fixed	3/4	700			1	887434 ⁽¹⁾
Frame 1/2	Withdrawable	3/4	700			1	887435 ⁽¹⁾

Functional units for ACB EntelliGuard™ G

Frame size	Type	Poles	Height (mm)	# ACBs	Ref. No.	# ACBs	Ref. No.
Vertical assembly				24 modules		36 modules	
Frame 1	Fixed	3/4	700	1	887240 ⁽¹⁾		
Frame 1	Withdrawable	3/4	700	1	887241 ⁽²⁾		
Frame 1/2	Fixed	3/4	700			1	887242 ⁽¹⁾
Frame 1/2	Withdrawable	3/4	700			1	887243 ⁽²⁾

Functional units for ACB M-PACT Plus

Frame size	Type	Poles	Height (mm)	# ACBs	Ref. No.	# ACBs	Ref. No.
Vertical assembly				24 modules		36 modules	
Frame 1	Fixed	3/4	700	1	887244 ⁽¹⁾		
Frame 1	Withdrawable	3/4	700	1	887245 ⁽²⁾		
Frame 1/2	Fixed	3/4	700			1	887246 ⁽¹⁾
Frame 1/2	Withdrawable	3/4	700			1	887247 ⁽²⁾

(1) One depth profile set required.

600 mm: 887329

800 mm: 887330

(2) Withdrawable only for 800 mm. One depth profile set required: 887330

Form 2 and 3: extra set depth profiles needed.

Note: enclosures 600 mm depth only allow ACB Frame 1 fixed



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Mounting plates

QuiXtra 4000 offers the possibility of using partial mounting plates in combination with the rest of functions, or the full height mounting plate, adjustable in depth. Partial mounting plates require 2 sets of depth profiles. Full height mounting plate requires 3 sets of depth profiles.

Height (mm)	Width		
	12 modules	24 modules	36 modules
200 ⁽¹⁾	887112	887117	887122
400 ⁽¹⁾	887113	887118	887123
600 ⁽¹⁾	887114	887119	887124
1800 ⁽²⁾	887115	887120	887125
200 perforated ⁽¹⁾	887116	887121	887126

(1) 4 supports needed ref. 887328 887329 887330
 (2) 6 supports needed ref. 887328 887329 887330
 See page B.31

Cover plates

Height (mm)	Type	Width		
		12 modules	24 modules	36 modules
50	Plain	885166	885167	885168
100	Plain	887127	887132	887137
150	Plain	885169	885170	885171
200	Plain	885172	885173	885174
250	Plain	887128	887133	887138
300	Plain	885175	885176	885177
400	Plain	887129	887134	887139
600	Plain	885161	887135	887140
750	Plain	885162	-	-
900	Plain	885163	-	-
1050	Plain	885164	-	-
1200	Plain	885165	-	-
150	Slot modular devices	885178	885179	885180
150	Push-buttons	-	885189	885190
150	Meters 72x72	-	885185 ⁽¹⁾	885186 ⁽²⁾
150	Meters 96x96	-	885187 ⁽³⁾	885188 ⁽⁴⁾
150	Recessed and pre-punched side	-	885181	885182
200	Ventilated	887131	887136	887141
300	Recessed and pre-punched side	887130	885183	885184

(1) 4 meters
 (2) 6 meters
 (3) 3 meters
 (4) 5 meters

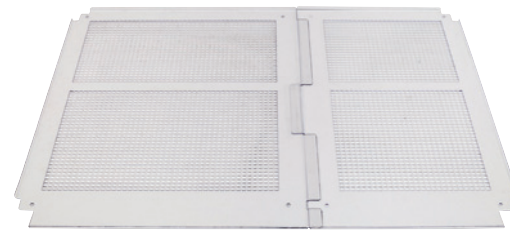
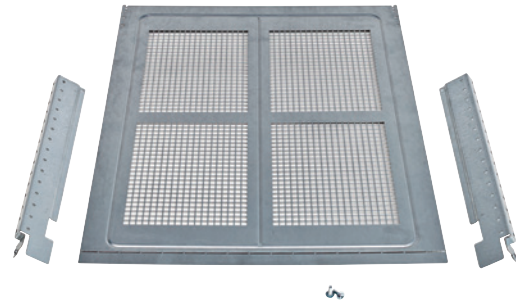


Separation screens Form 2 and Form 3

QuiXtra 4000 can be upgraded to internal segregation Form 2 or Form 3. To achieve the segregation Form 2 is required to add the separation screen for the busbars. To achieve the Form 3 additionally is required to add the separation screen between functions. There are special separation screen for the ACBs.

Form 2 and 3 separation screens

Depth (mm)				
Horizontal separation (metal)	Width			
	12 modules	24 modules	36 modules	
	450	887257	887260	887263
	600	887258	887261	887264
800	887259	887262	887265	
Side separation (length 900 mm) (polycarbonate)				
	without CC	with CC		
450	887266	887280	-	
600	887267	887281	-	
800	887268	887282	-	
Vertical rear busbar separation (length 900 mm) (polycarbonate)				
	12 modules	24 modules	36 modules	
450/600/800	-	887270	887270	



ACB Entelliguard L separation screens

Description	Type	Depth	Width	
			24 modules	36 modules
EG L Frame 1	Fixed	600	887436	887438
EG L Frame 1	Fixed	800	887454	887455
EG L Frame 1	Withdrawable	800	887437	887439
EG L Frame 2	Fixed	800	-	887440
EG L Frame 2	Withdrawable	800	-	887441

ACB Entelliguard G separation screens

Description	Type	Depth	Width	
			24 modules	36 modules
EG G Frame 1	Fixed	600	887271	887273
EG G Frame 1	Withdrawable	800	887272	887274
EG G Frame 2	Fixed	800	-	887273
EG G Frame 2	Withdrawable	800	-	887274

ACB M-PACT Plus separation screens

Description	Type	Depth	Width	
			24 modules	36 modules
M-Pact Frame 1	Fixed	600	887275	887277
M-Pact Frame 1	Withdrawable	800	887276	887278
M-Pact Frame 2	Fixed	800	-	887277
M-Pact Frame 2	Withdrawable	800	-	887278

Busbars overview

In a QuiXtra 4000, busbars can be fixed horizontally and/or vertically

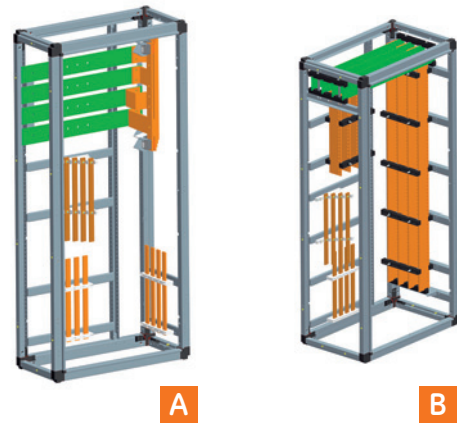
Maximum I_n (A) for busbars if ambient temperature is 35°C

Fixation	Position	Enclosure Depth (mm)	IP30 without door				IP55			
			12 mod.	24 mod.	36 mod.	24 mod. + CC	12 mod.	24 mod.	36 mod.	24 mod. + CC
HORIZONTAL										
Side	flat	600	2000	2000	2000	2000	2000	2000	2000	2000
		800	4000	4000	4000	4000	4000	4000	4000	4000
450		1600	1600	1600	1600	1600	1600	1600	1600	
600		1600	1600	1600	1600	1600	1600	1600	1600	
Rear	flat	800	1600	1600	1600	1600	1600	1600	1600	1600
		450	1600	1600	1600	1600	1600	1600	1600	
600		1600	1600	1600	1600	1600	1600	1600		
800		1600	1600	1600	1600	1600	1600	1600		
VERTICAL										
Side	flat	450	670	-	-	670	440	-	-	440
		600	670/2000	-	-	670/2000	440/2000	-	-	440/2000
	800	670/4000	-	-	670/2500	440/4000	-	-	440/2500	
	450	-	-	-	1600	-	-	-	1600	
Side	staircase	600	630	-	-	630	440	-	-	440
		800	630	-	-	630	440	-	-	440
	450	670/1600	630/1600	630/1600	670/1600	440/1600	440/1600	440/1600	440/1600	
	600	670/2000	630/2000	630/2000	670/2000	440/2000	440/2000	440/2000	440/2000	
Rear	flat	800	670/2000	630/2000	630/2000	670/2000	440/2000	440/2000	440/2000	440/2000
		450	630	630	630	630	440	440	440	440
	600	630	630	630	630	440	440	440	440	
	800	630	630	630	630	440	440	440	440	
Rear	staircase	450	630	630	630	630	440	440	440	440
		600	630	630	630	630	440	440	440	440
	800	630	630	630	630	440	440	440	440	
	450	630	630	630	630	440	440	440	440	

Horizontal busbars

Depending on where the busbar supports are fixed, QuiXtra 4000 offers 2 kinds of horizontal busbars, both with flat positioned bars.

- **Rear fixation A**: busbar supports are fixed on the back profiles and the phases are positioned one below the other. This is the only horizontal position possible for 450 mm deep enclosures.
- **Side fixation B**: busbar supports are fixed on the side profiles and the phases are positioned one behind the other. You can use floating supports in the middle. These busbars can be placed in 600 mm or 800 mm deep enclosures and are allocated at any height of the enclosure.



Maximum I_n (A) at IP30⁽¹⁾ without door if ambient temperature is 35°C

Enclosure depth (mm)	450	600	600	800	800
Busbar support fixation	Rear	Side	Rear	Side	Rear
Busbar position	Flat	Flat	Flat	Flat	flat
Figure letter	A	B	A	B	A
Max I_n (A) at IP30 without door ⁽¹⁾	1600	2000	1600	4000	1600
Distance between busbars (mm)	125	90	125	90	125
Enclosure width (mod.)	all	all	all	all	all
Cross section	50x10	1100A	1000A	1100A	1000A
	60x10	1300A	1250A	1300A	1250A
	80x10	1400A	1600A	1400A	1600A
	100x10	2000A		2000A	1600A
	120x10			2400A	
	160x10			2700A	
	(80x10) x2			2500A	
	(100x10) x2			3000A	
	(120x10) x2			3600A	
	(160x10) x2			4000A	

(1) Check table page C.5 for derating

Vertical busbars

Depending on where the busbar supports are fixed, QuiXtra 4000 offers 2 different fixations for vertical busbars.

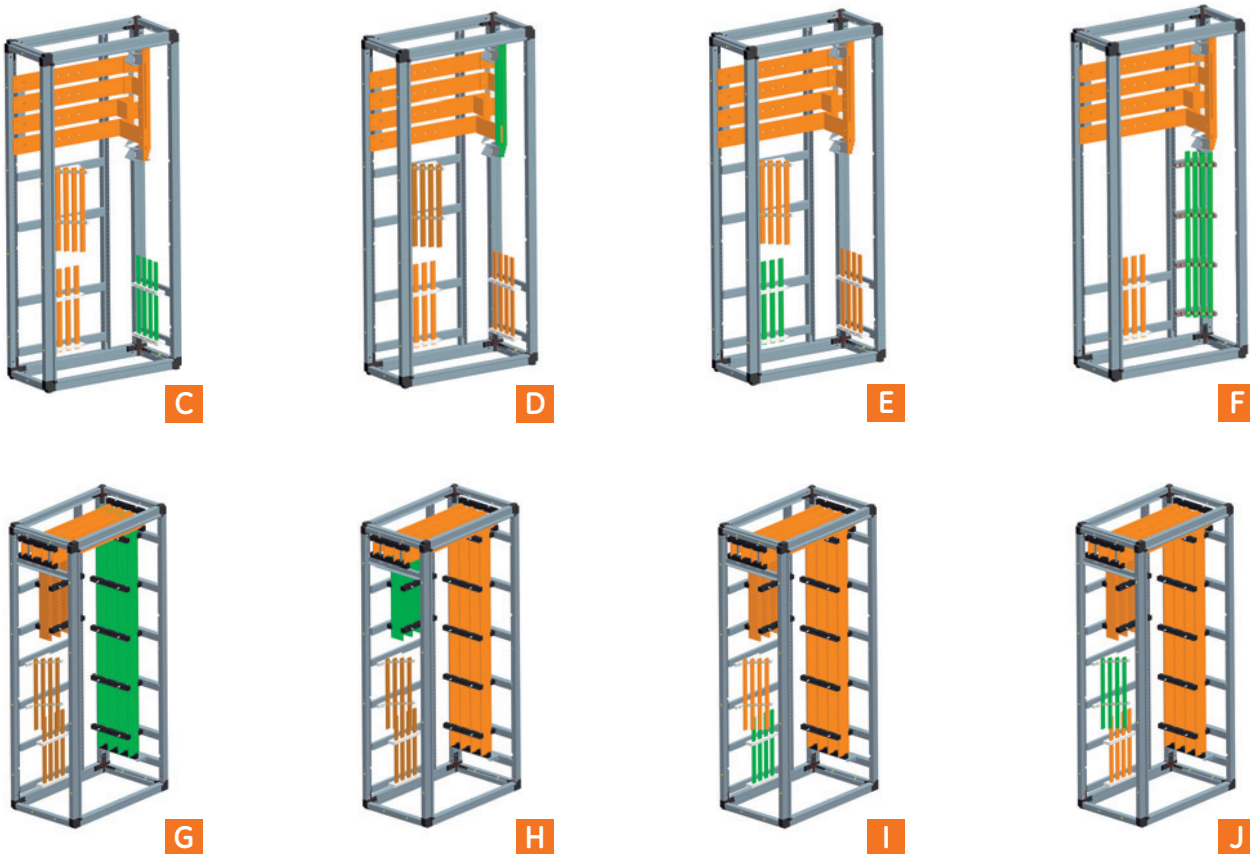
- **Side fixation:** busbar supports are fixed on the side of the enclosure and the phases are positioned one behind the other. These busbars can be placed in 600mm or 800mm deep enclosures of 12 modules width. We offer these busbars up to 4000A. Copper can be flat or staircase.
- **Rear fixation:** busbars supports are fixed on the back uprights of the enclosure and the position of the phases is one next to another. We have 2 sizes: up to 630A and up to 2000A. Copper can be flat or staircase.

Maximum I_n (A) at IP30⁽¹⁾ without door if ambient temperature is 35°C

Enclosure depth (mm)	450	450	450	450	600	600	600	600	800	800	800	800	
Busbar support fixation	Side	Side	Rear	Rear	Side	Rear	Rear	Rear	Side	Rear	Rear	Rear	
Busbar position	flat	staircase	flat	staircase	flat	flat	flat	staircase	flat	flat	flat	staircase	
Figure letter	C	D	E	F	G	H	I	J	G	H	I	J	
Max In (A) at IP30 without door ⁽¹⁾	670	1600	670	630	2000	2000	670	630	4000	2000	670	630	
Distance between busbars (mm)	60	-	60	35	90	125	60	35	90	125	60	35	
Enclosure width (mod.)	all	24 + CC	all	all	12/24 + CC	24/36/24 + CC	all	all	12/24 + CC	24/36/24 + CC	all	all	
Cross section	20x5	275A	-	275A	250A	-	-	275A	250A	-	-	275A	250A
	30x5	425A	-	425A	400A	-	-	425A	400A	-	-	425A	400A
	20x10	425A	-	425A	400A	-	-	425A	400A	-	-	425A	400A
	30x10	670A	670A	670A	630A	-	-	670A	630A	-	-	670A	630A
	40x10	-	800A	-	-	-	-	-	-	-	-	-	-
	50x10	-	1000A	-	-	1100A	1000A	-	-	1100A	1000A	-	-
	60x10	-	-	-	-	1300A	1250A	-	-	1300A	1250A	-	-
	80x10	-	-	-	-	1650A	1600A	-	-	1650A	1600A	-	-
	100x10	-	-	-	-	2000A	2000A ⁽²⁾	-	-	2000A	2000A	-	-
	(30x10) x2	-	800A	-	-	-	-	-	-	-	-	-	-
	(40x10) x2	-	1250A	-	-	-	-	-	-	-	-	-	-
	(50x10) x2	-	1600A	-	-	-	-	-	2000A	-	-	-	-
	(80x10) x2	-	-	-	-	-	-	-	2500A	-	-	-	-
	(100x10) x2	-	-	-	-	-	-	-	3000A	-	-	-	-
	(120x10) x2	-	-	-	-	-	-	-	3600A	-	-	-	-
	(160x10) x2	-	-	-	-	-	-	-	4000A	-	-	-	-

(1) Check table page C.6 for derating

(2) Not all functions can be put in front a 2000A busbar, please check with PowerDesign 2.0





Example of a connectivity kit for ACB to busbar



Example of connecting a vertical busbar with side fixation to a horizontal busbar with side fixation.

Copper bars

Cu size	Plain		Threaded		Pre-punched for vertical busbars	Cut appropriate length for horizontal busbars 450/600 and 800			
	3 m	2 m	2 m	4x1 m		holes	1.75 m	12 mod.	24 mod.
20x5	858036	-	885207	880847	M6	-	-	-	-
30x5	885204	-	885209	-	M6	-	-	-	-
20x10	885205	-	885208	-	M6	-	-	-	-
30x10	885206	-	885210	880851	M8	887398 ⁽¹⁾	-	-	-
40x10	-	-	-	-	-	887429 ⁽¹⁾	-	-	-
50x10	-	887306	-	-	-	887300	887425/887399	887422/887405	887419/887411
60x10	-	887307	-	-	-	887301	887426/887400	887423/887406	887420/887412
80x10	-	887308	-	-	-	887302	887427/887401	887424/887407	887421/887413
100x10	-	887309	-	-	-	887303	-/887402	-/887408	-/887414
120x10	-	887310	-	-	-	887304	-/887403	-/887409	-/887415
160x10	-	887311	-	-	-	887305	-/887404	-/887410	-/887416

(1) Ref. No. = set of 2 pcs

Flexible copper - Length = 2m

6x13x0.5 - 125A 886530	2x20x1 - 160A 886532	3x20x1 - 250A 828162	4x32x1 - 400A 828163	6x32x1 - 630A 828164	10x32x1 - 800A 828165
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Earth bars

The earth continuity is assured with horizontal and vertical copper bars. The use of standard copper bars is required.

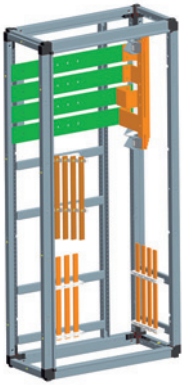


Earth bars

	Ref. No.
Universal brackets for earth bars	887347 ⁽¹⁾

(1) Set of 2 pcs

Horizontal busbars for 450 mm deep enclosures



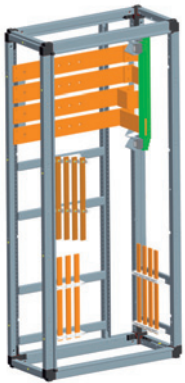
Rear fixation flat, up to 1600A

A

IP30 ⁽¹⁾	I _n max (A) at 35°C		Cu size (mm)	Plain copper bars	Cut appropriate length copper bars ⁽²⁾⁽³⁾			Insulator kit + support ⁽⁴⁾	Extension kit ⁽⁵⁾
	IP55				2m	12 mod.	24 mod.		
1000	960	60x10	887307	887425	887422	887419	887297	887325	
1250	1250	80x10	887308	887426	887423	887420	887297	887326	
1600	1600	100x10	887309	887427	887424	887421	887297	887327	

- (1) Without door, for derating see technical documentation on page C.5 and further
- (2) In one reference there is one busbar included, order one piece per phase
- (3) Ready for connectivity kit to vertical staircase busbar and/or Record Plus FK
- (4) Order one kit per enclosure, one kit contains 2 supports and 2 insulators
- (5) To connect 2 horizontal busbars

Vertical busbars for 450 mm deep enclosures



Side fixation staircase, up to 1600A

D

IP30 ⁽¹⁾	I _n max (A) at 35°C		Cu size (mm)	Plain copper bars	Pre-punched copper bars ⁽²⁾	Support ⁽³⁾	Spacer for double busbars ⁽⁴⁾
	IP55						
670	440	30x10	885206	887398	887296	-	
800	715	40x10	-	887429	887296	-	
1000	960	50x10	887306	887428	887296	-	
800	715	(30x10)x2	885206x2	887398x2	887296	887269	
1250	1250	(40x10)x2	-	887429x2	887296	887269	
1600	1600	(50x10)x2	887306x2	887428x2	887296	887269	

- (1) Without door, for derating see technical documentation on page C.5 and further
 - (2) In one reference there is one busbar included, order one piece per phase
 - (3) Set of 6 supports and 6 insulators
 - (4) Set of 24 spacers, usable for 1 set of 6 supports
- * CC = Cable Compartment

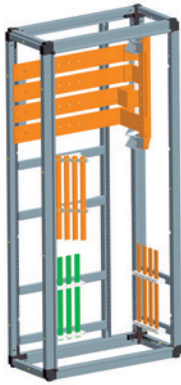
Minimum quantity of supports

Section/lcc	25kA	35kA	50kA
30x10	6	-	-
40x10	4	6	6
50x10	4	6	6
(30x10)x2	6	-	-
(40x10)x2	4	6	6
(50x10)x2	4	6	6

Connecting set for staircase busbar to main busbar

60x10	887324
80x10	887323
100x10	887318

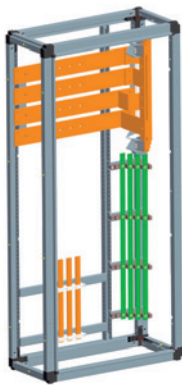
Vertical busbars for 450 mm deep enclosures



Rear fixation flat, up to 630A

E

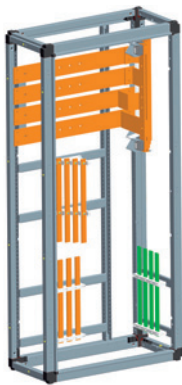
I_n max (A) at 35°C		Cu size	Plain copper bars	Threaded copper bars			Insulator kit + support ⁽²⁾			
IP30 ⁽¹⁾	IP55	(mm)	3m	2m	4x1m	12 mod.	24 mod.	36 mod.	24 mod. with int. CC*	
275	210	20x5	858036	885207	880847	887290	887291	887292	887291	
425	330	30x5	885204	885209	-	887290	887291	887292	887291	
425	330	20x10	885205	885208	-	887290	887291	887292	887291	
670	440	30x10	885206	885210	880851	887290	887291	887292	887291	



Rear fixation staircase, up to 630A

F

I_n max (A) at 35°C		Cu size	Plain copper bars	Threaded copper bars			Insulator kit + support ⁽²⁾	
IP30 ⁽¹⁾	IP55	(mm)	3m	2m	4x1m	12 mod.	24 mod. with int. CC*	
250	210	20x5	858036	885207	880847	887293	887294	
400	330	30x5	885204	885209	-	887293	887294	
400	330	20x10	885205	885208	-	887293	887294	
630	440	30x10	885206	885210	880851	887293	887294	



Side fixation flat, up to 630A

C

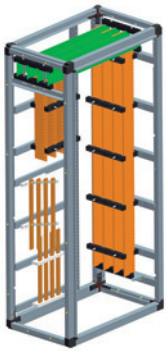
I_n max (A) at 35°C		Cu size	Plain copper bars	Threaded copper bars			Insulator kit + support ⁽²⁾
IP30 ⁽¹⁾	IP55	(mm)	3 m	2 m	4x1 m	24 mod. with int. CC*	
275	210	20x5	858036	885207	880847	887334	
425	330	30x5	885204	885209	-	887334	
425	330	20x10	885205	885208	-	887334	
670	440	30x10	885206	885210	880851	887334	

(1) Without door, for derating see technical documentation on page C.5 and further

(2) maximum distance between two supports is 300mm

* CC = Cable Compartment

Horizontal busbars for 600 mm deep enclosures



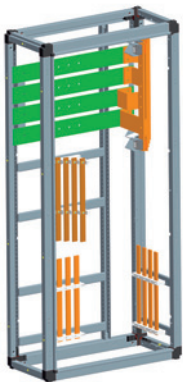
Side fixation flat, up to 2000A

B

I_n max (A) at 35°C		Cu size (mm)	Plain copper bars 2m	Cut appropriate length copper bars ⁽²⁾⁽³⁾			Support ⁽⁴⁾	Insulator ⁽⁴⁾	Extension kit ⁽⁵⁾
IP30 ⁽¹⁾	IP55			12 mod.	24 mod.	36 mod.			
1100A	950A	50x10	887306	887399	887405	887411	887287	887312	887375
1300A	1100A	60x10	887307	887400	887406	887412	887287	887313	887376
1650A	1400A	80x10	887308	887401	887407	887413	887287	887314	887377
2000A	2000A	100x10	887309	887402	887408	887414	887287	887315	887378

Quantity of supports/isolators needed

Cu size	12 mod.	24 mod.	36 mod.
	Icc 35 kA		
50x10	2/2	2/3	2/3
60x10	2/2	2/3	2/3
80x10	2/2	2/2	2/3
100x10	2/2	2/2	2/3
Icc 50 kA			
50x10	2/2	2/3	2/4
60x10	2/2	2/3	2/3
80x10	2/2	2/3	2/3
100x10	2/2	2/3	2/3
Icc 65 kA			
60x10	2/3	2/4	2/4
80x10	2/3	2/3	2/4
100x10	2/2	2/3	2/3
Icc 80 kA and 85 kA			
80x10	2/3	2/4	2/5
100x10	2/3	2/4	2/4



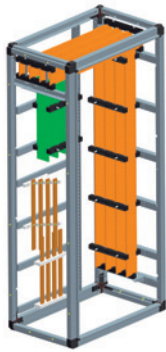
Rear fixation flat, up to 1600A

A

I_n max (A) at 35°C		Cu size (mm)	Plain copper bars 2m	Cut appropriate length copper bars ⁽²⁾⁽³⁾			Insulator kit + support ⁽⁴⁾	Extension kit ⁽⁵⁾
IP30	IP55			12 mod.	24 mod.	36 mod.		
1000A	950A	60x10	887307	887425	887422	887419	887297	887325
1250A	1100A	80x10	887308	887426	887423	887420	887297	887326
1600A	1400A	100x10	887309	887427	887424	887421	887297	887327

- (1) Without door, for derating see technical documentation on page C.5 and further
- (2) In one reference there is one busbar included, order one piece per phase
- (3) Ready for connectivity kit to vertical staircase busbar and/or Record Plus FK
- (4) Order one kit per enclosure, one kit contains 2 supports and 2 insulators
- (5) To connect two horizontal busbars

Vertical busbars for 600 mm deep enclosures



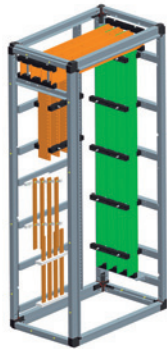
Rear fixation flat, up to 2000A

H

I _n max (A) at 35°C		Cu size	Plain copper bars ⁽¹⁾	Pre-punched copper bars ⁽²⁾	Support ⁽³⁾			Insulator ⁽³⁾	Bottom isolator ⁽⁴⁾
IP30 ⁽⁵⁾	IP55	(mm)	2m	1.75m	24 mod.	36 mod.	24 mod. with int. CC*		
1100	950	50x10	887306	887300	887298	887299	887298	887312	887289
1300	1100	60x10	887307	887301	887298	887299	887298	887313	887289
1650	1400	80x10	887308	887302	887298	887299	887298	887314	887289
2000 ⁽⁵⁾	2000 ⁽⁵⁾	100x10	887309	887303	887298	887299	887298	887315	887289

Maximum distance between supports (mm)

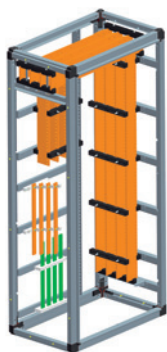
Cu size	35kA	50kA	65kA
50x10	450	325	-
60x10	500	350	275
80x10	600	400	300
100x10	650	450	350



Side fixation flat, up to 2000A

G

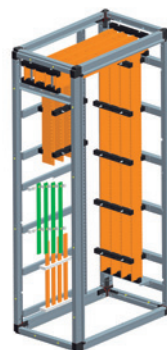
I _n max (A) at 35°C		Cu size	Plain copper bars	Pre-punched copper bars ⁽²⁾	Support ⁽³⁾	Insulator kit ⁽³⁾	Bottom isolator ⁽⁴⁾
IP30 ⁽⁵⁾	IP55	(mm)	2m	1.75m			
1100	950	50x10	887306	887300	887287	887312	887289
1300	1100	60x10	887307	887301	887287	887313	887289
1650	1400	80x10	887308	887302	887287	887314	887289
2000	2000	100x10	887309	887303	887287	887315	887289



Rear fixation flat, up to 630A

I

I _n max (A) at 35°C		Cu size	Plain copper bars	Threaded copper bars	Insulator kit + support ⁽⁶⁾				
IP30 ⁽⁵⁾	IP55	(mm)	3m	2m	4x1m	12 mod.	24 mod.	36 mod.	24 mod. with int. CC*
250	210	20x5	858036	885207	880847	887290	887291	887292	887291
400	330	30x5	885204	885209	-	887290	887291	887292	887291
400	330	20x10	885205	885208	-	887290	887291	887292	887291
630	440	30x10	885206	885210	880851	887290	887291	887292	887291



Rear fixation staircase, up to 630A

J

I _n max (A) at 35°C		Cu size	Plain copper bars	Threaded copper bars	Insulator kit + support ⁽²⁾		
IP30	IP55	(mm)	3m	2m	4x1m	12 mod.	24 mod. with int. CC*
250	210	20x5	858036	885207	880847	887293	887294
400	330	30x5	885204	885209	-	887293	887294
400	330	20x10	885205	885208	-	887293	887294
630	440	30x10	885206	885210	880851	887293	887294

(1) Without door, for derating see technical documentation on page C.5 and further

(2) In one reference there is one busbar included, order one piece per phase

(3) For quantities to be ordered see table above

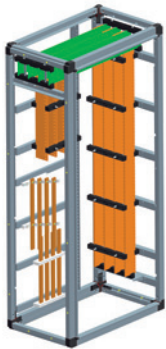
(4) One bottom isolator needed per busbar system, order an additional support for each bottom isolator

(5) Not all functions can be put in front of this busbar, please check with PowerDesign 2.0

(6) Maximum distance between two supports is 300 mm

* CC = Cable Compartment

Horizontal busbars for 800 mm deep enclosures

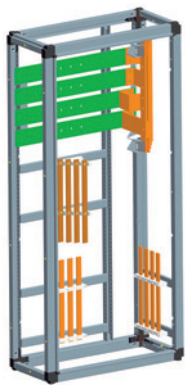


Side fixation flat, up to 4000A B

IP30 ⁽¹⁾	IP55	I _n max (A) at 35°C	Cu size (mm)	Plain copper bars 2 m	Cut appropriate length copper bars ⁽²⁾⁽³⁾			Support ⁽⁴⁾	Insulator kit ⁽⁴⁾	Extension kit ⁽⁵⁾
					12 mod.	24 mod.	36 mod.			
1100	950	50x10	887306	887306	887399	887405	887411	887288	887312	887375
1300	1100	60x10	887307	887307	887400	887406	887412	887288	887313	887376
1650	1400	80x10	887308	887401	887401	887407	887413	887288	887314	887377
2000	2000	100x10	887309	887402	887402	887408	887414	887288	887315	887378
2500	2500	80x10x2	887308x2	887401x2	887401x2	887407x2	887413x2	887288	887314	887377
3000	2950	100x10x2	887309x2	887402x2	887402x2	887408x2	887414x2	887288	887315	887378x2
3600	3300	120x10x2	887310x2	887403x2	887403x2	887409x2	887415x2	887288	887316	887379x2
4000	3800	160x10x2	887311x2	887404x2	887404x2	887410x2	887416x2	887288	887317	887380x2

Quantity of supports/isolators needed

Cu size	12 mod.	24 mod.	36 mod.	Cu size	12 mod.	24 mod.	36 mod.
Icc 35 kA				Icc 65 kA			
50x10	2/2	2/3	2/3	-	-	-	-
60x10	2/2	2/3	2/3	60x10	2/3	2/4	2/4
80x10	2/2	2/2	2/3	80x10	2/3	2/3	2/4
100x10	2/2	2/2	2/3	100x10	2/2	2/3	2/3
(80x10)x2	2/2	2/2	2/3	(80x10)x2	2/2	2/3	2/3
(100x10)x2	2/2	2/2	2/3	(100x10)x2	2/2	2/3	2/3
(120x10)x2	2/2	2/2	2/2	(120x10)x2	2/2	2/3	2/3
(160x10)x2	2/2	2/2	2/2	(160x10)x2	2/2	2/3	2/3
Icc 50 kA				Icc 80 kA and 85 kA			
50x10	2/2	2/3	2/4	-	-	-	-
60x10	2/2	2/3	2/3	-	-	-	-
80x10	2/2	2/3	2/3	80x10	2/3	2/4	2/5
100x10	2/2	2/3	2/3	100x10	2/3	2/4	2/4
(80x10)x2	2/2	2/3	2/3	(80x10)x2	2/3	2/4	2/4
(100x10)x2	2/2	2/3	2/3	(100x10)x2	2/3	2/4	2/4
(120x10)x2	2/2	2/2	2/2	(120x10)x2	2/2	2/4	2/4
(160x10)x2	2/2	2/2	2/2	(160x10)x2	2/2	2/4	2/4

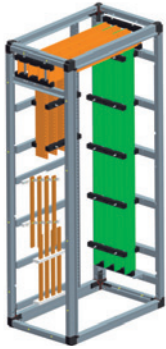


Rear fixation flat, up to 1600A A

IP30 ⁽¹⁾	IP55	I _n max (A) at 35°C	Cu size (mm)	Plain copper bars 2 m	Cut appropriate length copper bars ⁽²⁾⁽³⁾			Insulator kit ⁽⁴⁾	Extension kit ⁽⁵⁾
					12 mod.	24 mod.	36 mod.		
1000A	950A	60x10	887307	887307	887425	887422	887419	887297	887325
1250A	1100A	80x10	887308	887308	887426	887423	887420	887297	887326
1600A	1400A	100x10	887309	887309	887427	887424	887421	887297	887327

- (1) Without door, for derating see technical documentation on page C.5 and further
- (2) In one reference there is one busbar included, order one piece per phase
- (3) Ready for connectivity kit to vertical staircase busbar and/or Record Plus FK
- (4) Order one kit per enclosure, one kit contains 2 supports and 2 insulators
- (5) To connect two horizontal busbars

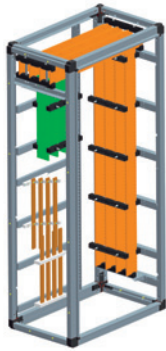
Vertical busbars for 800 mm deep enclosures



Side fixation flat, up to 4000A

G

I_n max (A) at 35°C		Cu size	Plain copper bars ⁽²⁾	Pre-punched copper bars ⁽²⁾	Support ⁽³⁾	Insulator kit ⁽³⁾	Bottom isolator ⁽⁴⁾
IP30 ⁽¹⁾	IP55	mm	2 m	1.75 m			
1100	950	50x10	887306	887300	887288	887312	887289
1300	1100	60x10	887307	887301	887288	887313	887289
1650	1400	80x10	887308	887302	887288	887314	887289
2000	2000	100x10	887309	887303	887288	887315	887289
2500	2500	(80x10)x2	887308x2	887302x2	887288	887314	887289
3600	3300	(120x10)x2	887310x2	887304x2	887288	887316	887289
4000	3800	(160x10)x2	887311x2	887305x2	887288	887317	887289



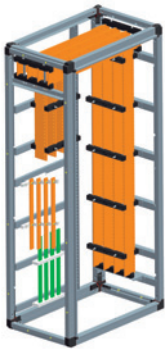
Rear fixation flat, up to 2000A

H

I_n max (A) at 35°C		Cu size	Plain copper bars	Pre-punched copper bars ⁽²⁾	Support ⁽³⁾			Insulator kit ⁽³⁾	Bottom isolator ⁽⁴⁾
IP30 ⁽¹⁾	IP55	mm	2 m	1.7 m	24 mod.	36 mod.	24 mod. with int. CC*		
1100	950	50x10	887306	887300	887298	887299	887298	887312	887289
1300	1100	60x10	887307	887301	887298	887299	887298	887313	887289
1650	1400	80x10	887308	887302	887298	887299	887298	887314	887289
2000	2000	100x10	887309	887303	887298	887299	887298	887315	887289

Maximum distance between supports (mm)

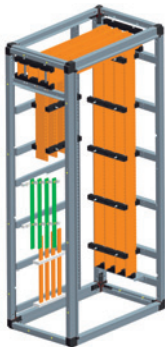
Cu size	50kA	65kA	80kA	85kA
80x10	400	300	-	-
100x10	450	350	250	200
(120x10)x2	900	600	400	375
(160x10)x2	900	600	400	375



Rear fixation staircase, up to 630A

I

I_n max (A) at 35°C		Cu size	Plain copper bars	Threaded copper bars			Insulator kit + support ⁽⁵⁾			
IP30 ⁽¹⁾	IP55	mm	3 m	2 m	4x1 m	12 mod.	24 mod.	36 mod.	24 mod. with int. CC*	
250	210	20x5	858036	885207	880847	887290	887291	887292	887291	
400	330	30x5	885204	885209	-	887290	887291	887292	887291	
400	330	20x10	885205	885208	-	887290	887291	887292	887291	
630	440	30x10	885206	885210	880851	887290	887291	887292	887291	



Rear fixation staircase, up to 630A

J

I_n max (A) at 35°C		Cu size	Plain copper bars	Threaded copper bars			Insulator kit + support ⁽²⁾	
IP30 ⁽¹⁾	IP55	mm	3 m	2 m	4x1 m	12 mod.	24 mod. with int. CC*	
250	210	20x5	858036	885207	880847	887293	887294	
400	330	30x5	885204	885209	-	887293	887294	
400	330	20x10	885205	885208	-	887293	887294	
630	440	30x10	885206	885210	880851	887293	887294	

(1) Without door, for derating see technical documentation on page C.6 and further

(2) In one reference there is one busbar included, order one piece per phase

(3) For quantities to be ordered see table on B.25

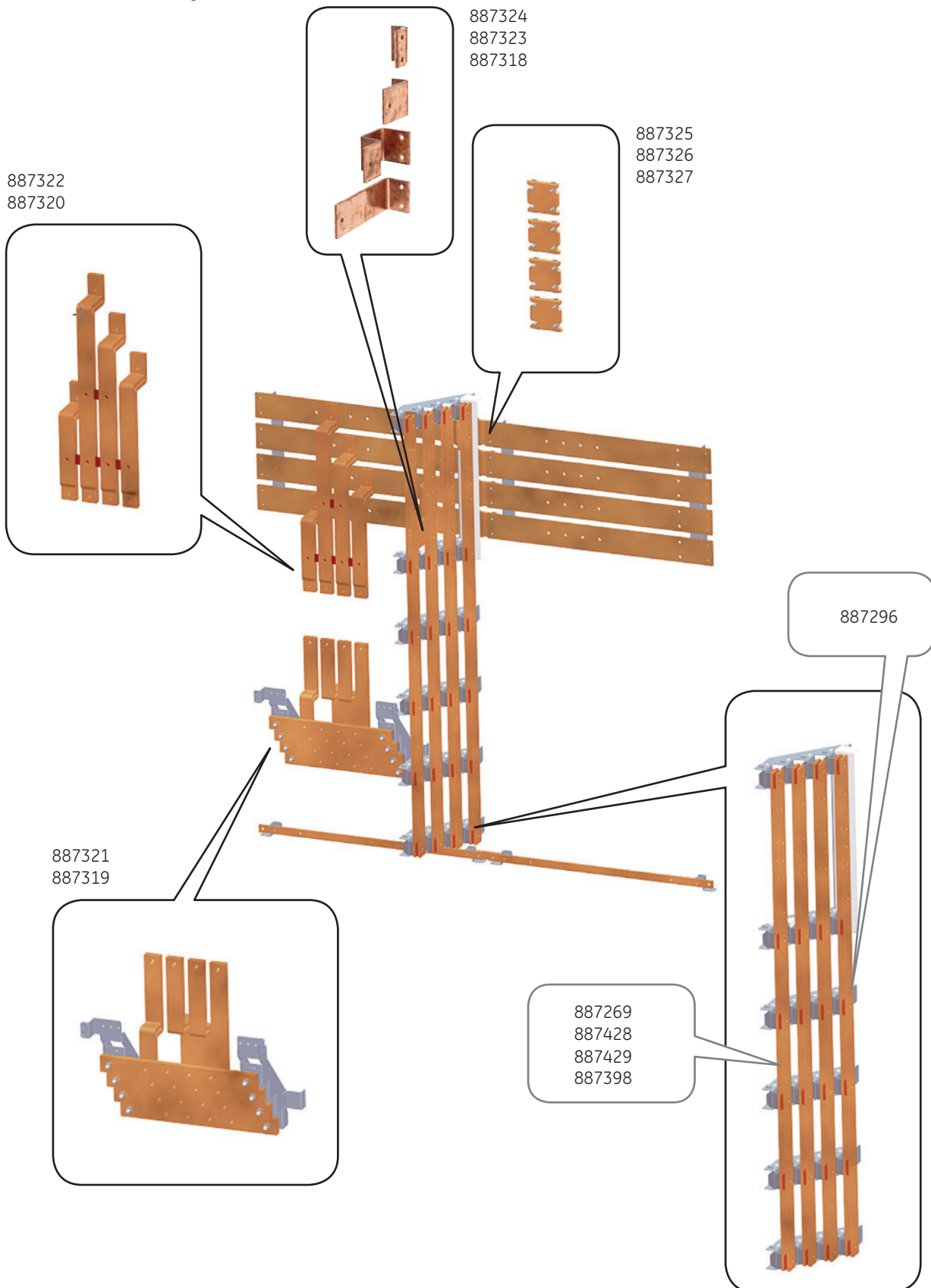
(4) One bottom isolator needed per busbar system, order an additional support for each bottom isolator

(5) Maximum distance between two supports is 300 mm

* CC = Cable Compartment

Connectivity

QuiXtra 4000 offers following connectivity solutions: busbar to busbar, ACB to busbar, MCCB to busbar, MCCB cable connection and connectivity accessories.



Order codes

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Busbar to busbar

For connecting two busbars, there are two connectivity solutions: extension kits for connecting 2 horizontal busbars and connection kits for connecting a staircase busbar to a horizontal busbar with rear fixation. Depending on the busbar fixation and on the copper size, QuiXtra 4000 offers different extension kits.



Extension kit for rear fixation busbar

Extension and connection kits

	Cu size	Ref. No.
Extension kit horizontal busbar side fixation (image B)	50x10	887375
	60x10	887376
	80x10	887377
	100x10	887378
	120x10	887379
	160x10	887380
Extension kit horizontal busbar rear fixation (image A)	60x10	887325
	80x10	887326
	100x10	887327
Connection kit vertical staircase busbar (image D) to horizontal busbar rear fixation (image A)	60x10	887324
	80x10	887323
	100x10	887318

Images on page. B.18 and B.19



Connectivity kit for Heavy Duty ACB EntelliGuard

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ACB to busbar

For connecting an Air Circuit Breaker to a horizontal busbar with side fixation, QuiXtra 4000 offers a complete range of connectivity solutions: M-PACT Plus frame 1 (2000A) and frame 2 (4000A); EntelliGuard frame 1 (2000A), frame 2 (4000A) and frame 2 heavy duty (for reduced heat dissipation).



Connectivity kit EntelliGuard L to horizontal busbar with side fixation (image B)

Size	Version	I _n max	Depth	Ref. No.
Frame 1 3P	Fixed	2500 A	600	887442
Frame 1 4P	Fixed	2500 A	600	887443
Frame 2 3P	Fixed	4000 A	800	887444
Frame 2 4P	Fixed	4000 A	800	887445
Frame 1 3P	Fixed	2500 A	800	887450
Frame 1 4P	Fixed	2500 A	800	887451
Frame 1 3P	Withdrawable	2500 A	800	887446
Frame 1 4P	Withdrawable	2500 A	800	887447
Frame 2 3P	Withdrawable	3200 A	800	887448
Frame 2 4P	Withdrawable	3200 A	800	887449
Frame 2 3P	Withdrawable	4000 A	800	887452
Frame 2 4P	Withdrawable	4000 A	800	887453

Connectivity kit EntelliGuard G to horizontal busbar with side fixation (image B)

Size	Version	I _n max	Depth	Ref. No.
Frame 1 3P	Fixed	2000 A	600	887248
Frame 1 4P	Fixed	2000 A	600	887249
Frame 2 3P	Fixed	4000 A	800	887250
Frame 2 4P	Fixed	4000 A	800	887251
Frame 1 3P	Withdrawable	2000 A	800	887252
Frame 1 4P	Withdrawable	2000 A	800	887253
Frame 2 3P	Withdrawable	4000 A	800	887254
Frame 2 4P	Withdrawable	4000 A	800	887255
Frame 2 3P Heavy Duty	Withdrawable	4000 A	800	887352
Frame 2 4P Heavy Duty	Withdrawable	4000 A	800	887353

Connectivity kit M-PACT Plus to horizontal busbar with side fixation (image B)

Size	Version	I _n max	Depth	Ref. No.
Frame 1 3P	Fixed	2000 A	600	887248
Frame 1 4P	Fixed	2000 A	600	887249
Frame 2 3P	Fixed	4000 A	800	887250
Frame 2 4P	Fixed	4000 A	800	887251
Frame 1 3P	Withdrawable	2000 A	800	887252
Frame 1 4P	Withdrawable	2000 A	800	887253
Frame 2 3P	Withdrawable	4000 A	800	887335
Frame 2 4P	Withdrawable	4000 A	800	887336

Supports for connectivity kit ACB (EntelliGuard or M-PACT Plus)

Size	Width	I _n max	Depth	Ref. No.
Frame 1 3/4P	24 mod.	2000A	-	887374
Frame 1 3P	36 mod.	2000A	-	887417
Frame 1 4P	36 mod.	2000A	-	887430
Frame 2 3P	36 mod.	4000A	-	887418
Frame 2 4P	36 mod.	4000A	-	887431
Frame 2 3P Heavy Duty ⁽¹⁾	36 mod.	4000A	-	887373
Frame 2 4P Heavy Duty ⁽¹⁾	36 mod.	4000A	-	887295

(1) Connectivity kit for Heavy Duty, see previous page.



MCCB to busbar

For connecting a Moulded Case Circuit Breaker to a horizontal busbar with rear fixation, QuiXtra 4000 offers a RecordPlus FK connectivity kit.

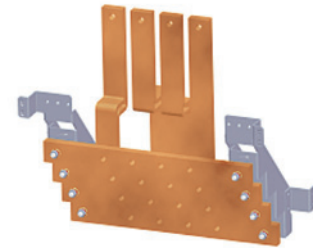


MCCB outgoing connection to busbar (image **A**)

	Size	Ref. No.
Connectivity kit RecordPlus to horizontal busbar rear fixation	FK frame 800A	887322
	FK frame 1250A/1600A	887320

MCCB to cables

For the easy connection of incoming or outgoing cables on a RecordPlus FK, QuiXtra 4000 offers a range of FK connection kits.



MCCB incoming cable connection

	Size	Ref. No.
Incoming connection kit, 3 cables, on RecordPlus	FK frame 800A	887321
	FK frame 1250A/1600A	887319

Cable management

For mounting a large cable duct e.g. above terminals, a function of 200mm high has been developed. Cable ducts or other accessories can easily be mounted.

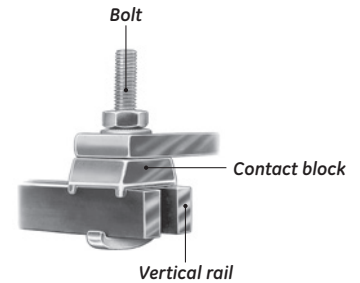
Horizontal cable management

	Ref. No.
Function for canalization horizontal 24 mod. 200mm height	887340
Function for canalization horizontal 36 mod. 200mm height	887341
Cable trunk support for DIN-rail (20 pcs)	828145

Accessories

Connectivity accessories

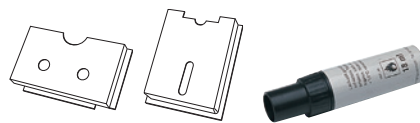
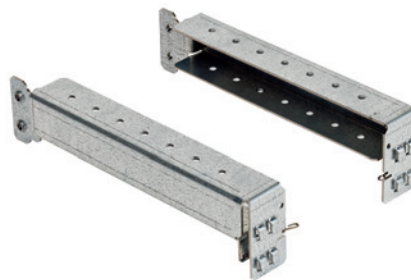
	Size	Ref. No.	
Connector for flexible copper	max Cu width 32 mm	828142 ⁽¹⁾	
Connector for cable gland 20 mm or 25 mm width	20 or 25 mm	858004 ⁽¹⁾	
Connector for cable gland 25 mm, 30 mm or 40 mm width	25, 30 or 40 mm	858003 ⁽¹⁾	
Connection for cable direct on Cu-rail 10 mm thickness - Torque 4 Nm	1.5-16 mm ²	858027 ⁽¹⁾	
	1.5-35 mm ²	858029 ⁽¹⁾	
	16-70 mm ²	858030 ⁽¹⁾	
	16-120 mm ²	858031 ⁽¹⁾	
T-bolt for 2x10 mm busbar length:	60 mm	Cu-rail 20x10	858013
	80 mm	Cu-rail 40x10	858011
	90 mm	Cu-rail 50x10	858014
	120 mm	Cu-rail 80x10	858016
	140 mm	Cu-rail 100x10	858017
Fastener bolts (40 pcs)	M6x16 mm	883617	
	M8x20 mm	880852	



(1) Contact block and T-bolt needed

General accessories

Description	Ref. No.
Set depth profiles: 450 mm	887328
600 mm	887329
800 mm	887330
Coupling bracket for base: 450 mm	887381
600 mm	887382
800 mm	887383
Lighting unit 24 mod. height 50 mm	887285
Lighting unit 36 mod. height 50 mm	887286
Bracket for recessed or adjustable DIN-rail	887348
Hinges for coverplate (set 2 pcs)	885285
Earthing cable for door 6 mm ²	887345
Universal bracket for main earth bar	887347
Lifting brackets for coupled enclosures	887331
Lifting eyes standard (set 4 pcs). Max 480 kg/column	887283
Lifting eyes heavy duty (set 4 pcs). Max 1000 kg/column	887339
Note: Check lifting instructions	
Set of cable support fixations (20 pcs)	828145
Set cable supports (10 supports)	828146
Height adaptor RecordPlus - ElfaPlus (1200 mm)	883997
Height adaptor RecordPlus - ElfaPlus (354 mm)	617947
Blanking strip for 45 mm cut-out - L 1000 mm - RAL 7035	828056
Blanking strip for 45 mm cut-out - L 72 mm - RAL 7035 (set 4pcs)	610142
Blanking strip for 65 mm cut-out (RecordPlus FD and FE) - L 1200 mm - RAL 7035	883970
Label holder (self adhesive) 12 mod.	885249
Label holder (self adhesive) 24 mod.	885250
Label holder (self adhesive) 36 mod.	885251
Drawing pocket A5	832000
Drawing pocket A4	811516
Paint RAL 9006 for minor touch-ups external panel	885252
Paint RAL 7024 for minor touch-ups external panel	885253
Handle for half cylinder (on request)	887346
Profile half cylinder with 2 keys V2432	832030
Profile half cylinder with 1 square key 8mm	832032
Profile half cylinder with 1 triangular key 8mm	832033
Profile half cylinder with 2 keys A434	843248



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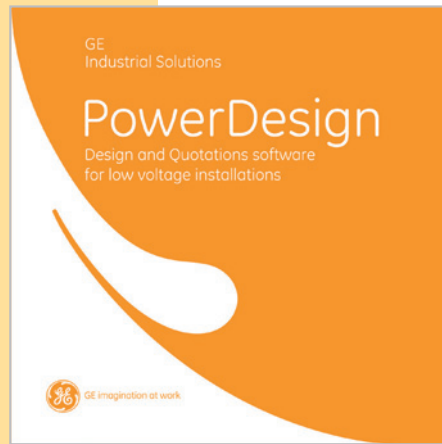
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Design and quotations software for QuiXtra 630 and QuiXtra 4000

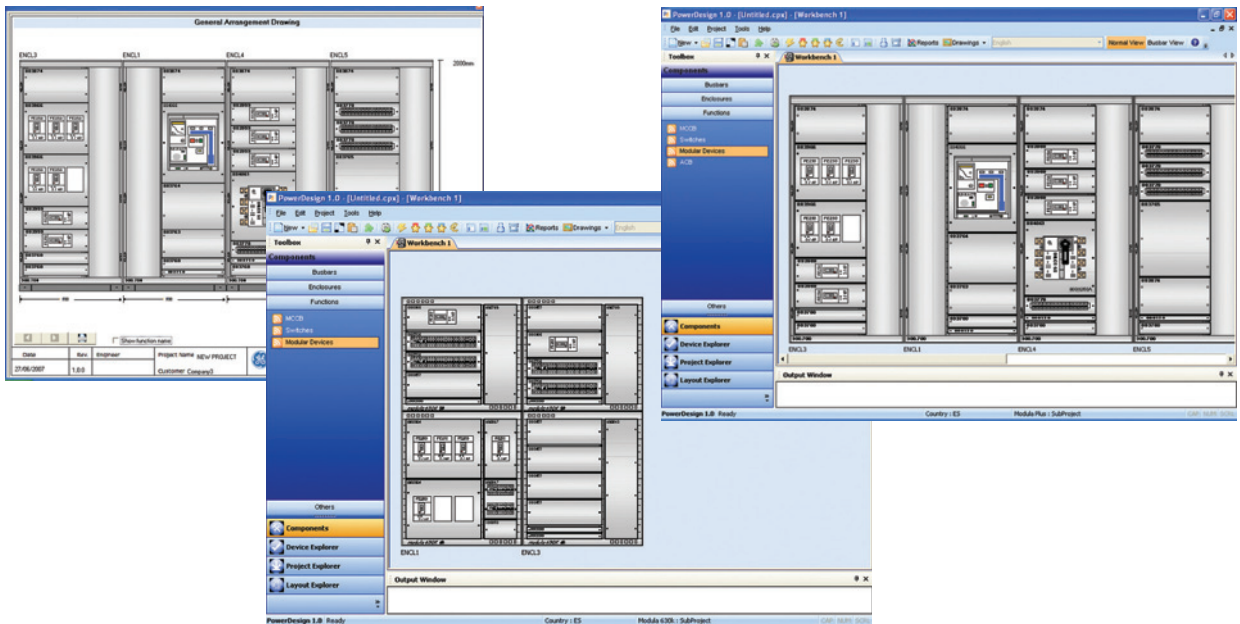
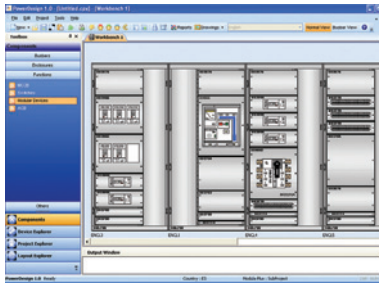


Quotation

- Material cost, kits, devices and busbar placements
- Discount management / Net prices / Assembly time
- Variable costs management: transport, logistics, study and documentation
- Margin calculation

Multiple report selection

- Detailed technical project data
- Front view and busbar view
- Distribution and placement of busbar systems
- Project definition
- Purchase order creation
- Quotations





e-Catalogue / Application guide

Insulated boxes

Insulated wall mounting cabinets

Wall mounting system enclosures

Sheet steel distribution boards

- E.5 **EH1** (non-metallic) - Small pedestals
- E.6 **EH2** (non-metallic) - Column cabinets
- E.8 **EH3** (non-metallic) - DIN-size pedestals
- E.14 **EH4** (non-metallic) - Column cabinets
- E.16 **RVS** - Stainless steel pedestals

Pedestals

Subterranean enclosures

Climate control

General accessories

General characteristics

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



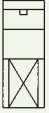



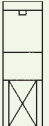
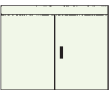




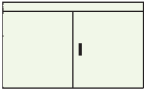


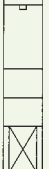
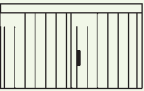



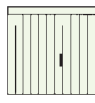
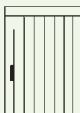

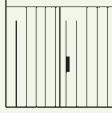
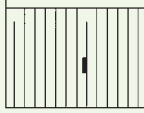
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Overview non-metallic pedestals

Pedestals

	EH1 IP43/IP23	EH3/F IP44	EH3/AP IP44	EH3/GD-AP IP44	EH4 IP43
	 752 x 385 x 270	 875 x 590 x 320	 875 x 455 x 320	 875 x 676 x 541	 1600 x 395 x 224
	EH2 IP44  590 x 425 x 240	 875 x 785 x 320	 875 x 590 x 320	 875 x 871 x 541	
	 1347 x 433 x 240	 875 x 1115 x 320	 875 x 785 x 320	 875 x 1200 x 541	 1600 x 495 x 224
	 1622 x 433 x 240	 875 x 1445 x 320	 875 x 1115 x 320	 1125 x 676 x 676	
	 1896 x 433 x 240		 875 x 1445 x 320	 1125 x 871 x 676	EH4-S IP44  1420 x 320 x 234
			 1125 x 590 x 320	 1125 x 1200 x 676	
			 1125 x 785 x 320		 1850 x 320 x 234
			 1125 x 1115 x 320		
			 1125 x 1445 x 320		

H x W x D in mm



Overview stainless steel pedestals

RVS with single door IP44			RVS with double door IP44			RVS met dubbele deur en 2 compartimenten IP43		RVS with double door and 2 compartments IP43
DIN 00	DIN 0	DIN 1	DIN 2	DIN 3	DIN 4	DIN 2	DIN 3	DIN 4
650 x 410 x 355 650 x 545 x 355 650 x 740 x 355			650 x 1070 x 355			650 x 1120 x 355		
900 x 410 x 355 900 x 545 x 355 900 x 740 x 355			900 x 1070 x 355 900 x 1400 x 355 900 x 1730 x 355			900 x 1120 x 355 900 x 1450 x 355		900 x 1780 x 355
1000 x 410 x 355 1000 x 545 x 355 1000 x 740 x 355			1000 x 1070 x 355 1000 x 1400 x 355 1000 x 1730 x 355			1150 x 1120 x 355 1150 x 1450 x 355		1150 x 1780 x 355
1150 x 545 x 355 1150 x 740 x 355			1150 x 1070 x 355 1150 x 1400 x 355 1150 x 1730 x 355			1350 x 1120 x 355 1350 x 1450 x 355		1350 x 1780 x 355
			1350 x 1400 x 355 1350 x 1730 x 355					

H x W x D in mm

Cabinets for underground cable distribution and all kind of outdoor industrial application



Standards

EN 61439-5
IEC 61439-5

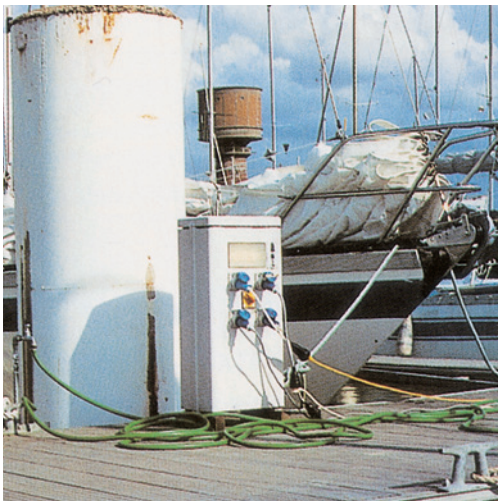
Applications

- Power distribution
- Cable television (CATV) in one or two ways
- Telecommunication and electronics
- Traffic signalling and public lighting
- Temporary service for construction sites
- Camping sites and market places
- Marinas
- Water treatment
- Sub-stations
- 48 cm (19") racking systems

A wide range of pedestals has completed our comprehensive range of non-metallic enclosures for several years. In power distribution application pedestals enable the connection of underground cables and the distribution to several consumers within the cabinets. Besides there are lots of applications that require reliable outdoor housings like Telecommunication or Traffic signalling.

Features

- Cabinets to be mounted on a plinth.
- The base is partly buried into the ground.
- For some types the base is an integrated part of the pedestals.
- As with all our polyester boxes and cabinets, the pedestal feature high protection and total insulation \square to IEC 61439-5.
- Degree of protection is at least IP43.
- Very high mechanical impact strength IK10 (EN/IEC 62262) and a high thermal insulation which results in reduced temperature variations within the enclosure.
- All cabinets are corrosion resistant and UV stabilised for outdoor applications.





Applications

- Cable television distribution (CATV)
- Gas distribution
- Telecommunication (surface terminal cabinet)
- Camping sites

Small pedestal

Features

- Small outdoor enclosure with integrated base.
- Hood grey colour RAL 7035
 - ventilated version in polyester or thermoplastic engineering polymer
 - non ventilated version in hot moulded, glass fibre reinforced polyester
 - blackened triangular zamac locking screws, vandalproof and for all seasons
- Degrees of protection:
 - IP43 for the non ventilated hoods
 - IP23 for the ventilated hoods.
 According to IEC 60529
- Protection degree against external mechanical impacts according to EN/IEC 62262
 - IK09 polyester hood
 - IK10 thermoplastic hood
- Rated insulation voltage U_i 690V
- Base in high density polyethylene (HDPE) RAL 9005
- Base resists a ground temperature of -50°C
- The upper part of the base serves as a mounting plate and is provided with three slots for fixation points.
- Moulded-in indication of burial depth.
- Easy to install by one person only (weight: 4.5 kg).
- Option: 2432E lock.
- Rated insulation voltage $U_i = 690\text{V}$.

Standards

EN/IEC 62208

EH1 - Pedestal

Type	Ref. No.	Pack.
Ventilated, thermoplastic	841017	1
Ventilated, thermoplastic + lock 2432E	841023	1
Ventilated, polyester	841018	1
Non-ventilated, polyester	841016	1
Non-ventilated, polyester + lock 2432E	841022	1
Ventilated polyester cover	841036	1
Key for triangular screws	851016	1

Cable television distribution



- Overview of the range ● Page E.2
- Dimensional drawings ● Page I.32
- Specifications for tender documents ● Page I.60
- Power dissipation values ● Page I.84

Intro

A

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X



Applications

- Power distribution
- Cable TV distribution (CATV)
- Traffic signalling
- Camping sites
- Pump application

Standards

EN/IEC 61439-5
EN/IEC 62208

- Overview of the range ● Page E.2
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- Specifications for tender documents ● Page I.61
- Power dissipation values ● Page I.84



Column cabinets

Features

- Columns made of hot moulded, glass fibre reinforced polyester.
- Dyed in mass RAL 7035 light grey.
- Protection degree IP44 according to EN 60529, IEC 60529
- Total insulation ☐
- Protection degree IK10 against external impacts according to EN/IEC 62262
- Corrosion resistant.
- UV stabilised for outdoor applications, coated version for improved resistance and aesthetics against UV-corrosion.
- Suitable for use in environments from -35° C to +80°C. Temporary exceeding temperatures will not be harmful.
- Fully integrated locking clamp, suitable for operation by a half profile cylindrical lock.
- The cylindrical lock can be fitted in a recessed lock box, protected by a vandal proof plastic cap.
- The enclosure can be accessed by removing the frontal lift-off segments (not hinged).
- Fixing holes for threaded inserts M6 are provided in the rear panel allowing direct mounting of busbars, a frame, a mounting plate or components. Inserts to fix the mounting plate are already installed.
- The base and the rear panel of the column are molded as one part.
- The base allows for stable installation of the column.
- For easy access to the inside of the cabinet, the hinged roof offers an opening angle of 90°.

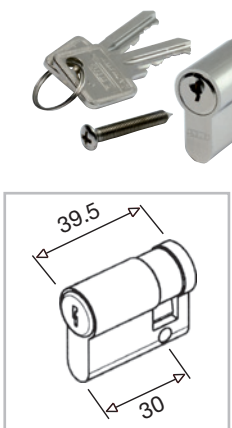






EH2 - Column cabinets

	Standard UV coated	Type	EH2-NA	EH2-NB	EH2-NC	EH2-ND
		H x W x D	1097 x 433 x 240	1347 x 433 x 240	1622 x 433 x 240	1896 x 433 x 240
		Ref. No.	842072	842073	842074	842075
		Ref. No.	842082	842083	842084	842085
	Mounting plate Pertinax with fixing bolts	H x W x D	200 x 395 x 5	450 x 395 x 5	700 x 395 x 5	700 x 395 x 5
		Ref. No.	842002	842000	842001	842001

Accessories


Locks - profile half cylinder type



	843001	1
	With 2 keys, V2432-E	
	832022	2
	Spare keys for 843001	
	843002	1
	With 1 square key, 8 mm	
	843003	1
	With 1 triangular key, 8 mm	
	843248	1
	With 2 keys A434	

Spare keys are available on request.

