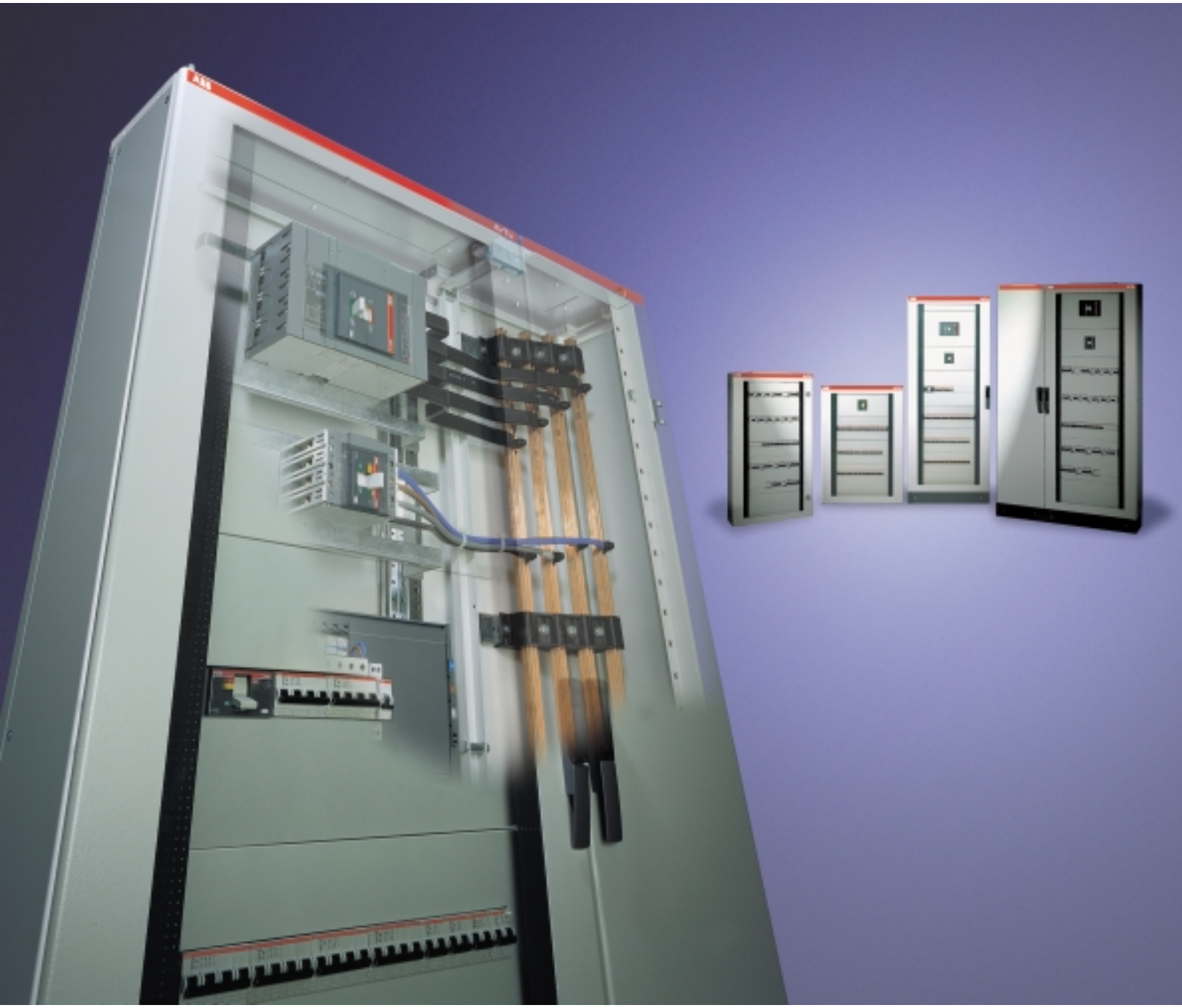
Technical catalogue

ArTu L
Distribution switchboards

1STC802002D0201



Index

General information..... 3
Technical-functional characteristics..... 4
Selection of the structure..... 6
Examples of configuration 8
Kits for installing apparatus..... 9
Distribution system 10
Components 14
In-depth technical information.....30
Overall dimensions 42
List of codes 46
List of new dedicated codes 49
Examples of configurations 52



ArTu L
General information

The ArTu distribution switchboards are enriched by the new L series for applications up to 630A, which widens the ABB offer in the secondary and terminal distribution sector: a series able to combine quality performances with maximum selection and assembly simplicity.


VTAL9003


VTAL9004


VTAL9005


VTAL9006

The ArTu L range has two versions, wall-mounted and floor-mounted, consisting of mdoular kits able to be adapted to very different requirements.
The quality of the materials used and the attention paid to detail remain the same, as does compatibility of the accessories, which are common to the other two M and K ranges and ensure the widest versatility of use. The DMBWin technical software, developed especially for the ArTu secondary distribution switchboards, also facilitates configuration, estimation and preparation of the documents to be enclosed with the switchboards once they have been cabled and tested for the new L series.

Both modular apparatus of the pro *M* System series, and moulded-case Tmax T1-T2-T3 and Isomax S4 and S5 (fixed version with front terminals) circuit-breakers are housed inside the switchboards, with a capacity of 24 modules per row. Apart from in the traditional versions (plain and pre-drilled) with 200 mm height, the modular panels in the new series are also available in the 150 mm height, which allows optimisation of the space available for circuit-breakers and cables.


VTAL9007

Components ..... **page 14** **In-depth technical information** ..... **page 20** **Overall dimensions** ..... **page 18**

ArTu L

Technical-functional characteristics

Sturdiness and practicality

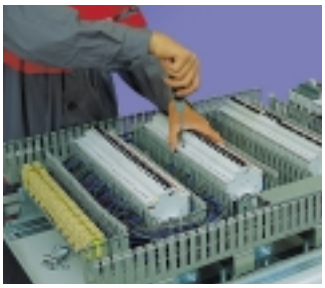
The ArTu L switchboards are extremely sturdy. The pickled sheet structure they are made of has a thickness of 15/10 (bottom profile and door) and 12/10 (structure).

The modular kits mean different combinations can be built up, limiting the overall dimensions to a depth of just 200 mm. In the wall-mounted version, the switchboards can also be placed side by side laterally.

Cabling becomes simpler, thanks to the structure which is completely open on all sides: with the switchboard dismantled, it is possible to carry out cabling easily in the workshop or on site, placing the switchboard horizontally on trestles.

The kit for fixing the circuit-breakers further simplifies the job, thanks to the practical rapid snap-on hooking up system and the standardised small items. The Unifix H and L cabling system is also the best solution for cabling the ABB SACE circuit-breakers inside the ArTu L switchboards.


VTAL9008


VTAL9009


VTAL9010


VTAL9011



Facilitated insertion of the kits



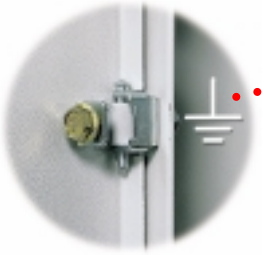
The busbars, too, can be mounted in the connection boxes



Possibility of using H=150mm panels with H=200mm panels



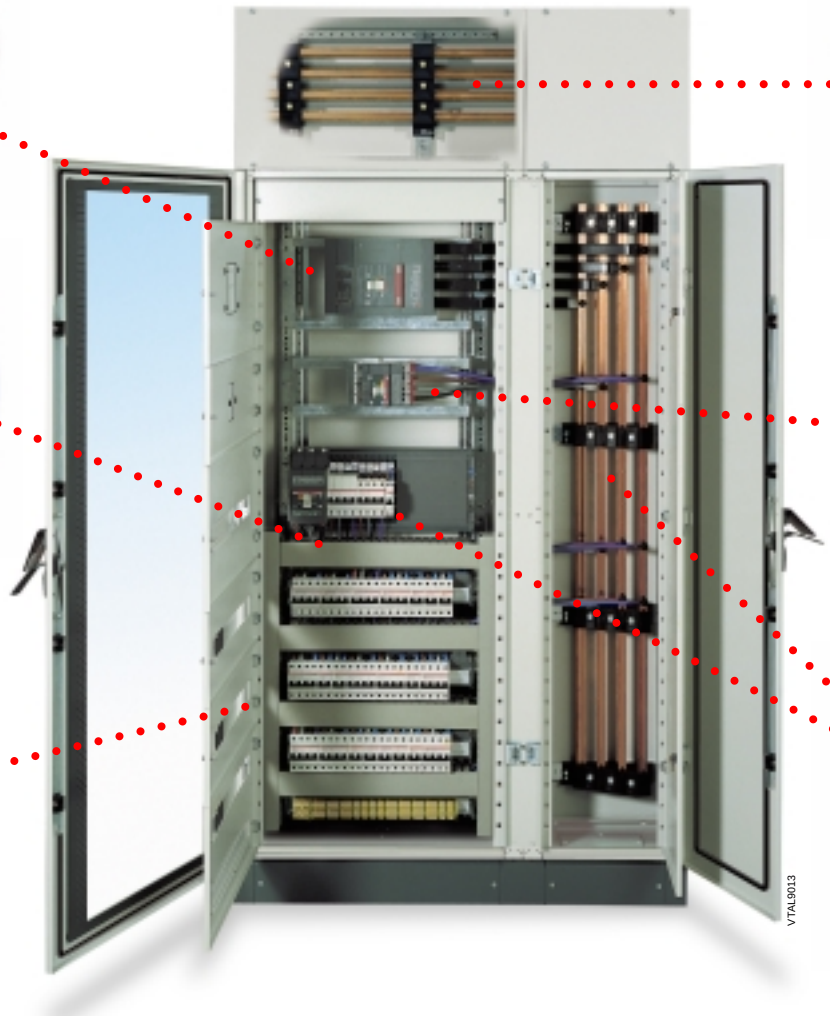
Side-by-side differential module and distribution frame



Automatic earthing between panels and structure



Prefabricated kits for connection between circuit-breakers and busbars


VTAL9013

Components ..... **page 14** **In-depth technical information** ..... **page 30** **Overall dimensions** ..... **page 42**

ArTu L

Technical-functional characteristics

Lateral access is guaranteed, as the possibility of mounting the vertical wiring duct both on the right and on the left. The wiring duct can also be positioned horizontally.
The cable riser container available with a width of 300mm is able to take the different busbar systems. The box, to be placed above the switchboard roof, increases the space available for the incoming cables and, together with the distribution frame, makes distribution simpler.

The 400 and 800A certified system of shaped profile busbars is also available for the L series switchboards, with prefabricated connections between circuit-breakers and busbars. Traditional flat busbars can be used. The degree of protection goes from IP31, for the versions without door, up to IP43 for the versions with door.
The maximum form of segregation which can be obtained is type 2.
The ArTu L switchboards are subjected to the type tests required by the CEI EN 60439-1 (CEI 17/13-1) Standards in the ABB laboratories. Using metalwork structures and relative accessories together with modular apparatus and ABB SACE moulded-case and air circuit-breakers, it is therefore possible to construct AS or ANS type switchboards without carrying out further type tests, but simply respecting the selection criteria and the assembly instructions of the various components.

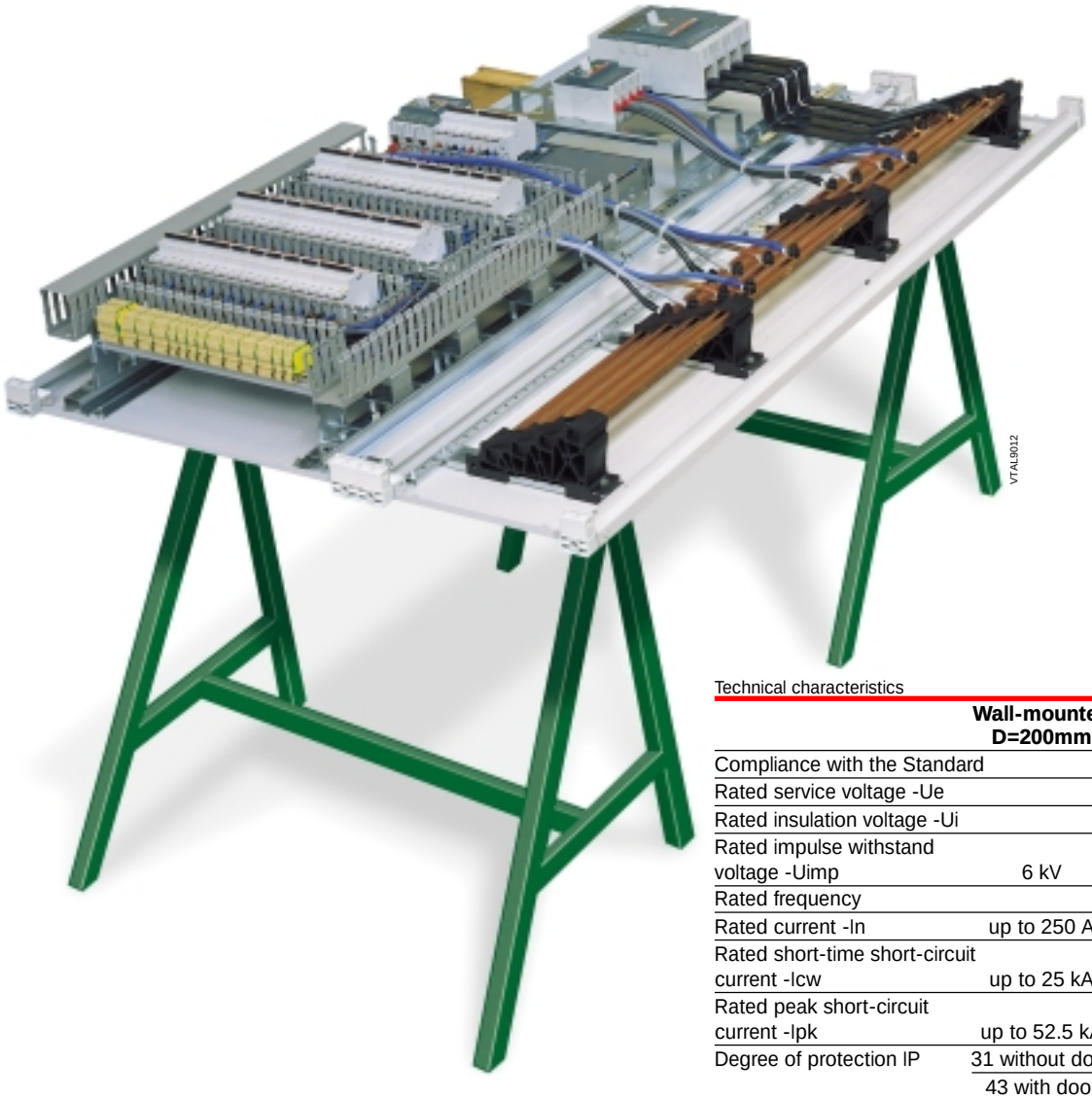
The range

WALL-MOUNTED ArTu L series

Heights	600, 800, 1000 e 1200 mm
Depth	200 mm
Width	700 mm

FLOOR-MOUNTED ArTu L series

Heights	1400, 1600, 1800 e 2000 mm
Depth	240 mm
Width	700 mm



Technical characteristics

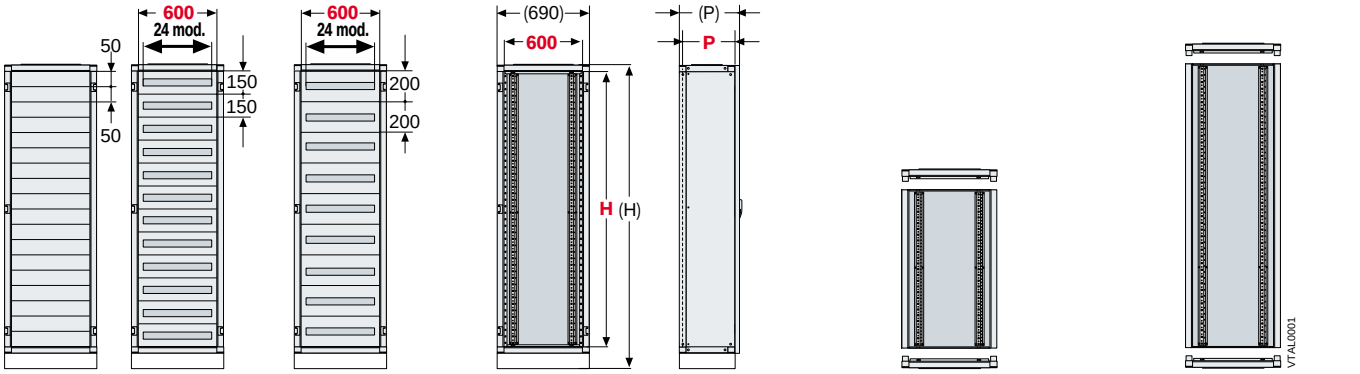
	Wall-mounted D=200mm	Floor-mounted D=240mm
Compliance with the Standard	CEI EN 60439-1	
Rated service voltage -Ue	fino a 690 V	
Rated insulation voltage -Ui	fino a 1000 V	
Rated impulse withstand voltage -Uimp	6 kV	8 kV
Rated frequency	50-60 Hz	
Rated current -In	up to 250 A	up to 630 A
Rated short-time short-circuit current -Icw	up to 25 kA	up to 35 kA
Rated peak short-circuit current -Ipk	up to 52.5 kA	up to 74 kA
Degree of protection IP	31 without door	31 without door
	43 with door	43 with door

Components ..... page 14 **In-depth technical information ..... page 20** **Overall dimensions ..... page 18**

ArTu L

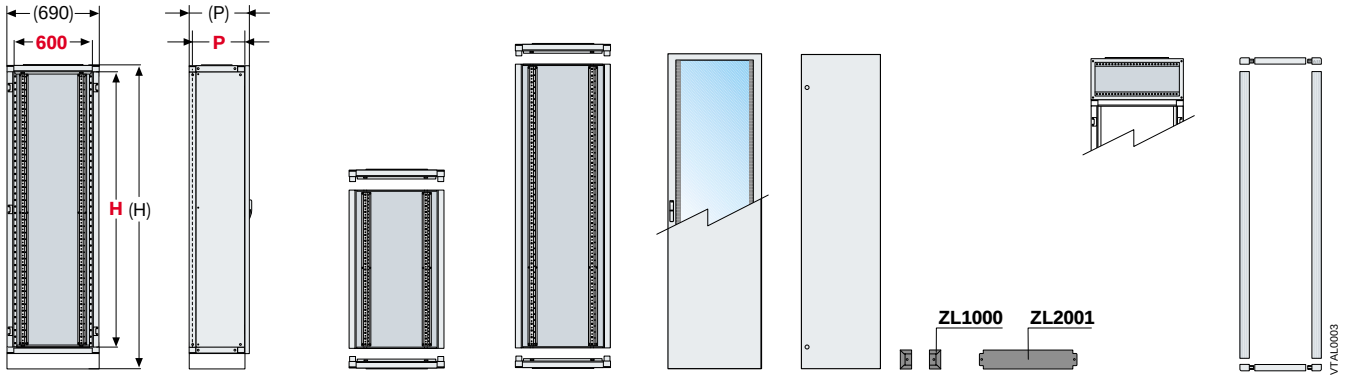
Selection of the structure

Structures



No. vertical mod H=100mm	No. DIN mod. installable	No. DINmod. installable	Overall external dimensions (1)			Functional dimensions(2)			Wall-mounted structure Bottom (3)	Floor-mounted structure Bottom
	DIN panel 24 modules H=150mm	DIN panel 24 modules H=200mm	(H) mm	(L) mm	(D) mm	H mm	L mm	D (4) mm	Including roof and base	Including roof and base
6	96 (24x4)	72 (24x3)	650	690	204	600	600	165	SL0600	
8	120 (24x5)	96 (24x4)	850			800			SL0800	
10	144 (24x6)	120 (24x5)	1050			1000			SL1000	
12	192 (24x8)	144 (24x6)	1250			1200			SL1200	
14	216 (24x9)	168 (24x7)	1550	690	240	1400	600	195		SL1400
16	240 (24x10)	192 (24x8)	1750			1600				SL1600
18	288 (24x12)	216 (24x9)	1950			1800				SL1800
20	312 (24x13)	240 (24x10)	2150			2000				SL2000

Additional cable container



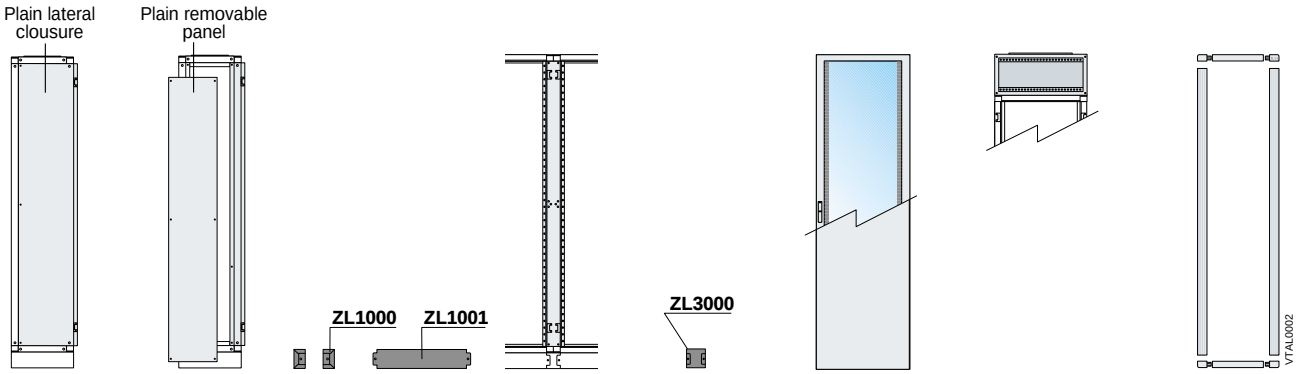
Overall external dimensions (1)			Functional dimensions(2)			Wall-mounted structure (3)	Floor-mounted structure	Front doors IP43	Internal door	Base strip		Connection boxes	IP31 Finishing profile
(H) mm	(L) mm	(D) mm	H mm	L mm	D (4) mm	Including roof and base	Including roof and base	Plain door	Plain door	Angles	Flanges	Roof box	
650	390	204	600	300	165	VC0600		PC0602		ZL1000	ZL2001	RC2000	see page 16
850			800			VC0800		PC0802					
1050			1000			VC1000		PC1002					
1250			1200			VC1200		PC1202					
1550	390	240	1400	300	195		VC1400	PC1402	PO1431				
1750			1600				VC1600	PC1602	PO1631				
1950			1800				VC1800	PC1802	PO1831				
2150			2000				VC2000	PC2002	PO2031				

(1) The overall external dimensions of the floor-mounted ArTu L switchboards include the palletizable base strip h=100mm (angle and flanges to be ordered separately).
(2) The functional dimensions are equal to the useful space for installation of the apparatus.
(3) The wall-mounted structures cannot be placed on top of each other.
(4) In this catalogue, reference is always made relative to the 200/240mm depths corresponding to the overall dimensions with front door. The useful dimensions between panel and the bottom of the structure are 165/195mm.

