



CPS25 v2 catalogue

The catalogue comprises all the necessary information in order to project and build a CUBIC CPS25 panel according to international standards within the IEC 61439 series. When applying the catalogue please observe concordance with i.a. national regulations.

As an original manufacturer of the CPS25 system CUBIC has made a verification to the above standards. With a correct application of the system and execution of routine verification the panel builder is able to construct electric panels which comply with both IEC 61439-2 and -3.

CUBIC

CPS25 v2



04 Platform - floor



- 25mm system
- 2 standard sizes
- Only 6 parts
- Integrated top and base
- Free access to components during assembly
- "Notch" which fixes and holds parts during building-in



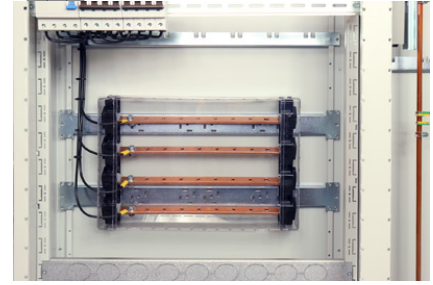
05 Platform - wall



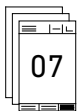
- 25mm system
- 2 standard sizes
- Only 4 parts
- Integrated top and base
- Free access to components during assembly
- "Notch" which fixes and holds parts during building-in



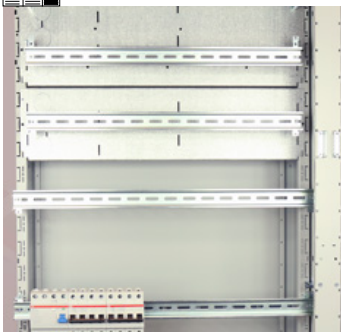
06 Busbars



- Standard copper
- Angled copper for improved assembly
- Vertical and horizontal assembly
- Form 2
- Traditional busbar or as distribution section
- In own compartment or behind components



07 Inserts



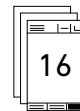
- DIN rail
- MCCB inserts
- Vertical or horizontal assembly of MCCBs
- Inserts for inlet switches
- Front coverings in metal
- Unique front covering of components
- Extensive range



14 Covering



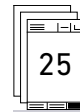
- Unique side plates to be mounted eventually
- Door with integrated hinges
- Quick dismantling and fitting of door



16 Accessories



- Form covering
- Lift bracket
- Accessories



25 Meterinserts



- Direct or with Transformer section

CUBIC PANEL SYSTEM (CPS25)

Standards: IEC 61439-2:2011, IEC 61439-3:2012, EN 61439-2:2011 and EN 61439-3:2012.

Overall dimensions of the floor model: 2000 mm high, 330 mm deep, and up to 3 sections of 400 and 600 mm width respectively.

Overall dimensions of the wall model: 1200 mm high, 330 mm deep, and up to 2 sections of 400 and 600 mm width respectively.

Max. weight for the wall model is 75 kg per section.

Parts can be mounted in steps of 50 mm, and the total internal mounting height is 1150 mm (wall) and 1850 mm (floor).

Material specification:

External enclosure: 1,36 and 1.5 mm iron phosphating steel painted in a light grey colour, RAL 7035.

Mounting plates: 1.5 mm hot-galvanized steel.

Busbar holder: PC in a black and light grey colour. - Flammability: UL 94 V0, non-flammable.

Busbar covering: PC, transparent.

Internal separation: PC, transparent.

MCCB flex cover: PA6 in grey colour.

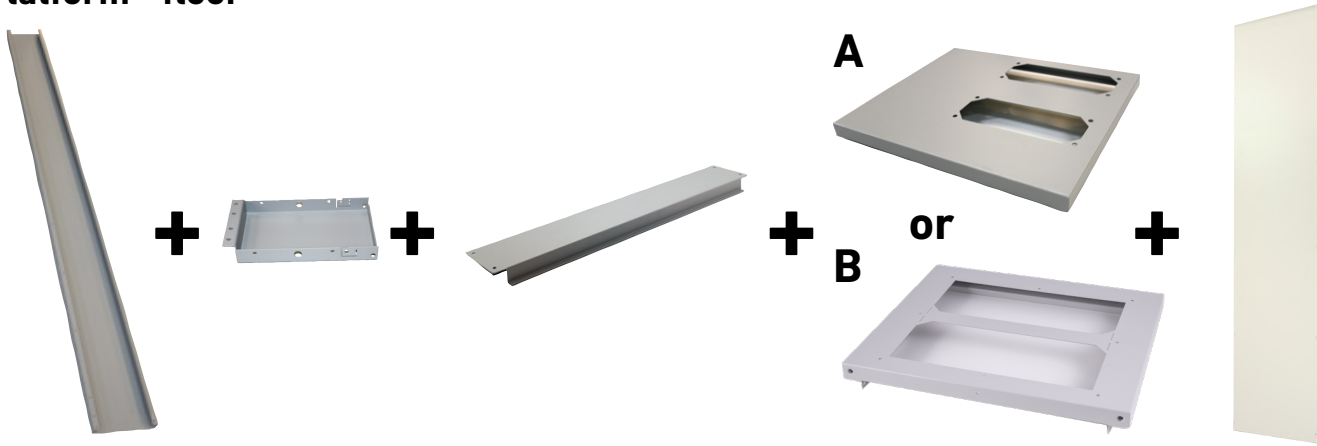
Closing device: Zinc + PA6.

Hinge: Stainless steel.

Construction and performance verification

Characteristics to be verified	Test / verification results
Strength of material and parts: - Resistance to corrosion	Indoor use
Lifting	Transport of sections up to 250 kg with crane or forklift
Mechanical impact	IK05
Marking	Marking is the responsibility of the assembly manufacturer
Degree of protection of enclosures	Enclosure: IP3X as standard, IP43 with sealing Internal separation: IP2X, Form 2A, 2B, 3A, 3B, 4A
Clearances	Rated impulse withstand voltage of 6 kV (Rated voltage of the assembly (Un) and/or rated operational voltage (Ue) of up to 240/415 VAC, 50 Hz)
Creepage distances	Rated insulation voltage (Ui) of 500 V and pollution degree 3, material group III
Protection against electric shock and integrity of protective circuits: - Effective continuity between the exposed conductive parts of the ASSEMBLY and the protective circuit - Short-circuit withstand strength of the protective circuit	Resistance < 0.1 Ω Outgoing devices up to 630A
Incorporation of switching devices and components; internal electrical circuits and connections plus terminals for external conductors	Incorporation has been inspected and found in accordance with the standard
Dielectric properties: - Power-frequency withstand voltage - Impulse withstand voltage	Up to 1890 VAC. (Ui up to 500 VAC, 50Hz) Up to 6 kV, depending on the installed components (Altitude of installation: up to 2000 meters)
Temperature rise limits at 35 °C ambient temperature	Busbar 1 - 5x20 mm: 440A at IP3X Busbar 2 - 5x20 mm: 800A at IP3X Cu-flex 1 - FB240 mounted between busbars: 440A at IP3X Verification of temperature rise of functional units, see page 33
Short-circuit withstand strength	Busbar 1 - 5x20 mm with 200 mm between busbar holders is tested to I _{cw} 30 kA for 0.3 sec / I _{pk} 63 kA Busbar 2 - 5x20 mm with 200 mm between busbar holders is tested to I _{cw} 30 kA for 1 sec. / I _{pk} 63 kA Busbars protected by devices with a cut-off current maximum 17kA should be supported by at least 2 busbar holders / e.g. 3 holders for one section Cu-flex 1 - FB240 is tested to I _{cw} 30 kA for 0.3 sec / I _{pk} 63 kA The neutral bar is verified to 60% of the above
Short-circuit withstand strength	Incoming units equipped with respectively Schneider or ABB devices up to 800 A are tested to a prospective current I _{cp} 42 kA Incoming units equipped with Terasaki devices up to 630 A are tested to I _{cp} 42 kA Test of other brands of devices with a cut-off current of maximum 17 kA is not required Wall model: Up to 630A and max. short-circuit level I _{cw} / I _{cc} = 10 kA
Short-circuit withstand strength	Outgoing units equipped with respectively Schneider, ABB or Terasaki devices up to 630 A are tested to I _{cp} 42 kA Test of other brands of devices with a cut-off current of maximum 17 kA is not required Wall model: Up to 630A and max. short-circuit level I _{cw} / I _{cc} = 10 kA
Electromagnetic compatibility (EMC)	The panel system is verified by assessment for environment A and B Electrical components should be installed according to the component manufacturer's recommendation
Mechanical operation	> 200 times
Arcing-fault test according to IEC TR 61641:2014	Units mounted with components up to 400A are tested at a prospective current I _{cp} at 42 kA

Platform - floor



Width (mm)	Platform side	Base side	Base front	Top A	Top B	Rear cover plate
400	4802-2000 x 2	4801-0046 x 2	4801-0040	4801-0041	4801-0042	4806-0240
600	4802-2000 x 2	4801-0046 x 2	4801-0060	4801-0061	4801-0062	4806-0260

Screws	
50 pcs.	3068-0050
1000 pcs.	1030-0510q1

REMEMBER
If nothing else is indicated, this screw should be applied!



Do not put on the rear plate until all accessories have been mounted.



Base side to be screwed on platform sides.



Base front to be mounted.



Top should be screwed on either horizontally or when the platform has been erected.



- Heavy platforms
- At transport
- Bottom plates

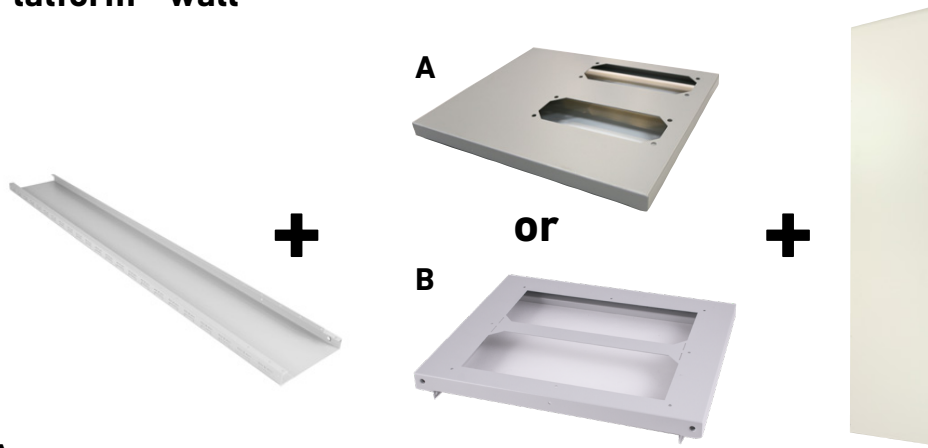


Back of plinth is mounted with screws



Width (mm)	Plinth, rear
400	4801-1040
600	4801-1060

Platform - wall




A

Width (mm)	Platform side	Top/Bottom	Rear cover plate
400	4833-1200 x 2	4801-0041 x 2	4834-1240
600	4833-1200 x 2	4801-0061 x 2	4834-1260

B

Width (mm)	Platform side	Top/Bottom	Rear cover plate
400	4833-1200 x 2	4801-0042 x 2	4834-1240
600	4833-1200 x 2	4801-0062 x 2	4834-1260

 Do not put on the rear plate until all accessories have been mounted.

Screws	
50 pcs	3068-0050
1000 pcs	1030-0510q1

REMEMBER
If nothing else is indicated, this screw should be applied!

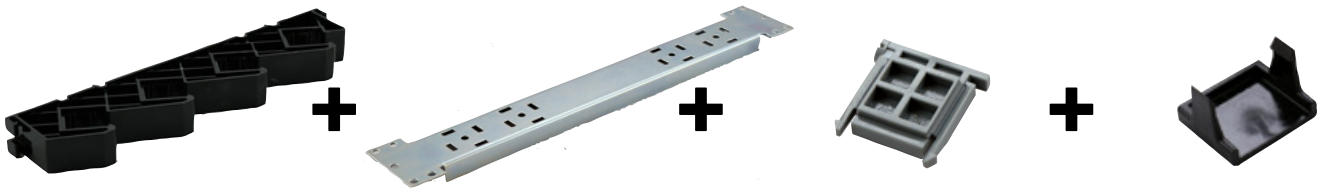


Top/bottom to be screwed on sides of the platform.



Turn the platform and screw on the second side.

Busbars



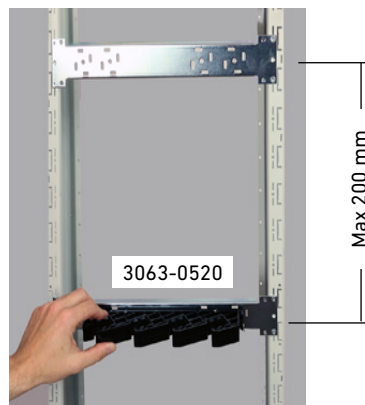
Cu 1x5x20			
Width (mm)	Busbar holder	Busbar carrier	Locking pad
400	3063-0520	4807-0040	3063-0001 x 4
600	3063-0520	4807-0060	3063-0001 x 4

Cu 2x5x20			
Width (mm)	Busbar holder	Busbar carrier	Locking pad
400	3063-0520	4807-0040	3063-0001 x 8
600	3063-0520	4807-0060	3063-0001 x 8

Vertical: Min. 2 busbar carriers and 2 busbar holders and 4 pcs. 3063-0002 per column should be ordered
 Horizontal: Min. 2 busbar carriers and 2 busbar holders and 8 pcs. 3063-0002 per column should be ordered



Busbar carrier to be screwed on the platform.



