Metal flat enclosures EMF



- **Metal (sheet-steel) flat enclosures EMF**
- **Complies to EN 62208**
- **Variants for surface and flush mounting**
- **Versions with 24 and 33 modules per a row, 2 up to 6 rows**
- **Degree of protection IP30**
- **Protection against mechanical impact IK07**
- **White colour**
- **Mounting depth lower than 118 mm, suitable also for narrow walls**

Sheet-steel enclosures EMFF/EMFS are suitable for various applications mainly in domestic and commercial installations. Their flat design and technical solution allow easy mounting onto wall or into relatively narrow walls, including plasterboard ones.

Removable adjustable doorframe allows to avoid possible damage during mounting and especially to compensate wall surface imperfections, including slight rotation. The door opening direction can be easily changed thanks to the applied system of hinges.

On the enclosures there are prepared pre-cut openings for conductors or cable grommets. The adjusting before connecting can thus be done very quickly. All variants are equipped with a removable mounting frame with DIN rails. Whole installation part is covered with self-earthed sheet-steel front plates.

An important part of enclosures EMF is a wide range of accessories for their customisation. There are offered mounting plates, space separators, front plates, cable grommets, cable fixing rail, key-locks and others.

Type Key

EMF	F	3	72	W
Product family	Version	Number of rows	Number of modules	Door type
EMF: Metal flat sheet-stell enclosures	F: Flush -mounted S: Surface -mounted	2 - 6	48 - 198	W: white

Certification marks

CE

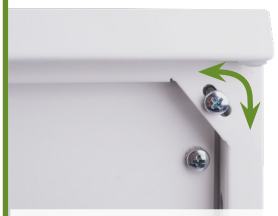
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N/PE terminals
in the scope of delivery



Removable frame
with door



Door frame can be turned
and adjusted in depth





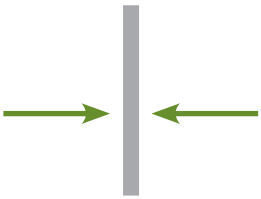
No exceeding screws
on mounting sides



Comfortable mounting
into all types of walls



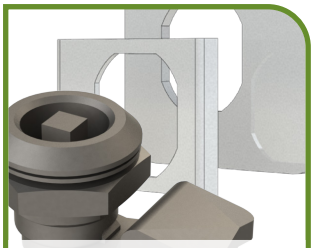
Pressed-in nuts
for functional screws



High stiffness thanks to the
robust material used

Metal flat enclosures EMF





Standardized
key-lock system



Separate sheet-steel
front plates



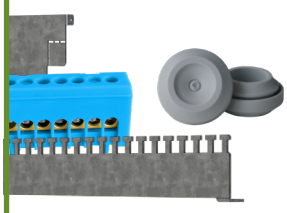
Pre-pressed openings
for cable grommets



Easy change of door
opening direction



Pre-cut openings
for conductors



Wide range of accessories

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Flush mounted versions, sheet-steel door

- Flush mounted
- 24 or 33 modules per a row
- 2 up to 6 rows
- White door colour
- Scope of delivery: enclosure, metal frame with door, mounting frame with device DIN rails, N + PE terminals, front plates with device cutout, grounding cable for door connection, mounting material and instruction sheet



Modules per a row	Number of rows	Total modules	N+PE terminals	Article No.	Type	Packing
24	2	48	2x (1+44)	109809	EMFF2 48W	1
24	3	72	2x (1+44)	109810	EMFF3 72W	1
24	4	96	2x (1+44)	109811	EMFF4 96W	1
24	5	120	2x (1+44)	109812	EMFF5 120W	1
24	6	144	2x (1+44)	109813	EMFF6 144W	1
33	2	66	2x (1+44)	109819	EMFF2 66W	1
33	3	99	2x (1+44)	109820	EMFF3 99W	1
33	4	132	2x (1+44)	109821	EMFF4 132W	1
33	5	165	2x (1+44)	109822	EMFF5 165W	1
33	6	198	2x (1+44)	109823	EMFF6 198W	1

