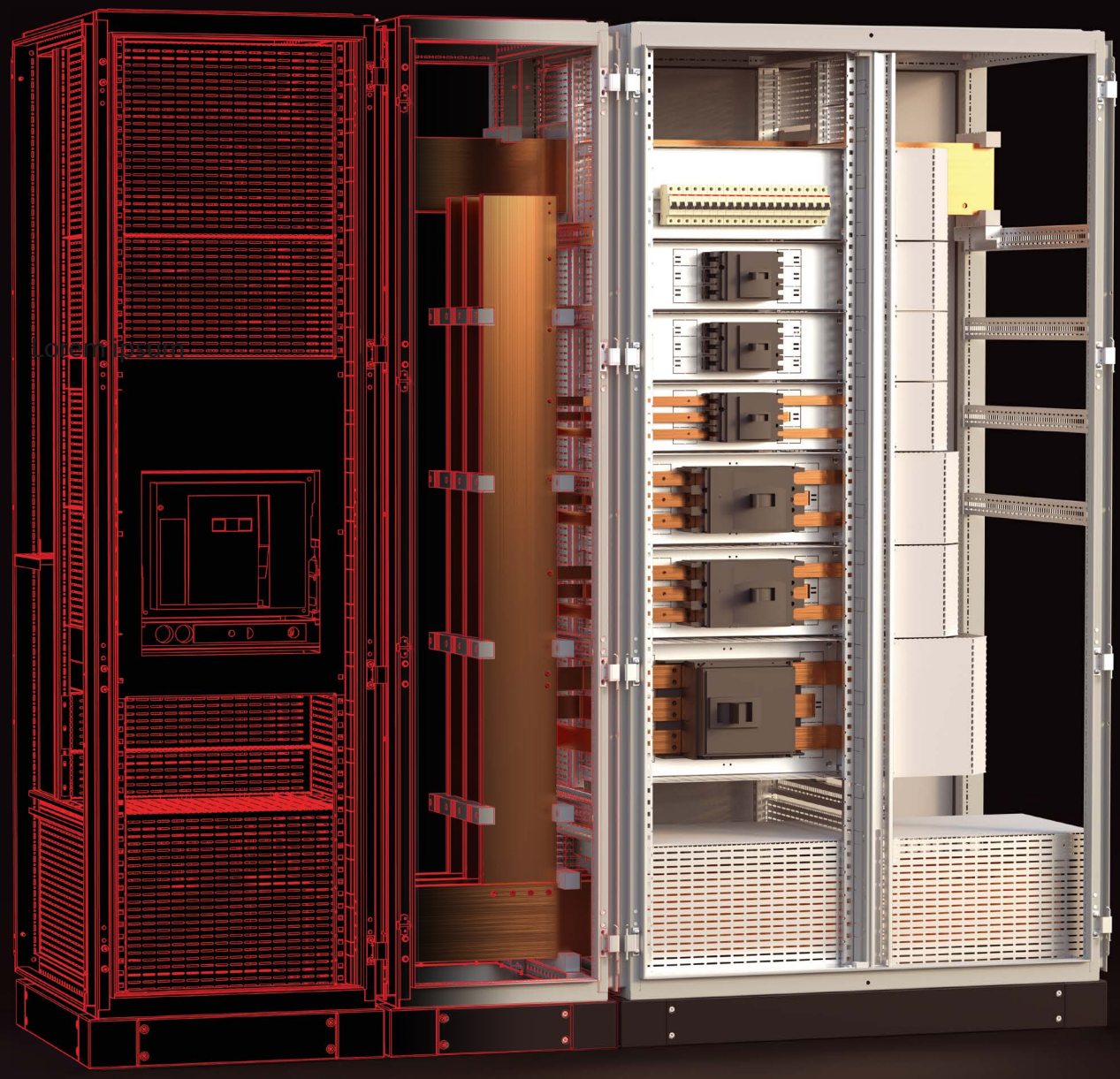
EVROTEHNA



CATALOGUE

KMW CABINETS

DESIGNING | CONSTRUCTION | PRODUCTION

EVROTEHNA was founded in 2000. The main activity of the company is the production of electrical distribution cabinets, rack cabinets and accessories.

From the beginning, Evrotehna strives to find the best technical solutions to ensure the maximum quality of the product.

Cabinet label: ***KM3/13/60W***

Cabinet label	IP31	IP55	Cabinet dimensions (H x W x D)
KM1/12/40W			1900 x 370 x 400
KM1,5/12/40W			1900 x 495 x 400
KM2/12/40W			1900 x 620 x 400
KM3/12/40W			1900 x 870 x 400
KM1,5/12/60W			1900 x 495 x 600
KM2/12/60W			1900 x 620 x 600
KM3/12/60W			1900 x 870 x 600
KM1,5/12/80W			1900 x 495 x 800
KM2/12/80W			1900 x 620 x 800
KM3/12/80W			1900 x 870 x 800
KM1,5/12/100W			1900 x 495 x 1000
KM2/12/100W			1900 x 620 x 1000
KM3/12/100W			1900 x 870 x 1000
KM4/12/40W			1900 x 1120 x 400
KM4/12/60W			1900 x 1120 x 600
KM4/12/80W			1900 x 1120 x 800
KM4/12/100W			1900 x 1120 x 1000

Cabinet label	IP31	IP55	Cabinet dimensions (H x W x D)
KM1/13/40W			2050 x 370 x 400
KM1,5/13/40W			2050 x 495 x 400
KM2/13/40W			2050 x 620 x 400
KM3/13/40W			2050 x 870 x 400
KM1,5/13/60W			2050 x 495 x 600
KM2/13/60W			2050 x 620 x 600
KM3/13/60W			2050 x 870 x 600
KM1,5/13/80W			2050 x 495 x 800
KM2/13/80W			2050 x 620 x 800
KM3/13/80W			2050 x 870 x 800
KM1,5/13/100W			2050 x 495 x 1000
KM2/13/100W			2050 x 620 x 1000
KM3/13/100W			2050 x 870 x 1000
KM4/13/40W			2050 x 1120 x 400
KM4/13/60W			2050 x 1120 x 600
KM4/13/80W			2050 x 1120 x 800
KM4/13/100W			2050 x 1120 x 1000

Cabinet label	IP31	IP55	Cabinet dimensions (H x W x D)
KM1/14/40W			2200 x 370 x 400
KM1,5/14/40W			2200 x 495 x 400
KM2/14/40W			2200 x 620 x 400
KM3/14/40W			2200 x 870 x 400
KM1,5/14/60W			2200 x 495 x 600
KM2/14/60W			2200 x 620 x 600
KM3/14/60W			2200 x 870 x 600
KM1,5/14/80W			2200 x 495 x 800
KM2/14/80W			2200 x 620 x 800
KM3/14/80W			2200 x 870 x 800
KM1,5/14/100W			2200 x 495 x 1000
KM2/14/100W			2200 x 620 x 1000
KM3/14/100W			2200 x 870 x 1000
KM4/14/40W			2200 x 1120 x 400
KM4/14/60W			2200 x 1120 x 600
KM4/14/80W			2200 x 1120 x 800
KM4/14/100W			2200 x 1120 x 1000

Free-standing distribution cabinets KMW type are manufactured from cold-rolled steel sheet DC01 and electrostatically plasticized using **RAL 7035EP** structural colour. The basic construction of the cabinet is made of 2 mm thick steel sheet.

The roof of the cabinet is with a maximum opening. Roof covers are ordered separately.
The back cover and side plates are made of 1.5 mm thick steel sheet. Fixed with screws.

The cabinet door is made of 2 mm thick steel sheet with perforated omega reinforcements at door frame. The door is secured with four-point locking system. The cabinet construction allows the door position to be changed so that it can be left or right, as well as mounting on the back of the cabinet.

The bottom of the cabinet is with an opening of maximum dimensions. The opening at the bottom can be closed with:

- **With bottom covers** made of galvanized sheet 5 mm thick and applied with a seal *(ordered separately)*.
- **With movable bottom covers** made of galvanized sheet 5 mm thick *(ordered separately)*.

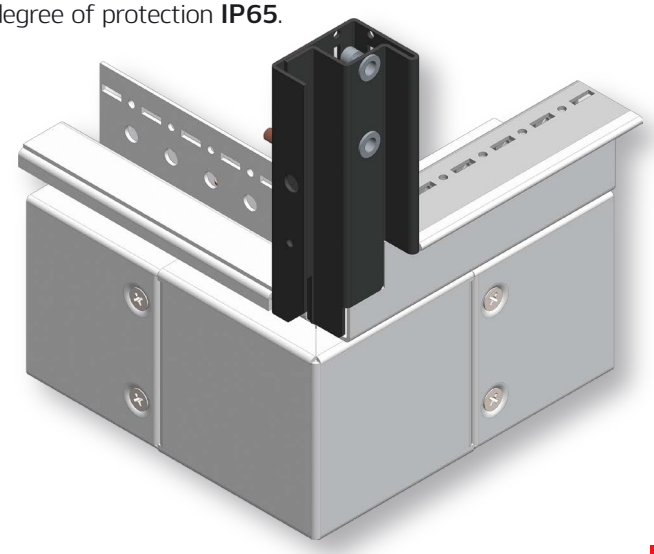
Stand of the cabinet *(does not enter the dimensions of the cabinet)* is a segment type. Electrostatically plasticized using black semi-matte color **RAL 9005**. Stand height is 100 mm. At the bottom of the stand are openings for floor fastening. *(The stand is delivered with the cabinet)*.

On request:

- Doors can have tempered glass thickness of 5 mm.
- Ventilation openings can be made.

It is possible to merge multiple cabinets into a string using a coupling set (PSO-KM), and on the first and last cabinets in the row are mounted side plates.

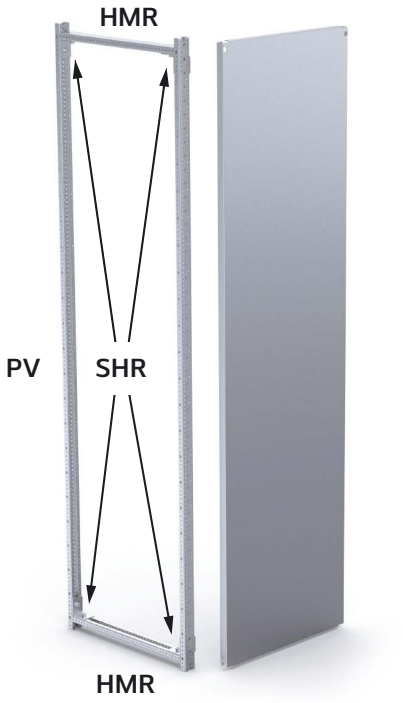
The degree of protection of KMW cabinet is **IP31** or **IP55**, and at the request of the customer, cabinets can also be made in the degree of protection **IP65**.



PROFILE OF KMW CABINET PILLAR

Mounting frames

Frame label	Cabinet label
MR1-12	KM1/12/40W
MR1,5-12	KM1,5/12/40(60)(80)(100)W
MR2-12	KM2/12/40(60)(80)(100)W
MR3-12	KM3/12/40 (60)(80)(100)W
MR4-12	KM4/12/40(60)(80)(100)W
MR1-13	KM1/13/40W
MR1,5-13	KM1,5/13/40(60)(80)(100)W
MR2-13	KM2/13/40(60)(80)(100)W
MR3-13	KM3/13/40(60)(80)(100)W
MR4-13	KM4/13/40(60)(80)(100)W
MR1-14	KM1/14/40W
MR1,5-14	KM1,5/14/40(60)(80)(100)W
MR2-14	KM2/14/40(60)(80)(100)W
MR3-14	KM3/14/40(60)(80)(100)W
MR4-14	KM4/14/40(60)(80)(100)W



Mounting plates

Plate label	Height	Width
MPKM1/12W	1784	247
MPKM1,5/12W	1784	372
MPKM2/12W	1784	497
MPKM3/12W	1784	747
MPKM4/12W	1784	997
MPKM1/13W	1934	247
MPKM1,5/13W	1934	372
MPKM2/13W	1934	497
MPKM3/13W	1934	747
MPKM4/13W	1934	997
MPKM1/14W	2084	247
MPKM1,5/14W	2084	372
MPKM2/14W	2084	497
MPKM3/14W	2084	747
MPKM4/14W	2084	997

For the installation of the mounting frames (MR) and mounting plates (MP) is used:

NKM **Carriers for mounting plates and mounting frames** for KMW cabinets. Set of carriers for mounting plates and mounting frames consists of 2 top and 2 bottom carriers. *They are ordered separately, page 9 i 10.*

NKMS **Middle carriers for mounting plates and mounting frames** for KMW cabinets. Set of carriers consists of 2 top and 2 bottom carriers. They are used in case of division of cabinet width 4 (KM4) to MR2+MPKM2, MR2+MR2 or MPKM2+MPKM2. *They are ordered separately, page 10.*

Parts of mounting frames PV, HMR, SHR

The frame consists of:

- Vertical **PV** profile 1 pair
- Horizontal **HMR** profile 1 pair
- Couplers **SHR** 2 pairs

Parts of the mounting frame can be ordered separately.

Mounting plates MPKM

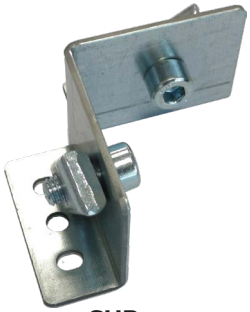
Mounting plates are made of zinc-coated sheet steel 2mm thick. Double bending on plates sides ensures additional stiffness of mounting plates. According to a distributing cabinet label an adequate mounting plate should be ordered.

For example: For KM2/12/40W distribution cabinet the corresponding mounting plate is MPKM2/12W.

Description of mounting frame parts	Label	Profile length
Vertical profile of the mounting frame for cabinets 1(1,5)(2)(3)(4)/12W	PV12	1800
Vertical profile of the mounting frame for cabinets 1(1,5)(2)(3)(4)/13W	PV13	1950
Vertical profile of the mounting frame for cabinets 1(1,5)(2)(3)(4)/14W	PV14	2100
Horizontal profile of the mounting frame for cabinets 1/12(13)(14)W	HMR1	210
Horizontal profile of the mounting frame for cabinets 1,5/12(13)(14)W	HMR1,5	335
Horizontal profile of the mounting frame for cabinets 2/12(13)(14)W	HMR2	460
Horizontal profile of the mounting frame for cabinets 3/12(13)(14)W	HMR3	710
Horizontal profile of the mounting frame for cabinets 4/12(13)(14)W	HMR4	960
Couplers for joining the profile PV and HMR	SHR	-


HMR


PV


SHR

UWB-PRESS

UWB-DB

UWB-TK333

UWB-TK3524

Lock BMW

Ensure good door closing and sealing, with the help of a four-point locking mechanism.

Lock inserts UWB

Standard lock has a push-botton for releasing a door handle. On request, the push-button can be replaced with a "T" key (double bit) insert or a half-cylinder.

Inner lock BW-U

The inner lock is used for all double-door cabinets and swing frames.

Side plates BPKM

They are designed to close the sides of the cabinet.. They are mounted using countersunk screws. The polyurethane seal provides good sealing.

Ordered as a pair.

Side plates		
Label	Cabinet height	Cabinet depth
BPKM19-4	1900	400
BPKM19-6	1900	600
BPKM19-8	1900	800
BPKM19-10	1900	1000
BPKM205-4	2050	400
BPKM205-6	2050	600
BPKM205-8	2050	800
BPKM205-10	2050	1000
BPKM22-4	2200	400
BPKM22-6	2200	600
BPKM22-8	2200	800
BPKM22-10	2200	1000

UK-W

OK-W

OK-WVŽAL OK-WHŽAL

Cable gland UK-W

It is used for inserting cables into KMW cabinet enclosures. In the case of KMW cabinet, it is necessary to order the roof cover required for mounting the UK-W gland.

The UK-W gland with sponge rubber is used for entrance of multiple cables inside the cabinet enclosure. Fixed with four holders with screws on the outside.

The grid frame is made of polyamide PA 6,6 inside which is a sealing gum of the sponge structure. The cable gland frame is sealed with polyurethane rubber, providing declared IP protection. The entrance of the cables is done through an opening made in a sponge rubber. The opening has to be formed by drilling with drill.

- Dimensions of the mounting hole **123** x **208** mm.
- Dimensions of cable gland **142** x **226** mm.

Cover OK-W

In the case when cables enter through plastic (PG), rubber (GPG) or similar cable gland, the cover OK-W can be used.

The cover is made of cold-rolled sheet steel DC01, 1,5 mm thick and polyester powder coated in **RAL 7035** structural colour. The cover frame is sealed with polyurethane rubber, which provides a declared degree of protection.

The cover is fixed with four screws, on the outside of the cabinet.

It is ordered separately from the distribution cabinet.

- Dimensions of cover **163** x **249** mm.

Ventilation cover OK-WVŽAL,OK-WHŽAL

They are made with vertical or horizontal slits, cover is made of cold-rolled sheet steel DC01, 1,5 mm thick and polyester powder coated in **RAL 7035**. The cover frame is sealed with polyurethane rubber, which provides a declared degree of protection.

The covers are fixed with four screws, from the outside of the cabinet.

- Dimensions of cover **163** x **249** mm.

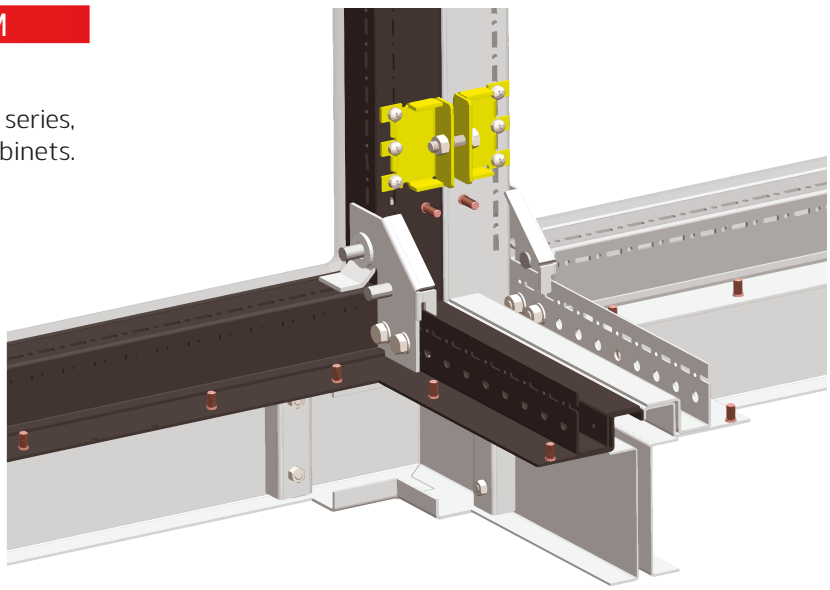
Connection kit PSO-KM

It is used for sideways joining KMW cabinets into a series, when the distribution system consists of several cabinets.

The supplied kit is for one connection.

It consists of:

- Coupling with screws – **12** pcs
- Sponge rubber – **10** m

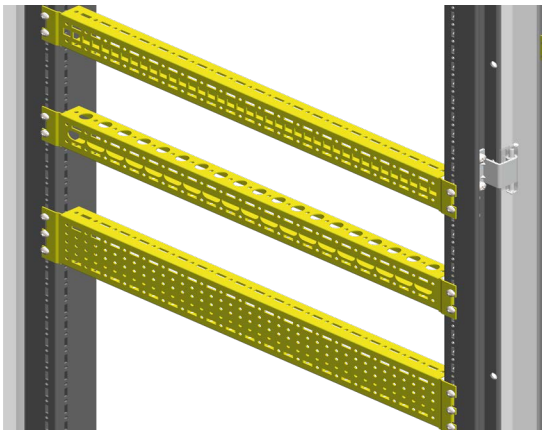


Side brackets

PB KM, PB KM/ZX, PB KM/S

They are used for mounting equipment or fixing cables on the side of the basic construction of the KMW cabinet. They are made of zinc-coated sheet steel 1.5 mm thick.

Side brackets for cabinets	Label	Length (mm)
depths 400 mm	PB400KM	337
depths 600 mm	PB600KM	537
depths 800 mm	PB800KM	737
depths 1000 mm	PB1000KM	937
depths 400 mm	PB400KM/ZX	337
depths 600 mm	PB600KM/ZX	537
depths 800 mm	PB800KM/ZX	737
depths 1000 mm	PB1000KM/ZX	937
depths 400 mm	PB400KM/S	337
depths 600 mm	PB600KM/S	537
depths 800 mm	PB800KM/S	737
depths 1000 mm	PB1000KM/S	937

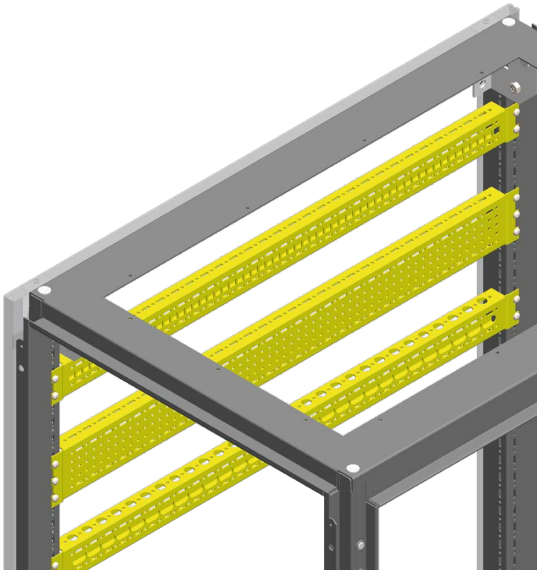


Rear brackets

ZP KM, ZP KM/S, ZP KM/ZX

They are used for mounting equipment or fixing cables on the back of the basic construction of the KMW cabinet or between two side brackets. They are made of zinc-coated sheet steel 1.5 mm thick.

