TECHNICAL CATALOGUE

System pro E power

Rear Busbar System CH



Summary
Rear Busbar System

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REAR BUSBAR SYSTEM 2

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Rear Busbar System

The ABB System pro E power Rear Busbar System is part of the type tested solutions portfolio for low voltage switchgears. The sections have a functional height of 2000 mm and a functional depth of 500 or 700 mm. Different widths can be selected (functional 250, 300, 400, 500, 600, 650, 700, 900, 1000 and 1250 mm) depending on the device type and quantity.

Security

- Tested to IEC 61439-1/-2
- Tmax XT adapters are supplied with safety interlock, which provide safety on unintended operations with live circuits. In all the configurations it is possible to reach 3b form of segregation, also in case of incoming cables on the same side as the main busbars.

Reliable in extreme conditions

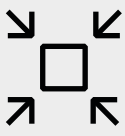
Thanks to the tests performed on the product, the enclosures can withstand a rated short-time current (Icw) of up to 75 kA and a maximum rated current up to 4000 A.
The safety is also guaranteed by the complete range of segregation forms up to form 4b.

Efficiency

- Main busbars and distribution busbars in one system
- High packing density
- Compact design
- All the circuit breaker sections have an optimized footprint (100 mm less in width respect the old solution). Additionally, it is possible to mix incoming and outgoing feeders in the same project with no need of additional sections.

Compatibility

- Combination possible with standard CombiLine N modules
- Installation of MCCBs Tmax and ACBs Emax 2
- Installation of fuse switch disconnectors InLine II
- ABB switch disconnector fusegears Slimline XRG with a 100 mm extension
- Combination of switch disconnectors fusegears ABB XRG 50 mm and Tmax XT MCCBs adapters in WWD execution according to IEC 61439-2



Space saving
Efficiency

Reduced footprint achieved by optimizing the section width to fit the existing breaker dimensions



Speed up your projects
Productivity

Save valuable time thanks ABB e-Configure configurator: create your projects, define the BOM and additionally associated tender texts for consultants.



Safety and protection
Reliability

Design verified up to 4000 A and Icw 75 kA

System pro E power
Easier and faster

In order to make easier the use of System pro E power available information, new labels have been created as a useful tool to stock and mount the enclosures.

On the components package the new label reports the following information:

1. **By scanning the QR code, you can quickly access the ABB System pro E power website, which provides all support materials related to the product, including:**
   - Promotional videos
   - 3D drawings
   - Catalogue and interactive instruction manual
   - Video guides and mounting sequence animations
2. **Video manual number: If specified, it indicates the video manual to watch for a specific constructive element, available on the ABB System pro E power website under the Tools and Support section**
3. **Mounting sequence number: If specified, it indicates the specific mounting sequence . It corresponds to the following possibilities:**
   1. Base frame and main busbars system
   2. Internal copper components (distributon busbars, busbar connections, etc.)
   3. Internal segregations and installation kits
   4. External segregations and partitions
   5. External doors, door frames, module doors, etc.
4. **By scanning this QR code, you can access the instruction sheet for the product or product family.**
5. **ABB web site**
6. **Country of origin**





System pro E power
ABB SACE Division and its environmental protection commitment

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

All corporate divisions actively pursue environmental management policies by rationalizing the use of raw materials and energy, preventing pollution, monitoring air and water quality, reducing noise emissions, and minimizing waste generated by production processes. They also conduct regular environmental audits with major suppliers.

By utilizing analysis tools like Life Cycle Analysis (LCA), ABB SACE incorporates the assessment and enhancement of environmental performance into its design engineering from the very beginning. This approach aims to optimize technical and energy efficiency, control and reduce environmental impact during manufacturing, and define the product's end-of-life management process

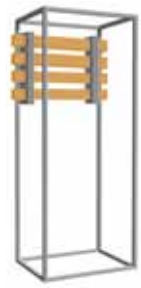
ABB: Certified Product Quality
ABB consistently allocates resources to achieve its quality and environmental protection objectives, as demonstrated by the following certifications obtained by the company:

Member of CISQ Federation
CERTIFIED MANAGEMENT SYSTEM
ISO 9001 - ISO 14001
BS OHSAS 18001

System pro E power
User's guide



Chapter 1
Our product range
Overview, introduction and advantages of the new main distribution switchboard range up to 4000 A.



Chapter 2
Rear busbars system
Overview of the various busbar system combinations that can be created, along with their selection guides



Chapter 3
Technical details, certifications and configuration examples
Specifications of the switchboard, regulatory framework, Italian and international certifications.



Chapter 4
Overall dimensions
Overall dimensions of the switchboards and the related components.

Chapter 2
Rear busbar system

2–2 **Range description**

2–4 **Selection table for solutions**

2–6 **Available configurations to install breakers**

2–7 **Quick configuration selection guide**

2–8 **Selection of the busbars type**

2–10 **Main busbars**

2–16 **Vertical breaker section**

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2–56 **XLine Horizontal 50 mm**

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2–82 **External cable compartment and back to back sections**

2–90 **Corner section**

2–97 **Special painting**

Rear Busbar System
Range description

A complete and design verified range of main distribution board solutions up to 4000 A. It is composed of incoming sections with ACBs up to E4.2 or MCCBs and outgoing sections with breakers Emax 2, Tmax XT, InLine II fuse switch disconnectors, Slimline XRG switch disconnectors fusegears or CombiLine system modules.

Main features

H (external dimensions with plinth): 2200 mm
W (external dimensions without covers): 350, 400, 500, 600, 800, 850, 1000, 1100, 1350 mm
D (external dimensions without covers): 600, 800 mm
IP protection class: IP40, IP41

Compliance with Standard		IEC 61439-1/2, IEC 60439-1
Approvals		LOVAG
Vibration test		IEC 60068-2-57
Antiseismic Test Standard		IEEE Std 693
Conditions of installation		Indoor, floor mounting
Ambient temperature, average value 24h		+35 °C
Ambient temperature, maximum value		+40 °C
Ambient temperature, minimum value		-5 °C
Pollution degree		3
Protection class		I (earthed)
Rated current In		up to 4000 A
Rated short-time withstand current Icw		up to 75 kA
Rated peak short-circuit current Ipk		up to 165 kA
Rated service voltage Ue		400/415 V AC
Rated insulation voltage Ui		1000 V AC 1500 V DC
Rated frequency		50-60 Hz
Rated impulse withstand voltage Uimp		8 kV/12 kV
IP protection class		IP40, IP41 (also CombiLine section IP41)
Painting	**Enclosure**	RAL 7035
	Plinth	RAL 7012
Protection against mechanical impact IEC62262	**Glass door**	IK09
Protection against mechanical impact IEC62262	**Blind door, with partial door**	IK10
External dimension (see more details in overall dimensions chapter).	**Height (mm) without plinth (+100, 200 mm with plinth)**	2100
	Width (mm)	350, 400, 500, 600, 800, 850, 1000, 1100, 1350
	Depth (mm)	600, 800

Electrical features

Segregation forms
- 1, 2a/3a, 2b, 3b, 4a, 4b

Incoming/Outgoing section
- Breaker: from Tmax XT5 to Emax E4.2 with nominal current In: up to 4000 A
- Breaker kit Tmax XT5 in vertical installation: rating 400 A, 630 A
  – Side-by-side configuration available
- Breaker kit Tmax XT7 in vertical installation: rating 800 A, 1000 A, 1250 A, 1600 A
  – Coupler and side-by-side configurations available
- Breaker kit Emax E1.2 in vertical installation
  – Coupler and side-by-side configurations available
- Breaker kit Emax E2.2 in vertical installation
  – Coupler configuration available
- Breaker kit Emax E4.2 in vertical installation
  – Coupler configuration available

Outgoing section
- XLine 50 mm adapters in removable (WWD) execution, from XT2 up to XT5 630 A in horizontal installation. MOE command also available.
- Fuse switch disconnector: size 00-1-2-3 of InLine II ZHBM
- Possibility to mount Slimline XRG with MCCB adapters in the same section
- Distribution busbars up to 2000 A, 75 kA Icw (1s)



General information
Selection table for solutions

Functional dimension W (mm)	External dimension W (mm)	Single breaker per section									
		XT5		XT7		E1.2		E2.2		E4.2	
		3P	4P	3P	4P	3P	4P	3P	4P	3P	4P
250	350										
300	400										
400	500	✔	✔								
500	600			✔	✔	✔	✔	✔	✔		
600	700										
650	750										
700	800									✔	✔
750	850										
900	1000										
1000	1100										
1250	1350										

Section with incoming /outgoing breaker Tmax XT5, XT7, Emax E1.2, E2.2, E4.2



Up to IP 41

External dimensions (with plinth H=100 mm)

H (mm)	W (mm)	D (mm)
2200	500	600
	600	800
	800	
	1000	

InLine



Up to IP 41

External dimensions (with plinth H=100 mm)

H (mm)	W (mm)	D (mm)
2200	600	600
	800	800
	1000	

XLine horizontal 50 mm



Up to IP 41

External dimensions (with plinth H=100 mm)

H (mm)	W (mm)	D (mm)
XLine horizontal 50 mm IP30		
2200	1150	600
	1250	800
	1450	

—
The functional compartment has an external width of 750 mm.

Multiple breakers per section							XLine		
XT5		XT7		E1.2		InLine Vertical	Horizontal 50 mm	CombiLine	External cable compartment
3P	4P	3P	4P	3P	4P				
								✔	
									✔
									✔
						✔		✔	✔
									✔
							✔		
✔	✔					✔			✔
								✔	
✔	✔	✔	✔	✔	✔	✔			✔
								✔	
								✔	

CombiLine



Up to IP 41

External dimensions (with plinth H=100 mm)

H (mm)	GU 150 mm	W (mm)	PW 250 mm	D (mm)
2200	13	350	1	600
		600	2	800
		850	3	
		1100	4	
		1350	5	

GU = H CombiLine module, PW = W CombiLine module.

External cable compartment



Up to IP 41

External dimensions (with plinth H=100 mm)

H (mm)	W (mm)	D (mm)
2200	400	600
	500	800
	600	
	700	
	800	
	1000	

Corner structure



Up to IP 41

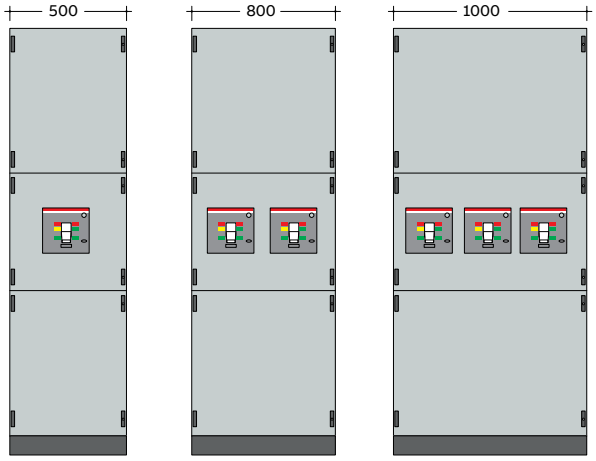
External dimensions (with plinth H=100 mm)

H (m	W (mm)	D (mm)
2200	700	600
	900	800

General information

Available configurations to install breakers

Tmax XT5

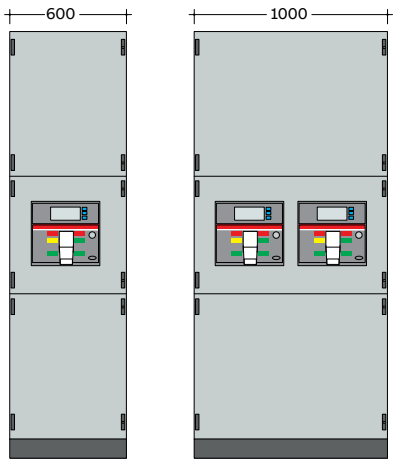


XT5 W or W MOE or W MOE I

2 x XT5 W or W MOE

3 x XT5 W or W MOE

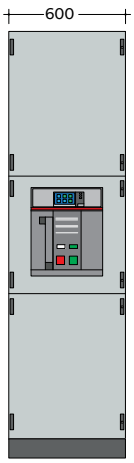
Tmax XT7 / Emax E1.2



XT7 or E1.2 W

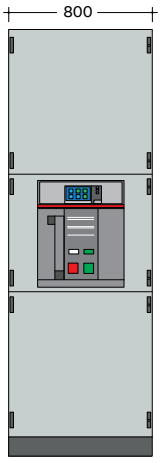
2 x XT7 or 2x E1.2 W

Emax E2.2



E2.2 W

Emax E4.2



E4.2 W

General information
Quick configuration selection guide

STEP 1
Choose your main busbar system current (In) and define the minimum depth of the enclosure.

In (A)	Depth (mm)
In ≤ 3200 A	600
3200 A < In ≤ 4000 A	800

STEP 2
Choose the busbar system according to the width and the type of section. The system must be completed with the busbar holders.

STEP 3
Consider expanding your solution whith InLine, XLine Horizontal, CombiLine and External cable compartment.

STEP 4
Choose the device kit for the breaker section.

STEP 5
Choose the connection kit

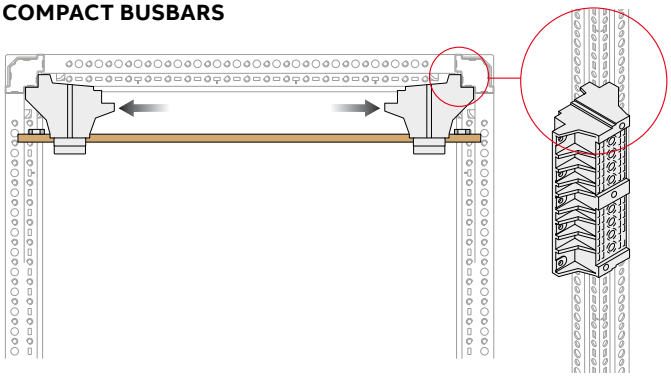
STEP 6
Complete your configuration with structure's codes (frame and external cover, segregation and other accessories).

Main busbars
Selection of the busbars type

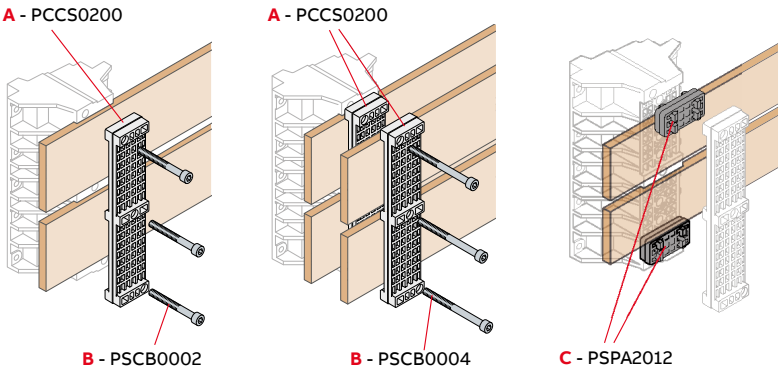
Selecting the type of fixing of busbars and busbars holder

A busbar holder mounted directly on the structural uprighthas the advantage of having the sections more compact according to the type of breaker installed.

COMPACT BUSBARS



Examples of uses



	2 busbars/phase	4 busbars/phase	Final Note
A **Busbar holders**	1xPBHS0200	1xPBHS0200	Multiply the quantities of each code for the number of the phases of the system (4 phases)
b **Closing Cover**	1xPCCS0200	2xPCCS0200	
C **Mounting Screws**	1xPSCB0002	1xPSCB0004	
D **Spacers**	… x PSPA2012*	… x PSPA2012*	
Busbars	See Busbars selection table		

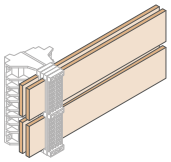
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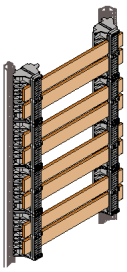
* One package contains 12 pcs. Each piece is H=20 mm. Check the empty spaces that have to be covered considering the busbar section.

Main busbars

Selection of the busbars type

Main compact busbars quick selection guide

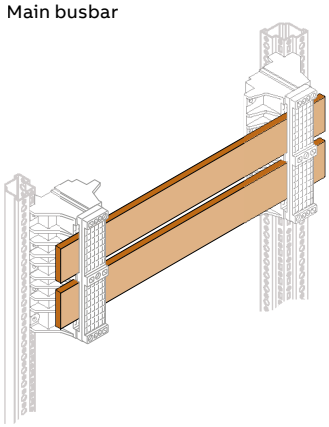




		External dimensions			
MBB rating In	**MBB Inc**	**W (mm)**	**D (mm)**	**Cross section per phase/N100%**	**4 phases configuration FS**
1000 A 1250 A	**1500 A**	**400**	**600/800**	2 x 20 x 10	4 x PCFB1040
		500	**600/800**		4 x PCFB1050
		600	**600/800**		4 x PCFB1060
		800	**600/800**		4 x PCFB1080
		1000	**600/800**		4 x PCFB1010
1600 A 2000 A	**1800 A**	**400**	**600/800**	2 x 40 x 10	4 x PCFB1640
		500	**600/800**		4 x PCFB1650
		600	**600/800**		4 x PCFB1660
		800	**600/800**		4 x PCFB1680
		1000	**600/800**		4 x PCFB1610
3200 A	**2650A**	**400**	**600**	4 x 40 x 10	4 x PCFB3240
		500	**600**		4 x PCFB3250
		600	**600**		4 x PCFB3260
		800	**600**		4 x PCFB3280
		1000	**600**		4 x PCFB3210
3200 A	**3200 A**	**400**	**800**	4 x 40 x 10	4 x PCFB3240
		500	**800**		4 x PCFB3250
		600	**800**		4 x PCFB3260
		800	**800**		4 x PCFB3280
		1000	**800**		4 x PCFB3210
4000 A	**3400 A**	**400**	**800**	4 x 60 x 10	4 x PCFB4040
		500	**800**		4 x PCFB4050
		600	**800**		4 x PCFB4060
		800	**800**		4 x PCFB4080
		1000	**800**		4 x PCFB4010

Main busbars
Order codes

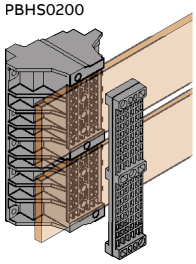
Main busbars copper flat busbars
Each code contains 2 pieces of work-hardened CU-ETP (Electrolytic Tough Pitch) busbars according to UNI EN 13601.

Description	Section External dimensions W (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Main busbar 	**MBB rating In=1000/1250 A - Neutral 100%**			
	400	PCFB1040	1STQ003169B0000	1/2
	500	PCFB1050	1STQ003170B0000	1/2
	600	PCFB1060	1STQ003171B0000	1/2
	800	PCFB1080	1STQ003172B0000	1/2
	1000	PCFB1010	1STQ003175B0000	1/2
	MBB rating In=1600/2000 A - Neutral 100%			
	400	PCFB1640	1STQ003190B0000	1/2
	500	PCFB1650	1STQ003191B0000	1/2
	600	PCFB1660	1STQ003192B0000	1/2
	800	PCFB1680	1STQ003520B0000	1/2
	1000	PCFB1610	1STQ003194B0000	1/2
	MBB rating In=2500/3200 A - Neutral 100%			
	400	PCFB3240	1STQ003219B0000	1/2
	500	PCFB3250	1STQ003220B0000	1/2
	600	PCFB3260	1STQ003221B0000	1/2
	800	PCFB3280	1STQ003222B0000	1/2
	1000	PCFB3210	1STQ003224B0000	1/2
	MBB rating In=4000 A - Neutral 100%			
	400	PCFB4040	1STQ003229B0000	1/2
	500	PCFB4050	1STQ003230B0000	1/2
	600	PCFB4060	1STQ003231B0000	1/2
	800	PCFB4080	1STQ003232B0000	1/2
	1000	PCFB4010	1STQ003234B0000	1/2

Main busbars

Order codes

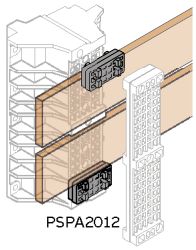
PBHS0200



PCCS0200

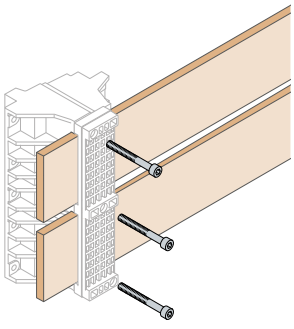
Busbar holders

The maximum width of the main busbar that can be installed in a busbar holder is 80 mm.
The minimum number of busbars per phase is 2 and the maximum is 4.
If the busbars have a width of 80 mm, each phase requires PBHS0200 + 1 PCCS0200 + 1 PSCB0002.
In the case of using busbars with a width of less than 80 mm, PSPA2012 spacers must be used to fill the gap and ensure proper closing of the cover. For example, if the busbar width is 40 mm, 2 pieces of H=20 mm PSPA2012 spacers are required per busbar and per phase, as (80-40)/20 = 2 pieces.
In configurations with 4 busbars per phase instead of 2, the number of PCCS0200 must be doubled.
Also the fixing screws must be selected according to the number of busbars per phase.

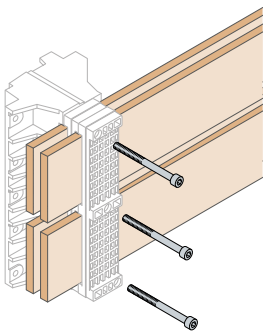


PSPA2012

Description	Delivered in kit Type	Order code	Package/ No. pcs
Busbar holders H=200 mm	PBHS0200	1STQ009602A0000	1/2
Spacers H=20 mm	PSPA2012	1STQ009604A0000	1/12
Closing cover for holder H=200 mm	PCCS0200	1STQ009605A0000	1/2
Mountig screws for 2 busbars per phase	PSCB0002	1STQ009606A0000	1/6
Mountig screws for 4 busbars per phase	PSCB0004	1STQ009631A0000	1/6



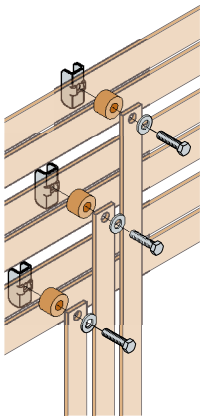
PSCB0002



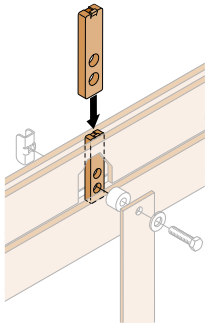
PSCB0004

Main busbars

Order codes



Copper compensators



Busbar fixing kit

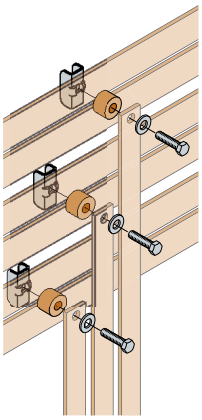
Accessories to fix the connection busbars to the main busbars.

Main busbar rating (A)	Breaker size (A)	number of poles	Depth section (mm)	Delivered in kit		Copper compensators Delivered in kit			Package/ No. pcs
				Type	Order code	Type	Order code	Qty	
Tmax XT5, XT5 MOE 400 A									
1000 A/1250 A	400 A	3P/4P	600	PCCS02X4	1STQ003643B0000				1/4
1000 A/1250 A	400 A	3P/4P	800	PCCS04X4	1STQ003651B0000				1/4
1600 A/2000 A	400 A	3P/4P	600	PCCS02X4	1STQ003643B0000				1/4
1600 A/2000 A	400 A	3P/4P	800	PCCS04X4	1STQ003651B0000				1/4
3200 A	400 A	3P/4P	600	PCCS02X4	1STQ003643B0000	PCMP0014	1STQ003699B0000	1	1/4
3200 A	400 A	3P/4P	800	PCCS2344	1STQ008287B0000	PCMP0014	1STQ003699B0000	1	1/4
4000 A	400 A	3P/4P	600	PCCS02X4	1STQ003643B0000	PCMP0014	1STQ003699B0000	1	1/4
4000 A	400 A	3P/4P	800	PCCS2344	1STQ008287B0000	PCMP0014	1STQ003699B0000	1	1/4
Tmax XT5, XT5 MOE 630 A									
1000 A/1250 A	630 A	3P/4P	600	PCCS02X4	1STQ003643B0000				1/4
1000 A/1250 A	630 A	3P/4P	800	PCCS04X4	1STQ003651B0000				1/4
1600 A/2000 A	630 A	3P/4P	600	PCCS02X4	1STQ003643B0000				1/4
1600 A/2000 A	630 A	3P/4P	800	PCCS04X4	1STQ003651B0000				1/4
3200 A	630 A	3P/4P	600	PCCS02X4	1STQ003643B0000	PCMP0014	1STQ003699B0000	1	1/4
3200 A	630 A	3P/4P	800	PCCS2344	1STQ008287B0000	PCMP0014	1STQ003699B0000	1	1/4
4000 A	630 A	3P/4P	600	PCCS02X4	1STQ003643B0000	PCMP0014	1STQ003699B0000	1	1/4
4000 A	630 A	3P/4P	800	PCCS2344	1STQ008287B0000	PCMP0014	1STQ003699B0000	1	1/4
Tmax XT7/Emax E1.2 800 A									
1000 A/1250 A	800 A	3P/4P	600	PCCS02X4	1STQ003643B0000				1/4
1000 A/1250 A	800 A	3P/4P	800	PCCS2934	1STQ008286B0000				1/4
1600 A/2000 A	800 A	3P/4P	600	PCCS02X4	1STQ003643B0000				1/4
1600 A/2000 A	800 A	3P/4P	800	PCCS2934	1STQ008286B0000				1/4
3200 A	800 A	3P/4P	600	PCCS2924	1STQ008284B0000	PCMP0014	1STQ003699B0000	1	1/4
3200 A	800 A	3P/4P	800	PCCS2344	1STQ008287B0000	PCMP0014	1STQ003699B0000	1	1/4
4000 A	800 A	3P/4P	600	PCCS2924	1STQ008284B0000	PCMP0014	1STQ003699B0000	1	1/4
4000 A	800 A	3P/4P	800	PCCS2344	1STQ008287B0000	PCMP0014	1STQ003699B0000	1	1/4
Tmax XT7/Emax E1.2 1250 A									
1000 A/1250 A	1250 A	3P/4P	600	PCCS02X4	1STQ003643B0000				1/4
1000 A/1250 A	1250 A	3P/4P	800	PCCS2934	1STQ008286B0000				1/4
1600 A/2000 A	1250 A	3P/4P	600	PCCS02X4	1STQ003643B0000				1/4
1600 A/2000 A	1250 A	3P/4P	800	PCCS2934	1STQ008286B0000				1/4
3200 A	1250 A	3P/4P	600	PCCS2824	1STQ008285B0000	PCMP0014	1STQ003699B0000	1	1/4
3200 A	1250 A	3P/4P	800	PCCS06X4	1STQ003653B0000	PCMP0014	1STQ003699B0000	1	1/4
4000 A	1250 A	3P/4P	600	PCCS2824	1STQ008285B0000	PCMP0014	1STQ003699B0000	1	1/4
4000 A	1250 A	3P/4P	800	PCCS06X4	1STQ003653B0000	PCMP0014	1STQ003699B0000	1	1/4
Emax E2.2 1600/2000 A									
1000 A/1250 A	1600 A/2000 A	3P/4P	600	PCCS2924	1STQ008284B0000				1/4
1000 A/1250 A	1600 A/2000 A	3P/4P	800	PCCS2344	1STQ008287B0000				1/4
1600 A/2000 A	1600 A/2000 A	3P/4P	600	PCCS2924	1STQ008284B0000				1/4
1600 A/2000 A	1600 A/2000 A	3P/4P	800	PCCS2344	1STQ008287B0000				1/4
3200 A	1600 A/2000 A	3P/4P	600	PCCS10X4	1STQ003645B0000	PCMP0014	1STQ003699B0000	1	1/4
3200 A	1600 A/2000 A	3P/4P	800	PCCS08X4	1STQ003655B0000	PCMP0014	1STQ003699B0000	1	1/4
4000 A	1600 A/2000 A	3P/4P	600	PCCS10X4	1STQ003645B0000	PCMP0014	1STQ003699B0000	1	1/4

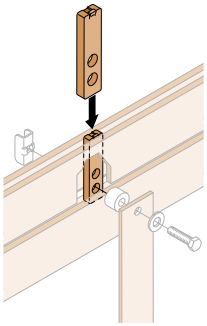
CONTINUES

Main busbars

Order codes



Copper compensators



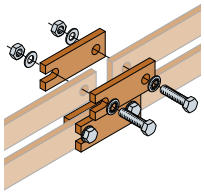
Busbar fixing kit

Accessories to fix the connection busbars to the main busbars.

Main busbar rating (A)	Breaker size (A)	number of poles	Depth section (mm)	Copper compensators					Package/ No. pcs
				Delivered in kit		Delivered in kit			
				Type	Order code	Type	Order code	Qty	
4000 A	1600 A/2000 A	3P/4P	800	PCCS08X4	1STQ003655B0000	PCMP0014	1STQ003699B0000	1	1/4
Emax E2.2 2500 A									
1000 A/1250 A	2500 A	3P/4P	600	PCCS2924	1STQ008284B0000				1/4
1000 A/1250 A	2500 A	3P/4P	800	PCCS2344	1STQ008287B0000				1/4
1600 A/2000 A	2500 A	3P/4P	600	PCCS2924	1STQ008284B0000				1/4
1600 A/2000 A	2500 A	3P/4P	800	PCCS2344	1STQ008287B0000				1/4
3200 A	2500 A	3P/4P	600	PCCS10X4	1STQ003645B0000	PCMP0014	1STQ003699B0000	1	1/4
3200 A	2500 A	3P/4P	800	PCCS08X4	1STQ003655B0000	PCMP0014	1STQ003699B0000	1	1/4
4000 A	2500 A	3P/4P	600	PCCS10X4	1STQ003645B0000	PCMP0014	1STQ003699B0000	1	1/4
4000 A	2500 A	3P/4P	800	PCCS08X4	1STQ003655B0000	PCMP0014	1STQ003699B0000	1	1/4
Emax E4.2 3200 A									
3200 A	3200 A	3P/4P	800	PCCS08X4	1STQ003655B0000	PCMP0014	1STQ003699B0000	2	1/4
4000 A	3200 A	3P/4P	800	PCCS08X4	1STQ003655B0000	PCMP0014	1STQ003699B0000	2	1/4
Emax E4.2 4000 A									
3200 A	4000 A	3P/4P	800	PCCS16X4	1STQ003657B0000	PCMP0014	1STQ003699B0000	2	1/4
4000 A	4000 A	3P/4P	800	PCCS16X4	1STQ003657B0000	PCMP0014	1STQ003699B0000	2	1/4

Main busbars

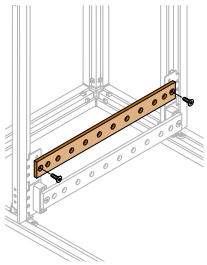
Order codes



Busbar joints for busbar holders

Must be selected to connect the main busbars between sections.

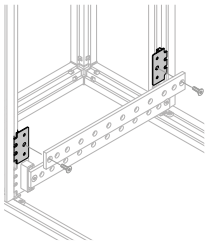
MBBS In (A)	No. poles	Delivered in kit Type	Order code	Package/ No. pcs
Busbar joint for compact busbars holders				
1000	4P	PJCC1046	1STQ009345B0000	1/1
1600; 2000	4P	PJCC1647	1STQ002827C0000	1/1
2500;3200	4P	PJCC3246	1STQ009347B0000	1/1
4000	4P	PJCC4042	1STQ009335B0000	1/1



Earthing busbars

With a minimum cross section of 600 mm² (60x10 mm it covers the applications up to 4000 A with 1/4 of the main busbars' cross section.

MBB rating In (A)	Section W (external)	Busbar section (mm)	Delivered in kit Type	Order code	Package/ No. pcs
PE busbar					
4000 A	400	1X60X10	PBNE2040	1STQ003808B0000	1/1
	600	1X60X10	PBNE2060	1STQ003810B0000	1/1
	800	1X60X10	PBNE2080	1STQ003811B0000	1/1
	1000	1X60X10	PBNE2010	1STQ003813B0000	1/1



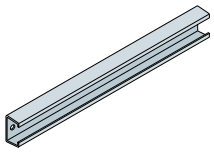
Brackets for N/PE busbar

To be ordered for fixing the neutral and earthing busbars.

Description	Delivered in kit Type	Order code	Package/ No. pcs
Brackets for PE busbar	PBRP0003	1STQ003149B0000	1/2

Main busbars

Order codes



Profile

For mounting on top of cabinet profiles

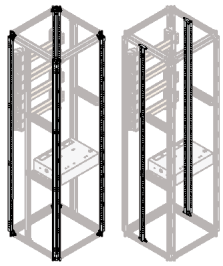
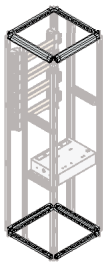
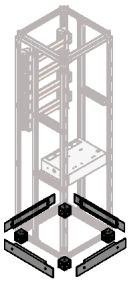
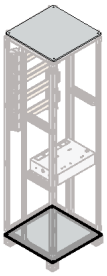
Description	Delivered in kit		Package/ No. pcs
	Type	Order code	
Profile 35 x 19 x 250 mm	RZBA110	2CPX046049R9999	1/1



Cu cylindrical spacer

Description	Delivered in kit		Package/ No. pcs
	Type	Order code	
Cu cylindrical spacer, ø 30 x 30 mm, ø 12,5 mm	ZX653	2CPX046090R9999	1/1
Cu cylindrical spacer, ø 30 x 20 mm, ø 12,5 mm	ZX652	2CPX046089R9999	1/1

Vertical breaker section
Quick selection guide

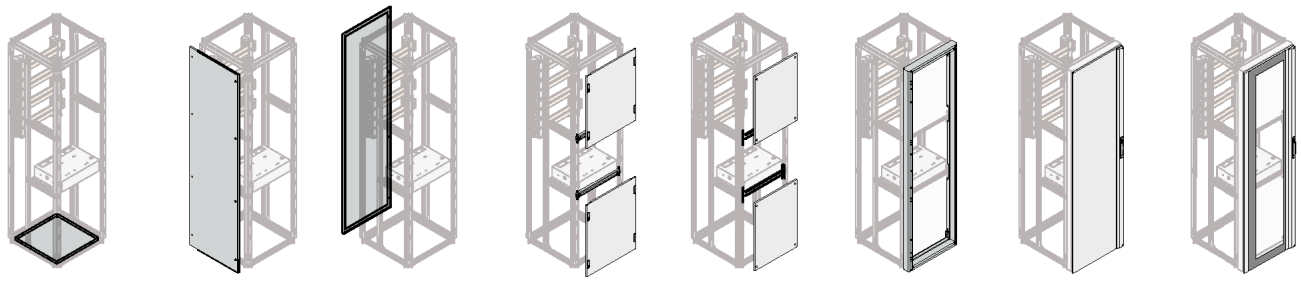





			FRAME							COVERS
External dimensions *			Uprights	Intermediate uprights for internal mounting kits	Structure crosspieces Galvanized sheet metal		H=100 mm plinth	Plinth covers		External Top/bottom
H (mm)	W (mm)	D (mm)	Galvanized sheet metal	Galvanized sheet metal	Front/Rear	Side	Angle pieces	Front/ Rear	Side	Blind
2200	**500**	**600**	PUPM2001	PUPM2011	PCFM0400	PCFM0500	PPAM0100	PPFM1040	PPFM1050	PTBB4050
		800				PCFM0700			PPFM1070	PTBB4070
	600	**600**			PCFM0500	PCFM0500	PPAM0100	PPFM1050	PPFM1050	PTBB5057
		800				PCFM0700			PPFM1070	PTBB5070
	800	**600**			PCFM0700	PCFM0500	PPAM0100	PPFM1070	PPFM1050	PTBB5070
		800				PCFM0700			PPFM1070	PTBB7072
	1000	**600**			PCFM0900	PCFM0500	PPAM0100	PPFM1090	PPFM1050	PTBB5090
		800				PCFM0700			PPFM1070	PTBB9070

—

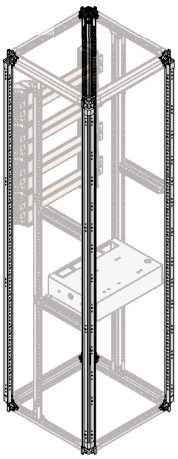
* The external dimensions include the H=100 mm plinth

** Handle to be ordered separately PHLS0010, PHLS0011, PHLS0012, PHLS0013.



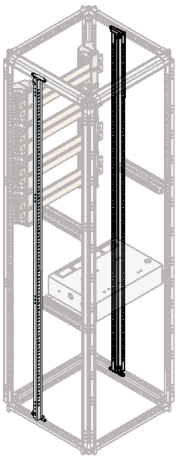
Internal bottom	Side Panel	Rear Panel	Front panel top/ bottom without door	Front panel top/ bottom with door	Frame for external door	Doors **	
Blind	Blind	Blind	H=750 mm	H=750 mm		Blind	Glass
PBWP4050	PPEB2056	PPEB2046	PPNT0640	PPNT0631	PEFD0500	PDLB2041	PDLG2043
PBWP4070	PPEB2076						
PBWP5050	PPEB2056	PPEB2056	PPNT0650	PPNT0641	PEFD0601	PDLB2153	PDLG2058
PBWP5070	PPEB2076						
PBWP5070	PPEB2056	PPEB2076	PPNT0670	PPNT0651	PEFD0800	PDLB2061	PDLG2072
PBWP7074	PPEB2076						
PBWP5090	PPEB2056	PPEB2096	PPNT0690	PPNT0671	PEFD1000	PDLB2072	PDLG2091
PBWP9074	PPEB2076						

Vertical breaker section
Order codes - Frame



Uprights – Galvanized sheet metal
Upright formed by a closed profile made of galvanized sheet metal. The uprights include 8 already assembled 3-way joints, 8 already assembled axial screws and 16 loose axial screws. For applications with In <= 4000 A.

External dimensions H (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Galvanized sheet metal uprights			
2100	PUPM2001	1STQ003353B0000	1/4

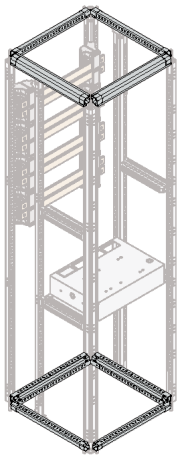


Intermediate upright for internal mounting kits and busbars – Galvanized sheet metal
Upright formed by a closed profile made of galvanized sheet metal. For applications with In <= 4000 A. For D=600 and 800 mm order 2 pcs. For D=1000 order 4 pcs.

External dimensions H (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Galvanized sheet metal upright			
2100	PUPM2011	1STQ003355B0000	1/1

Vertical breaker section

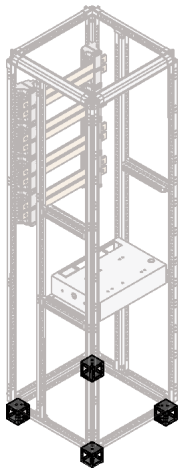
Order codes - Frame



Structure crosspieces – Galvanized sheel metal

Depth and width crosspieces for structures in galvanized sheet metal.

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
Width crosspieces				
500		PCFM0400	1STQ007038A0000	1/4
600		PCFM0500	1STQ007039A0000	1/4
800		PCFM0700	1STQ007046A0000	1/4
1000		PCFM0900	1STQ007047A0000	1/4
Depth crosspieces				
	600	PCFM0500	1STQ007039A0000	1/4
	800	PCFM0700	1STQ007046A0000	1/4



Universal angle pieces for plinths in galvanized sheet metal

Not pre-assembled to the structure. New angle piece with high mechanical strength. Can be fixed from the outside and from the inside of the structure even at a later date. Equipped with anti-rotation system and bottom that can be transported with a pallet trolley.

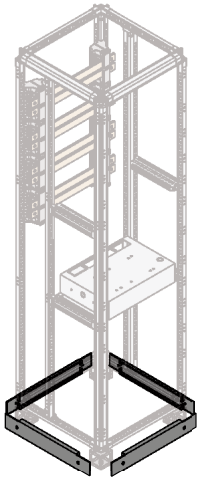
External dimensions	Delivered in kit		Package/
H (mm)	Type	Order code	No. pcs
Plinth angle pieces			
100	PPAM0100	1STQ007048A0000	1/4

"L" covers for plinth angle-pieces

These are used to cover the sides of the plinth when the covers are not selected. If the covers are not required, but the plinth still needs to be covered, they can be used as an alternative.



External dimensions	Delivered in kit		Package/
H (mm)	Type	Order code	No. pcs
Angle-piece covers			
100	PCPA0004	1STQ008109A0000	1/4



Plinth covers

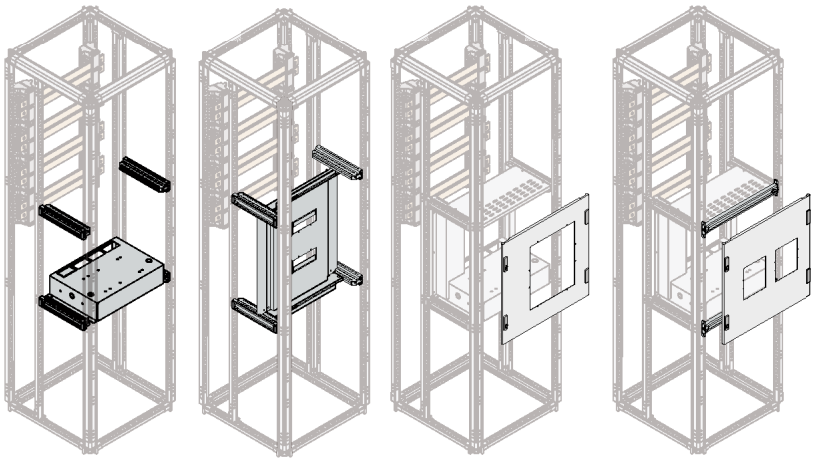
Side and front/rear plinth covers H=100 mm RAL 7012.

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
Front/rear plinth covers				
500		PPFM1040	1STQ007051A0000	1/2
600		PPFM1050	1STQ007052A0000	1/2
800		PPFM1070	1STQ007059A0000	1/2
1000		PPFM1090	1STQ007060A0000	1/2
Side plinth covers				
	600	PPFM1050	1STQ007052A0000	1/2
	800	PPFM1070	1STQ007059A0000	1/2

Vertical breaker section

Order codes - Frame

Kit for installation with withdrawable circuit-breakers
VERTICAL INSTALLATION (rear connections)

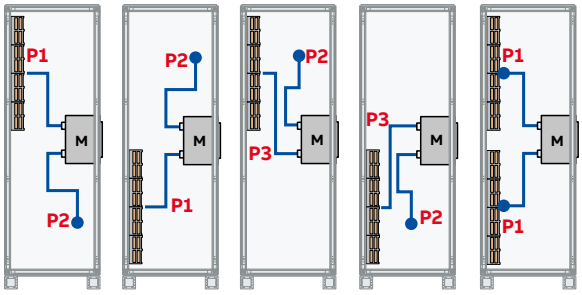


When selecting a vertical breaker section, you need::
- 1x Code of installation breaker kit
- 1x Code of circuit breaker panel (with or without external door)

Circuit-breakers 3/4 poles	Execution	Width (internal)	In current [A]	Number of breakers	Installation breaker kit		Circuit-breaker panel with external door		Circuit-breaker panel without external door		Package/ No. pcs
					Delivered in kit						
					Type	Order code	Type	Order code	Type	Order code	
XT5, XT5 MOE	W	500	400; 630	1	PWXT5405	1STQ007359B0000	PEXT5404	1STQ007370B0000	PPXT5404	1STQ007364B0000	1/1
XT7, E1.2	W	600	800; 1000; 1250; 1600	1	PWXE1806	1STQ007360B0000	PEAE1805	1STQ007372B0000	PPAE1805	1STQ007366B0000	1/1
E2.2	W	600	1600; 2000; 2500	1	PWAE2166	1STQ007361B0000	PEAE2165	1STQ007373B0000	PPAE2165	1STQ007367B0000	1/1
E4.2	W	800	3200	1	PWAE4328	1STQ007362B0000	PEAE4327	1STQ007374B0000	PPAE4327	1STQ007368B0000	1/1
E4.2	W	800	4000	1	PWAE4408	1STQ007363B0000	PEAE4407	1STQ007375B0000	PPAE4407	1STQ007369B0000	1/1
XT5, XT5 MOE	W	800	400; 630	2	PWXT5270	1STQ008007B0000	PEXT5270	1STQ008015B0000	PPXT5270	1STQ008010B0000	1/1
XT5 INT	W	800	400; 630	2	PIXT5080	1STQ007997B0000	PPET5080	1STQ007999B0000	PPXT5080	1STQ007998B0000	1/1
XT7, E1.2	W	1000	800; 1000; 1250; 1600	2	PWXE1290	1STQ008006B0000	PEAE1290	1STQ008014B0000	PPAE1290	1STQ008009B0000	1/1
XT5, XT5 MOE	W	1000	400; 630	3	PWXT5390	1STQ008008B0000	PEXT5290	1STQ008016B0000	PPXT5290	1STQ008011B0000	1/1

Vertical breaker section

Order codes - Connection for vertical circuit breaker kit



Key:
P1 Connection between circuit breaker and main busbars.
P2 Connection between circuit breaker and cables.
P3 Connection between circuit breaker and main busbars when it is in the same position as P2 (top/bottom).

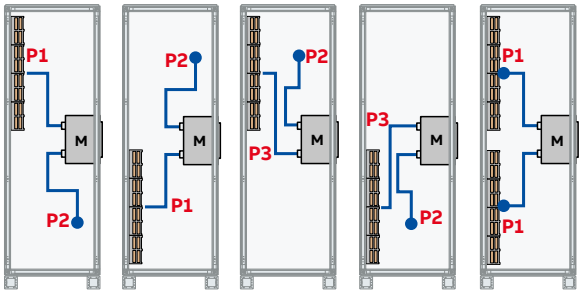
KIT FOR CIRCUIT-BREAKER

The kit includes copper busbars, anchoring system, and isolators to connect the circuit breaker to the main busbar (P1 or P3) or serve as terminals to the circuit breaker (P2).

