

EVROTEHNA



CATALOGUE

KB KU KL KLP CABINETS

DESIGN & PRODUCTION



*SINCE ITS FOUND
FACTORY HAS GR
PRODUCERS OF E*





*ING IN 2000, EVROTEHNA ELECTRICAL CABINETS
OWN TO BECOME ONE OF THE AREA'S TOP
ELECTRICAL DISTRIBUTION CABINETS.*



As a continuously evolving company, we have implemented advanced technologies in our production process and use top-of-the-line equipment to deliver high-quality products in compliance with European standards.

Our expert team is always ready to meet the needs of our clients. We prioritize building enduring relationships with our clients and giving them the best options available to meet their requirements.

We are proud to have contributed to numerous large-scale initiatives around the world, including industrial facilities, energy and transportation infrastructure and many others.

Our goal is to continue making investments in cutting-edge technology and streamlining our operations in order to guarantee quick and effective production that meets the individual needs of our customers.

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ANDROID APPLICATION - KATALOG AR KB

The application provides additional options for viewing 3D models, animations, video tutorials, and other information related to KB, KU, KL, KLP products.



1. Download and install the application on your mobile device from the Google Play Store.
 - a. By scanning the QR code
 - b. By searching for the application under the name Katalog AR KB

2. After installation, launch the application and allow it to access the camera of your mobile device.

3. Scan the desired page in the catalog using the application. The application will use the camera of your mobile device to recognize the page in the catalog and display multimedia content.

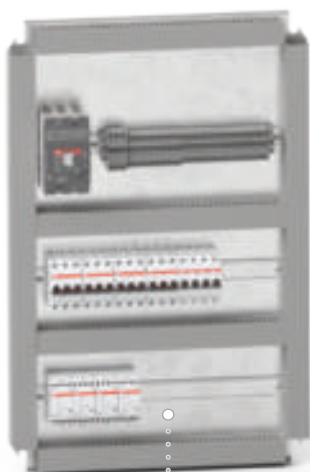


The selection of the supporting structure and cabinets

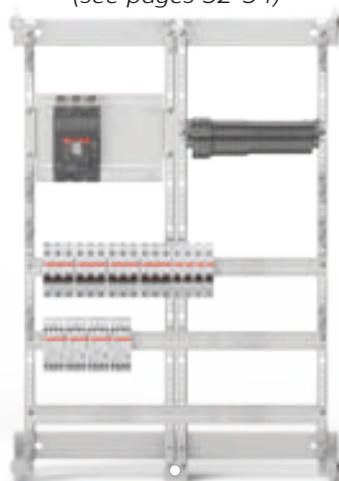


The appropriate **supporting structure** is chosen based on the specified electrical equipment

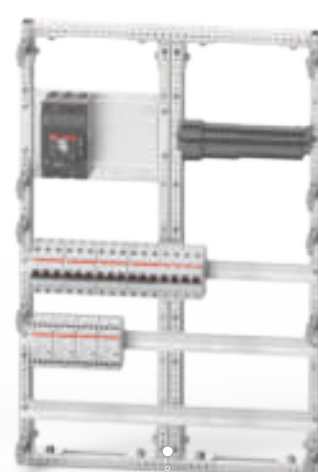
Mounting plate
(see page 29)



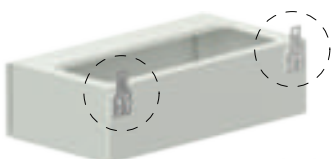
Mounting frame for light equipment
(see pages 32-34)



Mounting frame for heavier equipment
(see pages 35-36)



Distribution cabinet
(see pages 9-17)



The **wall mount holder kit** is ordered separately and is used to mount a distribution cabinet on a wall (see page 23)



The **modular plinth** is ordered separately based on the width and depth of the distribution cabinet (see pages 18-20)



Roof covers and cable entry plates are ordered by width and depth of distribution cabinet (see pages 24-26)

Distribution cabinet rotation

The KB type distribution cabinet allows cables to be entered from either the top or bottom. The standard cable entry point is at the top, but the housing can be rotated 180 degrees to allow cables to be entered from the bottom instead.

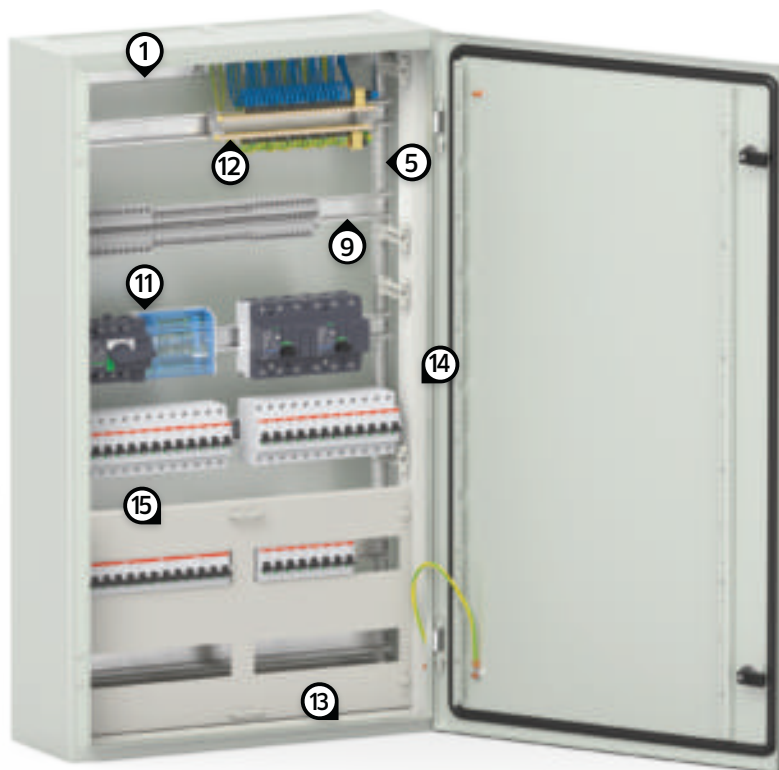


Reversing the position of the door

The standard door position on KB cabinets is on the right. The cabinets have slot holes on both the left and right sides, allowing the door to be easily moved from one side to the other.



MOUNTING



View of the cabinet **KB2/6IP65** with equipment



View of the cabinet **KB3/6IP65** with equipment

MOUNTING FRAME ELEMENTS

1. Horizontal supporting profile 2 «HNP2»
see page 32
2. Horizontal supporting profile 3 «HNP3»
see page 32
3. DM profile supports kit «NDM21»
see page 32
4. Lower DM profile support «NDMD21»
see page 33
5. DM vertical profiles «DM3»
see page 34
6. DM vertical profiles «DM6»
see page 34
7. Horizontal dividing profiles «HPP-3»
see page 34

SUPPORTING ELEMENTS OF ELECTRICAL EQUIPMENT

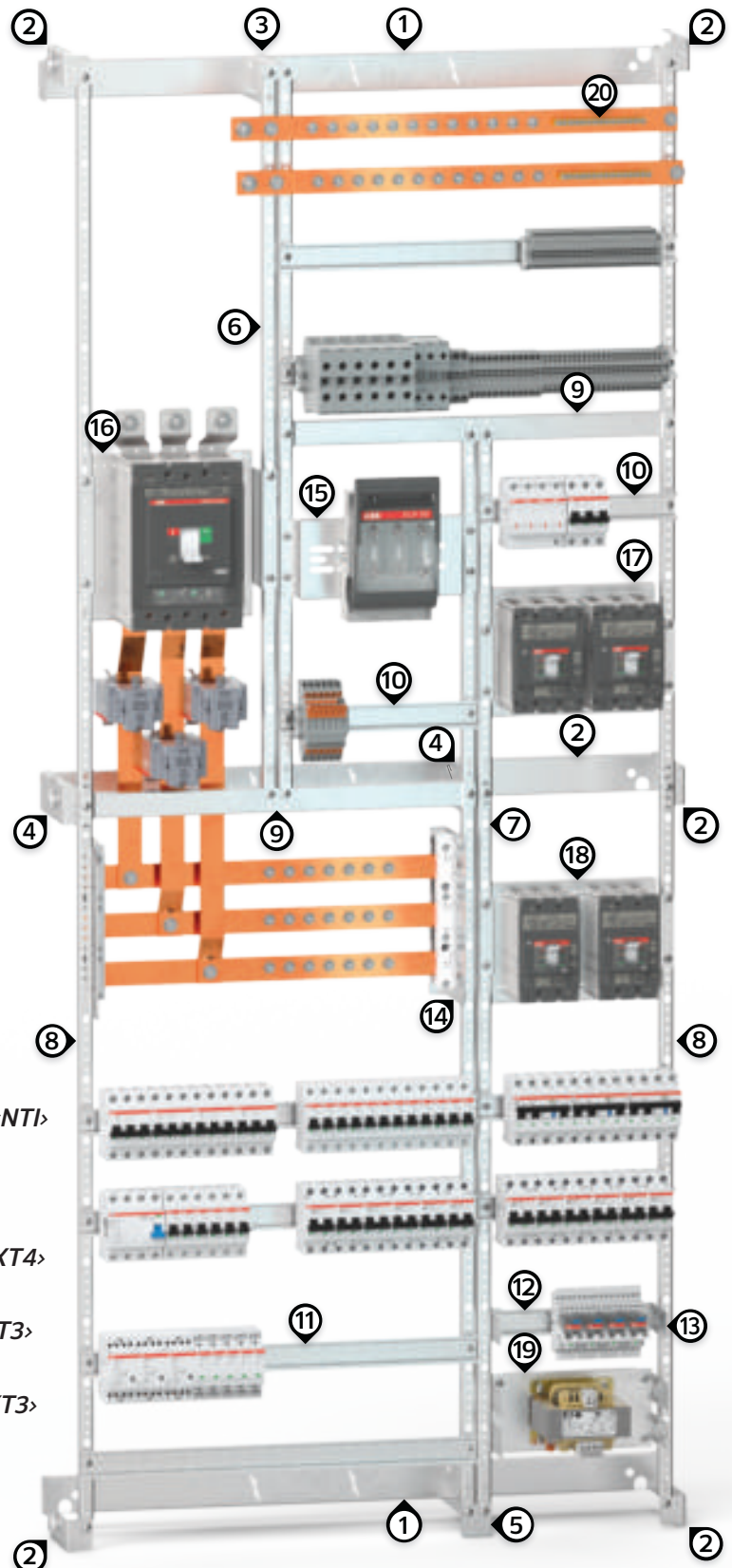
8. DIN rail 1 «DIN-1»
see page 43
9. DIN rail 2 «DIN-2»
see page 43
10. RV depth regulator «RV»
see page 37
11. Distribution Block «RB-125-407»
see page 45
12. PEN1000 busbars «PEN1000»
see page 48

PROTECTION

13. Horizontal touch protection profile «HZIP2»
see page 51
14. Vertical touch protection profile «VZIP6»
see page 51
15. Protective masks for the mounting frame «PP»
see pages 49-50

ELEMENTS

1. Horizontal supporting profile 3 «HNP3»
see page 32
2. Set holders of DM supports «NDM30»
see page 32
3. Upper holder of DM supports «NDMG30»
see page 33
4. Middle holder of DM supports «NDMS21»
see page 33
5. Lower holder of DM supports «NDMD30»
see page 33
6. DM vertical profiles «DM6»
see page 34
7. DM vertical profiles «DM19»
see page 34
8. DM vertical profiles «DM12»
see page 34
9. Horizontal dividing profile «HPP-2»
see page 34
10. DIN rail 1 «DIN-1»
see page 43
11. DIN rail 2 «DIN-2»
see page 43
12. DIN rail SP «DIN-SP»
see page 43
13. RV depth regulator «RV»
see page 37
14. Three-phase universal busbar support holder «NTI»
see page 46
15. ABB fuse switch disconnectors mounting plate «P1-NV00-0» see page 42
16. ABB circuit breakers mounting plate «P1XT2-XT4»
see page 40
17. ABB circuit breakers mounting plate «P1XT1-XT3»
see page 40
18. ABB circuit breakers mounting plate «P1XT1-XT3»
see page 40
19. Universal mounting plate «UMP1/10»
see page 37
20. PEN1000 busbars «PEN1000»
see page 48

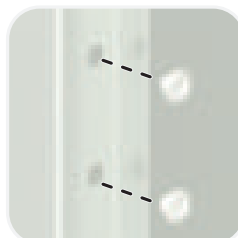


View of the **mounting frame for lightweight equipment**
for KB3/12IP65 cabinet, with equipment

Wall-mounted KB cabinets

150 and 210 mm deep

Knock-out rectangular holes are located on the top of the cabinets and are used to install **UK-KB** (see page 25) and covers of the rectangular holes (see page 23).



Slot holes allow for precise adjustment of the door position and changing side of the door. Dimensions: $\varnothing 5,4 \times 7$ mm (see page 6)



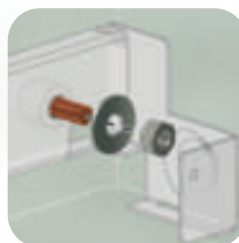
View of the cabinet **KB2/6IP65**



Door stiffeners have the ability to mount **DIN** rails, cable ducts and door cross bars (see page 28).



Installation of a mounting plate with the M8 x 30 mm spot welded studs, using the 12 mm spacer (see page 29).



Installation of a mounting frame support on the spot welded studs M8 x 30 mm and the 12 mm spacer, using the horizontal supporting profile (see page 32).

Touch protection profiles are mounted on M6 spot welded studs. These profiles close the gap between masks and the interior surfaces of the cabinet (see page 51).



Standard lock is EB-1 with **EK-T** plastic key. Different types of locks can also be installed upon request (see page 21).




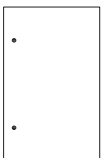


EB-1



EK-T

Wall-mounted KB cabinets

150 and 210 mm deep

Product Label	IP65	Dimensions (H x W x D)
KB1/3IP65		500 x 300 x 210
KB1/4IP65		650 x 300 x 210
KB1.5/3IP65		500 x 425 x 210
KB1.5/4IP65		650 x 425 x 210
KB2/3IP65		500 x 550 x 210
KB2/4IP65		650 x 550 x 210
Product Label	IP65	Dimensions (H x W x D)
KB1/5IP65		800 x 300 x 210
KB1/6IP65		950 x 300 x 210
KB1.5/5IP65		800 x 425 x 210
KB1.5/6IP65		950 x 425 x 210
Product Label	IP65	Dimensions (H x W x D)
KB2/5IP65		800 x 550 x 210
KB2/6IP65		950 x 550 x 210
KB3/5IP65		800 x 800 x 210
KB3/6IP65		950 x 800 x 210
Product Label	IP65	Dimensions (H x W x D)
KB303015IP65		300 x 300 x 150
KB303021IP65		300 x 300 x 210
KB404021IP65		400 x 400 x 210
KB604021IP65		600 x 400 x 210

Dimensions are in millimeters (mm)

For cabinet doors with widths of 1 and 1.5 the outer edges are reinforced through additional bending to provide maximum space for installing equipment on the door.

Wall-mounted KB distribution cabinets are made of CR steel sheet DC-01 with a **thickness of 1,5 mm**. The enclosure of the KB cabinet is made of a single piece of sheet metal, by bending and welding, which provides degree of protection **IP65**. On request, the enclosure can also be produced with an IP66 protection rating. The protection is achieved by electrostatic plasticization with **RAL 7035** polyester structural paint, resistant to UV rays.

The designations of the cabinet type indicate the dimensions of the distribution cabinet. **The first digit** represents the width of the cabinet, which determines the number of modular equipment groups that can be installed based on the width of the cabinet. Each modular equipment group can hold up to 12 modular circuit breakers MCBs (p. 31). **The second digit** represents the height of the cabinet, which determines the number of rows of modular equipment that can be installed based on the height of the cabinet.

The standard **lock** for wall-mounted cabinets is the **EB-1** lock with a "T" key (**EK-T**), which provides good sealing and closure for the cabinet. Other lock options may be available upon request (see page 21).

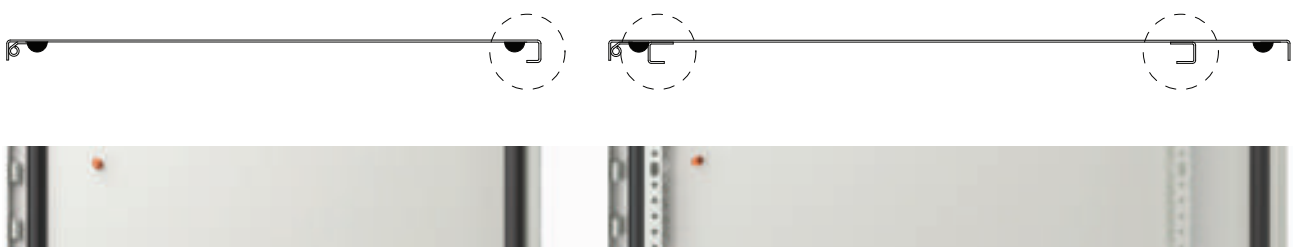
Wall-mounted cabinets have one or two locks based on the height of the door:

- Doors up to 650 mm have one lock
- Doors over 650 mm have two locks

The door opening angle is 130°, but it can be increased to 180° upon customer request.

For wall-mounted KB cabinets with a depth of 150 or 210 mm, the **door stiffeners** are determined by the width of the door (door with a height of up to 500 mm do not have door stiffeners).

Cabinet doors with widths of 2 and 3 are reinforced through spot welding of two perforated U-profiles. This helps to ensure stability and strength of the cabinet door.



Cross-section of a reinforced door
by bending outer edge

Cross-section of a reinforced door
with spot welding of two U profiles

Wall-mounted KB cabinets

300 mm deep

Slot holes allow for precise adjustment of the door position and changing side of the door.
Dimensions: $\varnothing 5,4 \times 7$ mm, (see page 6)



View of the cabinet **KB2/8IP65**



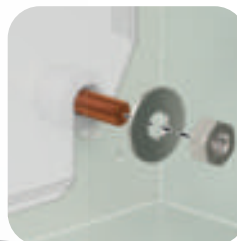
Knock-out round holes are openings in the cabinet that can be removed to allow for the attachment of the roof, floor stand or for connecting cabinets in a row (see page 22).



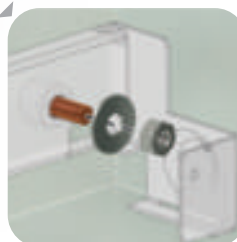
The roof opening of the cabinets has a maximum size. It supports various types of cable gland plates (see pages 25-26).



Door stiffeners are structural elements that are located on the door of the cabinet and are used to mount components as: **DIN** rails, cable ducts and door cross bars (see page 28).



Installation of a mounting plate with the M8 x 30 mm spot welded studs, using the 12 mm spacer (see page 29).



Installation of a mounting frame support on the spot welded studs M8 x 30 mm and the 12 mm spacer, using the horizontal supporting profile (see page 32).

Touch protection profiles are mounted on M6 spot welded studs. These profiles close the gap between masks and the interior surfaces of the cabinet (see page 51).



Standard lock is EB-1 with **EK-T** plastic key. Different types of locks can also be installed upon request (see page 21).





EB-1



EK-T

Wall-mounted KB cabinets

300 mm deep

Product Label	IP65	Dimensions (H x W x D)
KB1/8IP65		1250 x 300 x 300
KB1/9IP65		1400 x 300 x 300
KB1.5/8IP65		1250 x 425 x 300
KB1.5/9IP65		1400 x 425 x 300
Product Label	IP65	Dimensions (H x W x D)
KB2/8IP65		1250 x 550 x 300
KB2/9IP65		1400 x 550 x 300
KB3/8IP65		1250 x 800 x 300
KB3/9IP65		1400 x 800 x 300

Dimensions are in millimeters (mm)

For cabinet doors with widths of 1 and 1.5 the outer edges are reinforced through additional bending to provide maximum space for installing equipment on the door.

Wall-mounted KB distribution cabinets are made of CR steel sheet DC-01 with a **thickness of 1,5 mm**. The enclosure of the KB cabinet is made of a single piece of sheet metal, by bending and welding, which provides degree of protection **IP65**. On request, the enclosure can also be produced with an IP66 protection rating. The protection is achieved by electrostatic plasticization with **RAL 7035** polyester structural paint, resistant to UV rays.

The designations of the cabinet type indicate the dimensions of the distribution cabinet. **The first digit** represents the width of the cabinet, which determines the number of modular equipment groups that can be installed based on the width of the cabinet. Each modular equipment group can hold up to 12 MCBs (p. 31). **The second digit** represents the height of the cabinet, which determines the number of rows of modular equipment that can be installed based on the height of the cabinet.

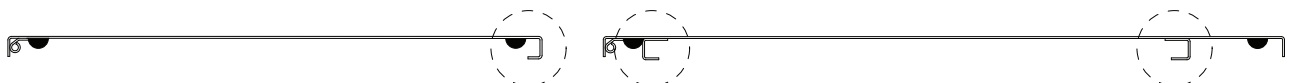
The standard **lock** for wall-mounted cabinets is the **EB-1** lock with a "T" key (**EK-T**), which provides good sealing and closure for the cabinet. Other lock options may be available upon request (see page 21).

Wall-mounted cabinets 300 mm deep have **two** locks.

The door opening angle is 130°, but it can be increased to 180° upon customer request.

The **door stiffeners** of wall-mounted KB cabinets with a depth of 300 mm are determined by the width of the cabinet door.

Cabinet doors with widths of 2 and 3 are reinforced through spot welding of two perforated U-profiles. This helps to ensure stability and strength of the cabinet.



*Cross-section of a reinforced door
by bending outer edges*



*Cross-section of a reinforced door
with spot welding of two U profiles*

Freestanding KB cabinets

300 and 400 mm deep

View of the cabinet KB2/12IP65



The roof opening of the cabinets has a maximum size. It supports various types of cable gland plates (see pages 25-26).



Knock-out round holes are openings in the cabinet that can be removed to allow for the attachment of the roof, floor stand or for connecting cabinets in a row (see page 22).



Door stiffeners are structural elements that are located on the door of the cabinet and are used to mount components as: **DIN** rails, cable ducts and door cross bars (see page 28).



Installation of mounting plate on the omega mount (see page 29).



Installation of a mounting frame support on the omega mount, using the horizontal supporting profile (see page 32).




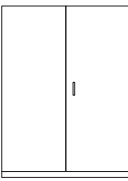
Touch protection profiles are mounted on M6 spot welded studs. These profiles close the gap between masks and the interior surfaces of the cabinet (see page 51).

Knock-out rectangular holes are located on the sides and bottom of the cabinets and are used to install **UK-KB** cable glands (pp. 25-26) and ventilation covers (p. 23).

The modular plinth is available in two different heights: 50 mm and 100 mm. Stands can be stacked on top of each other (see pages 18-19).

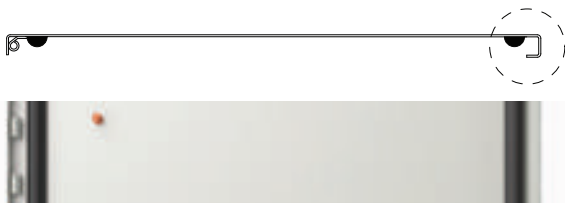
Freestanding KB cabinets

300 and 400 mm deep

Product Label	IP65	Dimensions (H x W x D)
KB1/12IP65		1850 x 300 x 300
KB1.5/12IP65		1850 x 425 x 300
KB2/12IP65		1850 x 550 x 300
KB3/12IP65		1850 x 800 x 300
KB1/12/40IP65		1850 x 300 x 400
KB1.5/12/40IP65		1850 x 425 x 400
KB2/12/40IP65		1850 x 550 x 400
KB3/12/40IP65		1850 x 800 x 400
Product Label	IP65	Dimensions (H x W x D)
KB4/12IP65		1850 x 1050 x 300
KB4/12/40IP65		1850 x 1050 x 400

Dimensions are in millimeters (mm)

For cabinet doors with widths of 1 and 1.5 the outer edges are reinforced through additional bending to provide maximum space for installing equipment on the door.



*Cross-section of a door stiffener
by bending outer edges*

Freestanding KB distribution cabinets are made of CR steel sheet DC-01 with a **thickness of 1,5 mm**. The protection is achieved by electrostatic plasticization with **RAL 7035** polyester structural paint, resistant to UV rays. The degree of protection is **IP65**. On request, the enclosure can also be produced with an IP66 protection rating.

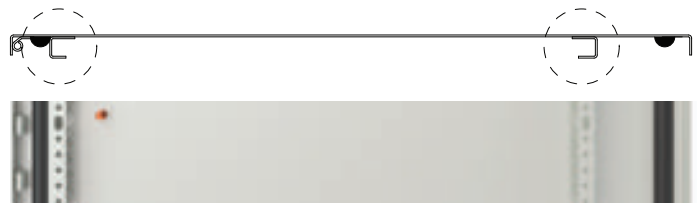
The **modular plinth** is 50 and 100 mm high. It is ordered separately (see pages 18-20).

