



ENYMOD

Mi Power
distribution boards

Mi Power distribution boards up to 630 A

in accordance with IEC 61439-2

- combinable enclosure system
- degree of protection IP 65
- made from polycarbonat
- protection class II, □

IEC 61439-2:

| | |
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Further technical information can be found on the Internet
www.hensel-electric.de -> Products

Standard-conforming rating according to IEC 61439-2

The new IEC 61439 - the standard for the construction of switchgear assemblies - brings changes that affect the planning of a switchgear assembly. In addition, new tasks and responsibilities are awaiting the manufacturer of a switchgear assembly.

Decisive for the optimal functioning of a switchgear assembly under operating conditions is the correct rating of the interface characteristics of the assembly. For this purpose, the assembly is considered as **BLACK-BOX** with four interface characteristics which shall ensure compatibility with the ratings of the circuits to which it is connected and the installation conditions and shall be declared by the assembly manufacturer using the criteria identified below.

Assembly considered as BLACK BOX with the four interface characteristics according to IEC 61439-2



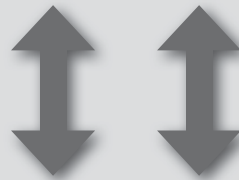
Installation and ambient conditions

- For the protected outdoor installation
- Degree of protection IP 65
- Combinable enclosure system, extendable in all directions
- 6 enclosure sizes in a grid of 150 mm
- EMC compliant busbar system
- Wall-mounting or floor-standing



Operation and maintainance

- Electrical functions intended to be operated by electrotechnical skilled or unskilled persons
- Protection class II up to a rated current of 630 A
- Flexible by standardised and tested kits
- Spacious connection areas



BLACK BOX with 4 interfaces

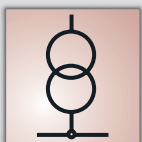


Mi Power Distribution Board (PSC)

Combinable enclosure system, insulation-enclosed, total insulated, degree of protection IP 65, for the assembly of power switchgear and controlgear assemblies (PSC) up to 630 A in accordance with IEC 61439-2.

The requirements for all installed electrical functions within the assembly have been proved compliance with the applicable requirements of IEC 61439-2.

I_{nc} and RDF must be specified in the documentation.



Connection to the electrical network

- Electric circuit / final circuit
- Circuit-breaker up to 630 A
- Switch disconnector up to 630 A
- Fuse switch disconnector up to 630 A
- Bus-mounted fuse base up to 63 A
- Connection with cable from above / from below
- Connection: conductors from copper / aluminium
- Optional connection of CEE sockets according to EN 60309 and sockets with earthing contact



Circuits and consumers

- Rated voltage $U_n = 690$ V a.c. / 1000 V d.c.
- Rated current I_N up to 630 A
- Circuit-breaker up to 630 A
- Switch disconnector up to 630 A
- Fuse switch disconnector up to 630 A
- 5-conductor system
- Connector with cable from above / from below



Changes facing the manufacturer of a switchgear assembly (Panel builder)

IEC 61439 - the standard for the assembly of switchgear assemblies and distribution boards - determines the safety requirements for electrical equipment for the compliance of protection objectives for people and facilities. Requirements for products are more clearly defined and a new terminology is introduced.

BLACK BOX Specification

The designer specifies a switchgear assembly by defining the interface parameters as BLACK BOX. Based on these interface specifications the manufacturer of a switchgear assembly has to rate and define the structure of the switchgear assembly.

Product presentation in media changed significantly

The standard has an effect as well on the documentation of products. Additional information, such as the rated current of circuits and the number of circuits, are now listed for each product as they are now required by designers and manufacturers for the construction of switchgear assemblies.

The international catalogue presents Mi empty and circuit breaker boxes.



Further enclosures with electrical functions for the assembly of ENYSTAR distribution boards up to 250 A, for example, with built-in busbars, circuit breakers, etc., see at: www.hensel-electric.de

For design and assembly according IEC 61439 / EN 61439 with ENYSTAR Distribution Boards up to 250 A please refer to the guide at www.hensel-elctric.de/61439.

The guide to design and assemble in accordance with EN 61439 for ENYSTAR distribution boards up to 250 A and Mi Power distribution boards up to 630 A can be downloaded:

 www.hensel-electric.de/en

ENYGUIDE

Planning tool Configurator ENYGUIDE at www.enyguide.de

Free planning software ENYGUIDE: allows the quick and easy configuration of distribution boards.



- Dimensional drawings and parts lists are automatically created by ENYGUIDE.
- Representation of the distribution board as a detailed 3D-image or a 2D-drawing.
- Various view planes show the equipment, covers and doors.
- ENYGUIDE determines the necessary accessories such as the number of wall separators independently.
- No time-consuming program installation is needed.

www.enyguide.de

Mi Power distribution boards up to 630 A

combinable enclosure system, insulation-enclosed, total insulated, degree of protection IP 65, for the assembly of power switchgear and controlgear assembly (PSC) up to 630 A in accordance with IEC 61439 Part 2

- Boxes can also be used as a single box
- Degree of protection IP 65: dust-proof and jet water-proof
- Application area: Mi enclosures are suitable for for the protected outdoor installation - harsh environment and /or outdoor.

Material:

- Polycarbonate
- Burning behaviour: Glow wire test in accordance with IEC 60 695-2-11, self-extinguishing, flame-retardant
- UV-resistance in accordance with IEC 61439-1, Clause 10.2.4: The material is examined for UV resistance.
- Toxic behaviour: silicone- and halogen-free
- Chemical resistance:
resistant against acid, lye, benzene and mineral oil



Power distribution board (PSC) in accordance with IEC 61439-2



Safe in dust, dirt, moisture and in harsh industrial atmosphere



Dust- and waterresistant:
Mi Distribution Boards can withstand the highest loads



Assembly of Mi Distribution boards in accordance with IEC 61439-2

Enclosure system:

- Enclosures with electrical functions with standardized kits up to 630 A
- Covers made from thermoplastic
- Covers with protected, editable and captive labelling strips
- Cover plates for mounted electrical equipment
- Mounting plates or DIN rails for installation device
- Large wall openings enable the wiring within the distribution boards
- Cable entry via metric knockouts in all box walls, via flanges with metric knockouts or elastic membranes or cable inserts with up to 74 mm cable diameter
- Wall fixing right away in the boxes, via external brackets or via mounting profiles
- Facility for lead seal and locking
- Hinges for lids and heavy-duty hinge joints for operating installation device within a large area

- Connection Box for the installation of devices that must be operated externally, such as plugs, pushbuttons and switches
- Mi empty boxes and single empty boxes conform to the RoHS Directive 2011/65/EC



Assembly instruction
Please request or download information:
www.hensel-electric.de/en -> Downloads

Dependent on the system

Electrical parameters



Electrical parameters

rated voltage: max. 690 V a.c.
rated insulation voltage: 690 V a.c., 1000 V d.c.
rated current: max. 630 A
rated short-time withstand current: max. 21 kA

The design values are possibly reduced by the installed equipment technology, please refer to technical data of the product or index technical data.

System properties



Environmental conditions

Ambient temperature
- for distribution boards
in accordance with IEC 61439:
-5 °C up to 35 °C, max. + 40 °C
Relative humidity: 50% at 40 °C, 100% at 25 °C

- for empty enclosures: - 25 °C up to + 70 °C
The climatic influences and effects on the equipment are to be considered, see technical details / operating and ambient conditions



Application area

The enclosures are suitable for outdoor installation, protected against weather influences.

However, pay attention to the climatic effects on the installed equipment, see operating and ambient conditions in index technical data.



Insulation

insulated enclosures (protection class II)



Impact strength

degree of protection against mechanical load IK 08 (5 Joule) in accordance with IEC 62262



Protection against foreign solid objects and direct contact

dust-proof degree of protection IP 65



Protection against ingress of water with harmful effects

protected against water degree of protection IP 65

Single enclosures without any flanges and components mounted in the lid have degree of protection IP 66

Dependent on material

Material properties: polycarbonate



Burning behaviour

glow wire test 960 °C
in accordance with IEC 60695-2-11
flame-retardant, self-extinguishing



UV resistance

UV resistance according to IEC 61439-1, Section 10.2.4: the material is examined for UV resistance



Chemical resistance

resistance against acid 10% and alkaline 10%, petrol and mineral oil



Toxic behaviour

silicone- and halogen-free

Tested and certified
by ASTA



Suitable also for typical
devices or the installation
of armoured cables with
earth connections

Application:
**Motor Control Centre based
on Mi System**

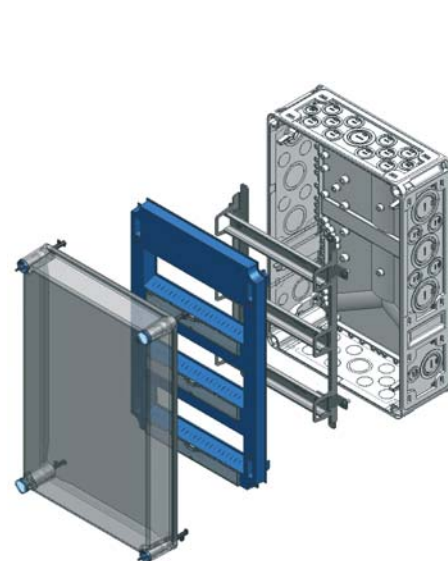
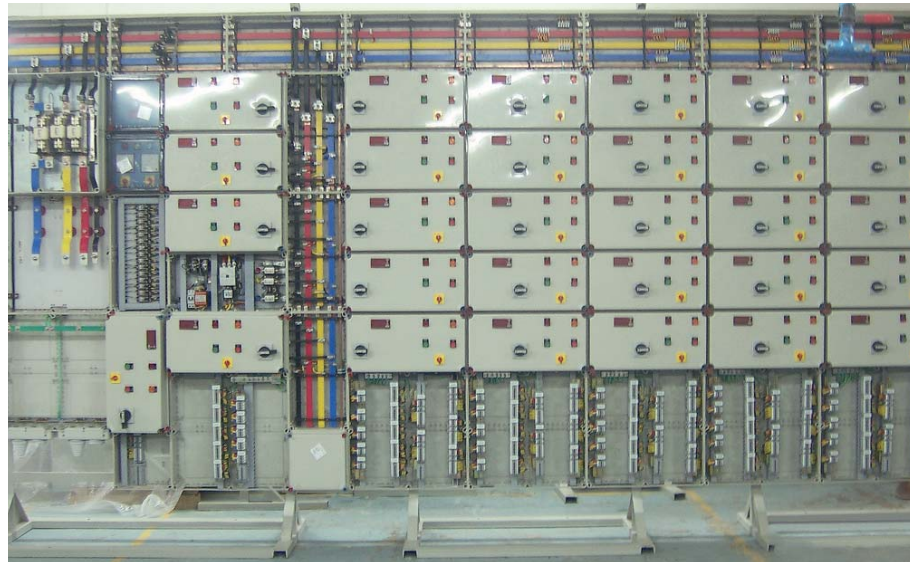
This Motor Control Centre installed in a big paper mill consists of 33 feeders ranging from 2.2 kW to 50 kW including complete wiring with main incomer of 630 A.

Application:
Removable DIN rail rack for integrated earth bounding in each Mi Circuit breaker box.

Cable entry for armoured cables via metal glands for earth connection according to British Standards.

Key benefits

| | |
|---|---|
| Material | Thermoplastic material |
| Corrosion-proof | yes |
| Degree of protection | IP 65 (dust proof, water proof) |
| Protection against mechanical impact | no lasting deformations, elastic |
| Weight | "light" |
| Subsequent handling (such as openings) | "easy" |
| Transparent lids | standard offer |
| Operating area | partial opening range via lids of individual enclosures |
| Adaptability to location | by arrangement of modular enclosures |
| Combinability / Expandability | in all directions by combinable enclosures including electrical functions |
| Availability in the market | immediately with standard modules and accessories |



Integrated earth bounding in each circuit breaker box



Cable entry for armoured cables via metal glands

Combinable and
extendable in all directions

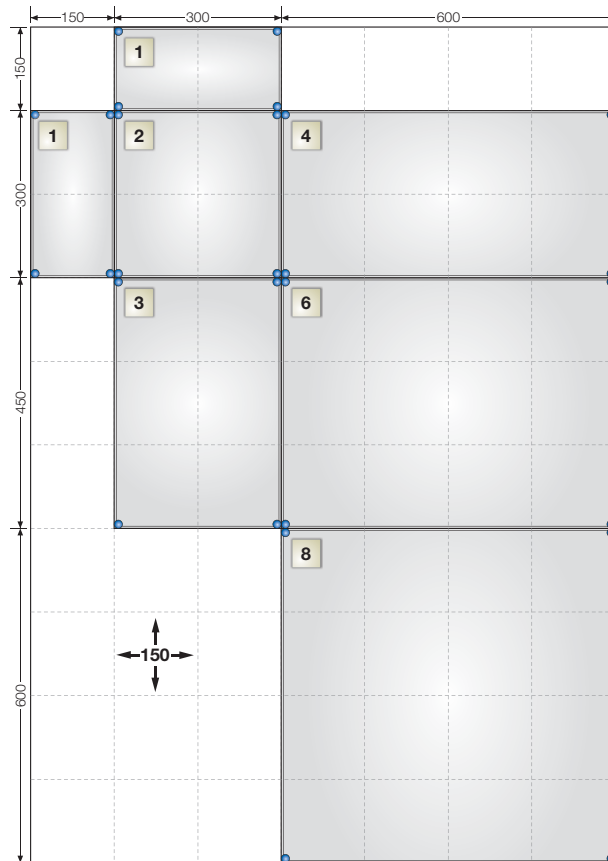
Application examples



Mi Distribution boards

- modular enclosure system in grid of 150 mm
- 5 kapslingsstorlekar: 150 x 300 mm, 300 x 300 mm, 450 x 300 mm, 600 x 300 mm, 600 x 450 mm eller 600 x 600 mm
- for the assembly of power switchgear and controlgear assemblies (PSC) up to 630 A
- Enclosures can be used as well as single boxes.