Rear brackets for cabinets	Label	Length (mm)
KM1/12/(13)(14)W	ZP1KM	298
KM1,5/12/(13)(14)W	ZP1,5KM	423
KM2/12/(13)(14)W	ZP2KM	548
KM3/12/(13)(14)W	ZP3KM	798
KM4/12/(13)(14)W	ZP4KM	1048
KM1/12/(13)(14)W	ZP1KM/S	298
KM1,5/12/(13)(14)W	ZP1,5KM/S	423
KM2/12/(13)(14)W	ZP2KM/S	548
KM3/12/(13)(14)W	ZP3KM/S	798
KM4/12/(13)(14)W	ZP4KM/S	1048
KM1,5/12/(13)(14)W	ZP1,5KM/ZX	423
KM2/12/(13)(14)W	ZP2KM/ZX	548
KM3/12/(13)(14)W	ZP3KM/ZX	798
KM4/12/(13)(14)W	ZP4KM/ZX	1048

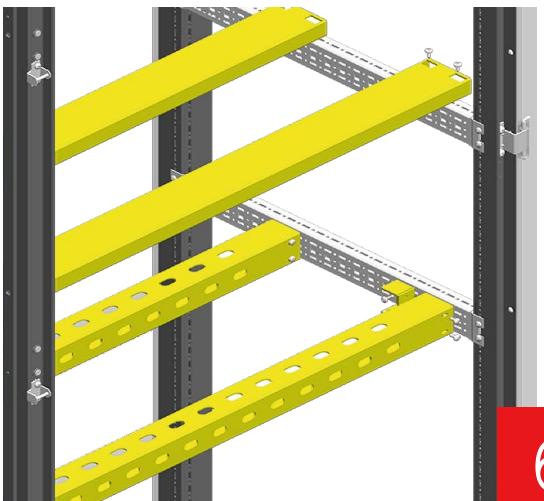


Cross brackets

PP KM/S, PP KM

They are used for mounting equipment to the basic construction of the KMW cabinet.
Cross brackets **PP_KM/S** are made of zinc-coated sheet steel 2,5 mm thick.
Mounted on the side brackets.
Cross brackets **PP_KM** are made of zinc-coated sheet steel 2 mm thick.
Mounted between the side brackets.

Cross brackets for cabinets	Label	Length (mm)
KM2/12/(13)(14)W	PP2KM/S	560
KM3/12/(13)(14)W	PP3KM/S	810
KM4/12/(13)(14)W	PP4KM/S	1060
KM2/12/(13)(14)W	PP2KM	513
KM3/12/(13)(14)W	PP3KM	763
KM4/12/(13)(14)W	PP4KM	1013

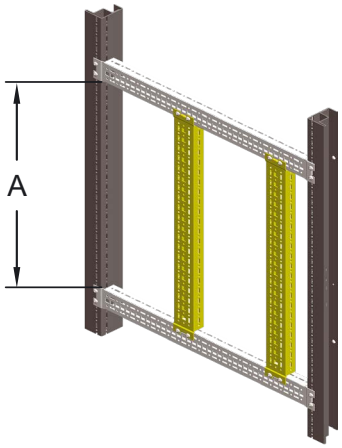


Vertical brackets

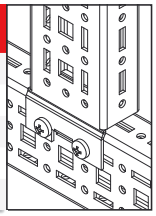
VP KM

They are used for mounting equipment or fixing cables on the construction of KMW cabinets. They are made of zinc-coated sheet steel 1.5 mm thick.

They are mounted between the two side or rear brackets.



Vertical brackets for field height A	Label	Length (mm)
Field height 525	VP525KM	560
Field height 825	VP825KM	860
Field height 1125	VP1125KM	1160
Field height 1425	VP1425KM	1460
Field height 1725	VP1725KM	1760



SOW instrument

SOW

It is used for mounting equipment under the mounting frame. It is fixed with an imbus screw and hexagon nut M8R on the mounting frame.

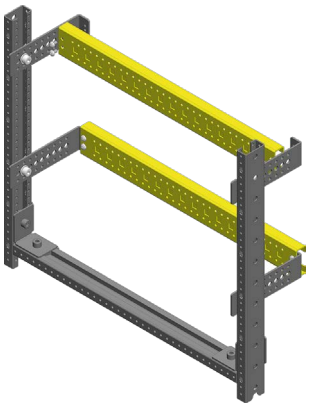
Supplied as a kit.

- Hexagon nut - **2** pcs
- Inbus screw - **2** pcs
- L profile - **2** pcs

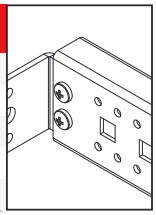
Mounting brackets under the mounting frame

SP

They are used for mounting equipment under the mounting frame. They are made of zinc-coated sheet steel 2 mm thick.
Mounted on the SOW instrument.



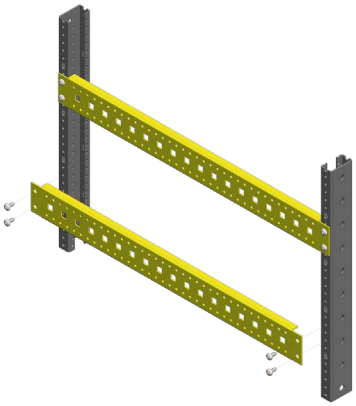
Mounting brackets under mounting frame	Label	Length (mm)
MR1-12(13)(14)W	SP1	195
MR1,5-12(13)(14)W	SP1,5	320
MR2-12(13)(14)W	SP2	445
MR3-12(13)(14)W	SP3	695
MR4-12(13)(14)W	SP4	945



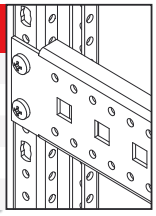
Mounting brackets on the mounting frame

PR

They are used for mounting equipment on the mounting frame. They are made of zinc-coated sheet steel with a thickness of 2 mm.
Mounted on the front and back of the mounting frame.



Mounting brackets on the mounting frame	Label	Length(mm)
MR1-12(13)(14)W	PR1	245
MR1,5-12(13)(14)W	PR1,5	370
MR2-12(13)(14)W	PR2	495
MR3-12(13)(14)W	PR3	745
MR4-12(13)(14)W	PR4	995

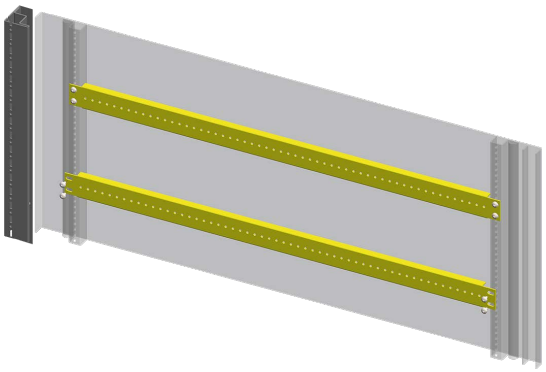


Door brackets

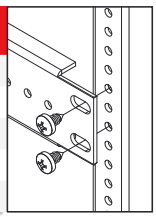
PZV KM

They are used for mounting equipment on the door. They are made of zinc-coated sheet steel 2 mm thick.

They are mounted on door reinforcement.



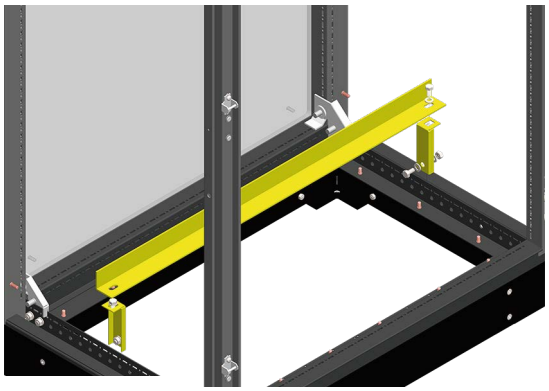
Door brackets for cabinets	Label	Length (mm)
KM1/12/(13)(14)W	PZV1KM	195
KM1,5/12/(13)(14)W	PZV1,5KM	368
KM2/12/(13)(14)W	PZV2KM	493
KM3/12/(13)(14)W	PZV3KM	743
KM4/12/(13)(14)W	PZV4KM	433



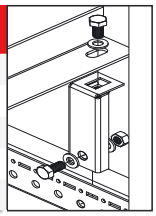
Cable holders

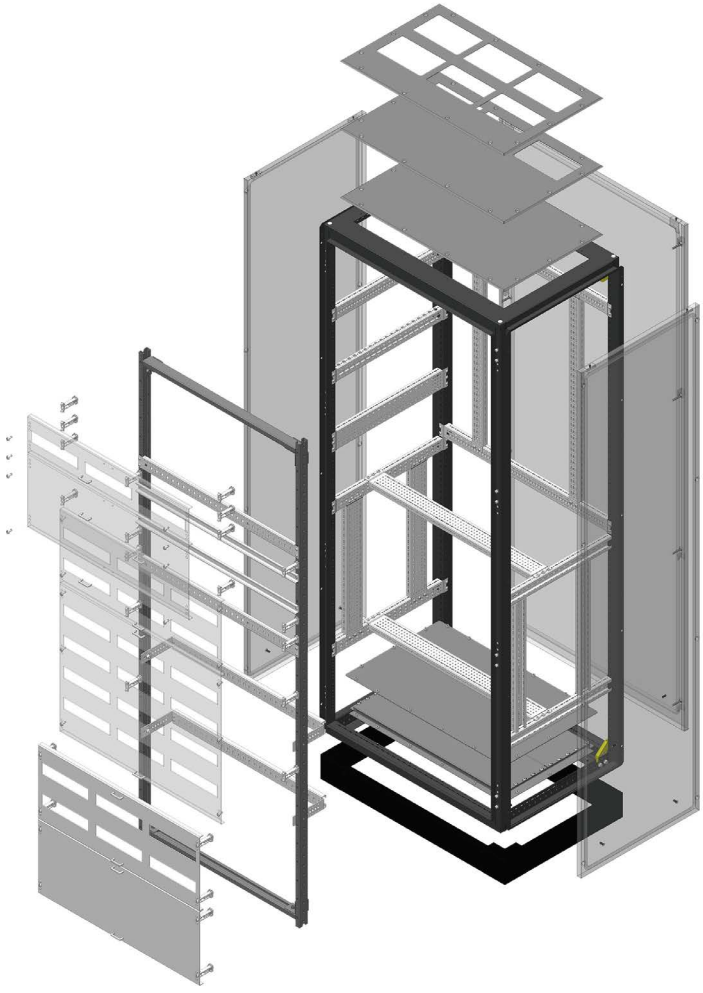
DK KM

Used for fixing (unloading) cables on the underside of the cabinet. They are made of cold-rolled sheet steel 3 mm thick and electrostatically plasticized with structural color **RAL 7035**.
Supplied with carriers (2 pcs).



Cables holder for cabinets	Label	Length (mm)
KM1/12/(13)(14)W	DK1KM	348
KM1,5/12/(13)(14)W	DK1,5KM	473
KM2/12/(13)(14)W	DK2KM	598
KM3/12/(13)(14)W	DK3KM	848
KM4/12/(13)(14)W	DK4KM	1098





Single-door cabinet

KMW

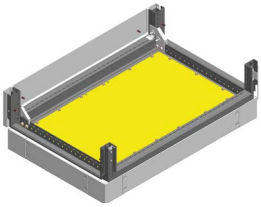
Detail of the roof

Lifting Eye Bolts (M12) for carrying cabinets

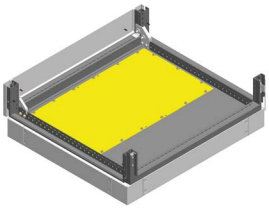
NUV-12

Upper holder for mounting plate and mounting frame

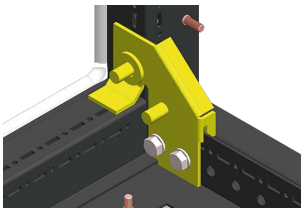
NKM



Bottom of the single-door cabinet **400** and **600** IP55
(cover with a seal)

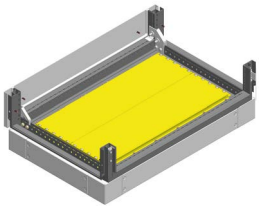


Bottom of the single-door cabinet **800** and **1000** IP55
(cover with a seal)

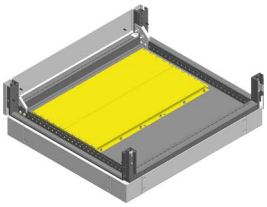


Lower holder for mounting plate and mounting frame

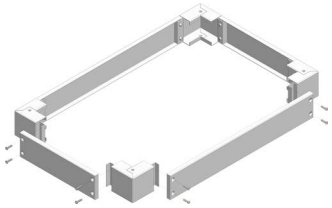
NKM



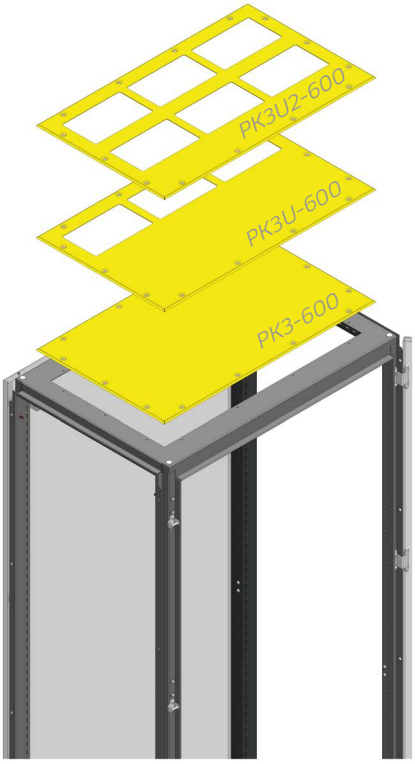
Bottom of the single-door cabinet **400** and **600**
(movable plates)



Bottom of the single-door cabinet **800** and **1000**
(movable plates)



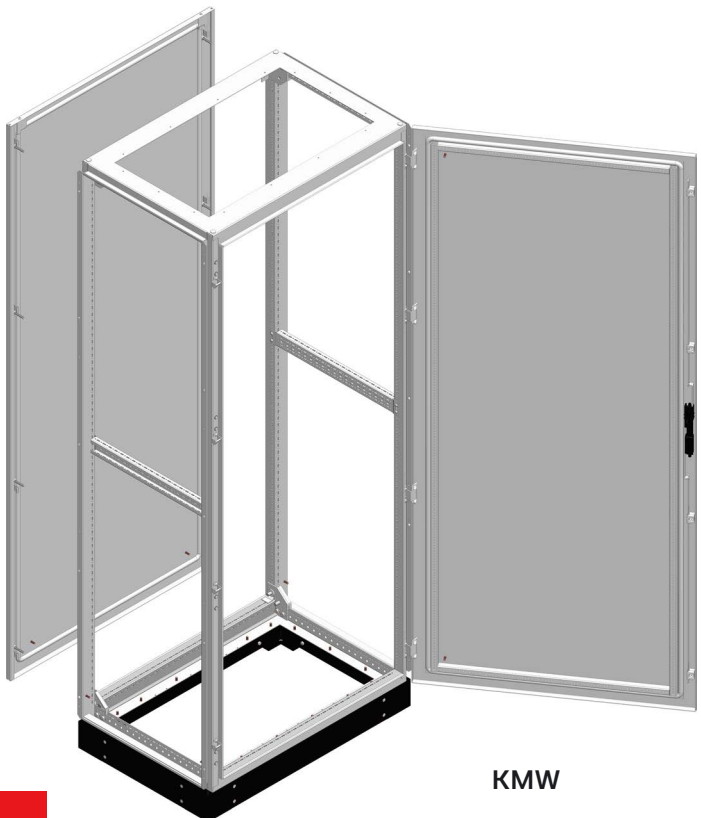
Segment stand
of KMW cabinet, height 100 mm.



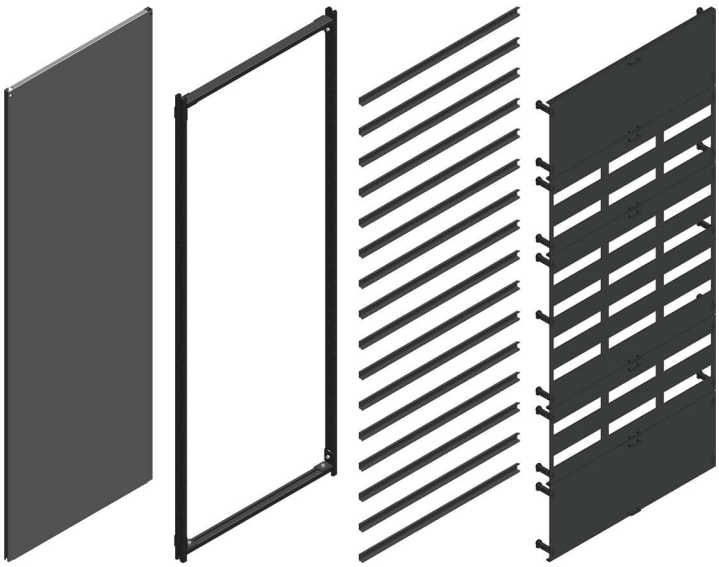
VARIANTS OF ROOF COVER

Mounting plates and systems for fast installation of modular equipment

KMW



KMW



MPKM MR DIN PP

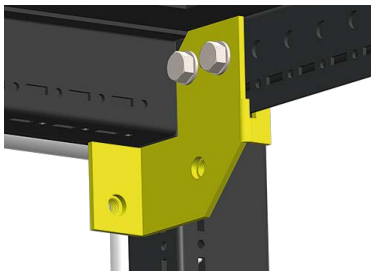
Double-door cabinet

KMW

Detail of the roof

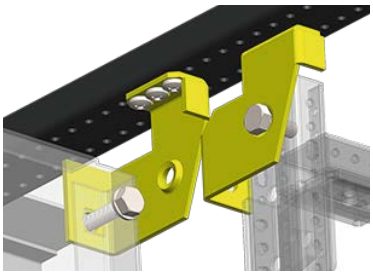
Lifting Eye Bolts (M12) for carrying cabinets

NUV-12



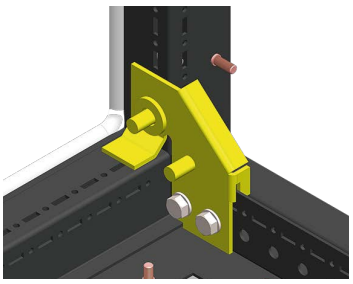
Upper holder for mounting plate and mounting frame

NKM



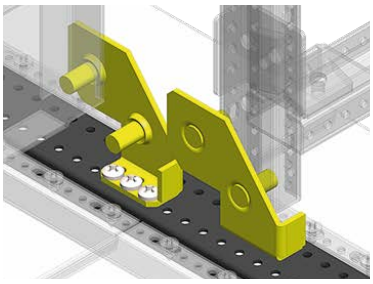
Middle holder for mounting plate and mounting frame **upper**

NKMS



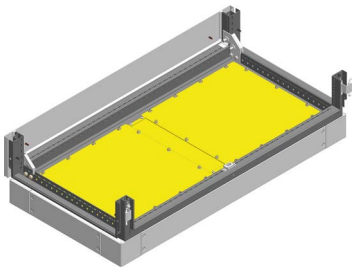
Lower holder for mounting plate and mounting frame

NKM

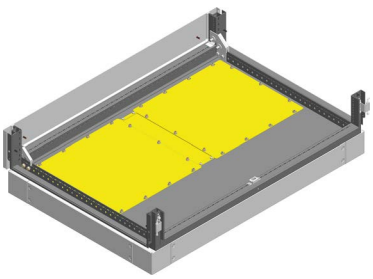


Middle holder for mounting plate and mounting frame **lower**

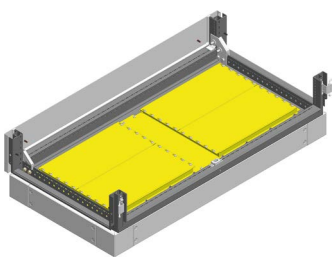
NKMS



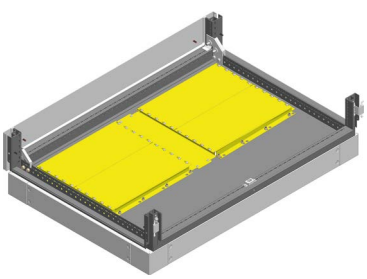
Bottom of the single-door cabinet **400** and **600** IP55
(cover with a seal)