In the cabinet type designation, **the first digit** indicates the width of the distribution cabinet, which indicate the number of modular equipment groups that may be installed by cabinet width. A modular equipment group can be fitted with up to 12 MCBs (see page 31). **The second digit** indicates the height of the cabinet, which indicates the number of rows (groups of modular equipment) that can be installed per the height of the distribution cabinet.

The door opening angle is 130°, but it can be increased to 180° upon customer request.

The 300 and 400 mm deep freestanding KB cabinets **door stiffeners** are dependent on the width of the cabinet door.

Cabinet doors with widths of 2 and 3 are reinforced through spot welding of two perforated U-profiles. This helps to ensure stability and strength of the cabinet.



*Cross-section of a door stiffeners
with spot welding of two U profiles*

The **BMKB lock** is the standard lock for freestanding cabinets, which features three-point locking with a standard insert **UWB-PRESS**. The locks help to ensure good closure and sealing of the cabinet. Upon request, the lock inserts can be replaced with other types of inserts as illustrated.



UWB-PRESS



UWB-DB



UWB-TK333 UWB-TK3524



BMKB

Hot air outlet



Cold air inlet

The sun shield is designed to dissipate heat by allowing air to circulate through the 20 mm space between the shield and the cabinet housing.



The thermal insulation is made of 20 mm thick foam rubber coated with polyurethane and protected by a layer of aluminium foil. It helps to regulate the temperature within the cabinet.



Cross-section of a special purpose cabinet with dimensions of 1050 x 550 x 360 mm with a sun shield

The door insulation is made of 20 mm thick polyurethane foam rubber and may also have reflective aluminium foil. It helps to regulate the temperature within the cabinet.



The panel of the climate control unit is a component designed for installing the climate control unit. It features air louvers on the side for ventilation.



Stainless steel special purpose cabinet cross-section; air-conditioned, dimensions 1200 x (630 + 200) x 500 mm



KB cabinets for special purposes – selection of manufacturing materials

Different materials can be used for cabinet fabrication based on the environment in which the cabinets will be used. Some options include:



Stainless steel AISI 304, which is resistant to acidic environments and is commonly used in the food industry, medical equipment, furniture etc.



Stainless steel AISI 316, which has a wide range of applications in the chemical, food, dairy and paper industries and has good corrosion resistance and a high gloss.



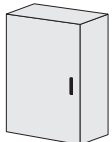
Cold-rolled DC-01 sheet metal (1) is first plastified with primer (2) and then coated with polyester paint (3) for improved corrosion protection.



Aluminum Al Mg3 (1) are coated with polyester paint (2). These cabinets are suitable for environments where a lighter construction is required.

KB cabinets for special purposes – selection of structural solutions

The selection of cabinet structural solutions depends on the environment and the operating temperature range of the equipment installed in the cabinet. There are a number of constructive solutions that can be combined together or individually.



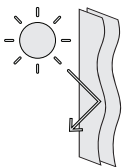
Without a rain roof

These cabinets are used in enclosed environments where they are not exposed to precipitation (rain, snow, ice, hail). They can be combined with ventilation, thermal insulation or air conditioning.



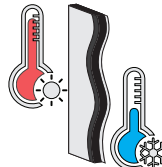
With a rain roof

These cabinets are used in outdoor environments where they are exposed to precipitation. They have variants with overhangs on three or four sides or a slope towards the door or back of the cabinet.



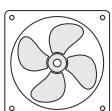
With a sun shield

These cabinets are used in outdoor environments, where they are more exposed to the sun's rays, to prevent excessive heating of the interior. They have a 20 mm gap between the shield and the cabinet housing to allow air flow.



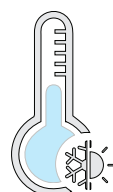
Thermally insulated cabinets

These cabinets are used in both open and closed environments and have polyurethane insulation on the inside of the housing, protected by an aluminum foil. Insulation provides the necessary thermal protection. The insulation is 20 mm thick.



Cabinets with ventilation

These cabinets are suitable for any environment, based on requirements. They can be combined with various other technical solutions such as a sun shield, with or without rain roof or thermal insulation. They have openings for air flow in the sides, bottom and roof of the cabinet.



Air conditioned cabinets

These cabinets have a special panel for mounting the climate control unit and related electrical equipment. They are suitable for use in both open and closed environments and are always combined with thermal insulation protection. They help to regulate the temperature range inside the enclosure.

KB cabinets with glass doors

KB cabinets with glass doors allow for easy viewing of the contents inside the cabinet. The glass is 5 mm thick and sealed hermetically with a polyurethane gasket, which provides IP65 protection against dust and water. The glass is also mechanically fastened to the door for added security.

Product Label	Glass opening (mm)	
	Width	Height
KB1/3IP65P	150	325
KB1/4IP65P	150	475
KB1/5IP65P	150	625
KB1/6IP65P	150	775
KB1/8IP65P	150	1075
KB1/9IP65P	150	1225
KB1.5/3IP65P	275	325
KB1.5/4IP65P	275	475
KB1.5/5IP65P	275	625
KB1.5/6IP65P	275	775
KB1.5/8IP65P	275	1075
KB1.5/9IP65P	275	1225
KB2/3IP65P	390	325
KB2/4IP65P	390	475
KB2/5IP65P	390	625
KB2/6IP65P	390	775
KB2/8IP65P	390	1075
KB2/9IP65P	390	1225
KB3/5IP65P	555	625
KB3/6IP65P	555	775
KB3/8IP65P	555	1075
KB3/9IP65P	555	1225
KB1/12IP65P	150	1675
KB1.5/12IP65P	275	1675
KB2/12IP65P	305	1675
KB3/12IP65P	555	1675
KB4/12IP65P	305	1675
KB1/12/40IP65P	150	1675
KB1.5/12/40IP65P	275	1675
KB2/12/40IP65P	305	1675
KB3/12/40IP65P	555	1675
KB4/12/40IP65P	305	1675
KB303015IP65P	150	195
KB303021IP65P	150	195
KB404021IP65P	250	295
KB604021IP65P	250	495

Dimensions are in millimeters (mm)

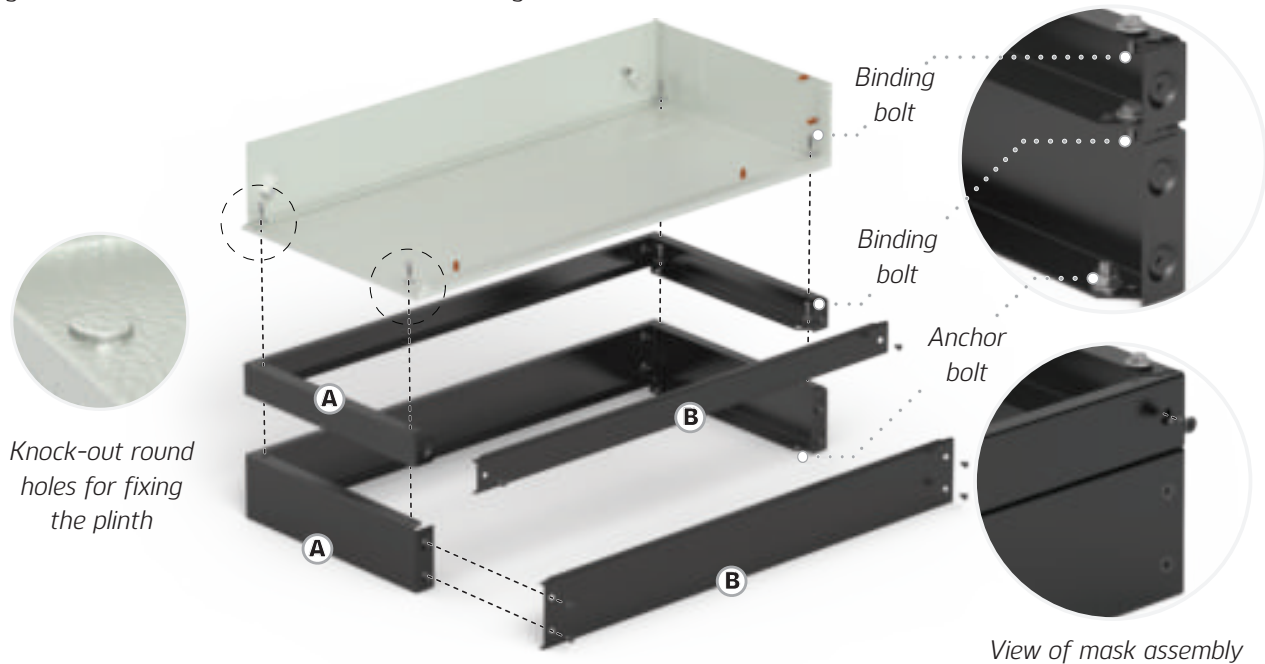


*View of the cabinet **KB2/12IP65P**
with glass door*

Modular plinths

height 50 and 100 mm

Modular plinths are designed to support distribution cabinets and are available in two heights: 50 and 100 mm. They can be mounted on top of each other, allowing for adjustable height. For example, by installing two modular plinths with a height of 100 and 50 mm, a stand with a total height of 150 mm can be achieved.



Assembly of 50 and 100 mm modular plinths

The load bearing profiles of the modular plinth (NPSP) (A) are made of 2 mm thick sheet metal and carry the weight of the cabinet. They are available in **two depths**: 300 and 400 mm. They are ordered in pairs, with a kit of bolts.



Modular plinth 50 mm in height

Product Label	For cabinet depth	Length (A)
NPSP30/5	300 mm	279 mm
NPSP40/5	400 mm	379 mm
Product Label	For cabinet width	Length (B)
MSP1/5	KB1/X	298 mm
MSP1.5/5	KB1.5/X	423 mm
MSP2/5	KB2/X	548 mm
MSP3/5	KB3/X	798 mm
MSP4/5	KB4/X	1048 mm

They are ordered in pairs, with a kit of bolts

The mask of the modular plinth (MSP) (B) closes the space between two load bearing profiles and adds additional strength to the plinth. It is removable for ease of transport with a forklift and for the passage of cables through the bottom of the cabinet. The mask is available in **five widths** to match the widths of the cabinets and is ordered in pairs.



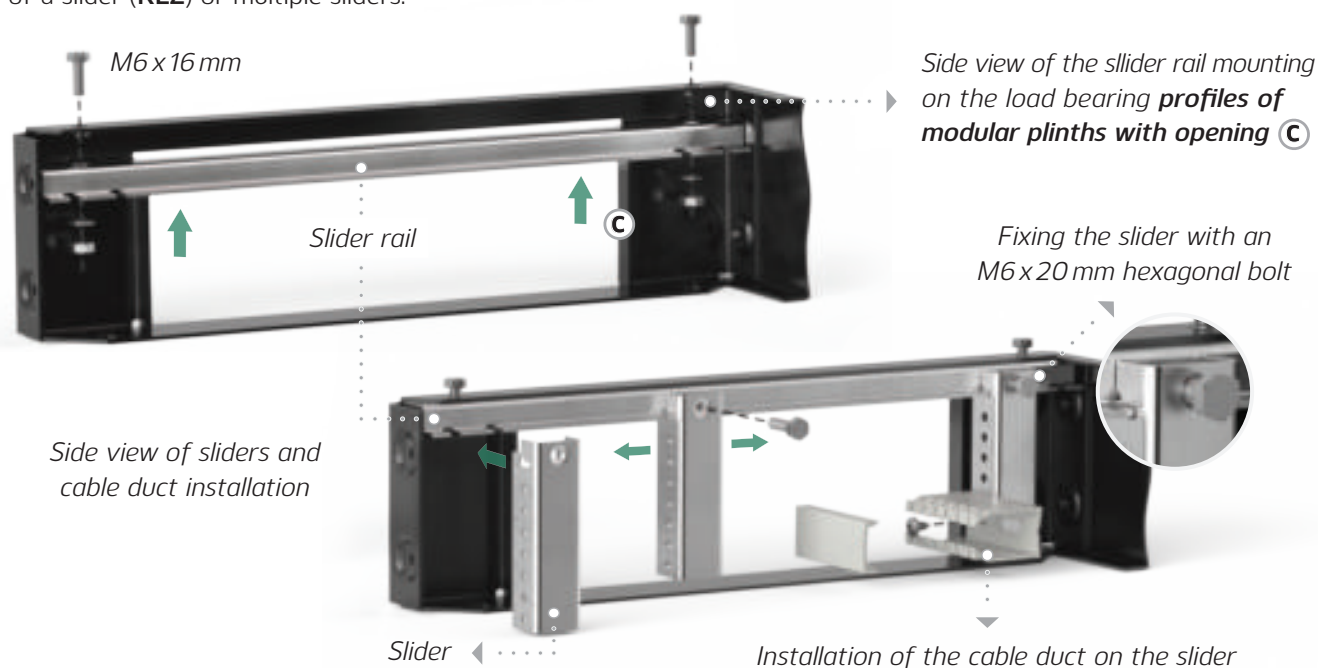
Modular plinth 100 mm in height

Product Label	For cabinet depth	Length (A)
NPSP30/10	300 mm	279 mm
NPSP40/10	400 mm	379 mm
Product Label	For cabinet width	Length (B)
MSP1/10	KB1/X	298 mm
MSP1.5/10	KB1.5/X	423 mm
MSP2/10	KB2/X	548 mm
MSP3/10	KB3/X	798 mm
MSP4/10	KB4/X	1048 mm

They are ordered in pairs, with a kit of bolts

Load bearing profiles of modular plinths with opening, rails and sliders

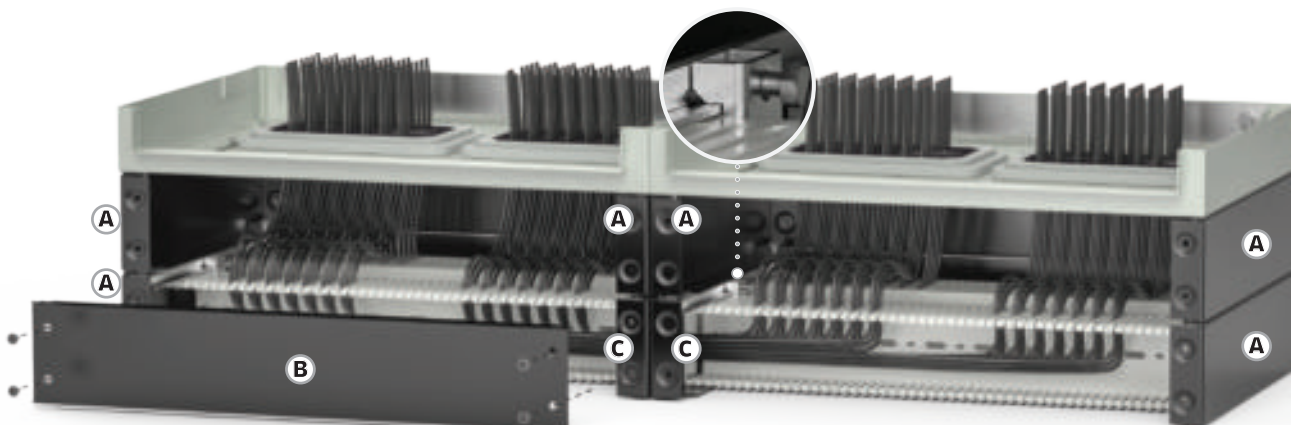
The load bearing profiles **(C)** with an opening (**NPSP0xx**) are part of the modular plinths and are 100 mm in height. They are designed to allow the mounting of a slider rail (**SKxx**), which provides additional support for the installation of a slider (**KLZ**) or multiple sliders.



Product Label	Load bearing profiles of modular plinths with opening		Slider rail		Slider
	NPSP030	NPSP040	SK30	SK40	KLZ
Lenght	276 mm	376 mm	265 mm	365 mm	80 mm
For cabinet depth	300 mm	400 mm	300 mm	400 mm	
Opening dimensions	80 x 150 mm	80 x 250 mm			

They are ordered in pairs, with a kit of bolts

The sliders offer the advantage of adjustable depth positioning within the modular plinths stand and the ability to install C profiles and various dimensions of cable ducts.



An example of the use of load bearing profiles of modular plinths with opening for interconnection of distribution cabinets

C profile and cable clamps

The C profile is used to secure cables using plastic ties or arc cable clamps. It is made from 1,5 mm thick galvanized steel and features a rectangular perforation for securing cables with plastic ties.

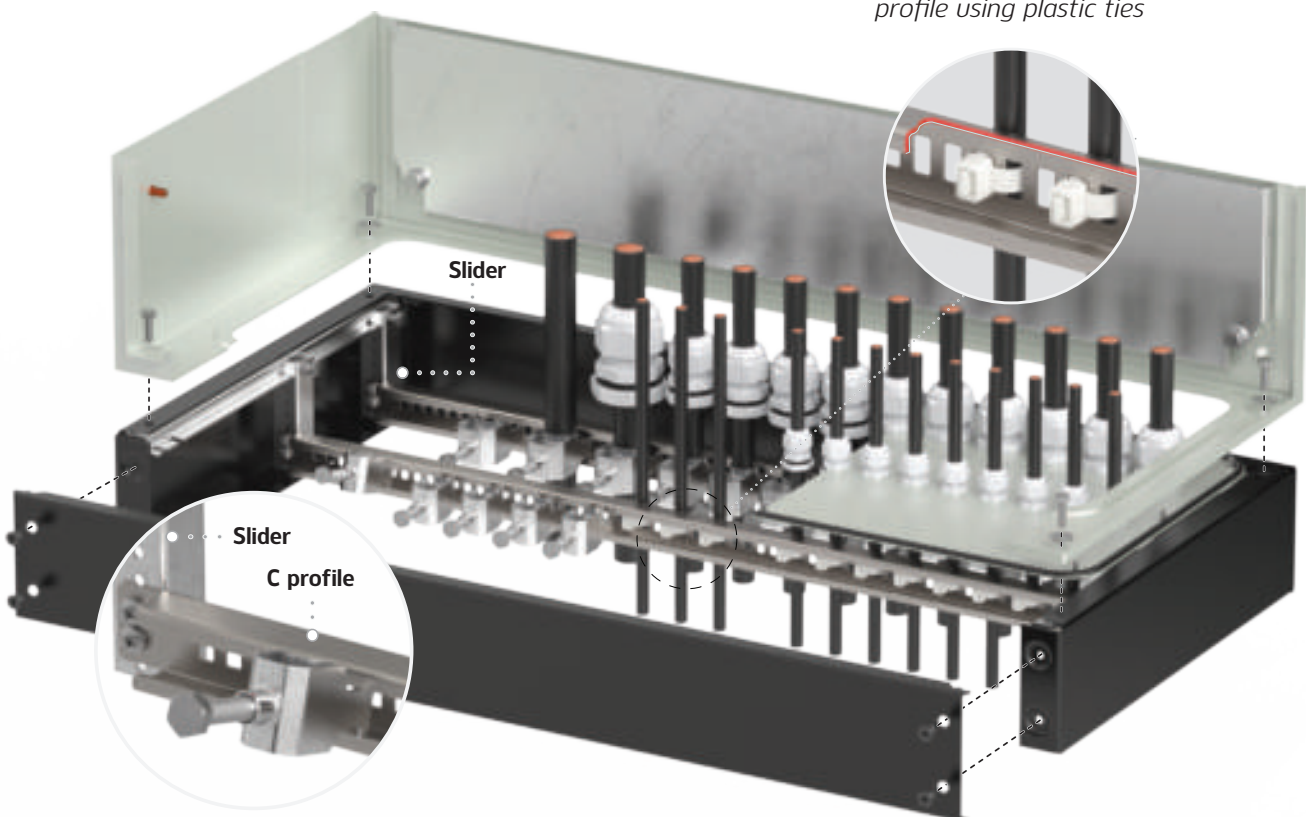
The C profile can also be produced from non-magnetic materials such as stainless steel or aluminum upon request. It can be mounted on the plinth of the cabinet on a pair of slides using four 4,8 mm self-tapping screws.

C profiles

Product Label	C-PR1	C-PR1,5	C-PR2	C-PR3	C-PR4
Length	253 mm	378 mm	503 mm	753 mm	1003 mm

They are ordered individually

Securing cables to the C profile using plastic ties



Installation of the arc cable clamps on the C profile

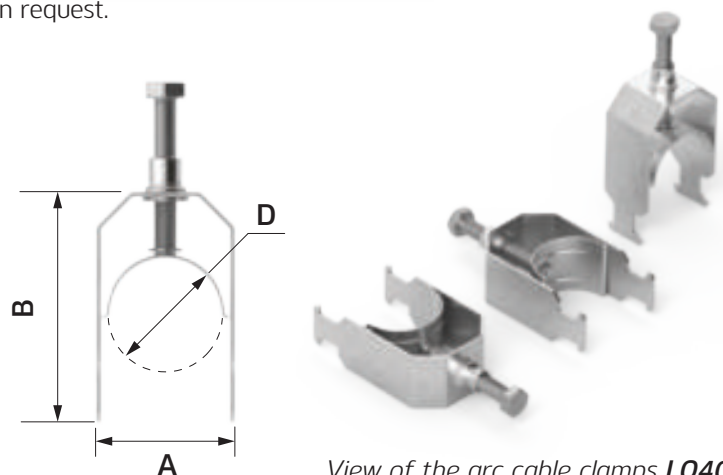
Examples of the use of arc cable clamps and C profiles

The arc cable clamps, made of 1,5 mm thick galvanized steel, can be installed on the C profile to carry cables. They can also be manufactured from stainless steel upon request.

Arc cable clamps

Product label	Width A (mm)	Height B (mm)	Diameter D (mm)
L010	20	45	10
L016	26	45	16
L022	32	50	22
L028	38	50	28
L034	44	50	34
L040	50	75	40
L050	60	75	50
L064	74	92	64

They are ordered individually



View of the arc cable clamps L040

Description of KB cabinet doors

ZUV



The **door gasket** is made from poured polyurethane foam and has an IP65 rating.

Protective grounding kit for the door (ZUV)

The grounding wire is 200 mm long and has insulated ring terminals with a diameter of $\varnothing 6$ mm at each end. It is connected to the ground bolt in the order:

- star washer
- ring terminal
- flat washer
- spring washer
- hex nut.

Ordered as a kit with the necessary fasteners.

Ground bolts for the KB cabinet

The cabinet and its door contain copper-plated spot welded studs for grounding the cabinet door.

The door is equipped with two screw studs that are spot welded in place, one at the top and one at the bottom of the door. These studs allow the door to be easily grounded, regardless of which side it is installed on.

The **edge of the KB cabinet** is folded outward from all sides, creating a channel for water to drain securely. A polyurethane door gasket covers the edge of the KB distribution cabinets to provide additional protection against moisture.

Locks of wall-mounted KB cabinets

The standard lock for wall-mounted cabinets is (**EB-1**) with a "T" key (**EK-T**). The locks provide good closures and sealing of the cabinet. On request, locks can be replaced with another type of locks. The available locks:



EB-1



EK-T



EB-L



EB-BS



EB-T333



EB-O

Removal of the knock-out round holes, a bottle of the corrector

The latest series of **KB cabinets** has improved connectivity and assembly, thanks to the inclusion of knock-out round holes. KB cabinets with a depth of 300 and 400 mm have $\varnothing 8$ mm knock-out round holes on the top and bottom of the cabinet for attaching the modular plinth and roof. These cabinets also have $\varnothing 8$ mm knock-out round holes for connecting cabinets in series.

Each hole has three tabs that ensure a secure physical connection to the cabinet. To open the hole, simply remove the tabs from the knock-out round hole.

1. Positioning the screwdriver head on one of the three tabs of the knock-out round hole

2. A hammer blow on the handle of the screwdriver breaks the tab connection and opens the hole



Example of punching the knock-out round hole

A bottle of the corrector (KR)

A bottle of corrector is used to repair and protect surfaces on cabinets or other elements that have been damaged by drilling or other physical impacts, and to repair minor damages.

The corrector bottle contains paint in a specific RAL color and can be used to repaint damaged surfaces to provide anti-corrosion protection. The paint is applied using a brush.

The corrector bottles are ordered individually.