Surface mounted versions, sheet-steel door

- Surface mounted
- 24 or 33 modules per a row
- 2 up to 6 rows
- White door colour
- Scope of delivery: enclosure, metal frame with door, mounting frame with device DIN rails, N + PE terminals, front plates with device cutout, grounding cable for door connection, mounting material and instruction sheet



Modules per a row	Number of rows	Total modules	N+PE terminals	Article No.	Type	Packing
24	2	48	2x (1+44)	109814	EMFS2 48W	1
24	3	72	2x (1+44)	109815	EMFS3 72W	1
24	4	96	2x (1+44)	109816	EMFS4 96W	1
24	5	120	2x (1+44)	109817	EMFS5 120W	1
24	6	144	2x (1+44)	109818	EMFS6 144W	1
33	2	66	2x (1+44)	109824	EMFS2 66W	1
33	3	99	2x (1+44)	109825	EMFS3 99W	1
33	4	132	2x (1+44)	109826	EMFS4 132W	1
33	5	165	2x (1+44)	109827	EMFS5 165W	1
33	6	198	2x (1+44)	109828	EMFS6 198W	1

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Spare door

- Spare door with plastic lock for EMF
- Common for flush and surface mounted enclosure‘s door
- 24 or 33 modules per a row
- 2 up to 6 rows
- White coloured sheet-steel parts of door
- Packed separately
- Door hinges are not included



Modules per a row	Number of rows	Total modules	Article No.	Type	Packing
24	2	48	109939	EMF DR2 48W	1
24	3	72	109940	EMF DR3 72W	1
24	4	96	109941	EMF DR4 96W	1
24	5	120	109942	EMF DR5 120W	1
24	6	144	109943	EMF DR6 144W	1
33	2	66	109944	EMF DR2 66W	1
33	3	99	109945	EMF DR3 99W	1
33	4	132	109946	EMF DR4 132W	1
33	5	165	109947	EMF DR5 165W	1
33	6	198	109948	EMF DR6 198W	1

Spare door hinges

- Spare door hinges set (1 set necessary for 1 door)
- Common for flush and surface mounted enclosure‘s door
- Packed separately
- In the scope of delivery: plastic holders, metal hinges



Description	Article No.	Type	Packing
Spare door hinges	109831	EMF SDH	1 set

Metal flat enclosures EMF

Metal front plates

- Various types and sizes of spare front plates for covering of internal space in enclosures according to used devices and needs
- Common for flush and surface mounted enclosures
- 24 or 33 modules per a row variants
- White coloured sheet-steel
- Packed separately
- Mouting screws in the scope of delivery

Metal front plates with device cutout 45 mm



Description	Modules per a row	Height	Article No.	Type	Packing
Standard plate	24	141 mm	109935	EMF FP 1 24	1
Wide outer plate	24	212 mm	109937	EMF FP 1+ 24	1
Standard plate	33	141 mm	109936	EMF FP 1 33	1
Wide outer plate	33	212 mm	109938	EMF FP 1+ 33	1

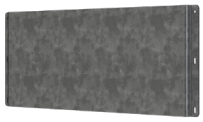
Blind metal front plates



Description	Modules per a row	Height	Article No.	Type	Packing
Narrow outer plate	24	71 mm	109835	EMF FPB 0+ 24	1
Narrow outer plate	33	71 mm	109933	EMF FPB 0+ 33	1

Universal mounting plates

- Universal mounting plates for mounting of arbitrary devices of appropriate dimensions with screws
- Can be fitted also by means of pressed screws in order to not overlap outer dimensions of the enclosure
- Common for flush and surface mounted enclosures
- 24 or 33 modules per row variants
- Galvanized sheet-sheet
- Packed separately
- Mouting material in the scope of delivery