Connection position	In (A)	No. of poles	Section dimension D (mm)	Delivered in kit		Package/ No. pcs
				Type	Order code	
Tmax XT5 Withdrawable - HR terminal						
P1	400 A	3	600	PJXT543061	1STQ007376B0000	1/1
		4		PJXT544263	1STQ007416B0000	1/1
		3	800	PJXT543081	1STQ007384B0000	1/1
		4		PJXT544283	1STQ007424B0000	1/1
P2		3	600/800	PJXT543002	1STQ007392B0000	1/1
		4		PJXT544002	1STQ007432B0000	1/1
P3		3	600	PJXT543063	1STQ007400B0000	1/1
		4		PJXT544463	1STQ007440B0000	1/1
		3	800	PJXT543083	1STQ007408B0000	1/1
		4		PJXT544483	1STQ007448B0000	1/1
P1	630 A	3	600	PJXT563061	1STQ007377B0000	1/1
		4		PJXT563263	1STQ007417B0000	1/1
		3	800	PJXT563081	1STQ007385B0000	1/1
		4		PJXT563283	1STQ007425B0000	1/1
P2		3	600/800	PJXT563592	1STQ007980B0000	1/1
		4		PJXT564592	1STQ008037B0000	1/1
P3		3	600	PJXT563063	1STQ007401B0000	1/1
		4		PJXT563463	1STQ007441B0000	1/1
		3	800	PJXT563083	1STQ007409B0000	1/1
		4		PJXT563483	1STQ007449B0000	1/1
Tmax XT5 MOE Withdrawable - HR terminal						
P1	400 A	3	600	PJXT545351	1STQ007972B0000	1/1
		4		PJXT545451	1STQ008029B0000	1/1
		3	800	PJXT547371	1STQ007973B0000	1/1
		4		PJXT547471	1STQ008030B0000	1/1
P2		3	600/800	PJXT543002	1STQ007392B0000	1/1
		4		PJXT544002	1STQ007432B0000	1/1
P3		3	600	PJXT545353	1STQ007974B0000	1/1
		4		PJXT545453	1STQ008031B0000	1/1
		3	800	PJXT547373	1STQ007975B0000	1/1
		4		PJXT547473	1STQ008032B0000	1/1
P1	630 A	3	600	PJXT565351	1STQ007976B0000	1/1
		4		PJXT565451	1STQ008033B0000	1/1
		3	800	PJXT567371	1STQ007977B0000	1/1
		4		PJXT567471	1STQ008034B0000	1/1
P2		3	600/800	PJXT563592	1STQ007980B0000	1/1
		4		PJXT564592	1STQ008037B0000	1/1
P3		3	600	PJXT565353	1STQ007978B0000	1/1
		4		PJXT565453	1STQ008035B0000	1/1
		3	800	PJXT567373	1STQ007979B0000	1/1
		4		PJXT567473	1STQ008036B0000	1/1

Vertical breaker section

Order codes - Connection for vertical circuit breaker kit



Key:
P1 Connection between circuit breaker and main busbars.
P2 Connection between circuit breaker and cables.
P3 Connection between circuit breaker and main busbars when it is in the same position as P2 (top/bottom).

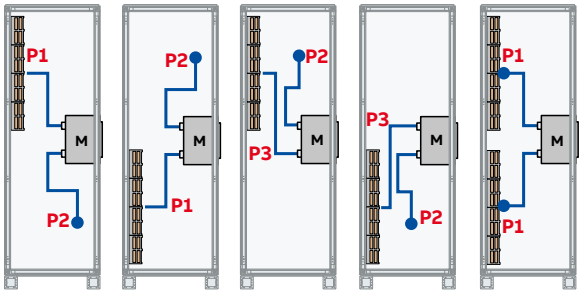
KIT FOR CIRCUIT-BREAKER

The kit includes copper busbars, anchoring system, and isolators to connect the circuit breaker to the main busbar (P1 or P3) or serve as terminals to the circuit breaker (P2).

Connection position	In (A)	No. of poles	Section dimension D (mm)	Delivered in kit		Package/ No. pcs
				Type	Order code	
Tmax XT5 W standard lever command interlocked - HR terminals						
P1	400 A	3	600	PJXT594361	1STQ008151B0000	1/1
		4		PJXT594461	1STQ008153B0000	1/1
		3	800	PJXT584361	1STQ008159B0000	1/1
		4		PJXT584461	1STQ008161B0000	1/1
P2		3	600/800	PJXT594382	1STQ008149B0000	1/1
		4		PJXT594482	1STQ007995B0000	1/1
P3		3	600	PJXT594363	1STQ008155B0000	1/1
		4		PJXT594463	1STQ008157B0000	1/1
		3	800	PJXT584363	1STQ008163B0000	1/1
		4		PJXT584463	1STQ008165B0000	1/1
P1	630 A	3	600	PJXT596361	1STQ008152B0000	1/1
		4		PJXT596461	1STQ008154B0000	1/1
		3	800	PJXT586361	1STQ008160B0000	1/1
		4		PJXT586461	1STQ008162B0000	1/1
P2		3	600/800	PJXT596382	1STQ008150B0000	1/1
		4		PJXT596482	1STQ007996B0000	1/1
P3		3	600	PJXT596363	1STQ008156B0000	1/1
		4		PJXT596463	1STQ008158B0000	1/1
		3	800	PJXT586363	1STQ008164B0000	1/1
		4		PJXT586463	1STQ008166B0000	1/1
Tmax XT7/Emax E1.2 Withdrawable - HR terminal						
P1	800/ 1000 A	3	600	PJXE183061	1STQ007378B0000	1/1
		4		PJXE184263	1STQ007418B0000	1/1
		3	800	PJXE183081	1STQ007386B0000	1/1
		4		PJXE184283	1STQ007426B0000	1/1
P2		3	600/800	PJXE183002	1STQ007394B0000	1/1
		4		PJXE184002	1STQ007434B0000	1/1
P3		3	600	PJXE183063	1STQ007402B0000	1/1
		4		PJXE184463	1STQ007442B0000	1/1
		3	800	PJXE183083	1STQ007410B0000	1/1
		4		PJXE184483	1STQ007450B0000	1/1
P1	1250/ 1600 A	3	600	PJXE123061	1STQ007379B0000	1/1
		4		PJXE124263	1STQ007419B0000	1/1
		3	800	PJXE123081	1STQ007387B0000	1/1
		4		PJXE124283	1STQ007427B0000	1/1
P2		3	600/800	PJXE123002	1STQ007395B0000	1/1
		4		PJXE124002	1STQ007435B0000	1/1
P3		3	600	PJXE123063	1STQ007403B0000	1/1
		4		PJXE124463	1STQ007443B0000	1/1
		3	800	PJXE123083	1STQ007411B0000	1/1
		4		PJXE124483	1STQ007451B0000	1/1

Vertical breaker section

Order codes - Connection for vertical circuit breaker kit



Key:
P1 Connection between circuit breaker and main busbars.
P2 Connection between circuit breaker and cables.
P3 Connection between circuit breaker and main busbars when it is in the same position as P2 (top/bottom).

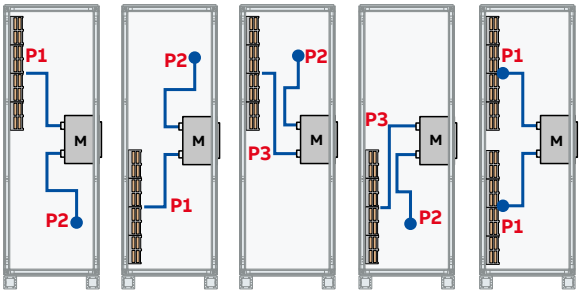
KIT FOR CIRCUIT-BREAKER

The kit includes copper busbars, anchoring system, and isolators to connect the circuit breaker to the main busbar (P1 or P3) or serve as terminals to the circuit breaker (P2).

Connection position	In (A)	No. of poles	Section dimension D (mm)	Delivered in kit		Package/ No. pcs
				Type	Order code	
Emax E2.2 Withdrawable - HR terminal						
P1	1600 A	3	600	PJE2163061	1STQ007380B0000	1/1
	2000 A	4		PJAE216263	1STQ007420B0000	1/1
		3	800	PJE2163081	1STQ007388B0000	1/1
		4		PJAE216283	1STQ007428B0000	1/1
P2		3	600/800	PJAE216302	1STQ007396B0000	1/1
		4		PJAE216402	1STQ007436B0000	1/1
P3		3	600	PJAE216363	1STQ007404B0000	1/1
		4		PJAE216463	1STQ007444B0000	1/1
		3	800	PJAE216383	1STQ007412B0000	1/1
		4		PJAE216483	1STQ007452B0000	1/1
P1	2500 A	3	600	PJE2253061	1STQ007381B0000	1/1
		4		PJAE225263	1STQ007421B0000	1/1
		3	800	PJE2253081	1STQ007389B0000	1/1
		4		PJAE225283	1STQ007429B0000	1/1
P2		3	600/800	PJAE225302	1STQ007397B0000	1/1
		4		PJAE225402	1STQ007437B0000	1/1
P3		3	600	PJAE225363	1STQ007405B0000	1/1
		4		PJAE225463	1STQ007445B0000	1/1
		3	800	PJAE225383	1STQ007413B0000	1/1
		4		PJAE225483	1STQ007453B0000	1/1
Emax E4.2 Withdrawable - HR terminal						
P1	3200 A	3	800	PJE4323081	1STQ007390B0000	1/1
		4		PJAE432283	1STQ007430B0000	1/1
P2		3	800	PJAE432302	1STQ007398B0000	1/1
		4		PJAE432402	1STQ007438B0000	1/1
P3		3	800	PJAE432383	1STQ007414B0000	1/1
		4		PJAE432483	1STQ007454B0000	1/1
P1	4000 A	3	800	PJE4403081	1STQ007391B0000	1/1
		4		PJAE440283	1STQ007431B0000	1/1
P2		3	800	PJAE440302	1STQ007399B0000	1/1
		4		PJAE440402	1STQ007439B0000	1/1
P3		3	800	PJAE440383	1STQ007415B0000	1/1
		4		PJAE440483	1STQ007455B0000	1/1

Vertical breaker section

Order codes - Connection for vertical circuit-breakers kit



Key:
P1 Connection between circuit breaker and main busbars.
P2 Connection between circuit breaker and cables.
P3 Connection between circuit breaker and main busbars when it is in the same position as P2 (top/bottom).

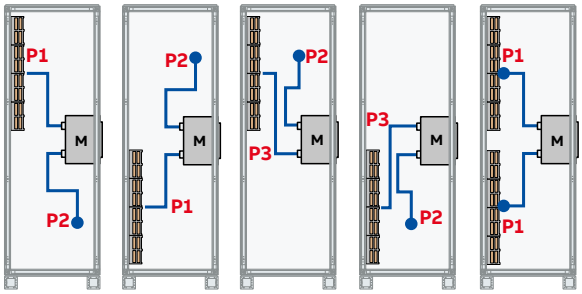
KIT FOR SIDE BY SIDE CIRCUIT-BREAKER

The kit includes copper busbars, anchoring system, and isolators to connect the circuit breaker to the main busbar (P1 or P3) or serve as terminals to the circuit breaker (P2).

connection position	In (A)	No. of poles	Section dimension D (mm)	W (mm)	Number of breakers per section	Delivered in kit Type	Order code	Package/ No. pcs
Tmax XT5 Withdrawable								
P1	400 A	4P	600	800	2	PJXT542261	1STQ008082B0000	1/1
		3P	600	800	2	PJXT543261	1STQ008092B0000	1/1
		4P	600	1000	3	PJXT542361	1STQ008102B0000	1/1
		3P	600	1000	3	PJXT543361	1STQ008112B0000	1/1
		4P	800	800	2	PJXT542281	1STQ008083B0000	1/1
		3P	800	800	2	PJXT543281	1STQ008093B0000	1/1
		4P	800	1000	3	PJXT542381	1STQ008103B0000	1/1
		3P	800	1000	3	PJXT543381	1STQ008113B0000	1/1
P2	400 A	4P	600/800	800	2	PJXT542262	1STQ008084B0000	1/1
		3P	600/800	800	2	PJXT543262	1STQ008094B0000	1/1
		4P	600/800	1000	3	PJXT542363	1STQ008104B0000	1/1
		3P	600/800	1000	3	PJXT543362	1STQ008114B0000	1/1
P3	400 A	4P	600	800	2	PJXT542263	1STQ008085B0000	1/1
		3P	600	800	2	PJXT543263	1STQ008095B0000	1/1
		4P	600	1000	3	PJXT542383	1STQ008105B0000	1/1
		3P	600	1000	3	PJXT543363	1STQ008115B0000	1/1
		4P	800	800	2	PJXT542283	1STQ008086B0000	1/1
		3P	800	800	2	PJXT543283	1STQ008096B0000	1/1
		4P	800	1000	3	PJXT542362	1STQ008106B0000	1/1
		3P	800	1000	3	PJXT543383	1STQ008116B0000	1/1
P1	630 A	4P	600	800	2	PJXT562261	1STQ008087B0000	1/1
		3P	600	800	2	PJXT563261	1STQ008097B0000	1/1
		4P	600	1000	3	PJXT562361	1STQ008107B0000	1/1
		3P	600	1000	3	PJXT563361	1STQ008117B0000	1/1
		4P	800	800	2	PJXT562281	1STQ008088B0000	1/1
		3P	800	800	2	PJXT563281	1STQ008098B0000	1/1
		4P	800	1000	3	PJXT562381	1STQ008108B0000	1/1
		3P	800	1000	3	PJXT563381	1STQ008118B0000	1/1
P2	630 A	4P	600/800	800	2	PJXT562262	1STQ008091B0000	1/1
		3P	600/800	800	2	PJXT563262	1STQ008101B0000	1/1
		4P	600/800	1000	3	PJXT562362	1STQ008111B0000	1/1
		3P	600/800	1000	3	PJXT563962	1STQ008121B0000	1/1
P3	630 A	4P	600	800	2	PJXT562263	1STQ008089B0000	1/1
		3P	600	800	2	PJXT563963	1STQ008099B0000	1/1
		4P	600	1000	3	PJXT562363	1STQ008109B0000	1/1
		3P	600	1000	3	PJXT563363	1STQ008119B0000	1/1
		4P	800	800	2	PJXT562283	1STQ008090B0000	1/1
		3P	800	800	2	PJXT563983	1STQ008100B0000	1/1
		4P	800	1000	3	PJXT562383	1STQ008110B0000	1/1
		3P	800	1000	3	PJXT563383	1STQ008120B0000	1/1

Vertical breaker section

Order codes - Connection for vertical circuit breaker kit



Key:
P1 Connection between circuit breaker and main busbars.
P2 Connection between circuit breaker and cables.
P3 Connection between circuit breaker and main busbars when it is in the same position as P2 (top/bottom).

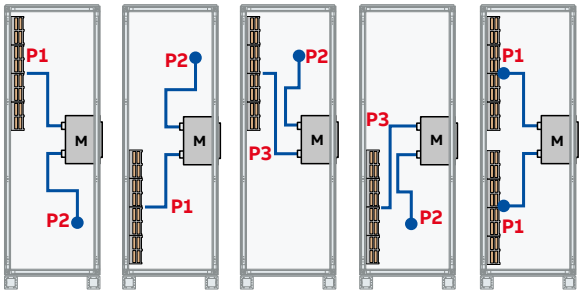
KIT FOR SIDE BY SIDE CIRCUIT-BREAKER

The kit includes copper busbars, anchoring system, and isolators to connect the circuit breaker to the main busbar (P1 or P3) or serve as terminals to the circuit breaker (P2).

connection position	In (A)	No. of poles	Section dimension D (mm)	W (mm)	Number of breakers per section	Delivered in kit Type	Order code	Package/ No. pcs
Tmax XT5 MOE Withdrawable								
P1	400 A	4P	600	800	2	PJXT582361	1STQ008046B0000	1/1
		3P	600	800	2	PJXT553361	1STQ008055B0000	1/1
		4P	600	1000	3	PJXT542461	1STQ008064B0000	1/1
		3P	600	1000	3	PJXT543461	1STQ008073B0000	1/1
		4P	800	800	2	PJXT592381	1STQ008047B0000	1/1
		3P	800	800	2	PJXT573381	1STQ008056B0000	1/1
		4P	800	1000	3	PJXT542481	1STQ008065B0000	1/1
		3P	800	1000	3	PJXT543481	1STQ008074B0000	1/1
P3	400 A	4P	600	800	2	PJXT582363	1STQ008048B0000	1/1
		3P	600	800	2	PJXT553363	1STQ008057B0000	1/1
		4P	600	1000	3	PJXT542463	1STQ008066B0000	1/1
		3P	600	1000	3	PJXT543463	1STQ008075B0000	1/1
		4P	800	800	2	PJXT592383	1STQ008049B0000	1/1
		3P	800	800	2	PJXT573383	1STQ008058B0000	1/1
		4P	800	1000	3	PJXT542483	1STQ008067B0000	1/1
		3P	800	1000	3	PJXT543483	1STQ008076B0000	1/1
P1	630 A	4P	600	800	2	PJXT552361	1STQ008050B0000	1/1
		3P	600	800	2	PJXT593361	1STQ008059B0000	1/1
		4P	600	1000	3	PJXT562461	1STQ008068B0000	1/1
		3P	600	1000	3	PJXT563461	1STQ008077B0000	1/1
		4P	800	800	2	PJXT552381	1STQ008051B0000	1/1
		3P	800	800	2	PJXT553381	1STQ008060B0000	1/1
		4P	800	1000	3	PJXT562481	1STQ008069B0000	1/1
		3P	800	1000	3	PJXT563481	1STQ008078B0000	1/1
P2	630 A	4P	600/800	800	2	PJXT562262	1STQ008091B0000	1/1
		3P	600/800	800	2	PJXT563262	1STQ008101B0000	1/1
		4P	600/800	1000	3	PJXT562362	1STQ008111B0000	1/1
		3P	600/800	1000	3	PJXT563962	1STQ008121B0000	1/1
P3	630 A	4P	600	800	2	PJXT552363	1STQ008052B0000	1/1
		3P	600	800	2	PJXT555333	1STQ008061B0000	1/1
		4P	600	1000	3	PJXT562463	1STQ008070B0000	1/1
		3P	600	1000	3	PJXT563863	1STQ008079B0000	1/1
		4P	800	800	2	PJXT552383	1STQ008053B0000	1/1
		3P	800	800	2	PJXT553383	1STQ008062B0000	1/1
		4P	800	1000	3	PJXT562483	1STQ008071B0000	1/1
		3P	800	1000	3	PJXT563883	1STQ008080B0000	1/1

Vertical breaker section

Order codes - Connection for vertical circuit breaker kit



Key:
P1 Connection between circuit breaker and main busbars.
P2 Connection between circuit breaker and cables.
P3 Connection between circuit breaker and main busbars when it is in the same position as P2 (top/bottom).

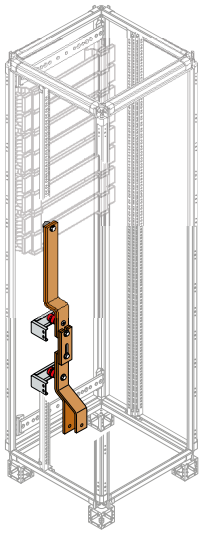
KIT FOR SIDE BY SIDE CIRCUIT-BREAKER

The kit includes copper busbars, anchoring system, and isolators to connect the circuit breaker to the main busbar (P1 or P3) or serve as terminals to the circuit breaker (P2).

connection position	In (A)	No. of poles	Section dimension D (mm)	W (mm)	Number of breakers per section	Delivered in kit Type	Order code	Package/ No. pcs
Tmax XT7/Emax E1.2 Withdrawable - HR terminal								
P1	800/ 1000 A	4P	600	1000	2	PJXE184261	1STQ008122B0000	1/1
		3P	600	1000	2	PJXE183261	1STQ008132B0000	1/1
		4P	800	1000	2	PJXE184281	1STQ008123B0000	1/1
		3P	800	1000	2	PJXE183281	1STQ008133B0000	1/1
P2	800/ 1000 A	4P	600/800	1000	2	PJXE184262	1STQ008124B0000	1/1
		3P	600/800	1000	2	PJXE183262	1STQ008134B0000	1/1
P3	800/ 1000 A	4P	600	1000	2	PJXE189263	1STQ008125B0000	1/1
		3P	600	1000	2	PJXE183263	1STQ008135B0000	1/1
		4P	800	1000	2	PJXE184983	1STQ008126B0000	1/1
		3P	800	1000	2	PJXE183283	1STQ008136B0000	1/1
P1	1250/ 1600 A	4P	600	1000	2	PJXE124361	1STQ008127B0000	1/1
		3P	600	1000	2	PJXE123261	1STQ008137B0000	1/1
		4P	800	1000	2	PJXE124381	1STQ008128B0000	1/1
		3P	800	1000	2	PJXE123281	1STQ008138B0000	1/1
P2	1250/ 1600 A	4P	600/800	1000	2	PJXE124362	1STQ008131B0000	1/1
		3P	600/800	1000	2	PJXE123283	1STQ008141B0000	1/1
P3	1250/ 1600 A	4P	800	1000	2	PJXE124383	1STQ008130B0000	1/1
		3P	800	1000	2	PJXE123263	1STQ008140B0000	1/1
		4P	600	1000	2	PJXE124363	1STQ008129B0000	1/1
		3P	600	1000	2	PJXE123262	1STQ008139B0000	1/1

Vertical breaker section

Order codes - Connection for vertical circuit breaker kit



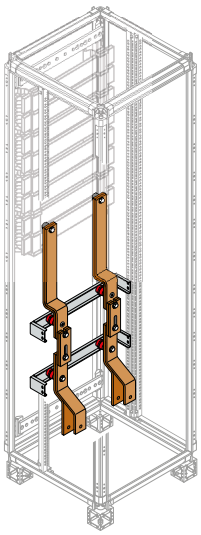
Neutral disconnector

Circuit-breakers	Position	Dimensions (mm) D	Delivered in kit Type	Order code	Package/ No. pcs
XT5 W 400 A	1-2	600	PNXT543002	1STQ007768B0000	1/1
	1-2	800	PNXT543003	1STQ007774B0000	1/1
	3-2	600	PMXT543002	1STQ007782B0000	1/1
	3-2	800	PMXT543003	1STQ007788B0000	1/1
XT5 W 630 A	1-2	600	PNXT563002	1STQ007769B0000	1/1
	1-2	800	PNXT563003	1STQ007775B0000	1/1
	3-2	600	PMXT563002	1STQ007783B0000	1/1
	3-2	800	PMXT563003	1STQ007789B0000	1/1
XT5 W MOE 400 A	1-2	600	PNXT509612	1STQ007981B0000	1/1
	1-2	800	PNXT509812	1STQ007982B0000	1/1
	3-2	600	PNXT509632	1STQ007983B0000	1/1
	3-2	800	PNXT509832	1STQ007984B0000	1/1
XT5 W MOE 630 A	1-2	600	PNXT569612	1STQ007985B0000	1/1
	1-2	800	PNXT569812	1STQ007986B0000	1/1
	3-2	600	PNXT569632	1STQ007987B0000	1/1
	3-2	800	PNXT569832	1STQ007988B0000	1/1
XT7, E1.2 W 800/1000 A	1-2	600	PNXE183002	1STQ007770B0000	1/1
	1-2	800	PNXE183003	1STQ007776B0000	1/1
	3-2	600	PMXE183002	1STQ007784B0000	1/1
	3-2	800	PMXE183003	1STQ007790B0000	1/1
XT7, E1.2 W 1250/1600 A	1-2	600	PNXE123002	1STQ007771B0000	1/1
	1-2	800	PNXE123003	1STQ007777B0000	1/1
	3-2	600	PMXE123002	1STQ007785B0000	1/1
	3-2	800	PMXE123003	1STQ007791B0000	1/1
E2.2 W 1600/2000 A	1-2	600	PNAE216302	1STQ007772B0000	1/1
	1-2	800	PNAE216303	1STQ007778B0000	1/1
	3-2	600	PMAE216302	1STQ007786B0000	1/1
	3-2	800	PMAE216303	1STQ007792B0000	1/1
E2.2 W 2500 A	1-2	600	PNAE225302	1STQ007773B0000	1/1
	1-2	800	PNAE225303	1STQ007779B0000	1/1
	3-2	600	PMAE225302	1STQ007787B0000	1/1
	3-2	800	PMAE225303	1STQ007793B0000	1/1
E4.2 W 3200 A	1-2	800	PNAE432302	1STQ007780B0000	1/1
	3-2	800	PMAE432302	1STQ007794B0000	1/1
E4.2 W 4000 A	1-2	800	PNAE440302	1STQ007781B0000	1/1
	3-2	800	PMAE440302	1STQ007795B0000	1/1

Each code contains only 1 piece. In case of side by side configurations with 3P breakers, the amount of neutral disconnectors to be ordered must be increased accordingly.

Vertical breaker section

Order codes - Connection for vertical circuit breaker kit

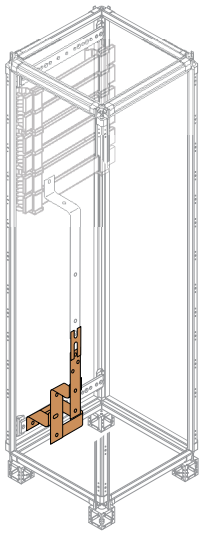


Side by side neutral disconnector for XT5 W interlocked breakers

Circuit-breakers	Position	No. poles	Dimensions (mm) W	D	Delivered in kit Type	Order code	Package/ No. pcs
Tmax XT5 400/630 A Interlocked							
2x XT5 INT	1-2	3/4P	800	600	PNXT519612	1STQ008228B0000	1/1
2x XT5 INT	1-2	3P	800	600	PNXT519812	1STQ008229B0000	1/1
2x XT5 INT	3-2	3P	800	600	PNXT519632	1STQ008230B0000	1/1
2x XT5 INT	3-2	3P	800	600	PNXT519832	1STQ008231B0000	1/1
2x XT5 INT	1-2	3P	800	600	PNXT579612	1STQ008232B0000	1/1
2x XT5 INT	1-2	3P	800	600	PNXT579812	1STQ008233B0000	1/1
2x XT5 INT	3-2	3P	800	600	PNXT579632	1STQ008234B0000	1/1
2x XT5 INT	3-2	3P	800	600	PNXT579832	1STQ008235B0000	1/1

Vertical breaker section

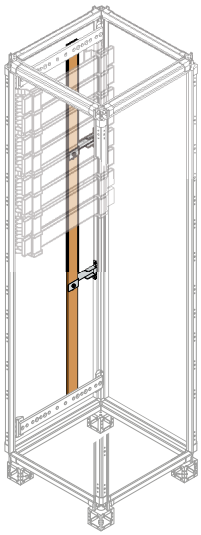
Order codes - Connection for vertical circuit breaker kit



Central earthing point (CEP)

Description	Dimensions (mm) D	Delivered in kit Type	Order code	Package/ No. pcs
Cep for 3 poles breakers				
CEP XT5 W 400 A	600	PCEP5145	1STQ007858B0000	1/1
	800	PCEP5147	1STQ007860B0000	1/1
CEP XT5 W 630 A	600	PCEP5165	1STQ007859B0000	1/1
	800	PCEP5167	1STQ007861B0000	1/1
CEP XT5 W MOE 400 A	600	PCEP5450	1STQ007989B0000	1/1
	800	PCEP5470	1STQ007991B0000	1/1
CEP XT5 W MOE 630 A	600	PCEP6350	1STQ007990B0000	1/1
	800	PCEP6370	1STQ007992B0000	1/1
CEP XT7 - E1.2 W 800/1000/1250/1600 A	600	PCEP1165	1STQ007869B0000	1/1
	800	PCEP1167	1STQ007870B0000	1/1
CEP E2.2 W 1600/2000/2500 A	600	PCEP2165*	1STQ007872B0000	1/1
	800	PCEP2167*	1STQ007873B0000	1/1
EP E4.2 W 3200 A	800	PCEP4137	1STQ007875B0000	1/1
EP E4.2 W 4000 A	800	PCEP4147	1STQ007876B0000	1/1

The CEP can only be mounted in combination with the neutral disconnector.
* An additional 10 mm copper spacer is needed (ZX651) when used with a 1600 or 2000 A system.
In the case of 2500 A, no additional spacer is needed.

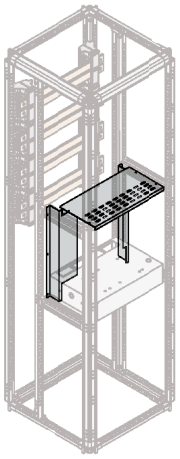


Offset

Description	Delivered in kit Type	Order code	Package/ No. pcs
Offset 1x60x10	POCN1600	1STQ007889B0000	1/1

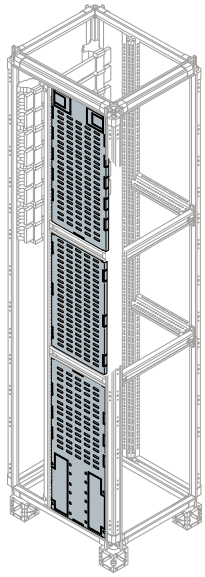
Vertical breaker section

Order codes - Segregation



Segregation Form 2a, 3a

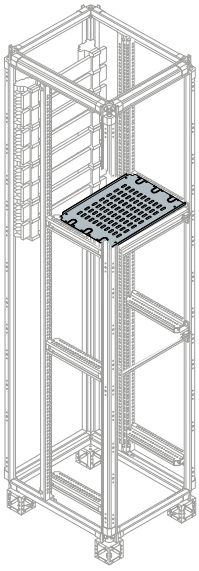
Circuit-breakers	No. poles	Dimensions W (mm)	Delivered in kit Type	Order code	Package/ No. pcs
XT5/XT5 MOE	3–4	500	PSVRT550	1STQ003995B0000	1/1
2x X5/X15 MOE	3–4	800	PSVRT559	1STQ008238B0000	1/1
3X XT5 MOE	3–4	1000	PSVRT649	1STQ008239B0000	1/1
XT7-E1.2	3	600	PSVT7613	1STQ007457B0000	1/1
XT7-E1.2	4	600	PSVT7614	1STQ007462B0000	1/1
2x XT7-E1.2	3	1000	PSVT7213	1STQ008147B0000	1/1
2x XT7-E1.2	4	1000	PSVT7214	1STQ008148B0000	1/1
E2.2	3	600	PSVE2603	1STQ007458B0000	1/1
E2.2	4	600	PSVE2604	1STQ007463B0000	1/1
E4.2 W 3200 A	3	800	PSVE4803	1STQ007459B0000	1/1
E4.2 W 3200 A	4	800	PSVE4804	1STQ007464B0000	1/1
E4.2 W 4000 A	3	800	PSVE4613	1STQ007460B0000	1/1
E4.2 W 4000 A	4	800	PSVE4634	1STQ007465B0000	1/1



Side segregation

All three segregations must be ordered for each section.

External dimensions H (mm)	D* (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Side segregation for wiring duct compartment (top position)				
700	300	PPVT7530	1STQ004009B0000	1/1
Side segregation (middle position)				
600	300	PPVS6030	1STQ004008B0000	1/1
Side segregation for N/PE compartment (bottom position)				
700	300	PPVB7530	1STQ004010B0000	1/1



Universal horizontal segregations

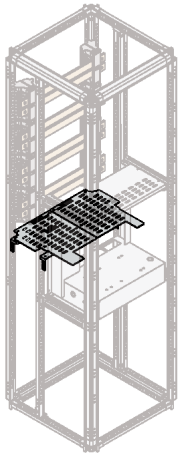
The kit contains an horizontal segregation form 2a/3a. It is necessary to order the universal horizontal segregation. The universal horizontal segregation must be ordered in case of a coupler (P1-P1) or when cable outgoing is on the same side as the main busbar system (P2-P3), with the PE position aligned with the MBBS.

External dimensions W (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Horizontal segregation			
500	PSHS0500	1STQ004012B0000	1/1
600	PSHS0601	1STQ004013B0000	1/1
800	PSHS0800	1STQ004014B0000	1/1
1000	PSHS1000	1STQ004015B0000	1/1

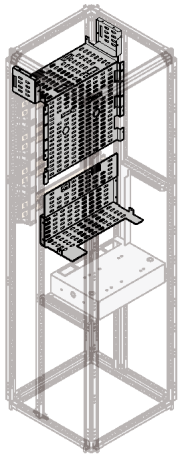
Vertical breaker section

Order codes - Segregation

Position P1-P2



Position P3-P2

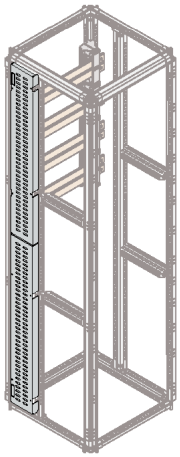


Segregation form 3b

Circuit-breakers	In (A)	No. poles	Position	Dimensions (mm) W	D	Delivered in kit Type	Order code	Package/ No. pcs
XT5 W	400 A 630 A	3/4P	3-2	500	600	PSHW5461	1STQ007706B0000	1/1
			1-2			PSHW6551	1STQ007723B0000	1/1
			3-2		800	PSHW5480	1STQ007713B0000	1/1
			1-2			PSHW8551	1STQ007744B0000	1/1
			1-2	800	600	PSHW5464	1STQ007709B0000	1/1
			3-2			PSHW5465	1STQ007710B0000	1/1
			3-2		800	PSHW5484	1STQ007717B0000	1/1
			1-2			PSHW5483	1STQ007716B0000	1/1
			1-2	1000	600	PSHW5468	1STQ007711B0000	1/1
			3-2			PSHW5469	1STQ007712B0000	1/1
			3-2		800	PSHW5488	1STQ007721B0000	1/1
			1-2			PSHW5489	1STQ007722B0000	1/1
XT5 W MOE	400 A 630 A	3/4	1-2	500	600	PSHW5462	1STQ007707B0000	1/1
			3-2			PSHW5463	1STQ007708B0000	1/1
			3-2		800	PSHW5482	1STQ007715B0000	1/1
			1-2			PSHW5481	1STQ007714B0000	1/1
			1-2	800	600	PSHW5282	1STQ007701B0000	1/1
			3-2			PSHW5283	1STQ007702B0000	1/1
			3-2		800	PSHW5486	1STQ007719B0000	1/1
			1-2			PSHW5485	1STQ007718B0000	1/1
			1-2	1000	600	PSHW5284	1STQ007703B0000	1/1
			3-2			PSHW5285	1STQ007704B0000	1/1
			3-2		800	PSHW5080	1STQ007695B0000	1/1
			1-2			PSHW5489	1STQ007722B0000	1/1
XT5 W-I	400 A 630 A	3/4P	1-2	800	600	PSHW5612	1STQ008000B0000	1/1
			1-2		800	PSHW5812	1STQ008001B0000	1/1
			3-2		600	PSHW5632	1STQ008002B0000	1/1
			3-2		800	PSHW5832	1STQ008003B0000	1/1
XT7 W E1.2 W	800 A 1000 A 1250 A 1600 A	3P	1-2	600	600	PSHW7861	1STQ007724B0000	1/1
		4P	1-2			PSHW7961	1STQ007735B0000	1/1
		3/4P	3-2			PSHW7863	1STQ007725B0000	1/1
		3P	1-2		800	PSHW7882	1STQ007728B0000	1/1
		4P	1-2			PSHW7982	1STQ007739B0000	1/1
		3/4P	3-2			PSHW7884	1STQ007729B0000	1/1
XT7 W E1.2 W	800 A 1000 A 1250 A 1600 A	3/4P	1-2	1000	600	PSHW7965	1STQ007737B0000	1/1
			3-2			PSHW7967	1STQ007738B0000	1/1
			1-2		800	PSHW7986	1STQ007741B0000	1/1
			3-2			PSHW7988	1STQ007742B0000	1/1
E2.2 W	1600 A 2000 A 2500 A	3P	1-2	600	600	PSHW2161	1STQ007681B0000	1/1
		4P	1-2			PSHW2461	1STQ007685B0000	1/1
		3/4P	3-2			PSHW2462	1STQ007686B0000	1/1
		3P	1-2		800	PSHW2181	1STQ007683B0000	1/1
		4P	1-2			PSHW2481	1STQ007687B0000	1/1
		3/4P	3-2			PSHW2482	1STQ007688B0000	1/1
E4.2 W	3200 A 4000 A	3P	1-2	800	800	PSHW4381	1STQ007689B0000	1/1
		4P	1-2			PSHW4581	1STQ007691B0000	1/1
		3P	3-2			PSHW4382	1STQ007690B0000	1/1
		4P	3-2			PSHW4582	1STQ007692B0000	1/1

Vertical breaker section

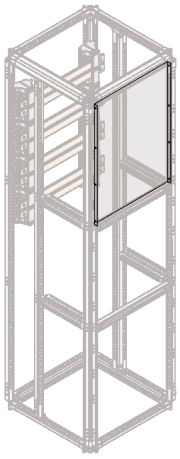
Order codes - Segregation



Form 3/4b segregation

Description	Dimensions D (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Segregation form 4b				
Left top/bottom right	600	PPVS7162	1STQ007747B0000	1/1
Left top/bottom right	800	PPVS7182	1STQ007748B0000	1/1
Right top/bottom left	600	PPVS7163	1STQ007750B0000	1/1
Right top/bottom left	800	PPVS7183	1STQ007751B0000	1/1

These metal segregations are mounted between the intermediate and rear uprights. This panel is required depending on the arrangment of sections. Depending on which sections are placed next to each other, it is sometimes needed and sometimes is not.



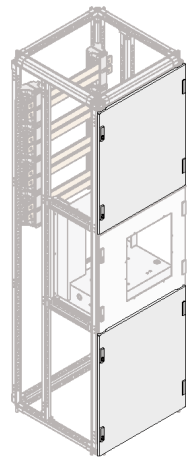
Cable touchguard protection

Description	Dimensions (mm) H	W	Delivered in kit Type	Order code	Package/ No. pcs
Cable touchguard	700	500	PPTG4071	1STQ001805C0000	1/1
Cable touchguard	700	600	PPTG5071	1STQ001806C0000	1/1
Cable touchguard	700	800	PPTG7071	1STQ001807C0000	1/1
Cable touchguard	700	1000	PPTG9071	1STQ001808C0000	1/1

If the configuration is made with partial door, the accessory for holding the touchguard protections to the frame 1STQ001809C0000 - PPTG1000 must also be exported.

Vertical breaker section

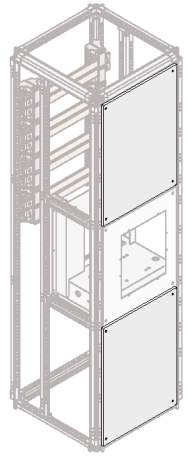
Order codes - Segregation



Front blind panel top/bottom without external door

Description	Dimensions W (mm)	Delivered in kit Type	Order code	Package/ No. pcs
CB blind panel				
Blind panel	500	PPNT0640	1STQ003667B0000	1/1
Blind panel	600	PPNT0650	1STQ003668B0000	1/1
Blind panel	800	PPNT0670	1STQ003670B0000	1/1
Blind panel	1000	PPNT0690	1STQ003672B0000	1/1

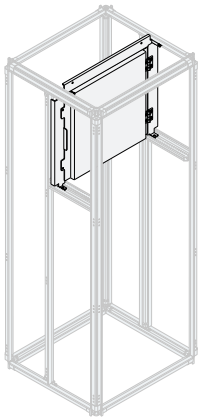
Order 2 pcs for each section.



Front blind panel top/bottom with external door

Description	Dimensions W (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Blind panel	500	PPNT0641	1STQ005993B0000	1/1
Blind panel	600	PPNT0651	1STQ005994B0000	1/1
Blind panel	800	PPNT0671	1STQ005995B0000	1/1
Blind panel	1000	PPNT0691	1STQ005996B0000	1/1

Order 2 pcs for each section.



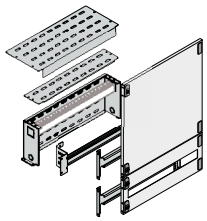
Top/bottom compartment: adjustable position rear partition doors

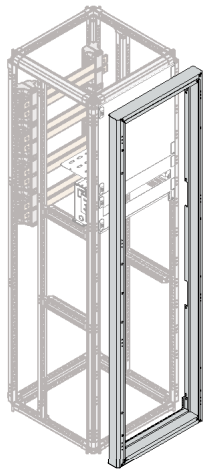
They can be mounted in the top or bottom compartment if cable connections and N/PE busbars are not present.

External dimensions H (mm)	W (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Adjustable rear partition door				
700	500	PSVH7050	1STQ003143B0000	1/1
700	600	PSVH7060	1STQ003144B0000	1/1
700	800	PSVH7080	1STQ003145B0000	1/1
700	1000	PSVH7010	1STQ003146B0000	1/1

Vertical breaker section

Cover kits



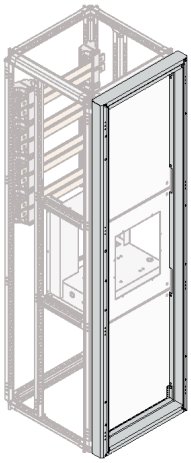


Section with an additional DIN rail kit

Description	Dimensions W (mm)	Delivered in kit Type	Order code	Package/ No. pcs
DIN rail kit	600	PDIN5001	1STQ007908B0000	1/1
DIN rail kit	800	PDIN7001	1STQ007909B0000	1/1
DIN rail kit	1000	PDIN9001	1STQ007910B0000	1/1
DIN rail panel	600	PPNT5001	1STQ007911B0000	1/1
DIN rail panel	800	PPNT7001	1STQ007912B0000	1/1
DIN rail panel	1000	PPNT9001	1STQ007913B0000	1/1
Blind panel	600	PPNT5501	1STQ007914B0000	1/1
Blind panel	800	PPNT7501	1STQ007915B0000	1/1
Blind panel	1000	PPNT9501	1STQ007916B0000	1/1
Frame for external door	600	PEFD5001	1STQ007917B0000	1/1
Frame for external door	800	PEFD7001	1STQ007918B0000	1/1
Frame for external door	1000	PEFD9001	1STQ007919B0000	1/1
DIN segreg. H450	600	PDIN5450	1STQ008142B0000	1/1
DIN segreg. H450	800	PDIN7450	1STQ008143B0000	1/1
DIN segreg. H450	1000	PDIN9450	1STQ008144B0000	1/1
DIN segreg. H450 for wiring duct		PDIN1450	1STQ008145B0000	1/1
DIN segreg. H450 N/PE bar		PDIN2450	1STQ008146B0000	1/1

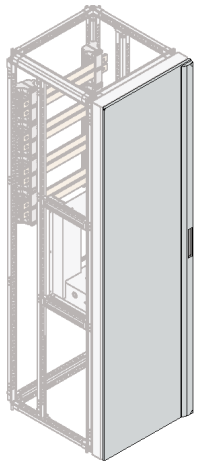
Vertical breaker section

Cover kits



Frame for external door

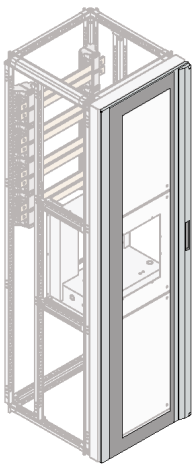
Dimensions (mm)		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
2100	500	PEFD0500	1STQ005696B0000	1/1
2100	600	PEFD0600	1STQ005697B0000	1/1
2100	800	PEFD0800	1STQ005699B0000	1/1
2100	1000	PEFD1000	1STQ005701B0000	1/1
2100	1100	PEFD1100	1STQ005702B0000	1/1



External blind door

Description	Dimensions W (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Blind door	500	PDLB2041	1STQ003607B0000	1/1
Blind door	600	PDLB2153	1STQ006036B0000	1/1
Blind door	800	PDLB2072	1STQ006039B0000	1/1
Blind door	1000	PDLB2091	1STQ006041B0000	1/1

Door handle to be ordered separately.



External glass door

Description	Dimensions W (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Glass door	500	PDLG2043	1STQ006035B0000	1/1
Glass door	600	PDLG2153	1STQ006046B0000	1/1
Glass door	800	PDLG2072	1STQ006040B0000	1/1
Glass door	1000	PDLG2091	1STQ006042B0000	1/1

Door handle to be ordered separately.