A bottle of the corrector

Product Label	RAL xxxx	Description
KR9005	RAL 9005	Jet black <input checked="" type="checkbox"/>
KR9016	RAL 9016	Traffic white <input type="checkbox"/>
KR7035	RAL 7035	Light grey <input type="checkbox"/>

They are ordered individually

A bottle of the corrector

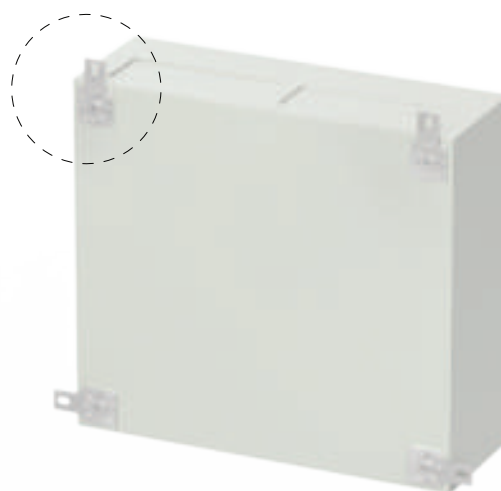
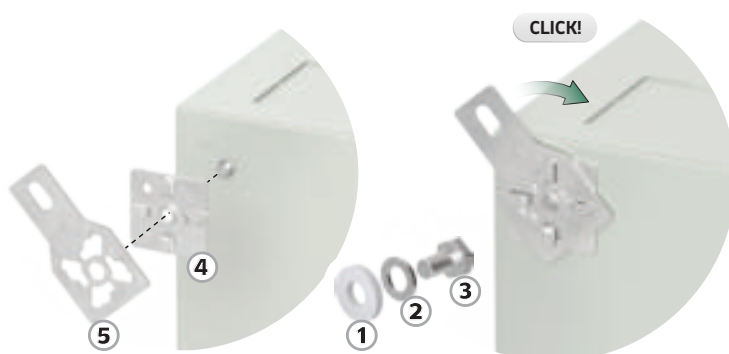
Wall mount brackets kit

UMZ

KB wall-mounted and freestanding cabinets can be mounted on the wall using the openings on the back of the cabinet or with the help of a kit of wall mount brackets. They are ordered as a kit.

The brackets kit (**UMZ**) includes:

- ① Plastic washers **4 pcs**
- ② Washers **4 pcs**
- ③ M8 bolts **4 pcs**
- ④ Tiles **4 pcs**
- ⑤ Brackets **4 pcs**



Example of mounting wall mount brackets

Covers of the knock-out rectangular holes

KB cabinets have rectangular knock-out holes that can be covered with vent covers or covers without opening. The knock-out holes have eight tabs that form a physical connection to the cabinet and can be opened by tearing off the tabs. **The dimensions of the opening are 222 x 80 mm.**

Four holes of size $\varnothing 4,2$ mm are drilled in each rectangular cover for attachment using the screws of size 4,8 mm. Covers are ordered individually.

Vent covers

They are made with vertical and horizontal slits.

- **Cover dimensions: 249 x 120 mm**



OK-KBVZAL

OK-KBHZAL

Covers without opening

Covers without opening on which holes can be drilled as needed, serve to close knock-out rectangular holes on KB cabinets.

- **Cover dimensions: 249 x 120 mm**
- **Clearance for drilling holes: 222 x 80 mm**



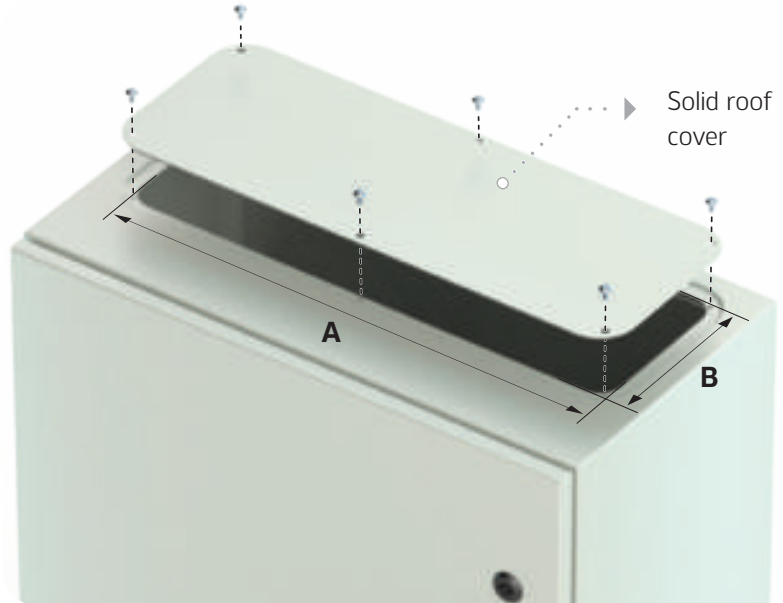
*Installation of PG cable gland on the **OK-KB** cover without openings*

Roof opening with maximum dimensions, PG cable glands

All 300 and 400 mm deep KB cabinets have a roof opening with maximum dimensions. Roof covers of maximum dimensions are ordered separately, based on the types of cable entry plates (see pages 25-26).

Opening of maximum dimensions

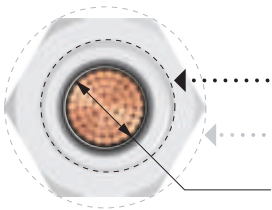
Cabinet width	A (mm)	B (mm)	
		300	400
1	224	155	255
1.5	349	155	255
2	474	155	255
3	724	155	255
4	974	155	255



Installation of a solid roof cover on opening with maximum dimensions

PG cable glands

Product Label	PG7	PG9	PG11	PG13.5	PG16	PG21	PG29	PG36	PG42	PG48	PG63
Minimum diameter (ø) of the opening for fitting the gland (mm)	13	16	19	21	23	29	38	48	55,5	60,5	71,5
Lock nut, outer maximum dimension (mm)	20	23,5	26,5	29,5	32	39,5	50	63	72	77,5	90
Maximum diameter (ø) of conductor (mm)	6,5	8	9,5	11,5	13,5	17,5	24,5	31,5	37,5	43	51



Bottom view of PG cable gland

They are ordered individually



Installation of PG cable glands on the roof cover **PKMD2-30KB**

Roof covers of maximum dimensions, Cable entry plates

PKMD, UK, TZ

The proper roof cover for a KB cabinet must be chosen based on the type of cable entry plates selected for cable entry.


UK-W (IP55)

Cable entry plate dimension:

> **142 x 226 mm**

Space for cable entry:

> **92 x 175 mm**

For cable entry up to 16 mm²


UK-KB (IP55)

Cable entry plate dimension:

> **97 x 240 mm**

Space for cable entry:

> **57 x 190 mm**

For cable entry up to 16 mm²


TZ 101 (IP55)

ø6 - 325 mm **2 pcs**

ø6 - 25 mm **2 pcs**

ø6 - 19 mm **4 pcs**

ø6 - 15 mm **10 pcs**

ø6 - 12 mm **2 pcs**

ø6 - 11 mm **31 pcs**

ø6 - 7 mm **1 pc**


TZ 105 (IP55)

ø14 - 54 mm **3 pcs**

Roof covers

Cabinet width	Panel depth (mm)	Solid cover	UK-W	UK-KB	TZ	LMC. MC.MB	Openings count
1	300	PKMD1-30KB	PKMD1-30UK-W	PKMD1-30UK-KB	PKMD1-30TZ	PKMD1-30LMC.MC	1
	400	PKMD1-40KB	PKMD1-40UK-W	PKMD1-40UK-KB	PKMD1-40TZ	PKMD1-40LMC.MC	1
1.5	300	PKMD1.5-30KB	PKMD1.5-30UK-W	PKMD1.5-30UK-KB	PKMD1.5-30TZ	PKMD1.5-30LMC.MC	1
	400	PKMD1.5-40KB	PKMD1.5-40UK-W	PKMD1.5-40UK-KB	PKMD1.5-40TZ	PKMD1.5-40LMC.MC	1
2	300	PKMD2-30KB	PKMD2-30UK-W	PKMD2-30UK-KB	PKMD2-30TZ	PKMD2-30LMC.MC	2
	400	PKMD2-40KB	PKMD2-40UK-W	PKMD2-40UK-KB	PKMD2-40TZ	PKMD2-40LMC.MC	2
3	300	PKMD3-30KB	PKMD3-30UK-W	PKMD3-30UK-KB	PKMD3-30TZ	PKMD3-30LMC.MC	3
	400	PKMD3-40KB	PKMD3-40UK-W	PKMD3-40UK-KB	PKMD3-40TZ	PKMD3-40LMC.MC	3
4	300	PKMD4-30KB	PKMD4-30UK-W	PKMD4-30UK-KB	PKMD4-30TZ	PKMD4-30LMC.MC	4
	400	PKMD4-40KB	PKMD4-40UK-W	PKMD4-40UK-KB	PKMD4-40TZ	PKMD4-40LMC.MC	4

They are ordered individually with mounting kit included

Roof covers of maximum dimensions, Cable entry plates

PKMD, LMC, MC, MB



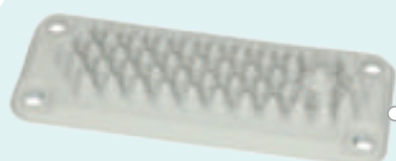
LMC 14 (IP54)

ø10 - 14 mm	5 pcs
ø14 - 18 mm	4 pcs
ø14 - 22 mm	3 pcs
ø24 - 54 mm	2 pcs



LMC 25 (IP54)

ø3,5 - 11 mm	2 pcs
ø10 - 14 mm	5 pcs
ø14 - 18 mm	12 pcs
ø14 - 22 mm	5 pcs
ø14 - 35 mm	1 pc



LMC 51 (IP54)

ø7 - 13 mm	50 pcs
ø15 - 25 mm	1 pc



MC 3/7 (IP66/IP67)

ø10 - 14 mm	4 pcs
ø24 - 54 mm	2 pcs
ø30 - 60 mm	1 pc



MC 25/27 (IP66/IP67)

ø5 - 7 mm	4 pcs
ø8 - 12 mm	4 pcs
ø10 - 14 mm	13 pcs
ø14 - 20 mm	4 pcs
ø20 - 26 mm	2 pcs



MC 35/37 (IP66/IP67)

ø6 - 10 mm	4 pcs
ø8 - 12 mm	4 pcs
ø10 - 14 mm	6 pcs
ø2 - 18 mm	2 pcs
ø17 - 32 mm	1 pc



MB 5/11 (IP66/IP67)

ø5 - 7 mm	4 pcs
ø7 - 10 mm	3 pcs
ø10 - 14 mm	2 pcs
ø15 - 30 mm	2 pcs

Example of installation of roof covers of maximum dimensions on the rooftop of the cabinet **KB2/8IP65**

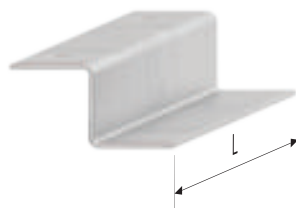
LMC, MC and MB are ordered individually with mounting pins included

LED lamp holders

ZN

LED lamp holders are made of 1,5 mm thick galvanized sheet metal and are mounted on copper-plated spot welded M6 studs. Nuts and washers are included.

They have two holes $\varnothing 3,5$ mm that allow mounting of plastic supports (from accessories) for LED lamps with self-tapping screws 4,2 mm.



Product Label	Lenght L (mm)
ZN1.5	370
ZN2	495
ZN3	745
ZN4	995

They are ordered individually with mounting kit included

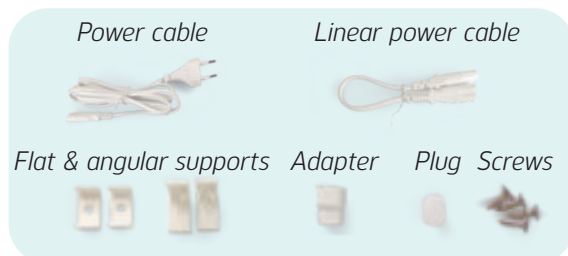
Led lamps

LED300, LED600

The LED lamps have compact dimensions and are available in two lengths: 313 and 573 mm.

- Handy switch directly installed on the luminaire
- High luminous efficacy: up to 112 lm/W
- Flexible installation in 2 different angles with 2 different mounting options
- Low flicker light thanks to special electronic control gear

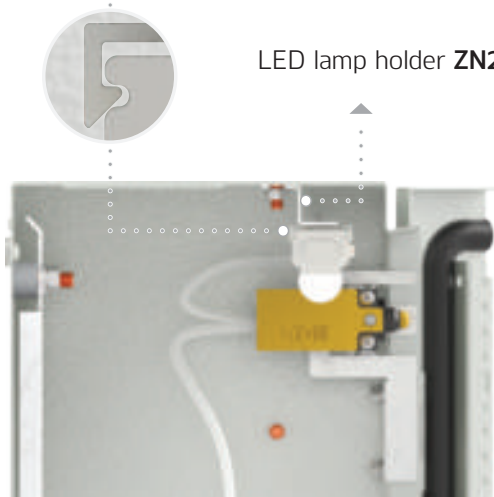
LED lamp **accessories** include:



LED lamps	LED300	LED600
Lenght x Width x Height	313 x 28 x 36 mm	573 x 28 x 36 mm
Weight	119,00 gr	300,00 gr
Electrical data		
Nominal wattage	4,00 W	8,00 W
Nominal voltage	220 ... 240 V	220 ... 240 V
Mains frequency	50 ... 60 Hz	50 ... 60 Hz
Nominal current	0,03 A	0,06 A
Inrush current	10 A	15 A
Inrush current time t_{H50}	150µs	150µs
Recommended fuses	B16 or C10 or C16	B16 or C10 or C16
Total harmonic distortion	88 %	89 %
Operating mode	Integrated LED driver	
Photometrical data		
Luminous flux	450 lm	800 lm
Luminous efficacy	110 lm / W	100 lm / W
Color temperature	4000 K	
Light color (designation)	Natural white	
Color rendering index (Ra)	CRI > 80	
Low flicker	Yes	
Beam angle	140°	
Ambient temperature range	from -20°C to +40°C	
Lifespan L80/B10 at 25 °C	40000 h	

They are ordered individually, with accessories

LED lamp holder **ZN2**



Example of the installation of a lamp and micro-switch in a **KB2/6IP65** cabinet - Side view

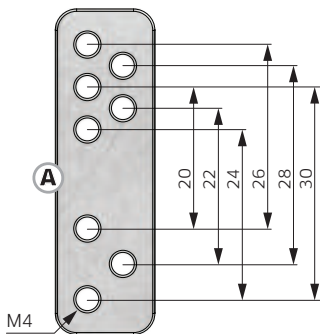


Example of the installation of a lamp and micro-switch in a **KB2/6IP65** cabinet - Front view

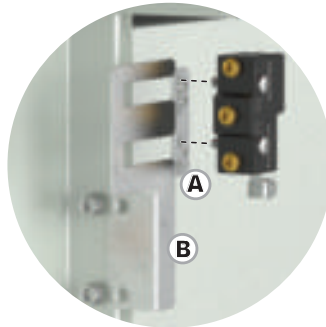
Universal micro switch mount, Door cross bars

UNMRPR, PZVKB

The universal micro-switch mount (UNMRPR) is designed to be mounted on cabinet hinge bolts and enables the installation of a micro-switch with support bolts at a distance between 20 mm and 30 mm. The mount consists of a tile (A), a mount (B) and two M4 x 30 mm bolts.



Tile



Example of mount installation



Installation examples of
EATON and TRACON micro-switches



The adjustable position of the micro switch allows for the same mount to be used on cabinets with or without door reinforcement. The universal micro switch mount is compatible with several types of micro switches:

- Eaton (LS-11),
- Tracon (LS15GW2-B) and others.

Door cross bars (PZVKB)

Door cross bars are designed to be mounted on the door reinforcements of KB cabinets. They provide a secure installation point for various electrical equipment, such as cable ducts and DIN rails. They are available in two lengths to fit cabinets with widths 2 and 3.

Door cross bars

Product Label	Length (mm)
PZVKB2	436
PZVKB3	686

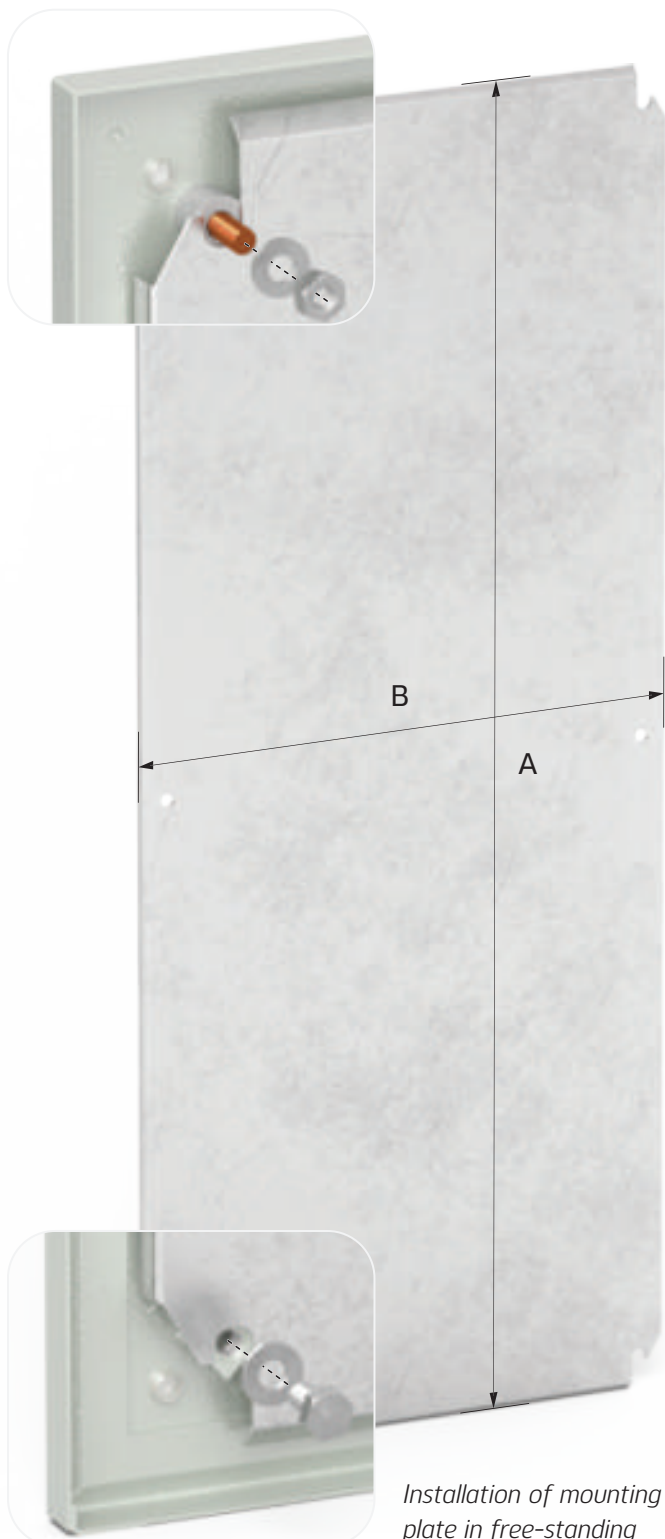
They are ordered individually

Cabinet KB2/6IP65 cross-section with door cross bars,
universal micro switch mount and micro switch

Mounting plates

MP

Mounting plate installation in KB wall-mounted cabinets, with **M8 x 30 mm copper-plated welded studs**



Installation of mounting plate in free-standing cabinets on **omega mounts**

Mounting plates are made of 2 and 1,5 mm thick galvanized sheet metal. On mounting plates with a height of 8 (1216 mm) or higher, there are additional mid-mounting holes (ø12 mm). These plates are reinforced with additional bending of the edges (except for **MP3030**, **MP4040**, and **MP6040**).

Upon request, the mounting plates can also be produced from other types of materials up to 3 mm thick.

The marking of the mounting plate corresponds to the marking of the cabinet. For example, a cabinet marked **KB2/4IP65** is compatible with a mounting plate marked **MP2/4**.

Mounting plates

Product Label	Thick (mm)	Height A (mm)	Width B (mm)
MP1/3	2	466	248
MP1/4	2	616	248
MP1/5	2	766	248
MP1/6	2	916	248
MP1/8	2	1216	248
MP1/9	2	1366	248
MP1.5/3	2	466	373
MP1.5/4	2	616	373
MP1.5/5	2	766	373
MP1.5/6	2	916	373
MP1.5/8	2	1216	373
MP1.5/9	2	1366	373
MP2/3	2	466	498
MP2/4	2	616	498
MP2/5	2	766	498
MP2/6	2	916	498
MP2/8	2	1216	498
MP2/9	2	1366	498
MP3/5	2	766	748
MP3/6	2	916	748
MP3/8	2	1216	748
MP3/9	2	1366	748
MP1/12	2	1816	248
MP1.5/12	2	1816	373
MP2/12	2	1816	498
MP3/12	2	1816	748
MP4/12	2	1816	998
MP3030	1,5	266	248
MP4040	1,5	366	348
MP6040	1,5	566	348

They are ordered individually, mounting kit included with cabinets

Mounting brackets for cable ducts and DIN rails, plexiglas holders

PKD, PKDU

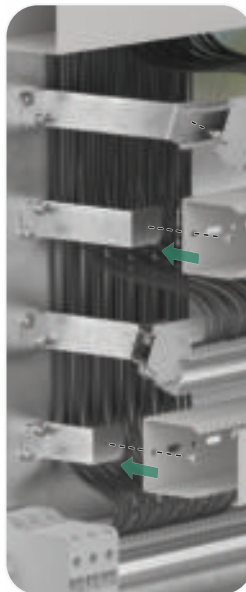
Mounting brackets for cable ducts and **DIN** rails provide flexibility for connecting input cables and are available in three heights. These Z-shaped brackets are available with and without a 20° slope and help to maximize space utilization by eliminating cable overlap over terminal blocks.

Brackets for cable ducts and DIN rails (PKD, PDKDU)

The brackets and **DIN** rails (**PKD**, **PKDU**) are attached to the mounting plate using two 4,8 mm self-tapping screws and have a 4,2mm opening for fastening cable ducts and **DIN** rails.

Product Label	Height & angle (mm, degrees)
PKD50	50
PKD90	90
PKD130	130
PKDU50	52,5 - (20°)
PKDU90	92,5 - (20°)
PKDU130	132,5 - (20°)

They are ordered in pairs



Plexiglas holders

Plexiglas holders can be installed on the mounting plate by drilling holes and creating threads for an M6 bolts.

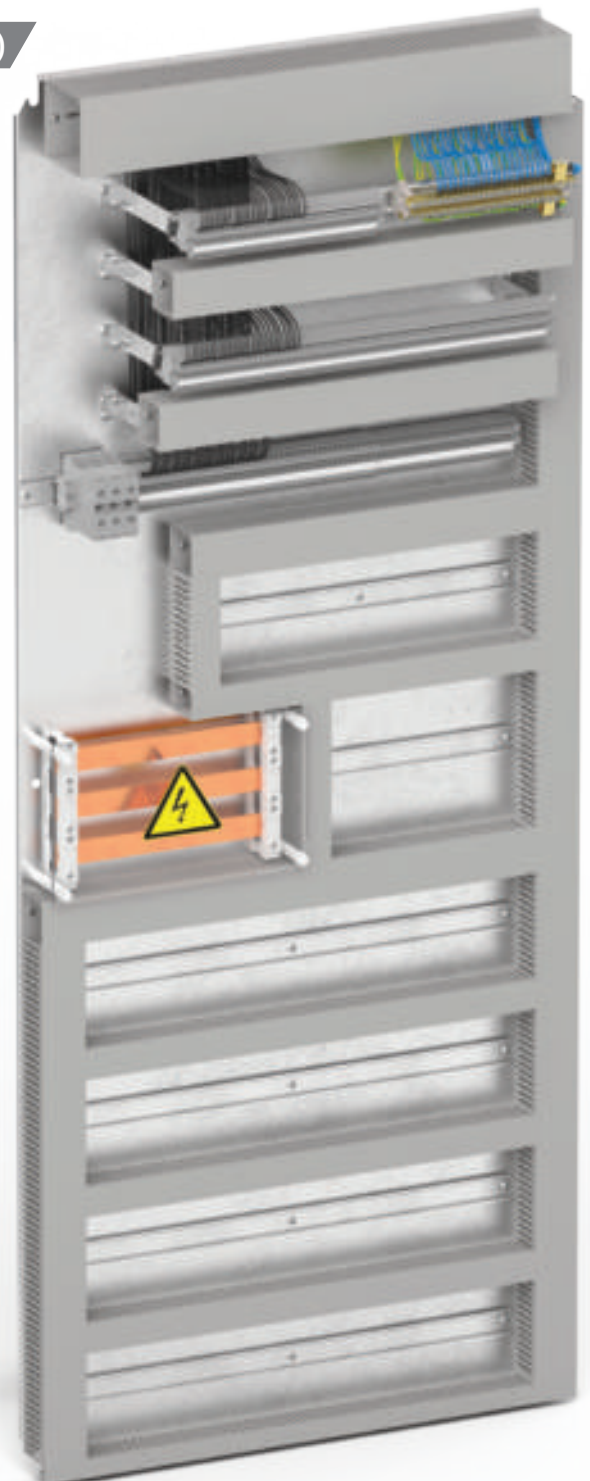
They are available in five different heights and can be stacked on top of each other, with the plexiglas secured using a decorative bolt.