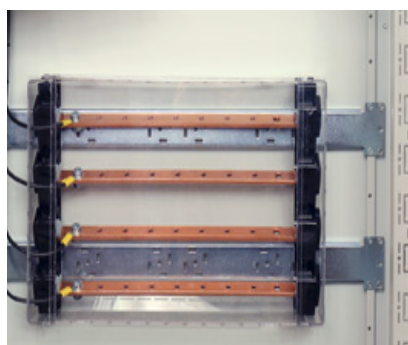
At least 2 units per column should be mounted.



Busbar holder should be clicked on either horizontally or vertically, and stop pads mounted at the bottom of the column.



Copper bars should be fastened and ensured by locking pad.

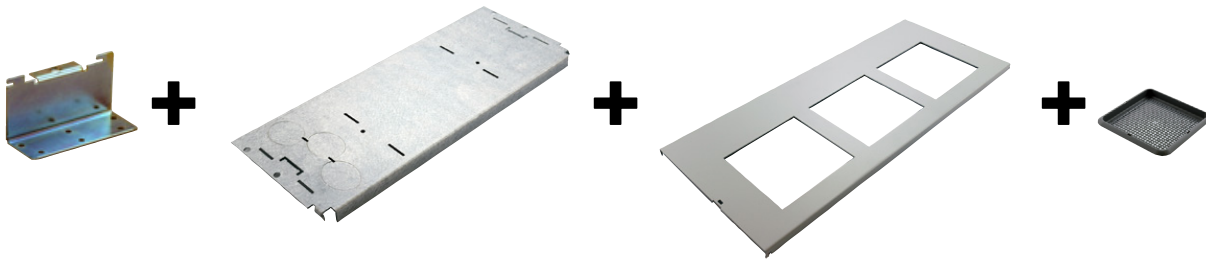


Example of horizontal fitting, here stop pads should be mounted at both ends.
 Busbar: 4821-00X0



Example of vertical fitting, here stop pads should be mounted at both ends.
 Busbar: 4821-00X0

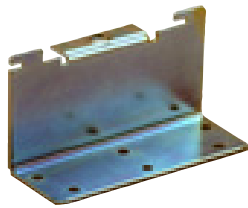
Inserts, mounting plates and front coverings



Procedure for ordering:

- 1 Bracket should be chosen for the switch
- 2 Select side 400mm, 600mm, DIN or coverings without modified holes
- 3 Decide positioning of switch on the mounting plate
- 4 Select the height of the mounting plate
- 5 Select front covering and accessories

1



Schneider

Component	Bracket
NX1X00 - NSX250	4803-1001 x 2
NSX400 - NSX630	4803-1002 x 2

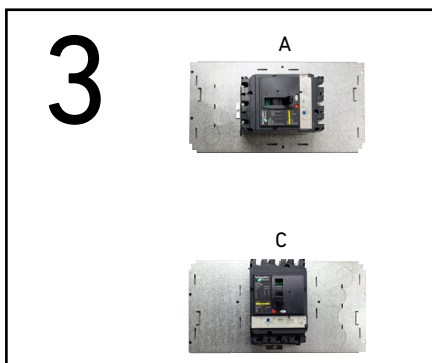
ABB

Component	Bracket
T3 (TS3)	4803-2002 x 2
T4 + T5	4803-2003 x 2
XT1 + XT3	4803-2004 x 2
XT2 + XT4	4803-2005 x 2


Terasaki

Component	Bracket
S160-E250-S250	4803-3005 x 2
E400/S400/E630/S630	4803-3006 x 2
E125-S125	4803-3007 x 2

2 400mm



4




Mounting plates		
Height	Pos.	
150	A	4805-1540
200	A	4805-2040
	C *)	4805-2040
250	A	4805-2540
	C	4805-2540
300	A	4805-3040
	C	4805-3040
350	A	4805-3540
	C	4805-3540
400	A	4805-4040
	C	4805-4040
450 (400)	A	4805-4040
	C	4805-4040

*) Cannot be applied for: Schneider NSX400-630A + ABB T4-T5



5



+50

Montageplade Frontplade

Montageplade +50 Kabelgemf. som tilvalg Frontplade +50mm

A C

Front coverings		
	+50	Deep
4846-4015		4850-4015
4846-4020	4849-4025	4850-4020
4846-4020	4849-4025	4580-4020
4846-4025	4849-4030	4850-4025
4846-4025	4849-4030	4850-4025
4846-4030	4849-4035	4850-4030
4846-4030	4849-4035	4850-4030
4846-4035	4849-4035	4850-4035
4846-4035	4849-4035	4850-4035
4846-4040	4849-4045	4850-4040
4846-4040	4849-4045	4850-4040
		4850-4045
		4850-4045

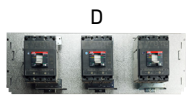
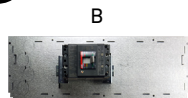
MCCB fl. cov.
3061-0000
3061-0000
3061-0000
3061-0000
3061-0000
3061-0000
3061-0000
3061-0000
3061-0000
3061-0000
3061-0000
3061-0000
3061-0000
3061-0000
3061-0000
3061-0000

2 600mm



Screw 3061-3510

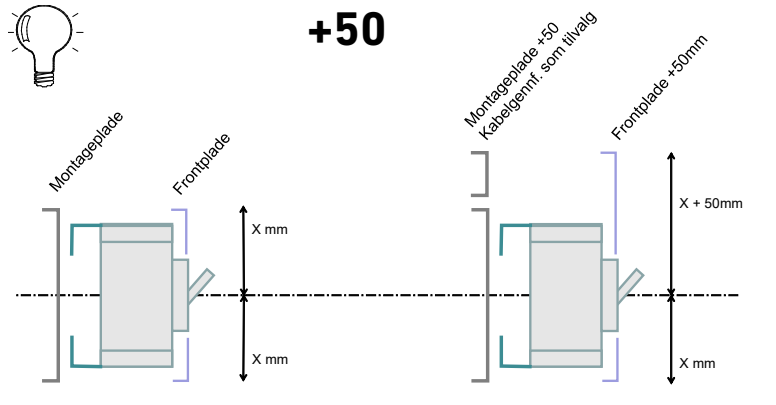
3



5



+50

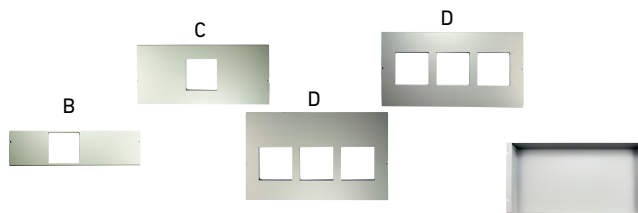


4



Mounting plates

Height	Pos.	
150	B	4805-1560
200	B	4805-2060
	C	4805-2060
	D	4805-2060
250	B	4805-2560
	C	4805-2560
	D	4805-2560
300	C	4805-3060
	D	4805-3060
350	C	4805-3560
	D	4805-3560
400	C	4805-4060
	D	4805-4060
450 (400)	C	4805-4060
	D	4805-4060



Front coverings

Horizontal		+50		Deep
4848-6015				4850-6015
4848-6020				4850-6020
	4846-6020			4850-6020
		4849-6025	4851-6020	4850-6020
4848-6025				4850-6025
	4846-6025			4850-6025
		4849-6030	4851-6025	4850-6025
	4846-6030			4850-6030
		4849-6035	4851-6030	4850-6030
	4846-6035			4850-6035
		4849-6040	4851-6035	4850-6035
	4846-6040			4850-6040
		4849-6045	4851-6040	4850-6040
				4850-6045
			4851-6045	4850-6045





MCCB fl. cov.

3061-0000
3061-0000
3061-0000
3061-0000 x3
3061-0000
3061-0000
3061-0000 x3
3061-0000
3061-0000
3061-0000 x3
3061-0000
3061-0000 x3
3061-0000
3061-0000 x3

2 DIN

3 Not relevant with DIN rail





4   30 kg

400mm	
Mounting plates	
Height	
150	4805-1540
200	4805-2040
250	4805-2540
300	4805-3040
350	4805-3540
400	4805-4040

600mm	
Mounting plates	
Height	
150	4805-1560
200	4805-2060
250	4805-2560
300	4805-3060
350	4805-3560
400	4805-4060

+

+

5    

400mm (Opening for components = 324mm)			
Front cov. DIN	Master brack.	Fastner	DIN rail
4847-4015	4803-0010 x 2	3064-0000 x 2	4814-0040 x 1
4847-4020	4803-0010 x 2	3064-0000 x 2	4814-0040 x 1
4847-4025	4803-0010 x 4	3064-0000 x 4	4814-0040 x 2
4847-4030	4803-0010 x 4	3064-0000 x 4	4814-0040 x 2
4847-4035	4803-0010 x 4	3064-0000 x 4	4814-0040 x 2
4847-4040	4803-0010 x 6	4814-0040 x 3	4822-0002 x 4

600mm (Opening for components = 522mm)			
Front cov. DIN	Master brack.	Fastner	DIN rail
4847-6015	4803-0010 x 2	3064-0000 x 2	4814-0060 x 1
4847-6020	4803-0010 x 2	3064-0000 x 2	4814-0060 x 1
4847-6025	4803-0010 x 4	3064-0000 x 4	4814-0060 x 2
4847-6030	4803-0010 x 4	3064-0000 x 4	4814-0060 x 2
4847-6035	4803-0010 x 4	3064-0000 x 4	4814-0060 x 2
4847-6040	4803-0010 x 6	3064-0000 x 6	4814-0060 x 3





4 Mounting plate can be left out and DIN material be mounted direct on the platform.



When ordering 1 pcs. of 3064-0000, you will receive 10 fasteners.



Screw 3061-3510

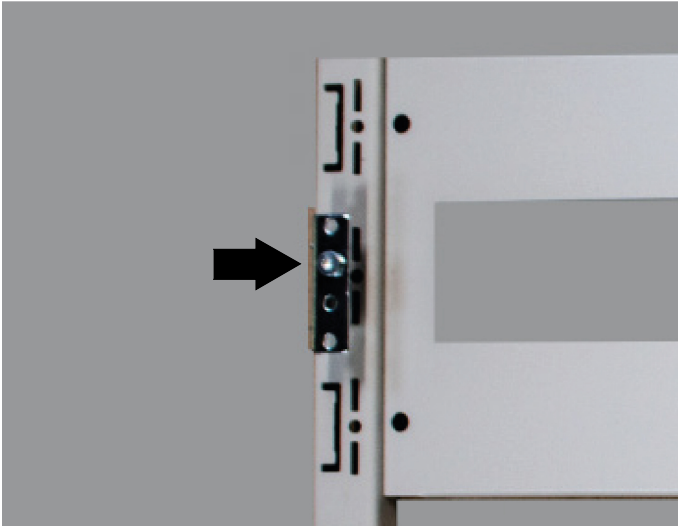
5    

400mm (Opening for components = 324mm)				
Height	Front cov. DIN	Master brack.	Fastner	DIN rail
150	4847-4015	4803-0010 x 2	3064-0000 x 2	4814-0041 x 1
200	4847-4020	4803-0010 x 2	3064-0000 x 2	4814-0041 x 1
250	4847-4025	4803-0010 x 4	3064-0000 x 4	4814-0041 x 2
300	4847-4030	4803-0010 x 4	3064-0000 x 4	4814-0041 x 2
350	4847-4035	4803-0010 x 4	3064-0000 x 4	4814-0041 x 2
400	4847-4040	4803-0010 x 6	3064-0000 x 6	4814-0041 x 3

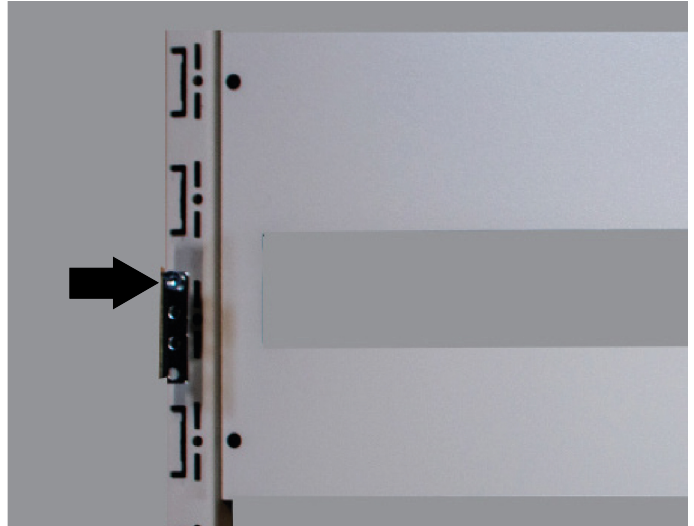
600mm (Opening for components = 522mm)				
Height	Front cov. DIN	Master brack.	Fastner	DIN rail
150	4847-6015	4803-0010 x 2	3064-0000 x 2	4814-0061 x 1
200	4847-6020	4803-0010 x 2	3064-0000 x 2	4814-0061 x 1
250	4847-6025	4803-0010 x 4	3064-0000 x 4	4814-0061 x 2
300	4847-6030	4803-0010 x 4	3064-0000 x 4	4814-0061 x 2
350	4847-6035	4803-0010 x 4	3064-0000 x 4	4814-0061 x 2
400	4847-6040	4803-0010 x 6	3064-0000 x 6	4814-0061 x 3