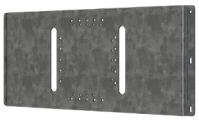


Description	Modules per a row	Height	Article No.	Type	Packing
Universal mounting plate	24	80 mm	109836	EMF UMP 80 24	1
Universal mounting plate	24	160 mm	109838	EMF UMP 160 24	1
Universal mounting plate	33	80 mm	109932	EMF UMP 80 33	1
Universal mounting plate	33	160 mm	109934	EMF UMP 160 33	1

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Mounting plates for MCCBs line Ex9M

- Tailored pre-drilled mounting plates for mounting of MCCBs of Ex9M line, frame sizes M1 and M2
- Mounting holes with thread for easy mounting of Ex9M1 and Ex9M2
- In case common mounting depth of the M1 size breaker's front panel is requested, it is necessary to use mounting depth spacers WG 10
- Common for flush and surface mounted enclosures
- 24 or 33 modules per row variants
- Galvanized sheet-sheet
- Packed separately
- Mounting material in the scope of delivery



Description	Modules per row	Article No.	Type	Packing
Mounting plate for MCCBs	24	110699	EMF MP M12 24	1
Mounting plate for MCCBs	33	110700	EMF MP M12 33	1

Horizontal separators

- Horizontal space separators can be used e.g. for separation of electronic and electric part of installation
- Common for flush and surface mounted enclosures
- 24 modules per a row
- Galvanized sheet-sheet
- Packed separately
- Mouting material in the scope of delivery



Description	Modules per a row	Article No.	Type	Packing
Horizontal separator	24	109837	EMF HS 24	1

Cable fixing rails

- Metal rail suitable for cable fixing in the enclosure
- Common for flush and surface mounted enclosures
- 24 modules per row
- Galvanized sheet-sheet
- Packed separately
- Mouting material in the scope of delivery



Description	Modules per a row	Article No.	Type	Packing
Cable fixing rail	24	109839	EMF CFR24	1

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Mounting holders

- Set of metal straps for fixing and easier mounting of flush mounted enclosures into the walls
- Can be used as mounting holders when installing into brick walls or for fixing into construction of plaster boards, when the wall supports are not located directly at the edge of the enclosure
- Packed separately
- Four pieces in the scope of delivery



Description	Article No.	Type	Packing
Set of mounting holders for flush mounted enclosures	109931	EMFF MH	1 set

Spare mounting material

- Spare mounting material for EMF line enclosures
- Scope of delivery: grounding cable for door with pads and nuts, screws



Description	Article No.	Type	Packing
Spare mounting material for flush mounted enclosures	109832	EMFF SMM	1 set
Spare mounting material for surface mounted enclosures	109833	EMFS SMM	1 set

Additional N/PE terminals

- Rated current up to 63 A
- Packed separately

Horizontal terminal bar holders



Description	Article No.	Type	Packing
Horizontal terminal bar holders	109830	EMF TBH	1 set

Terminal bars



Description	Terminals	Article No.	Type	Packing
N/PE terminal bar	2x (1x 25 + 46x 16 mm^2)	109829	EMF TB45+2	1

Metal flat enclosures EMF

Set for mounting of EMF DLK lock-keys

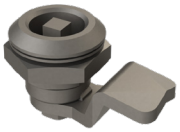
- Set (two tailored metal cover plates) for mounting of lock-key to the plastic lock cutout in enclosure‘s door
- Suitable EMF DLK lock-key to be ordered separately
- Common for flush and surface mounted enclosures
- White coloured sheet-steel
- Packed separately without lock-key



Description	Article No.	Type	Packing
Set for mounting of EMF DLK lock-key	109834	EMF LMS	1 set

Lock-keys

- Suitable sets of lock-keys for mounting set EMF LMS
- Various types of inserts
- Housing diameter 28 mm, height 18 mm
- Cam length 35 mm
- Packed separately without EMF LMS
- In the scope of delivery: housing, insert, flat external seal, nut, cam, screw