Product Label	Holder height (mm)
560750/101	20
560700/451	30
560710/102	45
560720/103	70
560730/104	120
560850/341	Decorative bolt

They are ordered individually



560850/341

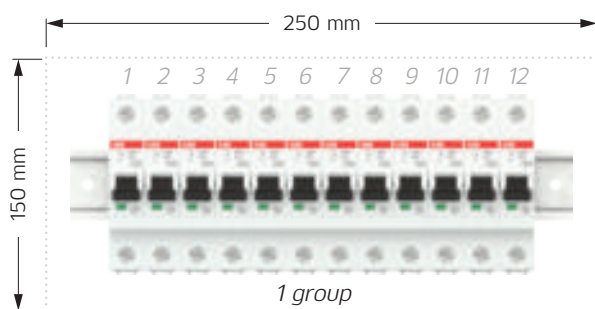


Mounting plate **MP3/12**
with equipment

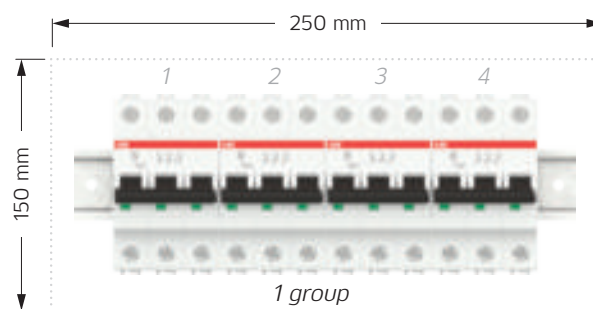
Choosing a mounting frame

HNP, NDM, DM

Cabinets and other assembly elements are divided into groups of modules, with each group occupying a space of 250 mm wide and 150 mm high. Up to 12 modules can be placed in a single group.

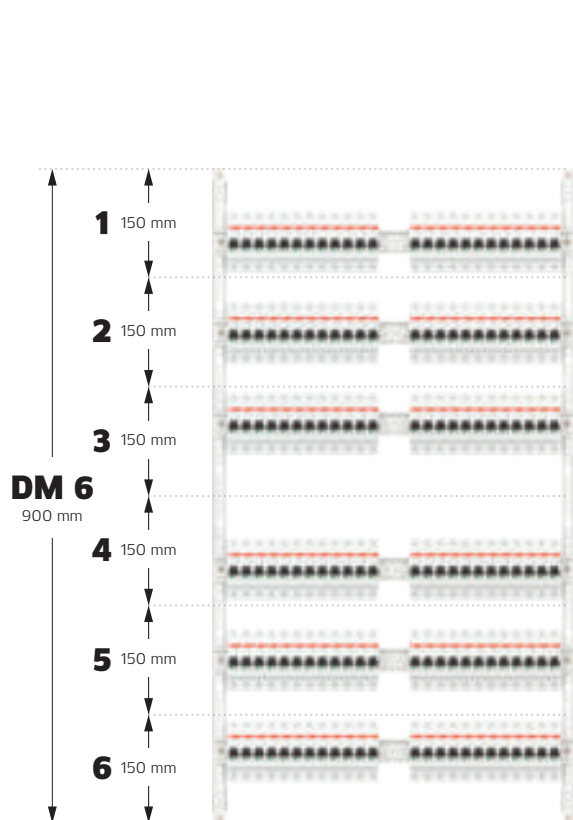


Example: 12 one pole MCBs



Example: 4 three-pole MCBs

The assembly frame for the distribution cabinet consists of horizontal (**HNP**) supporting profiles, vertical profiles (**DM**) and a set of DM profile supports (**NDM**). The numerical label in the **product label** of the horizontal and vertical frame profiles indicates the number of module groups that can be supported by the width or height of the cabinet.



Mounting frame for KB2/6IP65



Cabinet KB2/6IP65 with frame

Example:

- **HNP2** supports two groups of 12 modules per width
- **DM6** supports six groups of 12 modules per height

The combination of **HNP2** and **DM-6** can accommodate up to $2 \times 6 = 12$ groups of 12 modules or $12 \times 12 = 144$ modules.

Mounting frame supports for lightweight equipment

HNP, NDM

Mounting frame supports for lightweight equipment are available in five heights and three depths. These supports enable the mounting of **DM** profiles (p.34) and serve as a base for the installation of modular equipment.

The base of the mounting system support consists of:

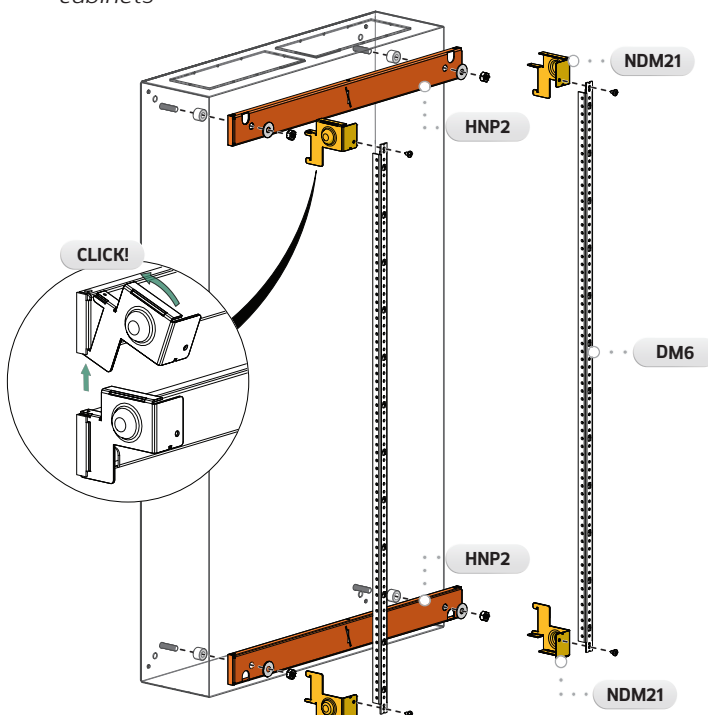
- Horizontal supporting profiles (**HNP**)
- Kit of DM profile supports (**NDM**).

In the case of free-standing cabinets, the **HNP** profiles are mounted on omega mounts, while in the case of wall-mounted cabinets, they are mounted on spot welded studs M8x30 mm. They are ordered individually, mounting kit included with cabinets.

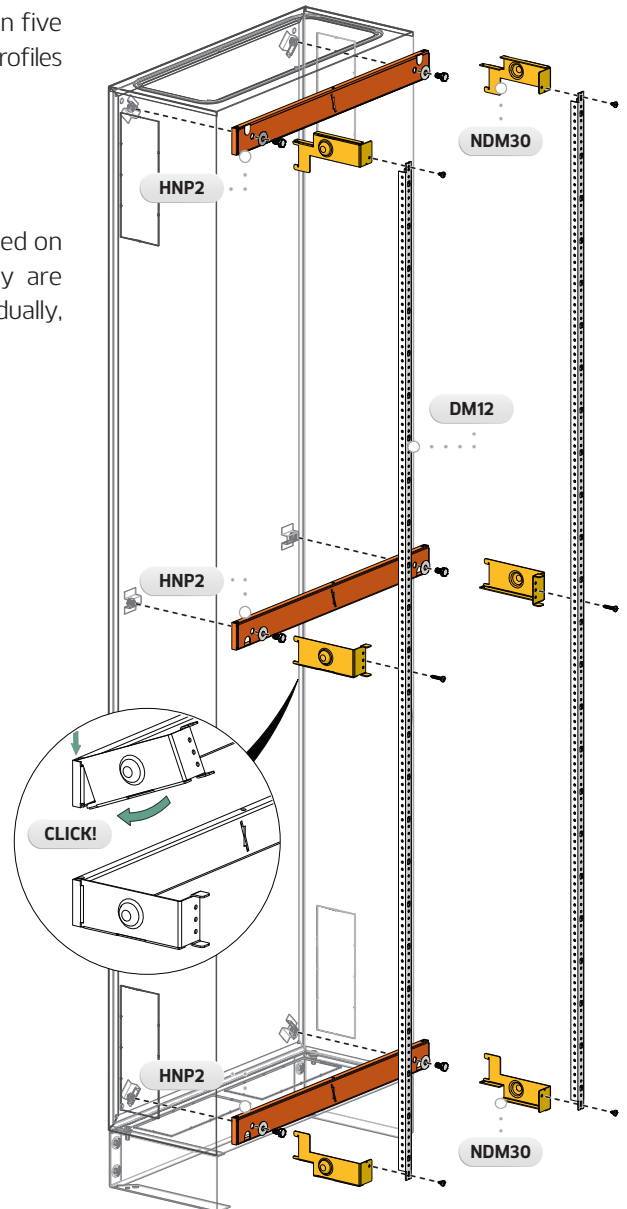
Horizontal supporting profile

Product Label	For cabinet width		For cabinet height	
			from 3 to 6 less then 950 mm	from 8 to 12 larger then 1250 mm
HNP1	1	300 mm	2 pcs	3 pcs
HNP1.5	1.5	425 mm	2 pcs	3 pcs
HNP2	2	550 mm	2 pcs	3 pcs
HNP3	3	800 mm	2 pcs	3 pcs
HNP4	4	1050 mm	2 pcs	3 pcs

They are ordered individually, mounting kit included with cabinets



KB2/6 + **HNP2** (2pcs) + **NDM21** (1kit / 4pcs) + DM6 (1pair)
Installation of frame supports for lightweight equipment



KB2/12 + **HNP2** (3pcs) + **NDM30** (1kit / 6pcs)
+ DM12 (1pair)
Installation of frame supports for lightweight equipment

DM profile supports kit

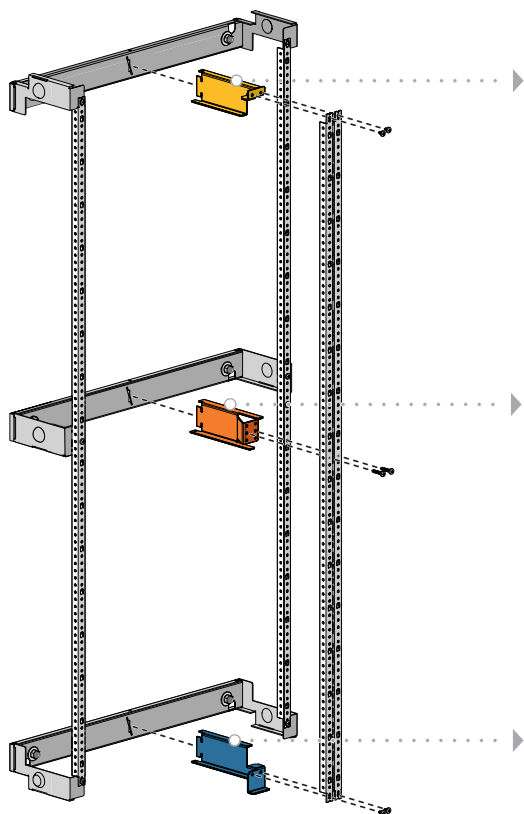
Product Label	For cabinet depth (mm)	Number of supports in a kit:
NDM21	210	4 pcs
NDM30	300	6 pcs
NDM40	400	6 pcs

They are ordered as a kit (NDM30 and NDM40 includes two screws 4,8x25 mm)

Mounting frame supports for lightweight equipment

NDMG, NDMS, NDMD

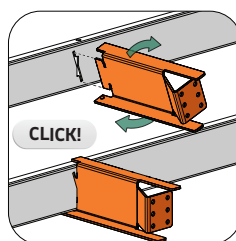
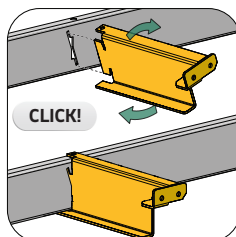
Holders for division of cabinets provide the possibility of mounting **DM** profiles (page 34) in any configuration. They are easily mounted on horizontal supporting profiles (**HNP**) using special fixing holes. The advantage of the system is fast and easier assembly. The holders for division of the cabinets into sections are: DM profile upper (**NDMG**) - middle (**NDMS**) - lower (**NDMD**) carriers.



Upper holder of DM profile

Product Label	For cabinet depth (mm)
NDMG21	210
NDMG30	300
NDMG40	400

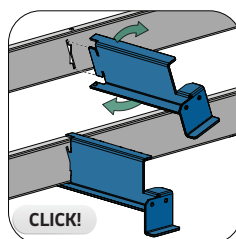
Holders are ordered individually



Middle holder of DM profile

Product Label	For cabinet depth (mm)
NDMS30	300
NDMS40	400

Holders are ordered individually with two 4,8 x 25 mm screws

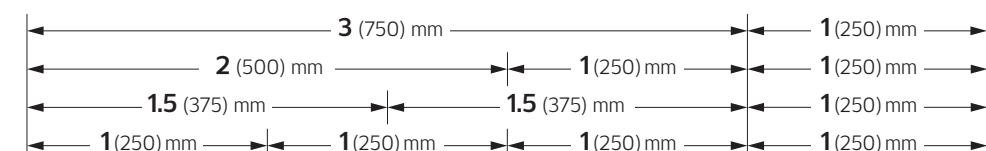
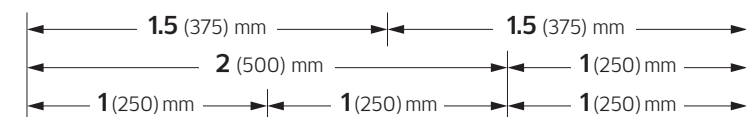
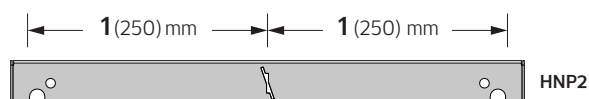


Lower holder of DM profile

Product Label	For cabinet depth (mm)
NDMD21	210
NDMD30	300
NDMD40	400

Holders are ordered individually

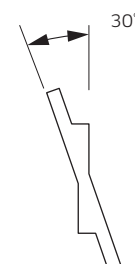
KB2/8 + HNP2 (3pcs) + NDM30 (kit - 6pcs)
+ **NDMG30** (1piece) + **NDMS30** (1piece)
+ **NDMD30** (1piece) + DM8 (2pairs)



Examples of positions of special openings on horizontal support profiles **HNP**

The special openings on the **HNP** profiles enable fast and easy fastening of **NDM** holders without the need for additional screws, simply by rotating the holders 30 degrees.

These special profile openings allow for the division of the cabinet into sections of **1, 1.5, 2** and **3**, as illustrated in the drawings.



Special opening on **HNP**

Division of the mounting frame for lightweight equipment into sections



View of the **KB4/12IP65** cabinet frame division

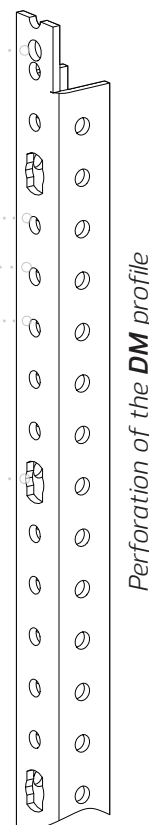
The **DM** profiles can be mounted on **NDM**, **NDMG**, **NDMS**, **NDMD** (pp. 32-33) and **HPP** (p. 34) and can support a variety of equipment such as:

- Mask holders (p.49), cable guides (p.48), busbar supports (p.46)
- Circuit breakers / disconnectors mounting plates (pp.39-42)
- **RV** (p.37) and **RVD** depth regulators (p.38)
- Power capacitor carrying plates (p.44)
- **DIN** rails (p.43) etc.

Hole for fastening the **DM** profile

Universal perforation $\varnothing 4,2$ mm for fixing additional equipment

Keyhole-shaped opening. It is used to place and secure the mask holder



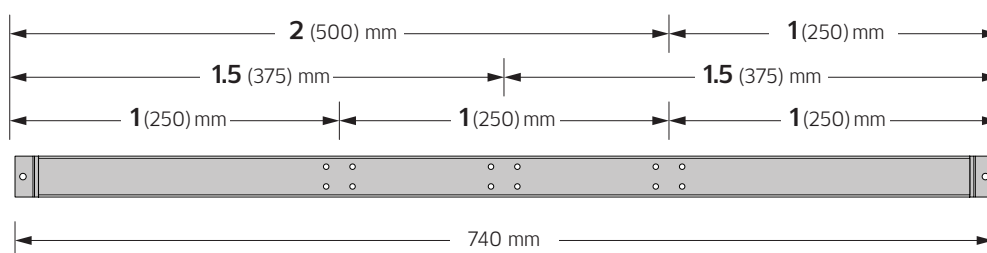
DM vertical profile

Product Label	Profile height (mm)	For cabinet height (mm)
DM3	450	500
DM4	600	650
DM5	750	800
DM6	900	950
DM8	1200	1250
DM9	1350	1400
DM12	1800	1850

They are delivered in pairs

By combining horizontal dividing profiles (**HPP**) and **DM** profiles, the cabinet can be divided into smaller sections, i.e. adapt to the needs of electrical equipment in a more optimal manner.

The horizontal dividing profiles (**HPP**) are installed between two **DM** profiles and have a perforation on the top side for mounting the **DM** profile, allowing for division into sections of 1, 1.5, 2 and 3. The profiles also have perforated sides for the installation of equipment such as **RV** depth regulators (p. 37), **NTI** three-phase insulator supports (p. 46), **NK** cable guides (p. 48) etc.



Horizontal dividing profile **HPP-3**

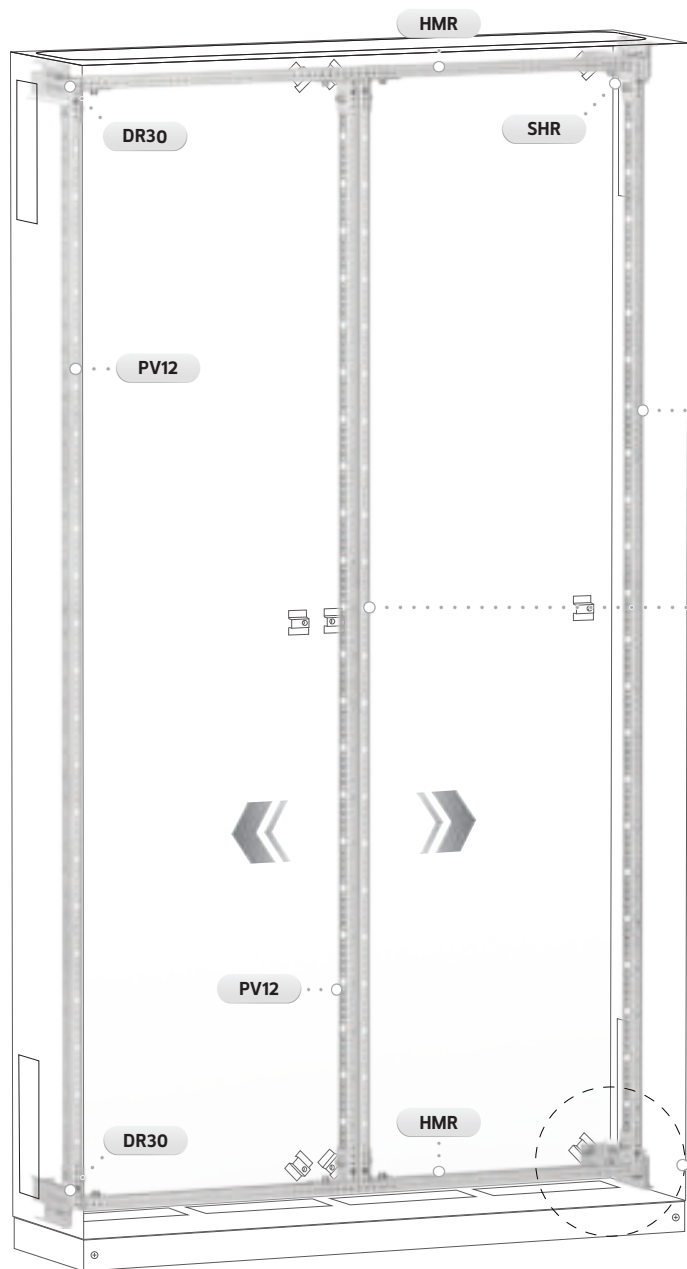
Horizontal dividing profile

Product Label	Profile width (mm)
HPP-1	240
HPP-1.5	365
HPP-2	490
HPP-3	740
HPP-4	990

Ordered individually

Mounting frame for heavier equipment

HMR, PV, SHR



Mounting frame for heavy equipment

If a stronger support structure is needed for cabinets with a height of 12 (1850 mm), mounting frame elements are used:

- Horizontal profiles (**HMR**)
- Vertical profiles (**PV12**)
- Vertical dividing profiles (**PV12SP**)
- Coupling kit (**SHR**)
- Carrier kit (**DR**)

The **PV12 vertical profiles** are mounted on the sides of the mounting frame. They are ordered individually.

PV12 = 1800 mm

The **PV12SP vertical shortened profiles** are similar to the **PV12** profiles, but are 40 mm shorter in order to be installed between two **HMR** horizontal profiles. This allows for the division of the mounting frame into sections.

They are ordered individually.

PV12SP = 1760 mm

The **SHR coupling kit** is used to connect **HMR**, **PV12** and **PV12SP** profiles.

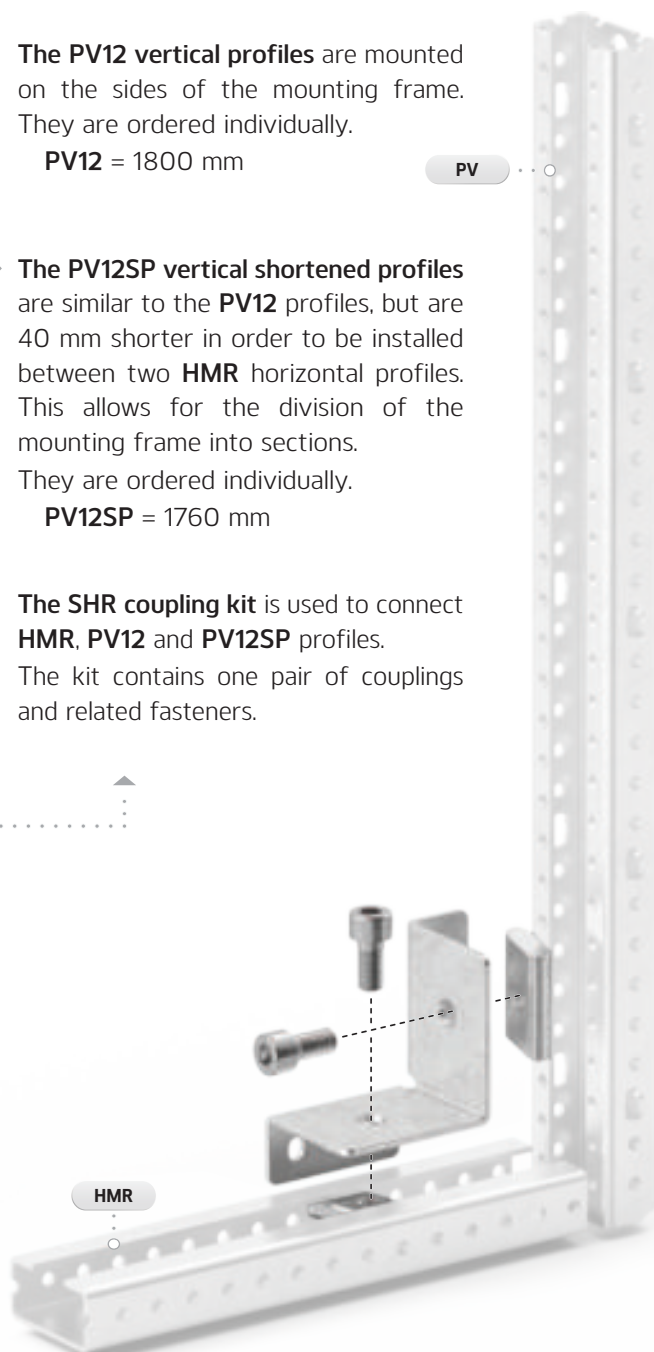
The kit contains one pair of couplings and related fasteners.

The **horizontal profiles (HMR)** are installed between two vertical profiles (**PV12**). They are produced for cabinet widths 1, 1.5, 2, 3 and 4.

If several **DIN** rails, crossbars or mounting plates are mounted on the mounting frame, then it is considered that the frame is additionally reinforced and there is no need to use the **HMR** profile.