How to place the screw in bracket, when using DIN-mounting bar

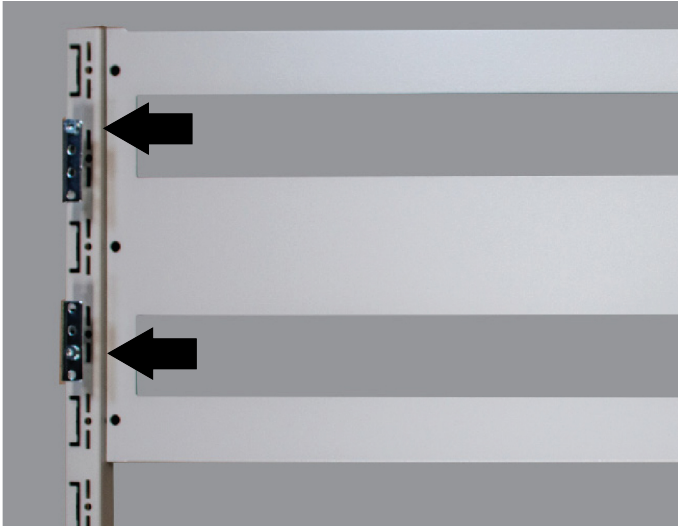
4847-XX15



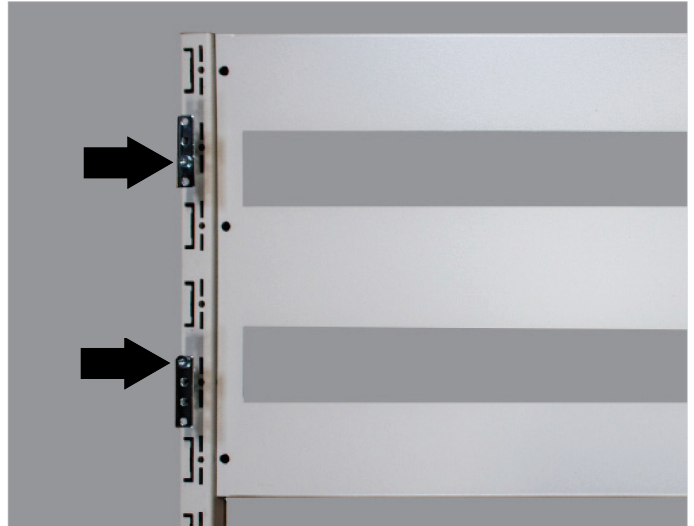
4847-XX20



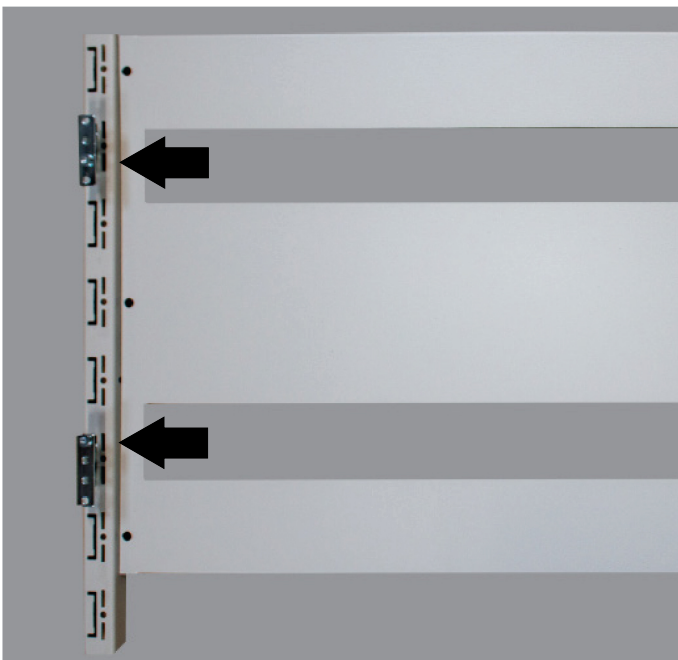
4847-XX25



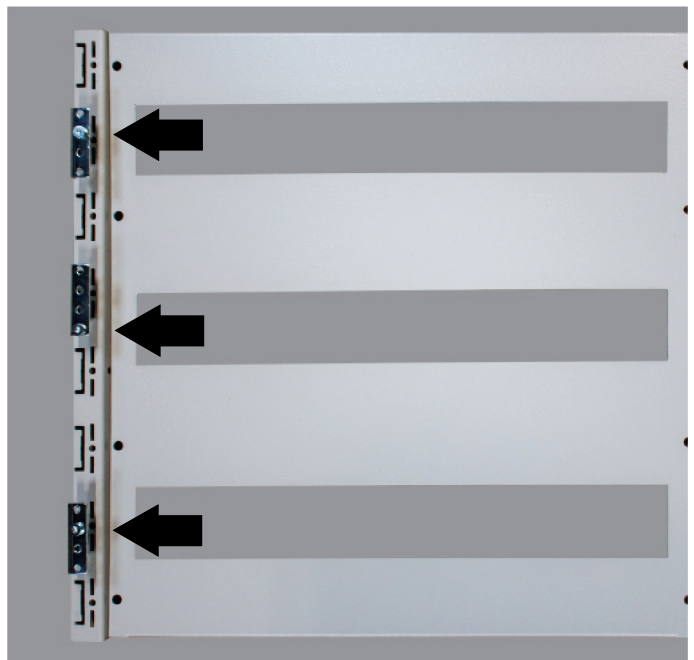
4847-XX30



4847-XX35

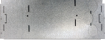




4847-XX40



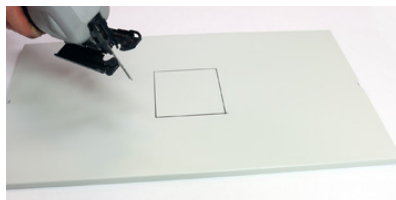
2 Without modified holes

3 Not relevant

<h2>4</h2>   <table border="1"> <thead> <tr> <th colspan="2">400mm</th> </tr> <tr> <th colspan="2">Mounting plates</th> </tr> <tr> <th>Height</th> <th></th> </tr> </thead> <tbody> <tr> <td>150</td> <td>4805-1540</td> </tr> <tr> <td>200</td> <td>4805-2040</td> </tr> <tr> <td>250</td> <td>4805-2540</td> </tr> <tr> <td>300</td> <td>4805-3040</td> </tr> <tr> <td>350</td> <td>4805-3540</td> </tr> <tr> <td>400</td> <td>4805-4040</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">600mm</th> </tr> <tr> <th colspan="2">Mounting plates</th> </tr> <tr> <th>Height</th> <th></th> </tr> </thead> <tbody> <tr> <td>150</td> <td>4805-1560</td> </tr> <tr> <td>200</td> <td>4805-2060</td> </tr> <tr> <td>250</td> <td>4805-2560</td> </tr> <tr> <td>300</td> <td>4805-3060</td> </tr> <tr> <td>350</td> <td>4805-3560</td> </tr> <tr> <td>400</td> <td>4805-4060</td> </tr> </tbody> </table>	400mm		Mounting plates		Height		150	4805-1540	200	4805-2040	250	4805-2540	300	4805-3040	350	4805-3540	400	4805-4040	600mm		Mounting plates		Height		150	4805-1560	200	4805-2060	250	4805-2560	300	4805-3060	350	4805-3560	400	4805-4060	+	<h2>5</h2>  <table border="1"> <thead> <tr> <th colspan="2">400mm</th> </tr> <tr> <th colspan="2">Front coverings</th> </tr> <tr> <th>Height</th> <th></th> </tr> </thead> <tbody> <tr> <td>50</td> <td>4845-4005</td> </tr> <tr> <td>150</td> <td>4845-4015</td> </tr> <tr> <td>200</td> <td>4845-4020</td> </tr> <tr> <td>250</td> <td>4845-4025</td> </tr> <tr> <td>300</td> <td>4845-4030</td> </tr> <tr> <td>350</td> <td>4845-4035</td> </tr> <tr> <td>400</td> <td>4845-4040</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">600mm</th> </tr> <tr> <th colspan="2">Front coverings</th> </tr> <tr> <th>Height</th> <th></th> </tr> </thead> <tbody> <tr> <td>50</td> <td>4845-6005</td> </tr> <tr> <td>150</td> <td>4845-6015</td> </tr> <tr> <td>200</td> <td>4845-6020</td> </tr> <tr> <td>250</td> <td>4845-6025</td> </tr> <tr> <td>300</td> <td>4845-6030</td> </tr> <tr> <td>350</td> <td>4845-6035</td> </tr> <tr> <td>400</td> <td>4845-6040</td> </tr> </tbody> </table>	400mm		Front coverings		Height		50	4845-4005	150	4845-4015	200	4845-4020	250	4845-4025	300	4845-4030	350	4845-4035	400	4845-4040	600mm		Front coverings		Height		50	4845-6005	150	4845-6015	200	4845-6020	250	4845-6025	300	4845-6030	350	4845-6035	400	4845-6040
400mm																																																																														
Mounting plates																																																																														
Height																																																																														
150	4805-1540																																																																													
200	4805-2040																																																																													
250	4805-2540																																																																													
300	4805-3040																																																																													
350	4805-3540																																																																													
400	4805-4040																																																																													
600mm																																																																														
Mounting plates																																																																														
Height																																																																														
150	4805-1560																																																																													
200	4805-2060																																																																													
250	4805-2560																																																																													
300	4805-3060																																																																													
350	4805-3560																																																																													
400	4805-4060																																																																													
400mm																																																																														
Front coverings																																																																														
Height																																																																														
50	4845-4005																																																																													
150	4845-4015																																																																													
200	4845-4020																																																																													
250	4845-4025																																																																													
300	4845-4030																																																																													
350	4845-4035																																																																													
400	4845-4040																																																																													
600mm																																																																														
Front coverings																																																																														
Height																																																																														
50	4845-6005																																																																													
150	4845-6015																																																																													
200	4845-6020																																																																													
250	4845-6025																																																																													
300	4845-6030																																																																													
350	4845-6035																																																																													
400	4845-6040																																																																													

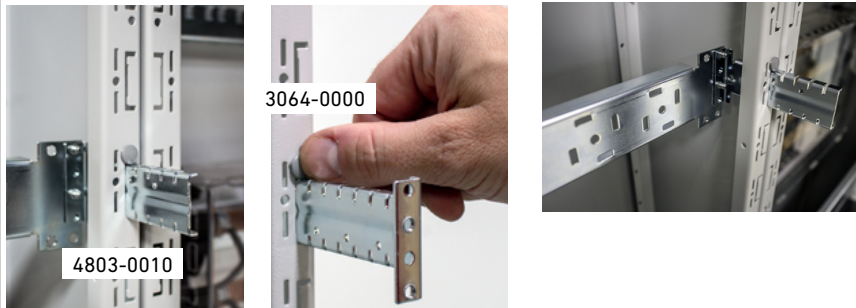


Screw 3061-3510



Measure for switch and prepare the hole.
For MCCB flex covering the holes dim.:
130x130mm

Assembly of mounting plates and front coverings



The mounting plate can be displaced either backwards or forward with brackets, which dislocate with 20mm and then in leaps of 10mm up to 80mm.



The bottom of the mounting plate should be placed in holes on the platform and be tilted in place.



The mounting plate should be fastened with screws.



Brackets should be mounted in pre-defined holes and slits and fastened with screws, then the switch selected should be installed.



The covering is fixed with screws to the brackets.

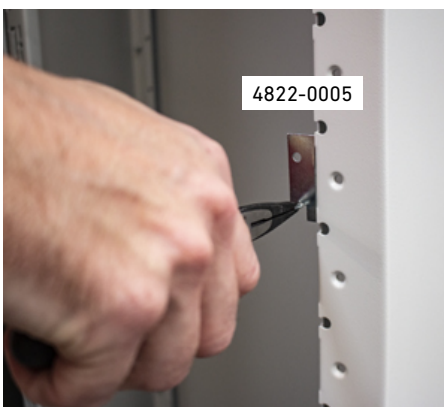


Sealing screw	
M5x10	4830-0510

Bracket for sealing	
	4822-0005



A hole is drilled for sealing.



Bracket is mounted, and tap is bended.

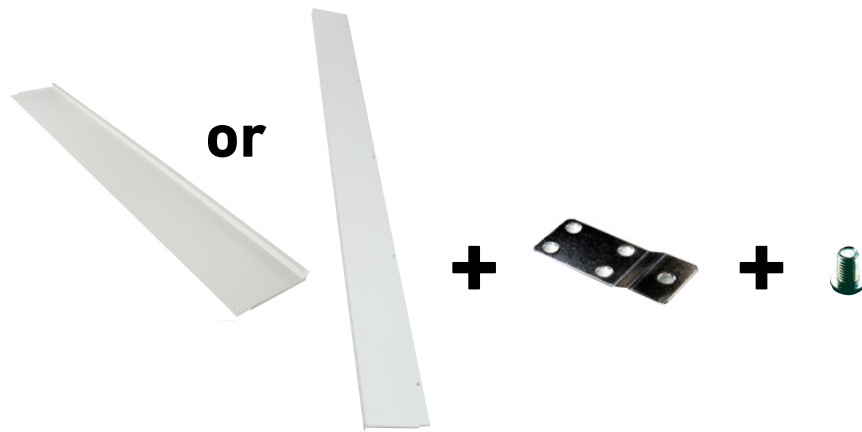


The tap should penetrate the hole, and the screw fastened.



Ready for sealing.

Covering, side and back



Width (mm)	Side profile FLOOR	Side profile WALL	Fitting for wall	Screw
400	4840-2015	4838-1215	4836-0000 x 2	3041-0812 x 4
600	4840-2015	4838-1215	4836-0000 x 2	3041-0812 x 4

To cover holes, use blind plugs 3066-4452s (40 pcs.).



To cover hinge holes not applied, use grey blind plugs 3069-0855s (40 pcs.).



At first the small chip with a hole is bended, so the side plates can be mounted.



The side plates are fastened to the platform.



Then wall brackets are mounted at the back of the platform with screws.



Reinforced hinge is mounted (2 pcs.)