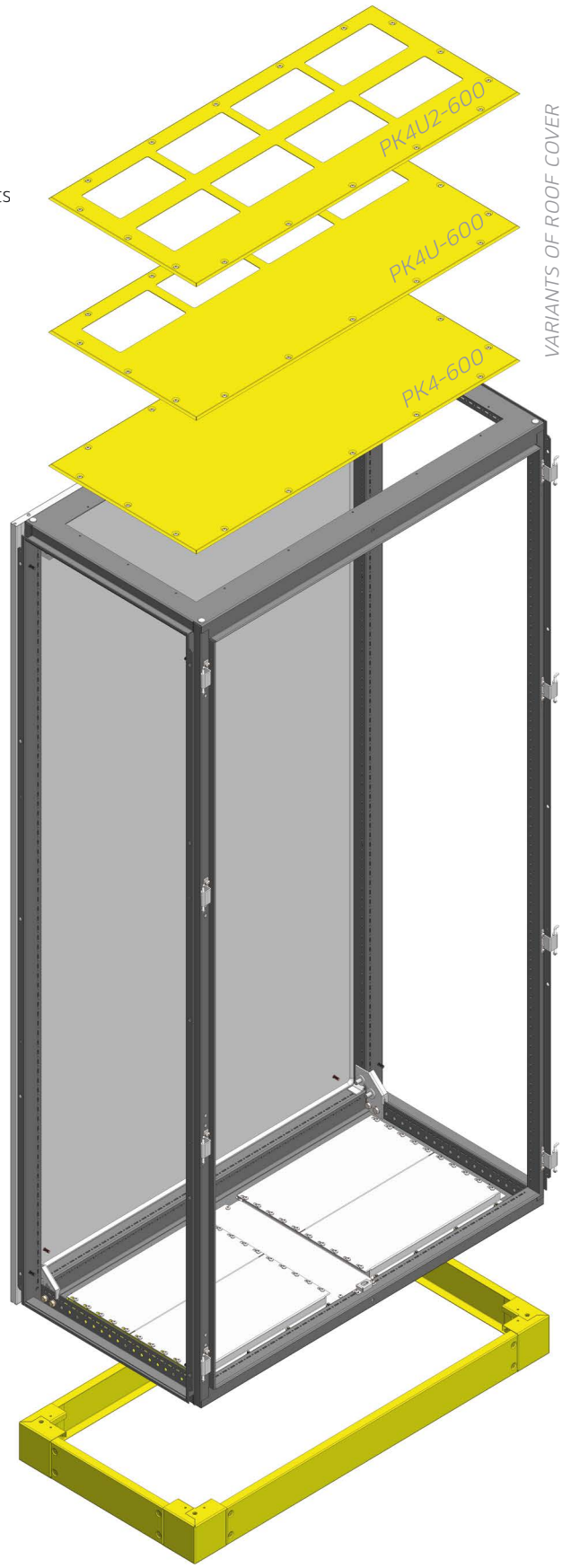
Bottom of the single-door cabinet **800** and **1000** IP55
(cover with a seal)



Bottom of the single-door cabinet **400** and **600**
(movable plates)



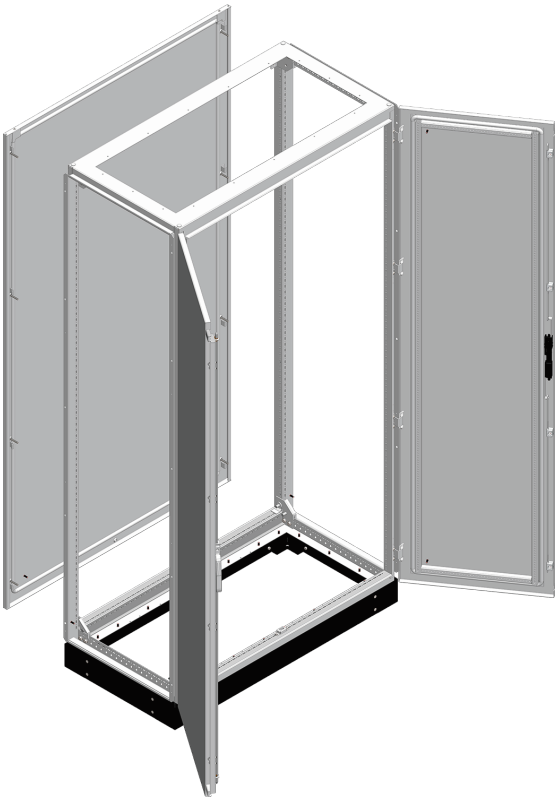
Bottom of the single-door cabinet **800** and **1000**
(movable plates)

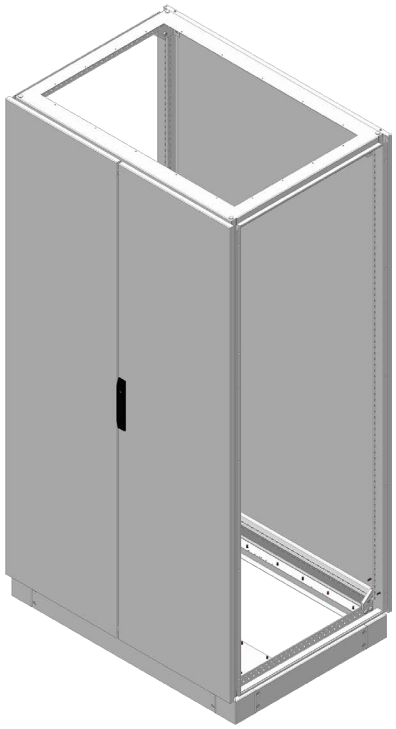


VARIANTS OF ROOF COVER

Segment stand of KMW cabinet, height 100 mm.

Double-door cabinet — KMW





Mounting plates and systems for fast installation of modular equipment — KMW

MPKM

MPKM+MR

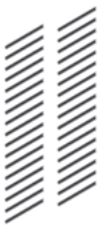
DIN

PP

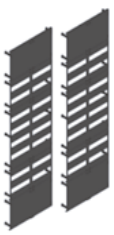
MR

MR

DIN



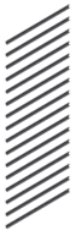
PP



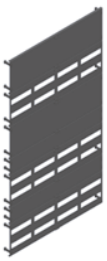
MPKM

MR

DIN

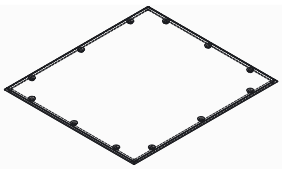
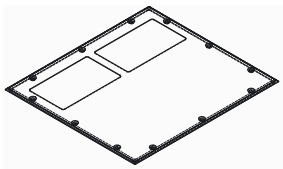
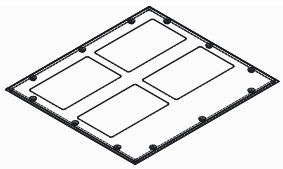


PP



Roof covers

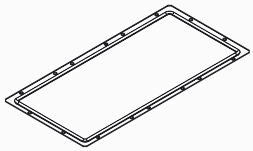
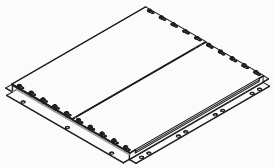
PK, PK U, PK U2

Cabinet label	Width A (mm)	Depth B (mm)			
KM1/12(13)(14)/40W	235	210	PK1-400	PK1U-400	-
KM1,5/12 (13)(14)/40W	335	210	PK1,5-400	PK1,5U-400	-
KM2/12(13)(14)/40W	460	210	PK2-400	PK2U-400	-
KM3/12(13)(14)/40W	710	210	PK3-400	PK3U-400	-
KM4/12(13)(14)/40W	960	210	PK4-400	PK4U-400	-
KM1,5/12(13)(14)/60W	335	410	PK1,5-600	PK1,5U-600	PK1,5U2-600
KM2/12(13)(14)/60W	460	410	PK2-600	PK2U-600	PK2U2-600
KM3/12(13)(14)/60W	710	410	PK3-600	PK3U-600	PK3U2-600
KM4/12(13)(14)/60W	960	410	PK4-600	PK4U-600	PK4U2-600
KM1,5/12(13)(14)/80W	335	610	PK1,5-800	PK1,5U-800	PK1,5U3-800
KM2/12(13)(14)/80W	460	610	PK2-800	PK2U-800	PK2U2-800
KM3/12(13)(14)/80W	710	610	PK3-800	PK3U-800	PK3U2-800
KM4/12(13)(14)/80W	960	610	PK4-800	PK4U-800	PK4U2-800
KM1,5/12(13)(14)/100W	335	810	PK1,5-1000	PK1,5U-1000	PK1,5U3-1000
KM2/12(13)(14)/100W	460	810	PK2-1000	PK2U-1000	PK2U2-1000
KM3/12(13)(14)/100W	710	810	PK3-1000	PK3U-1000	PK3U2-1000
KM4/12(13)(14)/100W	960	810	PK4-1000	PK4U-1000	PK4U2-1000

Roof covers are manufactured from cold-rolled steel sheet DC01 thickness of 1.5 mm and electrostatically plasticized using RAL 7035EP structural color, with a filling polyurethane seal. Degree of protection IP55.

Bottom covers

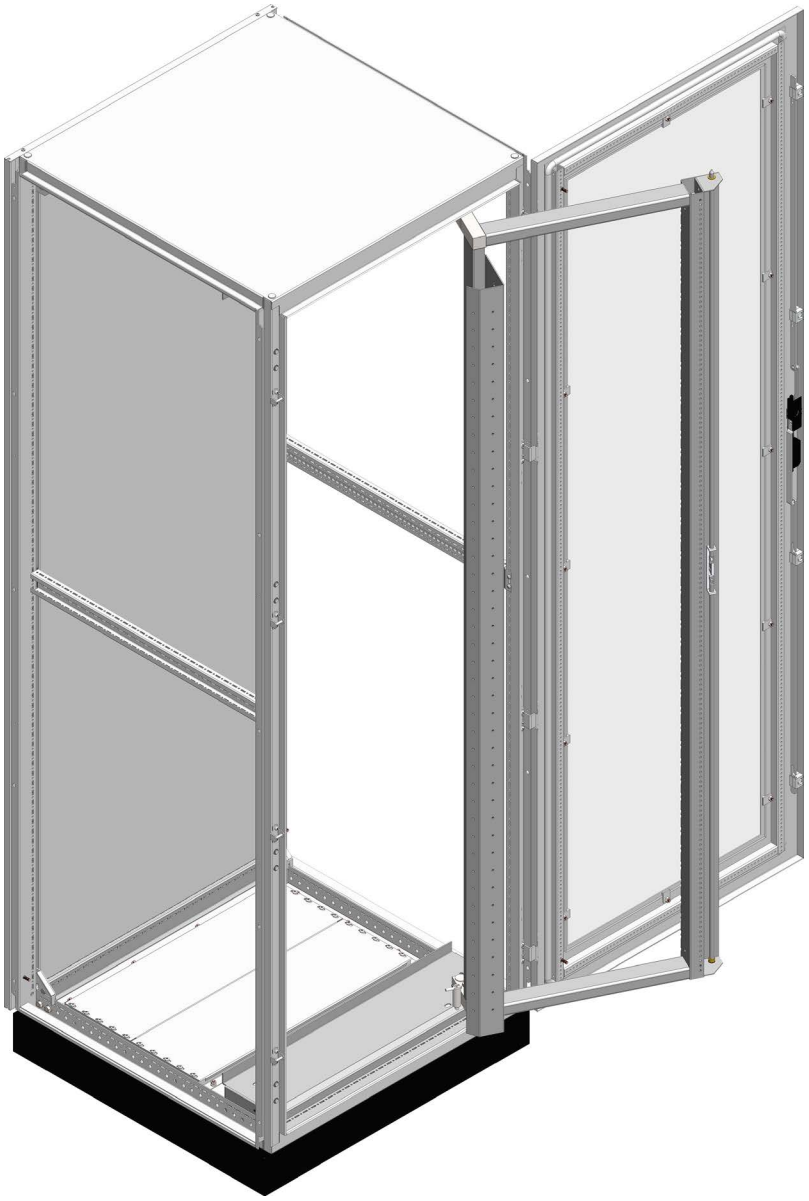
PD, PDP

Cabinet label	Width A (mm)	Depth B (mm)		
KM1/12(13)(14)/40W	200	200	PD1-200	PDP1-200
KM1,5/12(13)(14)/40W	325	200	PD1,5-200	PDP1,5-200
KM2/12(13)(14)/40W	450	200	PD2-200	PDP2-200
KM3/12(13)(14)/40W	700	200	PD3-200	PDP3-200
KM4/12(13)(14)/40W	950	200	PD4-200	PDP4-200
			PD4/2-200	PDP4/2-200
KM1,5/12(13)(14)/60(80)(100)W	325	400	PD1,5-400	PDP1,5-400
KM2/12(13)(14)/60(80)(100)W	450	400	PD2-400	PDP2-400
KM3/12(13)(14)/60(80)(100)W	700	400	PD3-400	PDP3-400
KM4/12(13)(14)/60(80)(100)W	950	400	PD4-400	PDP4-400
			PD4/2-400	PDP4/2-400

Bottom cover PD is made of zinc-coated sheet steel with a thickness of 1,5 mm and filled with polyurethane seal.
Movable bottom cover PDP consists of movable panels which are made of zinc-coated sheet steel with a thickness of 1,5 mm.

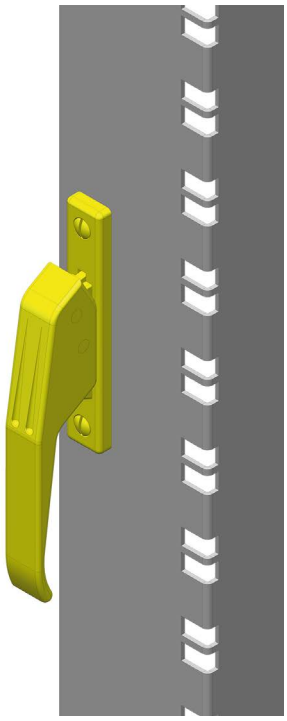
19" REK cabinet KMW type with swing frame

KMWO



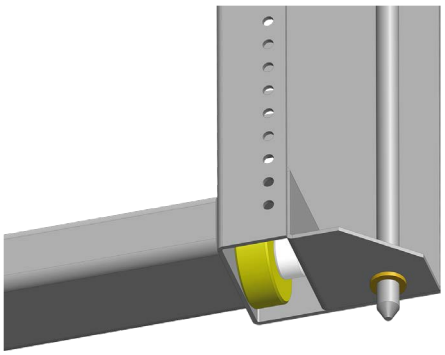
The basis of the cabinet is a free-standing cabinet KMW type, width **800 mm**, **870 mm** and **900 mm**.

Manufactured from cold-rolled steel sheet DC01 2 mm thick.

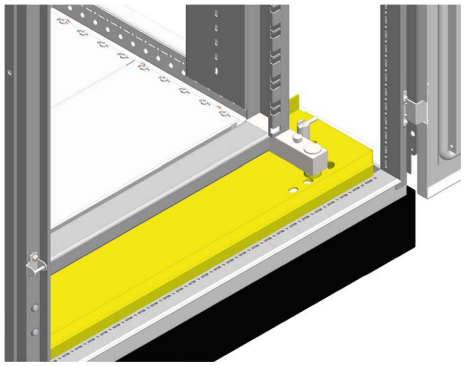


Swing frame lock

BW14-U

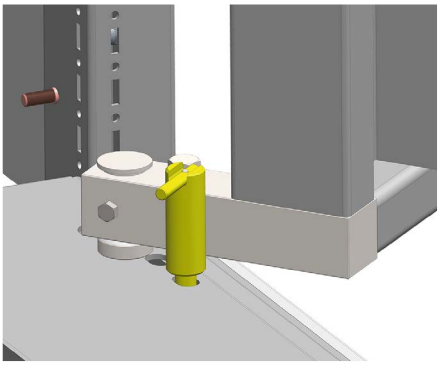


Swing frame pointing wheel



A swing frame holder

It is made of cold-rolled sheet metal DC01, 2,5 mm thick,galvanized with zinc. It is possible to install it at different depths.



Locking mechanism

It fixes a swing frame in an open position.

19" REK cabinets KMW type with swing frame

KMWO

Cabinet label	IP 55	Cabinet dimensions (H x W x D)
KMWO38U/80/60P		1900 x 800 x 600
KMWO38U/80/80P		1900 x 800 x 800
KMWO38U/87/60P		1900 x 870 x 600
KMWO38U/87/80P		1900 x 870 x 800
KMWO38U/90/80P		1900 x 900 x 600
KMWO38U/90/80P		1900 x 900 x 800
KMWO41U/80/60P		2050 x 800 x 600
KMWO41U/80/80P		2050 x 800 x 800
KMWO41U/87/60P		2050 x 870 x 600
KMWO41U/87/80P		2050 x 870 x 800
KMWO41U/90/60P		2050 x 900 x 600
KMWO41U/90/80P		2050 x 900x 800
KMWO44U/80/60P		2200 x 800 x 600
KMWO44U/80/80P		2200 x 800 x 800
KMWO44U/87/60P		2200 x 870 x 600
KMWO44U/87/80P		2200 x 870 x 800
KMWO44U/90/60P		2200 x 900 x 600
KMWO44U/90/80P		2200 x 900 x 800

19" REK cabinets with swing frame are based on the KMW cabinets.

The roof of the cabinet is without an opening.

The bottom of the cabinet is with movable plates for cables inserting.

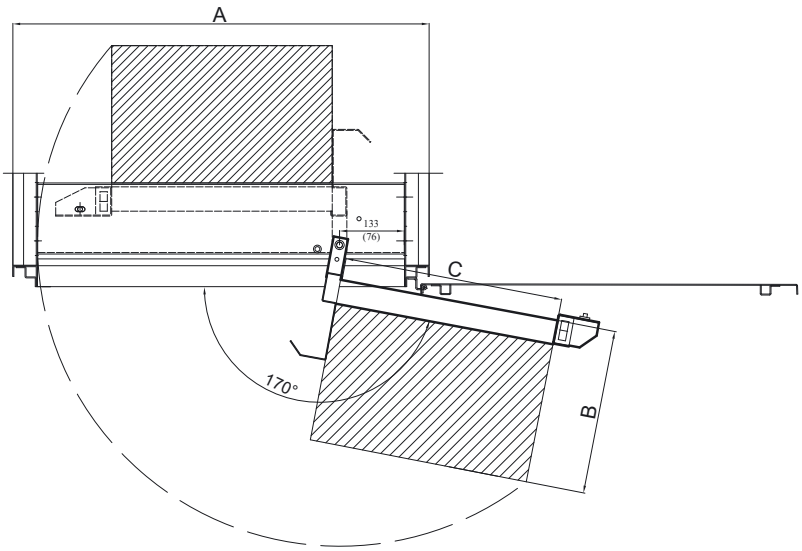
The cabinet door are with tempered glass of maximum dimensions. The opening angle of the cabinet door is **180°**.

The back cover and side plates are fixed with screws. *(side plates are ordered separately).*

Stand of the cabinet *(does not enter the dimensions of the cabinet)* is a segment type. Electrostatically plasticized using black semi-matte color **RAL 9005**. Stand height is 100 mm. At the bottom of the stand are openings for floor fastening.
(The stand is delivered with the cabinet).

Swing frame is installed in the cabinet.