Product Label	Profile length (mm)
HMR1	210
HMR1.5	335
HMR2	460
HMR3	710
HMR4	960

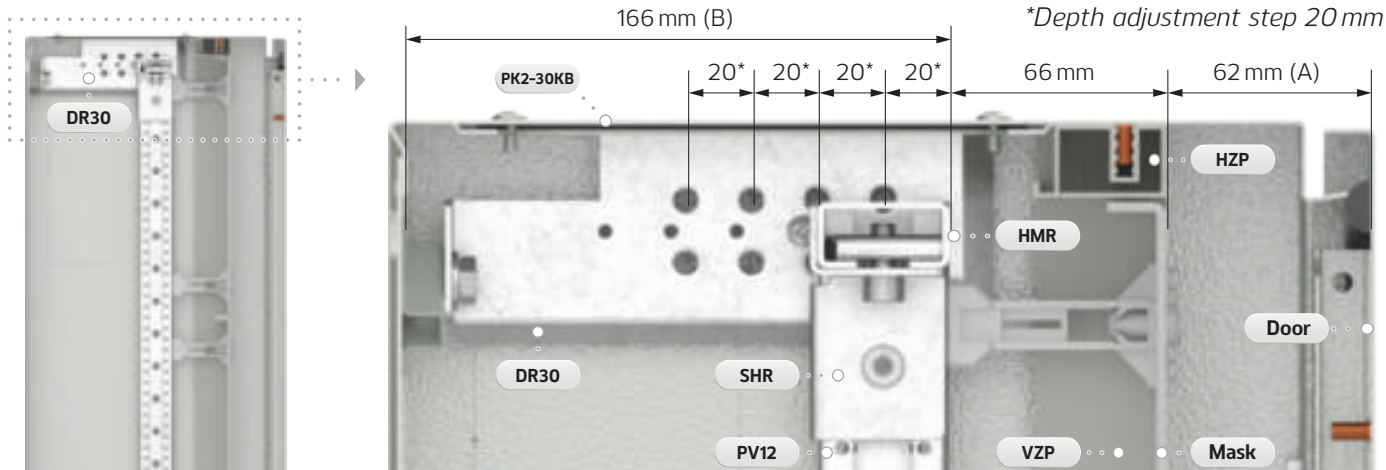
They are delivered in pairs



Assembly of the **SHR** set on **PV** and **HMR** profiles

DR Carriers of mounting frame for heavier equipment

DR



The DR carriers (DR30, DR40) are designed to allow adjustment of mounting frame depth for heavier equipment (see page 35). **DR30** is used for cabinets with a depth of 300 mm, and **DR40** for 400 mm.

Product Label	Distance between front of the frame and back of the cabinet (B)	Distance between the mask and the door (A)
DR30	from 106 mm to 166 mm	From 62 mm to 122 mm
DR40	from 166 mm to 266 mm	From 62 mm to 162 mm

The DR carrier kit includes two pairs of carriers and related fasteners.

Ordered as a kit with the necessary fasteners



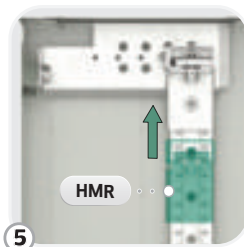
Cross-section of cabinet
KB2/12IP65



The upper DR carrier is mounted to the omega profile using a washer and bolt. The 4,8 mm self-tapping screw serves as a limiter for future installation of the frame.



The PV profile is secured to the upper DR carrier by an M8 Allen bolt.



After the PV profile is fixed, the HMR is positioned in the proper position.



The lower DR carrier is mounted to the omega profile using a washer and bolt. The M8 Allen bolt has the function of support for the PV profile.



The M8 Allen bolt supports the bottom of the PV profile, which is then positioned vertically.



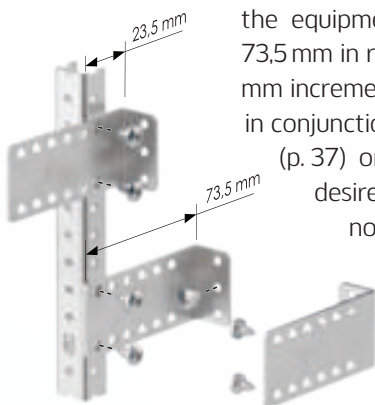
Mounting of
the frame

Load bearing elements

RV, RV-P, UMP

Depth regulator (RV) is used to mount non-modular equipment under the mounting frame of a cabinet. It is made from 2 mm thick galvanized sheet metal and allows for the depth of the equipment to be adjusted from 23,5 mm to 73,5 mm in relation to the front of the frame in 10 mm increments. The RV depth regulators are used in conjunction with **DIN-SP** rail (p.43), **UMP** plates (p. 37) or **SP** crossbar (p.38) to achieve the desired depth for the installation of non-modular equipment.

They are ordered in pairs.

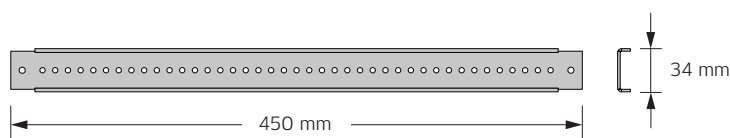


Example of installing an RV depth regulator on a DM profile

Crossbars (RV-P) are mounted to either the **RV** or **RVD** depth regulators. They allow for the installation of various non-modular equipment, such as current transformers and low-voltage insulators (p. 47) etc. Crossbars have a $\varnothing 4.2$ mm perforation on the front side with a 10 mm spacing.

Product Label	Crossbar width (mm)
RV-P1	200
RV-P1.5	325
RV-P2	450
RV-P3	700

Ordered individually



Crossbar RV-P2

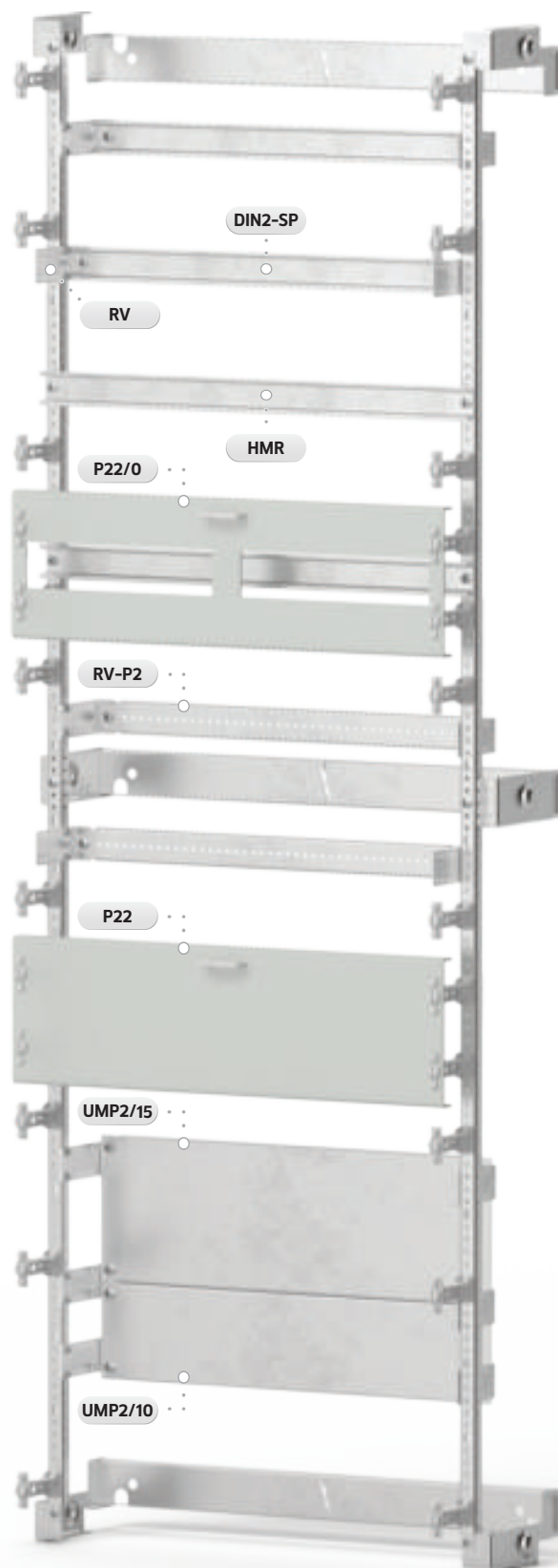
The universal mounting plates (UMP) are made from 1,5 mm thick galvanized sheet metal. It can be mounted on **RV** or **RVD** depth regulators to allow for the installation of a variety of non-modular equipment, such as: electricity meters, PLC, rectifiers, transformers etc.

Product Label	Plate height (mm)	Section width	Plate width (mm)
UMP1/10	100	1	205
UMP1/15	150		
UMP1.5/10	100	1.5	330
UMP1.5/15	150		
UMP2/10	100	2	455
UMP2/15	150		
UMP3/10	100	3	705
UMP3/15	150		

They are ordered individually

The UMP can be arranged in rows to achieve the necessary height (two adjacent plates share one pair of **RV** or **RVD** depth regulators).

Holes or threads can be drilled on the plates for mounting specific equipment.

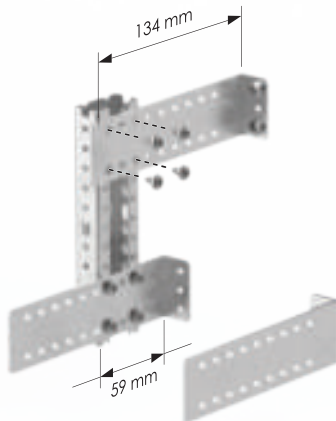


The use of load bearing elements on the DM frame

Load bearing elements

RVD, SP, PR

Depth regulator (RVD) is used to mount non-modular equipment under the mounting frame of a cabinet. It is made from 2,5 mm thick galvanized sheet metal and allows for the depth of the equipment to be adjusted from 59 to 134 mm in relation to the front of the frame in 10 mm increments.



The **RVD** depth regulators are used in conjunction with **DIN-SP** rail (p. 43), **UMP** plates (p. 37) or **SP** crossbar (p. 38) to achieve the desired depth for the installation of non-modular equipment.

They are ordered in pairs.

*Example of installing an **RVD** depth regulator on a **PV** profile*

Crossbars (SP) are made of 2 mm thick galvanized sheet metal and are used to mount equipment under the mounting frame. They are mounted on the **RV** or **RVD** depth regulators (pp. 37-38).

Crossbars SP

Product Label	Crossbar length (mm)
SP1	195
SP1.5	320
SP2	445
SP3	695
SP4	945

They are ordered individually

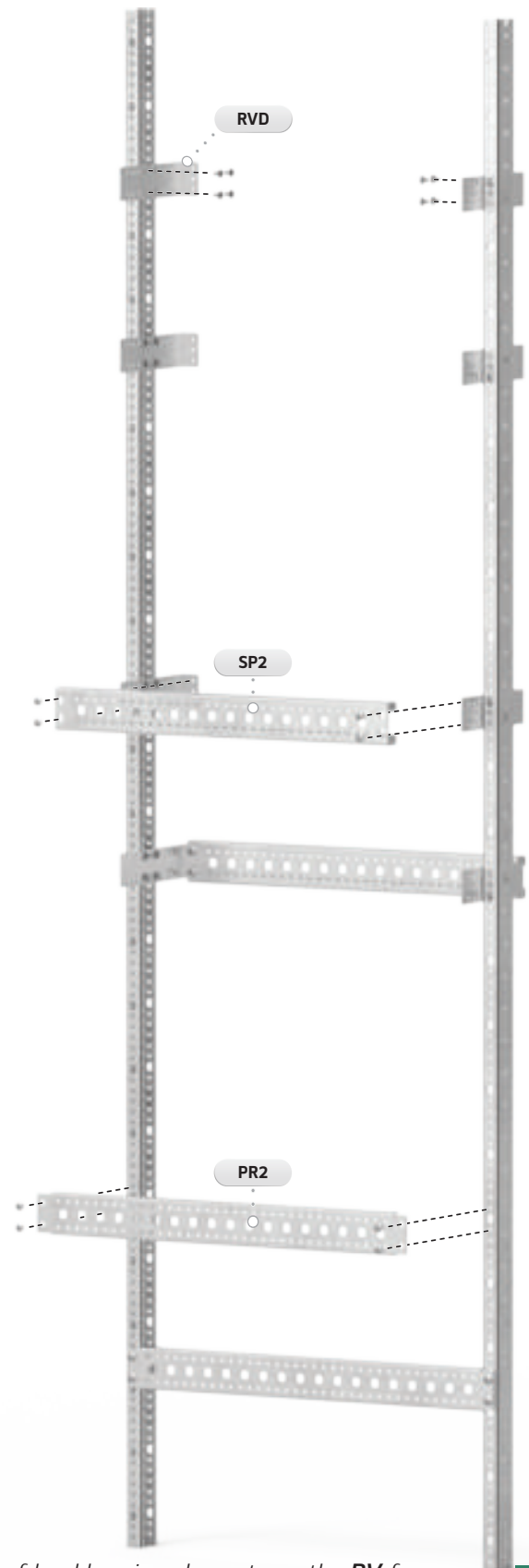
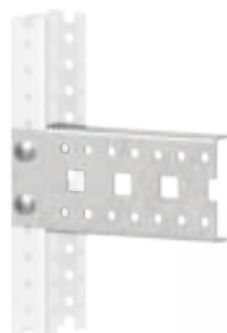


The PR crossbars (PR) are used to mount equipment onto the mounting frame. They are made from 2 mm thick galvanized sheet metal and can be mounted on the front or back of the **PV** profile (p. 35) or on the front of the **DM** profile (p. 34).

Crossbars PR

Product Label	Crossbar length (mm)
PR1	245
PR1.5	370
PR2	495
PR3	745
PR4	995

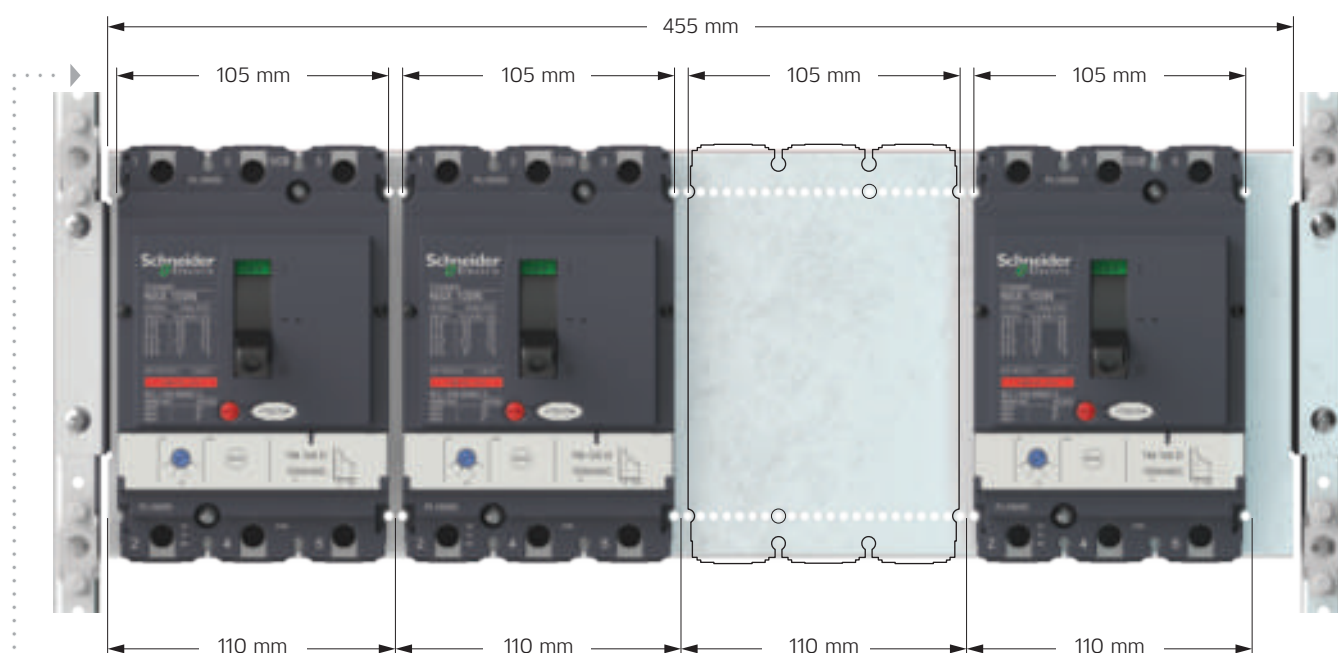
They are ordered individually



*Use of load bearing elements on the **PV** frame*

Mounting plates for Schneider Electric circuit breakers

Mounting plates for Schneider Electric circuit breakers are designed for use with fixed three-pole and/or four-pole circuit breakers NSX250 and NSX630. They feature two rows of perforated holes, which can be threaded for fastening depending on the desired position or type of breaker. These mounting plates are mounted to **DM** (p. 34) or **PV** profiles (p. 35) using 4,8 mm self-tapping screws and are made from 1,5 mm thick galvanized sheet metal. They are ordered individually.



Mounting the NSX250 circuit breakers on the **P2NSX100-250** mounting plate

				Section width			
				1	1.5	2	3
Maximum installation space				205 mm	330 mm	455 mm	705 mm
Product Label				P1NSX100-250	P1.5NSX100-250	P2NSX100-250	P3NSX100-250
NSX250 to 250A	3P	105 mm	110 mm	1 pc	3 pcs	4 pcs	6 pcs
	4P	140 mm	145 mm	1 pc	2 pcs	3 pcs	4 pcs
Product Label				P1NSX400-630	P1.5NSX400-630	P2NSX400-630	P3NSX400-630
NSX630 to 630A	3P	140 mm	145 mm	1 pc	1 pc	2 pcs	4 pcs
	4P	185 mm	190 mm	1 pc	2 pcs	1 pc	3 pcs

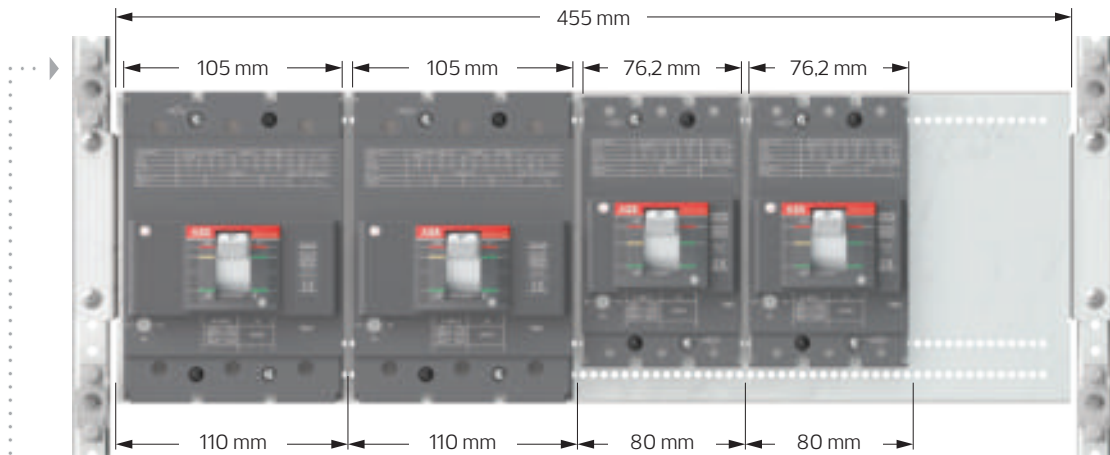
Examples of Schneider Electric circuit breakers mounted to mounting plates






They are ordered individually

Mounting plates for ABB circuit breakers

ABB circuit breaker mounting plates are designed for use with fixed three-pole and/or four-pole circuit breakers XT1, XT2, XT3, XT4, XT5, XT6, T5 and T6. They feature two or three rows of perforated holes, which can be threaded for fastening depending on the desired position or type of breaker. They are mounted to **DM** (p. 34) or **PV** profiles (p. 35) using 4,8 mm self-tapping screws and are made from 1,5 mm thick galvanized sheet metal. They are ordered individually.



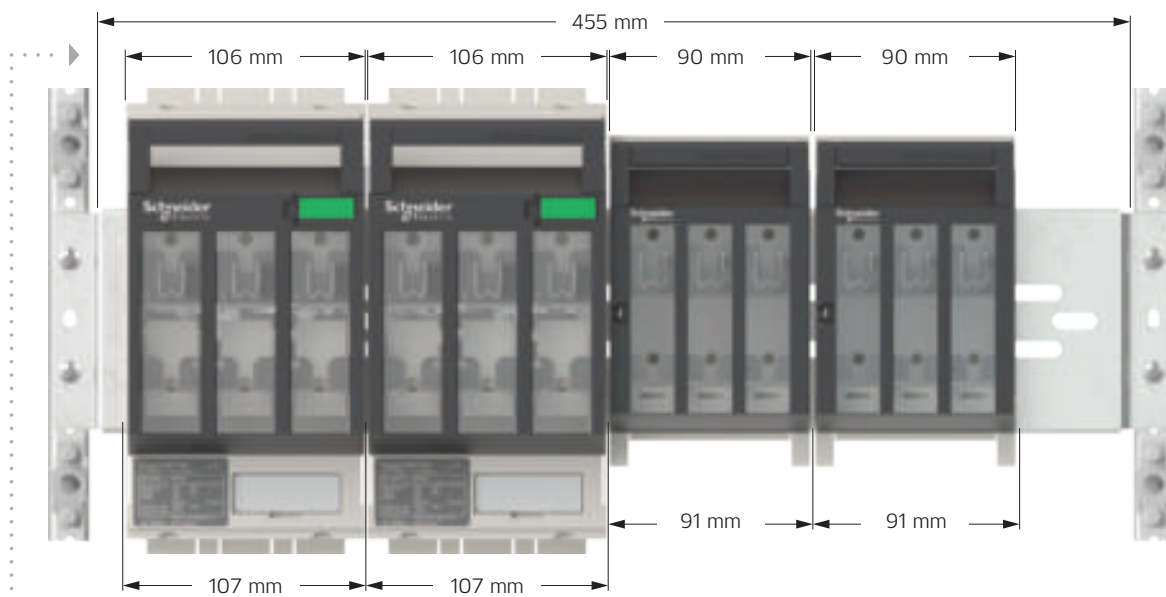
Mounting the XT1 and XT3 circuit breakers on the **P2XT1-XT3** mounting plate

		Breaker width	Minimal installation space	Section width				Examples of ABB circuit breakers mounted to mounting plates
				1	1.5	2	3	
Maximum installation space				205 mm	330 mm	455 mm	705 mm	
Product Label				P1XT1-XT3	P1.5XT1-XT3	P2XT1-XT3	P3XT1-XT3	
XT1 to 160A	3P	76,2 mm	80 mm	2 pcs	4 pcs	5 pcs	8 pcs	
	4P	101,2 mm	105 mm	1 pc	3 pcs	4 pcs	6 pcs	
XT3 to 250A	3P	105 mm	110 mm	1 pc	3 pcs	4 pcs	6 pcs	
	4P	140 mm	145 mm	1 pc	2 pcs	3 pcs	4 pcs	
Product Label				P1XT2-XT4	P1.5XT2-XT4	P2XT2-XT4	P3XT2-XT4	
XT2 to 160A	3P	90 mm	95 mm	2 pcs	3 pcs	4 pcs	7 pcs	
	4P	120 mm	125 mm	1 pc	2 pcs	3 pcs	5 pcs	
XT4 to 250A	3P	103 mm	110 mm	1 pc	3 pcs	4 pcs	6 pcs	
	4P	140 mm	145 mm	1 pc	2 pcs	3 pcs	4 pcs	
Product Label				P1XT5	P1.5XT5	P2XT5	P3XT5	
XT5 to 630A	3P	139,5 mm	144,7 mm	1 pc	2 pcs	3 pcs	4 pcs	
	4P	186 mm	191,2 mm	1 pc	1 pc	2 pcs	3 pcs	
Product Label				P1XT6	P1.5XT6	P2XT6	P3XT6	
XT6 to 630A	3P	210 mm	215 mm	-	1 pc	2 pcs	3 pcs	
	4P	280 mm	285 mm	-	-	1 pc	2 pcs	

They are ordered individually

Universal mounting plates for Schneider Electric and ABB fuse switch disconnectors

Universal mounting plates for Schneider Electric and ABB fuse switch disconnectors are used for 3-pole and 4-pole Schneider Electric (**ISFT series**) as well as ABB (**XLP series**) disconnectors. The universal plates are equipped with an oval perforation which enables flexible positioning of the disconnectors. The plates are fastened using 4,8 mm self-tapping screws on **DM** (p. 34) or **PV** profile (p. 35). They are made from 1,5 mm thick galvanised sheet metal. They are ordered individually.