Vertical breaker section

Cover kits



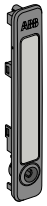
PHLS0010



PHLL0011



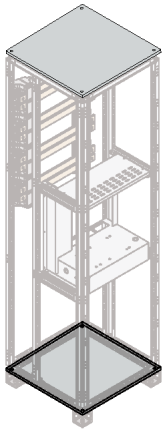
PHLL0012



PHLL0013

Door handles and locking systems

Description	Delivered in kit Type	Order code	Package/ No. pcs
Standard lever with push-button	PHLS0010	1STQ008126A0000	1/1
Padlockable lever	PHLS0011	1STQ002282B0000	1/1
Lever for semicylinder inserts	PHLS0012	1STQ002283B0000	1/1
Standard lever without push-button	PHLS0013	1STQ002334B0000	1/1

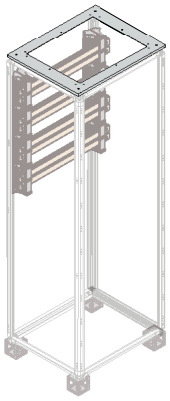


Blind top external panel

Dimensions W (mm)	D (mm)	Delivered in kit Type	Order code	Package/ No. pcs
500	600	PTBB4050	1STQ007114A0000	1/1
	800	PTBB4070	1STQ007115A0000	1/1
600	600	PTBB5057	1STQ009407A0000	1/1
	800	PTBB5070	1STQ009435A0000	1/1
800	600	PTBB5070	1STQ009435A0000	1/1
	800	PTBB7072	1STQ003358B0000	1/1
1000	600	PTBB5090	1STQ001283B0000	1/1
	800	PTBB9070	1STQ003600B0000	1/1

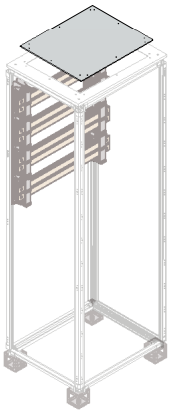
Vertical breaker section

Cover kits



Top panel with cutout

Dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
500	600	PTBO4050	1STQ007142A0000	1/1
500	800	PTBO4070	1STQ007143A0000	1/1
600	600	PTBO5050	1STQ007145A0000	1/1
600	800	PTBO5070	1STQ007146A0000	1/1
800	600	PTBO7050	1STQ008505B0000	1/1
800	800	PTBO7070	1STQ008506B0000	1/1
1000	600	PTBO9050	1STQ008508B0000	1/1
1000	800	PTBO9070	1STQ008509B0000	1/1

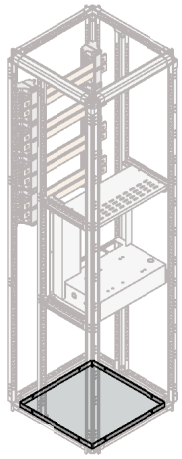


Cutout cover

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
500	600	PFCF4050	1STQ007665A0000	1/1
500	800	PFCF4070	1STQ007666A0000	1/1
600	600	PFCF5050	1STQ007668A0000	1/1
600	800	PFCF5070	1STQ007669A0000	1/1
800	600	PFCF5070	1STQ007669A0000	1/1
800	800	PFCF7070	1STQ008512B0000	1/1
1000	600	PFCF5090	1STQ001292B0000	1/1
1000	800	PFCF7090	1STQ008513B0000	1/1

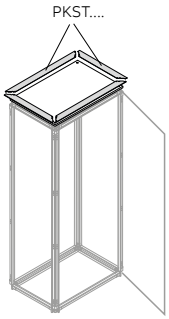
Vertical breaker section

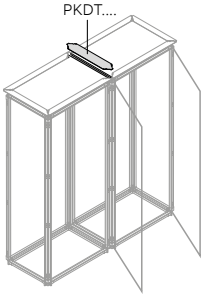
Cover kits

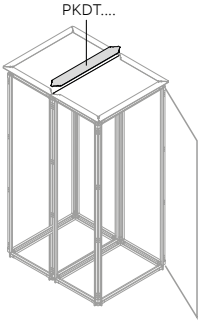


Internal bottom plate

Dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
500	600	PBWP4050	1STQ007178A0000	1/1
500	800	PBWP4070	1STQ007179A0000	1/1
600	600	PBWP5050	1STQ007181A0000	1/1
600	800	PBWP5070	1STQ007182A0000	1/1
800	600	PBWP5070	1STQ007182A0000	1/1
800	800	PBWP7074	1STQ006884B0000	1/1
1000	600	PBWP5090	1STQ001299B0000	1/1
1000	800	PBWP9074	1STQ006889B0000	1/1





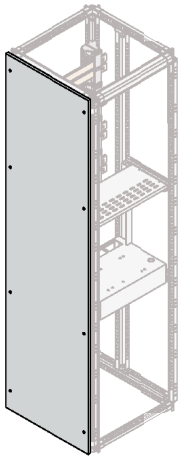


IPX1 profiles

Dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
IPX1 profiles for single sections (width)				
500		PKST0400	1STQ001908B0000	1/1
600		PKST0500	1STQ001909B0000	1/1
800		PKST0701	1STQ007920B0000	1/1
1000		PKTS0900	1STQ007921B0000	1/1
IPX1 profiles for single sections (depth)				
	600	PKDT0501	1STQ001938B0000	1/1
	800	PKDT0700	1STQ001923B0000	1/1
IPX1 profiles for back to back sections (width)				
500		PKDT0400	1STQ001920B0000	1/1
600		PKDT0500	1STQ001921B0000	1/1
800		PKDT0700	1STQ001923B0000	1/1
1000		PKDT0900	1STQ001926B0000	1/1
IPX1 profiles for side by side sections (depth)				
	600	PKST0501	1STQ001936B0000	1/1
	800	PKST0700	1STQ001911B0000	1/1

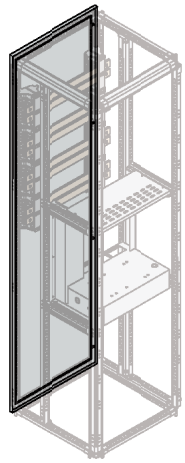
Vertical breaker section

Cover kits



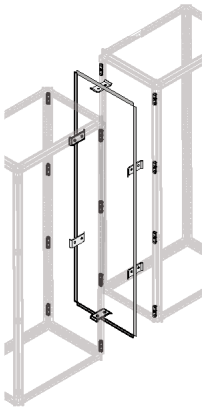
External blind side panel

Dimensions		Delivered in kit		Package/
H (mm)	D (mm)	Type	Order code	No. pcs
2100	600	PPEB2056	1STQ008106A0000	1/1
	800	PPEB2076	1STQ008107A0000	1/1



External blind rear panel

Dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
2100	500	PPEB2046	1STQ007590A0000	1/1
	600	PPEB2056	1STQ008106A0000	1/1
	800	PPEB2076	1STQ008107A0000	1/1
	1000	PPEB2096	1STQ008108A0000	1/1

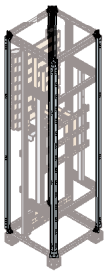


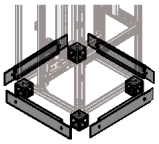
Kit for joining the frames of two sections

The kit for joining two sections is composed of different brackets and a gasket to maintain the IP protection degree. It allows to join two side-by-side or two back-to-back sections.

	Delivered in kit		Package/
Description	Type	Order code	No. pcs
Kit for joining structures	PSES0009	1STQ005273B0000	1/12

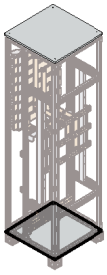
InLine
Quick selection guide

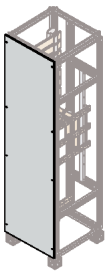
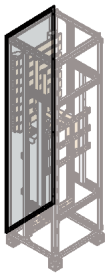


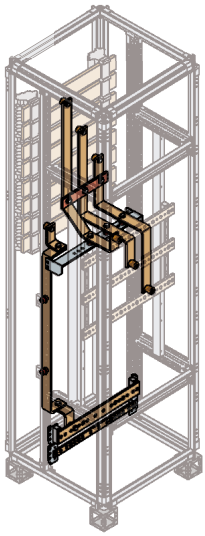
External Dimensions*			FRAME Uprights	Intermediate uprights for internal mounting kits	Structure crosspieces Galvanized sheet metal		H=100 mm plinth	Plinth blind panels	
H (mm)	W (mm)	D (mm)	Galvanized sheet metal	Galvanized sheet metal	Front/Rear	Side	Angle pieces	Front/Rear	Side
2200	600	600	PUPM2001	PUPM2011	PCFM0500	PCFM0500	PPAM0100	PPFM1050	PPFM1050
		800				PCFM0700			PPFM1070
	800	600			PCFM0700	PCFM0500	PPAM0100	PPFM1070	PPFM1050
		800				PCFM0700			PPFM1070
	1000	600			PCFM0900	PCFM0500	PPAM0100	PPFM1090	PPFM1050
		800				PCFM0700			PPFM1070

* The external dimensions include the H=100 mm plinth



EXTERNAL COVER				InLine kit 1200 mm
Top/bottom external panel	**Internal bottom**	**Side Panel**	**Rear Panel**	**Kit for fixing the Inline fuseholders**
		Blind	Blind	height of central section 1200 mm
PTBB5057	PBWP5050	PPEB2056	PPEB2056	PKNX1262
PTBB5070	PBWP5070	PPEB2076		
PTBB5070	PBWP5070	PPEB2056	PPEB2076	PKNX1282
PTBB7072	PBWP7074	PPEB2076		
PTBB5090	PBWP5090	PPEB2056	PPEB2096	PKNX1212
PTBB9070	PBWP9074	PPEB2076		



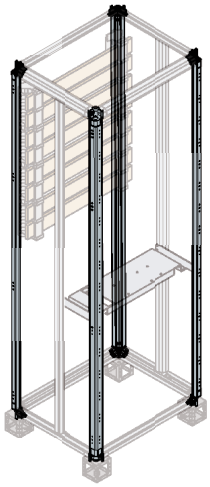
Connection between main and distribution busbars

H (mm)	D (mm)	Rating [A]	Distribution busbar cross section
1200	600	1000	3x 50x10 mm
		1250	3x 60x10 mm
		1600	3x 80x10 mm
		2000	3x 100x10 mm
	800	1000	3x 50x10 mm
		1250	3x 60x10 mm
		1600	3x 80x10 mm
		2000	3x 100x10 mm

—

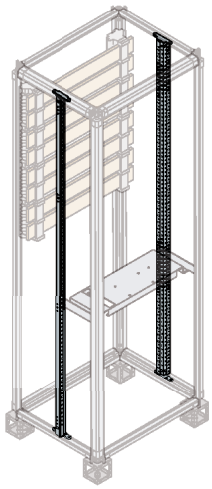
For distribution busbars codes, see pag. 2-74.

InLine
Order codes - Frame



Uprights – Galvanized sheet metal
Upright formed by a closed profile made of galvanized sheet metal. The uprights include 8 already assembled 3-way joints, 8 already assembled axial screws and 16 loose axial screws. For applications with In ≤ 4000 A.

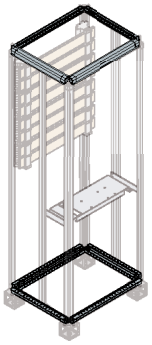
External dimensions H (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Galvanized sheet metal uprights			
2100	PUPM2001	1STQ003353B0000	1/4



Intermediate upright for internal mounting kits – Galvanized sheet metal
Upright formed by a closed profile made of galvanized sheet metal. For applications with In ≤ 4000 A. For D=600 and 800 mm order 2 pieces.

External dimensions H (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Galvanized sheet metal upright			
2100	PUPM2011	1STQ003355B0000	1/1

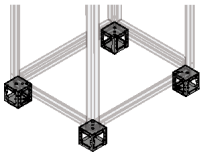
InLine
Order codes - Frame



Structure crosspieces – Galvanized sheel metal
Depth and width crosspieces for structures in galvanized sheet metal.

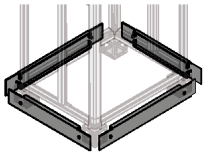
External dimensions W (mm)	D (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Width crosspieces				
600		PCFM0500	1STQ007039A0000	1/4
800		PCFM0700	1STQ007046A0000	1/4
1000		PCFM0900	1STQ007047A0000	1/4
Depth crosspieces				
	600	PCFM0500	1STQ007039A0000	1/4
	800	PCFM0700	1STQ007046A0000	1/4

PPAM0100



Universal angle pieces for plinths in galvanized sheet metal
Not pre-assembled to the structure. New angle piece with high mechanical strength. Can be fixed from the outside and from the inside of the structure even at a later date. Equipped with anti-rotation system and bottom that can be transported with a pallet trolley.

External dimensions H (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Plinth angle pieces			
100	PPAM0100	1STQ007048A0000	1/4



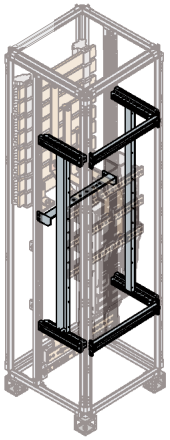
Plinth covers
Side and front/rear plinth covers H=100 mm RAL 7012.

External dimensions W (mm)	D (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Front/rear plinth covers				
600		PPFM1050	1STQ007052A0000	1/2
800		PPFM1070	1STQ007059A0000	1/2
1000		PPFM1090	1STQ007060A0000	1/2
Side plinth covers				
	600	PPFM1050	1STQ007052A0000	1/2
	800	PPFM1070	1STQ007059A0000	1/2

—
Order two sets of covers when using two plinths on top of each other (H = 200 mm). For three plinths accordingly three sets.

InLine

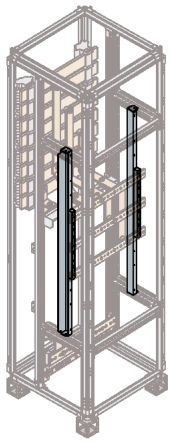
Order codes - Installation kits



InLine II installation kit

Kit for fixing Inline II fuseholders. Busbar holders are not included and must be ordered separately, see below.

Dimensions (mm)		Delivered in kit		Package/
H	W	Type	Order code	No. pcs
InLine mounting kit				
1200	600	PKNX1262	1STQ009298B0000	1/1
1200	800	PKNX1282	1STQ009299B0000	1/1
1200	1000	PKNX1212	1STQ009300B0000	1/1



Busbar mounting bars

To be ordered separately.

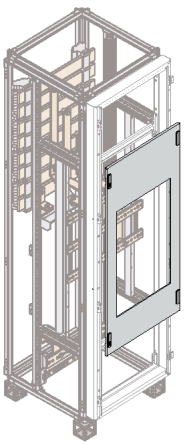
	Delivered in kit		Package/
Description	Type	Order code	No. pcs
Busbar mounting bar	ZX522	2CPX067909R9999	1/1

—
Order 2 pieces per section.

Panel for InLine mounting kit

For sections without external doors.

Dimensions (mm)		Delivered in kit		Package/
H	W	Type	Order code	No. pcs
1200	600	PKNL1264	1STQ006224B0000	1/1
1200	800	PKNL1284	1STQ006225B0000	1/1
1200	1000	PKNL1214	1STQ006226B0000	1/1



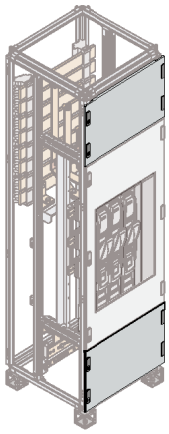
Panel for InLine mounting kit

For sections with external doors.

External dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
400	600	PKNL1263	1STQ005988B0000	1/1
400	800	PKNL1283	1STQ005989B0000	1/1
400	1000	PKNL1213	1STQ005987B0000	1/1

InLine

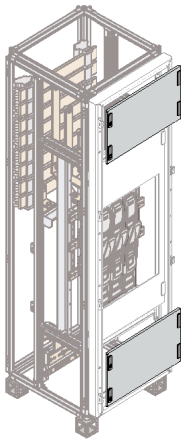
Order codes - Panels



Panels to cover top/bottom compartment

For sections without external doors.

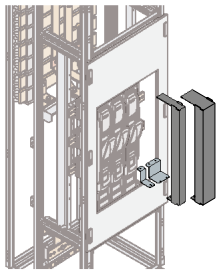
External dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
Flat front blind panel top/bottom without doors				
400	600	PPNT1250	1STQ003669B0000	1/1
400	800	PPNT1270	1STQ003671B0000	1/1
400	1000	PPNT1290	1STQ003673B0000	1/1



Panels to cover top/bottom compartment

For sections with external doors.

External dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
Flat front blind panel top/bottom with doors				
400	600	PPNT1251	1STQ005997B0000	1/1
400	800	PPNT1271	1STQ005998B0000	1/1
400	1000	PPNT1291	1STQ005999B0000	1/1



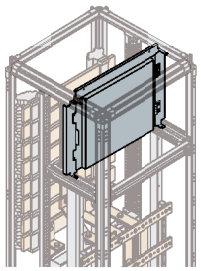
InLine dummy modules

Dummy modules to cover free space in the section and ensure touch protection.

Dimensions	Delivered in kit		Package/
W (mm)	Type	Order code	No. pcs
InLine vertical compensator			
50	PCNX0050	1STQ009301B0000	1/1
100	PCNX0100	1STQ009302B0000	1/1

InLine

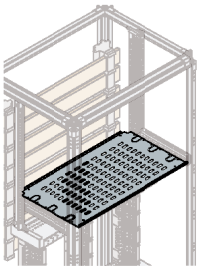
Order codes - Components



Top/bottom compartment: fixed and adjustable position rear partition doors

They can be mounted in the top or bottom compartment if cable connections and N/PE busbars are not present.

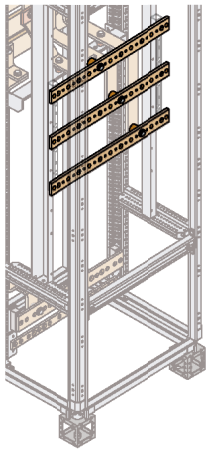
External dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
Adjustable rear partition door				
400	600	PSVH4060	1STQ003137B0000	1/1
400	800	PSVH4080	1STQ003138B0000	1/1
400	1000	PSVH4010	1STQ003139B0000	1/1



Horizontal segregations

The kit is composed composed by one horizontal segregation form 2a/3a.

External dimensions	Delivered in kit		Package/
W (mm)	Type	Order code	No. pcs
Horizontal segregation			
600	PSHS0601	1STQ004013B0000	1/1
800	PSHS0800	1STQ004014B0000	1/1
1000	PSHS1000	1STQ004015B0000	1/1



Distribution busbar for application

Horizontal busbar system to be selected according to the rating and the width of the section.

Application without external door.

Busbar cross section	Dimensions	Rating	Delivered in kit		Package/
(mm)	W (mm)	[A]	Type	Order code	No. pcs
3 busbars L1-L2-L3					
50x10	600	1000	PBNL5060	1STQ003630B0000	1/3
60x10		1250	PBNL6060	1STQ003631B0000	1/3
80x10		1600	PBNL8060	1STQ003632B0000	1/3
100x10		2000	PBNL1060	1STQ003633B0000	1/3
50x10	800	1000	PBNL5080	1STQ003634B0000	1/3
60x10		1250	PBNL6080	1STQ003635B0000	1/3
80x10		1600	PBNL8080	1STQ003636B0000	1/3
100x10		2000	PBNL1080	1STQ003637B0000	1/3
50x10	1000	1000	PBNL5010	1STQ003638B0000	1/3
60x10		1250	PBNL6010	1STQ003639B0000	1/3
80x10		1600	PBNL8010	1STQ003640B0000	1/3
100x10		2000	PBNL1010	1STQ003641B0000	1/3

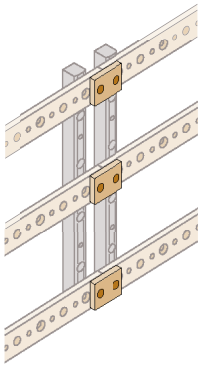
Horizontal busbar system to be selected according to the rating and the width of the section.

Application with external door.

Busbar cross section	Dimensions	Rating	Delivered in kit		Package/
(mm)	W (mm)	[A]	Type	Order code	No. pcs
3 busbars L1-L2-L3					
50X10	600	1000	PBNL5061	1STQ006233B0000	1/3
60X10		1250	PBNL6061	1STQ006234B0000	1/3
80X10		1600	PBNL8061	1STQ006235B0000	1/3
100X10		2000	PBNL1061	1STQ006236B0000	1/3
50X10	800	1000	PBNL5081	1STQ006237B0000	1/3
60X10		1250	PBNL6081	1STQ006238B0000	1/3
80X10		1600	PBNL8081	1STQ006239B0000	1/3
100X10		2000	PBNL1081	1STQ006240B0000	1/3
50X10	1000	1000	PBNL5011	1STQ006241B0000	1/3
60X10		1250	PBNL6011	1STQ006242B0000	1/3
80X10		1600	PBNL8011	1STQ006243B0000	1/3
100X10		2000	PBNL1011	1STQ006244B0000	1/3

InLine

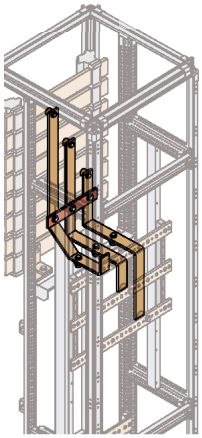
Order codes - Components



Busbar joints for distribution busbars

For InLine sections connected side by side.

Busbar cross section (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Busbars joint			
1x50x10	PDJ50X10	1STQ005405B0000	1/1
1x60x10	PDJ60X10	1STQ005406B0000	1/1
1x80x10	PDJ80X10	1STQ005407B0000	1/1
1x100x10	PDJ10X10	1STQ005408B0000	1/1



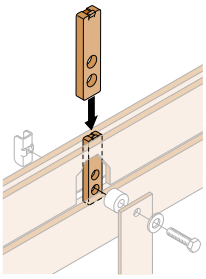
InLine connections 3 poles

To make the connection between the main and distribution busbars. Includes all the fixing accessories.

Depth (mm)	InLine Busbar In (A)	Busbar cross section (mm)	MBBS Rating	Type	Order code	CU Spacer	Fixing kit
600	1000 A	50x10	1000 A-2000 A	PBLL5010	1STQ003662B0000	3 pcs of ZX652	PCCS19X3 (1 pc)
			2500 A				PCCS20X3 (1 pc) + PCMP0014 (1 pc)
			3200 A				PCCS20X3 (1 pc) + PCMP0014 (1 pc)
	1250 A	60x10	1000 A-2000 A	PBLL6010	1STQ003663B0000		PCCS19X3 (1 pc)
			2500 A				PCCS20X3 (1 pc) + PCMP0014 (1 pc)
			3200 A				PCCS20X3 (1 pc) + PCMP0014 (1 pc)
	1600 A	80x10	1000 A-2000 A	PBLL8010	1STQ003664B0000	6 pcs of ZX652	PCCS19X3 (2 pcs)
			2500 A				PCCS20X3 (2 pcs) + PCMP0014 (2 pcs)
			3200 A				PCCS20X3 (2 pcs) + PCMP0014 (2 pcs)
	2000 A	100x10	1000 A-2000 A	PBLL1010	15TQ00366580000		PCCS19X3 (2 pcs)
			2500 A				PCCS20X3 (2 pcs) + PCMP0014 (2 pcs)
			3200 A				PCCS20X3 (2 pcs) + PCMP0014 (2 pcs)
800	1000 A	50x10	1000 A-2000 A	PBLL5011	1STQ003783B0000	6 pcs of ZX652	PCCS19X3 (1 pc)
			2500 A				PCCS20X3 (1 pc) + PCMP0014 (1 pc)
			3200 A-4000 A				PCCS20X3 (1 pc) + PCMP0014 (1 pc)
	1250 A	60x10	1000 A-2000 A	PBLL6011	1STQ003784B0000		PCCS19X3 (1 pc)
			2500 A				PCCS20X3 (1 pc) + PCMP0014 (1 pc)
			3200 A-4000 A				PCCS20X3 (1 pc) + PCMP0014 (1 pc)
	1600 A	80x10	1000 A-2000 A	PBLL8011	1STQ003785B0000		PCCS19X3 (2 pcs)
			2500 A				PCCS20X3 (2 pcs) + PCMP0014 (2 pcs)
			3200 A-4000 A				PCCS20X3 (2 pcs) + PCMP0014 (2 pcs)
	2000 A	100x10	1000 A-2000 A	PBLL1011	1STQ003786B0000		PCCS19X3 (2 pcs)
			2500 A				PCCS20X3 (2 pcs) + PCMP0014 (2 pcs)
			3200 A-4000 A				PCCS20X3 (2 pcs) + PCMP0014 (2 pcs)

InLine

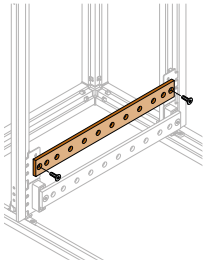
Order codes - Components



Copper compensators

To be selected in case of 4 or 6 bars per phase according to the rating and number of phases.

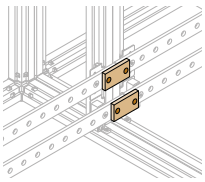
In (A)	No. of poles	Depth	Delivered in kit Type	Order code	Package/ No. pcs
Copper compensator					
1600/2000 A	3	600/800	PCMP0013	1STQ003698B0000	1/3



Busbars for neutral 100% separated

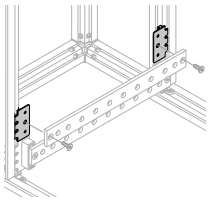
To be used for stand alone enclosure.

Busbar cross section (mm²)	Section external W (mm)	Connection Busbar rating (A)	Delivered in kit Type	Order code	Package/ No. pcs
Busbars for neutral 100% separated					
50x10	600	1000 A	PBNE1061	1STQ005307B0000	1/1
	800		PBNE1081	1STQ005308B0000	1/1
	1000		PBNE1051	1STQ005309B0000	1/1
60x10	600	1250 A	PBNE2060	1STQ003810B0000	1/1
	800		PBNE2080	1STQ003811B0000	1/1
	1000		PBNE2010	1STQ003813B0000	1/1
80x10	600	1600 A	PBNE2560	1STQ003820B0000	1/1
	800		PBNE2580	1STQ003821B0000	1/1
	1000		PBNE2510	1STQ003823B0000	1/1
2x50x10	600	2000 A	PBNE1161	1STQ005632B0000	1/1
	800		PBNE1181	1STQ005633B0000	1/1
	1000		PBNE1113	1STQ005634B0000	1/1



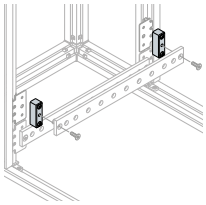
Busbar joint for neutral/earth busbars

Busbar cross section (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Busbars joint for N/PE busbars			
1x50x10	PNJ50X10	1STQ005398B0000	1/1
1x60x10	PNJ60X10	1STQ005399B0000	1/1
1x80x10	PNJ80X10	1STQ005400B0000	1/1
2x50x10	PNJ52X10	1STQ005401B0000	1/1



Brackets for PE/N compartment

Description	Delivered in kit Type	Order code	Package/ No. pcs
Brackets for PE /N busbar	PBRP0003	1STQ003149B0000	1/2

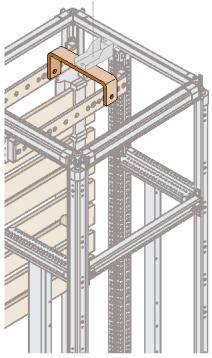


Neutral busbar holder

Two pieces must be ordered to fix the busbar in one section.

Description	Delivered in kit Type	Order code	Package/ No. pcs
Neutral busbar holder	ZX563	2CPX068735R9999	1/1

Optional
PBRP0005



PE front shift

No anchoring elements are required.

Description	Delivered in kit Type	Order code	Package/ No. pcs
Connection PE PE 60x10 mm D=600 mm	PEBB6062	1STQ003270C0000	1/1
Connection PE PE 60x10 mm D=800 mm	PEBB6082	1STQ003271C0000	1/1

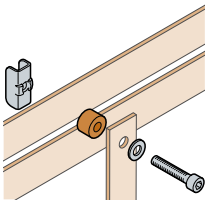
Option to add PBRP0005 - 1STQ003249C0000 for reinforced anchoring.

Neutral offset connection between the MBBS and the N-busbar

	MBB rating In (A)	Busbar cross section (mm)	D (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Offset connnection N to N						
A	1000 A	50x10	600 800 1000	POILV5010	1STQ005800B0000	1/1
	1250 A	60x10		POILV6010	1STQ005801B0000	1/1
	1600 A	80x10		POILV8010	1STQ005802B0000	1/1
	2000 A	100x10		POILV1010	1STQ005803B0000	1/1
B	1000 A	50x10	600	POILH5016	1STQ005804B0000	1/1
	1250 A	60x10		POILH6016	1STQ005805B0000	1/1
	1600 A	80x10		POILH8016	1STQ005806B0000	1/1
	2000 A	100x10		POILH1016	1STQ005807B0000	1/1
C	1000 A	50x10	800	POILH5018	1STQ005809B0000	1/1
	1250 A	60x10		POILH6018	1STQ005810B0000	1/1
	1600 A	80x10		POILH8018	1STQ005811B0000	1/1
	2000 A	100x10		POILH1018	1STQ005812B0000	1/1

Offset to main busbar system in D = 600 mm, you need to order the combination of codes A + B.

Offset to main busbar system in D = 800 mm, you need to order the combination of codes A + C.



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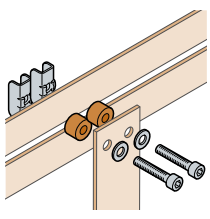
For 4000 A only D=800 mm

InLine - Bars fixing kit-selection table

This kit contains cylinders, screws and closing elements to be selected according to the below table and the breaker type, rating and section depth.

For current ≥ 3200 A it is necessary to complete the configuration with copper compensators PCMP.... (see page 2-47).

Busbar section (mm)	InLine Connection Busbar (A)	No. of poles	MBBS Rating (A)	Depth (mm)	Type	Order code	Qty to order	Package/ No. pcs
50x10	1000 A	3	1000/1250/1600/2000 A	600/800	PCC519X3	1STC00627203000	1	1/3
60x10	1250 A		2500/3200/4000 A		PCCS20X3	1STQ00627300000	1	1/3



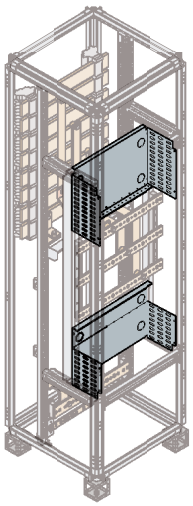
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For 4000 A only D=800 mm

Busbar section (mm)	InLine Connection Busbar (A)	No. of poles	MBBS Rating (A)	Depth (mm)	Type	Order code	Qty to order	Package/ No. pcs
80x10	1600 A	3	1000/1250/1600/2000 A	600/800	PCCS19X3	1ST000327200000	2 pcs	1/3
100x10	2000 A		2500/3200/4000 A		PCCS20X3	1STQ00327300000	2 pcs	1/3

InLine

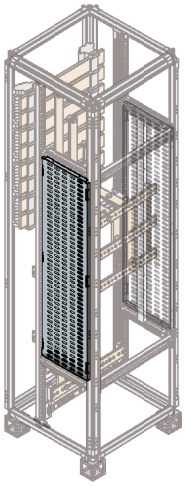
Order codes - Components



Form 2a/3a

Rear segregation to separate the InLine compartment

External dimensions		Delivered in kit		Package/
W (mm)	H(mm)	Type	Order code	No. pcs
Rear segregation				
600	1200	PSVR0062	1STQ008650B0000	1/1
800	1200	PSVR0082	1STQ008651B0000	1/1
1000	1200	PSVR1002	1STQ008652B0000	1/1

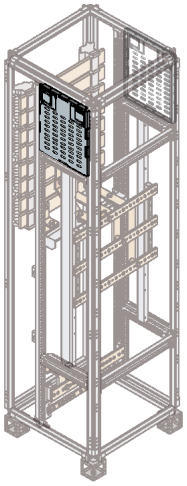


Side segregation for middle compartment

One segregation per section for each compartmented is needed.

External dimensions		Delivered in kit		Package/
H (mm)	D (mm) *	Type	Order code	No. pcs
Side segregation for middle compartment				
1200	300	PPVS1230	1STQ004123B0000	1/1

* up to intermediate upright.



Side segregation for wiring duct compartment

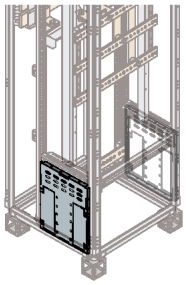
One segregation per section for each compartmented is needed.

External dimensions		Delivered in kit		Package/
H (mm)	D (mm) *	Type	Order code	No. pcs
Side segregation for wiring duct compartment				
400	300	PPVT4030	1STQ004124B0000	1/1

* up to intermediate upright.

InLine

Order codes - Segregation



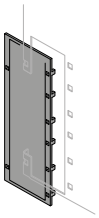
Form 2a/3a

Side segregation for P/NE compartment

One segregation per section for each compartment is needed.

External dimensions		Delivered in kit		Package/
H (mm)	D (mm) *	Type	Order code	No. pcs
Side segregation for P/NE compartment				
400	300	PPVB4030	1STQ004231B0000	1/1

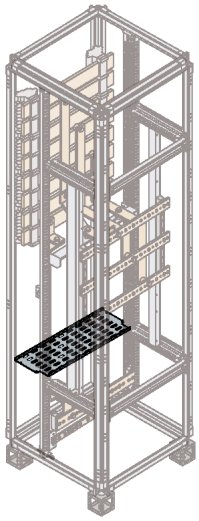
* up to intermediate upright.



Rubber cover for closing compartments on the side

Rubber cover for closing compartments on the side and control circuit connections.

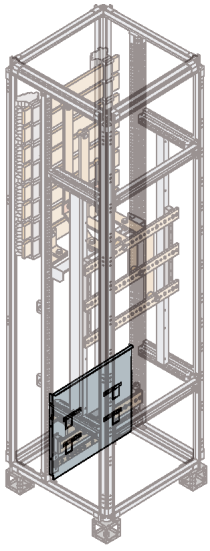
Cell dimensions (mm) H	Rubber dimensions (mm) H	Delivered in kit Type	Order code	Package/ No. pcs
Rubber cover				
300	250	PPRS0300	1STQ008585A0000	1/1



Horizontal segregation

The kit includes a horizontal segregation for the outgoing side (form 2a/3a).

External dimensions	Delivered in kit		Package/
W (mm)	Type	Order code	No. pcs
Horizontal segregation			
600	PSHS0602	1STQ004125B0000	1/1
800	PSHS0801	1STQ004126B0000	1/1
1000	PSHS1001	1STQ004127B0000	1/1



Form 3b

Segregation for bottom compartment

The kit includes a vertical rear segregation for the top or bottom compartment.

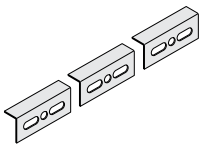
External dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
Vertical rear segregation				
400	600	PRVS0460	1STQ004128B0000	1/1
400	800	PRVS0480	1STQ004129B0000	1/1
400	1000	PRVS0410	1STQ004130B0000	1/1

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If the Inline are mounted upside down, two pieces have to be ordered.

InLine

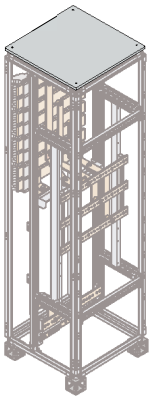
Order codes - External cover



Main busbar system protections

They must be installed to create an insulating distance between distribution busbars and lateral segregations.

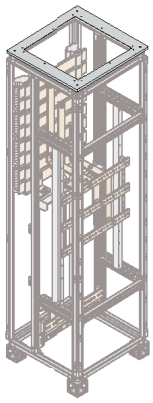
External dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
		PPZX9700	1STQ008549B0000	1/1



Blind Top - without gasket

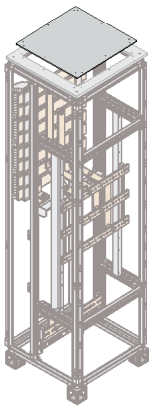
Pickled sheet steel without gasket.

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
Blind Top/Bottom				
600	600	PTBB5057	1STQ009407A0000	1/1
	800	PTBB5070	1STQ009435A0000	1/1
800	600	PTBB5070	1STQ009435A0000	1/1
	800	PTBB7072	1STQ003358B0000	1/1
1000	600	PTBB5090	1STQ001283B0000	1/1
	800	PTBB9070	1STQ003600B0000	1/1



Top panel with cutout

Dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
500	600	PTBO4050	1STQ007142A0000	1/1
500	800	PTBO4070	1STQ007143A0000	1/1
600	600	PTBO5050	1STQ007145A0000	1/1
600	800	PTBO5070	1STQ007146A0000	1/1
800	600	PTBO7050	1STQ008505B0000	1/1
800	800	PTBO7070	1STQ008506B0000	1/1
1000	600	PTBO9050	1STQ008508B0000	1/1
1000	800	PTBO9070	1STQ008509B0000	1/1

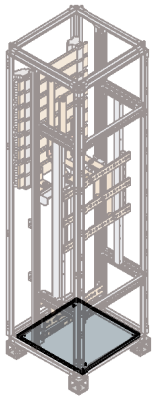


Cover for cutout

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
500	600	PFCF4050	1STQ007665A0000	1/1
500	800	PFCF4070	1STQ007666A0000	1/1
600	600	PFCF5050	1STQ007668A0000	1/1
600	800	PFCF5070	1STQ007669A0000	1/1
800	600	PFCF7050	1STQ008511B0000	1/1
800	800	PFCF7070	1STQ008512B0000	1/1
1000	600	PFCF5090	1STQ001292B0000	1/1
1000	800	PFCF7090	1STQ008513B0000	1/1

InLine

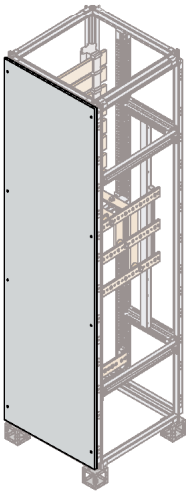
Order codes - External cover



Internal bottom - without gasket

Zinc-coated sheet metal.

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
Open top/bottom				
600	600	PBWP5050	1STQ007181A0000	1/1
	800	PBWP5070	1STQ007182A0000	1/1
800	600	PBWP5070	1STQ007182A0000	1/1
	800	PBWP7074	1STQ006884B0000	1/1
1000	600	PBWP5090	1STQ001299B0000	1/1
	800	PBWP9074	1STQ006889B0000	1/1



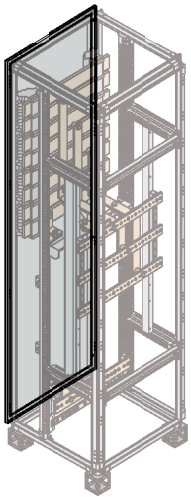
External blind side panel - with gasket

Pickled sheet steel with gasket. The code refers to one single side panel.

External dimensions		Delivered in kit		Package/
H (mm)	D (mm)	Type	Order code	No. pcs
Blind side panel				
2100	600	PPEB2056	1STQ008106A0000	1/1
	800	PPEB2076	1STQ008107A0000	1/1

InLine

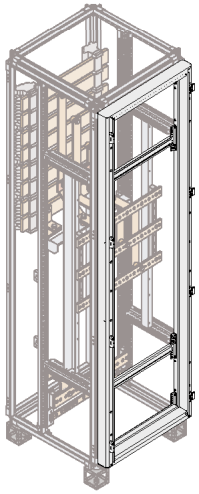
Order codes - External cover



External blind rear panel - with gasket

Pickled sheet steel. The code refers to one single side panel.

External dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
Blind rear panel				
2100	600	PPEB2056	1STQ008106A0000	1/1
	800	PPEB2076	1STQ008107A0000	1/1
	1000	PPEB2096	1STQ008108A0000	1/1

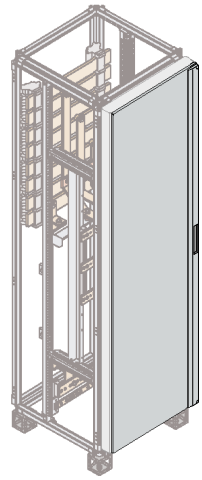


Frame for external door InLine structure

Dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
Door mounting kit				
2100	600	PKNL2262	1STQ006227B0000	1/1
	800	PKNL2282	1STQ006228B0000	1/1
	1000	PKNL2212	1STQ006229B0000	1/1

InLine

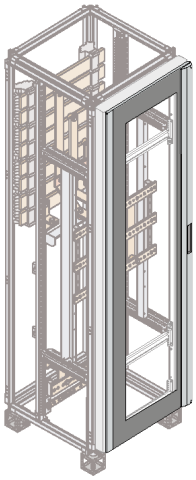
Order codes - External cover



External blind door

Description	Dimensions W (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Blind door	600	PDLB2153	1STQ006036B0000	1/1
Blind door	800	PDLB2072	1STQ006039B0000	1/1
Blind door	1000	PDLB2091	1STQ006041B0000	1/1

Handle to be ordered separately.



External glass door

Description	Dimensions W (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Glass door	600	PDLG2153	1STQ006046B0000	1/1
Glass door	800	PDLG2072	1STQ006040B0000	1/1
Glass door	1000	PDLG2091	1STQ006042B0000	1/1

With the glass door it is necessary to assemble two blind modules of 50 mm (PCNX0050), one on the right and one on the left of the structure.
Handle to be ordered separately.



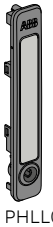
PHLS0010



PHLL0011



PHLL0012

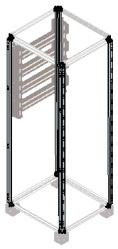


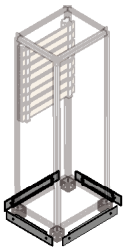
PHLL0013

Door handles and locking systems

Description	Delivered in kit Type	Order code	Package/ No. pcs
Standard lever with push-button	PHLS0010	1STQ008126A0000	1/1
Padlockable lever	PHLS0011	1STQ002282B0000	1/1
Lever for semicylinder inserts	PHLS0012	1STQ002283B0000	1/1
Standard lever without push-button	PHLS0013	1STQ002334B0000	1/1

XLine
Quick selection guide



External Dimensions*			FRAME					
			Uprights	Structure crosspieces Galvanized sheet metal		H=100 mm plinth	Plinth covers	
H (mm)	W (mm)	D (mm)	Galvanized sheet metal	Front/Rear	Side	Angle pieces	Front/ Rear	Side
Structure for XLine								
2200	750	600	PUPM2001	PCFM0650	PCFM0500	PPAM0100	PPFM1075	PPFM1050
		800			PCFM0700			PPFM1070
External Dimensions*								
2200	400	600	PUPM2001	PCFM0300	PCFM0500	PPAM0100	PPFM1030	PPFM1050
		800			PCFM0700			PPFM1070
	500	600		PCFM0400	PCFM0500	PPAM0100	PPFM1040	PPFM1050
		800			PCFM0700			PPFM1070
	700	600		PCFM0600	PCFM0500	PPAM0100	PPFM1060	PPFM1050
		800			PCFM0700			PPFM1070

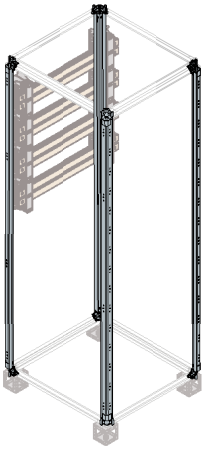
* The external dimensions include the H=100 mm plinth



EXTERNAL COVER

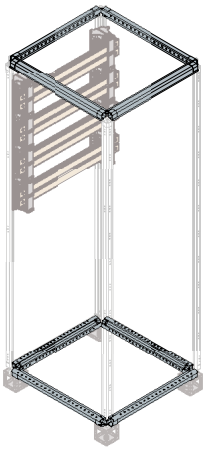
Blind top bottom	Open top bottom	Bottom without plinth	Blind rear panel	Frame for external door	Blind door without lever	Glass door without lever	Lever codes, to be added for each door				XLine components	
							Standard lever with push-button	Padlockable lever handle	Lever for semi-cylinder insert	Standard lever without push-button	Xline Frame for fixing kit and distribution busbars	Xline Frame for panels with partial door
PTBB6550		PBWP6550	PPEB2065	PEFD0650	PDLB2065	PDLG2065	PHLS0010	PHLS0011	PHLS0012	PHLS0013	PSVB2006	PPFX2006
PTBB6570		PBWP6570										
PTBB3050	PTBO3050	PBWP3054	PPEB2036	PEFD0400	PDLB2031		PHLS0010	PHLS0011	PHLS0012	PHLS0013		
PTBB3070	PTBO3070	PBWP3074										
PTBB4050	PTBO4050	PBWP4055	PPEB2046	PEFD0501	PDLB2041							
PTBB4070	PTBO4070	PBWP4075										
PTBB6050	PTBO6050	PBWP6055	PPEB2066	PFFX2066	PDLB2061							
PTBB6070	PTBO6070	PBWP6075										

XLine
Order codes - Frame



Uprights – Galvanized sheet metal
Upright formed by a closed profile made of galvanized sheet metal. The uprights include 8 already assembled 3-way joints, 8 already assembled axial screws and 16 loose axial screws. For applications with In ≤ 4000 A.

External dimensions H (mm)	Type	Order code	Package/ No. pcs
Galvanized sheet metal uprights			
2100	PUPM2001	1STQ003353B0000	1/4

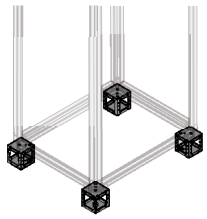


Structure crosspieces – Galvanized sheel metal
Depth and width crosspieces for structures in galvanized sheet metal.

External dimensions W (mm)	D (mm)	Type	Order code	Package/ No. pcs
Front crosspieces				
750		PCFM0650	1STQ007466B0000	1/4
400		PCFM0300	1STQ007037A0000	1/4
500		PCFM0400	1STQ007038A0000	1/4
700		PCFM0600	1STQ007040A0000	1/4
Side crosspieces				
	600	PCFM0500	1STQ007039A0000	1/4
	800	PCFM0700	1STQ007046A0000	1/4

XLine

Order codes - Frame



Universal angle pieces for plinths in galvanized sheet metal

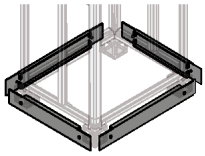
Not pre-assembled to the structure. New angle piece with high mechanical strength. Can be fixed from the outside and from the inside of the structure even at a later date. Equipped with anti-rotation system and bottom that can be transported with a pallet trolley.

External dimensions H (mm)	Type	Order code	Package/ No. pcs
Plinth angle pieces			
100	PPAM0100	1STQ007048A0000	1/4

"L" covers for plinth angle-pieces

Used for covering the sides of the plinth when the plinth covers shown below are not used.

External dimensions H (mm)	Type	Order code	Package/ No. pcs
Angle-piece covers			
100	PCPA0004	1STQ008109A0000	1/4



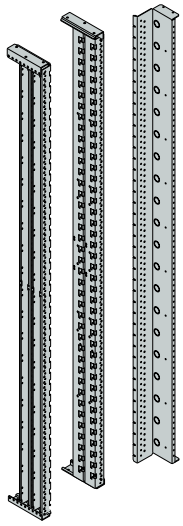
Plinth covers

Side and front/rear plinth covers H=100 mm RAL 7012.