The **modular design** in a basic grid of 150 mm allows free design of the outer form. The enclosures can be combined in all directions. Obstacle easily circumvented.



Different enclosure depths

allow the installation of equipment of different heights (Fig. 1).

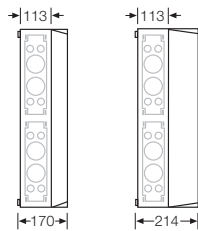


figure 1

With an extension frame the depth of the enclosure sizes 4 and 8 can be extended by 85 mm (Fig. 2).

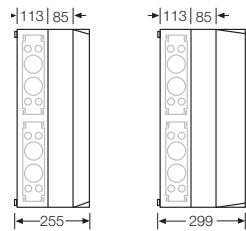
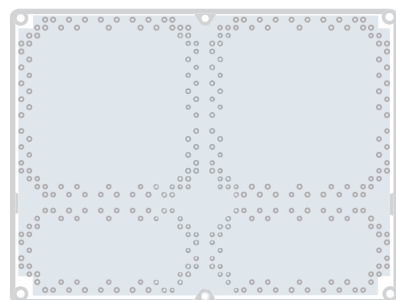


figure 2

Enclosure size 6 (600x450 mm)

Due to an enlarged terminal compartment directly in the housing, some electrical functions can be installed more economical.

An additional enclosure for wiring is not necessary.



Combinable distribution boards with door



Empty enclosures



Empty enclosures with hinged lid



Circuit breaker box



Mi enclosures can be assembled to distribution boards.



Empty enclosures for the installation of electrical equipment via mounting plates or DIN rails

Example:
Mi hinges for lids enable to operate installation device within a large area



Example:
Locking option with triangle prevents unauthorized access



Empty enclosures
transparent or opaque lids

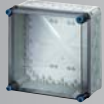
Empty enclosures
hinged transparent or opaque lids



Mi 0100
built-in dimensions
275x125x146 mm



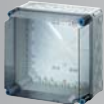
Mi 0101
built-in dimensions
275x125x146 mm



Mi 0200
built-in dimensions
275x275x146 mm



Mi 0201
built-in dimensions
275x275x146 mm



Mi 0210
built-in dimensions
275x275x191 mm



Mi 0211
built-in dimensions
275x275x191 mm



Mi 0220
built-in dimensions
275x275x115 mm
hinged lid



Mi 0221
built-in dimensions
275x275x115 mm
hinged lid



Mi 0300
built-in dimensions
275x425x146 mm



Mi 0301
built-in dimensions
275x425x146 mm



Mi 0310
built-in dimensions
275x425x191 mm



Mi 0311
built-in dimensions
275x425x191 mm



Mi 0400
built-in dimensions
275x575x146 mm



Mi 0401
built-in dimensions
275x575x146 mm



Mi 0410
built-in dimensions
275x575x191 mm



Mi 0411
built-in dimensions
275x575x191 mm



Mi 0600
built-in dimensions
575x425x146 mm



Mi 0601
built-in dimensions
575x425x146 mm



Mi 0800
built-in dimensions
575x575x146 mm



Mi 0801
built-in dimensions
575x575x146 mm



Mi 9100
built-in dimensions
122x272x146 mm,
hinged lid



Mi 9101
built-in dimensions
122x272x146 mm,
hinged lid



Mi 9200
built-in dimensions
275x275x146 mm,
hinged lid



Mi 9201
built-in dimensions
275x275x146 mm,
hinged lid



Mi 9210
built-in dimensions
275x275x191 mm,
hinged lid



Mi 9211
built-in dimensions
275x275x191 mm,
hinged lid



Mi 9300
built-in dimensions
275x425x146 mm,
hinged lid



Mi 9301
built-in dimensions
275x425x146 mm,
hinged lid



Mi 9310
built-in dimensions
275x425x191 mm,
hinged lid



Mi 9311
built-in dimensions
275x425x191 mm,
hinged lid



Mi 9400
built-in dimensions
275x575x146 mm,
hinged lid



Mi 9401
built-in dimensions
275x575x146 mm,
hinged lid



Mi 9410
built-in dimensions
275x575x191 mm,
hinged lid






























Mi 9411
built-in dimensions
275x575x191 mm,
hinged lid













Empty boxes for the installation of different electrical devices either directly over attachments in the base of the enclosures or on DIN rails or mounting plates.


Empty boxes with hinged lids applicable as single empty box for the installation of device via DIN rails or mounting plates. The lid keeps permanently connected to the box. Built-in devices can be easily operated and for example measurements conveniently carried out with both hands.

Circuit breaker boxes
with or without PE/N

| | | | |
|---|--|---|---|
|  | Mi 1109 1x9x18 mm, PE+N |  | Mi 1111 1x12x18 mm, PE+N, 1 hinged lid |
|  | Mi 1112 1x12x18 mm, PE+N |  | Mi 1117 1x12x18 mm, without PE+N, 1 hinged flap |
|  | Mi 1115 1x12x18 mm without PE+N |  | Mi 1222 2x12x18 mm, PE+N, 2 hinged flaps |
|  | Mi 1224 2x12x18 mm, PE+N |  | Mi 1225 2x12x18 mm without PE+N |
|  | Mi 1220 2x12x18 mm, PE+N, Scharnierdeckel |  | Mi 1227 2x12x18 mm, without PE+N, 2 hinged flaps |
|  | Mi 1226 2x12x18 mm without PE+N, hinged lid |  | Mi 1333 3x12x18 mm, PE+N, 3 hinged flaps |
|  | Mi 1336 3x12x18 mm, PE+N |  | Mi 1337 3x12x18 mm, without PE+N, 3 hinged flaps |
|  | Mi 1335 3x12x18 mm without PE+N |  | Mi 1444 4x12x18 mm, PE+N, 4 hinged flaps |
|  | Mi 1448 4x12x18 mm, PE+N |  | Mi 1445 4x12x18 mm, without PE+N, 4 hinged flaps |
|  | Mi 1440 3x12x18 mm, 1 DIN rail, without PE+N |  | Mi 1443 3x12x18 mm, 1 DIN rail, without PE+N, 3 hinged flaps |
|  | Mi 1456 * 2x28x18 mm, PE+N |  | Mi 1281 for miniature circuit breakers 1x6x18 mm, PEN |
|  | Mi 1455 * 2x28x18 mm without PE+N | | |
|  | Mi 1684 * 2x28x18 mm and 2x12x18 mm PE+N | | |
|  | Mi 1683 * 2x28x18 mm and 2x12x18 mm without PE+N | | |
|  | Mi 1884 * 3x28x18 mm, PE+N | | |
|  | Mi 1885 * 3x28x18 mm without PE+N | | |

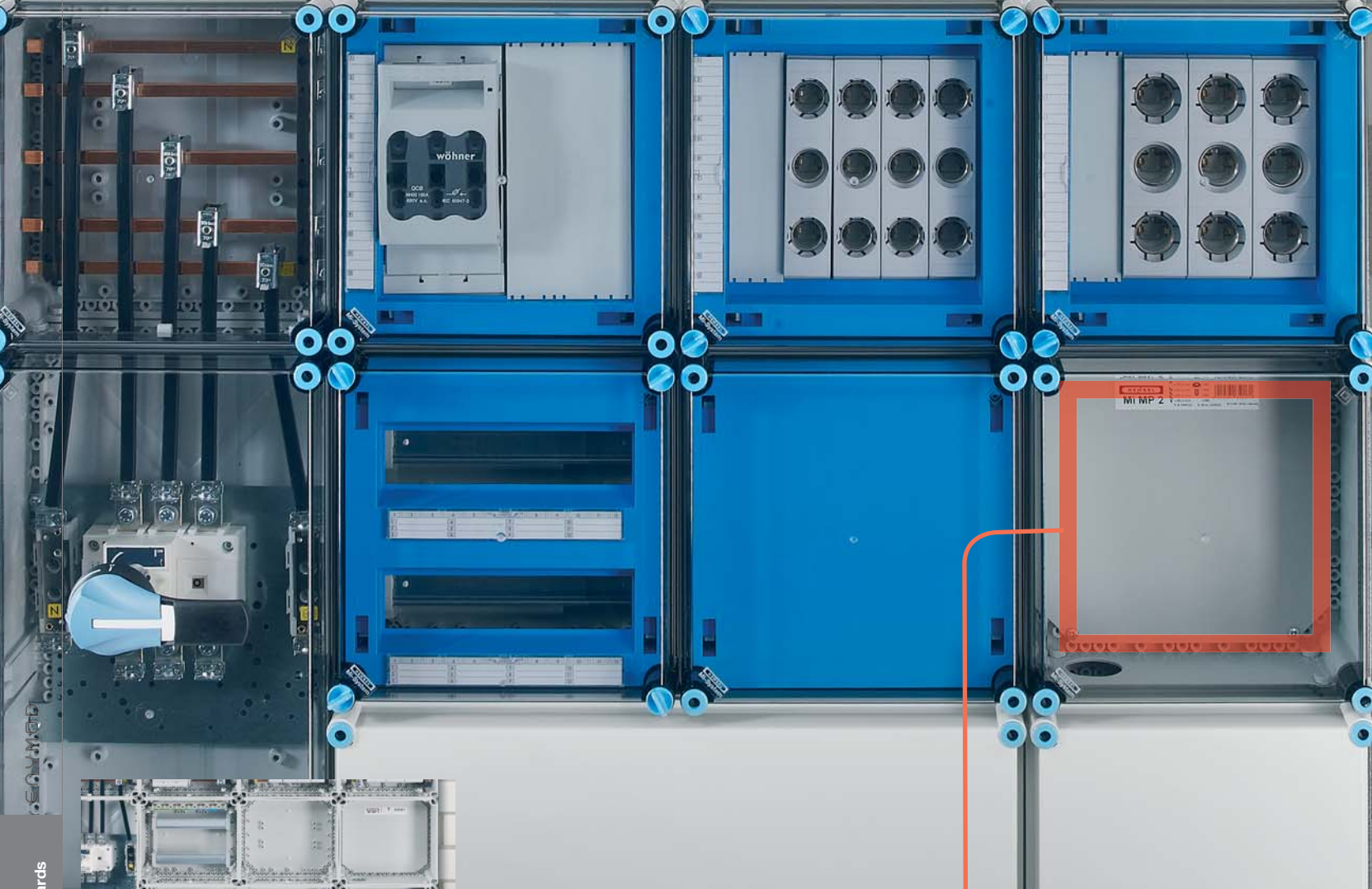
Circuit breaker boxes
removable DIN rail rack and
earth connection

| | | | |
|--|--|---|--|
|  | Mi 1118 * 1x12x18 mm, without PE+N |  | Mi 1119 * 1x12x18 mm, without PE+N, 1 hinged flap |
|  | Mi 1228 * 2x12x18 mm, without PE+N |  | Mi 1229 * 2x12x18 mm, without PE+N, 2 hinged flaps |
|  | Mi 1221 * 2x12x18 mm, without PE+N with hinged lid |  | Mi 1339 * 3x12x18 mm, without PE+N, 3 hinged flaps |
|  | Mi 1338 * 3x12x18 mm, without PE+N |  | Mi 1449 * 4x12x18 mm, without PE+N, 4 hinged flaps |
|  | Mi 1446 * 4x12x18 mm, without PE+N | | |
|  | Mi 1455 * 2x28x18 mm, without PE+N | | |
|  | Mi 1686 * 2x28x18 mm and 2x12x18 mm | | |
|  | Mi 1885 * 3x28x18 mm, without PE+N | | |



* With removable DIN rail rack or earth connection

Circuit breaker boxes for the installation of DIN rail equipment in accordance with DIN 43880 from 9 to 84 modules.
Unused DIN rail openings in covers are stripped with attached blanking strips.




Mi Power distribution boards



Mi Distribution Boards

Empty boxes

for the assembly of power distribution boards (PSC) up to 630 A in accordance with IEC 61430-2

- Transparent or opaque enclosure lids
- Empty enclosure with hinged lid, trilaterally combinable
- Device installation either on mounting plates or DIN rails
- Installation depths extendable by using lids of different heights or extension frames
- Enclosures can also be used as single boxes
- Protection class II, 
- Degree of protection: IP 65
- Material: PC (polycarbonate)
- Colour: grey, RAL 7035

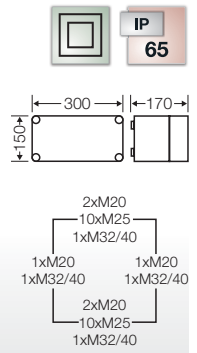
Mi Distribution Boards
Empty boxes with transparent lid



Mi 0100

Built-in dimensions W 275 x H 125 x D 150 mm

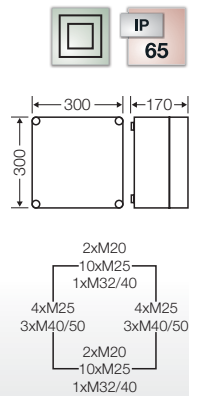
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 1
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation



Mi 0200

Built-in dimensions W 275 x H 275 x D 150 mm

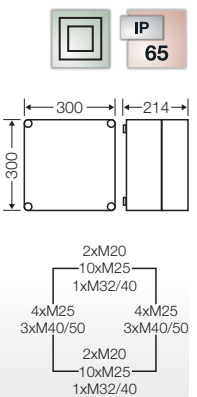
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation



Mi 0210

Built-in dimensions W 275 x H 275 x D 195 mm

- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation



Please note:



Terminals for incoming/outgoing cables under accessories



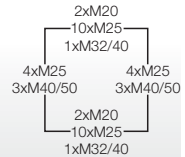
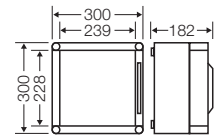
Covers for protection of installation device, see accessories



Mi 0220

Built-in dimensions W 275 x H 275 x D 119 mm

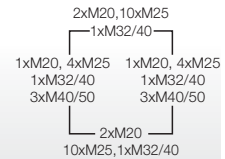
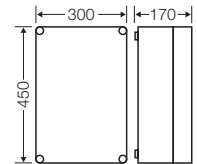
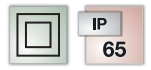
- max. installation depth with built-in mounting plate 115 mm, with built-in DIN rail 104 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- with hinged lid for built-in equipment with protection cover which must be operated
- with transparent lid
- lid fasteners for tool operation