- RAL paint: **7035EP** – structural
- Degree of protection **IP 55.**



Maximum depth of equipment fitting on swing frame

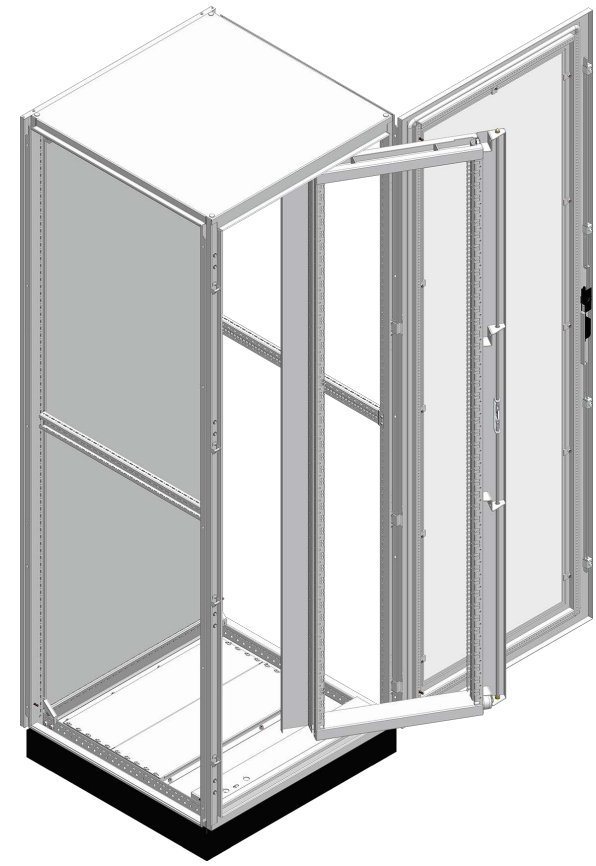
Width of cabinet	Swing frame in axis	Swing frame off axis	Useful width of frame
A	B	B	C
800	300	335	450
870	350	425	450
900	375	465	450

Swing frame 19":

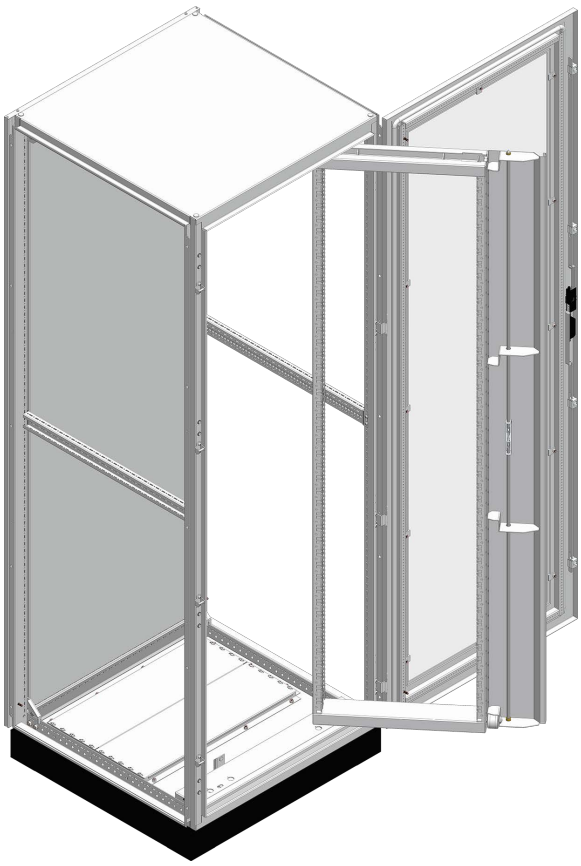
- Made of steel sheet metal 2 mm thick and rectangular steel tubes.
- Can be zinc-coated or electrostatically plasticized.
- Can be mounted as „left" or „right".
- Can be in axis or off axis in relation to the axis of the cabinet (off axis is used when installing equipment of greater depth).
- Rated load: **180 kg**
- Turning angle: **170°**

19" REK cabinet KMW type with swing frame — KMWOSR, KMWOAR

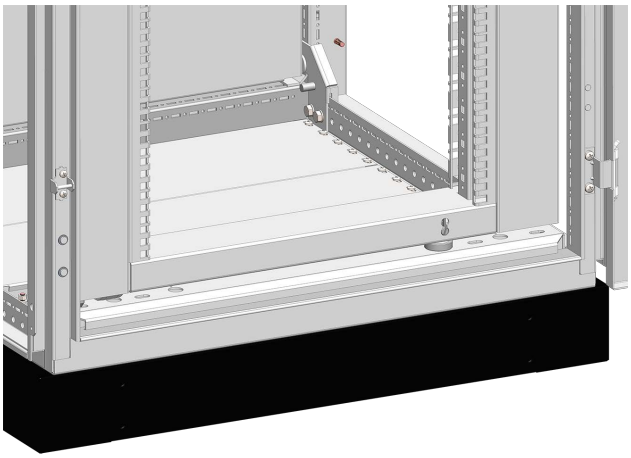
The basis of the cabinet is a free-standing cabinet KMW type, with width of **800 mm** and **870 mm.** Manufactured from cold-rolled steel sheet DC01 2 mm thick.



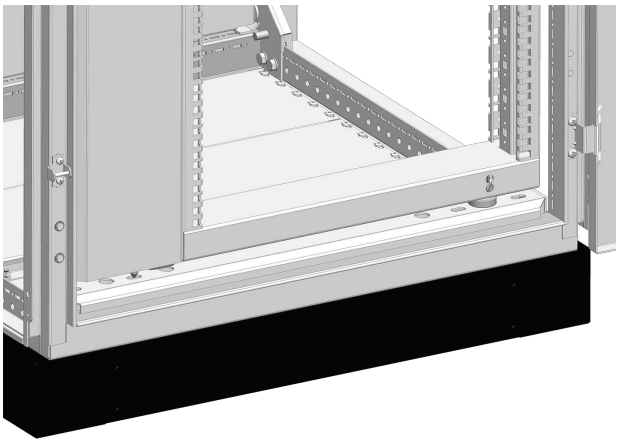
Swing frame **in axis** KMWOSR



Swing frame **off axis** KMWOAR



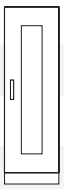
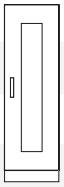
Swing frame **in axis** KMWOSR



Swing frame **off axis** KMWOAR

19" REK cabinets KMW type with swing frame

KMWOSR, KMWOAR

Cabinet label	IP 55	Cabinet dimensions (H x W x D)
KMWOSR44U/80/60P		2200 x 800 x 600
KMWOSR44U/80/80P		2200 x 800 x 800
KMWOSR44U/87/60P		2200 x 870 x 600
KMWOSR44U/87/80P		2200 x 870 x 800
KMWOAR44U/80/60P		2200 x 800 x 600
KMWOAR44U/80/80P		2200 x 800 x 800
KMWOAR44U/87/60P		2200 x 870 x 600
KMWOAR44U/87/80P		2200 x 870 x 800

19" REK cabinets with swing frame are based on the KMW cabinets.

The roof of the cabinet is without an opening.

The bottom of the cabinet is with movable plates for cables inserting.

The cabinet door are with tempered glass of maximum dimensions. The opening angle of the cabinet door is **180°**.

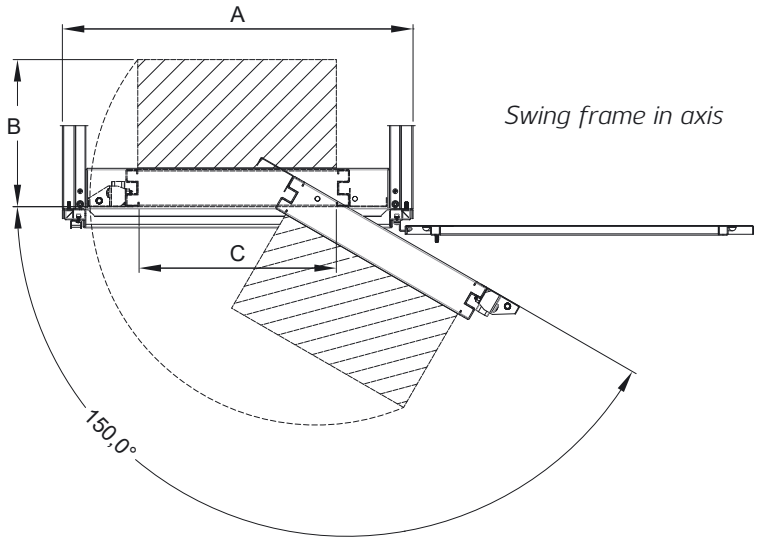
The back cover and side plates are fixed with screws *(side plates are ordered separately).*

Stand of the cabinet *(does not enter the dimensions of the cabinet)* is a segment type.
Electrostatically is plasticized using black semi-matte color **RAL 9005**. Stand height is 100 mm. At the bottom of the stand are openings for floor fastening. *(The stand is delivered with the cabinet).*

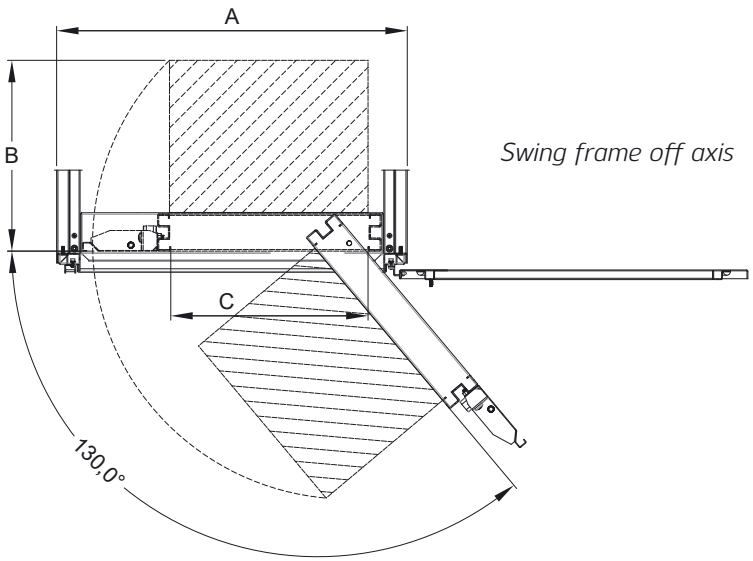
Swing frame is installed in the cabinet.

- RAL paint: **7035EP** – structural
- Degree of protection **IP 55.**

Cabinet with swing frame can be ordered with special requirements.



Swing frame in axis



Swing frame off axis

Maximum depth of equipment fitting on swing frame

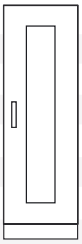
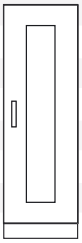
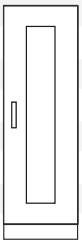
Width of cabinet	Swing frame in axis	Swing frame off axis	Useful width of frame
A	B	B	C
800	335	440	450
870	390	550	450

Swing frame 19":

- Made of steel sheet metal 2,5 mm thick and rectangular steel tubes.
- Can be zinc-coated or electrostatically plasticized.
- Can be mounted as „left" or „right".
- Can be in axis or off axis in relation to the axis of the cabinet (off axis is used when installing equipment of greater depth).
- Rated load: **180 kg**
- Turning angle: **130° or 150°**

19" REK cabinets KMW type with fixed frame

KMWF

Cabinet label	IP 55	Cabinet dimensions (H x W x D)
KMWF41U/62/40		1900 x 620 x 400
KMWF41U/62/60		1900 x 620 x 600
KMWF41U/62/80		1900 x 620 x 800
KMWF41U/62/100		1900 x 620 x 1000
KMWF41U/80/40		1900 x 800 x 400
KMWF41U/80/60		1900 x 800 x 600
KMWF41U/80/80		1900 x 800 x 800
KMWF41U/80/100		1900 x 800 x 1000
KMWF44U/62/40		2050 x 620 x 400
KMWF44U/62/60		2050 x 620 x 600
KMWF44U/62/80		2050 x 620 x 800
KMWF44U/62/100		2050 x 620 x 1000
KMWF44U/80/40		2050 x 800 x 400
KMWF44U/80/60		2050 x 800 x 600
KMWF44U/80/80		2050 x 800 x 800
KMWF44U/80/100		2050 x 870 x 1000
KMWF47U/62/40		2200 x 620 x 400
KMWF47U/62/60		2200 x 620 x 600
KMWF47U/62/80		2200 x 620 x 800
KMWF47U/62/100		2200 x 620 x 1000
KMWF47U/80/40		2200 x 800 x 400
KMWF47U/80/60		2200 x 800 x 600
KMWF47U/80/80		2200 x 800 x 800
KMWF47U/80/100		2200 x 800 x 1000

19" REK cabinets with swing frame are based on the KMW cabinets.

The roof of the cabinet is with an opening.

The bottom of the cabinet is with movable plates for cables inserting.

The cabinet door are with tempered glass of maximum dimensions. The opening angle of the cabinet door is **180°**.

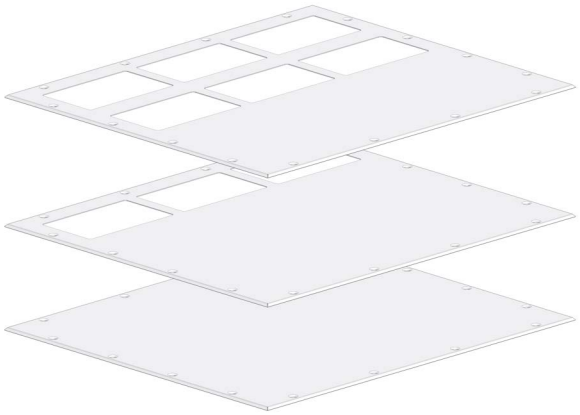
The back cover and side plates are fixed with screws *(side plates are ordered separately).*

Stand of the cabinet is a segment type *(does not enter the dimensions of the cabinet).* Electrostatically plasticized using black semi-matte color **RAL 9005**. Stand height is 100 mm. At the bottom of the stand are openings for floor fastening.
(The stand is delivered with the cabinet).

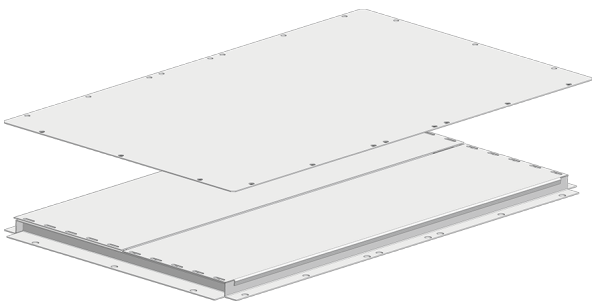
Fixed frame is installed in the cabinet.

- RAL paint: **7035EP** – structural
- Degree of protection **IP 55.**

Cabinet with fixed frame can be ordered with special requirements.



Variants of the roof cover

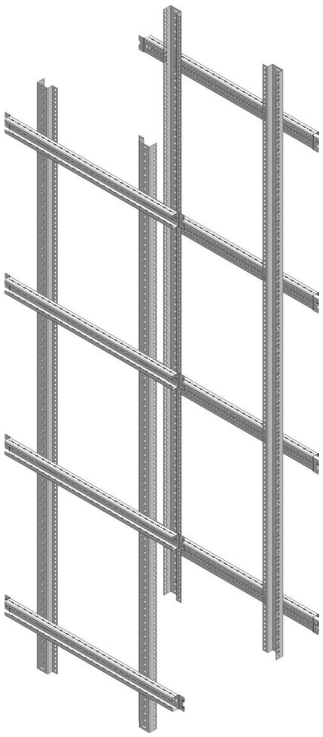


Variants of the bottom cover

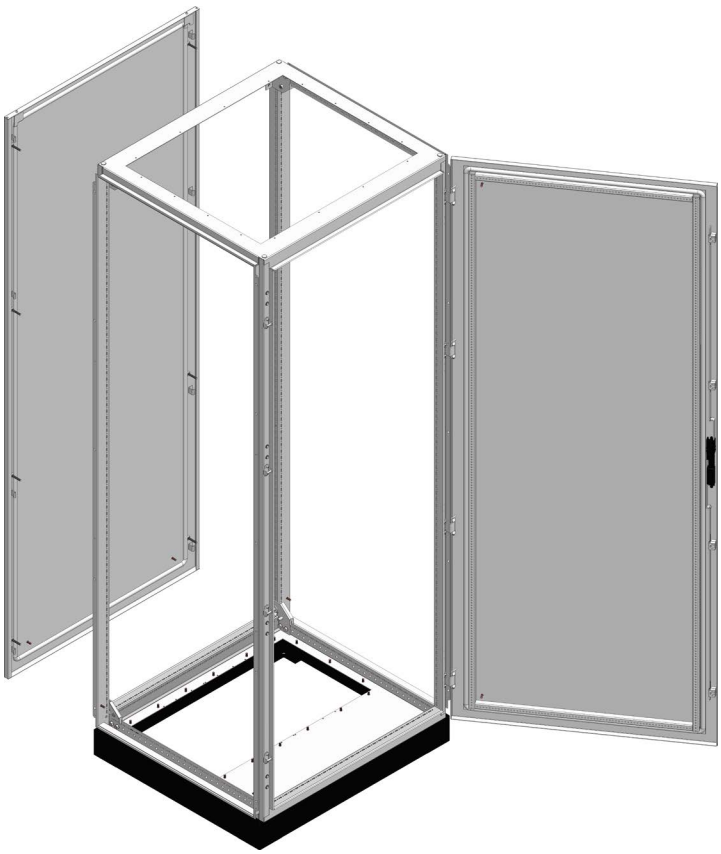
19" REK cabinet KMW type with fixed frame

KMWF

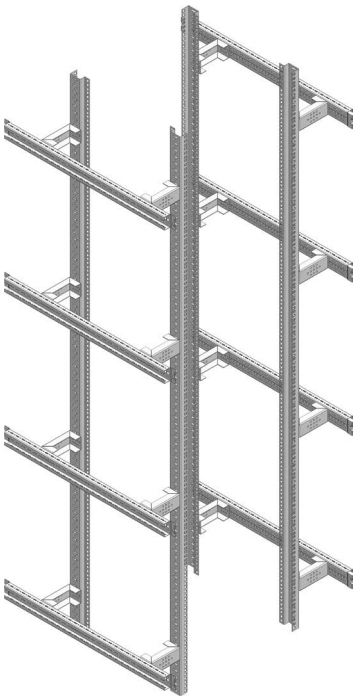
KMWF47U/62/80



Mounting supporting profiles of the REK on the side brackets PB

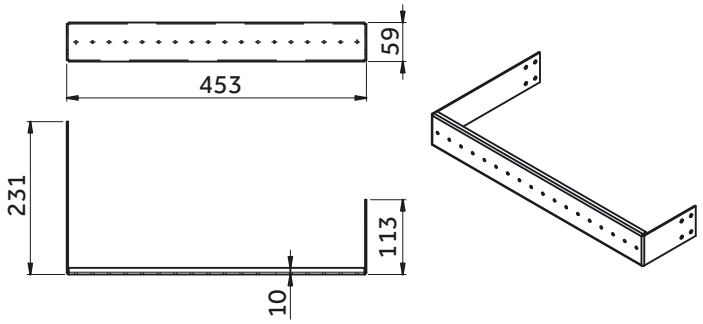


KMWF47U/87/80

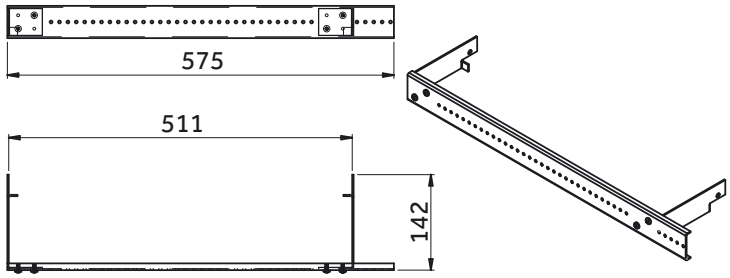


Mounting supporting profiles of the REK on the side brackets PB through spacer profiles

Wiring duct carrier for swing frame NKOR19IN



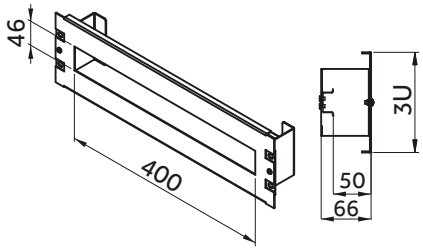
Wiring duct carrier for swing frame NKOR19INR



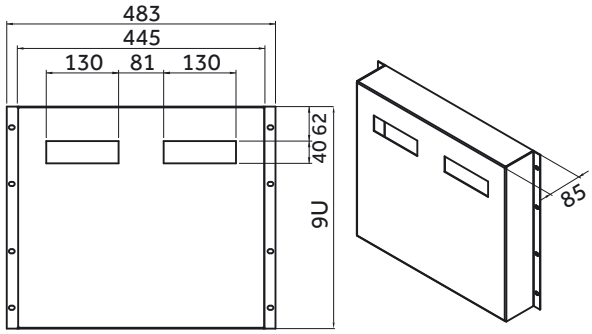
19" Protective masks P

According to the customer's request, masks with openings and masks for filling unused space are produced.

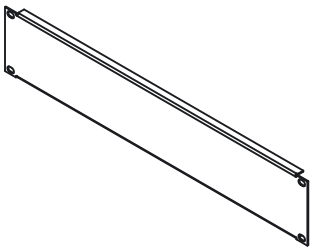
Height of mask	1U	2U	3U	4U	5U	6U	7U	8U	9U	10U
Label	P-1U	P-2U	P-3U	P-4U	P-5U	P-6U	P-7U	P-8U	P-9U	P-10U



P-3UOS



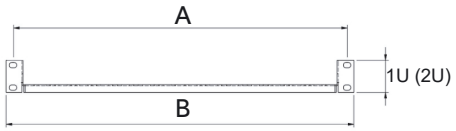
P-9U85H



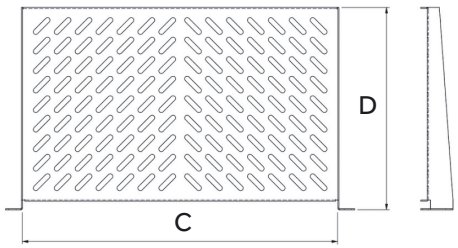
Mask P

19" Shelves P U, PF

Fixed shelf for installation with support in two points is made of cold-rolled sheet steel DC01 1,5 mm thick. The shelf is protected with electrostatically plasticized structural color RAL 9005 or RAL 7035.