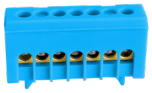


Insert shape		Article No.	Type	Packing
square socket, 6 mm		106826	MF DLK SQ6	1 set
square pin, 6 mm		106863	MF DLK SP6	1 set
double bit, 3 mm pin		106825	MF DLK DB3	1 set
double bit, 5 mm pin		106828	MF DLK DB5	1 set
slotted 2x4mm		106829	MF DLK S24	1 set
Czech crescent		106827	MF DLK CZ	1 set
Daimler-Benz		106830	MF DLK D	1 set
Lock with key		109048	MF DLK K	1 set

Metal flat enclosures EMF

Covered neutral and grounding terminal bars

- Rated current up to 63 A
- Rated operational voltage 690 V AC
- All side finger-safe
- One-side closed conductor notch
- Plastic DIN-rail clip
- For wires up to 16 mm²



Terminals	Terminal capacity	Colour	Article No.	Type	Packing
7	up to 16 mm²	blue	103850	TBB 7x16	1/10
7	up to 16 mm²	green	103851	TBG 7x16	1/10
15	up to 16 mm²	blue	103852	TBB 15x16	1/10
15	up to 16 mm²	green	103853	TBG 15x16	1/10

Uncovered neutral and grounding terminal bars

- Rated current up to 63 A
- Rated operational voltage 690 V AC
- Plastic DIN-rail clip
- For wires up to 10 mm²



Terminals	Terminal capacity	Colour	Article No.	Type	Packing
7	10 mm²	blue	103854	TBB 7x10	1/10
7	10 mm²	green	103855	TBG 7x10	1/10
12	10 mm²	blue	103856	TBB 12x10	1/10
12	10 mm²	green	103857	TBG 12x10	1/10

Terminal bars up to 63 A with steel DIN rail clip

- Rated current up to 63 A
- Rated operational voltage 690 V AC
- Steel-sheet DIN-rail clip, self-earthed
- For wires up to 10 mm²



Terminals	Terminal capacity	Article No.	Type	Packing
7	10 mm²	103858	TB 7x10	1/10
12	10 mm²	103859	TB 12x10	1/10

Metal flat enclosures EMF

Plastic cover for empty place

- Plastic cover for unused 45 mm device cutouts
- Total width 224 mm, can be shortened
- Segmented as 1x 15 mm, 22 x 1/2 module width, 1x 15 mm
- White colour plastic
- Packed separately



Description	Article No.	Type	Packing
Plastic cover for unused 45 mm device cutout	101574	B CC45	1/500

Plastic documentation pocket

- Self-adhesive pocket for documentation
- Suitable for A4 paper size documents
- PVC material
- Packed separately



Description	Size	Article No.	Type	Packing
Self-adhesive documentation pocket, slim	A4	106832	MF PDP A4S	1

Cable grommets

- Cable grommets suitable for cutouts prepared on the topside of surface mounted enclosures
- Top panels of EMFS enclosures are pre-cut for 16 mm diameter grommets
- Used material allows to use various diameter of the conductors (up to 50 mm^2)
- Packed separately

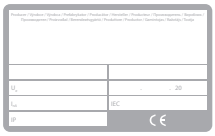


Description	Diameter	Article No.	Type	Packing
Cable grommet for EMFS enclosures	16 mm	106860	CGQS M16	1
Cable grommet	20 mm	106208	CGQS M20	1
Cable grommet	25 mm	106209	CGQS M25	1
Cable grommet	32 mm	106210	CGQS M32	1

Metal flat enclosures EMF

Type label

- Pre-printed type label for distribution boards according to EN 61439
- Box texts in EN, CZ, SK, PL, RO, DE, FR, RU, UK, BG, HR, HU, IT, LT, LV, EE language
- Material: Aluminium foil, resistive to chemical cleaners
- Self-adhesive