External dimensions		Delivered in kit		Package/ No. pcs
W (mm)	D (mm)	Type	Order code	
Front plinth covers H=100 mm				
750		PPFM1065	1STQ007467B0000	1/2
400		PPFM1030	1STQ007050A0000	1/2
500		PPFM1040	1STQ007051A0000	1/2
700		PPFM1060	1STQ007053A0000	1/2
Side plinth covers H=100 mm				
	600	PPFM1050	1STQ007052A0000	1/2
	800	PPFM1070	1STQ007059A0000	1/2

XLine

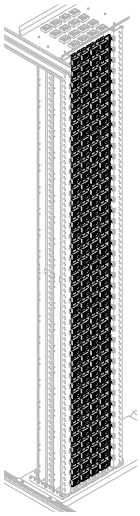
Order codes - Frame



Frame for kit fixing

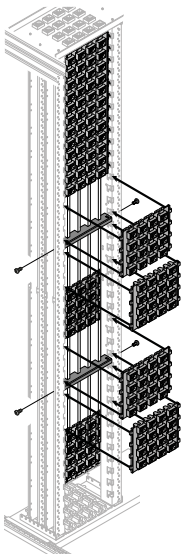
Pickled sheet metal painted RAL7035 (colour texture “orange peel”) IP 41, to enable the fixation of Tmax XT or Slimline kits.

External dimensions				Package/
H (mm)	W (mm)	Type	Order code	No. pcs
Frame for kit fixing				
2100	750	PSVB2006	1STQ005709B0000	1/1



Fixing kit for Icw 50 kA

Description	Type	Order code	Package/ No. pcs
Fixing kit for Icw 50 kA	PBSH0002	1STQ005715B0000	1/18

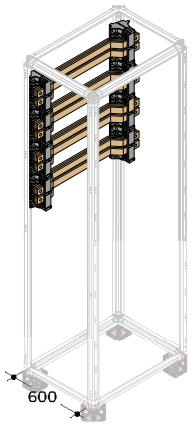


Fixing kit for Icw 75 kA

Description	Type	Order code	Package/ No. pcs
Fixing kit for Icw 75 kA	PAKF0000	1STQ005983B0000	1/23

XLine

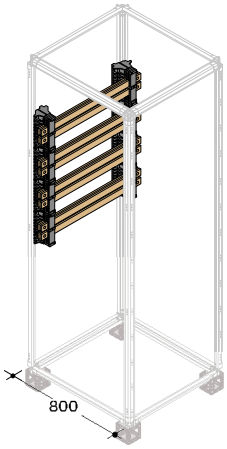
Order codes - Components



Main recessed compact busbars for XLine

Only for a depth of 600 mm.

MBB rating In (A)	External dimensions W (mm)	Cross section per phase/ N100%	Delivered in kit Type	Order code	Package/ No. pcs
1000/1250 A	750	2x20x10	PFCR1075	1STQ007583B0000	1/2
1600/2000 A		2x40x10	PFCR1675	1STQ007585B0000	1/2
2500/3200 A		4x40x10	PFCR3275	1STQ007588B0000	1/4



Main compact busbars for XLine

Only for depth of 800.

MBB rating In (A)	External dimensions W (mm)	Cross section per phase; N=100%	Delivered in kit Type	Order code	Package/ No. pcs
1000/1250 A	750	2x20x10	PFCB1075	1STQ00753180000	1/2
1600/2000 A		2x40x10	PFCB1675	1STQ007533B0000	1/2
2500/3200 A		4x40x10	PFCB3275	1STQ007536B0000	1/4
4000 A		4x60x10	PFCB4075	1STQ007537B0000	1/4

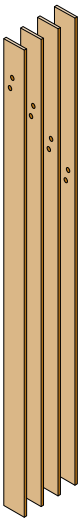
Main compact busbars for Xline cable compartment

For both depth 600 and 800 mm.

MBB rating In (A)	External dimensions W (mm)	Cross section per phase; N=100%	Delivered in kit Type	Order code	Package/ No. pcs
1000/1250 A	400	2x20x10	PCFB1040	1STQ003169B0000	1/2
1600/2000 A		2x40×10	PCFB1640	1STQ003190B0000	1/2
3200 A		4x40×10	PCFB3240	1STQ003219B0000	1/4
4000 A		4x60x10	PCFB4040	1STQ003229B0000	1/4
1000/1250 A	500	2x20x10	PCFB1050	1STQ003170B0000	1/2
1600/2000 A		2x40×10	PCFB1650	1STQ00319180000	1/2
3200 A		4x40×10	PCFB3250	1STQ003220B0000	1/4
4000 A		4x60x10	PCFB4050	1STQ003230B0000	1/4
1000/1250 A	700	2x20x10	PCFB1070	1STQ006188B0000	1/2
1600/2000 A		2x40×10	PCFB1670	1STQ006190B0000	1/2
3200 A		4x40×10	PCFB3270	1STQ006193B0000	1/4
4000 A		4x60x10	PCFB4070	1STQ006194B0000	1/4

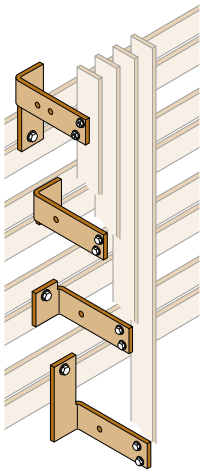
XLine

Order codes - Frame



Distribution busbars top or bottom

Description	Delivered in kit Type	Order code	Package/ No. pcs
DBBS 60x10 3p direct	PBFC6011	1STQ006156B0000	1/3
DBBS 60x10 4p direct	PBFQ6012	1STQ006158B0000	1/4
DBBS 80x10 3p direct	PBFC8011	1STQ006157B0000	1/3
DBBS 80x10 4p direct	PBFQ8012	1STQ006159B0000	1/4



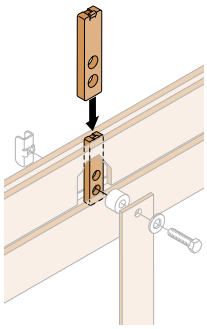
Connection between distribution busbars and main busbar system

Cross section (mm²)	DBBS In (A)	N. poles	External dimensions Depth (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Top or bottom position - only for D=600 mm						
60x10	1600 A	3P	600	PBCC0001	1STQ006164B0000	1/1
60x10	1600 A	4P		PBCC0005	1STQ006168B0000	1/1
80x10	2000 A	3P		PBCC0003	151Q006166B0000	1/1
80x10	2000 A	4P		PBCC0006	151Q00616980000	1/1
Top position - only for D=800 mm						
60x10	1600 A	3P	800	PBCC0002	1STQ006165B0000	1/1
60x10	1600 A	4P		PBCC0007	1STQ006170B0000	1/1
80x10	2000 A	3P		PBCC0040	1STQ006167B0000	1/1
80x10	2000 A	4P		PBCC0008	1STQ006171B0000	1/1
Bottom position - only for D=800 mm						
60x10	1600 A	3P	800	PBCC0038	1STQ002180C0000	1/1
60x10	1600 A	4P		PBCC0039	1STQ002181C0000	1/1
80x10	2000 A	3P		PBCC0040	1STQ002182C0000	1/1
80x10	2000 A	4P		PBCC0041	1STQ002183C0000	1/1

In case the MBBS is 2500 A, 3200 A or 4000 A, 2 pcs of copper compensators (PCMP0014) must be added

XLine

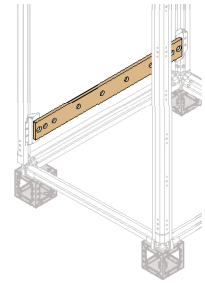
Order codes - Components



Copper compensators

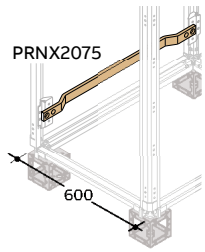
Must be selected in case of 4 or 6 busbars per phase according to the rating and number of phases.

In (A)	No. of poles	Depth	Delivered in kit Type	Order code	Package/ No. pcs
Copper compensator					
1600 A 2000 A	3	600/800	PCMP0013	1STQ003698B0000	1/3
	4		PCMP0014	1STQ003699B0000	1/4



PE main busbars for Xline section

External dimensions Width (mm)	Cross section (mm)	Depth (mm)	Delivered in kit Type	Order code	Package/ No. pcs
750	1x60x10	600	PRNX2075	1STQ007827B000	1/1
		800	PBNX2075	1STQ007543B000	1/1

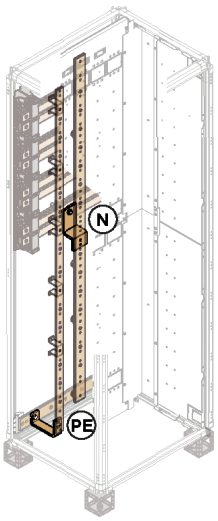


PE main busbars for Xline cable compartment

External dimensions Width (mm)	Cross section (mm)	Depth (mm)	Delivered in kit Type	Order code	Package/ No. pcs
400	1x60x10	600/800	PBNX2040	1STQ007591B000	1/1
500			PBNX2050	1STQ007598B000	1/1
700			PBNX2070	1STQ006208B000	1/1

XLine

Order codes - Components



Neutral connections

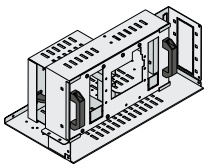
External dimensions D (mm)	Bars cross section (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Connection N-N to separated N in external cable bompartment				
600	60x10	PBNE6060	1STQ004658B0000	1/1
	80x10	PBNE6080	1STQ004659B0000	1/1
800	60x10	PBNE8060	1STQ004663B0000	1/1
	80x10	PBNE8080	1STQ004664B0000	1/1
Busbar N 100% for external cable container				
	60x10	PBNE6016	1STQ007867B0000	1/1
	80x10	PBNE8016	1STQ007868B0000	1/1

PE main busbars for internal cable compartment

External dimensions D (mm)	Bars cross section (mm)	Rating (A)	Delivered in kit Type	Order code	Package/ No. pcs
PE busbar					
600	30x10		PBCE3060	1STQ007864B0000	1/2
800	30x10		PBCE3080	1STQ007865B0000	1/2

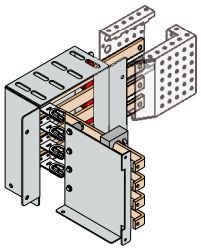
XLine

Order codes - Components



Breaker kit

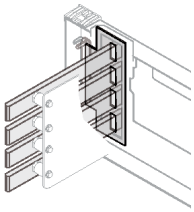
Circuit-breakers	Type	Order code	Package/ No. pcs
XT5 MOE 400 A 3P	PMXT5430	1STQ007642B0000	1/1
XT5 MOE 400 A 4P	PMXT5440	1STQ007643B0000	1/1
XT5 MOE 630 A 3P	PMXT5630	1STQ007644B0000	1/1
XT5 MOE 630 A 4P	PMXT5640	1STQ007645B0000	1/1
XT5 400 A 3P	PKXT5430	1STQ005720B0000	1/1
XT5 400 A 4P	PXKT5440	1STQ005721B0000	1/1
XT5 630 A 3P	PFXT5630	1STQ005722B0000	1/1
XT5 630 A 4P	PFXT5640	1STQ005723B0000	1/1
XT2 3P	PFXT2030	1STQ005716B0000	1/1
XT2 4P	PFXT2040	1STQ005717B0000	1/1
XT2 MOE 3P	PMXT2030	1STQ007638B0000	1/1
XT2 MOE 4P	PMXT2040	1STQ007639B0000	1/1
XT4 3P	PFXT4030	1STQ005718B0000	1/1
XT4 4P	PFXT4040	1STQ005719B0000	1/1
XT4 MOE 3P	PMXT4030	1STQ007640B0000	1/1
XT4 MOE 4P	PMXT4040	1STQ007641B0000	1/1



Plug-in outgoings

To be ordered only in WWD execution.

Circuit-breakers	No. poles	In (A)	Command	Type	Order code	Package/ No. pcs
XT2	3P	160	lever	PCPF2030	1STQ005747B0000	1/1
XT2	4P	160	lever	PCPF2040	1STQ005748B0000	1/1
XT4	3P	250	lever	PCPF4030	1STQ005749B0000	1/1
XT4	4P	250	lever	PCPF4040	1STQ005750B0000	1/1
XT5	3P	400	lever	PCPF5430	1STQ005751B0000	1/1
XT5	4P	400	lever	PCPF5440	1STQ005752B0000	1/1
XT5	3P	630	lever	PCPF5630	1STQ005753B0000	1/1
XT5	4P	630	lever	PCPF5640	1STQ005754B0000	1/1
XT2	3P	160	MOE	PCPM2030	1STQ007646B0000	1/1
XT2	4P	160	MOE	PCPM2040	1STQ007647B0000	1/1
XT4	3P	250	MOE	PCPM4030	1STQ007648B0000	1/1
XT4	4P	250	MOE	PCPM4040	1STQ007649B0000	1/1
XT5	3P	400	MOE	PCPM5430	1STQ007650B0000	1/1
XT5	4P	400	MOE	PCPM5440	1STQ007651B0000	1/1
XT5	3P	630	MOE	PCPM5630	1STQ007652B0000	1/1
XT5	4P	630	MOE	PCPM5640	1STQ007653B0000	1/1

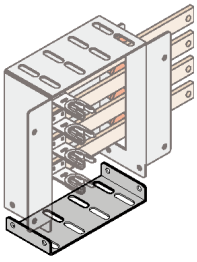


OPTIONAL FOR INCOMER

Outgoing lexan cover

Circuit-breakers	No. poles	Type	Order code	Package/ No. pcs
XT2	3P	PPXL0230	1STQ008168B0000	1/1
XT2	4P	PPXL0240	1STQ008169B0000	1/1
XT4	3P	PPXL0430	1STQ008170B0000	1/1
XT4	4P	PPXL0440	1STQ008171B0000	1/1
XT5	3/4P	PPXL0534	1STQ008172B0000	1/1

To be ordered only if the cassette is incoming on distribution busbar.

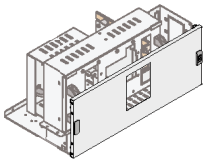


Outgoing horizontal segregation

Description	Type	Order code	Package/ No. pcs
Outgoings horizontal segregation	PSXX0600	1STQ006045B0000	1/1

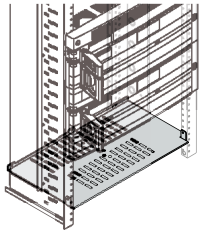
XLine

Order codes - Components



Circuit-breaker panel

Circuit-breakers	No. poles	In (A)	Command	Type	Order code	Package/ No. pcs
Panel without instrument						
XT2	3P	160	lever	PWAP2030	1STQ005732B0000	1/1
XT2	4P	160	lever	PWAP2040	1STQ005733B0000	1/1
XT4	3P	250	lever	PWAP4030	1STQ005734B0000	1/1
XT4	4P	250	lever	PWAP4040	1STQ005735B0000	1/1
XT5	3P	400	lever	PWAP5030	1STQ005736B0000	1/1
XT5	4P	400	lever	PWAP5040	1STQ005737B0000	1/1
XT5	3P	630	lever	PWAP5030	1STQ005736B0000	1/1
XT5	4P	630	lever	PWAP5040	1STQ005737B0000	1/1
XT2	3P	160	MOE	PWMP2030	1STQ005763B0000	1/1
XT2	4P	160	MOE	PWMP2040	1STQ005764B0000	1/1
XT4	3P	250	MOE	PWMP4030	1STQ005765B0000	1/1
XT4	4P	250	MOE	PWMP4040	1STQ005766B0000	1/1
XT5	3P	400	MOE	PWMP5030	1STQ005767B0000	1/1
XT5	4P	400	MOE	PWMP5040	1STQ005768B0000	1/1
XT5	3P	630	MOE	PWMP5030	1STQ005767B0000	1/1
XT5	4P	630	MOE	PWMP5040	1STQ005768B0000	1/1
Panel with instrument on the right side						
XT2	3P	160	lever	PIAP2030	1STQ005738B0000	1/1
XT2	4P	160	lever	PIAP2040	1STQ005739B0000	1/1
XT4	3P	250	lever	PIAP4030	1STQ005740B0000	1/1
XT4	4P	250	lever	PIAP4040	1STQ005741B0000	1/1
XT5	3P	400	lever	PIAP5030	1STQ005742B0000	1/1
XT5	4P	400	lever	PIAP5040	1STQ005743B0000	1/1
XT5	3P	630	lever	PIAP5030	1STQ005742B0000	1/1
XT5	4P	630	lever	PIAP5040	1STQ005743B0000	1/1
XT2	3P	160	MOE	PIMP2030	1STQ005769B0000	1/1
XT2	4P	160	MOE	PIMP2040	1STQ005770B0000	1/1
XT4	3P	250	MOE	PIMP4030	1STQ005771B0000	1/1
XT4	4P	250	MOE	PIMP4040	1STQ005772B0000	1/1
XT5	3P	400	MOE	PIMP5030	1STQ005773B0000	1/1
XT5	4P	400	MOE	PIMP5040	1STQ005774B0000	1/1
XT5	3P	630	MOE	PIMP5030	1STQ005773B0000	1/1
XT5	4P	630	MOE	PIMP5040	1STQ005774B0000	1/1
Panel with instrument on the left side						
XT2	3P	160	lever	PIAP2031	1STQ007798B0000	1/1
XT2	4P	160	lever	PIAP2041	1STQ007799B0000	1/1
XT4	3P	250	lever	PIAP4031	1STQ007800B0000	1/1
XT4	4P	250	lever	PIAP4041	1STQ007801B0000	1/1
XT5	3P	400	lever	PIAP5031	1STQ007802B0000	1/1
XT5	4P	400	lever	PIAP5041	1STQ007803B0000	1/1
XT5	3P	630	lever	PIAP5031	1STQ007802B0000	1/1
XT5	4P	630	lever	PIAP5041	1STQ007803B0000	1/1
XT2	3P	160	MOE	PIMP2031	1STQ007804B0000	1/1
XT2	4P	160	MOE	PIMP2041	1STQ007805B0000	1/1
XT4	3P	250	MOE	PIMP4031	1STQ007806B0000	1/1
XT4	4P	250	MOE	PIMP4041	1STQ007807B0000	1/1
XT5	3P	400	MOE	PIMP5031	1STQ007808B0000	1/1
XT5	4P	400	MOE	PIMP5041	1STQ007809B0000	1/1
XT5	3P	630	MOE	PIMP5031	1STQ007808B0000	1/1
XT5	4P	630	MOE	PIMP5041	1STQ007809B0000	1/1



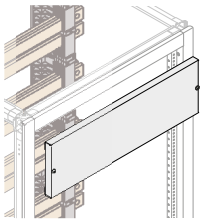
Breaker kit horizontal segregation

Description	Delivered in kit		Package/ No. pcs
	Type	Order code	
Breaker kit horizontal segregation	PBAP0001	1STQ008299B0000	1/1

Use separate breaker kits in one section

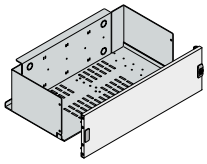
XLine

Order codes - Components



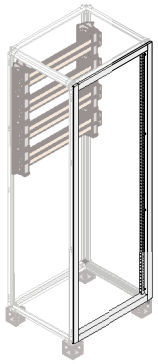
Blind panels

External dimensions		Delivered in kit		Package/
W (mm)	H (mm)	Type	Order code	No. pcs
650	50	PBAP0050	1STQ005744B0000	1/1



Empty container with blind front panel

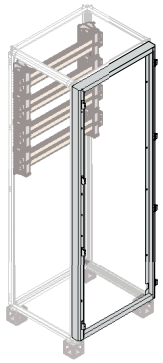
External dimensions		Delivered in kit		Package/
W (mm)	H (mm)	Type	Order code	No. pcs
750	200	PPMB2000	1STQ007818B0000	1/1
	250	PPMB2500	1STQ007819B0000	1/1
	300	PPMB3000	1STQ007820B0000	1/1



Frame for adapter panels - installation with partial doors

Description	Type	Order code	Package/ No. pcs
For adapter panel	PPFX2006	1STQ005710B0000	1/1

To be ordered only without external door.

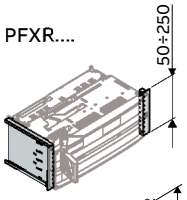


Frame for external door

External dimensions (mm)				Package/
H	W	Type	Order code	No. pcs
For structure				
2100	750	PEFD0650	1STQ007482B0000	1/1
For external cable compartment				
2100	400	PEFD0400	1STQ005695B0000	1/1
	500	PEFD0501	1STQ005698B0000	1/1
	700	PFFX2066	1STQ005711B0000	1/1

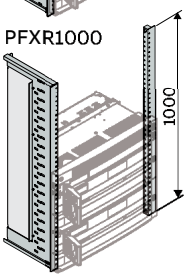
XLine

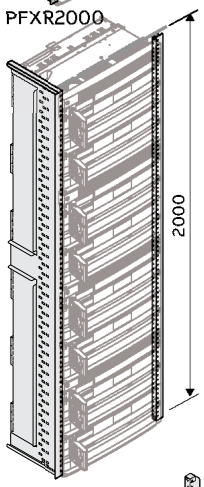
Order codes - Components



SlimLine XRG single mounting kit

Description	No. poles	Height	Delivered in kit Type	Order code	Package/ No. pcs
XRG00	3P	50 mm	PFXR0030	1STQ007810B0000	1/1
XRG00	4P	100 mm	PFXR1030	1STQ007611B0000	1/1
XRG1	3P				
XRG1	4P	150 mm	PFXR1040	1STQ007815B0000	1/1
XRG2/XRG3	3P	200 mm	PFXR2030	1STQ007812B0000	1/1
XRG2/XRG3	4P	250 mm	PFXR4040	1STQ007817B0000	1/1



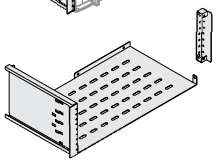


SlimLine XRG section mounting kits

When using SlimLines in half or the entire section, these mounting kits are quicker to install than multiple single mounting kits. Be aware that if these section mounting kits are installed, the XT breaker adapters cannot be mounted. As a result, any empty space can only be filled with SlimLines or the SlimLine compensation panel (PCXR0050).

External dimensions H (mm)	Delivered in kit Type	Order code	Package/ No. pcs
1000	PFXR1000	1STQ007968B0000	1/1
2000	PFXR2000	1STQ003269C0000	1/1

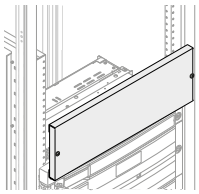
2000 mm mounting kit covers all the functional space; 1000 mm covers half of the section.



Horizontal support for Slimline XRG2/XRG3

External dimensions W (mm)	Delivered in kit Type	Order code	Package/ No. pcs
750	PSXX1000	1STQ003221C0000	1/1

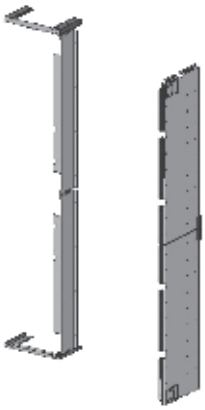
This horizontal metal support is added to facilitate the device installation for the Slimline XRG2 and XRG3 in combination with one of the SlimLine mounting kits (PFXR1000 or PFXR2000).



SlimLine compensation panel

External dimensions W (mm)	H (mm)	Delivered in kit Type	Order code	Package/ No. pcs
600	50	PCXR0050	1STQ007969B0000	1/1

The compensation panel is mounted on the SlimLine XRG mounting kits.



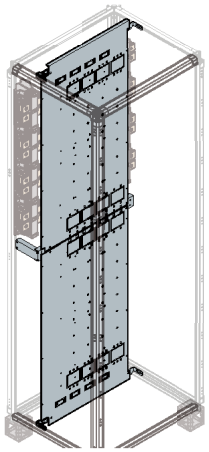
Segregations for side cable compartment

External dimensions H (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Panel for side cable compartment vertical side segregation			
2100	PTXS2006	1STQ005779B0000	1/2
	PTXS2010	1STQ001333C0000	1/2

Both parts are needed to segregate the section.

XLine

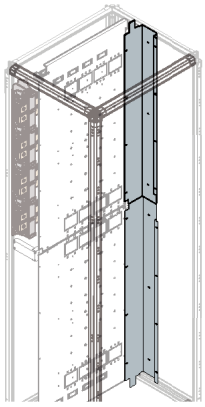
Order codes - Components



Segregation external cable compartment

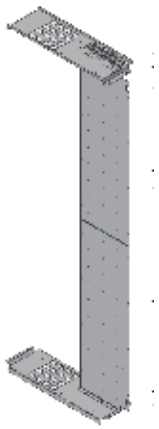
External dimensions	Delivered in kit		Package/
W (mm)	Type	Order code	No. pcs
400	PTVS2031	1STQ005789B0000	1/1
500	PTVS2041	1STQ005790B0000	1/1
600	PTVS2061	1STQ005791B0000	1/1

The brackets to mount the segregation depend on the depth of cabinet and are delivered with the PE-busbar PBCE3060 (for 600 mm depth) or PBCE3080 (for 800 mm depth)



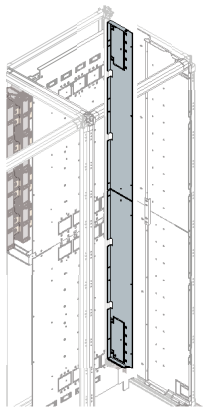
Angular segregation for external cable compartment

	Delivered in kit		Package/
Description	Type	Order code	No. pcs
Angular segregation	PTVS2379	1STQ005776B0000	1/1



Lateral segregation for external cable compartment

	Delivered in kit		Package/
Description	Type	Order code	No. pcs
Lateral segregation	PTVS2479	1STQ005778B0000	1/1



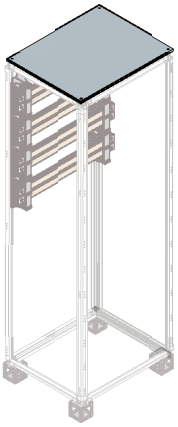
Rear segreagation for external cable compartment

External dimensions			Delivered in kit		Package/
H (mm)	W (mm)	D (mm)	Type	Order code	No. pcs
Panel for rear cable compartment					
2000		600	PTVS2015	1STQ003313B0000	1/2
		800	PTVS2035	1STQ003314B0000	1/2

To be ordered only if XLine is the last section on the right of a switchgear.

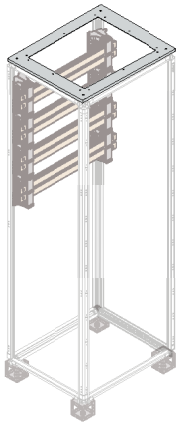
XLine

Order codes - External cover



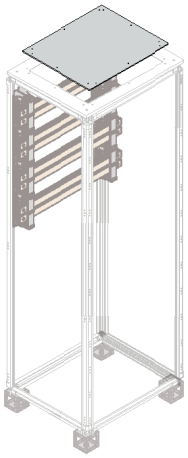
Blind top panel

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
750	600	PTBB6550	1STQ007468B0000	1/1
	800	PTBB6570	1STQ007469B0000	1/1



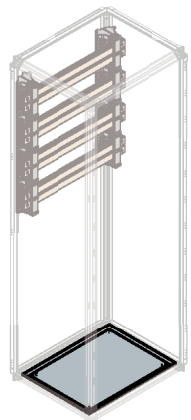
Top panel with cutout

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
For external cable compartment				
400	500	PTBO3050	1STQ007137A0000	1/1
	700	PTBO3070	1STQ007138A0000	1/1
400	500	PTBO4050	1STQ007142A0000	1/1
	700	PTBO4070	1STQ007143A0000	1/1
400	500	PTBO6050	1STQ007149A0000	1/1
	700	PTBO6070	1STQ007150A0000	1/1



Cover for cutout

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
400	600	PFCF3050	1STQ007660A0000	1/1
	800	PFCF3070	1STQ007661A0000	1/1
500	600	PFCF4050	1STQ007665A0000	1/1
	800	PFCF4070	1STQ007666A0000	1/1
700	600	PFCF6050	1STQ007672A0000	1/1
	800	PFCF6070	1STQ007673A0000	1/1

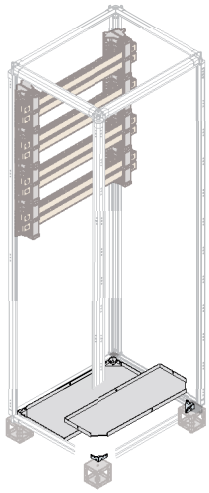


Internal blind bottom without plinth

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
IP 40 Blind				
750	600	PBWP6550	1STQ007471B0000	1/1
	800	PBWP6570	1STQ007472B0000	1/1

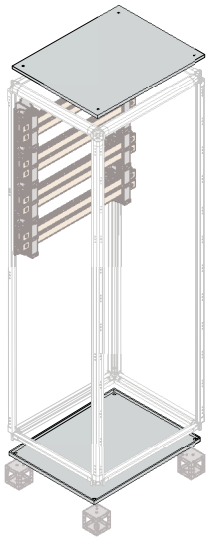
XLine

Order codes - External cover



Internal bottom panel

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
IP40 Blind				
400	600	PBWP3054	1STQ006875B0000	1/1
	800	PBWP3074	1STQ006876B0000	1/1
500	600	PBWP4055	1STQ007846B0000	1/1
	800	PBWP4075	1STQ007847B0000	1/1
700	600	PBWP6055	1STQ007849B0000	1/1
	800	PBWP6075	1STQ007850B0000	1/1



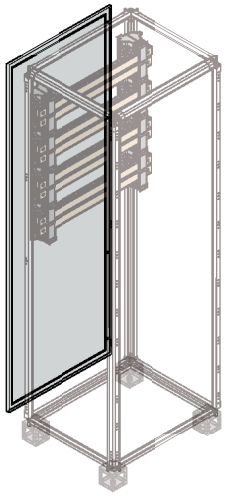
Blind Top/bottom panel IP40 – Pickled sheet steel

Pickled sheet steel without gasket. The article includes one single component that can be used either at the top or bottom. In order to purchase both the top and the bottom, please order two pieces of the same code or two different top/bottom codes according to the desired design of the structure. The code includes four M12x20 screws.

External dimensions				Package/
W (mm)	D (mm)	Type	Order code	No. pcs
Blind Top/Bottom IP40				
400	600	PTBB3050	1STQ007109A0000	1/1
	800	PTBB3070	1STQ007110A0000	1/1
500	600	PTBB4050	1STQ007114A0000	1/1
	800	PTBB4070	1STQ007115A0000	1/1
700	600	PTBB6050	1STQ007119A0000	1/1
	800	PTBB6070	1STQ007120A0000	1/1

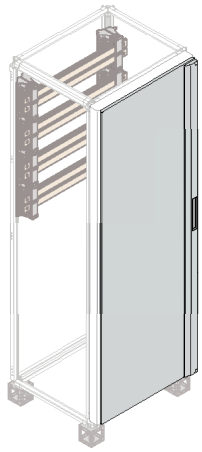
XLine

Order codes - External cover



External blind rear panel

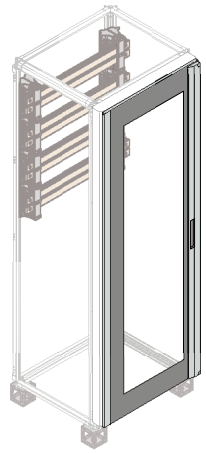
External dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
For structure				
2100	750	PPEB2065	1STQ007479B0000	1/1
For external cable compartment				
2100	400	PPEB2036	1STQ007589A0000	1/1
	500	PPEB2046	1STQ007590A0000	1/1
	700	PPEB2066	1STQ007592A0000	1/1



Blind door without handle

External dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
For structure				
2100	750	PDLB2065	1STQ007481B0000	1/1
For external cable compartment				
2100	400	PDLB2031	1STQ003606B0000	1/1
	500	PDLB2041	1STQ003607B0000	1/1
	700	PDLB2061	1STQ006037B0000	1/1

Handle to be ordered separately.



Glass door without handle

Glass door is only possible for the XLine section. The cable compartments are always with blind metal door

External dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
For structure				
2100	750	PDLG2065	1STQ007480B0000	1/1

Handle to be ordered separately.

XLine

Order codes - External cover


PHLS0010

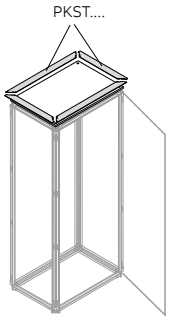

PHLL0011

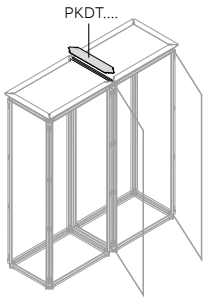

PHLL0012

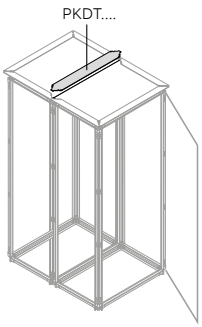

PHLL0013

Door handles and locking systems

Description	Delivered in kit Type	Order code	Package/ No. pcs
Standard lever with push-button	PHLS0010	1STQ008126A0000	1/1
Padlockable lever	PHLS0011	1STQ002282B0000	1/1
Lever for semicylinder inserts	PHLS0012	1STQ002283B0000	1/1
Standard lever without push-button	PHLS0013	1STQ002334B0000	1/1





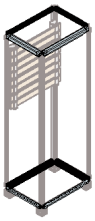
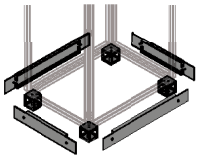
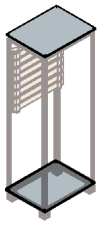
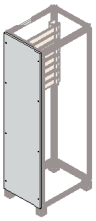


Top sealing kit IP31/IP41

Profiles for IP31/IP41 for top.

Dimensions (mm) W	D	Type	Order code	Package/ No. pcs
Roof profiles for single section				
	600	PKST0501	1STQ001936B0000	1/1
	800	PKST0700	1STQ001911B0000	1/2
750		PKST0650	1STQ007796B0000	1/2
400		PKST0300	1STQ001907B0000	1/2
500		PKST0400	1STQ001908B0000	1/2
700		PKST0600	1STQ001910B0000	1/2
Roof profile for back to back sections				
750		PKDT0650	1STQ007797B0000	1/1
400		PKDT0300	1STQ001919B0000	1/1
500		PKDT0400	1STQ001920B0000	1/1
700		PKDT0600	1STQ001922B0000	1/1
Roof profile for side by side sections				
	600	PKDT0501	1STQ001938B0000	1/1
	800	PKDT0700	1STQ001923B0000	1/1

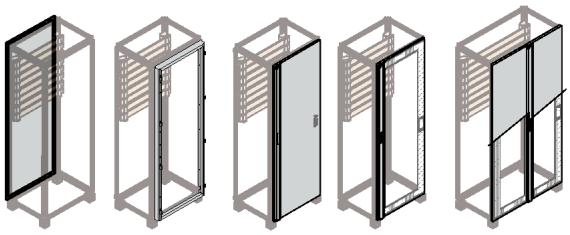
CombiLine
Quick selection guide

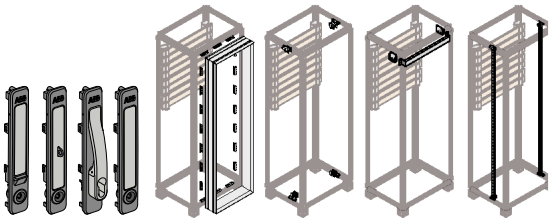






External Dimensions*	FRAME			EXTERNAL COVERS		
	Uprights Galvanized sheet metal	Structure crosspieces Galvanized sheet metal	H=100 mm plinth Galvanized sheet metal	Top/bottom panels with gasket	Top/bottom panels witout gasket	Side Panel

H (mm)	W (mm)	D (mm)		Front/Rear	Side	Angle pieces	Plinth covers Front/ Rear	Side	Blind	Blind	with gasket
2200	350	600	PUPM2001	PCFM0250	PCFM0500	PPAM0100	PPFM1025	PPFM1050	PTBB2556	PTBB2550	PPEB2056
		800			PCFM0700			PPFM1070	PTBB2576	PTBB2570	PPEB2076
	600	600		PCFM0500	PCFM0500	PPAM0100	PPFM1050	PPFM1050	PTBB5050	PTBB5050	PPEB2056
		800			PCFM0700			PPFM1070	PTBB5076	PTBB5070	PPEB2076
	850	600		PCFM0750	PCFM0500	PPAM0100	PPFM1075	PPFM1050	PTBB7556	PTBB7550	PPEB2056
		800			PCFM0700			PPFM1070	PTBB7576	PTBB7570	PPEB2076
	1100	600		PCFM1000	PCFM0500	PPAM0100	PPFM1010	PPFM1050	PTBB1056	PTBB1050	PPEB2056
		800			PCFM0700			PPFM1070	PTBB1076	PTBB1070	PPEB2076
	1350	600		PCFM1250	PCFM0500	PPAM0100 + PPIM0100	PPFM1250	PPFM1050	PTBB1256	PTBB1250	PPEB2056
		800			PCFM0700			PPFM1070	PTBB1276	PTBB1270	PPEB2076

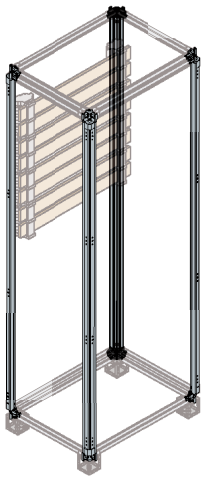
* The external dimensions include the H=100 mm plinth





Rear Panel	Frame for external doors	Doors without lever				Lever codes, to be added for each door				CombiLine kit				
						Standard lever with push-button	Padlockable lever handle	Lever for semi-cylinder insert	Standard lever without push-button					
with gasket		Single blind with gasket	Single glazed with gasket	Double blind with gasket	Double glazed with gasket					Touch-guard	Bracket	Adaptor for H2000 mm	WR frame	Depth support
PPEB2025	PEFD0350	PDLB2024								PNTG6025		PCCM2025	WR191	
PPEB2056	PEFD0601	PDLB2054	PDLG2054							PNTG6050		PCCM2050	WR291	
PPEB2075	PEFD8560	PDLB2074	PDLG2074							PNTG6075		PCCM2075	WR391	
PPEB2016	PEFD1060			PDLB2174 + PDLB2154	PDLG2174 + PDLG2154	PHLS0010	PHLS0011	PHLS0012	PHLS0013	PNTG6010	PBCM0004	PCCM2010	WR291x2	PDFC0500 PDFC0700
PPEB2013 + PPBB2014	PEFD1351			PDLB2174 + PDLB2274	PDLG2174 + PDLG2274					PNTG6012		PCCM2012	WR291 WR391	PDFC0500 PDFC0700

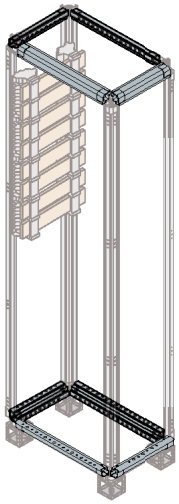
CombiLine
Order codes - Frame



Uprights – Galvanized sheet metal

Upright formed by a closed profile made of galvanized sheet metal. The uprights include 8 already assembled 3-way joints, 8 already assembled axial screws and 16 loose axial screws. For applications with In ≤ 4000 A.

External dimensions H (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Galvanized sheet metal uprights			
2100	PUPM2001	1STQ003353B0000	1/4



Structure crosspieces – Galvanized sheel metal

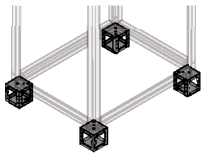
Depth and width crosspieces for structures in galvanized sheet metal.

External dimensions W (mm)	D (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Width crosspieces				
350		PCFM0250	1STQ007036A0000	1/4
600		PCFM0500	1STQ007039A0000	1/4
850		PCFM0750	1STQ007041A0000	1/4
1100		PCFM1000	1STQ007043A0000	1/4
1350		PCFM1250	1STQ007044A0000	1/4
Depth crosspieces				
	600	PCFM0500	1STQ007039A0000	1/4
	800	PCFM0700	1STQ007046A0000	1/4

CombiLine

Order codes - Frame

PPAM0100

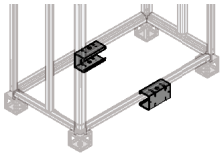


Universal angle pieces for plinths in galvanized sheet metal

Not pre-assembled to the structure. New angle piece with high mechanical strength. Can be fixed from the outside and from the inside of the structure even at a later date. Equipped with anti-rotation system and bottom that can be transported with a pallet trolley.

External dimensions H (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Plinth angle pieces			
100	PPAM0100	1STQ007048A0000	1/4

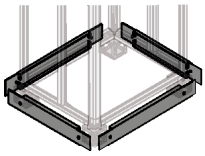
PPIM0100



Intermediate plinth

Intermediate plinth only for structures with a width of 1250 mm

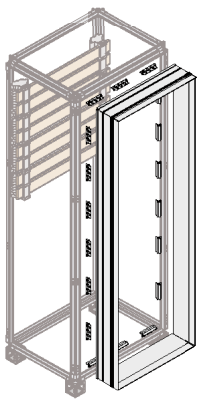
External dimensions H (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Intermediate plinths			
100	PPIM0100	1STQ007208A0000	1/2



Plinth covers

Side and front/rear plinth covers H=100 mm RAL 7012.

External dimensions W (mm)	D (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Front/rear plinth covers				
350		PPFM1025	1STQ007049A0000	1/2
600		PPFM1050	1STQ007052A0000	1/2
850		PPFM1075	1STQ007054A0000	1/2
1100		PPFM1010	1STQ007056A0000	1/2
1350		PPFM1250	1STQ007057A0000	1/2
Side plinth covers				
	600	PPFM1050	1STQ007052A0000	1/2
	800	PPFM1070	1STQ007059A0000	1/2



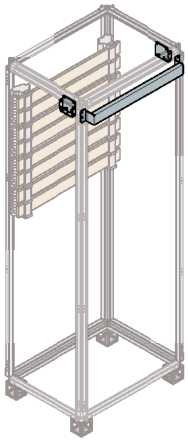
Touch guard profile - dedicated solution for CombiLine N

Profile to guarantee without a gasket the touch protection when CombiLine N modules are installed.

External dimensions (mm) H	W	Delivered in kit Type	Order code	Package/ No. pcs
Touch Guard profile with vertical reinforcements				
2100	350	PNTG6025	1STQ007342B0000	1/1
	600	PNTG6050	1STQ007343B0000	1/1
	850	PNTG6075	1STQ007344B0000	1/1
	1100	PNTG6010	1STQ007345B0000	1/1
	1350	PNTG6012	1STQ007346B0000	1/1

CombiLine

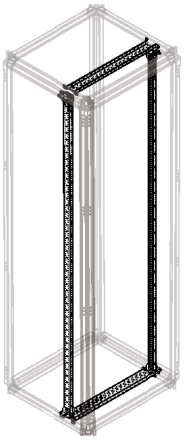
Order codes - Components



Height adapters for 2100 mm sections

Adapters to be used when installing CombiLine N modules in a CombiLine section. The components cover 50 mm on the bottom and on the top.

External dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
Adapter				
2100	350	PCCM2025	1STQ009355A0000	1/2
	600	PCCM2050	1STQ009356A0000	1/2
	850	PCCM2075	1STQ009357A0000	1/2
	1100	PCCM2010	1STQ009358A0000	1/2
	1350	PCCM2012	1STQ001318B0000	1/2



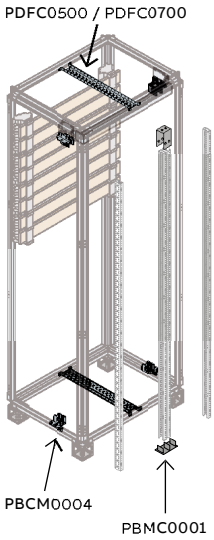
WR Frame

Mounting frame necessaires to fix CombiLine modules and bracket kit.

External dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
Adapter				
2100	350	WR191	2CPX042944R9999	1/1
	600	WR291	2CPX042945R9999	1/1
	850	WR391	2CPX042946R9999	1/1
	1100	WR291+WR391	-	1/2
	1350	WR291+WR391	-	1/2

—

2 pieces must be ordered per section.



Fixing set

Fixed set for the adaptation of standard WR frame on System pro E power structure.

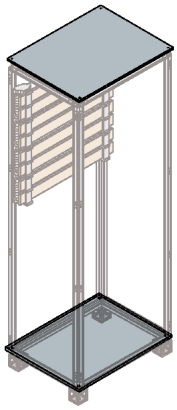
	Delivered in kit		Package/
Description	Type	Order code	No. pcs
CombiLine N fixing set	PBCM0004	1STQ009354A0000	1/4
Depth support for frontal partitions			
CombiLine crosspieces for frame D=600 mm	PDFC0500	1STQ001931B0000	1/2
CombiLine crosspieces for frame D=800 mm	PDFC0700	1STQ001932B0000	1/2
Frame holder			
WR mounting central bottom frame holder	RZ1P4	2CPX045950R9999	1/4
WR mounting central top frame holder	PBMC0001	1STQ001934B0000	1/2

—

Order the RZ1P4 older for two frames and PBMC0001 adaptor for CombiLine H=2000 mm.
If two or more CombiLine N sections have to be installed use the following bracket: PBMC0001 1 braket for CombiLine N D. frame H=2000 1STQ001934B0000.

CombiLine

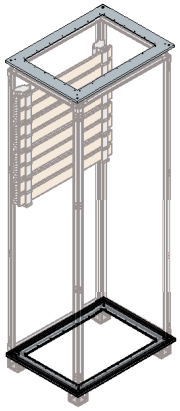
Order codes - Frame



Blind top/bottom – Pickled sheet steel

The article includes one single component that can be used as either at the top or bottom. In order to purchase both, the top and the bottom, please order two quantities of the same code or two different top/bottom codes according to the desired design of the structure. The code includes four M12x20 screws.