Components ..... **page 14** **In-depth technical information** ..... **page 30** **Overall dimensions** ..... **page 42**

ArTu L

Selection of the structure



Lateral closure	Lateral closure	Base strip		Intermediate uprights	Base strip	Front doors IP43		Connection boxes	IP31 Finishing profile
Plain	With plain removable panel	Angles	Flanges	For placing side by side laterally	Angle for side by side laterally	Glass door	Plain door	Roof box	
MC0600				**MI0600**		**PV0600**	**PC0601**		see page 16
MC0800				**MI0800**		**PV0800**	**PC0801**		
MC1000				**MI1000**		**PV1000**	**PC1001**		
MC1200				**MI1200**		**PV1200**	**PC1201**		
MC1400	**LF1400**	**ZL1000**	**ZL1001**	**MI1400**	**ZL3000**	**PV1400**	**PC1401**	**RC1000**	
MC1600	**LF1600**			**MI1600**		**PV1600**	**PC1601**		
MC1800	**LF1800**			**MI1800**		**PV1800**	**PC1801**		
MC2000	**LF2000**			**MI2000**		**PV2000**	**PC2001**		

Solutions recommended for installation of the apparatus

Apparatus		Type of structure/installation						
		Wall-mounted structures			Floor-mounted structures			Connection box
		Vertical on DIN rail	Vertical	Horizontal	Vertical on DIN rail	Vertical	Horizontal	Horizontal
Pro *M* System modular apparatus		•			•			
OESA						•		
OETL						•		
Tmax T1	3/4 poles - fixed / front terminals	(••)	•	•	(••)	•	•	
Tmax T2	3/4 poles - fixed / front terminals	(••)	•	•	(••)	•	•	
Tmax T3	3/4 poles - fixed / front terminals	•	(•)	•	•	(•)	•	
Tmax T3	3/4 poles - fixed / front terminals+distr. frame					•	•	
Kit for side-by-side Tmax						•		
Isomax S4	3/4 poles - fixed / front terminals					(•)	(■■)	
Isomax S5	3/4 poles - fixed / front terminals					(•)	•	
Busbars with shaped profile	Linear busbar holder		(•)			(•)		•
	Scaled busbar holder					(■)		•
Flat busbars	Linear busbar holder		(•)			(•)		•
	Scaled busbar holder					(■)		•
Unifix H-L				•			•	

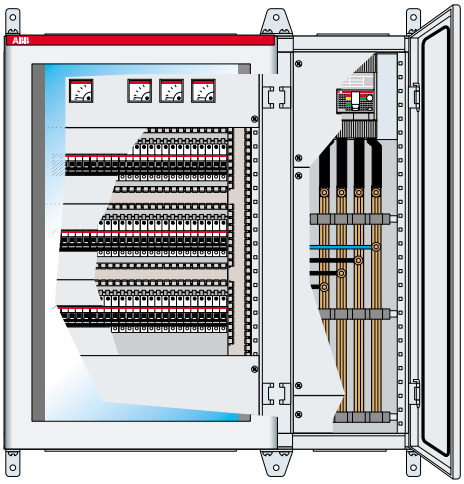
(••) Also for Isomax S1-S2.
(•) Can also be installed in the additional cable container.
(■) Can only be installed in the additional cable container.
(■■) Also for Isomax S3.

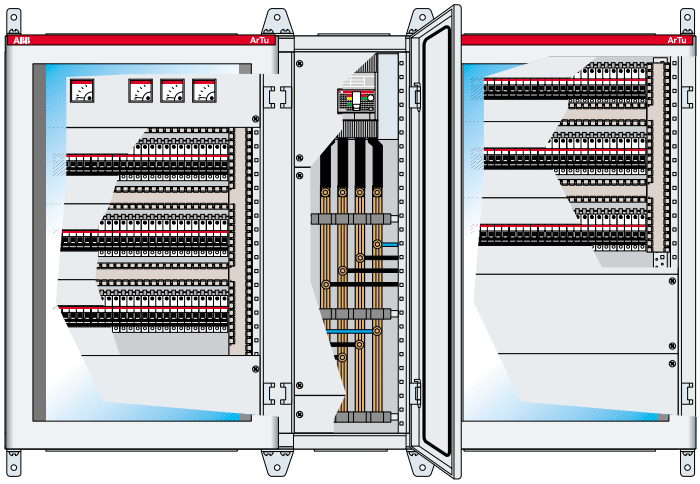
Components ..... **page 14** **In-depth technical information** ..... **page 20** **Overall dimensions** ..... **page 18**

ArTu L

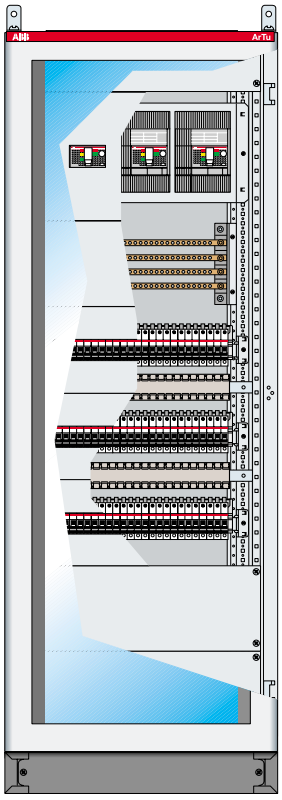
Examples of configuration

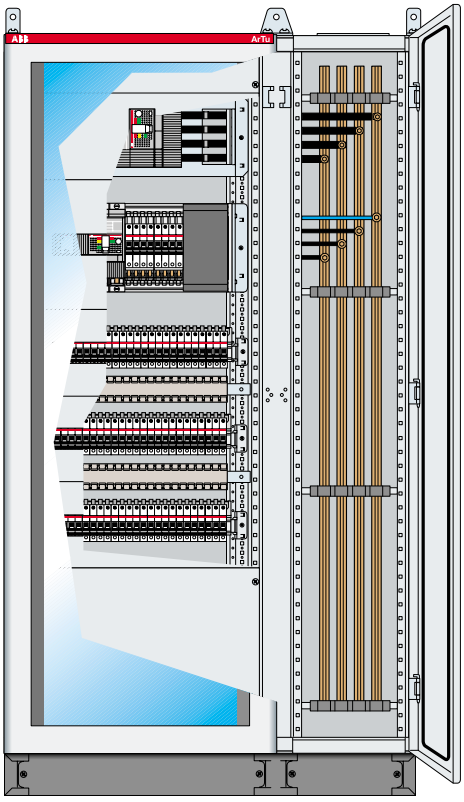
Wall-mounted structures





Floor-mounted structures



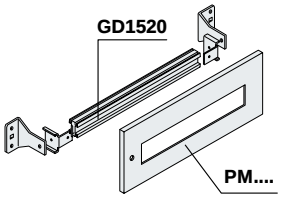


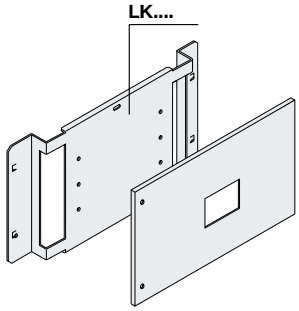
Components ..... page 14 In-depth technical information ..... page 30 Overall dimensions ..... page 42

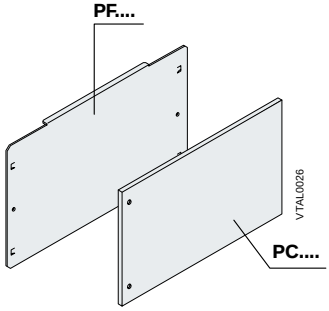
ArTu L

Kits for installation of apparatus

Kit for Pro *M* System modular apparatus, Tmax T1-T2-T3, Ot, Oetl and Isomax S4-S5





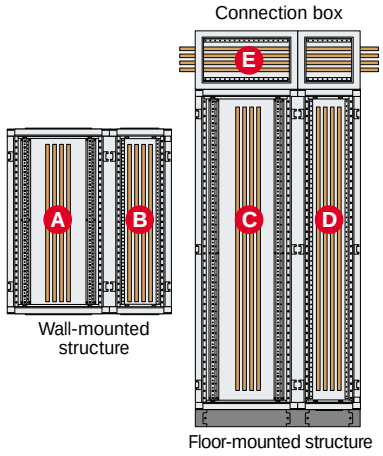


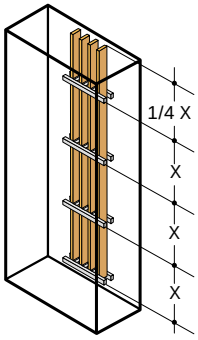
Fixed circuits-breakers front terminals 3/4 poles		Dimensions H (mm)	Wall-mountded structures: Vertical on DIN rail DIN rail	Wall-mountded structures: Vertical on DIN rail Panel	Wall-mountded structures: Horizontal Kit	Wall-mountded structures: Vertical Kit	Wall-mountded structures: Vertical cable cont. Kit	Floor-mountded structures: Vertical on DIN rail DIN rail	Floor-mountded structures: Vertical on DIN rail Panel	Floor-mountded structures: Horizontal Kit	Floor-mountded structures: Vertical Kit	Floor-mountded structures: Vertical cable cont. Kit
Modular apparatus, Tmax T1-T2-T3 e Isomax S1-S2												
	(1DIN row) [1]	150	**GD1520**	**PM1500**				**GD1520**	**PM1500**			
	(1 DIN row)	200	**GD1520**	**PM2624**				**GD1520**	**PM2624**			
	(1 DIN rows) [2]	300	**GD1520**	**PM2312**				**GD1520**	**PM2312**			
	(2 DIN rows) [1]	300	**2 x GD1520**	**PM3648**				**2 x GD1520**	**PM3648**			
	(3 DIN rows) [1]	600	**3 x GD1520**	**PM6672**				**3 x GD1520**	**PM6672**			
OT	**OT45...63 E3-E4**	150/200	**GD 1520**	**PM1500**				**GD1520**	**PM1500**			
									PM2624			
	OT80 E3-E4	150/200	**GD1520**	**PM1500**				**GD1520**	**PM1500**			
									PM2624			
	OT100...125 E3-E4	150/200	**GD1520**	**PC1150**				**GD1520**	**PC1150**			
									PM2624			
OETL	**200K3-K4; 315K3-K4**	200			**PR2600+ PF1001**					**PR2600+ PF1001**		
	400D1-D2; 630K3-K4	400			**PR4600+ PF1004**					**PR4600+ PF1004**		
Tmax T1		200			**LK1000**	**LK1001**				**LK1000**	**LK1001**	
Tmax T1	No.4 side-by-side cbs	200									**LK4100**	
Tmax T1	Circuit-breaker+rcr	200			**LK1004**					**LK1004**		
Tmax T2		200			**LK2000**	**LK2001**				**LK2000**	**LK2001**	
Tmax T2	No.3 side-by-side cbs	200									**LK3200**	
Tmax T2	Circuit-breaker+rcr	200			**LK2004**					**LK2004**		
Tmax T3		200/300			**LK3000**	**LK3001**	**LK3003**			**LK3000**	**LK3001**	**LK3002**
Tmax T3	No.3 side-by-side cbs	300									**LK3300**	
Tmax T3	Circuit-brea.+distr. frame	200								**LK3301**		
Tmax T3	Circuit-breaker+rcr	300			**LK3004**	**LK3005**				**LK3004**	**LK3005**	
Isomax S3-S4		200/400								**LK4000**	**LK4001**[2]	**LK4002**
Isomax S5		300/500								**LK5000**	**LK5001**	**LK5002**

[1] Only for Pro *M* system modular apparatus.
[2] For Tmax with residual current release

Components ..... **page 14** **In-depth technical information** ..... **page 20** **Overall dimensions** ..... **page 18**

Shaped profile busbars up to 800A and busbar holder up to 630A





Shaped profile busbars up to 800A Using the correct number of busbar holders ensures wihstanding the electrodynamic forces in the case of short-circuit. Assess the maximum distance (X max) not to be exceeded between two consecutive busbar holders according to the maximum I_{cc}

Shaped profile busbars up to 800A

Installation	Crosspiece for fixing to the structure	Busbar holder	Type	Capacity	Busbars	No. busb./phase	Capacity (A) IP31 / IP43	Icw max (kA)	LxL (mm)	Section (mm^2)	N°busbar holder (for busbar L=1730mm) according to the max I_{cc} 25 kA	X max (mm)	35 kA	X max (mm)
A	TL1000	PB0803	Linear	up to 800A	BA0400	1	630 / 500	35	20x20	200	4	550	5	425
B	TL3000				BA0800	1	970 / 830	35	20x20	283	4	550	5	425
C	TL1000													
D	TL3000													
E	TL3000													
B	TL2000	PB0802	Scaled	up to 800A	BA0400	1	630 / 500	35	20x20	200	4	550	5	425
D	TL2000				BA0800	1	970 / 830	35	20x20	283	4	550	5	425
E	TL2000													

Busbar holder up to 630A

Installation	Crosspiece for fixing to the structure	Busbar holder	Type	Capacity	Busbars	No. busb./phase	Capacity (A) IP43	Icw max (kA)	LxL (mm)	N°busbar holder (for busbar L=1730mm) according to the max I 16 kA	X max (mm)	20 kA	X max (mm)	23 kA	X max (mm)	32 kA	X max (mm)
A	TL1000	BP0630 (1)	Linear	up to 630A	BR0250	1	250	23	15x5	4	500	6	350	10	200	-	-
B	TL3000				BR0400	1	400	23	25x5	4	500	6	350	10	200	-	-
C	TL1000				BR0630	1	630	32	30x10	-	-	4	600	4	600	9	210
D	TL3000																
E	TL3000																
B	TL3000	BP0634	Scaled	up to 630A	BR0250	1	250	23	15x5	-	-	-	-	18	102	-	-
D	TL3000				BR0400	1	400	23	25x5	-	-	-	-	18	102	-	-
E	TL3000				BR0630	1	630	32	30x10	-	-	-	-	18	102	-	-

VTAL0008

(1) The busbar terminal protection covers must be ordered separately **PB0632**.

Components ..... **page 14** **In-depth technical information** ..... **page 30** **Overall dimensions** ..... **page 42**

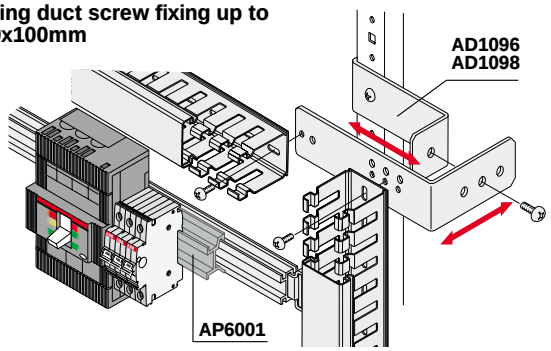
Distributor frames

Type	Description Technical data	In (A)	Icw (A)	Version	Installation	Power supply Ø cable mm² min.	max	No. outgoing feeders Ø cable mm² 2,5÷10	2,5÷16	2,5÷25	6÷35	Dimensions mm hxlxd	No.DIN modules
AD1028	Rated voltage 500V	80	6	four-pole	on DIN 35 rail	6	16	8				80x116x44	7
AD1029	Rated voltage 500V	125	6	four-pole	on DIN 35 rail	10	35	7	4			80x143x44	8
AD1027	Rated voltage 500V	160	6	four-pole	on DIN 35 rail	10	50		8		3	90x160x50	9
AD1034	Rated voltage 500V Threaded busbars (cross-section 25x5)	250	15	four-pole	with crosspiece AD1038				N° 22 holes M5 with 17,5mm pitch per phase			150x600x70	24
AD1080	Rated voltage 500V Degree of protection IP20	125	10	single pole	on DIN 35 rail	6	35		6			75x25x47	1,5
AD1081	Rated voltage 500V Degree of protection IP20	160	10	single pole	on DIN 35 rail	10	70		6			92x35x49	2
AD1030	Rated voltage 500V Degree of protection IP20	250	21	single pole	on DIN 35 rail	35	120	4	5	2		96x45x49	3
AD1031	Rated voltage 500V Degree of protection IP20	400	21	single pole	on DIN 35 rail	95	185	4	5	2		96x45x49	3

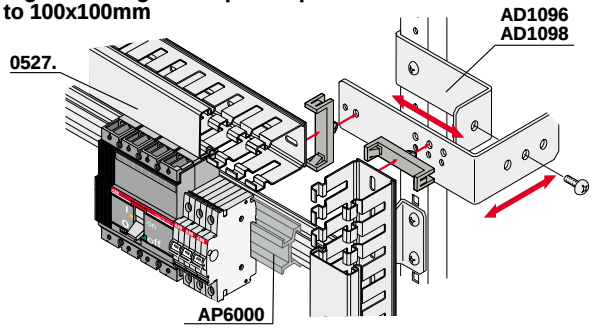
VTQD0221

Installation completion items

Wiring duct screw fixing up to 100x100mm



Wiring duct fixing with rapid snap-on base up to 100x100mm



VTAL0005

Support for vertical/horizontal wiring duct

Code	Description
AD1096	Metal support for horizontal/vertical wiring duct
AD1098	Metal support for horizontal/vertical floor

Allows assembly of the cabling wiring duct horizontally and vertically up to 100x100mm (in the case of installation in floor-mounted structure with removable side panel **LF...** the vertical wiring duct has maximum dimensions of 100x80mm hxl). The support has compensation drillings as the height and width of the wiring duct varies. The accessory is also prepared with ø7mm holes for assembly of the ABB wiring duct by hooking up.

Fix-O-rapid

Code	Description
05274	Rapid hooking up for channel base L=60mm
05276	Rapid hooking up for channel base L=80mm
05278	Rapid hooking up for channel base L=100mm

Depth adapter

Code	Description
AP6001	Depth adapter L=600mm for side-by-side Pro *M* - Tmax T1-T2-T3
AP6000	Depth adapter L=600mm for side-by-side Pro *M* - Isomax S1-S2

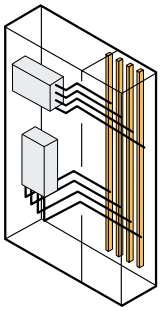
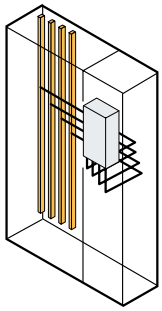
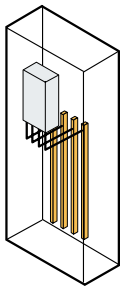
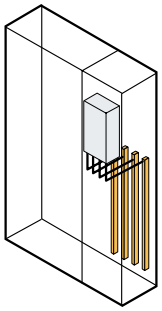
Allows side-by-side positioning of pro *M* System modular circuit-breakers and moulded-case Isomax S1, S2 and Tmax T1, T2 and T3 circuit-breakers. It can be cut to size according to requirements.

Hole cover

Code	Description
12863	Hole cover 4 DIN mod. RAL 7035

Components ..... **page 14** **In-depth technical information** ..... **page 20** **Overall dimensions** ..... **page 18**

Prefabricated kit for connections between apparatus and 400/800A shaped profile busbars

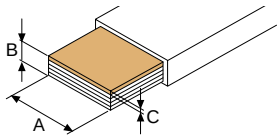





Type of installation	From circuit-breaker in the structure towards the busbars in the cablecontainer	From circuit-breaker in the cable container towards the busbars in the structure	From circuit-breaker in the structure towards the busbars on the bottom	From circuit-breaker in the cable container towards the busbars on the bottom
Type busbar holder	Scaled **PB0802**	Linear **PB0803**	Linear **PB0803**	Linear **PB0803**
Apparatus with front terminals horizontal fixed installation				
Tmax T1 4 poles	**KB1001** (type **B**)			
Tmax T2 4 poles	**KB1001** (type **B**)			
Tmax T3 4 poles	**KB1002** (type **B**)			
Isomax S4 4 poles	**KB1003** (type **B**)			
Isomax S5 4 poles 400A	**KB1004** (type **A**)			
Isomax S5 4 poles 630A	**KB1005** (type **A**)			
Apparatus with front terminals vertical fixed installation				
Tmax T3 4 poles	**KB1006** (type **B**)	**KB1010** (type **B**)	**KB1014 / KB1018** [1] (type **A**)	**KB1014 / KB1018** [1] (type **A**)
Tmax T3 4 poles (wall-mounted struc.)	**KB1006** (type **B**)	**KB1010** (type **B**)	**KB1014** (type **A**)	**KB1014** (type **A**)
Isomax S4 4 poles	**KB1006** (type **B**)	**KB1010** (type **B**)	**KB1015** (type **A**)	**KB1015** (type **A**)
Isomax S5 4 poles 400A	**KB1008** (type **A**)	**KB1012** (type **A**)	**KB1016** (type **A**)	**KB1016** (type **A**)
Isomax S5 4 poles 630A	**KB1009** (type **A**)	**KB1013** (type **A**)	**KB1017** (type **A**)	**KB1017** (type **A**)

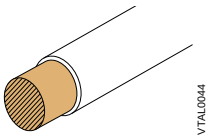
[1] KB1018: only with flat busbars and scaled busbar holder.

Dimensions of conductors

Type **A**



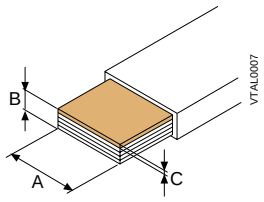
Type **B**



Apparatus	AxBxC (mm)	section (mm^2)
Tmax T1-T2		50
Tmax T3-Isomax S4	20x5x1	150
Isomax S5 400A	24x6x1	
Isomax S5 630A	24x10x1	

Use of the prefabricated connection kits is only possible with the cable container mounted on the right of the structure.