Description	Article No.	Type	Packing
Empty type label for distribution boards, self-adhesive	107841	MF TL	10

Special colour on request

- Enclosures EMF can be produced in non-standard colours
- Standards RAL codes can be chosen
- Please contact NOARK staff with specification, based on which real possibility will be checked

Special version on request

- Enclosures EMF can be produced in modified design
- Changes must not affect general parameters of the enclosure
- Typical changes - e.g. non-standard dimensions (within the range of smallest and biggest type), different internal configuration, etc.
- Please contact NOARK staff with specification, based on which real possibility will be checked

Technical Data EMF

Metal (sheet-steel) flat enclosures

General parameters

Sheet-steel enclosures suitable for various applications mainly in domestic and commercial applications
Variants for surface and flush mounting, usable also for hollow walls including plasterboard ones
Removable adjustable doorframe allows to compensate wall surface imperfections, including slight rotation
Prepared pre-cut openings for conductors or cable grommets
Wide range of accessories

Electrical parameters

Tested according to	EN 62208
Rated operational voltage U_e	400 V AC
Rated frequency	50 Hz
Insulation voltage U_i	415 V AC
Degree of protection	IP30
Degree of protection against external mechanical impact	IK07
Protection class	I
Overvoltage category	IV
Pollution degree	1

Mechanical parameters

Number of modules (MU) per row	24, 33
Number of rows	2, 3, 4, 5, 6
Mounting	surface and flush-mounting
Mounting depth (EMFF)	118 mm
Door	white sheet-steel
Door opening	left and right
Door load	1 kg
Door to front plates distance EMFF / EMFS	34 / 34 mm
Maximum door opening angle	110°
Used metal material - enclosure, door, front plates, separators, etc. - mounting plates	painted sheet-steel thickness 1 mm thickness 2 mm
Painted metal parts colour	powder coated, white, flat, RAL 9003

N/PE terminals in the scope of delivery

Max. rated current of N/PE terminals	63 A
Suitable material of conductors	Cu
Number of N/PE terminal bars	2
Terminal capacity	1x 25 mm^2 + 46x 16 mm^2)
Width	332 mm

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Metal (sheet-steel) flat enclosures

Maximum static load

Maximum allowed load of all installed devices and other non-standard parts

EMFF2 48W	10.8 kg	**EMFS2 48W**	11 kg
EMFF3 72W	15.6 kg	**EMFS3 72W**	16 kg
EMFF4 96W	20.2 kg	**EMFS4 96W**	20.8 kg
EMFF5 120W	23.4 kg	**EMFS5 120W**	24.3 kg
EMFF6 144W	25.9 kg	**EMFS6 144W**	28 kg
EMFF2 66W	13.9 kg	**EMFS2 66W**	14.4 kg
EMFF3 99W	20 kg	**EMFS3 99W**	20.8 kg
EMFF4 132W	25.7 kg	**EMFS4 132W**	26.7 kg
EMFF5 165W	29.7 kg	**EMFS5 165W**	32 kg
EMFF6 198W	32 kg	**EMFS6 198W**	37 kg

Power dissipation

Maximum power dissipation of all installed devices at ambient temperature 30 °C

EMFF2 48W	69 W	**EMFS2 48W**	76 W
EMFF3 72W	82 W	**EMFS3 72W**	90 W
EMFF4 96W	95 W	**EMFS4 96W**	105 W
EMFF5 120W	109 W	**EMFS5 120W**	117 W
EMFF6 144W	123 W	**EMFS6 144W**	130 W
EMFF2 66W	78 W	**EMFS2 66W**	88 W
EMFF3 99W	102 W	**EMFS3 99W**	110 W
EMFF4 132W	120 W	**EMFS4 132W**	128 W
EMFF5 165W	135 W	**EMFS5 165W**	141 W
EMFF6 198W	144 W	**EMFS6 198W**	156 W