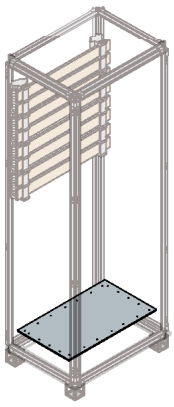
External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
With gasket blind top/bottom				
350	600	PTBB2556	1STQ007072A0000	1/1
	800	PTBB2576	1STQ007073A0000	1/1
600	600	PTBB5050	1STQ009179A0000	1/1
	800	PTBB5076	1STQ007085A0000	1/1
850	600	PTBB7556	1STQ007092A0000	1/1
	800	PTBB7576	1STQ007093A0000	1/1
1100	600	PTBB1056	1STQ007100A0000	1/1
	800	PTBB1076	1STQ007101A0000	1/1
1350	600	PTBB1256	1STQ002295B0000	1/1
	800	PTBB1276	1STQ002296B0000	1/1
Without gasket blind top/bottom				
350	600	PTBB2550	1STQ009370A0000	1/1
	800	PTBB2570	1STQ009423A0000	1/1
600	600	PTBB5050	1STQ009179A0000	1/1
	800	PTBB5070	1STQ009435A0000	1/1
850	600	PTBB7550	1STQ009387A0000	1/1
	800	PTBB7570	1STQ009429A0000	1/1
1100	600	PTBB1050	1STQ007128A0000	1/1
	800	PTBB1070	1STQ007129A0000	1/1
1350	600	PTBB1250	1STQ001316B0000	1/1
	800	PTBB1270	1STQ001317B0000	1/1



Open top/bottom for section with plinth - with gasket

Pickled sheet steel with holes. The code includes one single component that can be used as either at the top or bottom. In order to purchase both, the top and the bottom, please order two quantities of the same code or two different top/bottom codes according to the desired design of the structure. In order to reach IP65 protection degree, use the dedicated fixed cable incoming cutout covers PFCF…. The use of the single open top/bottom without cutout covers does not guarantee any degree of protection IP.

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
350	600	PTBO2550	1STQ007133A0000	1/1
350	800	PTBO2570	1STQ007134A0000	1/1
600	600	PTBO5050	1STQ007145A0000	1/1
600	800	PTBO5070	1STQ007146A0000	1/1
850	600	PTBO7550	1STQ007153A0000	1/1
850	800	PTBO7570	1STQ007154A0000	1/1
1100	600	PTBO1050	1STQ007161A0000	1/1
1100	800	PTBO1070	1STQ007162A0000	1/1
1350	600	PTBO1250	1STQ007165A0000	1/1
1350	800	PTBO1270	1STQ007166A0000	1/1



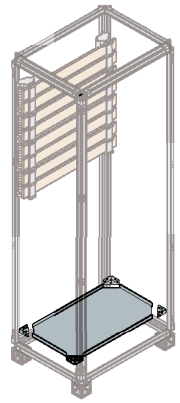
Fixed incoming cable cutout cover

Fixed incoming cable cutout cover in sheet metal to use in combination with the open bottom panel to guarantee IP65 protection class.

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
350	600	PFCF2550	1STQ007656A0000	1/1
350	800	PFCF2570	1STQ007657A0000	1/1
600	600	PFCF5050	1STQ007668A0000	1/1
600	800	PFCF5070	1STQ007669A0000	1/1
850	600	PFCF7550	1STQ007676A0000	1/1
850	800	PFCF7570	1STQ007677A0000	1/1
1100	600	PFCF1050	1STQ007684A0000	1/1
1100	800	PFCF1070	1STQ007685A0000	1/1
1350	600	2x PFCF6050	1STQ007672A0000	1/1
1350	800	2x PFCF6070	1STQ007673A0000	1/1

CombiLine

Order codes - External cover

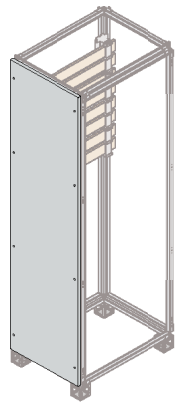


Internal blind bottom for section without plinth - without gasket

Internal galvanized steel bottom with special brackets kit included (special brackets kit available also as spare part with the code PBRB0004).

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
600	600	PBWP5050	1STQ007181A0000	1/1
600	800	PBWP5070	1STQ007182A0000	1/1
850	600	PBWP7550	1STQ007189A0000	1/1
850	800	PBWP7570	1STQ007190A0000	1/1
1100	600	PBWP1050	1STQ007197A0000	1/1
1100	800	PBWP1070	1STQ007198A0000	1/1
1350 *	600	PBWP1250	1STQ007201A0000	1/1
1350 *	800	PBWP1270	1STQ007202A0000	1/1
1350	600	2x PFCF6050	1STQ007672A0000	1/1
1350	800	2x PFCF6070	1STQ007673A0000	1/1

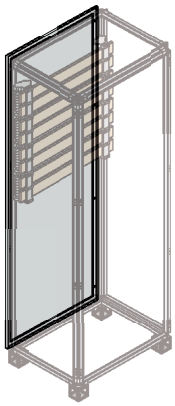
*Made in two pieces.



External blind side panel - with gasket

Pickled sheet steel with gasket. The code refers to one single side panel.

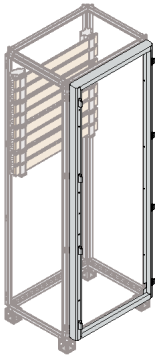
External dimensions		Delivered in kit		Package/
H (mm)	D (mm)	Type	Order code	No. pcs
Blind side panel				
2100	600	PPEB2056	1STQ008106A0000	1/1
	800	PPEB2076	1STQ008107A0000	1/1



External blind rear panel - with gasket

Pickled sheet steel with gasket and plugs with gasket.

External dimensions			Delivered in kit		Package/
H (mm)	W (mm)		Type	Order code	No. pcs
Blind rear panel					
2100	350		PPEB2025	1STQ009380A0000	1/1
	600		PPEB2056	1STQ008106A0000	1/1
	850		PPEB2075	1STQ009400 A0000	1/1
	1100		PPEB2016	1STQ007596A0000	1/1
	1350	right	PPEB2013	1STQ003547B0000	1/1
		left	PPEB2014	1STQ004142B0000	1/1

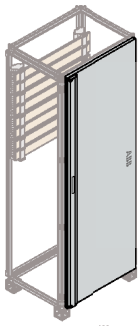


Frame for external door CombiLine structure

Dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
Door mounting kit				
2100	350	PEFD0350	1STQ005694B0000	1/1
	600	PEFD0601	1STQ006215B0000	1/1
	850	PEFD8560	1STQ005700B0000	1/1
	1100	PEFD1100	1STQ005702B0000	
	1350	PEFD1351	1STQ006216B0000	1/1

CombiLine

Order codes - External cover



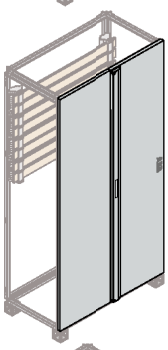
Blind door without lever -without gasket

Pickled sheet steel with gasket. Opens through 135° in (case of single section). Complete with 4 hinges to be screwed onto the uprights, 4 door closing brackets. Doors can be mounted both on the front and on the back of the enclosures. Reinforcing tubes for W >400 mm.

External dimensions H (mm)	W (mm)		Delivered in kit Type	Order code	Package/ No. pcs
Single blind door without gasket					
2100	350		PDLB2024	1STQ003208C0000	1/1
	600		PDLB2054	1STQ003209C0000	1/1
	850		PDLB2074	1STQ003210C0000	1/1
Double blind door without gasket for structure W=1100 mm					
2100	550	Left door	PDLB2174	1STQ003213C0000	1/1
	550	Right door	PDLB2154	1STQ003215C0000	1/1
Double blind door without gasket for structure W=1350 mm					
2100	550	Left door	PDLB2174	1STQ003213C0000	1/1
	800	Right door	PDLB2274	1STQ003217C0000	1/1

—

Handles to be ordered separately.



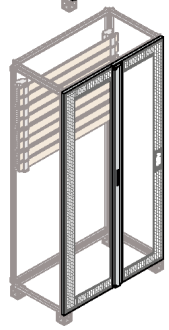
Glass door without lever - without gasket

Pickled sheet steel with gasket. Opens through 135° (in case of single section). Complete with 4 hinges to be screwed onto the uprights, 4 door closing brackets. Doors can be mounted both on the front and on the back of the enclosures. Reinforcing tubes for W >400 mm.

External dimensions H (mm)	W (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Single glazed door without gasket				
2100	600	PDLG2054	1STQ003211C0000	1/1
	850	PDLG2074	1STQ003212C0000	1/1
Double glazed door without gasket for structure W=1100 mm				
2100	550	PDLG2174	1STQ003214C0000	1/1
	550	PDLG2154	1STQ003216C0000	1/1
Double glazed door without gasket for structure W=1350 mm				
2100	550	PDLG2174	1STQ003214C0000	1/1
	800	PDLG2274	1STQ003218C0000	1/1

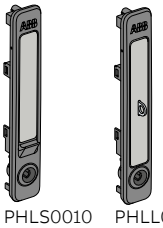
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Handles to be ordered separately.

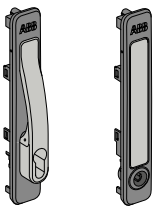


Door handles and locking systems

Description	Delivered in kit Type	Order code	Package/ No. pcs
Standard lever with push-button	PHLS0010	1STQ008126A0000	1/1
Padlockable lever	PHLS0011	1STQ002282B0000	1/1
Lever for semicylinder inserts	PHLS0012	1STQ002283B0000	1/1
Standard lever without push-button	PHLS0013	1STQ002334B0000	1/1



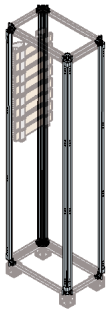
PHLS0010 PHLL0011

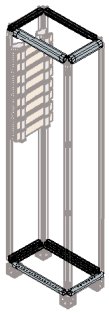


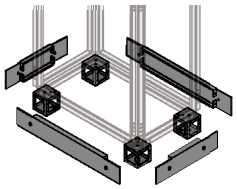
PHLL0012 PHLL0013

External cable compartment and back to back sections

Quick selection guide

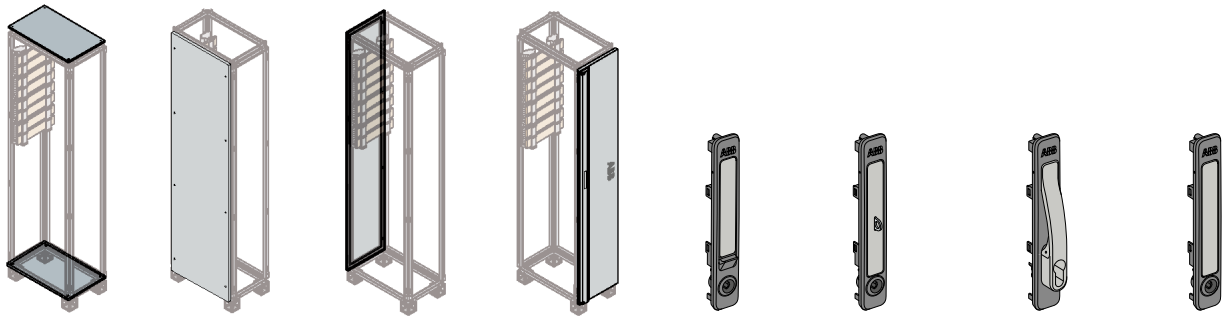






External Dimensions*			FRAME					
			Uprights	Structure crosspieces Galvanized sheet metal		H=100 mm plinth	Plinth covers	
H (mm)	W (mm)	D (mm)	Galvanized sheet metal	Front/Rear	Side	Angle pieces	Front/ Rear	Side
2200	400	600	PUPM2001	PCFM0300	PCFM0500	PPAM0100	PPFM1030	PPFM1050
		800			PCFM0700			PPFM1070
	500	600		PCFM0400	PCFM0500	PPAM0100	PPFM1040	PPFM1050
		800			PCFM0700			PPFM1070
	600	600		PCFM0500	PCFM0500	PPFM1050	PPFM1050	PTBB5050
		800			PCFM0700		PPFM1070	PTBB5070
	700	600		PCFM0600	PCFM0500	PPAM0100	PPFM1060	PPFM1050
		800			PCFM0700			PPFM1070
	800	600		PCFM0700	PCFM0500	PPAM0100	PPFM1070	PPFM1050
		800			PCFM0700			PPFM1070
	1000	600		PCFM0900	PCFM0500	PPAM0100	PPFM1090	PPFM1050
		800			PCFM0700			PPFM1070

* The external dimensions include the H=100 mm plinth

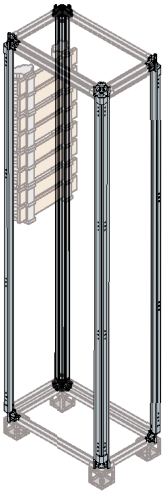


EXTERNAL COVERS

Top/bottom panels	Side panel	Rear panel	Doors without lever	Lever codes, to be added for each door			
Blind	Side panel Blind	Blind	Blind	Standard lever with push-button	Padlockable lever handle	Lever for semicylinder	Standard lever without push-button
PTBB3050	PPEB2056	PPEB2036	PDLB2031	PHLS0010	PHLS0011	PHLS0012	PHLS0012
PTBB3070	PPEB2076						
PTBB4050	PPEB2056	PPEB2046	PDLB2041				
PTBB4070	PPEB2076						
PPEB2056	PPBE2066	PPBE2056	PDLB2153				
PPEB2076							
PTBB6050	PPEB2056	PPEB2066	PDLB2061				
PTBB6070	PPEB2076						
PTBB5070	PPEB2056	PPEB2076	PDLB2072				
PTBB7072	PPEB2076						
PTBB5090	PPEB2056	PPEB2096	PDLB2091				
PTBB9070	PPEB2076						

External cable compartment and back to back sections

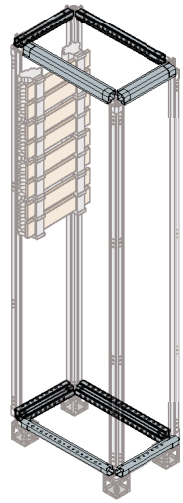
Order codes - Frame



Uprights – Galvanized sheet metal

Upright formed by a closed profile made of galvanized sheet metal. The uprights include 8 already assembled 3-way joints, 8 already assembled axial screws and 16 loose axial screws. For applications with In ≤ 4000 A.

External dimensions H (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Galvanized sheet metal uprights			
2100	PUPM2001	1STQ003353B0000	1/4



Structure crosspieces – Galvanized sheel metal

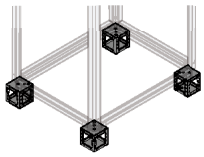
Depth and width crosspieces for structures in galvanized sheet metal.

External dimensions W (mm)	D (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Width crosspieces				
400		PCFM0300	1STQ007037A0000	1/4
500		PCFM0400	1STQ007038A0000	1/4
600		PCFM0500	1STQ007039A0000	1/4
700		PCFM0600	1STQ007040A0000	1/4
800		PCFM0700	1STQ007046A0000	1/4
1000		PCFM0900	1STQ007047A0000	1/4
Depth crosspieces				
	600	PCFM0500	1STQ007039A0000	1/4
	800	PCFM0700	1STQ007046A0000	1/4

External cable compartment and back to back sections

Order codes - Frame

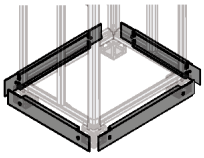
PPAM0100



Universal angle pieces for plinths in galvanized sheet metal

Not pre-assembled to the structure. New angle piece with high mechanical strength. Can be fixed from the outside and from the inside of the structure even at a later date. Equipped with anti-rotation system and bottom that can be transported with a pallet trolley.

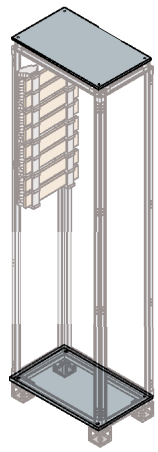
External dimensions H (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Plinth angle pieces			
100	PPAM0100	1STQ007048A0000	1/4



Plinth covers

Side and front/rear plinth covers H=100 mm RAL 7012.

External dimensions W (mm)	D (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Front/rear plinth covers				
400		PPFM1030	1STQ007050A0000	1/2
500		PPFM1040	1STQ007051A0000	1/2
600		PPFM1050	1STQ007052A0000	1/2
700		PPFM1060	1STQ007053A0000	1/2
800		PPFM1070	1STQ007059A0000	1/2
1000		PPFM1090	1STQ007060A0000	1/2
Side plinth covers				
	600	PPFM1050	1STQ007052A0000	1/2
	800	PPFM1070	1STQ007059A0000	1/2



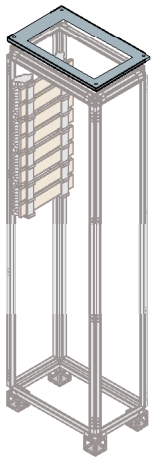
Blind Top/Bottom - without gasket

Pickled sheet steel without gasket. The article comprises one single component that can be used as either a top or bottom. In order to purchase both the top and the bottom, please order two quantities of the same code or two different top/bottom codes according to the desired design of the structure. The code includes four M12x20 screws.

External dimensions W (mm)	D (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Blind Top/Bottom				
400	600	PTBB3050	1STQ007109A0000	1/1
	800	PTBB3070	1STQ007110A0000	1/1
500	600	PTBB4050	1STQ007114A0000	1/1
	800	PTBB4070	1STQ007115A0000	1/1
600	600	PTBB5050	1STQ009179A0000	1/1
	800	PTBB5070	1STQ009435A0000	1/1
700	600	PTBB6050	1STQ007119A0000	1/1
	800	PTBB6070	1STQ007120A0000	1/1
800	600	PTBB5070	1STQ009435A0000	1/1
	800	PTBB7072	1STQ003358B0000	1/1
1000	600	PTBB5090	1STQ001283B0000	1/1
	800	PTBB9070	1STQ003600B0000	1/1

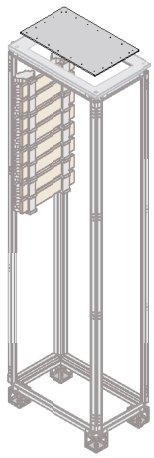
External cable compartment and back to back sections

Order codes - Frame



Open top

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
For external cable compartment				
400	600	PTBO3050	1STQ007137A0000	1/1
	800	PTBO3070	1STQ007138A0000	1/1
500	600	PTBO4050	1STQ007142A0000	1/1
	800	PTBO4070	1STQ007143A0000	1/1
600	600	PTBO5050	1STQ007145A0000	1/1
	800	PTBO5070	1STQ007146A0000	1/1
700	600	PTBO6050	1STQ007149A0000	1/1
	800	PTBO6070	1STQ007150A0000	1/1
800	600	PTBO7050	1STQ008505B0000	1/1
	800	PTBO7070	1STQ008506B0000	1/1
1000	600	PTBO9050	1STQ008508B0000	1/1
	800	PTBO9070	1STQ008509B0000	1/1

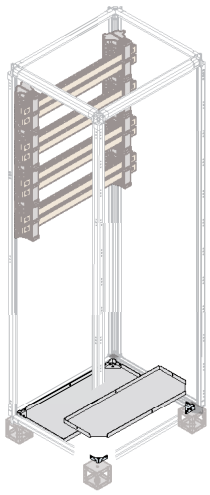


Fixed incoming cable cutout cover for external cable compartment

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
400	600	PFCF3050	1STQ007660A0000	1/1
	800	PFCF3070	1STQ007661A0000	1/1
500	600	PFCF4050	1STQ007665A0000	1/1
	800	PFCF4070	1STQ007666A0000	1/1
600	600	PFCF5050	1STQ007668A0000	1/1
	800	PFCF5070	1STQ007669A0000	1/1
700	600	PFCF6050	1STQ007672A0000	1/1
	800	PFCF6070	1STQ007673A0000	1/1
800	600	PFCF7050	1STQ008511B0000	1/1
	800	PFCF7070	1STQ008512B0000	1/1
1000	600	PFCF5090	1STQ001292B0000	1/1
	800	PFCF7090	1STQ008513B0000	1/1

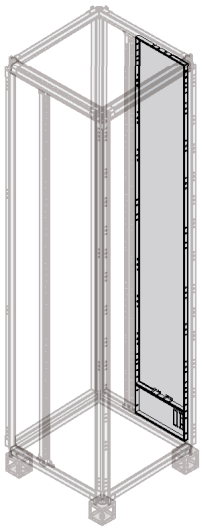
External cable compartment and back to back sections

Order codes - Frame



Internal bottom panel

External dimensions		Delivered in kit		Package/
W (mm)	D (mm)	Type	Order code	No. pcs
IP40 Blind				
400	600	PBWP3054	1STQ006875B0000	1/1
	800	PBWP3074	1STQ006876B0000	1/1
500	600	PBWP4055	1STQ007846B0000	1/1
	800	PBWP4075	1STQ007847B0000	1/1
600	600	PBWP5050	1STQ007181A0000	1/1
	800	PBWP5070	1STQ007182A0000	1/1
700	600	PBWP6055	1STQ007849B0000	1/1
	800	PBWP6075	1STQ007850B0000	1/1
800	600	PBWP5070	1STQ007182A0000	1/1
	800	PBWP7074	1STQ006884B0000	1/1
1000	600	PBWP5090	1STQ001299B0000	1/1
	800	PBWP9074	1STQ006889B0000	1/1



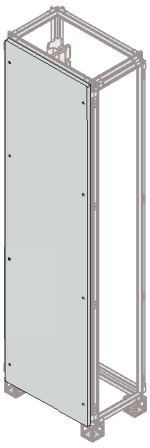
Separator for use in the empty field, back-to-back solutions and corner field

Separator for use in the empty field (with or without SS), back-to-back solutions and corner field (attention, CombiLine field not).
It must be exported if the shape is >1. The dividers are normally mounted in the right part of each field. bottom, please order two quantities of the same code or two different top/bottom codes according to the desired design of the structure. The code includes four M12x20 screws.

	Delivered in kit		Delivered assembled		Package/
Description	Type	Order code	Type	Order code	No. pcs
Vertical separator	PPVS5009	1STQ002730C0000	PPVS5009A	1STQ005866M0000	1/1

External cable compartment and back to back sections

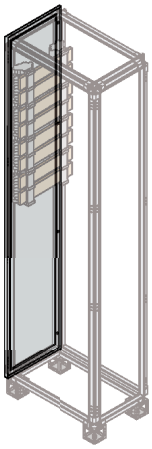
Order codes - Frame



Blind side panel - without gasket

Pickled sheet steel without gasket. The code refers to one single side panel.

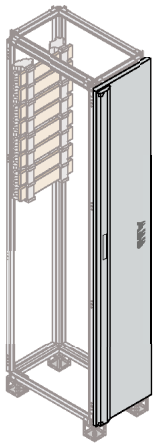
External dimensions		Delivered in kit		Package/
H (mm)	D (mm)	Type	Order code	No. pcs
Blind side panel				
2100	600	PPEB2056	1STQ008106A0000	1/1
	800	PPEB2076	1STQ008107A0000	1/1



External blind rear panel - with gasket

Pickled sheet steel with gasket. The code refers to one single side panel.

External dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
Blind rear panel				
2100	400	PPEB2036	1STQ007589A0000	1/1
	500	PPEB2046	1STQ007590A0000	1/1
	600	PPEB2056	1STQ008106A0000	1/1
	700	PPEB2066	1STQ007592A0000	1/1
	800	PPEB2076	1STQ008107A0000	1/1
	1000	PPEB2096	1STQ008108A0000	1/1



Doors without lever - without gasket

External dimensions		Delivered in kit		Package/
H (mm)	W (mm)	Type	Order code	No. pcs
Single blind door				
2100	400	PDLB2031	1STQ003606B0000	1/1
	500	PDLB2041	1STQ003607B0000	1/1
	600	PDLB2153	1STQ006036B0000	1/1
	700	PDLB2061	1STQ006037B0000	1/1
	800	PDLB2072	1STQ006039B0000	1/1
	1000	PDLB2091	1STQ006041B0000	1/1

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Handles to be ordered separately.

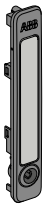
External cable compartment and back to back sections

Order codes - Frame


PHLS0010

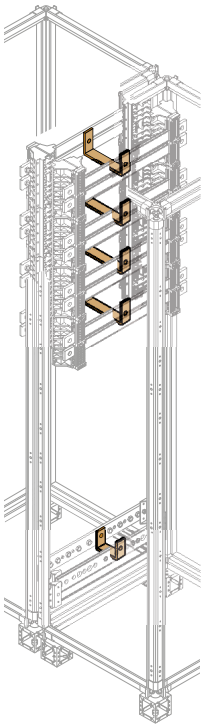

PHLL0011


PHLL0012


PHLL0013

Door handles and locking systems

Description	Delivered in kit Type	Order code	Package/ No. pcs
Standard lever with push-button	PHLS0010	1STQ008126A0000	1/1
Padlockable lever	PHLS0011	1STQ002282B0000	1/1
Lever for semicylinder inserts	PHLS0012	1STQ002283B0000	1/1
Standard lever without push-button	PHLS0013	1STQ002334B0000	1/1



Back to back copper joints for Main busbar and PE

Description	Dimensions (mm) D	Delivered in kit Type	Order code	Package/ No. pcs
Back to back CU 1000/1250 A	600/800	PBBB6812	1STQ007879B0000	1/1
Back to back CU 1600/2000 A	600/800	PBBB6862	1STQ007880B0000	1/1
Back to back CU 2500/3200 A	600/800	PBBB6823	1STQ007881B0000	1/1
Back to back CU 4000 A	600/800	PBBB6840	1STQ007882B0000	1/1
Back to back PE-CU	600/800	PBBB6850	1STQ007883B0000	1/1

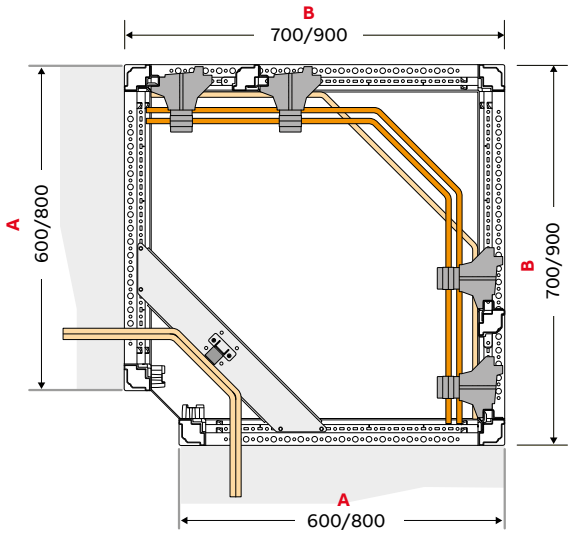
Segregation back to back sections

Description	Dimensions W (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Segregation back to back	500	PPVS2040	1STQ008236B0000	1/1
Segregation back to back	600	PPVS2050	1STQ008237B0000	1/1

Corner section

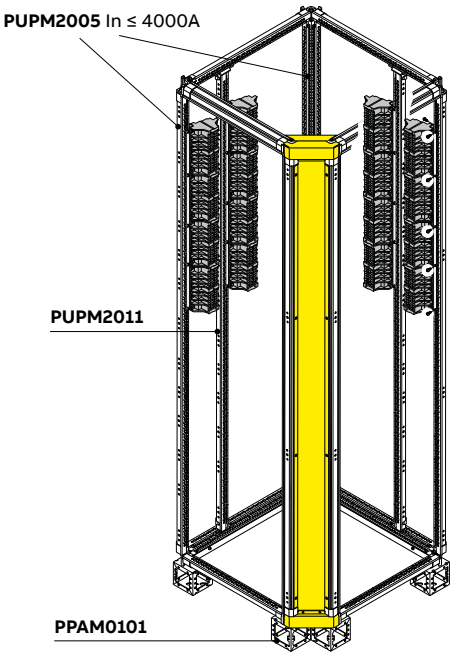
Example of corner section composition

Crosspieces to use on the top/bottom of corner section



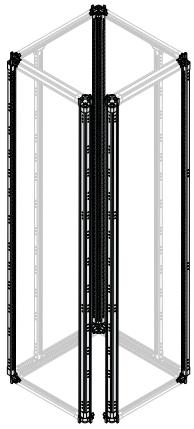
A External dimensions		B External dimensions	
(mm)	Crosspieces Type	(mm)	Crosspieces Type
600	1xPCFM0500	700	1xPCFM0600
800	1xPCFM0700	900	1xPCFM0800

Upright and others parts to use



External dimensions	Uprights	Plinth	Angled section
(mm)	Type	Type	Type
600	PUPM2005 + 2xPUPM2011	PPAM0101	PPEC2010
800	PUPM2005 + 2xPUPM2011	PPAM0101	PPEC2010

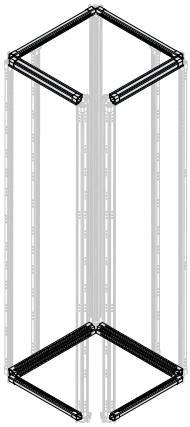
Corner section
Order codes



Uprights – Galvanized sheet metal

Upright formed by a closed profile made of galvanized sheet metal. The uprights include 8 already assembled 3-way joints, 8 already assembled axial screws and 16 loose axial screws. For applications with In ≤ 4000 A.

External dimensions H (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Galvanized sheet metal uprights			
2100	PUPM2005	1STQ008649B0000	1/4



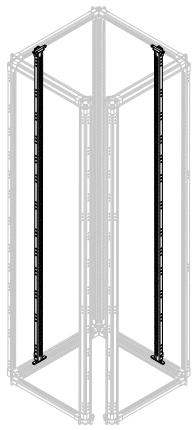
Structure crosspieces – Galvanized sheel metal

Depth and width crosspieces for structures in galvanized sheet metal.

External dimensions (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Crosspieces			
600	PCFM0500	1STQ007039A0000	1/4
800	PCFM0700	1STQ007046A0000	1/4
700	PCFM0600	1STQ007040A0000	1/4
900	PCFM0800	1STQ007042A0000	1/4

Corner section

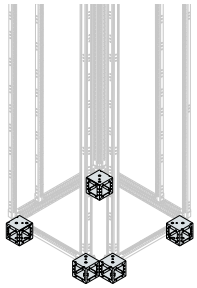
Order codes



Intermediate upright for internal mounting kits and busbars – Galvanized sheet metal

Upright formed by a closed profile made of galvanized sheet metal. For applications with In ≤ 4000 A.

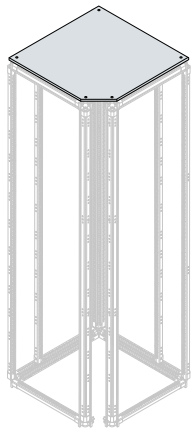
External dimensions H (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Galvanized sheet metal upright			
2100	PUPM2011	1STQ003355B0000	1/1



Universal angle pieces for plinths in galvanized sheet metal

Not pre-assembled to the structure. New angle piece with high mechanical strength. Can be fixed from the outside and from the inside of the structure even at a later date. Equipped with anti-rotation system and bottom that can be transported with a pallet trolley.

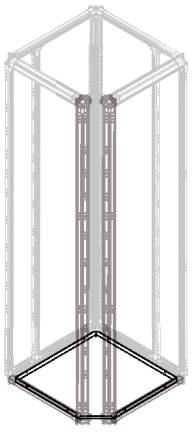
External dimensions H (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Plinth angle pieces			
100	PPAM0101	1STQ008646B0000	1/5



Top panel – Pickled sheet steel

Pickled sheet steel without gasket. The code includes four M12x20 screws.

External dimensions (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Blind top			
600	PTBB6006	1STQ008634B0000	1/1
800	PTBB8006	1STQ008635B0000	1/1

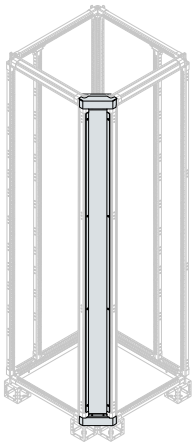


Bottom panel – Pickled sheet steel

Pickled sheet steel without gasket. The code includes four M12x20 screws.

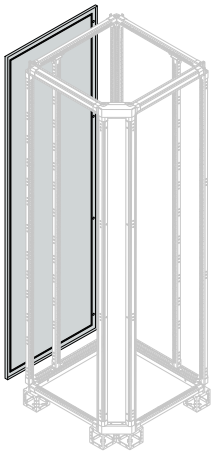
External dimensions (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Blind bottom			
600	PTBB6005	1STQ008640B0000	1/1
800	PTBB8005	1STQ008641B0000	1/1

Corner section
Order codes



Corner section external frame

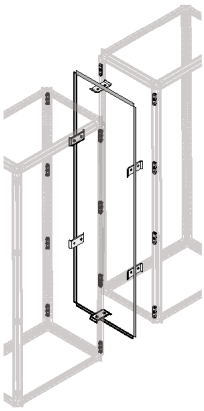
Description	Delivered in kit Type	Order code	Package/ No. pcs
Corner frame	PPEC2010	1STQ008648B0000	1/1



External blind side panel - with gasket

Pickled sheet steel with gasket. The code refers to one single side panel.

External dimensions H (mm)	D (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Blind side panel				
2100	700	PPEB2060	1STQ007622A0000	1/1
	900	PPEB2080	1STQ007624A0000	1/1



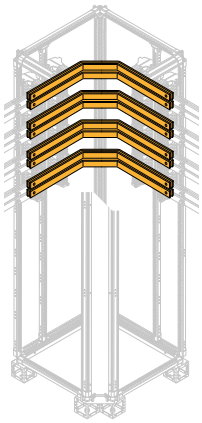
Kit for joining structures

The kit for joining structures is composed of different brackets and a gasket to maintain of the IP protection degree. It allows to join two side-by-side or two back-to-back sections.

Description	Delivered in kit Type	Order code	Package/ No. pcs
Kit for joining corner structures	PSCS0579	1STQ009185A0000	1/12

Corner section

Order codes

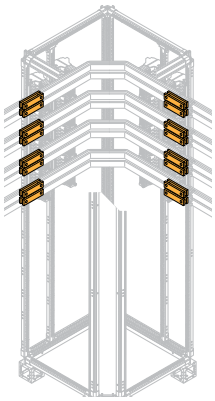


Main corner busbars

Corner External dimensions (mm)	In (A)	Delivered in kit Type	Order code	Package/ No. pcs
600	**1000**	PCFB1061	1STQ008620B0000	1/1
	1600	PCFB1661	1STQ008621B0000	1/1
	2500/3200	PCFB3261	1STQ008623B0000	1/1
800	**1000**	PCFB1081	1STQ008624B0000	1/1
	1600	PCFB1681	1STQ008625B0000	1/1
	2500	PCFB2581	1STQ008626B0000	1/1
	3200	PCFB3281	1STQ009359B0000	1/1
	4000	PCFB4081	1STQ008647B0000	1/1

Busbar holders

The maximum installable busbar section inside the busbar holder is 80 mm.
The maximum width of the main busbar that can be installed in a busbar holder is 80 mm.
If the busbars have a width of 80 mm, each phase requires 1 PBHS0200 + 1 PCCS0200 + 1 PSCB0002.
In the case of using busbars with a width of less than 80 mm, PSPA2012 spacers must be used to fill the gap and ensure proper closing of the cover. For example, if the busbar width is 40 mm, 2 pieces of H=20 mm PSPA2012 spacers are required per busbar and per phase, as (80-40)/20 = 2 pieces.
In configurations with 4 busbars per phase instead of 2, the number of PCCS0200 must be doubled.
Also the fixing screws must be selected according to the number of busbars per phase.



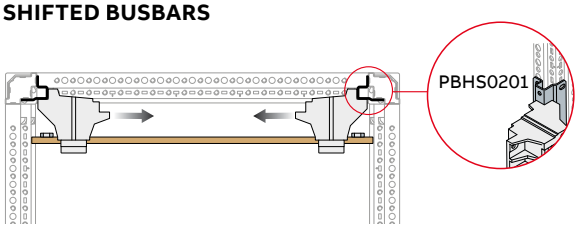
Corner connections

Main busbar rating (A)	Delivered in kit Type	Order code	Package/ No. pcs
1000 A	PJCC1048	1STQ003039C0000	1/4
1600 A/2000 A	PJCC1648	1STQ003040C0000	1/4
2500 A/3200 A	PJCC3248	1STQ003041C0000	1/4
4000 A	PJSC4042	1STQ009321B0000	1/4

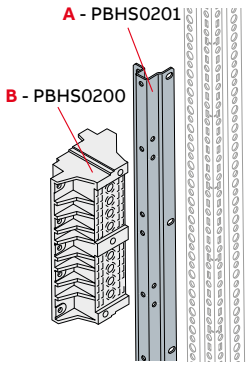
Corner section
Order codes

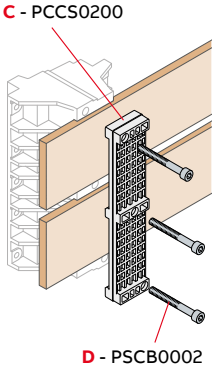
Accessories to fix the main bars (MBBS) on the corner section
On this type of section only the shifted solution of the main busbar is available.

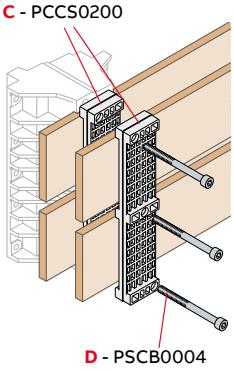
SHIFTED BUSBARS

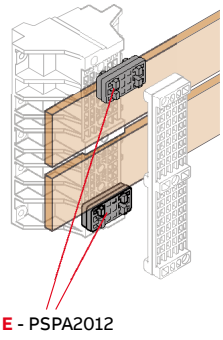


Examples of uses



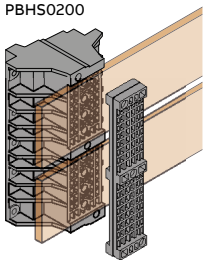






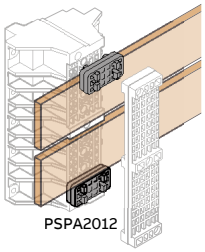
	2 busbars/phase	4 busbars/phase	Note
A Support only for shifted busbars	1xPBHS0201	1xPBHS0201	Multiply the quantities of each code with the number of the phases of the system (3 or 4 phases)
B Busbar holders	2xPBHS0200	2xPBHS0200	
C Closing cover	2xPCCS0200	4xPCCS0200	
D Mounting screws	2xPSCB0002	2xPSCB0004	
E Spacers	... x PSPA2012*	... x PSPA2012*	
Busbars		See busbar selection table	

PBHS0200

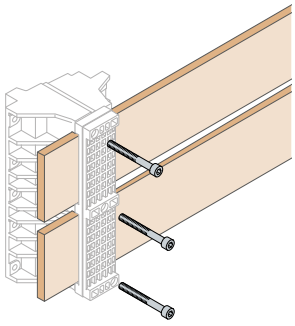


PCCS0200

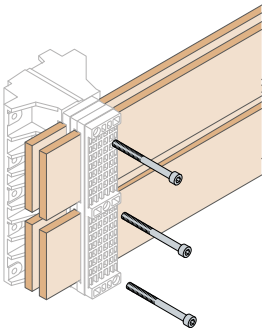
Description	Delivered in kit Type	Order code	Package/ No. pcs
Busbar holders H=200 mm	PBHS0200	1STQ009602A0000	1/2
Supports for shifted busbars	PBHS0201	1STQ005066B0000	1/2
Spacers H=20 mm	PSPA2012	1STQ009604A0000	1/12
Closing cover for holder H=200 mm	PCCS0200	1STQ009605A0000	1/2
Mountig screws for 2 busbars per phase	PSCB0002	1STQ009606A0000	1/6
Mountig screws for 4 busbars per phase	PSCB0004	1STQ009631A0000	1/6



PSPA2012



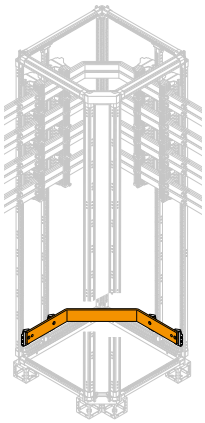
PSCB0002



PSCB0004

Corner section

Order codes

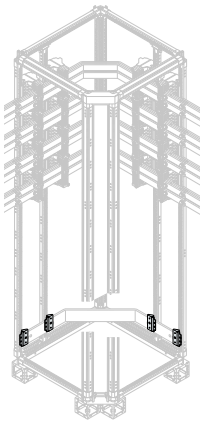


Earthing busbars

Codes for the PE busbar to be used in the corner section. This code depends on:

- Main busbar system nominal current (In)
- section depth

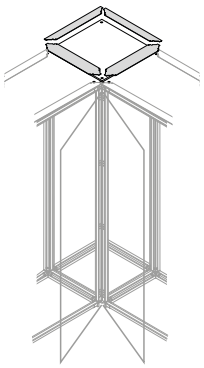
Corner External dimensions (mm)	In (A)	Delivered in kit Type	Order code	Package/ No. pcs
600	**4000**	PBNE6067	1STQ008613B0000	1/1
800	**4000**	PBNE6087	1STQ008617B0000	1/1



Brackets for PE busbar

To be ordered for fixing the neutral and earthing busbars.

Description	Delivered in kit Type	Order code	Package/ No. pcs
Brackets for PE busbar	PBRP0003	1STQ003149B0000	1/2



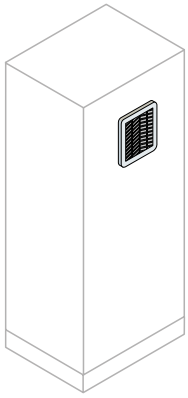
Top sealing kit IPX1

Profiles for IP31/IP41 for top.

Corner External dimensions (mm)	Delivered in kit Type	Order code	Package/ No. pcs
Roof profiles for corner section			
700	PKAT6060	1STQ009860B0000	1/1
900	PKAT8080	1STQ009861B0000	1/1

Temperature management

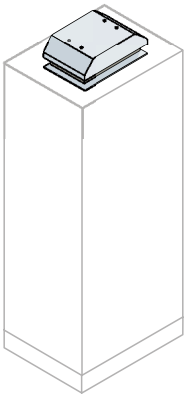
Order codes



Natural ventilation kit IP21 / 54 IP21/54
Grilles made of insulating material (ABS self-extinguishing UL94V-0) RAL7035 colour, complete with filter cloth with high dust accumulation capacity (600 g/m²), able to reduce maintenance interventions (cleaning by washing with water or beating). IP21 degree of protection without filter, IP54 with filter according to CEI EN 60529 standard, Type 1 without filter, Type12 with filter according to UL approval 508 fitted with pre-mounted tightness gasket. CE and cURus (see mark) approval

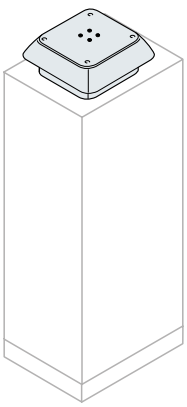
Air entry surface for ventilation		Dimensions (mm)					
Without filter cm²	With filter cm²	W	W		Type	Order code	Package/ No. pcs
Grille+air passage filter kit							
27	6	105	105		EN0105K	-	1/1
53	10	150	150		EN0150K	-	1/1
121	22	204	204		EN0204K	-	1/1
225	32	250	250		EN0250K	-	1/1
317	55	325	325		EN0325K*	-	1/1

* For structures W≥400 mm / D≥500 mm.



IP23 ventilation hood
Structure made of steel painted RAL7035 colour, complete with selfadhesive gasket seal.
Useful aeration section 128 cm².

	Dimensions (mm)					
Description	W	W	D	Type	Order code	Package/ No. pcs
Roof ventilation kit	375	295	119	EN0481K	-	1/2

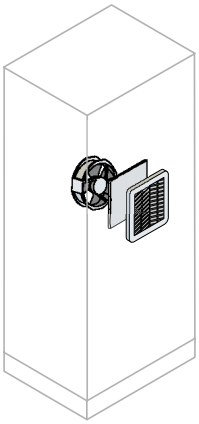


IP54 ventilation hood
Structure made up of plastic PC/ABS and aluminium (PC/ABS selfextinguishing according to UL 94V-0) painted RAL 7035 with polyuretanic foam gasket. CE and cURus approval.

	Dimensions (mm)						
Description	W	W	D		Type	Order code	Package/ No. pcs
Roof ventilation kit	375	295	119		EN0483K	-	1/2

Main distribution system

Temperature management - Order codes



Forced ventilation kit IP21/54
Grilles made of insulating material (ABS self-extinguishing UL94V-0) RAL7035 colour, complete with filter cloth with high dust accumulation capacity (600 g/m²), able to reduce maintenance interventions (cleaning by washing with water or beating). IP54 degree of protection with filter according to UL approval 508 fitted with pre-mounted tightness gasket.
Operating temperature -10 °C +50 °C, for noise values see page 8-50. The fans allow reversible flow of air. CE and cURus (see mark) approval.

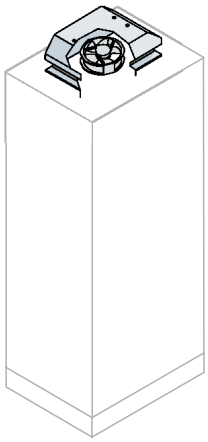
Power consumption (W)	Air flow (m³/h)	Dimensions (mm) W	Height		Type	Order code	Package/ No. pcs
With fan 230 V~							
10	23	105	105		EN1105K	-	1/1
20	57	150	150		EN1150K	-	1/1
23	120	204	204		EN1204K	-	1/1
59	240	250	250		EN1250K	-	1/1
59/72	520/580	325	325		EN2325K*	-	1/1
With fan 115 V~							
10	23	105	105		EN2105K	-	1/1
20	57	150	150		EN2150K	-	1/1
23	120	200	200		EN2204K	-	1/1
59	240	250	250		EN2250K	-	1/1
71/122	520/580	325	325		EN3325K*	-	1/1

* For structures W ≥ 400 mm / D ≥ 500 mm.