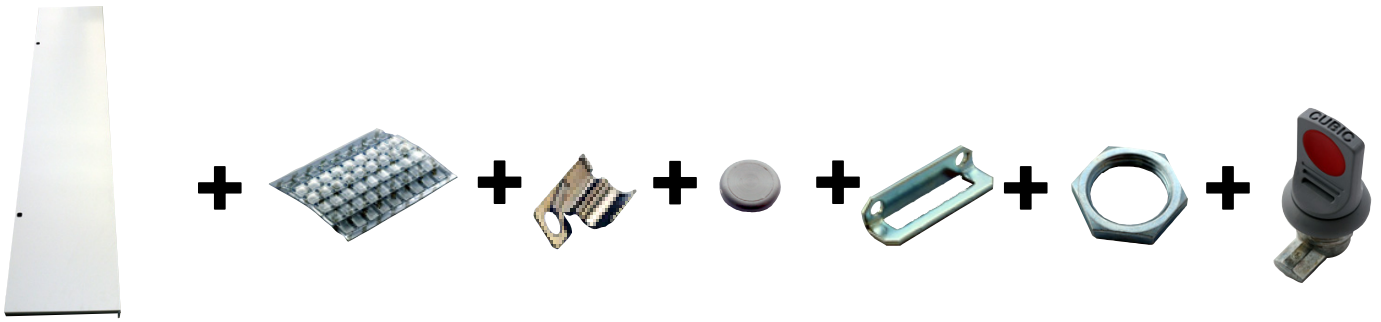


The back plate is fastened with a screw.



The bracket can also be used to hold two platforms together.

Covering, door and closing device



Floor				
Width (mm)	Door	Soft close device	Reinfor. hinge	Cap
400	4806-2040	3067-0001	3060-0005 x 2	3060-0395 x 2
600	4806-2060	3067-0001	3060-0005 x 2	3060-0395 x 2

Wall				
Width (mm)	Door	Soft close device	Reinfor. hinge	Cap
400	4835-1240	3067-0001	3060-0005	3060-0395
600	4835-1260	3067-0001	3060-0005	3060-0395

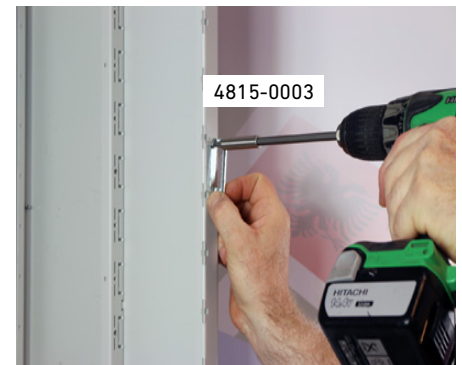
Closing device	Closing clamp	Lock nut	Closing device
Finger knob	4815-0003 x 2	2176-0000 x 2	1190-0000 x 2
Snap screw	4815-0003 x 2	2176-0000 x 2	1191-0000 x 2
Wing knob w/lock	4815-0003 x 2		3004-1003 x 2



At first the door is mounted at the bottom.



The hinge is tilted a little at the top, before the door is moved into place.



The closing clamp is mounted on the platform.



The closing device is mounted on the door by means of the lock nut.



Soft close devices 3060-0395 are mounted under each of the 2 reinforced hinges.

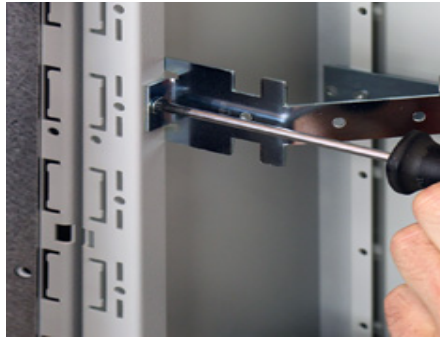


Soft close devices are put on as illustrated, 4 pcs. per door, the sheet consists of 54 pcs.

Accessories



Width (mm)	Bracket, cable area
400 & 600	4803-0004



Brackets to be mounted in the platform.



DIN, PE rail and wiring channel can be mounted.



Width (mm)	Special nut	Screw DIN933	Dish washer
400 & 600	4807-0008	2009-0840	2018-0800



Mounting of e.g. Cu-flex on busbars.

Accessories



Width (mm)	Busbar cover, side	Busbar cover, front/back	Busbar cover, top/bottom
400 & 600	4816-0200 x 2	4817-0200 x 2	4818-0000 x 2
	4816-0250 x 2	4817-0250 x 2	4818-0000 x 2
	4816-0300 x 2	4817-0300 x 2	4818-0000 x 2
	4816-0350 x 2	4817-0350 x 2	4818-0000 x 2
	4816-0400 x 2	4817-0400 x 2	4818-0000 x 2



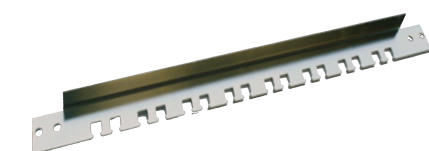
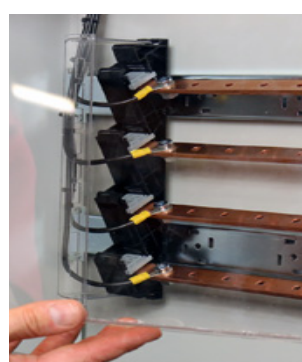
At more spaces above each other, covering is made with 4818-0001, and each column is concluded with top/bottom.



Top/bottom are clicked in busbar holder in both sides.



The sides are mounted, and at the end the front and back are clicked on.



Cable support is mounted in cable field.



For easier mounting of cable tray, bend a pin out in both sides of the cable support.



Wires fixed with cable tie.



Cable tray is then mounted with cable ties. Use 2 cable ties \geq 535Nm per. cable support.

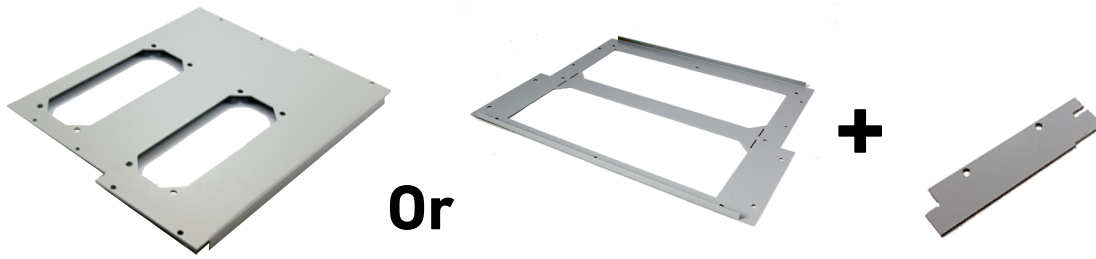


Width (mm)	Cable support
400	4803-1040
600	4803-1060

Width (mm)	Cable tray
150	3062-0150
300	3062-0300
500	3062-0500



Accessories



Or

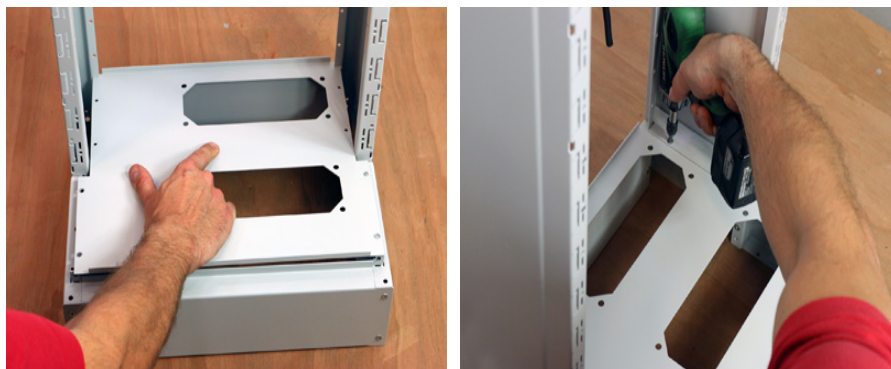


Bottom pl. should be ass. before side pl.

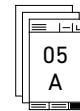


Plinth must be mounted first. See page 4

Width (mm)	Bottom plate with small flange	Bottom plate with big flange	Side section
400	4804-0040	4804-0042	4804-0001 x 2
600	4804-0060	4804-0062	4804-0001 x 2

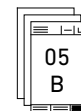
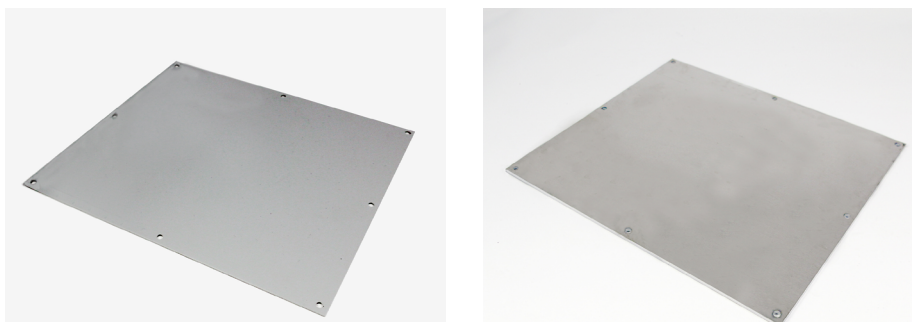


Bottom plates should be mounted with screws. Side sections close gap at the back of the platform.



All flanges can be applied for the top and bottom plates.

Width (mm)	Multi flange	Multi flange	Blind flange
400 & 600	MC25	MC3	0117-0100
Screw	2012-0816 x 4	2012-0816 x 4	3041-0812 x 4



Width (mm)	Flange Fe
400	4832-0040
600	4832-0060

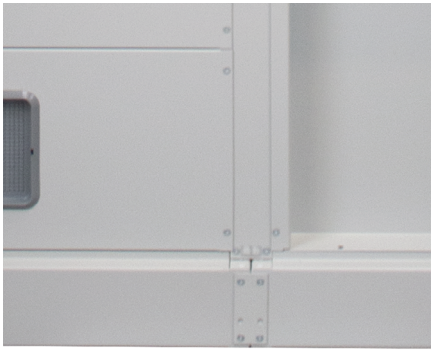
Width (mm)	Flange Alu
400	4832-0043
600	4832-0063



CUBIC-Modulsystem A/S
 Skjoldborgsgade 21
 9700 Broenderslev
 Denmark

Tel +45 9882 2400
 E-mail: info@cubic.eu
 www.cubic.eu

Accessories



4841-0009



When joining together sections at the back, fitting brackets should be used.

Joining bracket	Joining	Joining to floor
400	4841-0009	4841-0008



Width (mm) 400 and 600			
	Barrier	Support bracket	Assembly fitting
Gulv	4840-2000	4803-0002 x 5	4803-0003 x 2
Væg	4839-1200	4803-0002	4803-0003 x 2



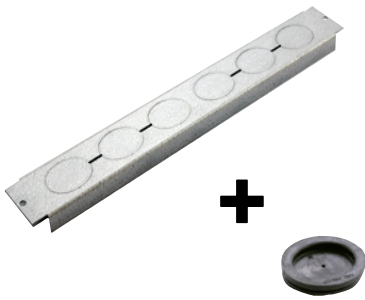
The bar is mounted to assemble the two platforms.

Support brackets are mounted.



Support brackets are mounted at 5 places as shown here

Accessories



Cables are led through as required, after making a hole and mounting a joint.

Width (mm)	Cable entry
400	4805-0540
600	4805-0560

Width (mm)	Joint f/cable entry
400 & 600	3050-4215



Screws are removed from the platform, and lift brackets are mounted in the holes with the screws.

Width (mm)	Lift bracket
400	4802-0040
600	4802-0060

Accessories



Above the mounting plates a cover is made to the busbars.

Width (mm)	Covering top
400	4804-0041
600	4804-0061



Order an extra top/bottom for every collum



4854-XXXX only mounted towards the cable compartment.



Without ventilation

Width	Height	Inner cov. vert.	Inner cov. top/bot.
400	150	4853-1500 x 2	4828-0040
	200	4853-2000 x 2	4828-0040
	250	4853-2500 x 2	4828-0040
	300	4853-3000 x 2	4828-0040
	350	4853-3500 x 2	4828-0040
	400	4853-4000 x 2	4828-0040
600	150	4853-1500 x 2	4828-0060
	200	4853-2000 x 2	4828-0060
	250	4853-2500 x 2	4828-0060
	300	4853-3000 x 2	4828-0060
	350	4853-3500 x 2	4828-0060
	400	4853-4000 x 2	4828-0060

With ventilation

Bredd	Height	Inner cov. vert.	Cover with ventilla.	Inner cov. top/bot.
400	150	4853-1500	4854-1500	4828-0040
	200	4853-2000	4854-2000	4828-0040
	250	4853-2500	4854-2500	4828-0040
	300	4853-3000	4854-3000	4828-0040
	350	4853-3500	4854-3500	4828-0040
	400	4853-4000	4854-4000	4828-0040
600	150	4853-1500	4854-1500	4828-0060
	200	4853-2000	4854-2000	4828-0060
	250	4853-2500	4854-2500	4828-0060
	300	4853-3000	4854-3000	4828-0060
	350	4853-3500	4854-3500	4828-0060
	400	4853-4000	4854-4000	4828-0060



Coverings for side are clicked on.



Top/bottom is clicked on the sides.