Weight

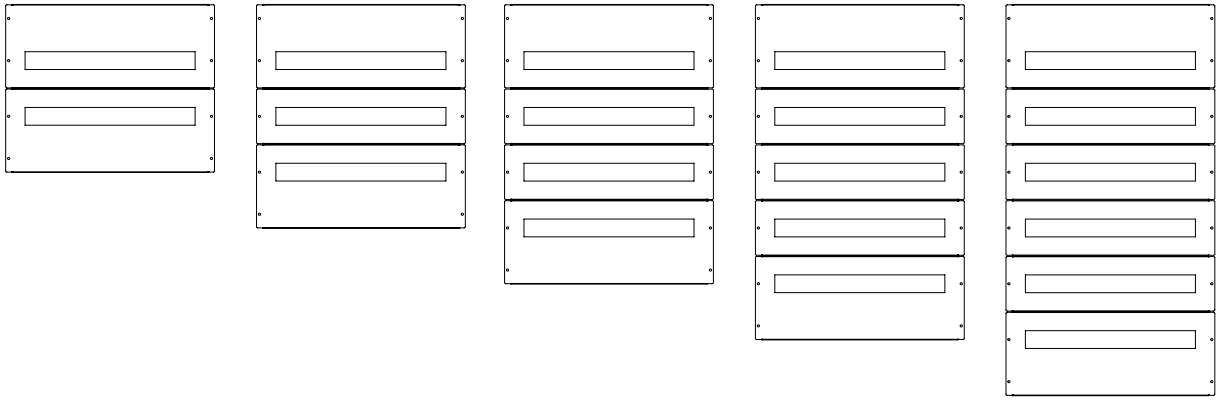
Total weight of complete enclosure (including doors, front plates, mounting frame, etc.) without devices

EMFF2 48W	10.5 kg	**EMFS2 48W**	10.0 kg
EMFF3 72W	13.2 / kg	**EMFS3 72W**	12.7 kg
EMFF4 96W	15.9 kg	**EMFS4 96W**	16.8 kg
EMFF5 120W	18.5 kg	**EMFS5 120W**	17.8 kg
EMFF6 144W	21.1 kg	**EMFS6 144W**	20.5 kg
EMFF2 66W	12.6 kg	**EMFS2 66W**	12.2 kg
EMFF3 99W	15.7 kg	**EMFS3 99W**	15.3 kg
EMFF4 132W	18.8 kg	**EMFS4 132W**	18.5 kg
EMFF5 165W	21.9 kg	**EMFS5 165W**	21.8 kg
EMFF6 198W	25.1 kg	**EMFS6 198W**	24.9 kg

Technical Data EMF

Metal (sheet-steel) flat enclosures

Front plates in the scope of delivery



EMFF2/EMFS2 **EMFF3/EMFS3** **EMFF4/EMFS4** **EMFF5/EMFS5** **EMFF6/EMFS6**

Pre-cut openings for conductors or cable grommets - flush-mounted versions

EMFF2 48W **EMFF3 72W** **EMFF4 96W** **EMFF5 120W**	4x 47x85 mm (back side, center) + 4x 47x85 mm (top) + 4x 47x85 mm (bottom) + 2x 47x85 mm (left-hand side) + 2x 47x85 mm (right-hand side)
EMFF6 144W	4x 47x85 mm (back side, center) + 4x 47x85 mm (top) + 4x 47x85 mm (bottom) + 2x 47x85 mm (left-hand side) + 2x 47x85 mm (right-hand side)
EMFF2 66W **EMFF3 99W** **EMFF4 132W** **EMFF5 165W**	4x 47x85 mm (back side, center) + 5x 47x85 mm (top) + 5x 47x85 mm (bottom) + 2x 47x85 mm (left-hand side) + 2x 47x85 mm (right-hand side)
EMFF6 198 W	4x 47x85 mm (back side, center) + 5x 47x85 mm (top) + 5x 47x85 mm (bottom) + 3x 47x85 mm (left-hand side) + 3x 47x85 mm (right-hand side)