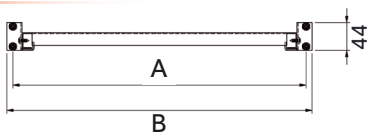
Label	A (mm)	B (mm)	C (mm)	D (mm)	E (kg)
P1U/140	465	483	436	140	8
P1U/280	465	483	436	280	12
P2U/140	465	483	436	140	10
P2U/280	465	483	436	280	15



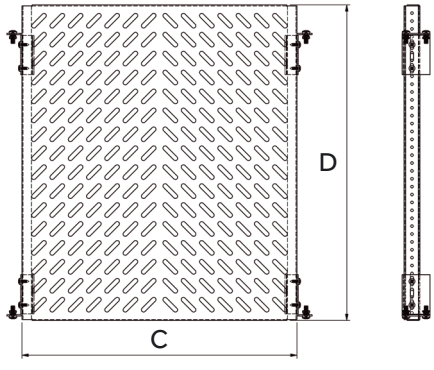
E(kg) - Load capacity with uniform load

Fixed shelf for installation with support in four points is made of cold-rolled sheet steel DC01 1,5 mm thick. Protection of carrying surface and shelf carriers is performed with electrostatically plasticized structural color RAL 9005 or RAL 7035.

Load capacity with uniform load up to 50 kg.



Label	A (mm)	B (mm)	C (mm)	D (mm)
PF450	465	483	436	450
PF650	465	483	436	650
PF850	465	483	436	850



According to the request can be made for larger load capacity.

Protective covers for mounting frame

PP

They are used to cover and protect cabinet equipment. They are made of plastic, 3 mm thick.

They can be with or without an opening. Covers with holes are used for automatic fuses and other modular type equipment.

The openings that have remained unused or for reserve are covered with covers for empty space. With plastic cover holder and fastener, they are mounted on PV profile.

- Dimensions of openings in covers width **1**, **2**, **3** i **4** are:

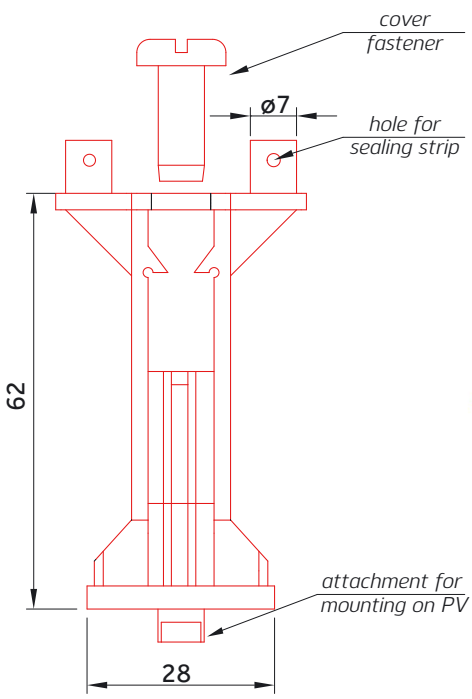
  46 x **217** mm (opening for 12 modules).

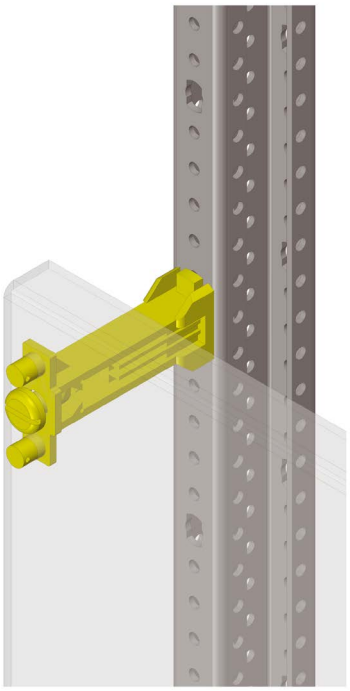
- Dimensions of openings in covers width **1,5** are:

  46 x **322** mm (opening for 18 modules).

For covers height **1** *and* **2** *a kit containing: 4* holders, *4 fasteners and 1 handle.*

For covers height **3** *and* **4** *a kit containing: 6* holders, *6 fasteners and 2 handles.*

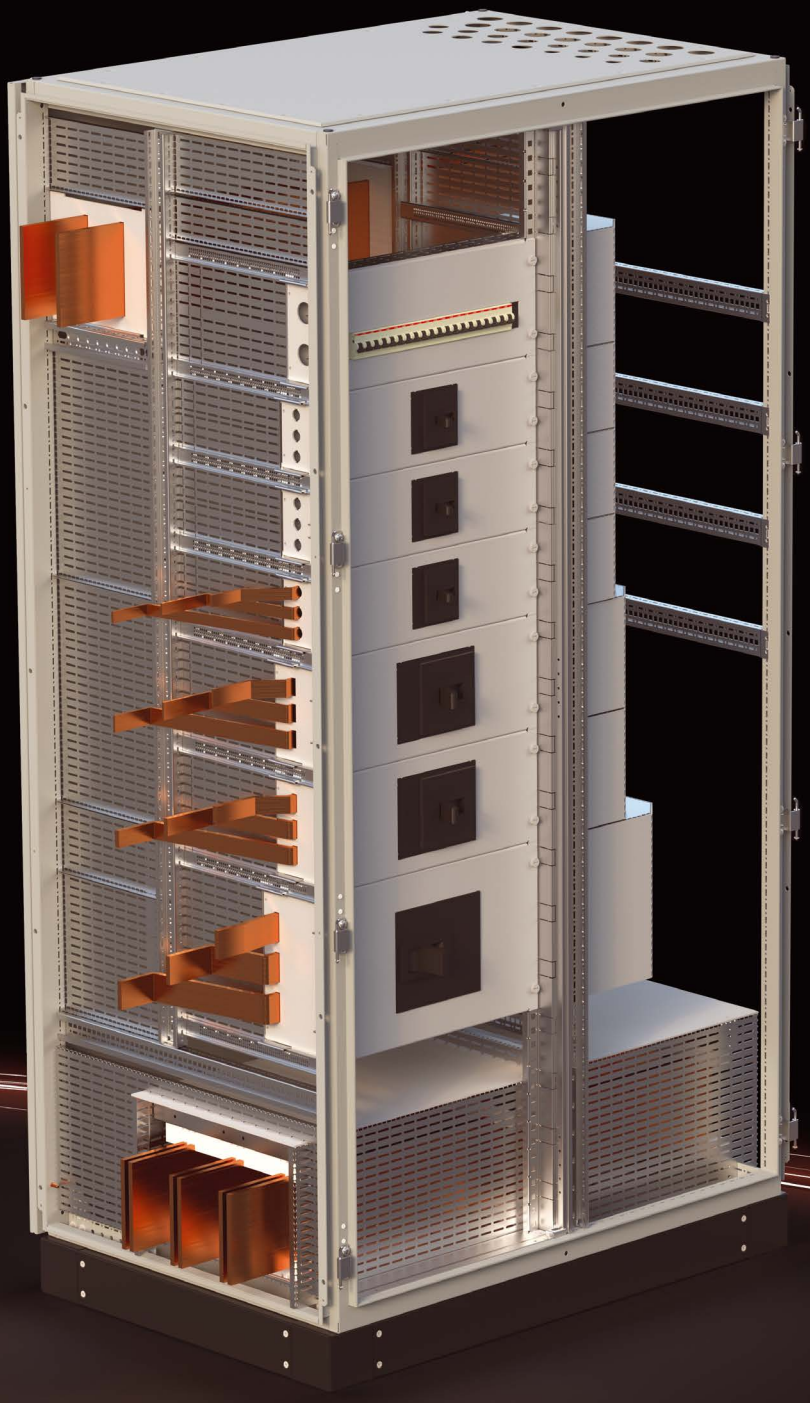




WIDTH OF COVERS FOR CABINETS

HEIGHT OF COVERS FOR CABINETS	1	1,5	2	3	4
1	PP11	PP1,51	PP21	PP31	PP41
2	PP12	PP1,52	PP22	PP32	PP42
3	PP13	PP1,53	PP23	PP33	PP43
4	PP14	PP1,54	PP24	PP34	PP44
1	PP11/0	PP1,51/0	PP21/0	PP31/0	PP41/0
2	PP12/0	PP1,52/0	PP22/0	PP32/0	PP42/0
3	PP13/0	PP1,53/0	PP23/0	PP33/0	PP43/0
4	PP14/0	PP1,54/0	PP24/0	PP34/0	PP44/0

MODULAR SYSTEM **KMW**



Modular system KMW is designed for the development of low voltage switchgear and controlgear assemblies according to the specific requirement of each client.

The modular KM system can accept the equipment of almost all equipment manufacturers (ABB, Schneider Electric, Siemens, Eaton...).

The main advantages are:

- Simplify and accelerate assembly of equipment.
- They enable faster and easier connection of the cabinet on the site.
- They provide savings in the consumption of copper bars up to **25 %.**
- In most cases, the assemblies are smaller than the conventional installation system.
- According to the standard **IEC 61439:2** it is possible to achieve internal forms of separation 2a, 2b, 3a, 3b, 4a and 4b.

All bracket pillars, as well as all mounting profiles of the KMW cabinets, have a standard specially designed perforation that allows very easy mounting, so that when mounting, there is no need for adhering and centering before fastening with a screw.

With this solution probability of error (slantwise mounting of equipment) is minimized.

Modular system KMW

Modularity

The formation of the swtichgear assemblies is performed using modular components (cubicles, roof covers, side plates, partial mounting plates, partial doors, cabinet stands, components for the formation of modular separations, busbars, busbars holders, busbar insulations, mounts for fitting equipment by depth, width and height of cabinets, equipment for inserting and fixing of the cable, lighting, air conditioning, ventilation, assembly-fitting accessories and other equipment).

Panels are made on the basis of the Evrotehna KMW platform of free-standing cabinets. If there is a need for subsequent expansion, ie, by upgrading the system, this can be done very easily using standard components.

Type tests according to EIC 61439-1 standard

	TYPE OF TEST		IEC 61439-1
1	Strength of material and parts		
	1.1	Resistance to corrosion	
		Severity test A	10.2.2.2 (1)
	1.2	Properties of insulating materials	
		Verification of thermal stability of cabinet	10.2.3.1 (2)
		Verification of resistance of insulating material to abnormal test heat and fire due to internal electric effect	10.2.3.2 (3)
	1.3	Lifting	10.2.5
	1.4	Mechanical impact	10.2.6
		Marking	10.2.7
2	Degree of protection of enclosures (IP)		10.3
3	Clearances		10.4
4	Creepage distances		
5	Protection against electric shock and integrity of protective circuits:		
	5.1	Effective continuity between the exposed conductive parts of the ASSEMBLY and the protective circuit	10.5.2
	5.2	Short-circuit withstand strenght of the protective circuit at I=0,6*I_0	10.5.3 10.11.5.6
6	Dielectric properties		
	6.1	Power-frequency withstand voltage	10.9.2
	6.2	Impulse withstand voltage	10.9.3
7	Temperature-raise limits		10.1
8	Short-circuit withstand strenght		10.11

Modular system KMW

Design verification

Design verification is one of the key differences of the new standard IEC 61439 compared to the old standard IEC 60439, where terminology „TYPE TESTED ASSEMBLIES" was used.

According to the new IEC 61439 standard, the tasks of all parties are precisely defined in obtaining a safe and reliable distribution system. All involved parties are:

- **Original manufacturer**

An organization that has made an original design and the necessary verification of the ASSEMBLY. The original manufacturer is responsible for the design verification specified in IEC 61439-2 as well as a series of electrical tests. Evrotehna, as the original manufacturer, has made a series of tests needed to meet the requirements of IEC 61439.

- **Panel builder**

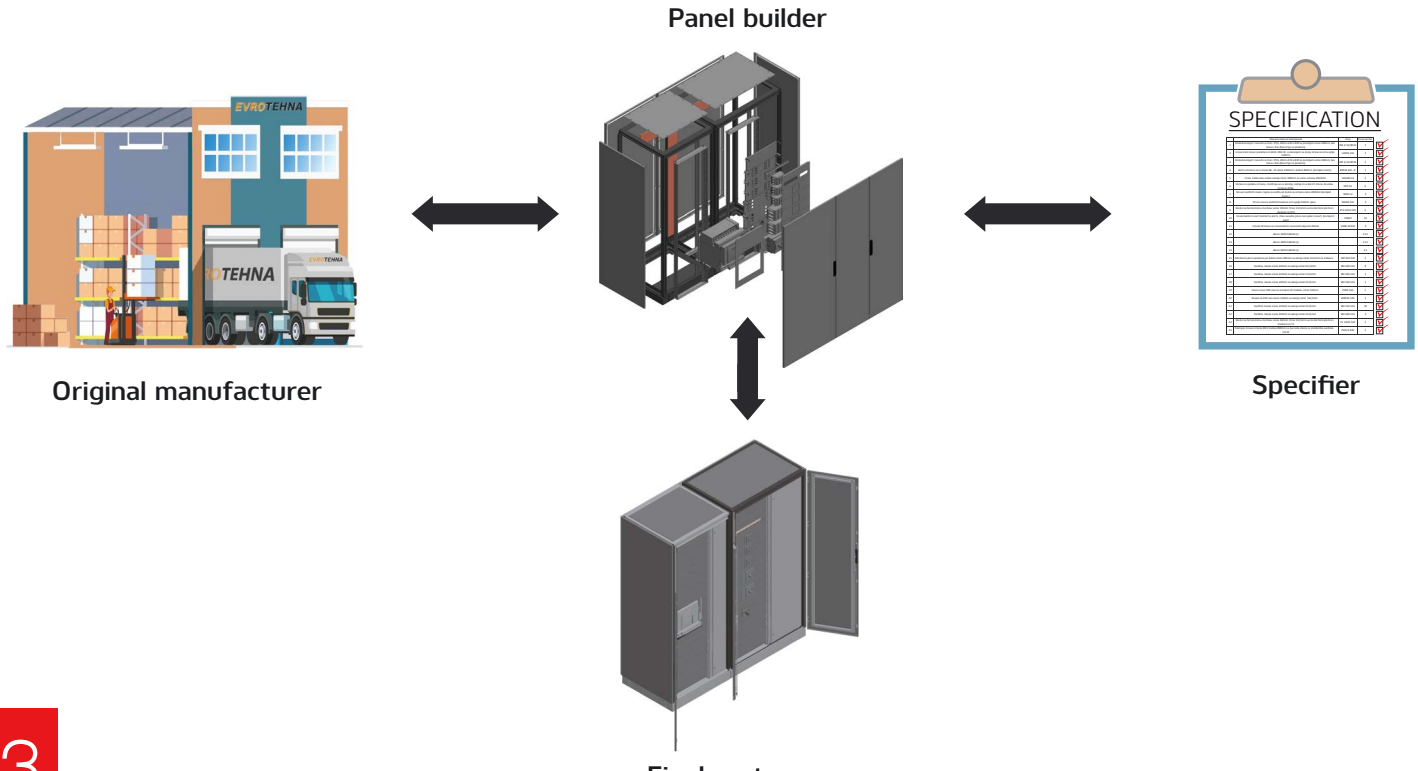
Organization responsible for ASSEMBLY. Panel builder is responsible for a series of routine tests for each panel defined according to IEC 61349-1 and according to the instructions of the original manufacturer. If the manufacturer of the ASSEMBLY deviates from the original manufacturer's instructions, then it becomes the original manufacturer and is obliged to do all the necessary tests as the original manufacturer.

- **Specifier**

Specifies all requirements and constraints of the ASSEMBLY, installation and control of the ASSEMBLY. He is responsible for checking whether the manufacturer of the ASSEMBLY fulfilled all the requirements and the necessary conditions according to his requirements. Depending on the situation, the specifier can be an end buyer, a design house or a third party hired by the end customer.

- **Final customer**

Final customer should require a certified ASSEMBLY. By obtaining a Test Report on routine testing, the final customer is assured that he has received a reliable and safe product according to design verification.



Modular system KMW

Modular system KMW offers flexibility in creation of panels/sections.

1. Section of the air circuit breaker
2. Section with vertical busbars
3. Section of modular circuit breaker
4. Cable section

Variants:
For each section it is possible to use a separate cabinet or to divide the cabinet into more sections (economical variant).

Universal busbar holders up to 630A — SI014950

Universal busbar suppport 3-pole with internal screw holes for busbars. Screw holes can be used as central supports. Certified to IEC 61439-1 2011.

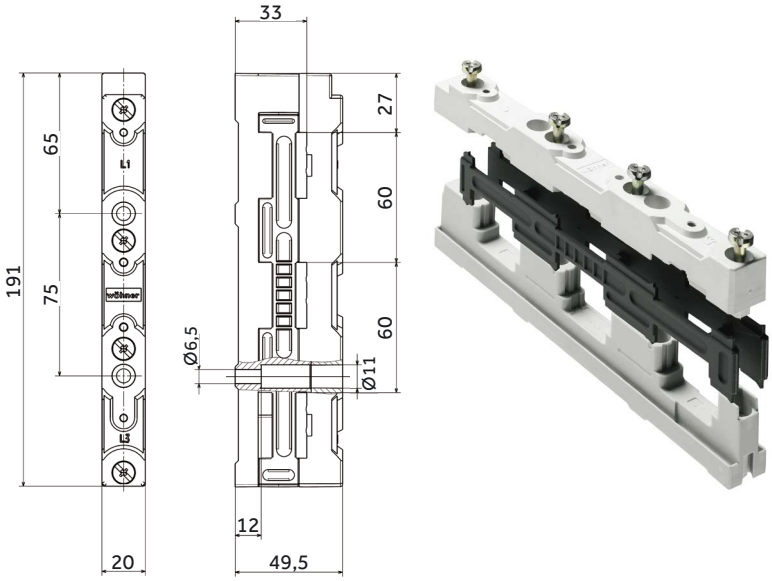
For Cu busbars: 12, 15, 20, 25, 30 x 5 mm.
For Cu busbars: 12, 15, 20, 25, 30 x 10 mm.

Material properties:

Main part: Thermal stability 125°C
Body: Self-extinguished material according to UL94, slip resistance CTI 600, halogen-free.

Rated surge voltage U_{imp} = 8kV
Maximum permissible voltage (IEC) AC = 1000 V
Maximum permissible voltage (IEC) DC = 1500 V
Durability due to short-circuit current IEC/EN:
$I_{pk\ max.}$ = 73 kA
(busbars 30 x 10, 2 busbars at a distance 250 mm).

Note: Torque for the screws of the busbar support Md = 4 Nm.



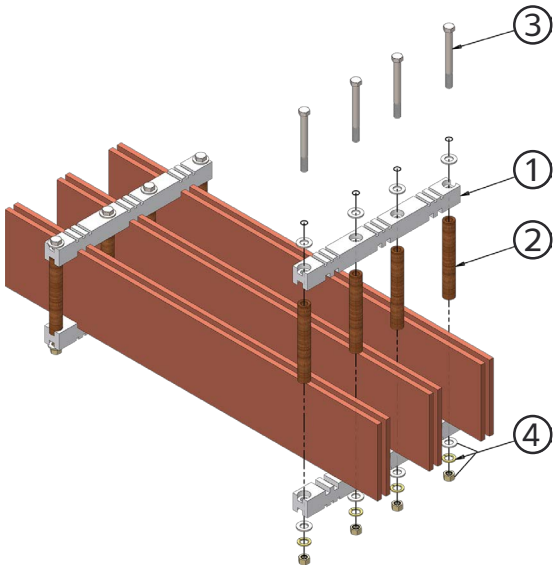
Horizontal and vertical busbars — to 100 kA/1s

There are several key parameters in determining the dimensions of the busbar in the switchgear assembly:

- Necessary power carrying capacity InA/InC
- Short-circuit withstand rating I_{pk} / I_{cw}
- Withstand voltage
- Impulse withstand voltage

Horizontal and vertical busbars have been tested and the following results have been obtained:

U_e = 415 VAC U_{imp} = 12 kV f = 50 Hz
I_{pk} = 220 kA I_{cw} = 100 kA/1S



① **Busbar holders**
② **Spacers**
③ **Special screw for connecting two holders**
④ **Nuts and washers**

① Busbar holders — ZX154

Neutral N and protective PE busbar holders with central spacing between busbars 72 mm.
Two holders ZX154 are required for each point of attachment of the busbar.

For Cu busbars: from 20 x 5 mm to 30 x 5 mm.
For Cu busbars: from 30 x 10 mm to 160 x 10 mm.