Filling pellets



	422902	1
	Pellets made out of clay as humidity barrier between ground and enclosure. Recommended filling height 200-300 mm.	
	DIN 00-1: 1 bag	
	DIN 2-3: 2 bags	

Vandal proof nameplate holder

	843304	1
--	---------------	---

Can be placed on every flat surface, by drilling two holes Ø 5.5 mm; the identification window is used as a drill template. Steady against vandalism; it keeps its total isolation .

Possibility to write on manually and/or to use the standard letteringsystems; the maximal letterheight is 18 mm.

Usefull dimensions of letters: 18 x 143


Outside dimensions: 30 x 183 x 5



Inserts


	890846	100
--	---------------	-----

Threaded inserts M6 x 11




	852003	1
--	---------------	---

Special tool for securing threaded inserts M6



	842004	1
--	---------------	---

Support for cable release clamp (to be ordered separately)





Applications

- Power distribution
- Water treatment
- Cable television distribution (CATV) in one or two ways
- Photovoltaic
- Camping sites and market places
- Traffic signalling and public lighting



DIN-size pedestals

Common features

- Cabinets made of hot moulded, glass fibre reinforced polyester.
- Dyed in mass RAL 7035 light grey.
- Delivered in kit-form or factory assembled.
- Protection degree IP44 according to EN 60529, IEC 60529
- Total insulation ☐
- Protection degree IK10 against external impacts according to EN/IEC 62262
- Corrosion resistant.
- UV stabilized for outdoor applications, coated cabinets for increased resistance and aesthetics against UV-corrosion available.
- Suitable for use in environments from -35° C to +80° C. Temporary exceeding temperatures will not be harmful.
- The open door can be manually unhinged to allow free access for maintenance. Door opening angle exceeds 180°.
- Studs are moulded in the rear panel which can receive M8 inserts to allow direct mounting at busbars, a frame or a mounting plate for components.
- Fixation points at the side panel are foreseen to mount busbars.
- Supplied with open bottom.
- To be mounted on a basement according to DIN 43629 standard dimensions between the fixation points.
- The rainhood shape prevents water stagnation on the roof.
- Removable bottom profile for easy cable access without tools.

Standards

EN/IEC 61439-5

EH3/F

Cabinets with flat surface

- Five sizes in five different widths; all sizes feature the same height and depth.
- Three point locking mechanism, operated by a swing handle.
- The swing handle is designed to receive a half profile cylindrical lock.

EH3/AP

Cabinets with anti fly posting surface

- Ten sizes in five different widths and two different heights; all sizes feature the same depth.
- Three point locking mechanism, operated by a solid handle.
- The solid, not recessed handle allows for more usable space inside the cabinet and is designed to receive a half profile cylinder lock.
- Profiled door and rear panels make poster sticking difficult and causes poster to drop off.





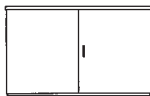









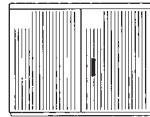
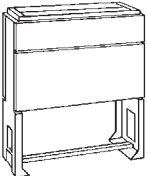

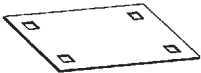
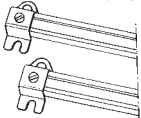
Overview of the range ● Page E.2

Dimensional drawings ● Page I.34

Specifications for tender documents ● Page I.61

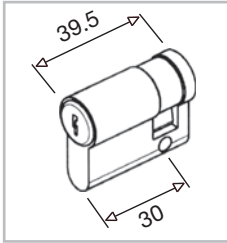
Power dissipation values ● Page I.85

EH3 - DIN-size pedestals

	DIN 00	DIN 0	DIN 1	DIN 2	DIN 3	
Type EH3 / F (H = 875) IP44						
Type	EH3/F - 00	EH3/F - 0	EH3/F - 1	EH3/F - 2	EH3/F - 3	
H x W x D	875 x 455 x 320	875 x 590 x 320	875 x 785 x 320	875 x 1115 x 320	875 x 1445 x 320	
Kit-form Ref. No.	843669	843125	843127	843128	843129	
Factory assembled Ref. No.	843670	843158	843160	843162	843164	
Type EH3 / AP (H = 875) IP44						
Type	EH3/AP - 00	EH3/AP - 0	EH3/AP - 1	EH3/AP - 2	EH3/AP - 3	
H x W x D	875 x 455 x 320	875 x 590 x 320	875 x 785 x 320	875 x 1115 x 320	875 x 1445 x 320	
Kit-form Ref. No.	843671	843150	843151	843152	843153	
Factory assembled Ref. No.	843672	843176	843177	843178	843179	
Factory assembled, UV coated Ref. No.	843673	843480	843481	843482	843483	
Fact. assembled, dual cylinder handle Ref. No.	843674	843313	843314	843315	843316	
Type EH3 / AP (H = 1125) IP44						
Type	EH3/AP - 00	EH3/AP - 20	EH3/AP - 21	EH3/AP - 22	EH3/AP - 23	
H x W x D	1125 x 455 x 320	1125 x 590 x 320	1125 x 785 x 320	1125 x 1115 x 320	1125 x 1445 x 320	
Kit-form Ref. No.	843675	843154	843155	843156	843157	
Factory assembled Ref. No.	843676	843180	843181	843182	843183	
Factory assembled, UV coated Ref. No.	843677	843484	843485	843486	843487	
Fact. assembled, dual cylinder handle Ref. No.	843678	843317	843318	843319	843320	
 Polyester bases Kit-form	H x W x D	900 x 450 x 310	900 x 585 x 310	900 x 780 x 310	900 x 1110 x 310	900 x 1430 x 310
	Ref. No.	842098	842099	842100	842101	843144
 Mounting plate Pertinax with fixing bolts Height 875 mm	H x W x D	-	665 x 485 x 5	665 x 680 x 5	705 x 1000 x 5	705 x 1340 x 5
	Ref. No.	843681	843024	843044	843057	843067
Height 1125 mm	H x W x D	-	915 x 485 x 5	915 x 680 x 5	915 x 1000 x 5	915 x 1340 x 5
	Ref. No.	843682	843070	843071	843072	843256
	H x W x D	-	-	915 x 680 x 10	915 x 1000 x 10	915 x 1340 x 10
	Ref. No.	-	-	783325 ⁽¹⁾	783326 ⁽¹⁾	783327 ⁽¹⁾
 Bottom plate Polyester 3 mm with mounting bolts	H x W	-	562 x 285	757 x 285	1086 x 285	1416 x 285
	Ref. No.	843683	843300	843301	843302	843303
 Wall fixing unit Two aluminium C-profiles with wall fixing lugs	W	-	710	885	1215	1545
	Ref. No.	843684	843441	843442	843443	843444

(1) Without fixation set, to be ordered separate: 843566 (DIN 1) or 843567 (DIN 2 & 3).

Accessories



Locks - profile half cylinder type

843001	1
With 2 keys, V2432-E	
832022	2
Spare keys for 843001	
843002	1
With 1 square key, 8 mm	
843003	1
With 1 triangular key, 8 mm	
843248	1
With 2 keys A434	
Spare keys are available on request.	

Vandal proof nameplate holder

843304	1
Can be placed on every flat surface, by drilling two holes Ø 5.5 mm; the identification window is used as a drill template. Steady against vandalism; it keeps its total isolation <input type="checkbox"/>	
Possibility to write on manually and/or to use the standard letteringsystems; the maximal letterheight is 18 mm.	
Usefull dimensions of letters: 18 x 143	
Outside dimensions: 30 x 183 x 5	



Inserts

890845	100
Threaded inserts M8	
Type dodge for rear panel and door.	



844039 1

Special tool for securing threaded inserts M8



Filling pellets

422902	1
Pellets made out of clay as humidity barrier between ground and enclosure. Recommended filling height 200-300 mm.	
DIN 00-1: 1 bag	
DIN 2-3: 2 bags	



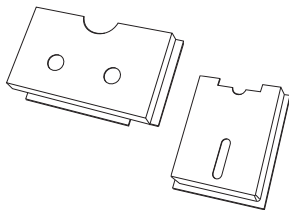
Concrete base (kit-form)

843272	1
Size: DIN00	
843273	1
Size: DIN0	
843274	1
Size: DIN1	
843275	1
Size: DIN2	
843276	1
Size: DIN3	



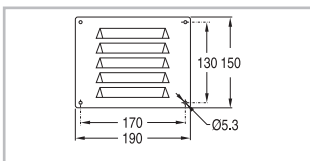
Document pocket

811516	1
DIN A4 - W x H = 325 x 180 mm	
832000	1
DIN A5 - W x H = 155 x 225 mm	



Louvre plate IP44

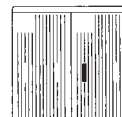
832019	1
Fits one ventilation opening.	
Package includes 2 grids and 4 nylon nails. Total insulation.	
RAL 7035	



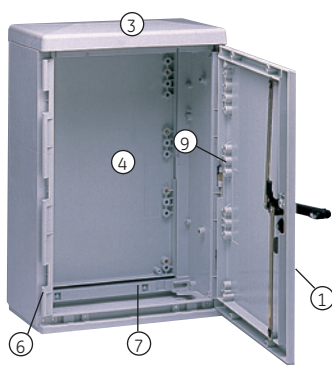
EH3/DC - DIN 2 pedestal with separate compartments

Type EH3/DC - 2

EH3/DC - 2
1125 x 1115 x 320
843576



- Intro
- A
- B
- C
- D
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- H
- I
- X



EH3/F (H = 875)

- ① Door (with handle)
- ② Doorpost
- ③ Roof
- ④ Rear panel
- ⑤ Middle beam
- ⑥ Side panel
- ⑦ Bottom profile
- ⑧ Support
- ⑨ Set hinges
- ⑩ Set accessories includes all screws, washers and bolts for assembly of the individual polyester parts into a cabinet.

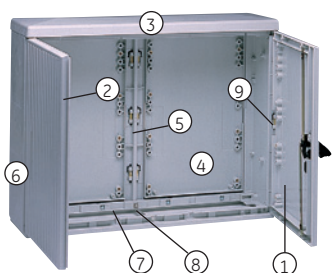
Remark
Spare parts do fit pedestals supplied after 06/2012 (roof mounted with HiLo screws).
Spare parts on request for pedestals supplied before.

EH3 - Spare parts

	DIN 0		DIN 1		DIN 2		DIN 3	
	EH3/F - 0		EH3/F - 1		EH3/F - 2		EH3/F - 3	
	left	right	left	right	left	right	left	right
①		843035		843049	843615	843614	843618	843617
②	-	-	-	-	843605	-	843605	-
③	843599	-	843600	-	843601	-	843602	-
④	843519	-	843521	-	2 x 843607	-	2 x 843608	-
⑤	-	-	-	-	843603	-	843603	-
⑥	843592	843591	843592	843591	843592	843591	843592	843591
⑦	843515	-	843516	-	843517	-	843518	-
⑧	-	-	-	-	-	-	-	-
⑨	843445	-	843445	-	2 x 843445	-	2 x 843445	-
⑩	843447	-	843447	-	843452	-	843452	-

	DIN 0		DIN 1		DIN 2		DIN 3	
	EH3/AP - 0		EH3/AP - 1		EH3/AP - 2		EH3/AP - 3	
	left	right	left	right	left	right	left	right
①		843101		843104	843538	843108	843542	843369
②	-	-	-	-	843605	-	843605	-
③	843599	-	843600	-	843601	-	843602	-
④	843531	-	843533	-	2 x 843609	-	2 x 843610	-
⑤	-	-	-	-	843603	-	843603	-
⑥	843592	843591	843592	843591	843592	843591	843592	843591
⑦	843515	-	843516	-	843517	-	843518	-
⑧	-	-	-	-	-	-	-	-
⑨	843445	-	843445	-	2 x 843445	-	2 x 843445	-
⑩	843447	-	843447	-	843452	-	843452	-

For polyester parts with special UV topcoat for prolonged smooth surface of roof, door, rear and side panels, please contact us.



EH3/AP (H = 1125)

- ① Door (with handle)
- ② Doorpost
- ③ Roof
- ④ Rear panel
- ⑤ Middle beam
- ⑥ Side panel
- ⑦ Bottom profile
- ⑧ Support
- ⑨ Set hinges
- ⑩ Set accessories includes all screws, washers and bolts for assembly of the individual polyester parts into a cabinet.

EH3 - Spare parts

	DIN 0		DIN 1		DIN 2		DIN 3	
	EH3/AP - 20		EH3/AP - 21		EH3/AP - 22		EH3/AP - 23	
	left	right	left	right	left	right	left	right
①		843117		843120	843627	843626	843630	843629
②	-	-	-	-	843606	-	843606	-
③	843599	-	843600	-	843601	-	843602	-
④	843543	-	843545	-	2 x 843611	-	2 x 843612	-
⑤	-	-	-	-	843604	-	843604	-
⑥	843594	843593	843594	843593	843594	843593	843594	843593
⑦	843515	-	843516	-	843517	-	843518	-
⑧	-	-	-	-	843631	-	843631	-
⑨	843445	-	843445	-	2 x 843445	-	2 x 843445	-
⑩	843447	-	843447	-	843452	-	843452	-



DIN-size pedestals

- Intro
- A
- B
- C
- D
- E
- F
- G
- H
- I
- X



Pedestals with greater depth

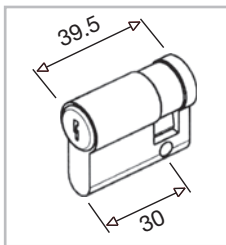
Features

- Door, rear and side panels made of hot moulded, glass fibre reinforced polyester.
- Dyed in mass RAL 7035 light grey.
- Rainhood made of hand lay-up glass fibre reinforced polyester.
- Rainhood with RAL 7035 topcoat.
- Six sizes in two heights, two depths and three widths.
- Shipped fully assembled.
- Protection degree IP44 according to EN 60529, IEC 60529
- Total insulation \square
- Protection degree IK10 against external impacts according to EN/IEC 62262
- Corrosion resistant.
- UV stabilized for outdoor applications.
- Suitable for use in environments from -35° C to +80°C
Temporary exceeding temperatures will not be harmful.
- Three point locking mechanism, operated by a solid handle.
- The solid, not recessed handle allows for more usable space inside the cabinet and is designed to receive a half profile cylinder lock.
- The open doors can be manually unhinged to allow free access for maintenance.
- Possibility of pivoting door on side or back.
- Threaded inserts for bolts M10 are moulded in the rear panel, allowing for direct mounting of busbars, a frame or a mounting plate for components.
- Supplied with open bottom.
- Provided with fixing points for floor or base mounting.
- The rainhood shape prevents water stagnation on the roof.
- Anti poster surface make poster sticking difficult and causes poster to drop off.

Applications

- Power distribution
- Gas meter units
- Power supply and control units
- Rectifier or inverters
- Generators or transformer stations
- Pumping installations
- 19" rack electronic systems

Accessories



Locks - profile half cylinder type

843001	1
With 2 keys, V2432-E	
832022	2
Spare keys for 843001	
843002	1
With 1 square key, 8 mm	
843003	1
With 1 triangular key, 8 mm	
843248	1
With 2 keys A434	
Spare keys are available on request.	

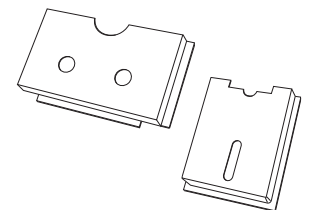
Vandal proof nameplate holder

843304	1
Can be placed on every flat surface, by drilling two holes \varnothing 5,5 mm; the identification window is used as a drill template.	
Steady against vandalism; it keeps its total isolation \square .	
Possibility to describe manually and/or to use the standard letteringsystems; the maximal letterheight is 18 mm.	
Usefull dimensions of letters: 18 x 143	
Outside dimensions: 30 x 183 x 5	

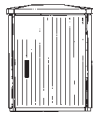



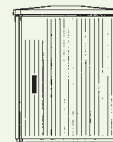

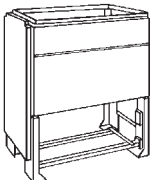
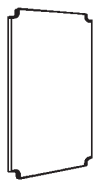



Document pocket



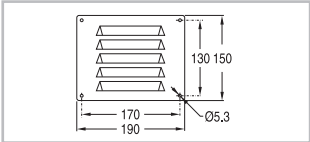
811516	1
DIN A4 - W x H = 325 x 180 mm	
832000	1
DIN A5 - W x H = 155 x 225 mm	



EH3/GD - Pedestals with greater depth

	Width	676	871	1200
<p>Type EH3 / GD (H 875, D 424 mm) Factory-assembled IP43</p>				
	Type	EH3/GD-AP - 031	EH3/GD-AP - 041	EH3/GD-AP - 051
	H x W x D	875 x 676 x 541	875 x 871 x 541	875 x 1200 x 541
	Ref. No.	843645	843646	843647
<p>Type EH3 / GD (H 1125, D 676 mm) Factory-assembled IP43</p>				
	Type	EH3/GD-AP - 233	EH3/GD-AP - 243	EH3/GD-AP - 253
	H x W x D	1125 x 676 x 676	1125 x 871 x 676	1125 x 1200 x 676
	Ref. No.	843654	843655	843656
<p>Polyester bases Kit-form For cabinets D = 541 mm D = 676 mm</p> 	H x W x D	900 x 676 x 541	900 x 871 x 541	900 x 1200 x 541
	Ref. No.	843663	843664	843665
	H x W x D	900 x 676 x 676	900 x 871 x 676	900 x 1200 x 676
	Ref. No.	843666	843667	843668
<p>Mounting plate H = 875 mm H = 1125 mm Pertinax with fixing bolts</p> 	H x W x D	665 x 485 x 5	665 x 680 x 5	705 x 1000 x 5
	Ref. No.	843024	843044	843057
	H x W x D	915 x 485 x 5	915 x 680 x 5	915 x 1000 x 5
	Ref. No.	843070	843071	843072
<p>Bottom plate D = 541 mm D = 676 mm Polyester 3 mm with mounting bolts</p> 	H x W	676 x 541	871 x 541	1200 x 541
	Ref. No.	843657	843658	843659
	H x W	676 x 676	871 x 676	1200 x 676
	Ref. No.	843660	843661	843662

Accessories

	<p>Louvre plate IP44</p> <p>832019 1</p> <p>Fits one ventilation opening.</p> <p>Package includes 2 grids and 4 nylon nails.</p> <p>Total insulation.</p> <p>RAL 7035</p>	
	<p>Clamps for quick removal of bottom profile</p> <p>843250 1</p> <ul style="list-style-type: none"> - Replace the standard fixation of bottom profile with fixed screws. - Permits to remove the bottom profile without tools, after withdrawing the door. - Better entry to the pedestal for cable connection. 	
		

Overview of the range ● Page E.2
Dimensional drawings ● Page I.38

Specifications for tender documents ● Page I.62
Power dissipation values ● Page I.85





Applications

- Power distribution
- Cable TV distribution
- Traffic signalling
- Camping sites
- Pump application

Standards

EN 61439-5
IEC 61439-5



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- Power dissipation values ● Page I.84

Column cabinets

Common features

- Pedestal and base are made of hot moulded glass fibre reinforced polyester.
- Dyed in mass RAL 7035 light grey.
- Protection degree IP43/IP44 according to EN/IEC 60259
- Total insulation ☐
- Impact strength IK10 against external impacts according EN/IEC 62262
- Corrosion resistant.
- UV stabilised for outdoor applications.
- Suitable for use in environments from -35°C to $+80^{\circ}\text{C}$.
Temporary exceeding temperatures will not be harmful.
- Fixing holes for threaded inserts M6 are provided in the rear panel allowing direct mounting of busbars, mounting plate or components.
Inserts to fix a mounting plate are installed.
- The base can be buried into the ground for stable installation of the column.
- The rainhood shape prevents water stagnation on the roof.

Features for EH4

Cabinets with hinged door - IP43

- Pedestal and base are delivered together.
- Swing handle for half profile cylindrical lock.
- Door opening angle of 180°

Features for EH4-S

Cabinets with frontal lift-off segments - IP44

- Base and rear panel are moulded as one part.
- Recessed lock box for half profile cylindrical lock, protected by a vandal proof cover.
- The enclosure can be accessed by removing the frontal lift-off segments (not hinged).



EH4-00









EH4-0


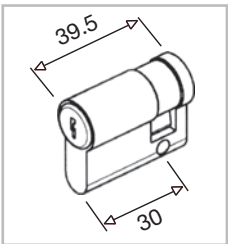




EH4-1

EH4/EH4S - Column cabinets

	Width	395	495	745	320	320
						
Type		EH4-00	EH4-0	EH4-1	EH4-S1	EH4-S2
H x W x D		1600 x 395 x 224	1600 x 495 x 224	1600 x 745 x 224	1420 x 320 x 234	1850 x 320 x 234
Ref. No.		844130	844131	844132	844153	844185
	Type					
	H x W x D	790 x 370 x 5	790 x 470 x 5	790 x 720 x 5	600 x 278 x 5	950 x 278 x 5
	Ref. No.	844133	844134	844135	844154	844186

Accessories

 	Locks - profile half cylinder type	Swing handle																								
	<table border="1"> <tr> <td>832030</td> <td>1</td> </tr> <tr> <td colspan="2">For EH4 - security lock V2432E</td> </tr> <tr> <td>832741</td> <td>2</td> </tr> <tr> <td colspan="2">Spare keys for 832030</td> </tr> <tr> <td>832331</td> <td>1</td> </tr> <tr> <td colspan="2">For EH4 - security lock V2432E for double locking</td> </tr> <tr> <td>843001</td> <td>1</td> </tr> <tr> <td colspan="2">For EH4-S - with 2 keys, V2432-E</td> </tr> <tr> <td>832022</td> <td>2</td> </tr> <tr> <td colspan="2">Spare keys for 843001</td> </tr> </table>	832030		1	For EH4 - security lock V2432E		832741	2	Spare keys for 832030		832331	1	For EH4 - security lock V2432E for double locking		843001	1	For EH4-S - with 2 keys, V2432-E		832022	2	Spare keys for 843001		<table border="1"> <tr> <td>844152</td> <td>1</td> </tr> <tr> <td colspan="2">For EH4 DIN00/0/1- dual cylinder handle</td> </tr> </table>	844152	1	For EH4 DIN00/0/1- dual cylinder handle
	832030	1																								
	For EH4 - security lock V2432E																									
	832741	2																								
Spare keys for 832030																										
832331	1																									
For EH4 - security lock V2432E for double locking																										
843001	1																									
For EH4-S - with 2 keys, V2432-E																										
832022	2																									
Spare keys for 843001																										
844152	1																									
For EH4 DIN00/0/1- dual cylinder handle																										
	Filling pellets																									
	<table border="1"> <tr> <td>422902</td> <td>1</td> </tr> <tr> <td colspan="2">Pellets made out of clay as humidity barrier between ground and enclosure. Recommended filling height 200-300 mm.</td> </tr> <tr> <td colspan="2">DIN 00-1: 1 bag</td> </tr> <tr> <td colspan="2">DIN 2-3: 2 bags</td> </tr> </table>		422902	1	Pellets made out of clay as humidity barrier between ground and enclosure. Recommended filling height 200-300 mm.		DIN 00-1: 1 bag		DIN 2-3: 2 bags																	
422902	1																									
Pellets made out of clay as humidity barrier between ground and enclosure. Recommended filling height 200-300 mm.																										
DIN 00-1: 1 bag																										
DIN 2-3: 2 bags																										

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Stainless steel pedestals



Applications

- Energy distribution
- Recreation grounds
- Cable television
- Traffic regulation & signalling
- Telecommunications
- Market connections
- Event connections
- Gas distribution

Standards

EN/IEC 60439-5
 EN/IEC 60529
 EN 50102
 IEC 61439-5 in preparation)

Advantages

- Flexibility in dimensions, colour and design.
- Easy and cheap to recycle.
- Guaranteed 30-year service life.
- Maintenance-free.
- Good mechanical properties (IEC 60947).
- High torsion resistance.
- Resists impact test with sharp point according to EN 60439-5.
- High IK value.
- Twists and bends (no tears or holes) on impact.
- High fire resistance.
- High vandal resistance.
- Special designs rapidly available, even as single orders.

- Overview of the range ● Page E.3
- Dimensional drawings ● Page I.42
- Specifications for tender documents ● Page I.64
- Power dissipation values ● Page I.86

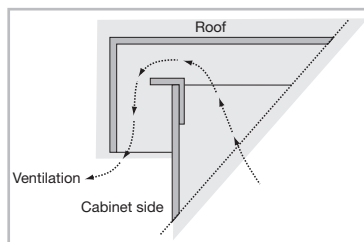
A wide range of stainless steel cabinets RVS for outdoor use completes the delivery program of outdoor enclosures.

Together with the EH series of fibreglass-reinforced polyester cabinets and the full range of UTS cabinets for subterranean solutions, it provides an extremely versatile product offering.

RVS cabinets for outdoor use make it possible to offer professional above-ground solutions for cable networks, telecommunications, recreation grounds and other applications. The cabinets have partially sunken bases.

Features

- The cabinets can be placed on either concrete or stainless steel bases.
- They can also be adapted for wall mounting.
- The protection degree IP44-IK 10 according to IEC 60529 and EN/IEC 62262.
- A high mechanical impact resistance according to IEC 60439-5 ensures that the cabinet is extremely vandal proof.
- Condensation is limited by the natural ventilation provided by labyrinth openings.



Construction

- Cabinets are made of 2 mm AISI 304 stainless steel with polyester surface treatment in RAL 7034.
- Anti-graffiti treatment available on request.
- Other RAL colours available on request.
- Doors are fitted with stainless steel hinged rods (8 mm) and the opened door is easy removable without tools.
- Doors hinge pins turn in nylon bushings, no corrosion at critical points of rotation is possible
- Natural ventilation with protection degree IP43.
- Large opening between doors and cabinet frame, no moisture accumulation is possible.
- Automatic condensation evacuation thanks to unique design of cabinet base.
- Natural ventilation thanks to labyrinth openings on top of the side panels and special base design.
- No internal moisture problems thanks to polystyrene plate inside the roof panel; any moisture formed is automatically discharged along vertical sides of cabinet.
- A 3 point rod closing mechanism sliding in synthetic bearings for high cabinets and double door cabinets. A single locking point mechanism for smaller doors.
- Standard handle suitable for profile half-cylinder lock. Other lock types are available on request.
- Cabinet suitable for fixing, with four M12 bolts, to concrete or stainless steel basements according to DIN 43629. The stainless steel fixing bolts are adjustable.
- Wall mounting brackets and a stainless steel bottom plate in the RAL 7034 are available in case of wall mounting.
- Four or six fixing holes in rear panel for mounting a mounting plate or frame.
- Cables easily inserted thanks to removable bottom profile. (sill profile).
- Guaranteed earthing independent of corrosion-sensitive transitional surfaces.



Door stop



Handle



Cable entry door



Cable entry door (inside)



Wall mounting



Bottomplate

Customisation on request



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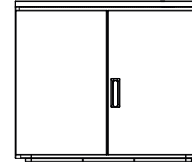
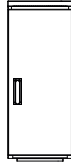
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Stainless steel pedestals IP44-IK10

With single door With double door



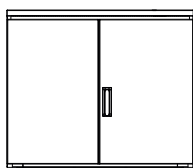
Pedestals

		DIN 00	DIN 0	DIN 1	DIN 2	DIN 3	DIN 4
Pedestal	Type	RVL 500	RVL 50	RVL 51	RVL 52		
Height 650	H x W x D	650 x 410 x 355	650 x 545 x 355	650 x 740 x 355	650 x 1070 x 355		
	Ref. No.	845100	845103	845107	845111		
Mounting plate	Type	MPL 500	MPL 50	MPL 51	MPL 52		
	Ref. No.	845163	845166	845170	845174		
Pedestal	Type	RVN 500	RVN 50	RVN 51	RVN 52	RVN 53	RVN 54
Height 900	H x W x D	900 x 410 x 355	900 x 545 x 355	900 x 740 x 355	900 x 1070 x 355	900 x 1400 x 355	900 x 1730 x 355
	Ref. No.	845101	845104	845108	845112	845115	845119
Mounting plate	Type	MPN 500	MPN 50	MPN 51	MPN 52	MPN 53	MPN 54
	Ref. No.	845164	845167	845171	845175	845178	845182
Pedestal	Type	RVD 500	RVD 50	RVD 51	RVD 52	RVD 53	RVD 54
Height 1000	H x W x D	1000 x 410 x 355	1000 x 545 x 355	1000 x 740 x 355	1000 x 1070 x 355	1000 x 1400 x 355	1000 x 1730 x 355
	Ref. No.	845102	845105	845109	845113	845116	845120
Mounting plate	Type		MPD 50	MPD 51	MPD 52	MPD 53	MPD 54
	Ref. No.	845165	845168	845172	845176	845179	845183
Pedestal	Type		RVH 50	RVH 51	RVH 52	RVH 53	RVH 54
Height 1150	H x W x D		1150 x 545 x 355	1150 x 740 x 355	1150 x 1070 x 355	1150 x 1400 x 355	1150 x 1730 x 355
	Ref. No.		845106	845110	845114	845117	845121
Mounting plate	Type			MPH 51	MPH 52	MPH 53	MPH 54
	Ref. No.		845169	845173	845177	845180	845184
Pedestal	Type					RVS 53	RVS 54
Height 1350	H x W x D					1350 x 1400 x 355	1350 x 1730 x 355
	Ref. No.					845118	845122
Mounting plate	Type					MPS 53	MPS 54
	Ref. No.					845181	845185

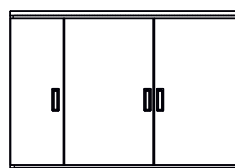


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With double door and two compartments



With 3 doors and 2 compartments



		DIN 2	DIN 3	DIN 4
Height 650				
Pedestal	Type	RVL 52 DC1		
	H x W x D	650 x 1070 x 355		
	Ref. No.	845126	-	-
	Comp. Left/Right	500/500		
Height 900				
Pedestal	Type	RVN 52 DC1	RVN 53 DC1	RVN 54 DC1
	H x W x D	900 x 1070 x 355	900 x 1400 x 355	900 x 1730 x 355
	Ref. No.	845127	845136	845148
	Comp. Left/Right	500/500	665/665	1325/335
Pedestal	Type	RVN 52 DC2	RVN 53 DC2	RVN 54 DC2
	H x W x D	900 x 1070 x 355	900 x 1400 x 355	900 x 1730 x 355
	Ref. No.	845128	845137	845149
	Comp. Left/Right	335/665	335/995	335/1325
Pedestal	Type	RVN 52 DC3	RVN 53 DC3	
	H x W x D	900 x 1070 x 355	900 x 1400 x 355	
	Ref. No.	845129	845138	-
	Comp. Left/Right	665/335	995/335	
Height 1150				
Pedestal	Type	RVD 52 DC1	RVD 53 DC1	RVD 54 DC1
	H x W x D	1150 x 1070 x 355	1150 x 1400 x 355	1150 x 1730 x 355
	Ref. No.	845130	845139	845150
	Comp. Left/Right	500/500	665/665	1325/335
Pedestal	Type	RVD 52 DC2	RVD 53 DC2	RVD 54 DC2
	H x W x D	1150 x 1070 x 355	1150 x 1400 x 355	1150 x 1730 x 355
	Ref. No.	845131	845140	845151
	Comp. Left/Right	335/665	335/995	335/1325
Pedestal	Type	RVD 52 DC3	RVD 53 DC3	
	H x W x D	1150 x 1070 x 355	1150 x 1400 x 355	
	Ref. No.	845132	845141	-
	Comp. Left/Right	665/335	995/335	
Height 1350				
Pedestal	Type	RVH 52 DC1	RVH 53 DC1	RVH 54 DC1
	H x W x D	1350 x 1070 x 355	1350 x 1400 x 355	1350 x 1730 x 355
	Ref. No.	845133	845142	845152
	Comp. Left/Right	500/500	665/665	1325/335
Pedestal	Type	RVH 52 DC2	RVH 53 DC2	RVH 54 DC2
	H x W x D	1350 x 1070 x 355	1350 x 1400 x 355	1350 x 1730 x 355
	Ref. No.	845134	845143	845153
	Comp. Left/Right	335/665	335/995	335/1325
Pedestal	Type	RVH 52 DC3	RVH 53 DC3	
	H x W x D	1350 x 1070 x 355	1350 x 1400 x 355	
	Ref. No.	845135	845144	-
	Comp. Left/Right	665/335	995/335	

Standard delivery

- enclosure with plain doors
- central locking system / door
- handle without lockinsert / door
- with two separate, mounting plates in melamine
- with separation sheet in melamine - IP20
- open bottom



Accessories

Fixation kit for mounting plate

For DIN00/0/1	422849	1
For DIN2/3/4	422850	1
With special bolts and nuts		

Bases in stainless steel



For DIN 00	845157	1
For DIN 0	845158	1
For DIN 1	845159	1
For DIN 2	845160	1
For DIN 3	845161	1
For DIN 4	845162	1

Plinths in stainless steel



For DIN 1	845196	1
For DIN 2	845197	1
For DIN 3	845198	1
For DIN 4	845199	1

Door stop



	845220	1
Right for DIN 00/0/2		
	845221	1
Right for DIN 1/3/4		
	845222	1
Left for DIN 00/0/2		
	845223	1
Left for DIN 1/3/4		

Paint touch-up kit



	422901	1
RAL 7034		

Filling pellets



50 liter	422902	1
5 liter	422903	1
Pellets made out of clay as humidity barrier between ground and enclosure. Recommended filling height: 20-30 cm.		

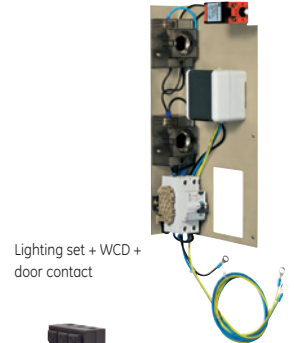
Document holder

	845225	1
DIN A4 - W x H = 325 x 180 mm		



Lighting set

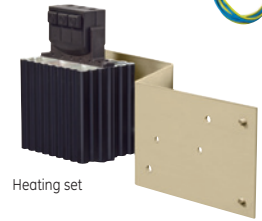
	845209	1
Lighting set right + door contact		
	845210	1
Lighting set left + door contact		
	845211	1
Lighting set right + WCD + door contact		
	845212	1
Lighting set left + WCD + door contact		
	845213	1
WCD set - 2P - 230V		



Lighting set + WCD + door contact

Heating set

	845214	1
Heating set		
	845215	1
Heating set + WCD		



Heating set

Support for accessories

For RVL-enclos.	845204	1
For RVN-enclos.	845205	1
For RVD-enclos.	845206	1
For RVH-enclos.	845207	1
For RVS-enclos.	845208	1



Bottom plate

Width DIN 00	845191	1
Width DIN 0	845192	1
Width DIN 1	845193	1
Width DIN 2	845194	1
Width DIN 3	845195	1



Set for wall mounting

Width DIN 00	845186	1
Width DIN 0	845187	1
Width DIN 1	845188	1
Width DIN 2	845189	1
Width DIN 3	845190	1



Accessories (continued)



Profile half cylinder locks

843001	1
--------	---

With 2 keys, V2432-E



843002	1
--------	---

With 1 square key, 8 mm



843003	1
--------	---

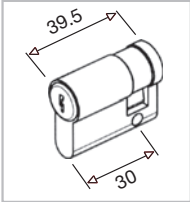
With 1 triangular key, 8 mm



843248	1
--------	---

With 2 keys A434

Spare keys are available on request.



Column in RVS

422885	1
--------	---



Base for column in RVS

422886	1
--------	---



Column for market places

845224	1
--------	---



Stainless steel pedestals

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Grid of dotted lines for notes.





e-Catalogue / Application guide

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Insulated wall mounting cabinets

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F.2 **UC-Cabinet** - Underground cabinets

Subterranean enclosures

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Underground cabinets

Applications

- Temporary connection at markets, fairs and events
- Low voltage distribution
- Glass fibre connections
- IT applications
- Mobile telephone networks
- Sewer installations
- kWh meter enclosures
- Telephone network Repeater Access Modules

Outdoor locations

- Market places
- City squares
- Harbours
- Railway stations
- Sports stadia and arenas
- Airports
- Shopping centres

Indoor locations

- Factories
- Storage facilities
- Maintenance areas
- Sports halls
- Event halls
- Congress halls
- Shopping malls

Aesthetical solution

- No obstacle at street level
- Fully integrated solutions
- The cover can integrate paving materials
- Extra public space

Safety

- Cover closed during use
- Due to Diving bell system (Boyle's law) the enclosure can be used without any problem immediately after a flood (tested by 1m water during 48 h)
- The user does not have to access electrical equipment
- User compartment is separated from electricity supplier compartment
- Outgoing cables channelled through a cable chamber
- Cover load tested by COPRA according to EN 124B125 (12.5 Ton)
- Electrically tested by Kema according to EN 61439-2 and IEC 60529
- Complied to RoHs-guidelines (directives 200/95/EC)
- Concrete enforced with polyester fibers. Cover in stainless steel AISI 304

No damage due to flood

Due to the diving bell system (Boyle's law) the cabinet can be used without any problem immediately after a flood (tested by 1 m water during 48 h, and proven reliable).

Standards

EN 61439-2	NEN EN 124
IEC 60529	EN 124B125

Dimensional drawings ● Page I.45
 Specifications for tender ● Page I.65
 documents



Type Stadion (Stadium)



Characteristics

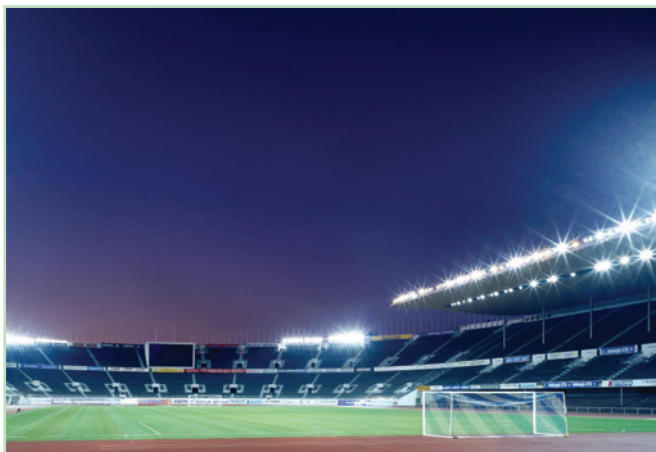
Common compartment for users and supplier.

Technical features

Maximum voltage	400/230VCA
Maximum incoming rating	63A
Maximum outgoing rating	32A
Frequency	50Hz
Maximum outgoing functions	8
Operating temperature	-20°C to +40°C
Level of immersion	1 m above groundlevel
Cover load	12.5 tons
Maximum angle of cover opening	80°
Lifetime	20 years
Dimensions (H x W x L)	519 x 620 x 770 mm
Weight (kg)	275

Basic compositions

	32A/5P	16A/5P	16A/3P	Main breaker	kWh	Ref. No.
Stadion 1	1	-	6	1	-	424415
Stadion 2	-	1	6	1	-	424416
Stadion 3	2	-	5	1	-	424417
Stadion 4	-	2	5	1	-	424418
Stadion 5	1	1	5	1	-	424419
Stadion 6	3	-	2	1	-	424420
Stadion 7	1	2	2	1	-	424421
Stadion 8	2	1	2	1	-	424422



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Type Fair



Characteristics

Separated compartments for users and supplier.

Technical features

Maximum voltage	400/230VCA
Maximum incoming rating	63A
Maximum outgoing rating	32A
Frequency	50Hz
Maximum outgoing functions	8
Operating temperature	-20°C to +40°C
Level of immersion	1 m above groundlevel
Cover load	12.5 tons
Maximum angle of cover opening	80°
Lifetime	20 years
Dimensions (H x W x L)	519 (569) x 708 x 1230 mm
Weight (kg)	350

Basic compositions

	32A/5P	16A/5P	16A/3P	Main breaker	kWh	Ref. No.
Fair 1	2	-	5	1	-	424423
Fair 2	-	2	5	1	-	424424
Fair 3	1	1	5	1	-	424425
Fair 4	3	-	2	1	-	424426
Fair 5	2	1	2	1	-	424427
Fair 6	1	-	7	1	-	424428
Fair 7	-	1	7	1	-	424429
Fair 8	-	-	8	1	-	424430



Type Market



Characteristics

Separated compartments for users and supplier.

Technical features

Maximum voltage	400/230VCA
Maximum incoming rating	63A
Maximum outgoing rating	32A
Frequency	50Hz
Maximum outgoing functions	16
Operating temperature	-20°C to +40°C
Level of immersion	1 m above groundlevel
Cover load	12.5 tons
Maximum angle of cover opening	80°
Lifetime	20 years
Dimensions (H x W x L)	519 (569) x 1014 x 1195 mm
Weight (kg)	400

Basic compositions

	32A/5P	16A/5P	16A/3P	Main breaker	kWh	Ref. No.
Market 1	5	-	7	1	-	424431
Market 2	2	-	10	1	-	424432
Market 3	1	-	11	1	-	424433
Market 4	2	1	7	1	-	424434
Market 5	1	2	7	1	-	424435
Market 6	-	1	11	1	-	424436
Market 7	1	1	10	1	-	424437
Market 8	-	2	10	1	-	424438



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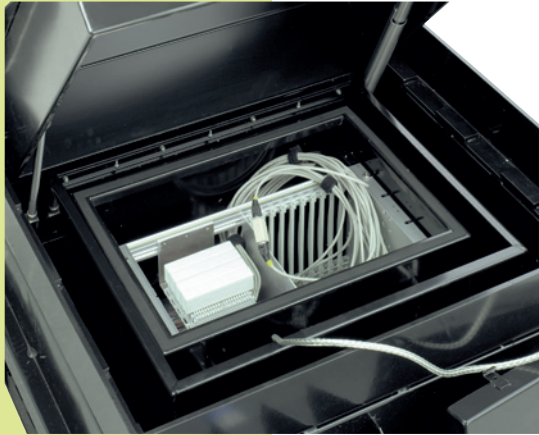
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Enclosure for telecommunications applications



Applications

UC-Cabinet enclosure for RAM installations (Repeater Access Module)

This enclosure has been designed specifically for housing sensitive electrical equipment such as is used for telecommunication links.

The equipment is protected by a built-in enclosure (IP65) which, in turn, is integrated into a sealed compartment.

Characteristics

- Dimensions: L x W x D = 1165 x 895 x 515 mm.
- The cover features a brass surface-mounted lock that accepts reduced-depth profile half cylinder lock
- Normal level of groundwater table should not extend above 25 cm below surface (street) level.
- Maximum permissible load 25 tonnes according to EN 124 standard
- Under certain conditions the cover can be provided with a paving material or similar finish so that it blends into its surroundings.



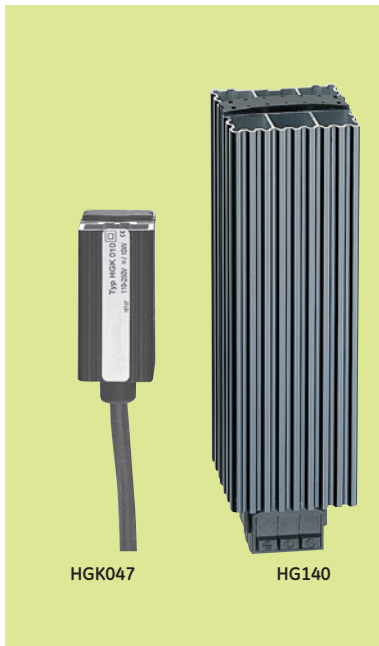
G.2 Heating
G.7 Ventilation

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Heating units

Function

Small heating units for enclosures are important accessories for guaranteeing operational safety of control and distribution units. They are mainly used to prevent formation of condensation or to maintain a minimum temperature inside the enclosure, that is, a few degrees above the temperature of the surrounding air.

Operating principle

Small heating units are fitted with PTC heating resistances (positive temperature coefficient semi-conductors). The self-regulating and self-limiting semi-conductor heating elements maintain a constant temperature on the heating surface of the small heating units. The aluminium casing transmits heat to the surrounding air by natural radiation. Special extruded sections ensure the heat is fully radiated.

Heating requirements calculation

Using the formula: $P = A \times \Delta T \times k$

P = power supplied by the resistance (W)

A = external free surface of the enclosure (m²)

ΔT = difference in temperature between the internal temperature after heating, and the external temperature, in °K.

k = thermal radiation coefficient: sheet steel: 5.5 W/m²K
polyester: 3.5 W/m²K

Approximation rule: recommended value 100 w/m³ of enclosure volume. For an outdoor installation, the calorific power should be doubled. Several small heating units are better than a single large heating unit.

Advantages

- Energy saving
- Dynamic heating-up
- Self-regulating
- Temperature-limiting
- Quick snap-on fixing
- No maintenance
- Long endurance
- Compact housing

Standards

VDE 0700

IEC 60 335-1

UL on request

Applications

Switch cabinets, instrument cases, display panels, control desks, automatic bank machines, car park control systems, etc.

Fitting

Push-fit onto DIN 35 mm rail (EN 50 022).

Installation preferably at the bottom of the cabinet, at about 40 mm from the equipment itself.

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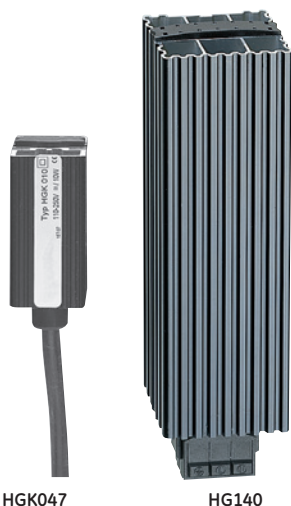
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Heating units HGK047-HG140



HGK047

HG140

Technical data

Nominal voltage	140-250 V AC/DC (max. 265 V)
Power	10 to 150 W
Heating element	self-regulating PTC resistance
Heating body	anodised aluminium sections
Protection class	I
Protection level	HGK047: IP44 - HG140: IP20
Connection	Series HGK047: silicon cable 2 x 0.75 mm ² length 300 mm Series HG140: with terminals 0.5 - 2.5 mm ²
Dimensions (H x D)	Series HGK047: 25 x 60 mm Series HG140: 70 x 60 mm

Order codes

	W ⁽¹⁾	I max. (A)	H (mm)	Wt. (kg)	Ref. No.	Pack.
HGK047	10	0.8	50	0.10	818105	1
	20	1.0	60	0.11	818106	1
	30	1.5	70	0.12	818107	1
HG140	15	0.5	65	0.3	818092	1
	30	1.0	65	0.3	818093	1
	45	1.0	65	0.3	818094	1
	60	1.5	140	0.5	818097	1
	75	1.8	140	0.5	818098	1
	100	2.4	140	0.5	818099	1
	150	4.5	220	0.8	818102	1

(1) At ambient temperature 20°C

Heating unit HGL046 with fan



With forced ventilation with an axial fan.
Prevents formation of dangerous levels of condensation, and maintains a constant temperature inside the enclosure.

Technical data

Nominal voltage	220/280V 50-60Hz
Power	250 and 400W
Heating element	traditional heating element with built-in thermostat
Heating body	anodised aluminium sections
Surface temperature	±75°C
Protection class	I
Protection level	IP20
Connection	three-pole terminal strip 2.5 mm ²
Fitting	on DIN 35 mm rail
Fan	rate: 35 m ³ /h without counter-pressure ball bearing service: 30000 hrs at 20°C

Order codes

	W	B x D	H (mm)	Wt. (kg)	Ref. No.	Pack.
HGL046	250	80 x 80	178	0.95	818103	1
	400	80 x 80	252	1.30	818104	1



HV031: Heating element, extra compact, flatter, only 22mm thick.

HVL031: HV031 heating element with an axial fan to give optimal heat radiation. Fresh air drawn in from outside is heated and dried. If the fan fails, thermal power drops automatically to prevent overheating.

Applications

Telecommunications systems, control panels, display panels, control desks, bank cash machines, car park control systems.



- Compact heater with integrated ventilation CR 027 350/550W 230V.
- Heating capacity adjusts to ambient temperature.
- Safely cut-out in case of fan failure.
- Adjustable temperature range.

Heating units HV031 and HVL031 (with fan)

Technical data

Nominal voltage	220/230V 50-60Hz
Power	100 - 150 - 200 - 300 - 400W
Heating element	traditional heating element with built-in thermostat
Heating body	thermostat
Connection	anodised aluminium sections
Surface temperature with fan	five-pole terminal strip 2.5 mm ² 45°C at a distance of 50 mm
Fitting	on DIN rail
Protection class	I / IP20
Fan rate (without counter-pressure)	35 m ³ /h (100 - 150W) 108 m ³ /h (200 - 300 - 400W)
Dimensions (H x W x D)	80 x 112 x 22 mm (100 - 150W) 119 x 151 x 22 mm (200 - 300 - 400W)
Weight	240 g (100 - 150W) 490 g (200 - 300 - 400W)

Order codes

	Power	Ref. No.	Pack.
HV031	100W	818177	1
	150W	818178	1
	200W	818091	1
	300W	818162	1
	400W	818163	1
HVL031 with fan	100W	818179	1
	150W	818180	1
	200W	811542	1
	300W	818164	1
	400W	818165	1

Semi conductor fan heater

Technical data

Nominal voltage	220/230V 50-60Hz
Power	350 / 550W
Current at make	7.5 A - 350W / 230V 8.5 A - 550W / 230V
Heating element	PTC resistor - self regulating
Temperature regulation	Adjustment range 0 - 60°C
Optical indicator	Thermostat control lamp
Casing	Plastic, light grey
Protection class	II (double insulated)
Protection level	IP 20
Connection	4 pole terminal connector, 2.5 mm ²
Fitting	on DIN 35 mm rail
Axial fan	45 m ³ /h, ball bearing service life 50,000 h at 25°C
Dimensions	165 x 100 x 124 mm (HxWxD)
Weight	1.1 kg
Approval	UL file E 204590

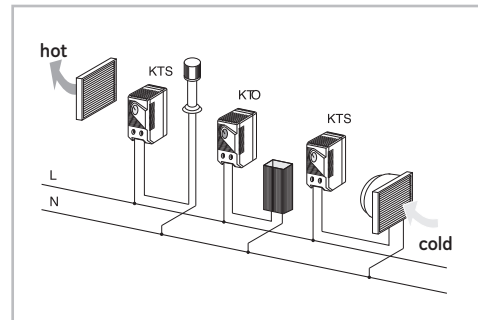
Order codes

	Ref. No.	Pack.
CR 027	818193	1

Temperature regulators

Function

FZK 011, KTO, KTS and ZR 011 elements regulate and control the temperature inside the enclosure by means of small heating elements, fans, heat exchangers and refrigeration units.

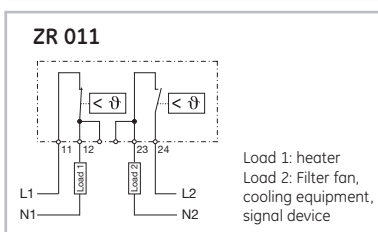
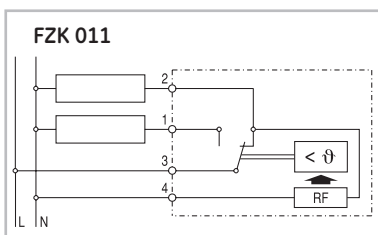


Technical data

Type	FZK 011	KTO	KTS	ZR 011
Range of adjustment:				
Temperature	10°C - 60°C	0°C - 60°C	0°C - 60°C	0°C - 60°C
Hysteresis	0.5K	7K	7K	7K
Contact type	Inverter: single pole	NC 	NO 	NO
Power ⁽¹⁾	NC 10A (4) 250V AC NO 5A (2) 250V AC resistive load	10A (2) 250V AC resistive load	10A (2) 250V AC resistive load	10A (2) 250V AC resistive load
Weight	100 g	36 g	36 g	90 g
Dimensions (H x W x D)	67 x 50 x 38	60 x 33 x 35	60 x 33 x 35	67 x 50 x 46
Application diagram	(see below)	red button: heating	blue button: cooling, fan, alarm signal	(see below)
Protection level	IP20	IP20	IP20	IP20
Connection	2.5 mm ² screw connector			
Fitting	push fit on DIN 35mm rail (EN 50022)			
Case	plastic UL 94 V0			
EMC	according to EN 55014-1-2, EN 61000-3-2, EN 61000-3-3			

(1) Values in brackets = inductive load $\cos \varphi = 0,60$

Application diagram



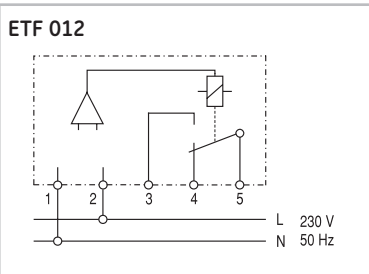
Order codes

	Ref. No.	Pack.
FZK 011	818079	1
KTO	818080	1
KTS	818081	1
ZR 011	818217	1

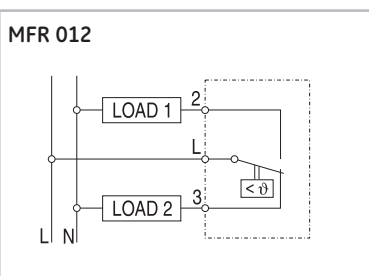




The electronic temperature regulator and humidity controller controls the temperature and humidity level of the air independently of each other by switching resistive and inductive loads (e.g. small heating units and refrigeration units).



The electromechanical hygrometer is designed to control enclosure heaters so that the dew point is raised when a critical relative humidity of 65% is exceeded. In this way condensation and corrosion are effectively prevented.



Humidity controller

Technical data

Range of adjustment:	
Temperature	0°C - 60°C
Hysteresis	2K
Humidity	50 %-90 %
Response time	160 sec.
Power supply voltage	230V/50-60Hz
Contact type	relay output/inverter contact
Power ⁽¹⁾	8A (4) 250V AC 0.5A 100V DC 8A 12V DC 5A 35V DC
On/off indicator	LED
Weight	140 g
Dimensions (H x W x D)	50 x 67 x 43
Protection level	IP20
Connection	2.5 mm ² screw connector
Fitting	push fit on DIN 35mm rail (EN 50022)
Case	plastic UL 94 VO
Interference protection	N according to VDE 0875

Order codes

	Ref. No.	Pack.
ETF 012	818083	1

(1) Values in brackets = inductive load $\cos \varphi = 0,80$

Mechanical hygrometer

Technical data

Adjustment range	35-95% relative humidity
Switching accuracy	$\pm 3\%$
Voltage	250V AC
Switching capacity, max. load	
resistive load	5 A 250V
inductive load $\cos \phi 0.8$	0.2 A AC 250V
inductive load $L/R = 3 \text{ ms}$	1 A DC 50V - DC 75V
switching capacity, min.load	100 mA DC/AC 20V
contact type	change over contact
Connection	terminals in casing 3 x 2.5 mm ²
Casing	Plastic, light grey
Mounting	on DIN 35 mm rail
Protection level	IP 20
Dimensions	67x50x38 mm (HxWxD)
Weight	60 g

Order codes

	Ref. No.	Pack.
MFR 012	818190	1

Enclosure ventilation

Pressure differences occur because of temperature variations between the inside the enclosure with a high protection degree and the environment.

In case of vacuum, dust and humidity can be absorbed through the door seal and can enter the enclosure.

As the humidity cannot exit the enclosure condensation may occur.

In order to prevent this pressure compensation plugs or ventilation grids should be used.

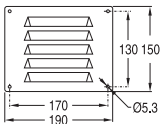
Louvre plate IP44



Fits one ventilation opening
Package includes 2 grids and mounting accessories
Total insulation

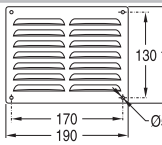
832019 1

Outlet 2000 mm²



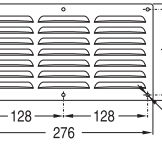
832743 1

Outlet 3000 mm²



832744 1

Outlet 4500 mm²



Ventilation grids - IP44⁽¹⁾



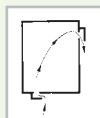
Set of 2 ventilation grids
Drilling Ø 34.9 mm
(1) If installed i.e. inside ARIA corners, underneath PolySafe roof

831009 1

Air vents IP44



Kits of two pieces in polyamide
RAL 7035 **833677** 1
Two air vents must be mounted per enclosure to ensure sufficient air circulation and prevent condensation water.
Complete with template and screws.
Air vents are preferably mounted in the upper and lower part of the base.



Air vent (IPx4)

To allow ventilation and prevent condensation. Air vents are preferably mounted in the upper and lower part of the box - M20



861728 25

Pressure compensation plug - IP55

Kit of two pieces

818078 1

In a tightly closed enclosure, pressure differentials can occur during extreme temperature variations, such as day/night operation. The risk of dust and humidity being absorbed increases dramatically. The plug permits a controlled change in pressure.

Easy installation in each enclosure.

Technical data

Dimensions: dia 65.5 mm x 30.5 mm

Cut-out: dia 37 mm

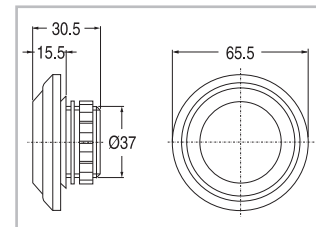
Fixation with PG 29 thread or nut

Material: ABS / PC

Air inlet: ± 7 cm²

Protection: IP55

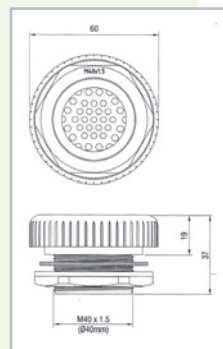
Remark: for optimal pressure compensation the use of 2 plugs, installed diagonally to each other, is recommended.

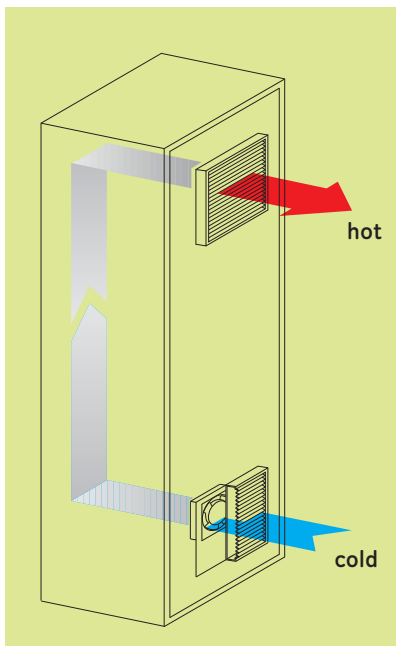


Pressure compensation plug - IP66

Set of 2 pieces

818223 1





The electrical operating elements built into a control enclosure, such as power converters, transformers, inductance coils, contactors, relays, etc., emit dissipation heat into the surrounding air.

If this dissipation heat is not removed, it may cause the temperature inside the enclosure to exceed the temperature permissible for electrical equipment. This poses a hazard to, in particular, electronic components.

The heat must therefore be removed to avoid malfunction and, ultimately, idle time. Natural aeration (by domes, gills, etc.) is not recommended, as the risk of contamination is very high and, in addition, the degree of protection of the enclosure cannot be maintained.

In such cases, forced aeration with appropriate built-in filters is the answer. In this system, the cooler ambient air is sucked by a fan into the lower part of the control enclosure, simultaneously filtered, and then blown into the body of the enclosure.

Here the air absorbs the dissipated heat and is then removed via an exhaust filter located in the upper part of the enclosure. An overpressure created simultaneously in the enclosure prevents dust particles penetrating any openings in the housing. Removing warm air by suction is not recommended, as the partial vacuum created within the enclosure would neutralise the dust-protective effect.

Enclosure ventilation

- Colour RAL 7035
- Gasket included
- IP54 as standard
- On request: filter fans and exhaust filters type LS...K and type LG...K in colour RAL 7032

Filter fan selection

The air flow (volume flow rate) of the filter fan depends on the total thermal loss and the temperature difference ΔT between the permissible interior temperature and the ambient temperature.

The following formula applies here:

$$V \text{ (m}^3\text{/h)} = \frac{3.1 P \text{ (W)}}{\Delta T \text{ (K)}} \times 1.15$$

V = required air flow (m³/h) - P = thermal loss in watts (W)

ΔT = interior/ambient temperature difference in Kelvin (K)

3.1 = constant numerical value of miscellaneous ventilation data

1.15 = 15% margin

Air flows (m³/h) for thermal losses up to 3000 watts and temperature differences (DT) of 5...25 (K) can be taken from the selection chart.

It is recommended that a 15% margin be added to allow for contaminated filter mats or extreme conditions.

The air flows specified for the individual filter fans were measured in accordance with DIN 24163. At an air density of 1.2 kg/m³, the tolerance is $\pm 5\%$.

Filter material

DIN-tested VILEDON P15/350S, P15/500S or T3/290S filter mats (to DIN 24185) are used in the filter fans and exhaust filters. The material is thermally bonded. Behaviour in fire corresponds to DIN 53438, class F1.

The P15/350S filter mat collects dust particles of a minimum size of 10 μm at a separation efficiency of 85%, while the P15/500S filter mat collects dust particles of a minimum size of 5 μm at a separation efficiency of 94%.

If the dust particles are extremely fine, the supplementary, denser T3/290S filter mat may be used. This collects dust particles of a minimum size of 0.5 μm at a separation efficiency of 96% (please note the reduced air flow).

Soiled filter mats can be cleaned by rinsing out with water, by beating, or by blowing through with compressed air (do not wring out!).

Housing

Housings are made of heat-resistant ABS plastic (-35°C to +85°C), self-extinguishing to UL 94 VO, tracking resistance to 3kA. Colour RAL 7035. Other colours available upon request.

Degree of protection

Our filter fans are conform to relevant CE regulations.

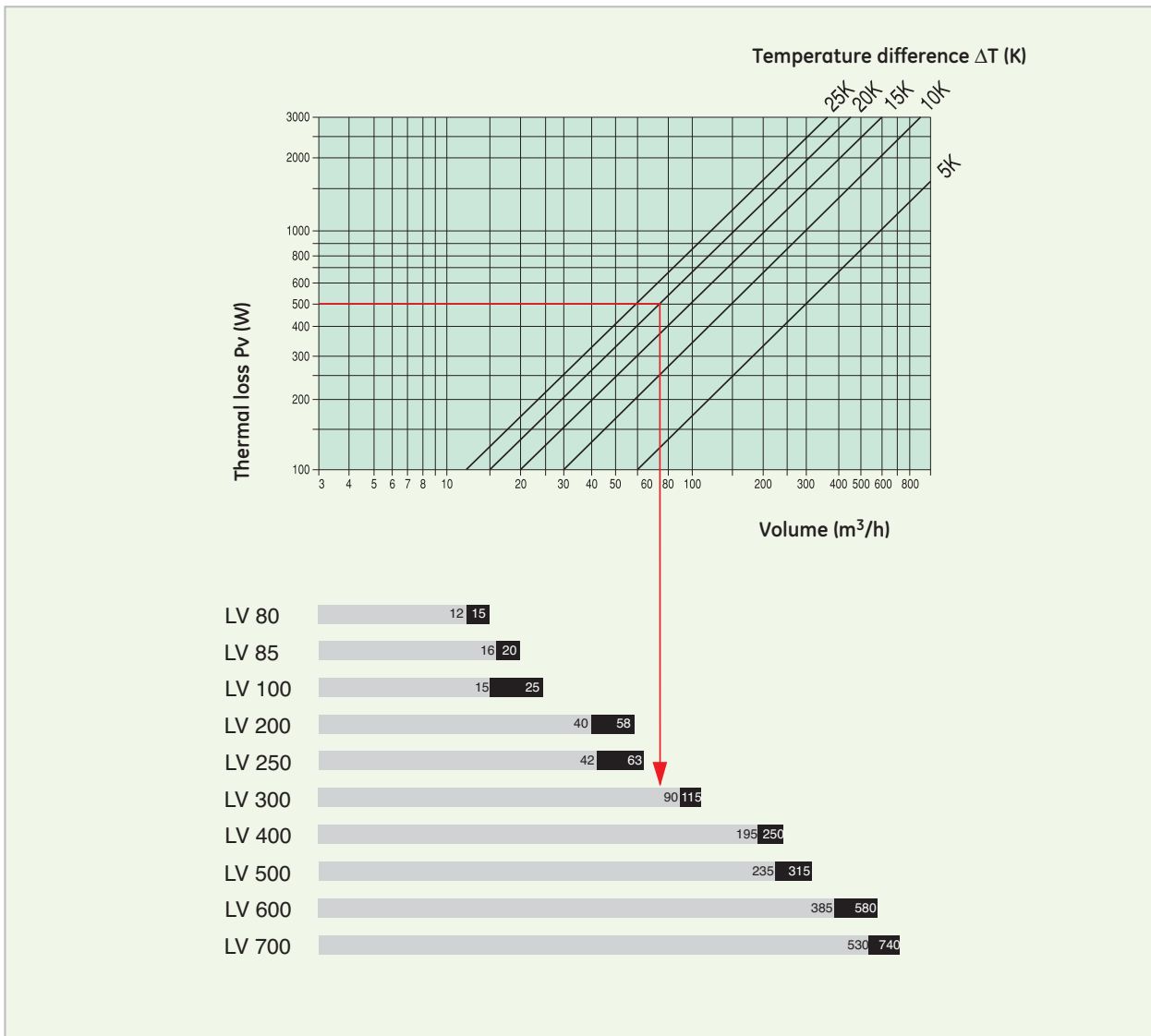
Contact-voltage proof to DIN 31001. Resistance to foreign bodies and water to IP54 (EN 60529) is achieved by combining a horizontal air flow with a gasket, delivered as a standard.