Mi 0300

Built-in dimensions W 275 x H 425 x D 150 mm

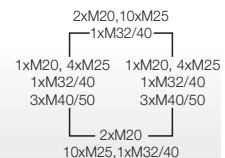
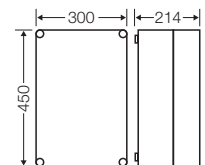
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation



Mi 0310

Built-in dimensions W 275 x H 425 x D 195 mm

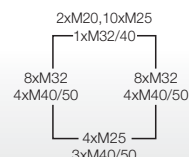
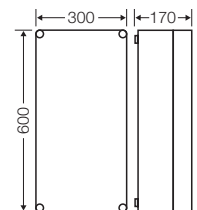
- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation



Mi 0400

Built-in dimensions W 275 x H 575 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation

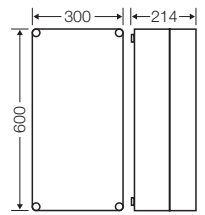




Mi 0410

Built-in dimensions W 275 x H 575 x D 195 mm

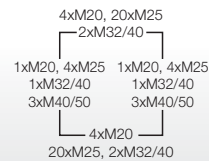
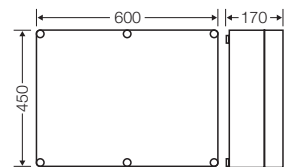
- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation



Mi 0600

built-in dimensions W 575 x H 425 x D 150 mm

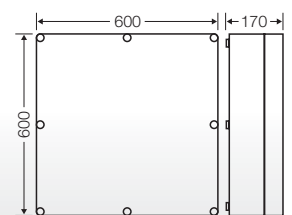
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 6
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation



Mi 0800

Built-in dimensions W 575 x H 575 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 8
- please order DIN rails, mounting plates or covers additionally
- cable entry only possible via flange
- with transparent lid
- lid fasteners for tool operation



Please note:



Terminals for incoming/outgoing cables under accessories



Covers for protection of installation device, see accessories

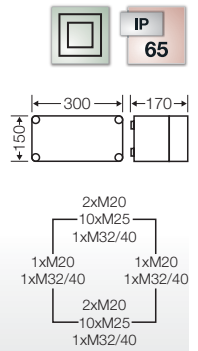
Mi Distribution Boards
Empty boxes with opaque lid



Mi 0101

Built-in dimensions W 275 x H 125 x D 150 mm

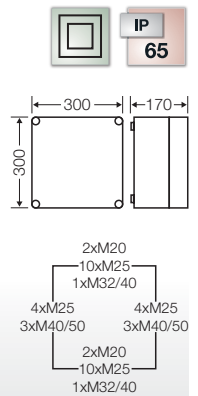
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 1
- please order DIN rails, mounting plates or covers additionally
- with opaque lid
- lid fasteners for tool operation



Mi 0201

Built-in dimensions W 275 x H 275 x D 150 mm

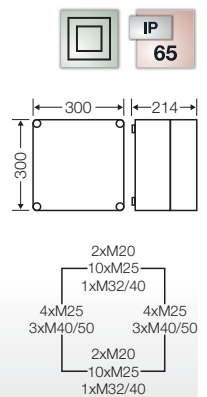
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- with opaque lid
- lid fasteners for tool operation



Mi 0211

Built-in dimensions W 275 x H 275 x D 195 mm

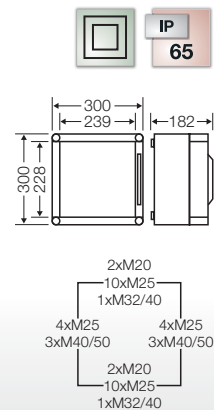
- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- with opaque lid
- lid fasteners for tool operation



Mi 0221

Built-in dimensions W 275 x H 275 x D 119 mm

- max. installation depth with built-in mounting plate 115 mm, with built-in DIN rail 104 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- with hinged lid for built-in equipment with protection cover which must be operated
- with opaque lid
- lid fasteners for tool operation



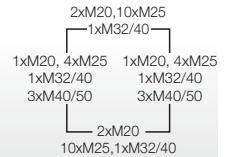
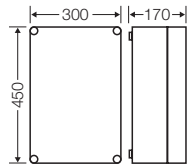
Mi Distribution Boards
Empty boxes with opaque lid



Mi 0301

Built-in dimensions W 275 x H 425 x D 150 mm

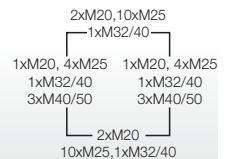
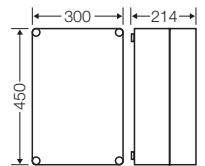
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- with opaque lid
- lid fasteners for tool operation



Mi 0311

Built-in dimensions W 275 x H 425 x D 195 mm

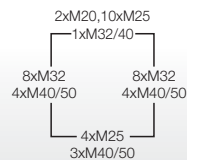
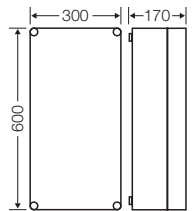
- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- with opaque lid
- lid fasteners for tool operation



Mi 0401

Built-in dimensions W 275 x H 575 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- with opaque lid
- lid fasteners for tool operation



Please note:



Terminals for incoming/outgoing cables under accessories



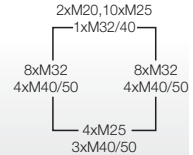
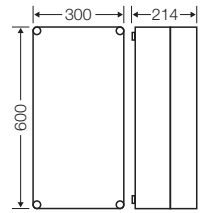
Covers for protection of installation device, see accessories



Mi 0411

Built-in dimensions W 275 x H 575 x D 195 mm

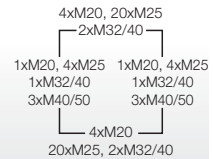
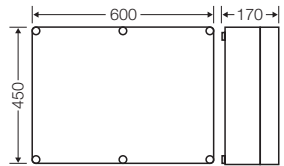
- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- with opaque lid
- lid fasteners for tool operation



Mi 0601

built-in dimensions W 575 x H 425 x D 150 mm

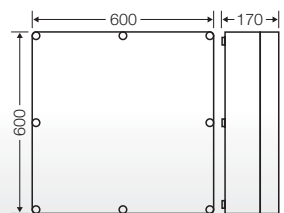
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 6
- please order DIN rails, mounting plates or covers additionally
- with opaque lid
- lid fasteners for tool operation



Mi 0801

Built-in dimensions W 575 x H 575 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 8
- please order DIN rails, mounting plates or covers additionally
- cable entry only possible via flange
- with opaque lid
- lid fasteners for tool operation



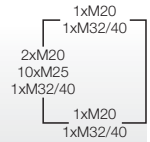
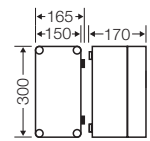
Mi Distribution Boards
Empty boxes
with hinged, transparent lid



Mi 9100

Built-in dimensions W 125 x H 275 x D 150 mm

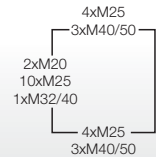
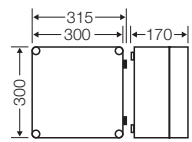
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 1
- please order DIN rails, mounting plates or covers additionally
- 3 walls with metric knockouts for cable entry and assembly
- trilaterally combinable
- lid hinges attached
- with transparent, hinged lid
- lid fasteners for tool operation



Mi 9200

Built-in dimensions W 275 x H 275 x D 150 mm

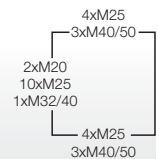
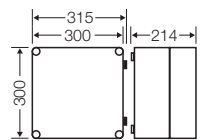
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with transparent, hinged lid
- lid fasteners for tool operation



Mi 9210

Built-in dimensions W 275 x H 275 x D 195 mm

- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with transparent, hinged lid
- lid fasteners for tool operation



Please note:



Terminals for incoming/outgoing cables under accessories



Covers for protection of installation device, see accessories



Empty enclosures with hinged lids

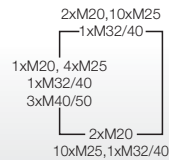
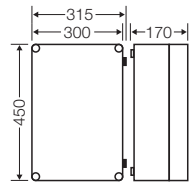
Mi Distribution Boards
Empty boxes
with hinged, transparent lid



Mi 9300

Built-in dimensions W 275 x H 425 x D 150 mm

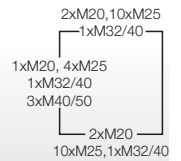
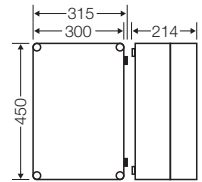
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with transparent, hinged lid
- lid fasteners for tool operation



Mi 9310

Built-in dimensions W 275 x H 425 x D 195 mm

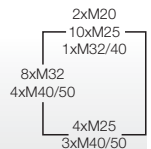
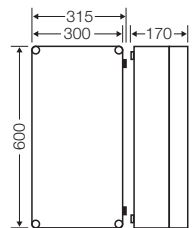
- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with transparent, hinged lid
- lid fasteners for tool operation



Mi 9400

Built-in dimensions W 275 x H 575 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with transparent, hinged lid
- lid fasteners for tool operation



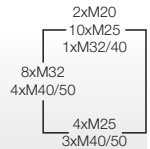
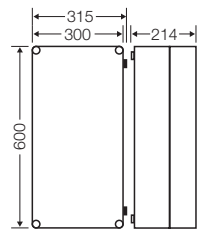
Mi Distribution Boards
Empty boxes
with hinged, transparent lid



Mi 9410

Built-in dimensions W 275 x H 575 x D 195 mm

- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with transparent, hinged lid
- lid fasteners for tool operation



Please note:



Terminals for incoming/outgoing cables under accessories



Covers for protection of installation device, see accessories



Empty enclosures with hinged lids

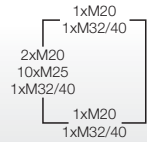
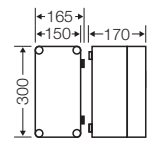
Mi Distribution Boards
Empty boxes
with hinged, opaque lid



Mi 9101

Built-in dimensions W 125 x H 275 x D 150 mm

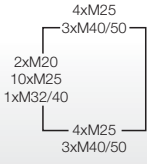
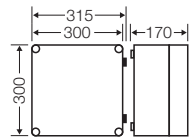
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 1
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged lid
- lid fasteners for tool operation



Mi 9201

Built-in dimensions W 275 x H 275 x D 150 mm

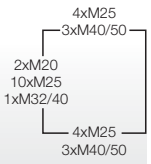
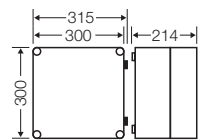
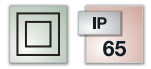
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged lid
- lid fasteners for tool operation



Mi 9211

Built-in dimensions W 275 x H 275 x D 195 mm

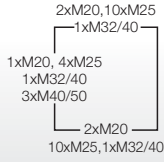
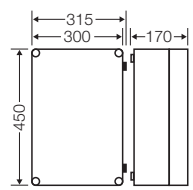
- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged lid
- lid fasteners for tool operation



Mi 9301

Built-in dimensions W 275 x H 425 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged lid
- lid fasteners for tool operation



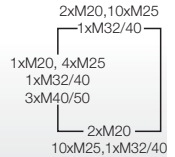
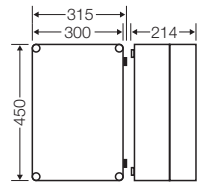
Mi Distribution Boards
Empty boxes
with hinged, opaque lid



Mi 9311

Built-in dimensions W 275 x H 425 x D 195 mm

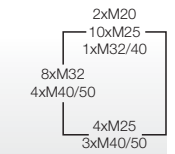
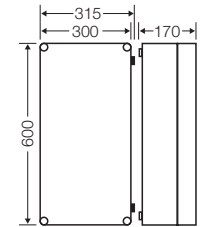
- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged lid
- lid fasteners for tool operation



Mi 9401

Built-in dimensions W 275 x H 575 x D 150 mm

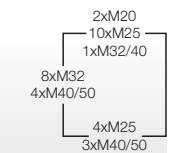
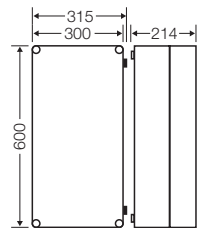
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged lid
- lid fasteners for tool operation



Mi 9411

Built-in dimensions W 275 x H 575 x D 195 mm

- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged lid
- lid fasteners for tool operation



Please note:



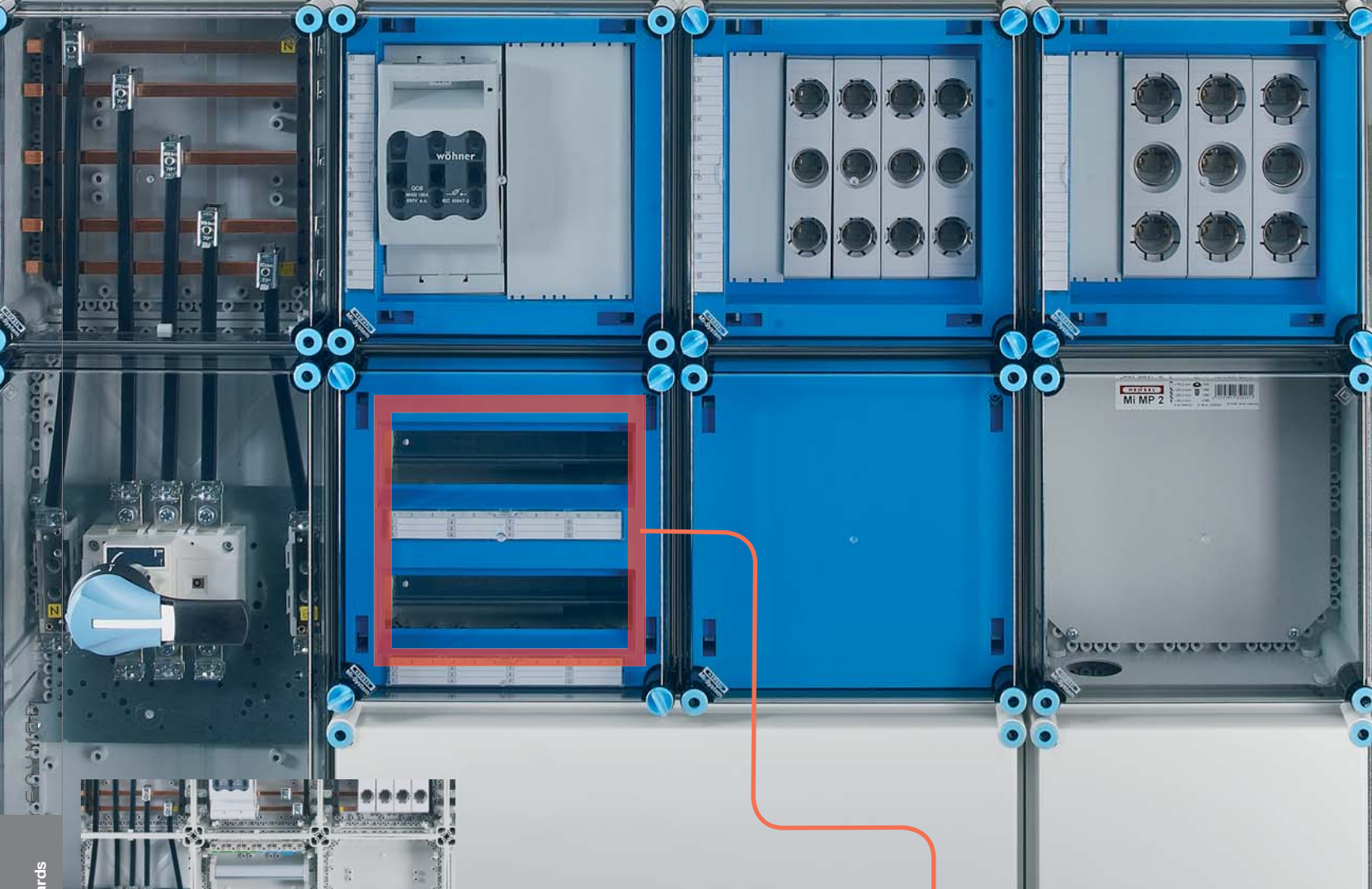
Terminals for incoming/
outgoing cables under
accessories



Covers for protection of
installation device, see
accessories



Empty enclosures with
hinged lids




Mi Power distribution boards



Mi Distribution Boards

Circuit breaker boxes with or without PE and N terminals with hinged flaps

for the assembly of power distribution boards (PSC) up to 630 A in accordance with IEC 61430-2

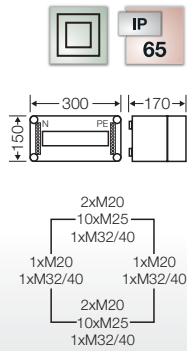
- Transparent lids
- Hinged flap or hinged lid for an easy operation of installation devices
- Hinged flap lock against unauthorised opening under accessories
- Circuit breaker boxes with or without PE and N terminals
- Protection against direct contact with hazardous live parts for operable installation devices
- Included blanking strips for unused DIN rail openings
- Attached labelling strips for circuit identification
- Enclosures can also be used as single boxes
- Protection class II, 
- Degree of protection: IP 65
- Material: PC (polycarbonate)
- Colour: grey, RAL 7035

Mi Distribution Boards
Circuit breaker box with PE and N terminals



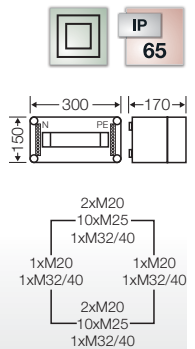
Mi 1109
9 modules: 1 x 9 x 18 mm

- 1-row
- FIXCONNECT® plug-in terminal technology for PE and N
- PE/N 2 x 25 mm², 8 x 4 mm², Cu each
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



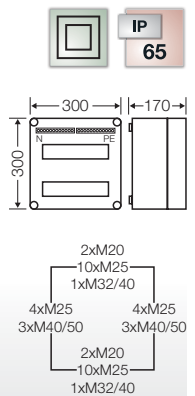
Mi 1112
12 modules: 1 x 12 x 18 mm

- 1-row
- with screw-type terminals for PE/N, for copper conductors
- per PE/N 10 x 16 mm², Cu
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1224
24 modules: 2 x 12 x 18 mm

- 2-row
- FIXCONNECT® plug-in terminal technology for PE and N
- per PE/N 3 x 25 mm², 12 x 4 mm², Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Please note:



Connection box for plug devices, push buttons or switches under accessories



Cover cutouts against direct contact with hazardous live parts



Editable labelling strips: www.hensel-electric.de

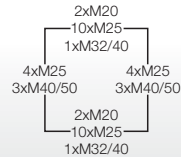
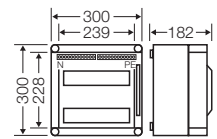
Mi Distribution Boards
Circuit breaker box with PE and N terminals



Mi 1220

24 modules: 2 x 12 x 18 mm

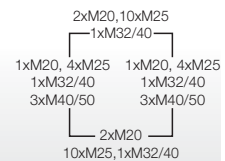
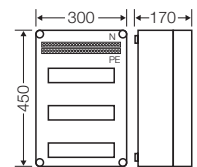
- 2-row
- with hinged lid
- FIXCONNECT® plug-in terminal technology for PE and N
- per PE/N 3 x 25 mm², 12 x 4 mm², Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1336

36 modules: 3 x 12 x 18 mm

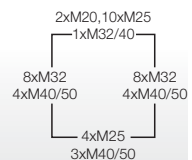
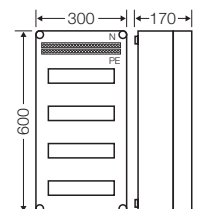
- 3-row
- FIXCONNECT® plug-in terminal technology for PE and N
- per PE/N 6 x 25 mm², 24 x 4 mm², Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1448

48 modules: 4 x 12 x 18 mm

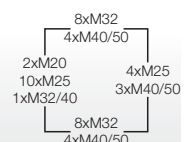
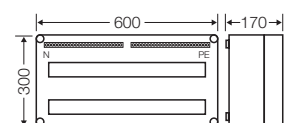
- 4-row
- FIXCONNECT® plug-in terminal technology for PE and N
- per PE/N 6 x 25 mm², 24 x 4 mm², Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1456

56 modules: 2 x 28 x 18 mm

- 2-row
- FIXCONNECT® plug-in terminal technology for PE and N
- per PE/N 6 x 25 mm², 24 x 4 mm², Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- DIN rail rack can be earthed



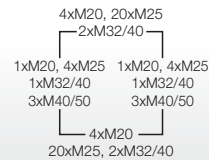
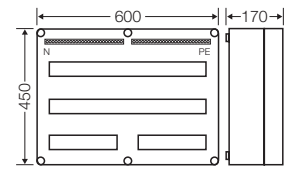
Mi Distribution Boards
Circuit breaker box with PE and N terminals



Mi 1684

80 modules: 2 x 28 x 18 mm and 2 x 12 x 18 mm

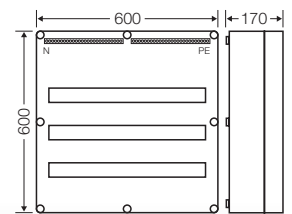
- 3-row
- FIXCONNECT® plug-in terminal technology for PE and N
- per PE/N 6 x 25 mm², 24 x 4 mm², Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- DIN rail rack can be earthed



Mi 1884

84 modules: 3 x 28 x 18 mm

- 3-row
- FIXCONNECT® plug-in terminal technology for PE and N
- per PE/N 6 x 25 mm², 24 x 4 mm², Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- DIN rail rack can be earthed
- cable entry only possible via flange



Please note:



Connection box for plug devices, push buttons or switches under accessories



Cover cutouts against direct contact with hazardous live parts



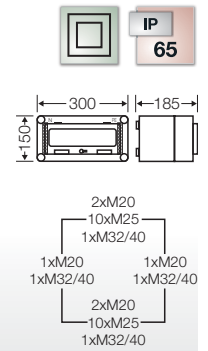
Editable labelling strips: www.hensel-electric.de



Mi 1111

12 modules: 1 x 12 x 18 mm

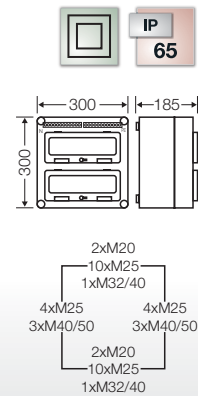
- 1-row
- with 1 hinged flap
- hinged flap lockable with accessories
- with screw-type terminals for PE/N, for copper conductors
- per PE/N 10 x 16 mm², Cu
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1222

24 modules: 2 x 12 x 18 mm

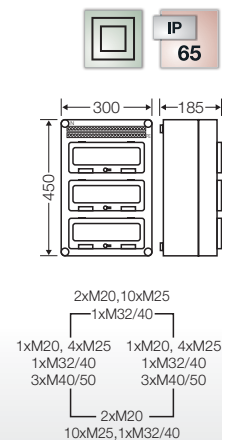
- 2-row
- with 2 hinged flaps
- hinged flap lockable with accessories
- FIXCONNECT® plug-in terminal technology for PE and N
- per PE/N 3 x 25 mm², 12 x 4 mm², Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1333

36 modules: 3 x 12 x 18 mm

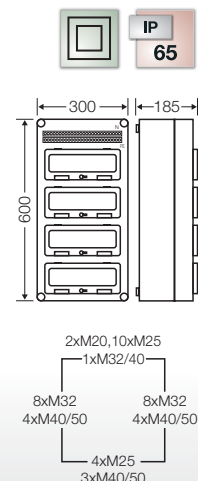
- 3-row
- with 3 hinged flaps
- hinged flap lockable with accessories
- FIXCONNECT® plug-in terminal technology for PE and N
- per PE/N 6 x 25 mm², 24 x 4 mm², Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1444

48 modules: 4 x 12 x 18 mm

- 4-row
- with 4 hinged flaps
- hinged flap lockable with accessories
- FIXCONNECT® plug-in terminal technology for PE and N
- per PE/N 6 x 25 mm², 24 x 4 mm², Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation

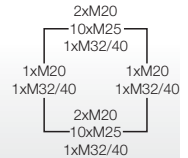
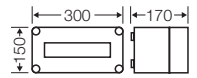




Mi 1115

12 modules: 1 x 12 x 18 mm
without PE and N terminal

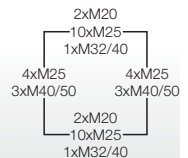
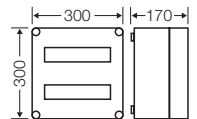
- 1-row
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1225

24 modules: 2 x 12 x 18 mm
without PE and N terminal

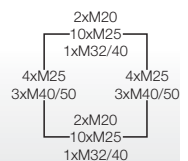
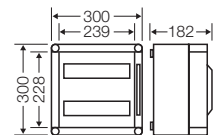
- 2-row
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1226

24 modules: 2 x 12 x 18 mm
without PE and N terminal
with hinged lid

- 2-row
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Please note:



Connection box for plug devices, push buttons or switches under accessories



Cover cutouts against direct contact with hazardous live parts

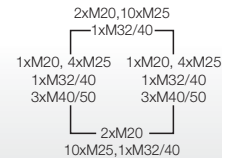
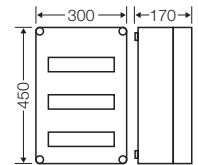


Editable labelling strips: www.hensel-electric.de



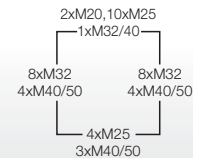
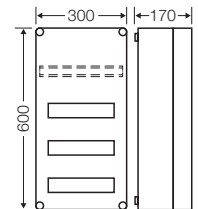
Mi 1335
36 modules: 3 x 12 x 18 mm
without PE and N terminal

- 3-row
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



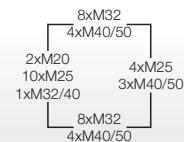
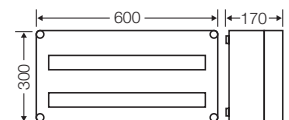
Mi 1440
36 modules: 3 x 12 x 18 mm
without PE and N terminal
with additional DIN rail

- 4-row
- with 1 DIN rail 216 mm wide (for installation depth of 72 mm)
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1455
56 modules: 2 x 28 x 18 mm
without PE and N terminal

- 2-row
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection



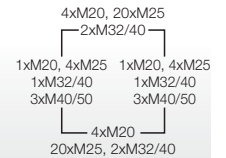
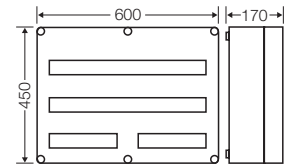
Mi Distribution Boards
Circuit breaker box without PE and N terminals



Mi 1683

80 modules: 2 x 28 x 18 mm and 2 x 12 x 18 mm without PE and N terminal

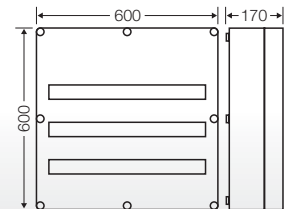
- 3-row
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection



Mi 1885

84 modules: 3 x 28 x 18 mm without PE and N terminal

- 3-row
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- cable entry only possible via flange



Please note:



Connection box for plug devices, push buttons or switches under accessories



Cover cutouts against direct contact with hazardous live parts



Editable labelling strips: www.hensel-electric.de

Mi Distribution Boards

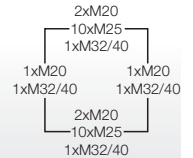
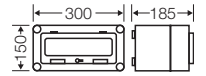
Circuit breaker boxes without PE and N terminals with hinged flaps