Flexible busbars up to 630A to be cut and bent



In (A)	Code	N° busbar/phase	Capacity (A) IP31	Capacity (A) IP43	AxBxC (mm)	Cross section (mm^2)	Lenght (mm)	Weight (kg)
250	**BF1602**	1	395	323	20x3x1	60	2000	1,42
400	**BF2502**	1	498	460	20x5x1	100	2000	2,15
400	**BF4002**	1	660	620	24x6x1	144	2000	3
630	**BF4012**	1	758	702	32x5x1	160	2000	3,36

Components ..... **page 14** **In-depth technical information** ..... **page 30** **Overall dimensions** ..... **page 42**

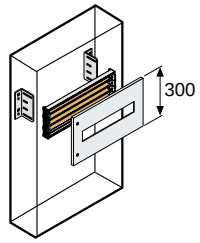
Technical characteristics of the Unifix System

Technical characteristics		Unifix H	Unifix L
Rated service voltage (Ue)		690V ca	400V ca
Rated insulation voltage (Ui)		1000V ca	500V ca
Rated impulse withstand voltage (Uimp)		8kV	6kV
Rated frequency		50/60Hz	50/60Hz
Rated current (I_n)	central power supply	400A	100A
	lateral power supply	320A	80A
Short-time withstand current (I_{cw})		25kA	
Maximum peak current (I_p)		52,5kA-400V	
Maximum circuit-breaker size installable		250A	100A
Conditioned short-circuit current (I_{cc})	(1) Tmax T1	36kA-400V	
	(1) Tmax T2 N, S	50kA-400V	
	(2) Tmax T3	50kA-400V	
With circuit-breaker	Isomax S1	25kA-400V	
	Isomax S2	50kA-400V	
	S250-DS650		6kA-400V
	S270-DS670		10kA-400V
	S280		25kA-400V
Degree of protection		IP20 with accessory	IP20
Characteristics of the insulating material		Self-extinguishing thermoplastic V1 (UL94)	Self-extinguishing thermoplastic V1 (UL94)
Characteristics of the conductive material		Electrolytic copper	Electrolytic copper
Width (No. modules/mm)		24/600	12/400 - 24/600
Installable apparatus	Tmax	T1-T2-T3	
	Isomax	S1-S2	
	System Pro-*M*	All	All (except S500 and S290)

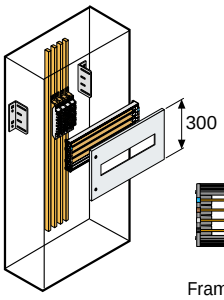
(1) Select circuit-breakers in version with front terminals for copper cables.
(2) Select circuit-breakers in version with front terminals.

Unifix System applications

Unifix H



Installation



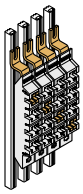
Wall-mounted strctures

Floor-mounted strctures



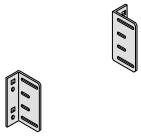
Frame for Tmax, Isomax and modular apparatus

ED2183



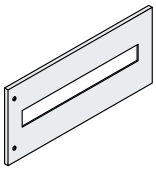
Direct connection with the shaped profile busbars 400/800A

ED2209



Brackets for fixing to the structure

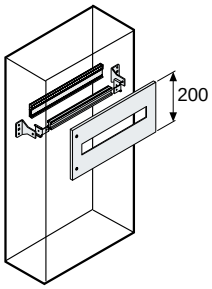
AD1097



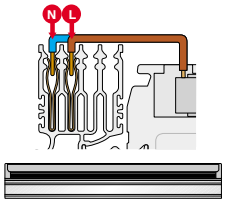
Modular panel

PM3624

Unifix L

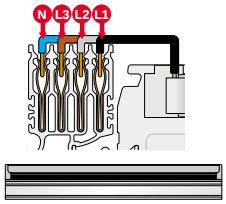


Installation



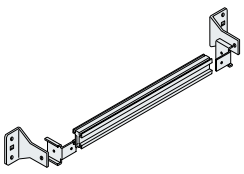
Busbars 2 poles

ED3017



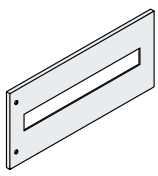
Busbars 4 poles

ED2969



Supports for fixing to the structure

GD1520

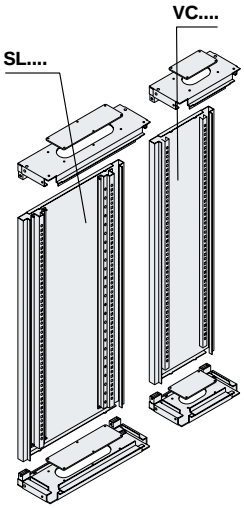


Modular panel

PM2624

Wall or floor-mounted structures

Components ..... **page 14** **In-depth technical information** ..... **page 20** **Overall dimensions** ..... **page 18**



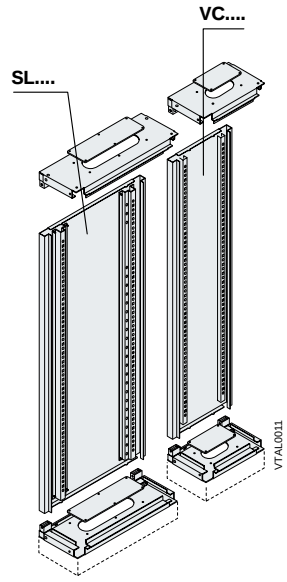
Wall-mounted switchboards

Wall-mounted switchboard structure

Code	Description	nominal	external	Pack.
SL0600	Bottom, roof and base for structur	600x600x165	(650x690x204)	1
SL0800	Bottom, roof and base for structur	800x600x165	(850x690x204)	1
SL1000	Bottom, roof and base for structur	1000x600x165	(1050x690x204)	1
SL1200	Bottom, roof and base for structur	1200x600x165	(1250x690x204)	1

Additional wall-mounted cable container structure

Code	Description	nominal	external	Pack.
VC0600	Bottom, roof and base for cable container	600x300x165	(650x390x204)	1
VC0800	Bottom, roof and base for cable container	800x300x165	(850x390x204)	1
VC1000	Bottom, roof and base for cable container	1000x300x165	(1050x390x204)	1
VC1200	Bottom, roof and base for cable container	1200x300x165	(1250x390x204)	1



Floor-mounted switchboards

Floor-mounted switchboard structure

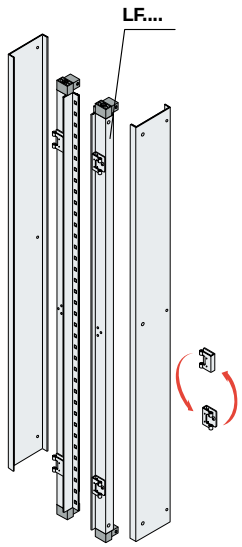
Code	Description	nominal	external	Pack.
SL1400	Bottom, roof and base for structure	1400x600x195	(1550x690x240)	1
SL1600	Bottom, roof and base for structure	1600x600x195	(1750x690x240)	1
SL1800	Bottom, roof and base for structure	1800x600x195	(1950x690x240)	1
SL2000	Bottom, roof and base for structure	2000x600x195	(2150x690x240)	1

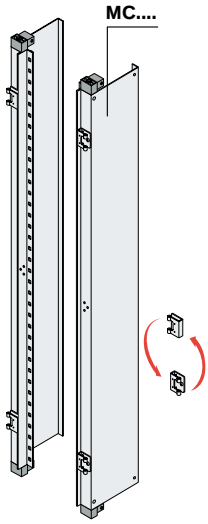
Additional floor-mounted cable container structure

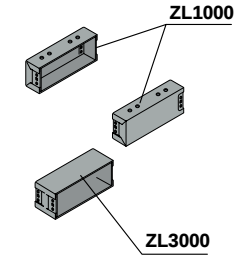
Code	Description	nominali	esterne	Pack.
VC1400	Bottom, roof and base for cable container	1400x300x195	(1550x390x240)	1
VC1600	Bottom, roof and base for cable container	1600x300x195	(1750x390x240)	1
VC1800	Bottom, roof and base for cable container	1800x300x195	(1950x390x240)	1
VC2000	Bottom, roof and base for structure	2000x300x195	(2150x390x240)	1

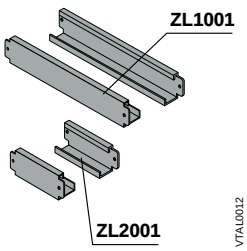
Notes: the palletizable base strips (ZL1000 or ZL2000) and the flanges (ZL1001 or ZL2001) must be ordered separately.

Selection table ..... **page 6** **In-depth technical information** ..... **page 30** **Overall dimensions** ..... **page 42**









VTAL0012

Code	Description	Dimensions mm (hxd)	Pack.
Lateral closure with plain panel			
LF1400 (*)	No.2 lateral closure for floor-mounted structures	1400x240	1
LF1600 (*)	No.2 lateral for floor-mounted structures	1600x240	1
LF1800 (*)	No.2 lateral for floor-mounted structures	1800x240	1
LF2000	No.2 lateral for floor-mounted structures	2000x240	1

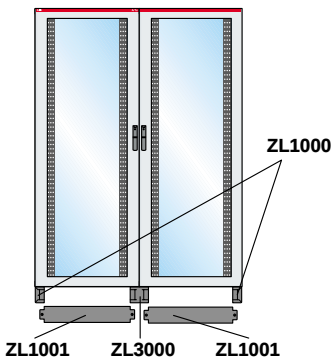
(*) The central hinge, contained in the kit, must be mounted on the right or left panel, according to the door opening direction

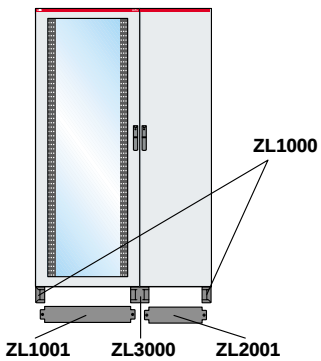
Code	Description	Dimensions mm (hxd)	Pack.
Lateral closure with removable panel			
MC0600	No.2 lateral for wall-mounted structures	600x200	1
MC0800	No.2 lateral for wall-mounted structures	800x200	1
MC1000	No.2 lateral for wall-mounted structures	1000x200	1
MC1200	No.2 lateral for wall-mounted structures	1200x200	1
MC1400 (*)	No.2 lateral for floor-mounted structures	1400x240	1
MC1600 (*)	No.2 lateral for floor-mounted structures	1600x240	1
MC1800 (*)	No.2 lateral for floor-mounted structures	1800x240	1
MC2000	No.2 lateral for floor-mounted structures	2000x240	1

(*) The central hinge, contained in the kit, must be mounted on the right or left panel, according to the door opening direction

Code	Description	Dimensions mm (h)	Pack.
Base strips			
ZL1000	No.2 angles for structure or cable container	100	1
ZL3000	Angles for side-by-side structures	100	1

Code	Description	Dimensions mm (l)	Pack.
Base strip covering flanges			
ZL1001	No.2 flanges for structure base strip	600	1
ZL2001	No.2 flanges for cable container base strip	300	1

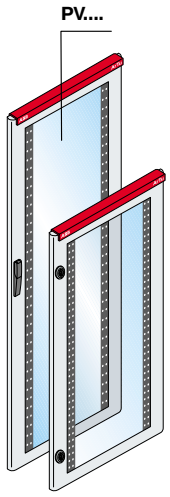


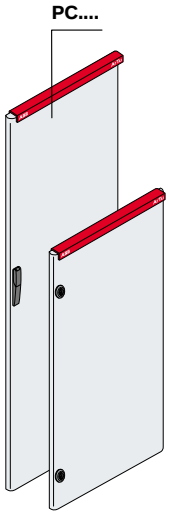


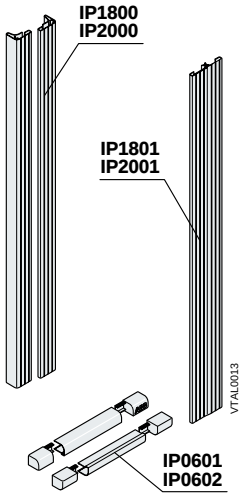
Example of base strip composition for side-by-side structures

Type of composition	Angles	Flanges
2 side-by-side structures	1x **ZL1000** + 1x **ZL3000**	2x **ZL1001**
1 structure + 1 cable container	1x **ZL1000** + 1x **ZL3000**	1x **ZL1001** +1x **ZL2001**

Selection table ..... **page 6** **In-depth technical information** ..... **page 30** **Overall dimensions** ..... **page 42**







Code	Description	Dimensions mm (hxl)	Pack.

Glass doors IP43

PV0600	Glass door for structure	600x600	1
PV0800	Glass door for structure	800x600	1
PV1000	Glass door for structure	1000x600	1
PV1200	Glass door for structure	1200x600	1
PV1400	Glass door for structure	1400x600	1
PV1600	Glass door for structure	1600x600	1
PV1800	Glass door for structure	1800x600	1
PV2000	Glass door for structure	2000x600	1

Plain doors IP43

Per strucrtures

PC0601	Plain door for structure	600x600	1
PC0801	Plain door for structure	800x600	1
PC1001	Plain door for structure	1000x600	1
PC1201	Plain door for structure	1200x600	1
PC1401	Plain door for structure	1400x600	1
PC1601	Plain door for structure	1600x600	1
PC1801	Plain door for structure	1800x600	1
PC2001	Plain door for structure	2000x600	1

For cable container

PC0602	Plain door for cable container	600x300	1
PC0802	Plain door for cable container	800x300	1
PC1002	Plain door for cable container	1000x300	1
PC1202	Plain door for cable container	1200x300	1
PC1402	Plain door for cable container	1400x300	1
PC1602	Plain door for cable container	1600x300	1
PC1802	Plain door for cable container	1800x300	1
PC2002	Plain door for cable container	2000x300	1

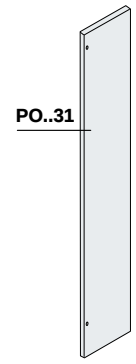
Code	Description	Dimensions mm	Pack.

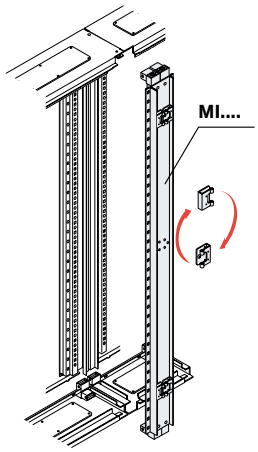
Finishing profiles IP31

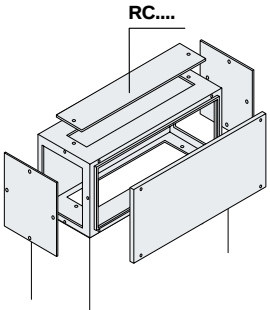
For structures and cable container

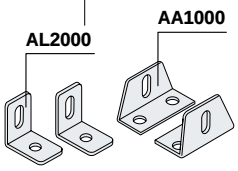
IP1800	No.2 vertical finishing profile for structure and cable container H=1800	1
IP2000	No.2 vertical finishing profile for structure and cable container H=2000	1
IP0601	No.2 horizontal finishing profile for structure L=600	1
IP0602	No.2 horizontal finishing profile for cable container L=300	1
IP1801	No.2 vertical finishing profile for side-by-side structures H=1800	1
IP2001	No.2 vertical finishing profile for side-by-side structures H=2000	1

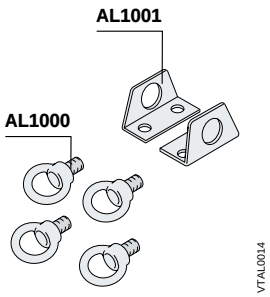
Selection table ..... page 6 | In-depth technical information ..... page 30 | Overall dimensions ..... page 42











Code	Description	Dimensions mm (hxl)	Pack.

Internal door for cable container

PO1431	Internal door for cable container	1400x300	1
PO1631	Internal door for cable container	1600x300	1
PO1831	Internal door for cable container	1800x300	1
PO2031	Internal door for cable container	2000x300	1

Code	Description	Dimensions mm	Pack.

Intermediate uprights for lateral side-by-side positioning

MI0600	Intermediate upright for placing structures side by side H=600	1
MI0800	Intermediate upright for placing structures side by side H=800	1
MI1000	Intermediate upright for placing structures side by side H=1000	1
MI1200	Intermediate upright for placing structures side by side H=1200	1
MI1400 (*)	Intermediate upright for placing structures side by side H=1400	1
MI1600 (*)	Intermediate upright for placing structures side by side H=1600	1
MI1800 (*)	Intermediate upright for placing structures side by side H=1800	1
MI2000	Intermediate upright for placing structures side by side H=2000	1

(*) The central hinge, contained in the kit, must be mounted on the right or left, according to the way the door opens.

Code	Description	Dimensions mm (lxhxd)	Pack.

Connection boxes

RC1000	Roof box for floor-mounted structures	400x600x200	1
RC2000	Roof box for floor-mounted cable container	400x300x200	1

Code	Description	Pack.

Brackets for wall fixing

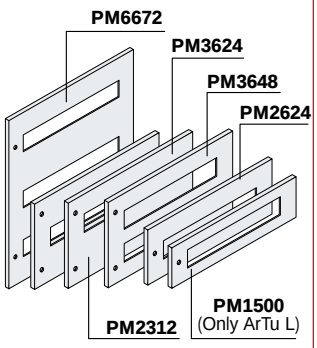
AL2000	No.2 brackets for wall fixing	1
AA1000	Brackets for wall fixing of 2 side-by-side structures	1

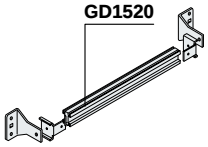
For the wall-mounted version, order 2 x AL2000.

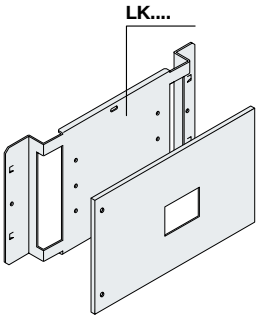
Eyebolts and lifting reinforcement

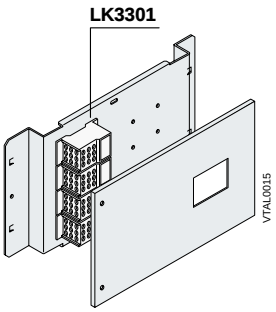
AL1000	No.4 M8 steel eyebolts	1
AL1001	No.2 lifting reinforcements for side-by-side structures	1

Selection table ..... **page 6** **In-depth technical information** ..... **page 30** **Overall dimensions** ..... **page 42**









Code	Description	Dimensions mm (hxl)	Pack.

Modular panels for apparatus on DIN rail

PM1500	Modular panel 1 Din row (only for ArTu L)	150x600	1
PM2624	Modular panel 1 Din row	200x600	1
PM3624	Modular panel 1 Din row	300x600	1
PM2312	Modular panel 1 Din row for Tmax with differential	300x600	1
PM3648	Modular panel 2 DIN rows	300x600	1
PM6672	Modular panel 3 DIN rows	600x600	1

DIN rail kit for Pro-*M* System modular apparatus, Isomax S1-S2, Tmax T1-T2-T3 and Unifix L

GD1520	DIN rail kit	1

The modular panels must be ordered separately (see above).

Kit for installation of Tmax and Isomax circuit-breakers

Horizontal installation

LK1000	Kit for Tmax T1 - 3/4 poles, fixed - wall/floor-mounted	200x600	1
LK2000	Kit for Tmax T2 - 3/4 poles, fixed - wall/floor-mounted	200x600	1
LK3000	Kit for Tmax T3 - 3/4 poles, fixed - wall/floor-mounted	200x600	1
LK4000	Kit for Isomax S4 - 3/4 poles, fixed -floor-mounted	200x600	1
LK5000	Kit for Isomax S5 - 3/4 poles, fixed - floor-mounted	300x600	1
LK3301	Kit for Tmax T3 with distribution frame - floor-mounted	200x600	1
LK1004	Kit for Tmax T1 - 4 poles, fixed + differential	200x600	1
LK2004	Kit for Tmax T2 - 4 poles, fixed + differential	200x600	1
LK3004	Kit for Tmax T3 - 4 poles, fixed + differential	300x600	1

Vertical installation

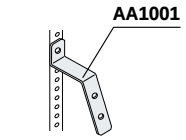
LK1001	Kit for Tmax T1 - 3/4 poles, fixed - wall/floor-mounted	200x600	1
LK2001	Kit for Tmax T2 - 3/4 poles, fixed - wall/floor-mounted	200x600	1
LK3001	Kit for Tmax T3 - 3/4 poles, fixed - wall/floor-mounted	300x600	1
LK4001	Kit for Isomax S4 - 3/4 poles, fixed - floor-mounted	400x600	1
LK5001	Kit for Isomax S5 - 3/4 poles, fixed - floor-mounted	500x600	1
LK3200	Kit for placing n°3 Tmax T2 - floor-mounted side by side	200x600	1
LK3300	Kit for placing n°3 Tmax T3 - floor-mounted side by side	300x600	1
LK4100	Kit for placing n°4 Tmax T1 - floor-mounted side by side	200x600	1
LK3005	Kit for Tmax T3 - 4 poles, fixed + differential	300x600	1

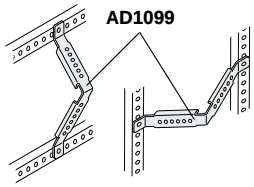
Vertical installation in the cable container

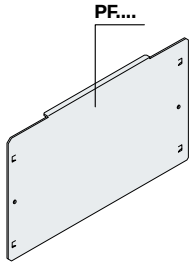
LK3003	Kit for Tmax T3 - 3/4 poles, fixed - wall-mounted	300x300	1
LK3002	Kit for Tmax T3 - 3/4 poles, fixed - floor-mounted	300x300	1
LK4002	Kit for Isomax S4 - 3/4 poles, fixed - floor-mounted	400x300	1
LK5002	Kit for Isomax S5 - 3/4 poles, fixed - floor-mounted	500x300	1

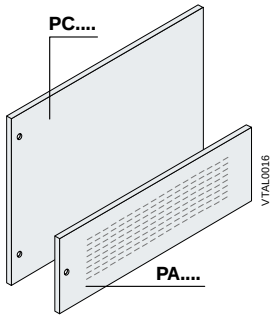
Panels are included in the kits.

Selection table ..... **page 8-9** **In-depth technical information** ..... **page 30** **Overall dimensions** ..... **page 42**









Code	Description	Dimensions mm (hxl)	Pack.

Supports for terminal box

AA1001	No.2 supports for horizontal terminal box in the structure		1
AD1099	No.2 supports for vertical terminal box in the cable container or horizontal in the box		1

Plain bottom plates for generic apparatus

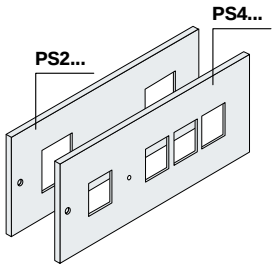
PF1002	Plain bottom plate	200x600	1
PF1003	Plain bottom plate	300x600	1
PF1004	Plain bottom plate	400x600	1
PF1006	Plain bottom plate	600x600	1
PF1008	Plain bottom plate	800x600	1
PC0600	Plain bottom plate for structure connection box	400x600	1
PC0300	Plain bottom plate for cable container connection box	400x300	1

Panels must be ordered separately (see below).