① Busbar holders — ZX155

Three-phase busbar holders with central spacing between busbars 100 mm.
Two holders ZX155 are required for each point of attachment of the busbar.

For Cu busbars: from 20 x 5 mm to 30 x 5 mm.
For Cu busbars: from 30 x 10 mm to 160 x 10 mm.

① Busbar holders

ZX156

Three-phase busbar holders with central spacing between busbars 125 mm.
Two holders ZX156 are required for each point of attachment of the busbar.

For Cu busbars: from 20 x 5 mm to 30 x 5 mm.
For Cu busbars: from 30 x 10 mm to 160 x 10 mm.

② Spacers from hard paper

Two spacers are required for each point of attachment of the busbar holders ZX154 and ZX155, while four spacers are required for ZX156 busbar holders. Diameter x Length, inner diameter 13 mm.

ZX173
19 x 20 mm
For Cu busbars
20 x 5 or 30 x 10 mm

ZX174
19 x 30 mm
For Cu busbars
30 x 5 mm or 40 x 10 mm

ZX175
19 x 40 mm
For Cu busbars
50 x 10 mm

ZX176
19 x 50 mm
For Cu busbars
60 x 10 mm

ZX177
19 x 70 mm
For Cu busbars
80 x 10 mm

ZX178
19 x 90 mm
For Cu busbars
100 x 10 mm

ZX579
19 x 110 mm
For Cu busbars
120 x 10 mm

ZX580
19 x 150 mm
For Cu busbars
160 x 10 mm

ZX180
19 x 1000 mm
- -
Spacer length 1 m.

③ Special screw for connecting two holders

Screws are made of steel, additionally galvanized, with a strength of 8.8 according to DIN933. The two screws are required for each mounting point of the ZX154 and ZX155 busbar holders, while the four screws are required for the ZX156 busbar holders.

ZX181
M12 x 100 mm
For Cu busbars
20 x 5 or 30 x 10 mm

ZX182
M12 x 110 mm
For Cu busbars
30 x 5 or 40 x 10 mm

ZX183
M12 x 120 mm
For Cu busbars
50 x 10 mm

ZX184
M12 x 130 mm
For Cu busbars
60 x 10 mm

ZX186
M12 x 150 mm
For Cu busbars
80 x 10 mm

ZX188
M12 x 170 mm
For Cu busbars
100 x 10 mm

ZX213
M12 x 190 mm
For Cu busbars
120 x 10 mm

ZX214
M12 x 230 mm
For Cu busbarse
160 x 10 mm

④ Nuts and washers

In order to fasten each bolt, it is necessary to install certain nuts and washers. A flat washer M12 should be placed between the head of the screw and the busbar holder. Between the nut and the busbar holder, it is necessary to put first the flat washer M12, the spring washer M12 and finally the M12 nut.

Low voltage insulators, metric thread NVENT ERIFLEX — up to 100 kA/1s

ISO-TP insulators are made of high-quality materials, steel glass fiber and polyamide reinforced, which shows a successful test for abnormal heat due to fire at 960°C, as a mandatory part of testing according to **IEC 61439-1** standard.

Characteristics:

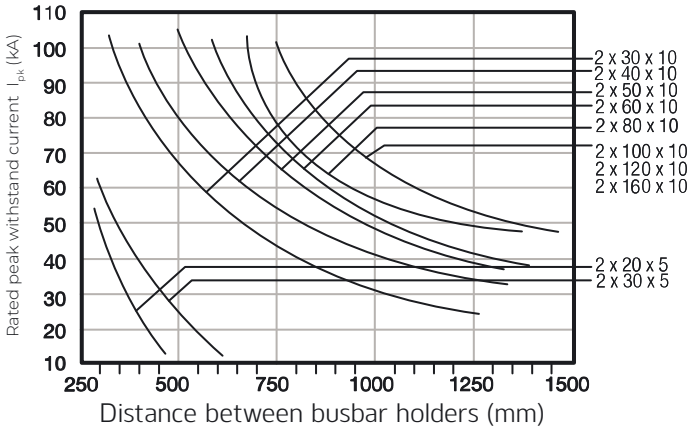
- Halogen free
- High resistance to leakage current
- Excellent stability due to electric and mechanical parameters
- Fiberglass reinforced
- Satisfied **RoHS**

Users can easily determine the distance between busbars according to the configuration of the position and value of the potential short-circuit current using the Online Erico Calculator.

Rated current allowed through Cu busbars — Diagram of short-circuit current strength

Cu busbars of rectangular cross-sections in assemblies at ambient temperature of 25°C around the busbar and maximum temperature of the busbar 65°C.

Dimensions	Allowed rated current		
Cu busbars (mm) height x thickness	1 Cu busbars	2 Cu busbars	3 Cu busbars
20 x 5	320	500	690
30 x 5	440	672	896
30 x 10	630	1250	-
40 x 10	850	1500	-
50 x 10	1000	1700	-
60 x 10	1250	2000	-
80 x 10	1450	2400	-
100 x 10	1700	2750	-
120 x 10	2000	3500	-
160 x 10	2500	4000	-



For short-circuit currents I_{pk} from:

10 - 20 kA	20 - 50 kA	>50 kA
$I_{cw}=I_{pk}$ x 0.52	$I_{cw}=I_{pk}$ x 0.48	$I_{cw}=I_{pk}$ x 0.46

Short-circuit current ratio I_{cw} - I_{pk}

According to standard IEC 61439-1 it is possible to determine the ratio of the short-circuit current value.

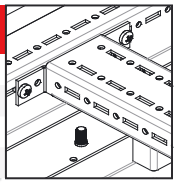
I_{cw} - short-term durable short-circuit current
I_{pk} - maximum durable current value

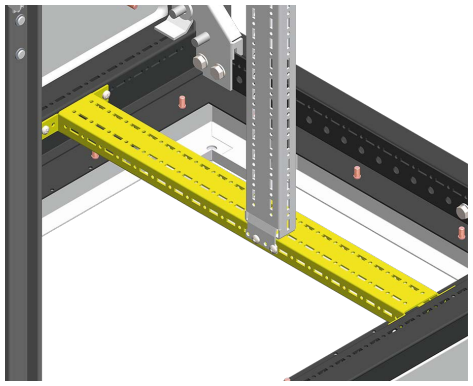
Profile for cabinet splitting

PPO

Used to split cabinets to sections. Delivered as a pair.
It is made of zinc-coated sheet steel 2 mm thick.

Profile for cabinet splitting	Label	Length (mm)
depth of 400 mm	PPO400	301
depth of 600 mm	PPO600	501
depth of 800 mm	PPO800	701
depth of 1000 mm	PPO1000	901



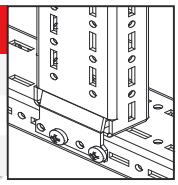


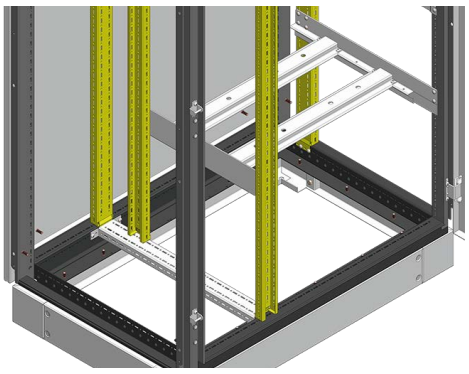
Pillars for cabinet splitting

SPO

Used to split cabinets to sections.
It is made of zinc-coated sheet steel 2 mm thick.

Pillars for cabinet splitting	Label	Height (mm)
height of 1900 mm	SPO12	1837
height of 2050 mm	SPO13	1987
height of 2200 mm	SPO14	2137



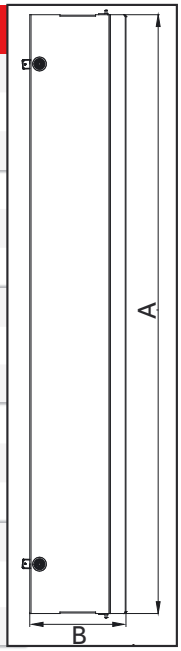


Cable and busbar duct doors

VKS

They are used to close the space in the cabinets of the cable and busbar ducts. They are made from cold-rolled steel sheet DC01 1 mm thick. Electrostatically painted with structural color **RAL 7035 EP.**

Cable and busbar duct doors for section	Label	Height A (mm)	Width B (mm)
200 mm width, for the height of 1900 mm	VKS200-12	1796	194,5
200 mm width, for the height of 2050 mm	VKS200-13	1946	194,5
200 mm width, for the height of 2200 mm	VKS200-14	2096	194,5
325 mm width, for the height of 1900 mm	VKS325-12	1796	319,5
325 mm width, for the height of 2050 mm	VKS325-13	1946	319,5
325 mm width, for the height of 2200 mm	VKS325-14	2096	319,5
450 mm width, for the height of 1900 mm	VKS450-12	1796	444,5
450 mm width, for the height of 2050 mm	VKS450-13	1946	444,5
450 mm width, for the height of 2200 mm	VKS450-14	2096	444,5
KM1,5 width, for the height of 1900 mm	VKS1,5-12	1796	382
KM1,5 width, for the height of 2050 mm	VKS1,5-13	1946	382
KM1,5 width, for the height of 2200 mm	VKS1,5-14	2096	382
KM2 width, for the height of 1900 mm	VKS2-12	1796	507
KM2 width, for the height of 2050 mm	VKS2-13	1946	507
KM2 width, for the height of 2200 mm	VKS2-14	2096	507

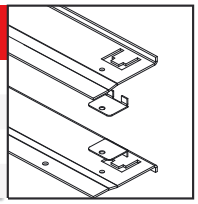


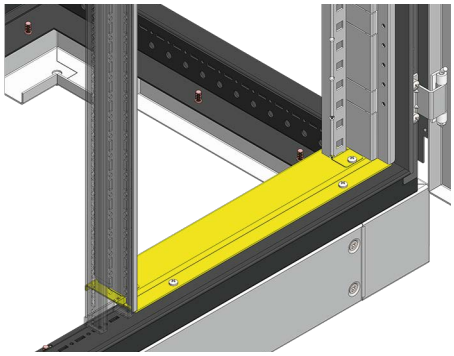
Holders of protective cover carriers

DNZM

Holders of protective cover carriers are used to hold protective mask carriers.
They are made of zinc-coated sheet steel 2 mm thick.

Holders of protective cover carriers	Label	Width (mm)
for width 387,5 mm	DNZM385	377,5
for width 512,5 mm	DNZM510	502,5
for width 762,5 mm	DNZM760	752,5
for width 1012,5 mm	DNZM1010	1002,5



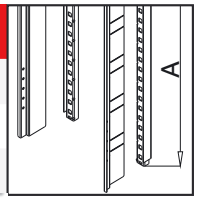


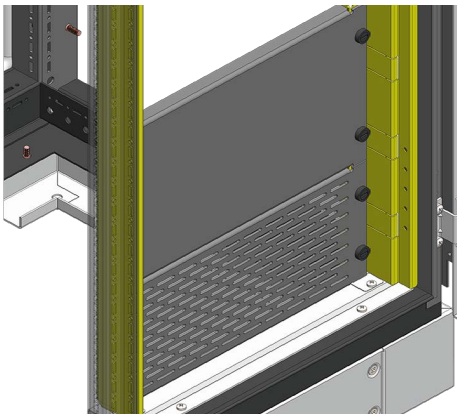
Protective cover carriers and battens for protection against contact

NZM

Protective cover carriers are used to carry protective covers. They are made of zinc-coated sheet steel 1,5 mm thick.
Battens for protection against contact serve to close the side space. They are made of zinc-coated sheet steel 1 mm thick.

Protective covers carriers and battens for protection against contact (NZM)	Label	Height A (mm)
for cabinets height 1900 mm	NZM12	1812
for cabinets height 2050 mm	NZM13	1962
for cabinets height 2200 mm	NZM14	2112



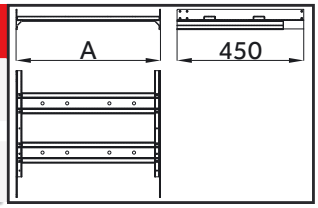


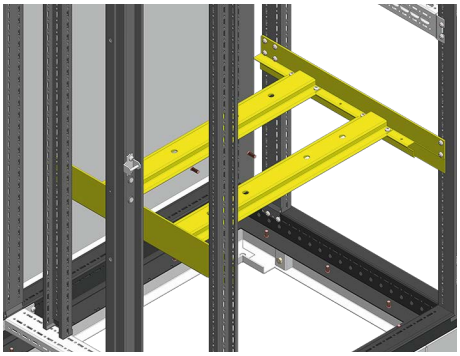
Universal mounting kit for air circuit breakers up to 4000A

UNEN

They are used to carry E-max and NW circuit breakers. They are made of zinc-coated sheet steel 2 mm thick.

Universal mounting kit for air circuit breakers	Label	Width A (mm)
UNEN E-MAX and NW-SE for hanging from the bottom side for section width 512,5 mm	UNEN510	513
UNEN E-MAX and NW-SE for hanging from the bottom side for section width 762,5 mm	UNEN760	763



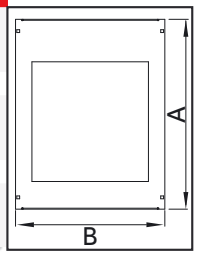


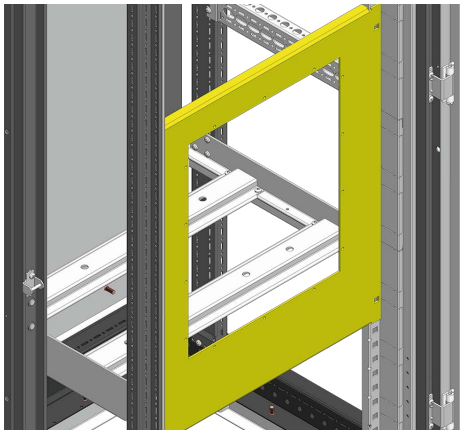
Protective covers for NW and EMAX 2

ZM

They are made of plastic, 3 mm thick.

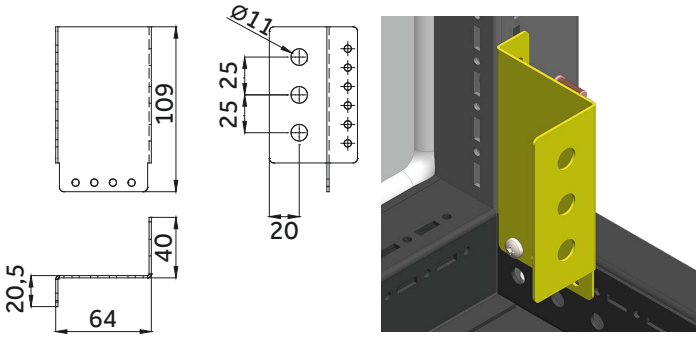
Protective covers for air circuit breakers	Label	Height A (mm)	Width B (mm)
550 mm height, for section 512,5 mm width Emax 2	ZM550-510 Emax2	550	471,5
600 mm height, for section 512,5 mm width NW fixed	ZM600-510 FNW	600	471,5
600 mm height, for section 512,5 mm width NW withdrawable	ZM600-510 INW	600	471,5





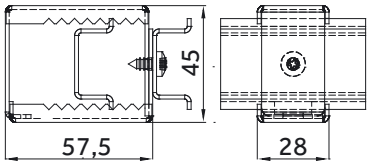
Carrier of neutral or ground busbar — NNZ

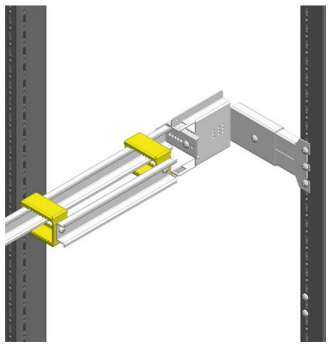
Made of zinc-coated sheet steel 1.5 mm thick.



Uplifter of DIN rail — PO-DIN

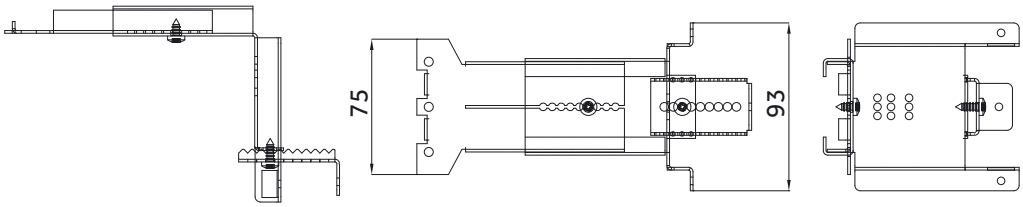
It makes easier the installation of a DIN rail for shallow equipment to the existing DIN rail.
Made of zinc-coated sheet steel 1,5 mm thick.

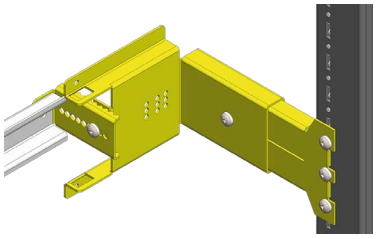




Adjustable DIN rail mounting device — PDIN

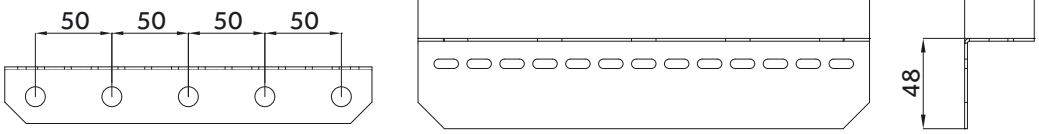
It makes easier the installation of DIN rail and wiring duct at the desired depth. They are made of zinc-coated sheet steel 1,5 mm thick.

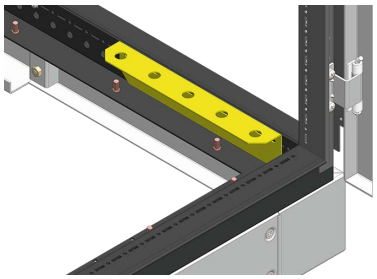




Universal busbar holder mount — NZXU

It is used for carrying busbar holders **ZX154**, **ZX155**, **ZX156**. It is made of zinc-coated sheet steel 1,5 mm thick.

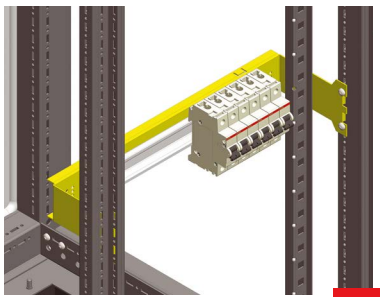




Fixed DIN rail carrier — FDIN

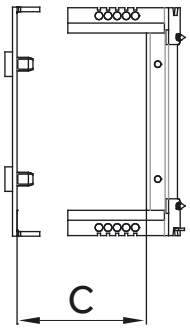
Fixed DIN rail carrier is used for mounting modular equipment. It is made of zinc-coated sheet steel 1,5 mm thick.

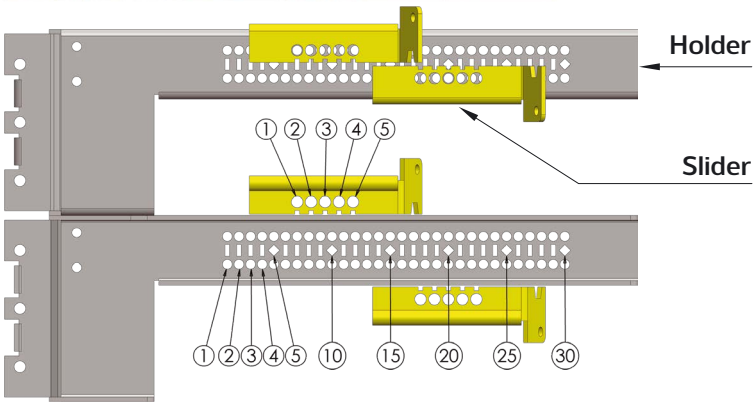
Fixed DIN rail carrier (FDIN)	Label	A Width A (mm)
FDIN for mounting 15 modules, 387,5 mm width	FDIN-385	384
FDIN for mounting 15 modules, 512,5 mm width	FDIN-510	509
FDIN for mounting 15 modules, 762,5 mm width	FDIN-760	759



Universal mounting plate holder — UNMP

It is used to hold mounting plates adjustable in depth. One holder carries two mounting plates. Made of zinc-coated sheet steel 2 mm thick.