Advantages

Serie LV filter fans offer the follow advantages:

- Quick mounting \Rightarrow Snaps into the cut-out, no screws needed
- Low shape \Rightarrow Maximum protrusion of the cover is only 6.5 mm

Selection of the filter fan and the exhaust filter



Example

Parameters

Thermal loss 500W
 Temperature difference 20K

Selection



LV 300 + GV 300

90	Filter fan + exhaust filter
115	Filter fan free blowing with filter mat P15/500S



Filter fans and exhaust filters

Standard delivery

Filter fan				Exhaust filter		
230VAC - 50/60Hz IP54 sealing included standard filter mat P15/350 S RAL 7035				IP54 sealing included standard filter mat P15/350 S RAL 7035		
						
Type	Ref. No.	m ³ /h	Cutout in mm ⁽³⁾	Type	Ref. No.	m ³ /h
LV 80 ⁽²⁾	818195	15	68 x 68	GV 80	818200	12
LV 85 ⁽¹⁾⁽²⁾	818196	20	68 x 68	GV 80	818200	16
LV 100 ⁽²⁾	818197	25	92 x 92	GV 100	818201	15
LV 200	818140	58	116 x 116	GV 200	818144	40
LV 250	818198	63	125 x 125	GV 250	818202	42
LV 300	818141	115	177 x 177	GV 300	818145	90
LV 400	818142	250	223 x 223	GV 400/500	818146	195
LV 500	818143	315	223 x 223	GV 400/500	818146	235
LV 600	818199	580	292 x 292	GV 600/700	818182	385
LV 700	818181	740	292 x 292	GV 600/700	818182	530

(1) 24VDC (2) P15/150S

(3) Detail drawing see page I.45

Technical data filter fan

Filter fan 230VAC 50/60Hz	818195	818196	818197
Filter fan type	LV 80	LV 85	LV 100
Exhaust filter	GV 80	GV 80	GV 100
IP54 & sealing is standard	yes	yes	yes
Free air flow	m ³ /h	15	20
In combination with exhaust filter	m ³ /h	12	16
Standard filter mat P 15/150 S (67 % efficiency)	yes	yes	yes
Standard filter mat P 15/350 S (85 % efficiency)	-	-	-
Optional filter mat P 15/500 S (94 % efficiency)	-	-	-
Free air flow	m ³ /h	-	-
In combination with exhaust filter	m ³ /h	-	-
Optional filter mat P 15/350 S + fine filter mat T3/290 S (96 % efficiency)	-	-	-
Free air flow	m ³ /h	-	-
In combination with exhaust filter	m ³ /h	-	-
Power input 230VAC - 50/60Hz	W	5/4	3 (24VDC)
Current 230VAC - 50/60Hz	A	22/16mA	130mA
Noise level	dB (A)	27	48.5
Service life	hour	40000	60000
Speed	rpm	2550/3100	6850
Temperature	-10°C to +55°C	-20°C ... +65°C	-20°C ... +65°C
Approval	CE/UL/CSA	yes	yes
Turn motor 180° to change from blowing to sucking (reduced air flow)	yes	yes	yes
Suction version can be ordered as option	-	-	-
115VAC	on request	-	yes
400VAC	on request	-	-
24VDC	on request	yes	standard
12VDC	on request	yes	yes
Options			
Spare filter mat P15/350 S	-	-	yes
Spare filter mat P15/500S	-	-	-
Fine filter mat T3/290S	-	-	-
Gasket IP 54	-	-	-

Dimensional drawings ● Page I.46



Gasket (spare part)		Filter mat (spare part)							
IP54 Polyethylen		P15/150S degree of separation 67% filter class ⁽⁴⁾ G2 (EU 2)		P15/350S degree of separation 85% filter class ⁽⁴⁾ G3 (EU 3)		P15/500S degree of separation 94% filter class ⁽⁴⁾ G4 (EU 4)		T3/290 S degree of separation 96% filter class ⁽⁴⁾ G4 (EU 4)	
Type	Ref. No.	Type	Ref. No.	Type	Ref. No.	Type	Ref. No.	Type	Ref. No.
D 80	818203	AM 815 P	818206	-	-	-	-	-	-
D 80	818203	AM 815 P	818206	-	-	-	-	-	-
D 100	818204	AM 115 P	818207	-	-	-	-	-	-
D 200	818173	-	-	AM 235 P	818208	AM 200 P	818166	-	-
D 250	818205	-	-	AM 0135 P	818209	AM 01 P	818213	-	-
D 300	818174	-	-	AM 335 P	818210	AM 300 P	818167	AM 300 T	818170
D 400	818175	-	-	AM 435 P	818211	AM 400 P	818168	AM 400 T	818171
D 400	818175	-	-	AM 435 P	818211	AM 400 P	818168	AM 400 T	818171
D 700	818176	-	-	AM 735 P	818212	AM 700 P	818169	AM 700 T	818172
D 700	818176	-	-	AM 735 P	818212	AM 700 P	818169	AM 700 T	818172

(4) DIN EN 779

818140	818198	818141	818142	818143	818199	818181
LV 200	LV 250	LV 300	LV 400	LV 500	LV 600	LV 700
GV 200	GV 250	GV 300	GV 400/500	GV 400/500	GV 600/700	GV 600/700
yes	yes	yes	yes	yes	yes	yes
58	63	115	250	315	580	740
40	42	90	195	235	385	530
-	-	-	-	-	-	-
yes	yes	yes	yes	yes	yes	yes
46	48	90	220	260	430	580
30	31	60	165	195	250	410
-	-	58	125	165	255	390
-	-	51	115	145	210	330
19/18	19/18	19/18	45/39	50/61	64/80	115/155
0.11	0.11	0.11	0.3	0.24/0.27	0.39/0.45	0.51/0.68
42	42	51	52	65	60	70
27500	27500	27500	40000	40000	40000	40000
2650/3100	2650/3100	2650/3100	2760/3030	2740/3120	2550/2800	2550/2750
yes	yes	yes	yes	yes	yes	-10°C ... +50°C
yes	yes	yes	yes	yes	yes	yes
yes	yes	yes	yes	-	yes	-
-	-	-	-	818218	-	818194
yes	yes	yes	yes	yes	yes	yes
-	-	-	-	yes	-	yes
yes	yes	yes	yes	-	yes	-
-	-	-	-	-	-	-
yes	yes	yes	yes	yes	yes	yes
yes	yes	yes	yes	yes	yes	yes
-	-	yes	yes	yes	yes	yes
yes	yes	yes	yes	yes	yes	yes



General Purpose Enclosures

Notes

Climate control

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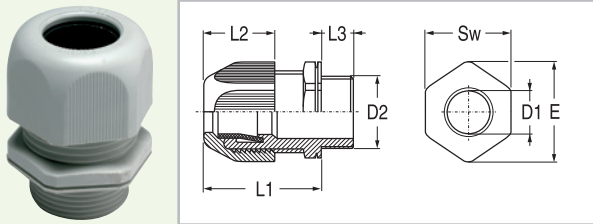


Compression glands - Metric - IP68 in polyamide (RAL 7035)

Metric size D2	Drill Ø (mm)	Clamping range D1 (mm)	L1	L2	L3	E	Keywidth Sw (mm)		
M12	12.5	4 - 6	21	12	8	17	15	851650	50
M16	16.5	5.5 - 8	25	15	8	21	19	851651	50
M20	20.5	7 - 12	35	20	10	27	24	851652	50
M25	25.5	12 - 18	36	22	12	36	33	851653	25
M32	32.5	17 - 25	42	25	12	47	42	851654	10
M40	40.5	22 - 32	46	30	13	58	53	851655	10
M50	50.5	32 - 38	47	30	13	66	60	851656	5
M63	63.5	38 - 44	47	30	14	71	65/68*	851657	5

*body 68 / nut 65

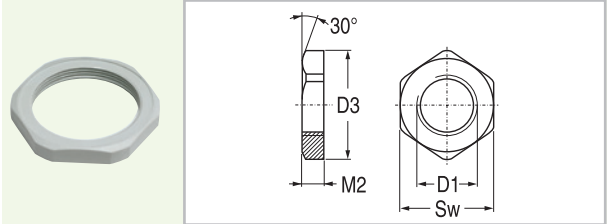
Temperature : - 30° C up to + 100° C



Lock nuts in polyamide - Metric - (RAL 7035)

Metric size	Width D1	Thickness D3	Keywidth M2	Sw (mm)	
851664	100	M12	19	5	17
851665	100	M16	25	5	22
851666	100	M20	29	6	26
851667	100	M25	36	6	32
851668	50	M32	46	7	41
851669	25	M40	54	7	50
851670	25	M50	67	8	60
851671	25	M63	83	8	75

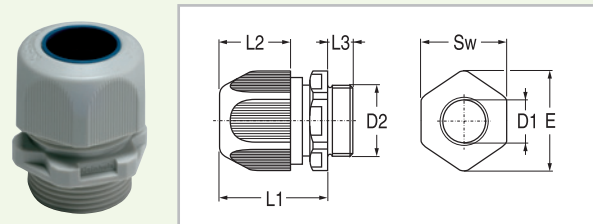
Temperature : - 40° C up to + 100° C



Compression glands - Metric - IP54 in polystyrene (RAL 7035)

Metric size D2	Drill Ø (mm)	Clamping range D1 (mm)	L1	L2	L3	E	Keywidth Sw (mm)		
M12	12.5	3 - 6	22	13.6	8	18	16	851658	50
M16	16.5	5 - 9.5	24	14.2	8	23	21	851659	50
M20	20.5	8 - 13	27	16.2	9.5	28	25	851660	50
M25	25.5	10 - 16	30	18.2	10	33	30	851661	50
M32	32.5	14 - 20	35	21.5	12	40	36	851662	10
M40	40.5	19 - 27	43	24.5	12	51	46	851663	10

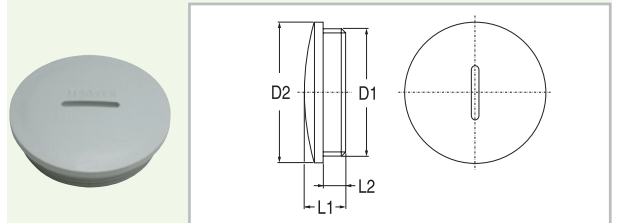
Temperature : - 30° C up to + 60° C



Blanking plugs - Metric - IP54 in polyamide (RAL 7035)

Metric size	Width D1	Thickness D2	Thread L1	L2 length (mm)	
851672	100	M12	15	10	6
851673	100	M16	20	10.5	6
851674	100	M20	24	10.5	6
851675	100	M25	30	13	8
851676	100	M32	37	13.5	8

Temperature : - 40° C up to + 100° C



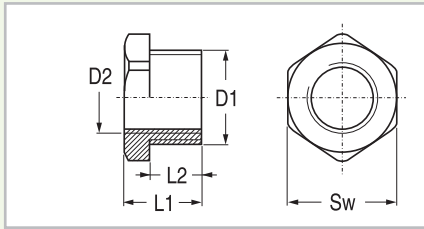
Metric

General Purpose Enclosures

Reducing ring - Metric - IP54 in polyamide (RAL 7035)

Metric size D1 - D2	Thread (mm)		Keywidth		
	L1	L2	Sw (mm)		
M20 - M16	12.5	8.5	24	851680	50
M25 - M20	14	8	29	851681	50
M32 - M25	16	10	36	851682	25
M40 - M32	16	10	46	851683	10
M50 - M40	18	12	55	851684	5
M63 - M50	18	12	68	851685	5

Temperature : - 40° C up to + 100° C

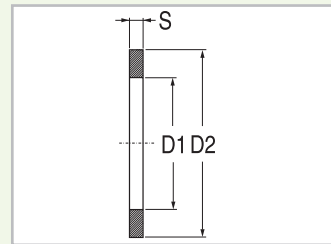


Connection thread grummet - Metric - in polyethylene (RAL 7035)

	Metric size	S (mm)	D1 (mm)	D2 (mm)
851691	M12	1.5	11.6	16
851692	M16	1.5	15.6	21
851693	M20	2	19.4	25
851694	M25	2	24.4	32
851695	M32	2	31.4	39
851696	M40	2	39.4	47
851697	M50	3	49.3	57
851698	M63	3	62.2	70

Temperature : up to + 70° C

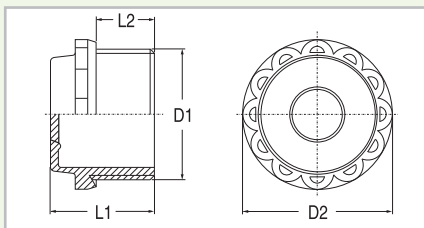
thickness s - diameter d1 - diameter d2



Universal cable entries - Metric - IP54 in polyethylene (RAL 7035)

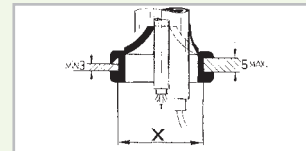
Metric size D1	Cable section D2 (mm)	Thread in mm				
		L1	L2			
M16	20	6 - 8	16	8	851686	100
M20	24	9 - 12	19	10	851687	100
M25	30	11 - 17	22	12	851688	50
M32	37	16 - 22	25	14	851689	25
M40	46	19 - 25	28	16	851690	10

Temperature : - 40° C up to + 80° C

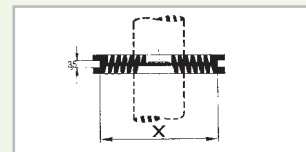


Universal cable entries (grey)

Max. Ø cable	PG	Drill Ø X (mm)	Colour		
18	16	23	grey	610130	25
24	21	29	grey	610132	25
32	29	38	grey	610133	25
49	42	54	grey	852191	1



Min. Ø cable	Max. Ø PG	Drill Ø X (mm)	Colour		
12	48	55	grey	851096	20
12	30	35	grey	851097	20
12	36	45	grey	851098	20
22	66	75	grey	851099	10
22	58	65	grey	851100	10



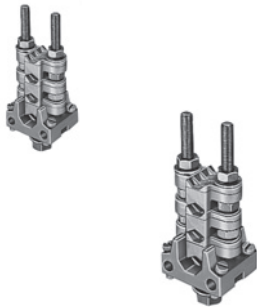
General Purpose Enclosures

Terminals



①	610022	12
4 pole terminal - 6.5 x 9 mm bars 63A For DIN-rail mounting		
②	617992	1
4 pole terminal with cover - 160A For DIN-rail mounting		
③	610020	12
4 pole terminal - 12 x 5 mm bars 160A For DIN-rail mounting		
④	610021	12
Protective screen for 610020		
	610017	10
Earth-neutral bar 12 x 5 mm Length 1.2 m + 50 clamps + 50 nuts Max. distance between supports: 200 mm To use with support 851192		
	610018	1
Support for four bars 12 x 5 Max. distance between support: 200 mm For DIN-rail mounting Use with above bars		

Cable on bus bar connection



4 connections possibility		
- Aluminium cable can be connected		
- Bar thickness: max. 12 mm		
- Bar width: no limit		
35-70 mm²		
1 cable	779220	4
2 cables	779221	4
3 cables	779222	4
+ 4 connections (16 mm ²)		
90-150 mm²		
1 cable	779217	4
2 cables	779218	4
3 cables	779219	4
+ 4 connections (25 mm ²)		

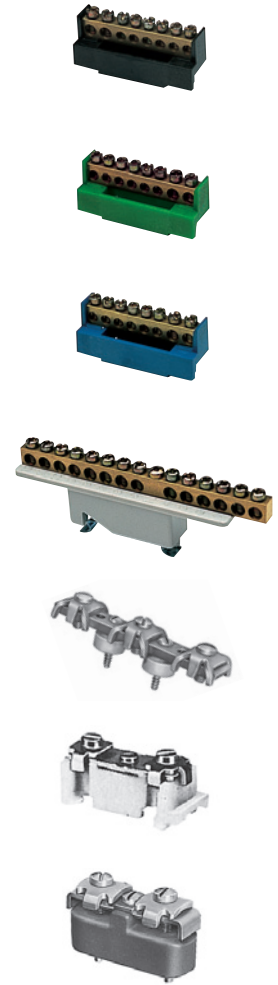
Insulation hood in rubber



	779224	4
For terminal 35-70 mm ²		
	779223	4
For terminal 95-150 mm ²		

Branch terminals

	610185	4
Phase bar - black 6 x 10 mm ² and 2 x 16 mm ² To clip on 12 x 2 mm bar		
	610186	4
Earth bar - green 6 x 10 mm ² and 2 x 16 mm ² To clip on 12 x 2 mm bar		
	610187	4
Neutral bar - blue 6 x 10 mm ² and 2 x 16 mm ² To clip on 12 x 2 mm bar		
	610065	4
14 x 16 mm ² Fixation on DIN-rail		
	851021	10
Earth bar 12 x 4 with 3 clamps Screw fixation		
	851325	5
Neutral clamp with screw fixation (also snap on bar 12 x 2)		
	851172	10
Neutral clamp with screw fixation		



Bar on busbar connections

		Main bar	Secondary bar	Total bar thickness	
				Min.	Max.
851125	50	12	12	5	15
851120	10	20	15-20	5-4	26-24
851129	10	30	15-20-30	7-6-5	28-27-26



Cable on bar connection

		Max. Ø Cable cross (mm ²)	Bar thickness (mm)	Bar width (mm)
851117	10	10 to 50	5 to 6	30
851118	10	4 to 35	3 to 5	15
851121	10	16 to 120	2 to 5	5 to 12



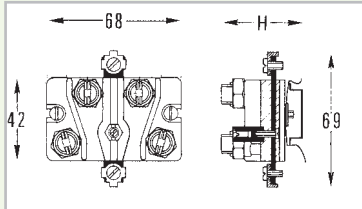
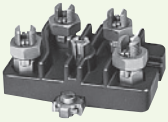
Terminals for Al and Cu cable 10-16 mm²

4 terminals with max. capacity

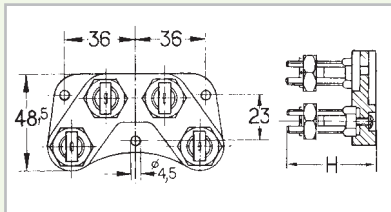
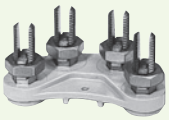
Single compression unit: 4 x 4 mm² - 4 x 6 mm² - 4 x 10 mm² - 3 x 16 mm²

Double compression unit is optional

Fixation	Earth terminal	H	10-16 mm ²	
with screws	without	46	779212	5
on DIN-profile	without	48	779213	5
with screws	with	46	779214	5
on DIN-profile	with	48	779215	5



with screws	without	48	890705	5
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Double compression unit

779216 1

Set of 4 compression nuts

Insulated hood

890704 20

In rubber



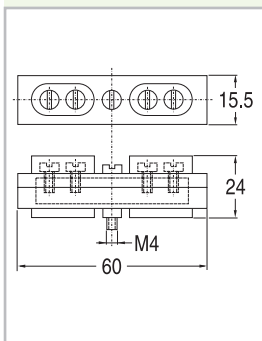
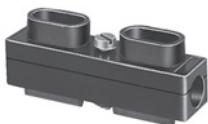
Conduct through terminal

16 mm² with double clamp

Conductors 4 - 16 mm² - 500V

Al conductors 4 - 25 mm²

601231 20



Terminals 25-35 mm²

Without insulation hood

779201 10

1 compression nut • Al/Cu cable

779202 10

2 compression nuts • Al/Cu cable

With insulation hood

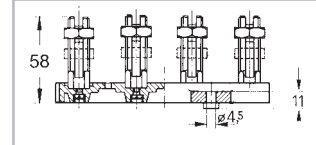
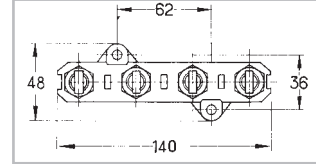
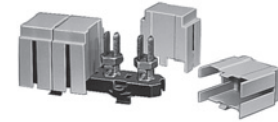
779204 10

2 compression nuts • Al/Cu cable

With insulation hood and DIN-rail fixation

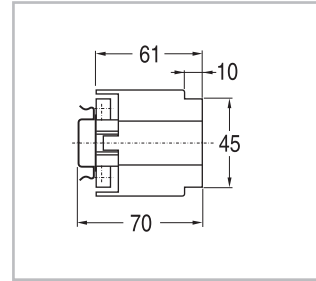
779205 10

2 compression nuts • Al/Cu cable



Insulation hood

890838 10



Double compression unit

779203 10

Set of 4 compression nuts

Key

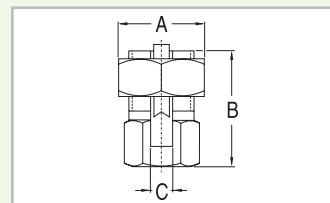
601222 1

Insulated key M20 - 1000V for terminals 25-35 mm².



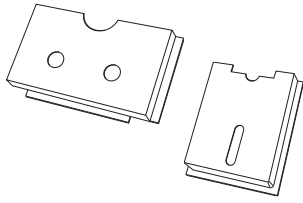
Cable connection for outer lines

	Section	A	B	C	
601227	100	10 mm ²	14	24	4.5
601228	50	16 mm ²	22	29	5.5
601229	25	35 mm ²	25	35	7.5
601230	25	50 mm ²	28	43.5	9.0



General Purpose Enclosures

Document pocket - Self adhesive




	811516	1
DIN A4		325 W x 180 H
	832000	1
DIN A5 transparent		155 W x 225 H

Marking strip




	851321	1m
		Self-adhesive

Blanking plates




	610142	10
		For 4 modules break off 1/2 module

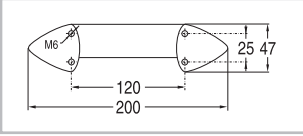


	828056	1m
		Spare blank plate for screening off rectangular openings


Handle



	851244	1
		Heigh 50 mm
		With reinforced rib + screws
		Made of Vyncolite



Enclosure lighting

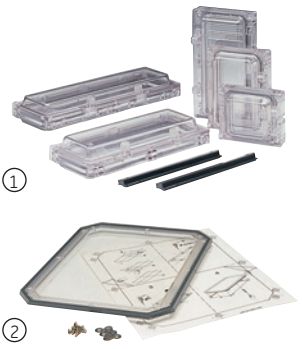
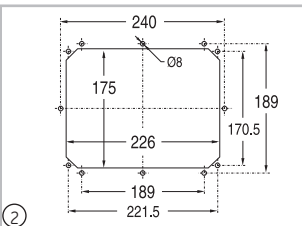
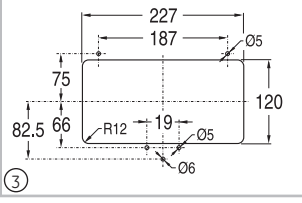
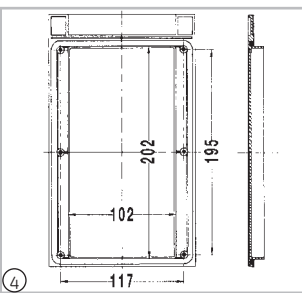
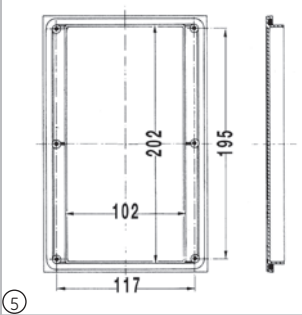


	818192	1
		230V 50/60Hz 11W
		With magnetic attachment
		355 x 65 x 65 mm
	818112	1
		With "Schuko" socket 250V/16A
	818191	1
		With "CEBEC" socket 250V/16A
		Without cover
		Cover for lamp

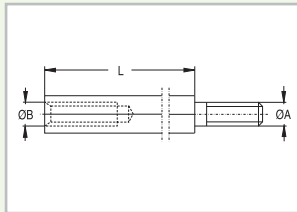
Surface-mounted windows

Including drill template and mounting

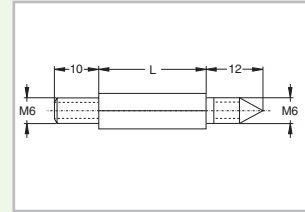
①	861395	1
		77 x 60 mm - 2 mod.
①	861396	1
		77 x 96 mm - 4 mod.
①	861397	1
		77 x 130 mm - 6 mod.
①	861398	1
		77 x 163 mm - 8 mod.
①	861399	1
		77 x 200 mm - 10 mod.
②	866001	1
		Screwed IP67
③	890837	1
		Hinged, with gasket IP55
④	866002	1
		Screwed IP67, with indication strip
⑤	866003	1
		Screwed IP67, without indication strip

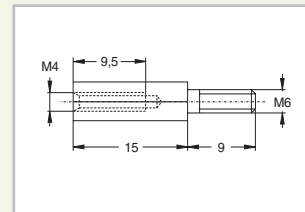

Height extension studs				
L (mm)	Ø A	Ø B	Type M4	
10	M4	M4		890800 50
15	M4	M4		890801 50
20	M4	M4		890802 50
25	M4	M4		890803 50
30	M4	M4		890804 50
60	M4	M4		890805 50
65	M4	M4		890806 50
97	M4	M4		890807 50
102	M4	M4		890808 50



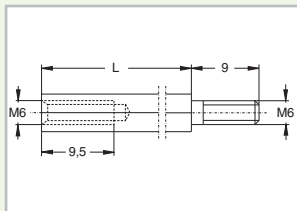
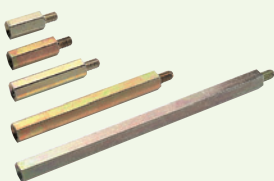
Height extension studs			
Type M6		L (mm)	Ø
811342	100	60	M6-M6
811343	100	30	M6-M6



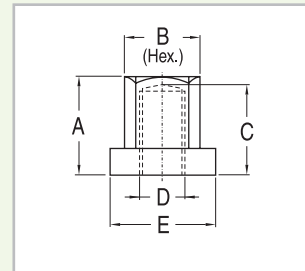
Type M4-M6			
811336	100	15	M6-M4



Height extension studs				
L (mm)	Ø	Type M6		
15	M6-M6		811337	100
20	M6-M6		811338	100
25	M6-M6		811454	100
30	M6-M6		811339	100
35	M6-M6		811455	100
45	M6-M6		811456	100
55	M6-M6		811457	100
65	M6-M6		811458	100
70	M6-M6		811340	100
80	M6-M6		811460	100
100	M6-M6		811461	100
120	M6-M6		811341	100

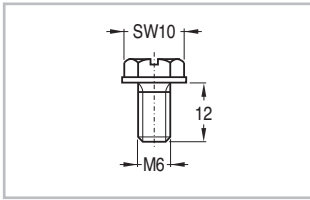


Insulated nuts (grey RAL 7035)							
			A	B	C	D	ØE
601223	100	M4	15	13,2	8,5	M4	11
601224	100	M5	18	17,0	10	M5	14
601225	100	M6	22,3	20,4	9	M6	17
601226	50	M8	25,3	24,2	10	M8	20



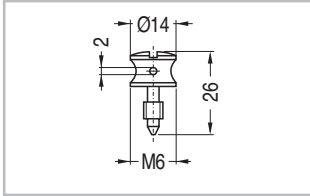
General Purpose Enclosures

Screws



811483 100

Screws M6 with flanges



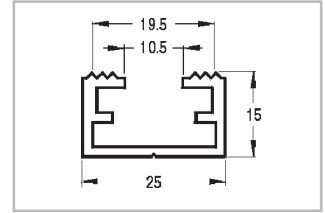
811451 100

Screws M6 in PVC for cover plate (sealable)

Aluminium profiles

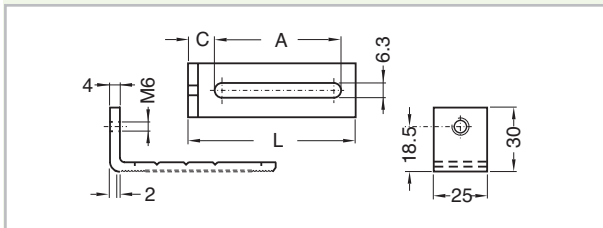
Profile length 3 m

811417 1

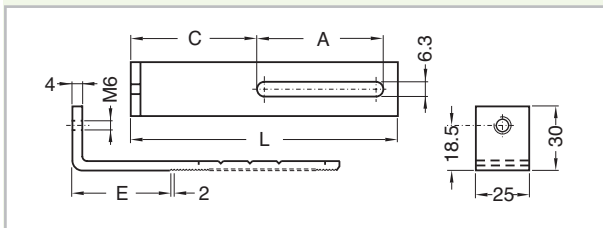


Brackets

L	A	C	E		
25	10	9,5	-	811477	100
40	24	9,5	-	811478	100
80	64	9,5	-	811479	100



120	64	49,5	41,5	811480	100
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Intro

A

B

C

D

E

F

G

H

I

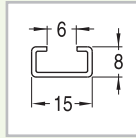
X



Galvanised profiles

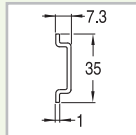
890848 1

Profile C 15 x 8 x 1
Length: 3 m



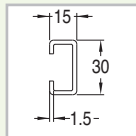
890847 1

DIN profile 35 x 7.3 x 1
Length: 3 m



811619 1

Profile C 30 x 15 x 1.5
Length: 3 m



811363 25

Sliding nuts for C 30 x 15
M6



811365 50

Sliding nuts for C 25 x 10
M6



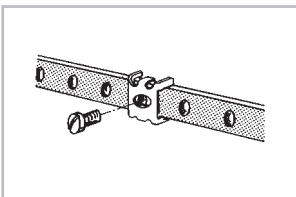
811263 1

Cu profile 12 x 5 with thread M 5
Length: 3 m



851123 10

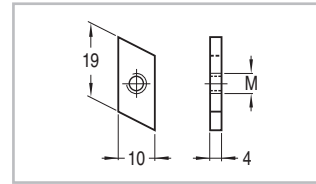
Connectors + screws M 5 x 13
Max. 2 x 10 mm² per connector



Nuts in metal

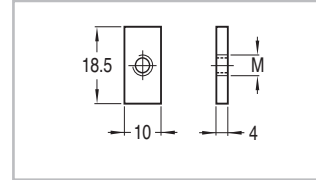
811435 100

M6



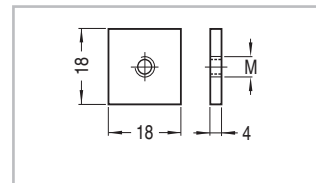
811438 100

M4



811442 100

M6



811446 100

M6

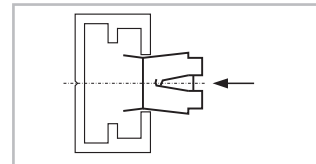
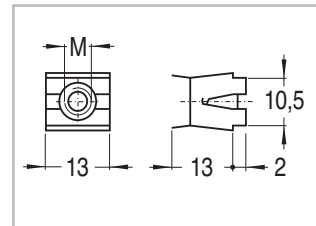
811447 100

M8

Nuts in PVC

811443 100

M6



Sliding nuts

For perforated mounting plate

831328 50

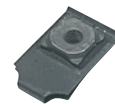
Bolt M4

831329 50

Bolt M5

831330 50

Bolt M6












Height extension studs

610312 10

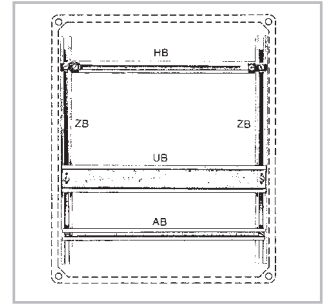
For use on symmetrical
DIN-rail
Height: 21 mm



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Fixation material	
	890835 10 Sliding contact + screw M4
	890836 10 Sliding contact + washer + screw M4
	890842 10 Set for meter fixation M4
	890843 20 Screw M5 for meter fixation L = 11 mm
	890844 20 Screw M5 for meter fixation L = 21 mm
	890849 50 Screw M 4 x 8
	890841 50 Sliding nut M4
	890850 20 Washer M4
	890840 20 Coupling kit
	890839 25 Cross fixation for C-profiles

Profiles			
Type AB (C 15 x 8)			
Profile length	Width of the box		
100 mm	150	890809	10
135 mm	185	890812	10
250 mm	300	890817	10
320 mm	370	890822	10
506 mm	555	890827	10
550 mm	600	890831	10
Type HB (C 15 x 8)			
Profile length	Width of the box		
110 mm	185	890813	10
225 mm	300	890818	10
295 mm	370	890823	10
481 mm	555	890828	10
525 mm	600	890832	10
Type UB (1)			
Profile length	Width of the box		
90 mm	150	890810	10
100 mm	150	890811	10
135 mm	185	890814	10
200 mm	250	890816	10
250 mm	300	890820	10
276 mm	300	890819	10
320 mm	370	890824	10
506 mm	555	890829	10
550 mm	600	890833	10
(1) DIN 46.277/bl.3			
Type ZB (C 15 x 8)			
Profile length	Height of the box		
105 mm	185	890815	10
220 mm	300	890821	10
290 mm	370	890825	10
405 mm	485	890826	10
476 mm	555	890830	10
520 mm	600	890834	10



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I.2	Abbreviations	I.49	MultiBox
I.3	Advantages of polyester enclosures	I.50	MultiBox Xtra
I.4	Degrees of protection	I.51	APO
I.6	Engineering specifications	I.52	MultiCab
I.9	Legal units	I.53	ARIA
I.10	Dimensional drawings	I.54	PolySafe
I.10	Flex-o-Box	I.55	VMS
I.10	Series 55	I.56	Fix-o-Rail Senior
I.11	Street lighting pole boxes	I.57	QuiXtra 630
I.12	MultiBox	I.58	QuiXtra 4000
I.14	MultiBox Xtra	I.59	EH1
I.16	APO	I.61	EH2
I.15	MultiCab	I.61	EH3/F & EH3/AP
I.20	ARIA	I.62	EH3/GD
I.22	PolySafe	I.62	EH4
I.24	VMS	I.64	RVS
I.28	Fix-o-Rail Senior	I.65	UC-Cabinet
I.29	QuiXtra 630	I.66	Power dissipation values
I.30	QuiXtra 4000	I.67	MultiBox
I.32	EH1	I.68	APO
I.33	EH2	I.70	ARIA
I.34	EH3	I.72	PolySafe
I.38	EH3/GD	I.74	VMS
I.40	EH4	I.75	Fix-o-Rail Senior
I.42	RVS	I.76	QuiXtra 630
I.45	UC-Cabinet	I.80	QuiXtra 4000
I.46	Ventilation	I.84	EH1 • EH2 • EH4
		I.85	EH3
		I.86	RVS

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General Purpose Enclosures

Agreements

	AS	Australia
	ÖVE	Austria
	CEBEC	Belgium
	CSA, CEC	Canada
	DEMKO	Denmark
	SETI	Finland
	UTE	France
	VDE	Germany
	BS	Great Britain
	ASTA	Great Britain
	IMQ	Italy
	KEMA	Netherlands
	NEMA	North America
	NEMKO	Norway
	CERTIF	Portugal
	AEE	Spain
	SEMKO	Sweden
	SEV	Switzerland
	UL, NEC, OSHA	U.S.A.
	UR	U.S.A.
	Lloyd's Register of Shipping	
	Germanischer Lloyd	

Abbreviations

Al	Aluminium
ASTM	American Society for Testing Materials
BS	British Standards
CENELEC	European Committee for Electrotechnical Standardisation (Comité Européen de Normalisation Electronique)
CCA	Cenelec Certification Agreement
Cu	Copper
DIN	Deutsche Institut für Normung e.V.
E ..	Edison thread
IEC	International Electrotechnical Commission
IP..	Protection degree
M..	Metric thread
NBN	Belgian Standards (Norme belge / Belgische norm)
NEN	Dutch Standards (Nederlandse norm)
NF	French Standards (Norme française)
1P	Unipolar
2P	Bipolar
3P	Tripolar
4P	Tetrapolar
PG..	Thread following DIN 40430 (Panzerrohrgewinde)
RAL..	Colour Standard (Ausschuss für Lieferbedingungen und Gütesicherung)
VDE	Verband Deutscher Elektrotechniker



Advantages of polyester enclosures



Temperature resistant



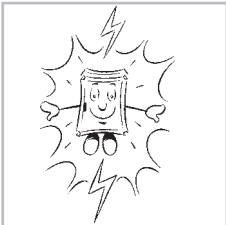
Temperature resistant



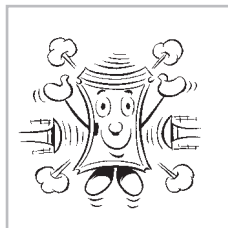
Corrosion resistant



Self extinguishing



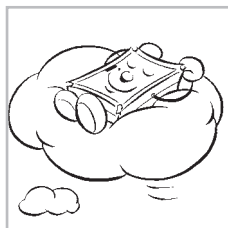
Total insulation



Impact resistant



High IP rating



Lightweight

Normal corrosion resistance

Acid rain

Saline corrosion resistance

Sea shore

Extreme corrosion resistance

Industry

Impact resistance

Up to 50J

Total insulation

Polyester enclosures provide protection against indirect electrical contact

Maintenance free

Self extinguishing

Limit fire propagation

Fire retardant

Protect equipment

Halogen-free

No toxic gas release in a fire

Coloured in mass

U.V.-resistant

High IP rating

Gasket tongue/groove arrangement
Polyurethane gasket

- no joint
- gasket stick on bottom and sides

Temperature resistant

Resist to wide temperature variations without modification of properties
(FRP: -50°C to +150°C)

Lightweight

Weight: 1/4 of steel
Easy to handle

Constant quality

Because of machine moulding

Installer friendly

Easy to work (standard tools)
Easy to install (mounting feet, lightweight)
Easy to maintain (when scratches occur, some vaseline gives back appearance of FRP)

Aesthetic

Suitable for indoor/outdoor designs

Condensation limiting

Reduced change of inside condensation versus metallic enclosures

Technical data

- on protection degrees, see pages I.4-I.5
- on materials, see page I.6-I.8

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



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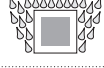
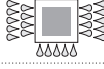
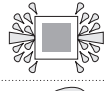





General Purpose Enclosures

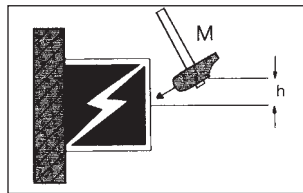
Degrees of protection of the electrical equipment up to 1000V a.c. and 1500V d.c.

IP X1 X2 according to IEC 60529 (2001) and EN 60529 (1991)

X1 Protection of persons against contact with live parts Protection of equipment against ingress of solid foreign bodies		
	Test	
0		No protection
1		Against access with hand and ingress of solid objects greater than 50 mm
2		Against access with finger and ingress of solid objects greater than 12 mm
3		Against access with tools and ingress of solid objects greater than 2.5 mm
4		Against access with wires of strips and ingress of solid objects greater than 1 mm
5		Complete protection against contact with live parts and ingress of harmful deposits of dust
6		Complete protection against contact with live parts and ingress of dust

X2 Protection against ingress of liquids		
	Test	
0		No protection
1		Against vertically falling drops
2		Against drops of falling liquid at an angle up to 15° from the vertical
3		Against water falling in rain at an angle up to 60° from the vertical
4		Against water splashed from any direction (over 360°)
5		Against water jets from any direction (over 360°)
6		Against water projected in powerful jets as from heavy seas
7		Against immersion in water under defined conditions of pressure and time
8		Against continuous submersion in water

After 10 strokes, the enclosure should show neither visible crack or damage that might jeopardize the protection degree IP X1X2



* = no protection

X3 Protection against external mechanical damage According to NBN C20-001 Impact strength			
	Hammer mass (kg)	Fall (m)	Impact energy (J)
0.5	M = 0.15	h = 0.1	0.2
1	M = 0.15	h = 0.15	0.3
1.5	M = 0.15	h = 0.2	0.4
2	M = 0.15	h = 0.25	0.5
3	M = 0.25	h = 0.2	0.6
4	M = 0.5	h = 0.2	1
5	M = 0.5	h = 0.4	2
6	M = 1.5	h = 0.27	4
7	M = 1.5	h = 0.4	6
8	M = 5	h = 0.2	10
9	M = 5	h = 0.4	20
10	M = 15	h = 0.235	35
11	M = 15	h = 0.4	60

IK Protection against external mechanical damage According to EN 62262 and IEC 62262 Impact strength			
	Hammer mass (kg)	Fall (mm)	Impact energy (J)
00	*	*	*
01	M = 0.25	h = 56	0.14
02	M = 0.25	h = 80	0.2
03	M = 0.25	h = 140	0.35
04	M = 0.25	h = 200	0.5
05	M = 0.25	h = 280	0.7
06	M = 0.25	h = 400	1
07	M = 0.5	h = 400	2
08	M = 1.7	h = 300	5
09	M = 5	h = 200	10
10	M = 5	h = 400	20
	M = 10	h = 500	50

Explanation

The standard NBN C20-001/A was valid until April 15, 1997. The tables mentioned above are classified according to the impact energy.

The IPxx-X3 values and the IK-values can not just be compared to each other, because there exists a difference between the form of the hammer and the

number of tests. In that case, it is impossible to set up a conversion table. Notice that no value was defined to replace the IPxx-11. If a shock resistance higher than IK10 is needed, the new standard will only provide a recommendation.

The IK-value is shown with a figure of two numbers to exclude the confusion with the IPxx-X3 value.





Degrees of protection

Type	Intended use and description	Type	Intended use and description	Type	Intended use and description
1	Indoor use, primarily to provide a degree of protection against limited amounts of falling dirt.	4	Indoor or outdoor use, primarily to provide a degree of protection against windblown dust and rain, splashing water, hose-directed water and damage from external ice formation.	12 12K	Indoor use, primarily to provide a degree of protection against circulating dust, falling dirt and dripping non-corrosive liquids.
2	Indoor use, primarily to provide a degree of protection against limited amounts of falling water and dirt.	4X	Indoor or outdoor use, primarily to provide a degree of protection against corrosion, wind blown dust and rain, splashing water, hose-directed water and damage from external ice formation.	13	Indoor use, primarily to provide a degree of protection against dust, spraying of water, oil and non-corrosive coolant.
3	Outdoor use, primarily to provide a degree of protection against rain, sleet, wind blown dust and damage from external ice formation.	5	Indoor use, primarily to provide a degree of protection against settling airborne dust, falling dirt and dripping noncorrosive liquids.		
3R	Outdoor use, primarily to provide a degree of protection against rain, sleet and damage from external ice formation.	6	Indoor or outdoor use, primarily to provide a degree of protection against hose-directed water and the entry of water during occasional temporary submersion at a limited depth and damage from external ice formation.		
3S	Outdoor use, primarily to provide a degree of protection against rain, sleet, windblown dust and to provide for operation of external mechanisms when ice laden.	6P	Indoor or outdoor use, primarily to provide a degree of protection against hose-directed water, the entry of water during prolonged submersion at a limited depth and damage from external ice formation.		

Rating of enclosures following UL 50 and CSA C22.2 no. 94-M91

Enclosure	1	2	3	3R	3S	4	4X	5	6	6P	12	12K	13
APO													
With polyester cover	•		•	•		•	•		•	•	•		•
With polycarbonate cover	•		•	•		•	•		•	•	•		•
With hinged cover	•		•	•		•	•		•	•	•		•
With polyester cover and stainless steel hinges	•		•	•		•	•		•	•	•		•
With polycarbonate cover and stainless steel hinges	•		•	•		•	•		•	•	•		•
With polyester cover and plastic hinges	•		•	•		•	•		•	•	•		•
With polycarbonate cover and plastic hinges	•		•	•		•	•		•	•	•		•
With polyester cover and depth extension frame	•		•	•		•	•		•	•	•		•
With polycarbonate cover and depth extension frame	•		•	•		•	•		•	•	•		•
With hinged cover and depth extension frame	•		•	•		•	•		•	•	•		•
With polyester cover, depth extension frame and stainless steel hinges	•		•	•		•	•		•	•	•		•
With polycarb. cover, depth extension frame and stainless steel hinges	•		•	•		•	•		•	•	•		•
With polyester cover, depth extension frame and plastic hinges	•		•	•		•	•		•	•	•		•
With polycarbonate cover, depth extension frame and plastic hinges	•		•	•		•	•		•	•	•		•
VMS													
Single	•	•	•	•	•			•			•	•	
Modular system	•	•	•	•	•			•			•	•	
Modular system using coupling set 853063	•	•	•	•				•			•	•	
With hinged cover	•	•	•	•				•			•	•	
With external plastic hinges	•	•	•	•				•			•	•	
ARIA													
Standard	•		•	•	•	•	•				•	•	•
PolySafe													
Factory assembled with single door	•		•	•	•	•	•				•	•	•
Factory assembled with double door	•		•	•	•	•	•				•	•	•
Factory assembled coupled cabinets	•		•	•	•	•	•				•	•	•
Factory assembled with drain ventilators	•		•	•	•	•	•				•	•	•

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Plastics

A plastic is a material that can be formed and shaped into finished articles using heat (thermoformed). It has a molecular structure that consists of very long chains of polymers formed by the interaction of many molecules (monomers) or molecular pairs.

A distinction is made between thermoplastics and thermosettings.

Thermoplastics

Made by injection of the molten plastic into a cool mould. Parts formed from thermoplastics can be repeatedly softened by an increase of temperature. Most thermoplastics are soluble in a suitable organic solvent.

Thermosettings

Made by forming the plastic objects in a hot mould. Once formed, it becomes substantially infusible and also insoluble because of the crosslinked molecular structure. Thus products from materials made using thermosettings do not melt upon heating and are practically insoluble to most commercial solvents. Some softening under the effect of commercial solvents is however possible.

Advantages of plastics

Double insulation ensures perfect safety against direct and indirect contact.

The frame does not need **to be earthed**.

Unlike metals, plastics are **corrosion-resistant**.

The enclosures are homogeneous, thus they do **not require any maintenance** even when scratched, as only more of the same materials will be exposed.

Due to their **light weight** plastic enclosures can be very easily handled and installed.

Technical data of plastics

Properties	Standards	Unit	Polyester glassfibre reinforced
Mechanical			
Impact strength	ISO179	kJ/m ²	55
Notched impact strength	ISO 179	kJ/m ²	55
Flexural strength	ISO 178	MPa	150
Tensile strength	ISO 3268	MPa	50-60
Electrical			
Tracking resistance	IEC 112	V/50dr	KC600
Surface resistivity	IEC 93	Comparative fig.	12
Special resistivity	IEC 93	Ω cm	≥ 10 ¹²
Dielectric strength	IEC 243	kV/mm	18
Physical			
Deflection temperature	ISO 74/A	°C	> 250
Vicat softening point	ISO 306/B50	°C	-
Temperature resistance	continuous	°C	-50 to +130
Colour fastness	ISO 877	Blue wool scale 1-8	8
Tropicalisation and resistance to mould and fungus growth	IEC 68-2-3	-	no degradation
Water absorption	ISO 62/1 96h	mg	45
Density	ISO 1183	kg/dm ³	1.75
Flame resistance			
Oxygen index	ISO 4589	% O ₂	26
Flammability	UL 94 (3 mm)		94 HB
Hot wire resistance	IEC 695-2-11	°C	960
Toxicity of fumes	ISO 4615	% Cl	halogen-free



Special features

Polyester (UP)

A thermoset derived from unsaturated polyester resins reinforced with glass fibres. Readily worked with common tools such as drills, punches and saws. Polyester enclosures are ideally suited for outdoor installations and use in hot, humid and/or chemically aggressive environments. The glassfibre has a minimum diameter of 12 μ and is considered as not harmful.

Polystyrene and related polymers (PS/SB/ABS)

Polystyrene is a general purpose thermoplastic with good electrical properties.

Where higher impact resistance is needed, styrene-butadiene (SB) or acrylonitrile-butadiene-styrene (ABS) is used.

Polyurethane (PUR)

Thermosetting material, with good chemical resistance. In its foamed and elastic form it is used for gaskets.

Neoprene rubber (CR)

Elastomer with excellent chemical resistance and excellent flame resistance.

Ethylene-propylene-terpolymer (EPDM)

Elastomer with good chemical resistance and excellent aging resistance.

Polycarbonate (PC)

Thermoplastic with high impact resistance over a wide temperature range. The UV-stabilised grades can be used for outdoor applications.

Polyphenylene oxide (PPO)

Thermoplastic with good mechanical rigidity and excellent dimensional stability.

This material is normally not used for outdoor applications because of its tendency to discolour when exposed to UV-radiation.

Polyamide (PA)

Thermoplastic with good mechanical, thermal and electrical properties. It is resistant to most commonly used solvents, but is readily attacked by acids.

Polybutyleneterephthalate (PBT)

Thermoplastic with good electrical, chemical and thermal resistance.

Polyvinylchloride (PVC)

Thermoplastic with good resistance to weathering and excellent flame resistance.

Polycarbonate	Polycarbonate glassfibre reinforced	PPO	PA6 (2.5% humidity)	PVC
no rupture	50	40	40	25
30-50	15	15	25	20
no rupture	160-170	no rupture	no rupture	no rupture
65-70	100	37	60	65
KC200	KC175	KC175	KC600	KC600
15	15	> 12	12	15
$\geq 10^{16}$	$\geq 10^{16}$	$\geq 10^{14}$	$\geq 10^{12}$	$\geq 10^{13}$
35	39	16	34	30
135	145	95	60	50
145-150	160-165	109	210-220	70
-35 to +120	-35 to +120	-35 to +80	-35 to +100	-10 to +65
4	4	4	8	4
no degradation	no degradation	no degradation	no degradation	no degradation
10	10	7	320	5
1.2	1.33	1.1	1.14	1.38 to 1.40
24.3	34.4	27.5	23	43 to 47
94 V2	94 V1	94 V1	94 V2	94 V0
850	960	960	650	960
halogen-free	halogen-free	halogen-free	halogen-free	halogens

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General Purpose Enclosures

Resistance against submersion at room temperature

Product	UP	PC	PA	PS/SB ABS	PPO	PBT	PVC	PP	PUR	Neo- prene	EPDM
Water	S	S	S	S	S	S	S	S	S	S	S
Seawater	S	S	S	S	S	S	S	S	L	S	S
Acid, diluted	S	S	NS	S	S	S	S	S	L	S	S
Acid, conc.	NS	L	NS	L	S	L	S	S	NS	L	S
Acid, oxid.	NS	NS	NS	L	L	NS	L	L	NS	NS	NS
Alkalis, diluted	L	L	S	S	S	L	S	L	L	S	S
Alkalis, conc.	NS	NS	S	S	L	L	S	S	NS	S	S
ammoniac								S			S
Salt, aqueous sol.	S	S	S	S	S	S	S	S	S	S	S
chlorides			L					S			
Alcohols	S	L	S	L	S	L	S	S	L	S	S
Ketones	L	NS	S	L	NS	NS	NS	S	NS	L	S
acetone	L	NS	S	NS	NS	L	NS	S	NS	S	S
Esters	L	NS	L	NS	NS	L	NS	S/L	L	NS	L
n-butylacetate	L	NS	S	NS	NS	L	NS	L	NS	NS	L
Ethers	L	NS	S	NS	NS	L	L	S	L	L	NS
Hydrocarbons aliphatic	S	S	S	NS	L	S	S	S	L	L	NS
white spirit	S	S	S	NS	L	S	S	S	L	L	NS
Hydrocarbons aromatic	NS	NS	S	NS	NS	L	NS	NS	L	NS	NS
xylene	L	NS	S	NS	NS	S	NS	L	NS	NS	NS
Hydrocarbons halogenated	L	NS	L	NS	NS	L	NS	L/NS	NS	ONS	NS
chlorobenzene	NS	NS	NS	NS	NS	NS	NS	S	NS	NS	NS
Mineral oils	S	NS	S	NS	S	S	S	S	S	L	NS
Oils and fats	S	NS	S	L	S	S	S	S	S	S	NS
Propylene glycol	L	S	S	S			S	NS	S		
Nitrobenzene	NS	NS	L	NS	NS	NS	NS	S	NS	NS	L
Phenol	NS	NS	NS	NS	NS	NS	L	S	NS	L	S
Temperature limits (for continuous use)											
min. (°C)	-50	-35	-35	(1)	-35	-35	-10	-5	-30	-30	-50
max. (°C)	130	120	100	70	80	120	65	65	100	90	120

By resistance is meant the maintenance of isolation and mechanical properties necessary for good functioning. An eventual changing outlook is not taken into consideration (ex. loose of gloss).

Abbreviations

S = satisfactory	UP: polyester	PPO: polyphenylene oxide
L = limited	PC: polycarbonate	PBT: polybutyleneterephthalate
NS = not satisfactory	PA: polyamide	PVC: polyvinylchloride
	PS: polystyrene	PP: polypropylene
	SB: styrene-butadiene	PUR: polyurethane
	ABS: acrylonitrile-butadiene-styrene	EPDM: ethylene-propylene-terpolymer

- (1) PS (standard): -10°C
 PS (higher impact): -20°C
 ABS: -20°C
 SB: -20°C

For satisfactory and lasting trouble-free operation of outdoor enclosures, the following precautions are recommended

Material selection

Select proper enclosure material and gasket:

- sufficient U.V. resistance
- resistance to normal corrosion (e.g. acid rain)
- resistance to saline corrosion (e.g. sea shore)
- resistance to extreme corrosion (e.g. industrial sea shore)

Glassfibre reinforced polyester enclosures satisfy all those requirements.

Ice stagnation

Avoid water stagnation on top of enclosures.

Icing, de-icing and dirt will deteriorate gaskets by allowing corrosive deposits in cracks.

For Superpolyrel 400 we recommend the use of a rainhood.

Ventilation

If condensation inside enclosure will be harmful, there are two ways to avoid it:

- natural ventilation, made by creating openings in the enclosure to allow air to circulate and remove moisture. This can be done if the required protection does not exceed raintightness
- if the enclosure must be raintight and watertight (IP55 or more), heating of the enclosure may be necessary to remove moisture.