Mounting the ISFT160 and ISFT100 fuse switch disconnectors on the **P2-NV00-0** mounting plate

		Fuse switch disconnector width	Minimal installation space	Section width			
				1	1.5	2	3
Maximum installation space				205 mm	330 mm	455 mm	705 mm
Product Label				P1-NV00-0	P1.5-NV00-0	P2-NV00-0	P3-NV00-0
ISFT100 to 100A	3P	90 mm	91 mm	2 pcs	3 pcs	4 pcs	7 pcs
ISFT160 to 160A	3P	106 mm	107 mm	1 pc	3 pcs	4 pcs	6 pcs
Product Label				P1-NV1	P1.5-NV1	P2-NV1	P3-NV1
ISFT250 to 250A	3P	184 mm	200 mm	1 pc	1 pc	2 pcs	3 pcs
Product Label				-	P1.5-NV2-3	P2-NV2-3	P3-NV2-3
ISFT400 to 400A	3P	210 mm	225 mm	-	1 pc	2 pcs	3 pcs
ISFT630 to 630A	3P	250 mm	275 mm	-	1 pc	1 pc	2 pcs

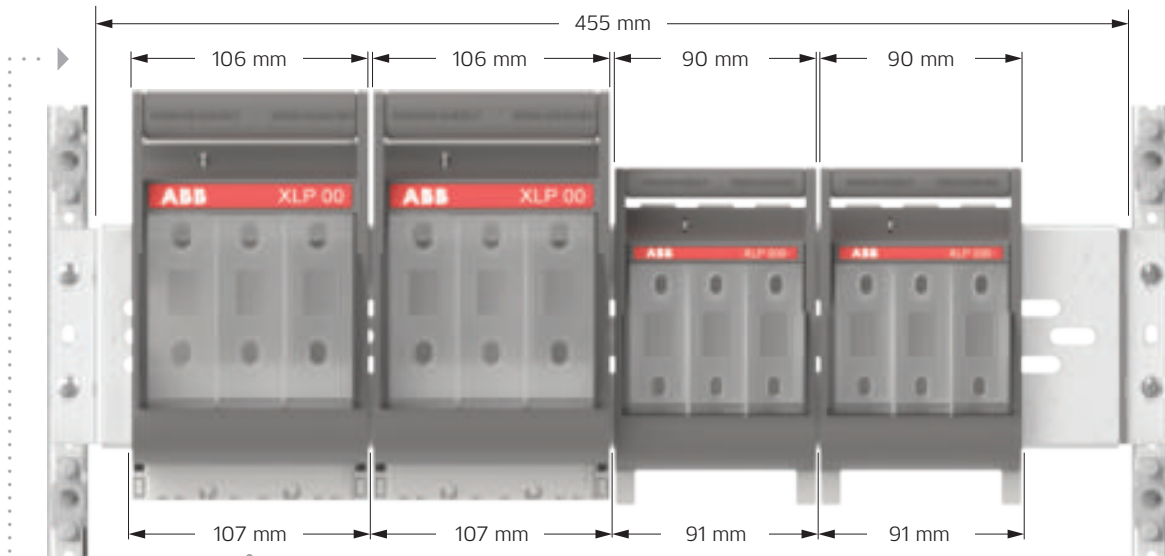
Examples of Schneider Electric disconnectors mounted to mounting plates



They are ordered individually

Universal mounting plates for Schneider Electric and ABB fuse switch disconnectors

Universal mounting plates for Schneider Electric and ABB fuse switch disconnectors are used for 3-pole and 4-pole Schneider Electric (ISFT series) as well as ABB (XLP series) disconnectors. The universal plates are equipped with an oval perforation which enables flexible positioning of the disconnectors. The plates are fastened using 4,8 mm self-tapping screws on DM (p. 34) or PV profiles (p. 35). They are made from 1,5 mm thick galvanised sheet metal. They are ordered individually.



Mounting the XLP00 and XLP000 fuse switch disconnectors on the **P2-NV00-0** mounting plate

				Section width			
				1	1.5	2	3
Maximum installation space				205 mm	330 mm	455 mm	705 mm
Product Label				P1-NV00-0	P1.5-NV00-0	P2-NV00-0	P3-NV00-0
XLP000 to 100A	3P	89 mm	91 mm	2 pcs	3 pcs	4 pcs	7 pcs
XLP00 to 160A	3P	105 mm	107 mm	1 pc	3 pcs	4 pcs	6 pcs
Product Label				P1-NV1	P1.5-NV1	P2-NV1	P3-NV1
XLP1 to 250A	3P	184 mm	200 mm	1 pc	1 pc	2 pcs	3 pcs
Product Label				-	P1.5-NV2-3	P2-NV2-3	P3-NV2-3
XLP2 to 400A	3P	210 mm	225 mm	-	1 pc	2 pcs	3 pcs
XLP3 to 630A	3P	250 mm	275 mm	-	1 pc	1 pc	2 pcs

Examples of ABB disconnectors mounted to mounting plates



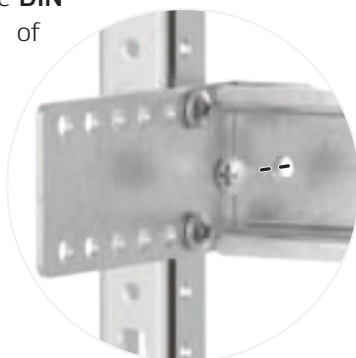
They are ordered individually

The deep DIN rails

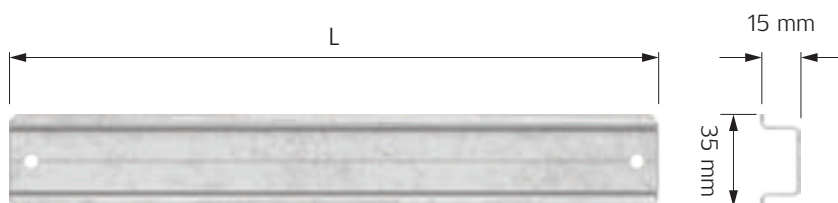
DIN, DIN-SP

The deep **DIN rails** are used when installing electrical equipment on a mounting frame. The **DIN-SP** rail is always used in conjunction with the **RV** (p.37) or **RVD** (p.38) depth regulators, in order to obtain sufficient space between the mask and the **DIN** rail for the installation of non-modular equipment.

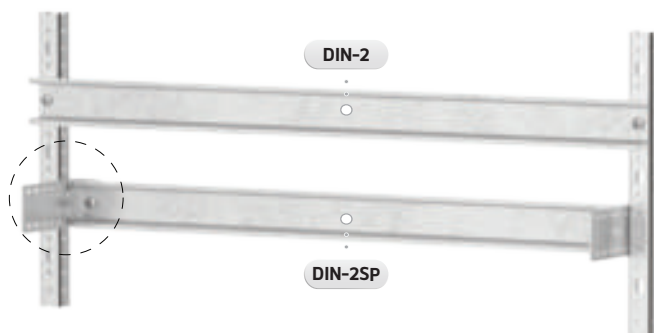
The **DIN** rail has fixing holes and rounded edges for ease of use and installation. They are ordered individually.



Depth regulator **RV**



Drawing of a deep **DIN** rail



DIN rails

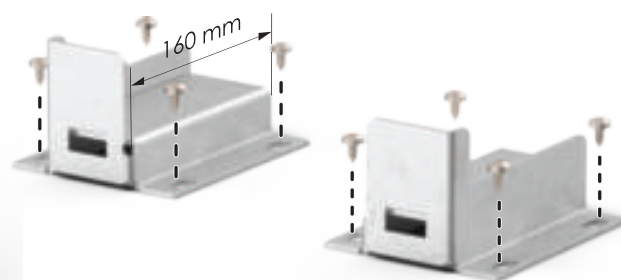
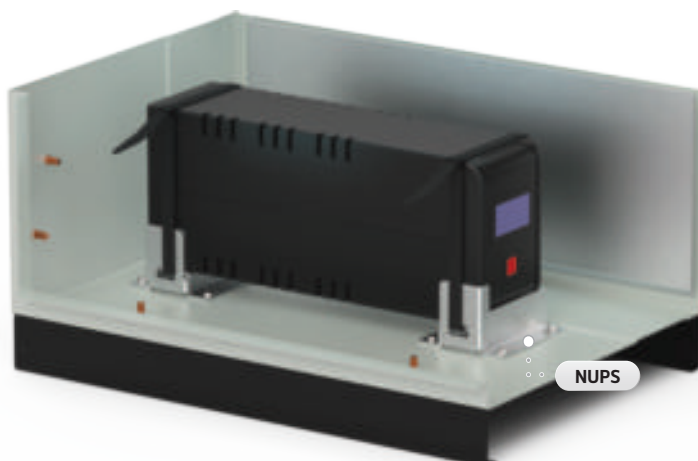
Product Label	Rail length L (mm)
DIN-1	246
DIN-1.5	371
DIN-2	496
DIN-3	746
DIN-1SP	198
DIN-1.5SP	323
DIN-2SP	448
DIN-3SP	698

They are ordered individually

Universal UPS carrier

NUPS

The **universal UPS carrier** is a mounting system designed to allow the installation of various models of uninterruptible power supply (**UPS**) units at the bottom of a cabinet. It consists of two galvanized sheet metal supports and two 12 x 1000 mm plastic ties. The supports are attached to the bottom of the cabinet using the self-tapping screws 4,8 mm and the UPS unit is then secured to the supports using the plastic ties. They are ordered in pairs.



View of the **UPS** carrier kit

Power capacitor carrying plates

NPK

Mounting of **power capacitor carrying plates** on **PV** profiles (p.35) is easy with the help of six 4,8 mm self-tapping screws.

The carrying plates come in widths 2 and 3 and feature perforations with $\varnothing 13$ mm holes (suitable for M10 bolt connection) that are compatible with cylindrical capacitors from leading manufacturers such as **ABB**, **Schneider Electric**, **Circuitor**, etc.

They are ordered individually.

Power capacitor carrying plates

Product Label	Plate width (mm)	Plate depth (mm)
NPK2	494	165
NPK3	744	165

They are ordered individually

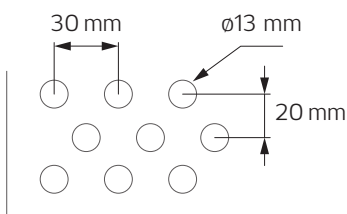


Plate perforation



Power capacitor **carrying plates** with **Schneider Electric** capacitors

Cross-section



Installation of power capacitor, contractors and disconnectors in the **KB3/12IP65** cabinet

NPK3

Distribution Blocks

DB, RB



RB-125-407



Example of a three-block **DB250A** connection for a three-phase system

High-quality distribution blocks facilitate work, save space and provide many other benefits:

- Minimum space for maximum power
- Protection cover and insulating screens are transparent
- Insulating screen between each row
- Easy and safe connections
- Easily clips onto DIN rail or mounts to panel with screws
- One-piece brass bars provide reliability
- Input separated from output
- Easy balancing of phase loads
- IP 20 protection
- Strong mechanical assembly
- Neutral bar available (RB-125-4XX)
- RoHS compliant
- In accordance with standard EN 61238-1 and EN 60947-7-1
- Halogen free
- Flammability Rating UL® 94 V-2

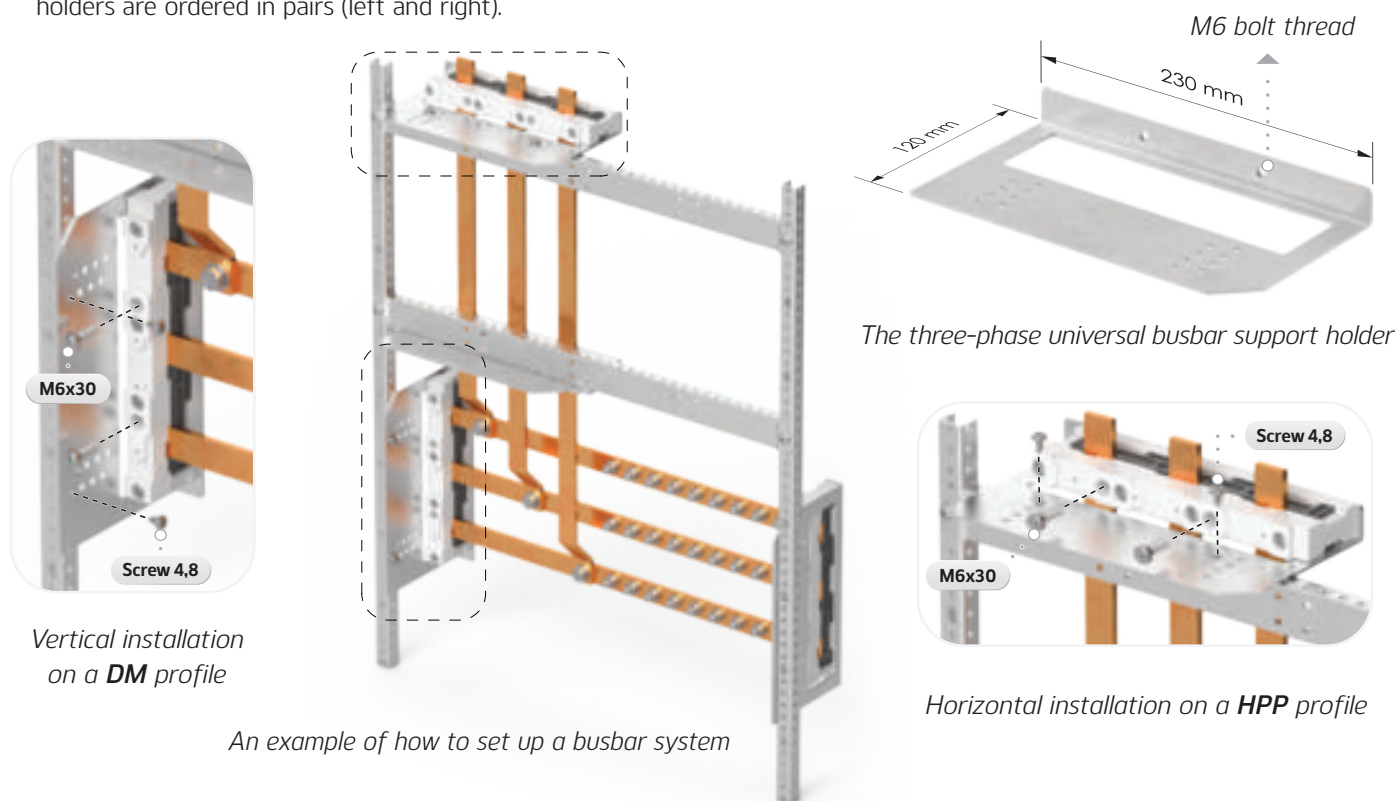
Product Label	Max IEC current	Number of poles (phases)	Line side		Load side		Dimensions L x H x W (mm)
			Tube insulated terminal mm ² (quantity)	Without tube insulated terminal mm ² (quantity)	Tube insulated terminal mm ² (quantity)	Without tube insulated terminal mm ² (quantity)	
DB135A	135A (Cu) 120A (Al)	1	2,5 - 10 mm ² 2,5 - 35 mm ²	2,5 - 10 mm ² 2,5 - 35 mm ²	2,5 - 10 mm ² (2) 2,5 - 16 mm ² (4)	2,5 - 10 mm ² (2) 2,5 - 16 mm ² (4)	49 x 90 x 24,3
DB200A	200A (Cu) 160A (Al)	1	10 - 70 mm ²	10 - 70 mm ²	2,5 - 16 mm ² (6)	2,5 - 16 mm ² (6)	46 x 75,8 x 32,4
DB250A	280A (Cu) 250A (Al)	1	35 - 120 mm ²	35 - 120 mm ²	2,5 - 10 mm ² (4) 2,5 - 16 mm ² (5) 6 - 25 mm ² (2)	2,5 - 10 mm ² (4) 2,5 - 16 mm ² (5) 6 - 35 mm ² (2)	51 x 97 x 44,4
DB400A	425A (Cu) 380A (Al)	1	95 - 240 mm ²	95 - 240 mm ²	2,5 - 35 mm ² (4) 6 - 50 mm ² (3)	2,5 - 35 mm ² (4) 6 - 50 mm ² (3)	51,2 x 100,3 x 51,4
RB-125-407	125A	4	10 - 25 mm ²	10 - 25 mm ²	1,5 - 6 mm ² (5) 6 - 16 mm ² (1)	1,5 - 6 mm ² (5) 6 - 16 mm ² (1)	50 x 85 x 109
RB-125-411	125A	4	10 - 25 mm ²	10 - 25 mm ²	1,5 - 6 mm ² (7) 6 - 16 mm ² (3)	1,5 - 6 mm ² (7) 6 - 16 mm ² (3)	50 x 85 x 147
RB-125-415	125A	4	10 - 25 mm ²	10 - 25 mm ²	1,5 - 6 mm ² (11) 6 - 16 mm ² (3)	1,5 - 6 mm ² (11) 6 - 16 mm ² (3)	50 x 85 x 182

They are ordered individually

Three-phase universal busbar support holder

NTI

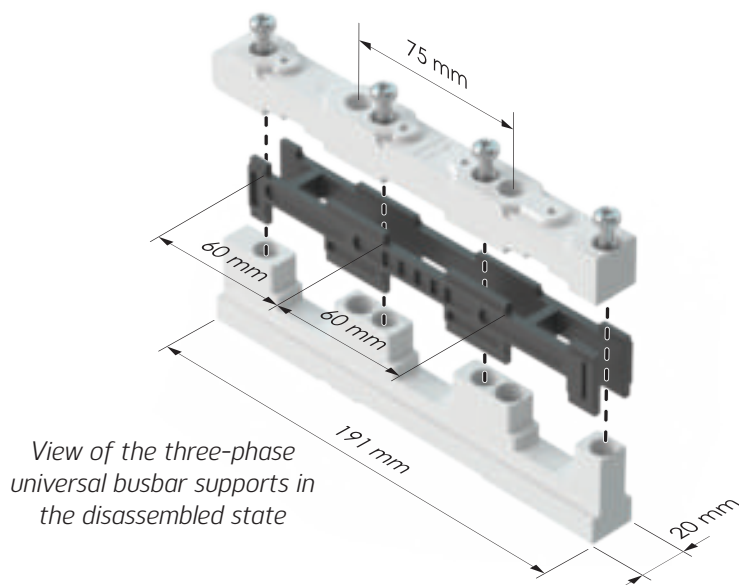
The **three-phase universal busbar support holder (NTI)** is used to secure and hold universal supports for busbars support. These holders can be mounted on **DM** (p. 34), **PV** (p. 35) and **HPP** (p. 34) profiles using 4,8 mm self-tapping screws. They have the ability to adjust their depth in 5 mm increments, making it easy to install the busbars at the desired position. The holders are ordered in pairs (left and right).



The three-phase universal busbar supports

SI014950

The **three-phase universal busbar supports (SI014950)** are designed to hold three copper busbars with dimensions ranging from 12x5 mm to 30x10 mm. They have two holes for M6 x 30 mm bolts with cylindrical heads, which can be used to attach them to the three-phase universal busbar support holder (**NTI**) or mounting plates (**MP**). The three-phase universal supports conform to the IEC 61439-1:2011 standard.



Electrical data	
Rated voltage (IEC) AC	800 V
Rated surge voltage Uimp	8 kV
Max. permitted voltage (IEC) AC	1000 V
Max. permitted voltage (IEC) DC	1500 V
Short-circuit capacity IEC/EN (for busbars 30x10 mm with two busbar support at a distance of 250 mm)	Ipk = 73 kA
Mechanical data	
Length X Width x Height	20 x 191 x 50 mm
Weight	127 gr
Material properties	
Main body	Temperature stability 125°C. Self-extinguishing in acc. to UL 94. Creepage resistance CTI 600, halogen-free.
Screws	Galvanized cylinder head screws with slot (PZ2).

They are ordered individually

Low voltage insulators with metric thread

548xxx

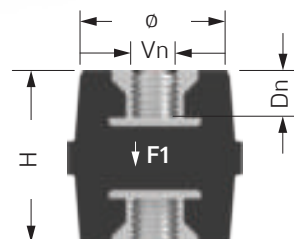
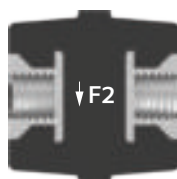
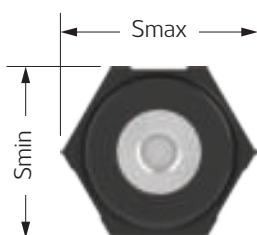
Low voltage hexagonal insulators are robust and reliable, available in a wide range of sizes.

Features of the insulators:

- Halogen free
- High resistance to leakage current
- Great stability of electrical and mechanical parameters
- Fiberglass reinforced
- RoHS compliant
- UL® Recognized in E125470 and evaluated for dielectric withstand rating of 1,500 VAC/DC
- Flammability Rating UL® 94V-O
- Material: steel, glass fibre reinforced polyamide
- Finish: electrogalvanized
- Working Temperature: from -40°C to 130°C
- Complies With: IEC® 60695-2-11 (glow wire test 960°C)



Installation of copper
busbar on insulators
ISOTP30M8 (548450)



Name	Product Label	Height (H)	Hex width		Thread size		Diameter of the support surface (ø)	Static Load	
			Min (Smin)	Max (Smax)	Size (Vn)	Depth (Dn)		F1	F2
ISOTP20M6	548420	20 mm	17 mm	20 mm	M6	6 mm	15 mm	1,5 N	1,0 N
ISOTP25M5	548700	25 mm	19 mm	20 mm	M5	6 mm	18 mm	3,0 N	1,6 N
ISOTP25M6	548430	25 mm	19 mm	20 mm	M6	6 mm	18 mm	3,0 N	1,6 N
ISOTP30M6	548440	30 mm	30 mm	34 mm	M6	8 mm	26 mm	6,0 N	3,0 N
ISOTP30M8	548450	30 mm	30 mm	34 mm	M8	8 mm	26 mm	6,0 N	3,0 N
ISOTP30M10	548451	30 mm	30 mm	34 mm	M10	8 mm	26 mm	6,0 N	3,0 N
ISOTP35M6L	548470	35 mm	41 mm	46 mm	M6	8 mm	34 mm	11,0 N	5,0 N
ISOTP35M8	548480	35 mm	41 mm	46 mm	M8	8 mm	34 mm	11,0 N	8,0 N
ISOTP35M10	548490	35 mm	41 mm	46 mm	M10	10 mm	34 mm	11,0 N	8,0 N
ISOTP40M6	548500	40 mm	46 mm	53 mm	M6	9 mm	40 mm	11,0 N	8,0 N
ISOTP40M8	548510	40 mm	46 mm	53 mm	M8	8 mm	40 mm	11,0 N	8,0 N
ISOTP45M6	548530	45 mm	41 mm	47 mm	M6	9 mm	34 mm	11,0 N	6,5 N
ISOTP45M8	548540	45 mm	41 mm	47 mm	M8	15 mm	34 mm	11,0 N	6,5 N
ISOTP45M8L	548550	45 mm	50 mm	57 mm	M8	15 mm	41 mm	18,0 N	10,0 N
ISOTP45M10	548560	45 mm	50 mm	57 mm	M10	10 mm	41 mm	18,0 N	7,0 N
ISOTP50M6	548570	50 mm	50 mm	57 mm	M6	9 mm	41 mm	20,0 N	7,0 N
ISOTP50M8	548580	50 mm	50 mm	57 mm	M8	15 mm	41 mm	20,0 N	10,0 N
ISOTP50M10	548590	50 mm	50 mm	57 mm	M10	10 mm	41 mm	20,0 N	10,0 N
ISOTP60M8	548600	60 mm	55 mm	63 mm	M8	15 mm	44 mm	22,0 N	10,0 N
ISOTP60M10	548610	60 mm	55 mm	63 mm	M10	10 mm	44 mm	22,0 N	10,0 N
ISOTP70M10	548609	70 mm	65 mm	75 mm	M10	10 mm	52 mm	22,0 N	10,0 N
ISOTP75M10	548629	75 mm	65 mm	75 mm	M10	10 mm	51 mm	22,0 N	10,0 N

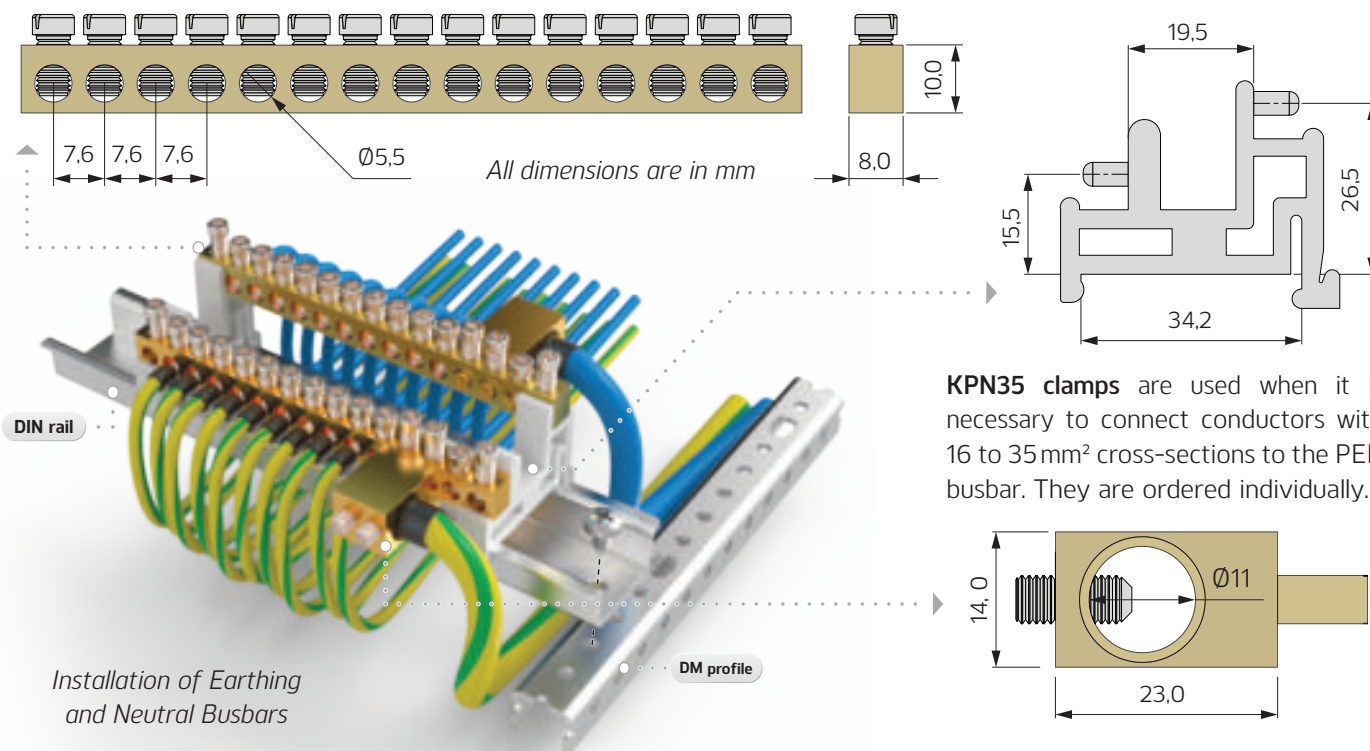
They are ordered individually

Earthing and Neutral busbar

PEN1000, PD35, KPN35

PEN1000 busbars are used for conductors with cross-sections up to 16 mm². They are 1000 mm long, but can be cut down to the desired size. These busbars can withstand a maximum current of 63A. They are ordered individually.