Depth of plate C (mm)	Hole on the holder	Hole on the slider
72	5	5
73	4	4
74	3	3
75	2	2
76	1	1
77	6	5
78	5	4
79	4	3
80	3	2
81	2	1
82	7	5
83	6	4
84	5	3
85	4	2
86	3	1
87	8	5
88	7	4
89	6	3
90	5	2
91	4	1
92	9	5
93	8	4
94	7	3
95	6	2
96	5	1
97	10	5
98	9	4
99	8	3
100	7	2
101	6	1
102	11	5
103	10	4
104	9	3
105	8	2
106	7	1
107	12	5
108	11	4
109	10	3
110	9	2
111	8	1
112	13	5
113	12	4
114	11	3

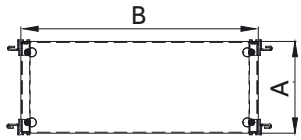
Depth of plate C (mm)	Hole on the holder	Hole on the slider
115	10	2
116	9	1
117	14	5
118	13	4
119	12	3
120	11	2
121	10	1
122	15	5
123	14	4
124	13	3
125	12	2
126	11	1
127	16	5
128	15	4
129	14	3
130	13	2
131	12	1
132	17	5
133	16	4
134	15	3
135	14	2
136	13	1
137	18	5
138	17	4
139	16	3
140	15	2
141	14	1
142	19	5
143	18	4
144	17	3
145	16	2
146	15	1
147	20	5
148	19	4
149	18	3
150	17	2
151	16	1
152	21	5
153	20	4
154	19	3
155	18	2
156	17	1
157	22	5

Depth of plate C (mm)	Hole on the holder	Hole on the slider
158	21	4
159	20	3
160	19	2
161	18	1
162	23	5
163	22	4
164	21	3
165	20	2
166	19	1
167	24	5
168	23	4
169	22	3
170	21	2
171	20	1
172	25	5
173	24	4
174	23	3
175	22	2
176	21	1
177	26	5
178	25	4
179	24	3
180	23	2
181	22	1
182	27	5
183	26	4
184	25	3
185	24	2
186	23	1
187	28	5
188	27	4
189	26	3
190	25	2
191	24	1
192	29	5
193	28	4
194	27	3
195	26	2
196	25	1
197	30	5
198	29	4
199	28	3
200	27	2

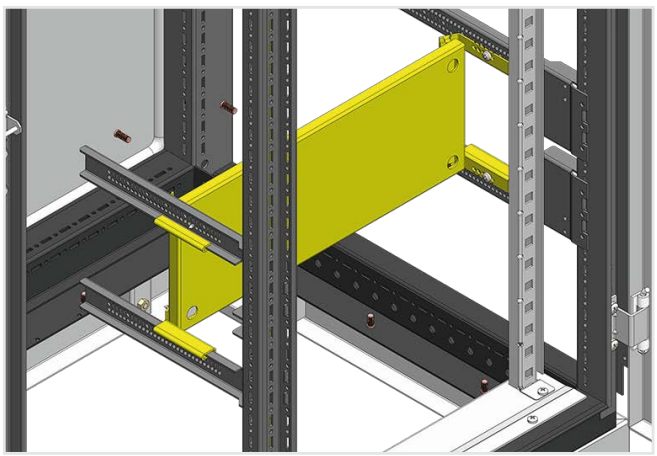
Mounting plate adjustable in depth — MP

These mounting plates do not have perforations and therefore have a very wide application. They are used for compact switches ABB, Schneider Electric and other manufacturers, as well as for non-modular equipment (relays, contactors, voltage transformers...). Made of zinc-coated sheet steel 1.5 mm thick.

(Supplied with four sliders).



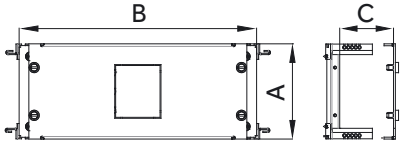
Mounting plate adjustable in depth	Label	Height A (mm)	Width B (mm)
MP height 150 mm, for section width 387,5 mm	MP150-385	144	377,5
MP height 200 mm, for section width 387,5 mm	MP200-385	194	377,5
MP height 300 mm, for section width 387,5 mm	MP300-385	294	377,5
MP height 400 mm, for section width 387,5 mm	MP400-385	394	377,5
MP height 500 mm, for section width 387,5 mm	MP500-385	494	377,5
MP height 150 mm, for section width 512,5 mm	MP150-510	144	502,5
MP height 200 mm, for section width 512,5 mm	MP200-510	194	502,5
MP height 300 mm, for section width 512,5 mm	MP300-510	294	502,5
MP height 400 mm, for section width 512,5 mm	MP400-510	394	502,5
MP height 500 mm, for section width 512,5 mm	MP500-510	494	502,5
MP height 600 mm, for section width 512,5 mm	MP600-510	594	502,5
MP height 150 mm, for section width 762,5 mm	MP150-760	144	752,5
MP height 200 mm, for section width 762,5 mm	MP200-760	194	752,5
MP height 300 mm, for section width 762,5 mm	MP300-760	294	752,5
MP height 400 mm, for section width 762,5 mm	MP400-760	394	752,5
MP height 500 mm, for section width 762,5 mm	MP500-760	494	752,5
MP height 600 mm, for section width 762,5 mm	MP600-760	594	752,5
MP height 150 mm, for section width 1012,5 mm	MP150-1010	144	1002,5
MP height 200 mm, for section width 1012,5 mm	MP200-1010	194	1002,5
MP height 300 mm, for section width 1012,5 mm	MP300-1010	294	1002,5
MP height 400 mm, for section width 1012,5 mm	MP400-1010	394	1002,5
MP height 500 mm, for section width 1012,5 mm	MP500-1010	494	1002,5
MP height 600 mm, for section width 1012,5 mm	MP600-1010	594	1002,5



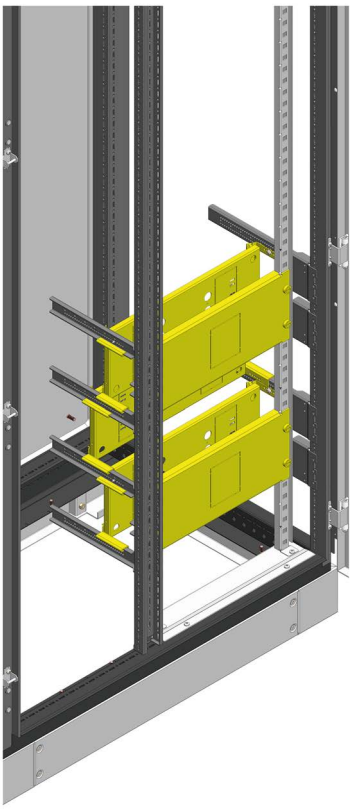
Module for mounting ABB moulded-case circuit breakers — XT, T

Supplied with mounting plate, four sliders and a protective cover for the selected circuit breaker for vertical or horizontal mounting. Plates have groove threads for mounting the circuit breakers and holes for connecting cables. Covers have marked openings for circuit breakers leavers and protective units. Plates are made of zinc-coated sheet steel 1,5 mm thick, and a protective cover of plastic 3 mm thick.

Module for horizontal (HM) or vertical (VM) mounting of ABB moulded-case circuit breakers



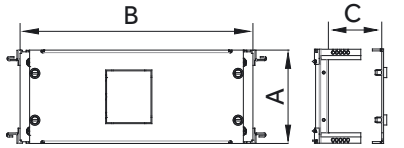
	Label	Height A (mm)	Width B (mm)	Depth C (mm)
Module for HM, 150mm height, 387,5 mm width, with MP and ZM, for XT1	XT1H150-385	150	377,5	73
Module for HM, 150mm height, 387,5 mm width, with MP and ZM, for XT2	XT2H150-385	150	377,5	86
Module for HM, 150mm height, 387,5 mm width, with MP and ZM, for XT3	XT3H150-385	150	377,5	73
Module for HM, 150mm height, 387,5 mm width, with MP and ZM, for XT4	XT4H150-385	150	377,5	86
Module for HM, 150mm height, 512,5 mm width, with MP and ZM, for XT1	XT1H150-510	150	502,5	73
Module for HM, 150mm height, 512,5 mm width, with MP and ZM, for XT2	XT2H150-510	150	502,5	86
Module for HM, 150mm height, 512,5 mm width, with MP and ZM, for XT3	XT3H150-510	150	502,5	73
Module for HM, 150mm height, 512,5 mm width, with MP and ZM, for XT4	XT4H150-510	150	502,5	86
Module for HM, 150mm height, 762,5 mm width, with MP and ZM, for XT1	XT1H150-760	150	752,5	73
Module for HM, 150mm height, 762,5 mm width, with MP and ZM, for XT2	XT2H150-760	150	752,5	86
Module for HM, 150mm height, 762,5 mm width, with MP and ZM, for XT3	XT3H150-760	150	752,5	73
Module for HM, 150mm height, 762,5 mm width, with MP and ZM, for XT4	XT4H150-760	150	752,5	86
Module for HM, 200 mm height, 512,5 mm width, with MP and ZM, for T5	T5H200-510	200	502,5	107
Module for HM, 300 mm height, 512,5 mm width, with MP and ZM, for T6	T6H300-510	300	502,5	107
Module for HM, 200 mm height, 762,5 mm width, with MP and ZM, for T5	T5H200-760	200	752,5	107
Module for HM, 300 mm height, 762,5 mm width, with MP and ZM, for T6	T6H300-760	300	752,5	107
Module for VM_3 swit. XT1, 300 mm height, 512,5 mm width, with MP and ZM	3XT1V300-510	300	502,5	73
Module for VM_3 swit. XT2, 300 mm height, 512,5 mm width, with MP and ZM	3XT2V300-510	300	502,5	86
Module for VM_3 swit. XT3, 300 mm height, 512,5 mm width, with MP and ZM	3XT3V300-510	300	502,5	73
Module for VM_3 swit. XT4, 350 mm height, 512,5 mm width, with MP and ZM	3XT4V350-510	350	502,5	86
Module for VM_4 swit. XT1, 300 mm height, 762,5 mm width, with MP and ZM	4XT1V300-760	300	752,5	73
Module for VM_4 swit. XT2, 300 mm height, 762,5 mm width, with MP and ZM	4XT2V300-760	300	752,5	86
Module for VM_4 swit. XT3, 300 mm height, 762,5 mm width, with MP and ZM	4XT3V300-760	300	752,5	73
Module for VM_4 swit. XT4, 350 mm height, 762,5 mm width, with MP and ZM	4XT4V350-760	350	752,5	86
Module for VM_6 swit. XT1, 300 mm height, 1012,5 mm width, with MP and ZM	6XT1V300-1010	300	1002,5	73
Module for VM_6 swit. XT2, 300 mm height, 1012,5 mm width, with MP and ZM	6XT2V300-1010	300	1002,5	86



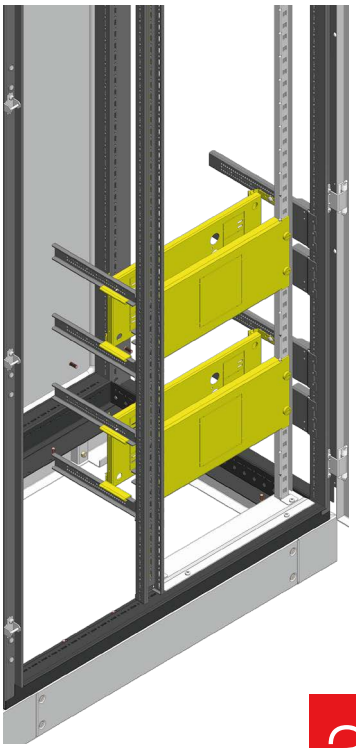
Module for mounting SCHNEIDER ELECTRIC compact circuit breakers — NSX, NS

Supplied with mounting plate, four sliders and a protective cover for the selected circuit breaker for vertical or horizontal mounting. Plates have groove threads for mounting the circuit breaker and holes for connecting cables. Covers have marked openings for circuit breakers leavers and protective units. Plates are made of zinc-coated sheet steel 1,5 mm thick, and a protective cover of plastic 3 mm thick.

Module for horizontal (HM) or vertical (VM) mounting of Schneider Electric compact circuit breakers



	Label	Height A (mm)	Width B (mm)	Depth C (mm)
HM 150 mm height, 387,5 mm width, with MP and ZM, for NSX250	NSX250H150-385	150	377,5	82
HM 200 mm height, 387,5 mm width, with MP and ZM, for NSX630	NSX630H200-385	200	377,5	106
HM 150 mm height, 512,5 mm width, with MP and ZM, for NSX250	NSX250H150-510	150	502,5	82
HM 200 mm height, 512,5 mm width, with MP and ZM, for NSX630	NSX630H200-510	200	502,5	106
HM 150 mm height, 762,5 mm width, with MP and ZM, for NSX250	NSX250H150-760	150	752,5	82
HM 200 mm height, 762,5 mm width, with MP and ZM, for NSX630	NSX630H200-760	200	752,5	106
HM swit. NS800-1600, 300 mm height, 512,5 mm width, with MP and ZM	NS800-1600H300-510	300	502,5	135
HM swit. NS800-1600, 300 mm height, 762,5 mm width, with MP and ZM	NS800-1600H300-760	300	752,5	135
VM_3 switches NSX250, 300 mm height, 512,5 mm width, with MP and ZM	3NSX250V300-510	300	502,5	82
VM_4 switches NSX250, 300 mm height, 762,5 mm width, with MP and ZM	4NSX250V300-760	300	752,5	82
VM_6 switches NSX250, 300 mm height, 1012,5 mm width, with MP and ZM	6NSX250V300-1010	300	1002,5	82
VM_2 switches NSX630, 400 mm height, 512,5 mm width, with MP and ZM	2NSX630V400-510	400	502,5	106
VM_3 switches NSX630, 400 mm height, 762,5 mm width, with MP and ZM	3NSX630V400-760	400	752,5	106
VM switches NS800-1600, 500 mm height, 387,5 mm width, with MP and ZM	NS800-1600V500-385	500	377,5	135
VM switches NS800-1600, 500 mm height, 512,5 mm width, with MP and ZM	NS800-1600V500-510	500	502,5	135
VM_2 switches NS800-1600, 500 mm height, 762,5mm width, with MP and ZM	2NS800-1600V500-760	500	752,5	135

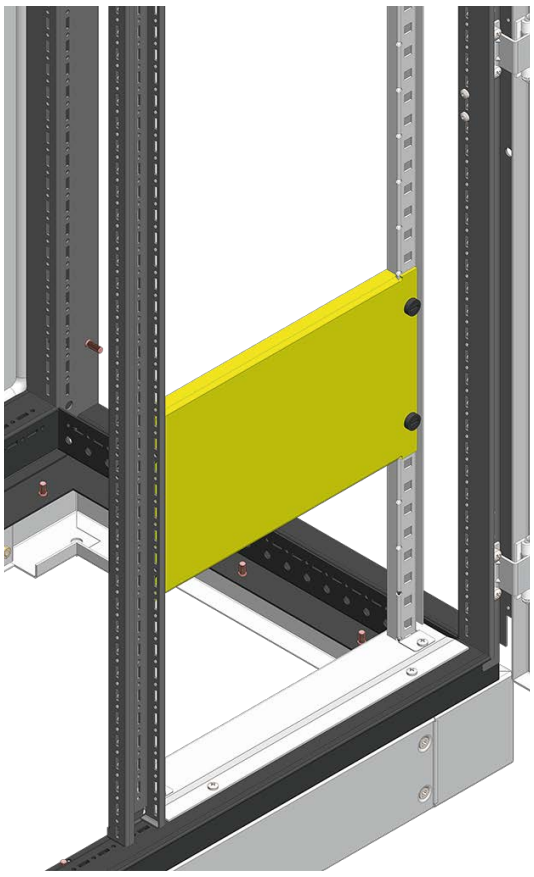


Protective covers

ZM

Used to close the space. They are made of plastic, 3 mm thick.

Protective covers (ZM)	Label	Height A (mm)	Width B (mm)
ZM 50 mm height, for a section 387,5 mm width	ZM50-385	50	346,5
ZM 100 mm height, for a section 387,5 mm width	ZM100-385	100	346,5
ZM 150 mm height, for a section 387,5 mm width	ZM150-385	150	346,5
ZM 200 mm height, for a section 387,5 mm width	ZM200-385	200	346,5
ZM 300 mm height, for a section 387,5 mm width	ZM300-385	300	346,5
ZM 400 mm height, for a section 387,5 mm width	ZM400-385	400	346,5
ZM 500 mm height, for a section 387,5 mm width	ZM500-385	500	346,5
ZM 600 mm height, for a section 387,5 mm width	ZM600-385	600	346,5
ZM 50 mm height, for a section 512,5 mm width	ZM50-510	50	471,5
ZM 100 mm height, for a section 512,5 mm width	ZM100-510	100	471,5
ZM 150 mm height, for a section 512,5 mm width	ZM150-510	150	471,5
ZM 200 mm height, for a section 512,5 mm width	ZM200-510	200	471,5
ZM 300 mm height, for a section 512,5 mm width	ZM300-510	300	471,5
ZM 400 mm height, for a section 512,5 mm width	ZM400-510	400	471,5
ZM 500 mm height, for a section 512,5 mm width	ZM500-510	500	471,5
ZM 600 mm height, for a section 512,5 mm width	ZM600-510	600	471,5
ZM 50 mm height, for a section 762,5 mm width	ZM50-760	50	721,5
ZM 100 mm height, for a section 762,5 mm width	ZM100-760	100	721,5
ZM 150 mm height, for a section 762,5 mm width	ZM150-760	150	721,5
ZM 200 mm height, for a section 762,5 mm width	ZM200-760	200	721,5
ZM 300 mm height, for a section 762,5 mm width	ZM300-760	300	721,5
ZM 400 mm height, for a section 762,5 mm width	ZM400-760	400	721,5
ZM 500 mm height, for a section 762,5 mm width	ZM500-760	500	721,5
ZM 600 mm height, for a section 762,5 mm width	ZM600-760	600	721,5
ZM 50 mm height, for a section 1012,5 mm width	ZM50-1010	50	971,5
ZM 100 mm height, for a section 1012,5 mm width	ZM100-1010	100	971,5
ZM 150 mm height, for a section 1012,5 mm width	ZM150-1010	150	971,5
ZM 200 mm height, for a section 1012,5 mm width	ZM200-1010	200	971,5
ZM 300 mm height, for a section 1012,5 mm width	ZM300-1010	300	971,5
ZM 400 mm height, for a section 1012,5 mm width	ZM400-1010	400	971,5
ZM 500 mm height, for a section 1012,5 mm width	ZM500-1010	500	971,5
ZM 600 mm height, for a section 1012,5 mm width	ZM600-1010	600	971,5

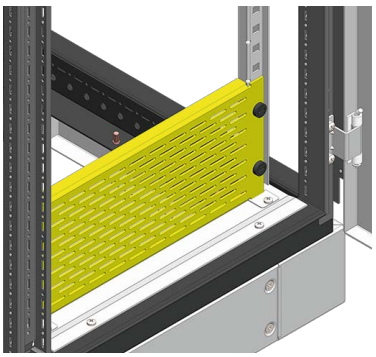


Protective covers perforated

ZMP

Used to close the space and to enable ventilation. They are made of plastic, 3 mm thick.

Protective covers perforated (ZMP)	Label	Height A (mm)	Width B (mm)
ZM 150 mm height, for a section 387,5 mm width	ZM150-385/P	150	346,5
ZM 150 mm height, for a section 512,5 mm width	ZM150-510/P	150	471,5
ZM 150 mm height, for a section 762,5 mm width	ZM150-760/P	150	721,5
ZM 150 mm height, for a section 1012,5 mm width	ZM150-1010/P	150	971,5

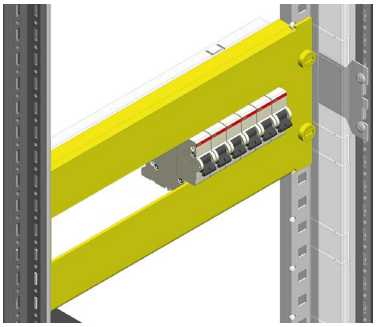


Protective covers for DIN rail equipment

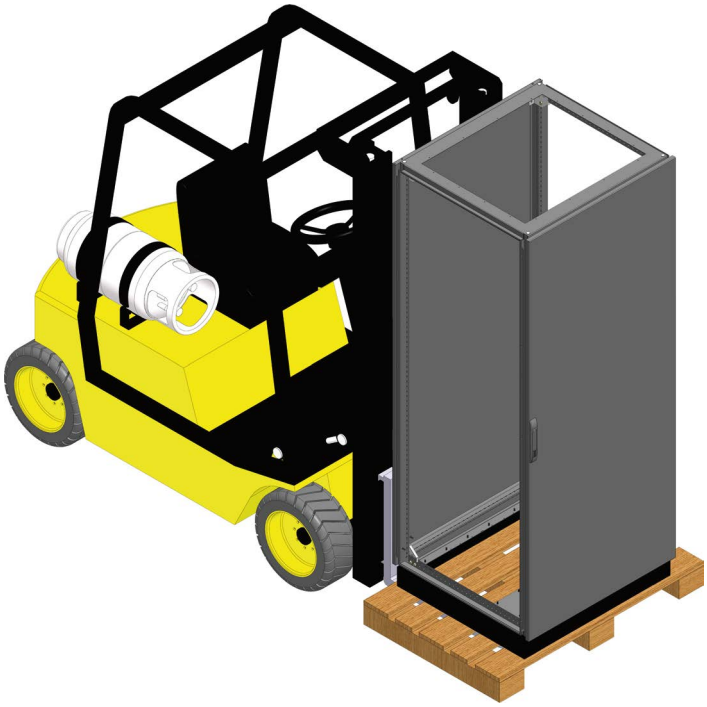
ZMDIN

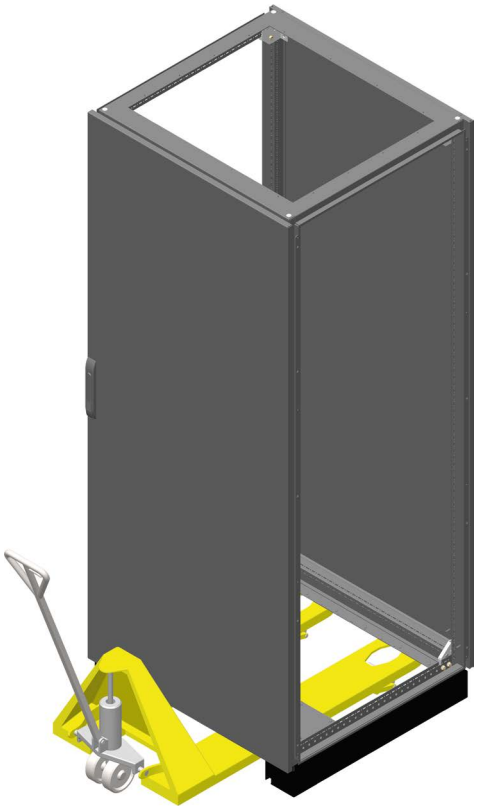
Used to close the space of modular equipment. They are made of plastic, 3 mm thick.