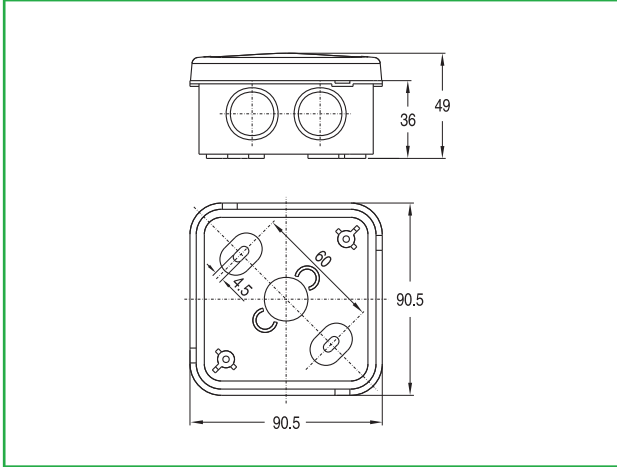


Legal units (SI), conversion and formulas

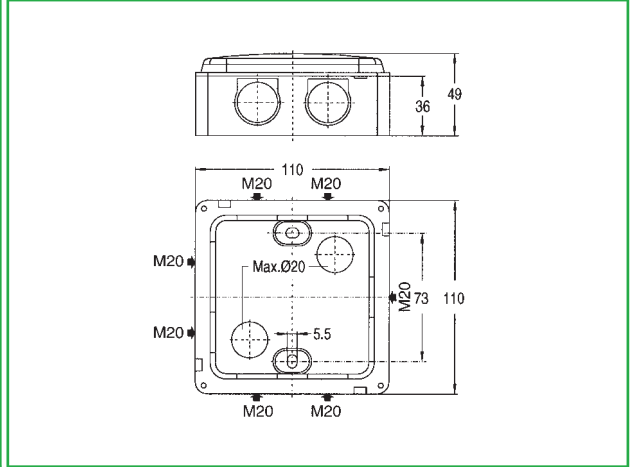
Quantity	Symbol	Formule for proportions	Unit	Abbreviation (symbol)	Related	Abbreviation (symbol)	Other units	Symbol	Conversion
Length	l		metre	m		km, hm, dam dm, cm, mm, µm, nm	Inch Foot	in ft	1 in = 2.54 cm 1 ft = 12 in = 30.48 cm
Width	w		metre	m					
Height, depth	h		metre	m					
Radius	r		metre	m					
Diameter	d		metre	m					
Way, waylength	s		metre	m	lightyear	ly	mile yard	mile yd	1 ly = 9.46 x 10 ¹² km 1 mi = 1609 m ; 1 min _{out} = 1852 m 1 yd = 0.9144 m ; 1 mi = 1760 yd
Wavelength	λ		metre	m					λ = c / f
Area	A (S)	A = l.b	square metre	m ²	are	a, ha, ca km ² , cm ² , mm ²	square inch	in ²	1 ca = 1 m ² ; 1 a = 100 m ² 1 ha = 100 a = 10 000 m ² 1 in ² = 6.45 cm ²
Volume	V	V = l.b.h	cubic metre	m ³ , dm ³ , cm ³ , mm ³	liter	l hl, dl, cl, ml 1 hl = 100 l	gallon barrel pint	gal bbl pt	1 l = 1 dm ³ ; 1 gal = 4.546 l 1 bbl = 42 gal = 158.9 l (oil Am) 1 pt = 0.5683 l 1 st = 1 m ³
Plane angle	α, β, φ		radian	rad, °	degree, min, sec rotation	° ' "			1° = π/180 rad = 60' = 3600" 1 tr = 2 rad = 360°
Mass	m		kilogram	kg	ton	t	pound ounce	mg, µg lb oz	1 t = 1000 kg 1 lb = 16 oz = 0.4536 kg 1 oz = 28.35 g
Time	t		second	s	minute, hour, day	min., h, d, ms, µs, ns			1 day = 24 h ; 1 h = 60'
Period	T		second	s					
Frequency	f	f = 1 / T	Hertz (=1/s)	Hz		kHz, MHz, GHz			
Rotation frequency (No of revolutions)	n	n = β / t		rad/s			rpm, r/s rpm, r/s		1 rpm = π / 30 rad/s
Angular velocity	ω	ω = β / t		rad/s					1 rpm = 0.10472 rad/s
Linear velocity	v, u, w	v = s / t		m/s	kilometer/hour	km/h	miles/hour	miles/h	1 mile/h = 1.61 km/h
Light velocity	c								c _i = 299 792 km/s (vacuum)
Sound velocity	c								c _g = 332 m/s in air at 0°C g = 9.81 m/s ² (Belgium)
Acceleration	a	a = δv/δt		m/s ²	earth acceleration	g			
Output	q	q = v/t		m ³ /s					
Force	F	F = m.a	Newton	N (kg.m/s ²)		kN, MN	[kg-force]	[kgf]	[1 kgr = 9.81 N]
Weight	G	G = m.g	Newton	N					
Pressure	p	p = F / A(S)	Pascal	Pa (N/m ²)	hecto Pascal	hPa	bar mmmerc.col mmwat.col lb/squareinch electronvolt	bar mm Hg mm H ₂ O psi eV	1 bar = 10 ⁵ Pa ; 1 hPa = 100 Pa 1 mm Hg = 133.322 Pa 1 mm H ₂ O = 9.81 Pa 1 psi = 6.894 kPa 1 eV = 0.160219 10 ⁻¹⁸ J 1 kWh = 3 600 000 J
Energy, work	W, E	W = F.s W = P.t	Joule (= N.m) Joule (= W.s)	J (N.m) J	kilowatthour	kJ, MJ kWh	calory therm	cal therm	1 kcal = 4 187 J 1 therm = 105 506 k J
Moment of force	M	M = F.r	Newtonmeter	N.m		kN.m, kN.cm, N.cm			
Quantity of heat	Q		Joule	J		kJ, MJ	calory therm	cal therm	1 kcal = 4 187 J 1 therm = 105 506 k J
Power	P	P = W / t P = F.v	Watt	W(=J/s) W(=N.m/s)	kilowatt	mW, kW, MW	horse power kcalory/hour	hp kcal/h	1 hp = 736 W 1 kcal/h = 1.163 W
Thermodynamic temperature	T, θ		degree Kelvin	°K	degree Celsius	°C	degree Fahrenheit	°F	1°C = 1 K ; °C = (x + 273.15)K 1°F = 5/9 °C ; °F = 5/9(x-32)°C
Electrical current	I		ampere	A		µA, mA, kA			
Voltage	E, U		Volt	V		kV, mV, ÷V			
Resistance	R	R = U/I	Ohm	Ω		MΩ, kΩ, mΩ			1 Ω = 1V / 1A
Impedance	Z	Z = U/I	Ohm	Ω		MΩ, kΩ, mΩ			
Power (DC)	P	P = U.I	Watt	W		MW, kW, mW			1 W = 1V, 1A
Power (AC)									
Single phase	active	P = U.I.cosφ	Watt	W		MW, kW, mW			1 W = 1V, 1A
reactive	Q = U.I.sinφ	VAreactive	var			kvar			cos φ = P/S = P/√(P ² +Q ²)
apparent	S = U.I	Volt-ampere				kVA, MVA			S ² = P ² + Q ²
Three-phase	active	P = √3.U.I.cosφ	Watt	W		MW, kW, mW			
reactive	Q = √3.U.I.sinφ	VAreactive	var			kvar			
apparent	S = √3.U.I	Volt-ampere	VA			kVA, MVA			
Energy Consumption Active									
Single phase	Wa	Wa = U.I.t.cosφ	Joule	J		kWh			1 kWh = 3 600 000 J
Three-phase	Wa	Wa = √3.U.I.t.cosφ	Joule	J		kWh			1 kWh = 3 600 000 J
Energy Consumption Reactive									
Single phase	Wr	Wr = U.I.t.sinφ				kvarh			cos φ = Wa/√(Wa ² +Wr ²)
Three-phase	Wr	Wr = √3.U.I.t.sinφ				kvarh			
Resistance conductors	R	R = ρ.L/S	Ohm	Ω	ρ in Ω mm ² /m	L in m	S in mm ²		ρ _{cu} = 0.0178 Ω.mm ² /m
Efficiency	η	η = Pn/Pt							Pn = useful power Pt = added power
Motor slip	s	s = (ns-nr).100/ns	percent	%					ns = f.60/p Pt = Pn/η
Power mec	Pn(Pmec)	Pn = 2π x Cm.n/60							



Flex-o-Box Junior

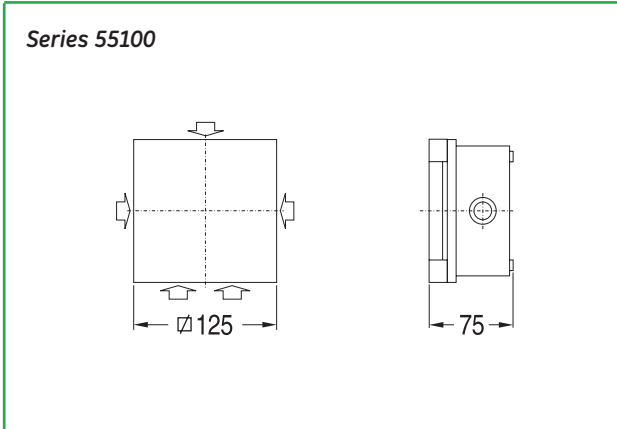


Flex-o-Box JB⁶

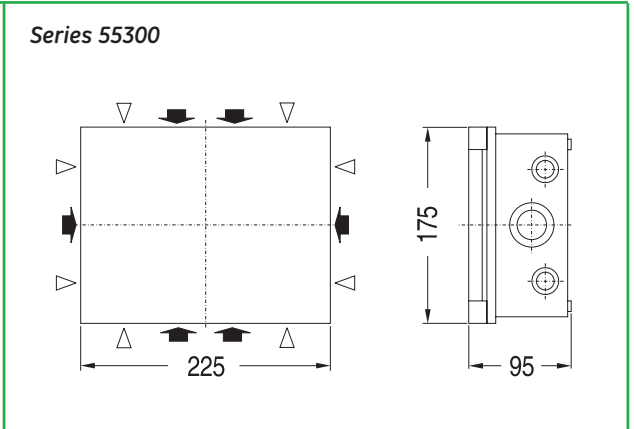


Series 55

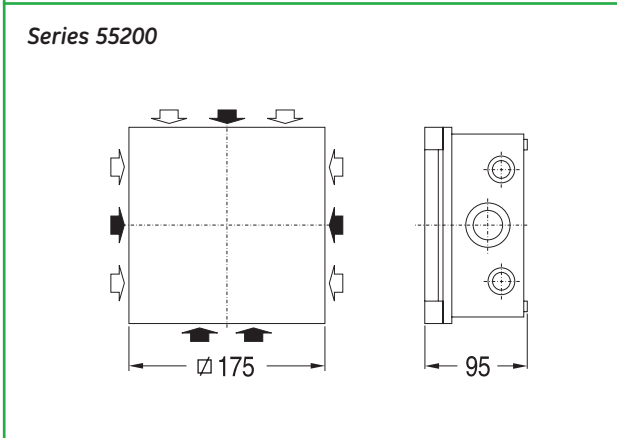
Series 55100



Series 55300



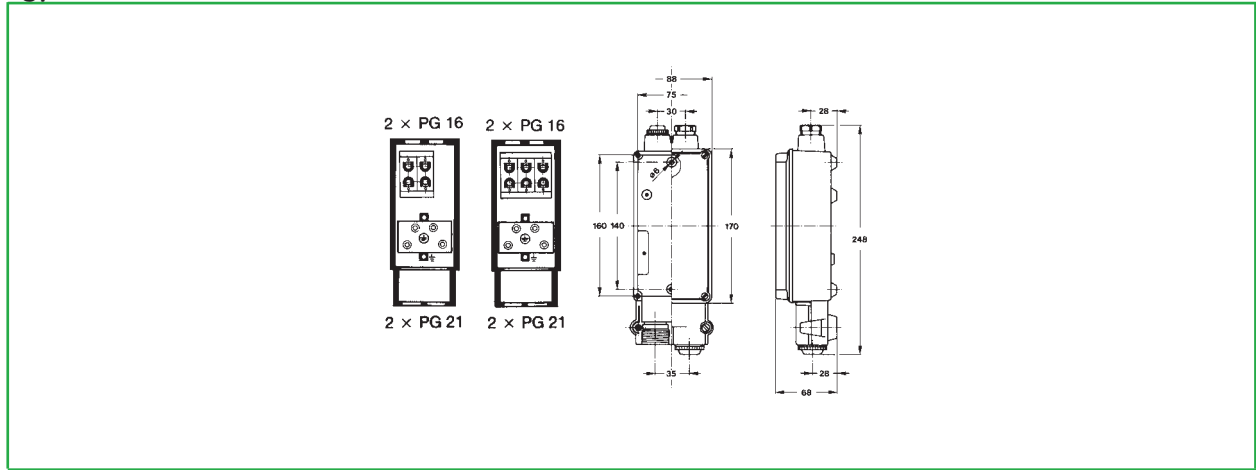
Series 55200



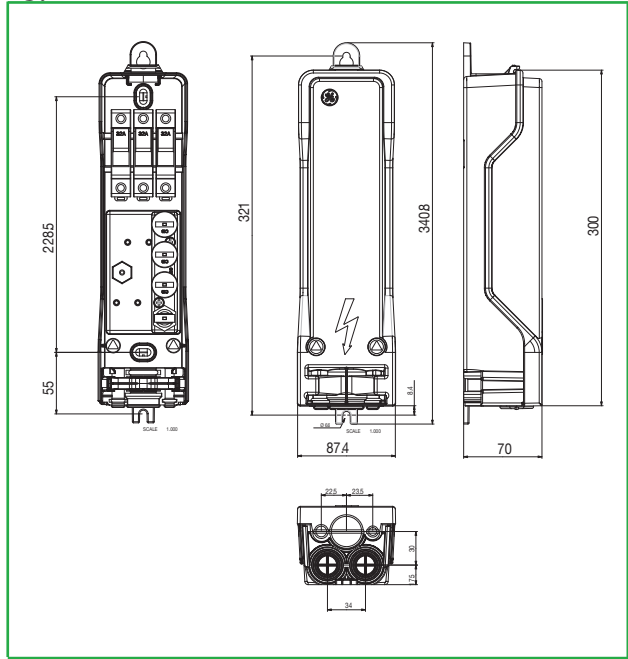
- ▽ PG 21
- ◁ PG 16/21
- ▾ PG 21/29



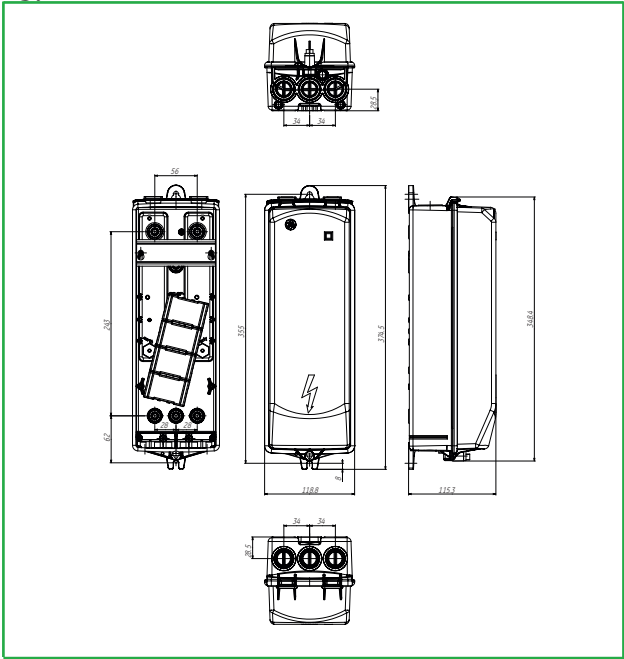
Type A



Type D



Type E



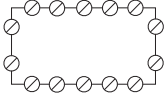

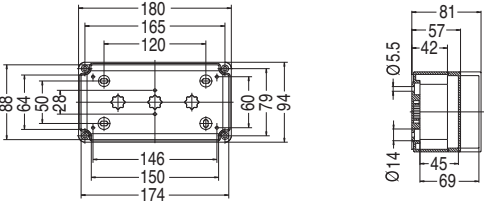
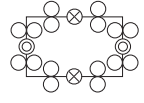
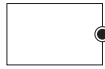
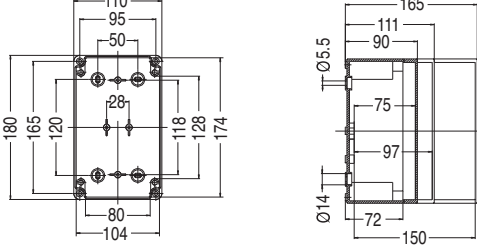
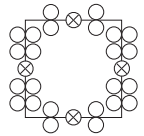
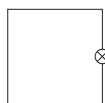
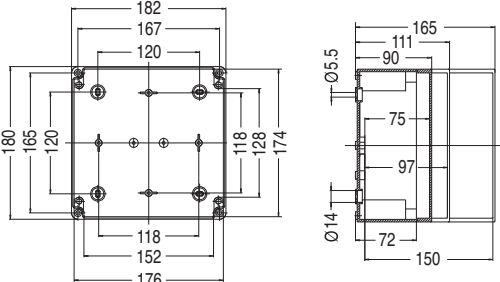
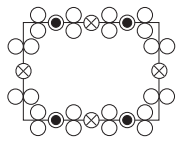

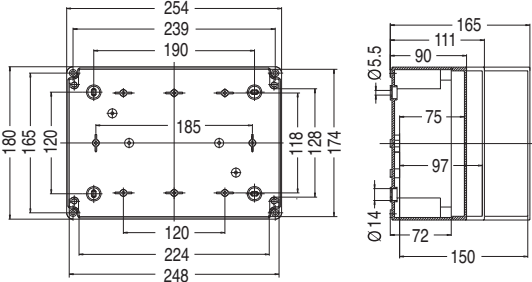
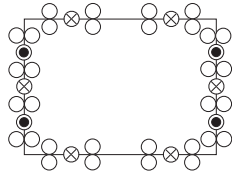

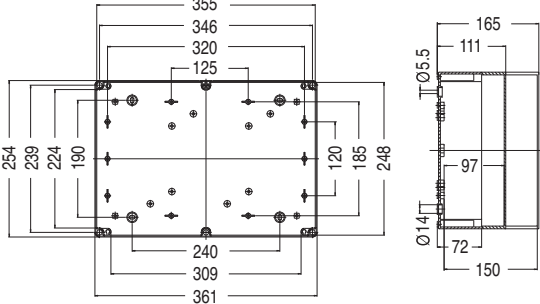
MB11 - MB44

	Polystyrene/Polycarbonate	Polycarbonate (*)			
MB11			Metric knockouts ⊙ = M16/20		
MB21			Metric knockouts ⊙ = M16/20		
MB22			Metric knockouts ⊙ = M16/20		
MB33			Metric knockouts ⊙ = M20/25		
MB42			Metric knockouts ⊙ = M16/20		
MB44			Metric knockouts ○ = M20 ⊙ = M20/25 ● = M25/32		

(*) Smooth = one metric knock-out on short side for power supply cord



MB52 - MB87

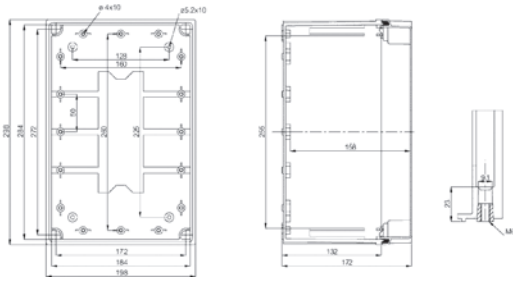
Polystyrene/Polycarbonate	Polycarbonate (*)		
<p>MB52</p> 		<p>Metric knockouts ○ = M16/20</p>	
<p>MB53</p> 		<p>Metric knockouts ○ = M20 ⊙ = M20/25 ● = M25/32 ⊗ = M32/40</p>	
<p>MB65</p> 		<p>Metric knockouts ○ = M20 ⊗ = M32/40</p>	
<p>MB75</p> 		<p>Metric knockouts ○ = M20 ● = M25/32 ⊗ = M32/40</p>	
<p>MB87</p> 		<p>Metric knockouts ○ = M20 ● = M25/32 ⊗ = M32/40</p>	

(*) Smooth = one metric knock-out on short side for power supply cord

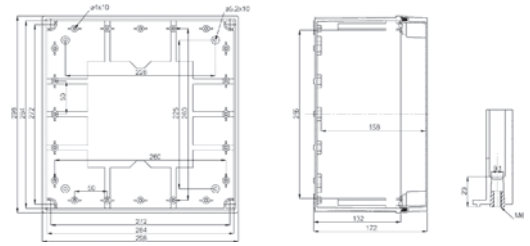


Boxes

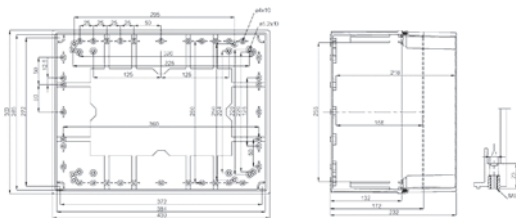
MBX 32



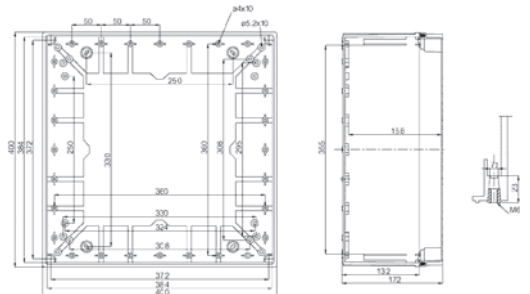
MBX 33



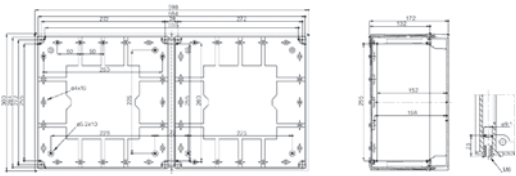
MBX 431 & 432



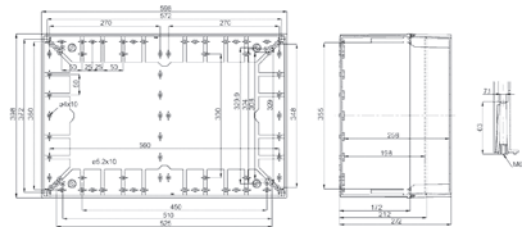
MBX 44



MBX 63

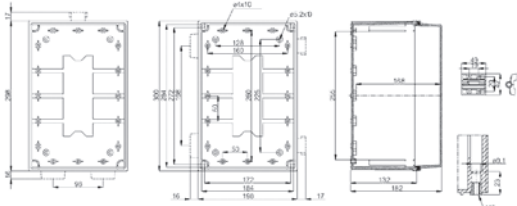


MBX 641 & 642

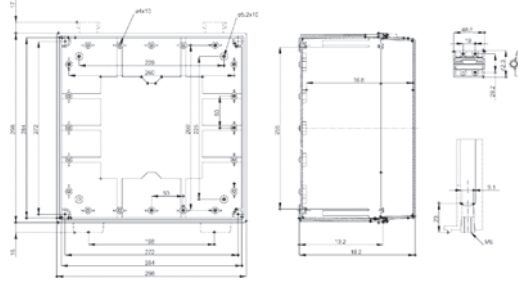


Cabinets

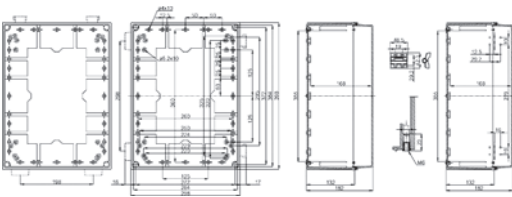
MC 32



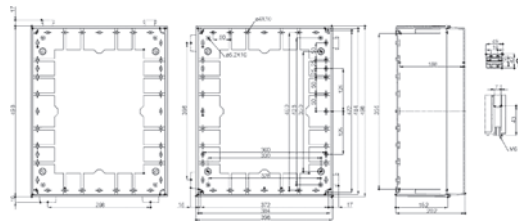
MC 33



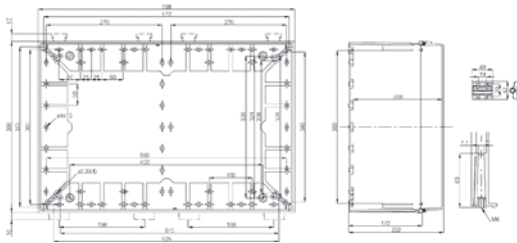
MC 43



MC 54



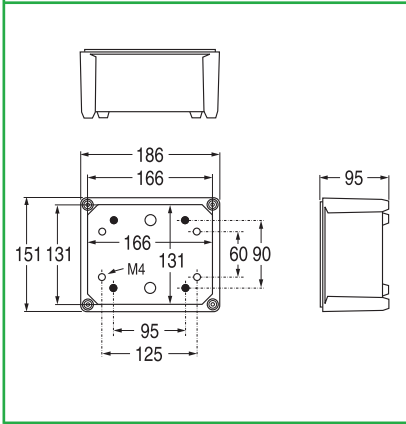
MC 64



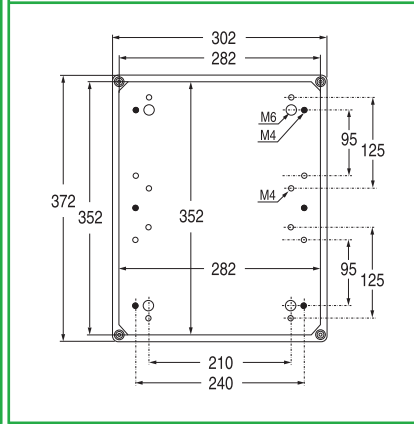
Bases

● = insert standard delivered in APO boxes (base + cover)
 ○ = with insert M4 or M6

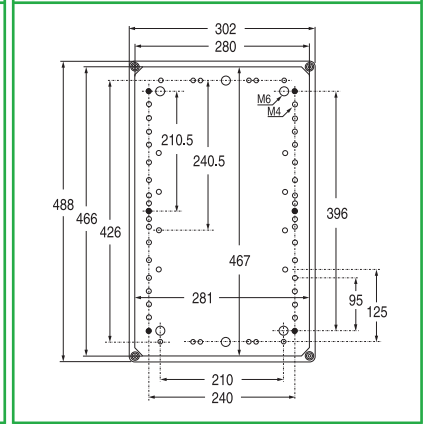
APO 1



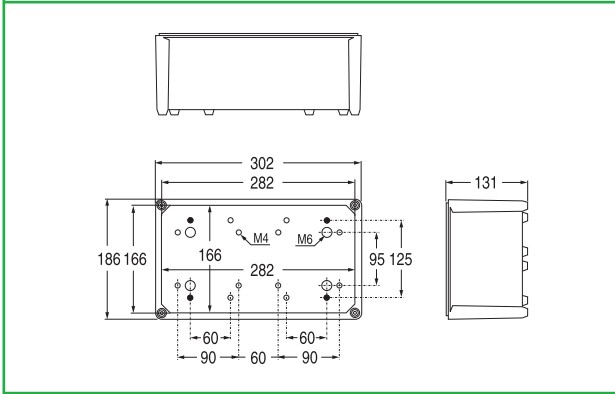
APO 71



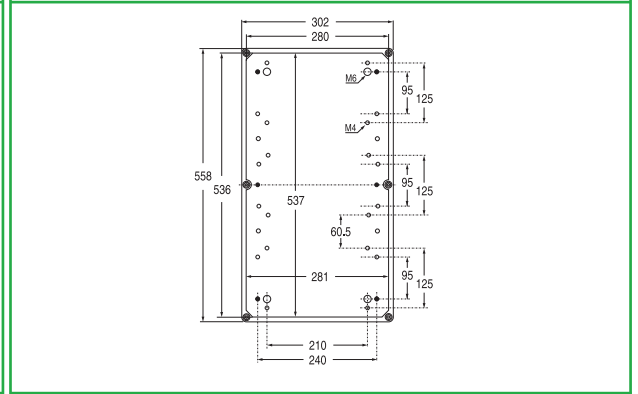
APO 51



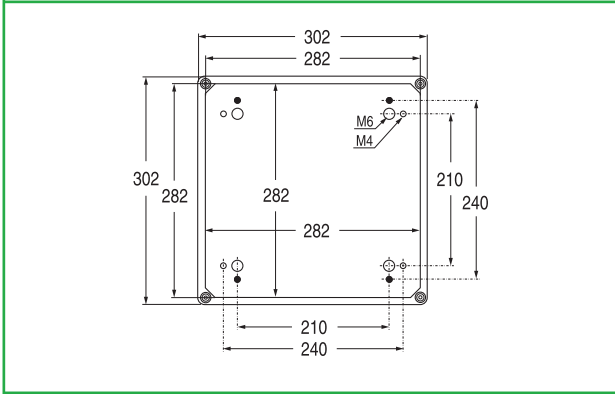
APO 31



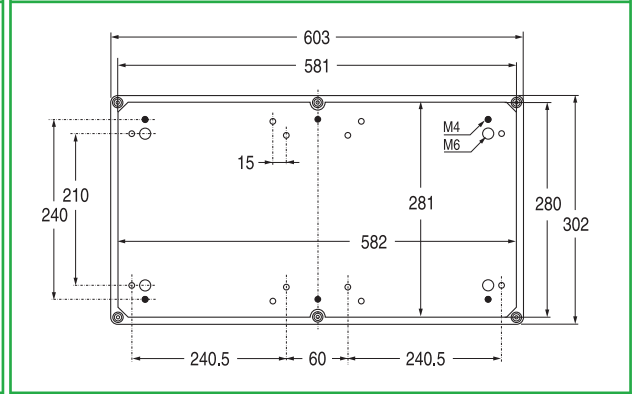
APO 81



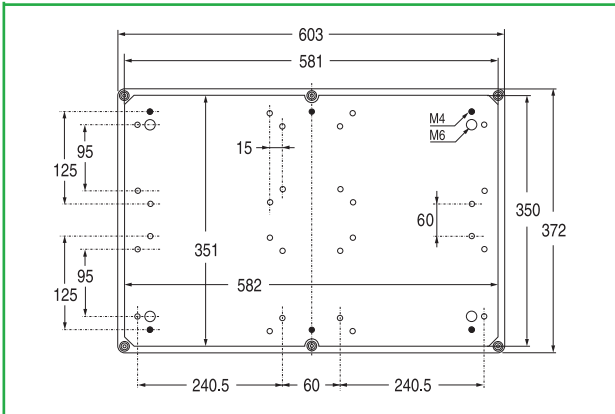
APO 41



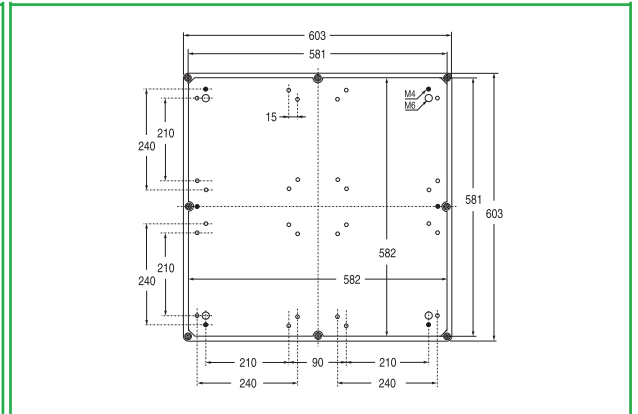
APO 61



APO 11

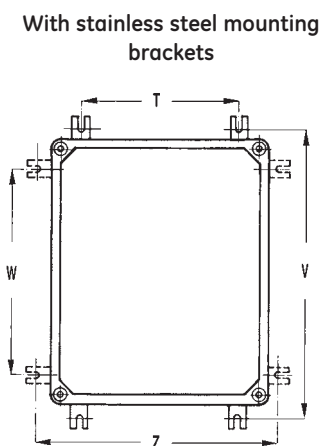
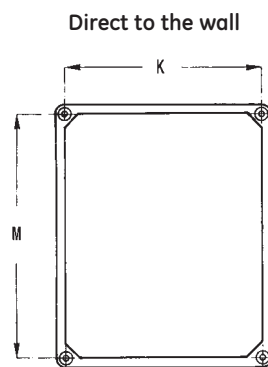
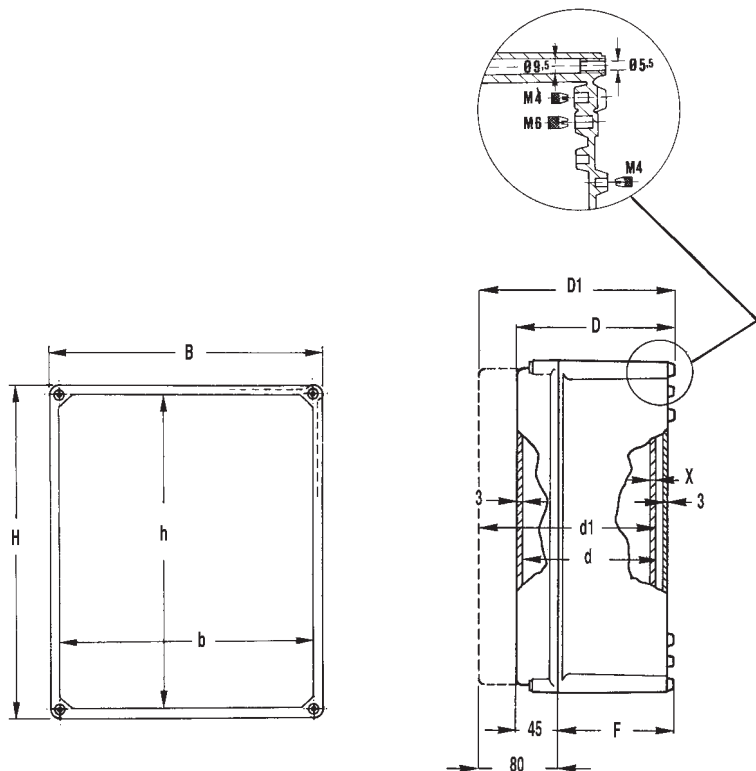


APO 12

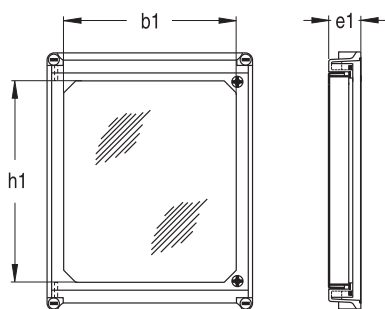


Boxes

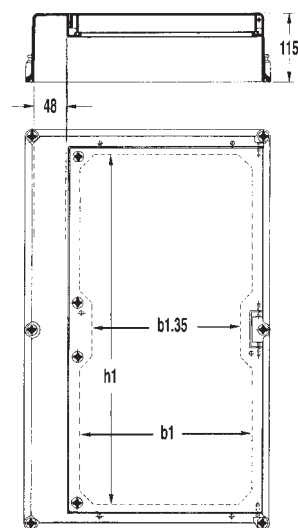
Wall mounting



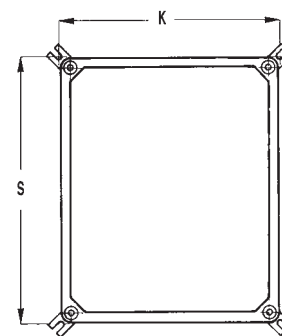
Transparent hinged cover



APO 11
Hinged cover with side flange



With polyamide mounting brackets



Dimensions

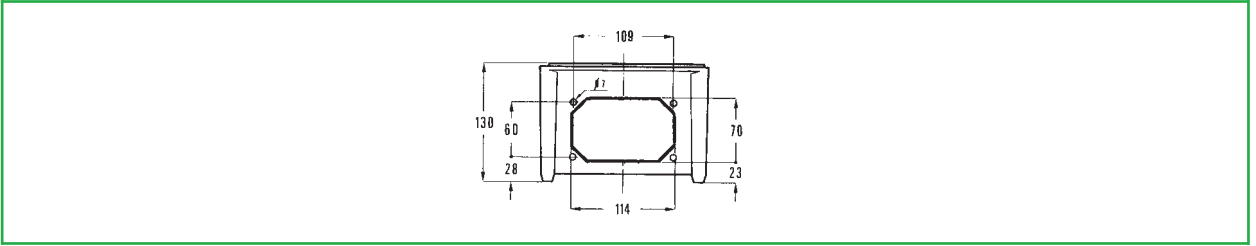
H	B	D	D1	h	b	d	d1	F	h1	b1	e1	Type	K	M	R	S	T	V	W	Z
186	151	140	-	166	131	118-X	-	95	-	-	-	APO 1	131	166	155	190	-	-	-	-
302	186	175	-	282	166	150-X	-	130	110	260	45	APO 31	282	166	190	306	125	312	241	197
302	302	175	-	282	282	150-X	-	130	225	260	45	APO 41	282	282	306	306	241	313	241	313
372	302	175	-	352	282	150-X	-	130	295	260	45	APO 71	282	352	376	306	241	383	311	313
488	302	175	210	467	281	150-X	185-X	130	410	260	45	APO 51	280	466	490	304	241	499	427	313
558	302	175	210	537	281	150-X	185-X	130	-	-	-	APO 81	280	536	561	305	241	569	497	313
603	302	175	210	582	281	150-X	185-X	130	525	260	45	APO 61	280	581	606	305	241	614	542	313
603	372	175	210	582	351	150-X	185-X	130	525	260	115	APO 11	350	581	606	374	311	614	542	383
603	603	175	210	582	582	150-X	185-X	130	-	-	-	APO 12	581	581	605	605	542	614	542	614

X = thickness of mounting plate

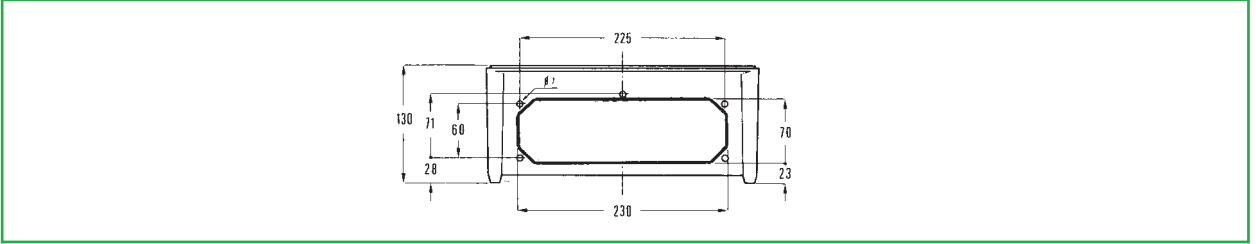


Cut-outs in side panels

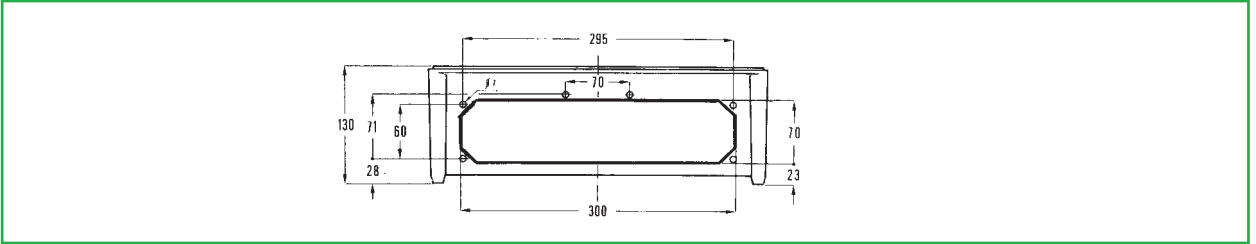
Side 185



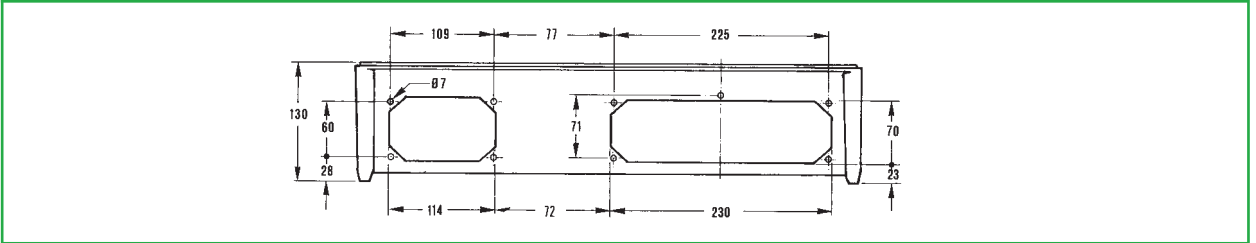
Side 300



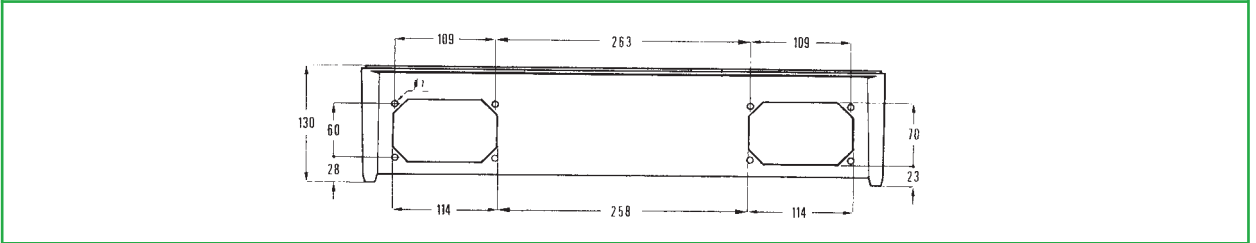
Side 370



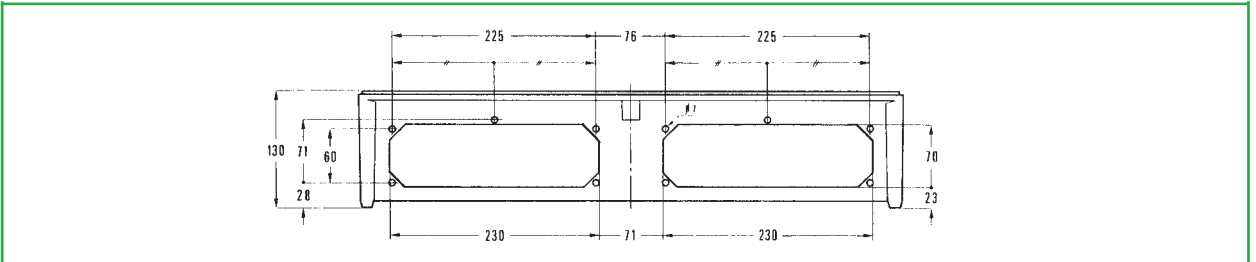
Side 485



Side 555



Side 600



Intro

A

B

C

D

E

F

G

H

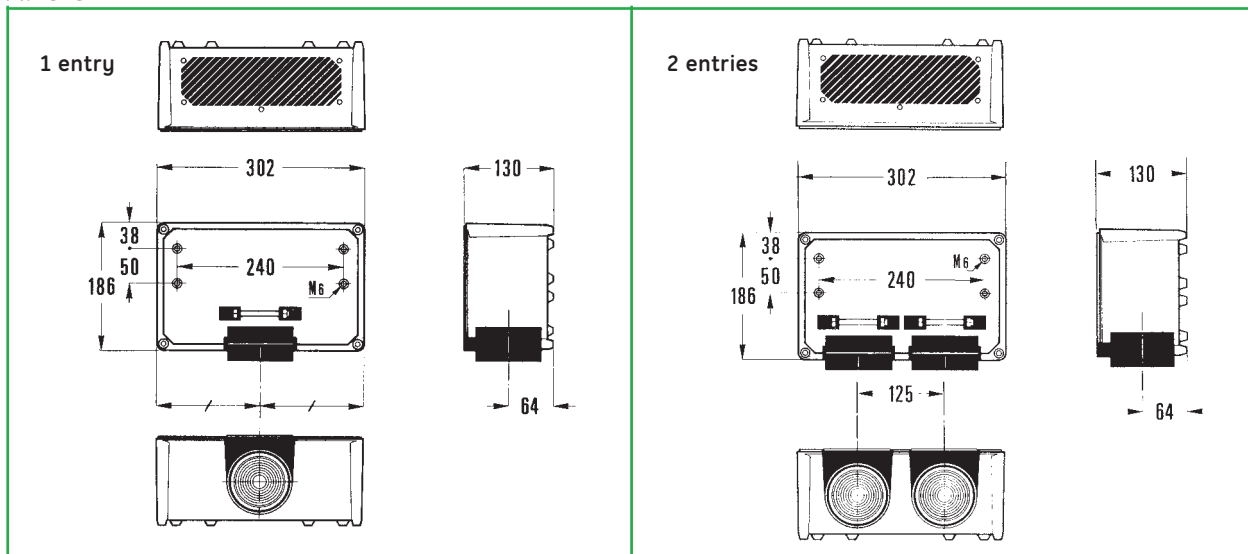
I

X

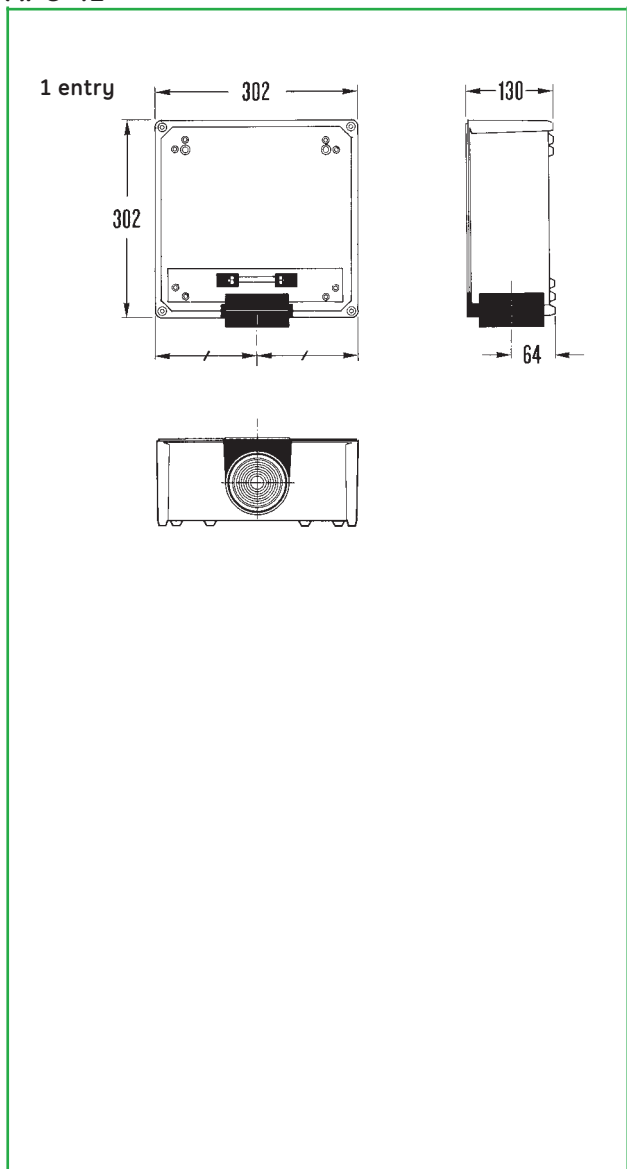


Cable-end boxes

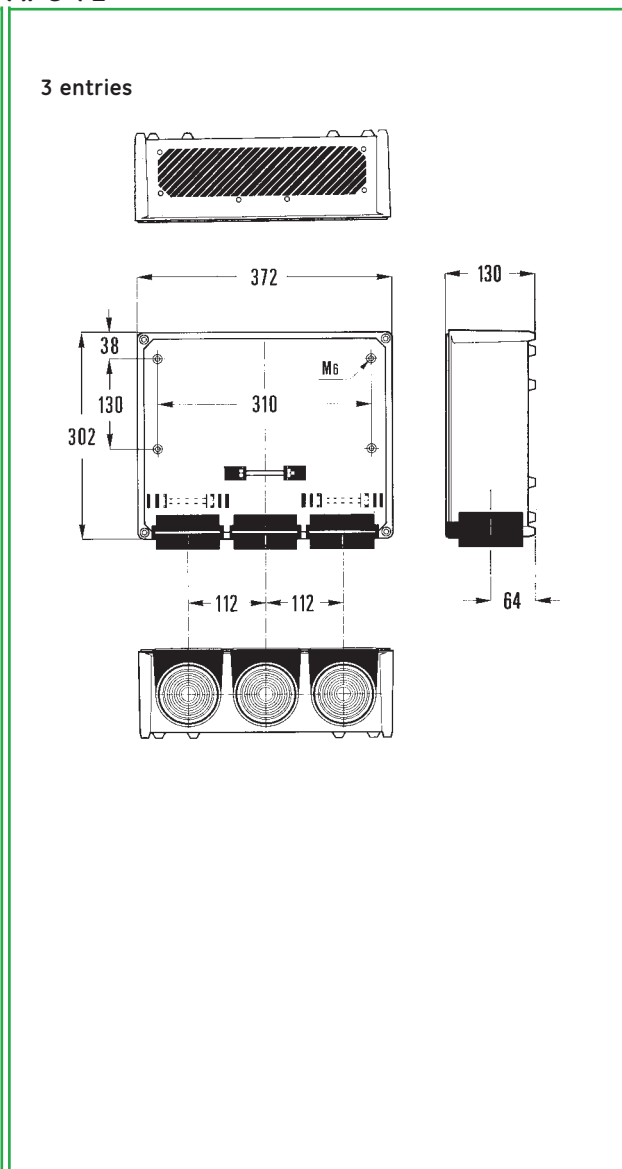
APO 31



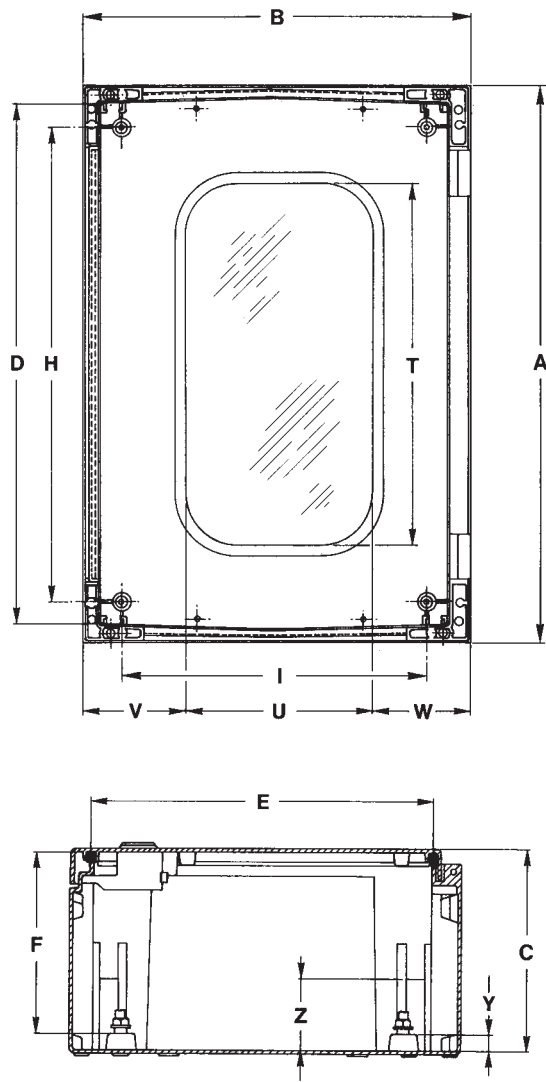
APO 41



APO 71



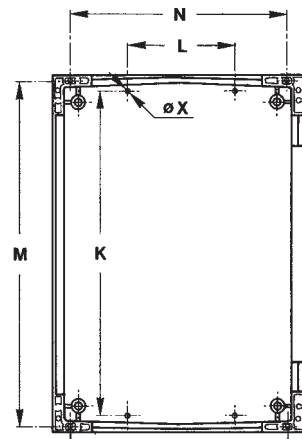
Cabinets



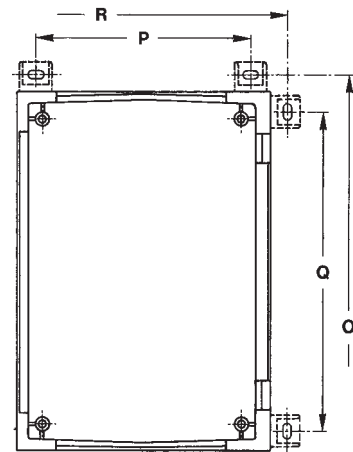
Dimensions							
ARIA	32	43	54	64	75	86	108
A	315	415	515	615	735	835	1035
B	215	315	415	415	535	635	835
C	170	170	230	230	270	300	300
D	275	375	475	575	675	775	975
E	170	270	370	370	470	570	770
F	148	148	208	208	248	278	277
H	225	325	425	525	625	725	925
I	125	225	325	325	425	525	725
K	275	375	475	575	675	775	975
L	70	150	200	200	300	400	600
M	295	395	495	595	-	-	-
N	155	255	355	355	-	-	-
O	362	462	562	662	782	882	1082
P	162	262	362	362	482	582	782
Q	262	362	462	562	682	782	982
R	262	362	462	462	582	682	882
T	-	280	380	480	580	680	880
U	-	130	230	230	330	430	630
V	-	70	70	70	80	80	80
W	-	115	115	115	125	125	125
X	6	6	6	6	8	8	8
Y	14	14	15,5	15,5	15,5	15,5	15,5
Z	28	25	88	88	118	148	148

Wall mounting

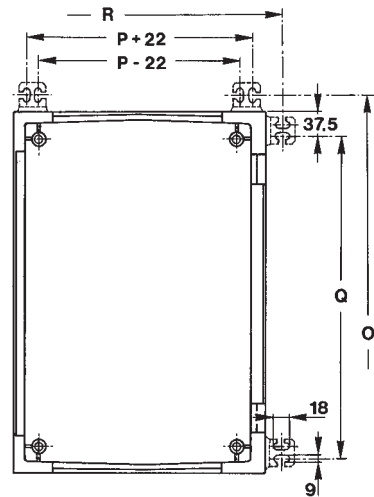
Direct to the wall



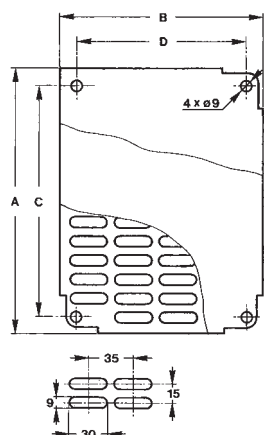
By fixing lugs in polyamide



By fixing lugs in stainless steel



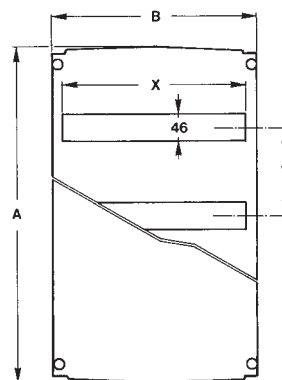
Mounting plates



Dimensions				
ARIA	A	B	C	D
32	250	150	225	125
43	350	250	325	225
54	450	350	425	325
64	550	350	525	325
75	650	450	625	425
86	750	550	725	525
108	950	750	925	725

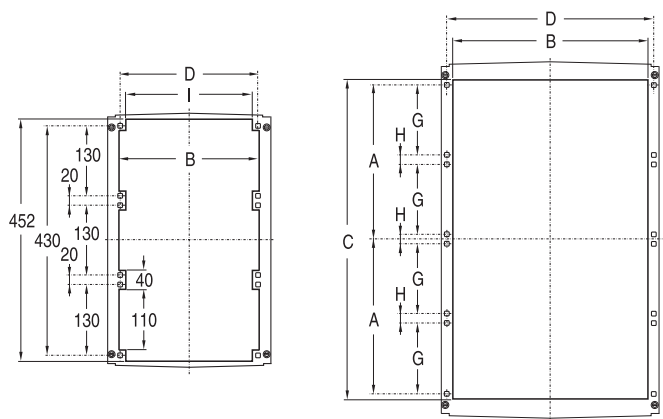
Cover plates

Plain and with openings for DIN-rail equipment

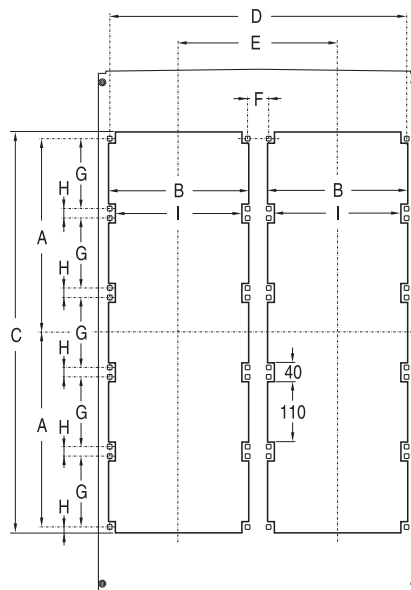


Dimensions					
ARIA	A	B	X	Y	
32	2 rows	279	162	108	125
43	2 rows	379	262	216	150
54	3 rows	479	362	324	150
64	3 rows	579	362	324	150
75	4 rows	690	462	396	150
86	4 rows	790	562	2 x 216	150
108	5 rows	990	762	2 x 324	150

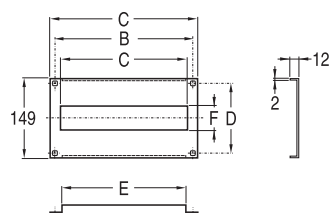
Cover plates with cut-out for individual modular cover plates



Dimensions										
Type	A	B	C	D	E	F	G	H	I	Mod.
ARIA 43	140	216	302	236	-	-	130	20	-	24
ARIA 54	-	308	-	303	-	-	-	-	283	51
ARIA 64	-	326	-	336	-	-	-	-	316	54
ARIA 75	290	400	602	428	-	-	130	20	-	88
ARIA 86	290	216	602	524	288	52	130	20	-	96
ARIA 108	365	326	752	732	396	60	130	20	316	180

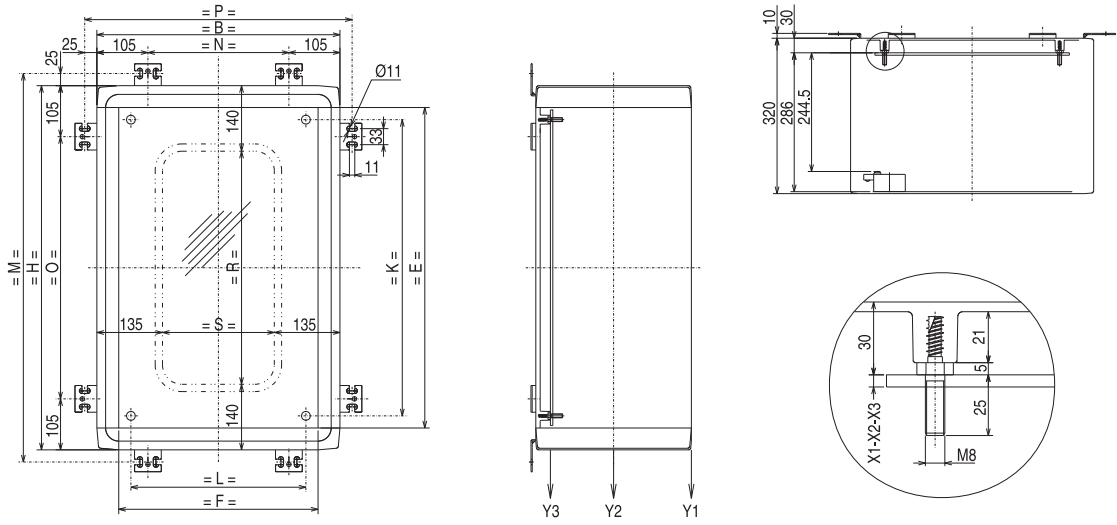


Individual modular cover plate

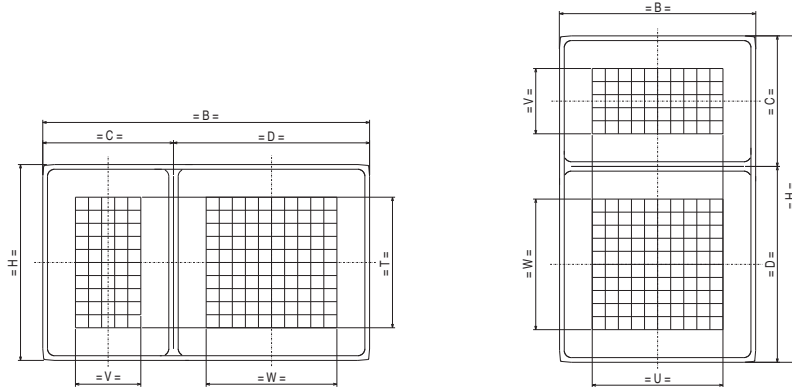


Dimensions						
Ref. No.	A	B	C	D	E	F
831796	255	236	216	130	210	46
831797	255	236	0	130	210	0
831798	322	303	306	130	280	46
831799	322	303	0	130	280	0
831800	355	336	324	130	312	46
831801	355	336	0	130	312	0
831802	455	428	396	130	396	46
831803	455	428	0	130	396	0

Enclosures



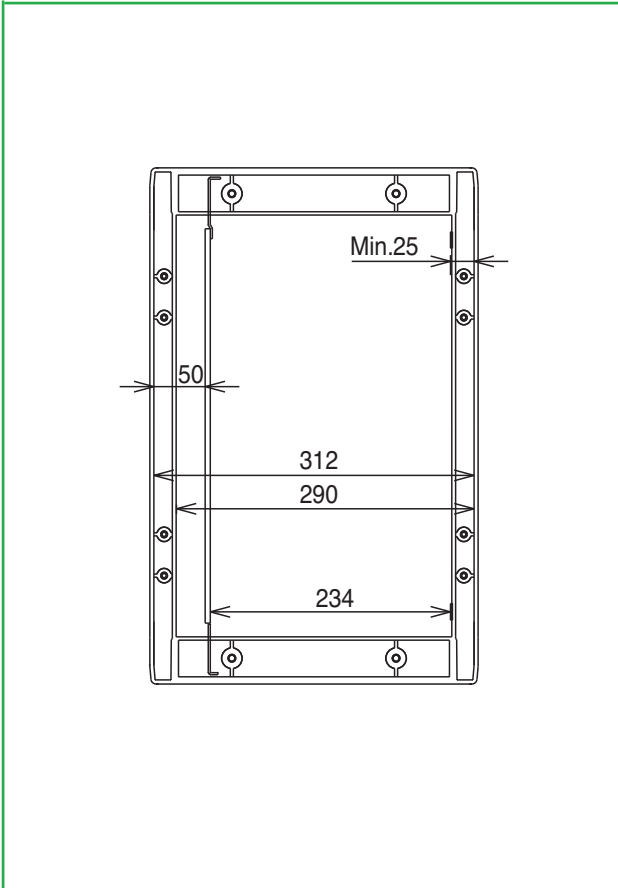
Usable mounting space on the doors



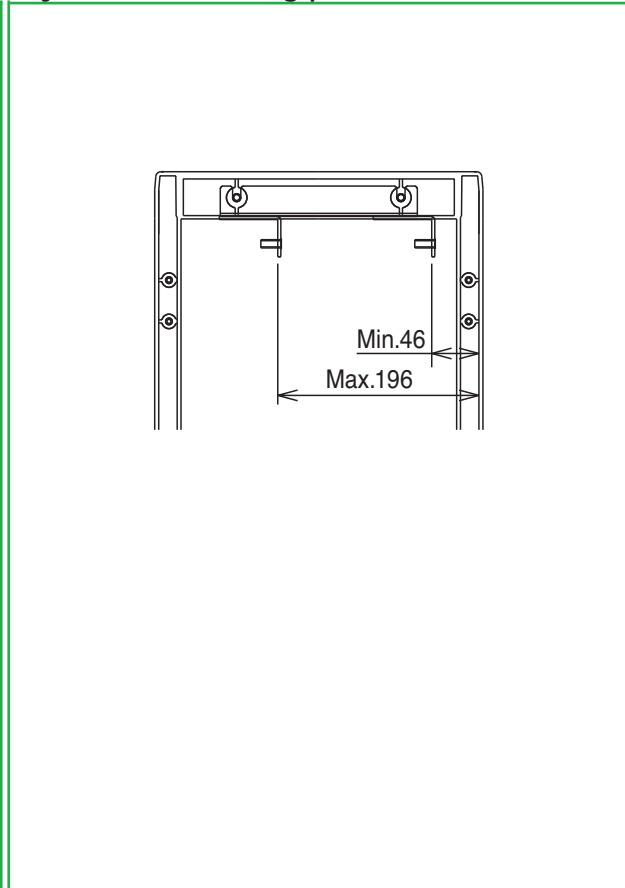
Dimensions																								
Type	H	B	C	D	E	F	K	L	M	N	O	P	R	S	T	U	V	W	X1	X2	X3	Y1	Y2	Y3
220	500	500			410	410	360	360	550	290	290	550	220	230	250	250			5	2	-	8	80	110
230	500	750			410	660	360	610	550	540	290	800	220	480	250	500			5	2	-	8	80	110
320	750	500			660	410	610	360	800	290	540	550	470	230	500	250			5	2	-	8	80	110
330	750	750			660	660	610	610	800	540	540	800	470	480	500	500			5	2	-	8	80	110
340	750	1000			660	910	610	860	800	790	540	1050	470	730	500	750			5	2	-	6	80	110
352	750	1250	500	750	660		610	1110	800	1040	540	1300			500		250	500	5	2	10	5	80	110
420	1000	500			910	410	860	360	1050	290	790	550	720	230	750	250			5	2	-	8	80	110
430	1000	750			910	660	860	610	1050	540	790	800	720	480	750	500			5	2	-	8	80	110
440	1000	1000			910	910	860	860	1050	790	790	1050	720	730	750	750			5	2	10	6	80	110
442	1000	1000	500	500	910		860	860	1050	790	790	1050			750		250	250	5	2	10	6	80	110
452	1000	1250	500	750	910		860	1110	1050	1040	790	1300			750		250	500	5	2	10	5	80	110
530	1250	750			1160	660	1110	610	1300	540	1040	800	970	480	1000	500			5	2	10	8	80	110
542	1250	1000	500	750		910	1110	860	1300	790	1040	1050				750	250	500	5	2	10	6	80	110
546	1250	1000	500	750		910	1110	860	1300	790	1040	1050				750	250	500	5	2	10	6	80	110
	Enclosure external dimensions	Door dimensions			Enclosure let-through	Centres of the mounting plate			Centres for wall mounting			Window surface			Usable mounting space on the doors				Thickness of the mounting plate			Admissible charge in kg		
																			X1 = pertinax 5 mm X2 = metal perforated 2 mm X3 = pertinax 10 mm					



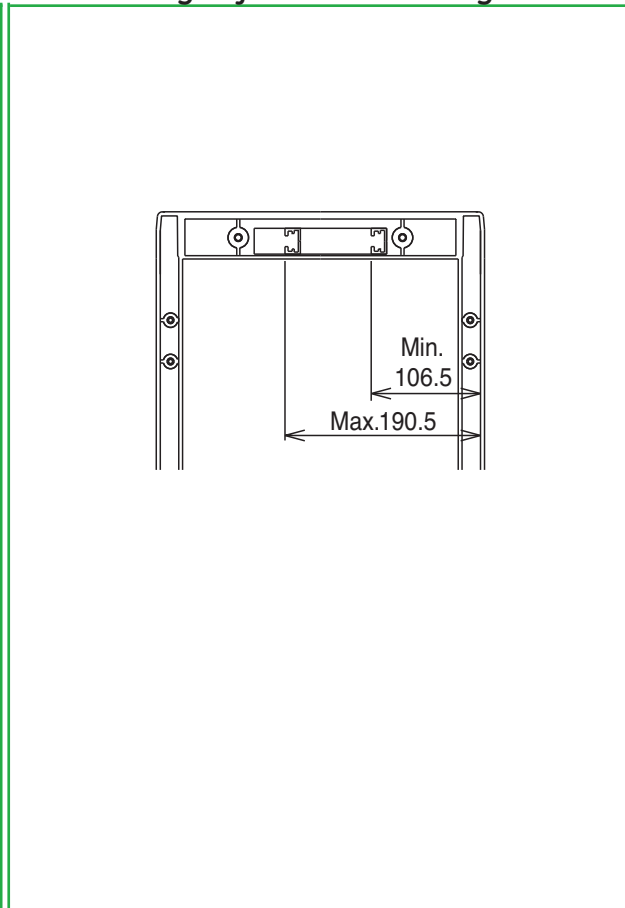
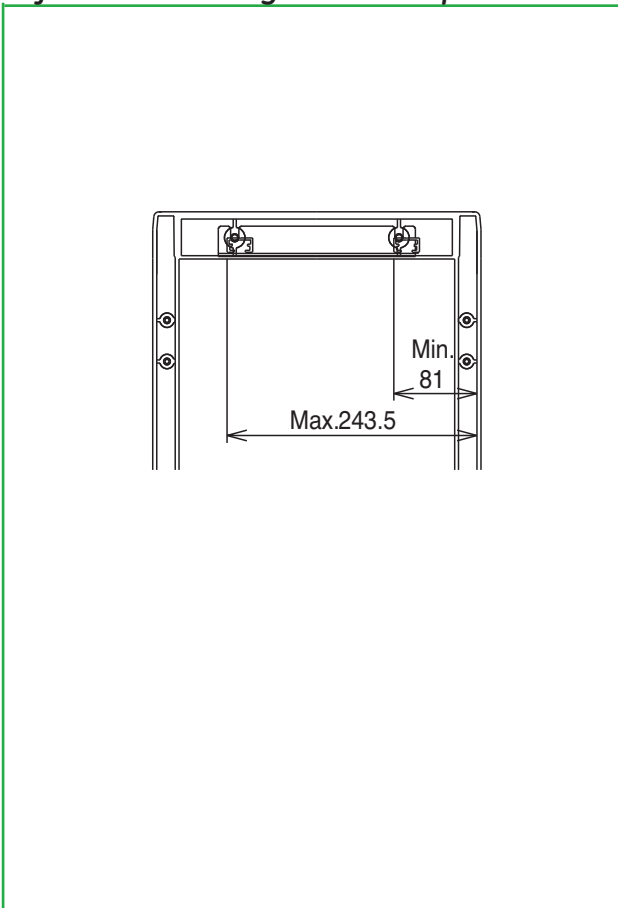
Inner door



Adjustable mounting plate

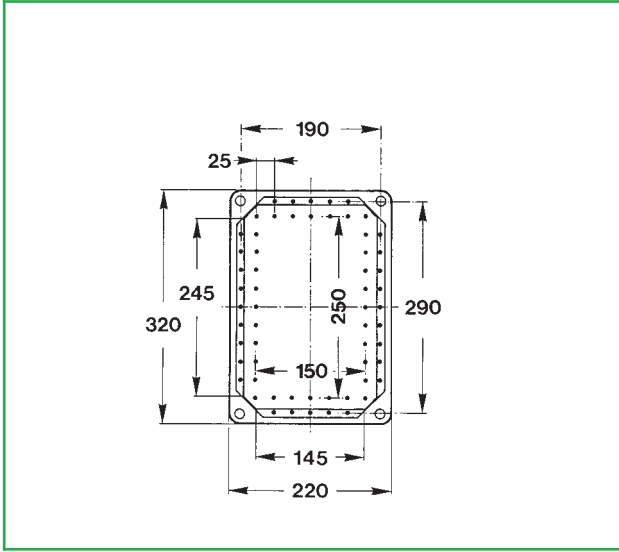


Adjustable mounting frame in steps of 12.5 mm Continuously adjustable mounting frame