PD35 holders are used to secure PEN busbars to **DIN** rails. They are ordered individually.



KPN35 clamps are used when it is necessary to connect conductors with 16 to 35 mm² cross-sections to the PEN busbar. They are ordered individually.

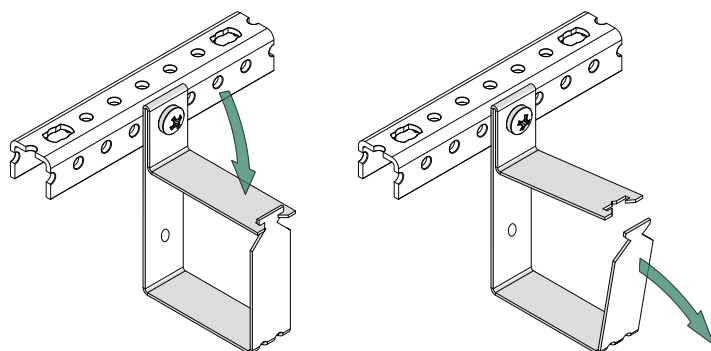
Cable guides

NK3030, NK5050

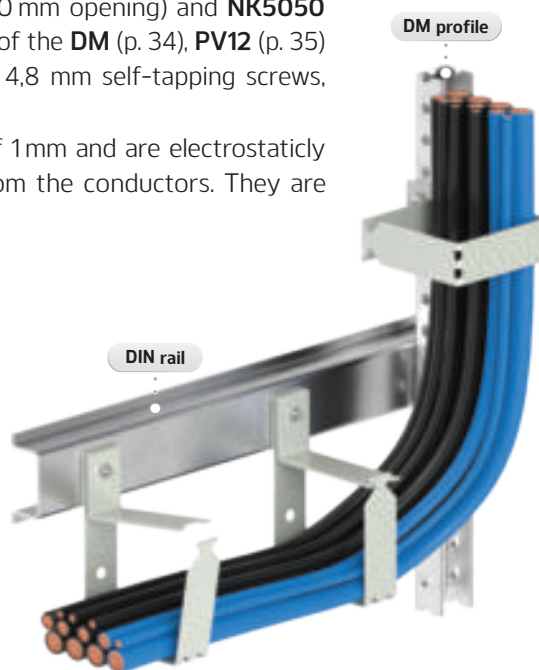
Cable guides are available in two sizes: **NK3030** (featuring a 30 x 30 mm opening) and **NK5050** (featuring a 50 x 50 mm opening). They are fastened to the perforation of the **DM** (p. 34), **PV12** (p. 35) and **HPP** profiles (p. 34) or Ø4.2 mm holes on **DIN** rails (p. 43) with 4.8 mm self-tapping screws, which also provide grounding.

They are produced from CR steel sheet DC-01 with a thickness of 1mm and are electrostatically painted with structural color RAL7035, which achieves isolation from the conductors. They are delivered individually.

Unlock mechanism:



By pressing down, the cable guide opens



Installation of cable guides on **DM** profile and **DIN** rail

Protective masks for the mounting frame

PP

Protective masks for the mounting frame are used to cover and protect the equipment in the cabinet. They are made of 3 mm thick plastic and come in **two types**: with or without openings. Masks with openings are used for automatic circuit breakers and other modular type equipment. Openings that remain unused or intended for reserve are covered with empty space masks. Protective masks are mounted on **DM** profiles (p. 34) or **PV** profiles (p. 35) using plastic holders and clips. They are ordered individually with mounting accessories.

Mask opening dimensions:

- widths **1, 2, 3 i 4**: 46 x 217 mm (opening for 12 modules)
- width **1.5**: 46 x 322 mm (opening for 18 modules)

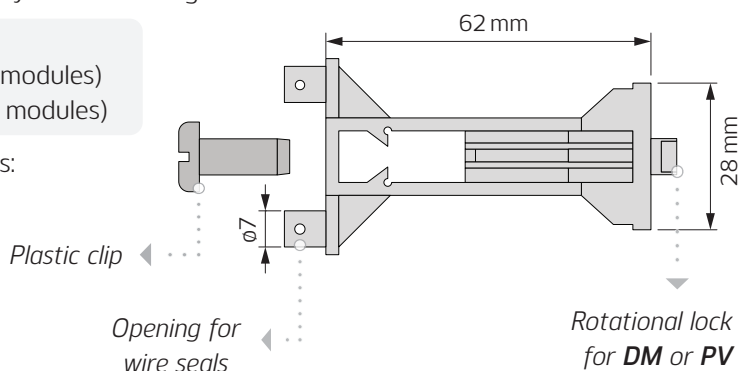
Mounting accessories are ordered with the masks:

Masks height 1 (149 mm) and **2** (299 mm)

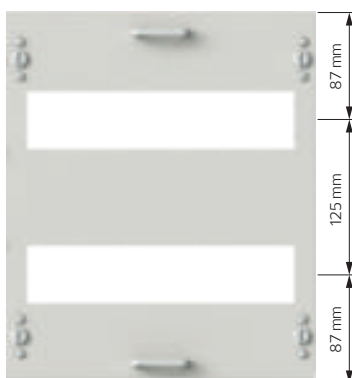
- 4 holders, 4 clips and handles (one or two)

Masks height 3 (449 mm) and **4** (599 mm)

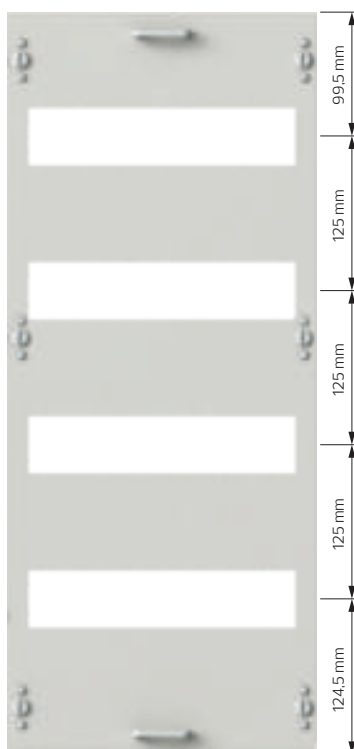
- 6 holders, 6 clips and two handles



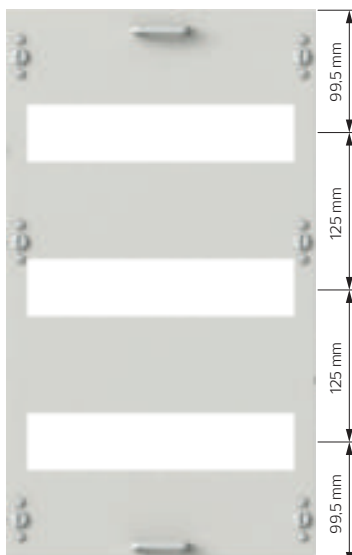
Protective mask **PP11/O**



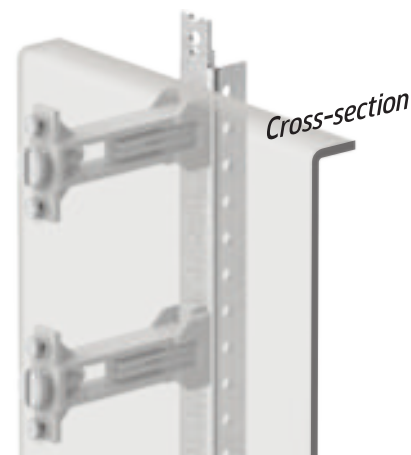
Protective mask **PP12/O**



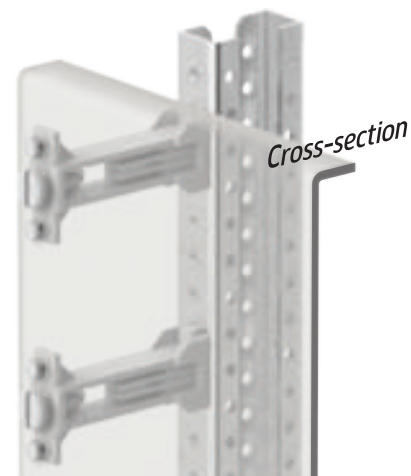
Protective mask **PP14/O**



Protective mask **PP13/O**



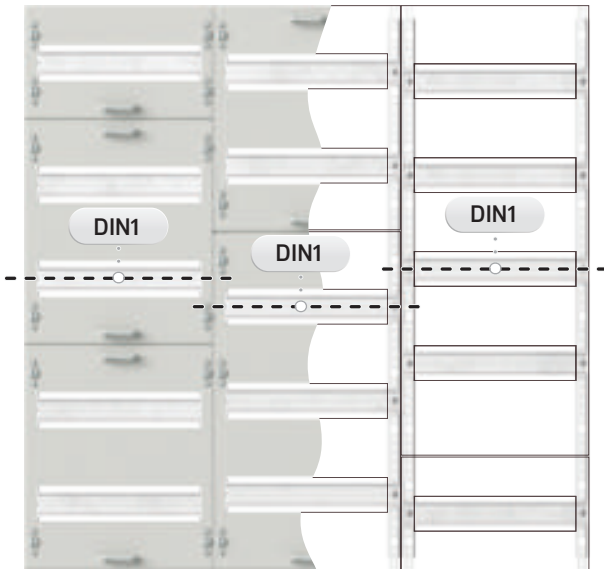
Installation of the mask on the **DM** profile



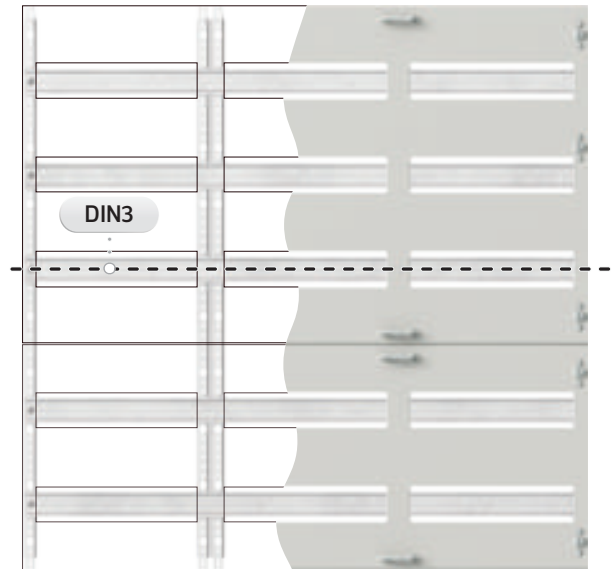
Installation of the mask on the **PV** profile

Protective masks for the mounting frame

PP



Example when openings for modular equipment are not at the same height (several **DIN** rails with width 1 are used)



Example when openings for modular equipment are at the same height (one **DIN** rail with width 3 are used)

		Selection of suitable masks for cabinet widths				
		1	1.5	2	3	4
Protective masks height	1	250 150 PP11	375 150 PP 1.51	500 150 PP21	750 150 PP31	1000 150 PP41
	2	300 PP12	375 300 PP1.52	500 300 PP22	750 300 PP32	1000 300 PP42
	3	450 PP13	450 PP1.53	500 450 PP23	750 450 PP33	1000 450 PP43
	4	600 PP14	600 PP1.54	500 600 PP24	750 600 PP34	1000 600 PP44
	1	150 PP11/0	150 PP1.51/0	150 PP21/0	150 PP31/0	150 PP41/0
	2	300 PP12/0	300 PP1.52/0	300 PP22/0	300 PP32/0	300 PP42/0
	3	450 PP13/0	450 PP1.53/0	450 PP23/0	450 PP33/0	450 PP43/0
	4	600 PP14/0	600 PP1.54/0	600 PP24/0	600 PP34/0	600 PP44/0

Dimensions are in millimeters (mm)

Touch protection profiles

HZP, VZP

Touch protection profiles are used to close the gap between the protective masks and the sides, roof and bottom of the cabinet, providing protection to the user from touch potential.

The touch protection consists of:

- A pair of **horizontal** protective profiles (**HZP**), they are selected based on the width of the cabinet.
- A pair of **vertical** protective profiles (**VZP**), they are selected based on the height of the cabinet.

These profiles are mounted on spot welded studs (M6 x 12 mm) from the interior of the cabinet, so that the studs enter the ribbed channel of the profile. They can be removed if necessary and for easier removal, the profiles have a lever on the back. The profiles are made of plastic extrusion with a wall thickness of 1,5 mm. They are ordered in pairs.

Horizontal touch protection profile

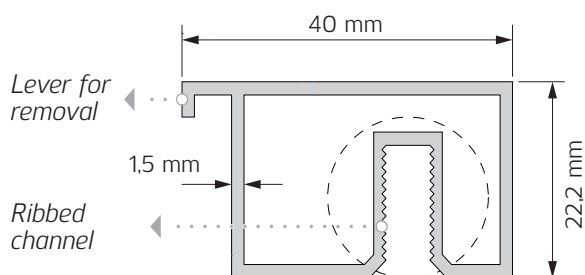
Product Label	For cabinet widths	Profile length (mm)
HZP1	KB1/X	252
HZP1.5	KB1.5/X	377
HZP2	KB2/X	502
HZP3	KB3/X	752
HZP4	KB4/X	1002

They are ordered in pairs

Vertical touch protection profile

Product Label	For cabinet heights	Profile length (mm)
VZP3	KBX/3	496
VZP4	KBX/4	646
VZP5	KBX/5	796
VZP6	KBX/6	946
VZP8	KBX/8	1246
VZP9	KBX/9	1396
VZP12	KBX/12	1896

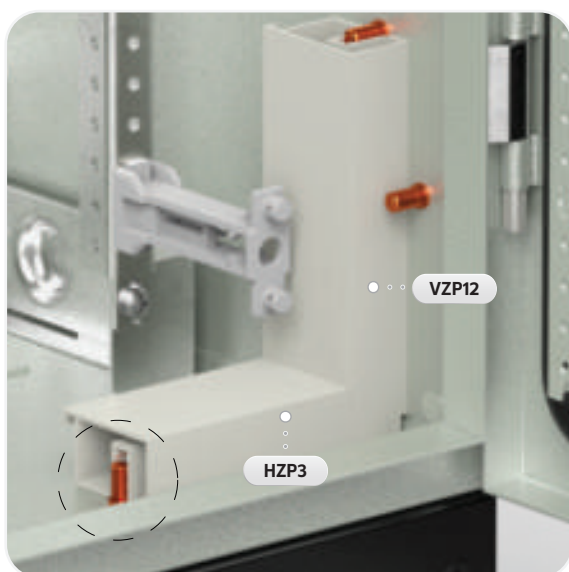
They are ordered in pairs



Cross-section of the profile



Spot welded studs M6x12 mm



Cross-section of the touch protection profile



View after installation of the profile and protective mask

Rain roofs, M pole mount

K, MNOS

Rain roofs are used to protect outdoor cabinets from rain and other weather conditions. They are made of CR steel sheet DC-01 with a thickness of 1.5 mm and are electrostatically coated with primer and polyester structural paint in the standard color **RAL7035** for corrosion protection.

The rain roof has an overhang of 30 mm on three or four sides, depending on the installation location. It can be customized upon request.



Installation of the **KB2/8IP65** cabinet on a 100 mm high modular plinth. The roof of the cabinet has an overhang on four sides with a slope towards the back.

For cabinet widths:

Roofs	1 300mm	1.5 425mm	2 550mm	3 800mm	4 1050mm
Overhang on three sides with a slope towards the back , for a cabinet depth of 210 mm	K1L3	K1.5L3	K2L3	-	-
Overhang on three sides with a slope towards the door , for a cabinet depth of 300 mm	K1V3	K1.5V3	K2V3	K3V3	K4V3
Overhang on four sides with a slope towards the back , for a cabinet depth of 400 mm	K1P4	K1.5P4	K2P4	K3P4	K4P4

They are ordered individually with the necessary fasteners

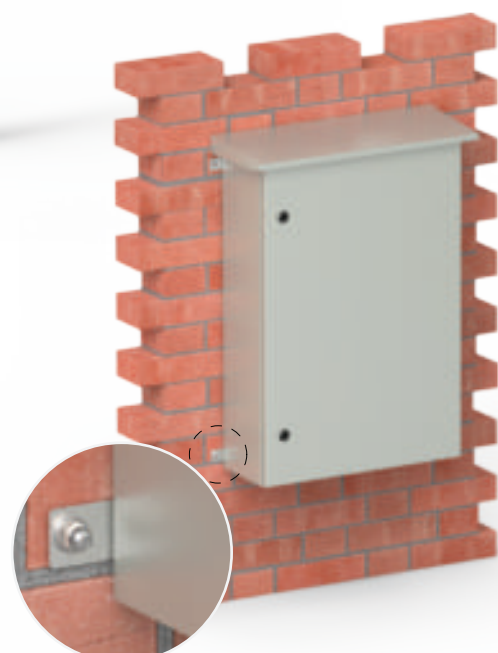


► M pole mount **MNOS1**

Installation of the cabinet **KB1/3IP65** on the pole, using the M-pole mount (**MNOS1**).

They are ordered in pairs with mounting accessories.

The roof of the cabinet has an overhang on three sides with a slope towards the back.



Installation of the cabinet **KB2/5IP65** on the wall using wall mount bracket kit. The roof of the cabinet has an overhang on three sides with a slope towards the door.

Transportation

Manual forklift



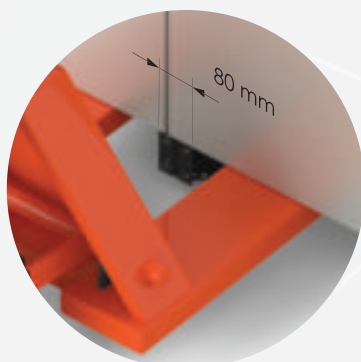
All KB cabinets have packaging protection. The wall-mounted cabinets are packaged in cardboard boxes, while the freestanding cabinets are protected by lower and upper cardboard caps, with additional protection with stretch film.

They are delivered on pallets for easy storage. All packaging material can be recycled.

The transport of freestanding KB cabinets is made easier thanks to the modular plinth. Before transport, it is necessary to dismantle the front and rear cover of the modular plinth (pp. 18-20), in order to provide access for a forklift or a manual forklift.

The modular plinth makes it possible to use the forklift without hindrance in cases where two connected cabinets are transported.

The two adjacent load bearing profiles of the modular plinth (in the case of two connected cabinets) provide plenty of space for a forklift.

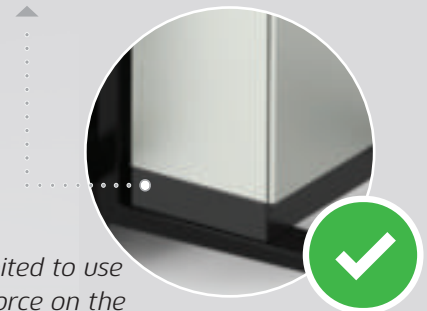


Transportation

Forklift



When transporting a freestanding KB cabinet with a plinth, it is necessary to support it using the side load bearing profiles of the modular plinth.



It is prohibited to use mechanical force on the front and back covers of the modular plinth!


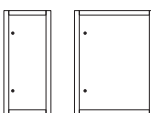


To ensure safe transport, it is recommended to use stretch film to secure cabinets on a pallet, in the case when multiple cabinets are being transported. The stretch film will prevent cabinets from shifting during transit and ensure their safety.



KU distribution cabinets

KU

Product Label	IP31	Cabinet casing with the door (H x L)	Cabinet casing (H x W x D)
KU1/3		545 x 350	526 x 308 x 120
KU1/4		695 x 350	676 x 308 x 120
KU1/5		845 x 350	826 x 308 x 120
KU1.5/3		545 x 475	526 x 433 x 120
KU1.5/4		695 x 475	676 x 433 x 120
KU1.5/5		845 x 475	826 x 433 x 120
KU2/3		545 x 600	526 x 558 x 120
KU2/4		695 x 600	676 x 558 x 120
KU2/5		845 x 600	826 x 558 x 120
Product Label	IP31	Cabinet casing with the door (H x L)	Cabinet casing (H x W x D)
KU1/6		995 x 350	976 x 308 x 120
KU1.5/6		995 x 475	976 x 433 x 120
KU2/6		995 x 600	976 x 558 x 120
KU3/5		845 x 850	826 x 808 x 120
KU3/6		995 x 850	976 x 808 x 120
KU4/5		845 x 1100	826 x 1058 x 120
KU4/6		995 x 1100	976 x 1058 x 120

All dimensions are in millimeters (mm)

KU distribution cabinets are designed for in-wall installation. They are composed of:

- cabinet casing
- cabinet cover with the door.

The **cabinet casing** is made of 1mm thick galvanized sheet metal. **Cabinet cover** with the door is made of CR steel sheet DC-01 with a thickness of 1mm. The protection is achieved by electrostatic plasticization with **RAL 9016** polyester smooth paint. The degree of protection is **IP31**.

Equipment can be installed on:

- a mounting plate **MP-ULP** (p. 58)
- a mounting frame **DM** (p. 34), **HPP** (p. 34) and **DIN** rails (p. 43).

KU cabinets that utilize **DM** profiles for mounting do not require mounting frame supports for light-weight equipment since they are equipped with fixed frame supports.

The same protective masks (**PP**) are used as for KB type cabinets (pages 49-50).

The design of the cabinet allows for the door to be mounted on either the left or right side.