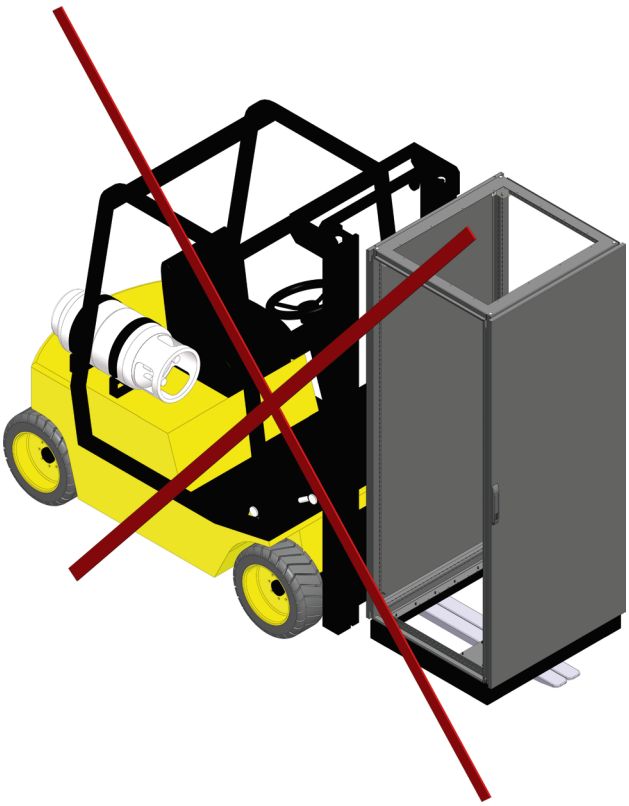
Protective covers (ZMDIN)	Label	Height A (mm)	Width B (mm)	Width C (mm)
ZMDIN 150 mm height, for a section 387,5 mm width	ZMDIN-385	150	346,5	271
ZMDIN 150 mm height, for a section 512,5 mm width	ZMDIN-510	150	471,5	397
ZMDIN 150 mm height, for a section 762,5 mm width	ZMDIN-760	150	721,5	577
ZMDIN 200 mm height, for a section 512,5 mm width	ZMDIN200-510	200	471,5	397
ZMDIN 200 mm height, for a section 762,5 mm width	ZMDIN200-760	200	721,5	577

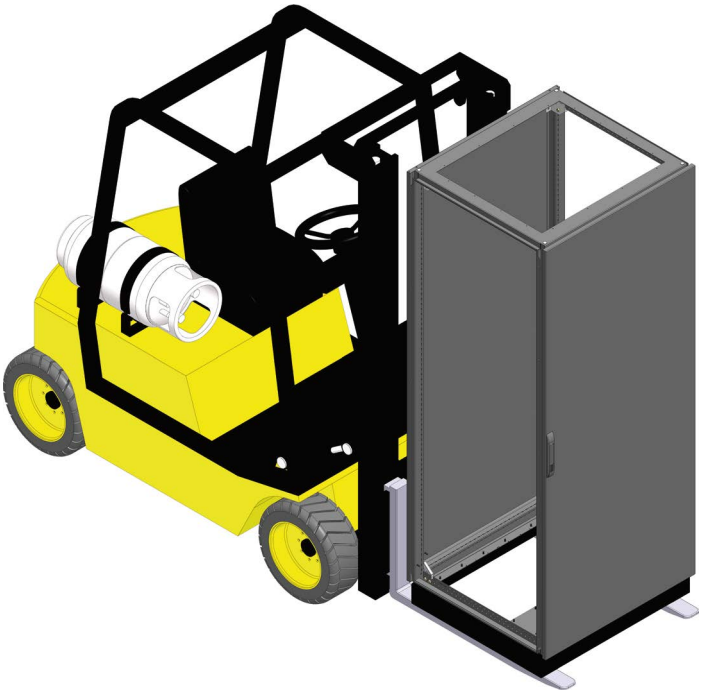


Transport

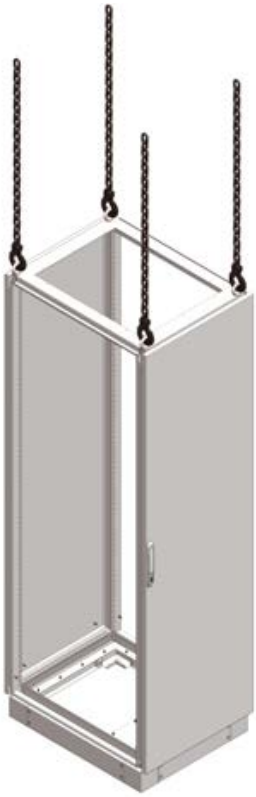


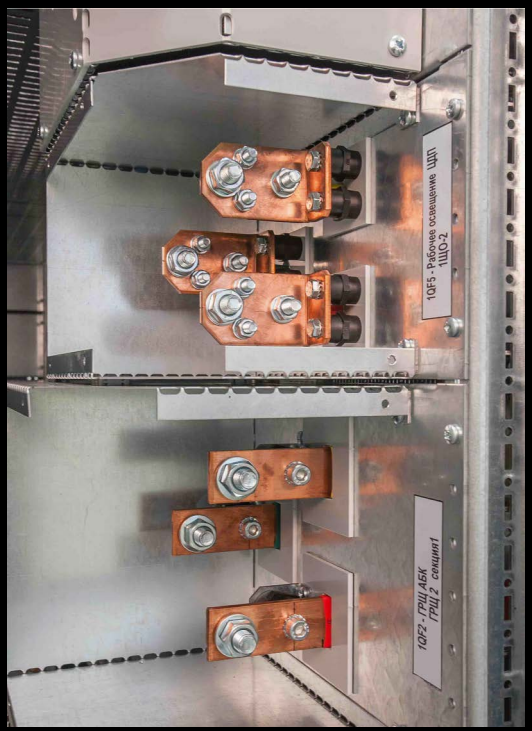


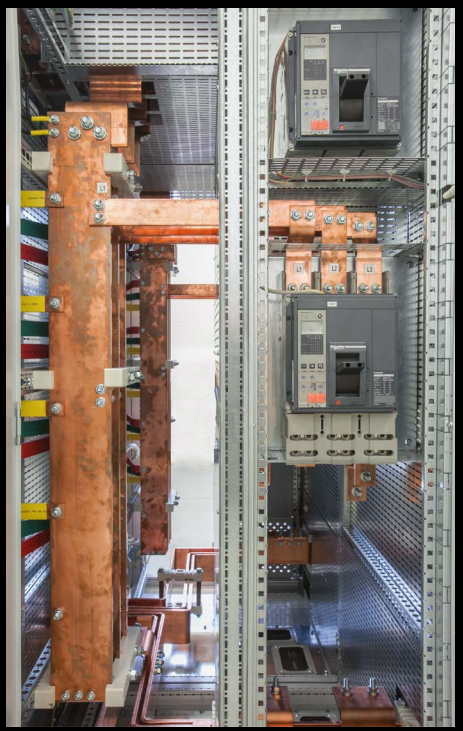


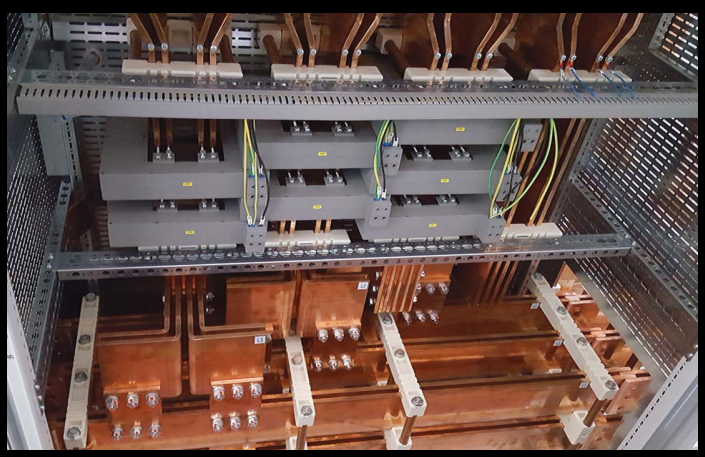


Lifting the cabinet




10F5 - Рабочее освещение ЩО2
10F2 - ГРЩ АБК ГРЩ 2 секция1





ASSOCIAZIONE PER LA CERTIFICAZIONE
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A C A E

Certificate of conformity n° A 18.016

page 1 of 3

Apparatus Low-voltage switchgear and controlgear assemblies
415V (U_e) - 4000A (I_{nA}) – 50Hz (f) – 690/1000V (U_i) – 6/12kV (U_{imp}) – 100kA -1s, (I_{cw}) – 220kA (I_{pk}) – IP31 – 4B (form of internal separation).

This Certificate applies only to the apparatus verified. The responsibility for conformity of any apparatus having the same designation with that tested rests with the manufacturer or responsible vendor.

Only integral reproduction of this Certificate or reproductions of this page accompanied by any page(s) on which are stated the tests performed and the assigned rated characteristics of the apparatus tested, are permitted without written permission from the ACAE.

Designation KM-W

Manufacturer EVROTEHNA D.O.O.
Konarevo 105B, 36340 Kraljevo / SERBIA

Applicant: FELUKA GROUP D.O.O.
Kruzni put 71, Bubanj potok, 11223 Belgrade / SERBIA

Tested by: ACAE Laboratory ICMET - CRAIOVA (Romania)

The apparatus, constructed in accordance with the description mentioned in the documents listed on this Certificate has been subjected to the series of proving tests in accordance with IEC 61439-1 Ed.2.0 (2011-08) and IEC 61439-2 Ed. 2.0 (2011-8)

The results are shown in the attached documents according to ACAE procedures. The values obtained and the general performance are considered to comply with the above Standard(s) and to justify the characteristic assigned by the manufacturer as stated in page 2.

The General Secretary
Date: 2018.05.31

ACAE is accredited by

ACCREDIA
PRD N°070 B
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page 2 of 3

Temperature-rise limits	InA: 4000 A	Test Report 12785
Dielectric properties-Power frequency voltage	Ui:690/1000V	Test Report 46301/29.03.2018
Dielectric properties-Impulse voltage	Uimp:6/12kV	Test Report 46301/29.03.2018
Clearances and creepage distances	Clearances: 8/10mm, Creepage distances: 8/10mm	Test Report 46301/29.03.2018
Short-circuit withstand strenght	Icw: 100kA-1sec, Ipk: 220kA	Test Report 12785
Effectiveness of the protective and neutral circuit	Icw: 62kA-1sec, Ipk:132kA	Test Report 12785
Conditional Short-circuit current	Icc: 25/50/100kA at 415V	Test Report 12785
Degree of protection	IP31	Test Report 46303/12.04.2018
Mechanical impact	IK10	Test Report 46303/12.04.2018
Lifting	The product passed the test	Test Report 46303/12.04.2018
Resistance of insulating materials to abnormal test heat and fire due to internal electric effect	current-carrying parts: 960°C,	Test Report 46299/29.03.2018 Test Report 46300/29.03.2018
Resistance to corrosion	Severity test A	Test Report 46297/10.04.2018

The General Secretary
Date: 2018.05.31

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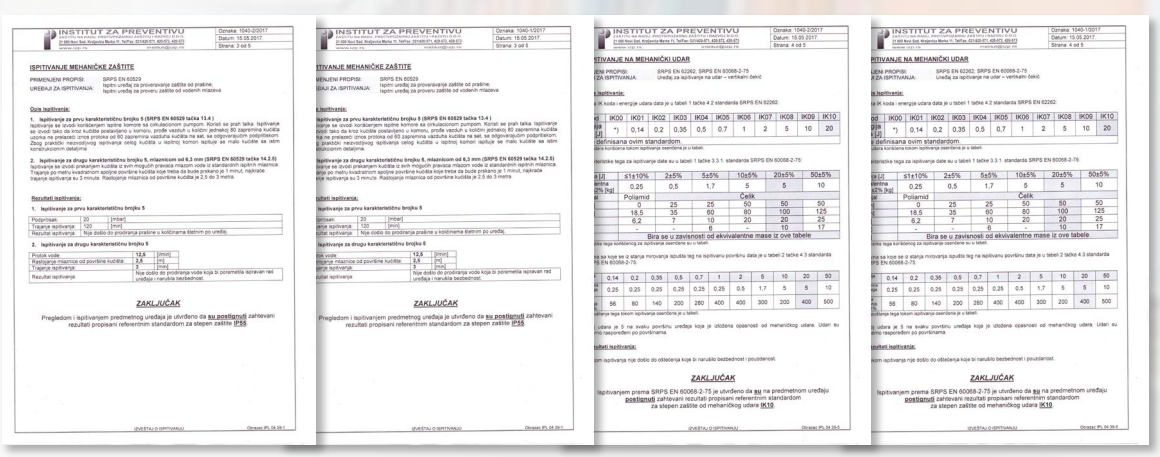
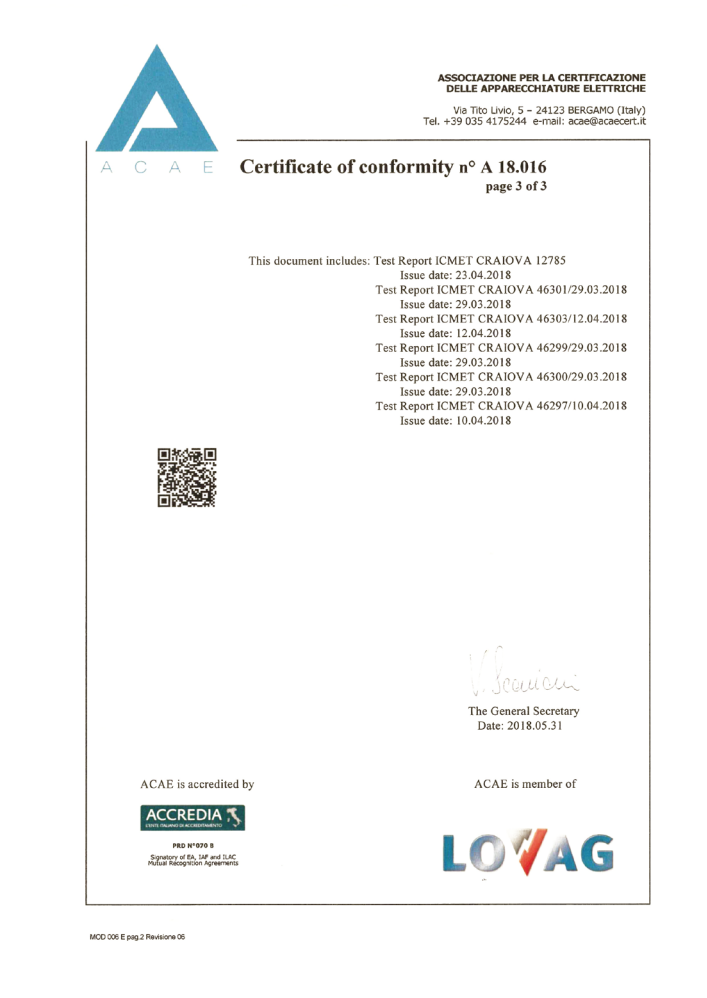
MOD 005 E pag 2 Revisione 05





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Certificate of conformity n° A 18.016
page 3 of 3

This document includes: Test Report ICMET CRAIOVA 12785
Issue date: 23.04.2018
Test Report ICMET CRAIOVA 46301/29.03.2018
Issue date: 29.03.2018
Test Report ICMET CRAIOVA 46303/12.04.2018
Issue date: 12.04.2018
Test Report ICMET CRAIOVA 46299/29.03.2018
Issue date: 29.03.2018
Test Report ICMET CRAIOVA 46300/29.03.2018
Issue date: 29.03.2018
Test Report ICMET CRAIOVA 46297/10.04.2018
Issue date: 10.04.2018

The General Secretary
Date: 2018.05.31

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References

Major facilities in Serbia:

"Nikola Tesla" Thermal power stations, *Obrenovac*
"Iron Gate" Hydroelectric power station, *Djerdap*
Hydroelectric power station, *Bajina Basta*
Belgrade electric stations
Hydroelectric power stations, *Vlasina*
TS 110/20 kV Vrsac 1, 2, *Elektrovojvodina*
Opencast mining, *Drmno*
TS 110/10 kV, Electrodistribution, *Vozdovac*
JP TENT – RP 110 kV, *Kolubara*
The Belgrade Arena, *Belgrade*
LUKOIL petrol stations, *Serbia*
Nikola Tesla Airport, *Belgrade*
Border crossing, *Horgos*
"Vojvoda Stepa" housing estate, *Belgrade*
Belgrade and Smederevo waterworks
Electric Power Industry of Serbia
USCE Shopping Center, *Belgrade*
Court building, 9 Nemanjina Street, *Belgrade*
Fair Hall, *Kragujevac*
"Football house", *Stara Pazova*
Toll plaza, *Vrcin*
The factory of vehicle parts 'ZF', *Pancevo*
The factory of vehicle parts 'MAI TAI' 2nd phase, *Baric*
LIDL Serbia KD chain stores, *Serbia*
Belgrade Wholesale Market, *Belgrade*

Major facilities worldwide:

Domodedovo International Airport, *Moscow area*
Ugolny Airport, Anadyr, *the Russian Federation*
The Central Bank of the Russian Federation, *Moscow*
Aurora Shopping Centre, *Moscow*
"Three D" Shopping Centre, *Moscow*
"Sheremetyevo podvorje" Shopping and Business Complex, *Moscow*
McDonald's fast-food restaurants, *the Russian Federation*
Coke plants and iron and steel plants, *the Russian Federation*
"Moscow City" Business Centre, *Moscow*
The Senate of the Republic of Uzbekistan, *Tashkent*
The residence of the president of Kazakhstan , *Astana*
Traffic systems, *Luanda, Angola*
The multimedia center, *Doha, Qatar*
Electric-power systems, *Dubai, the United Arab Emirates*
The Government building in Banja Luka, *the Republic of Srpska*
The quay power-supplying, *Tivat, Montenegro*
"Delta City" Shopping Centre, *Podgorica, Montenegro*
EPCG AD Niksic – TS 35/10kV *Rozino, Montenegro*
EPCG AD Niksic – TS 110/10kV *Podgorica, Montenegro*
EPCG AD Niksic – TS 35/10kV *Gornja Zeta, Montenegro*
Thermal power stations Pljevlja, *Montenegro*
Dispotec Technology, *Austria*
RWE Power AG, *Germany*
Containers, *Nigeria*
Containers, *Montenegro*
Audi, Bosh, PCK, *Germany*
Airport, *Malaysia*
Systems, *Belgium, Luxemburg, Iraq*
Traffic systems, *Tashkent Uzbekistan, Norway*
AŽD Praha – Cabinets for the railway system, *the Czech Republic, Montenegro, Bosnia and Herzegovina*
Scholl Energy and management technique, *Germany*
"L'oreal" production facility, *Borovsky District, Russia*
The residential facilities of the President of Uzbekistan, *Tashkent*
The factory for production of innovative synthetic elements, *Vorsino Industrial park, Russia*
Administration and production complex, *Novy Urengoy, Russia*
IKEA distribution centre, *IKEA Esipovo, Russia*
Henkel production and storage building, *Moscow region*
PepsiCo Milk factory, *Timashevsk, Russia*

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