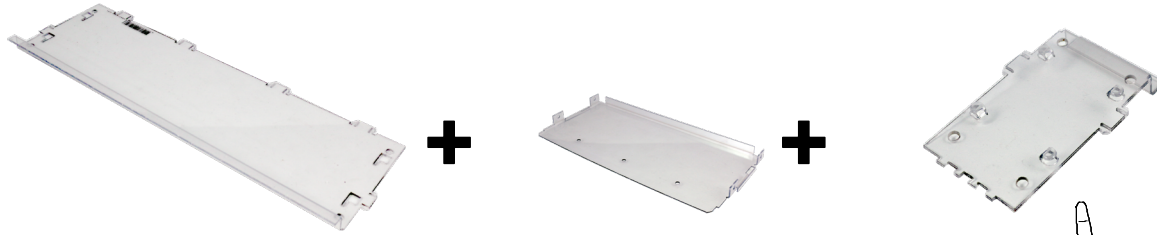
Holes must be drilled in the metal plate for mounting of screws for fastening of top and bottom.



CUBIC-Modulsystem A/S
 Skjoldborgsgade 21
 9700 Broenderslev
 Denmark

Tel +45 9882 2400
 E-mail: info@cubic.eu
 www.cubic.eu

Accessories

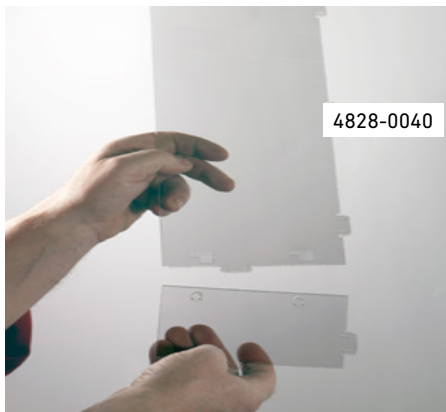


+50



Order an extra top/bottom per column

Used for cable entry pl: 4805-0540 & 4805-0560				
Width	Height	Inner cov. vert.	Cov. extension	Inner cov. top/bot.
400	200	4853-1500 x 2	4853-0500 x 2	4828-0040
	250	4853-2000 x 2	4853-0500 x 2	4828-0040
	300	4853-2500 x 2	4853-0500 x 2	4828-0040
	350	4853-3000 x 2	4853-0500 x 2	4828-0040
	400	4853-3500 x 2	4853-0500 x 2	4828-0040
	450	4853-4000 x 2	4853-0500 x 2	4828-0040
600	200	4853-1500 x 2	4853-0500 x 2	4828-0060
	250	4853-2000 x 2	4853-0500 x 2	4828-0060
	300	4853-2500 x 2	4853-0500 x 2	4828-0060
	350	4853-3000 x 2	4853-0500 x 2	4828-0060
	400	4853-3500 x 2	4853-0500 x 2	4828-0060
	450	4853-4000 x 2	4853-0500 x 2	4828-0060



Extension and side coverings are put together.



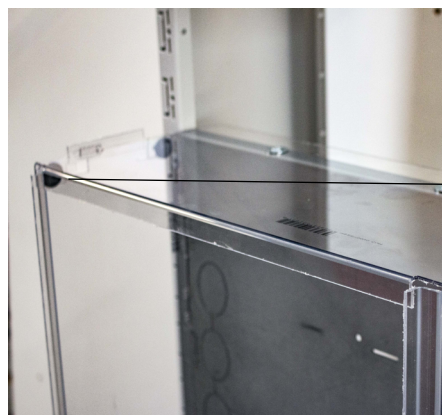
The sides with extension are clicked on.



Top/bottom is clicked on the sides.



The box is closed in the corners.



Holes must be drilled in the metal plate for mounting of screws for fastening of top and bottom.



CUBIC-Modulsystem A/S
 Skjoldborgsgade 21
 9700 Broenderslev
 Denmark

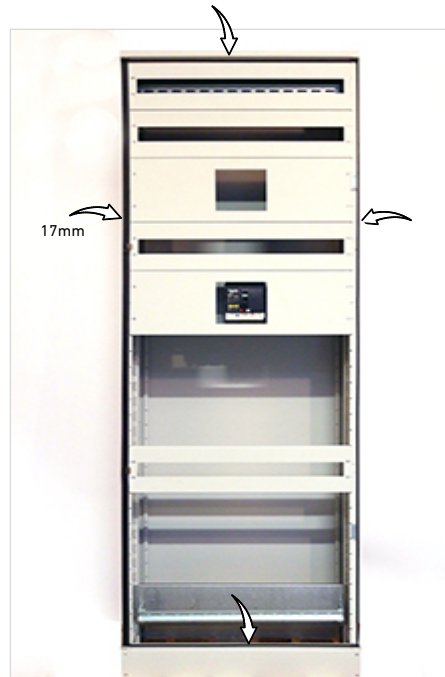
Tel +45 9882 2400
 E-mail: info@cubic.eu
 www.cubic.eu

Accessories

IP43



Width (mm)	Sealing strip
6 mm	3070-3006
17 mm	3070-3017



On the hinged side a 17mm list must be mounted and on the other 3 a 6mm list.



The list must be mounted all the way around in top of the panel. (6mm list)



A 2 cm list is mounted where the 2 parts meet, between the 2 sides. (6mm)



17mm og 6mm must be mounted besides each other, on the side of one of the two cabinettes, when connected.



Label 1029-0002 should be mounted where cabinets are connected. Holes can be plugged with 2080-0855. (40 pcs = 3069-0855s)

Transporting the panels



- Max 3 sections
- Max 250 kg
- Plinth in back must be mounted

Transport device	4841-0000s x 2
------------------	----------------



Mount bracket for lifting



Use transport device to lift panel from the floor



Use as shown here



The panel can now be moved in to place

CUBIC

CUBIC-Modulsystem A/S
 Skjoldborgsgade 21
 9700 Broenderslev
 Denmark

Tel +45 9882 2400
 E-mail: info@cubic.eu
www.cubic.eu

Insert for meter with transformer field



Busbar section and transformer field are delivered together in a box.



Width (mm)		
400	4825-0000s	Complete
400	4825-0100s	Only meter section

	Screws
50 pcs.	3068-0050
1000 pcs.	1030-0510q1

REMEMBER
If nothing else is indicated, this screw should be applied!



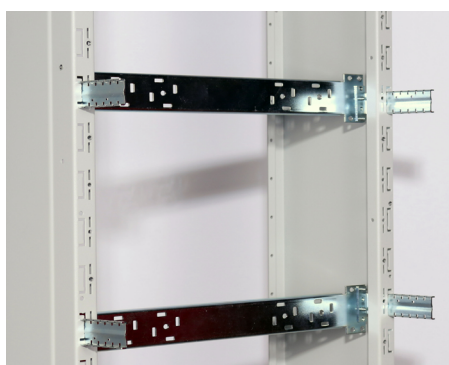
4824-0000
Position of the insert for meter is determined by measuring with the side covering



Universal bracket and bearer to be mounted in the third slot from the side covering.



Please note the position of the universal bracket in the depth.



2 bearers are mounted at this distance.



Coverings are clipped on the house.



Then fasten to the platform in the 2 coverings.



Top/bottom are clipped on.



The foam plate is mounted.



The foam plate is fastened from the back.



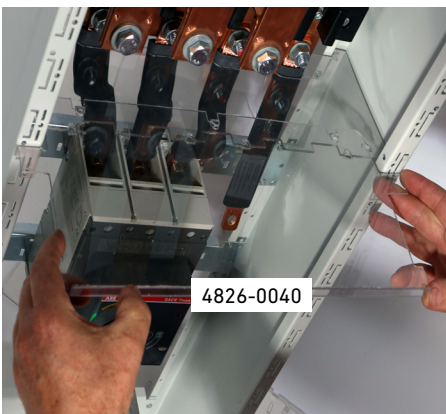
Horizontal covering back is mounted.



Transformer field is fastened.



Horizontal covering is mounted below the transformer field.



After mounting the components, they are protected with horizontal covering front.



Put together the chips of the 2 plates and fasten the covering to the platform.



Side coverings are mounted in both sides.



Mount the sides.



It is covered, and is now ready for sealing.

Insert for meter - direct metering



Insert for meter is delivered altogether in a box.

Width (mm)	
400	4823-0000s

	Screws
50 pcs.	3068-0050
1000 pcs.	1030-0510q1

REMEMBER
If nothing else is indicated, this screw should be applied!



Universal bracket and bearer to be mounted in the third slot from the covering.



Please note the position of the universal bracket in the depth.



2 bearers are mounted at this distance.



Coverings are clipped on the house.

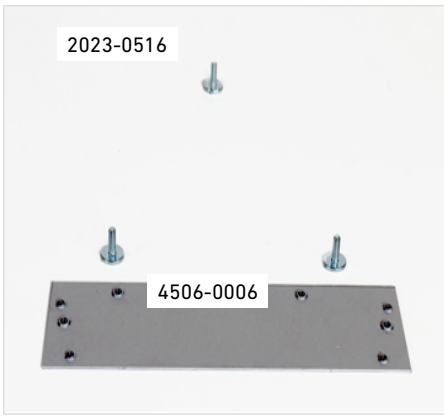


Then fasten to the platform in the 2 coverings.

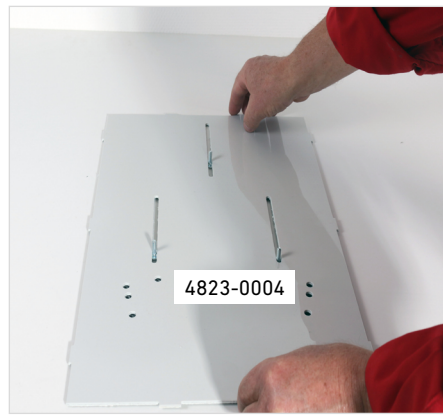
CUBIC

CUBIC-Modulsystem A/S
Skjoldborgsgade 21
9700 Broenderslev
Denmark

Tel +45 9882 2400
E-mail: info@cubic.eu
www.cubic.eu



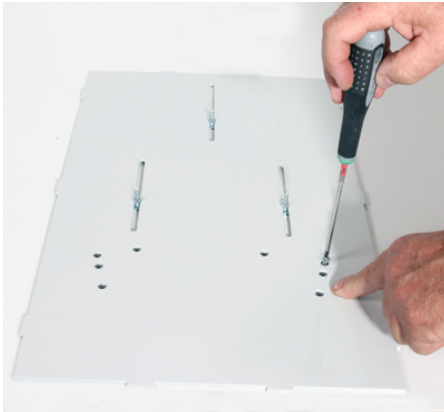
Screws and plate are put on the table.



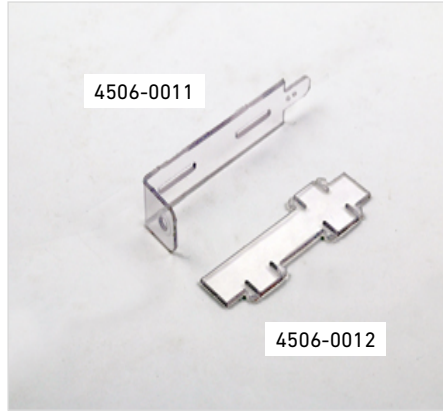
The meter plate is placed on top of the parts.



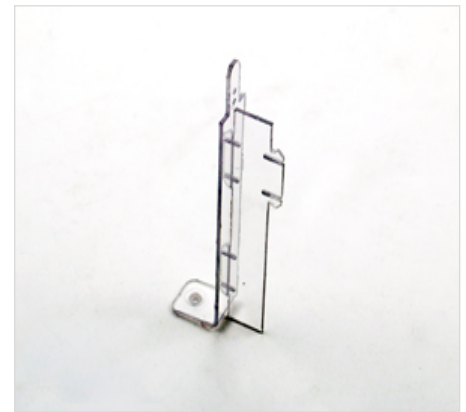
The meter plate is fastened with screws.



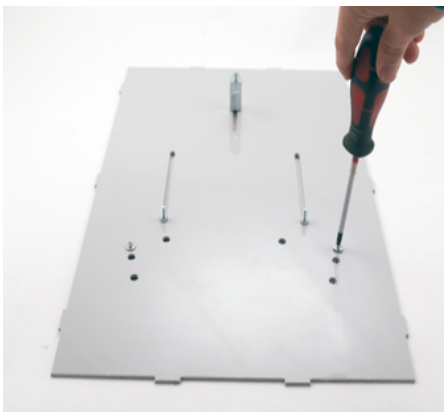
Then the fastening plate is screwed on the meter plate.



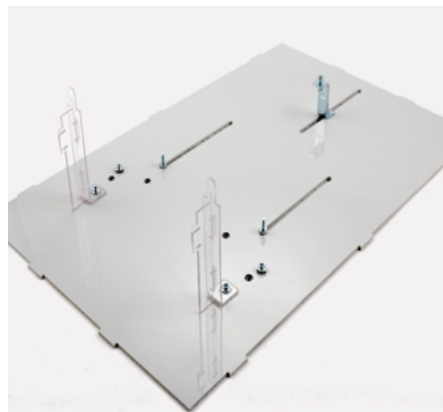
Stiffener parts are assembled.



Stiffener ready for mounting.



Stiffeners are mounted on the meter plate.



Preassembled meter plate with stiffeners ready to be fastened to house.



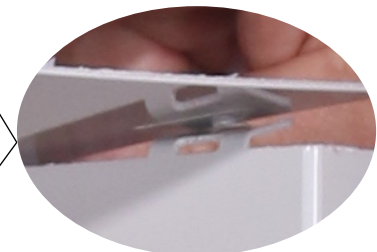
The back is clipped into place.



Top and bottom are clipped into place.



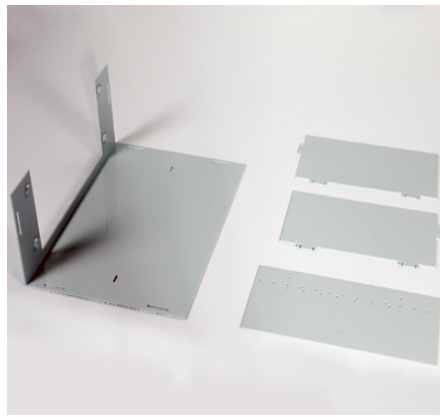
Then they are fastened with screws.