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

Main distribution system

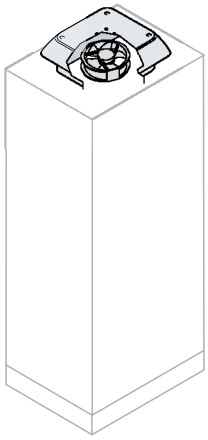
Temperature management - Order codes



IP23 forced ventilation hood

Allows ventilation through the roof of the section. RAL 7035 colour, complete with self-adhesive gasket; consumption 58/78 W, capacity 550/590 m³/h. Operating temperature from -20 °C to +60 °C, noise 68/71 dB (A).

Description	Dimensions (mm) W	D	H	Type	Order code	Package/ No. pcs
Ventilation hoods 230 V - 50/60 Hz	375	295	119	EN0480K	-	1/1
Ventilation hoods 115 V - 50/60 Hz	375	295	119	EN0482K	-	1/1

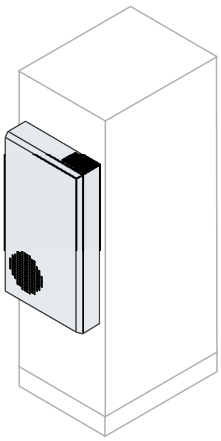


IP54 Forced ventilation hood

This hood allows ventilation of heat through the roof of the section. The structure is made of plastic PC/ABS (PC/ ABS self-extinguishing according to UL 9V-0), with the top part in aluminium, painted RAL 7035 with polyuretanic foam gasket. CE homologation.

Description	Dimensions (mm) W	D	H	Type	Order code	Package/ No. pcs
Ventilation hoods 115 V - 50/60 Hz	324	324	94	EN0484K	-	1/1
Ventilation hoods 230 V - 50/60 Hz	324	324	94	EN0485K	-	1/1

• Technical details page **7**–1 • Overall dimensions page **8**–1



IP54 heat exchangers (air-air) for wall mounting

Dimensions (mm) H	W	D	Refrigerating yield (W) internal	Flow rate (m³/h) external	Type	Order code	Package/ No. pcs
Wall mounting- Power supply 230 V AC							
710	370	130	35	200	VS4235K [1]	-	1/1
900	435	175	85	300	VS6285K [2]	-	1/1

[1] For structures W ≥ 600 mm
[2] For structures W ≥ 600 mm

Special painting

On request, colors other than the standard RAL 7035 textured are available with the same painting cycle.

The following colors are available as per the table with delivery times, price increases and minimum order lots; ask your local ABB representative for an offer.

RAL color chart available (minimum lot of 3 structures)

RAL 1001 Smooth ■ Orange peel	RAL 1004 Smooth ■ Orange peel	RAL 1013 Smooth ■ Orange peel ■	RAL 1015 Smooth ■ Orange peel ■	RAL 1018 Smooth ■ Orange peel
RAL 1021 Smooth ■ Orange peel	RAL 2004 Smooth ■ Orange peel ■	RAL 2008 Smooth ■ Orange peel	RAL 2009 Smooth ■ Orange peel	RAL 3000 Smooth ■ Orange peel
RAL 3004 Smooth ■ Orange peel	RAL 3020 Smooth ■ Orange peel	RAL 4005 Smooth ■ Orange peel	RAL 5000 Smooth ■ Orange peel	RAL 5009 Smooth Orange peel ■
RAL 5010 Smooth ■ Orange peel ■	RAL 5012 Smooth ■ Orange peel	RAL 5015 Smooth Orange peel ■	RAL 6011 Smooth Orange peel ■	RAL 6021 Smooth Orange peel ■
RAL 6027 Smooth ■ Orange peel	RAL 7001 Smooth ■ Orange peel ■	RAL 7004 Smooth Orange peel ■	RAL 7012 Smooth Orange peel ■	RAL 7016 Smooth Orange peel ■
RAL 7024 Smooth Orange peel ■	RAL 7030 Smooth ■ Orange peel ■	RAL 7032 Smooth ■ Orange peel	RAL 7035 Smooth ■ Orange peel	RAL 7036 Smooth Orange peel ■
RAL 7037 Smooth ■ Orange peel ■	RAL 7038 Smooth ■ Orange peel ■	RAL 7040 Smooth ■ Orange peel	RAL 7042 Smooth ■ Orange peel	RAL 7043 Smooth ■ Orange peel
RAL 7047 Smooth ■ Orange peel	RAL 9001 Smooth ■ Orange peel ■	RAL 9002 Smooth Orange peel ■	RAL 9003 Smooth ■ Orange peel	RAL 9005 Smooth Orange peel ■
RAL 9007 Smooth ■ Orange peel	RAL 9010 Smooth ■ Orange peel ■	RAL 9016 Smooth ■ Orange peel		

Chapter 3
Technichal details and certification

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3–18 **Mechanical and electrical characteristic**

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Technical details and certifications According to IEC 61439-1/2

As from November 1st, 2014, the IEC 61439-1 and IEC 61439-2 Standards are to be used for the construction and specification of low voltage assemblies (e.g.: Power Centers and secondary distribution switchboards).

IEC 61439-1 includes all the rules and general prescriptions applicable to the protective and switching assemblies in low voltage (LV assemblies).This Standard deals with the definitions and establishes service conditions, construction rules, technical characteristics and verification prescriptions for LV assemblies (U ≤ 1000 V a.c or U ≤ 1500 V d.c.). Part 1 cannot be used alone to specify an assembly or to determine its compliance with the Standard, but it has to be used together with the specific product Standard. For System pro E power, the specific product Standard is IEC 61439-2 that deals with “Power switchgear and controlgear assemblies” and is used for the assembly designation marking.
The whole of these two Standards identifies the design and testing requirements as regards the industrialization of the product and the tests to be performed to ensure its performances.

A significant change introduced by the IEC 61439 series has been the elimination of the distinction between type-tested assemblies (TTA) and partially type-tested assemblies (PTTA), replaced with the concept of design verification.

IEC 61439-1 defines as “design verification” a verification made on a sample of an assembly or on parts of assemblies to show that the design meets the requirements of the relevant assembly standard.

In particular, the Standard admits three different but equivalent methods to verify the compliance of the design with the Standard,
namely:

- verification by laboratory testing (previously defined type-tests and now verification tests); or
- verification by comparison with a tested reference design; or
- verification by assessment (verification through design rules, appropriate safety margins, calculation etc.).

The different characteristics (e.g.: temperature-rise, short-circuit withstand strength, insulation, degree of protection, etc.) can be verified using these three methods according to Annex D of the IEC 61439-1 (see Table 1) that prescribes , for each characteristics to be verified, which of the three verification options can be used.

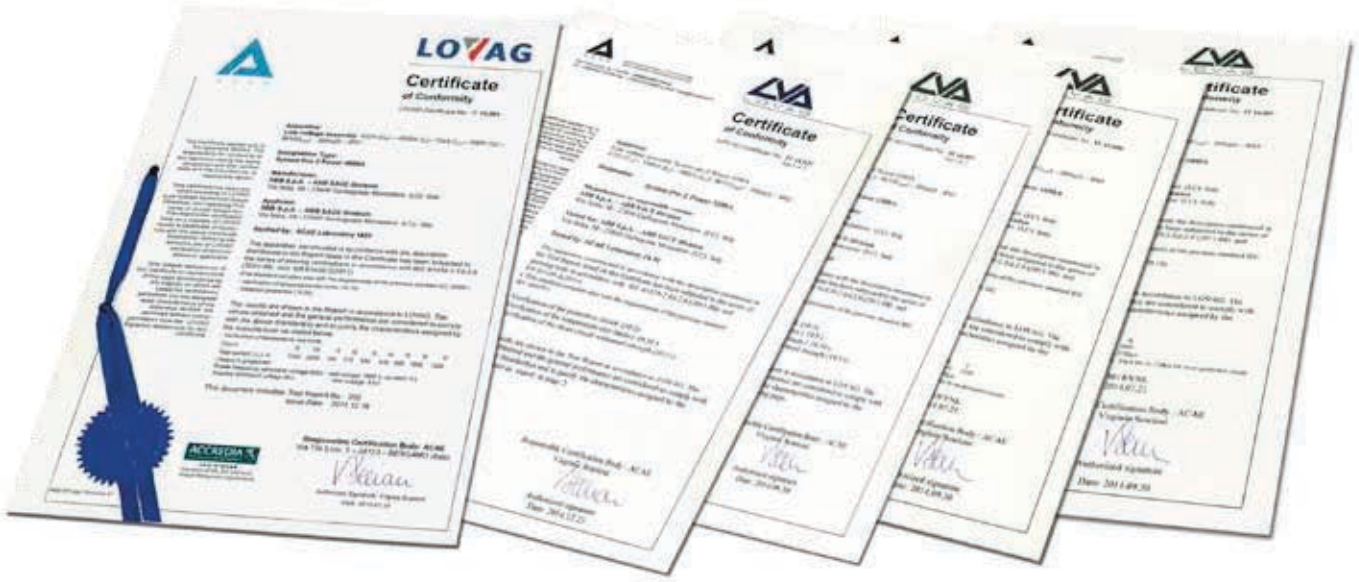
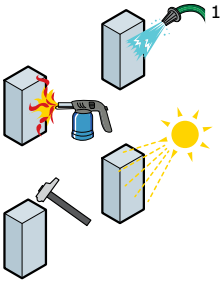
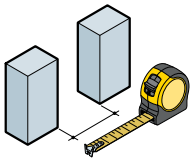
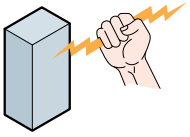
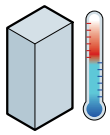
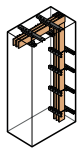
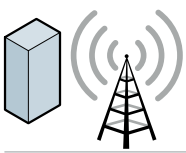
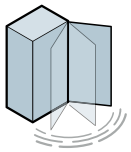


Table 1 – List of design verifications to be performed.

	No.	Characteristic	Clauses or subclauses	Verification options available		
				Testing	Comparison with a reference design	Assessment
	1	Strength of material and parts:	10.2			
		Resistance to corrosion	10.2.2	YES	NO	NO
		Properties of insulating materials	10.2.3			
		Thermal stability	10.2.3.1	YES	NO	NO
		Resistance to abnormal heat and fire due to internal electric effects	10.2.3.2	YES	NO	YES
		Resistance to ultra-violet (UV) radiation	10.2.4	YES	NO	YES
		Lifting	10.2.5	YES	NO	NO
		Mechanical impact	10.2.6	YES	NO	NO
		Marking	10.2.7	YES	NO	NO
	2	Degree of protection of enclosures	10.3	YES	NO	YES
	3	Clearances	10.4	YES	NO	NO
	4	Creepage distances	10.4	YES	NO	NO
	5	Protection against electric shock and integrity of protective circuits:	10.5			
		Effective continuity between the exposed conductive parts of the assembly	10.5.2	YES	NO	NO
		and protective circuit	10.5.3	YES	YES	NO
	6	Incorporation of switching devices and components	10.6	NO	NO	YES
	7	Internal electrical circuits and connections	10.7	NO	NO	YES
	8	Terminals for external conductors	10.8	NO	NO	YES
	9	Dielectric properties:	10.9			
		Power-frequency withstand voltage	10.9.2	YES	NO	NO
		Impulse withstand voltage	10.9.3	YES	NO	YES
	10	Temperature-rise limits	10.10	YES	YES	YES
	11	Short-circuit withstand strength	10.11	YES	YES	NO
	12	Electromagnetic compatibility (EMC)	10.12	YES	NO	YES
	13	Mechanical operation	10.13	YES	NO	NO

For the end user, the method used is irrelevant, provided that the assembly design has been verified according to Table 1.

Technical details and certifications

According to IEC 61439-1/2

The Standard IEC 61439-1 defines the two roles of the “Original manufacturer” and the “ASSEMBLY manufacturer”.

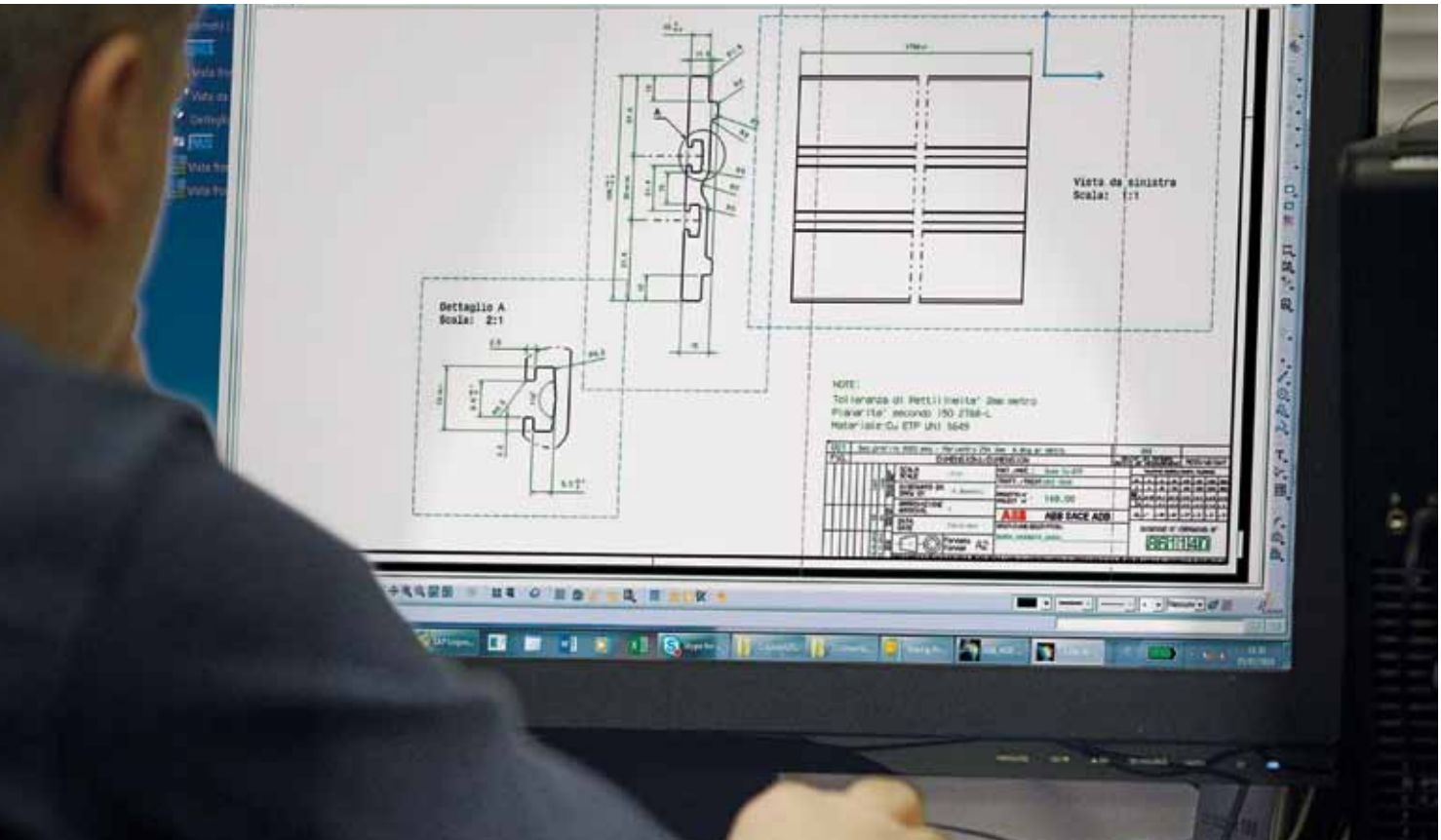
The “Original manufacturer” is the organization (e.g. ABB SACE) that has carried out the original design and the associated verification of an assembly, in accordance with the relevant assembly standard (IEC 61439-2 for System pro E power).

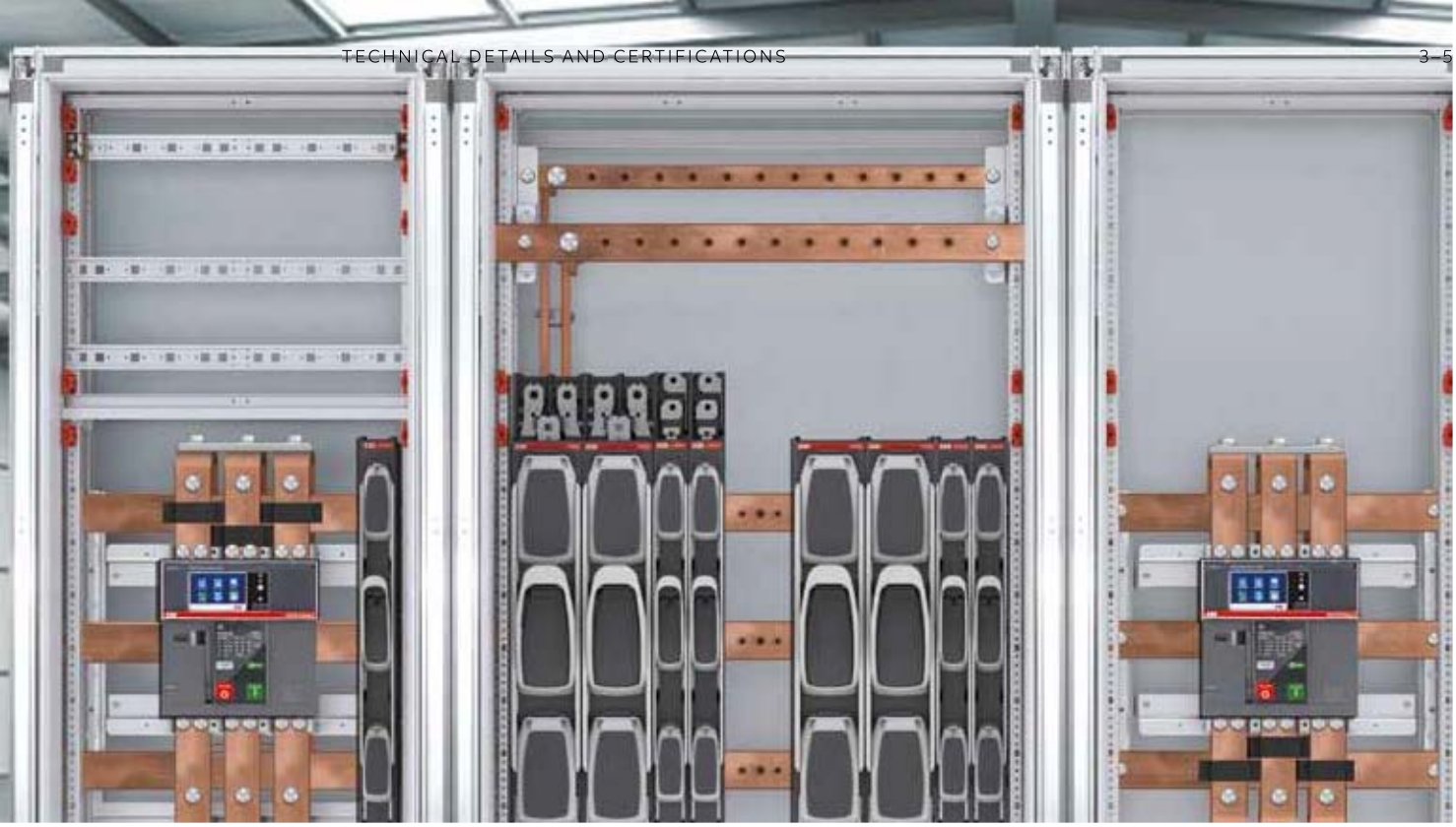
IBesides, in case mounting of the assembly is carried out by others, the Original manufacturer defines and publishes the instructions necessary to produce various assemblies.
The Original manufacturer designs and sets up a wide range of assembly configurations (the assembly system[1]), starting from a full and predefined range of components.

The assembly system is verified by the Original manufacturer in the most onerous representative configurations.

The Original manufacturer shall ensure the design verifications on the assembly system and provide the instructions for the selection of the components and for the mounting of the assembly.

[1] Assembly system: full range of mechanical and electrical components (enclosures, busbars, functional units, etc.), as defined by the original manufacturer, which can be assembled in accordance with the original manufacturer’s instructions in order to produce various ASSEMBLIES.





The “ASSEMBLY manufacturer” is the organization taking the responsibility for the completed assembly; The ASSEMBLY manufacturer may be a different organization to the original manufacturer.

The ASSEMBLY manufacturer (e.g.: the assembler/panel builder, the partner) puts together the assembly using spare parts/components and assembly kits, and, by following the instructions of the Original manufacturer, he obtains the final assembly complying with IEC 61439-2

The ASSEMBLY manufacturer shall carry out:

1) selection and assembling of the components according to the instructions provided by the Original manufacturer;

2) design verifications, through further tests or comparisons or assessments, in case of deviations from the instructions of the Original manufacturer;

3) routine verifications on any assembly realized. Hereunder the list of the routine verifications to be carried out by the “ASSEMBLY manufacturer”:

Characteristics relevant to construction:
- Degree of protection of enclosures;
- Clearances and creepage distances;
- Protection against electric shock and integrity of protective circuits;
- Installation of built-in components;
- Internal electrical circuits and connections;
- Terminals for external conductors;
- Mechanical operation.

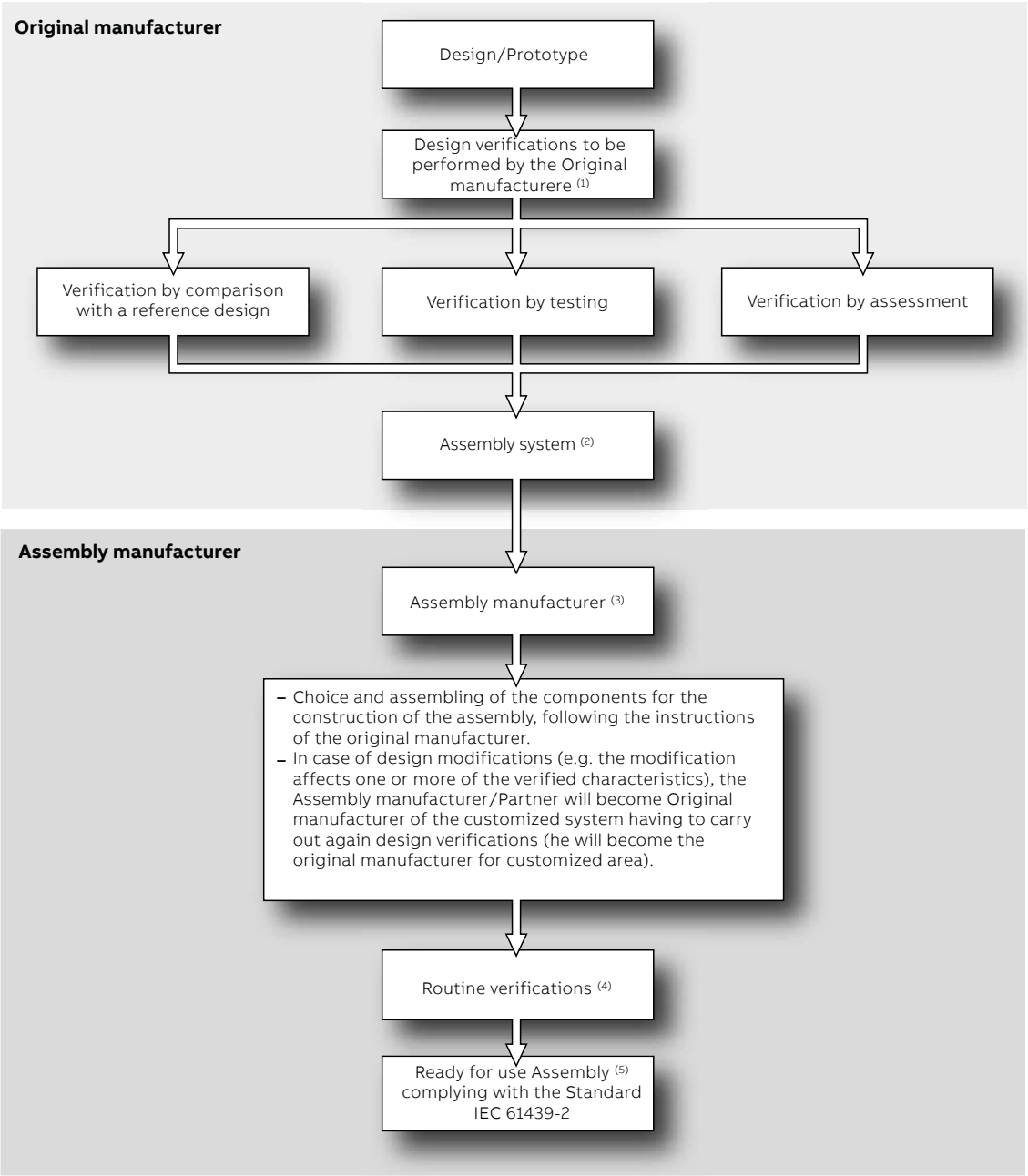
Characteristics relevant to performance:
- Dielectric properties;
- Wiring, operational performance and function

Technical details and certifications

According to IEC 61439-1/2

The main changes introduced by the series of Standards IEC 61439 can be summarized in the following flowchart:

Table 1



1) Original manufacturer: organization that has carried out the original design and the associated verification of an ASSEMBLY in accordance with the relevant ASSEMBLY standard
2) Assembly system: full range of mechanical and electrical components (enclosures, busbars, functional units, etc.), as defined by the original manufacturer, which can be assembled in accordance with the original manufacturer's instructions in order to produce various ASSEMBLIES
3) Assembly manufacturer: organization taking the responsibility for the completed ASSEMBLY; The ASSEMBLY manufacturer may be a different organization to the original manufacturer.
4) Routine verification: verification of each ASSEMBLY performed during and/or after manufacture to confirm whether it complies with the requirements of the relevant ASSEMBLY standard
5) Assembly: combination of one or more low-voltage switching devices together with associated control, measuring, signaling, protective, regulating equipment, with all the internal electrical and mechanical interconnections and structural parts

Technical details and certifications
According to IEC 61439-1/2

System pro E power, the 100% compliant solution with IEC 61439-1/2

System pro E power assemblies are subject at ABB laboratories to the testing prescribed by the Standards IEC 61439-1/2. The results of these verifications ensure the performances of System pro E power assemblies and relieve the ASSEMBLY manufacturer of the burden of carrying out further design verifications when ABB SACE structures, assembly kits, enclosures, busbars and devices are used following the selection criteria and mounting instructions of the Technical Catalogue and Instruction Handbook of System pro E power. Reference can be made to such results (summarized in Table 2) when drawing up the declaration of conformity of the assembly.

Table 2

Characteristic	Section	Standard Rule/Rating	Verification method	Test report/Certificate No.
Resistance to corrosion	10.2.2	Severity test A for indoor assemblies/ enclosures	Test	LBRS12753 LBRS13893 1STC860049
Thermal stability	10.2.3.1	Test for enclosures manufactured from insulating material.	Not required	Not required
Resistance to abnormal heat and fire due to internal electric effects	10.2.3.2	The Original manufacturer shall provide data on the suitability of materials from the insulating material supplier	Assessment	DATA SHEET – LET01b (Declaration by the insulating material supplier verified by ACAE/ LOVAG during temperature rise tests) 1STC860049
Resistance to ultra-violet (UV) radiation	10.2.4	Only for enclosures and external parts of assemblies for outdoor installation	Not required	Not required
Lifting	10.2.5	The maximum number of sections, allowed by the Original manufacturer to be lifted together, shall be equipped with components and/or weights to achieve a weight of 1.25 times its maximum shipping weight.	Test	IT 14.136 IT 14.097 IT 14.138 IT 15.024 IT 14.095 IT 14.094 IT 14.096 IT 16.048 IT 15.069 IT 15.070 IT 15.071 IT 15.072 IT 15.073 1STC860049
Mechanical impact	10.2.6	- IK9 (glass door) - IK10 (blind door)	Test	16-0367-01 1STC860049
Marking	10.2.7	The ASSEMBLY manufacturer shall provide each ASSEMBLY with one or more labels, marked in a durable manner and located in a place such that they are visible and legible when the ASSEMBLY is installed and in operation. Compliance is checked according to the test of 10.2.7 and by inspection.	Test	ASSEMBLY manufacturer
Degree of protection of enclosures	10.3	IP30 (without doors) IP40 (with doors) IP31/41 (with roof accessories) IP65 (with IP65 doors and panels) Verification by assessment is possible when an empty enclosure in accordance with IEC 62208 is used, and no external modification has been carried out that may result in a deterioration of the degree of protection.	Test	16-0367-01 1STC860049

Technical details and certifications

According to IEC 61439-1/2

Characteristic	Section	Standard Rule/Rating	Verification method	Test report/Certificate No.
Clearances	10.4	Insulation clearances are guaranteed when the assembly instructions provided with the ABB SACE structures, busbars and devices are complied with Minimum clearances ≥ 14mm@12kV	Test	IT 15.024 IT 15.075 1STC860049
Creepage distances	10.4	Minimum creepage distances ≥ 14 mm (pollution degree 3 and material group II)	Test	IT 15.024 IT 15.075 1STC860049
Effective continuity between the exposed conductive parts of the ASSEMBLY and the protective circuit	10.5.2	The exposed conductive parts are electrically connected with the main protective conductor; the maximum resistance value allowed for the protective circuit is ≤ 0.1 Ω.	Test	IT 14.095 IT 14.096 IT 14.094 IT 14.093 IT 14.097 IT 14.136 IT 14.138 IT 14.137 IT 14.139 LBRP 14175/00 1STC860049
Short-circuit withstand strength of the protective circuit	10.5.3	According to the standard (at least 60% of three-phase short circuit current): up to 72 kA (1s).	Test cuponal bars 100x10 IT 14.138 Cuponal bars 100x10 IT 14.139	IT 14.085 Lovag Acae system pro E power 1000A 35kA IT 14.086 Lovag Acae system pro E power 1000A 36kA IT 14.087 Lovag certificate IT 14.087 1000A 50kA IT 14.088 Lovag Acae system pro E power LS 1600A 65kA IT 14.089 Lovag Acae system pro E power LS 2500A 75kA IT 14.096 Lovag Acae system pro E power 2500A 50kA IT 15.024 Lovag Acae system pro E power LS 1600A 36kA IT 14.095 Lovag Acae system pro E power 2500A 50kA IT 14.094 Lovag Acae system pro E power LS 2500A 85kA IT 14.093 Lovag Acae system pro E power LS 2500A 100kA IT 14.097 Lovag certificate IT 14.097 2500A 100kA IT 14.136 Lovag Acae system pro E power LS 3200A 50kA IT 14.138 Lovag Acae system pro E power LS 3200A 50kA IT 14.137 Lovag certificate IT 14.137 3200A 100kA IT 14.139 Lovag Acae system pro E power LS 3200A 65kA IT 15.075 Lovag Acae system pro E power LS 1600A 50kA IT 15.069 Lovag Acae System pro E power LS 4000A 100kA IT 15.070 Lovag Acae System pro E power LS 4000A 36kA IT 15.071 IT 15.072 IT 15.073 Lovag Acae System pro E power LS 6300A 100kA IT 15.074 Lovag Acae System pro E power LS 7000A 120kA 1STC860049
Incorporation of switching devices and components	10.6	Compliance with the design requirements in section 8.5 for the incorporation of switching devices and components.	Assessment by inspection	ASSEMBLY manufacturer must observe the Original Manufacturer´s instructions of the assembly system and switching devices and components.
Internal electrical circuits and connections	10.7	Compliance with the design requirements in section 8.6 for internal electrical circuits and connections	Assessment by inspection	The original parts/components must be assembled according to the original manufacturer´s instructions.
Terminals for external conductors	10.8	Compliance with the design requirements in section 8.8 for terminals for external conductors.	Assessment by inspection	The original parts/components must be assembled according to the original manufacturer´s instructions.

Technical details and certifications

According to IEC 61439-1/2

Characteristic	Section	Standard Rule/Rating	Verification method	Test report/Certificate No.
Power-frequency withstand voltage	10.9.2	According to Table 8/9 of IEC 61439-1: Ui up to 1000 Vac/1500 Vdc	Test	IT 14.085 IT 14.086 IT 14.087 IT 14.088 IT 14.089 IT 14.096 IT 15.024 IT 14.095 IT 14.094 IT 14.097 IT 14.136 IT 14.138 IT 15.001 IT 15.075 IT 16.048 IT 15.069 IT 15.070 IT 15.071 IT 15.072 IT 15.073 1STC860049
Impulse withstand voltage	10.9.3	According to Table 10 of IEC 61439-1: Uimp = 12 kV/8 k	Test	IT 14.085 IT 14.086 IT 14.087 IT 14.096 IT 15.024 IT 14.088 IT 14.095 IT 14.094 IT 14.097 IT 14.089 IT 14.136 IT 14.138 IT 15.001 IT 15.075 IT 16.048 IT 15.069 IT 15.070 IT 15.071 IT 15.072 IT 15.073 1STC860049
Temperature-rise limits	10.10	Verification by test Rated current InA up to 6300 A InA max = 7000 A (main busbars)	Test	IT 14.085 IT 14.086 IT 14.087 IT 14.096 IT 15.024 IT 14.088 IT 14.095 IT 14.094 IT 14.097 IT 14.089 IT 14.136 IT 14.138 IT 14.137 IT 14.139 IT 15.001 IT 16.048 IT 15.069 IT 15.071 IT 15.072 IT 15.073 IT 15.074 IT 15.075 1STC860049

Technical details and certifications

According to IEC 61439-1/2

Characteristic	Section	Standard Rule/Rating	Verification method	Test report/Certificate No.
Short-circuit withstand strength	10.11	Verification by test: Icw line to line: up to 100 kA for 1s Icw line to line: up to 150 kA for 1s (main busbars) Icw line to neutral: up to 90 kA (1s) Ipk max: 330 kA Verification by comparison with the reference design: Icw line to line: 69 kA for 3s (main busbars)	Test	IT 14.085 IT 14.086 IT 14.087 IT 14.096 IT 15.024 IT 14.088 IT 14.095 IT 14.094 IT 14.093 IT 14.097 IT 14.089 IT 14.136 IT 14.138 IT 14.137 IT 14.139 IT 15.075 IT 15.069 IT 15.071 IT 15.072 IT 15.073 IT 15.074 1STC860049
Electromagnetic compatibility (EMC)	10.12	Ambient condition A and B Ambient condition A and B No EMC test if the incorporated devices and components are in compliance with the requirements for EMC as required by the relevant product Standard and the internal installation and wiring is carried out in accordance with the devices and components manufacturer's instructions.	Verification by assessment	Not required
Mechanical operation	10.13	The movable parts of System pro E power (e.g. hinges for doors and panels) have been tested through 200 operating cycles. This verification test shall not be made on such devices (e.g. withdrawable circuitbreaker) of the ASSEMBLY when they have already been type-tested according to their relevant product Standard unless their mechanical operation has been modified by their mounting.	Test	16-0367-01 1STC860049

The document and certificates can be downloaded at the following link:

http://www.abb.com/abblibrary/downloadcenter/

Technical details and certifications
Anti-seismic withstand

1. Introduction

Anti-seismic is an important thematic which is proper implemented in ABB by testing product solutions that meet the growing security demands and requirements from different markets. For System pro E power, ABB guarantees a seismic resistance in standard version without additional reinforcement elements up to 0.5g and with reinforcement kit up to 0.75g.

2. Reference rules

The reference rules adopted are:

- IEC 60068-3-3 Environmental testing - Part 3: Guidance. Seismic test methods for equipment;
- IEC 60068-2-6 Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal);
- IEC 60068-2-57 Environmental testing - Part 2-57: Tests - Test Ff: Vibration - Time-history method;
- IEC 60068-2-59 Environmental testing - Part 2: Tests. Test Fe: Vibration - Sine-beat method;
- IEC 60068-2-47 Environmental testing - Part 2-47: Test - Mounting of specimens for vibration, impact and similar dynamic tests;
- IEEE Std 693-2005 IEEE Recommended Practice for Seismic Design of Substations;
- Required response spectra applicable to “YATAY” and “DIKEY” sites (Turkey).

In order to meet the anti-seismic requirements, ABB offers a seismic qualification, in accordance with CEI EN 62271-207, which determine the total withstand capability of the switchgear assemblies in case of seismic stresses, combining results obtained by test, algebraically results and other service loads.

3. Seismic qualification

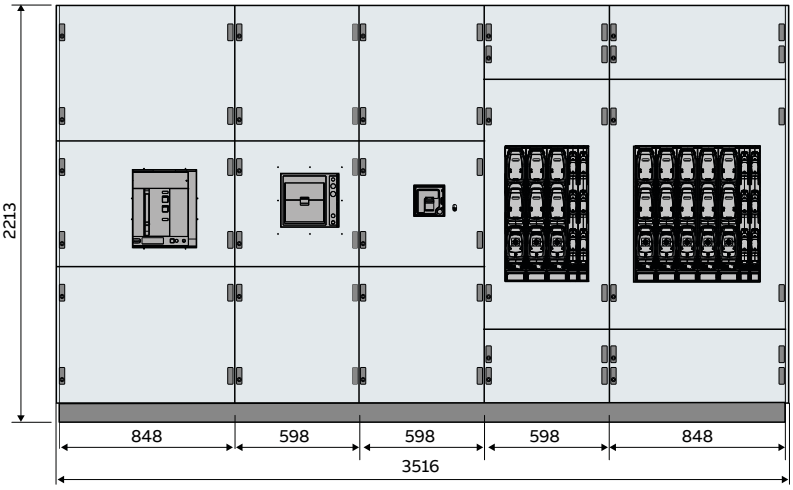
To determine the seismic qualification, 10 different configurations were seismic tested, using two different laboratories, CESI (Centro Elettronico Sperimentale Italiano), an Italian company founded in 1956, which deals with tests and certifications of electromechanical and electrical systems and Vir-lab, an Engineering laboratory
that provides seismic test in Asteasu, Spain. The data on which the certification is based are the following ones:

- Certified solutions. In particular the certified configurations are System pro E power Top Busbar System – 4000 A up to 0.5 g;
- System pro E power Rear Busbar System – 4000 A with anti-seismic kit up to 0.75 g.

The front side of RBBS enclosure is represented in the picture below.

This is representative for all possible configurations.

The adopted configurations are the ones that our R&D technicians identify as the most critical, due to the presence of plastic tie-rods and,
due to the reduced withstand current (Icw), the distance between the busbar holders is increased, which contribute to decrease the
resistance in case of seismic events.



Technical details and certifications

Anti-seismic withstand

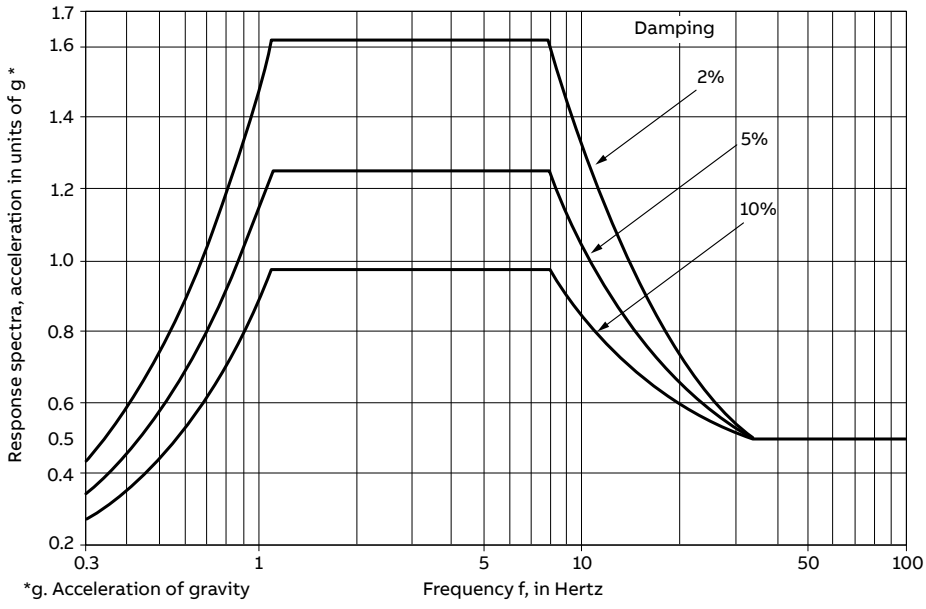
The test was performed according to the following criteria:

- Historical data on passed Main Distribution Enclosure ArTu K and Power Automation Enclosure IS2 tests.
- FEM Analysis, made during design phase, by creating the structure solid, assuming loads that follow the utilization and fixing proper constraints, it was simulated the deformation on the structure. Also few comparative analysis were performed, such as System pro E power vs. ArTu K, System pro E power vs. Triline and System pro E power vs. major competitors. The purpose of the work is to perform a stress analysis in different electrical panels. The effort and displacement evaluation has to be comparable between the different geometries at the same load conditions.
- Vibration tests. These are different from a seismic event because they are predictable events in a given range, instead the antiseismic events are unavoidable, non-constant and do not have a precise range. Vibrations can last for hours or be a constant condition; seismic event is a short, impulsive event.
- Customer test data, followed by ABB as external consultants.
- Traction, compression and torsion tests.
- Lifting tests, with ACAE-LOVAG presidia. All lifting tests are performed without paneling (minus 30 % of rigidity without the addition of the external panels and door), with an additional load of 25% (guaranteeing the structure with an additional margin).
- In addition to seismic and vibration tests, System Pro E Power, in glass door version, has passed the internal-arc test at 65 kA @ 480 V (0.3 s) in conformity with TR61641 (criteria 1-6). In addition, the frame has the capability to resist to a short circuit up to 150 kA for 1 s in conformity to the rule CEI EN 61439-2, in both the TBS and RBBS versions. These induced accelerations are much higher of those of a seismic event (current up to 330000 A that pass through the structure) that cause mechanical stresses higher than seismic events.

4. Anti-seismic tests

It has been used the reference of IEE 693-1997 rule, by utilizing the response spectra with a 2% damping, the most critical curve.

The accelerometers were positioned in the most critical points, at the top of the structure, close to the switches and close to the bars.

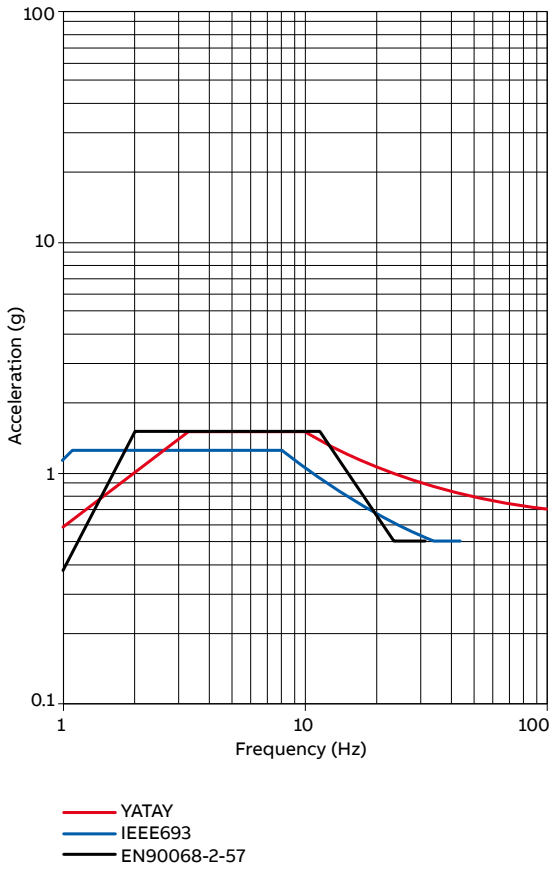


Technical details and certifications

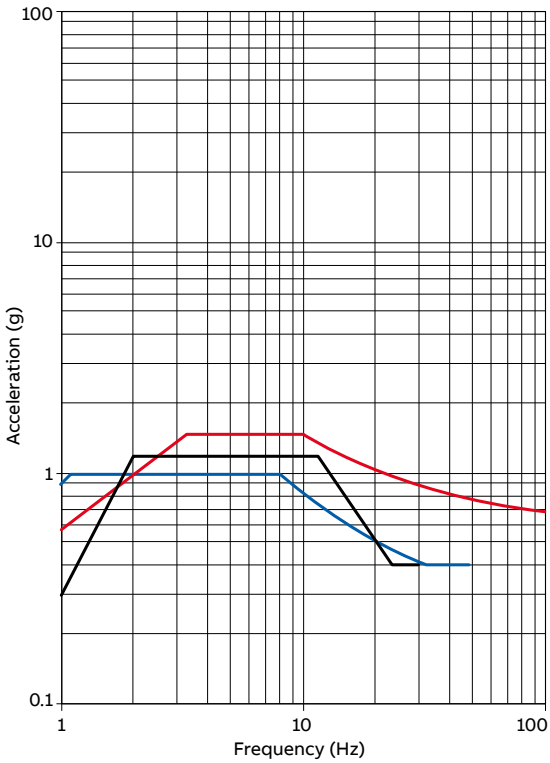
Anti-seismic withstand

It has been guaranteed in a standard configuration the resistance to a shock level up to 0.5 g, as represented in the picture below:

S2 Horizontal (5% damping)



S2 Vertical (5% damping)



YATAY
IEEE693
EN90068-2-57

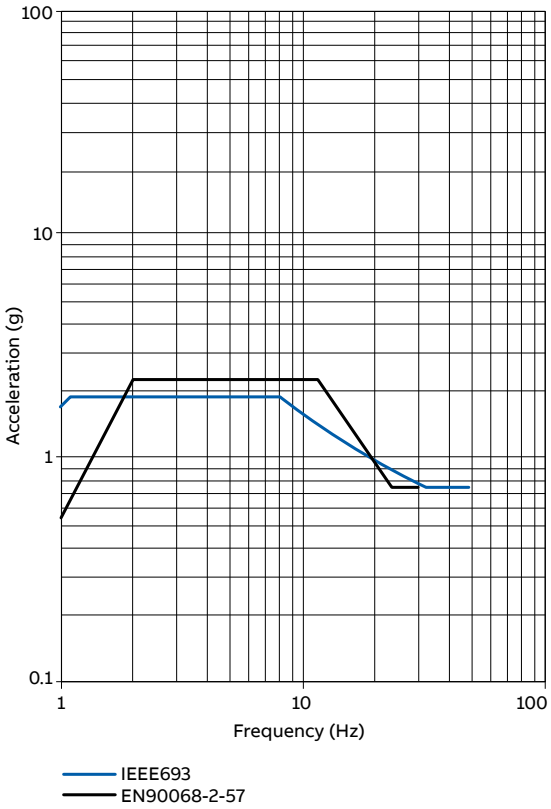
The horizontal ZPA (Zero Period acceleration) 0.69 g. is highter than the corresponding to the AG5 "Ground Acceleration Reference" defined in Table 3 of point 8.2.4 of European standard EN 60068-3-3, value calculated, as it is described in point 8.2.7 of the referred standard, as follows:

Technical details and certifications

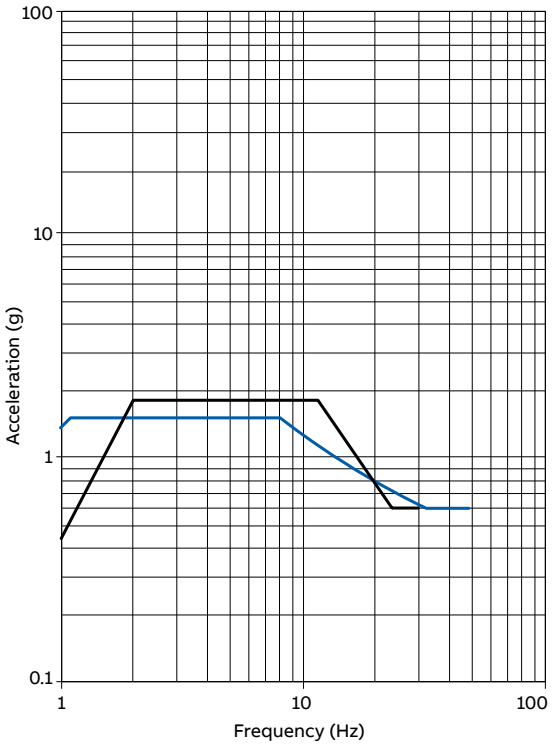
Anti-seismic withstand

In addition, by installing anti-seismic kit, it has been guaranteed the resistance to a shock level up to 0.75 g, as represented in the picture below:

S2 Horizontal (0.75 g ZPA; 5% damping)



S2 Vertical (0.6 g ZPA; 5% damping)



After the seismic event in the defined limits and conditions, it is guaranteed:

- No collapse of the structure.
- Operation of the switchboard after the earthquake.
- Maintaining of the mechanical characteristics, IP and IK.