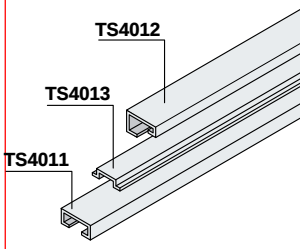
Plain and ventilated modular panels

PC1050	Plain panel for structure	50x600	1
PC1600	Plain panel for structure	100x600	1
PC1150	Plain panel for structure	150x600	1
PC2600	Plain panel for structure	200x600	1
PC3600	Plain panel for structure	300x600	1
PC4600	Plain panel for structure	400x600	1
PC6600	Plain panel for structure	600x600	1
PA1600	Ventilated panel for structure	100x600	1
PA2600	Ventilated panel for structure	200x600	1
PC1403	Plain panel for cable container	100x300	1
PC2401	Plain panel for cable container	200x300	1
PC3401	Plain panel for cable container	300x300	1
PC4401	Plain panel for cable container	400x300	1
PC6401	Plain panel for cable container	600x300	1
PC8401	Plain panel for cable container	800x300	1

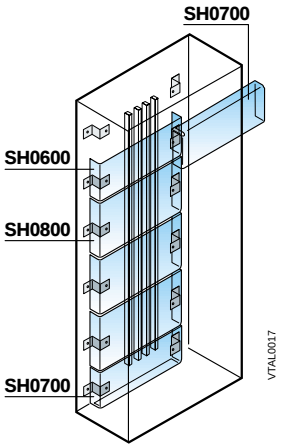
Selection table ..... **page 8-9** **In-depth technical information** ..... **page 30** **Overall dimensions** ..... **page 42**



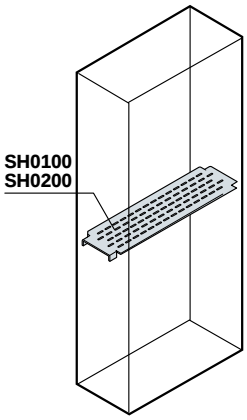
Code	Description	Dimensions mm (hxl)	Pack.
Panels for square measuring instruments			
PS2720	Panels for 2 instruments 72x72mm	200x600	1
PS2960	Panels for 2 instruments 96x96mm	200x600	1
PS4720	Panels for 4 instruments 72x72mm	200x600	1
PS4960	Panels for 4 instruments 96x96mm	200x600	1



Code	Description	Dimensions mm (l)	Pack.
Profiles for accessories			
TS4011	N°2 profiles EN50024 C30	2000	1
TS4012	N°2 profiles EN50035 G32	2000	1
TS4013	N°2 profiles DIN EN50022	2000	1



Form 2 segregations			
SH0600	Form 2 segregation kit	200	1
SH0800	Form 2 segregation kit	300	1
SH0700	Form 2 segregation kit base/head	200	1

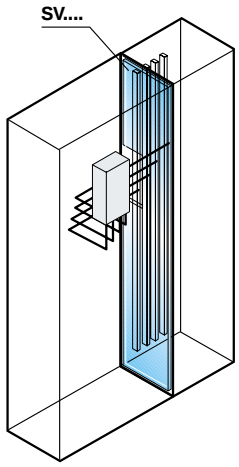


Horizontal shelves			
SH0100	Horizontal shelf for wall-mounted structure	600	1
SH0200	Horizontal shelf for floor-mounted structure	600	1

Horizontal non-supporting shelf-allows divisions to be made inside the ArTu L switchboards.

In-depth technical information ..... page 30 **Overall dimensions ..... page 42**

ArTu L
Components



Code	Description	Dimensions mm (h)	Pack.
Vertical segregations			
SV0600	Vertical segregation kit	600	1
SV0800	Vertical segregation kit	800	1
SV1000	Vertical segregation kit	1000	1
SV1200	Vertical segregation kit	1200	1
SV1400	Vertical segregation kit	1400	1
SV1600	Vertical segregation kit	1600	1
SV1800	Vertical segregation kit	1800	1
SV2000	Vertical segregation kit	2000	1

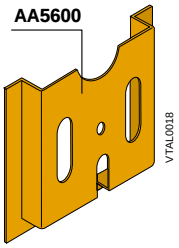


Diagram pocket holder

AA5600	Plastic diagram pocket holder	1

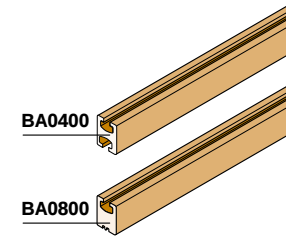
The diagram pocket holder (made of RAL 2004 colour plastic, dim. HxL 237x265mm type A4) is applied to the inside of doors/plain panels of suitable size using the adhesive provided.

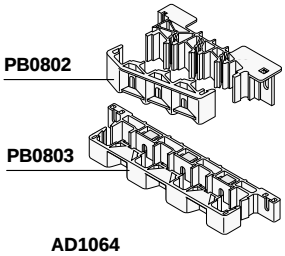
Accessories/spare parts

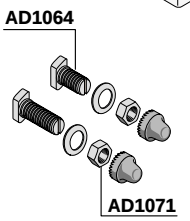
AA1000	Brackets for fixing side-by-side structures	1
12863	No.30 hole covering shutter 4 DIN mod. RAL 7035 colour	1
AD1058	Zn+Al+Mg alloy key with double tab	1
AA6200	ArTu L floor-mounted Yale type insert	1
AA8202	ArTu L wall-mounted Yale type insert	1
AD1036	No.20 cage nut kit	1
AD1033	No.50 three-lobed M6 spare screw kit	1
VB7035	RAL 7035 colour spray paint for touching up (400 ml can)	1
AD1057	“ArTu Survival Kit” - Accessores and small items for spare parts	1

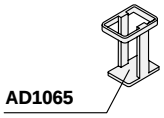
ArTu small items
The screws provided with all the ArTu components are of the three-lobed self-threading M6 type: they screw up without the need for a nut and automatically mask the hole. For any spare parts, the code is AD1033.
The cage nuts art. AD1036 allow all the rectangular holes present in the uprights for fixing the various accessories to be used. They are snap-on installed from the front.

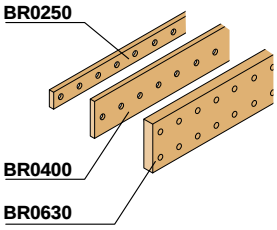
In-depth technical information ..... page 30 **Overall dimensions ..... page 42**

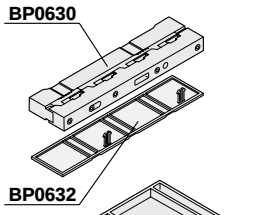


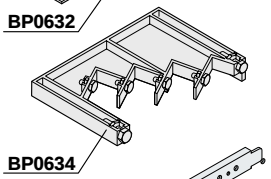


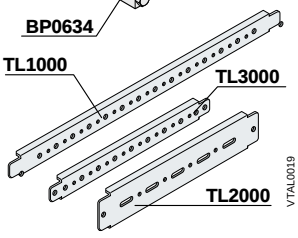








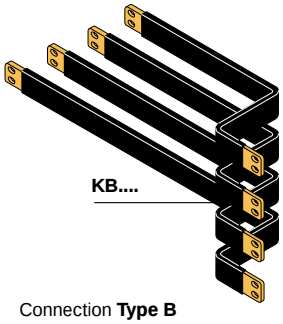




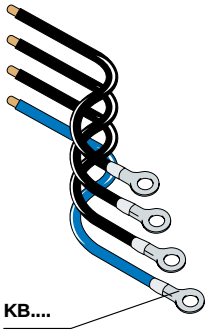
Code	Description	Dimensions mm (l)	Pack.
Shaped profile distribution busbars			
BA0400	Busbar In=400A	1730	1
BA0800	Busbar In=800A	1730	1
Busbar holders for shaped profile busbars			
PB0802	Scaled busbar-holder In=800A - 35kA		1
PB0803	Linear busbar-holder In=800A - 35kA		1
Seal screws for shaped profile busbars			
AD1064	No.12 M8 hammer seal screws L=27mm, complete with screw cover cap		1
AD1071	No.12 M8 hammer seal screws L=37mm, complete with screw cover cap		1
Resting bases for shaped profile busbars			
AD1065	No.4 resting bases for busbars		1
Flat distribution busbars			
BR0250	No.2 busbars I_n=250A section 15x5mm	1750	1
BR0400	No.2 busbars I_n=400A section 25x5mm	1750	1
BR0630	No.2 busbars I_n=630A section 30x10mm	1750	1
Busbar holders for flat busbars			
BP0630	No.2 linear busbar holder I_n=630A - 32kA		1
BP0632	No.2 cover for linear busbar holder BP0630		1
BP0634	No.2 scaled busbar holder I_n=630A - 23kA		1
Crosspieces for busbars			
TL1000	Crosspiece for fixing linear busbar holder in the structure		1
TL3000	Crosspiece for fixing linear busbar holder in the cable container		1
TL2000	Crosspiece for fixing scaled busbar holder in the cable container		1

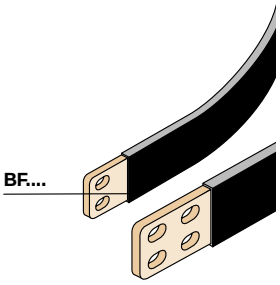
Selection table ..... **page 10** **In-depth technical information** ..... **page 30** **Overall dimensions** ..... **page 42**

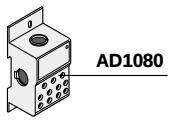
Connection **Type A**

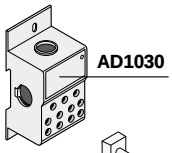


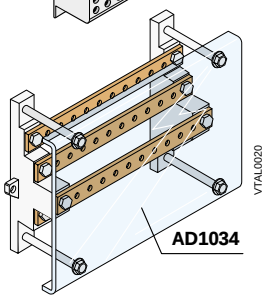
Connection **Type B**











Code	Description	Type	Pack.

Prefabricated kit for connection between apparatus and 400/800A shaped profile busbars

Horizontal installation

KB1001	Connect. between Tmax T1-T2 in the struc. and busbars in the cable cont. floor-mount.	**B**	1
KB1002	Connect. between Tmax T3 in the struc. and busbars in the cable cont. wall/floor-mount.	**B**	1
KB1003	Connect. between Isomax S4 in the struct. and busbars in the cable cont. wall-mount.	**B**	1
KB1004	Connect. betw. Isomax S5 (400A) in the struct. and busb. in the cable cont. floor-mount.	**A**	1
KB1005	Connect. betw. Isomax S5 (630A) in the struct. and busb. in the cable cont. floor-mount.	**A**	1

Vertical installation

KB1006	Connect. between Tmax T3 in the struc. and busbars in the cable cont. wall/floor-mount. Connect. between Isomax S4 in the struc. and busbars in the cable cont.floor-mount.	**B**	1
KB1008	Connect. between Isomax S5 (400A) in the struc. and busb. in the cable cont. floor-mount.	**A**	1
KB1009	Connect. between Isomax S5 (630A) in the struc. and busb. in the cable cont. floor-mount.	**A**	1
KB1010	Connect. between Tmax T3 in the cable cont. and busbars in the struct. wall/floor-mount. Connect. between Isomax S4 in the cable cont. and busbars in the struct. floor-mounted	**B**	1
KB1012	Connect. between Isomax S5 (400A) in the cable cont. and busbars in the struct. floor-mount.	**A**	1
KB1013	Connect. between Isomax S5 (630A) in the cable cont. and busbars in the struct. floor-mounted	**A**	1
KB1014	Connect. between Tmax T3 in the struc./cable cont. and busbars on the bottom wall/floor-mount.	**A**	1
KB1015	Connect. between Isomax S4 in the struct./cable cont. and busbars on the bottom floor-mount.	**A**	1
KB1016	Connect. between Isomax S5 (400A) in the struct./cable cont. and busb. on the bot. floor-mounted	**A**	1
KB1017	Connect. between Isomax S5 (630A) in the struct./cable cont. and busb. on the bott. floor-mounted	**A**	1
KB1018	Connect. between Tmax T3 in the struct./cable container and busb. on the bot. wall/floor-mounted(1)	**A**	1

(1) Only with flat busbars and scaled busbar holder.

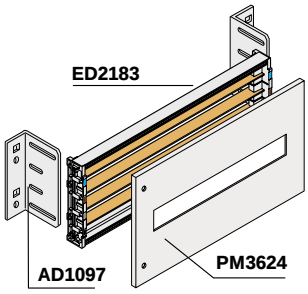
Flexible busbars to be cut and bent

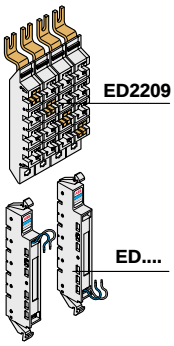
BF1602	Flexible busbars, section 20x3 - 250A	1
BF2502	Flexible busbars, section 20x5 - 400A	1
BF4002	Flexible busbars, section 24x6 - 500A	1
BF4012	Flexible busbars, section 32x5 - 630A	1

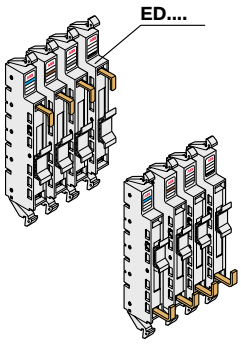
Distribution frames

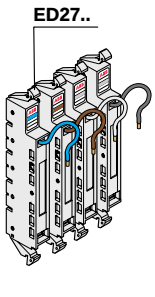
AD1028	Modular four-pole distribution frame 80A	1
AD1029	Modular four-pole distribution frame 125A	1
AD1027	Modular four-pole distribution frame 160A	1
AD1034	No.2 four-pole horizontal distribution frame 250A (L=600mm)	1
AD1038	Fixing brackets for distribution frame AD1034	1
AD1080	Modular single-pole distribution frame 125A	1
AD1081	Modular single-pole distribution frame 160A	1
AD1030	Modular single-pole distribution frame 250A	1
AD1031	Modular single-pole distribution frame 400A	1
AD1083	Connection accessory between two AD1080	1

Selection table ..... **page 11-12** **In-depth technical information** ..... **page 30** **Overall dimensions** ..... **page 42**









Code	Description	Pack.

Unifix H

Frames for Tmax and Isomax

ED2183	Frame with 24 DIN module busbars (L=600mm)	1

Feeder modules

ED2209	4P 400A feeder module (for ED2183)	1

Basic modules I_n 16A

ED2894	Basic auxiliary DIN modules L1-N top 16A	1
ED2902	Basic DIN modules L1-N top 16A	1
ED2910	Basic DIN modules L1-N bottom 16	1
ED2928	Basic DIN modules L1-N bottom 16A	1

Basic modules I_n 40A

ED2613	Basic L1 top 40A 1	
ED2621	Basic L2 top 40A 1	
ED2639	Basic L3 top 40A 1	
ED2647	Basic Neutral top 40A	1
ED2654	Basic L1/Neutral top 40A	1
ED2662	Basic L2/Neutral top 40A	1
ED2670	Basic L3/Neutral top 40A	1
ED2688	Basic L1 bottom 40A	1
ED2696	Basic L2 bottom 40A	1
ED2704	Basic L33 bottom 40A	1
ED2712	Basic Neutral bottom 40A	1

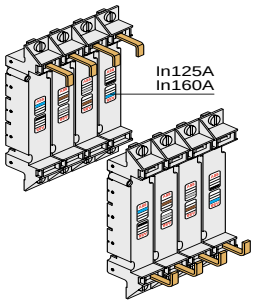
Basic modules I_n 63A

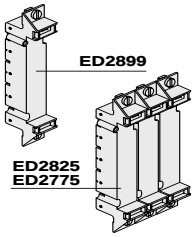
ED2530	Basic modules L1 top 63A	1
ED2548	Basic modules L2 top 63A	1
ED2555	Basic modules L3 top 63A	1
ED2563	Basic modules Neutral top 63A	1
ED2571	Basic modules L1 bottom 63A	1
ED2589	Basic modules L2 bottom 63A	1
ED2597	Basic modules L3 bottom 63A	1
ED2605	Basic modules Neutral bottom 63A	1

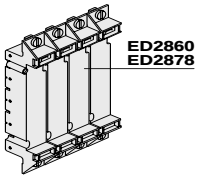
Basic modules I_n 100A

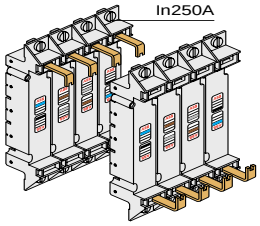
ED2720	Basic modules with cable L1 top 100A	1
ED2738	Basic modules with cable L2 top 100A	1
ED2746	Basic modules with cable L3 top 100A	1
ED2753	Basic modules with cable Neutral top 100A	1

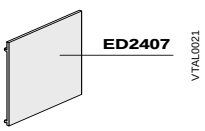
Selection table ..... **page 13** **In-depth technical information** ..... **page 40** **Overall dimensions** ..... **page 45**











Code	Description	Pack.

Unifix H

Basic modules I_n 160A Tmax T1

ED2217	Basic modules L1 top L2 bottom	1
ED2225	Basic modules L2 top L1 bottom	1
ED2233	Basic modules L3 top Neutral bottom	1
ED2241	Basic modules Neutral top L3 bottom	1
ED2373	Basic modules false pole for residual current release	1
ED2381	Basic modules false pole for solenoid operating mechanism	1

Basic modules I_n 125A Isomax S1

ED2761	Basic modules L1 top L2 bottom	1
ED2779	Basic modules L2 top L1 bottom	1
ED2787	Basic modules L3 top Neutral bottom	1
ED2795	Basic modules Neutral top L3 bottom	1
ED2860	Basic modules false pole for residual current release Isomax RC	1

Basic modules I_n 160A Tmax T2

ED2258	Basic modules L1 top L2 bottom	1
ED2266	Basic modules L2 top L1 bottom	1
ED2274	Basic modules L3 top Neutral bottom	1
ED2282	Basic modules Neutral top L3 bottom	1
ED2373	Basic modules false pole for residual current release	1
ED2399	Basic modules false pole for solenoid operating mechanism	1

Basic modules I_n 160A Isomax S2

ED2803	Basic modules L1 top L2 bottom	1
ED2811	Basic modules L2 top L1 bottom	1
ED2829	Basic modules L3 top N bottom	1
ED2837	Basic N top L3 bottom	1
ED2878	Basic modules false pole for residual current release Isomax RC	

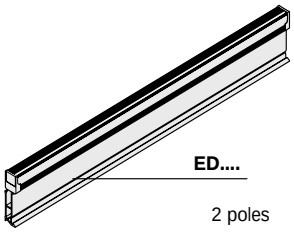
Basic modules I_n 250A Tmax T3

ED2290	Basic modules L1 top	1
ED2308	Basic modules L2 top	1
ED2316	Basic modules L3 top	1
ED2324	Basic modules N top	1
ED2332	Basic modules L1 bottom	1
ED2340	Basic modules L2 bottom	1
ED2357	Basic modules L3 bottom	1
ED2365	Basic modules N bottom	1
ED2373	Basic modules false pole for residual current release	1

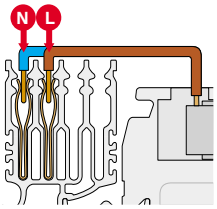
Accessories

ED2845	Basic modules false pole for DDA	1
ED2852	Basic modules false pole for modular MDRC	1
ED2407	N°2 IP20 covers (for ED2183-ED2191) L=173 mm (10 DIN mod.)	1
ED2936	N°6 wiring duct supports	1
AD1097	Brackets for fixing to the structure	1
PM3624	Modular front panel 300X600mm (hXl)	1

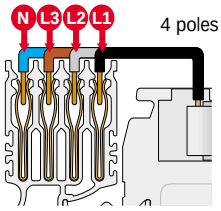
Selection table ..... page 13 | In-depth technical information ..... page 40 | Overall dimensions ..... page 45

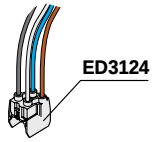


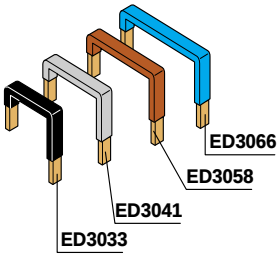
2 poles

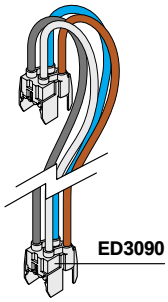


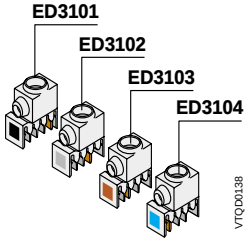
4 poles











Code	Description	Pack.

Unifix L

Busbars 2 poles

ED2985	Basic 100A 2P 8 modules (L=200mm)	1
ED2993	Basic 100A 2P 12 modules (L=300mm)	1
ED3009	Basic 100A 2P 18 modules (L=450mm)	1
ED3017	Basic 100A 2P 24 modules (L=600mm)	1

Busbars 4 poles

ED2944	Basic 100A 4P 12 modules (L=300mm)	1
ED2951	Basic 100A 4P 18 modules (L=450mm)	1
ED2969	Basic 100A 4P 24 modules (L=600mm)	1

Connections for miscellaneous apparatus

ED3108	Connections with 2 wires L1/N 16A	1
ED3116	Connections with 3 wires L1/L2/L3 16A	1
ED3124	Connections with 4 wires L1/L2/L3/N 16A	1
ED3355	Connections with 2 wires L1/N 40A	1
ED3363	Connections with 3 wires L1/L2/L3 40A	1
ED3371	Connections with 4 wires L1/L2/L3/N 40A	1

Connections for apparatus

ED3272	No.10 connections L1-N 40 A	1
ED3280	No.10 connections L2-N 40 A	1
ED3298	No.10 connections L3-N 40 A	1
ED3033	No.10 connections L 1 100A	1
ED3041	No.10 connections L 2 100A	1
ED3058	No.10 connections L 3 100A	1
ED3066	No.10 connections N 100A	1
ED3132	Feeders with cable 4P 100A L=350mm	1
ED0026	Feeders with cable 4P 100A L=1500mm	1
ED0025	Feeders with cable 4P 100A L=2500mm	1

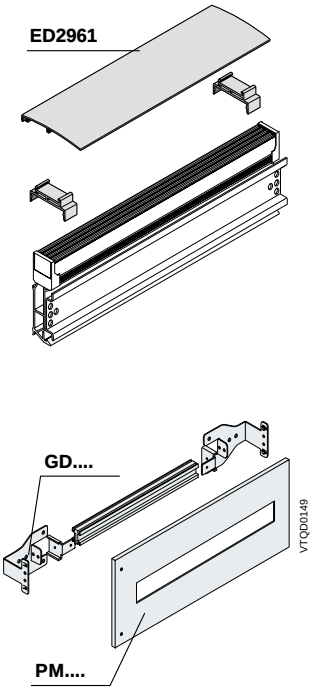
Modules for parallel power supply with cable

ED3082	Power supply modules 2P 100A with cable L=600m	1
ED3405	Power supply modules 4P 100A with cable L=400mm	1
ED3090	Power supply modules 4P 100A with cable L=600m	1
ED3413	Power supply modules 4P 100A with cable L=800mm	1
ED3439	Power supply modules 4P 100A with cable L=1500mm	1

Modules for power supply without cable In 100A

ED3101	No.10 single-pole power supply modules L 1	1
ED3102	No.10 single-pole power supply modules L 2	1
ED3103	No.10 single-pole power supply modules L 3	1
ED3104	No.10 single-pole power supply modules N	1

Selection table ..... **page 13** **In-depth technical information** ..... **page 32** **Overall dimensions** ..... **page 45**



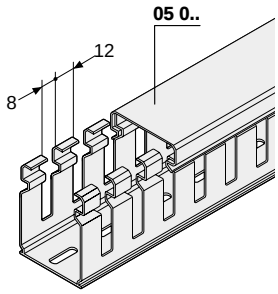
Code	Description	Pack.