Mi 1117

12 modules: 1 x 12 x 18 mm without PE and N terminal

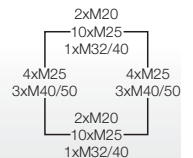
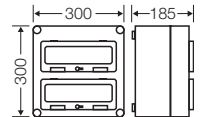
- 1-row
- with 1 hinged flap
- hinged flap lockable with accessories
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1227

24 modules: 2 x 12 x 18 mm without PE and N terminal

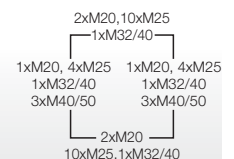
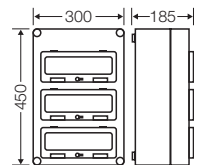
- 2-row
- with 2 hinged flaps
- hinged flap lockable with accessories
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1337

36 modules: 3 x 12 x 18 mm without PE and N terminal

- 3-row
- with 3 hinged flaps
- hinged flap lockable with accessories
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi Distribution Boards

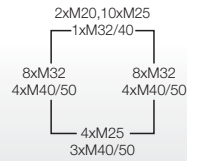
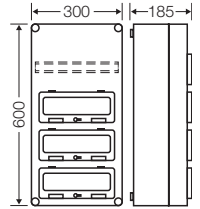
Circuit breaker boxes without PE and N terminals with hinged flaps



Mi 1443

36 modules: 3 x 12 x 18 mm without PE and N terminal with additional DIN rail

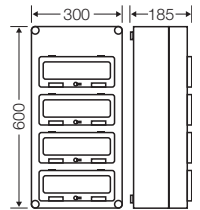
- 4-row
- with 3 hinged flaps
- hinged flap lockable with accessories
- with 1 DIN rail 216 mm wide (for installation depth of 72 mm)
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1445

48 modules: 4 x 12 x 18 mm without PE and N terminal

- 4-row
- with 4 hinged flaps
- hinged flap lockable with accessories
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Please note:



Connection box for plug devices, push buttons or switches under accessories



Cover cutouts against direct contact with hazardous live parts



Editable labeling strips: www.hensel-electric.de

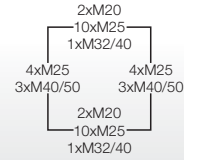
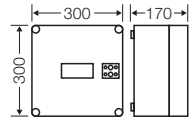
Mi Distribution Boards
Circuit breaker boxes for miniature circuit-breakers (MCB)



Mi 1281

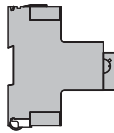
6 modules: 1 x 6 x 18 mm
for miniature circuit breakers (MCB)

- 1-row
- with 1-pole main branch terminal for copper conductors
- PEN 2 x 25 mm², 2 x 16 mm², Cu, round conductors
- protection cover can be sealed, with lockable cover strip
- lid fasteners for hand operation

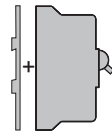


Note:

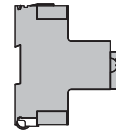
Prepared for the installation of currently commercially available miniature circuit-breakers (MDB)



for example
 ABN Type XHA 3...-4
 Hager Type HTN..E
 etc.
 SHA
 (voltage dependent)



for example
 ABB Type S 701/S 703
 + adapter for DIN rail
 S 700 BT3
 (1 pc. for S 701, 2 pc. for S 703)
 SHU (voltage dependent)



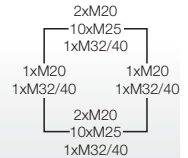
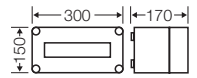
for example
 ABB Type S 80-...
 SHU (voltage dependent)

Mi Distribution Boards
Circuit breaker box
with removable DIN rail rack for earth connection



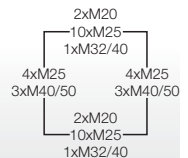
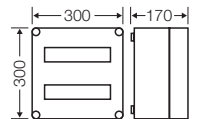
Mi 1118
12 modules: 1 x 12 x 18 mm
without PE and N terminal

- 1-row
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- DIN rail rack can be earthed



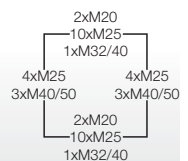
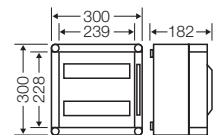
Mi 1228
24 modules: 2 x 12 x 18 mm
without PE and N terminal

- 2-row
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- DIN rail rack can be earthed



Mi 1221
24 modules: 2 x 12 x 18 mm
without PE and N terminal
with hinged lid

- 2-row
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- DIN rail rack can be earthed



Please note:



Connection box for plug devices, push buttons or switches under accessories



Cover cutouts against direct contact with hazardous live parts



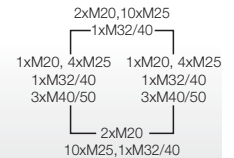
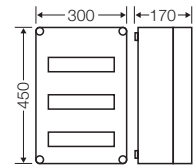
Editable labelling strips: www.hensel-electric.de

Mi Distribution Boards
Circuit breaker box
with removable DIN rail rack for earth connection



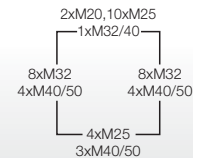
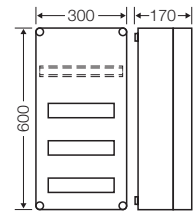
Mi 1338
36 modules: 3 x 12 x 18 mm
without PE and N terminal

- 3-row
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- order PE/N terminals separately
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- DIN rail rack can be earthed



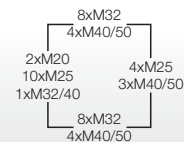
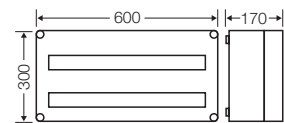
Mi 1446
36 modules: 3 x 12 x 18 mm
without PE and N terminal
with additional DIN rail

- 4-row
- with 1 DIN rail 216 mm wide (for installation depth of 72 mm)
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- DIN rail rack can be earthed



Mi 1455
56 modules: 2 x 28 x 18 mm
without PE and N terminal

- 2-row
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection



Removable DIN rail rack for earth connection



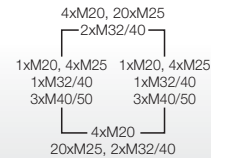
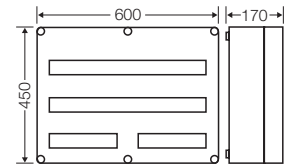
Mi Distribution Boards
Circuit breaker box
with removable DIN rail rack for earth connection



Mi 1683

80 modules: 2 x 28 x 18 mm and 2 x 12 x 18 mm
without PE and N terminal

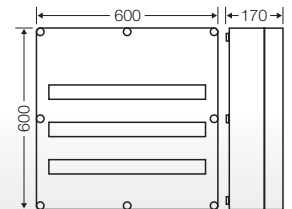
- 3-row
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection



Mi 1885

84 modules: 3 x 28 x 18 mm
without PE and N terminal

- 3-row
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- cable entry only possible via flange



Please note:



Connection box for plug devices, push buttons or switches under accessories



Cover cutouts against direct contact with hazardous live parts



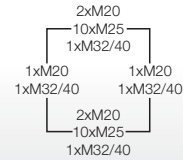
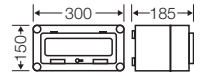
Editable labelling strips:
www.hensel-electric.de

Mi Distribution Boards
Circuit breaker box
with removable DIN rail rack for earth connection



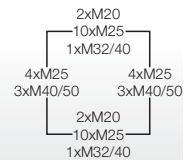
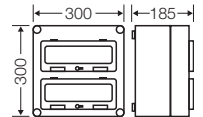
Mi 1119
12 modules: 1 x 12 x 18 mm
without PE and N terminal

- 1-row
- with 1 hinged flap
- hinged flap lockable with accessories
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- DIN rail rack can be earthed



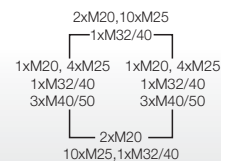
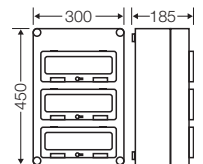
Mi 1229
24 modules: 2 x 12 x 18 mm

- 2-row
- with 2 hinged flaps
- hinged flap lockable with accessories
- for installation of DIN rail equipment in accordance with DIN 43880
- without PE and N terminal
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- DIN rail rack can be earthed



Mi 1339
36 modules: 3 x 12 x 18 mm
without PE and N terminal

- 3-row
- with 3 hinged flaps
- hinged flap lockable with accessories
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- DIN rail rack can be earthed



Removable DIN rail rack for earth connection



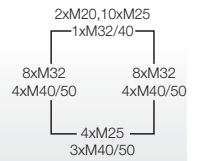
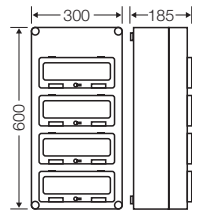
Mi Distribution Boards
Circuit breaker box
with removable DIN rail rack for earth connection



Mi 1449

48 modules: 4 x 12 x 18 mm
without PE and N terminal

- 4-row
- with 4 hinged flaps
- hinged flap lockable with accessories
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- DIN rail rack can be earthed



Please note:



Connection box for plug devices, push buttons or switches under accessories



Cover cutouts against direct contact with hazardous live parts



Editable labelling strips:
www.hensel-electric.de



Mi Distribution Boards

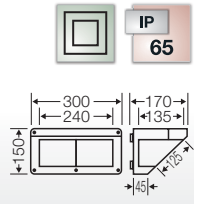
Accessories

| | |
|---|-----------|
| Connection Box | 339 |
| Extension frames, DIN rails, spacers | 340 - 341 |
| Mounting plates, fixing screws | 342 - 343 |
| Covers, blanking strips | 344 - 345 |
| Terminals | 346 - 349 |
| Wall gasket, wall separator, fixing spares | 350 |
| Flanges, metal inserts for flanges, ventilation flanges | 351 - 353 |
| Pressure compensation element, canopy | 354 - 355 |
| Conversion kits for lid fasteners | 356 |
| Hinges for lids | 357 |
| Hinged flap, protection covers for hinged flaps | 358 |
| Components for wall mounting | 359 - 360 |



Mi CB 10
Connection Box

- for the installation of devices that must be operated externally, such as plug devices, push buttons and switches
- for mounting to box walls 300 mm
- hinged mounting area
- with wall gasket



Application:

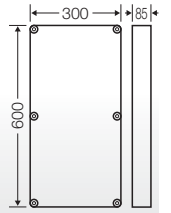


Connection box for plug devices, push buttons or switches under accessories



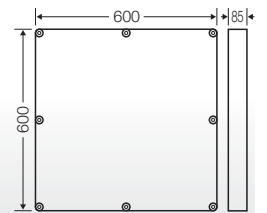
Mi ZR 4
**Extension frame
for enclosure size 4**

- for extension of the installation depth by 85 mm
- degree of protection IP 65 is maintained with use of up to two extension frames
- inclusive fixing material



Mi ZR 8
**Extension frame
for enclosure size 8**

- for extension of the installation depth by 85 mm
- degree of protection IP 65 is maintained with use of up to two extension frames
- inclusive fixing material



Application:



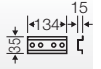
Increased enclosure depths
of 85 mm using extension
frames



Mi TS 15

DIN rail
length 134 mm

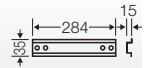
- in accordance with DIN EN 60715
- for Mi-Empty boxes sizes 1, 6
- for equipment or terminals with clip-on mounting
- with fixing screws



Mi TS 30

DIN rail
length 284 mm

- in accordance with DIN EN 60715
- for Mi-Empty boxes sizes 1, 2, 3, 4, 6, 8
- for equipment or terminals with clip-on mounting
- with fixing screws



Mi TS 45

DIN rail
length 434 mm

- in accordance with DIN EN 60715
- for Mi-Empty boxes sizes 3, 6
- for equipment or terminals with clip-on mounting
- with fixing screws



Mi TS 60

DIN rail
length 584 mm

- in accordance with DIN EN 60715
- for Mi-Empty boxes sizes 4, 6, 8
- for equipment or terminals with clip-on mounting
- with fixing screws



Mi DS 25

Spacer
height: 25 mm

- for spacing DIN-rails Mi TS ..
- 2 pieces
- with fixing screws for base of box and DIN rail



Mi DS 50

Spacer
height: 50 mm

- for spacing DIN-rails Mi TS ..
- 2 pieces
- with fixing screws for base of box and DIN rail

Application:



DIN rails for equipment or terminals with clip-on mounting



Mi MP 1

mounting plate
W 259 x H 115 mm

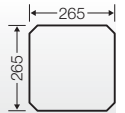
- material thickness 4 mm
- for Mi-Empty boxes sizes 1, 2, 3, 4, 6
- with fixing screws



Mi MP 2

mounting plate
W 265 x H 265 mm

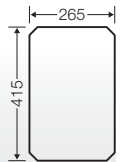
- material thickness 4 mm
- for Mi-Empty boxes sizes 2, 3, 4, 6, 8
- with fixing screws



Mi MP 3

mounting plate
W 265 x H 415 mm

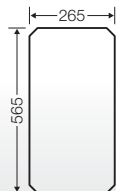
- material thickness 4 mm
- for Mi-Empty boxes sizes 3, 4, 6
- with fixing screws



Mi MP 4

mounting plate
W 265 x H 565 mm

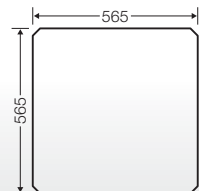
- material thickness 4 mm
- for Mi-Empty boxes sizes 4, 6, 8
- with fixing screws



Mi MP 8

mounting plate
W 565 x H 565 mm

- material thickness 4 mm
- for Mi Empty box size 8
- with fixing screws



Application:



Mounting plates for the installation of electrical devices



Mounting plates of various sizes in one enclosure

**Mi BZ 11****fixing screw**
length 11 mm

- for assembling DIN rails or mounting plates at the base of the box
- for material thicknesses of 1 to 2.5 mm
- self-tapping
- galvanised