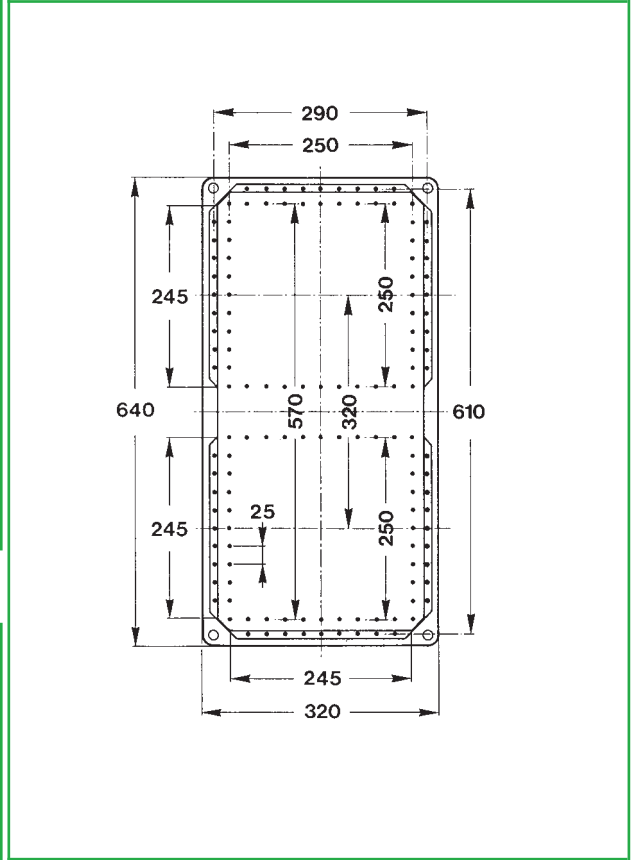


Bases

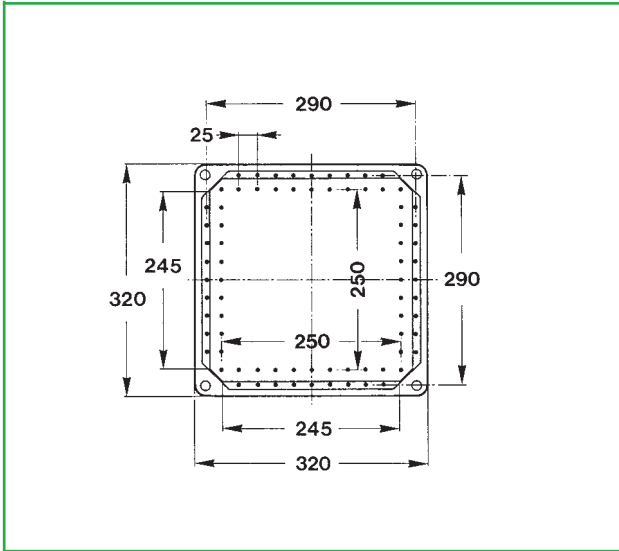
VMS 32



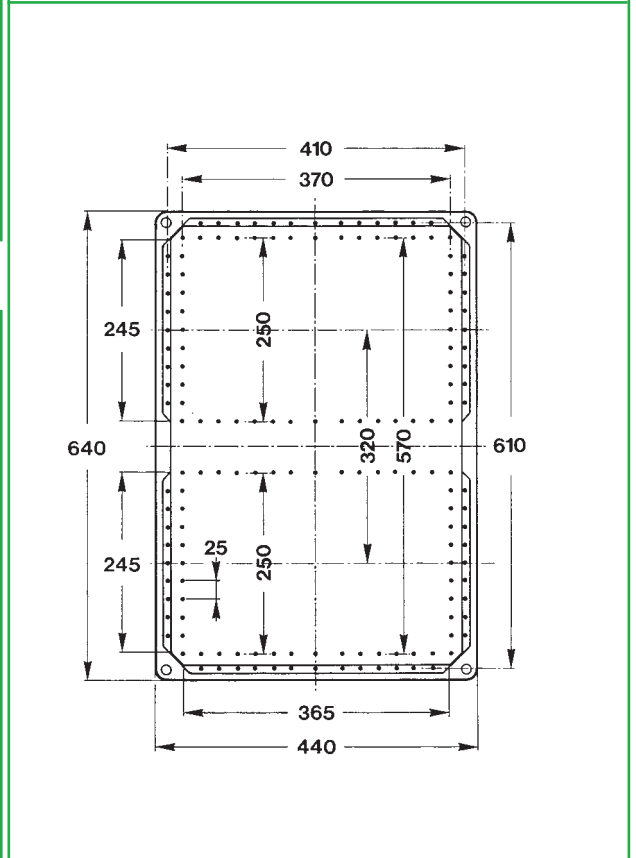
VMS 63



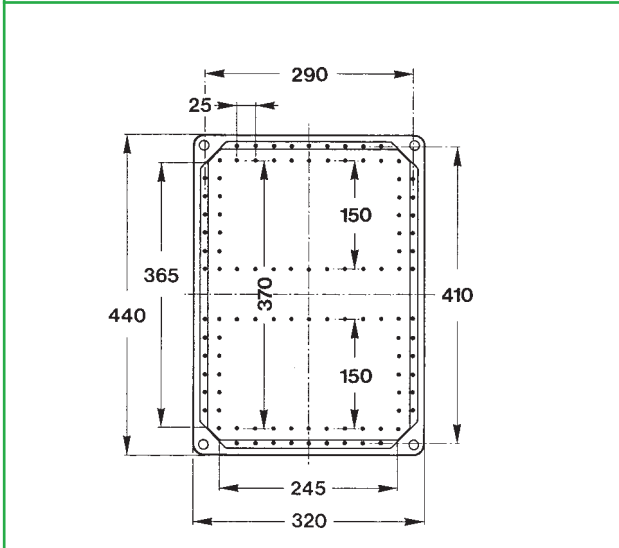
VMS 33



VMS 64



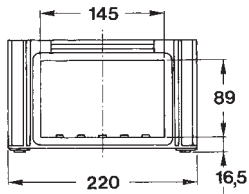
VMS 43



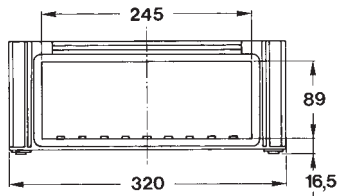
Bases

Openings in the base side walls

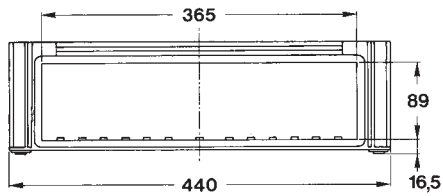
Side 220



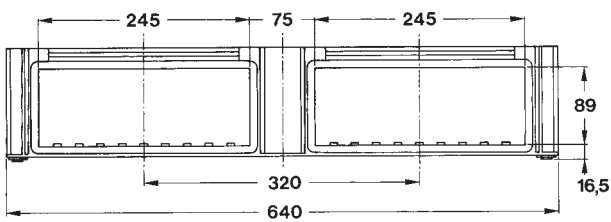
Side 320



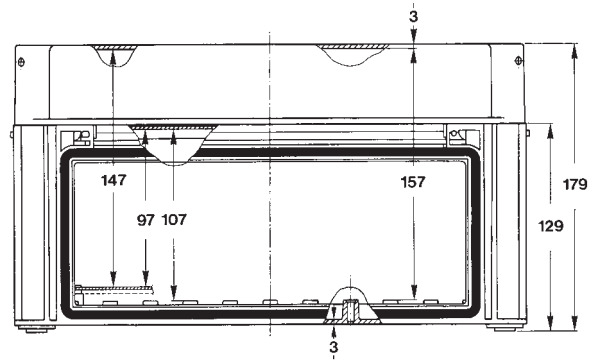
Side 440



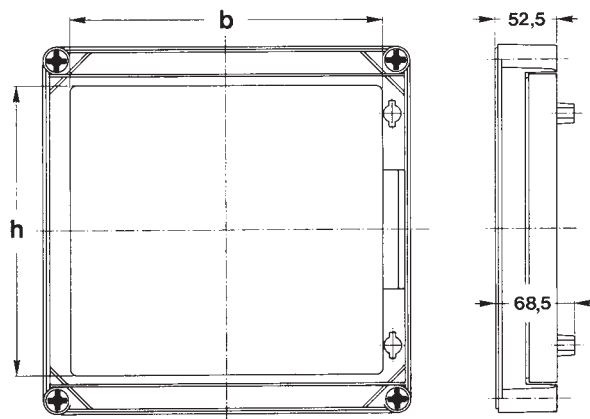
Side 640



Built-in heights



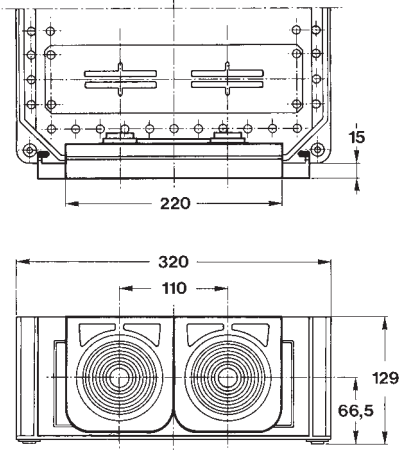
Pivoting covers



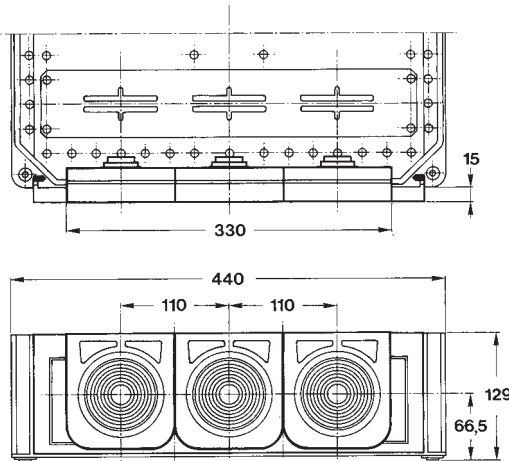
Type	Dimensions	b	h
VMS 33	320 x 320	260	241
VMS 43	440 x 320	260	361

Cable end plates and universal cable stress releases **Mounting brackets**

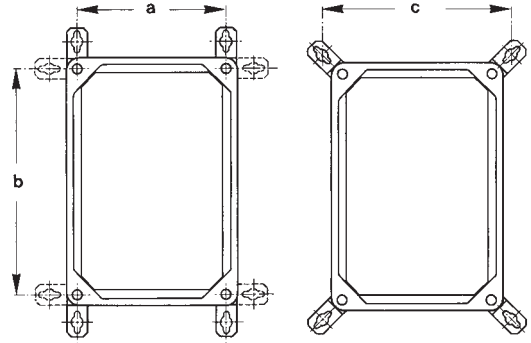
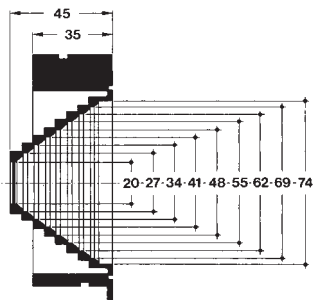
Side 320



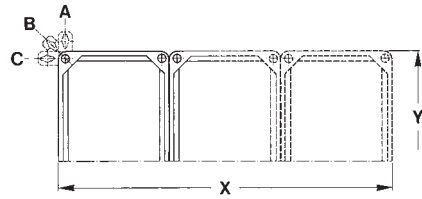
Side 440



Side view



Type	Dimensions	a	b	c
VMS 32	320 x 220	193	293	254
VMS 33	320 x 320	293	293	354
VMS 43	440 x 320	293	413	354
VMS 63	640 x 320	293	613	354
VMS 64	640 x 440	413	613	474



	Centre dimensions	
A	X - 27	Y + 40
B	X + 34	Y + 34
C	X + 40	Y - 27

Intro

A

B

C

D

E

F

G

H

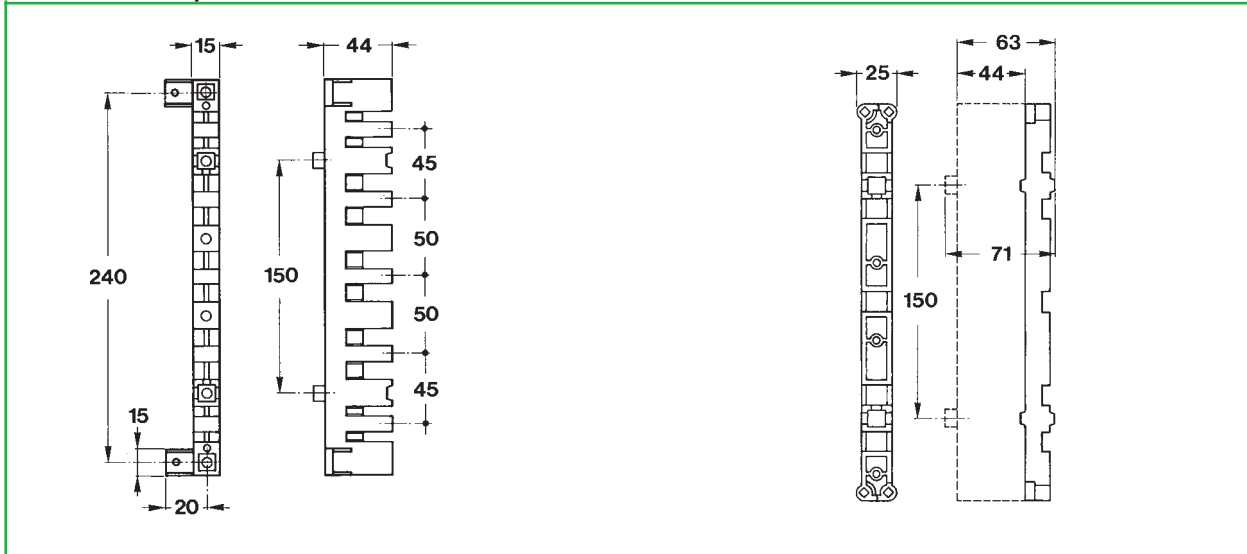
I

X



Busbar supports

630A-1250A - parallel



Dimensional drawings

Intro

A

B

C

D

E

F

G

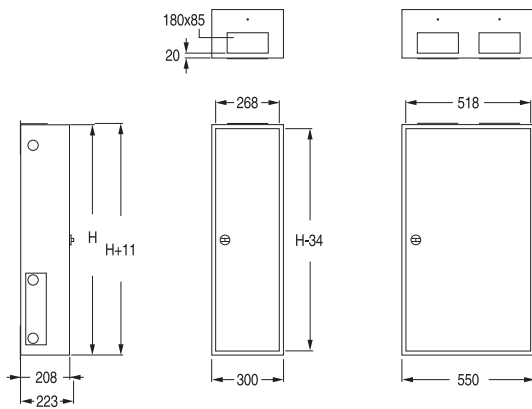
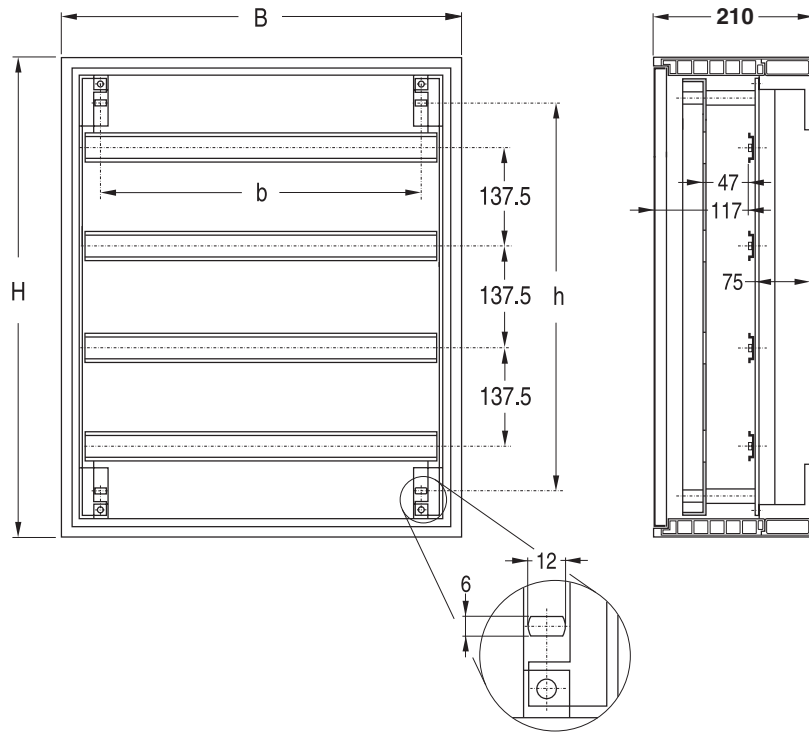
H

I

X



Surface mounting



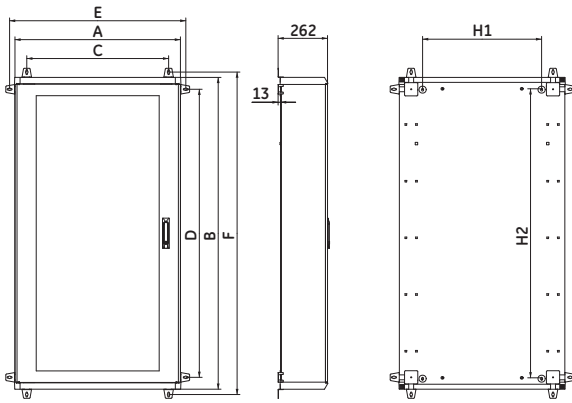
Dimensions				
Type	B	b	H	hc
4 rows - 48 mod.	300	191	650	401
5 rows - 60 mod.	300	191	800	551
4 rows - 96 mod.	550	441	650	401
5 rows - 120 mod.	550	441	800	551
6 rows - 144 mod.	550	441	950	701

4 pole terminals

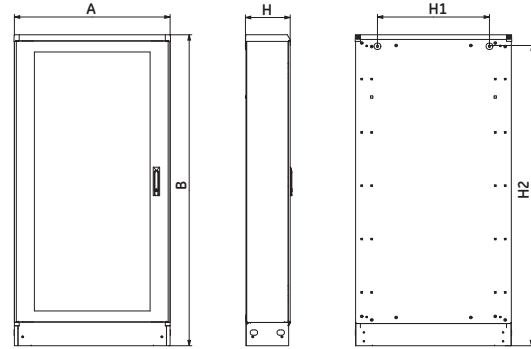
<p>63A</p>	<p>160A</p>	<p>160A - with protective cover</p>
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Enclosures

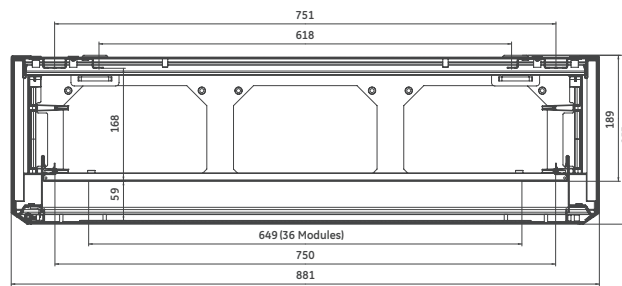
Wall mounting



Floor standing



Cross-section



Width 12 modules

	A	B	C	D	E	F	H	H1	H2
4 rows	364	750	239	625	421	807	252	120	630
5 rows	364	900	239	775	421	957	252	120	780
6 rows	364	1050	239	925	421	1107	252	120	930
7 rows	364	1200	239	1075	421	1257	252	120	1080
8 rows	364	1350	239	1225	421	1407	252	120	1230
9 rows + base	364	1600	239	-	-	-	252	120	1380
10 rows + base	364	1750	239	-	-	-	252	120	1530
12 rows + base	364	2050	239	-	-	-	252	120	1830

Width 24 modules

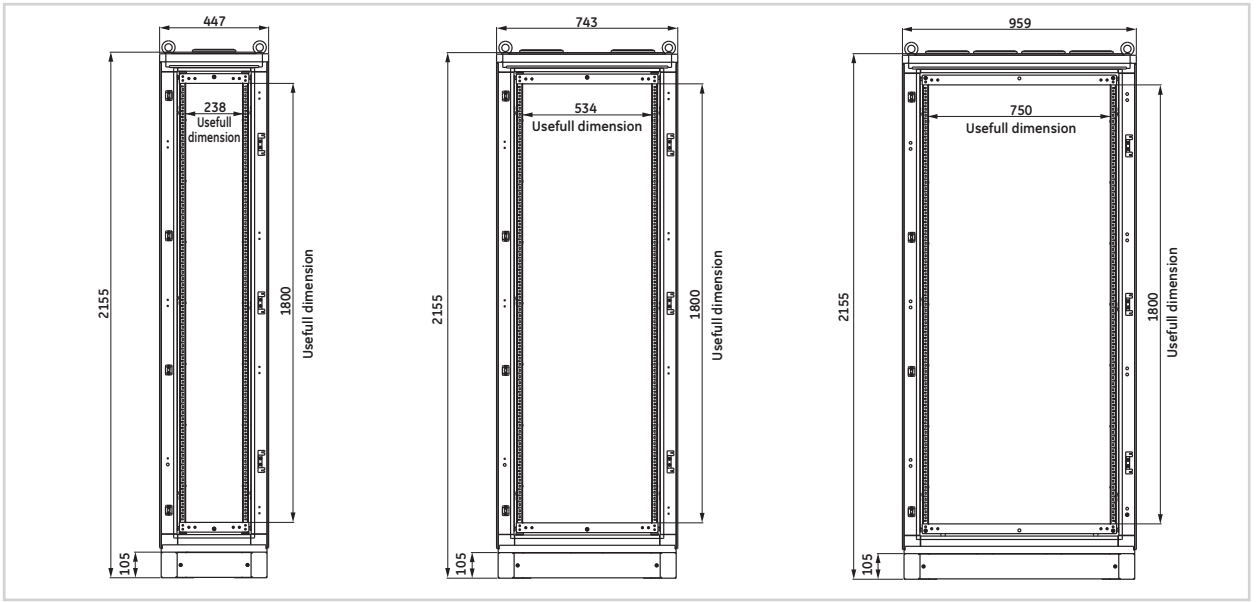
	A	B	C	D	E	F	H	H1	H2
3 rows	660	600	535	475	717	657	252	415	480
4 rows	660	750	535	625	717	807	252	415	630
5 rows	660	900	535	775	717	957	252	415	780
6 rows	660	1050	535	925	717	1107	252	415	930
7 rows	660	1200	535	1075	717	1257	252	415	1080
8 rows	660	1350	535	1225	717	1407	252	415	1230
9 rows + base	660	1600	535	-	-	-	252	415	1380
10 rows + base	660	1750	535	-	-	-	252	415	1530
12 rows + base	660	2050	535	-	-	-	252	415	1830

Width 36 modules

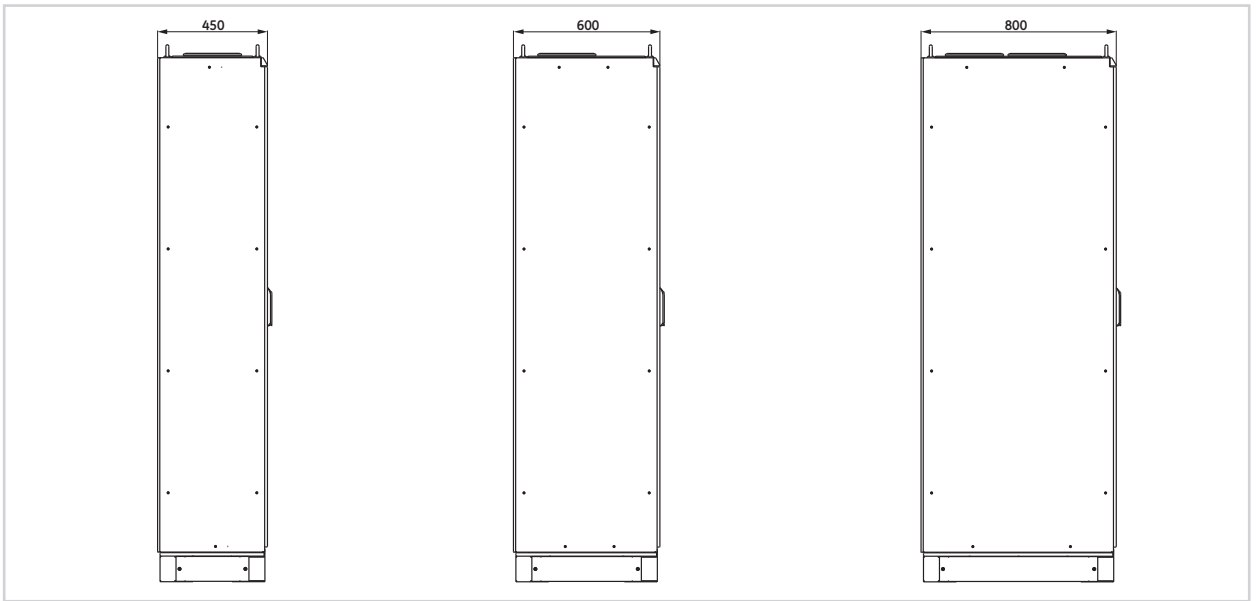
	A	B	C	D	E	F	H	H1	H2
5 rows	876	900	751	775	933	957	252	630	780
6 rows	876	1050	751	925	933	1107	252	630	930
7 rows	876	1200	751	1075	933	1257	252	630	1080
8 rows	876	1350	751	1225	933	1407	252	630	1230
9 rows + base	876	1600	751	-	-	-	252	630	1380
10 rows + base	876	1750	751	-	-	-	252	630	1530
12 rows + base	876	2050	751	-	-	-	252	630	1830



Frontview (in mm)



Sideview (in mm)



Intro

A

B

C

D

E

F

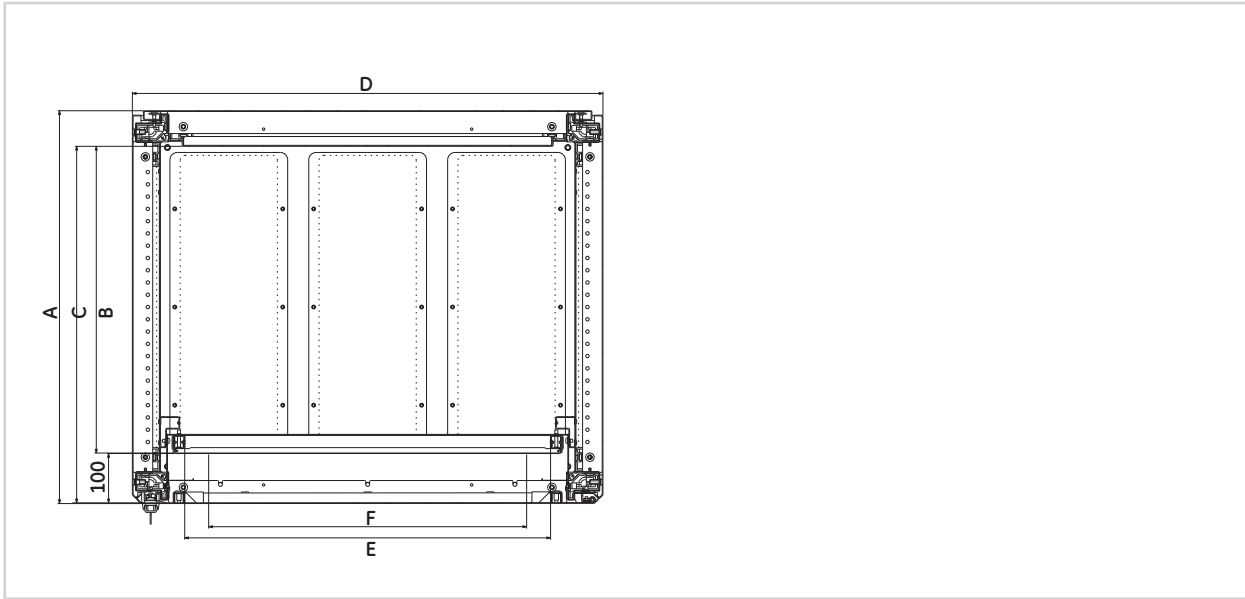
G

H

I

X

Cross-section



Dimensions in mm

Width (E)	Usefull dimensions			Height	External dimensions		
	Width for devices (F)	Depth behind the coverplate (B)	Depth behind the door (C)		Width (D)	Depth (A)	Height ⁽¹⁾
238	216 (12 mod.)	275	375	1800	447	450	2155
534	432 (24 mod.)	275	375	1800	743	450	2155
750	648 (36 mod.)	275	375	1800	959	450	2155
238	216 (12 mod.)	425	525	1800	447	600	2155
534	432 (24 mod.)	425	525	1800	743	600	2155
750	648 (36 mod.)	425	525	1800	959	600	2155
238	216 (12 mod.)	625	725	1800	447	800	2155
534	432 (24 mod.)	625	725	1800	743	800	2155
750	648 (36 mod.)	625	725	1800	959	800	2155

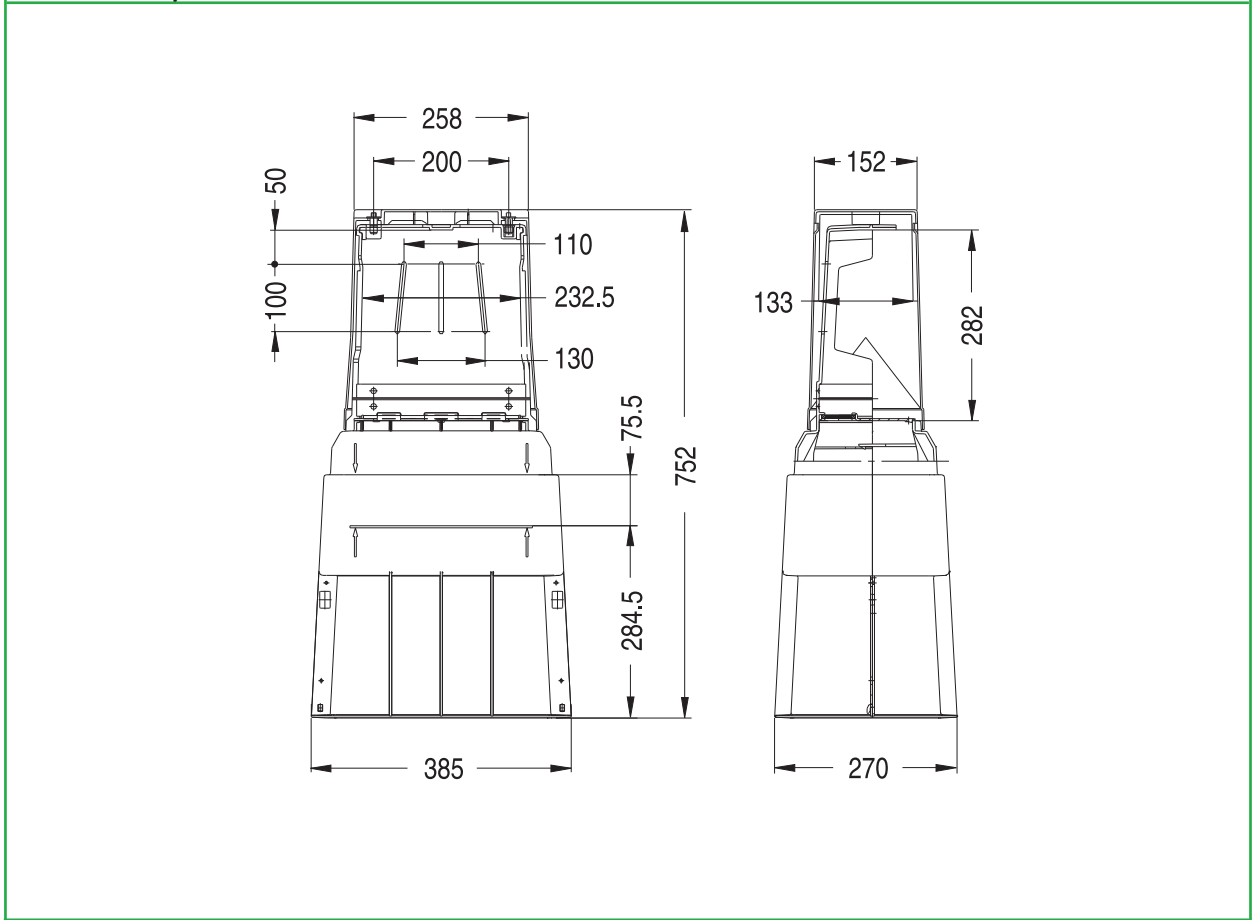
(1) With base

Floor drilling plan

A floor drilling plan drawing showing the layout of the unit on the floor. It includes dimensions D1, D2, D3, D4 for the main body and door heights, and F1, F2, F3, F4 for the width of the main body and door. A table provides specific dimensions for three different widths: 12, 24, and 36 modules.

Width	12	24	36
A	374	670	886
Depth	450 mm	600 mm	800 mm
B	370	520	720
Width	12	24	36
F1 - F4	94	242	350
F2 - F3	162	310	418
B	370	520	720
Depth	450 mm	600 mm	800 mm
D1 - D3	160	235	335
D2 - D4	92	167	267

EH1 - Small pedestal



Intro

A

B

C

D

E

F

G

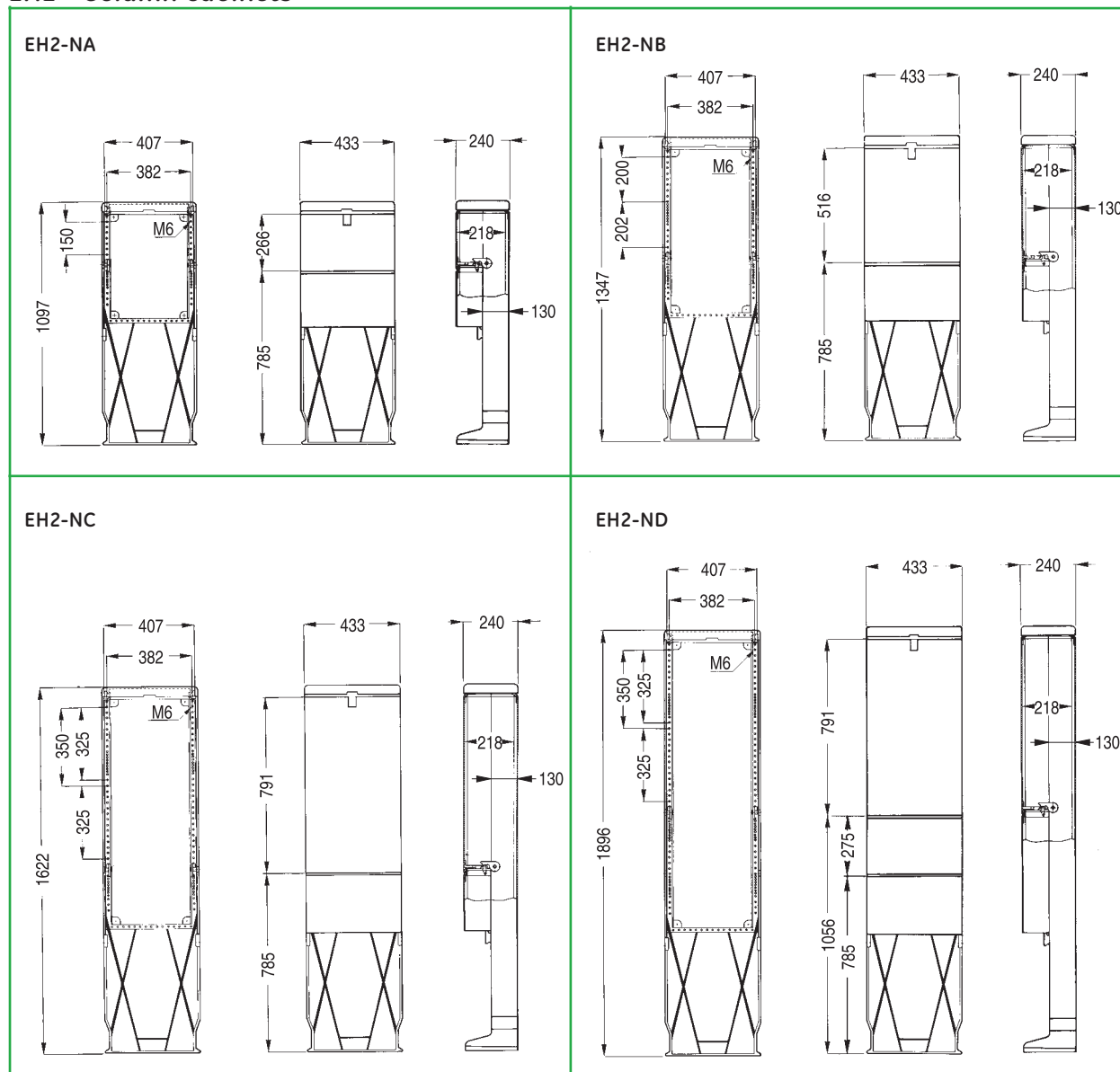
H

I

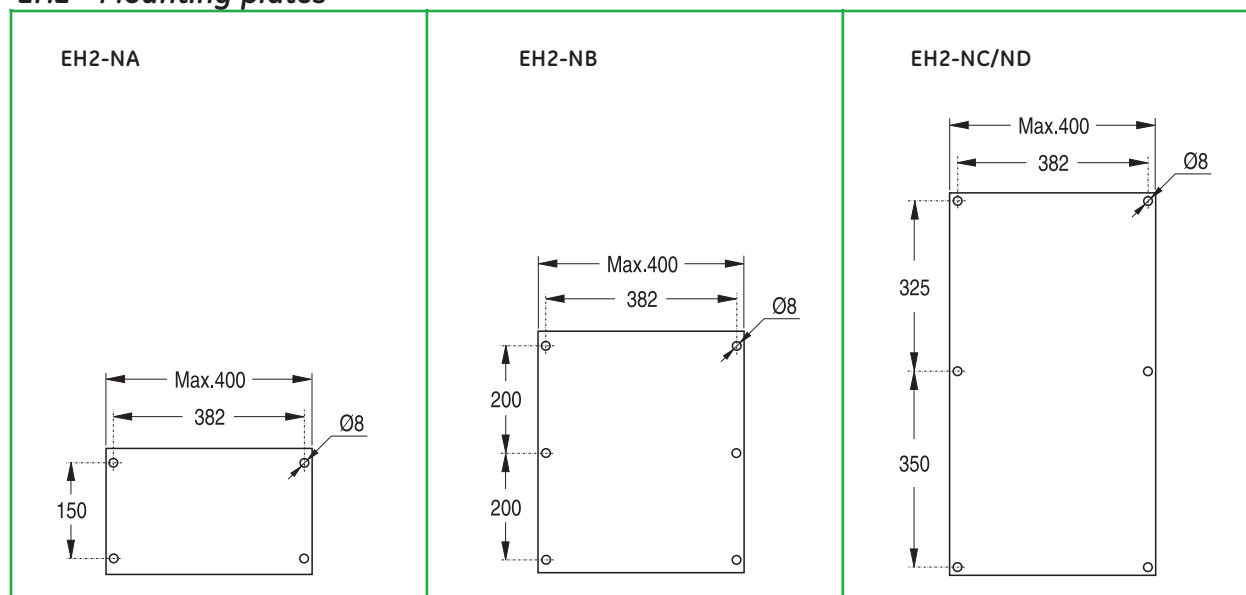
X



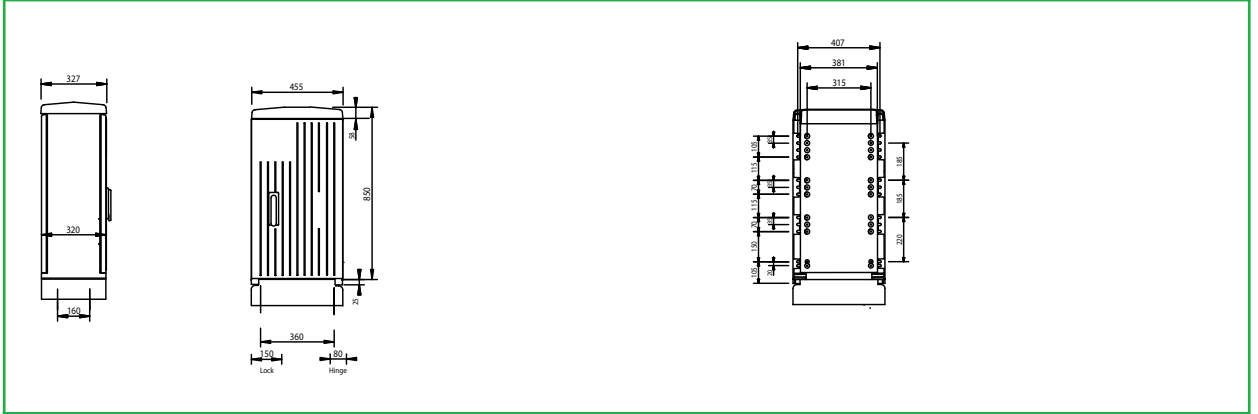
EH2 - Column cabinets



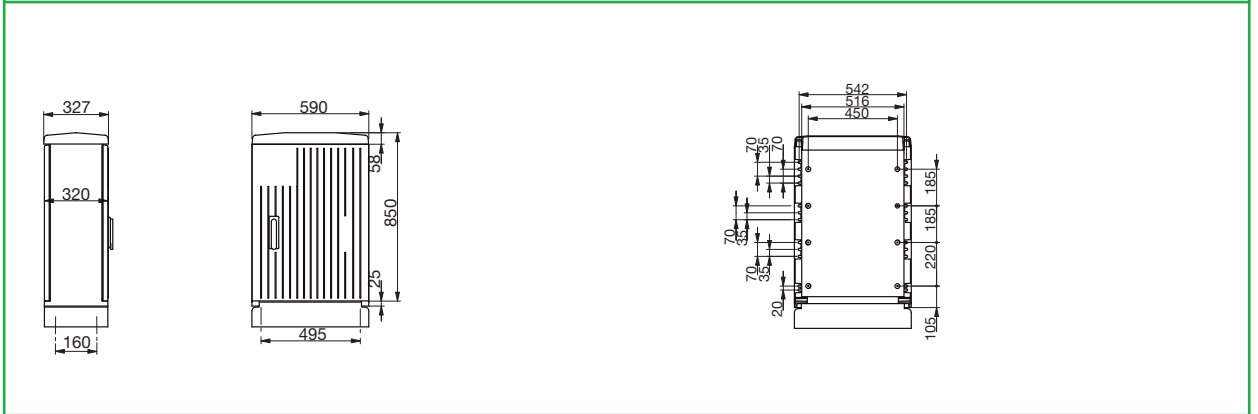
EH2 - Mounting plates



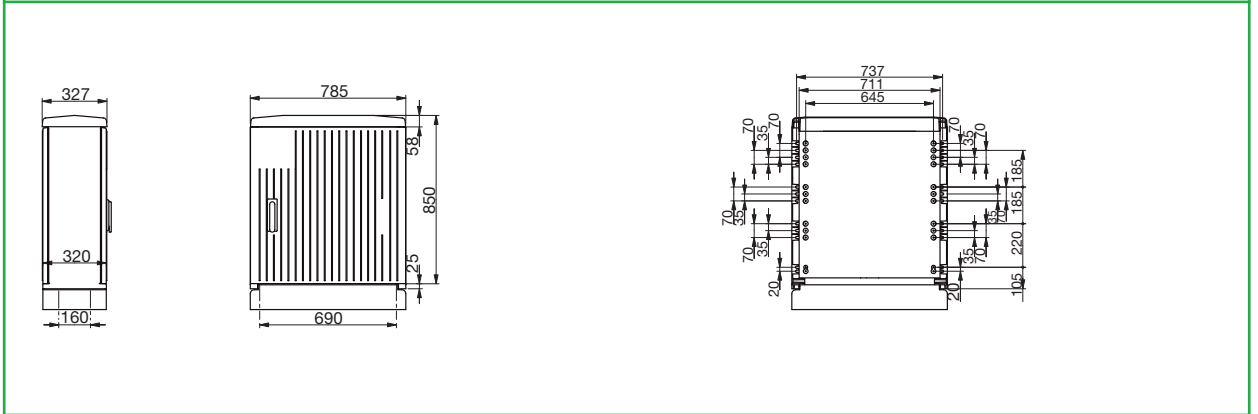
EH3 - 00



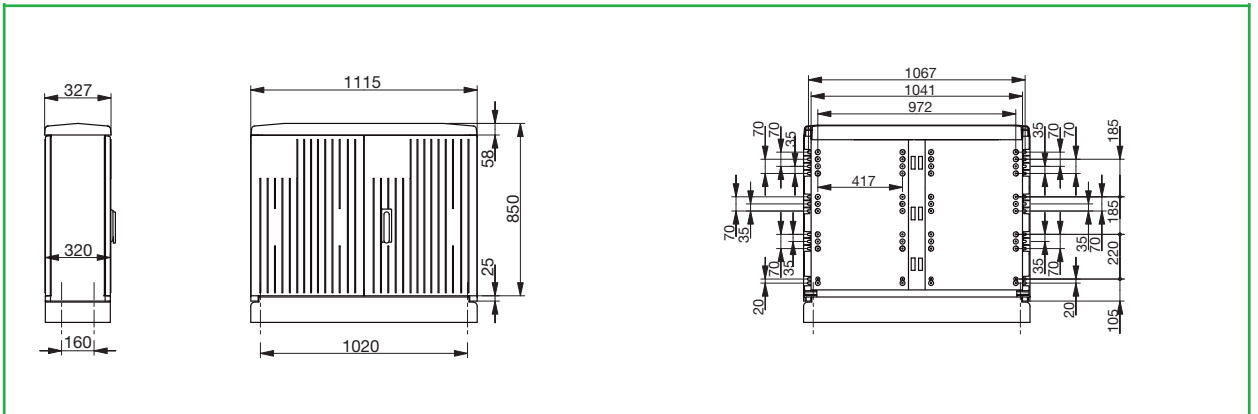
EH3 - 0



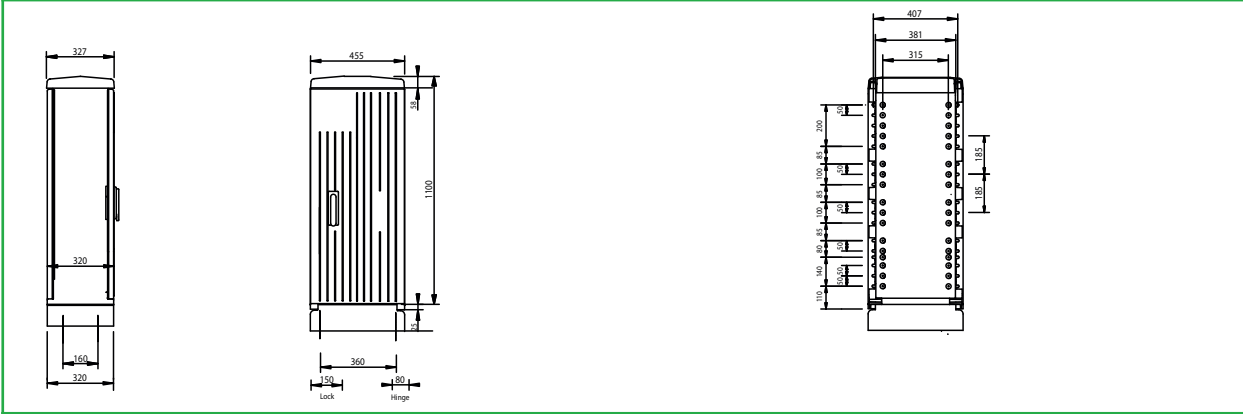
EH3 - 1



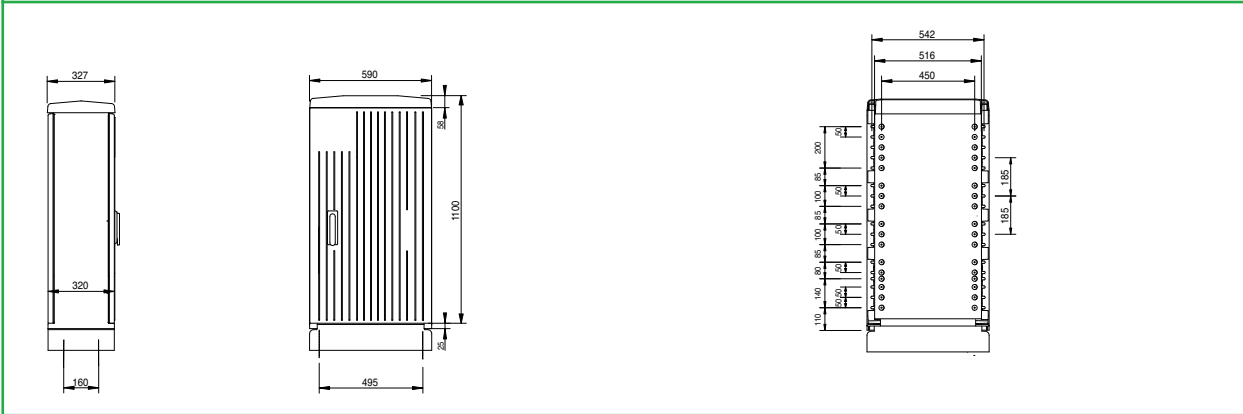
EH3 - 2



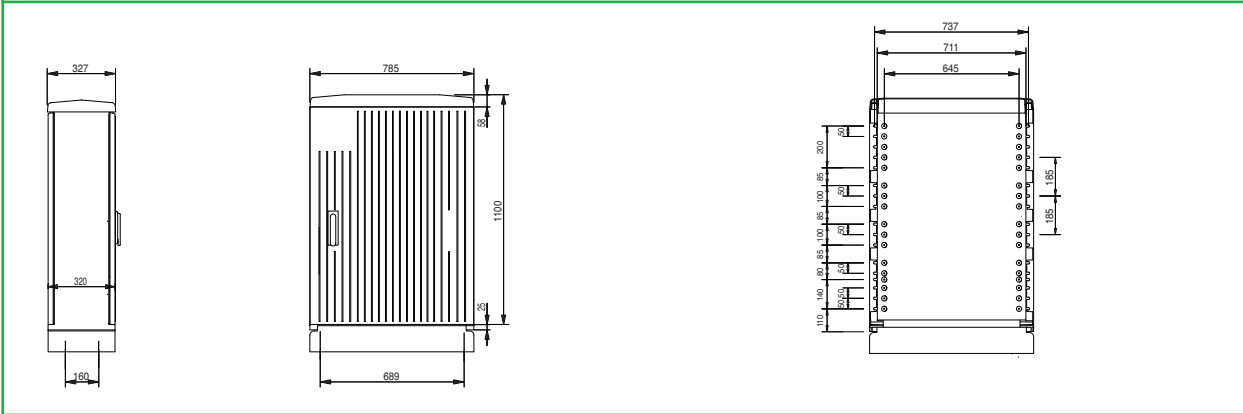
EH3/AP - 200



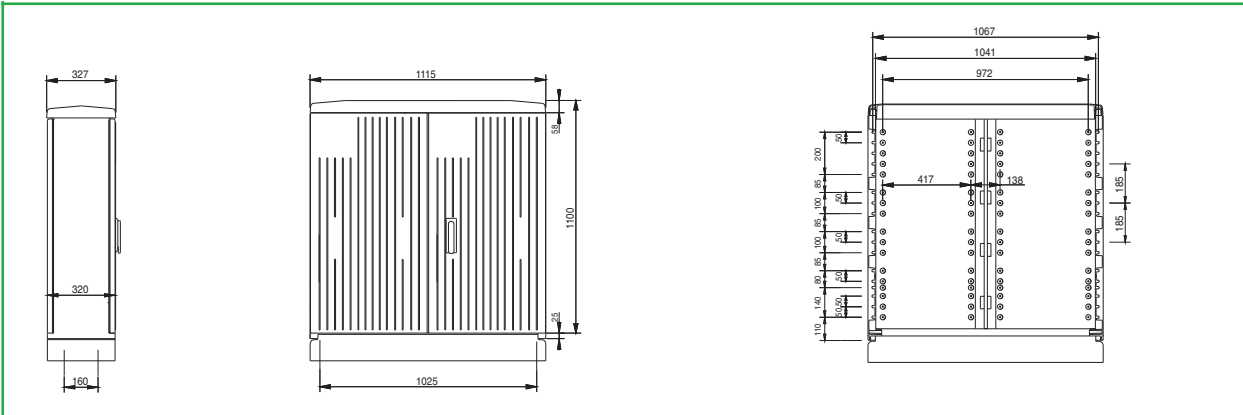
EH3/AP - 20



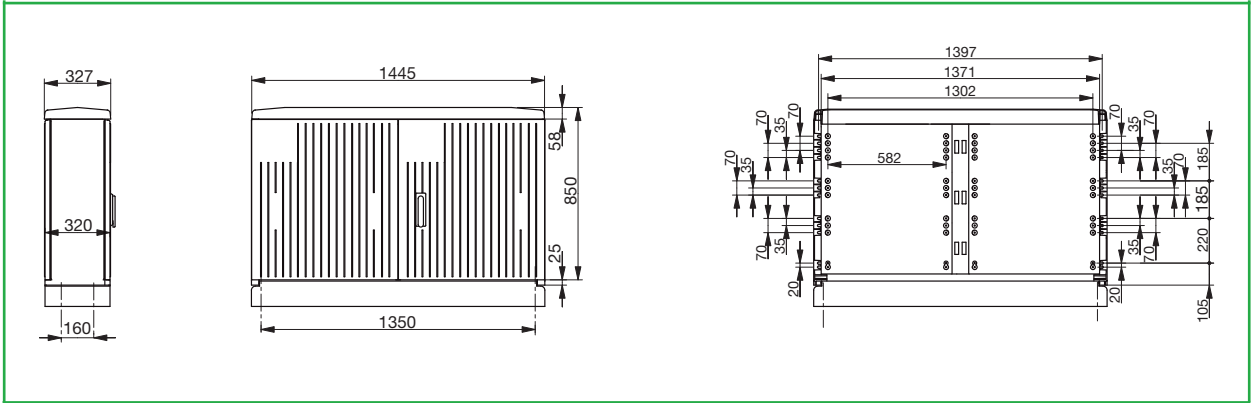
EH3/AP - 21



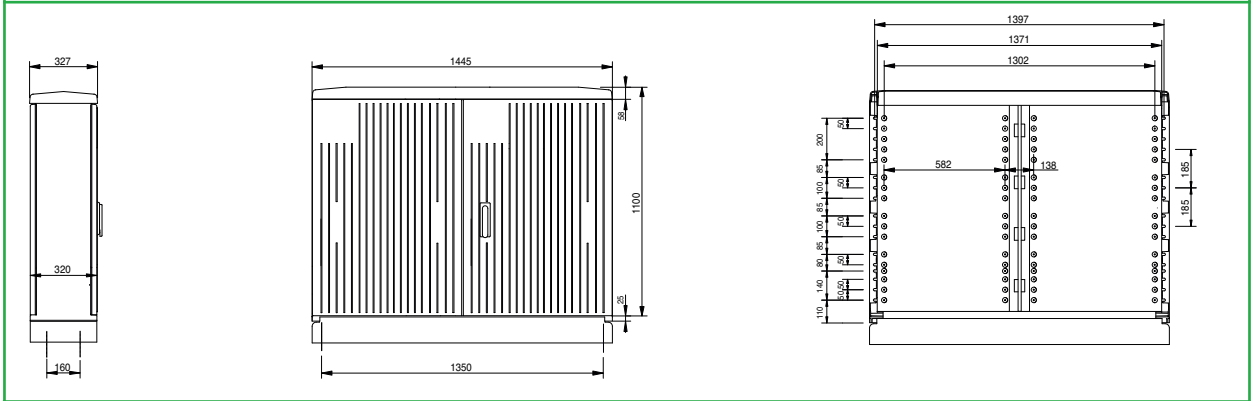
EH3/AP - 22



EH3 - 3



EH3/AP - 23



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Polyester bases DIN 00-0-1-2

Polyester bases DIN 3

The dimensions of the base fixation points are in accordance with DIN 43629.

Dimensions				
DIN	00	0	1	2
A	360	495	690	1020
B	322	457	652	982
C	408	543	738	1068

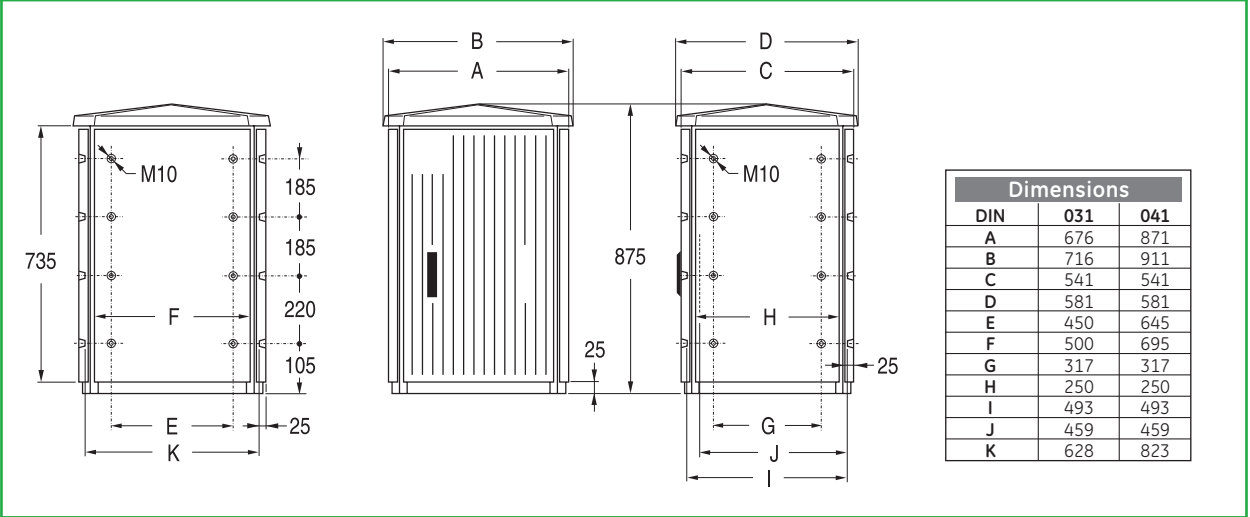
Dimensions	
DIN	3
A	1350
B	1315
C	1400

Bottom plate

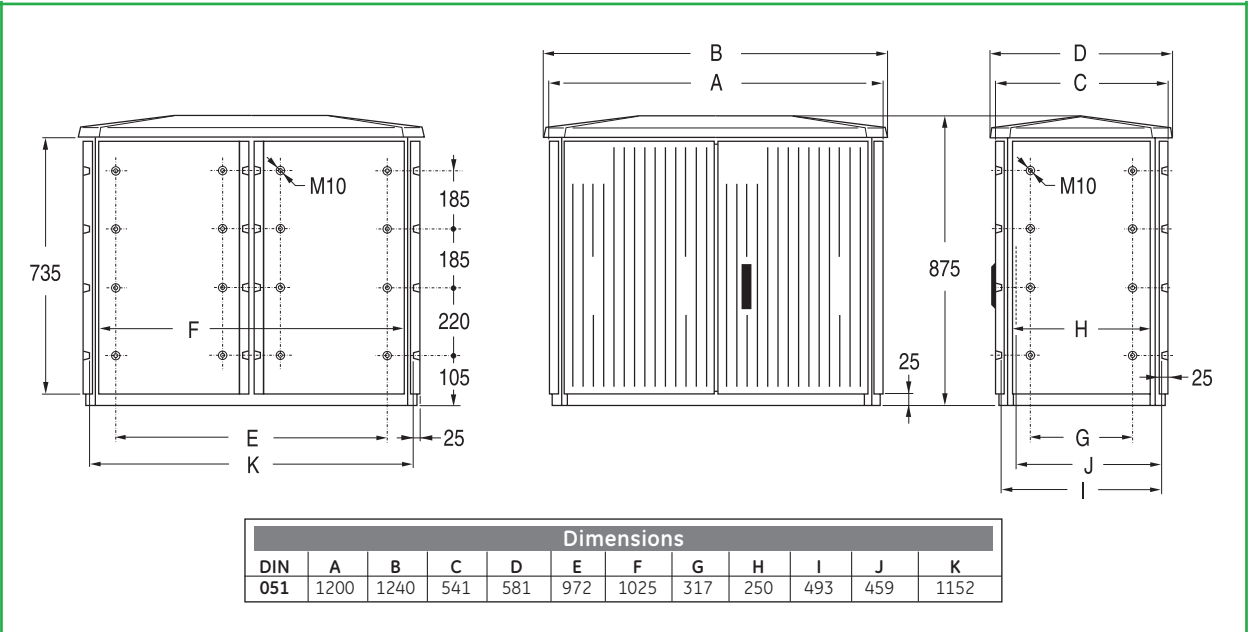
To be mounted between pedestal and DIN-base or as bottom plate of the enclosure.