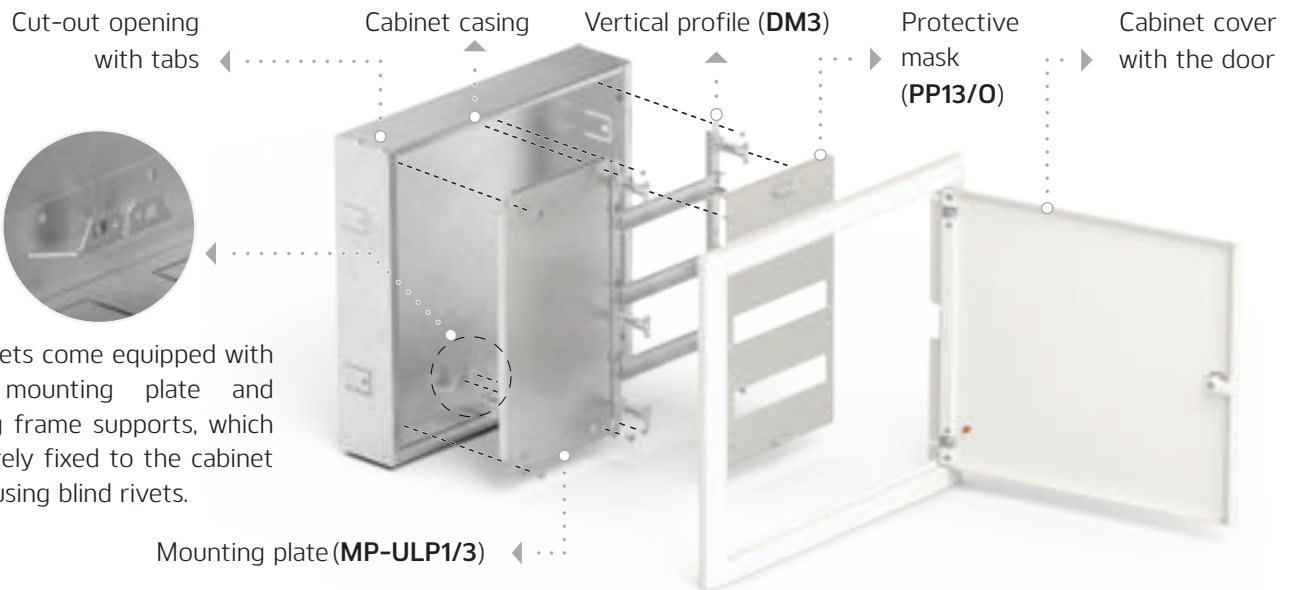
In-wall mounting



Example of the **KU2/4** in-wall mounting



View of the **KU2/3** cabinet with the mounting plate on the left and the **DM** supports on the right



KU cabinets come equipped with built-in mounting plate and mounting frame supports, which are securely fixed to the cabinet housing using blind rivets.

Cabinet KU2/3, installation of the mounting plate MP-ULP and DM vertical profiles

The mounting plate is attached to the supports using accessories such as cage nuts, washers and M6 bolts which are included with the mounting plate.

The DM profile is attached using 4,8 mm self-tapping screws, which are included with the cabinet.

Mounting of the cabinet cover with door:

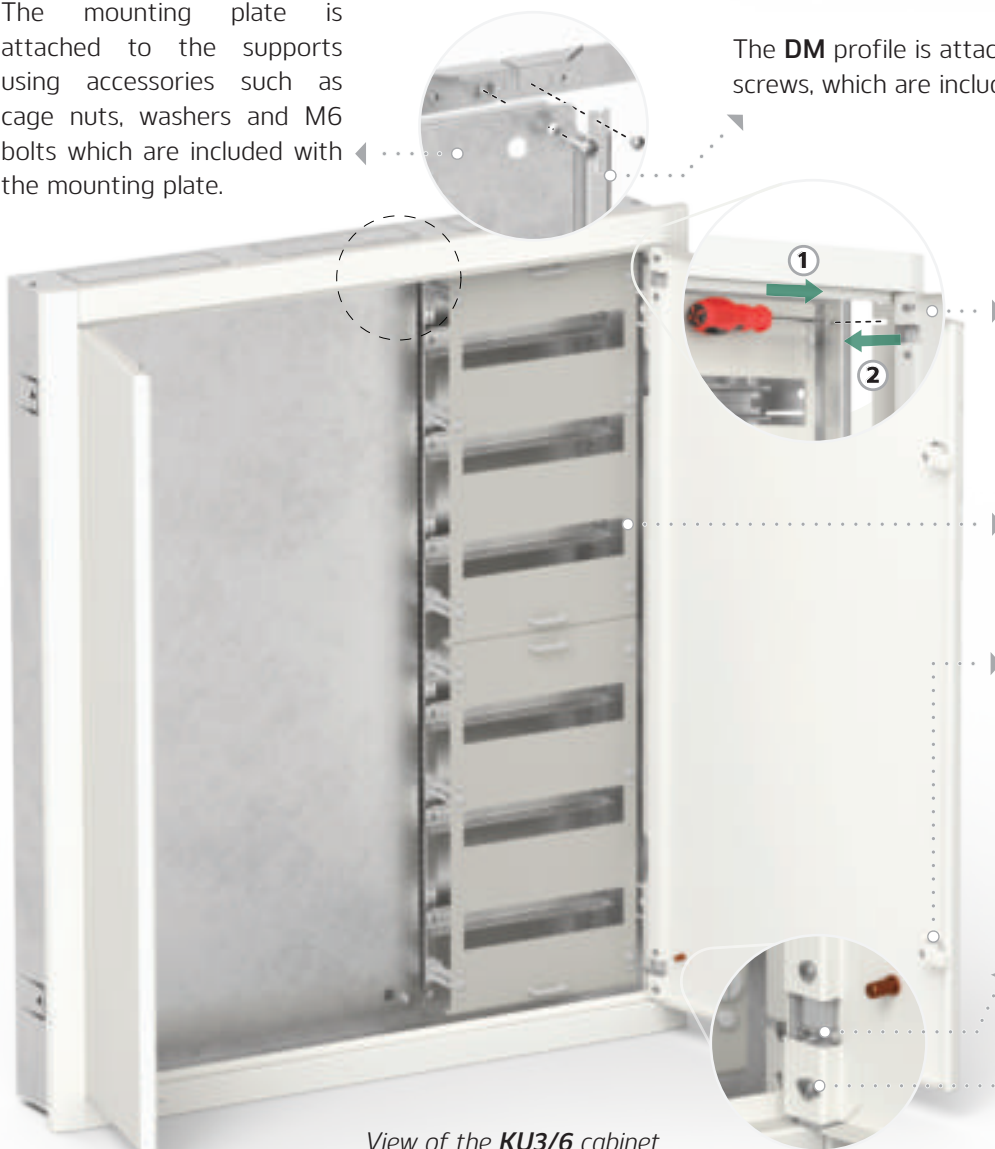
1. Self-tapping screws are screwed into the intended openings of the cabinet casing.
2. The cabinet cover with the door is pulled onto the screws and fixed.

The same protective masks (PP) are used as with the KB cabinet type (pages 49-50).

The standard lock is **EB-1** (white) with a plastic key **EK-T** included. Other types of locks can be installed upon request (p. 21).

The removable hinge allows for easy assembly and disassembly of the door.

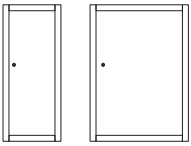
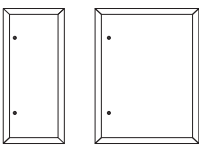
The panel gap between the cabinet cover and the door can be adjusted using a 4,8 mm screw.



View of the KU3/6 cabinet

KLP distribution cabinets

KLP

Product Label	IP31	Cabinet dimensions (H x W x D)
KLP1/3		500 x 300 x 140
KLP1/4		650 x 300 x 140
KLP1/5		800 x 300 x 140
KLP1.5/3		500 x 425 x 140
KLP1.5/4		650 x 425 x 140
KLP1.5/5		800 x 425 x 140
KLP2/3		500 x 550 x 140
KLP2/4		650 x 550 x 140
KLP2/5		800 x 550 x 140
KLP1/6		950 x 300 x 140
KLP1/8		1250 x 300 x 140
KLP1.5/6		950 x 425 x 140
KLP1.5/8		1250 x 425 x 140
KLP2/6		950 x 550 x 140
KLP2/8		1250 x 550 x 140

All dimensions are in millimeters (mm)



The **UK-KL** cable entry plate



View of the **KLP2/3** cabinet with the mounting plate on the left and the **DM** frame on the right

The **KLP distribution cabinets** are designed for wall mounting. The cabinet's casing and doors are made of CR steel sheet DC-01 with a thickness of 1 mm. The protection is achieved by electrostatic plasticization with **RAL 9016** polyester smooth paint. The degree of protection is **IP43**.

Equipment can be installed on:

- a mounting plate **MP-ULP** (p. 58)
- a mounting frame **DM** (p. 34), **HPP** (p. 34) and **DIN** rails (p. 43).

KLP cabinets that utilize **DM** profiles for mounting do not require mounting frame supports for light-weight equipment since they are equipped with fixed frame supports.

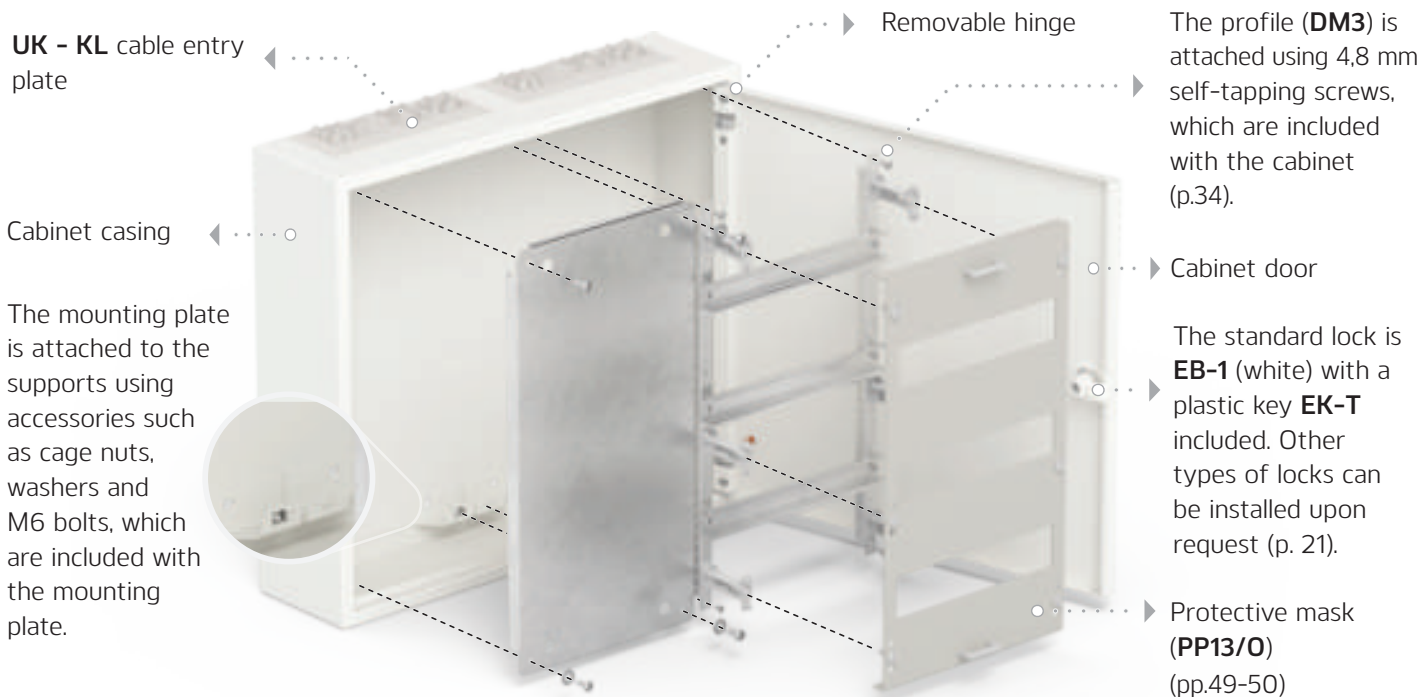
The same protective masks (**PP**) are used as for KB type cabinets (pages 49-50).

The design of the cabinet allows for the door to be mounted on either the left or right side.

The KLP cabinets come with **UK-KL** cable entry plates and an anchor screw set for wall mounting.



Example of the **KLP2/4** wall mounting



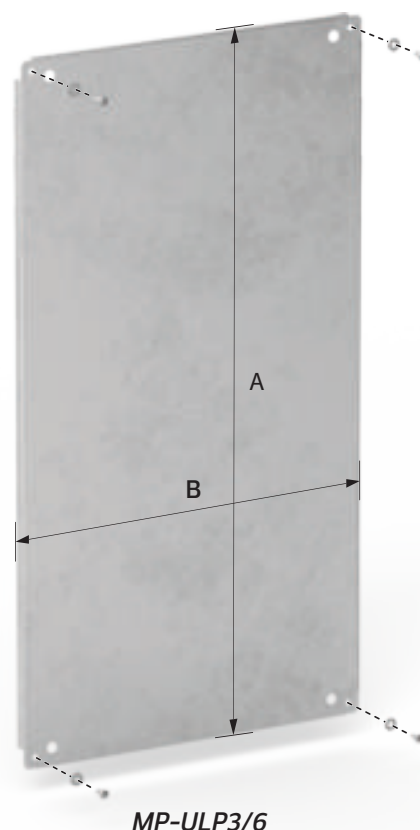
Cabinet **KLP2/3**, installation of the mounting plate **MP-ULP** and **DM** vertical profiles

Mounting plates for KU and KLP cabinets

MP-ULP

Mounting plates for KU and KLP cabinets are made of 1,5 mm thick galvanized sheet metal and reinforced with additional bending of the edges. Upon request, the mounting plates can also be produced from other types of materials up to 3 mm thick. The marking of the mounting plate corresponds to the marking of the cabinet. For example, a cabinet marked **KLP3/6** is compatible with a mounting plate marked **MP-ULP3/6**.

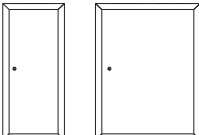
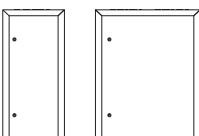
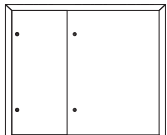
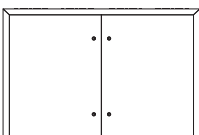
Product Label	Thickness (mm)	Height (A) (mm)	Width (B) (mm)
MP-ULP1/3	1,5	468	241
MP-ULP1/4	1,5	618	241
MP-ULP1/5	1,5	768	241
MP-ULP1/6	1,5	918	241
MP-ULP1/8	1,5	1218	241
MP-ULP1.5/3	1,5	468	366
MP-ULP1.5/4	1,5	618	366
MP-ULP1.5/5	1,5	768	366
MP-ULP1.5/6	1,5	918	366
MP-ULP1.5/8	1,5	1218	366
MP-ULP2/3	1,5	468	491
MP-ULP2/4	1,5	618	491
MP-ULP2/5	1,5	768	491
MP-ULP2/6	1,5	918	491
MP-ULP2/8	1,5	1218	491
MP-ULP3/5	1,5	768	741
MP-ULP3/6	1,5	918	741
MP-ULP3/8	1,5	1218	741
MP-ULP4/5	1,5	768	991
MP-ULP4/6	1,5	918	991
MP-ULP4/8	1,5	1218	991



They are ordered individually with mounting kit

KL distribution cabinets

KL

Product Label	IP43	Cabinet dimensions (H x W x D)
KL1/3		500 x 300 x 200
KL1/4		650 x 300 x 200
KL1/5		800 x 300 x 200
KL1.5/3		500 x 425 x 200
KL1.5/4		650 x 425 x 200
KL1.5/5		800 x 425 x 200
KL2/3		500 x 550 x 200
KL2/4		650 x 550 x 200
KL2/5		800 x 550 x 200
KL1/6		950 x 300 x 200
KL1/8		1250 x 550 x 200
KL1.5/6		950 x 425 x 200
KL1.5/8		1250 x 425 x 200
KL2/6		950 x 550 x 200
KL2/8		1250 x 550 x 200
KL3/5		800 x 800 x 200
KL3/6		950 x 800 x 200
KL3/8		1250 x 800 x 200
KL4/5		800 x 1050 x 200
KL4/6		950 x 1050 x 200
KL4/8		1250 x 1050 x 200

All dimensions are in millimeters (mm)

The **KL distribution cabinets** are designed for wall mounting. The **cabinet's casing and doors** are made of CR steel sheet DC-01 with a thickness of 1 mm. The protection is achieved by electrostatic plasticization with **RAL 9016** polyester smooth paint. The degree of protection is **IP43**.

Equipment can be installed on:

- a mounting plate **MPO** (p. 60)
- a mounting frame **DM** (p. 34), **HPP** (p. 34) and **DIN** rails (p. 43) using a mounting frame supports for lightweight equipment (p. 32).

The same protective masks (**PP**) are used as for KB type cabinets (pages 49-50).

The design of the cabinet allows for the door to be mounted on either the left or right side.

The KL cabinets come with **UK-KL** cable entry plates and an anchor screw set for wall mounting.

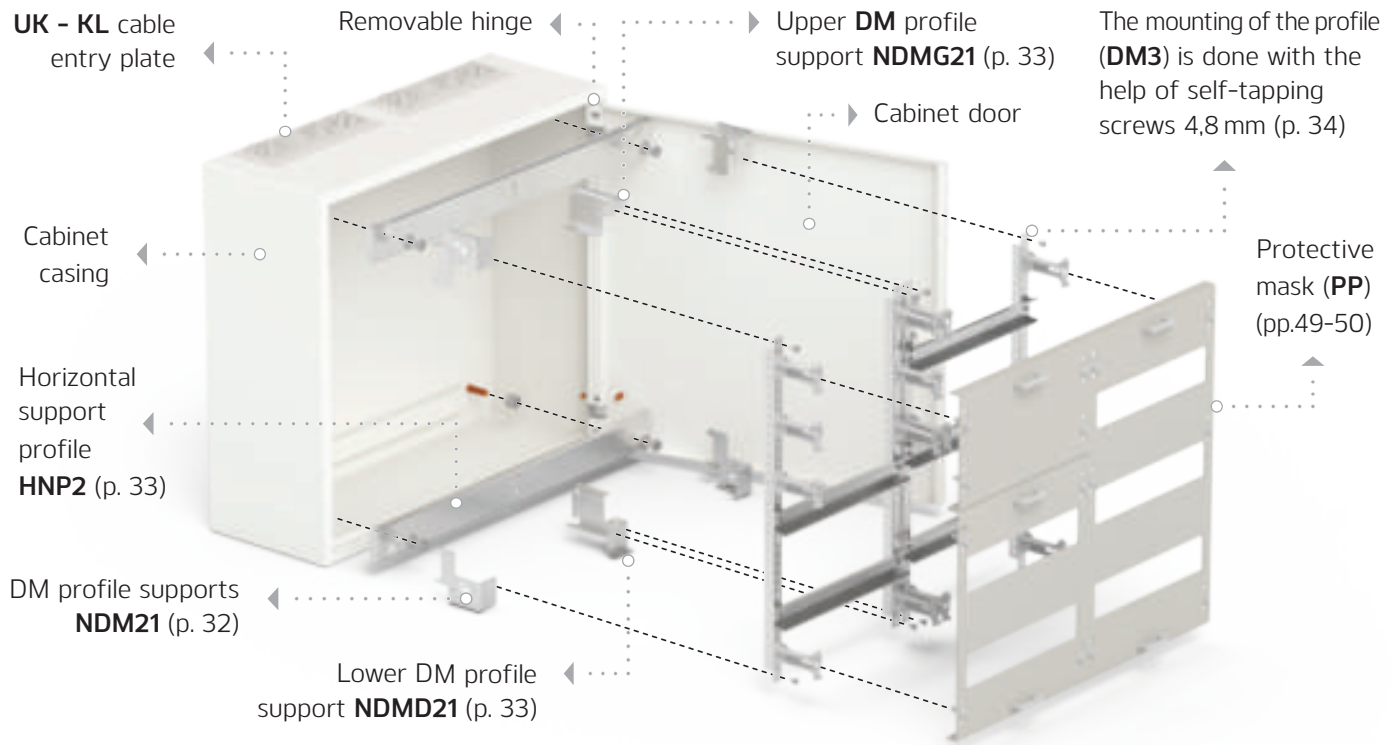
The standard lock is **EB-1** (white) with a plastic key **EK-T** included. Other types of locks can be installed upon request (p. 21).



View of the **KL3/6** cabinet with **DM** profile frame and protective masks



Example of the **KL2/4** wall mounting



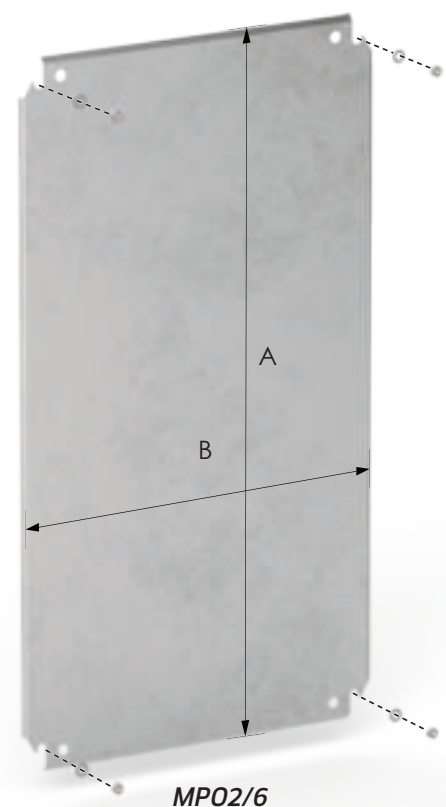
Cabinet **KL2/3**, installation of **DM** vertical profiles and protective masks **PP**

Mounting plates for KL cabinets

MPO

Mounting plates for KL cabinets are made of 1,5 mm thick galvanized sheet metal and reinforced with additional bending of the edges. Upon request, the mounting plates can also be produced from other types of materials up to 3 mm thick. The marking of the mounting plate corresponds to the marking of the cabinet. For example, a cabinet marked **KL2/6** is compatible with a mounting plate marked **MP02/6**. They are ordered individually, mounting kit included with cabinets.

Product Label	Thickness (mm)	Height (A) (mm)	Width (B) (mm)
MP01/3	2	466	248
MP01/4	2	616	248
MP01/5	2	766	248
MP01/6	2	916	248
MP01/8	2	1216	248
MP01.5/3	2	466	373
MP01.5/4	2	616	373
MP01.5/5	2	766	373
MP01.5/6	2	916	373
MP01.5/8	2	1216	373
MP02/3	2	466	498
MP02/4	2	616	498
MP02/5	2	766	498
MP02/6	2	916	498
MP02/8	2	1216	498
MP03/5	2	766	748
MP03/6	2	916	748
MP03/8	2	1216	748
MP04/5	2	766	998
MP04/6	2	916	998
MP04/8	2	1216	998





REFERENCES

Internacional:

- "Ikea distribution center", *Ikea Esipovo, Russian Federation*
- AŽD Praha - Railway cabinets
- Traffic systems, *Tashkent Uzbekistan, Norway, Angola*
- Dispotec Technology, *Austria*
- Multimedia Center, *Doha, Qatar*
- Electric power systems, *Dubai, UAE*
- Coke and ironworks, *Russian Federation*
- "Pepsico" milk factory, *Timashevsk, Russian Federation*
- Central Bank of the Russian Federation, *Moscow, Russian Federation*
- Business center "Moskva City", *Moscow, Russian Federation*
- Senate of the Republic, *Tashkent, Uzbekistan*
- Residence of the President of Kazakhstan, *Astana, Kazakhstan*
- Pier power supply, *Tivat, Montenegro*
- EPCG AD Niksic TS35/10kV, TS110/10kV, TS 35/10kV, *Montenegro*
- Containers, *Nigeria and Montenegro*
- Production warehouse building "Henkel", *Moscow region*
- RWE Power AG, *Germany*
- Scholt Energy, *Germany*
- KAPSCH, *Austria*
- Miratorg, *Kursk, Russian Federation*
- NIIVS, *Novosibirsk, Russian Federation*
- Barilla Solne, *Russian Federation*

Serbia:

- Auto parts factory "ZF", *Pančevo*
- "MAI TAI" car parts factory II phase, *Barič*
- "Nikola Tesla", *Obrenovac*
- Hydroelectric power plant, *Đerdap*
- Hydroelectric power plant, *Bajina Bašta*
- Belgrade power plants
- Congress, cultural and business center, *Sava center*
- Lidl administration building, *Nova Pazova*
- NCR d.o.o. *Belgrade*
- JP TENT-RP 110kV, *Kolubara*
- Belgrade Arena, *Belgrade*
- Network of Lukoil gas stations, *Serbia*
- Nikola Tesla Airport, *Belgrade*
- Public Enterprise Electric Power Industry of Serbia
- SC Ušće, *New Belgrade*
- Court building, *Nemanjina 9, Belgrade*
- The chain of retail facilities LIDL Serbia KD
- IMP Cabinets for the Railways of Serbia
- Continental, *Novi Sad*
- Hansgrohe, *Valjevo*
- CTP, *Novi Sad*
- Clinical Centre of Serbia, *Belgrade*

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