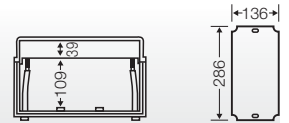
**Mi BZ 13****fixing screw**
length 13 mm

- for assembling DIN rails or mounting plates at the base of the box
- for material thicknesses of 2.5 to 4 mm
- self-tapping
- galvanised



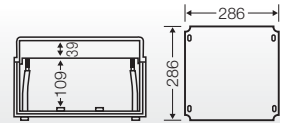
Mi EP 01
Cover
for Mi Empty box size 1

- for retrofitting
- cover without cut-outs made of plastics, as protection cover or for the installation of devices
- with fastening material



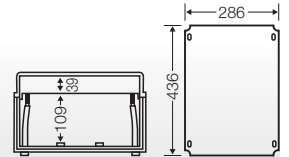
Mi EP 02
Cover
for Mi Empty box size 2

- for retrofitting
- cover without cut-outs made of plastics, as protection cover or for the installation of devices
- with fastening material



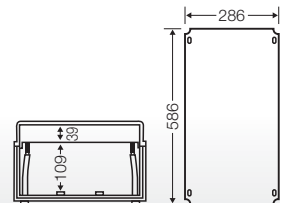
Mi EP 03
Cover
for Mi-Empty boxes sizes 3, 6

- for retrofitting
- 2 covers are required for Mi empty enclosure size 6
- cover without cut-outs made of plastics, as protection cover or for the installation of devices
- with fastening material



Mi EP 04
Cover
for Mi Empty box size 4

- for retrofitting
- cover without cut-outs made of plastics, as protection cover or for the installation of devices
- with fastening material



Application:



Covers for protection of installation device, see accessories



2 covers are required for Mi empty enclosure size 6


AS 12
Blanking strip
12 modules

- 12 x 18 mm, divisible every 9 mm
- for the covering of spare equipment openings, for material thickness up to 3 mm


AS 18
Blanking strip
18 modules

- 18 X 18 mm, divisible every 9 mm
- for the covering of spare equipment openings, for material thickness up to 3 mm


DAE 12
Spacer

- for improvement in the heat dissipation of DIN rail mounted devices
- consisting of 12 items

Application:



Cover cutouts against direct contact with hazardous live parts

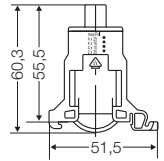


KKL 25

Connecting terminal

Rated connecting capacity: 6-35 mm², Cu

- as a connecting terminal
- for installation on DIN rails in accordance with IEC 60715, top hat profile 35 mm
- current carrying capacity: 102 A
- 1-pole 6 x 6 mm² sol, 6 x 10 mm² sol/ f*, 4 x 16 mm² s/ f*, 4 x 25 mm² s/ f*, 2 x 35 mm² s/ f* each
f* = with gas-tight end ferrule
- with two connected clamping units



| | |
|--------------------------------|----------------------------------|
| rated insulation voltage | U _i = 690 V a.c./d.c. |
| dismantling length | 16 mm |
| tightening torque for terminal | 3.0 Nm |



FC L 10

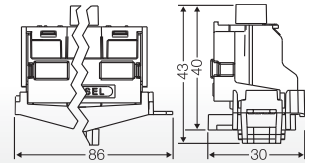
Terminal

2 x 25 mm², 8 x 4 mm², Cu

- for installation on DIN rails in accordance with IEC 60715, top hat profile 35 mm
- FIXCONNECT® plug-in technology, for terminal technology refer to index technical data
- current carrying capacity: 101 A

rated insulation voltage

U_i = 690 V a.c.



FC N 10

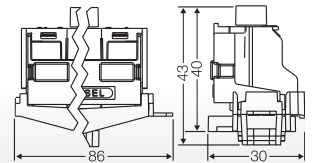
N terminal

2 x 25 mm², 8 x 4 mm², Cu

- for installation on DIN rails in accordance with IEC 60715, top hat profile 35 mm
- FIXCONNECT® plug-in technology, for terminal technology refer to index technical data
- current carrying capacity: 101 A

rated insulation voltage

U_i = 690 V a.c.



FC PE 10

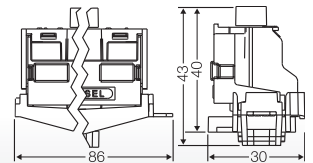
PE terminal

2 x 25 mm², 8 x 4 mm², Cu

- for installation on DIN rails in accordance with IEC 60715, top hat profile 35 mm
- for boxes with 1 x 12 modules (through terminal reduction to 9 modules)
- FIXCONNECT® plug-in technology, for terminal technology refer to index technical data

rated insulation voltage

U_i = 690 V a.c.



FC PN 10

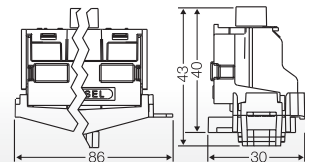
PE and N terminal

per PE/N 1 x 25 mm², 4 x 4 mm² Cu

- for installation on DIN rails in accordance with IEC 60715, top hat profile 35 mm
- FIXCONNECT® plug-in technology, for terminal technology refer to index technical data
- current carrying capacity: 101 A

rated insulation voltage

U_i = 690 V a.c.



FC BS 5

**FIXCONNECT labelling system
set with 5 pieces**

- labelling system for FIXCONNECT® plug-in terminals, not for terminals 2x25 / 4x4 mm²
- for attaching of labelling strips or marking with felt tip pen

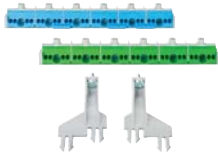


FC PN 30

PE and N terminal
per PE/N 3 x 25 mm², 12 x 4 mm², Cu

- 1-row
- FIXCONNECT® plug-in technology, for terminal technology refer to index technical data
- N separable, for up to 2 different potentials
- with fastening material
- current carrying capacity: 75 A

| | |
|--------------------------|-----------------|
| rated insulation voltage | Ui = 690 V a.c. |
|--------------------------|-----------------|



FC PN 60

PE and N terminal
per PE/N 6 x 25 mm², 24 x 4 mm², Cu

- 2-row
- FIXCONNECT® plug-in technology, for terminal technology refer to index technical data
- N separable, up to 4 different potentials
- with fastening material
- current carrying capacity: 75 A
- Not applicable in boxes Mi 1456, Mi 1455, Mi 1884 and Mi 1885

| | |
|--------------------------|-----------------|
| rated insulation voltage | Ui = 690 V a.c. |
|--------------------------|-----------------|



FC N 30

N terminal
per N 6 x 25 mm², 24 x 4 mm², Cu

- 1-row
- FIXCONNECT® plug-in technology, for terminal technology refer to index technical data
- N separable, up to 4 different potentials
- with fastening material
- current carrying capacity: 75 A

| | |
|--------------------------|-----------------|
| rated insulation voltage | Ui = 690 V a.c. |
|--------------------------|-----------------|



FC PE 30

PE terminal
per PE 6 x 25 mm², 24 x 4 mm², Cu

- 1-row
- FIXCONNECT® plug-in technology, for terminal technology refer to index technical data
- with fastening material

| | |
|--------------------------|-----------------|
| rated insulation voltage | Ui = 690 V a.c. |
|--------------------------|-----------------|



KKL 34

Main line branch terminal

Rated connecting capacity: 1.5-25 mm², Cu

- as a connecting terminal
- for installation on DIN rails in accordance with IEC 60715, top hat profile 35 mm
- connections per terminal L1-L3: 4x
- connection: 1.5-16 mm² f* or 2.5-25mm², Cu, round conductor
f* = with gas-tight end ferrule
- current carrying capacity: 80 A
- width: 61 mm



| | |
|--------------------------------|--------|
| dismantling length | 19 mm |
| tightening torque for terminal | 2,5 Nm |



KKL 48

Main line branch terminal

Rated connecting capacity: 1.5-25 mm², Cu

- as a connecting terminal
- for installation on DIN rails in accordance with IEC 60715, top hat profile 35 mm
- connections per terminal L1-L3, 4x
connections per terminal N: 8x
- connection: 1.5-16 mm² f* or 2.5-25mm², Cu, round conductor
f* = with gas-tight end ferrule
- current carrying capacity: 80 A
- width: 100 mm



| | |
|--------------------------------|--------|
| dismantling length | 19 mm |
| tightening torque for terminal | 2,5 Nm |

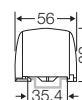


KKL 54

Main line branch terminal

Rated connecting capacity: 1.5-25 mm², Cu

- as a connecting terminal
- for installation on DIN rails in accordance with IEC 60715, top hat profile 35 mm
- connections per terminal L1-L3: 4x
connections per terminal N: 4x
connections per terminal PE: 4x
- connection: 1.5-16 mm² f* or 2.5-25mm², Cu, round conductor
f* = with gas-tight end ferrule
- current carrying capacity: 80 A
- width: 100 mm

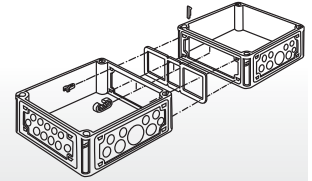


| | |
|--------------------------------|--------|
| dismantling length | 19 mm |
| tightening torque for terminal | 2,5 Nm |



Mi WD 2
Wall gasket
for box walls 150/300 mm

- for the assembly of Mi boxes
- consisting of 1 seal, 4 wedge links, 1 bracket



Mi WT 1
Wall separator

- for subdivision of 300 mm box walls into 2 x 150 mm in case of flange or box assembly



Mi BE
Fixing spares
4 connectors

- for the assembly of Mi boxes
- when converting existing installations

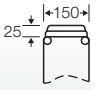


Mi FP 15

**Flange
without knockouts**

- box wall 150 mm
- with fixing wedges and seal

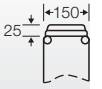
| | |
|-----------------|-------|
| mounting width | 65 mm |
| mounting height | 88 mm |



Mi FM 15

**Flange
knockouts 3 x M 20, 1 x M 32/40/50**

- box wall 150 mm
- with fixing wedges and seal

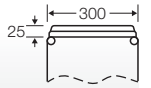


Mi FP 20

**Flange
without knockouts**

- box wall 300 mm
- with fixing wedges and seal

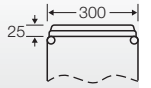
| | |
|-----------------|--------|
| mounting width | 215 mm |
| mounting height | 88 mm |



Mi FM 20

**Flange
knockouts 15 x M 16, 15 x M 20**

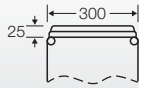
- box wall 300 mm
- with fixing wedges and seal



Mi FM 25

**Flange
knockouts: 19 x M 16/25**

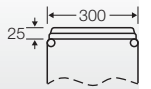
- box wall 300 mm
- with fixing wedges and seal



Mi FM 32

**Flange
knockouts: 8 x M 25/32, 1 x M 25/32/40**

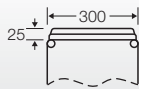
- box wall 300 mm
- with fixing wedges and seal



Mi FM 40

**Flange
knockouts: 2 x M 25/32, 5 x M 32/40**

- box wall 300 mm
- with fixing wedges and seal

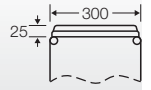




Mi FM 50

Flange
knockouts: 2 x M 20, 4 x M 32/40/50

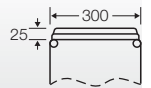
- box wall 300 mm
- with fixing wedges and seal



Mi FM 60

Flange
knockouts: 3 x M 40/50/63

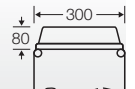
- box wall 300 mm
- with fixing wedges and seal



Mi FM 63

Flange with cable arrangement space
knockouts: 3 x M 40/50/63

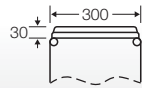
- box wall 300 mm
- with fixing wedges and seal



Mi FP 38

Flange
sealing range Ø 7-29 mm

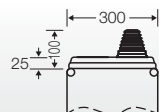
- cable entry via integrated elastic membranes
- sealing range: 29 x Ø 7-12 mm, 4 x Ø 7-14 mm, 4 x Ø 11-20 mm, 1 x Ø 16-29 mm
- box wall 300 mm
- with fixing wedges and seal



Mi FP 70

Flange
sealing range: 1 x Ø 30-72 mm

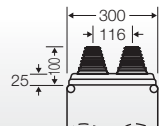
- box wall 300 mm
- with fixing wedges and seal



Mi FP 72

Flange
sealing range: 2 x each Ø 30-72 mm

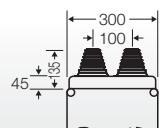
- box wall 300 mm
- with fixing wedges and seal



Mi FP 82

Cable insert
sealing range: 2 x each Ø 30-72 mm

- box wall 300 mm
- divisible for cable insertion from the front
- degree of protection IP 54 only with additional strain and pressure relief (e.g. Mi ZE 62)





KST 82

Stepped grommet
sealing range: Ø 30-72 mm

- for retrofitting of cable insertion Mi FP 82
- for indoor - normal environment and (or) protected outdoor installation
- ambient temperature - 25 °C to + 35 °C



Mi FP 30

Metal insert for flanges

- for earthing of metal armoured cables
- box wall 300 mm
- without knockouts

| | |
|-----------------|--------|
| mounting width | 215 mm |
| mounting height | 88 mm |



Mi ZE 62

Cable strain relief
for 2 cables with max. 60 mm external diameter

- with fixing rail 284 mm long
- to be used only in connection with cable insertion Mi FP 82



Mi GS 30

Box fin
for inserting cables across 2 boxes

- for box walls 300 mm
- removable
- can be retrofitted



Mi BF 44

Ventilation flange
for vertical installation on box walls

- box wall 300 mm
- for ventilation of Mi-Distribution boards in the event of extremely high internal temperatures or a risk of water condensation



BE 44

Ventilation insert



Application:



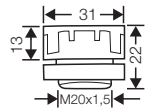
Ventilation via ventilation flange or ventilation insert