Unifix L

Accessories

ED3140	No.10 power supply terminals 63A for cable 25mm^2	1
ED2961	No.10 busbar covers L=600mm	1
GD1520	DIN rail kit and supports for fixing to the structure	1
PM1500	Modular panel 1 Din row (only for ArTu L) 150x600	1
PM2624	Modular panel 1 Din row 200x600	1
PM3648	Modular panel 2 DIN rows 300x600	1
PM6672	Modular panel 3 DIN rows 600x600	1

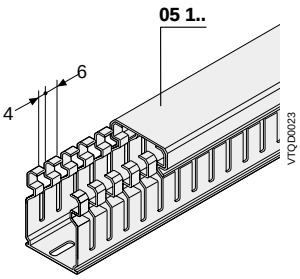
Selection table ..... **page 13** **In-depth technical information** ..... **page 32** **Overall dimensions** ..... **page 45**



Code	Dimensions mm (bxh)	Pack/metres

Wiring ducts with 8-12mm slit grey RAL 7030 colour

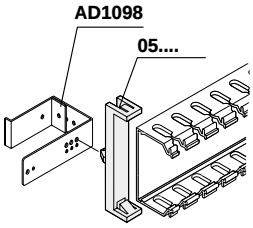
05 019	15x17	92
05 033	25x30	116
05 035	40x30	80
05 037	60x30	52
05 043	25x40	96
05 045	40x40	60
05 047	60x40	40
05 049	80x40	32
05 051	100x40	24
05 053	120x40	20
05 063	25x60	68
05 065	40x60	44
05 067	60x60	32
05 069	80x60	24
05 071	100x60	20
05 073	120x60	14
05 083	25x80	56
05 085	40x80	36
05 087	60x80	24
05 089	80x80	16
05 091	100x80	16
05 093	120x80	12
05 094	25x100	40
05 095	40x100	28
05 096	60x100	20
05 097	80x100	14
05 098	100x100	8
05 099	150x100	8

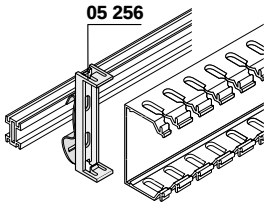


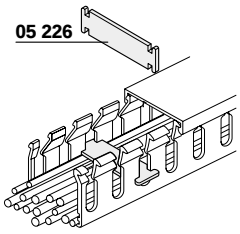
Wiring ducts with 4-6mm slit grey RAL 7030 colour

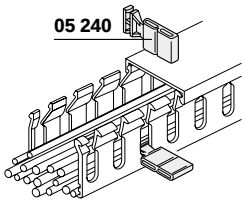
05 119	15x17	92
05 133	25x30	116
05 135	40x30	80
05 137	60x30	52
05 143	25x40	96
05 145	40x40	60
05 147	60x40	40
05 149	80x40	32
05 151	100x40	24
05 153	120x40	20
05 163	25x60	68
05 165	40x60	44
05 167	60x60	32
05 169	80x60	24
05 171	100x60	20
05 173	120x60	14
05 183	25x80	56
05 185	40x80	36
05 187	60x80	24
05 189	80x80	16
05 191	100x80	16
05 193	120x80	12
05 194	25x100	40
05 195	40x100	28
05 196	60x100	20
05 197	80x100	14
05 198	100x100	8
05 199	150x100	8

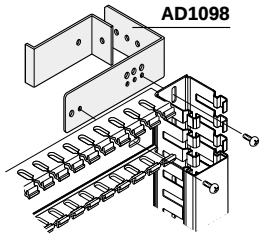
In-depth technical information ..... page 30 **Overall dimensions ..... page 42**

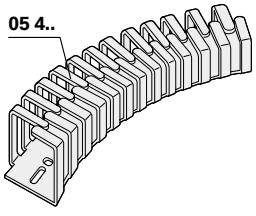












Code	Description	Pack.

Accessories for wiring ducts

05 214	No.100 rivet ø4mm	1
05 216	No.100 rivet ø6mm	1
05 224	No.100 wire retainer for wiring ducts base 40mm	1
05 226	No.100 wire retainer for wiring ducts base 60mm	1
05 228	No.100 wire retainer for wiring ducts base 80mm	1
05 230	No.100 wire retainer for wiring ducts base 100mm	1
05 240	No.100 plastic nameplate	1
AD1009	No.4 supports for horizontal wiring duct on DIN rail	1
05 250	No.20 rapid hooking base for wiring duct base 25mm horizontal on DIN rail	1
05 252	No.20 rapid hooking base for wiring duct base 40mm horizontal on DIN rail	1
05 254	No.20 rapid hooking base for wiring duct base 60mm horizontal on DIN rail	1
05 256	No.20 rapid hooking base for wiring duct base 80mm horizontal on DIN rail	1
05 258	No.20 rapid hooking base for wiring duct base 100mm horizontal on DIN rail	1
05 260	No.20 rapid hooking base for wiring duct base 120mm horizontal on DIN rail	1
05 262	No.20 rapid hooking base for wiring duct base 150mm horizontal on DIN rail	1
05 265	Shears for wiring ducts	1
05 266	Percussion striker for rivets	1

Brackets for fixing to the structure

AD1096	No.4 supports for hooking onto wall-mounted structure for horizontal/vertical wiring duct	1
AD1098	No.4 supports for hooking onto floor-mounted structure for horizontal/vertical wiring duct	1

Code	Dimensions mm (bxh)	Pack/metres

Flexible wiring ducts L=500mm grey RAL 7040 colour

05 400	12,5x12,5	112
05 402	16x16	84
05 405	20x20	112
05 410	25x25	70
05 415	30x30	50
05 420	40x40	50
05 425	50x50	32

Wiring ducts

The lamellar wiring ducts are made of thermoplastic self-extinguishing material complying with the UL 94V0 Standard, resistant to abnormal heat and fire up to 960°C (glow wire test) according to the IEC 695-2-1 Standard. Dimensional stability is guaranteed from -20°C to + 60°C. The standard length of the wiring ducts is 2 metres and the colour is grey RAL 7030. Products have the IMQ mark, UL and CSA approvals, and RINA homologation.

Flexible wiring ducts

Made of thermoplastic material resistant to a permanent temperature of 80°C and peaks of up to 110°C, according to the IEC 216 Standard. Self-extinguishing property is according to the UL 94V2 Standard. The standard length is 500mm and the colour is grey RAL 7040.

In-depth technical information ..... page 30 Overall dimensions ..... page 42

Compliance with CEI EN 60439-1 Standard

The ArTu switchboards have undergone the type tests foreseen by the CEI EN 60439-1 (CEI 17/13-1 3rd edition) Standards in the ABB laboratories. The results of these tests guarantee the performances of the ArTu switchboards and, by using the metalwork structures, ABB SACE air, modular and moulded-case circuit-breakers, mean that the end switchboard constructor does not have to carry out any further type tests by following the selection criteria and the assembly instructions for the various components. These results, which are indicated below, can be referred to for making out the declaration of conformity of the switchboard.

Over-temperature (Ref. par. 8.2.1 of the Standard)

The table on page 33 and following pages shows the thermal dissipation values referred to all the dimensions of ArTu switchboards and to the type of installation, deriving from the type tests carried out. The dissipated power data (in Watt) is according to the admissible over-temperature inside the switchboard (appropriately taking into account the simultaneity factor).

Dielectric properties (Ref. par. 8.2.2 of the Standard)

	ArTu L wall-mounted	ArTu L floor-mounted
Rated service voltage:	up to 500 V c.a.	up to 690 V c.a.
Rated insulation voltage:		up to 1000 V c.a.
Rated impulse withstand voltage:	6 kV	8 kV

Short-circuit withstand current (Ref. par. 8.2.3 of the Standard)

		ArTu L wall-mounted	ArTu L floor-mounted
Rated short-time short-circuit current:	phase-phase	25 kA (1s)	35 kA (1s)
	phase-neutral	9 kA(1s)	21 kA(1s)
Rated max. peak short-circuit current		15 kA	73 kA

Short-circuit efficiency (Ref. par. 8.2.4 of the Standard)

	ArTu L wall-mounted	ArTu L floor-mounted
(Ref. par. 8.2.4.1):	Following the assembly indications of the metal components, the effective electrical continuity between the exposed conductive parts is verified, with negligible resistance values.	
(Ref par. 8.2.4.2):	Protection circuit short-circuit withstand current: phase-earthing busbar	
	9 kA (1s)	15 kA (1s)

Insulation distances (Ref. par. 8.2.5 of the Standard)

The insulation distances are guaranteed by following the ABB SACE assembly and mounting instructions, and those for ABB SACE circuit-breakers.

Mechanical operation (Ref. par. 8.2.6 of the Standard)

Mechanical operation is verified by following the assembly and mounting instructions of the metalwork structures and ABB SACE circuit-breakers.

Degree of protection (Ref. par. 8.2.7 of the Standard) According to CEI EN 60529 (CEI 70-1 publication IEC 529)

	ArTu L wall-mounted	ArTu L floor-mounted
Without door	IP 31	IP 31
With door	IP 43	IP 43

Mechanical characteristics

Material

Structure	12/10mm thick pickled steel sheet
Doors	15/10mm thick steel sheet. 4mm thick tempered glass from the inside

Painting

Colour of structure	Grey orange peel RAL 7035	
Colour of base strip	Grey RAL 7012	
Standard cycle	Sheet washing	
	Phosphating with iron salt base	
	Drying in tunnel at 10°C	
	External and internal painting with electrostatic applicatoin of thermosetting powder enamel with epoxy polyester binders, orange peel RAL 7035 colour, totale thickness: 60/70 micron External and internal painting with electrostatic applicatoin of thermosetting powder enamel with epoxy polyester binders, orange peel RAL 7035 colour, totale thickness: 60/70 micron	
Paint characteristics	Binder:	epoxy polyester
	Specific gravity:	1,61g/cm^3
	Theoretical coverage:	10.4 m 2 /kg. with 60 micron average film thickness
	Melting point:	85-95 °C (Kofler bench method)
	Granulometry:	standard distribution between 5 and 100 micron with average size of the particles between 30 and 40 micron. Hardening: 12 min. x 190 °C (temperature of item)
	Hardness:	1H - 2H
	DIN 53152 bending elasticity:	unaltered on 1/4” spindle
	DIN 53151 reticular adherence:	GT O (100%)
	Erichem elasticity:	SEN DIN 53156: > 6mm
	Gardner resistance to impact:	25 Kg. x cm.

Tests carried out on small degreased and phosphated sheets with 60/70 micron film thickness.
The painting passed the resistance tests to saline mist (193 hours).

Ambient characteristics

Type of installation	indoor	
Installation conditions	wall / floor-mounted	
Service climate (t°/RH%)	constant	23°C/83% - 40°C/93%
	variable	23°C/98% - 40°C/98%
Ambient temperature limits	operating	-5°C +40°C
	storage	-25°C +55°C

ABB SACE Declaration of Conformity

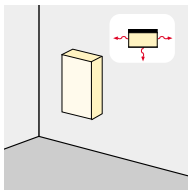
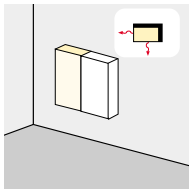
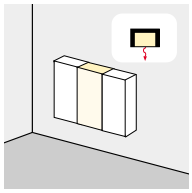
The ArTu L switchboards with the following rated characteristics:

Rated service voltage	up to 690 V		
Rated insulation voltage	up to 1000 V		
Rated current / I_{cw}	ArTu L wall-mounted		up to 250 A / 25 kA
	ArTu L floor-mounted		up to 630 A / 35 kA
Degree of protection	without door	IP 31	
	with door	IP 43	

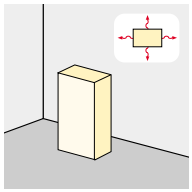
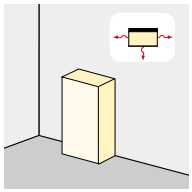
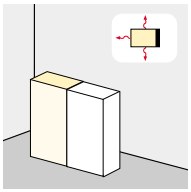
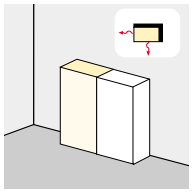
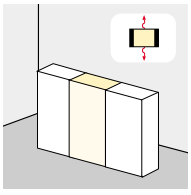
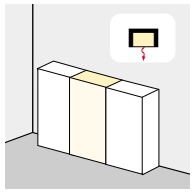
when correctly selected and assembled, as per the indications given in the catalogue and in the instruction manual, mean switchboards in accordance with the EN 60439-1 (CEI 17/13-1) Standards can be built on the basis of what is required by the Low Voltage Directive of the European Community (Directive 73/23/EEC, Law 791/1977).

The above is valid if the switchboard is designed and constructed:
- selecting the materials according to the requirements indicated in the ABB catalogues;
- sizing the conductors according to the requirements of the EN 60439-1 and CEI 64-8 Standards;
- carrying out the individual tests required by the EN 60439-1 Standard with positive outcome.

Dissipated power inside the wall-mounted ArTu L switchboards

Overtemperature	Separate housing wall-mounted assembly				First and last housing wall-mounted assembly				Central housing wall-mounted assembly			
												
	Maximum dissipated power (W)				Maximum dissipated power (W)				Maximum dissipated power (W)			
	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C
IP31												
SL0600	99	125	150	176	95	118	143	168	91	113	137	160
SL0800	106	134	160	188	100	125	152	178	107	132	160	189
SL1000	122	152	184	216	116	143	174	204	113	141	170	201
SL1200	135	170	205	241	128	161	193	228	126	156	189	223
IP43												
SL0600	90	113	137	162	86	108	131	155	82	103	125	147
SL0800	97	122	147	174	92	115	140	165	98	122	148	175
SL1000	113	141	171	202	107	134	162	191	104	131	158	187
SL1200	126	159	192	227	120	151	181	214	117	146	177	209

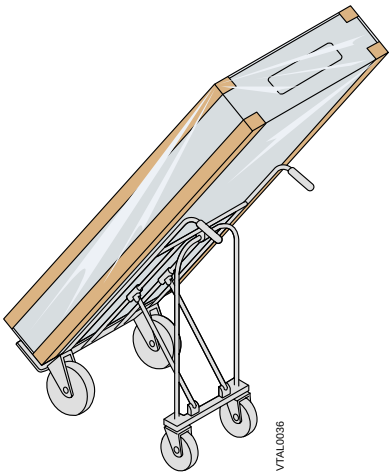
Dissipated power inside the floor-mounted ArTu L switchboards

Overtemperature	Separate housing exposed on all sides				Separate housing wall-mounted assembly				First and last housing exposed				First and last housing wall-mounted assembly				Central housing exposed				Central housing wall-mounted assembly			
																								
	Maximum dissipated power (W)				Maximum dissipated power (W)				Maximum dissipated power (W)				Maximum dissipated power (W)				Maximum dissipated power (W)				Maximum dissipated dissipabile (W)			
	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C	25° C	30° C	35° C	40° C
IP31																								
SL1400	174	217	265	312	155	195	237	278	168	211	255	301	145	183	221	261	164	206	250	295	140	176	213	252
SL1600	194	242	294	347	171	213	259	306	185	232	281	332	160	200	242	286	180	226	274	323	154	193	233	276
SL1800	211	264	320	378	184	231	281	331	200	251	305	360	173	217	262	309	195	244	296	350	166	208	252	298
SL2000	227	285	345	408	197	248	300	354	215	270	327	386	185	231	281	331	206	262	318	375	178	223	271	319
IP43																								
SL1400	158	197	241	284	141	177	215	253	153	192	232	274	132	166	201	237	149	187	227	268	127	160	194	229
SL1600	176	220	267	315	155	194	235	278	168	211	255	302	145	182	220	260	164	205	249	294	140	175	212	251
SL1800	192	240	291	344	167	210	255	301	182	228	277	327	157	197	238	281	177	222	269	318	151	189	229	271
SL2000	206	259	314	371	179	225	273	322	195	245	297	351	168	210	253	301	190	238	289	341	162	203	246	290

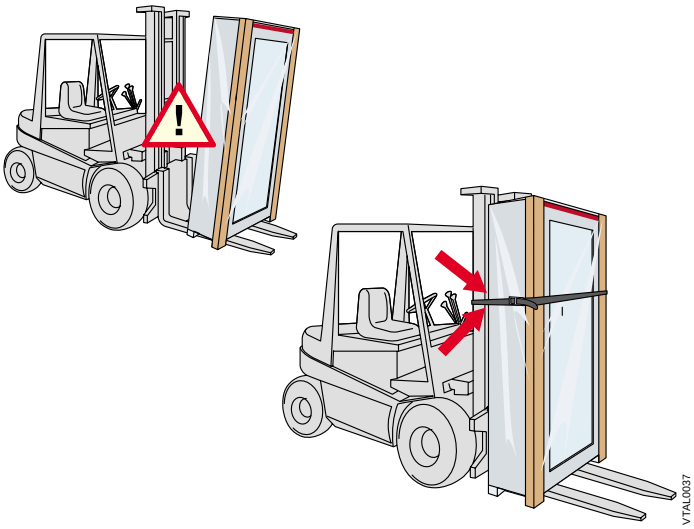
Dissipated power inside the ArTu L switchboards according to the admissible overtemperature

Handling by means of transpallets

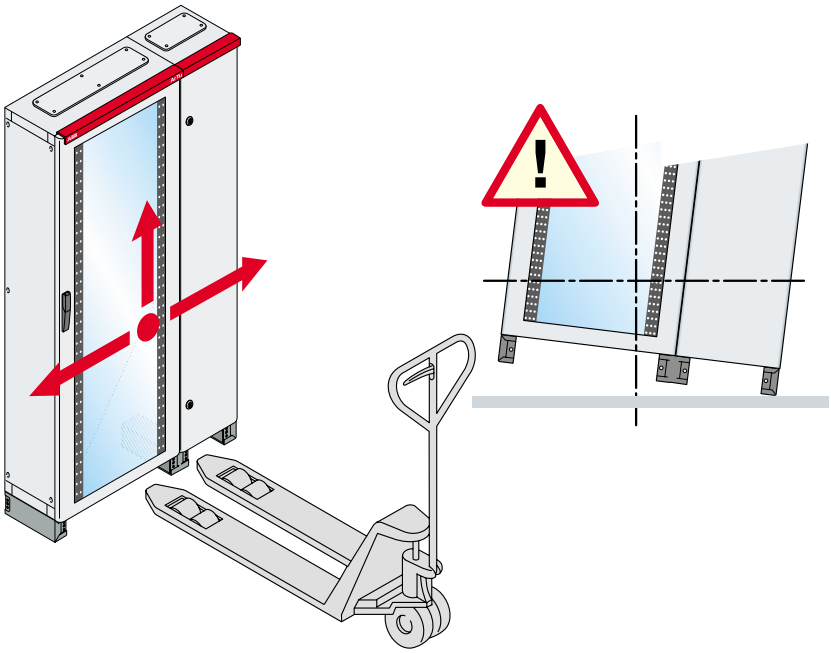
The following handling is recommended for ArTu L switchboards:

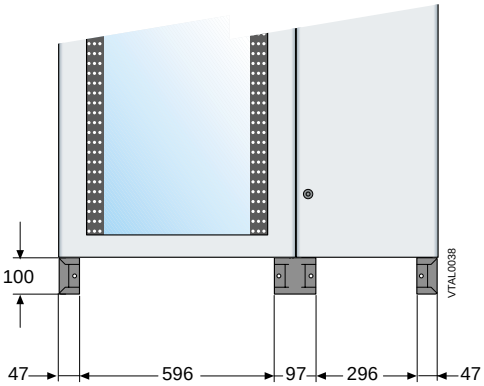


For greater safety during transport by means of a fork-lift truck, it is advisable to anchor the switchboard to the fork-lift truck:



For structures with cable container placed at the side containing busbar systems, check the baricentre before handling.