Dimensions				
DIN	0	1	2	3
A	562	757	1086	1416
B	495	630	1020	1350

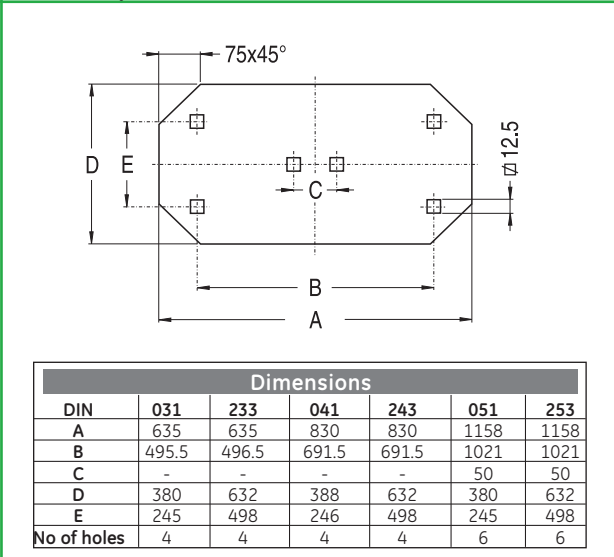
EH3/GD-AP 031 - EH3/GD-AP 041



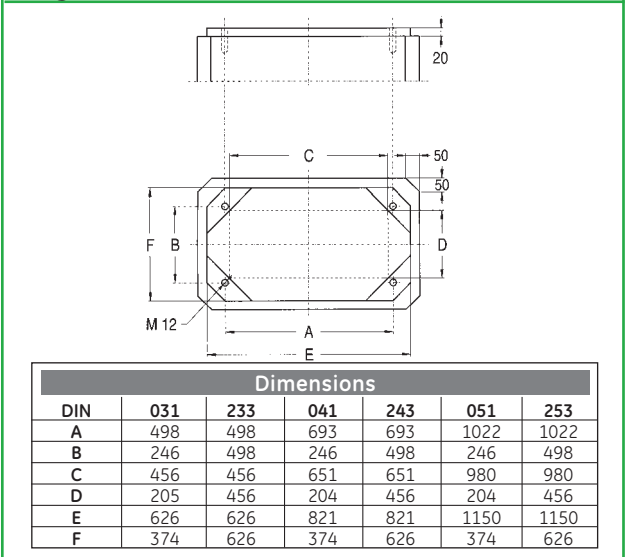
EH3/GD-AP 051



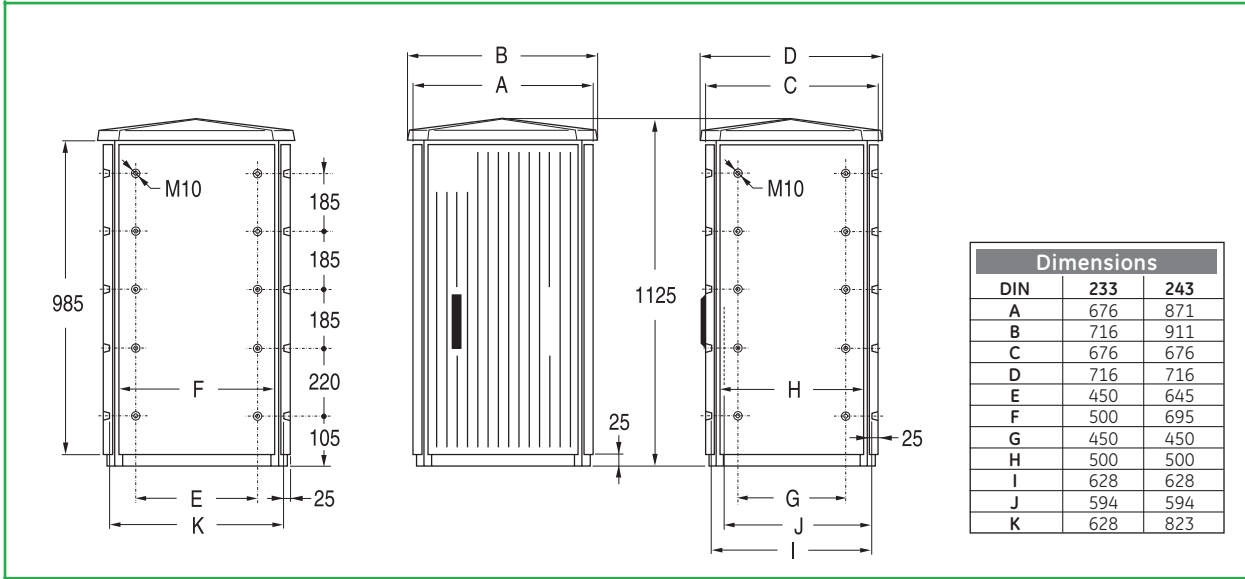
Bottom plate



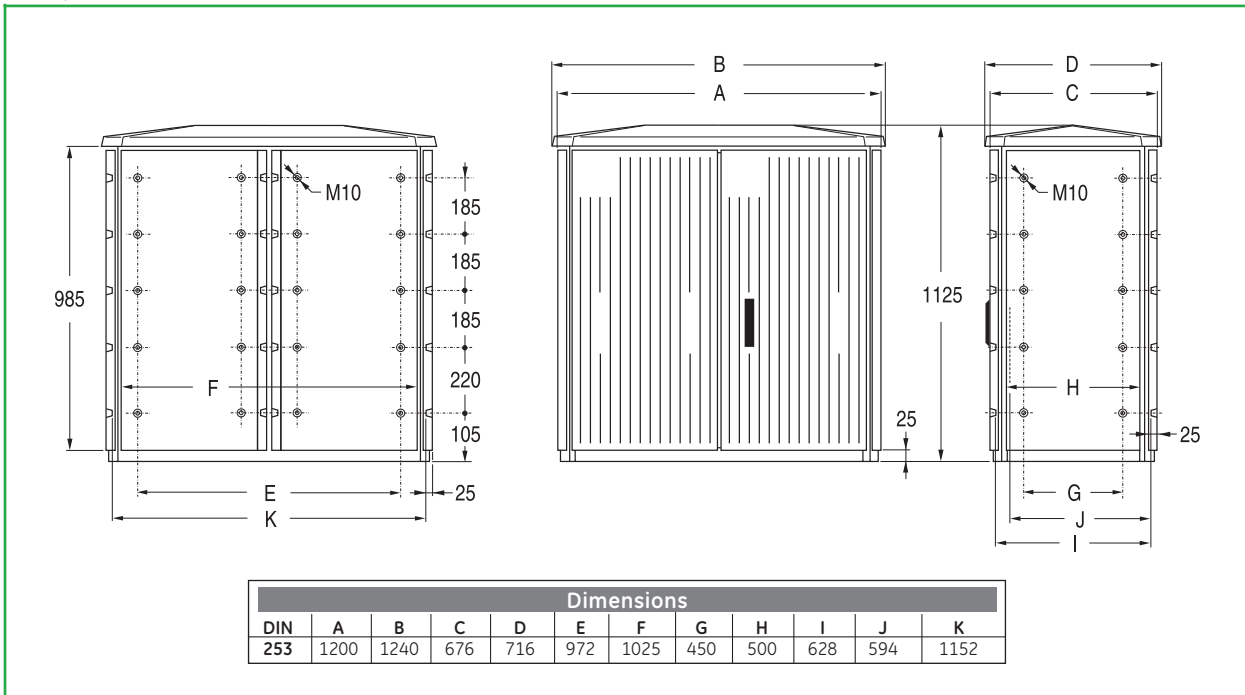
Polyester base



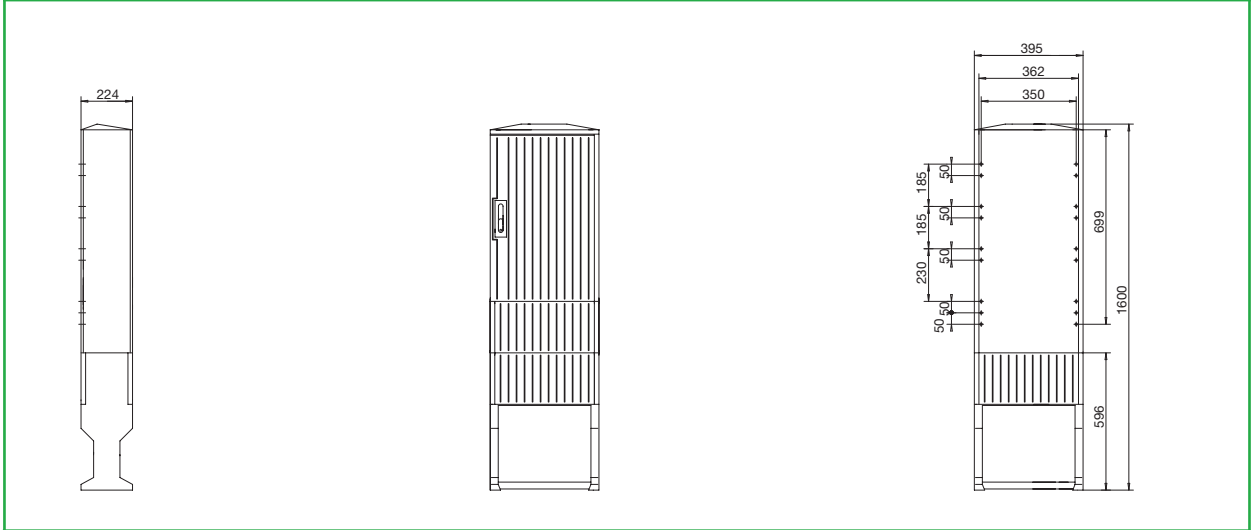
EH3/GD-AP 233 - EH3/GD-AP 243



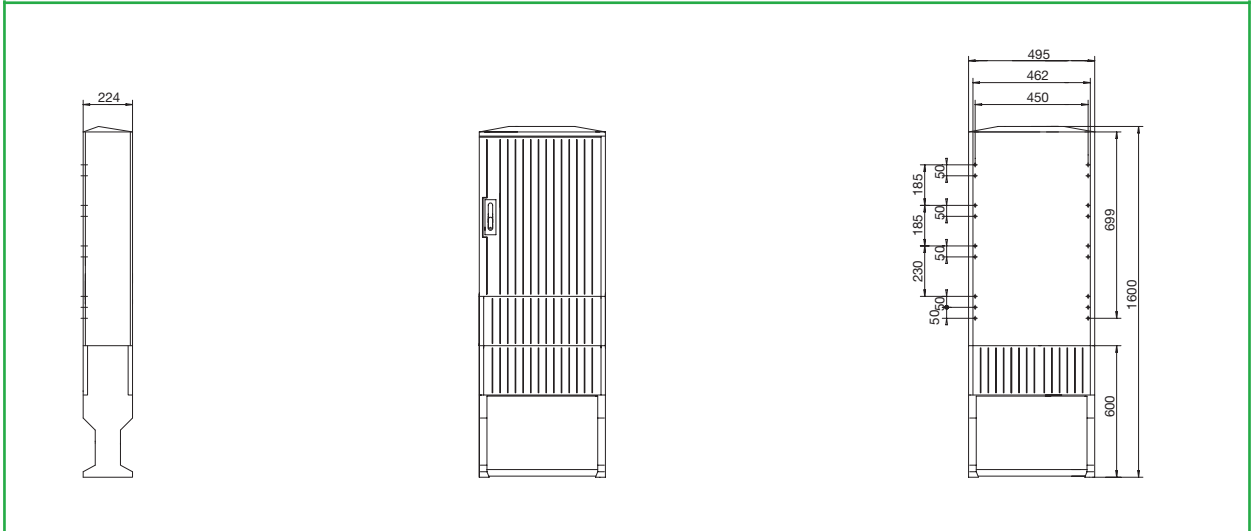
EH3/GD-AP 253



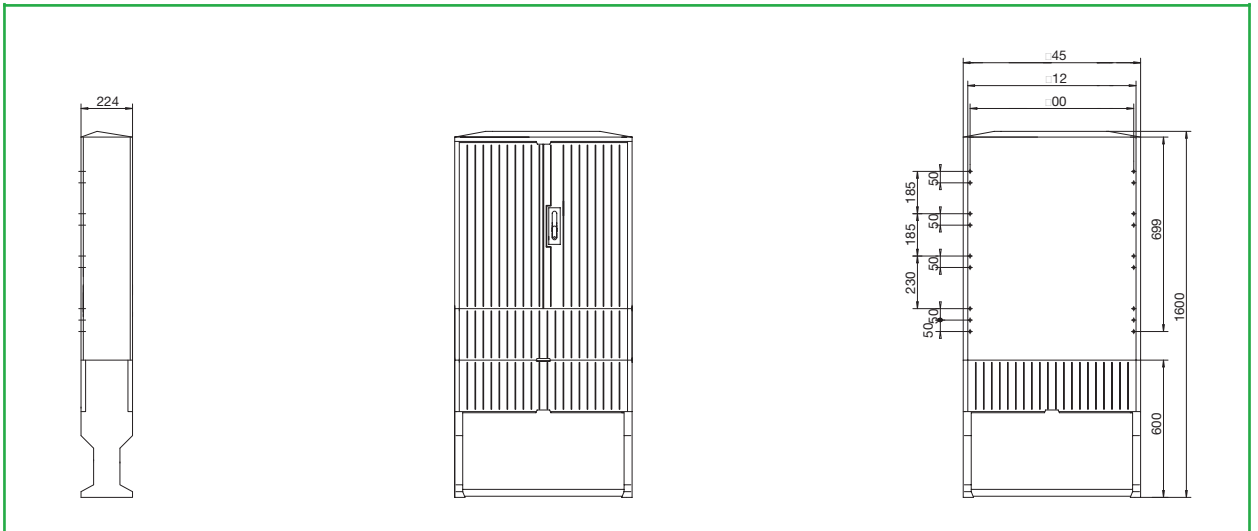
EH4 - 00



EH4 - 0



EH4 - 1



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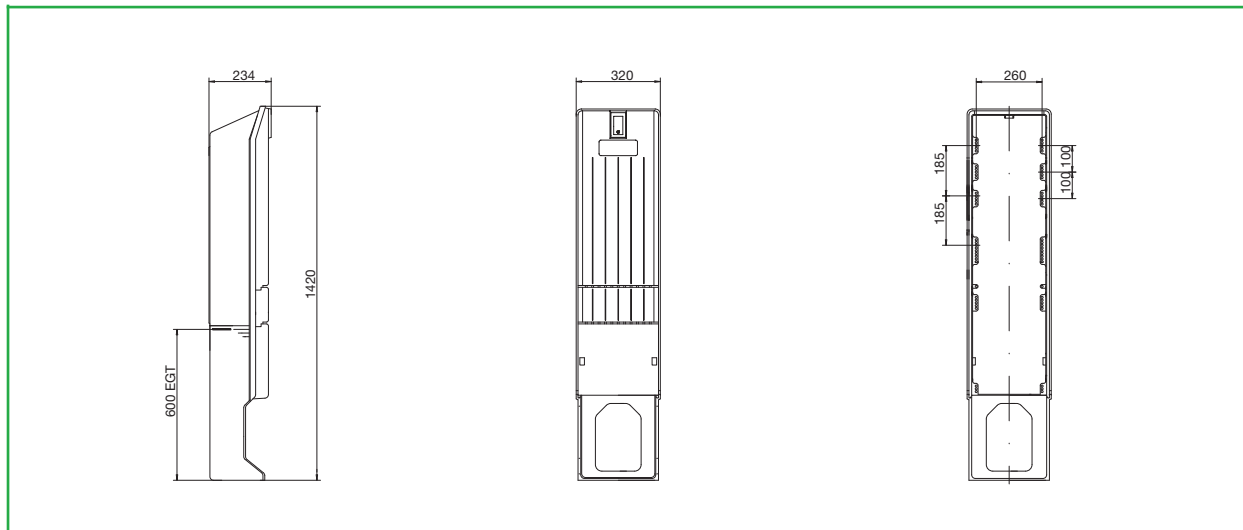
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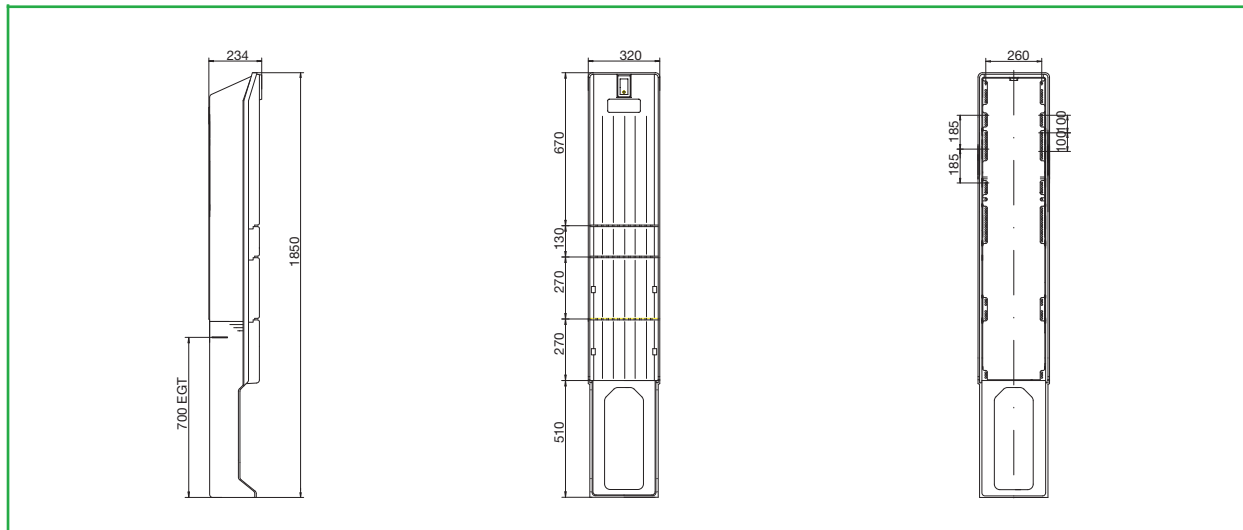
X



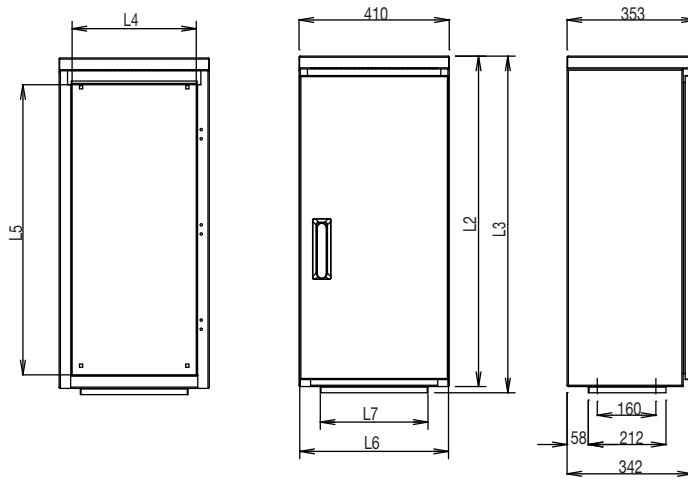
EH4 - S1



EH4 - S2

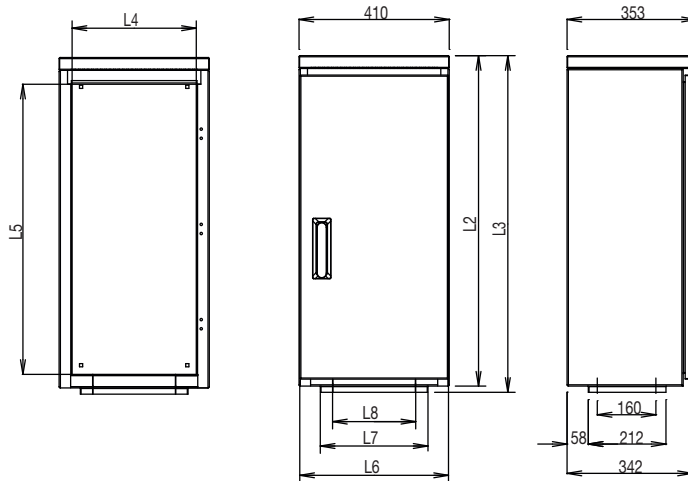


Pedestal with single door and with fixed sill profile



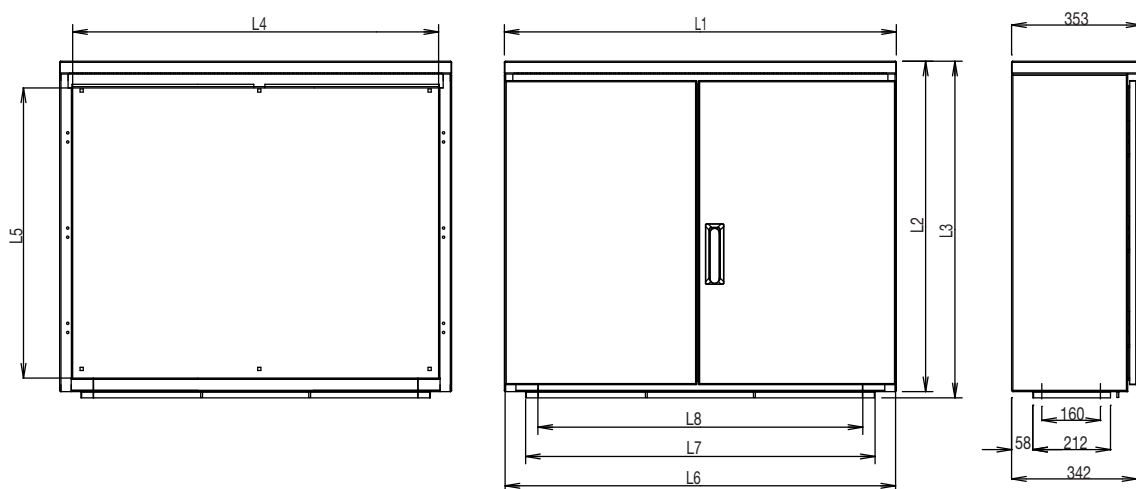
Dimensions							
Type	L1	L2	L3	L4	L5	L6	L7
RVL 500	410	652	669	339	542	406	294
RVN 500	410	902	919	339	792	406	294
RVD 500	410	1002	1019	339	892	406	294
RVL 50	545	652	669	474	542	541	429
RVN 50	545	902	919	474	792	541	429
RVD 50	545	1002	1019	474	892	541	429
RVH 50	545	1152	1169	474	1042	541	429

Pedestal with one door and with removable sill profile

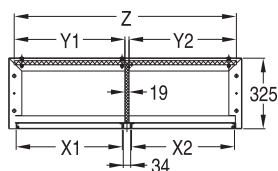


Dimensions								
Type	L1	L2	L3	L4	L5	L6	L7	L8
RVL 51	740	652	669	669	542	736	624	557
RVN 51	740	902	919	669	792	736	624	557
RVD 51	740	1002	1019	669	892	736	624	557
RVH 51	740	1152	1169	669	1042	736	624	557

Pedestal with double door and with removable sill profile Two compartments



Cross section



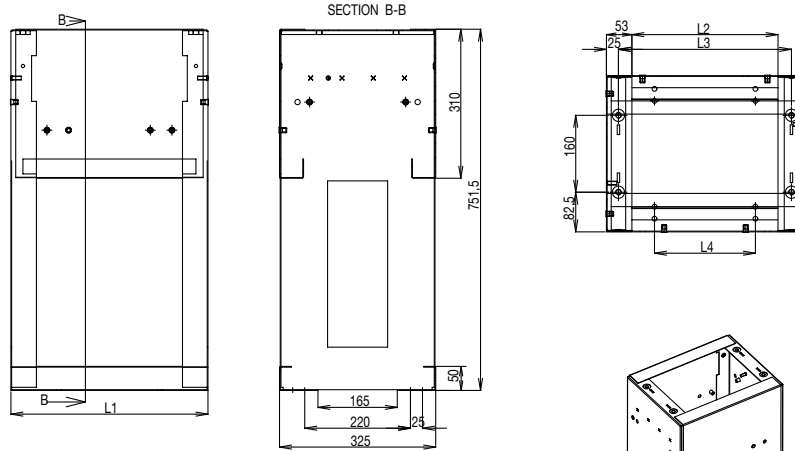
Dimensions								
Type	L1	L2	L3	L4	L5	L6	L7	L8
RVL 52	1070	652	669	999	542	1066	954	887
RVN 52	1070	902	919	999	792	1066	954	887
RVD 52	1070	1002	1019	999	892	1066	954	887
RVH 52	1070	1152	1169	999	1042	1066	954	887
RVN 53	1400	902	919	1329	792	1396	1284	1217
RVD 53	1400	1002	1019	1329	892	1396	1284	1217
RVH 53	1400	1152	1169	1329	1042	1396	1284	1217
RVS 53	1400	1352	1369	1329	1242	1396	1284	1217
RVN 54	1730	902	919	1659	792	1726	1614	1547
RVD 54	1730	1002	1019	1659	892	1726	1614	1547
RVH 54	1730	1152	1169	1659	1042	1726	1614	1547
RVS 54	1730	1352	1369	1659	1242	1726	1614	1547

Dimensions					
Type	X1	X2	Y1	Y2	Z
RVL/N/D/H 52 DC1	480	480	500	500	1020
RVN/D/H 52 DC2	315	645	335	665	1020
RVN/D/H 52 DC3	645	315	665	335	1020
RVN/D/H 53 DC1	645	645	665	665	1350
RVN/D/H 53 DC2	480	810	500	830	1350
RVN/D/H 53 DC3	810	480	830	500	1350
RVN/D/H 54 DC1	1305	315	1325	335	1680
RVN/D/H 54 DC2	315	1305	335	1325	1680

Remark: other dimensions are identical to the pedestals with one compartment with double door.

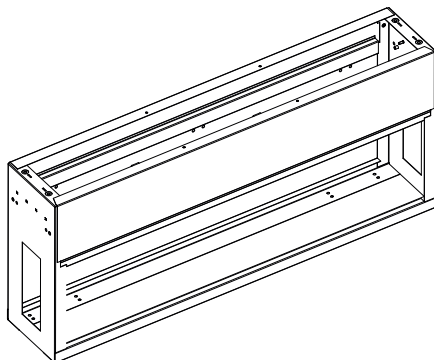
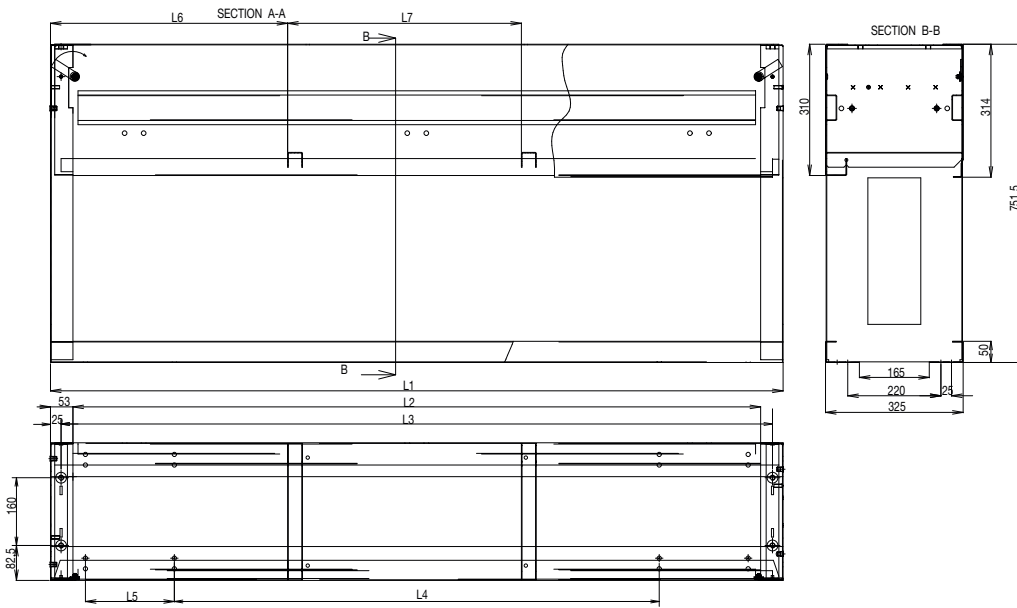
Bases

Base with fixed front plate



Dimensions					
DIN	Type	L1	L2	L3	L4
00	RF500	410	304	360	210
0	RF50	545	439	495	210

Base with removable front plate



Dimensions								
DIN	Type	L1	L2	L3	L4	L5	L6	L7
1	RF51	740	634	690	165	210	347	-
2	RF52	1070	964	1020	495	210	512,5	-
3	RF53	1400	1294	1350	815	210	677,5	-
4	RF54	1730	1624	1680	1145	210	560	552

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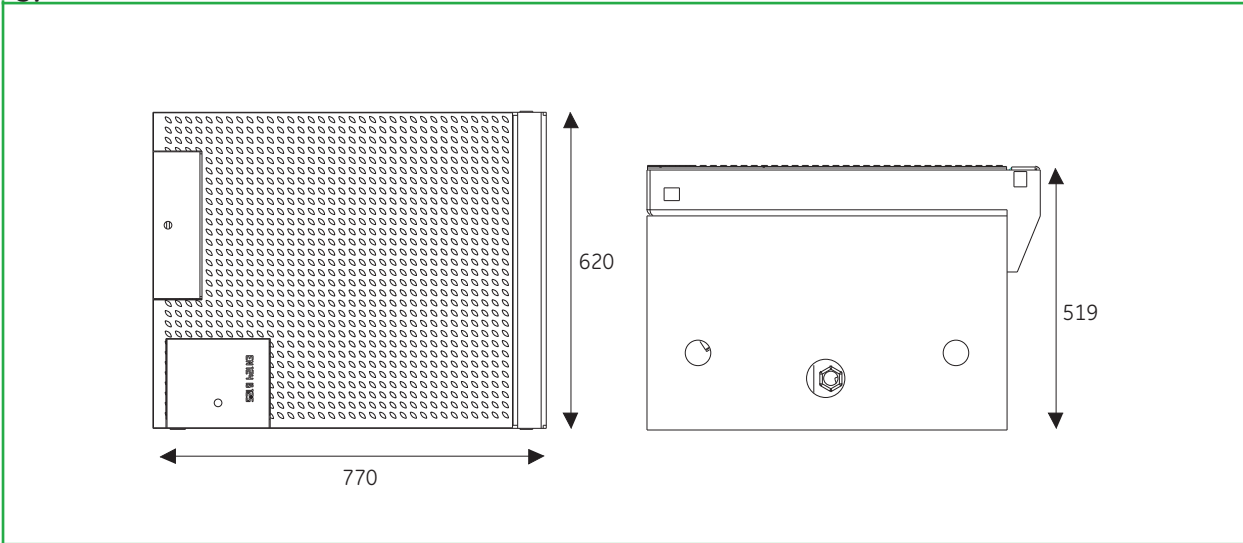
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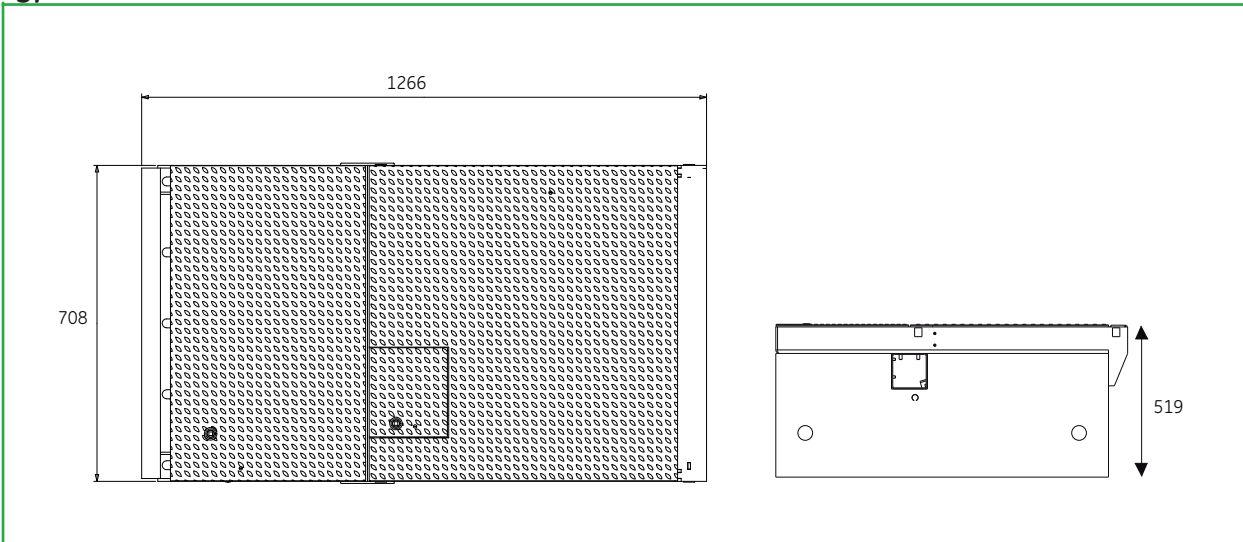
X



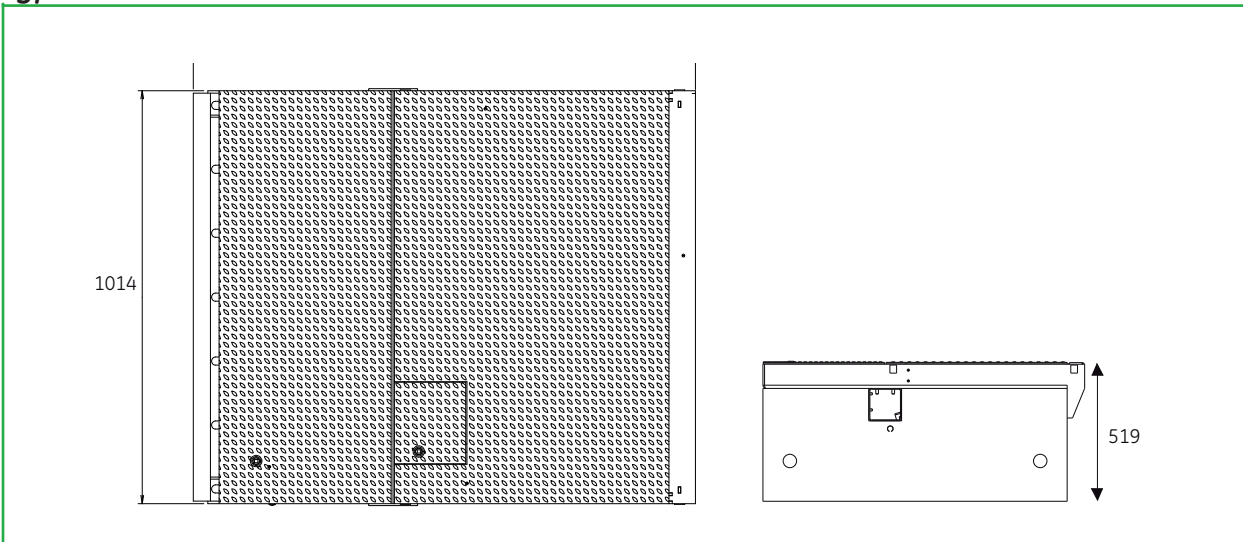
Type "Stadion" (Stadium)



Type "Fair"



Type "Market"



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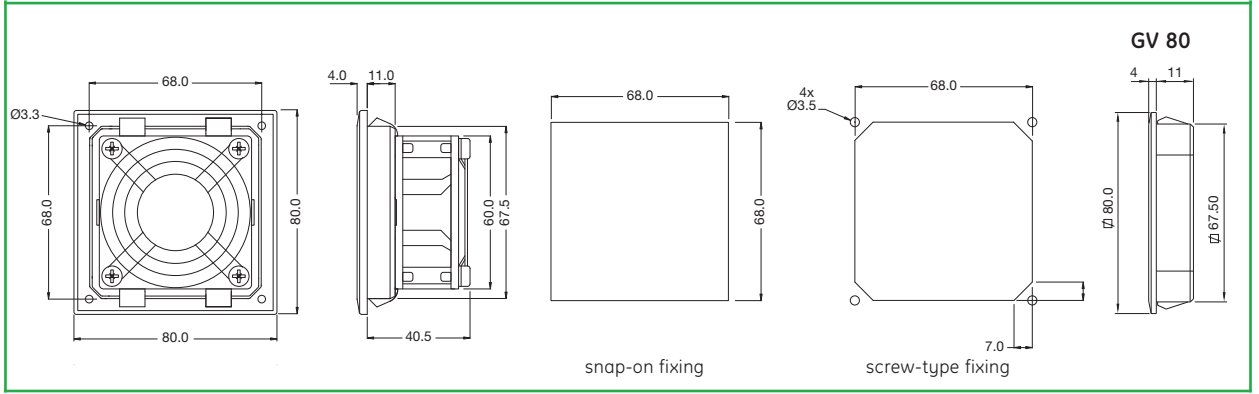
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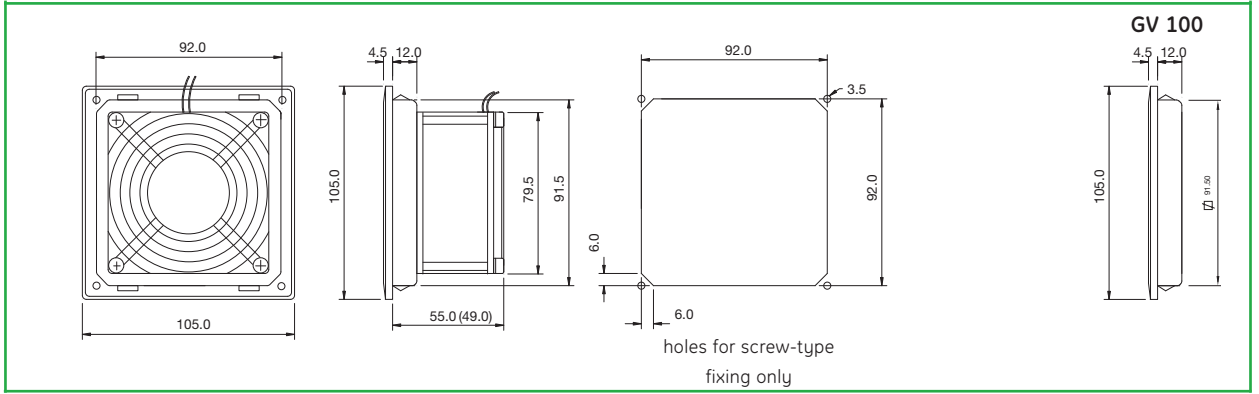
X



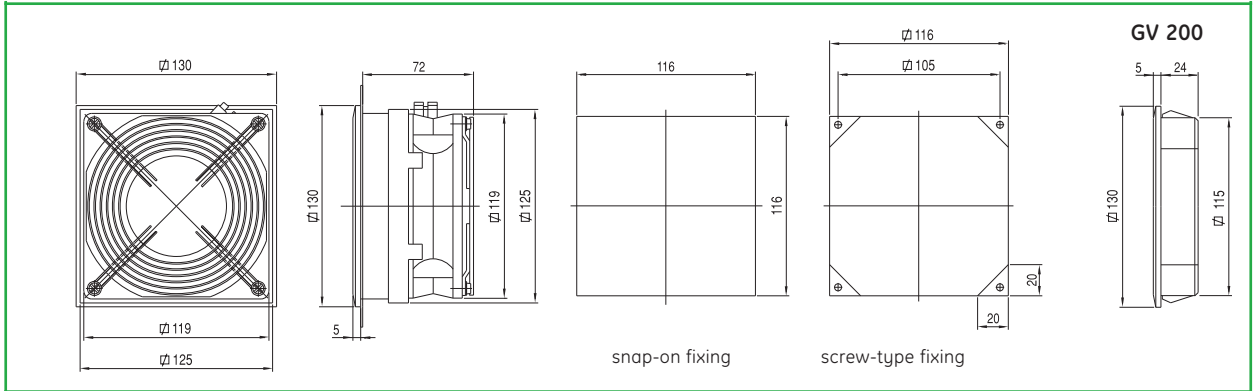
Filter fan LV 80 and LV 85



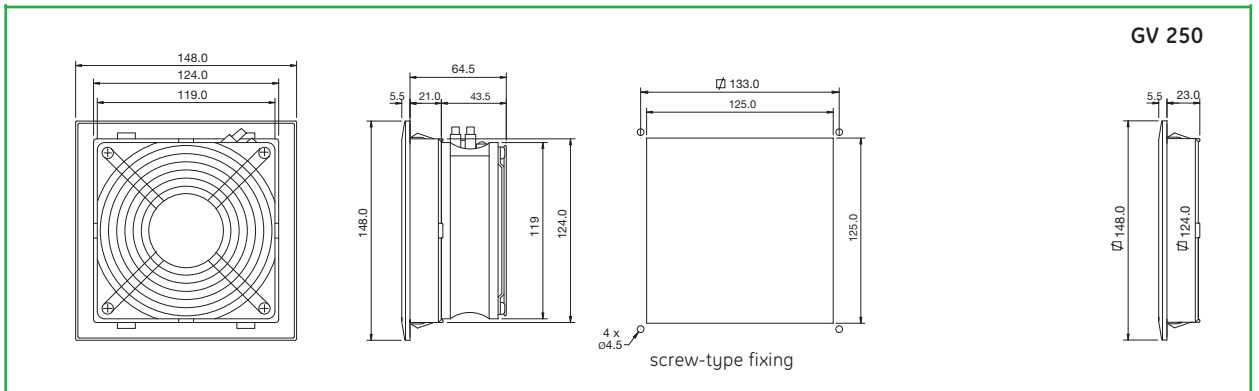
Filter fan LV 100



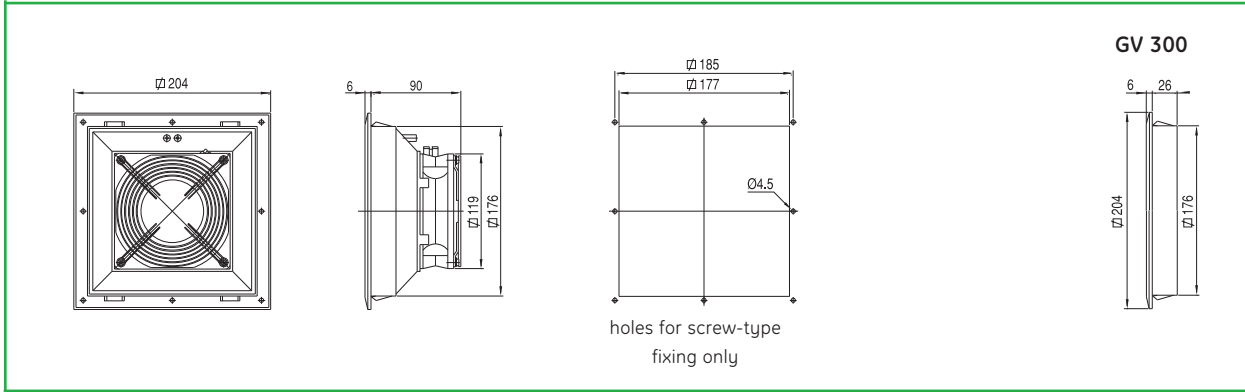
Filter fan LV 200



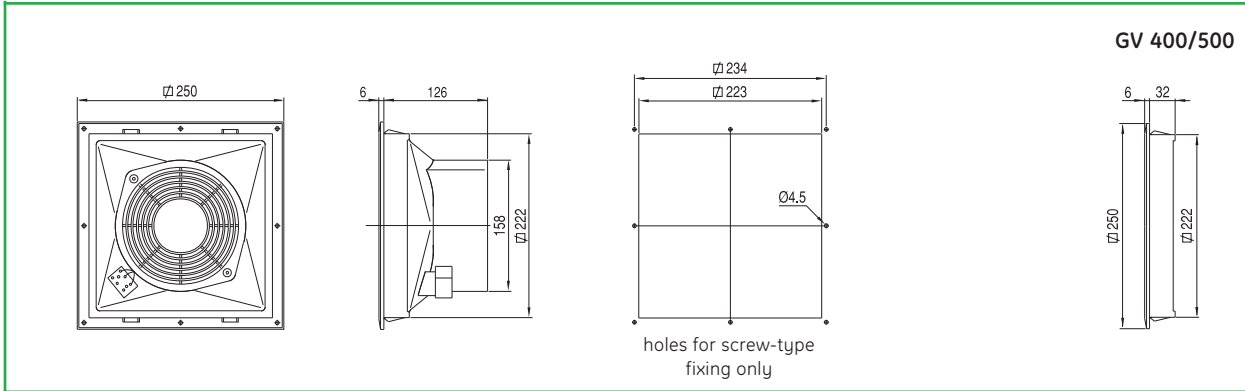
Filter fan LV 250



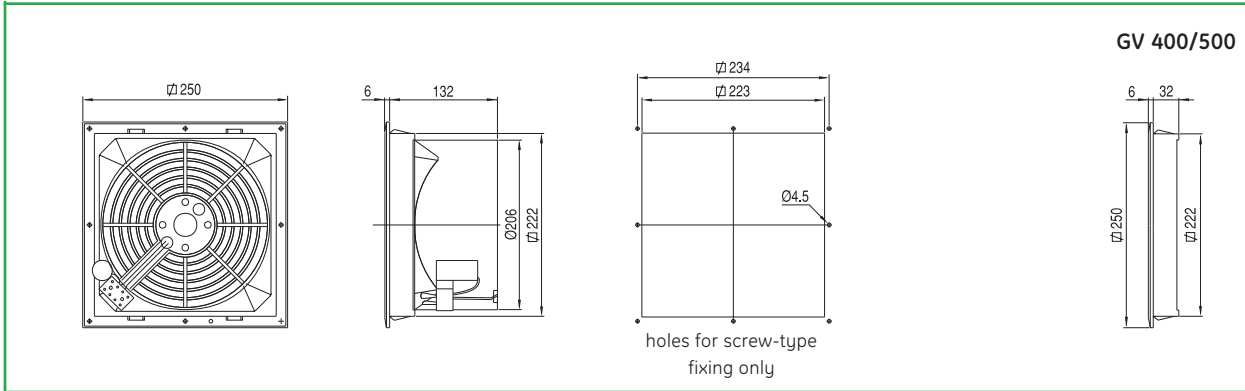
Filter fan LV 300



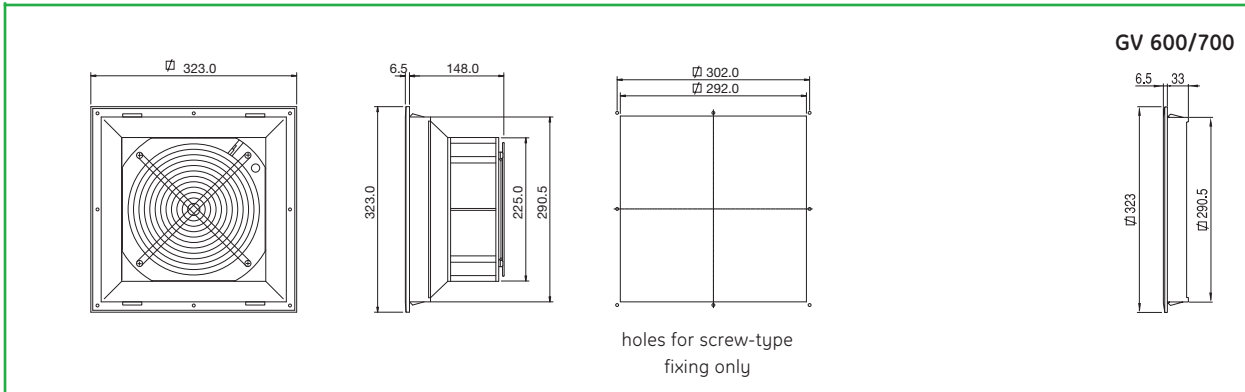
Filter fan LV 400



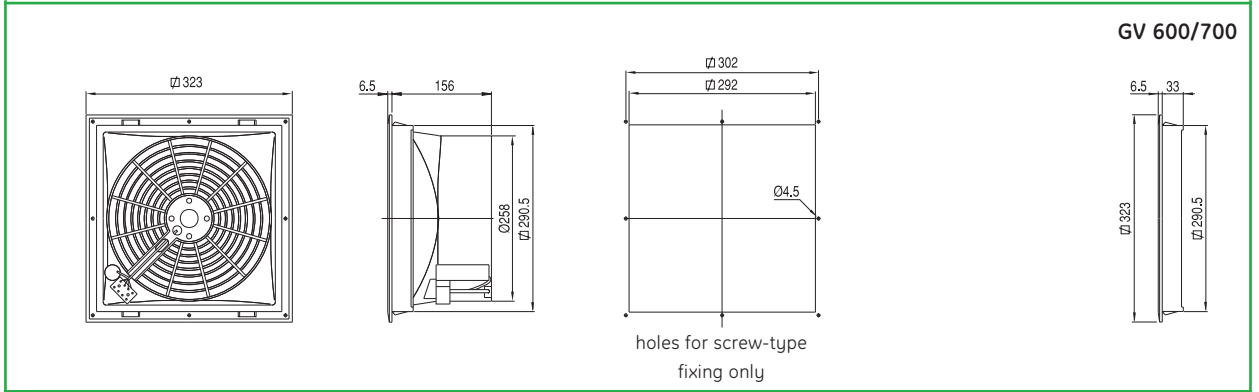
Filter fan LV 500



Filter fan LV 600



Filter fan LV 700



Dimensional drawings

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MultiBox



Small multipurpose boxes

- The range comprises 11 different basic box sizes, from 65 x 65 mm up to 361 x 254 mm, with up to 3 different cover depths and two designs:
 - with grey lid
 - with transparent lid.
- They are suitable for applications that require light weight and durability.
- The base is manufactured from glass-fibre reinforced polycarbonate (type PC) or polystyrene (type PS), both dyed in mass RAL 7035 (light grey).
- Glass-fibre reinforced polycarbonate bases (type PC) come with smooth side walls (only one Metric entry) or with several Metric knock-outs.
- Polystyrene bases (type PS) come with smooth side walls or with several Metric knock-outs.
- The lid is manufactured from transparent or opaque grey polycarbonate or grey polystyrene.
- The lid is fixed to the base by means of cover screws in polyamide.
- Polycarbonate boxes can withstand temperatures from -35° to +120°C, the polystyrene boxes temperatures between -40° and +70°C.
- The box offers maximum protection to the user and the equipment by means of total insulation \square and a protection degree as per IEC 60529 and also complies with the impact-resistance standard as per EN 62262 and IEC 62262.
 - boxes type PC, IP66-IK08
 - boxes type PS, IP66-IK07
- Materials are halogen-free.
- Both types (PC and PS) are self-extinguishing according UL94-V2.
- Boxes offer good resistance to chemical and aggressive influences.
- The box is secured to the wall by screws directly through the base, direct through the four corner shafts of the base (under the cover screws) or by using external mounting brackets.
- Boxes may be fitted with external hinges and/or padlocking as a protection against unauthorised access.
- Boxes can be combined in height and in width by means of a combi set.
- It is possible to mount DIN profiles (15x5x1 and 35x7.5x1) as well as mounting plates.
- Tailor-made boxes are available upon request: coloured, painted, overprinted, machine finished, EMC shielded.

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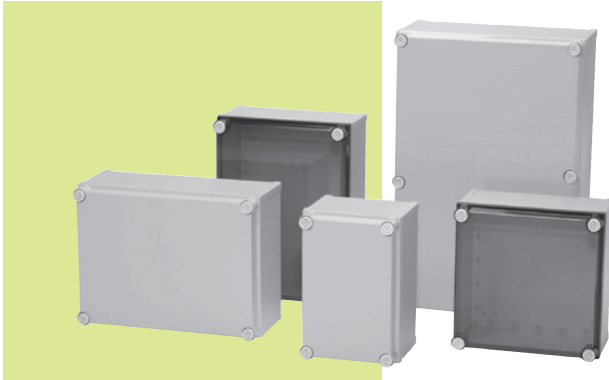
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MultiBox Xtra



Multipurpose boxes

- The range comprises 6 different basic box sizes, from 300 x 200 mm up to 600 x 400 mm, with up to 2 different cover depths per dimension (170, 210, 230, 270 mm) and two different executions:
 - with grey lid,
 - with transparent lid.
- They are suitable for applications that require light weight and durability.
- The base is manufactured from polycarbonate (type PC) or Acrylnitril-Butadien-Styrol (type ABS), both dyed in mass RAL 7035 (light grey).
- The enclosures have smooth side-walls, holes for cable Entries can be made where needed.
- Covers are made out of transparent or light-grey (RAL7035) PC or ABS.
- Covers are fixed to the base by means of a 180° degree turned polyamide screw.
- Polycarbonate enclosures withstand a temperature rating from -35° up-to +120°C, ABS enclosures withstand a temperature rating from +40° up-to +70°C.
- The box offers maximum protection to the user and the equipment by means of total insulation and a protection degree as per IEC 60529 and also complies with the impact-resistance standard as per IEC 62262.
 - boxes type PC, IP66/67-IK08
 - boxes type ABS, IP66/67-IK08
- Materials are halogen-free.
- Both types (PC and ABS) are self-extinguishing/flame retardant (PC960°C and ABX 650°C).
- Boxes offer good resistance to chemical and aggressive influences.
- The box is secured to the wall by screws directly through corner shafts in the base or by using external mounting brackets.
- Boxes may be fitted with external hinges.
- It is possible to mount DIN profiles (35x7.5x1) as well as metal and isolated (Pertinax) mounting plates.
- Tailor-made boxes are available upon request: coloured, painted, overprinted, machine finished, etc.

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APO



Modular polyester boxes

- The range consists of nine types with module 150/185 mm, with dimensions ranging from 185 x 150 mm to 600 x 600 mm in five different designs:
 - with screwed polyester lid
 - with screwed polycarbonate lid
 - with screwed flap lid
 - with hinged polyester lid
 - ventilated with hinged polyester lid and lock.
- The base is made from self-extinguishing, glass-fibre-reinforced and halogen-free polyester, dyed in mass RAL 7035 (light grey).
The glass-fibre content is a minimum of 25%.
The base also comes with a minimum of four M4 threaded inserts for mounting metal, perforated metal and pertinax (insulated) mounting plates, and also mounting frames for modular equipment.
The base also has space for four M6 threaded inserts.
- The lid is manufactured:
 - either from self-extinguishing, glass-fibre-reinforced and halogen-free polyester, dyed in mass RAL 7035 (light grey)
 - or from transparent polycarbonate.
 The design as flap lid: frame in self-extinguishing, glass-fibre-reinforced and halogen-free polyester, dyed in mass RAL 7035 (light grey), the window in transparent polycarbonate.
- The box can withstand continuous temperatures from -35° to +70°C (+130°C peak).
(peak +120°C for the box with polycarbonate lid).
- The useful mounting depth of the box can be expanded by means of depth extension frames without affecting the original protection degrees.
- The box offers maximum protection for user and equipment thanks to the total insulation \square and the protection degree as per IEC 60529 and also complies with the impact-resistance standard EN 62262 and IEC 62262.
 - box with screwed polyester lid, IP67-IK10
 - box with screwed polycarbonate lid, IP66-IK10
 - box with screwed flap lid, IP67-IK10
 - box with hinged polyester lid, IP55-IK10
 - ventilated box with hinged polyester lid and lock, IP44-IK10.
- Boxes are suitable for outdoor use. Heating and ventilation need to be considered depending on environmental conditions.
- There are various ways of securing the box to the wall:
 - using screws in the four corner holes
 - using fixing lugs secured through the four corner holes
 - using stainless steel fixing clamps, fitted directly to the rear of the base in the reinforcements provided.
 In all these cases, the IP values and total insulation are guaranteed.
- All boxes have the same depth and can be assembled by means of coupling frames.
- Boxes have the UL certification mark (available on request), in accordance with UL standard 508 and also comply with the CSA certification mark as per C22.2 no. 94.
 - boxes with polyester lid, types 3, 3R, 4, 4X, 6, 6P, 12 and 13
 - boxes with polycarbonate lid, types 3, 3R, 4, 4X, 12 and 13
 - boxes with flap lid, types 3, 3R, 4, 4X, 6, 12 and 13.
- Boxes also bear the following certification marks:
 - Lloyd's Register of Shipping
 - Germanischer Lloyd

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MultiCab



Multipurpose cabinets

- The range comprises 5 different basic cabinet sizes, from 300 x 200 mm up to 600 x 400 mm, with 1 cover depth per dimension (180, 200, 220mm) and two different executions:
 - with grey lid,
 - with transparent lid.
- They are suitable for applications that require light weight and durability.
- The base is manufactured from polycarbonate (type PC) dyed in mass RAL 7035 (light grey).
- The enclosures have smooth side-walls, holes for cable entries can be made where needed.
- Covers are made out of transparent or light-grey (RAL7035) PC.
- Covers are locked by means of a double-bit or latch mounted sideways of the enclosure base/cover. External hinges allow an easy opening.
- Polycarbonate enclosures withstand a continuous temperature rating from -35° up to +70°C (peak +120°C).
- The cabinet offers maximum protection to the user and the equipment by means of total insulation and a protection degree as per IEC 60529 and also complies with the impact-resistance standard as per IEC 62262.
 - cabinets type PC, IP65-IK08
- Materials are halogen-free and self-extinguishing/flame retardant (960°C).
- Cabinets offer good resistance to chemical and aggressive influences.
- The cabinet is secured to the wall by screws directly through corner shafts in the base or by using external mounting brackets.
- It is possible to mount DIN profiles (35x7.5x1) as well as metal and isolated (Pertinax) mounting plates.
- Tailor-made cabinets are available upon request: coloured, painted, overprinted, machine finished, etc.

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ARIA



Universal polyester cabinets

- The range comprises seven different sizes ranging from 315 x 215 mm to 1035 x 835 mm in two different designs:
 - cabinet with plain door
 - cabinet with glazed door.
- The cabinet is manufactured from self-extinguishing, glass-fibre-reinforced and halogen-free polyester, dyed in mass RAL 7035 (light grey). The glass fibre content is a minimum of 25%. The cabinet is fitted with four threaded pins and four nuts to secure perforated metal, Sendzimir zinc coated sheet steel or pertinax (insulated) mounting plates and mounting frames.
- The cabinet consists of two parts: the base and the door. The removable door is secured to the base by two hinges and the opening angle is a maximum of 180°. In a closed position, the hinges are invisible. Closure is controlled by a three-point locking mechanism operated by a single central operating grip or handle (single-point closure for cabinets 300 x 200 mm), two-point closing for cabinets 500 x 400 mm, 600 x 400 mm and 700 x 500 mm as an alternative. The door is fitted with a seamless seal and the total concept is such that stagnating water on the seal is avoided. A doorlifter (for bigger dimensions) ensures the door takes its center position during closing. The four angles in the base are double-walled. Ventilation against condensation can be done without the ventilation grids being visible when the cabinet is closed.
- The mounting frame or the mounting plate can be equipped and wired outside the cabinet. They are placed subsequently in the cabinet:
 - either on the securing points in the rear of the base provided for this purpose, without any further arrangement being necessary
 - or on special mounting supports which slide into the moulded-on C-profiles in the angles of the cabinet.
- The equipment is protected by a single-piece cover plate, manufactured from self-extinguishing, glass-fibre-reinforced and halogen-free polyester, dyed in mass RAL 7035. The cover plate is secured with snap-on fixing screws, which can be easily removed by the use of tools. This guarantees the protection degree of IP20 as for IEC 60529.
- If required, the cover plate can be fitted with hinges.
- Protection of the modular devices can also be obtained by using individual modular cover plates (h = 150 mm) in PVC material, also offering IP20. These individual modular cover plates can be plain or with cut-out for DIN-rail equipment.
- The cabinets can withstand continuous temperatures from -35° to +70°C (+130°C peak).
- The cabinet offers maximum protection to user and equipment thanks to the total insulation and protection degree IP66 as per IEC 60529 and also complies with the impact-resistance standard EN 62262 and IEC 62262.
 - IP66-IK10 cabinets with plain door and central locking system.
 - IP65-IK10 cabinets with plain door and two-point locking.
 - IP66-IK07 cabinets with glazed door.
- The cabinets are suitable for outdoor use. Heating and ventilation need to be considered depending on environmental conditions.
- The cabinets are secured to the wall by:
 - either four 304 stainless steel or polyamid mounting brackets, screwed along the back of the cabinet using stainless steel bolts which do not penetrate the back
 - or directly by means of screws in the double-walled corners
 - or directly through the base by means of four screws, sealed by a non removable sealing cap.
 - In these cases the IP value and the overall total insulation remain guaranteed.
- The cabinets have the UL approval (available on request) in accordance with UL standard 508 types 3, 3R, 3S, 4, 4X, 12 and 13.
- They also comply with the CSA certification mark (available on request) as per C22.2 no. 94 types 3, 3R, 3S, 4, 4X, 12 and 13.
- The cabinets also bear the certification mark: Lloyd's Register of Shipping.

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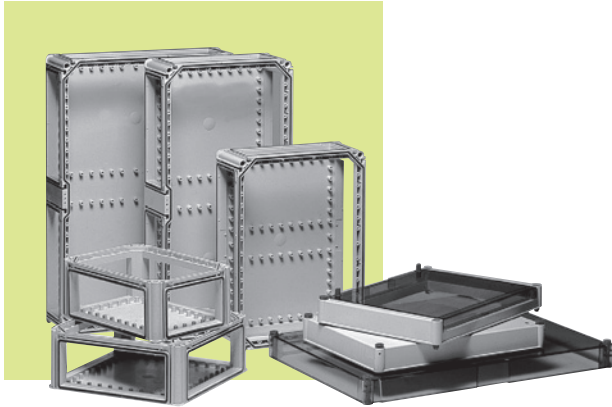
PolySafe



Multipurpose polyester cabinets

- The range consists out of fourteen types with module 250 mm, with dimensions ranging from 500x500 mm up to 1250x1000 mm, in one depth 320 mm and two different designs :
 - cabinet in-factory assembled with plain door
 - cabinet in-factory assembled with glazed door
 Four stainless steel wall mounting brackets are also supplied as standard.
- The cabinet is manufactured from self-extinguishing, hot moulded, glass fibre reinforced and halogen-free polyester, dyed in mass RAL 7035 (light grey). The glass-fibre content is a minimum of 25%.
- The cabinet exists out of a back panel, two side panels, a top panel, a base panel and a flush-mounted door.
- The door is secured to the main structure of the cabinet by means of hinges, each step of 250mm, and its angle of opening is a maximum of 100°. The hinges are not visible when the door is in closed position.
- Closure is effected by a five-point locking mechanism controlled by a single central operating handle.
- The operating handle is suitable for all types of profile half cylinder locks (standard depth 40 mm, alternative depth 45 mm).
- A doorlifter (for bigger dimensions) ensure the door takes its center position during closing.
- The standard depth of the cabinet is 320 mm, but can be increased to 640 mm by using a 320 mm extension kit.
- The cabinets can be coupled in height and in width by means of a coupling kit.
- The mounting plate (in pertinax, in Sendzimir zinc coated sheet steel or in perforated metal) can be set up and wired outside the cabinet. It is placed subsequently in the cabinet.
The mounting plate is secured directly to the securing points provided on the back panel of the cabinet or mounted on four depth adjustment brackets (steps of 12.5 mm).
- The modular mounting frame for DIN-rail equipment is completed with modular functions height 150 mm, plain or with cut-outs, or modular plain functions height 300 mm. They guarantee a protection degree of IP20 with open doors.
- The addition of a rainhood allows for natural ventilation (IP44/IP54) in the cabinet.
- The cabinets are designed for wall mounting, floor standing and pole fixing.
- The cabinets are resistant to continuous temperatures of -35° up to +70°C (+130°C peak).
- The cabinet offers maximum protection to user and equipment thanks to the total insulation \square and the high protection degree IP65/54 (IP54 for cabinets with glazed door) according to EN/IEC 60529. It also complies with the impact-resistance degree IK10 (IK07 for cabinets with glazed door) according to EN/IEC 62262.
- The cabinets are suitable for indoor as well as outdoor use. Heating and ventilation need to be considered depending on environmental conditions.
- The cabinets are secured to the wall by means of stainless steel mounting brackets which are clinged and fixed on the back without using any screws. These wall mounting brackets can be mounted vertical or horizontal.
The cabinets with rain hood are secured to the wall by means of four special similar brackets.
- A cabinet can be placed on the ground by using a floor mounting frame which is anchored to the ground together with the cabinet.
All cabinets width 750 and 1000 mm can be mounted on a DIN-base by means of a DIN adaptor frame. In all these cases the IP degree as well as the total insulation are guaranteed.
- The cabinets have following approvals (available on request): UL and CSA
 - cabinets with single door: types 3, 3R, 3S, 4, 4X, 12, 12K and 13.
 - cabinets with double door: types 3, 3R, 3S, 4, 4X, 12, 12K and 13.
 - coupled cabinets: types 3, 3R, 3S, 12, 12K and 13.
- Standards: IEC 60529, EN 60529, EN 62262, IEC 62262, EN 62208, IEC 62208, IEC 61439-2
- The cabinets also bear the certification mark: Lloyd's Register of Shipping.

VMS



Modular enclosures system

- The range consists of five types with module 100 mm, with dimensions ranging from 320 x 220 mm to 640 x 440 mm.
- The bases are manufactured from self-extinguishing, glass-fibre-reinforced and halogen-free polycarbonate, dyed in mass RAL 7035 (light grey). The glass fibre content is at least 20%.
- Securing points are fitted in the base to secure metal and pertinax mounting plates, mounting frames, busbars, etc., by means of self-tapping screws. These securing points form rows parallel to the box edge and figure both in the base and top edge with a step between them of 25 mm.
- The bases, with four open walls, can be linked without screws using dowels. The open side walls are closed by means of click-in end-plates which are locked by keys.
- The lid is manufactured:
 - either from self-extinguishing, halogen-free polycarbonate, dyed in mass RAL 7035 (light grey)
 - or from self-extinguishing, transparent polycarbonate.
 The design as flap lid: the frame dyed in mass RAL 7035, the window transparent, both in self-extinguishing polycarbonate.
- The useful mounting depth of the box, 157 mm, can be expanded using depth extension frames.
- The end-plates are manufactured from self-extinguishing, glass-fibre-reinforced and halogen-free polycarbonate, dyed in mass RAL 7035 (light grey) and available in three designs:
 - as a blind end-plate
 - as a combi end-plate with Metric knockouts
 - as a cable entry end-plate for cable input up to \varnothing 75 mm.
- The boxes can withstand continuous temperatures from -20° to $+70^{\circ}\text{C}$.
- The box offers maximum protection for user and equipment thanks to the total insulation \square and the protection degree as per IEC 60529 and also complies with the impact-resistance standard EN 62262 and IEC 62262.
 - individual, IP65-IK07
 - coupled, IP65-IK07
 - box with one depth extension frame, IP65-IK07
 - box with multiple extension frames, IP45-IK07
 - coupled with coupling set 2x220, IP44-IK07
 - box with cable entry, IP43-IK07
 - box with bridge, IP55-IK07.
- The box can be secured to the wall in various ways:
 - using screws in the four corner holes
 - using stainless steel mounting lugs through the four corner holes
 - using a supporting frame, consisting of at least two horizontal and two vertical C-profiles.
 If the assembly entails more than five boxes, a supporting frame is needed.
- A busbar system up to 1250A can be integrated by means of glass-fibre-reinforced polycarbonate busbar supports, with centre to centre distance between them of 320 mm, with a horizontal arrangement of the busbars (200A-630A) or parallel arrangement of two busbars per phase (630A-1250A). These guarantee a thermal short-circuit resistance between the phase rails with a maximum of 30kA (0,3 sec) and a dynamic short-circuit resistance between the phase rails of a maximum of 65kA peak.
- The boxes have the UL approval (available on request), in accordance with UL standard 508 and also comply with CSA certification mark as per C22.2 no. 94:
 - individual arrangement, types 2, 3, 3R, 3S, 5, 12 and 12K
 - coupled, types 2, 3, 3R, 3S, 5, 12 and 12K
 - coupled with coupling set 2 x 220, types 2 and 3R
 - box with hinged cover, types 2, 5, 12 and 12K
 - box with external hinges, type 2.
- The boxes also bear the KEMA KEUR and comply with following standards:
 - IEC 61439-2
 - EN 61439-2

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Fix-o-Rail Senior



Design verified distribution enclosure conform to EN 61439-2

- Manufactured using sheet steel for the outer enclosure, and protected inside with insulated, self-extinguishing and halogen-free profiles.
 - The sheet metal parts are pre-treated with iron phosphate and protected with epoxy polyester powder paint RAL 9016 giving smooth finish.
 - The range consists of 5 different sizes:
 - two widths: 300 & 550 mm
 - three heights: 650 – 800 – 950 mm
 - one depth: 210 mm
 - For modular devices from 48 modules up to 144 modules per enclosure, with 12 or 24 modules per row.
 - Standard equipped with
 - a removable DIN rail frame in sendzimir zinc plated steel
 - polyester cover plates, self-extinguish and halogen-free, with the necessary cut outs for the modular devices.
- The center distance between two DIN profiles is 130 mm
- The maximum depth for the modular devices is 92.5 mm with a wiring space of 75 mm behind the components
- Top and bottom of the enclosure are, for easy cable entry without any tool, equipped with a flexible cable entry per module width of 250 mm.
 - The capacity of the top cable entry is
 - 2 x 32.5 mm
 - 5 x 19 mm
 - 38 x 13.5 mm
 - The capacity of the bottom cable entry is
 - 1 x 50.5 mm
 - 2 x 32.5 mm
 - 2 x 19 mm
 - 28 x 13.5 mm
 - 2 x 11.5 mm

- In the back of the enclosure knockouts are available for easy cable entry from the backside.
 - The door is, by one hand, easy removable and adjustable without any tool.
The opening is reversible without any mechanical reworking.
The door may be
 - plain
 - or transparent if a visual control function is required.
- Standard closing
- with a handle without insert
 - with one or three point closing mechanism depending on the height of the enclosure
- The standard handle is replaceable by other inserts and /or handles with or without key.
- The wall-mounting fixation may be
 - outside the enclosure with a set of 4 brackets
 - or inside with screws going trough the backside, protected with plastic covers.
 - The enclosure offers maximum protection to the user and equipment thanks to the total insulation \square and the protection degree IP43 IK09 (IK05 for window door version, according to IEC 60529, EN 60529 and EN 62262 and IEC 62262.
 - The system enclosures comply with the standards EN 61439-2 and IEC 61439-2.
 - The enclosures have the KEMA and CEBEC approvals.