BM 20G

Pressure compensation element for M 20 knockouts

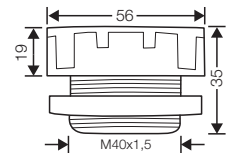
- for the reduction of condensation by pressure compensation in power distribution systems
- ISO thread M 20 x 1.5
- bore-hole: Ø 20.3 mm
- wall thickness up to 4 mm
- with counter nut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- In order not to exceed leakage limit of 0.07 bar with pressure compensation, one pressure compensation element BM 20G must be used per 28 litres (28000 cm³) of enclosure volume.
- Example: enclosure size 30 cm x 60 cm x 17 cm = 30600 cm³ = 30,6 litres. Number of necessary BM 20G (M32) = 2 piece.
- technical changes reserved
- Colour: grey, RAL 7035



BM 40G

Pressure compensation element for M 40 knockouts

- for the reduction of condensation by pressure compensation in power distribution systems
- ISO thread M 40 x 1.5
- bore-hole: Ø 40.3 mm
- wall thickness of up to 8 mm
- with counter nut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- In order not to exceed leakage limit of 0.07 bar with pressure compensation, one pressure compensation element BM 40G must be used per 122 litres (122000 cm³) of enclosure volume.
- Example: enclosure size 60 cm x 60 cm x 17 cm = 61200 cm³ = 61,2 litres. Number of necessary BM 40G (M40) = 1 piece.
- technical changes reserved
- Colour: grey, RAL 7035



Pressure compensation element



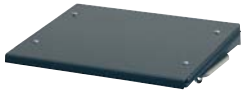


Mi DB 15
Canopy
for box wall 150 mm

- with fixing wedges and seal
- suitable for outdoor installation, UV resistant



| | |
|----------|-------------------------------|
| material | stainless steel powder-coated |
|----------|-------------------------------|

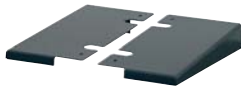


Mi DB 30
Canopy
for 300 mm box walls

- with fixing wedges and seal
- suitable for outdoor installation, UV resistant

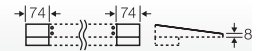


| | |
|----------|-------------------------------|
| material | stainless steel powder-coated |
|----------|-------------------------------|



Mi DB 01
Canopy end plate

- for canopies FP DB xx and Mi DB xx



| | |
|----------|-------------------------------|
| material | stainless steel powder-coated |
|----------|-------------------------------|

Application:



Canopy



Mi PL 2
Sealing cap

- 2 sealing caps for converting the lid fasteners



Mi SR 4
Conversion set for manual operation on tool operation

- 4 fastening covers



Mi SN 4
Conversion set for converting lid fasteners from tool to manual operation

- 4 manual actuators



Mi DV 01
Locking device insertion

- only in connection with Mi PL 2, Mi SR 4 or Mi SN 4



Mi ZS 11
Lid lock with locking device I for Mi boxes sizes 1 to 6

- Is being used instead of fasteners for hand or tool operation in order to prevent unauthorised opening of the lids
- consisting of: cylinder lock, keys, locking device insertion, dust cover



Mi ZS 12
Lid lock with locking device II for Mi boxes sizes 1 to 6

- Is being used instead of fasteners for hand or tool operation in order to prevent unauthorised opening of the lids
- consisting of: cylinder lock, keys, locking device insertion, dust cover



Mi DR 04
Lid fastener for tool operation triangle 8 mm

- is used instead of fasteners for hand- or tool operation, in order to make unauthorized opening of lids more difficult
- 4 locking devices with triangle 8 mm and key



DS 1
Triangular key 8 mm

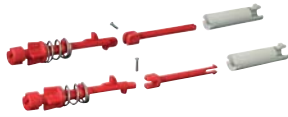




Mi SV 2

Conversion set for padlock (clip Ø max. 10 mm)

- 2 fastening covers
- can be used instead of fasteners for hand or tool operation in order to prevent unauthorised opening of the lids



Mi ZS 20

Mi hinge for lids for Mi boxes sizes 1, 2, 3, 4

- For operating installation device within a large area. The lid keeps permanently connected to the box.
- When assembling several boxes, the insertion can only be carried out for the external boxes.



Mi ZS 40

Mi hinge for lids for Mi boxes sizes 1 to 8

- For operating installation device within a large area. The lid keeps permanently connected to the box.
- Wall connectors or flanges are necessary for assembly
- Not applicable in boxes with covers



Mi ZS 60

Mi hinge for lids for Mi boxes sizes 4 and 8 with extension frame

- For operating installation device within a large area. The lid keeps permanently connected to the box.
- Wall connectors or flanges are necessary for assembly
- Not applicable in boxes with covers

Application:



Mi hinges for lids for operating within a large area



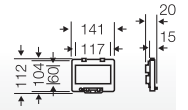
Mi hinges for lids for operating within a large area



Mi KL 6

Hinged flap
opening dimensions 117 x 60 mm

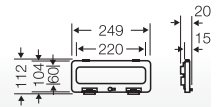
- with drill and saw template
- modules 1 x 6 x 18 mm
- sealable
- lockable with hinged flap lock
- inclusive fixing material
- wall thickness 1.5-4.5 mm



Mi KL 12

Hinged flap
opening dimensions 220 x 60 mm

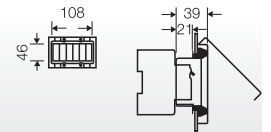
- with drill and saw template
- modules 1 x 12 x 18 mm
- sealable
- lockable with hinged flap lock
- inclusive fixing material
- wall thickness 1.5-4 mm



Mi BS 6
Protection cover
for Mi KL 6

- with fixing screws

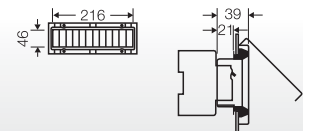
| | |
|---------|--------------------|
| modules | 6 1 x 6 x 18 mm |
|---------|--------------------|



Mi BS 12
Protection cover
for Mi KL 12

- with fixing screws

| | |
|---------|----------------------|
| modules | 12 1 x 12 x 18 mm |
|---------|----------------------|



Mi SK 01

Hinged flap lock

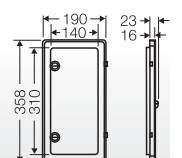
- for retrofitting in hinged flaps of 6 or 12 modules width
- for protecting the switchgear located behind the hinged flap against unauthorised access (only effective in connection with lid lock Mi ZS ..)
- consisting of:
- 1 lock (Mi KL), 2 keys, 1 grooved pin



NZ KL 54

KWH meter window flap
standard opening dimensions 140 x 310 mm

- in accordance with DIN 43 870
- for tool or manual operation
- can be locked with padlock (clip diameter max. 6 mm)
- complete with screws
- sealable





Mi SA 2

Dust protection cover

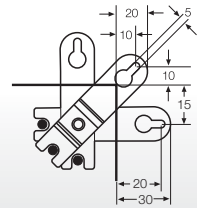
- for box sizes 1 to 4
- for 2 lid fittings



Mi AL 40

4 stainless steel external brackets

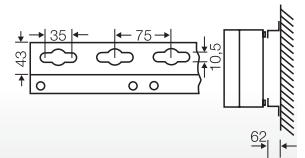
- for external fixing of enclosures



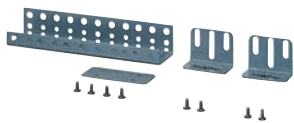
Mi MS 2

Profile for wall mounting

- for Mi distribution board assemblies up to 900 x 1200 mm
- with 8 screws M6 x 16, washers and nuts for mounting enclosures



| | |
|----------|---|
| length | 1950 mm |
| material | sendzimir galvanised steel profile with structured powder coating |



MX 0101

Mounting profile set

U-profile for constructing a mounting frame

- consisting of:
 - 1 x mounting rail, 2 x fixing brackets,
 - 1 x flat connector with connecting screws

| | |
|----------|---|
| length | 1950 mm |
| material | sheet steel, galvanised and powder-coated |

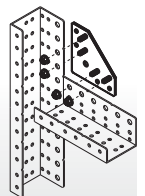


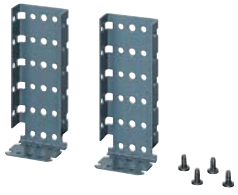
MX 0112

frame connector set

for constructing a mounting frame

- fixing elements for T or L connections
- consisting of: 2 couplers with screws and nuts





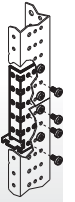
MX 0105

**Coupler set
for constructing a mounting frame**

- 2 x couplers with connecting screws

material

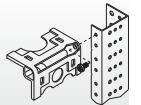
sheet steel, galvanised and
powder-coated



MX 0111

Screw for box fixing

- set with 12 pieces
- M 6 x 16
- self-tapping for fixing the Mi box onto mounting profile MX 0101



Varnishing pen RAL 7016

12 ml



Mi Distribution Boards

Technical details

| | |
|---------------------------------------|-----------|
| Operating and ambient conditions | 362 |
| Standards and regulations | 363 |
| Dimensions in mm | 364 |
| Terminals | 365 |
| Power dissipation of empty enclosures | 366 - 367 |
| Box assembly | 368 - 370 |
| Device installation, wall mounting | 371 - 373 |

| | Empty enclosures Mi 0... Mi 9... | Circuit breaker boxes Mi 1... |
|--|--|--|
| Application area | Suitable for indoor installation and outdoor installation, protected against weather influences However, pay attention to the climatic effects on the installed equipment, for example, high or low ambient temperatures or formation of condensed water see technical information | |
| | Resistance to occasional cleaning procedures (direct jet) with high-pressure cleaner without cleaning additives, water pressure: max 100 bar, water temperature: Max. 80 °C, distance => 0.15 m, in accordance with IP 69K requirements, single enclosure without lid equipment (no enclosure assembly), enclosure and cable glands at least IP 65. | |
| Ambient temperature | <ul style="list-style-type: none"> - Average value over 24 hours: - - Maximum value: + 70 °C - Minimum value: - 25 °C | |
| | + 35 °C The ambient temperature is reduced + 40 °C at distribution boards by the installed - 5 °C equipment technology! | |
| Relative humidity | - 50% at 40 °C | |
| - short-time | - 100% at 25 °C | |
| Fire protection in the event of internal faults | Demands placed on electrical devices from standards and laws: Minimum requirements - Glow wire test in accordance with IEC 60 695-2-11: - 650 °C for boxes and cable glands - 850 °C for conducting components | |
| Burning behaviour | | |
| - Glow wire test IEC 60 695-2-11 | 960 °C | 960 °C |
| - UL Subject 94 | V-2 flame-retardant self-extinguishing | V-2 flame-retardant self-extinguishing |
| Degree of protection against mechanical load | IK 08 (5 Joule) | IK 08 (5 Joule) |
| Toxic behaviour | halogenfree ¹⁾ silicone-free | halogenfree ¹⁾ silicone-free |

¹⁾ "Halogen-free" in accordance with IEC 60754-2"
Common test methods for cables - Determination of the amount of halogen acid gas".

For material properties see technical data.

**Mi Distribution Boards
comply with the require-
ments of the IEC 61439-2**

Distribution boards assembled and wired according to manufacturer data without essential deviations from the original type or system.

To meet these requirements for Hensel Mi Distribution Boards, the following must be noted:

1. The distribution boards must consist of the verified enclosures documented in this list.
2. The wiring of the equipment must be carried out with the cross-sections and conductor types indicated in Table "Rating of insulated conductors in switchgear assemblies", Index Techniques.
3. Once the distribution board is completed, a routine test must be carried out in accordance with this standard.
4. The test must be certified with a test report.
5. The assembly must be provided with a manufacturer's identification mark.
Compliance with important data such as
 - limit of temperature rise
 - dielectric strength
 - IP degrees of protection
 - creepage distances and clearances
 is verified for this system.


Standards and regulations

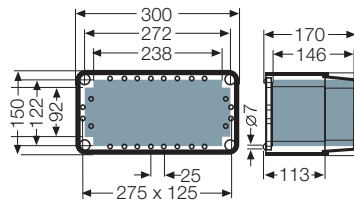
- IEC 61439-2
Low-voltage switchgear and controlgear assemblies –
Part 2: Power switchgear and controlgear assemblies
- IEC 60999, connecting devices
Safety requirements for screw-type and screwless-type clamping units
for electrical copper conductors
- DIN EN 50262
Metric threaded cable glands for electrical installations
- DIN 43880
Built-in equipment for electrical installations; overall dimensions
and related mounting dimensions
- IEC 60529
Degrees of protection provided by enclosures (IP-Code)

Technical details
Dimensions in mm

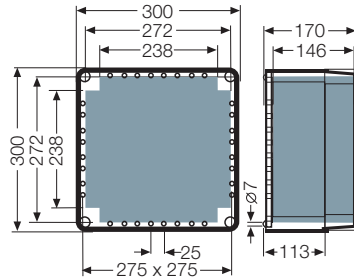
Dimensions of the interior installation depth with installed mounting plates.

The width of Mi Empty boxes Mi 9... enlarges about 15 mm because of the laterally mounted lid hinges, refer to product pages.