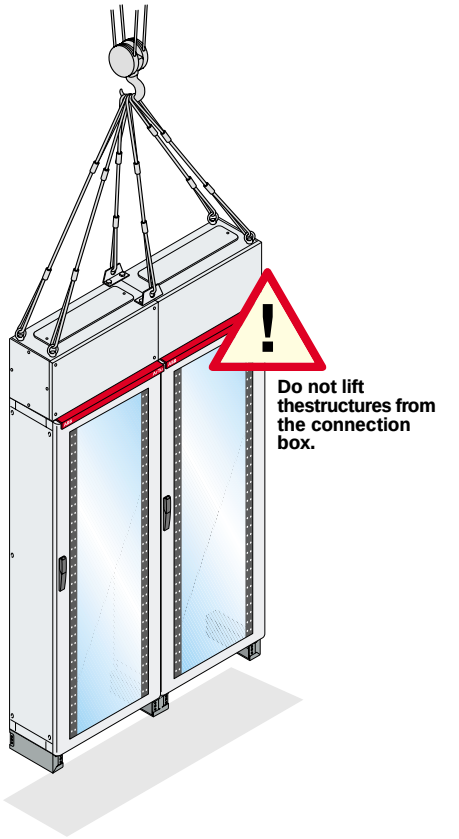


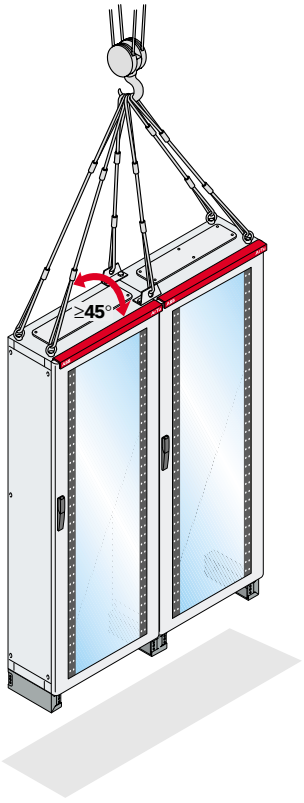
Handling by means of a bridge crane

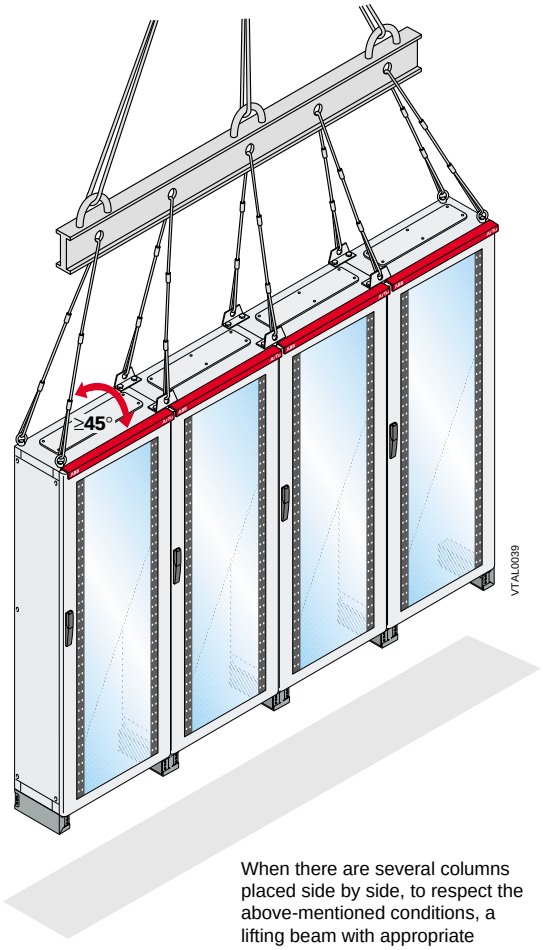
For handling by means of a crane or bridge crane, before lifting the switchboard check that the following conditions are present:

- excellent state of the ropes or chains;
- the angle between the lifting ropes and the roof of the switchboard must be ≥45;
- maximum number of columns which can be transported: 3;
- maximum weight which can be lifted as per DIN 580 Standard (M8).

When there are several columns placed side by side, to respect the above-mentioned conditions, a lifting beam with appropriate characteristics can be used.

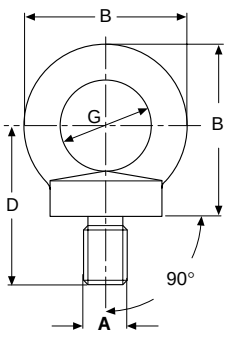


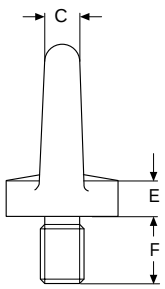


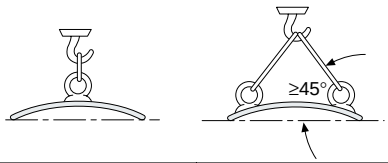


When there are several columns placed side by side, to respect the above-mentioned conditions, a lifting beam with appropriate characteristics can be used.

DIN 580 Standard regarding mechanical connection elements







A	Pitch (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	WLL1 kg	WLL2 kg
M6	1	26	6	14	6	11	14	75	50
M8	1,25	30	8	18	6	15	20	140	95
M10	1,5	45	10	23	8	18	25	230	170
M12	1,75	54	12	28	10	22	30	340	240
M14	2	54	12	28	10	22	30	460	320
M16	2	63	14	33	12	28	35	700	500

VTAL0040

Calculation of the PE protection conductor

The EN 60439-1 Standard indicates the methods for calculating the PE protection conductor cross-section which must be suitably sized to withstand the thermal and dynamic components of the fault currents.
When identifying the busbar fixing position, check there are the following conditions:

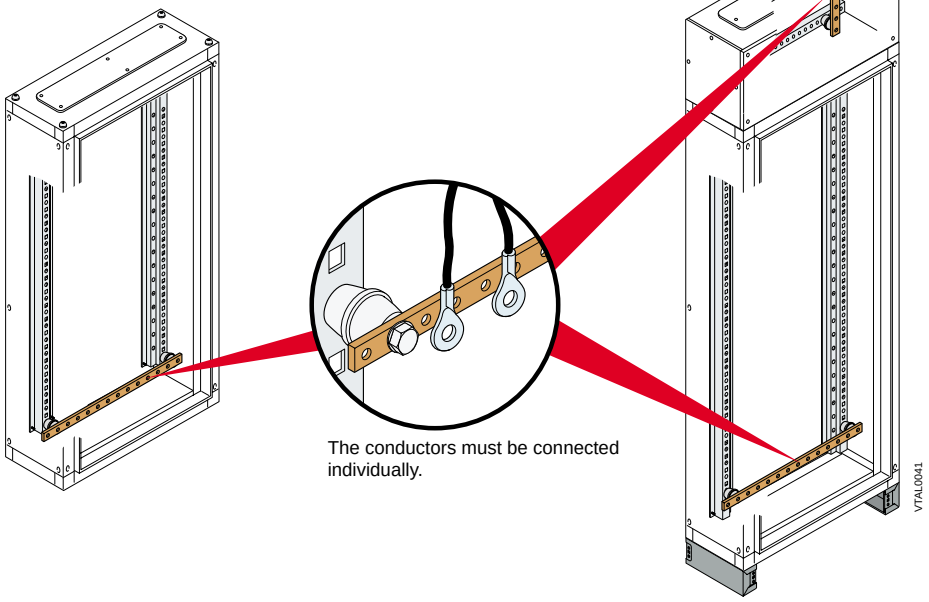
- the busbar must be connected directly to the earthed parts of the switchboard (structure);
- the busbar must be connected in an easily accessible position.

For sizing, use the values in the table, taken from the CEI EN60439-1(P.7.4.3.1.7)

Cross-section of the phase conductors S (mm^2)					Minimum cross-section of the corresponding protection conductor Sp (mm^2)
		S	≤	16	S
16	<	S	≤	35	16
35	<	S	≤	400	S/2
400	<	S	≤	800	200
		S	>	800	S/4

ArTu L wall-mounted

Cross-section of the protection conductor (25x4) 100mm^2



ArTu L floor-mounted

Cross-section of the protection conductor (25x4) 100mm^2

Equipotentiality

The accessible conductive parts of a device, which cannot be connected to the protection circuit by means of their own connecting means, must be connected to the protection circuit of the apparatus for equipotentiality protection by means of an equipotential conductor, whose cross-section must be selected according to the table given below.

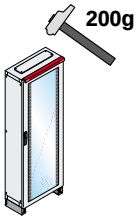
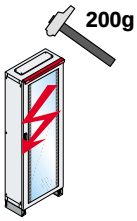
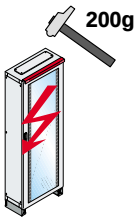
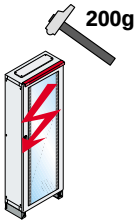
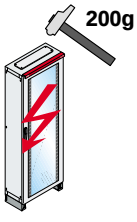
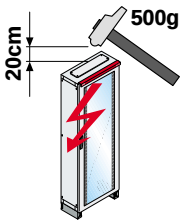
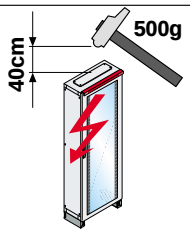
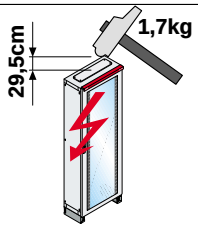
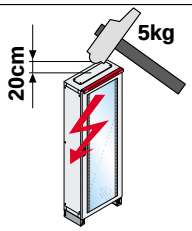
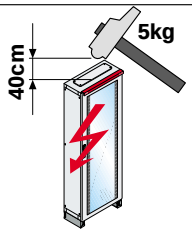
Rated service current I_e (mm^2)					Minimum cross-section of the corresponding protection conductor (mm^2)
		I_e	≤	20	S
20	<	I_e	≤	25	2,5
25	<	I_e	≤	32	4
32	<	I_e	≤	63	6
63	<	I_e			10

S = cross-section of the phase conductor (mm 2)

PEN conductor

The cross-section of the PEN conductors of a piece of apparatus must be determined using the same procedure followed for the neutral conductor (N).
The minimum cross-section of a copper conductor must be 10mm2. The PEN conductor does not need to be insulated. Parts of the structure must not be used as a PEN conductor. However, the assembly rails,made of copper or aluminium, can be used as PEN conductors. For the conductors not made of copper, the above-mentioned cross-sections are replaced with equivalent conductivity cross-sections, which can require larger sized terminals.

IK mechanical resistance

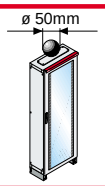
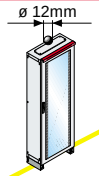
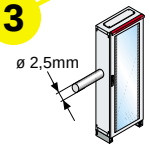
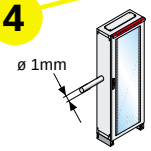
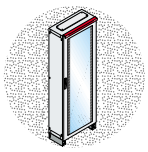
IK 0		Unprotected
IK 01		Impact energy in Joule **0,150**
IK 02		Impact energy in Joule **0,200**
IK 03		Impact energy in Joule **0,350**
IK 04		Impact energy in Joule **0,500**
IK 05		Impact energy in Joule **0,700**
IK 06		Impact energy in Joule **1,00**
IK 07		Impact energy in Joule **2,00**
IK 08		Impact energy in Joule **5,00**
IK 09		Impact energy in Joule **10,00**
IK 10		Impact energy in Joule **20,00**

VTAL0042

Number defined by the CEI EN 50102 Standard

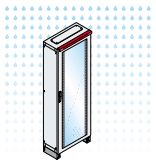
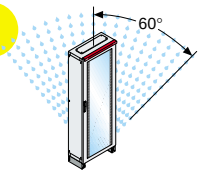
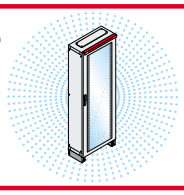
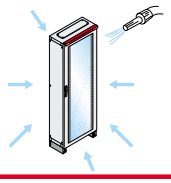
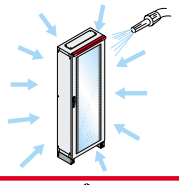
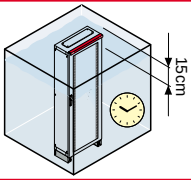
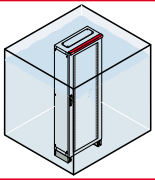
IP degree protection

1st NUMBER: protection against solid bodies

IP		
0		No protection
1		Protected against solid bodies larger than 50mm (accidental contact with hands)
2		Protected against solid bodies larger than 12mm (fingers)
3		Protected against solid bodies larger than 2.5mm (tools, wires)
4		Protected against solid bodies larger than 1 mm
5		Protected against dust (no harmful deposit)
6		Totally protected against dust

1st number defined by the CEI 70-1 - IEC 529 Standards

2nd NUMBER: protection against liquids

IP		
0		No protection
1		Protected against vertical fall of drops of water (condensation)
2		Protected against drops of water up to 15° from vertical
3		Protected against drops of rain water up to 60° from vertical
4		Protected against splashes of water from all directions
5		Protected against jets of water from all directions by means of a hose
6		Protected against jets of water similar to sea waves
7		Protected against the effects of temporary immersion
8		Protected against the effects of continual immersion

2nd number defined by the CEI 70-1 - IEC 529 Standards

VTAL0043

PROTECTION AGAINST PENETRATION OF SOLID BODIES

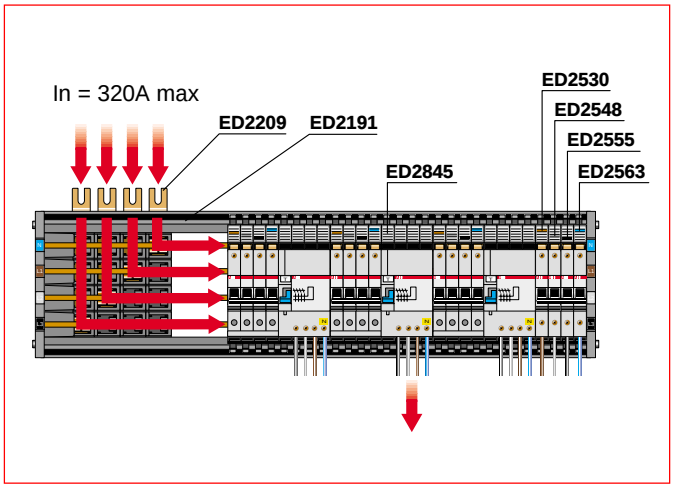
1st characterist. number	Brief description	Full description
0	Unprotected	No particular protection is provided
1	Protected against solid bodies larger than 50mmm	No large surface of the human body must be able to penetrate, for example a hand (voluntary protection is not, however, provided) or solid bodies larger than 50mm in diameter
2	Protected against solid bodies larger than 12mm	Fingers or similar objects of length not exceeding 80mm or solid bodies of diameter higher than 12mm must not penetrate
3	Protected against solid bodies larger than 2.5mm	Tools, wires, etc. with diameter or thickness greater than 2.5mm or solid bodies with diameter greater than 2.5mm must not be able to penetrate
4	Protected against solid bodies larger than 1.0mm	Wires or plates thicker than 1.0mm or solid bodies with diameter greater than 1.0mm must not be able to penetrate
5	Protected against dust	Penetration of dust is not totally excluded, but the amount which penetrates is not enough to jeopardise correct operation of the material
6	Totally protected against dust	No dust is allowed to penetrate

PROTECTION AGAINST PENETRATION OF WATER

2st characterist. number	Brief description	Full description
0	Unprotected	No particular protection is provided
1	Protected against falling drops of water	The drops of water which fall vertically must not cause harmful effects
2	Protected against drops of water up to 15° from vertical	The drops of water which fall vertically must not cause harmful effects when the housing is leant at any angle up to 15° in relation to its normal position
3	Protected against rain	The water which falls as rain from a direction with an angle of up to 60° to vertical must not cause harmful effects
4	Protected against water spray	Water splashed over the housing from all directions must not cause harmful effects
5	Protected against jets of water	Water sprayed with a nozzle onto the housing lfrom all directions must not cause harmful effects
6	Protected against waves	In the case of waves or strong jets of water, the water must not enter the housing in a harmful amount
7	Protected against the effects of temporary immersion	Water in a harmful amount must not be able to penetrate inside the housing immersed under certain pressure and duration conditions
8	Protected against the effects of continual immersion	The material is suited to remaining immersed in water under the conditions specified by the manufacturer

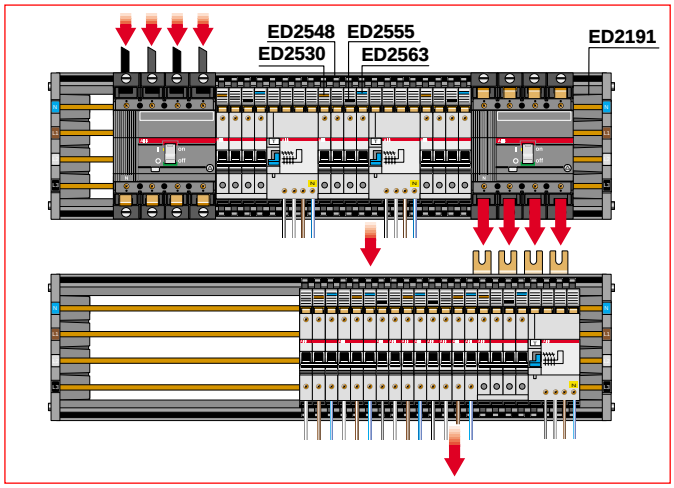
Unifix H frame with 400A busbars - 24 modules

Busbar power supply from above by means of 4P feeder module placed laterally

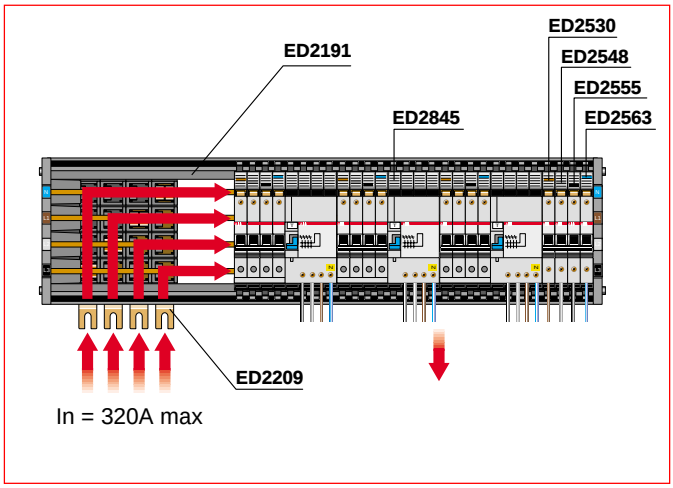


Unifix H frame with 400A busbars - 24 modules

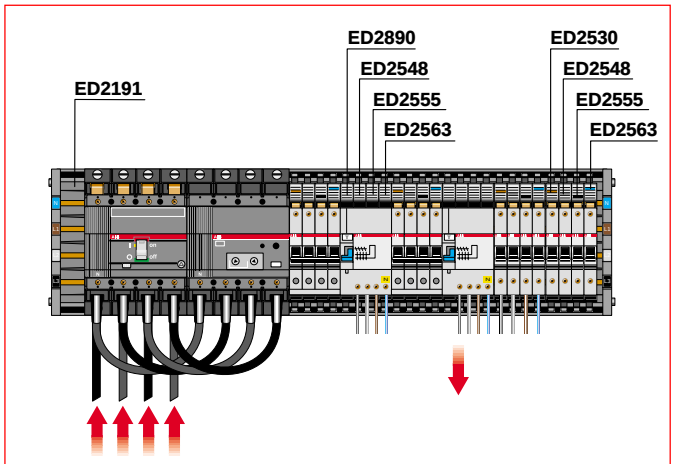
Power supply by means of general row circuit-breaker supplied from above



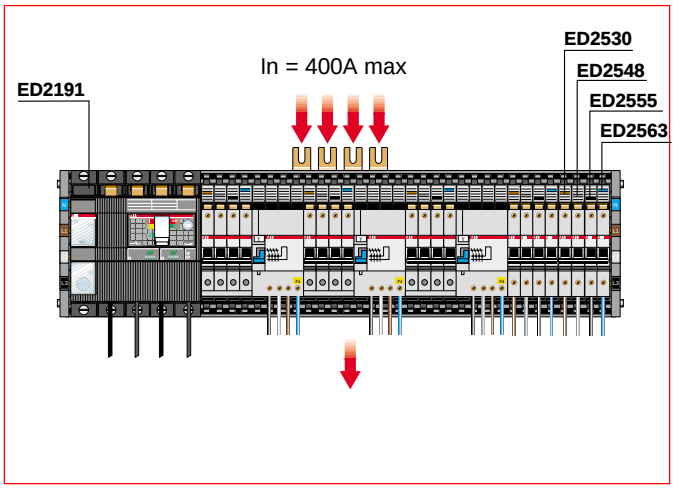
Busbar power supply from below by means of 4P feeder module placed laterally



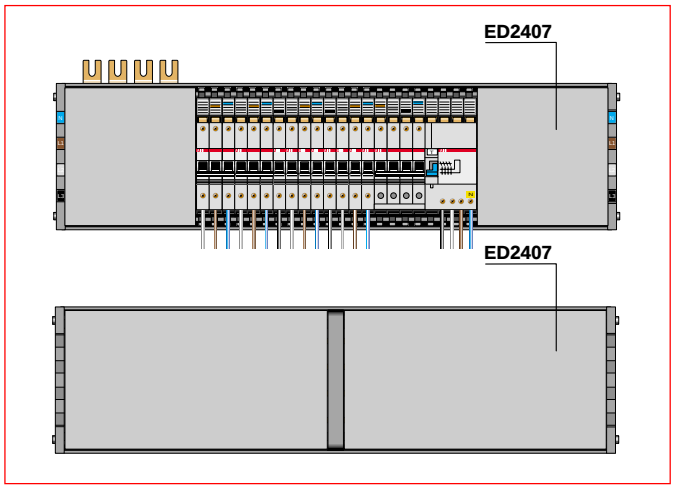
Power supply by means of general row circuit-breaker supplied from below



Busbar power supply from above by means of 4P feeder module placed centrally

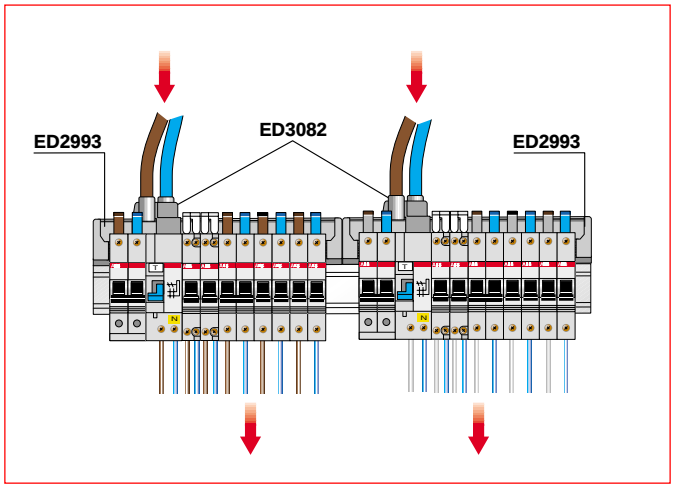


Covers for IP 20 degree of protection



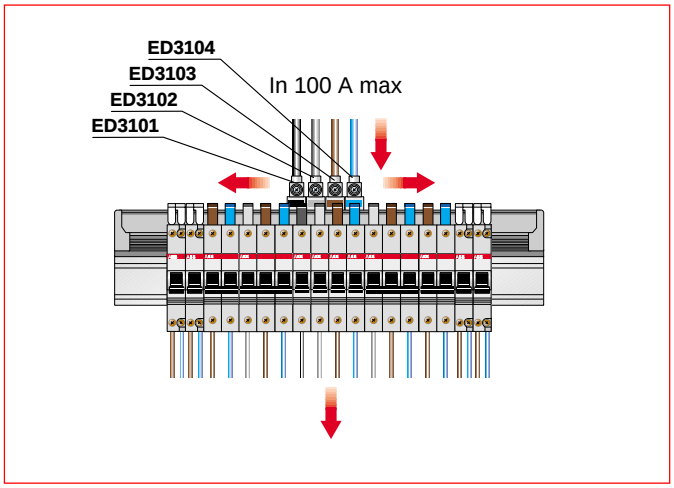
Unifix L frame with 100A busbars - 12/18/24 modules