Flaps on house are bended and used to fasten top and bottom with screw 2010-4812.



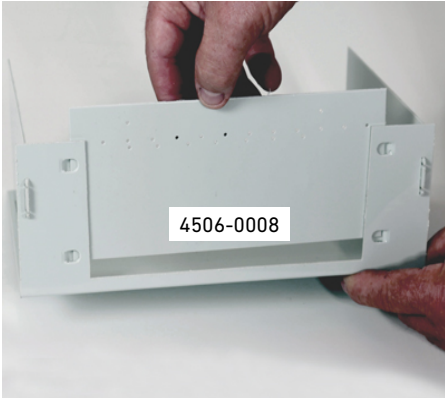
4823-0006
Mount the support plate - remember that the membrane should go through both plastic layers.



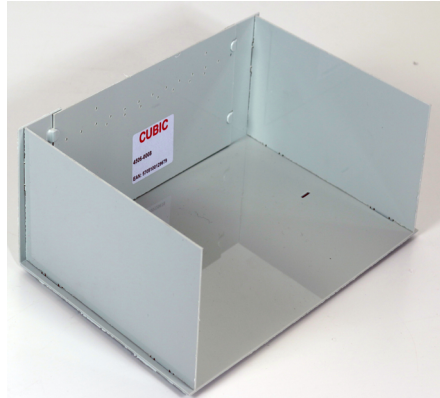
Covering for terminal strips should now be assembled.



4823-0007
The sides are clipped on.



4506-0008
Put the top into position in the slots.



Covering for terminal strips is now assembled.



The covering is clipped over the stiffeners, and sealing can be effected.

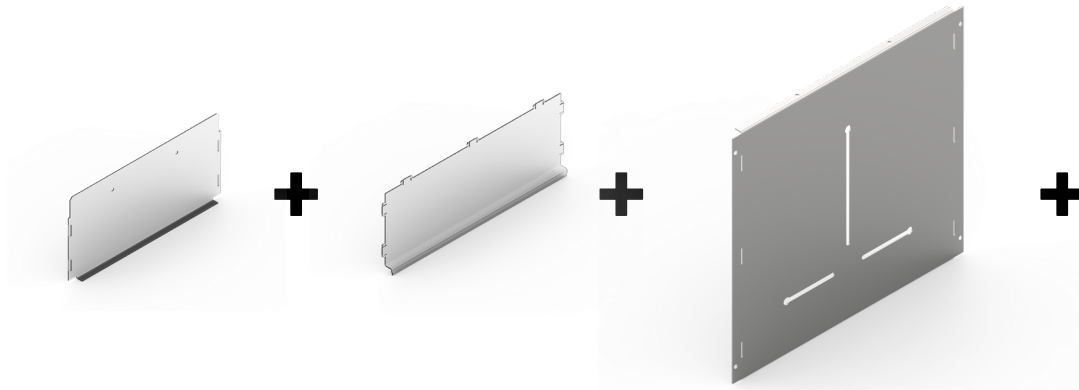


Sides for the platform are mounted with screws.



It is covered, and is now ready for meter and seal.

Insert for meter - variant



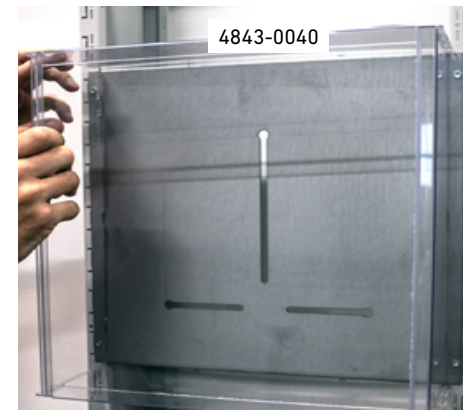
Horizontal covering	Vertical covering	Mounting plate	Washer
2x 4843-0040	2x 4843-3500	4843-4035	4x 2030-0600
2x 4843-0060	2x 4843-3500	4843-6035	4x 2030-0600



Mounting plate is mounted with 4 screws.



The sides are mounted in sloths.



Top/bottom are also mountes in sloths.



The covering is screwed together with washers and screws.



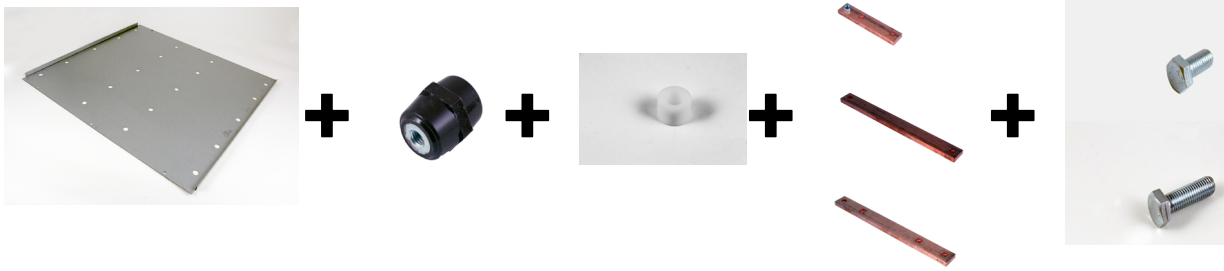
Both in top and in bottom.

CUBIC

CUBIC-Modulsystem A/S
Skjoldborgsgade 21
9700 Broenderslev
Denmark

Tel +45 9882 2400
E-mail: info@cubic.eu
www.cubic.eu

Transformer section 600x800



Size (mm)	Mounting plate	Isolator 40x50 M12	Distance piece	Busbar	Screw	Screw	Screw
600x800	4842-6060	2045-4050	3064-0001	4821-0400 4821-0500 4821-0600	2009-1225	2009-1240	2009-1035



Sides are mounted in both sides.



Inner top/bottom are mounted.



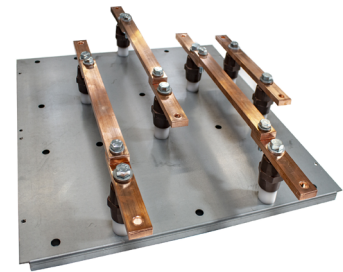
Inner top/bottom are mounted.



Outer top/bottom are mounted.



Outer top/bottom are mounted.



Parts are mounted on the mounting plate.



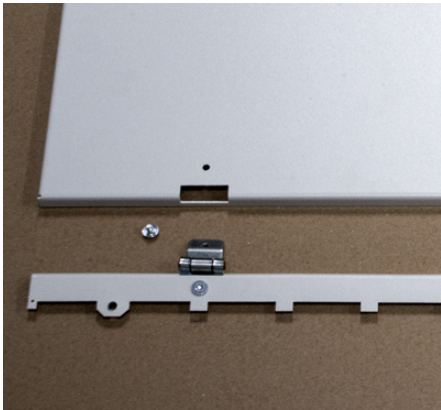
Mounting plate is mounted.



Transformer section 600x800



Swivelling front	Hinge bracket	Screws	Hinge
4852-4040	4852-0040	3041-0608 & 3047-0406 x 2	0570-0000 x2
4852-4080	4852-0080	3041-0608 & 3047-0406 x 2	0570-0000 x2
4852-6040	4852-0040	3041-0608 & 3047-0406 x 2	0570-0000 x2
4852-6080	4852-0080	3041-0608 & 3047-0406 x 2	0570-0000 x2



Swing frame is mounted.



Hinge must be mounted in the front with brackets



Front with swing frame is mounted.

Temperature rise verification

The temperature rise of CPS25 panels can be verified by calculation according to IEC/TR 60890.

The following pages guide you how to make this verification in a quick manner, and give an approximate indication. If a more detailed calculation is needed, IEC/TR 60890 can be used.

On pages 34 to 36 we have a representative list of different groups of functional units in the range from DIN material, MCCBs and up to 800A incoming device. The power loss for each group is calculated on the basis of values given by device manufactures.

On page 37 we have a representative list with power loss of CPS25 busbars, Cu-flex and wires.

The power loss of e.g. a busbar or device with a load different from the rated current can be calculated by using this formula: $P = P_n \times (I/I_n)^2$

I = rated current (given by the manufacturer)

P = power losses in watt at I

I_n = rated current (operating)

P_n = power losses in watt at I_n

NOTE!

External cables are not included in the power losses given in this manual.

The power loss for external cables is estimated to be about 20% of the calculated power loss from devices, busbars and internal wires.

The Total Power Loss (TPL) can be found by using the following formula [TPL = power loss from installed parts x RDF²].

The total power loss from the parts installed consists of:

- The calculated power loss for functional units from pages 34 to 36.
- The calculated power loss for busbars from page 37.
- The estimated power loss for cables.

Rated Diversity Factor (RDF) is subject to an agreement between the user and manufacturer.

In lack of an agreement, the RDF can be found in IEC 61439-2 table 101 or IEC 61439-3 table 101.

Example (floor model):

The power loss for 5 groups of functional units is calculated to a total of 500W

Busbar: 1 meter 1-5x20 loaded 400A => $P = P_n \times (I/I_n)^2 \Rightarrow 52 \times (400/440)^2 = 43W$

Cables: 15% of 543W = 81.5W

RDF for the circuits (e.g. 15) in the 5 groups according to IEC 61439-2, table 101 = 0.6

$TPL = (\text{functional units} + \text{busbar} + \text{cable}) \times RDF^2$

$TPL = (500W + 43 + 81.5W) \times 0.6^2 = 624.5W \times 0.36 = 225W$

The temperature rise in both the middle and the top of the panel can be found in the curves on page 38 (floor model) / page 39 (wall model).

For a 400mm wide panel the temperature rise in the middle is measured to 17K and in the top to 26K.

With an ambient temperature of 25 °C that gives an actual temperature of 42 °C and 51 °C.

The devices installed in the top half of the panel shall then be capable of withstanding 51 °C, and in the bottom half 42 °C. If not, the temperature must be lowered, either by selecting a larger panel, or by installing lower power loss (larger devices / thicker cables).

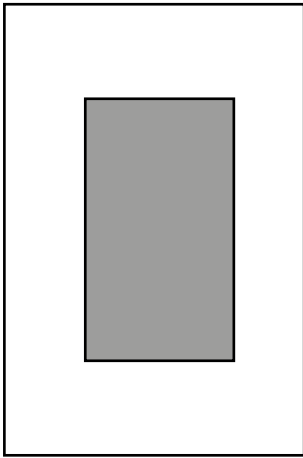
Type of load	Assumed loading factor
Distribution – 2 and 3 circuits	0.9
Distribution – 4 and 5 circuits	0.8
Distribution – 6 to 9 circuits	0.7
Distribution – 10 or more circuits	0.6
Electric actuator	0.2
Motors ≤ 100 kW	0.8
Motors > 100 kW	1.0
IEC 61439-2, table 101	

Number of outgoing circuits	Assumed loading factor
2 and 3 circuits	0.8
4 and 5 circuits	0.7
6 to 9 circuits	0.6
10 or more circuits	0.5
IEC 61439-3, table 101	

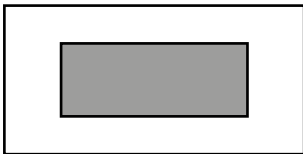
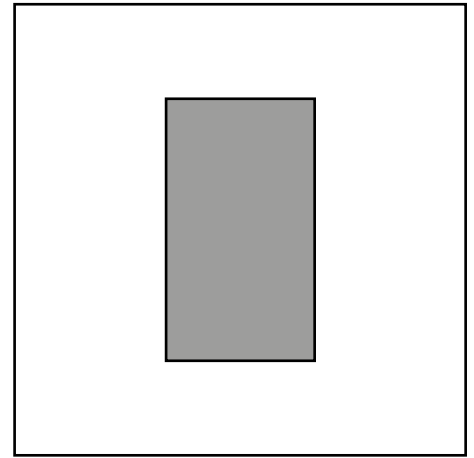
Inlet units (MCCB)

General data:

- Individual load of components = 80% average of rated current
- The power loss given is the total power loss of the unit including components and connections

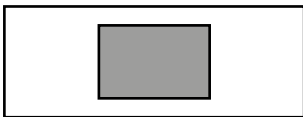
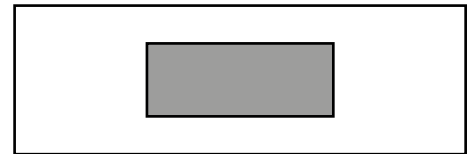


Component: 800 A MCCB
 Connection: 2 x FB240288 per pole
 Power loss: 133W



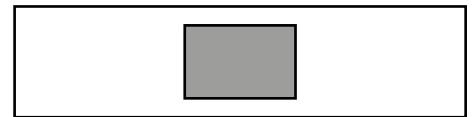
Component: 630 A MCCB
 Connection: 1 x FB240288 per pole
 Power loss: 250W

Component: 400 A MCCB
 Connection: 1 x FB100288 per pole
 Power loss: 133W



Component: 250 A MCCB
 Connection: 1 x FB100288 per pole
 Power loss: 123W

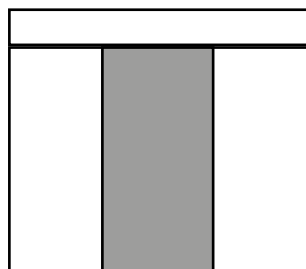
Component: 200 A MCCB
 Connection: 1 x FB50288 per pole
 Power loss: 98W



Outlet units (MCCB)