The results are confirmed by looking to the resonance final and initial benchmarking, which assess that no structural failures occur during tests.

	RESONANCE (Hz) (Amplification)		
POINT NUMBER	**Initial (Test Number 1)**	**Final (Test Number 18)**	**Frequancy Variation**
2 (Close to the center of gravity)	5.44 / (4.5) 23.81 / (2.5)	4.50 / (4.9) 24.00 / (2.5)	–17.28 % 0.80 %
3 (Close to the vertical BUS)	5.34 / (4.6)	4.50 / (4.8)	–15.73 %
4 (On the top left corner)	5.53 / (7.6)	4.59 / (8.3)	–17.00 %

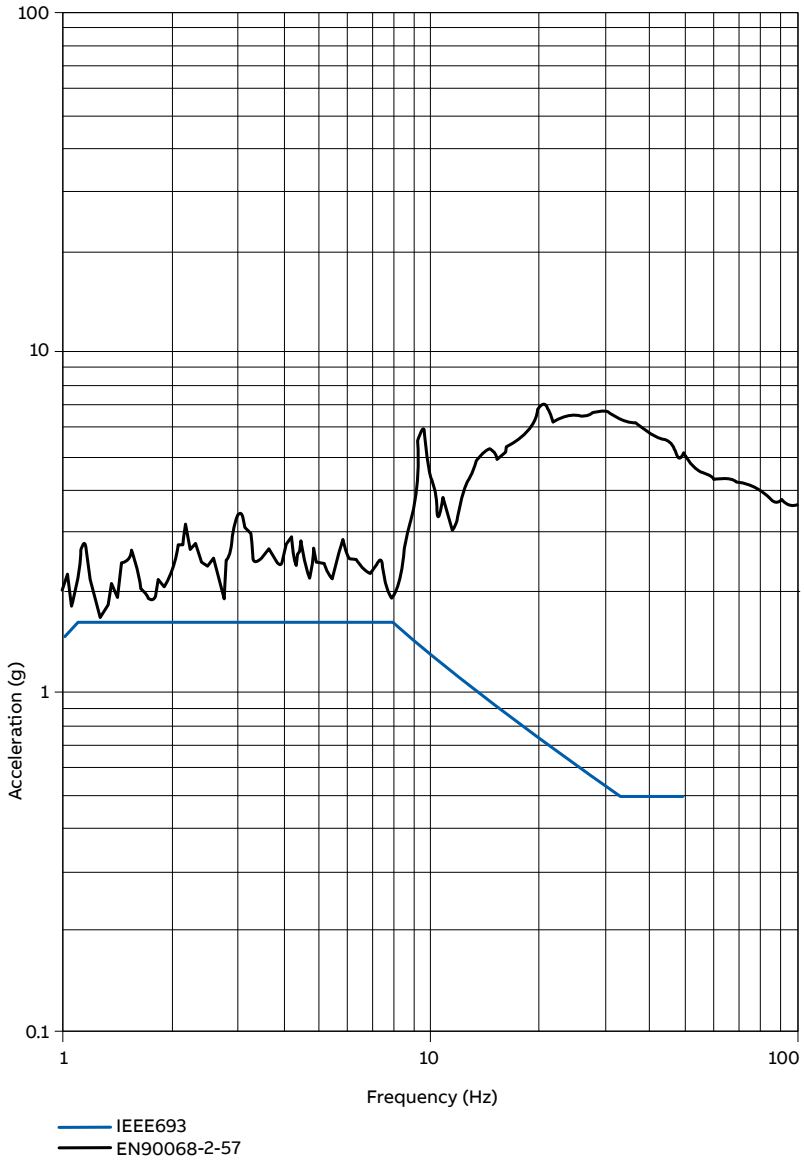
	RESONANCE (Hz) (Amplification)		
POINT NUMBER	**Initial (Test Number 2)**	**Final (Test Number 19)**	**Frequancy Variation**
2 (Close to the center of gravity)	3.94 / (5.2)	3.19 / (5.3)	–19.04 %
3 (Close to the vertical BUS)	3.84 / (3.8)	3.09 / (3.8)	–19.53 %
4 (On the top left corner)	3.94 / (8.8)	3.19 / (8.7)	–19.04 %

Technical details and certifications

Anti-seismic withstand

In order to obtain these results, ABB has performed tests with more difficult conditions. In the picture below, it is clearly visible that the test response spectrum is higher than the 0.5g thresholds.

Test Response Specrum (TRS)
S2 Horizontal - 2%
IEEE Std. 693-2005 "High Required Specrum", 0.5 g.

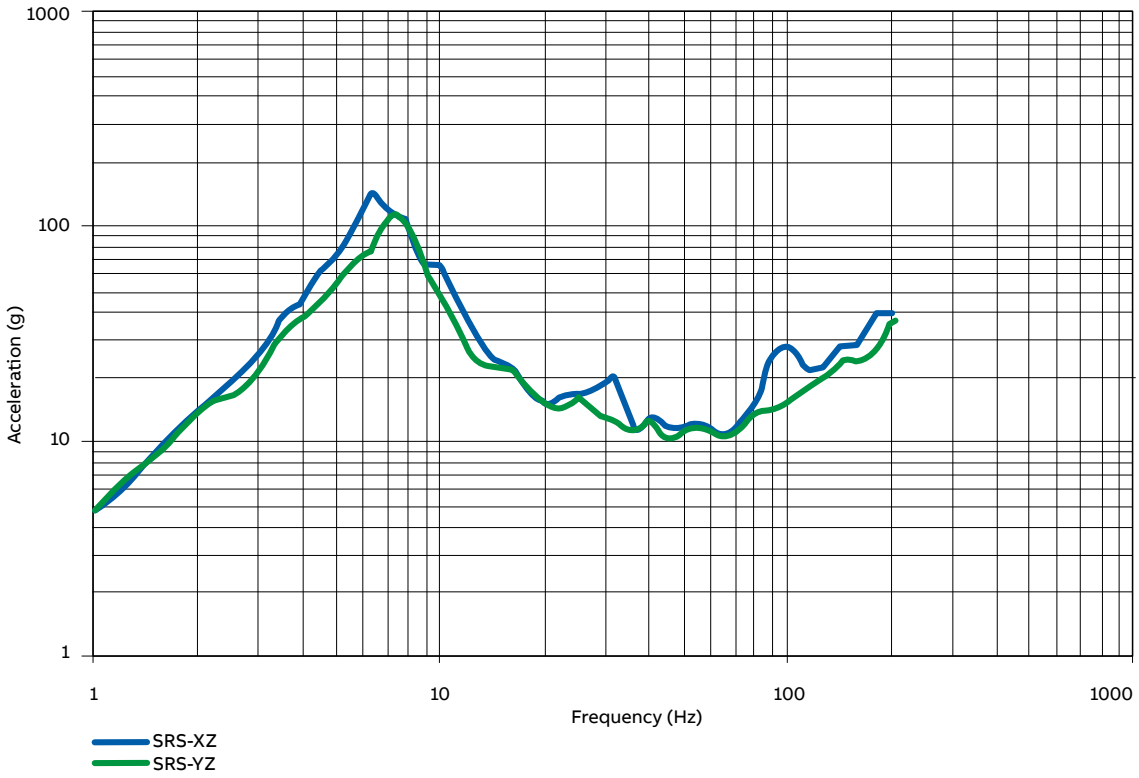


The anti-seismic tests on the structure are combined with the ones performed on the breakers. As visible on the below picture, the accelerations tested on breakers are higher than the ones tested on the SPEP. This is because, in case of an earthquake, the breaker is subject of the vibration of the building and simultaneously of the enclosure.

Technical details and certifications

Anti-seismic withstand

Specified Response Spectrum (SRS) (5%)
Envelope (points 2 to 5 and 7 of report 152322 and points 2 to 9 of report 152323)
Level S2 Horizontal Direction



By having significantly higher ZPA tested, it is possible to guarantee the operation of the switchboard during and after a seismic event.

5. Suggestions

Some suggestions are provided in order to increase the capability of the switchboard to withstand to a seismic event:

- It is better to distribute the weight at the bottom of the switchboard.
- Tighten the structure, by segregating it or by increasing the number of busbar holders.
- Fixing of floor structure with M12 class 8.8 screws.
- Avoid fixing the frame to the wall, possibly keeping a distance of 600mm to avoid the “hammer” effect during the earthquake, if there is no space make sure the wall is structured for fastening.
- Give maintenance instructions, for example after a seismic event of 0.5g check the tightening torques.
- Busways can compromise stability.
- If it is possible, it is better to reduce height dimension of the enclosure.
- Two structures side by side carry more than a single one.
- The lifting bar strengths the structure.
- If you have a cable feed, expect an additional length in the cables

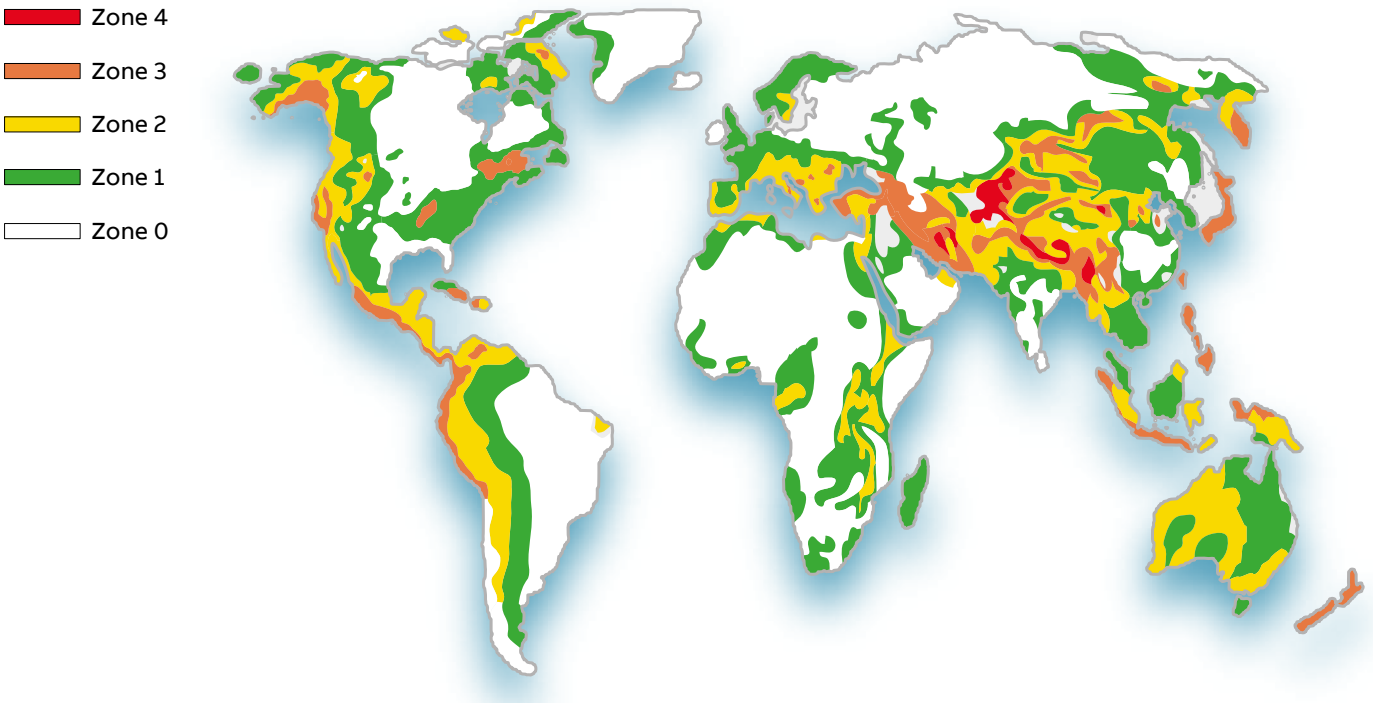
Technical details and certifications

Anti-seismic withstand

6. Results

The seismic zones around the World are represented in the picture below:

Seismic zones around the world



Below, the comparison table between the IEC 68-3-3 seismic zones, the Richter scale, the Mercalli scale, and the acceleration value.

Seismic Zone IEC 68-3-3		Scale of Richter Magnitude	Scale of Mercalli Magnitude	Phenomena	Maximum acceleration (g)	Freed energy (J)
System pro E power range						
AG5	4	9	XII	Exceptiolally catastrophic	1.53	$>10^{17}$
			XI	Catastrophic	1.02	
		8	X	Very destructive	0.51-1.02	
		7	IX	Destructive	0.2-0.5	10^{14} - $5x10^{15}$
			VIII	Damaging	0.12-0.2	
AG3	3	6	VII	Very strong		
	2	5	VI	Strong		10^{11} - $5x10^{12}$
			V	Fairly strong		
AG2	1	4	IV	Not strong		
	0	3	III	Weak		10^{8} - $5x10^{9}$
			II	Very weak		
		2	I	Registred by instrument		$5x10^{6}$ - 10^{8}
		1				$<5x10^{6}$

Technical details and certifications
Mechanical and electrical characteristics

Conformity to Standard IEC 61439-1-2

System pro E power switchboards are subjected in the ABB laboratories, to the type tests established by Standard IEC 61439-1-2.
The results of these tests guarantee the performance of System pro E power switchboards and when ABB SACE structures, air circuitbreakers, moulded-case and modular circuit-breakers are used, relieve the end manufacturer of the switchboard from having to perform further type tests so long as he/it complies with the selection criteria and assembly instructions for the various different components.
Reference can be made to these results, described below, when drawing up the declaration of conformity of the switchboard.

Overtemperature (Ref. sect. 9.2. of the Standard)

Values from the type tests performed referring to all System pro E - Power switchboard sizes and to the type of installation are given in the tables.
The dissipated power data (in Watts) depend on the allowable overtemperature inside the upper part of the switchboard and should be compared with the sum of the powers dissipated by all the components installed in the switchboard (also taking the coincidence factor into due account).

Dielectric properties (Ref. sect. 10.9. of the Standard)		
Rated service voltage		up to 1000V AC / 1500V DC
Rated insulation voltage		up to 1000V AC / 1500V DC
Rated impulse withstand voltage		12kV
Short-circuit withstand capacity (Ref. sect. 10.11. of the Standard)		
Rated short-time short-circuit current:	line-to-line	150kA (1s) 86.6kA (3s)
	line-to-neutral	90kA (1s)
Rated max. peak short-circuit current		264kA
Protection against the circuit and short-circuit withstand (Ref. sect. 9.3. of the Standard)		
Rated admissible short-time withstand current Icw for the protection circuit		90kA (1s)
Insulation clearances (Ref. sect. 10.4. of the Standard)		
Insulation clearances are guaranteed when the assembly instructions provided with the ABB SACE structures and circuit-breakers are complied with.		
Mechanical operation (Ref. sect. 10.13. of the Standard)		
When the assembly instructions of the ABB SACE structures are circuit-breakers are complied with, mechanical operation can be considered as verified.		

Technical details and certifications

Mechanical and electrical characteristics

Mechanical specifications

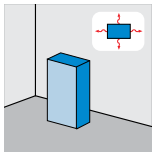
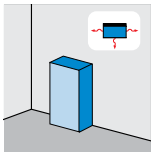
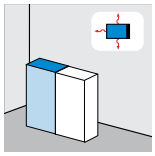
Material		
Uprights and cross-pieces	1,2mm hot-dip galvanized sheet steel	
	1,2mm AISI 304 stainless steel	
Plinth angle pieces	2,5mm hot-dip galvanized sheet steel	
Plinth flanges	1,5mm hot-dip galvanized sheet steel	
External panels	pickled steel sheet thickness 8/10mm for IP30/40 and 15/10 for IP54/55	
Doors	1,5mm thick pickled sheet steel. 4mm thick toughened glass glued from the inside	
Plates	1,5mm hot-dip galvanized sheet steel	
Panels	1,2mm pickled steel sheet	
Partitions	plastic components: thermoplastic vulcanizate metal components: 1,5mm pickled steel sheet	
Paint coating		
Structure colour	RAL 7035 grey orange peel finish	
Plinth colour	RAL 7012 grey orange peel finish	
Standard cycle	The sheet metal is cleaned	
	Phosphating, based on iron salts	
	Drying in a tunnel at 100°C	
	External and internal coating with electrostatic application of thermosetting powder coating with epoxy-polyester binders, RAL 7035 colour orange peel finish, total thickness 60/70 microns.	
	Curing in an oven 180°C	
Coating characteristics	Binder:	epoxy-polyester
	Specific gravity:	1.61g/cm3
	Theoretic yield:	10.4m²/kg with film an average 60 microns thick
	Melting point:	85-95 °C (Kofler bench method)
	Particle size:	standard distribution between 5 and 100 microns with 30 to 40 micron average particle size. Setting: 12 min x 190 °C (temperature of object).
	Hardness:	1H - 2H
	DIN 53152 bending elasticity:	unaltered on 1/4” mandrel
	DIN 53151 cross-hatch adhesion:	GT O (100%)
	Erichem elasticity:	SEN DIN 53156: > 6mm
	Gardner inpact resistance:	25 kg x cm.

Tests performed on degreased and phosphatized metal plates with 60/70 micron film thickness.
The paint coating passed the saline mist resistance tests (193 hours).

Environmental characteristics		
Type of installation	indoor	
Installation conditions	on floor	
Climatic conditions (t°/Rh%)	constant	23°C/83% - 40°C/93%
	variable	23°C/98% - 40°C/98%
Ambient temperature limits	for operation	-5°C +40°C Normal usage conditions (Ref. sect. 7.1 of the Standard IEC 61439-1-2)
	for stOrange	-25°C +55°C

Technical details and certifications
Power dissipated

System pro E power IP40 - IP41

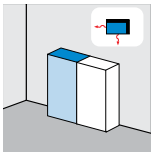
		Separate enclosure exposed on all sides					**Separate enclosure for assembly on a wall**					**First and last enclosures exposed**				
																
		Maximum power dissipated (W)					**Maximum power dissipated (W)**					**Maximum power dissipated (W)**				
W (mm)	**D (mm)**	**20 °C**	**25 °C**	**30 °C**	**35 °C**	**40 °C**	**20 °C**	**25 °C**	**30 °C**	**35 °C**	**40 °C**	**20 °C**	**25 °C**	**30 °C**	**35 °C**	**40 °C**
Structures with blind panels H = 2200mm including 100mm plinth																
350	600	186	234	290	360	428	176	222	275	341	406	163	205	254	315	375
	800	227	286	355	440	523	222	280	347	431	512	208	262	325	403	479
400	600	207	261	324	401	478	196	247	306	380	452	186	234	290	360	428
	800	255	321	398	494	587	248	313	388	481	573	233	294	365	452	538
500	600	248	312	393	476	561	236	297	360	448	530	225	284	356	431	508
	800	312	393	495	598	705	300	378	475	577	680	283	356	444	538	636
600	600	247	311	386	478	569	235	296	367	455	542	231	291	361	447	532
	800	293	369	458	567	675	284	358	444	550	655	272	343	425	527	628
800	600	293	369	458	567	675	276	348	432	535	637	279	352	436	541	644
	800	341	430	533	661	787	326	411	510	632	752	321	405	502	623	741
850	600	303	382	474	587	699	288	363	450	558	664	291	367	455	564	672
	800	354	446	553	686	816	336	423	525	650	774	333	420	521	646	768
1000	600	336	423	525	650	774	315	397	492	610	726	322	406	503	624	743
	800	392	494	613	760	904	367	463	574	712	847	370	466	578	717	853
1100	600	360	453	562	697	829	333	420	521	646	768	344	433	537	666	792
	800	417	525	651	807	961	390	492	610	756	900	396	499	619	767	913
1350	600	417	525	651	807	961	381	480	595	738	878	402	506	627	778	926
	800	487	613	760	943	1122	443	558	692	858	1021	459	578	717	889	1058

Power dissipated inside System pro E power switchboards on the basis of the admissible overtemperature.
Δt = each column describes the case for a specific Δt, while Δt is the difference between the temperature inside the enclosure and ambient temperature.

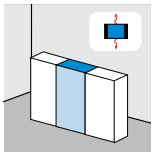
Technical details and certifications

Power dissipated

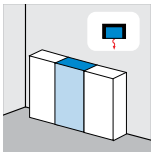
First and last enclosures for assembly on wall



Central enclosure exposed



Central enclosure for assembly on a wall



Maximum power dissipated (W)					Maximum power dissipated (W)					Maximum power dissipated (W)				
20 °C	25 °C	30 °C	35 °C	40 °C	20 °C	25 °C	30 °C	35 °C	40 °C	20 °C	25 °C	30 °C	35 °C	40 °C
152	191	237	294	349	137	173	215	266	317	127	160	198	246	293
200	252	312	387	461	177	223	277	343	408	168	212	263	326	388
172	217	269	334	397	160	201	249	309	368	146	184	228	283	337
229	288	357	443	527	206	260	322	400	476	195	246	305	378	450
206	260	327	395	467	205	258	322	392	466	185	233	293	354	419
243	306	386	469	550	253	319	397	480	565	231	291	365	442	525
222	280	347	431	512	219	276	342	424	505	202	255	316	392	467
260	328	407	504	600	250	315	391	484	576	246	310	384	477	567
260	328	407	504	600	263	331	410	509	606	252	317	393	487	580
310	391	485	601	715	304	383	475	589	701	290	366	454	563	670
271	341	423	524	624	275	346	429	532	633	261	329	408	506	602
320	403	500	620	737	314	396	491	609	725	302	381	472	586	697
305	384	476	590	703	310	390	484	600	714	292	368	456	566	673
349	440	546	677	805	348	438	543	673	801	338	426	528	655	779
322	406	503	624	743	329	415	515	638	759	315	397	492	610	726
369	465	577	715	851	371	468	580	720	856	357	450	558	692	823
367	463	574	712	847	386	486	603	747	889	361	455	564	700	833
424	534	662	821	977	433	545	676	838	997	410	516	640	793	944

Technical details and certifications
Electrical continuity granted up to 10 A

Electrical continuity of the structure and fixed and movable parts

The accessible metal parts in a switchboard must be electrically connected together and with the main protection conductor. The maximum resistance value allowed for this circuit is 0,1 Ω.

According to standard IEC 61439-1 (part 8.4.3.2.2) "Specifications for earthing continuity to protect against the consequences of faults within switchgear", point "b":
"For covers, doors, closing plates and similar, the ordinary connections with metal screws and metal hinges are considered sufficient for electrical continuity so long as electrical devices that exceed the low voltage limits (ELV) are not installed on them".
To achieve this:

- only and exclusively use the screws and accessories supplied with the components
- comply with the assembly instructions given in the manuals

The electrical continuity in System pro E power enclosures is automatically granted for the structure by screws and the assembly method itself. Moreover, it is possible to use a braid for the connection in the case of movable metal parts (doors or removable panels) provided with earthing pins.

Electrical continuity garanted up to 10A in System pro E power components

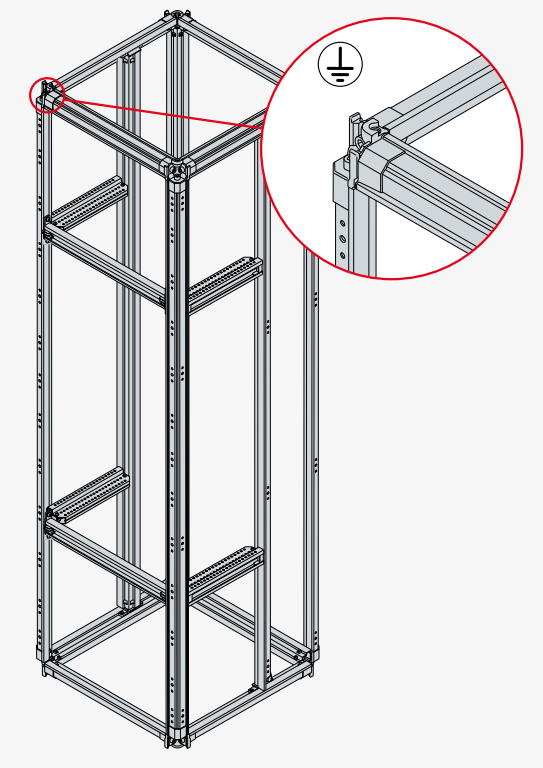
	Finishing		Electrical continuity	
Description	**Galvanized Metal Sheet/Stainless Steel AISI 304**	**Painted Metal Sheet**	**Automatically granted**	**By means of braid**
Uprights/Crosspieces	✓		✓	
WR frame	✓		✓	
Internal panels for devices		✓	✓	
Plates for devices	✓		✓	
External panels (side/rear/roof)		✓	✓	
Bottom with plinth		✓		✓
Bottom without plinth	✓		✓	
Frontal full door		✓		✓
Frontal partial door		✓	✓	

Technical details and certifications

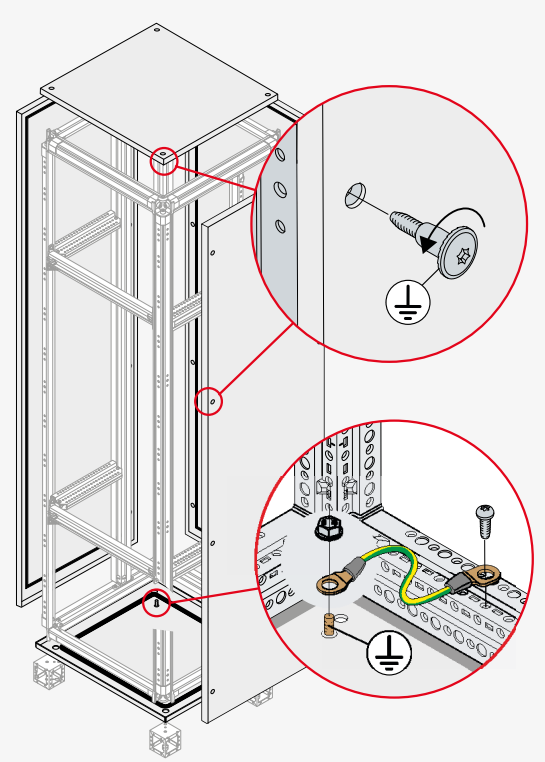
Electrical continuity granted up to 10A

—
01 The electrical continuity of the structure is automatically granted with the assembly of the structure itself, without the use of any dedicated accessory.
—
02 The side panels, the rear panels and the roof panels allows the electrical continuity by means of dedicated full thread head screws, which scratch the painting during the assembly. The bottom with plinth is provided with M6 pins, which allows the use of the traditional copper braid for the connection.
—
03 The blind and glass full doors are provided with M6 pins, which allows the use of the traditional copper braid for the connection.

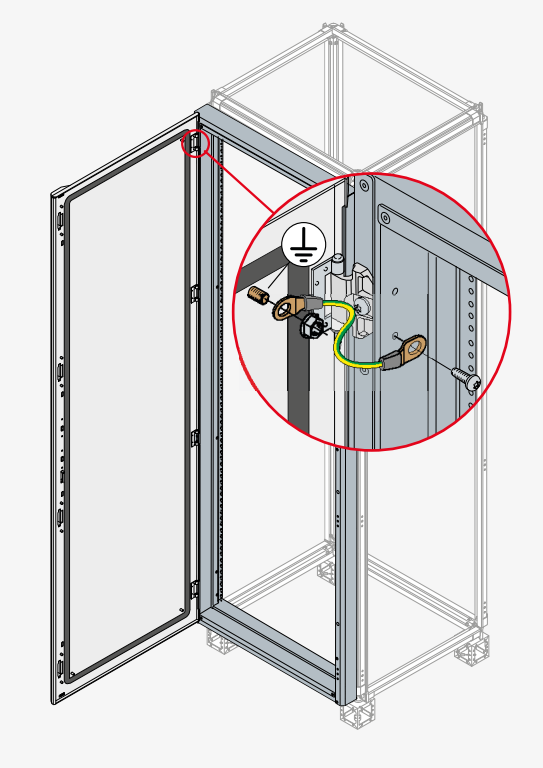
—
01



—
02



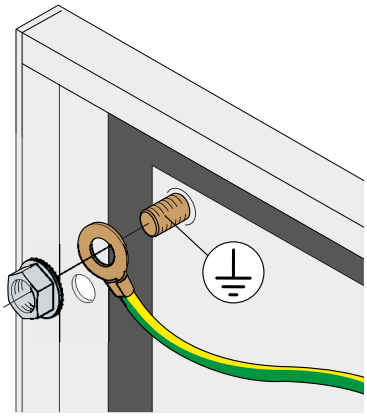
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03



Technical details and certifications
Conductors

Earthing of the structure

It is obligatory to use a braid for the earth connection in the case of movable metal parts (doors, swing frames or removable panels) that must support electrical components differing from class 2 (which, being fitted with double insulation, are not earthed).



Calculation of protection conductor PE
Standard IEC 61439-1-2 contain the methods for calculating the section of the protection conductor PE, which must be sized to withstand the thermal and dynamic components of the fault currents.

The following conditions must be ascertained when choosing the position in which the bar is to be fixed:

- the bar must be connected straight to the earthed parts of the switchboard (structure);
- the bar must be connected in an easily accessible position.

—
Use the values in the table for sizing taken from Standards IEC 61439-1-2.

S (mm²)					Sp (mm²)
		S	≤	16	S
16	<	S	≤	35	16
35	<	S	≤	400	S/2
400	<	S	≤	800	200
		S	>	800	S/4

Equipotentiality conductor

Conductive parts of a device, which cannot be connected to the protection circuit with their own means of connection, must be connected to the protection circuit of the apparatus through the equipotentiality of the protection.
This is done by means of a protective bonding conductor, the section of which must be chosen in accordance with the table below.

Rated service voltage I_e (A)					Minimum section of the protective bonding conductor (mm²)
		I_e	≤	20	S
20	<	I_e	≤	25	2,5
25	<	I_e	≤	32	4
32	<	I_e	≤	63	6
63	<	I_e			10

S = section of the line conductor (mm²)

Conductor PEN

The section of the PEN conductors of an apparatus must be determined in the same way as the neutral conductor (N).
10mm2 is the minimum section of a copper conductor.

The PEN conductor does not need to be insulated. Structure parts must not be used as a PEN conductors. However, the copper or aluminium assembly tracks can be used as PEN conductors.

For conductors that are not made of copper, equivalent conductivity sections are used instead of the sections above and may require larger terminals.

Technical details and certifications
Ordinary and extraordinary maintainance

1. Marking of the Enclosure
The manufacturer of the Enclosures must supply a readable identifying plate during the whole Enclosures' operation cycle.
The information that must be present on the license plate are:

- Manufacturer's name and trademark;
- Identification number of the Enclosures that can allow further information to be obtained from the constructor of the Enclosures
- Means for the identification of the construction date
- IEC 61439-2 referral
- CE marking (not outside Europe)

Company	
Enclosure number	
Date	
Standard	

Check the marking of the painting by rubbing for 15 seconds a rag soaked in water and then, for another 15 seconds, with rag soaked in petrol according to the directions reported in IEC 61439-1 10.2.7; the markings obtained by molding, pressure and engraving - similar, including labels with a coating laminated plastic, should not be verified according to the test.

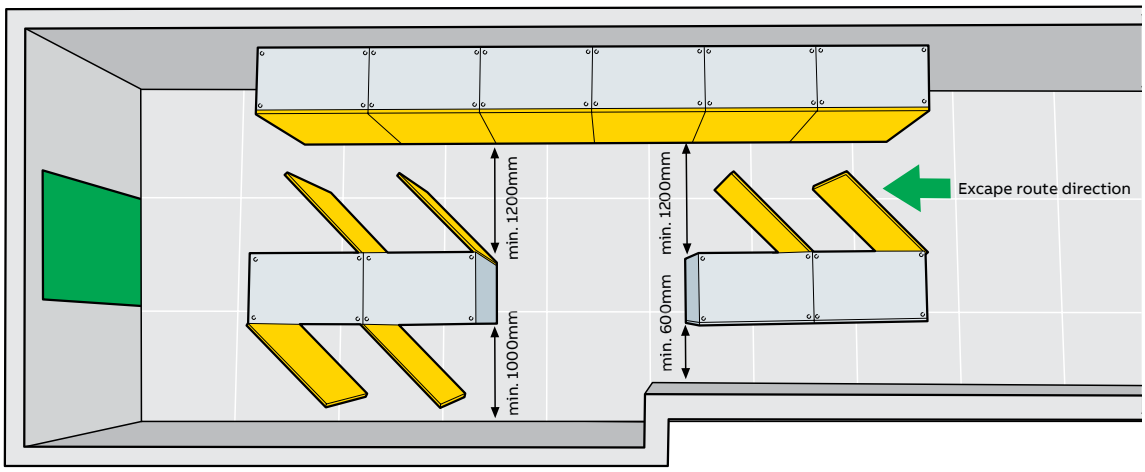
2. Required documentation to be attach to the painting:

- System pro E power Enclosures catalog and Equipment's catalog
- Instruction handbook for System pro E power components and Equipment's manual appliance instructions
- Document 1STC860086 Verification of the conditions installation
- If there are special service conditions agreed between the framework manufacturer and the user, verify that they are indeed in compliance to current Standard (see IEC 61439-1 7.2).

3. Installation and commissioning
The installation of the panel must take place in a position, which allows making easy accessibility both to the parts that can actually be object of maintenance and to the maneuvering devices, as an example:

- Keeping a distance of at least 600mm from the wall allows easy removal of the rear panel and assured thermal dissipation. The design, in fact, takes into account the positioning and the dimensions of the Enclosures, in order to guarantee compliance with the requirements for an effective maintenance.

For example, it is advisable to leave at least 600mm from the wall to allow easy removal of the back panel. The opening of the doors and swing frames must be granted. Suggested minimum distance without panel removal is 200mm.



Technical details and certifications

Ordinary and extraordinary maintainance

It must be possible to reach emergency exits in case of emergency without trouble.

- If the Enclosures are of considerable size, mechanical subdivisions must be prepared for an effective transport; before the floor installation, the mechanically parts must be reconnected as well as the electrical contacts.
- It is recommended the removal of glass door and extractable devices (if any) to avoid damage in the transport.
- Transport the loads following the instructions reported in the catalog.
- Floor fixing must take place on one leveled suitably base and free of excessive roughness with M12 class 8.8 screws.

Before activating the power supply of the Enclosures, it is recommended to check for any slack of the screws and to remove inclusions of dust and foreign bodies, etc.

- An example of the most important preliminary operations is summarized in Table 1.

Table 1

Action	Chek
Identification of the panel marking	
Visual inspection of cleaning and damage due to transport	
Visual inspection of seals integrity	
Tightening torques (Nm) of busbars and insulators: If previously marked with marker or varnish, carry out only a visual check, otherwise proceed with the verification of the tightening torques according to the table:	
Check tightening torque (Nm) Enclosures (External Panels, kit):	
Checking tightening torques (Nm) Devices:	
If previously marked with a felt-tip pen or paint, carry out only a visual check otherwise proceed with the verification of the tightening torques according to catalog indications and / or devices instruction manual	
Verification of the insulation resistance value between the three phases and between them and the mass	
Checking the correctness of the opening / closing operation on each appliance	
Verification of mechanical interlocks, if present	
Check operation of extraction and insertion on removable / removable devices, if any	
Verification of the connection of the auxiliary and measuring circuits, if any	
Verify the correct switching-on of any electronic measuring instruments, if any	
Verification of the correct intervention of the relays equipped with test button (switch in closed), if present	
Verification of auxiliary signals, if any	
Check correct relay ignition of electronic switches, if any	
Verification of operating cycles for motorized circuit breakers, if present	
Verification of the opening or emergency release coils, if any	
Check the auxiliary circuits of the withdrawable circuit-breakers in the isolated position, if present	
Check differential intervention using the Test key, if any	
Check switch adjustment, if any	
Check indications of voltmeters, lamps, analyzers, if any	

Component	(Nm)
PBHS0200	12
M6	8.9÷9.9
M8	21.8÷24.2
M10	43.2÷48
M12	74.3÷82.6
M14	117÷130
M16	177.5÷197.3

Component	(Nm)
Screws Kit (three-bar M6)	6
Screws / nuts M6	8.9÷9.9
Upright and cross-member screws (M10)	20
Screw for External Panels and hinges	5

Technical details and certifications

Ordinary and extraordinary maintainance

Once these actions are successfully completed, it is possible to start the "tensioning", always remembering to replace the covers previously removed. To power an electrical panel, normally:

- The line arrival switches are closed;
- The correct functioning of the instruments of measurement, of the network analyzerand of the lamps is verified;
- Outgoing switches are closed individually
- The correct functioning of the utilities has to be tested.
- If the instantaneous opening of an outgoing switch occurs, it is necessary to look for the reason of the fault and repeat all the above described procedures.

Once the installation is complete, it is necessary to check that the individual circuits and the respective devices of protection are identifiable by tags, which comply with IEC 81346-1 and 81346-2.

Technical details and certifications
Special painting and Instruction manuals

Customized directly in the factory

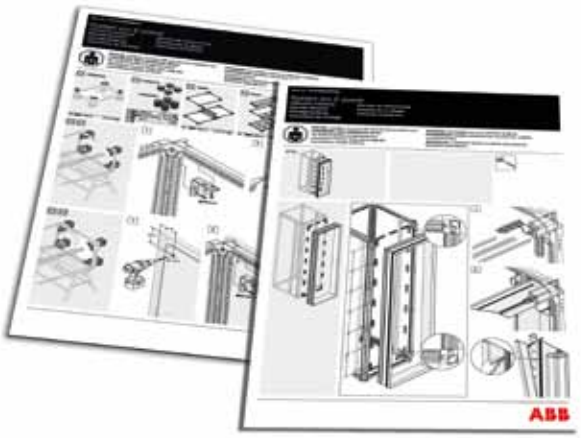
CUSTOM MADE SERVICE is an ABB service for Main Distribution Enclosures, which, on request, are supplied painted, drilled and, where necessary, assembled according to the customer's specific requirements.

Painting
A shade of color other than the standard one (grey orange peel RAL 7035) can be requested on the mounted versions of the enclosure.
For the various colors/finishes and for details of the painting cycle characteristics please contact ABB.

Customized drilling
CUSTOM MADE SERVICE offers also a drilling service complying with your own specific drawing, made using CAD .dwg or .dxf format drawings. Simply provide the useful dimensions. Should you prefer a solution ready to be worked with, you can choose the Custom Made Service solution dedicated to battery assembly of several columns.
The accessories can also be supplied already factory-mounted by ABB on request.

Instruction manuals
Detailed multi-language instruction manuals, including drawings, show the correct way to assemble the structures and the components inside them.

User compliance with manufacturer instructions allows the set-up of correctly selected and assembled electrical enclosures which conform to EN 61439-1 in accordance with the European Community Low Voltage Directive (Directive 2014/35/EU).





Technical details and certifications
Declaration of conformity

System pro E power switchboards with rated characteristics	
Rated service voltage Ue	up to 1000 V AC / 1500 V DC
Rated insulation voltage Ui	up to 1000 V AC / 1500 V DC
Rated current / Icw	up to 6300 A / up to 150 kA
IP protection class	IP30, IP31, IP40, IP41, IP54, IP65

If the components have been chosen and assembled correctly, as described in the catalogue and instruction manual, the resulting switchboards will conform to Standard IEC 61439-1-2, in accordance with the provisions established by the Low Voltage Directive adopted by the European Union 2007/95/EC (formerly Directive 73/23/EEC, Law 791/1977).

The above is valid if the switchboard has been designed and built:

- having chosen the materials on the basis of the performance values indicated in the ABB catalogues;
- having sized the conductors in accordance with the provisions established by Standards EN 61439-1 and CEI 64-8;
- having performed the individual tests established by Standard IEC 61439-1-2 and obtained positive results.

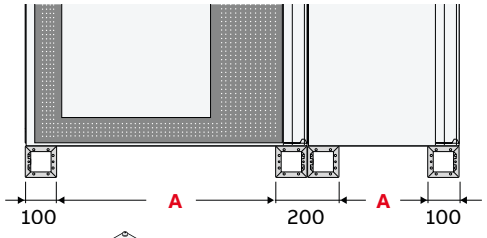
Technical details

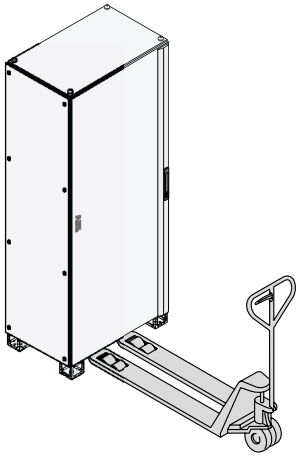
Information about disposal at the end of the lifecycle of the products
ABB SACE has conducted research into the end of the lifecycle of the product.
The assessments were made by applying the LCA (Life Cycle Assessment) method as established by ISO 14040 - 1997 and in accordance with the requirements established by SEMC in the ISO TR 14025 TYPE III Enviromental declarations (MSR 1999:2 – “Guidelines Environmental Product Declarations”) document.
The research was conducted considering the disposal and recycling processes of the main materials forming a typical switchboard.
Using the bill of materials as a starting point, the researchers considered the ease with which each part can be disassembled and separated as well as the ability to recycle the materials. They found that the product is almost entirely recyclable.
After this, they limited the bill of materials to the most significant components and assessed the lifecycle of each.
The result was the flow of recyclable materials and salvaged materials (or for incineration) indicated in the Table. In theory, none of the materials should end up in a landfill.

Substance	Destination
Aluminium scrap	Recycling
Copper scrap	Recycling
Polyurethane gaskets	Incineration
Fiberglass	Recycling
Scrapped glass	Recycling
Paper/cardboard	Recycling
Plastic insulators	Recycling
Sheet metal scrap	Recycling

Technical details and certifications
Handling

Handling with a transpallet

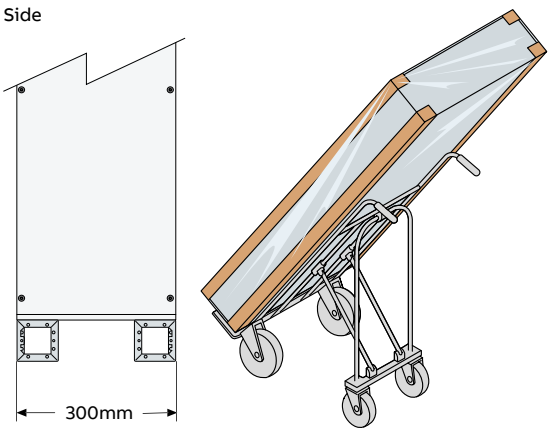




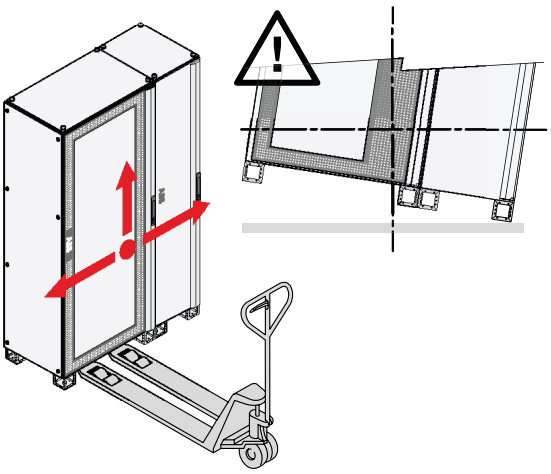
External dimensions W (mm)	A (mm)
350	248
400	298
500	398
600	498
800	698
850	748
1000	898
1100	998
1350	1298

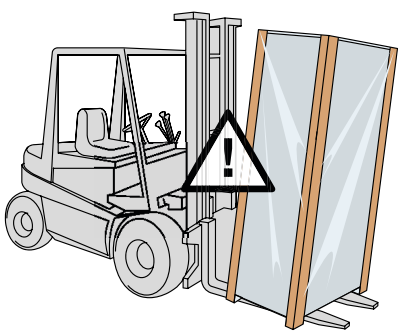
For extra safety, it is advisable to fasten the switchboard to the lift truck when using this type of vehicle for transport.