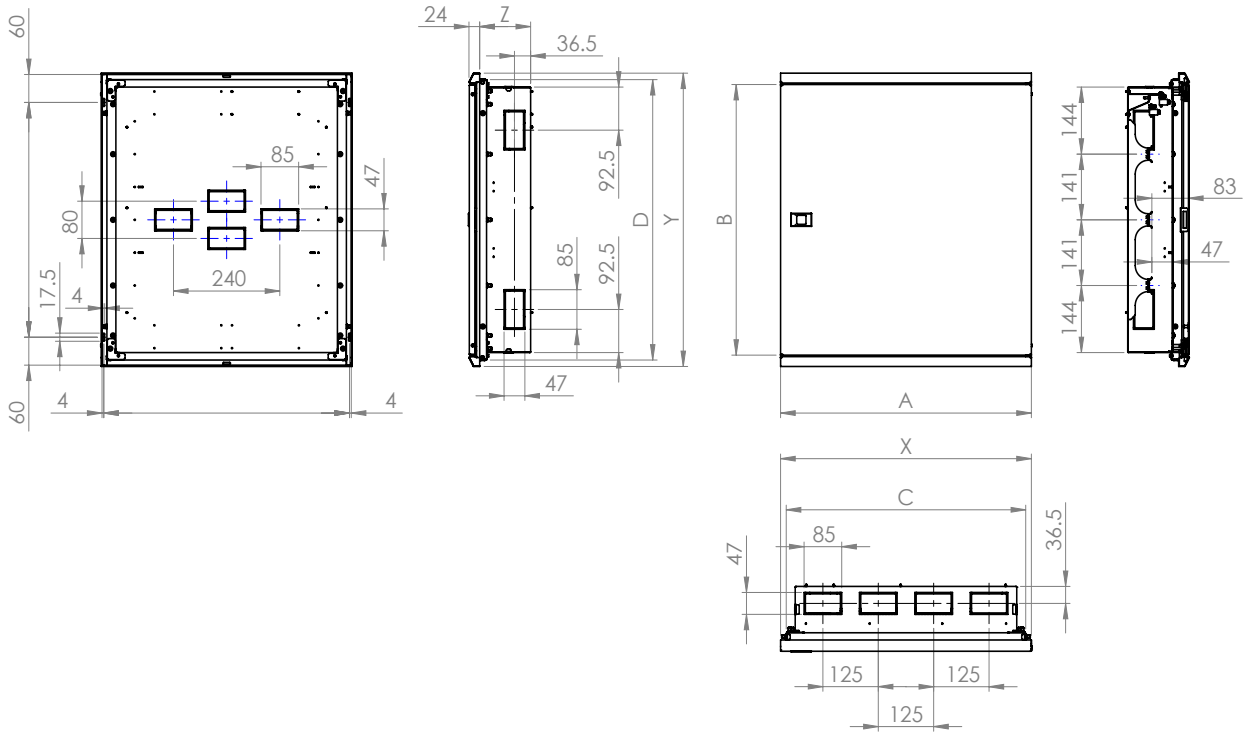
Pre-cut openings for conductors or cable grommets - surface-mounted versions

all EMFS variants	4x 47x55.6 mm (back side, center) + 4x 47x85 mm (back size, corners) + 14x round Ø20 mm (top)

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Metal (sheet-steel) flat enclosures