Two different single-phase circuits on a single 24 module DIN rail

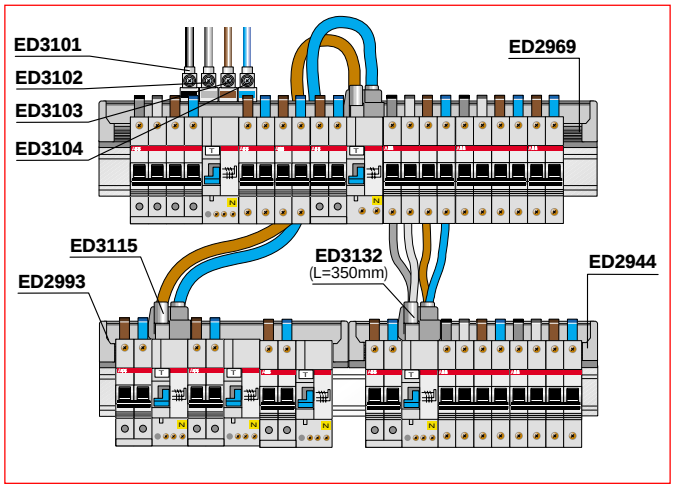


Unifix L frame with 100A busbars - 12/18/24 modules

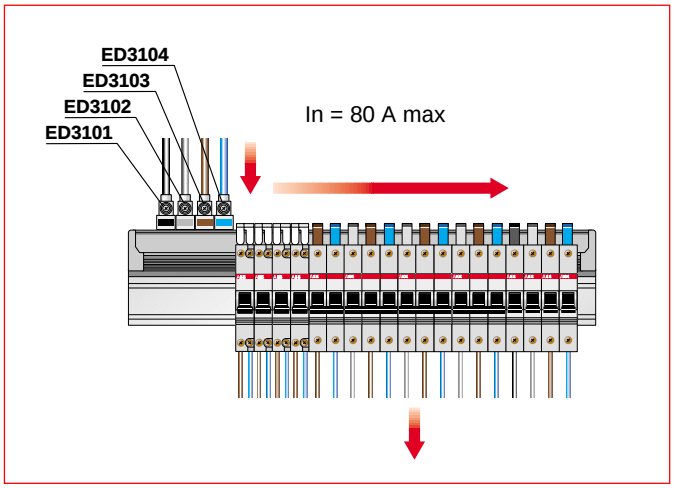
Busbar power supply by means of circuit-breaker supplied from above placed centrally



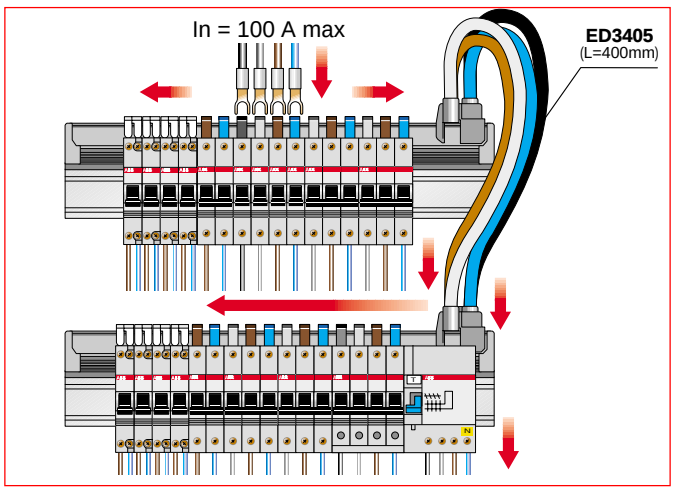
Example of main and branched power supply



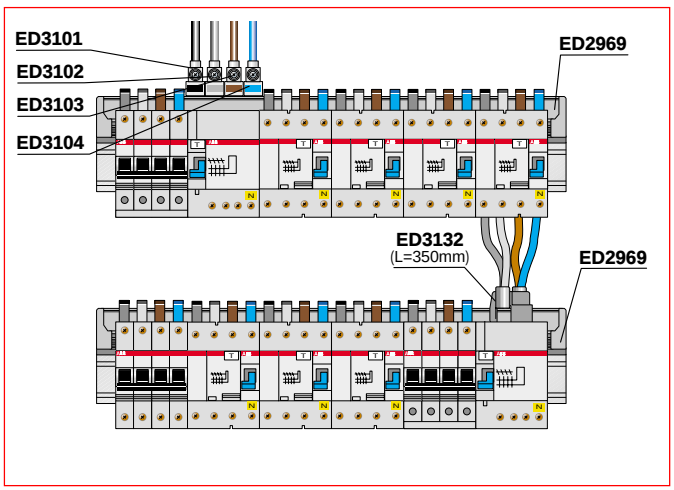
Busbar power supply by means of main row circuit-breaker supplied from above, placed laterally



Busbar power supply by means of cable terminalplaced under the circuit-breaker terminal head and branch with parallel module



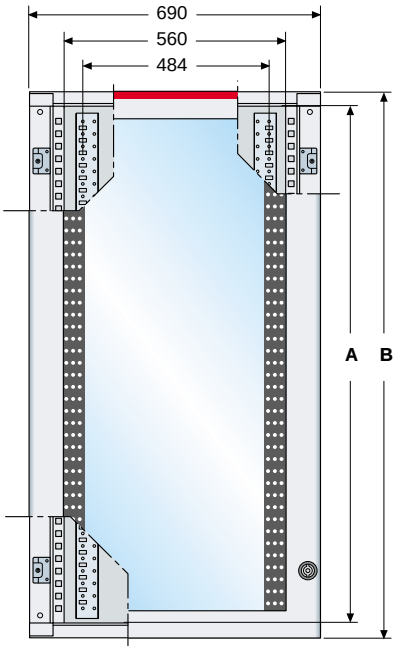
Direct busbar power supply by means of feeder module (supplied without cables)and branch by means of feeder module



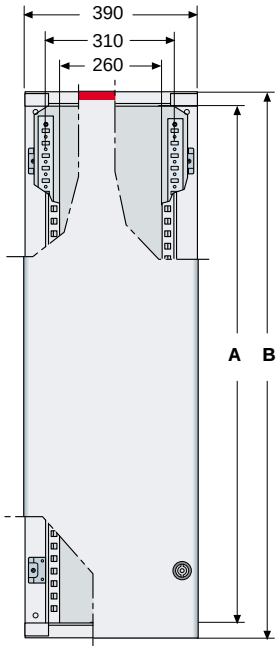
VTAL0046

Wall-mounted switchboards

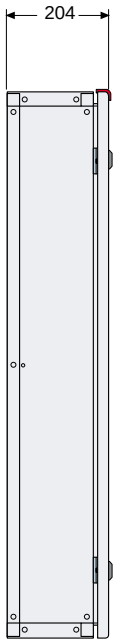
Structure front



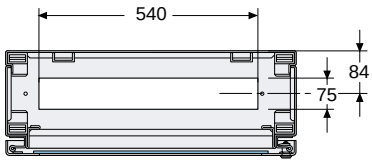
Cable container front



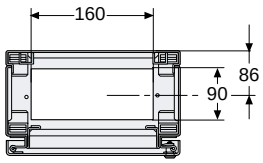
Side



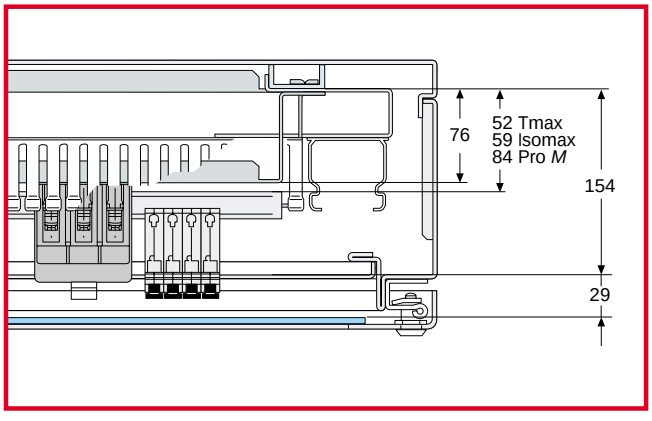
Structure base

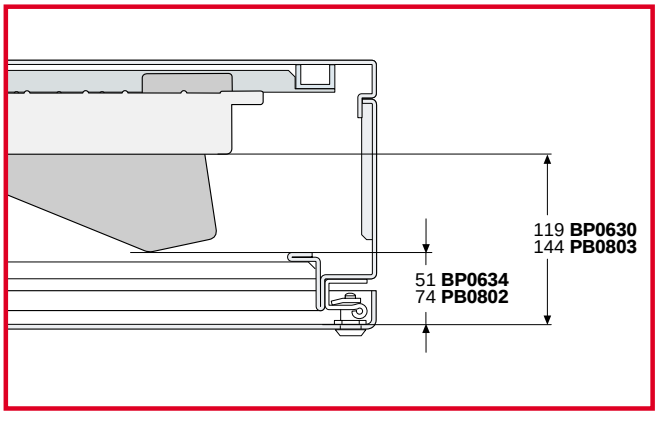


Cable container base



	A	B
Wall-mounted structures		
SL0600	600	650
SL0800	800	850
SL1000	1000	1050
SL1200	1200	1250
Wall-mounted cable container		
VC0600	600	650
VC0800	800	850
VC1000	1000	1050
VC1200	1200	1250

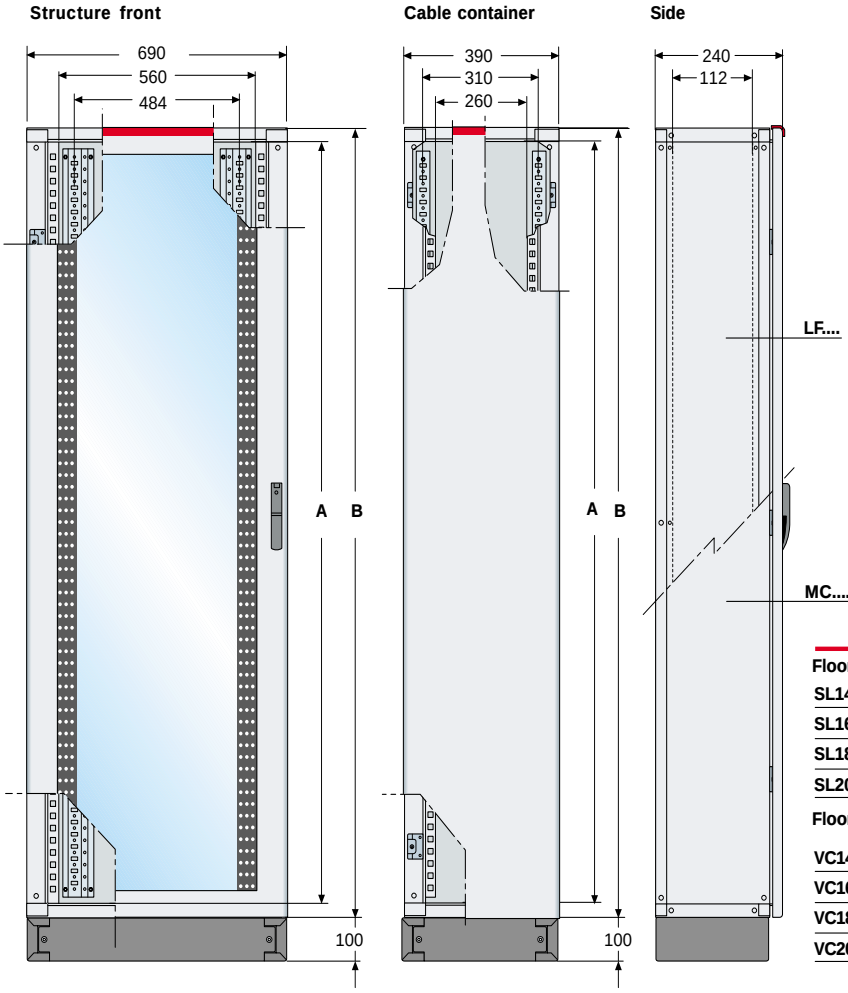




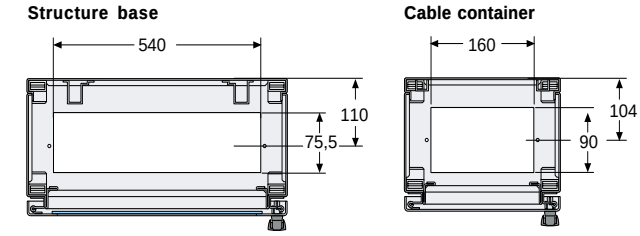
VTAL9025-1

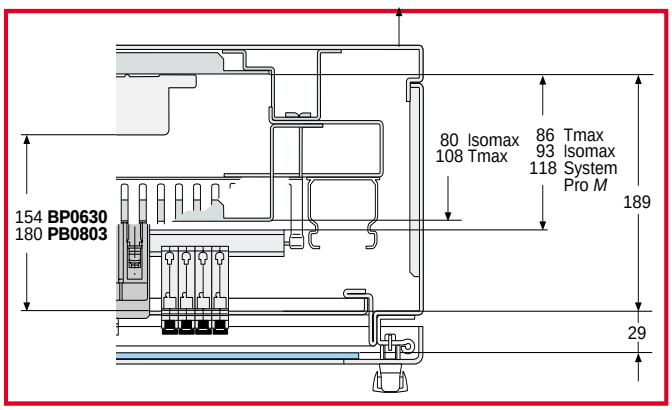
The measurements are in millimetres

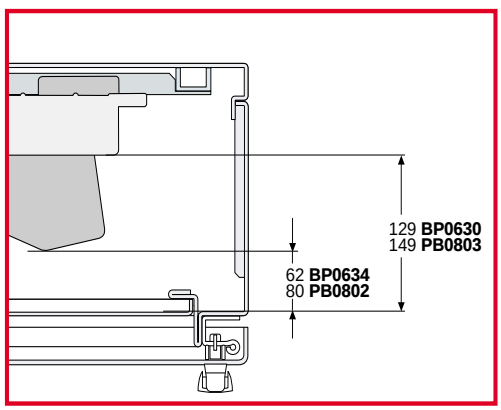
Floor-mounted switchboards



	A	B
Floor-mounted structures		
SL1400	1400	1450
SL1600	1600	1650
SL1800	1800	1850
SL2000	2000	2050
Floor-mounted cable containers		
VC1400	1400	1450
VC1600	1600	1650
VC1800	1800	1850
VC2000	2000	2050





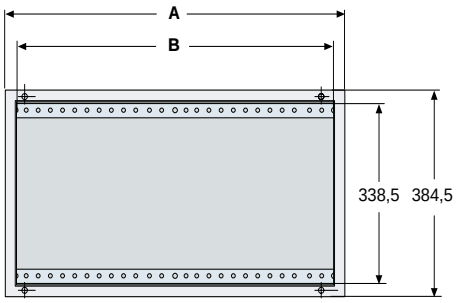


VTAL9025-2

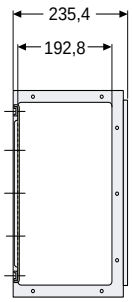
The measurements are in millimetres

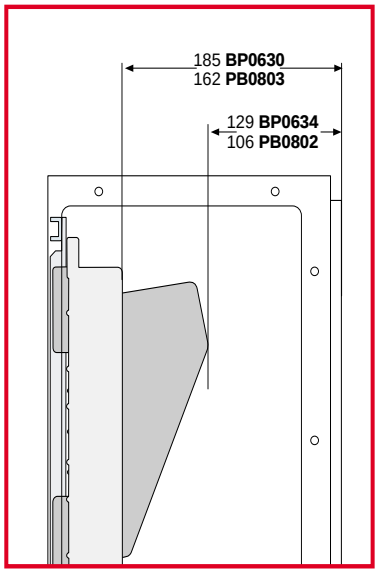
Connection boxes for floor-mounted switchboards

Front view

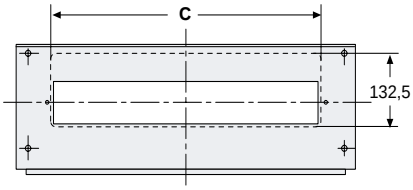


Lateral view





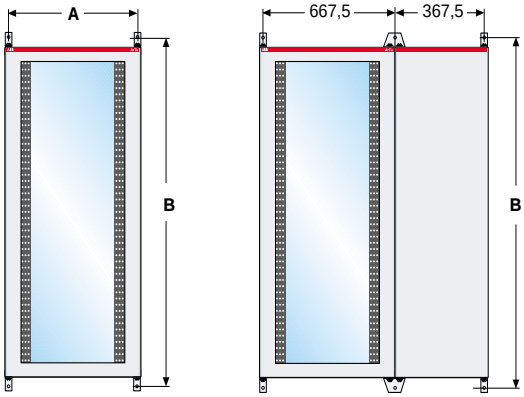
View from above



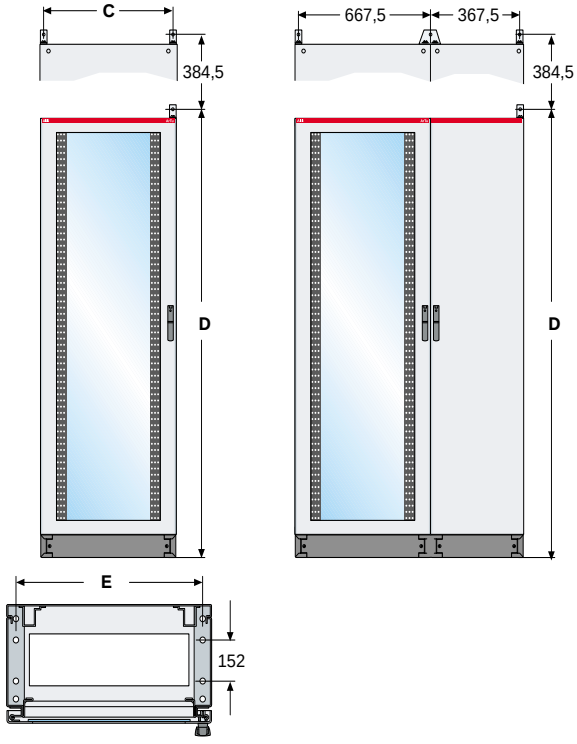
	A	B	C
Box for structure			
RC1000	690	644	550
Box for cable container			
RC2000	390	344	250

Drilling templates for fixing

Centre distances for fixing wall-mounted structures



Centre distances for fixing floor-mounted structures



Wall-mounted structures	A	B
SL0600	645	700
SL0800	645	900
SL1000	645	1100
SL1200	645	1300

Wall-mounted cable container	A	B
VC0600	345	700
VC0800	345	900
VC1000	345	1100
VC1400	345	1300

Floor-mounted structures	C	D	E
SL1400	645	1575	645
SL1600	645	1775	645
SL1800	645	1975	645
SL2000	645	2175	645

Floor-mounted cable	C	D	E
VC1400	345	1575	345
VC1600	345	1775	345
VC1800	345	1975	345
VC2000	345	2175	345

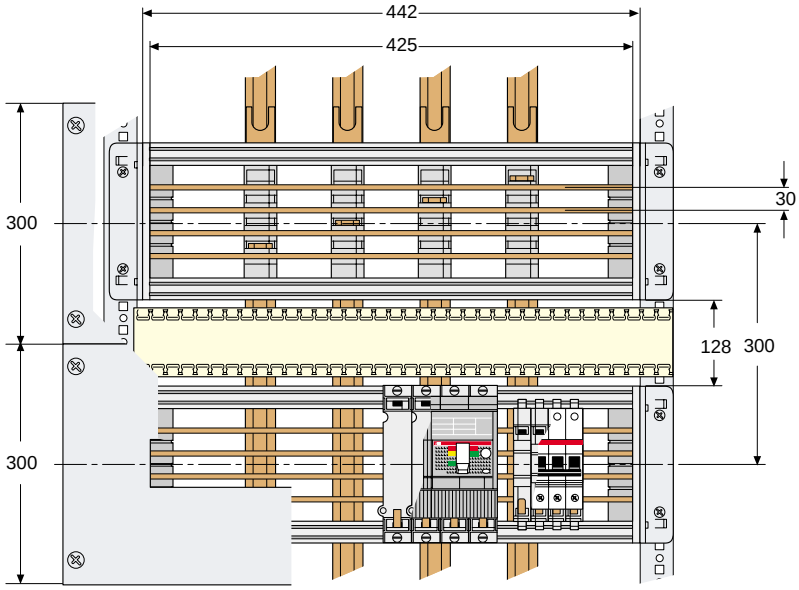
VTAL9025-3

The measurements are in millimetres

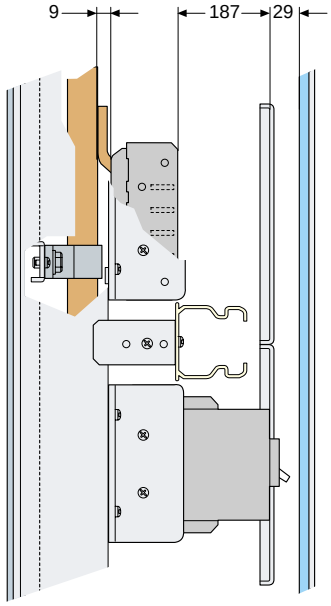
Unifix cabling system

Unifix H

Front view

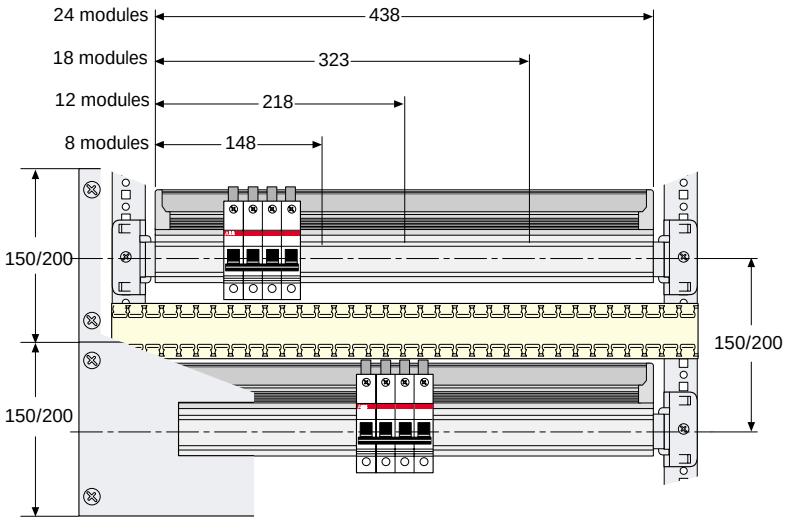


Lateral view

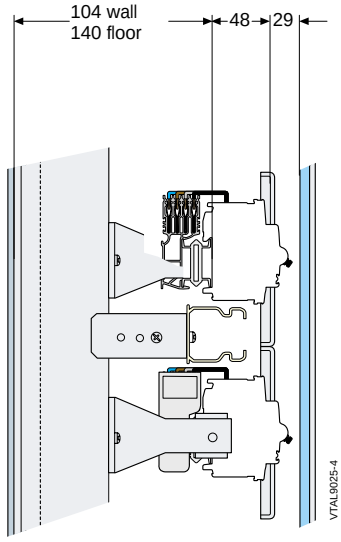


Unifix L

Front view



Lateral view



The measurements are in millimetres

ArTu L

List of codes

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05 043	28
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05 214	29
05 216	29
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05 228	29
05 230	29
05 240	29
05 250	29
05 252	29