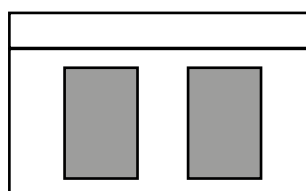
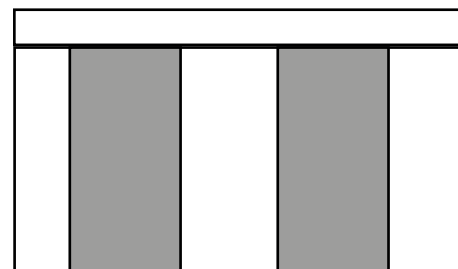
General data:

- Individual load of components = 80% average of rated current
- The power loss given is the total power loss of the unit including components and connections



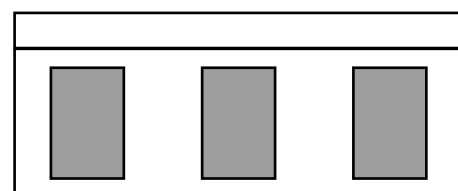
Component: 630 A MCCB
 Connection: 1 x FB240288 per pole
 Power loss: 250W

Component: 400 A MCCB
 Connection: 1 x FB100288 per pole
 Power loss: 133W



Component: 250 A MCCB
 Connection: 1 x FB100288 per pole
 Power loss: 123W

Component: 200 A MCCB
 Connection: 1 x FB50288 per pole
 Power loss: 98W

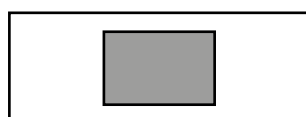


Component: 160 A MCCB
 Connection: 1 x FB25288 per pole
 Power loss: 99W

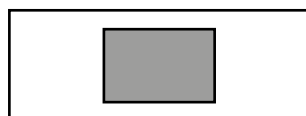
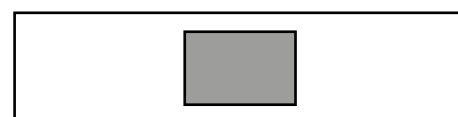
Component: 100 A MCCB
 Connection: 1 x 35 mm² wire per pole (300 mm)
 Power loss: 56W

Component: 80 A MCCB
 Connection: 1 x 25 mm² wire per pole (300 mm)
 Power loss: 55W

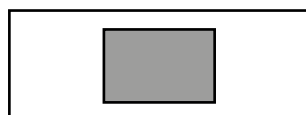
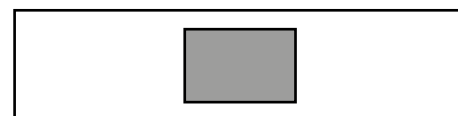
Component: 63 A MCCB
 Connection: 1 x 16 mm² wire per pole (300 mm)
 Power loss: 53W



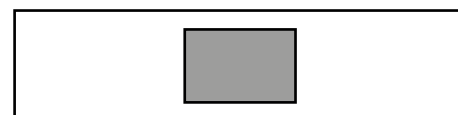
Component: 160 A MCCB
 Connection: 1 x FB25288 per pole
 Power loss: 99W



Component: 100 A MCCB
 Connection: 1 x 35 mm² wire per pole (300 mm)
 Power loss: 56W



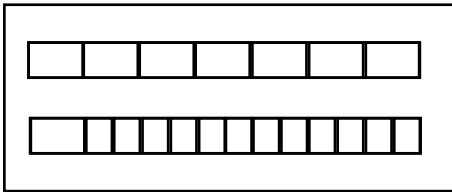
Component: 80 A MCCB
 Connection: 1 x 25 mm² wire per pole (300 mm)
 Power loss: 55W



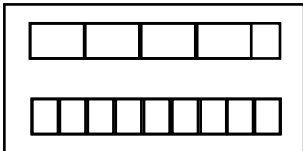
Outlet units (DIN rail material)

General data:

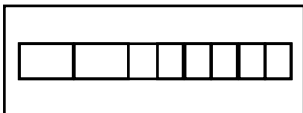
- Individual load of components = 80% average of rated current
Note: These components are typically not loaded continuously with up to 80%
- The power loss given is the total power loss for the unit including components and connections



Components:
 2 x 63A, 4 pole RCD relay
 6 x 16A, 4 pole MCB
 12 x 10A, 2 pole MCB
 Connection:
 16 mm² wire for 63A
 6 mm² wire for up to 16A
 Total power loss: 291W



Components:
 2 x 63A, 4 pole RCD relay
 2 x 16A, 4 pole MCB
 9 x 10A, 2 pole MCB
 Connection:
 16 mm² wire for 63A
 6 mm² wire for up to 16A
 Total power loss: 185W



Components:
 1 x 63A, 4 pole RCD relay
 1 x 16A, 4 pole MCB
 6 x 10A, 2 pole MCB
 Connection:
 16 mm² wire for 63A
 6 mm² wire for up to 16A
 Total power loss: 82W

Busbars

Busbar 1 - 5x20, 440A = 52W per meter

Busbar 2 - 5x20, 800A = 88W per meter

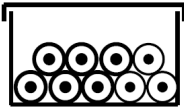

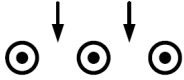
Note! A busbar typically has some outgoings, and the power loss should be adjusted accordingly.

Cu-flex

Cu-flex	Current [A]	Power loss [W]
FB25288	165	7
FB50288	260	9
FB100288	400	10.5
FB240288	670	13
2 x FB240288	1035	15.5

Further Cu-flex data can be found in the CUBIC Cu-flex brochure. Please download from www.cubic.eu

Wires according to IEC 61439-1, Annex H

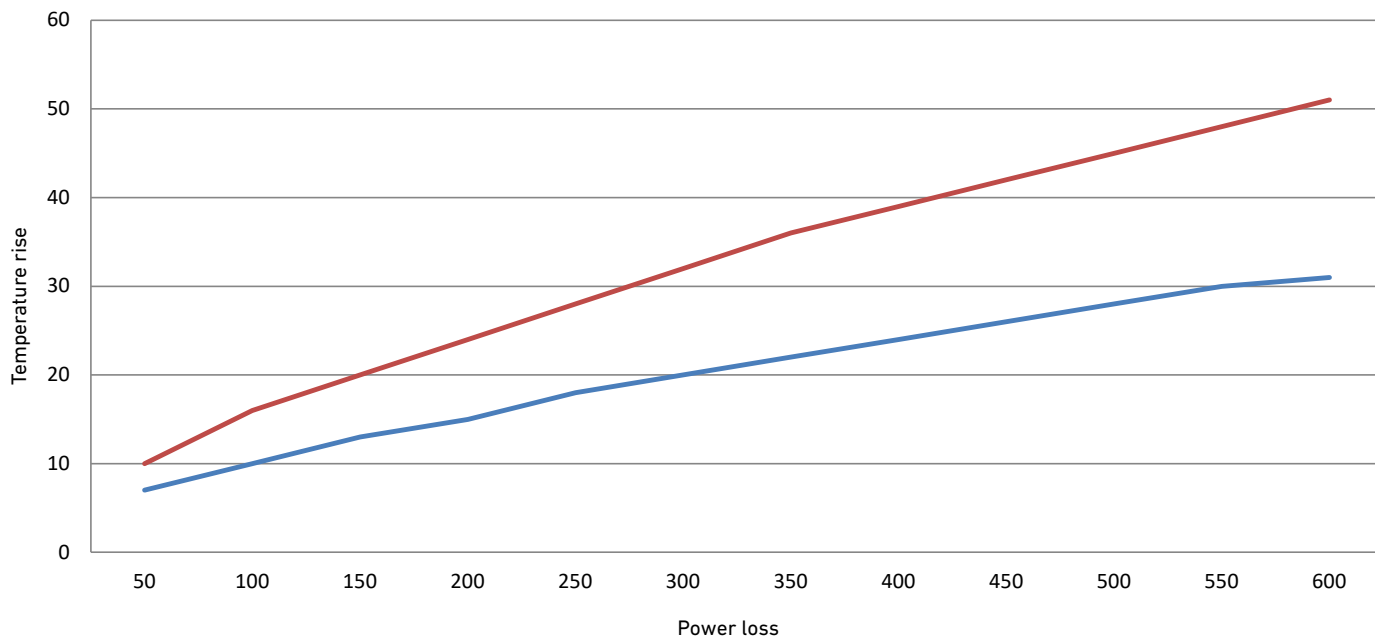
Conductor arrangement							
		Single-core cables in a cable trunking on a wall, horizontally run. 6 of the cables (2 three-phase circuits) continuously loaded		Single-core cables, touching free in air or on a perforated tray. 6 cables (2 three-phase circuits) continuously loaded		Single-core cables, horizontally spaced in free air	
Cross-sectional area of conductor	Resistance of conductor at 20°C, R ²⁰	Max. operating current I _{max}	Power losses per conductor P _V	Max. operating current I _{max}	Power losses per conductor P _V	Max. operating current I _{max}	Power losses per conductor P _V
mm ²	mΩ/m	A	W/m	A	W/m	A	W/m
1,5	12.1	8	0.8	9	1.3	15	3.2
2,5	7.41	10	0.9	13	1.5	21	3.7
4	4.61	14	1.0	18	1.7	28	4.2
6	3.08	18	1.1	23	2.0	36	4.7
10	1.83	24	1.3	32	2.3	50	5.4
16	1.15	33	1.5	44	2.7	67	6.2
25	0.727	43	1.6	59	3.0	89	6.9
35	0.524	54	1.8	74	3.4	110	7.7
50	0.387	65	2.0	90	3.7	134	8.3
70	0.268	83	2.2	116	4.3	171	9.4
95	0.193	101	2.4	142	4.7	208	10.0
120	0.153	117	2.5	165	5.0	242	10.7
150	0.124			191	5.4	278	11.5
185	0.0991			220	5.7	318	12.0
240	0.0754			260	6.1	375	12.7

Temperature rise curves - CPS25 floor model

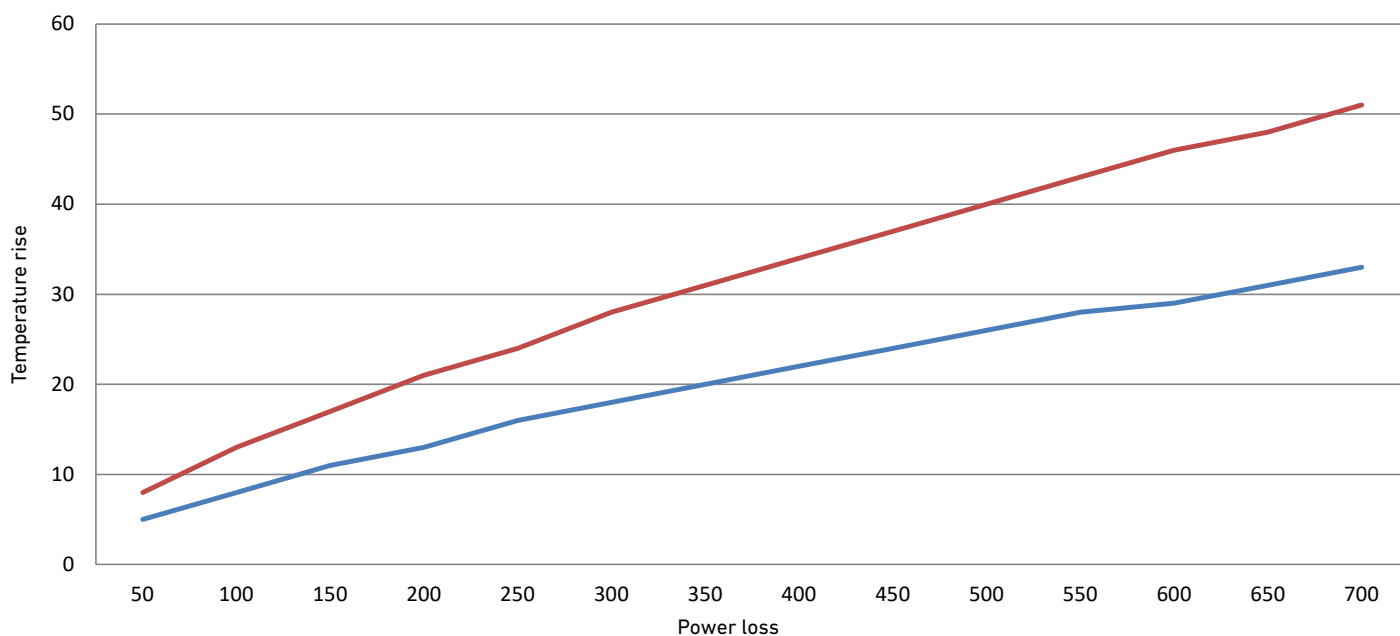
Blue curve = temperature rise in half height