QuiXtra™ 630



System Enclosure for Low Voltage distribution boards up to 630A

Conformity to standards

The panels are certified according to the IEC 61439-2 standard. All verification tests and individual tests required by the standard have been done.

Internal separation is Form 1. Form 2 can be achieved, as option.

Technical characteristics

The panel is designed of kit-form enclosures made from sheet steel, which can be stand alone or coupled next to each other, for indoor use.

Each enclosure consists of a high-strength rear plate, made of galvanized sheet steel 1,5 mm thick, with four aluminum corner parts bolted in each corner. The external panels and the doors are made in epoxy polyester powder coating sheetsteel 1,25mm thick. All the external panels (top, bottom and side panels) are fixed, using screws, to the aluminium corner parts. Each one can be disassembled independently from the rest of the external panels.

The sheet steel parts are pre-treated with iron phosphate and protected with epoxy polyester powder-coating RAL 9006, giving a smooth finish. The colour for the external corner parts, the handle and the base is RAL 7024.

The range of QuiXtra 630 consists of 24 different sizes:

- Three external widths: 364, 660 and 876 mm
- Nine heights: external dimensions from 600 up to 2050mm.
- One depth: 220 mm without door and 250 mm with the door
- Useful dimensions:
 - Widths for 12, 24 and 36 modules 18 mm
 - Heights from 450 up to 1800 mm

The DIN rails or mounting plates of the functional units, and the busbar holders are fixed with special "click-in" support, attaching to the vertical profiles which are fixed to the rear panel. QuiXtra 630 allows free accessibility from all sides for the wiring of electrical devices mounted on the DIN rails and mounting plates, fixed to the rear panel on the functional kits.

The functional units, based on a modular concept with a height in steps of 50 mm are available for:

- Modular devices, for 12, 24 and 36 modules of 18 mm. In two different heights, 150 and 200 mm. One special function for screwless MCB's is available.
- Meters
- Push-buttons
- Moulded case circuit breakers. Up to 630A. To mount in horizontal or in vertical position
- Load break switches. Up to 630A. To mount in horizontal or in vertical position.
- Terminals
- Plain mounting plates

Two busbar systems can be mounted in the enclosure:

- Staircase busbar. Developed for easy accessibility during wiring, to the four phases, because the holder shape puts the copper bars at different depths. The staircase busbar can be assembled in vertical position in the 12 module wide enclosure, and in horizontal position in the 24 and 36 module wide enclosure. Electrical devices cannot be mounted in front of a staircase busbar. The busbar holders are fixed to the rear panel using specific "click in" supports and profiles.
- Rear mounted busbar. It Allows the assembly of the copper bars between the rear panel and the electrical devices. The rear busbar can be mounted in vertical or in horizontal position in all types of enclosure. The electrical devices can be mounted in front of the rear busbar in the enclosures 24 and 36 modules wide, except RecordPlus FG and Dilos 3&4. A busbar can span multiple coupled enclosures. The busbar holders are fixed to the back plate using specific "click in" supports and profiles
- Vertical and horizontal separation screens allow the upgrade of the internal segregation form to form 2, according the IEC 61439-2

The enclosures can be closed with two types of doors, plain and transparent. The plain door is available for the three enclosure widths and the transparent door is available for the 24 and 36 modules wide enclosures. The locking system is operated by a central handle and consists of a one or a three point locking mechanism, depending on the height of the enclosure. The doors are equipped with a lock insert for a 2432E key. The door can be assembled and disassembled without any tools, and can be opened from the right or the left side of the enclosure. The opening angle is 135°.

The enclosure offers maximum protection to the users and equipment thanks to an IP 43 protection degree with door and IP43 profile, following IEC 60529 and the IEC 62262.

The enclosure has the KEMA approval.

Electrical characteristics

Rated operational voltage: 415V
 Rated insulation voltage: 690V
 Rated short-circuit current: 30kA /1s
 Rated busbar current system: up to 630A
 Protection degree: IP43 with door and IP43 profile, IP40 with door and without IP43 profile, IP30 without door
 The panel is designed for indoor use only
 Ambient temperature: 35°C



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QuiXtra™ 4000



System Enclosure for Low Voltage distribution boards up to 4000A.

Conformity to standards

The panels are certified according to the IEC 61439-2 standard. All verification tests and individual tests required by the standard have been passed, and certified by the independent certification body DEKRA. Internal separation is Form 1. Form 2, Form 3 and Form 4 can be achieved, as option.

Technical characteristics

The panel is designed of kit-form enclosures made from sheet steel for indoor use. The enclosures can be stand alone or coupled side to side or back to back, as floor standing disposal. Each enclosure consists of a rigid frame built with open profiles made of galvanized sheet steel 1.5 mm thick and four die-cast aluminum corner parts. The profiles are bolted in each corner. The external panels and the doors are made in epoxy polyester power coating sheet steel 1.5 mm thick. All the external panels (top, rear and side panels) are fixed, using screws, to the basic frame. Each one can be disassembled independently from the rest of the external panels. The sheet steel parts are pre-treated with iron phosphate and protected with epoxy polyester powdercoating RAL9006, giving a smooth finish. The colour for the external corner plastic parts, the handle and the base is RAL 7024.

The range of QuiXtra 4000 consists of 9 different sizes:

- Three external widths: 447, 743 and 959 mm
- One height: external dimensions, including the base of 100 mm: 2155 mm
- Three depths: 450 mm, 600 mm and 800 mm
- Useful dimensions:
 - Widths for 12, 24 and 36 modules 18 mm
 - Height of 1800 mm
 - Depth behind the coverplates: 275, 425 and 625 mm
 - Depth behind the door: 375, 525 and 725 mm

The DIN-rails, mounting plates or support on depth profiles of the functional units, and the busbar holders are fixed with special "click-in" support, attaching to the vertical profiles which are fixed to the front vertical profiles. QuiXtra 4000 allows free accessibility from all sides for the wiring and connection of electrical devices mounted on the DIN-rails, mounting plates or on supports on depth profiles.

The functional units, based on a modular concept with a height in steps of 50 mm are available for:

- Modular devices, for 12, 24 and 36 modules of 18 mm. In two different heights, 150 and 200 mm. One special function for screwless MCBs is available.
- Meters
- Push-buttons
- Moulded case circuit breakers. Up to 1600A. For fixed, plug-in and withdrawable execution when it's available. To mount in horizontal or in vertical position
- Changeover functions with MCCBs
- Load break switches. Up to 1250A. To mount in horizontal or in vertical position.
- Air Circuit Breakers. Up to 4000A. Fixed or withdrawable execution
- Terminals
- Plain mounting plates. Partial and full height

Several busbars system can be mounted in the enclosure.

- **Enclosure depth 450 mm**
 - **Rear horizontal busbar.** Up to 1600A. The main horizontal busbar for the enclosures 450 mm deep is assembled on the rear part, one phase over the other.
 - **Vertical staircase busbar.** 2 solutions, up to 630A and up to 1600A, using different isolators. It's possible to assemble in the enclosures 12 modules wide and in the integrated cable compartment.
 - **Rear vertical busbar.** 2 solutions. Up to 630A and up to 2000A, using different isolators. In the enclosures 12 modules wide only is possible the rear vertical busbar up to 630A
- **Enclosures depth 600 and 800 mm**
 - **Top and middle horizontal busbar.** Up to 2000A for 600 mm deep enclosures and up to 4000A for 800 mm deep.
 - **Vertical staircase busbar.** 2 solutions, up to 630A and up to 1600A, using different isolators. It's possible to assemble in the enclosures 12 modules wide and in the integrated cable compartment.
 - **Vertical side busbar.** Up to 2000A in the integrated cable compartment, and up to 4000A in the 12 modules wide enclosure.
 - **Rear vertical busbar.** 2 solutions. Up to 630A and up to 2000A, using different isolators. In the enclosures 12 modules wide only is possible the rear vertical busbar up to 630A.

- Vertical and horizontal separation screens allow the upgrade of the internal segregation Form to Form 2 or Form 3, according the IEC 61439-2

The enclosures can be closed with two types of doors, plain and transparent. The plain door is available for the three enclosure widths and the transparent door is available for the 24 and 36 modules wide enclosures. The locking system is operated by a central handle and consists of a four point locking mechanism. The doors are equipped with a lock insert for a 2432E key. The door can be assembled and disassembled without any tools, and can be opened from the right or the left side of the enclosure. The opening angle is 135°.

The enclosure offers maximum protection to the users and equipment thanks to an IP55 protection degree with door and the IP55 external panels, following IEC 60529 and the IEC 62262. The enclosure can be assembled as IP30, is the external panels assembled are the IP30 ones available. Without the doors, the distribution panel would be IP30, with the external panels IP30 or IP55. The enclosure has the DEKRA approval.

Electrical characteristics

Rated operational voltage: 415V, 690V
 Rated insulation voltage: 1000V
 Rated short-circuit current: 85kA /1s
 Rated busbar current system: up to 4000A in IP30
 Protection degree: IP55 with door and IP55 panels, IP30 with IP30 external panels, and with or without doors
 The panel is designed for indoor use only
 Ambient temperature: 35°C

Appendix

IEC 60439 vs IEC 61439 for Assemblies up to 4000A

The QuiXtra is designed according the recently published norm IEC 61439-1 and IEC 61439-2, pertaining to this type of system enclosure, in mind.

The new IEC 61439-2 supersedes the IEC 60439-1 norm. IEC 60439 was the norm that introduced the world to "type tested" and "partially type tested" assemblies. Because this terminology in the norm was open to gray zones and subjective interpretations, and therefore safety risks, they cease to exist in the new norm. The new standard IEC 61439 introduce the "Design verification" approach. The Design verification is achieved by testing, calculation or measurement and satisfying the design rules defined by the original

manufacturer (OEM).

The structure of the new IEC 61439 evolves from the IEC 60439. The structure for the new standard is:

- IEC 61439-1. General rules
- IEC 61439-2. Power Switchgear and Controlgear assemblies (PSC-Assemblies)

IEC 61439-1 introduces a few new terms.

- Original Equipment Manufacturer (OEM): company producing enclosures and electrical switchgear: Here: GE
- Assembly Manufacturer: company assembling enclosures and equipping them with electrical switchgear. Responsible of the complete Assembly. Here: Panel Builder
- Verification test: test performed by the original manufacturer to ensure that its enclosures and electrical switchgear are compliant with the norms.

In order for an assembly to comply to the new IEC 61439-2 norm, the original manufacturer needs to have conducted and passed verification tests for its enclosures and components.

For those enclosures and components, the OEM needs to provide documentation (typically in the form of Tables), enabling calculation of the critical parameters (heat dissipation, cable cross-sections) of an assembly, as well as clear instructions for its assembly and use.

The Assembly Manufacturer then makes this calculation for each assembly, and builds the assembly, strictly adhering to the instructions of the OEM.

If an assembly manufacturer uses a component not tested by the OEM of the enclosure, or if he makes modifications to the assembly not following the OEM's use instructions, it becomes his responsibility to ensure compliance with IEC 61439-2. That compliance must then be tested via a comprehensive test, to be performed by the assembly manufacturer.

GE has taken care to design the QuiXtra, together with original EntelliGuard, M-Pact Plus Record Plus, Dilos, Fulos and Redline/ElfaPlus equipment, to be fully compliant to IEC 61439-2. When building an assembly with GE components, and using the tables and calculation methods provided by GE, the assembly manufacturer can rest assured that his end product is fully IEC 61439-2 compliant.



Pedestals



- Polyester floor standing enclosures offer reliable housing for switching, distributing and protective equipment used in underground low voltage and communication networks as well as various kind of outdoor industrial applications.
- The bases are partly buried into the ground, guaranteeing a stable support for the equipped enclosure, and allowing easy and safe cable entry into the enclosure.
- The pedestals feature high protection degrees to protect both equipment and people.
- The enclosures have very high mechanical impact strength for increased safety during many years.
- The design offers natural ventilation to prevent accumulation of condensation humidity inside the enclosure. Heating and ventilation need to be considered depending on environmental conditions.
- The polyester has a low thermal conductivity, resulting in reduced temperature variations within the enclosure.

The pedestals comply with following standards:

- IEC 60529: IP protection degree against ingress of foreign bodies
- EN 62262 and IEC 62262: IK protection degree against mechanical impact
- IEC 61439-5: Cable distribution cabinets in power networks

EH1



Small pedestal

- Small pedestal: 752 x 385 x 270 mm
- Light weight and easy to install by one person: 4.5 kg
- Sturdy base in HDPE, colour RAL 9005, and rainhood in RAL 7035, made out of glass-fibre reinforced polyester or thermoplastic polymer.
- The rainhood is secured onto the base with two vandal proof zamac screws, alternatively a version with a lock is available.
- The base resists ground temperatures as low as -50°C
- Arrow indicators injected on the base front indicate burial depth and correct positioning.
- A mounting plate is integrated with the base, provided with 3 slots for mounting of devices.
- The ventilated, thermoplastic or polyester hood guarantees a protection degree IP23.
- Alternatively, the base with polyester hood guarantees IP43 and increased thermal stability in tropical temperatures.
- Protection degree IK10 against external mechanical impacts according to EN 62262 and IEC 62262
- Particularly suited for cable television networks. Heating and ventilation need to be considered depending on environmental conditions.

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EH2



Column cabinets

- Column cabinets with integrated base:
 - 1097 x 433 x 240 mm
 - 1347 x 433 x 240 mm
 - 1622 x 433 x 240 mm
 - 1896 x 433 x 240 mm
- The base and the rear panel of the column are molded as one part. The base allows for stable installation of the column.
- Enclosure made of hot moulded, glass fibre reinforced polyester in RAL 7035 light grey. Corrosion resistant, UV stabilized for outdoor applications, suitable for use in environments from - 35°C up to +70°C. Temporary exceeding temperatures will not be harmful.
- A labyrinth design guarantees natural ventilation whilst maintaining a good protection degree. The rainhood shape prevents water stagnation on the roof. This guarantees a protection degree IP44 according to IEC 60529.
- The cabinets offer maximum protection to user and equipment: protection degree IK10 against external impacts according to EN 62262 and IEC 62262
- Fully integrated locking clamp, suitable for operation by a profile half cylindrical lock. The cylindrical lock can be fitted in a recessed lock box, protected by a vandal proof plastic cap.
- Once unlocked, the enclosure can be accessed without tools by removing the frontal lift-off segments completely (not hinged).
- For easy access the roof can be opened, offering an opening angle of 90°.
- Fixing holes for threaded inserts M6 are provided in the rear panel allowing direct mounting of busbars, a frame, a mounting plate or components.
- Particularly suitable for outdoor installation of fused switchgear, 4-pole busbars, etc. Heating and ventilation need to be considered depending on environmental conditions.

EH3/F & EH3/AP



DIN-size pedestals

- Cabinets for DIN-base mounting:

- 875 x 455 x 320 mm	- 1125 x 455 x 320 mm	• DIN-size 00
- 875 x 590 x 320 mm	- 1125 x 590 x 320 mm	• DIN-size 0
- 875 x 785 x 320 mm	- 1125 x 785 x 320 mm	• DIN-size 1
- 875 x 1115 x 320 mm	- 1125 x 1115 x 320 mm	• DIN-size 2
- 875 x 1445 x 320 mm	- 1125 x 1445 x 320 mm	• DIN-size 3
- Door and rear available with flat surface (Type EH3/F) or with profiled surface (Type EH3/AP anti poster).
- Doors with profiled surface offer a labeling space on the top left corner.
- Supplied with open bottom for cable entry. To be mounted on a base-mat according to DIN 43629 standard dimensions between the fixation points.
- Both side panels are bolted to the roof and to the rear. The roof is bolted to the rear and the side panels. Horizontal bottom profiles are connected onto the side panels, guaranteeing a structure with high resistance to torsional and bending forces, according to IEC 61439-5.
- For easy cable entry the bottom profile can be easily removed by means of two sliding latches, to be operated without tools.
- The larger enclosures have two doors and two rear panels. The two rear panels are cross-linked with a middle beam. The left door has a doorpost, acting as a blocking profile to the right door.
- Enclosure made of hot moulded, glass fibre reinforced polyester in RAL 7035 light grey. Corrosion resistant, UV stabilized for outdoor applications, suitable for use in continuous environments from - 35°C to +70°C. Temporary exceeding temperatures will not be harmful.
- A labyrinth design guarantees natural ventilation whilst maintaining a good protection degree. The rainhood shape prevents water stagnation on the roof. This guarantees a protection degree IP44 according to IEC 60529.
- The cabinets offer maximum protection to user and equipment: protection degree IK10 against external impacts according to EN 62262 and IEC 62262.
- Three point locking mechanism, operated by a swing handle designed to receive a half profile cylindrical lock. Versions with dual cylinder handle are available as well.
- The door opening angle exceeds 180°.
- The open door can be manually unhinged to allow free access for maintenance. The hinges are made of glassfibre reinforced PA, guaranteeing excellent corrosion resistance.
- Threaded inserts for bolts M8 can be mounted in the rear panel, allowing for direct mounting of busbars, a frame or a mounting plate for components.
- Additional fixation possibilities are foreseen in the side panel to mount horizontal busbars. Thus the usable width on the busbar is maximised.
- For EH3/AP pedestals the profiled door and rear panels make poster sticking difficult and cause poster to drop off.
- Particularly designed for outdoor installation of fused switchgear, 4-pole busbars, telecom jumper frames, etc. Heating and ventilation need to be considered depending on environmental conditions.

Intro

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EH3/AP-GD



Pedestals with increased depth

- Cabinets with greater depth for base mounting:
 - 875 x 676 x 541 mm
 - 875 x 871 x 541 mm
 - 875 x 1200 x 541 mm
 - 1125 x 676 x 541 mm
 - 1125 x 871 x 541 mm
 - 1125 x 1200 x 541 mm
 - 875 x 676 x 676 mm
 - 875 x 871 x 676 mm
 - 875 x 1200 x 676 mm
 - 1125 x 676 x 676 mm
 - 1125 x 871 x 676 mm
 - 1125 x 1200 x 676 mm
- Provided with 4 fixing points for floor or base mounting.
- Door and rear profiled surface (anti poster).
The sides height 875 mm are profiled, whereas the sides height 1125 mm are flat, allowing installation of outgoing power plugs or connectors.
- Supplied with open bottom for cable entry.
- Both side panels are bolted to the roof and to the rear.
The roof is bolted to the rear and the side panels. Horizontal bottom profiles are bolted onto the side panels, guaranteeing a structure with high resistance to torsional and bending forces, according to IEC 61439-5.
- For easy cable entry the bottom profile can be easily removed by means of two sliding latches, to be operated without tools.
- The larger enclosures have two doors and two rear panels. The two rear panels are cross-liked with a middle beam. The left door has a doorpost, acting as a blocking profile to the right door.
- Possibility of pivoting door on side or back.
- Enclosure made of hot moulded, glass fibre reinforced polyester in RAL 7035 light grey. Corrosion resistant, UV stabilized for outdoor applications, suitable for use in continuous environments from - 35°C to +70°C. Temporary exceeding temperatures will not be harmful.
- Rainhood made of hand lay up glass fibre reinforced polyester with RAL 7035 topcoat.
- A labyrinth design guarantees natural ventilation whilst maintaining a good protection degree. The rainhood shape prevents water stagnation on the roof. This guarantees a protection degree IP44 according to IEC 60529.
- The cabinets offer maximum protection to user and equipment: protection degree IK10 against external impacts according to EN 62262 and IEC 62262
- Three point locking mechanism, operated by a solid, industrial handle. The handle is designed to receive a half profile cylindrical lock.
- The open door can be manually unhinged to allow free access for maintenance. The hinges are made of glassfibre reinforced PA, guaranteeing excellent corrosion resistance.
- Particularly designed for all kind of outdoor industrial application, e.g. pump control or waste water treatment. Heating and ventilation need to be considered depending on environmental conditions.

EH4

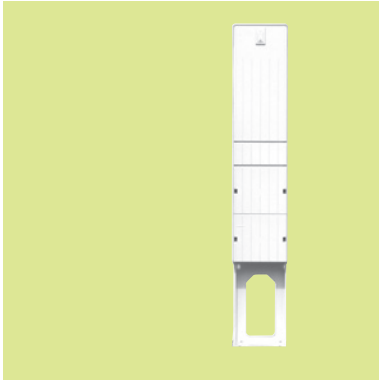


Column cabinets

Column cabinets type EH4 with integrated base:

- 1600 x 395 x 224 mm
- 1600 x 495 x 224 mm
- 1600 x 745 x 224 mm
- The base and the rear panel of the column are separate items, but are delivered assembled together
- Enclosure made of hot moulded, glass fibre reinforced polyester in RAL 7035 light grey. Corrosion resistant, UV stabilized for outdoor applications, suitable for use in continuous environments from -35°C to +70°C. Temporary exceeding temperatures will not be harmful.
- A labyrinth design guarantees natural ventilation whilst maintaining a good protection degree. The rainhood shape prevents water stagnation on the roof. This guarantees a protection degree IP44 according to IEC 60529.
- The pedestals guarantee Total Insulation
- The cabinets offer maximum protection to user and equipment: protection degree IK10 against external impacts according to EN 62262 and IEC 62262
- A swing handle, suitable for operation by a half profile cylindrical lock.
- Door opening angle of 180° is provided
- Fixing holes for threaded inserts M6 are provided in the rear panel allowing direct mounting of busbars, a frame, a mounting plate or components.
- Particularly suitable for outdoor installation of fused switchgear, 4-pole busbars, etc. Heating and ventilation need to be considered depending on environmental conditions.

EH4-S



Column cabinets

Column cabinets **EH4-S** with integrated base:

- 1420 x 320 x 234 mm
- 1850 x 320 x 234 mm
- The base and the rear panel of the column are moulded as one part. The base allows for stable installation of the column.
- Enclosure made of hot moulded, glass fibre reinforced polyester in RAL 7035 light grey. Corrosion resistant, UV stabilized for outdoor applications, suitable for use in continuous environments from -35°C to +70°C. Temporary exceeding temperatures will not be harmful.
- A labyrinth design guarantees natural ventilation whilst maintaining a good protection degree. The rainhood shape prevents water stagnation on the roof. This guarantees a protection degree IP44 according to IEC 60529.
- The cabinets offer maximum protection to user and equipment: protection degree IK10 against external impacts according to EN 62262 and IEC 62262
- Fully integrated locking clamp, suitable for operation by a half profile cylindric lock. The cylindric lock can be fitted in a recessed lock box, protected by a vandal proof plastic cap.
- Once unlocked, the enclosure can be accessed without tools by removing the frontal lift-off segments completely (not hinged).
- The pedestals guarantee total insulation
- Fixing holes for threaded inserts M6 are provided in the rear panel allowing direct mounting of busbars, a frame, a mounting plate or components.
- Particularly suitable for outdoor installation of fused switchgear, 4-pole busbars, etc. Heating and ventilation need to be considered depending on environmental conditions.

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RVS



Pedestals in stainless steel DIN 00 – DIN 4 according to EN 61439-5

- Stainless steel cabinets for outdoor use with a very high and reliable protection level for switchgear, distributors and safety equipment in energy networks, recreation grounds, markets, public events and telecommunications.
- Bases are partially sunken to provide a solid foundation for fitted-out cabinets and to ensure a safe and easy cable input via the removable front plate and sill profile.
- The pedestals meet high safety standards to protect both personnel and equipment.
- The cabinets have very good mechanical properties and a high torsion resistance to ensure many years of optimum protection.

The range of stainless steel pedestals consists of

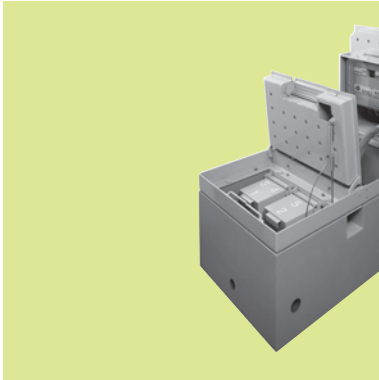
- Cabinets for base mounting:
 - Height 650, 900, 1000, 1150 and 1350 mm
 - Depth 355 mm
 - Width 460 up to 1780 mm in fixed increments.
 - Two compartment designs in different sizes.
 - Special dimensions available in consultation.
- Supplied with an open base for cable entry. Must be mounted on a base with standard centre-to-centre measurements according to DIN 43629 or made suitable for wall mounting by wall brackets and baseplate.
- The cabinets are fully welded. This guarantees a structure that is highly resistant to mechanical loads such as torsion and bending according to IEC 61439-5.
- Small cabinets have one door, larger cabinets have a double door with lock on the right-hand door.
- The housing is made of stainless steel AISI 304 according to EN 1.4452 and equipped with polyester surface treatment, standard in RAL 7034. The cabinet is suitable for use in extreme temperatures.

- The design guarantees natural ventilation without infringing the protection value IP44 according to IEC 60529. A polystyrene plate inside the roof panel ensures that moisture is automatically discharged along the vertical sides of the cabinet. The unique base design ensures automatic condensation evacuation.
- Upright and two-door cabinets fitted with a 3-point rod closing mechanism operated by a handle suitable for a profile half-cylinder lock.
- Opened door can be easily removed from the cabinet with a stainless steel hinged rod.
- Guaranteed earthing, independent of corrosion-sensitive transitional surfaces.
- Easy and cheap to recycle.

The enclosure offers maximum protection to the user and equipment thanks to the protection degree IP44 IK10, according to IEC 60529, EN 60529 and EN 62262 and IEC 62262

The pedestals comply with the standards EN 61439-5 and IEC 61439-5

UC-Cabinet



Subterranean enclosures

- Stainless steel enclosures for underground use, with a very high and reliable protection. Suitable for the switching, distribution and safety apparatus used in energy networks, market and event applications and telecommunications.
- The enclosure is sunken integrally. The covers - of stainless steel tear plate or suitable for paving - can be opened by manpower, without tools.
- The UC-Cabinet enclosures meet high safety standards to protect both personnel and equipment.
- The enclosures have excellent mechanical properties, can be used in public areas and offer many years of optimum protection.
- The patented air clock or diving bell principle ensures that components are protected.

The subterranean enclosures comply with following standards:

- IEC 60529: Degrees of protection provided by enclosures (IP code).
- IEC 61439-2: Low-voltage switchgear and control gear assemblies.
- EN 1.4452: Material number
- EN 124: Gully tops and cover tops for vehicular and pedestrian areas

- Enclosures for underground applications.
 - One- and two-compartment designs in various sizes.
 - Where as at the two compartment type there is a split between owner (electrical) compartment and the user compartment.
 - The base is made of polyester enforced concrete.
- The enclosures are made out of concrete, ideally for underground installation.
- The case is made of AISI 304 stainless steel according to EN 1.4452 and is equipped as standard with a surface treatment of polyester paint.
- The cover is standard made of non painted stainless steel tear plate.
- The enclosure is suitable for use in extreme temperatures.
- The cover can be loaded, depending on the design, with 12.5 tons according to EN 124 B125 or 25 tons according to EN 124 C250.
- The protection of the equipment is based on the use of the so-called air clock or diving bell principle (Boyle's law). The protection degree is IP43 according to IEC 60529 for the closed steel structure and IP65 when used in combination with an APO box.
- Locking mechanism suitable for a profile half-cylinder lock.
- Guaranteed earthing, independent of corrosion-sensitive transitional surfaces.

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Power dissipation values

According to EN 62208, IEC 62208 and IEC 60890

For each enclosures range

- The 4 or 5 different matrix tables contain all the enclosure **dimensions**.
- The tables are created according to the **positioning** of the enclosure.
- **Two different values** of temperature rise are given depending on the measuring point in the cabinet: **half way** or **on top**.

What is acceptable according to EN 62208, IEC 62208 and IEC 60890

- For common electrical applications, a **temperature rise of 50K** is generally accepted. If the rise is above 50K, a larger enclosure should be chosen. More volume results in a decrease of the temperature rise.
- The **absolute** temperature in °C in the enclosure is the **sum** of the **ambient** temperature in °C and the **temperature rise** in K. According to the standards, the absolute temperature is **max. 70°C**

How to use a matrix?

First choose the right matrix according to the position and the size of the enclosure.

Second calculate the effective power loss in Watt (left column). Add 10-20% to the total effective power loss of the components in order to compensate the small wiring and connections.

Third read in the matrix the temperature rise in the cabinet due to the thermal power dissipation.

Example of an individual enclosure PolySafe 452

(see page I.72)

Enclosure: height = 1000 mm,
width = 1250 mm, depth = 320 mm.

Placed against the wall.

The calculated effective power loss of the components: 600W

Components are placed in the centre of the cabinet.

In the table 'Rear against wall' (see below) read for **600W** and column **'Half': 40K** temperature rise.

With an ambient temperature of 20°C, the absolute temperature around the components will be approximately 20 + 40 = 60°C

If the temperature is too high for the components, then choose a larger cabinet to allow air ventilation.

Example of coupled enclosures PolySafe 452

Enclosure on the **left side**: height 1000, width 1250 mm, depth 320 mm

Enclosure **in the middle**: height 1000, width 1250 mm, depth 320 mm

Enclosure on the **right side**: height 1000, width 1250 mm, depth 320 mm

Placed against the wall

Do the same calculation as above for each individual enclosure.

Find the temperature rise for the **left and right side** enclosure in the table 'Front, left and upperside free', see page I.73 and find **'Half': 42K**

Find the temperature rise for the **middle** enclosure in the table 'Frontside and upperside free', see page I.73 and find **'Half': 44K**

Rear against wall (wall mounting)

Temperature rise [Kelvin]

DISSIPATION	PS 220 500x500		PS 230 500x750		PS 320 750x500		PS 330 750x750		PS 340 750x1000		PS 352 750x1250		PS 420 1000x500		PS 430 1000x750		PS 440/442 1000x1000		PS 452 1000x1250		PS 530 1250x750		PS 542/546 1250x1000				
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top		
10	4	5	4	4	4	5																					
20	8	9	7	7	6	8	5	6	4	5			5	7													
30	11	13																									
40	13	16	11	13	11	14	9	11	7	9	6	7	9	13	7	9	5	7	5	6	5	8					
50	16	19																	6	8	8	11	6	8			
60	19	22	16	18	16	19	12	16	10	12	8	10	12	18	10	13	7	10	6	8	8	11	6	8			
70	21	25																									
80	23	28	20	23	20	24	15	20	12	16	10	12	16	22	12	16											
90	26	31																									
100	28	33	24	27	23	29	18	23	15	19	12	14	19	27	14	19	11	14	9	12	11	16	9	13			
120	32	38	28	31	27	33	21	27					22	31	17	23											
140	37	44	31	35	31	38	24	31	19	24	15	19	25	35	19	26	15	19	12	16	15	21	12	16			
160	41	48	35	39	34	42	27	34					27	39	21	28											
180	45	53	38	43	38	46	29	38	24	30	19	23	30	43	23	31	18	23	15	19	18	25	15	20			
200	49	58	42	47	41	51	32	41					33	47	25	34											
220	53	63	45	51	44	55	34	44	28	35	22	27	35	50	27	37	21	27	18	23	21	30	18	24			
240			48	55	47	58	37	47					38	54	29	39											
260			52	58	51	62	39	51	32	40	25	31	40	58	31	42	24	31	20	26	24	34	20	27			
280							42	54					43	61	33	45											
300							44	57	36	45	28	35	45	65	35	47	27	35	23	29	27	38	23	30			
350							50	64	40	51	32	40	51	73	40	53	30	39	26	33	31	43	25	34			
400									45	57	36	44			44	59	34	44	29	37	34	48	28	38			
450									49	62	39	48			48	65	37	48	32	40	38	53	31	42			
500															53	71	40	53	34	44	41	58	34	46			
550																	44	57	37	47	45	63	37	49			
600																	47	61	40	51	48	67	39	53			
650																	50	65	42	54	51	72	42	57			
700																			45	57			45	60			
750																			48	61			47	63			
800																			50	64			50	67			



Rear against wall

Temperature rise [Kelvin]

H X W (mm)	MB11 65x65	MB11 65x65	MB21 94x65	MB21 94x65	MB22 94x94	MB22 94x94	MB33 110x110	MB33 110x110	MB42 130x94	MB42 130x94	MB44 130x130	MB44 130x130
Depth (mm)	57	81	57	81	57	81	66	90	57	81	75	99
DISSIPATION												
Watt	Top	Top	Top	Top	Top	Top	Top	Top	Top	Top	Top	Top
1												
2												
3												
4	45											
5	55	45	45									
6				45								
7	65	55	55		45							
8	75	65	65	55		45			45			
9					55		45					
10		75	75	65	65	55			55	45		
11							55	45				
12				75					55	45		
13					75	65		55	65			
14							65				55	45
15							75		65	75	65	55
20								75	75		75	65
25												75

Rear against wall

Temperature rise [Kelvin]

H X W (mm)	MB52 180x94	MB52 180x94	MB53 180x110	MB53 180x110	MB53 180x110	MB65 182x180	MB65 182x180	MB65 182x180	MB75 254x180	MB75 254x180	MB75 254x180	MB87 361x254	MB87 361x254
Depth (mm)	57	81	90	111	165	90	111	165	90	111	165	111	165
DISSIPATION													
Watt	Top	Top	Top	Top	Top	Top	Top	Top	Top	Top	Top	Top	Top
10	45	45											
15	55	55	45										
16	65			45									
17													
18				55									
19	75	65											
20			65	55	45	45							
25		75	75	65	55	55	45		45				
30				75	65	65	55	45	55	45			
35							65	55		55	45		
40					75	75	75		65			45	
45								65	75	65	55		
50								75		75			
55											65	55	45
60													
65											75	65	55
70													
75													
80												75	65
85													
90													
95													
100													75
105													
110													



Rear against wall

Temperature rise [Kelvin]

DISSIPATION	APO 1 185x150x130		APO 31 300x185x175		APO 41 300x300x175		APO 71 370x300x175		APO 51 485x300x175		APO 81 555x300x175		APO 61 600x300x175		APO 11 600x370x175		APO 12 600x600x175			
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	
5	12	14	7	9	6	7	5	6	4	5	4	5	4	5	3	4	3	3		
10	20	25	12	15	10	12	9	11	8	9	7	9	7	8	6	7	4	5		
15	28	34	17	21	14	16	12	15	10	13	10	12	9	11	8	10	6	7		
20	36	43	22	27	17	20	15	19	13	16	12	15	11	14	10	13	8	9		
25	43	52	26	32	21	24	18	22	16	19	14	18	14	17	12	15	9	11		
30			30	37	24	28	21	26	18	22	17	21	16	20	14	17	11	13		
40			38	47	30	36	27	32	23	28	21	26	20	25	18	22	14	16		
50			45	56	36	43	32	39	27	34	25	31	24	30	21	26	16	19		
60					42	49	37	45	32	39	29	36	28	34	25	30	19	22		
70							42	51	36	44	33	41	31	39	28	34	21	25		
80									40	49	37	46	35	43	31	38	24	28		
90											40	50	38	48	34	42	26	31		
100													42	52	37	46	28	34		
110															40	50	31	36		
120															43	53	33	39		
130																	35	42		
140																		37	44	
150																		39	47	
160																		41	49	
170																		45	53	

Front, left and upperside free

Temperature rise [Kelvin]

DISSIPATION	APO 1 185x150x130		APO 31 300x185x175		APO 41 300x300x175		APO 71 370x300x175		APO 51 485x300x175		APO 81 555x300x175		APO 61 600x300x175		APO 11 600x370x175		APO 12 600x600x175			
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	
5	13	15	8	9	6	7	5	6	5	6	4	5	4	5	4	4	3	3		
10	22	27	13	16	11	13	9	11	8	10	7	9	7	9	6	8	5	5		
15	30	37	18	23	15	18	13	15	11	14	10	13	10	12	9	11	6	8		
20	38	46	23	28	19	22	16	19	14	17	13	16	12	15	11	13	8	10		
25	46	56	28	34	22	27	19	23	17	21	15	19	15	18	13	16	10	11		
30			32	39	26	31	22	27	19	24	18	22	17	21	15	19	11	13		
40			40	50	33	39	28	34	24	30	22	28	19	24	19	23	14	17		
50					39	46	33	41	29	36	27	33	25	32	23	28	17	20		
60					45	54	39	47	34	42	31	39	29	37	26	32	19	23		
70							44	53	38	47	35	44	33	42	30	37	22	26		
80									42	52	39	49	37	46	33	41	25	29		
90											43	53	41	51	36	45	27	32		
100															39	49	29	35		
110															43	53	32	38		
120																	34	40		
130																	36	43		
140																	39	46		
150																	41	48		
160																	43	51		
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Frontside and upperside free

Temperature rise [Kelvin]

DISSIPATION	APO 1 185x150x130		APO 31 300x185x175		APO 41 300x300x175		APO 71 370x300x175		APO 51 485x300x175		APO 81 555x300x175		APO 61 600x300x175		APO 11 600x370x175		APO 12 600x600x175	
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half
5	13	16	8	10	7	8	6	7	5	6	5	6	4	5	4	5	3	3
10	24	29	14	18	11	14	10	12	8	10	8	10	7	9	7	8	5	6
15	33	40	20	24	16	19	14	17	12	15	11	14	10	13	9	11	7	8
20	41	50	25	31	20	24	17	21	15	18	14	17	13	16	12	14	8	10
25			30	37	24	28	21	25	18	22	16	20	16	20	14	17	10	12
30			34	42	28	33	24	29	20	25	19	24	18	23	16	20	12	14
40			43	54	35	41	30	37	26	32	24	30	23	29	20	25	15	17
50					42	49	36	44	31	38	29	36	27	34	24	30	17	21
60					48	57	42	51	36	44	33	41	32	39	28	35	20	24
70									40	50	38	47	36	45	32	39	23	27
80											42	52	40	50	35	44	26	30
90															39	48	28	33
100															42	52	31	36
110																	33	39
120																	35	42
130																	38	45
140																	40	48
150																	42	50
160																		
170																		

Frontside free, upper side not free

Temperature rise [Kelvin]

DISSIPATION	APO 1 185x150x130		APO 31 300x185x175		APO 41 300x300x175		APO 71 370x300x175		APO 51 485x300x175		APO 81 555x300x175		APO 61 600x300x175		APO 11 600x370x175		APO 12 600x600x175	
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half
5	15	18	9	11	7	8	6	8	5	6	5	6	5	6	4	5	3	4
10	25	31	16	19	12	15	11	14	9	11	8	10	8	10	7	9	5	6
15	35	43	22	27	17	21	16	19	13	16	12	14	11	14	10	12	7	9
20	44	54	27	34	22	26	20	24	16	20	15	18	14	17	12	15	9	11
25			33	41	26	31	23	29	19	23	18	22	17	21	15	18	11	13
30			38	47	30	36	27	33	22	27	20	25	19	24	17	21	13	15
40			48	59	38	45	34	42	28	34	26	32	24	30	22	27	16	19
50					46	54	41	50	33	41	31	38	29	36	26	32	19	22
60									38	47	35	44	34	42	30	37	22	26
70									43	54	40	50	38	48	34	42	25	29
80													43	53	38	47	28	33
90															42	51	30	36
100																	33	39
110																	36	42
120																	38	45
130																	41	48
140																	43	51
150																		
160																		
170																		

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Rear against wall

Temperature rise [Kelvin]

DISSIPATION	ARIA 32 300x200x170		ARIA 43 400x300x170		ARIA 54 500x400x230		ARIA 64 600x400x230		ARIA 75 700x500x270		ARIA 86 800x600x300		ARIA 108 1000x800x300	
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half
10	12	15	8	10	6	7	5	6	4	5	3	4	2	3
20	21	26	15	18	10	12	9	11	7	9	6	7	4	5
30	30	36	20	25	14	17	12	15	10	12	8	10	5	7
40	37	46	26	32	17	21	15	19	12	15	10	13	7	9
50	45	55	31	38	21	25	18	22	15	18	12	15	8	11
60			36	44	24	29	21	26	17	21	13	18	9	13
70			41	49	27	33	24	29	19	24	15	20	11	14
80			45	55	30	36	27	33	21	26	17	23	12	16
90					33	40	29	36	23	29	18	25	13	18
100					36	44	32	39	26	31	20	27	14	19
110					39	47	34	42	28	34	22	29	15	21
120					42	50	37	45	30	36	23	31	16	22
130							39	49	32	39	25	33	17	24
140							42	51	33	41	26	35	19	25
150									35	43	28	37	20	26
160									37	46	29	39	21	28
170									39	48	31	41	22	29
180									41	50	32	43	23	31
190											34	45	24	32
200											35	47	25	33
210											37	49	26	35
220											38	51	27	36
230													28	37
240													29	39
250													30	40
260													31	41
270													31	42
280													32	44
290													33	45
300													34	46
310													35	47
320													36	49
330													37	50
340														

Front, left and upperside free

Temperature rise [Kelvin]

DISSIPATION	ARIA 32 300x200x170		ARIA 43 400x300x170		ARIA 54 500x400x230		ARIA 64 600x400x230		ARIA 75 700x500x270		ARIA 86 800x600x300		ARIA 108 1000x800x300	
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half
10	13	16	9	11	6	7	5	7	4	5	3	4	2	3
20	23	28	16	19	10	13	9	11	7	9	6	8	4	6
30	31	38	22	26	15	18	13	16	10	12	8	11	6	8
40	39	49	27	33	18	22	16	20	13	16	10	13	7	10
50	47	58	32	40	22	27	19	24	15	19	12	16	9	12
60			38	46	25	31	23	28	18	22	14	19	10	13
70			43	52	29	35	26	31	20	24	16	21	11	15
80					32	39	28	35	22	27	18	23	13	17
90					35	43	31	38	24	30	19	26	14	19
100					38	46	34	42	27	33	21	28	15	20
110					41	50	37	45	29	35	23	30	16	22
120							39	48	31	38	24	32	18	23
130							42	52	33	40	26	35	19	25
140									35	43	28	37	20	26
150									37	45	29	39	21	28
160									39	48	31	41	22	29
170									41	50	32	43	23	31
180									43	52	34	45	24	32
190											35	47	26	34
200											37	49	27	35
210											38	51	28	37
220													29	38
230													30	39
240													31	41
250													32	42
260													33	44
270													34	45
280													35	46
290													36	48
300													37	49
310													38	50
320														
330														
340														



Frontside and upperside free

Temperature rise [Kelvin]

DISSIPATION	ARIA 32 300x200x170		ARIA 43 400x300x170		ARIA 54 500x400x230		ARIA 64 600x400x230		ARIA 75 700x500x270		ARIA 86 800x600x300		ARIA 108 1000x800x300	
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half
10	14	17	9	11	6	8	6	7	4	5	4	5	3	3
20	24	30	16	20	11	14	10	12	8	9	7	8	4	6
30	33	41	23	28	16	19	14	17	11	13	9	11	6	8
40	42	52	29	35	20	24	17	22	13	16	11	14	8	10
50			34	42	23	29	21	26	16	20	14	17	9	12
60			40	48	27	33	24	30	18	23	16	19	11	14
70			45	55	31	37	27	34	21	26	18	22	12	16
80					34	42	31	38	23	29	20	24	14	18
90					38	46	34	41	26	31	22	27	15	19
100					41	50	36	45	28	34	24	29	16	21
110							39	49	30	37	26	31	18	23
120							42	52	32	40	27	34	19	24
130									34	42	29	36	20	26
140									37	45	31	38	21	27
150									39	47	33	40	23	29
160									41	50	35	42	24	31
170											36	44	25	32
180											38	47	26	34
190											40	49	27	35
200											41	51	29	37
210													30	38
220													31	40
230													32	41
240													33	42
250													34	44
260													35	45
270													36	47
280													37	48
290													39	49
300													40	51
310														
320														
330														
340														

Power dissipation values

Frontside free, upper side not free

Temperature rise [Kelvin]

DISSIPATION	ARIA 32 300x200x170		ARIA 43 400x300x170		ARIA 54 500x400x230		ARIA 64 600x400x230		ARIA 75 700x500x270		ARIA 86 800x600x300		ARIA 108 1000x800x300	
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half
10	15	19	11	13	7	9	6	8	5	6	4	5	3	4
20	27	33	19	23	12	15	11	14	8	10	7	8	5	6
30	37	46	26	32	17	21	15	19	11	14	10	12	7	9
40	47	57	33	40	22	26	19	24	14	18	12	15	9	11
50			39	48	26	32	23	28	17	21	14	18	10	14
60			45	56	30	37	27	33	20	24	17	21	12	16
70					34	41	30	37	23	28	19	23	13	18
80					38	46	33	41	25	31	21	26	15	20
90					42	51	37	45	28	34	23	28	16	22
100							40	49	30	37	25	31	18	24
110									32	40	27	33	19	26
120									35	43	29	36	21	27
130									37	45	31	38	22	29
140									39	48	33	41	23	31
150									42	51	35	43	25	33
160											37	45	26	35
170											39	47	27	36
180											41	50	29	38
190													30	40
200													31	41
210													32	43
220													34	45
230													35	46
240													36	48
250													37	49
260													39	51
270														
280														
290														
300														
310														
320														
330														
340														

- Intro
- A
- B
- C
- D
- E
- F
- G
- H
- I
- X



Rear against wall (wall mounting)

Temperature rise [Kelvin]

DISSIPATION	PS 220 500x500		PS 230 500x750		PS 320 750x500		PS 330 750x750		PS 340 750x1000		PS 352 750x1250		PS 420 1000x500		PS 430 1000x750		PS 440/442 1000x1000		PS 452 1000x1250		PS 530 1250x750		PS 542/546 1250x1000			
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	
10	4	5	4	4	4	5																				
20	8	9	7	7	6	8	5	6	4	5			5	7												
30	11	13																								
40	13	16	11	13	11	14	9	11	7	9	6	7	9	13	7	9	5	7	5	6	5	8				
50	16	19																								
60	19	22	16	18	16	19	12	16	10	12	8	10	12	18	10	13	7	10	6	8	8	11	6	8		
70	21	25																								
80	23	28	20	23	20	24	15	20	12	16	10	12	16	22	12	16										
90	26	31																								
100	28	33	24	27	23	29	18	23	15	19	12	14	19	27	14	19	11	14	9	12	11	16	9	13		
120	32	38	28	31	27	33	21	27					22	31	17	23										
140	37	44	31	35	31	38	24	31	19	24	15	19	25	35	19	26	15	19	12	16	15	21	12	16		
160	41	48	35	39	34	42	27	34					27	39	21	28										
180	45	53	38	43	38	46	29	38	24	30	19	23	30	43	23	31	18	23	15	19	18	25	15	20		
200	49	58	42	47	41	51	32	41					33	47	25	34										
220	53	63	45	51	44	55	34	44	28	35	22	27	35	50	27	37	21	27	18	23	21	30	18	24		
240			48	55	47	58	37	47					38	54	29	39										
260			52	58	51	62	39	51	32	40	25	31	40	58	31	42	24	31	20	26	24	34	20	27		
280							42	54					43	61	33	45										
300							44	57	36	45	28	35	45	65	35	47	27	35	23	29	27	38	23	30		
350							50	64	40	51	32	40	51	73	40	53	30	39	26	33	31	43	25	34		
400									45	57	36	44			44	59	34	44	29	37	34	48	28	38		
450									49	62	39	48			48	65	37	48	32	40	38	53	31	42		
500													43	53			53	71	40	53	34	44	41	58	34	46
550													46	57					44	57	37	47	45	63	37	49
600													49	61					47	61	40	51	48	67	39	53
650													53	65					50	65	42	54	51	72	42	57
700																					45	57			45	60
750																					48	61			47	63
800																					50	64			50	67

Front, left and upperside free

Temperature rise [Kelvin]

DISSIPATION	PS 220 500x500		PS 230 500x750		PS 320 750x500		PS 330 750x750		PS 340 750x1000		PS 352 750x1250		PS 420 1000x500		PS 430 1000x750		PS 440/442 1000x1000		PS 452 1000x1250		PS 530 1250x750		PS 542/546 1250x1000	
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half
10	4	5	4	4	4	5																		
20	8	10	7	8	7	8	5	7	4	5			5	8	4	6								
30	11	13	9	11	9	12																		
40	14	17	12	13	12	15	9	12	7	9	6	7	10	13	7	10	6	7	5	6	6	8	5	6
50	17	20	14	16	14	17																		
60	19	23	16	19	16	20	13	16	10	13	8	10	13	19	10	14	8	10	7	8	8	11	7	9
70	22	26	19	21	19	23																		
80	25	29	21	23	21	25	16	20	13	16	10	13	17	23	13	17	10	13	8	10	10	14	8	11
90	27	32	23	26	23	28																		
100	29	35	25	28	25	30	19	24	16	19	12	15	20	28	16	21	12	15	10	12	12	17	10	13
120	34	40	29	32	29	35	22	28	18	22			23	32	18	24								
140	39	46	32	37	32	40	25	32	20	25	16	20	26	37	20	27	15	20	13	16	16	22	13	17
160	43	51	36	41	36	44	28	35	23	28			29	41	23	30								
180	47	56	40	45	40	49	31	39	25	31	20	24	32	45	25	33	19	24	16	20	20	27	16	21
200	51	61	43	49	43	53	33	42	27	34			35	49	27	36								
220			47	53	47	57	36	46	29	36	23	28	38	53	29	39	22	28	19	23	23	32	19	25
240			50	56	50	62	39	49	32	39			40	57	32	42								
260							41	52	34	42	27	32	43	60	34	45	25	32	21	27	27	37	21	28
280							44	55	36	44			46	64	36	47								
300							46	58	38	47	30	36	48	68	38	50	28	36	24	30	30	41	24	32
350							52	66	43	53	34	41	55	77	43	57	32	41	27	34	34	47	27	36
400									48	59	38	46			48	63	36	46	30	38	38	52	30	40
450									52	65	41	50			52	69	39	50	33	41	41	57	33	44
500													45	55			43	55	36	45	45	62	36	48
550													49	59			46	59	39	49	49	67	39	52
600													52	63			50	63	42	52	52	72	42	55
650																			45	56			45	59
700																			47	59			47	63
750																			50	62			50	66

A

B

C

D

E

F

G

H

I

X



Frontside and upperside free

Temperature rise [Kelvin]



DISSIPATION	PS 220 500x500		PS 230 500x750		PS 320 750x500		PS 330 750x750		PS 340 750x1000		PS 352 750x1250		PS 420 1000x500		PS 430 1000x750		PS 440/442 1000x1000		PS 452 1000x1250		PS 530 1250x750		PS 542/546 1250x1000	
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half
10	5	6	4	5	4	5																		
20	9	10	7	8	7	9	5	7	5	5			6	8	5	6								
30	12	14	10	11	10	12																		
40	15	18	12	14	12	15	10	12	8	9	6	7	11	13	8	10	6	7	5	6	7	9	5	6
50	18	21	15	17	15	18																		
60	21	25	17	19	17	21	13	16	11	13	9	10	15	19	11	14	8	10	7	8	9	12	7	9
70	23	28	19	22	19	24																		
80	26	31	21	24	22	27	17	20	14	16	11	13	19	23	14	18	11	13	9	11	11	15	9	11
90	29	34	23	26	24	29																		
100	31	37	26	29	26	32	20	25	17	20	13	15	23	28	17	22	13	16	10	13	14	18	11	14
120	36	43	30	33	30	37	23	28	19	23			26	33	19	25	15	18						
140	41	49	33	38	34	42	26	32	22	26	17	20	30	37	22	28	17	21	14	16	18	24	14	18
160	46	54	37	42	38	47	29	36	24	29			33	41	25	31	18	23						
180	50	59	41	46	42	51	32	39	27	32	21	25	36	45	27	35	20	25	17	20	22	29	17	22
200			45	50	45	56	35	43	29	34			39	49	29	38	22	27						
220			48	54	49	60	38	46	31	37	25	29	42	53	32	41	24	29	20	24	26	35	20	26
240			52	58	52	65	41	50	33	40			46	57										
260							43	53	36	42	28	33	49	61	36	46	27	34	22	27	29	40	23	29
280							46	56	38	45			52	64										
300							48	59	40	48	32	37			41	52	31	38	25	30	33	44	24	33
350							55	67	45	54	36	42			46	59	35	43	28	34	37	50	26	37
400									50	60	40	47			51	66	39	48	32	38	42	56	29	41
450											44	52			42	52	35	42	46	51	46	61	32	45
500											48	56			46	57	38	46	50	67	38	49		
550											52	61			50	62	41	50			42	53		
600																	44	53			45	57		
650																	47	57			47	61		
700																	50	60			50	65		

Power dissipation values

Frontside free, upperside not free

Temperature rise [Kelvin]



DISSIPATION	PS 220 500x500		PS 230 500x750		PS 320 750x500		PS 330 750x750		PS 340 750x1000		PS 352 750x1250		PS 420 1000x500		PS 430 1000x750		PS 440/442 1000x1000		PS 452 1000x1250		PS 530 1250x750		PS 542/546 1250x1000	
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half
10	6	7	4	5	4	5							4	5										
20	10	12	8	9	8	9	6	8	5	6	4	5	7	8	5	7					4	6		
30	14	16	11	12	11	13							9	11										
40	17	20	13	15	13	16	11	13	9	11	7	9	12	14	9	12	7	9	5	7	7	10	5	7
50	20	24	16	18	16	20							14	17										
60	24	28	19	21	18	23	15	18	12	15	10	13	16	20	12	16	10	12	8	9	10	14	7	10
70	27	32	21	24	21	26																		
80	30	35	24	27	23	28	19	23	16	19	13	16	20	25	15	20	12	16	10	12	13	18	9	13
90	33	39	26	29	25	31																		
100	36	42	28	32	28	34	23	28	19	23	16	19	24	30	18	24	15	19	11	14	15	21	11	15
120	41	49	33	37	32	39	27	32	22	27	18	22	28	35	21	28					18	24		
140	47	55	37	42	36	45	31	36	24	30	21	25	32	39	24	32	19	25	15	19	20	28	15	20
160	52	62	41	46	40	50	34	40	27	33	23	28	35	44	27	35					22	31		
180			45	51	44	55	37	44	30	37	25	30	39	48	29	39	23	30	18	23	24	34	18	24
200			49	55	48	60	41	48	32	40	27	33	42	53	32	42								
220			53	60	52	64	44	52	35	43	30	36	46	57	35	46	28	35	22	27	29	40	21	28
240							47	56	38	46	32	38	49	61	37	49								
260							50	60	40	49	34	41	52	65	40	52	32	40	25	31	33	45	24	32
280									43	52	36	43			42	56								
300									45	55	38	46			44	59	35	45	28	34	37	51	27	36
350									51	63	43	52			50	66	40	51	31	39	42	58	31	41
400											48	58					45	57	35	43	46	64	34	46
450											52	64					49	63	38	48	51	70	38	50
500																	53	68	42	52			41	55
550																			45	56			44	59
600																			48	60			48	63
650																			51	64			51	67

Stand alone

Temperature rise [Kelvin]



DISSIPATION	PS 220 500x500		PS 230 500x750		PS 320 750x500		PS 330 750x750		PS 340 750x1000		PS 352 750x1250		PS 420 1000x500		PS 430 1000x750		PS 440/442 1000x1000		PS 452 1000x1250		PS 530 1250x750		PS 542/546 1250x1000	
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half
20	7	9	6	7	6	8	4	6					5	7										
40	13	15	10	13	10	13	8	10	6	8	5	6	8	12	6	8	5	6	4	5	5	7		
60	17	21	14	17	14	19	11	14					11	16	8	11								
80	22	26	17	22	17	23	13	18	10	13	9	11	14	21	10	14	8	11	7	9	8	12	7	9
100	26	31	21	26	20	28	16	21					17	25	12	16								
120	30	36	24	30	24	33	19	25	14	18	12	15	20	28	14	19	11	15	9	12	12	17	9	13
140	34	41	27	34	27	37	21	28					22	32	16	22								
160	38	46	30	38	30	41	24	31	18	23	15	19	25	36	17	24	14	19	12	15	15	21	12	16
180	42	50	33	42	33	45	26	34					27	39	19	26								
200	46	55	36	46	36	49	28	37	21	27	18	23	29	43	21	29	17	22	14	18	17	25	14	19
220	50	59	39	50	38	53	30	40					32	46	23	31								
250			43	55	43	59	34	45	25	33	21	27	35	51	25	34	20	27	17	22	21	30	17	23
300			50	64	49	68	39	52	29	38	25	31	41	59	29	40	23	31	19	25	24	34	19	27
350							44	58	33	43	28	36	46	67										

Rear against wall (wall mounting)

Temperature rise [Kelvin]

	VMS 32 DISSIPATION 320x220x180		VMS 32 320x220x255		VMS 33 320x320x180		VMS 33 320x320x255		VMS 43 440x320x180		VMS 43 440x320x255		VMS 63 640x320x180		VMS 63 640x320x255		VMS 64 640x440x180		VMS 64 640x440x255		
	Watt	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top		
10	11	14	9	11	9	11	8	9	8	9	7	8	6	7	5	6	5	6	4	5	
20	20	24	16	20	16	19	14	16	13	16	11	14	10	13	9	11	9	11	8	10	
30	27	33	22	27	22	26	19	23	18	23	16	19	14	18	12	15	12	15	11	13	
40	34	42	28	34	28	33	24	28	23	28	20	24	18	23	16	19	15	19	14	17	
50	41	50	33	41	33	39	29	34	28	34	24	29	22	27	19	23	18	22	16	20	
60	47		38	47	38	45	33	39	32	39	28	34	25	31	22	27	21	26	19	23	
70	54		43	53	43	51	38	45	36	45	31	38	28	36	24	30	24	29	21	26	
80			48		48		42	50	42	50	35	43	32	40	27	34	27	33	24	29	
90			53		53		46	55	45	55	38	47	35	43	30	37	29	36	26	32	
100							50		49		42	51	38	47	33	41	32	39	28	35	
120									56			48		55		38	47	37	45	33	40
140																43	53	42	51	37	46
160																55	47	47	41	41	51
180																	52	51	45	56	
200																	57	56	49		
220																			53		

Front, right and upperside free

Temperature rise [Kelvin]

	VMS 32 DISSIPATION 320x220x180		VMS 32 320x220x255		VMS 33 320x320x180		VMS 33 320x320x255		VMS 43 440x320x180		VMS 43 440x320x255		VMS 63 640x320x180		VMS 63 640x320x255		VMS 64 640x440x180		VMS 64 640x440x255		
	Watt	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top		
10	12	15	10	12	9	11	8	10	8	10	7	9	6	8	6	7	5	6	5	6	
20	21	26	17	21	16	20	15	17	14	17	12	15	11	14	10	12	9	11	8	10	
30	29	35	24	30	23	27	20	24	20	24	17	21	15	19	13	17	13	16	11	14	
40	36	45	30	37	29	34	25	30	25	30	21	26	19	24	17	21	16	20	14	18	
50	43	53	36	45	34	41	30	36	29	36	26	31	23	29	20	25	19	24	17	21	
60	50		42	52	40	47	35	42	34	42	30	36	27	34	23	29	22	27	20	24	
70	57		48		45	54	40	47	39	47	34	41	31	38	26	33	25	31	22	28	
80			53		50		44	53	43	53	37	46	34	42	29	37	28	35	25	31	
90					55		49		47		41	50	37	47	32	40	31	38	27	34	
100							53		51		45	55	41	51	35	44	34	41	30	37	
120																47	51	39	48	35	43
140																53	46	44	54	39	48
160																	51	49	44	54	
180																	57	54	48		
200																			52		
220																			56		

Frontside and upperside free

Temperature rise [Kelvin]

	VMS 32 DISSIPATION 320x220x180		VMS 32 320x220x255		VMS 33 320x320x180		VMS 33 320x320x255		VMS 43 440x320x180		VMS 43 440x320x255		VMS 63 640x320x180		VMS 63 640x320x255		VMS 64 640x440x180		VMS 64 640x440x255		
	Watt	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top		
10	13	16	11	14	10	12	9	10	9	10	8	9	7	9	6	8	6	7	5	6	
20	22	27	20	24	18	22	15	18	15	18	13	16	12	15	11	13	10	12	9	11	
30	31	37	27	33	25	30	21	25	21	25	18	22	17	21	15	18	14	17	12	15	
40	38	47	34	42	32	38	27	32	26	32	23	28	21	26	18	23	17	21	15	19	
50	46	57	41	50	38	45	32	38	31	38	28	34	25	31	22	28	20	25	18	22	
60	53		47		44	52	37	44	36	44	32	39	29	36	26	32	24	29	21	26	
70			53		50		42	50	41	50	36	44	33	41	29	36	27	33	24	29	
80					55		47	56	46	56	40	49	37	46	32	40	30	37	27	33	
90							52		50		44	54	40	50	35	44	33	40	29	36	
100							56		54		48		44	55	39	48	36	44	32	39	
120																45	56	41	51	37	45
140																51		47	42	51	
160																56		52	46		
180																			51		

Frontside free, upperside not free

Temperature rise [Kelvin]

	VMS 32 DISSIPATION 320x220x180		VMS 32 320x220x255		VMS 33 320x320x180		VMS 33 320x320x255		VMS 43 440x320x180		VMS 43 440x320x255		VMS 63 640x320x180		VMS 63 640x320x255		VMS 64 640x440x180		VMS 64 640x440x255	
	Watt	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	Half Top	
10	14	17	12	15	12	14	10	12	9	11	8	10	7	9	7	8	6	7	5	7
20	24	30	22	27	20	24	18	22	16	20	15	18	13	16	12	14	11	13	10	12
30	33	41	30	37	28	34	25	30	22	27	20	25	18	22	16	20	15	18	13	16
40	42	52	38	46	36	42	32	38	28	34	26	31	22	28	20	25	18	23	17	21
50	50		45	55	43	51	38	45	34	41	31	38	27	33	24	30	22	27	20	25
60			52		49		44	52	39	48	35	43	31	39	28	35	26	31	23	28
70					56		50		44	54	40	49	35	44	32	39	29	36	26	32
80							55		49		45	55	39	49	35	44	32	40	29	36
90									54		49		43	54	39	48	35	43	32	39
100											54		47		42	52	39	47	35	43
120																55		50	40	50
140																		56	46	56
160																			51	
180																			56	



Enclosures depth = 210 mm

Rear against wall (wall mounting)

Temperature rise [Kelvin]

DISSIPATION	650 x 300		650 x 550		800 x 300		800 x 550		950 x 550	
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half
25	12	15	9	11	10	13	8	10	7	10
50	21	26	16	19	18	23	14	17	12	18
75	29	36	22	26	25	31	20	24	17	25
100	36	45	27	33	31	39	25	30	21	32
125	43	54	32	39	38	47	30	36	25	38
150	50	>55	38	45	44	55	34	42	29	44
175			43	51	49	>55	39	48	33	49
200			47	>55	55	>55	43	53	37	>55
225			52	>55			48	>55	41	>55
250							52	>55	44	>55
275									48	>55
300									51	>55
325									55	>55

Front, left and top free

Temperature rise [Kelvin]

DISSIPATION	650 x 300		650 x 550		800 x 300		800 x 550		950 x 550	
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half
25	13	16	9	11	11	14	8	10	8	10
50	22	28	16	19	19	24	15	18	14	17
75	31	39	22	27	27	34	20	25	19	23
100	39	49	28	34	34	43	26	31	24	29
125	47	>55	34	41	41	51	31	38	28	35
150	54	>55	39	47	47	>55	35	44	33	41
175			44	53	53	>55	40	49	37	46
200			49	>55			45	55	41	51
225			54	>55			49	>55	45	>55
250							54	>55	49	>55
275									53	>55

Front and top free

Temperature rise [Kelvin]

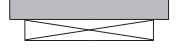
DISSIPATION	650 x 300		650 x 550		800 x 300		800 x 550		950 x 550	
	Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half
25	14	16	10	12	12	15	9	11	8	10
50	24	31	17	20	21	27	15	19	14	17
75	34	42	23	28	29	37	21	26	20	24
100	53	53	29	36	37	46	27	33	25	31
125	51	>55	35	43	44	>55	32	39	29	37
150			41	49	51	>55	37	45	34	42
175			46	>55			42	51	39	48
200			51	>55			46	>55	43	53
225							51	>55	47	>55
250									51	>55



Enclosure 12 modules

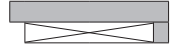
According IEC 60890, temperature rise in Kelvin