Code	Page
05 254	29
05 256	29
05 258	29
05 260	29
05 262	29
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AL1000	17
AL1001	17
AL2000	17
BA0400	22
BA0800	22
BF1602	23
BF2502	23
BF4002	23
BF4012	23
BP0630	22
BP0632	22
BP0634	22
BR0250	22
BR0400	22
BR0630	22
ED0025	26
ED0026	26
ED2183	24
ED2209	24
ED2217	25
ED2225	25
ED2233	25
ED2241	25
ED2258	25
ED2266	25

ArTu L

List of codes

Code	Page
ED2274	25
ED2282	25
ED2290	25
ED2308	25
ED2316	25
ED2324	25
ED2332	25
ED2340	25
ED2357	25
ED2365	25
ED2373	25
ED2373	25
ED2373	25
ED2381	25
ED2399	25
ED2407	25
ED2530	24
ED2548	24
ED2555	24
ED2563	24
ED2571	24
ED2589	24
ED2597	24
ED2605	24
ED2613	24
ED2621	24
ED2639	24
ED2647	24
ED2654	24
ED2662	24
ED2670	24
ED2688	24
ED2696	24
ED2704	24
ED2712	24
ED2720	24
ED2738	24
ED2746	24
ED2753	24
ED2761	25
ED2779	25
ED2787	25
ED2795	25
ED2803	25
ED2811	25
ED2829	25
ED2837	25
ED2845	25
ED2852	25
ED2860	25
ED2878	25
ED2894	24
ED2902	24
ED2910	24
ED2928	24
ED2936	25
ED2944	26
ED2951	26
ED2961	27
ED2969	26
ED2985	26
ED2993	26
ED3009	26
ED3017	26
ED3033	26
ED3041	26

Code	Page
ED3058	26
ED3066	26
ED3082	26
ED3090	26
ED3100	27
ED3101	26
ED3102	26
ED3103	26
ED3104	26
ED3108	26
ED3116	26
ED3124	26
ED3132	26
ED3140	27
ED3272	26
ED3280	26
ED3298	26
ED3355	26
ED3363	26
ED3371	26
ED3405	26
ED3413	26
ED3439	26
GD1520	18/27
IP0601	16
IP0602	16
IP1800	16
IP1801	16
IP2000	16
IP2001	16
KB1001	23
KB1002	23
KB1003	23
KB1004	23
KB1005	23
KB1006	23
KB1008	23
KB1009	23
KB1010	23
KB1012	23
KB1013	23
KB1014	23
KB1015	23
KB1016	23
KB1017	23
KB1018	23
LF1400	15
LF1600	15
LF1800	15
LF2000	15
LK1000	18
LK1001	18
LK1004	18
LK2000	18
LK2001	18
LK2004	18
LK3000	18
LK3001	18
LK3004	18
LK3002	18
LK3003	18
LK3200	18
LK3300	18
LK3301	18
LK3005	18
LK4000	18

ArTu L

List of codes

Code	Page
LK4001	18
LK4002	18
LK4100	18
LK5000	18
LK5001	18
LK5002	18
MC0600	15
MC0800	15
MC1000	15
MC1200	15
MC1400	15
MC1600	15
MC1800	15
MC2000	15
MI0600	17
MI0800	17
MI1000	17
MI1200	17
MI1400	17
MI1600	17
MI1800	17
MI2000	17
PA1600	19
PA2600	19
PB0802	22
PB0803	22
PC0300	19
PC0600	19
PC0601	16
PC0602	16
PC0801	16
PC0802	16
PC1001	16
PC1002	16
PC1050	19
PC1150	19
PC1201	16
PC1202	16
PC1401	16
PC1402	16
PC1403	19
PC1600	19
PC1601	16
PC1602	16
PC1801	16
PC1802	16
PC2001	16
PC2002	16
PC2401	19
PC2600	19
PC3401	19
PC3600	19
PC4401	19
PC4600	19
PC6401	19
PC6600	19
PC8401	19
PF1002	19
PF1003	19
PF1004	19
PF1006	19
PF1008	19
PM1500	18-27
PM2312	18
PM2624	18
PM2624	27
PM3624	18
PM3624	24
PM3648	18
PM3648	27
PM6672	18
PM6672	27
PO1431	17
PO1631	17
PO1831	17
PO2031	17
PS2720	20
PS2960	20
PS4720	20
PS4960	20
PV0600	16
PV0800	16
PV1000	16
PV1200	16
PV1400	16
PV1600	16
PV1800	16
PV2000	16
RC1000	17
RC2000	17
SH0100	20
SH0200	20
SH0600	20
SH0700	20
SH0800	20
SL0600	14
SL0800	14
SL1000	14
SL1200	14
SL1400	14
SL1600	14
SL1800	14
SL2000	14
SL2000	14
SV0600	21
SV0800	21
SV1000	21
SV1200	21
SV1400	21
SV1600	21
SV1800	21
SV2000	21
TL1000	22
TL2000	22
TL3000	22
TS4011	20
TS4012	20
TS4013	20
VB7035	21
VC0600	14
VC0800	14
VC1000	14
VC1200	14
VC1400	14
VC1600	14
VC1800	14
ZL1000	15
ZL1001	15
ZL2001	15
ZL3000	15

ArTu L

List of new dedicated codes

Code	Description
AA1000	Brackets for fixing side-by-side structures
AA1001	Terminal box support brackets for structure
AD1038	Brackets for fixing distributor frame AD1034
AD1096	Wall wiring duct support (no. 4 pcs.)
AD1097	Brackets for fixing Unifix H
AD1098	Floor wiring duct support (no. 4 pcs.)
AD1099	No. 2 terminal box supports
AL1000	M8 lifting eyebolts
AL1001	No. 2 lifting reinforcements
AL2000	No. 2 flat busbar holders 250-630A
BP0630	N°2 portabarre piatti 250-630A
BP0632	No. 2 flat busbar holder covers 250-630A
BP0634	No. 2 scaled busbar holders 250-630A
BR0250	No. 2 flat busbars 250A
BR0400	No. 2 flat busbars 400A
BR0630	No. 2 flat busbars630A
GD1520	DIN rail 150/200 mm pitch
IP0601	Horizontal structure finishing profile L=600
IP0602	Horizontal cable container finishing profile L300
IP1800	Vertical structure/cable container finishing profile H1800
IP1801	Vertical side-by-side struct. finishing profile H1800
IP2000	Vertical structure/cable container finishing profile H2000
IP2001	Vertical side-by-side struct. finishing profile H2000
KB1001	Connections T1/T2 floor-mounted
KB1002	Connections T3 wall-mounted/floor-mounted and S4 floor-mounted
KB1004	Connections S5 400A floor-mounted
KB1005	Connections S5 630A floor-mounted
KB1006	Connections T3 wall-mounted/floor-mounted and S4 floor-mounted
KB1008	Connections S5 400A floor-mounted
KB1009	Connections S5 630A floor-mounted
KB1010	Connections T3 wall-mounted/floor-mounted and S4 floor-mounted
KB1012	Connections S5 400A floor-mounted
KB1013	Connections S5 630A floor-mounted
KB1014	Connections T3 floor-mounted/wall-mounted
KB1015	Connections S4 400A floor-mounted
KB1016	Connections S5 400A floor-mounted
KB1017	Connections S5 630A floor-mounted
KB1018	Connections T3 wall-mounted/floor-mounted
LF1400	Side panels H1400
LF1600	Side panels H1600
LF1800	Side panels H1800
LF2000	Side panels H2000
LK1000	T1 horizontal 3/4p floor-mounted/wall-mounted kit
LK1001	T1 vertical 3/4 p floor-mounted/wall-mounted kit
LK1004	T1 4 p fixed horizontal + differential
LK2000	T2 horizontal 3/4 p floor-mounted/wall-mounted kit
LK2001	T2 vertical 3/4 p floor-mounted/wall-mounted kit
LK2004	T2 4 p fixed horizontal + differential
LK3000	T3 horizontal 3/4 p floor-mounted/wall-mounted kit
LK3001	T3 vertical 3/4 p floor-mounted/wall-mounted kit
LK3002	Kit for T3 floor-mounted vertical in the cable container
LK3003	Kit for T3 wall-mounted vertical in the cable container
LK3004	T3 4 p fixed horizontal + differential
LK3005	T3 4 p fixed vertical + differential
LK3200	Kit for no.3 T2 floor-mounted side by side
LK3300	Kit for no.3 T3 floor-mounted side by side
LK3301	Kit for T3 floor-mounted decentred+distributor frame
LK4000	Kit for horizontal 3/4 p floor-mounted S3-S4
LK4001	Kit for vertical 3/4 p floor-mounted S4
LK4002	Kit for vertical floor-mounted S3-S4 in the cable container
LK4100	Kit for no.4 T1 floor-mounted side by side
LK5000	Kit for horizontal 3/4 p floor-mounted S5

ArTu L

List of new dedicated codes

Code	Description
LK5001	Kit for floor-mounted 3/4 p vertical S5
LK5002	Kit for S5 floor-mounted vertical in the cable container
MC0600	Plain upright H600
MC0800	Plain upright H800
MC1000	Plain upright H1000
MC1200	Plain upright H1200
MC1400	Plain upright H1400
MC1600	Plain upright H1600
MC1800	Plain upright H1800
MC2000	Plain upright H2000
MI0600	Intermediate upright for side-by-side structures H600
MI0800	Intermediate upright for side-by-side structures H800
MI1000	Intermediate upright for side-by-side structures H1000
MI1200	Intermediate upright for side-by-side structures H1200
MI1400	Intermediate upright for side-by-side structures H1400
MI1600	Intermediate upright for side-by-side structures H1600
MI1800	Intermediate upright for side-by-side structures H1800
MI2000	Intermediate upright for side-by-side structures H2000
PC0300	Plain bottom plate for box
PC0600	Plain bottom plate for box
PC0601	Plain door for structure H600
PC0602	Plain door for cable container H600
PC0801	Plain door for structure H800
PC0802	Plain door for cable container H800
PC1001	Plain door for structure H1000
PC1002	Plain door for cable container H1000
PC1050	Plain panel H50mm
PC1150	Plain panel H150mm
PC1201	Plain door for structure H1200
PC1202	Plain door for cable container H1200
PC1401	Plain door for structure H1400
PC1402	Plain door for cable container H1400
PC1403	Plain panel H100mm
PC1601	Plain door for structure H1600
PC1602	Plain door for cable container H1600
PC1801	Plain door for structure H1800
PC1802	Plain door for cable container H1800
PC2001	Plain door for structure H2000
PC2002	Plain door for cable container H2000
PC2401	Plain panel H200mm
PC3401	Plain panel H300mm
PC4401	Plain panel H400mm
PC6401	Plain panel H600mm
PC8401	Plain panel H800mm
PF1002	Plain bottom plate H200 mm
PF1003	Plain bottom plate H300 mm
PF1004	Plain bottom plate H400 mm
PF1006	Plain bottom plate H600 mm
PF1008	Plain bottom plate H800 mm
PM1500	ArTuL modular panel 150 mm pitch
PO1431	Internal plain door for cable container 1400x300 mm
PV0600	Glass door for structure H600
PV0800	Glass door for structure H800
PV1000	Glass door for structure H1000
PV1200	Glass door for structure H1200
PV1400	Glass door for structure H1400
PV1600	Glass door for structure H1600
PV1800	Glass door for structure H1800
PV2000	Glass door for structure H2000
RC1000	Connection box H400 for structure
RC2000	Connection box H400 for cable container
SH0600	Form 2 segregation kit H200

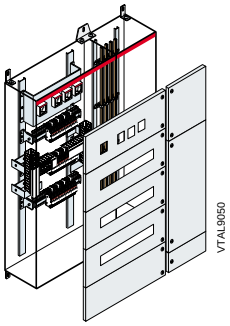
ArTu L

List of new dedicated codes

Code	Description
SH0700	Form 2 segregation kit base/head H200
SH0800	Form 2 segregation kit H300
SL0600	Bottom structure H600 L700 P200
SL0800	Bottom structure H800 L700 P200
SL1000	Bottom structure H1000 L700 P200
SL1200	Bottom structure H1200 L700 P200
SL1400	Bottom structure H1400 L700 P240
SL1600	Struttura di fondo H1600 L700 P240
SL1800	Bottom structure H1800 L700 P240
SL2000	Bottom structure H2000 L700 P240
SV0600	Vertical segregation kit H600
SV0800	Vertical segregation kit H800
SV1000	Vertical segregation kit H1000
SV1200	Vertical segregation kit H1200
SV1400	Vertical segregation kit H1400
SV1600	Vertical segregation kit H1600
SV1800	Vertical segregation kit H1800
SV2000	Vertical segregation kit H2000
TL1000	Linear crosspiece for structure
TL2000	Scaled crosspiece for cable container
TL3000	Linear crosspiece for cable container
VC0600	Cable container H600
VC0800	Cable container H800
VC1000	Cable container H1000
VC1200	Cable container H1200
VC1400	Cable container H1400
VC1600	Cable container H1600
VC1800	Cable container H1800
VC2000	Cable containerH2000
ZL1000	Base strips for structure
ZL1001	Structure flange
ZL2001	Cable container flange
ZL3000	Side-by-side base strips

ArTu L

Examples of configurations



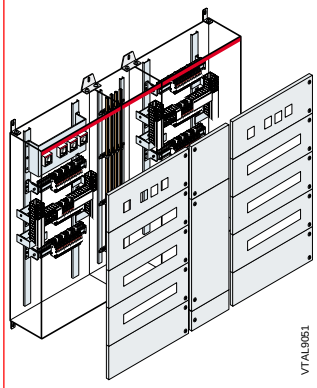
Wall-mounted ArTu L

Dimensions: 1000x900x165mm hxlxd (external: 1050x1080x204mm); IP43 degree of protection; structure with cable container, plate for Tmax T3, modular panels, complete with busbar holder, 250A busbars (Icw 16kA) and Unifix L.

Code	Description	Q.ty
SL1000	Bottom structure H1000 L700 P200	1
MC1000	Plain upright H1000	1
PV1000	Glass door for structure H1000	1
PC2600	Plain panel 200x600mm (hxl) M, K.	1
PM2624	Panel 24 mod. 200x600 mm M, K.	3
PS4720	Panel 4 instrum. 72x72 200x600(hxl) M, K	1
MI1000	Intermediate upright for side-by-side structures	1
VC1000	Cable containeri H1000	1
PC1002	Plain door for cable container H1000	1
LK3003	T3 wall-mounted vert. in the cable container kit	1
PC6401	Plain panel H600mm	1
PC1403	Plain panel H100mm	1
TL3000	Linear crosspiece for cable container	3
BP0630	No.2 flat busbar holders 250-630A	2
BR0250	No.2 flat busbars 250A	1
AD1064	Coupling screw l=27x for flat busbars up to 10mm (12 pcs)	1
AL2000	No.2 brackets for wall fixing	2
AA1000	Brackets for fixing side-by-side structures	1
ED2969	4P 24 module busbar	3
ED3132	Feeder with cable L=350mm. 4P 100A for section	3
GD1520	150/200 mm pitch DIN rail	3
AD1098	Accessory for floor wiring duct support (no. 4 pcs. including bolts and screws)	1

ArTu L

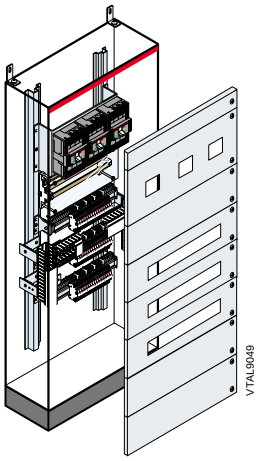
Examples of configurations



Wall-mounted ArTu L

Dimensions: 1000x1500x165mm hxlxd (external: 1050x1770x204mm); IP43 degree of protection; structure with cable container, plate for Tmax T3, modular panels, complete with busbar holder, 250A busbars (Icw 16kA) and Unifix L.

Code	Description	Q.ty
SL1000	Bottom structureH1000 L700 P200	2
MC1000	Plain upright H1000	1
PV1000	Glass door for structure H1000	2
PC2600	Plain panel 200x600 mm M, K.	3
PM2624	24 mod. panel 200x600 mm M, K.	6
PS4720	4 instrum. panel 72x72 200x600 (hxl) M, K	1
MI1000	Intermediate upright for side-by-side structures H1000	2
VC1000	Cable container H1000	1
PC1002	Plain door for cable container H1000	1
LK3003	Kit wall-mounted T3 vert. in the cable container	1
PC6401	Plain panel H600mm	1
PC1403	Plain panel H100mmN2 brackets for wall fixing	
AL2000	N°2 staffe fissaggio parete	2
AA1000	Brackets for fixing side-by-side structures	2
GD1520	150/200 mm pitch DIN rail	6
ED2969	4P 24 module busbar	6
ED3132	Feeder with cable L=350mm. 4P 100A for section	6
TL3000	Linear crosspiece for cable container	3
BP0630	No2 flat busbar holders 250-630A	2
BR0250	No.2 flat busbars 250A	1
AD1064	Coupling screw l=27 for flat busbars up to 10mm (12 pcs)	2
AD1098	Accessory for floor wiring duct support (no. 4 pcs. including bolts and screws)	2



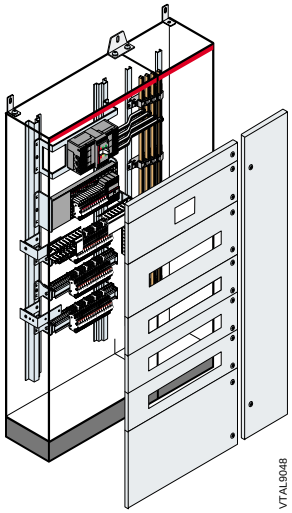
ArTu L floor-mounted

Dimensions: 1600x600x195mm hxlxd (external: 1750x690x240mm); IP43 degree of protection; structure with plate for no.3 Tmax T3, modular panels, 250A distributor frame and Unifix L.

Code	Description	Q.ty
SL1600	Bottom structure H1600 L700 P240	1
ZL1000	Base strips for structure	1
ZL1001	Flange structure	1
MC1600	Plain upright H1600	1
PV1600	Glass door for structure H1600	1
LK3300	Kit for floor-mounted ArTu L No. 3 side-by-side T3	1
PM2624	24 mod. panel 200x600 mm M, K.	3
PC2600	Plain panel 200x600mm (hxl) M, K.	3
PC1600	Plain panel 100x600mm (hxl) M, K	1
AL2000	No. 2 brackets for wall fixing	1
AD1034	Horizontal 250A busbar kit L=600mm	1
AD1038	Brackets for fixing distributor frame AD1034	1
ED2969	4P 24 module busbar	3
ED3132	Feeder with cable L=350mm. 4P 100A for section	1
GD1520	DIN rail 150/200 mm pitch	3
ED3090	Feeder with cable L=600mm. 4P 100A parallel	2
AD1098	Accessory for floor wiring duct support (no. 4 pcs. including bolts and screws)	2

ArTu L

Examples of configurations



ArTu L floor-mounted

Dimensions: 1600x900x195mm hxlxd (external 1750x1080x240mm); degree of protection IP43; structure with cable container, plate for Isomax S4, modular panels, complete with busbar holders, 400A busbars (Icw 25kA), connections to the circuit-breaker, Unifix H and L.

Codice	Descrizione	Q.tà
SL1600	Bottom structure H1600 L700 P240	1
ZL1000	Base strips for structure	1
ZL1001	Flange structure	1
MC1600	Plain upright H1600	1
PV1600	Glass door for structure H1600	1
PC1600	Plain panel 100x600mm (hxl) M, K	1
LK4000	Kit for floor-mounted ArTu L horizontal 3/4 pole Isomax S3-S4	1
PM3624	24 mod. panel 300x600 mm M, K	1
PM2624	24 mod. panel 200x600 mm M, K.	3
PC4600	Plain panel 400x600mm (hxl) M, K.	1
MI1600	Intermediate upright for side-by-side structures	1
ZL3000	Base strips for placing side by side	1
VC1600	Cable container H1600	1
ZL2001	Flange cable container	1
PC1602	Plain door for cable container H1600	1
AL2000	No.2 brackets for wall fixing	1
AA1000	Brackets for fixing side-by-side structures	1
ED2969	4P 24 module busbar	3
ED3132	Feeder with cable L=350mm. 4P 100A for section	1
GD1520	150/200 mm pitch DIN rail	3
ED3090	Feeder with cable L=600mm. 4P 100A parallel	2
TL2000	Scaled crosspiece for cable container	4
PB0802	Scaled busbar holder In=800A (35 kA)	2
BA0400	In=400A busbar	2
KB1002	Connections for T3 wall-mounted/floor-mounted and S4 floor-mounted fixed horiz. front terminals (cablecontainer busbars)	1
ED2183	Frame with 24 module busbars	1
AD1097	Brackets for fixing Unifix H	1
AD1064	Coupling screw l=27 for flat busbars up to 10mm (12 pcs)	1
AD1098	Accessory for floor wiring duct support (4 pcs. including bolts and screws)	2

Certificate N°OHS-015

Certificate N°1612/98/S

Certificate N° EMS-051

To take into account the evolution of Standards and materials, the characteristics and overall dimensions indicated in this catalogue can only be considered binding after confirmation from ABB SACE.

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