Red curve = temperature rise in top

CPS25 - 400mm wide section - IP3X



CPS25 - 600mm wide section - IP3X

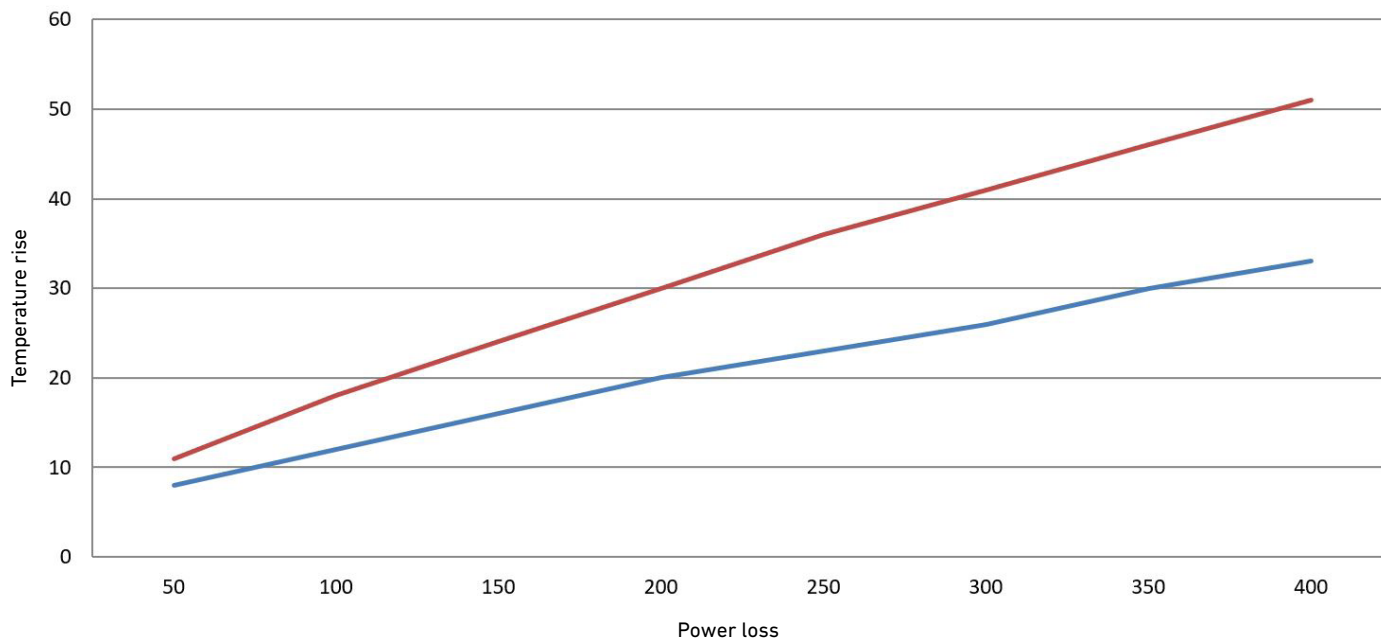


Temperature rise curves - CPS25 floor model

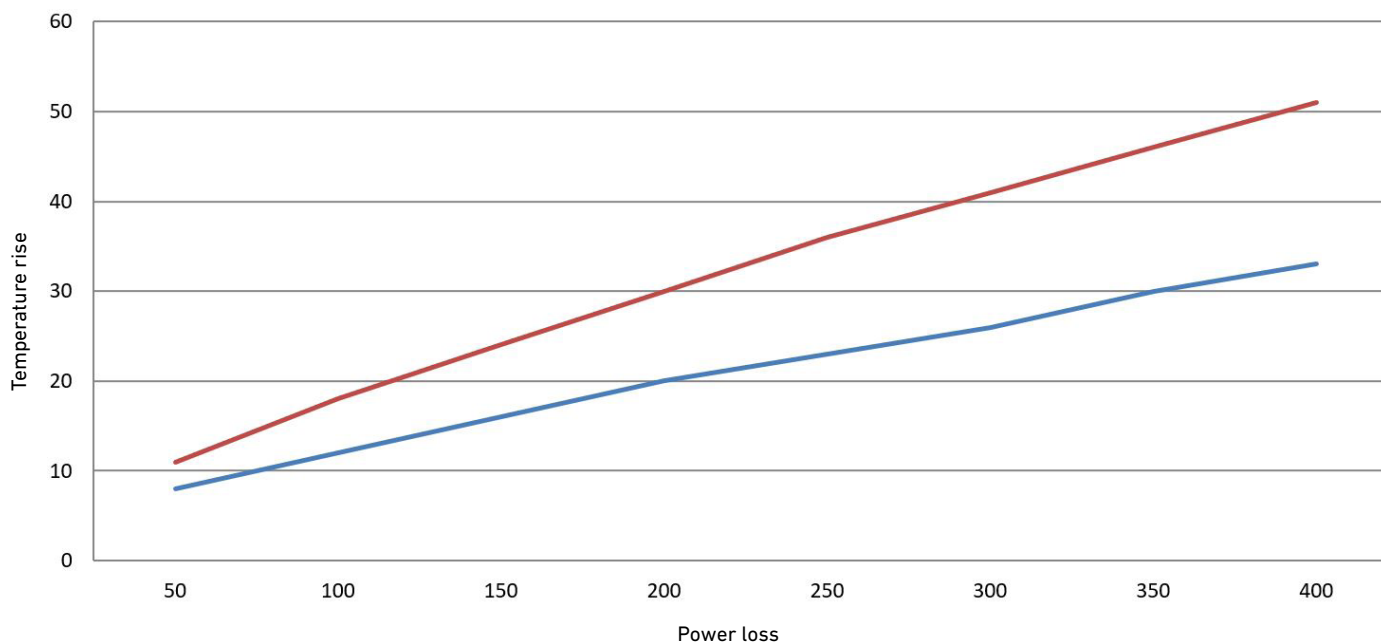
Blue curve = temperature rise in half height

Red curve = temperature rise in top

CPS25 - 400mm wide section - IP43



CPS25 - 600mm wide section - IP43

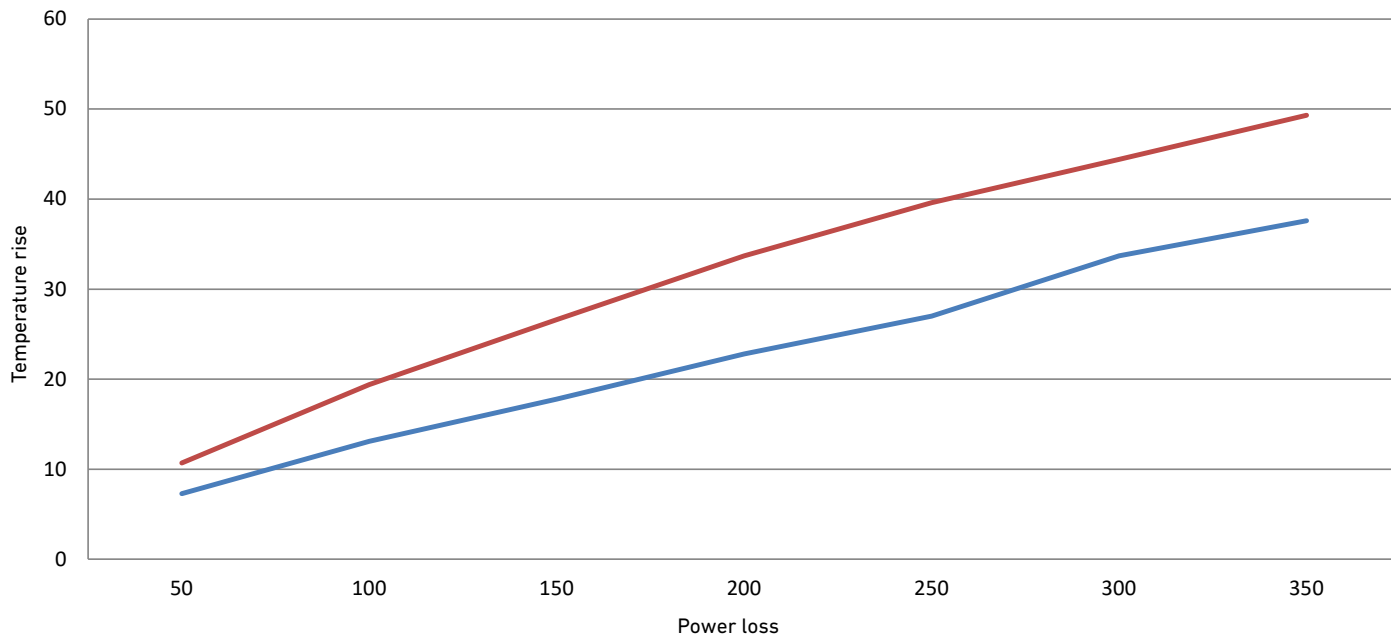


Temperature rise curves - CPS25 wall model

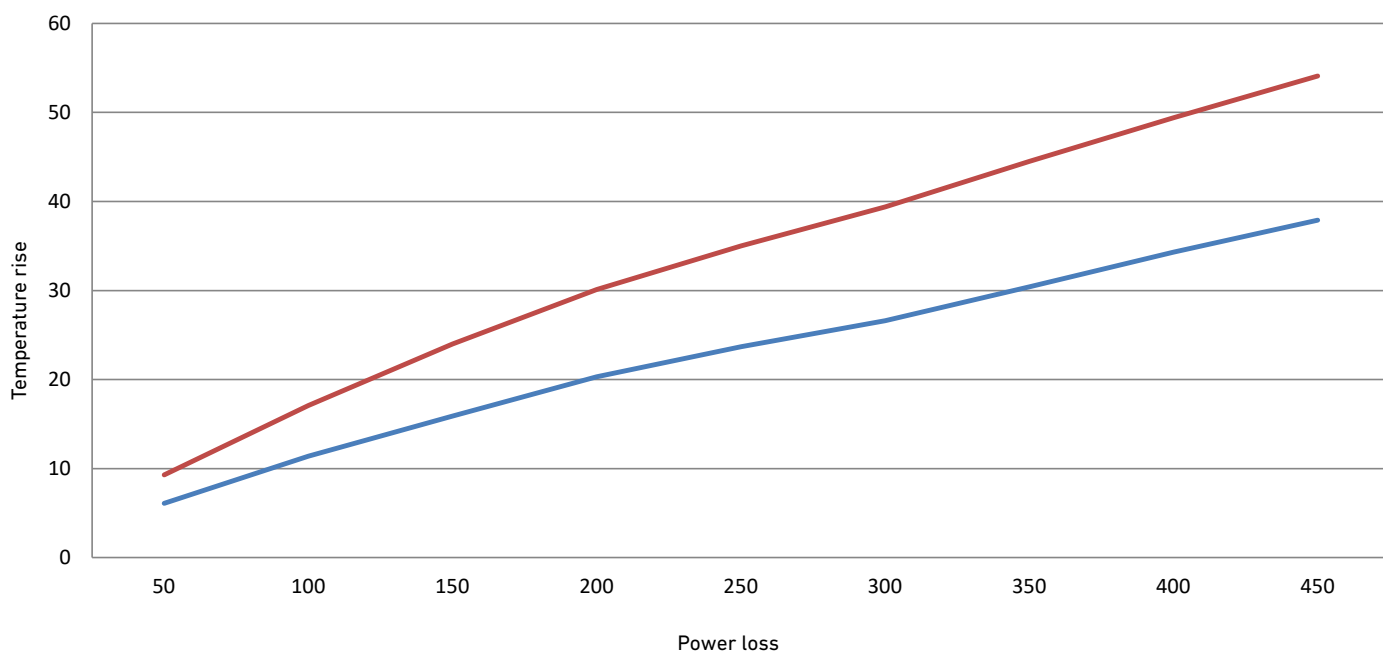
Blue curve = temperature rise in half height

Red curve = temperature rise in top

CPS25 - 400mm wide section - IP3X



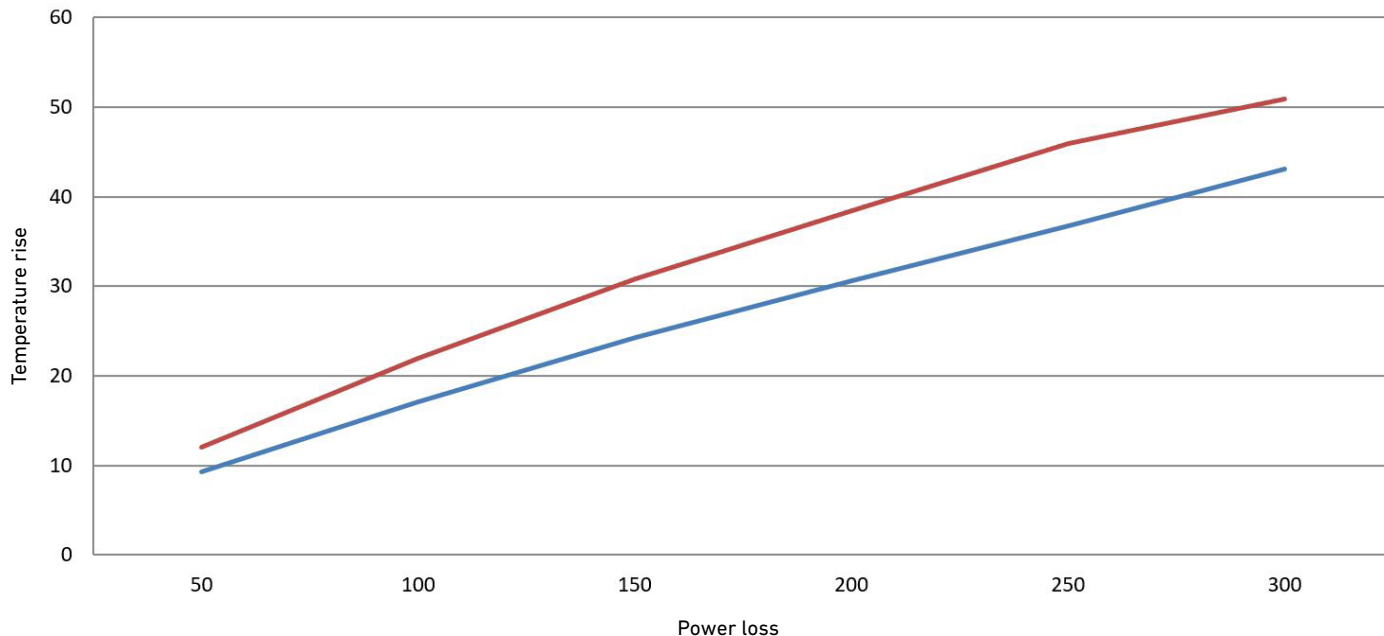
CPS25 - 600mm wide section - IP3X



Temperature rise curves - CPS25 wall model

Blue curve = temperature rise in half height
 Red curve = temperature rise in top

CPS25 - 400mm wide section - IP43



CPS25 - 600mm wide section - IP43