Dimensional drawings - flush-mounted versions



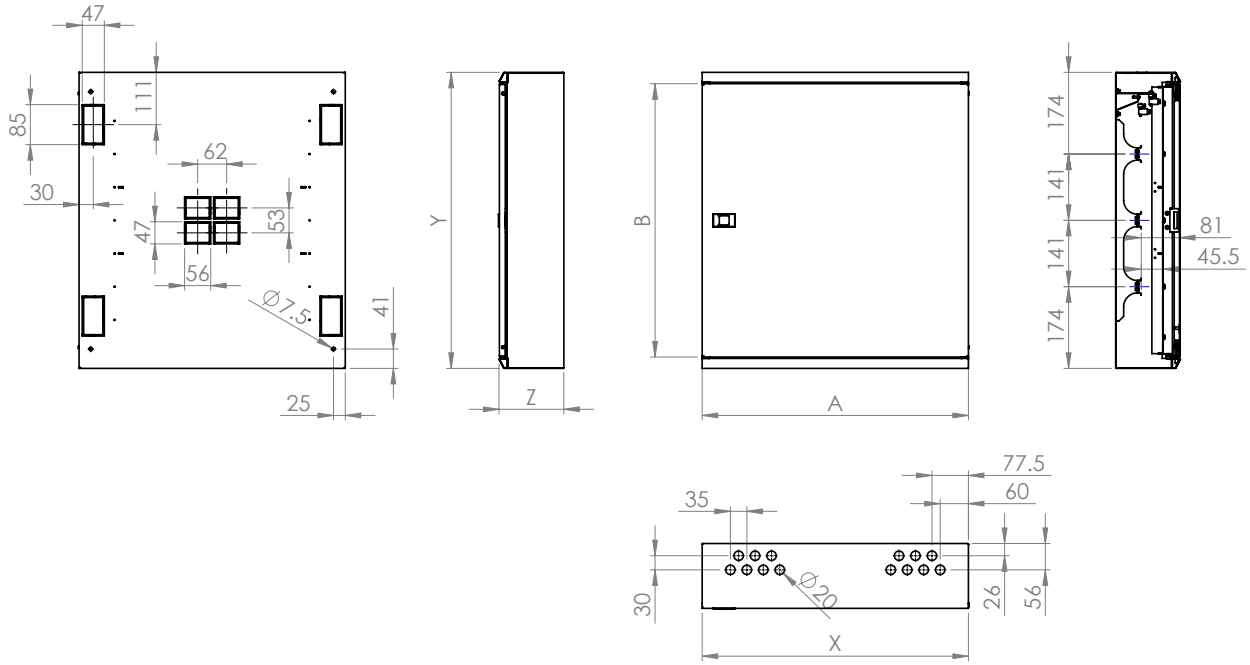
Dimensions

Type	Dimensions [mm]						
	Width (X)	Height (Y)	Mounting depth (Z)	Door width (A)	Door height (B)	Wall opening width (C)	Wall opening height (D)
EMFF2 48W	566	489	115	566	440	541	461
EMFF3 72W	566	630	115	566	581	541	602
EMFF4 96W	566	771	115	566	722	541	743
EMFF5 120W	566	912	115	566	863	541	884
EMFF6 144W	566	1053	115	566	1004	541	1025
EMFF2 66W	730	489	115	730	440	705	461
EMFF3 99W	730	630	115	730	581	705	602
EMFF4 132W	730	771	115	730	722	705	743
EMFF5 165W	730	912	115	730	863	705	884
EMFF6 198W	730	1053	115	730	1004	705	1025

Technical Data EMF

Metal (sheet-steel) flat enclosures

Dimensional drawings - surface-mounted versions



Dimensions

Type	Dimensions [mm]				
	Width (X)	Height (Y)	Depth (Z)	Door width (A)	Door height (B)
EMFS2 48W	566	489	137	566	440
EMFS3 72W	566	630	137	566	581
EMFS4 96W	566	771	137	566	722
EMFS5 120W	566	912	137	566	863
EMFS6 144W	566	1053	137	566	1004
EMFS2 66W	730	489	137	730	440
EMFS3 99W	730	630	137	730	581
EMFS4 132W	730	771	137	730	722
EMFS5 165W	730	912	137	730	863
EMFS6 198W	730	1053	137	730	1004