Rear against wall - external dimensions



Watt	750x364x250 12 mod /4 row		900x364x250 12 mod /5 row		1050x364x250 12 mod /6 row		1200x364x250 12 mod /7 row		1350x364x250 12 mod /8 row		1500x364x250 12 mod /9 row		1650x364x250 12 mod /10 row		1950x364x250 12 mod /12 row	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10	5	6	4	6	*	*	*	*	*	*	*	*	*	*	*	*
20	9	11	8	10	*	*	*	*	*	*	*	*	*	*	*	*
30	12	15	11	13	*	*	*	*	*	*	*	*	*	*	*	*
40	15	19	13	17	*	*	*	*	*	*	*	*	*	*	*	*
50	18	23	16	20	*	*	*	*	*	*	*	*	*	*	*	*
60	21	26	19	23	*	*	*	*	*	*	*	*	*	*	*	*
70	24	29	21	27	*	*	*	*	*	*	*	*	*	*	*	*
80	26	33	24	30	*	*	*	*	*	*	*	*	*	*	*	*
90	29	36	26	32	*	*	*	*	*	*	*	*	*	*	*	*
100	31	39	28	35	*	*	*	*	*	*	*	*	*	*	*	*
110	34	42	30	38	*	*	*	*	*	*	*	*	*	*	*	*
120	36	45	33	41	*	*	*	*	*	*	*	*	*	*	*	*
130	39	49	35	44	*	*	*	*	*	*	*	*	*	*	*	*
140	41	52	37	46	*	*	*	*	*	*	*	*	*	*	*	*
150	44	54	39	49	*	*	*	*	*	*	*	*	*	*	*	*
160	46	57	41	52	*	*	*	*	*	*	*	*	*	*	*	*
170	48	60	43	54	*	*	*	*	*	*	*	*	*	*	*	*
180	50	63	45	57	*	*	*	*	*	*	*	*	*	*	*	*
190	53	66	47	59	*	*	*	*	*	*	*	*	*	*	*	*
200	55	69	49	62	*	*	*	*	*	*	*	*	*	*	*	*
210	57	71	51	64	*	*	*	*	*	*	*	*	*	*	*	*
220	-	-	53	67	*	*	*	*	*	*	*	*	*	*	*	*
230	-	-	55	69	*	*	*	*	*	*	*	*	*	*	*	*
240	-	-	57	71	*	*	*	*	*	*	*	*	*	*	*	*
250	-	-	-	-	*	*	*	*	*	*	*	*	*	*	*	*

Front and one side free - external dimensions



Watt	750x364x250 12 Mod/4Row		900x364x250 12 Mod/5Row		1050x364x250 12 Mod/6Row		1200x364x250 12 Mod/7Row		1350x364x250 12 Mod/8Row		1500x364x250 12 Mod/9Row		1650x364x250 12 Mod/10Row		1950x364x250 12 Mod/12Row	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10	5	7	5	6	*	*	*	*	*	*	*	*	*	*	*	*
20	9	11	8	10	*	*	*	*	*	*	*	*	*	*	*	*
30	13	16	11	14	*	*	*	*	*	*	*	*	*	*	*	*
40	16	20	14	18	*	*	*	*	*	*	*	*	*	*	*	*
50	19	24	17	21	*	*	*	*	*	*	*	*	*	*	*	*
60	22	28	20	25	*	*	*	*	*	*	*	*	*	*	*	*
70	25	31	22	28	*	*	*	*	*	*	*	*	*	*	*	*
80	28	35	25	31	*	*	*	*	*	*	*	*	*	*	*	*
90	31	38	27	34	*	*	*	*	*	*	*	*	*	*	*	*
100	33	42	30	37	*	*	*	*	*	*	*	*	*	*	*	*
110	36	45	32	40	*	*	*	*	*	*	*	*	*	*	*	*
120	39	48	34	43	*	*	*	*	*	*	*	*	*	*	*	*
130	41	52	37	46	*	*	*	*	*	*	*	*	*	*	*	*
140	44	55	39	49	*	*	*	*	*	*	*	*	*	*	*	*
150	46	58	41	52	*	*	*	*	*	*	*	*	*	*	*	*
160	49	61	43	54	*	*	*	*	*	*	*	*	*	*	*	*
170	51	64	46	57	*	*	*	*	*	*	*	*	*	*	*	*
180	54	67	48	60	*	*	*	*	*	*	*	*	*	*	*	*
190	56	70	50	62	*	*	*	*	*	*	*	*	*	*	*	*
200	-	-	52	65	*	*	*	*	*	*	*	*	*	*	*	*
210	-	-	54	68	*	*	*	*	*	*	*	*	*	*	*	*
220	-	-	56	70	*	*	*	*	*	*	*	*	*	*	*	*
230	-	-	-	-	*	*	*	*	*	*	*	*	*	*	*	*
240	-	-	-	-	*	*	*	*	*	*	*	*	*	*	*	*
250	-	-	-	-	*	*	*	*	*	*	*	*	*	*	*	*

Front side free - external dimensions



Watt	750x364x250 12 Mod/4Row		900x364x250 12 Mod/5Row		1050x364x250 12 Mod/6Row		1200x364x250 12 Mod/7Row		1350x364x250 12 Mod/8Row		1500x364x250 12 Mod/9Row		1650x364x250 12 Mod/10Row		1950x364x250 12 Mod/12Row	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10	6	7	5	6	*	*	*	*	*	*	*	*	*	*	*	*
20	10	12	9	11	*	*	*	*	*	*	*	*	*	*	*	*
30	14	17	12	15	*	*	*	*	*	*	*	*	*	*	*	*
40	17	21	15	19	*	*	*	*	*	*	*	*	*	*	*	*
50	21	26	18	23	*	*	*	*	*	*	*	*	*	*	*	*
60	24	30	21	26	*	*	*	*	*	*	*	*	*	*	*	*
70	27	34	24	30	*	*	*	*	*	*	*	*	*	*	*	*
80	30	37	26	33	*	*	*	*	*	*	*	*	*	*	*	*
90	33	41	29	37	*	*	*	*	*	*	*	*	*	*	*	*
100	36	45	32	40	*	*	*	*	*	*	*	*	*	*	*	*
110	39	48	34	43	*	*	*	*	*	*	*	*	*	*	*	*
120	42	52	37	46	*	*	*	*	*	*	*	*	*	*	*	*
130	44	55	39	49	*	*	*	*	*	*	*	*	*	*	*	*
140	47	59	42	52	*	*	*	*	*	*	*	*	*	*	*	*
150	50	62	44	55	*	*	*	*	*	*	*	*	*	*	*	*
160	52	65	46	58	*	*	*	*	*	*	*	*	*	*	*	*
170	55	69	49	61	*	*	*	*	*	*	*	*	*	*	*	*
180	58	72	51	64	*	*	*	*	*	*	*	*	*	*	*	*
190	-	-	53	67	*	*	*	*	*	*	*	*	*	*	*	*
200	-	-	55	69	*	*	*	*	*	*	*	*	*	*	*	*
210	-	-	58	72	*	*	*	*	*	*	*	*	*	*	*	*
220	-	-	-	-	*	*	*	*	*	*	*	*	*	*	*	*
230	-	-	-	-	*	*	*	*	*	*	*	*	*	*	*	*
240	-	-	-	-	*	*	*	*	*	*	*	*	*	*	*	*
250	-	-	-	-	*	*	*	*	*	*	*	*	*	*	*	*

* not available



Enclosure 24 modules

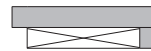
According IEC 60890, temperature rise in Kelvin

Rear against wall - external dimensions



Watt	600x660x250		750x660x250		900x660x250		1050x660x250		1200x660x250		1350x660x250		1500x660x250		1650x660x250		1950x660x250	
	24 Mod/3Row Half	Top	24 Mod/4Row Half	Top	24 Mod/5Row Half	Top	24 Mod/6Row Half	Top	24 Mod/7Row Half	Top	24 Mod/8Row Half	Top	24 Mod/9Row Half	Top	24 Mod/10Row Half	Top	24 Mod/12Row Half	Top
10	4	5	4	5	3	5	3	4	3	4	2	4	*	*	*	*	*	*
20	7	9	7	8	6	8	5	8	5	7	4	7	*	*	*	*	*	*
30	10	12	9	11	8	11	7	11	6	10	6	9	*	*	*	*	*	*
40	13	15	12	14	10	14	9	13	8	13	7	12	*	*	*	*	*	*
50	15	18	14	17	12	17	11	16	10	15	9	14	*	*	*	*	*	*
60	18	21	16	19	14	20	12	19	11	17	10	16	*	*	*	*	*	*
70	20	24	18	22	16	23	14	21	16	20	12	18	*	*	*	*	*	*
80	22	26	20	25	17	25	16	24	14	22	13	20	*	*	*	*	*	*
90	25	29	22	27	19	28	17	26	16	24	14	22	*	*	*	*	*	*
100	27	32	24	29	21	30	19	28	17	26	15	24	*	*	*	*	*	*
110	29	34	26	32	22	32	20	30	18	28	17	26	*	*	*	*	*	*
120	31	37	28	34	24	35	22	33	20	30	18	28	*	*	*	*	*	*
130	33	39	30	36	26	37	23	35	21	32	19	30	*	*	*	*	*	*
140	35	41	32	38	27	39	25	37	22	34	20	32	*	*	*	*	*	*
150	37	44	34	41	29	42	26	39	24	36	21	33	*	*	*	*	*	*
160	39	46	36	43	30	44	27	41	25	38	22	35	*	*	*	*	*	*
170	41	48	37	45	32	46	29	43	26	40	23	37	*	*	*	*	*	*
180	43	51	39	47	33	48	30	45	27	42	25	39	*	*	*	*	*	*
190	45	53	41	49	35	50	31	47	29	44	26	40	*	*	*	*	*	*
200	47	55	43	51	36	53	33	49	30	46	27	42	*	*	*	*	*	*
220	51	59	46	55	39	57	35	53	32	49	29	45	*	*	*	*	*	*
240	54	64	49	59	42	61	38	57	34	53	31	49	*	*	*	*	*	*
260	58	68	53	63	45	65	41	61	37	57	33	52	*	*	*	*	*	*
280	61	72	56	67	47	69	43	65	39	60	35	55	*	*	*	*	*	*
300	-	-	59	71	50	73	45	68	41	63	37	58	*	*	*	*	*	*
320	-	-	-	-	-	-	48	72	43	67	39	61	*	*	*	*	*	*
340	-	-	-	-	-	-	-	-	46	70	41	64	*	*	*	*	*	*
360	-	-	-	-	-	-	-	-	-	-	43	67	*	*	*	*	*	*
380	-	-	-	-	-	-	-	-	-	-	45	70	*	*	*	*	*	*
400	-	-	-	-	-	-	-	-	-	-	-	-	*	*	*	*	*	*

Front and one side free - external dimensions



Watt	600x660x250		750x660x250		900x660x250		1050x660x250		1200x660x250		1350x660x250		1500x660x250		1650x660x250		1950x660x250	
	24 Mod/3Row Half	Top	24 Mod/4Row Half	Top	24 Mod/5Row Half	Top	24 Mod/6Row Half	Top	24 Mod/7Row Half	Top	24 Mod/8Row Half	Top	24 Mod/9Row Half	Top	24 Mod/10Row Half	Top	24 Mod/12Row Half	Top
10	4	5	4	5	4	4	3	5	3	4	3	4	*	*	*	*	*	*
20	8	9	7	8	6	8	5	8	5	7	4	7	*	*	*	*	*	*
30	10	12	11	11	9	11	7	11	7	10	6	9	*	*	*	*	*	*
40	13	16	12	14	11	13	9	14	9	13	8	12	*	*	*	*	*	*
50	16	19	14	17	13	16	11	16	10	15	9	14	*	*	*	*	*	*
60	18	22	17	20	15	18	13	19	12	18	11	17	*	*	*	*	*	*
70	21	24	19	23	17	21	15	22	13	20	12	19	*	*	*	*	*	*
80	23	27	21	25	19	23	16	24	15	23	14	21	*	*	*	*	*	*
90	25	30	23	28	21	25	18	26	16	25	15	23	*	*	*	*	*	*
100	28	32	25	30	23	28	20	29	18	27	16	25	*	*	*	*	*	*
110	30	35	27	33	24	30	21	31	19	29	18	27	*	*	*	*	*	*
120	32	38	29	35	26	32	23	33	21	31	19	29	*	*	*	*	*	*
130	34	40	31	37	28	34	24	36	22	33	20	31	*	*	*	*	*	*
140	36	43	33	40	30	36	26	38	23	35	21	33	*	*	*	*	*	*
150	38	45	35	42	31	38	27	40	25	37	23	35	*	*	*	*	*	*
160	40	47	37	44	33	40	29	42	26	39	24	36	*	*	*	*	*	*
170	42	50	38	46	35	42	30	44	27	41	25	38	*	*	*	*	*	*
180	44	52	40	48	36	44	31	46	29	43	26	40	*	*	*	*	*	*
190	46	54	42	51	38	46	33	48	30	45	27	42	*	*	*	*	*	*
200	48	57	44	53	40	48	34	50	31	47	28	44	*	*	*	*	*	*
220	52	61	47	57	43	52	37	54	34	51	31	47	*	*	*	*	*	*
240	56	66	51	61	46	56	39	58	36	55	33	51	*	*	*	*	*	*
260	60	70	54	65	49	60	42	62	39	58	35	54	*	*	*	*	*	*
280	-	-	57	69	52	63	45	66	41	62	37	57	*	*	*	*	*	*
300	-	-	61	73	55	67	47	70	43	65	39	60	*	*	*	*	*	*
320	-	-	-	-	58	71	-	-	46	69	41	64	*	*	*	*	*	*
340	-	-	-	-	-	-	-	-	48	72	43	67	*	*	*	*	*	*
360	-	-	-	-	-	-	-	-	-	-	46	70	*	*	*	*	*	*
380	-	-	-	-	-	-	-	-	-	-	-	-	*	*	*	*	*	*

Front side free - external dimensions



Watt	600x660x250		750x660x250		900x660x250		1050x660x250		1200x660x250		1350x660x250		1500x660x250		1650x660x250		1950x660x250	
	24 Mod/3Row Half	Top	24 Mod/4Row Half	Top	24 Mod/5Row Half	Top	24 Mod/6Row Half	Top	24 Mod/7Row Half	Top	24 Mod/8Row Half	Top	24 Mod/9Row Half	Top	24 Mod/10Row Half	Top	24 Mod/12Row Half	Top
10	4	5	4	5	4	5	3	5	3	4	3	4	*	*	*	*	*	*
20	8	9	7	9	6	8	5	8	5	7	4	7	*	*	*	*	*	*
30	11	13	10	12	9	11	8	11	7	10	6	9	*	*	*	*	*	*
40	14	16	12	15	11	14	10	14	9	13	8	12	*	*	*	*	*	*
50	16	19	15	18	14	17	12	17	11	16	10	15	*	*	*	*	*	*
60	19	22	17	21	16	19	13	19	12	18	11	17	*	*	*	*	*	*
70	21	25	19	23	18	22	15	22	14	21	13	19	*	*	*	*	*	*
80	24	28	22	26	20	24	17	24	16	23	14	22	*	*	*	*	*	*
90	26	31	24	29	22	27	19	27	17	25	16	24	*	*	*	*	*	*
100	29	33	26	31	24	29	20	29	19	28	17	26	*	*	*	*	*	*
110	31	36	28	33	26	31	22	31	20	30	19	28	*	*	*	*	*	*
120	33	39	30	36	27	34	24	34	22	32	20	30	*	*	*	*	*	*
130	35	41	32	38	29	36	25	36	23	34	21	32	*	*	*	*	*	*
140	37	44	34	41	31	38	27	38	24	36	22	34	*	*	*	*	*	*
150	39	46	36	43	33	40	28	40	26	38	24	36	*	*	*	*	*	*
160	42	49	38	45	35	42	30	43	27	40	25	38	*	*	*	*	*	*
170	44	51	39	48	36	44	31	45	29	42	26	40	*	*	*	*	*	*
180	46	54	41	50	38	46	33	47	30	44	28	41	*	*	*	*	*	*
190	48	56	43	52	40	49	34	49	31	46	29	43	*	*	*	*	*	*
200	50	58	45	54	41	51	35	51	33	48	30	45	*	*	*	*	*	*
220	54	63	49	58	45	55	38	55	35	52	32	49	*	*	*	*	*	*
240	58	68	52	63	48	59	41	59	38	56	35	52	*	*	*	*	*	*
260	61	72	56	67	51	62	44	63	40	59	37	56	*	*	*	*	*	*
280	-	-	59	71	54	66	47	67	43	63	39	59	*	*	*	*	*	*
300	-	-	-	-	57	70	49	71	45	67	42	63	*	*	*	*	*	*
320	-	-	-	-	-	-	-	-	48	70	44	66	*	*	*	*	*	*
340	-	-	-	-	-	-	-	-	-	-	46	69	*	*	*	*	*	*
360	-	-	-	-	-	-	-	-	-	-	48	72	*	*	*	*	*	*
380	-	-	-	-	-	-	-	-	-	-	-	-	*	*	*	*	*	*

* not available



Power dissipation values

Intro

A

B

C

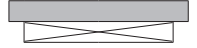
D

E

Enclosure 36 modules

According IEC 60890, temperature rise in Kelvin

Rear against wall - external dimensions



Power dissipation values

Watt	900x876x250		1050x876x250		1200x876x250		1350x876x250		1500x876x250		1650x876x250		1950x876x250	
	36 Mod/5Row		36 Mod/6Row		36 Mod/7Row		36 Mod/8Row		36 Mod/9Row		36 Mod/10Row		36 Mod/12Row	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10	3	4	2	3	2	3	2	3	2	3	2	3	*	*
20	5	7	4	6	4	5	3	5	3	5	3	4	*	*
30	7	9	6	8	5	7	4	7	4	6	4	6	*	*
40	8	12	7	11	6	9	6	8	5	8	5	7	*	*
50	10	14	9	13	8	11	7	10	6	9	6	9	*	*
60	12	16	10	15	9	13	8	12	7	11	6	10	*	*
70	13	18	12	17	10	15	9	13	8	12	7	11	*	*
80	15	20	13	18	11	16	10	15	9	14	8	13	*	*
90	16	22	14	20	12	18	11	16	10	15	9	14	*	*
100	18	24	15	22	13	20	12	17	11	16	10	15	*	*
120	20	28	18	26	15	23	13	20	12	19	11	18	*	*
140	23	32	20	29	17	26	15	23	14	22	13	20	*	*
160	26	36	22	32	19	29	17	25	16	24	14	22	*	*
180	28	39	25	35	21	31	18	28	17	26	16	24	*	*
200	31	43	27	39	23	34	20	30	19	29	17	27	*	*
220	33	46	29	42	25	37	22	33	20	31	18	29	*	*
240	35	49	31	45	27	40	23	35	22	33	20	31	*	*
260	38	53	33	48	29	42	25	38	23	36	21	33	*	*
280	40	56	35	51	30	45	26	40	24	38	22	35	*	*
300	42	59	37	53	32	47	28	42	26	40	24	37	*	*
320	45	62	39	56	34	50	29	44	27	42	25	39	*	*
340	47	65	41	59	35	52	31	47	29	44	26	41	*	*
360	49	68	43	62	37	55	32	49	30	46	27	43	*	*
380	51	71	45	65	39	57	34	51	31	48	28	45	*	*
400	-	-	47	67	40	60	35	53	33	50	30	47	*	*
420	-	-	49	70	42	62	37	55	34	52	31	48	*	*
440	-	-	-	-	44	64	38	57	35	54	32	50	*	*
460	-	-	-	-	45	67	39	59	36	56	33	52	*	*
480	-	-	-	-	47	69	41	61	38	58	34	54	*	*
500	-	-	-	-	48	71	42	64	39	60	36	56	*	*
520	-	-	-	-	-	-	43	66	40	62	37	57	*	*
540	-	-	-	-	-	-	45	68	41	64	38	59	*	*
560	-	-	-	-	-	-	46	70	43	66	39	61	*	*
580	-	-	-	-	-	-	-	-	44	68	40	63	*	*
600	-	-	-	-	-	-	-	-	45	70	41	64	*	*
650	-	-	-	-	-	-	-	-	-	-	44	69	*	*
700	-	-	-	-	-	-	-	-	-	-	47	73	*	*
750	-	-	-	-	-	-	-	-	-	-	-	-	*	*

Front and one side free - external dimensions



Watt	900x876x250		1050x876x250		1200x876x250		1350x876x250		1500x876x250		1650x876x250		1950x876x250	
	36 Mod/5Row		36 Mod/6Row		36 Mod/7Row		36 Mod/8Row		36 Mod/9Row		36 Mod/10Row		36 Mod/12Row	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10	3	4	3	4	2	3	2	3	2	3	2	3	*	*
20	5	7	4	6	4	6	3	5	3	5	3	4	*	*
30	7	9	6	9	5	8	5	7	4	6	4	6	*	*
40	9	12	8	11	7	10	6	9	5	8	5	8	*	*
50	10	14	9	13	8	12	7	10	6	10	6	9	*	*
60	12	16	11	15	9	14	8	12	7	11	7	10	*	*
70	14	19	12	17	11	15	9	14	8	12	8	12	*	*
80	15	21	13	19	12	17	10	15	9	14	9	13	*	*
90	17	23	15	21	13	19	11	17	10	15	9	14	*	*
100	18	25	16	23	14	20	12	18	11	17	10	16	*	*
120	21	29	19	26	16	24	14	21	13	19	12	18	*	*
140	24	33	21	30	18	27	16	24	14	22	13	21	*	*
160	26	36	23	33	20	30	18	26	16	24	15	23	*	*
180	29	40	26	37	23	33	20	29	18	27	16	25	*	*
200	32	43	28	40	25	36	21	32	19	29	18	27	*	*
220	34	47	30	43	26	38	23	34	21	31	19	30	*	*
240	37	50	33	46	28	41	25	37	22	34	21	32	*	*
260	39	54	35	49	30	44	26	39	24	36	22	34	*	*
280	41	57	37	52	32	47	28	41	25	38	23	36	*	*
300	44	60	39	55	34	49	29	44	27	40	25	38	*	*
320	46	63	41	58	36	52	31	46	28	42	26	40	*	*
340	48	66	43	61	38	55	33	48	29	44	27	42	*	*
360	51	70	45	64	39	57	34	51	31	47	29	44	*	*
380	53	73	47	67	41	60	36	53	32	49	30	46	*	*
400	-	-	49	69	43	62	37	55	34	51	31	48	*	*
420	-	-	51	72	45	65	39	57	35	53	32	50	*	*
440	-	-	-	-	46	67	40	60	36	55	34	52	*	*
460	-	-	-	-	48	70	42	62	37	57	35	54	*	*
480	-	-	-	-	50	72	43	64	39	59	36	55	*	*
500	-	-	-	-	-	-	44	66	40	61	37	57	*	*
520	-	-	-	-	-	-	46	68	41	63	38	59	*	*
540	-	-	-	-	-	-	47	70	43	65	40	61	*	*
560	-	-	-	-	-	-	49	72	44	66	41	63	*	*
580	-	-	-	-	-	-	-	-	45	68	42	64	*	*
600	-	-	-	-	-	-	-	-	46	70	43	66	*	*
650	-	-	-	-	-	-	-	-	-	-	46	71	*	*
700	-	-	-	-	-	-	-	-	-	-	-	-	*	*

* not available



Enclosure 36 modules

According IEC 60890, temperature rise in Kelvin

Front side free - external dimensions



Watt	900x876x250		1050x876x250		1200x876x250		1350x876x250		1500x876x250		1650x876x250		1950x876x250	
	36 Mod/5Row		36 Mod/6Row		36 Mod/7Row		36 Mod/8Row		36 Mod/9Row		36 Mod/10Row		36 Mod/12Row	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10	3	4	3	4	2	3	2	3	2	3	2	3	*	*
20	5	7	5	6	4	6	4	5	3	5	3	4	*	*
30	7	9	6	9	6	8	5	7	4	6	4	6	*	*
40	9	12	8	11	7	10	6	9	5	8	5	8	*	*
50	11	14	10	13	9	12	7	11	7	10	6	9	*	*
60	12	17	11	15	10	14	9	12	8	11	7	11	*	*
70	14	19	13	17	11	16	10	14	9	13	8	12	*	*
80	16	21	14	19	12	18	11	16	10	14	9	14	*	*
90	17	23	15	21	14	19	12	17	11	16	10	15	*	*
100	19	25	17	23	15	21	13	19	11	17	11	16	*	*
120	22	29	19	27	17	24	15	22	13	20	12	19	*	*
140	25	33	22	30	19	28	17	25	15	22	14	21	*	*
160	27	36	25	34	22	31	19	27	17	25	16	24	*	*
180	30	40	27	37	24	34	21	30	18	27	17	26	*	*
200	33	44	29	40	26	37	23	33	20	30	19	28	*	*
220	35	47	32	44	28	40	24	35	22	32	20	30	*	*
240	38	50	34	47	30	42	26	38	23	34	22	33	*	*
260	40	54	36	50	32	45	28	40	25	36	23	35	*	*
280	43	57	38	53	34	48	30	43	26	39	25	37	*	*
300	45	60	41	56	36	51	31	45	28	41	26	39	*	*
320	48	64	43	59	38	53	33	48	29	43	27	41	*	*
340	50	67	45	62	40	56	35	50	31	45	29	43	*	*
360	53	70	47	65	42	59	36	53	32	47	30	45	*	*
380	55	73	49	68	43	61	38	55	33	49	31	47	*	*
400	-	-	51	70	45	64	40	57	35	52	33	49	*	*
420	-	-	53	73	47	67	41	59	36	54	34	51	*	*
440	-	-	-	-	49	69	43	62	38	56	35	53	*	*
460	-	-	-	-	51	72	44	64	39	58	37	55	*	*
480	-	-	-	-	-	-	46	66	40	60	38	57	*	*
500	-	-	-	-	-	-	47	68	42	62	39	59	*	*
520	-	-	-	-	-	-	49	71	43	64	40	61	*	*
540	-	-	-	-	-	-	-	-	44	66	42	63	*	*
560	-	-	-	-	-	-	-	-	46	68	43	65	*	*
580	-	-	-	-	-	-	-	-	47	69	44	66	*	*
600	-	-	-	-	-	-	-	-	48	71	45	68	*	*
650	-	-	-	-	-	-	-	-	-	-	48	73	*	*
700	-	-	-	-	-	-	-	-	-	-	-	-	*	*

Power dissipation values

Intro

A

B

C

D

E

F

G

H

I

X

* not available



Heat dissipation tables - Only valid for FORM 1

According IEC 60890, temperature rise in Kelvin

Free standing enclosure - external dimensions



Power dissipation values

Watt	447x450x2155		743x450x2155		959x450x2155		447x600x2155		743x600x2155		959x600x2155		447x800x2155		743x800x2155		959x800x2155			
	12 Mod Half	12 Mod Top	24 Mod Half	24 Mod Top	36 Mod Half	36 Mod Top	12 Mod Half	12 Mod Top	24 Mod Half	24 Mod Top	36 Mod Half	36 Mod Top	12 Mod Half	12 Mod Top	24 Mod Half	24 Mod Top	36 Mod Half	36 Mod Top		
25	-	-	2	4	2	3	2	4	2	3	2	3	2	3	2	3	2	3	2	2
50	-	-	4	6	4	5	4	7	4	5	3	5	4	6	3	5	3	5	3	4
75	-	-	6	9	5	7	6	9	5	8	5	6	5	8	5	6	4	6	4	6
100	-	-	7	11	6	9	7	12	6	9	6	8	7	10	6	8	5	7	5	7
125	-	-	8	13	7	11	9	14	8	11	7	10	8	12	7	10	6	9	6	9
150	-	-	10	15	9	13	10	16	9	13	8	11	9	14	8	11	7	10	7	10
175	-	-	11	17	10	15	12	19	10	15	9	13	11	16	9	13	8	11	8	11
200	-	-	12	19	11	16	13	21	11	17	10	14	12	18	10	14	9	12	9	12
225	-	-	14	21	12	18	14	23	12	18	11	16	13	20	11	15	10	14	10	14
250	-	-	15	23	13	20	16	25	13	20	12	17	14	22	12	17	11	15	11	15
275	-	-	16	25	14	21	17	27	14	21	13	18	15	23	13	18	12	16	12	16
300	-	-	17	27	15	23	18	29	16	23	14	20	16	25	14	19	13	17	13	17
325	-	-	18	28	16	24	19	31	17	24	15	21	18	27	15	21	13	18	13	18
350	-	-	19	30	17	26	21	33	18	26	16	22	19	28	16	22	14	20	14	20
375	-	-	21	32	18	27	22	34	19	27	17	24	20	30	17	23	15	21	15	21
400	-	-	22	34	19	29	23	36	20	29	17	25	21	31	17	25	16	22	16	22
425	-	-	23	35	20	30	24	38	21	30	18	26	22	33	18	26	17	23	17	23
450	-	-	24	37	21	31	25	40	22	32	19	27	23	35	19	27	18	24	18	24
475	-	-	25	39	22	33	26	42	22	33	20	29	24	36	20	28	18	25	18	25
500	-	-	26	40	23	34	27	43	23	35	21	30	25	38	21	29	19	26	19	26
525	-	-	27	42	24	36	28	45	24	36	22	31	26	39	22	31	20	27	20	27
550	-	-	28	43	25	37	30	47	25	37	23	32	27	41	23	32	21	28	21	28
575	-	-	29	45	26	38	31	48	26	39	23	33	28	42	23	33	21	29	21	29
600	-	-	30	47	26	40	32	50	27	40	24	34	29	44	24	34	22	30	22	30
625	-	-	31	48	27	41	33	52	28	41	25	36	30	45	25	35	23	31	23	31
650	-	-	32	50	28	42	34	53	29	43	26	37	31	46	26	36	24	32	24	32
675	-	-	33	51	29	44	35	55	30	44	27	38	32	48	27	37	24	33	24	33
700	-	-	34	53	30	45	36	57	31	45	27	39	33	49	27	39	25	34	25	34
725	-	-	35	54	31	46	37	58	32	47	28	40	33	51	28	40	26	35	26	35
750	-	-	36	56	32	47	38	60	32	48	29	41	34	52	29	41	26	36	26	36
775	-	-	37	57	32	49	39	62	33	49	30	42	35	54	30	42	27	37	27	37
800	-	-	38	59	33	50	40	63	34	50	30	43	36	55	30	43	28	38	28	38
825	-	-	39	60	34	51	41	65	35	52	31	44	37	56	31	44	28	39	28	39
850	-	-	40	62	35	53	42	66	36	53	32	46	38	58	32	45	29	40	29	40
875	-	-	41	63	36	54	43	68	37	54	33	47	39	59	33	46	30	41	30	41
900	-	-	41	65	37	55	44	69	38	55	33	48	40	60	33	47	31	42	31	42
925	-	-	42	66	37	56	45	71	38	57	34	49	41	62	34	48	31	43	31	43
950	-	-	43	67	38	57	-	-	39	58	35	50	42	63	35	49	32	44	32	44
975	-	-	44	69	39	59	-	-	40	59	36	51	42	64	36	50	33	45	33	45
1000	-	-	45	70	40	60	-	-	41	60	36	52	43	66	36	51	33	45	33	45
1025	-	-	-	-	41	61	-	-	42	62	37	53	44	67	37	52	34	46	34	46
1050	-	-	-	-	41	62	-	-	42	63	38	54	45	68	38	53	35	47	35	47
1075	-	-	-	-	42	63	-	-	43	64	39	55	46	70	39	54	35	48	35	48
1100	-	-	-	-	43	65	-	-	44	65	39	56	-	-	39	55	36	49	36	49
1125	-	-	-	-	44	66	-	-	45	66	40	57	-	-	40	56	37	50	37	50
1150	-	-	-	-	45	67	-	-	46	68	41	58	-	-	41	57	37	51	37	51
1175	-	-	-	-	45	68	-	-	47	69	41	59	-	-	41	58	38	52	38	52
1200	-	-	-	-	46	69	-	-	47	70	42	60	-	-	42	59	39	53	39	53
1225	-	-	-	-	47	70	-	-	-	-	43	61	-	-	43	60	39	53	39	53
1250	-	-	-	-	-	-	-	-	-	-	44	62	-	-	44	61	40	54	40	54
1275	-	-	-	-	-	-	-	-	-	-	44	63	-	-	44	62	40	55	40	55
1300	-	-	-	-	-	-	-	-	-	-	45	64	-	-	45	63	41	56	41	56
1325	-	-	-	-	-	-	-	-	-	-	46	65	-	-	46	64	42	57	42	57
1350	-	-	-	-	-	-	-	-	-	-	46	66	-	-	46	65	42	58	42	58
1375	-	-	-	-	-	-	-	-	-	-	47	67	-	-	47	66	43	59	43	59
1400	-	-	-	-	-	-	-	-	-	-	48	68	-	-	48	67	44	59	44	59
1425	-	-	-	-	-	-	-	-	-	-	48	69	-	-	48	68	44	60	44	60
1450	-	-	-	-	-	-	-	-	-	-	49	70	-	-	49	69	45	61	45	61
1475	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	70	45	62	45	62
1500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46	63	46	63
1525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	64	47	64
1550	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	65	47	65
1575	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	65	48	65
1600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	66	49	66
1625	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	67	49	67
1650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	68	50	68
1675	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	69	50	69
1700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51	70	51	70
1725	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	70	52	70
1750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intro

A

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C

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Heat dissipation tables - Only valid for FORM 1

According IEC 60890, temperature rise in Kelvin

Back against the wall - external dimensions



Watt	447x450x2155		743x450x2155		959x450x2155		447x600x2155		743x600x2155		959x600x2155		447x800x2155		743x800x2155		959x800x2155	
	12 Mod		24 Mod		36 Mod		12 Mod		24 Mod		36 Mod		12 Mod		24 Mod		36 Mod	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
25	-	-	2	4	2	3	3	4	2	3	2	3	2	4	2	3	2	2
50	-	-	4	7	4	6	5	7	4	6	4	5	4	6	4	5	3	4
75	-	-	6	9	6	8	6	10	6	8	5	7	6	8	5	7	4	6
100	-	-	8	11	7	10	8	13	7	10	6	9	7	11	6	8	6	7
125	-	-	9	14	8	12	10	15	8	12	8	10	9	13	7	10	7	9
150	-	-	10	16	10	14	11	17	10	14	9	12	10	15	9	12	8	10
175	-	-	12	18	11	16	13	20	11	16	10	14	11	17	10	13	9	12
200	-	-	13	20	12	18	14	22	12	18	11	15	13	19	11	15	10	13
225	-	-	14	22	13	20	16	24	13	19	12	17	14	20	12	16	11	14
250	-	-	16	24	15	21	17	26	15	21	13	18	15	22	13	18	12	16
275	-	-	17	26	16	23	18	28	16	23	14	20	16	24	14	19	13	17
300	-	-	18	28	17	25	20	30	17	24	15	21	17	26	15	20	14	18
325	-	-	19	30	18	26	21	32	18	26	16	23	19	28	16	22	14	19
350	-	-	21	31	19	28	22	34	19	28	17	24	20	29	17	23	15	20
375	-	-	22	33	20	30	23	36	20	29	18	25	21	31	18	25	16	22
400	-	-	23	35	21	31	25	38	21	31	19	27	22	33	19	26	17	23
425	-	-	24	37	22	33	26	40	22	32	20	28	23	34	20	27	18	24
450	-	-	25	39	23	34	27	42	23	34	21	29	24	36	21	28	19	25
475	-	-	26	40	24	36	28	44	24	35	22	31	25	37	21	30	20	26
500	-	-	27	42	25	37	29	46	25	37	23	32	26	39	22	31	20	27
525	-	-	29	44	26	39	31	48	26	38	24	33	27	40	23	32	21	28
550	-	-	30	45	27	40	32	50	27	40	25	35	28	42	24	33	22	29
575	-	-	31	47	28	42	33	51	28	41	26	36	29	44	25	35	23	30
600	-	-	32	49	29	43	34	53	29	43	27	37	30	45	26	36	24	31
625	-	-	33	50	30	45	35	55	30	44	27	38	31	47	27	37	24	33
650	-	-	34	52	31	46	36	57	31	46	28	39	32	48	28	38	25	34
675	-	-	35	53	32	48	38	58	32	47	29	41	33	50	29	39	26	35
700	-	-	36	55	33	49	39	60	33	48	30	42	34	51	29	40	27	36
725	-	-	37	57	34	50	40	62	34	50	31	43	35	52	30	42	27	37
750	-	-	38	58	35	52	41	64	35	51	32	44	36	54	31	43	28	38
775	-	-	39	60	36	53	42	65	36	52	33	45	37	55	32	44	29	39
800	-	-	40	61	37	55	43	67	37	54	33	47	38	57	33	45	30	40
825	-	-	41	63	38	56	44	69	38	55	34	48	39	58	34	46	30	41
850	-	-	42	64	39	57	45	70	39	57	35	49	40	60	34	47	31	42
875	-	-	43	66	40	59	-	-	40	58	36	50	41	61	35	48	32	43
900	-	-	44	67	41	60	-	-	41	59	37	51	42	62	36	50	33	44
925	-	-	45	69	42	61	-	-	42	61	38	52	43	64	37	51	33	45
950	-	-	46	70	43	63	-	-	43	62	38	54	44	65	38	52	34	46
975	-	-	-	-	43	64	-	-	44	63	39	55	45	67	38	53	35	46
1000	-	-	-	-	44	65	-	-	44	64	40	56	46	68	39	54	36	47
1025	-	-	-	-	45	67	-	-	45	66	41	57	47	69	40	55	36	48
1050	-	-	-	-	46	68	-	-	46	67	42	58	48	71	41	56	37	49
1075	-	-	-	-	47	69	-	-	47	68	42	59	-	-	41	57	38	50
1100	-	-	-	-	48	71	-	-	48	70	43	60	-	-	42	58	38	51
1125	-	-	-	-	-	-	-	-	-	-	44	61	-	-	43	59	39	52
1150	-	-	-	-	-	-	-	-	-	-	45	62	-	-	44	60	40	53
1175	-	-	-	-	-	-	-	-	-	-	46	64	-	-	45	61	41	54
1200	-	-	-	-	-	-	-	-	-	-	46	65	-	-	45	62	41	55
1225	-	-	-	-	-	-	-	-	-	-	47	66	-	-	46	63	42	56
1250	-	-	-	-	-	-	-	-	-	-	48	67	-	-	47	65	43	57
1275	-	-	-	-	-	-	-	-	-	-	49	68	-	-	48	66	43	58
1300	-	-	-	-	-	-	-	-	-	-	49	69	-	-	48	67	44	59
1325	-	-	-	-	-	-	-	-	-	-	50	70	-	-	49	68	45	60
1350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	69	46	61
1375	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51	70	47	62
1400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	63
1425	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	64
1450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	65
1475	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	66
1500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	67
1525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51	67
1550	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51	68
1575	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	69
1600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	70
1625	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1675	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1725	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Power dissipation values

Intro

A

B

C

D

E

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X



Heat dissipation tables - Only valid for FORM 1

According to IEC 60890, temperature rise in Kelvin

Back against the wall and one side covered - external dimensions



or



Power dissipation values

Watt	447x450x2155		743x450x2155		959x450x2155		447x600x2155		743x600x2155		959x600x2155		447x800x2155		743x800x2155		959x800x2155	
	12 Mod		24 Mod		36 Mod		12 Mod		24 Mod		36 Mod		12 Mod		24 Mod		36 Mod	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
25	-	-	3	4	2	3	3	5	2	3	2	3	2	4	2	3	2	3
50	-	-	5	7	4	6	5	8	4	6	4	5	4	6	4	5	3	4
75	-	-	6	9	6	8	7	11	6	8	5	7	6	9	5	7	5	6
100	-	-	8	12	7	11	9	14	7	11	7	9	8	11	7	9	6	8
125	-	-	10	14	9	13	11	17	9	13	8	11	9	13	8	11	7	9
150	-	-	11	17	10	15	13	19	10	15	9	13	11	15	9	12	8	11
175	-	-	12	19	11	16	14	22	12	17	10	14	12	17	10	14	9	12
200	-	-	14	21	13	18	16	24	13	18	12	16	13	19	12	16	10	14
225	-	-	15	23	14	20	18	27	14	20	13	17	15	21	13	17	11	15
250	-	-	17	25	15	22	19	29	15	22	14	19	16	23	14	19	12	16
275	-	-	18	27	16	24	21	32	17	24	15	21	17	25	15	20	13	18
300	-	-	19	29	18	25	22	34	18	26	16	22	18	27	16	22	14	19
325	-	-	21	31	19	27	24	36	19	27	17	23	20	29	17	23	15	20
350	-	-	22	33	20	29	25	38	20	29	18	25	21	30	18	25	16	21
375	-	-	23	35	21	30	27	40	21	31	19	26	22	32	19	26	17	23
400	-	-	24	36	22	32	28	43	23	32	20	28	23	34	20	27	18	24
425	-	-	25	38	23	34	29	45	24	34	21	29	24	35	21	29	19	25
450	-	-	27	40	24	35	31	47	25	35	22	30	25	37	22	30	20	26
475	-	-	28	42	25	37	32	49	26	37	23	32	27	39	23	31	21	27
500	-	-	29	44	26	38	33	51	27	39	24	33	28	40	24	33	22	28
525	-	-	30	45	28	40	35	53	28	40	25	35	29	42	25	34	23	30
550	-	-	31	47	29	41	36	55	29	42	26	36	30	44	26	35	23	31
575	-	-	32	49	30	43	37	57	30	43	27	37	31	45	27	37	24	32
600	-	-	34	50	31	44	39	59	31	45	28	38	32	47	28	38	25	33
625	-	-	35	52	32	46	40	61	32	46	29	40	33	48	29	39	26	34
650	-	-	36	54	33	47	41	63	33	48	30	41	34	50	30	40	27	35
675	-	-	37	55	34	49	43	65	34	49	31	42	35	51	31	42	28	36
700	-	-	38	57	35	50	44	67	35	50	32	43	36	53	32	43	28	37
725	-	-	39	59	36	52	45	69	36	52	33	45	37	55	33	44	29	38
750	-	-	40	60	37	53	46	71	37	53	34	46	38	56	33	45	30	39
775	-	-	41	62	38	55	-	-	38	55	34	47	39	58	34	47	31	40
800	-	-	42	64	39	56	-	-	39	56	35	48	40	59	35	48	32	41
825	-	-	43	65	40	57	-	-	40	58	36	50	41	60	36	49	32	43
850	-	-	44	67	41	59	-	-	41	59	37	51	42	62	37	50	33	44
875	-	-	46	68	42	60	-	-	42	60	38	52	43	63	38	51	34	45
900	-	-	47	70	42	61	-	-	43	62	39	53	44	65	39	52	35	46
925	-	-	-	-	43	63	-	-	44	63	40	54	45	66	40	54	36	47
950	-	-	-	-	44	64	-	-	45	65	41	56	46	68	40	55	36	48
975	-	-	-	-	45	66	-	-	46	66	41	57	47	69	41	56	37	49
1000	-	-	-	-	46	67	-	-	47	67	42	58	48	71	42	57	38	50
1025	-	-	-	-	47	68	-	-	48	69	43	59	-	-	43	58	39	51
1050	-	-	-	-	48	70	-	-	49	70	44	60	-	-	44	59	39	52
1075	-	-	-	-	-	-	-	-	-	-	45	61	-	-	45	61	40	53
1100	-	-	-	-	-	-	-	-	-	-	46	63	-	-	45	62	41	54
1125	-	-	-	-	-	-	-	-	-	-	46	64	-	-	46	63	42	55
1150	-	-	-	-	-	-	-	-	-	-	47	65	-	-	47	64	42	56
1175	-	-	-	-	-	-	-	-	-	-	48	66	-	-	48	65	43	56
1200	-	-	-	-	-	-	-	-	-	-	49	67	-	-	49	66	44	57
1225	-	-	-	-	-	-	-	-	-	-	50	68	-	-	50	67	45	58
1250	-	-	-	-	-	-	-	-	-	-	51	69	-	-	50	68	45	59
1275	-	-	-	-	-	-	-	-	-	-	51	70	-	-	51	69	46	60
1300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	71	47	61
1325	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	62
1350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	63
1375	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	64
1400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	65
1425	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	66
1450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51	67
1475	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	68
1500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	69
1525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	70
1550	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1575	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1625	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1675	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1725	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intro

A

B

C

D

E

F

G

H

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X



Heat dissipation tables - Only valid for FORM 1

According IEC 60890, temperature rise in Kelvin

Back against the wall and both sides covered - external dimensions



Watt	447x450x2155		743x450x2155		959x450x2155		447x600x2155		743x600x2155		959x600x2155		447x800x2155		743x800x2155		959x800x2155	
	12 Mod		24 Mod		36 Mod		12 Mod		24 Mod		36 Mod		12 Mod		24 Mod		36 Mod	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
25	-	-	3	4	2	3	4	5	3	3	2	3	3	4	2	3	2	3
50	-	-	5	7	4	6	6	9	4	6	4	5	5	7	4	5	4	5
75	-	-	7	10	6	8	8	13	6	8	6	7	7	10	6	7	5	6
100	-	-	9	13	8	11	11	16	8	11	7	9	9	12	7	9	6	8
125	-	-	10	15	9	13	13	19	9	13	8	11	10	15	9	11	8	10
150	-	-	12	17	10	15	15	22	11	15	10	13	12	17	10	13	9	11
175	-	-	14	20	12	17	17	25	12	17	11	15	14	20	11	15	10	13
200	-	-	15	22	13	19	19	28	13	19	12	16	15	22	13	16	11	14
225	-	-	17	24	15	20	21	31	15	20	13	18	17	24	14	18	12	16
250	-	-	18	26	16	22	22	33	16	22	15	20	18	26	15	20	13	17
275	-	-	19	28	17	24	24	36	17	24	16	21	20	28	16	21	14	18
300	-	-	21	30	18	26	26	39	19	26	17	23	21	30	17	23	15	20
325	-	-	22	32	20	27	28	41	20	27	18	24	23	32	19	24	16	21
350	-	-	24	34	21	29	29	44	21	29	19	26	24	34	20	26	17	22
375	-	-	25	36	22	31	31	46	22	31	20	27	25	36	21	27	18	23
400	-	-	26	38	23	32	33	49	23	32	21	28	27	38	22	29	19	25
425	-	-	28	40	24	34	34	51	24	34	22	30	28	40	23	30	20	26
450	-	-	29	42	25	36	36	53	26	36	24	31	29	42	24	32	21	27
475	-	-	30	44	26	37	37	56	27	37	25	33	31	44	25	33	22	28
500	-	-	31	46	28	39	39	58	28	39	26	34	32	45	26	34	23	30
525	-	-	33	48	29	40	41	61	29	40	27	35	33	47	27	36	24	31
550	-	-	34	50	30	42	42	63	30	42	28	37	35	49	28	37	25	32
575	-	-	35	51	31	44	44	65	31	43	29	38	36	51	29	38	26	33
600	-	-	36	53	32	45	45	67	32	45	30	39	37	53	30	40	27	34
625	-	-	38	55	33	47	47	70	33	46	31	41	38	54	31	41	28	35
650	-	-	39	57	34	48	-	-	34	48	32	42	39	56	32	42	29	36
675	-	-	40	58	35	49	-	-	36	49	33	43	41	58	33	44	30	38
700	-	-	41	60	36	51	-	-	37	51	34	45	42	60	34	45	31	39
725	-	-	42	62	37	52	-	-	38	52	35	46	43	61	35	46	31	40
750	-	-	44	64	38	54	-	-	39	54	35	47	44	63	36	48	32	41
775	-	-	45	65	39	55	-	-	40	55	36	48	45	65	37	49	33	42
800	-	-	46	67	40	57	-	-	41	56	37	50	47	66	38	50	34	43
825	-	-	47	69	41	58	-	-	42	58	38	51	48	68	39	51	35	44
850	-	-	48	70	42	60	-	-	43	59	39	52	49	70	40	53	36	45
875	-	-	-	-	43	61	-	-	44	61	40	53	-	-	41	54	37	46
900	-	-	-	-	44	62	-	-	45	62	41	55	-	-	42	55	37	47
925	-	-	-	-	45	64	-	-	46	63	42	56	-	-	43	56	38	48
950	-	-	-	-	46	65	-	-	47	65	43	57	-	-	44	58	39	49
975	-	-	-	-	47	67	-	-	48	66	44	58	-	-	45	59	40	51
1000	-	-	-	-	48	68	-	-	49	68	45	60	-	-	46	60	41	52
1025	-	-	-	-	49	69	-	-	50	69	46	61	-	-	47	61	41	53
1050	-	-	-	-	50	71	-	-	51	70	46	62	-	-	48	62	42	54
1075	-	-	-	-	-	-	-	-	-	-	47	63	-	-	48	64	43	55
1100	-	-	-	-	-	-	-	-	-	-	48	64	-	-	49	65	44	56
1125	-	-	-	-	-	-	-	-	-	-	49	65	-	-	50	66	45	57
1150	-	-	-	-	-	-	-	-	-	-	50	67	-	-	51	67	46	58
1175	-	-	-	-	-	-	-	-	-	-	51	68	-	-	52	68	46	59
1200	-	-	-	-	-	-	-	-	-	-	52	69	-	-	53	70	47	60
1225	-	-	-	-	-	-	-	-	-	-	53	70	-	-	-	-	48	61
1250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	62
1275	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	63
1300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	64
1325	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51	65
1350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	66
1375	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	67
1400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	68
1425	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	69
1450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55	70
1475	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	70
1500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1550	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1575	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1625	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1675	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1725	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Power dissipation values

Intro

A

B

C

D

E

F

G

H

I

X



Stand alone

Temperature rise [Kelvin]

DISSIPATION	EH1 752x385x270		EH2-NA 256x433x240		EH2-NB 516x433x240		EH2-NC 791x433x240		EH2-ND 1066x433x240	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10		5	7	8	5	6		5		5
20	7	9	13	14	8	10	7	8	5	8
30	10	12	17	19	11	14	9	12	7	11
40	12	15	22	24	14	17	12	15	9	14
50	15	18	26	29	17	21	14	17	11	17
60	17	21	30	34	20	24	16	20	13	20
70	19	24	34	38	23	27	18	23	14	23
80	21	26	38	43	25	30	20	25	16	25
90	23	29	42	47	28	33	23	28	18	28
100	25	32	46	51	30	36	25	30	19	30
120	29	37	53		35	42	28	35	22	35
140	33	41			39	48	32	40	25	40
160	37	46			44	53	36	44	28	44
180	41	51			48		39	49	31	49
200	44	55			53		43	53	34	53
220	48				57		46		36	57
240	51						50		39	
260	55						53		42	
280							56		44	
300									47	
350									53	

Stand alone

Temperature rise [Kelvin]

DISSIPATION	EH4-00 1004x395x224		EH4-0 1004x495x224		EH4-1 1004x745x224		EH4-S1 820x320x234	
	Half	Top	Half	Top	Half	Top	Half	Top
10		4		5			4	5
20	6	8	5	8		6	7	9
30	9	11	7	11	5	8	10	13
40	11	14	9	14	7	10	13	16
50	13	16	11	17	8	12	15	19
60	15	19	13	20	9	14	18	22
70	17	21	14	22	11	15	20	25
80	19	24	16	25	12	17	22	28
90	21	26	18	27	13	19	25	31
100	23	28	19	29	14	21	27	34
120	26	33	22	34	16	24	31	39
140	30	37	25	39	19	27	35	44
160	33	41	28	43	21	30	39	49
180	36	45	31	47	23	33	43	54
200	39	49	33	51	25	36	47	59
220	42	53	36	55	27	39	51	64
240	46	57	39	59	29	42	54	68
260	49	61	41	63	31	44	58	73
280	52	65	44	67	33	47	62	77
300	55	68	46	71	34	50	65	
350	62	77	52		39	56	74	
400	69		58		43	63		
450	76		64		48	69		
500			70		52	75		
550			75		56			
600					60			
650					64			
700					68			
750					72			
800					76			
850					80			

Intro

A

B

C

D

E

F

G

H

I

X



Stand alone

Temperature rise [Kelvin]



DISSIPATION	EH3/F-0 EH3/AP-0		EH3/F-1 EH3/AP-1		EH3/F-2 EH3/AP-2		EH3/F-3 EH3/AP-3		EH3/AP-20		EH3/AP-21		EH3/AP-22		EH3/AP23	
	875x590x320	875x785x320	875x1115x320	875x1445x320	1125x590x320	1125x785x320	1125x1115x320	1125x1445x320	Half	Top	Half	Top	Half	Top	Half	Top
20	5	6		5					5			4				
30	6	9	5	7		5			5	7	4	6		4		
40	8	11	6	9	5	6		5	6	9	5	7		5		4
50	10	13	8	10	6	7	5	6	8	11	6	8	5	6	4	5
60	11	16	9	12	7	9	5	7	9	13	7	10	5	7	5	6
70	13	18	10	13	7	10	6	8	10	14	8	11	6	8	5	7
80	14	20	11	15	8	11	7	8	11	16	9	12	7	9	6	8
90	16	22	12	16	9	12	7	9	12	18	10	14	7	10	7	9
100	17	23	13	18	10	13	8	10	13	19	11	15	8	11	7	9
120	20	27	15	21	11	15	9	12	15	22	12	17	9	12	8	11
140	22	31	17	23	13	17	10	13	17	25	14	19	10	14	9	12
160	25	34	19	26	14	19	12	15	19	28	15	22	12	16	10	14
180	27	38	21	29	16	21	13	16	21	31	17	24	13	17	11	15
200	29	41	23	31	17	22	14	18	23	33	18	26	14	19	13	16
220	32	44	25	34	19	24	15	19	25	36	20	28	15	20	14	18
240	34	47	27	36	20	26	16	21	27	39	21	30	16	22	14	19
260	36	51	29	38	21	28	17	22	28	41	23	32	17	23	15	20
280	39	54	30	41	23	29	18	23	30	44	24	34	18	25	16	21
300	41	57	32	43	24	31	19	25	32	46	26	36	19	26	17	23
350	46		36	49	27	35	22	28	36	52	29	40	22	29	20	26
400	51		41	54	30	39	24	31	40		32	45	24	33	22	29
450	57		45		33	43	27	34	44		35	50	27	36	24	31
500			48		36	47	29	37	48		39	54	29	39	26	34
550			52		39	51	31	40	52		42		31	42	28	37
600			56		42	54	34	43	56		45		34	45	30	40
650					45		36	46		48			36	48	32	42
700					47		38	49		51			38	51	34	45
750					50		40	51		53			40	54	36	47
800					53		42	54		56			43		38	50
850					55		44	57					45		40	52
900							47						47		42	55
950							49						49		44	
1000							51						51		46	
1100							55						55		49	
1200															53	
1300															56	

Power dissipation values

Stand alone

Temperature rise [Kelvin]



DISSIPATION	EH3/GD-AP - 031 875x676x424		EH3/GD-AP - 041 875x871x424		EH3/GD-AP - 051 875x1200x424		EH3/GD-AP - 233 1125x676x676		EH3/GD-AP - 243 1125x871x676		EH3/GD-AP - 253 1125x1200x676	
	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10												
20		5										
30	5	7	4	5				4				
40	6	8	5	7			5	5		5		
50	7	10	6	8	5	6	5	6	4	5		5
60	9	11	7	9	5	7	5	7	5	6	4	5
70	10	13	8	10	6	8	6	8	6	7	5	6
80	11	14	9	12	7	9	7	9	6	8	5	7
90	12	16	10	13	8	10	7	10	7	9	6	7
100	13	17	11	14	8	11	8	11	7	10	6	8
120	15	20	12	16	10	12	9	12	9	11	7	9
140	17	22	14	18	11	14	11	14	10	13	8	11
160	19	25	16	20	12	15	12	15	11	14	9	12
180	21	27	17	22	13	17	13	17	12	15	10	13
200	23	30	19	24	14	18	14	18	13	17	11	14
220	24	32	20	26	16	20	15	20	14	18	12	15
240	26	35	22	28	17	21	16	21	15	19	13	16
260	28	37	23	30	18	23	17	23	16	21	14	18
280	30	39	25	32	19	24	18	24	17	22	15	19
300	31	41	26	34	20	25	19	26	18	23	16	20
350	35	47	29	38	23	29	22	29	20	26	18	22
400	39	52	33	42	25	32	25	32	23	29	20	25
450	43		36	47	28	35	27	35	25	32	22	27
500	47		39	51	30	38	29	38	27	35	24	30
550	51		42	55	33	41	32	42	29	38	25	32
600	55		45		35	44	34	45	31	40	27	34
650			48		37	47	36	47	34	43	29	37
700			51		40	50	38	50	36	46	31	39
750			54		42	53	41	53	38	48	33	41
800					44	56	43	56	40	51	34	43
850					46		45		42	54	36	46
900					49		47		44	56	38	48
950					51		49		46		40	50
1000						53		51	47		41	52
1100							55		51		44	56
1200									55		48	
1300											51	
1400											54	

- Intro
- A
- B
- C
- D
- E
- F
- G
- H
- I
- X



Enclosures depth = 355 mm

Stand alone

Temperature rise [Kelvin]



Power dissipation values

Type DISSIPATION	RVL 300 650x480		RVL 30 650x595		RVL 31 650x790		RVL32 650x1120		RVN 300 900x460		RVN 30 900x595		RVN 31 900x790		RVN 32 900x1120		RVN 33 900x1450		RVN 34 900x1780		RVD 30 1000x595	
Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top
10		5		4						4												
20	6	8	5	7	5	6		4	5	7	4	6		4							5	5
30	9	11	7	10	6	8	4	6	7	10	6	8	5	6		5			5	6	5	7
40	11	14	9	12	8	10	6	7	9	12	7	10	6	8	4	6			6	8	7	9
50	13	16	11	15	9	12	7	9	10	15	9	12	7	9	5	7	4	6	7	10	8	11
60	16	19	13	17	11	14	8	10	12	17	10	14	8	11	6	8	5	6	8	11	9	13
70	18	22	15	19	12	16	9	11	14	19	12	16	9	12	7	9	6	7	9	12	11	15
80	20	24	16	22	14	18	10	12	15	22	13	18	10	13	8	10	6	8	11	14	12	16
90	22	26	18	24	15	20	11	14	17	24	14	20	11	15	8	11	7	9	12	15	13	18
100	23	29	20	26	17	21	12	15	18	26	16	21	12	16	9	12	8	10	13	17	14	20
120	27	33	23	30	19	25	14	17	21	30	18	25	14	19	11	14	9	11	15	19	16	23
140	31	38	26	34	22	28	15	19	24	34	20	28	16	21	12	16	10	13	17	22	18	26
160	34	42	29	38	24	31	17	22	27	38	23	31	18	23	13	17	11	14	18	24	21	29
180	38	46	31	41	27	34	19	24	29	42	25	34	19	26	15	19	12	15	20	27	23	32
200	41	50	34	45	29	37	21	26	32	45	27	38	21	28	16	21	13	17	22	29	25	34
220	44	54	37	49	31	40	22	28	34	49	29	41	23	30	17	22	14	18	24	31	27	37
240	47		40	52	34	43	24	30	37	52	32	43	24	32	19	24	15	20	26	34	28	40
260	51		42	55	36	46	25	32	39	56	34	46	26	35	20	26	16	21	27	36	30	42
280	54		45		38	49	27	34	42		36	49	28	37	21	27	17	22	29	38	32	45
300	57		47		40	51	29	36	44		38	52	29	39	22	29	18	23	31	40	34	48
350			54		45		32	41	50		43		33	44	25	33	21	26	35	46	38	54
400					51		36	45	56		48		37	49	28	36	23	29	38	51	43	
450					56		40	50		52		40	54	31	40	25	32	42	56			
500							43	54				44		34	43	28	35	46				
550							47					47		36	47	30	38	50				
600							50					51		39	50	32	41	53				
650							53					54		42	54	34	43	57				
700							56							44	57	36	46					
750														47		38	49					
800															49		40	51				
850															52		42	54				
900															54		44	56				
950																56		46				
1000																		48				
1100																		52				
1200																		56				
1300																						
1400																						
1500																						

Type DISSIPATION	RVD 31 1000x790		RVD 32 1000x1120		RVD 33 1000x1450		RVD 34 1000x1780		RVH 31 1150x790		RVH 32 1150x1120		RVH 33 1150x1450		RVH 34 1150x1780		RVS 33 1350x1450		RVS 34 1350x1780		
Watt	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	Half	Top	
10																					
20			4					4													
30		4	6		4			4	6							5					5
40		5	7	4	5		5	5	7	5	7		5		4	5	7		4	4	6
50		6	9	5	6	4	5	6	9	6	8	4	6		5	6	8		5	5	7
60		7	10	6	7	5	6	8	10	7	9	5	7		5	6	7	9	4	6	8
70		8	11	6	8	6	7	9	11	7	10	6	8	5	7	8	11	5	6	7	9
80		9	12	7	9	6	8	9	13	8	11	6	8	6	8	9	12	5	7	7	10
90		10	14	8	10	7	9	10	14	9	13	7	9	6	8	9	13	6	8	8	11
100		11	15	8	11	7	10	11	15	10	14	8	10	7	9	10	14	6	8	9	12
120		13	17	10	13	9	11	13	18	11	16	9	12	8	10	12	16	7	10	10	14
140		14	19	11	14	10	13	15	20	13	18	10	13	9	12	14	18	8	11	12	16
160		16	22	12	16	11	14	17	22	14	20	11	15	10	13	15	21	9	12	13	18
180		18	24	14	18	12	15	18	24	16	22	12	16	11	14	17	23	10	13	14	20
200		19	26	15	19	13	17	20	26	17	24	13	18	12	16	18	25	11	15	16	22
220		21	28	16	21	14	18	21	29	19	26	14	19	13	17	19	26	12	16	17	24
240		22	30	17	22	15	19	23	31	20	28	15	21	14	18	21	28	13	17	18	25
260		24	32	18	24	16	21	24	33	21	29	16	22	15	19	22	30	14	18	19	27
280		25	34	19	25	17	22	26	35	23	31	17	23	16	21	24	32	14	19	20	29
300		27	36	20	27	18	23	27	37	24	33	18	25	17	22	25	34	15	20	22	30
350		30	41	23	30	20	26	31	41	27	37	21	28	19	25	28	38	17	23	24	34
400		33	45	26	34	23	29	35	46	30	42	23	31	21	27	31	43	19	26	27	38
450		37	50	28	37	25	32	38	51	33	46	26	34	23	30	35	47	21	28	30	42
500		40	54	31	40	27	35	41	55	36	50	28	37	25	33	38	51	23	31	33	46
550		43		33	43	29	38	45		39	54	30	40	27	35	41	55	25	33	35	49
600		46		36	47	31	40	48		42		32	43	29	38	44		27	35	38	53
650		49		38	50	34	43	51		44		34	46	31	41	46		28	38	40	56
700		53		40	53	36	46	54		47		37	49	33	43	49		30	40	43	
750		56		43	56	38	48			50		39	51	35	45	52		32	42	45	
800				45		40	51			53		41	54	37	48	55		34	45	48	
850				47		42	53			55		43	57	39	50			35	47	50	
900				49		44	56					45		41	53			37	49	52	
950				52		45						47		42	55			39	51	55	
1000				54		47						49		44				40	53	57	
1100						51						53						43			
1200						55						56						47			
1300																		50			
1400																		53			
1500																		56			



General Purpose Enclosures

By reference number

Ref. no.	Page	Ref. no.	Page	Ref. no.	Page	Ref. no.	Page	Ref. no.	Page
422...									
422849	E.20	610130	H.3	811342	B.31	818143	G.10	831037	B.12
422850	E.20	610130	A.8	811343	H.7	818144	G.10	831038	B.12
422885	E.21	610132	H.3	811343	B.31	818145	G.10	831039	B.12
422886	E.21	610132	A.8	811363	H.9	818146	G.10	831040	B.12
422901	E.20	610133	H.3	811365	H.9	818162	G.4	831041	B.12
422902	E.7	610133	A.8	811417	H.8	818164	G.4	831051	B.10
422902	E.20	610142	H.6	811417	B.30	818165	G.4	831052	B.10
422902	E.15	610142	D.69	811435	H.9	818166	G.11	831053	B.12
422902	E.10	610142	D.27	811435	B.30	818167	G.11	831055	B.12
422902	B.26	610142	B.15	811438	H.9	818168	G.11	831056	B.12
422903	E.20	610142	A.25	811438	B.30	818169	G.11	831057	B.12
424...									
424415	F.3	610185	H.4	811442	H.9	818170	G.11	831064	B.10
424416	F.3	610185	B.15	811442	B.30	818172	G.11	831065	B.10
424417	F.3	610186	H.4	811443	H.9	818174	G.11	831066	B.12
424418	F.3	610186	B.15	811443	B.31	818175	G.11	831067	B.12
424419	F.3	610186	A.25	811446	H.9	818177	G.4	831068	B.12
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