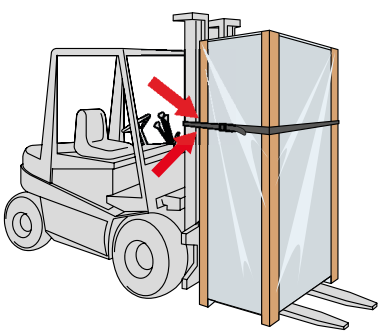
Shallow switchboards should be handled in the following way:



Check the center of gravity before handling structures measuring L=800/1000mm (with internal or external cable compartment) containing busbar systems.





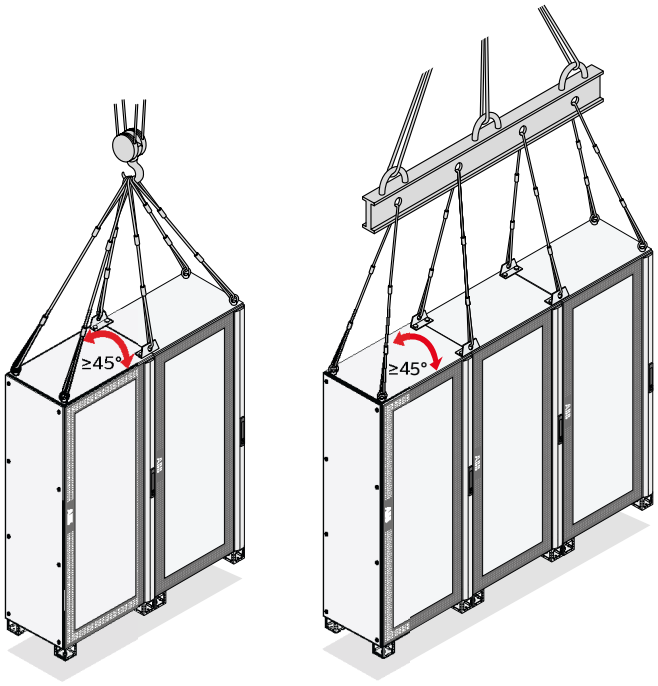


Technical details and certifications
Handling

Handling with a bridge crane

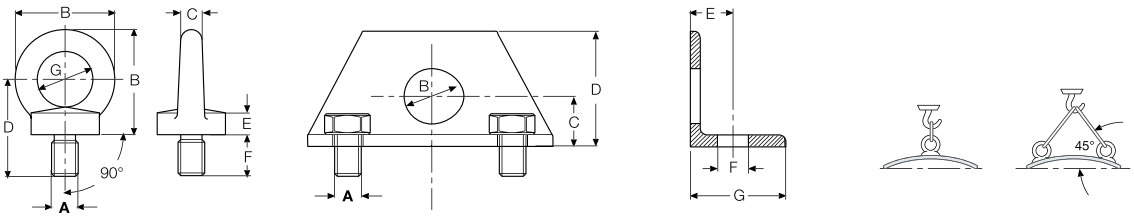
Before handling switchboards with a crane or bridge crane, make sure that:
- the ropes or chains are in an excellent condition;
- the angle between the lifting ropes and the top of the switchboard must be ≥45°;
- up to 3 units can be carried at the same time;
- maximum weight lifted as established by Standard DIN 580 (M12).

To comply with the conditions described above, use a lifting beam with the appropriate characteristics when lifting several adjacent units.



Standard DIN 580 concerning mechanical connection components (only for eyebolts)

Eyebolts **Lifting reinforcements**



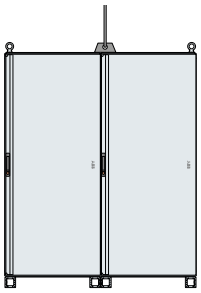
A	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	Load 1 (kg)	Load 2 (kg)	Tightening (Nm)
Eyebolts									
M12	54	12	28	10	22	30	340	240	8*
Lifting reinforcements									
M12	Ø40	37	80	25	Ø14	60	510	350	40

Technical details and certifications
Handling

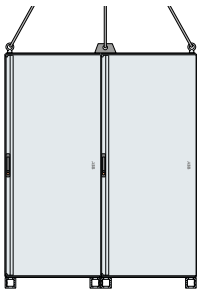
Maximum capacities
(in accordance with the IEC 62208 Standard)



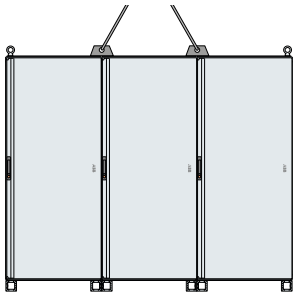
Number of section	1
Weight of single section kg	1000
Total weight of section kg	1000
Joining kit	PSBS0065
	PSES0008
Lifting kit	PEBL0004
Number of braces used	4



Number of section	2
Weight of single section kg	500
Total weight of section kg	1000
Joining kit	PSBS0065
	PSES0008
Lifting kit	PBRL0002
Number of braces used	2



Number of section	2
Weight of single section kg	2000
Total weight of section kg	1000
Joining kit	PSBS0065
	PSES0008
Lifting kit	PEBL0004
	PBRL0002
Number of braces used	6

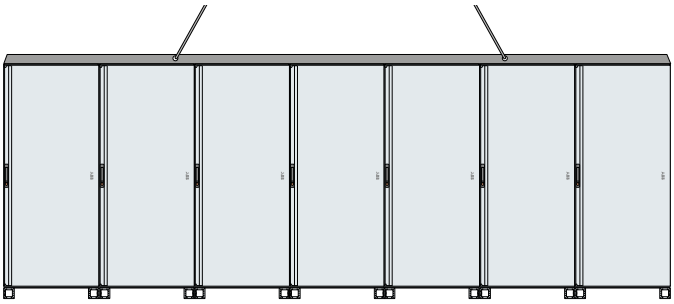


Number of section	3
Weight of single section kg	500
Total weight of section kg	1500
Joining kit	PSBS0065
	PSES0008
Lifting kit	PEBL0004
	PBRL0002
Number of braces used	4

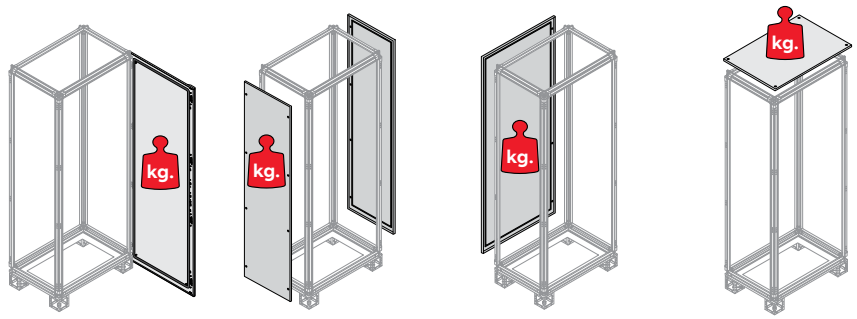
Technical details and certifications

Handling

Maximum capacities
(in accordance with the IEC 62208 Standard)b



Maximum section length	6 meters
Weight of single section kg	1000
Total weight of section kg	5000
Joining kit	PSBS0065
	PSES0008
Lifting kit	PEBL0004
	PBRL0002
Number of braces used	4



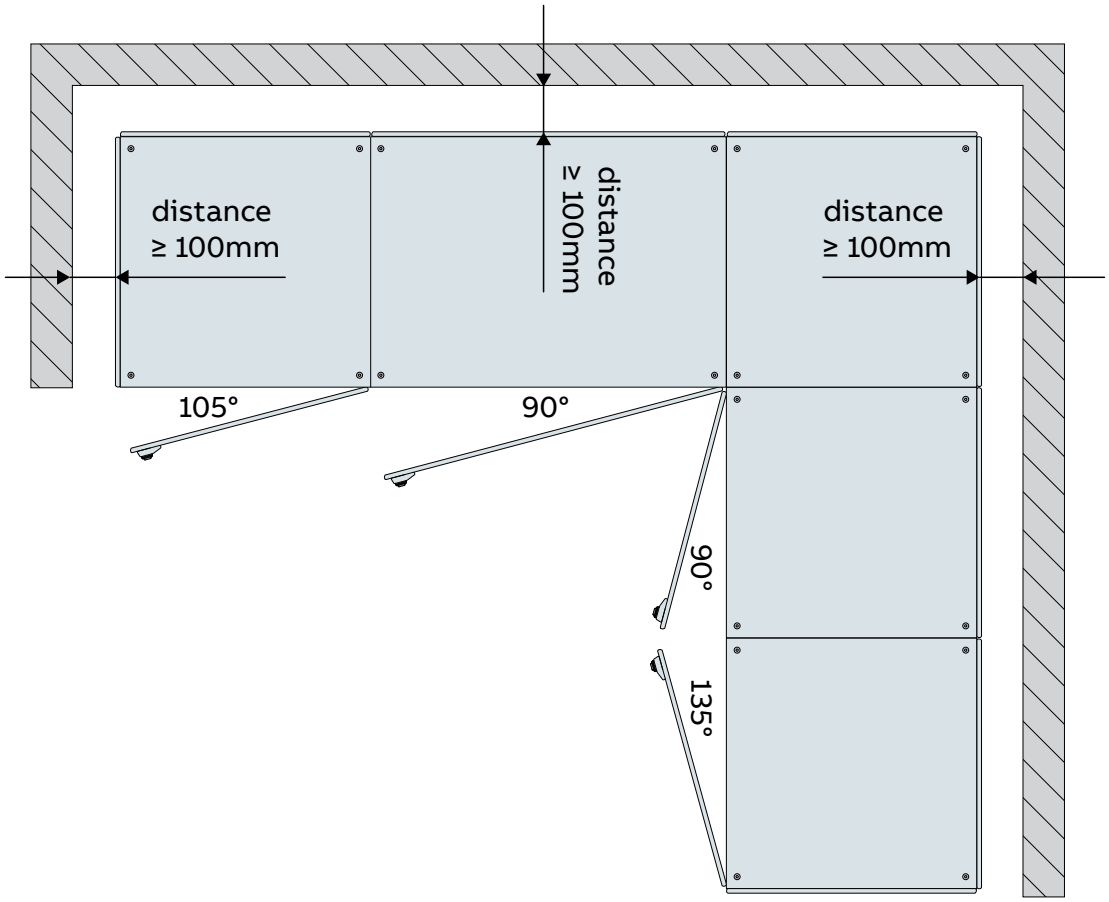
Door	**Side panel**		**Rear panel**		**Roof**
kg	D (mm)	kg	W (mm)	kg	kg
50	>800	90	>800	90	40
	≤800	110	≤800	110	

For column In ≥ 4000 A or particularly heavy columns, it is recommended the use of a single plinth.

Technical details and certifications
Recomended distances

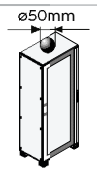
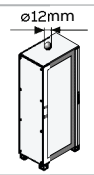
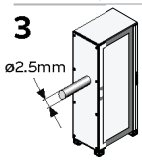
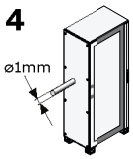
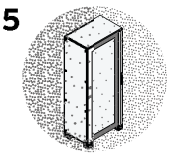
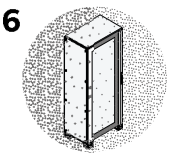
Distances to the side or rear wall

- At least 100 mm distance to the side walls must be maintained.
- At least 100 mm distance to the rear wall must be kept
- Derating is required for smaller distances to walls
- With a distance of 0 mm to the rear wall, the deratingfactor is 0.67



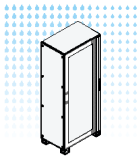
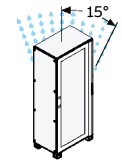
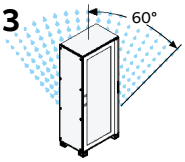
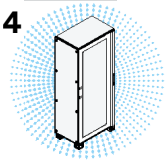
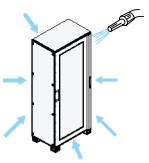
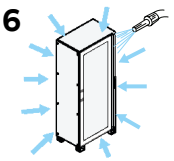
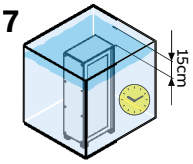
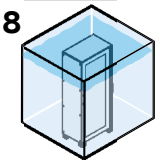
Technical details and certifications
IP protection class

Protection against ingress of solid objects

1st characteristic digit		Brief description	Full description
0		No protection	No particular protection is envisaged
1		Protected against solid objects larger 50mm (accidental contact with the hands)	A large area of the human body, for example a hand (however, voluntary protection is not envisaged) or solid objects larger than 50mm in diameter must not be able to penetrate
2		Protected against solid objects larger than 12mm (fingers)	The fingers or similar objects measuring 80mm or solid objects more than 12mm in diameter must not be able to penetrate
3		Protected against solid objects larger than 2.5mm (tools, wires)	Tools, wires, etc., more than 2.5mm in diameter or thickness or solid objects more than 2.5mm in diameter must not be able to penetrate
4		Protected against solid objects larger than 1mm	Wires or flat cables more that 1.0mm thick or solid objects more than 1.0mm in diameter must not be able to penetrate
5		Protected against dust (no harmful deposits)	Penetration of dust is not totally excluded but the quantity that may penetrate is not sufficient to impair the correct operation of the material
6		Totally protected against dust	No dust penetration is permitted

1st digit defined by Standards 61439-1-2 (Ref. sect. 10.3).

Protection against ingress of water

2nd characteristic digit		Brief description	Full description
0		No protection	No particular protection is envisaged
1		Protected against vertically dripping water (condensation)	Drops of water falling vertically must not produce harmful effects
2		Protected against water dripping at an angle up to 15° from the vertical	Drops of water falling vertically must not produce harmful effects when the enclosure is tilted at any angle up to 15° from its normal position
3		Protected against rain falling at an angle up to 60° from the vertical	Water falling as a spray at any angle up to 60° from the vertical shall have no harmful effects
4		Protected against water splashing from all directions	Water splashing against the enclosure from any direction shall have no harmful effects
5		Protected against jets of water sprayed from all directions	Water projected by a nozzle from any direction shall have no harmful effects
6		Protected against jets of water similar to waves	Waves or powerful water jets shall not penetrate the enclosure in harmful quantities
7		Protected against the effects of temporary immersion	Ingress of water in harmful quantities shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time
8		Protected against the effects of continuous immersion	The equipment is suitable for continuous immersion under conditions which shall be specified by the manufacturer

2nd digit defined by Standards 61439-1-2 (Ref. sect. 10.3).

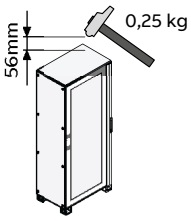
Technical details and certifications
Mechanical shock resistance IK

The IK is expressed in Joule in compliance with the requirements of IEC 62262.

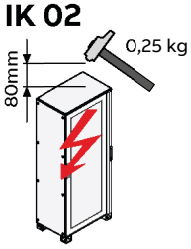
IK 0
Not protected



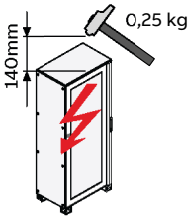
IK 01
Impact energy in
Joule 0.140



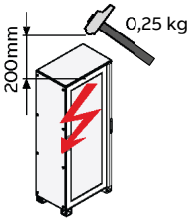
IK 02
Impact energy in
Joule 0.200



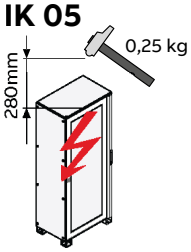
IK 03
Impact energy in
Joule 0.350



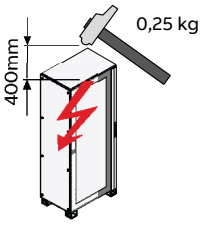
IK 04
Impact energy in
Joule 0.500



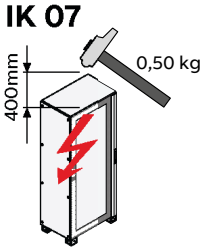
IK 05
Impact energy in
Joule 0.700



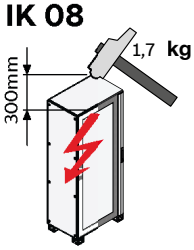
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Impact energy in
Joule 1.00



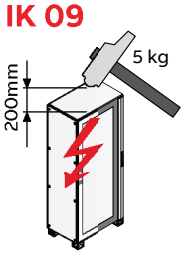
IK 07
Impact energy in
Joule 2.00



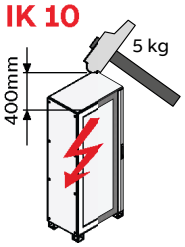
IK 08
Impact energy in
Joule 5.00



IK 09
System pro E power
Glass door
Impact energy in
Joule 10.00



IK 10
System pro E power
Blind door
Impact energy in
Joule 20.00



Technical details and certifications
Segregations

Segregations in accordance with Standard IEC 61439-1-2

Segregation form means the type of division inside the switchboard. Segregation by means of metal or insulating barriers or partitions may be required to:

- Provide protection against direct contacts (at least IPXXB) when a de-energized part of a switchboard must be accessed while the rest of it remains energized.
- Reduce the possibility of internal arc ignition and propagation.
- Prevent solid bodies from passing between different parts of the switchboard (protection class at least IP2X).

Partition means the element that separates two compartments while the barrier protects the operator from direct contact and from the effects of the arc of a switching device in the usual direction of access.

The partition can also be a casing that is an integral part of an apparatus, e.g. a moulded-case circuit-breaker.

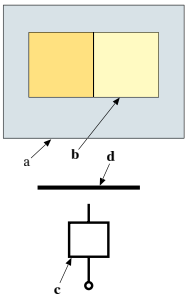
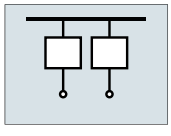
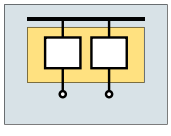
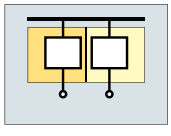
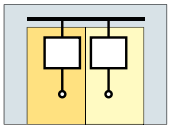
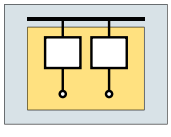
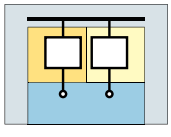
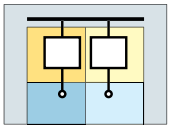
Internal segregation kits

The different segregation Forms, (Form 2a, 2b, 3a and 4b), that can be created in the new System pro E power main distribution switchboard are described in the following pages.
The descriptions include the following inFormation for each segregation Form:

- the basic conditions for its creation
- the various solutions
- the reference tables for the choice of codes

Generally speaking, the basic segregation Form of the circuit-breaker kits (Form 1) passes to Form 4b by adding different accessories in sequence, depending on the case in question.

The main innovation introduced by the new System pro E power segregation system concerns the kits for circuit-breakers with front (with high terminals*) and rear terminals for Form 2b.

Symbols	Form 1	Form 2	Form 3	Form 4
	No internal segregation	Segregation of busbars from all functional units	Segregation of busbars from all functional units. • Segregation of all functional units from each other • Segregation of the terminals for external conductors and the external conductors from the functional units, but not from the terminals of other functional units	Segregation of busbars from all functional units. • Segregation of all functional units from each other • Segregation of the terminals for external conductors associated with a functional unit from the terminals of any other functional unit and from the busbars • Segregation of the external conductors from the busbars • Segregation of the external conductors associated with a functional unit from other functional units and their terminals • The external conductors do not need to be separated from each other
		Form 2a The terminals for external conductors are not separated from the busbars	**Form 3a** The terminals for external conductors are not separated from the busbars	**Form 4a** The terminals for external conductors are in the same compartment as associated functional unit
				
		Form 2b The terminals for external conductors are separated from the busbars	**Form 3b** The terminals for external conductors and the external conductors are separated from the busbars	**Form 4b** The terminals for external conductors are not in the same compartment as associated functional unit but are in individual spaces or compartments, separated, enclosed and protected
Key a Empty enclosure b Internal segregation c Functional unit, including the terminals for the associated external conductors d Busbars, including the distribution busbars				

Technical details and certifications
Specification

GPO3 MBBS

MBBS		Delivered in kit		Delivered assembled			Package/
In (A)	Poles	Type	Order code	Type	Order code		No. pcs
1000/1250	3P	PGPO2230	1STQ003984B0000	PGPO2230A	1STQ001895M0000		1/1
1000/1250	4P	PGPO2240	1STQ003985B0000	PGPO2240A	1STQ001896M0000		1/1
1600	3P	PGPO2430	1STQ003988B0000	PGPO2430A	1STQ001899M0000		1/1
1600	4P	PGPO2440	1STQ003989B0000	PGPO2440A	1STQ001900M0000		1/1
2000/2500	3P	PGPO2630	1STQ003990B0000	PGPO2630A	1STQ001901M0000		1/1
2000/2500	4P	PGPO2640	1STQ003991B0000	PGPO2640A	1STQ001902M0000		1/1
3200	3P	PGPO4430	1STQ003980B0000	PGPO4430A	1STQ001905M0000		1/1
3200	4P	PGPO4440	1STQ003981B0000	PGPO4440A	1STQ001906M0000		1/1
4000	3P	PGPO4630	1STQ003982B0000	PGPO4630A	1STQ001907M0000		1/1
4000	4P	PGPO4640	1STQ003983B0000	PGPO4640A	1STQ001908M0000		1/1
5000	3P	PGPO6630	1STQ003976B0000	PGPO6630A	1STQ001909M0000		1/1
5000	4P	PGPO6640	1STQ003977B0000	PGPO6640A	1STQ001910M0000		1/1
6300	3P	PGPO6830	1STQ003978B0000	PGPO6830A	1STQ001911M0000		1/1
6300	4P	PGPO6840	1STQ003979B0000	PGPO6840A	1STQ001912M0000		1/1

Table 1 - valid only for all the sections excel xline horizontal 50 mm or 185 mm

MBBS	Icw	400	500	600	800	1000	1200	1350
1000/1250	50					1	1	1
1600	50						1	1
2000/2500	50							1
3200	50							1
4000	50							1
5000	50							1
6300	50							1
1600	75				1	1	1	2
2000/2500	75				1	1	1	2
3200	75				1	1	1	2
4000	75				1	1	1	2
5000	75				1	1	1	2
6300	75				1	1	1	2
3200	100			1	2	2	2	3
4000	100			1	2	2	2	3
5000	100			1	2	2	2	3
6300	100			1	2	2	2	3
5000	120	1	1	2	2	2	2	3
6300	120	1	1	2	2	2	2	3
6300	150	1	1	2	2	2	2	3

Table 2 - valid only for Xline Horizontal 185 mm or 50 mm

MBBS	Icw	1000	1200
1000/1250	50		
1600	50		
2000/2500	50		
3200	50		
4000	50		
5000	50		
6300	50		
1600	75		
2000/2500	75		
3200	75		
4000	75		
5000	75		
6300	75		
3200	100		2
4000	100		2
5000	100		2
6300	100		2
5000	120	2	2
6300	120	2	2
6300	150	2	2

Chapter 4
Overall dimensions

4–2 **Frame**

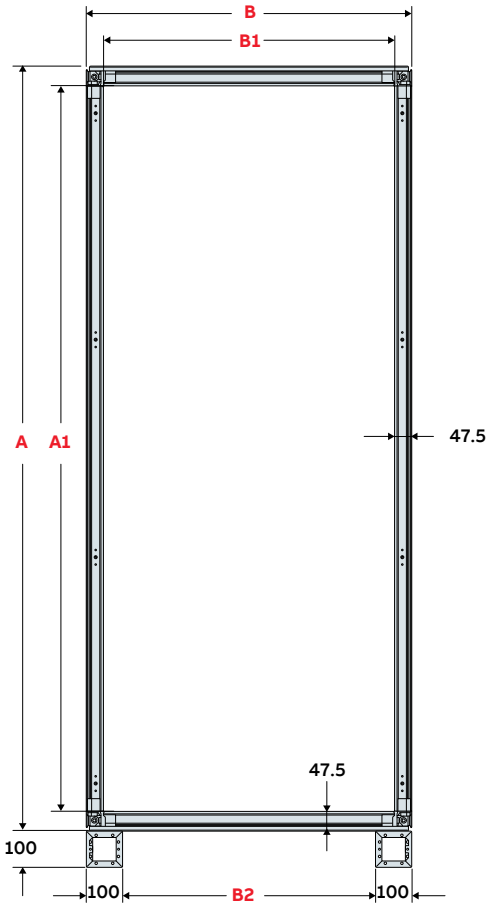
4–4 **External doors**

4–8 **Modules WR mounting frame**

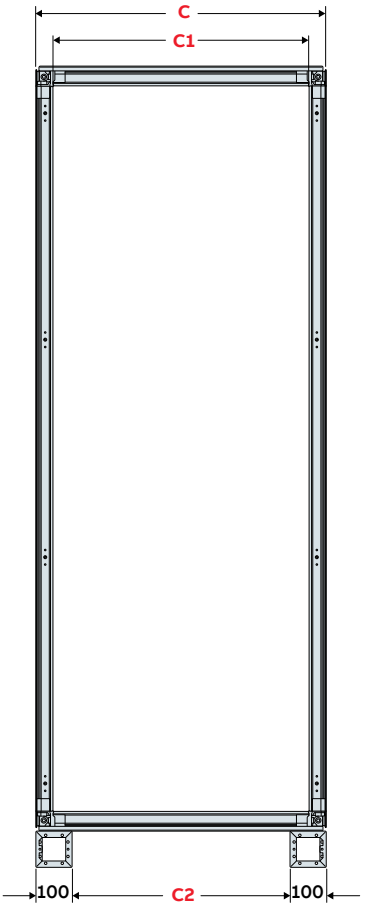
Overall dimensions

Frame

Front



Side



Height measurements (mm)

A	A1
2100	2000

Width measurements (mm)

B	B1	B2	B3	B4	B5	B6	B7	B8
350	254	148	287	325	194	271	348	226
400	304	198	337	375	244	321	398	276
500	404	298	437	475	344	421	498	376
600	504	398	537	575	444	521	598	476
650	554	448	587	625	494	571	648	526
850	754	648	787	825	694	771	848	726
1000	904	798	937	975	844	921	998	876
1100	1004	898	1037	1075	944	1021	1098	976
1250	1154	1048	1187	1225	1094	1171	1248	1126

Depth measurements (mm)

C	C1	C2	C3	C4	C5	C6	C7	C8
600	504	398	537	575	444	521	598	476
800	704	598	737	775	644	721	798	676

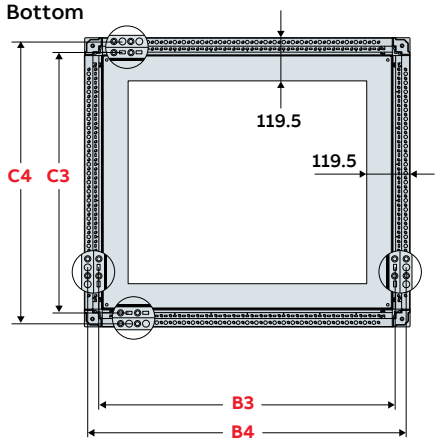
Total depth calculation

In case of partial door execution:

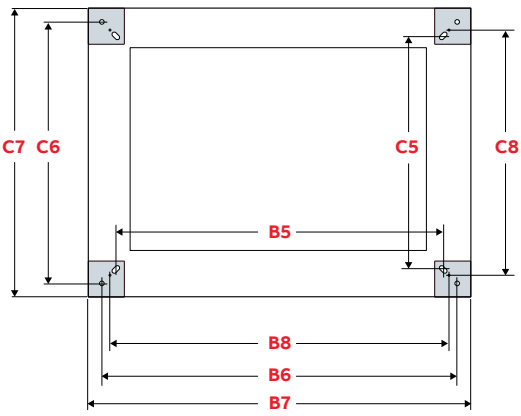
- for vertical circuit breaker and InLine sections the overall depth of the structure is equal to the measure C + 27mm (from the foremost point to rear panel)
- for XLine Horizontal including cable compartments, Combiline N sections or Empty Sections the overall depth of the structure is equal to the measure C + 47mm (from the foremost point to rear panel)

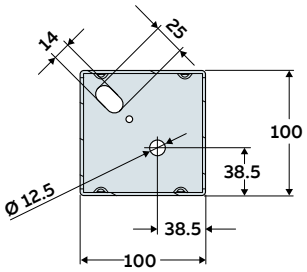
When using external doors, + 70 mm must be added to the above mentioned measures.

Bottom



Fixing on floor



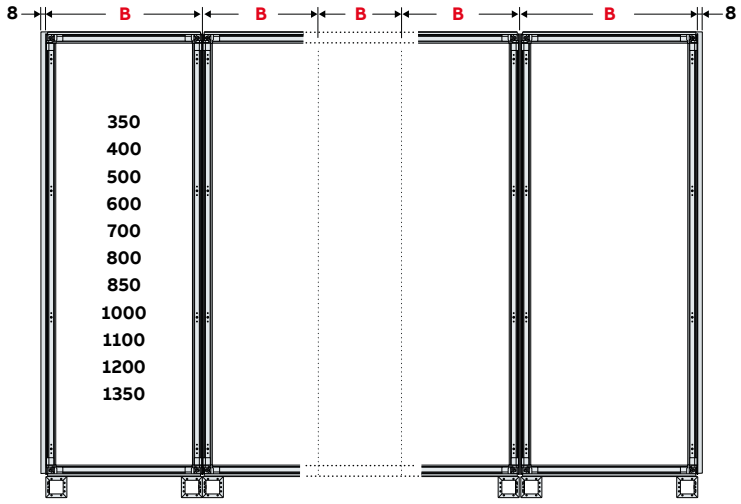


The measurements are given in millimeters.

Overall dimensions

Overall dimensions for multiple adjacent structures

Front



Side

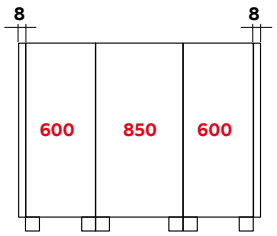


Total width calculation

Add 16 mm for the 2 side panels (8+8=16 mm)

Example

600 + 850 + 600 +16 = 2.066



Total depth calculation C

XLine Horizontal, CombiLine, External cable compartment
Depth of the structure + 48 mm
(front and rear covers including handle)

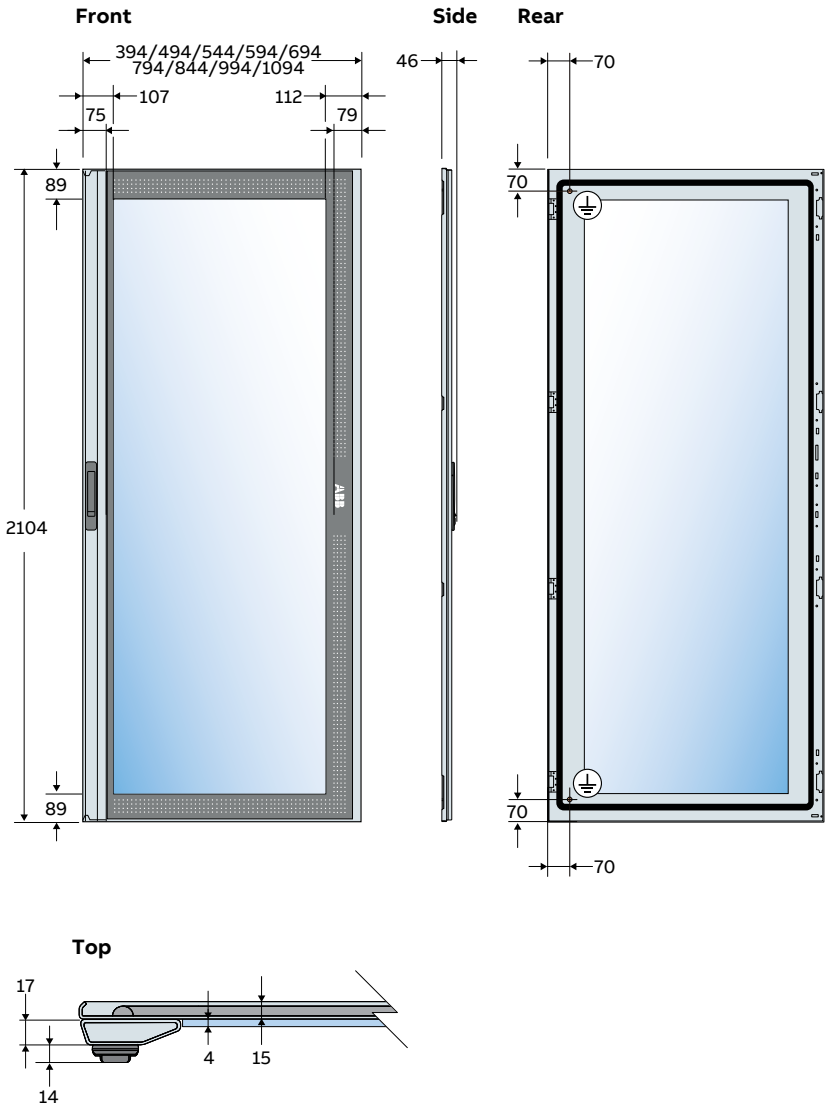
Vertical circuit breaker, InLine, XLine Vertical
Depth of the structure + 28 mm
(front segment doors and rear covers)

The measurements are given in millimeters.

Overall dimensions

External doors

Glass doors

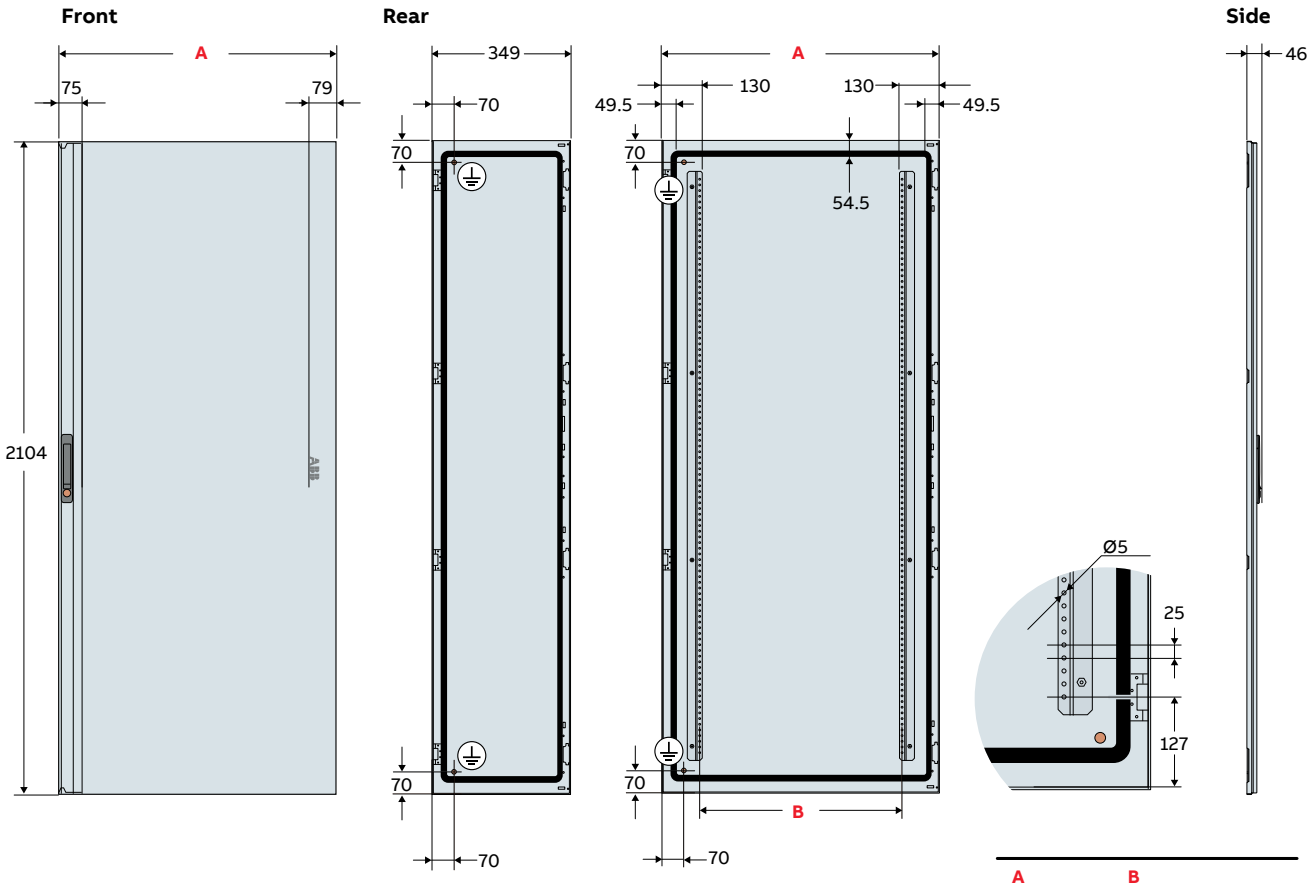


The measurements are given in millimeters.

Overall dimensions

External doors

Blind doors



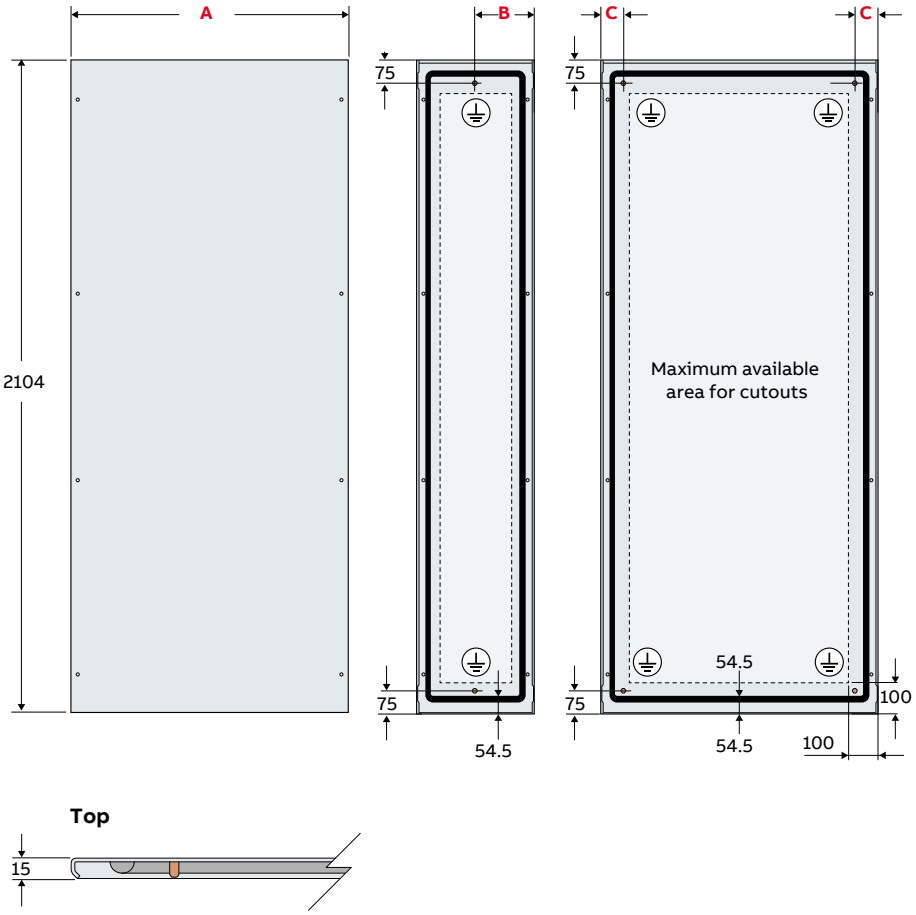
A	B
244	-
344	-
394	-
444	-
494	250
544	300
594	350
794	550
844	600
1094	850

The measurements are given in millimeters.

Overall dimensions

External covers

Rear, side panels



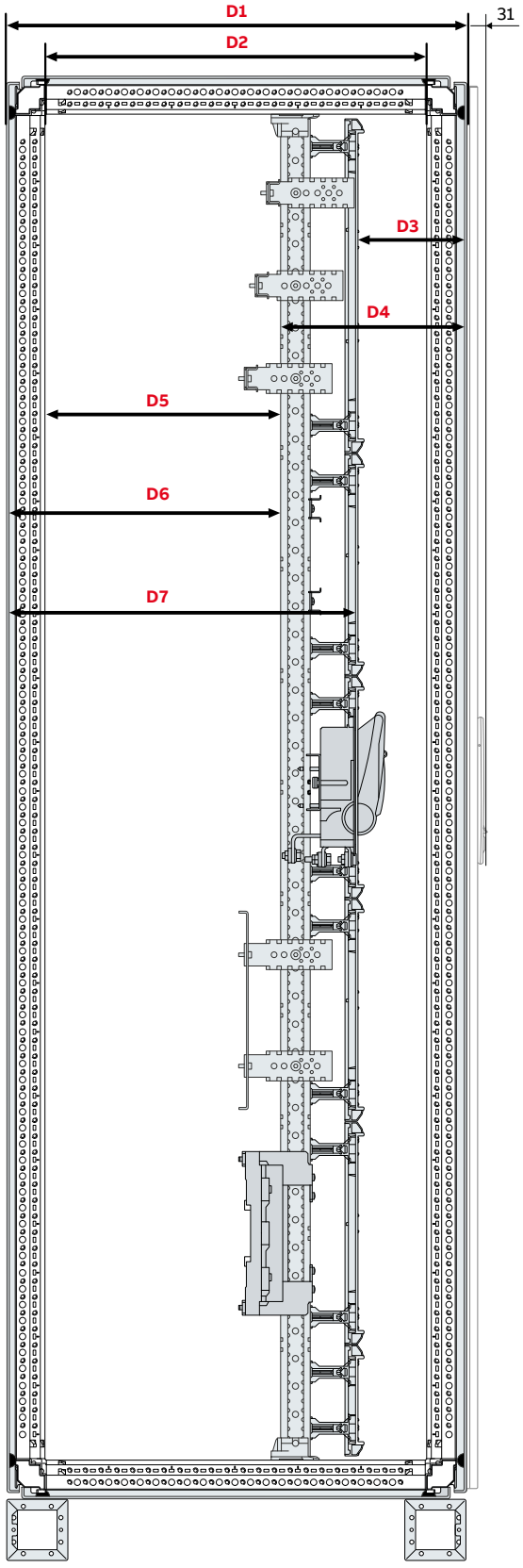
Rear panels		
A	B	C
239	194.5	
339	244.5	
489		75
439		75
489		75
539		75
589		75
689		75
789		75
859		75
989		75
1089		75
1239		75

Side panels	
A	C
589	75
789	75

The measurements are given in millimeters.

Overall dimensions

CombiLine modules mounted on WR mounting frames (only for CombiLine section)



CombiLine

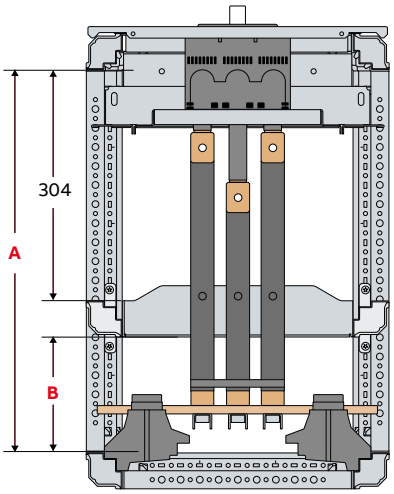
D1	D2	D3	D4	D5	D6	D7
616	504	133	238	320	375	477
816	704	133	238	520	575	677

The measurements are given in millimeters.

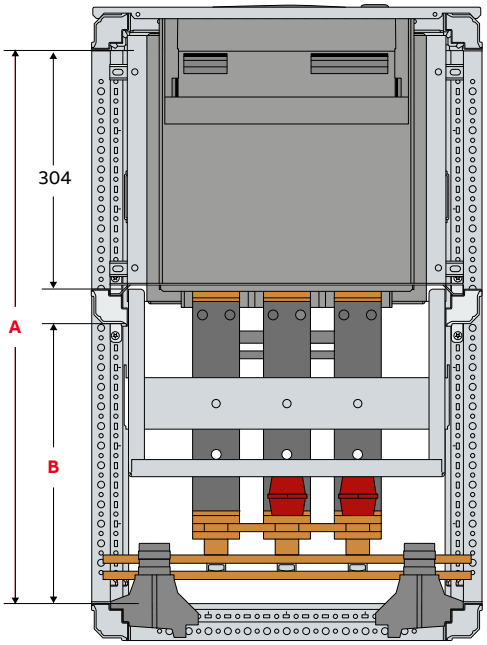
Overall dimensions

Usable space

Tmax



Emax



Depth	A	B
600	504	152.5
800	704	352.5

The measurements are given in millimeters.

Chapter 5
List of Codes

Listofcodes

Type	Oder code	Page
PCCS02X4	1STQ003643B0000	2-12
PCCS02X4	1STQ003643B0000	2-12
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PCCS2344	1STQ008287B0000	2-12
PCCS2344	1STQ008287B0000	2-12
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