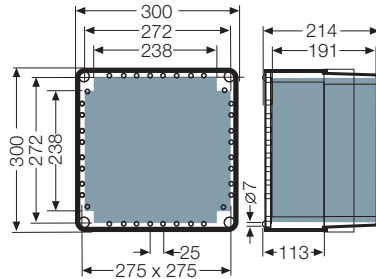
 = usable installation space with mounted cable glands



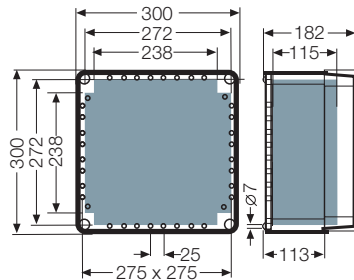
Mi 0100
Mi 0101
Mi 9100
Mi 9101



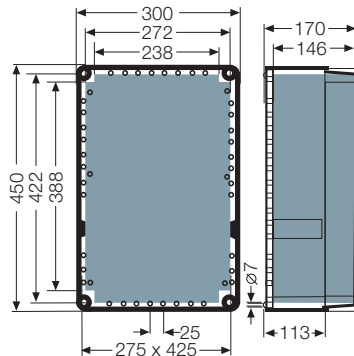
Mi 0200
Mi 0201
Mi 9200
Mi 9201



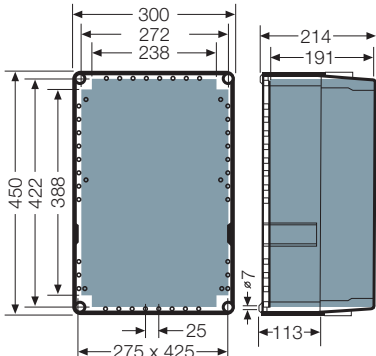
Mi 0210
Mi 0211
Mi 9210
Mi 9211



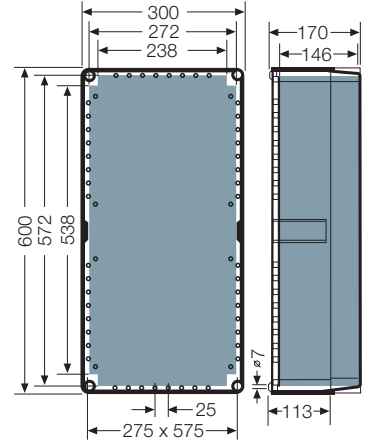
Mi 0220
Mi 0221



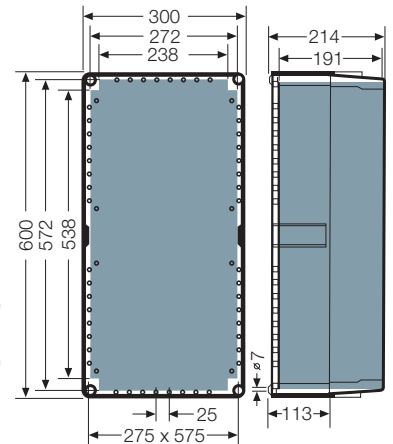
Mi 0300
Mi 0301
Mi 9310
Mi 9311



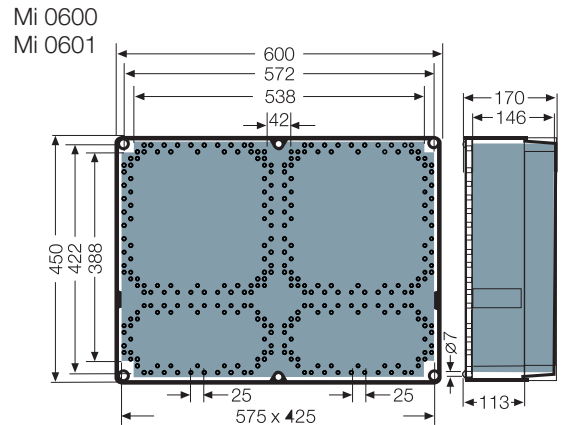
Mi 0310
Mi 0311
Mi 9310
Mi 9311



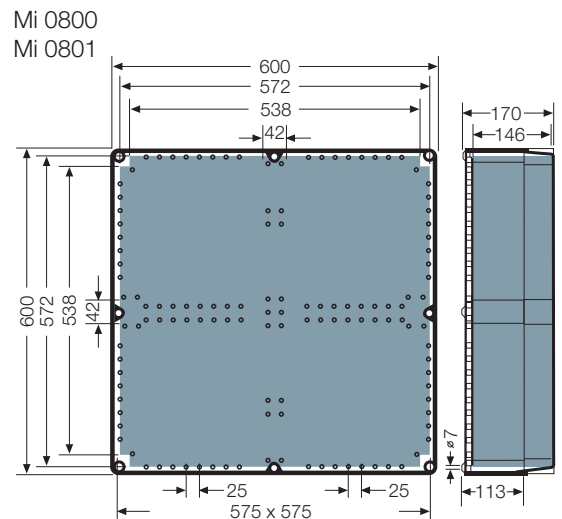
Mi 0400
Mi 0401
Mi 9400
Mi 9401



Mi 0410
Mi 0411
Mi 9410
Mi 9411



Mi 0600
Mi 0601

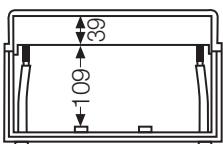


Mi 0800
Mi 0801

Installation of equipment in protection plates:

Pre-drill the sections at the corners, then saw away the section from the protection plate by using a piercing saw at middle to low cutting speed.

Use coarse toothed saw blades for plastics (e.g. Bosch T 101 B).

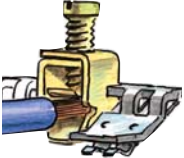



Technical details
Terminals

PE und N
FIXCONNECT®-Klemme





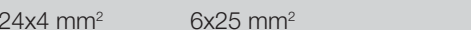
Rated connecting capacity
of PE and N terminals

Current carrying capacity:
75 A




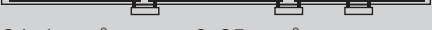

| Clamping unit | Corresponding cross-sections / copper | | | |
|--|---|-------------------------------|-------------|-----------------------------|
| | max. number | from - to max. | max. number | from - to max. |
|  Screw-type terminal 25 mm ² | 1 | 25 mm ² , s | 1 | 25 mm ² , f |
| | 1 | 16 mm ² , s | 1 | 16 mm ² , f |
| | 1 | 10 mm ² , sol | 1 | 10 mm ² , f |
| | 3 | 6 mm ² , sol | 1 | 6 mm ² , f |
| | 3 | 4 mm ² , sol | 1 | 4 mm ² , f |
| | 4 | 2.5 mm ² , sol | 1 | 2.5 mm ² , f |
| | 4 | 1.5 mm ² , sol | 1 | 1.5 mm ² , f |
| Tested as connecting terminal for several conductors of the same cross-sections for using in one circuit | | | | |
|  Plug-in terminal 4 mm ² | 1 | 1.5 - 4 mm ² , sol | 1 | 1.5 - 4 mm ² , f |
| | Without end ferrule; clamping unit has to be opened with a tool when conductor is inserted. | | | |

Terminal equipment
and number of conductors
to be connected

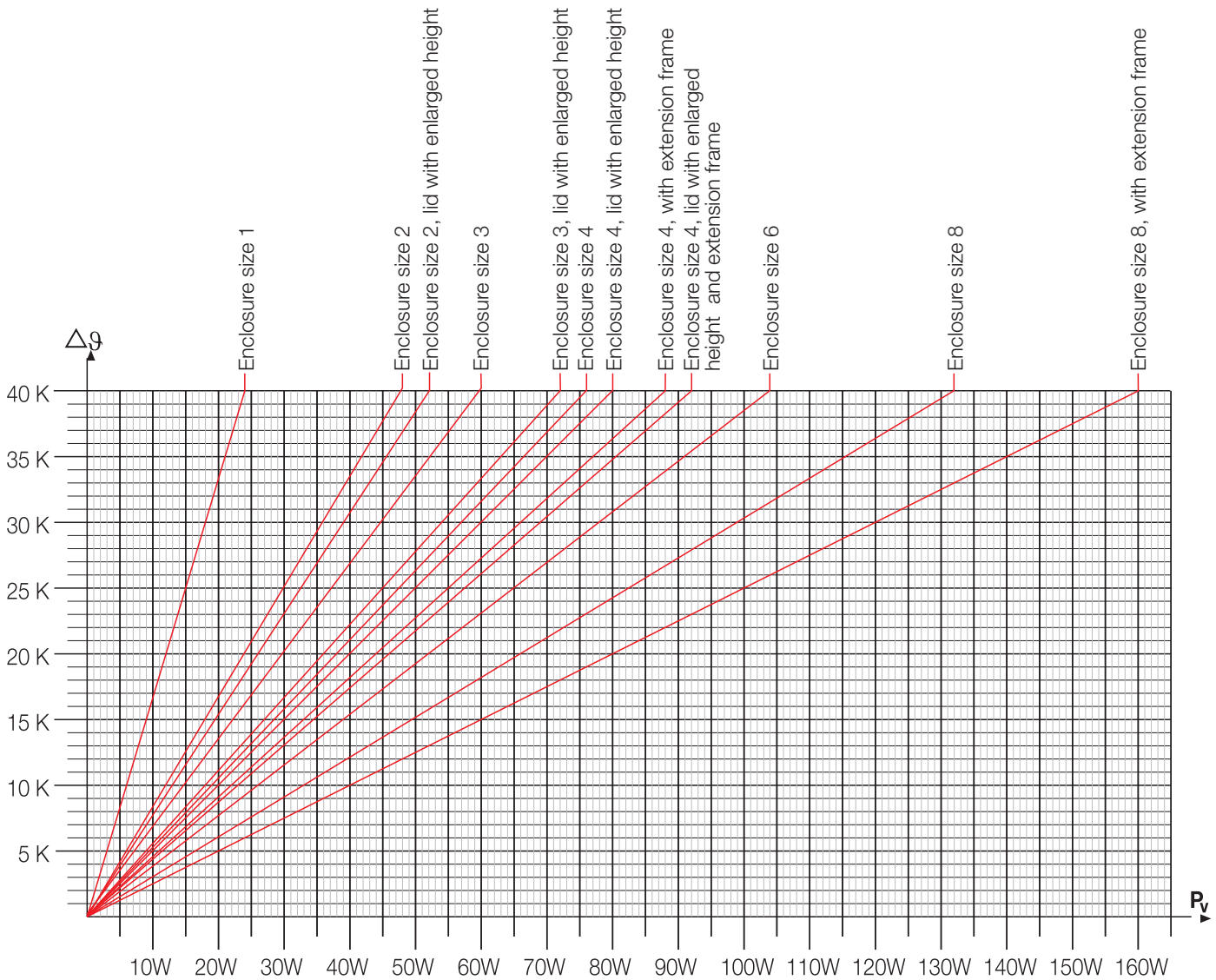
PE terminal

| Number of modules | Mounted in Mi Circuit breaker boxes | PE terminal | |
|--------------------------|-------------------------------------|--|--------------------------|
| | | up to 4 mm ² | up to 25 mm ² |
| 24 (2-row) | Mi 1224 |  | |
| | Mi 1220 |  | |
| | Mi 1222 | 12x4 mm ² | 2x25 mm ² |
| 36 (3-row) 48 (4-row) | Mi 1336 |  | |
| | Mi 1333 |  | |
| | Mi 1448 | 24x4 mm ² | 6x25 mm ² |
| | Mi 1444 |  | |

N terminal

| Number of modules | Mounted in Mi Circuit breaker boxes | N terminal | | plug-in jumper |
|--------------------------|-------------------------------------|--|--------------------------|----------------|
| | | up to 4 mm ² | up to 25 mm ² | |
| 24 (2-row) | Mi 1224 |  | | |
| | Mi 1220 |  | | |
| | Mi 1222 | 12x4 mm ² | 3x25 mm ² | |
| 36 (3-row) 48 (4-row) | Mi 1336 |  | | |
| | Mi 1333 |  | | |
| | Mi 1448 | 24x4 mm ² | 6x25 mm ² | |
| | Mi 1444 |  | | |

Temperature rise ($\Delta\theta$) with Mi-Distribution boards by power dissipation of electrical devices



| Mi distribution boards enclosure sizes | dimensions (WxHxD) in mm | rated power dissipation P_v in watts per Kelvin assembled enclosures |
|---|--------------------------|--|
| enclosure size 1 | 300 x 150 x 170 | 0.6 |
| enclosure size 2 | 300 x 300 x 170 | 1.2 |
| enclosure size 2, lid with enlarged depth | 300 x 300 x 214 | 1.3 |
| enclosure size 3 | 300 x 450 x 170 | 1.5 |
| enclosure size 3, lid with enlarged depth | 300 x 450 x 214 | 1.8 |
| enclosure size 4 | 300 x 600 x 170 | 1.9 |
| enclosure size 4, lid with enlarged depth | 300 x 600 x 214 | 2.0 |
| enclosure size 4 with extension frame | 300 x 600 x 255 | 2.2 |
| enclosure size 4, lid with enlarged depth and extension frame | 300 x 600 x 299 | 2.3 |
| enclosure size 6 | 450 x 600 x 170 | 2.6 |
| enclosure size 8 | 600 x 600 x 170 | 3.3 |
| enclosure size 8 with extension frame | 600 x 600 x 255 | 4.0 |

Note!

The maximally permissible operating temperature inside the enclosures ($\vartheta_{i\max}$) is determined by:

- 1st maximally permissible ambient temperature of the installed electrical devices (please consider data of the equipment manufacturers)
- 2nd category temperature of the internal wiring and the inserted cables
- 3rd temperature resistance of the enclosure materials and the cable entries etc.

Example: calculation of the maximum rated power dissipation (P_v)

| | |
|---|---|
| maximally permissible operating temperature inside the enclosure(s) ($\vartheta_{i\max}$): | e.g. 55 °C |
| ambient temperature of the enclosure(s) (ϑ_U): | 25 °C |
| maximally permissible heating up inside the enclosure: | $\Delta\vartheta = \vartheta_{i\max} - \vartheta_U = 55\text{ °C} - 25\text{ °C} = 30\text{ K}$ |
| maximum permissible power dissipation of the installed equipment inclusive wiring (P_v) in accordance with diagram: | enclosure size 3 (450 x 300 x 170 mm) |
| assembled enclosures: | $P_v = 45\text{ W}$ |

Example: calculation of the operating temperature inside the enclosure (ϑ_i)

| | |
|--|--|
| ambient temperature of the enclosure(s) (ϑ_U): | 25 °C |
| rated power dissipation of the installed electrical equipment (P_v): | 30 W |
| heating up inside the enclosures in accordance with diagram over: | $\Delta\vartheta$ |
| enclosure size 3 (450 x 300 x 170 mm) assembled enclosures: | $\Delta\vartheta = 17\text{ K}; \vartheta_i = \vartheta_U + \Delta\vartheta = 25\text{ °C} + 17\text{ K} = 42\text{ °C}$ |

P_v = Power dissipation loss

Assembly of Mi distribution boards according to assembly draft

Pre-assembled and tested enclosures with electrical functions



Knock out of box walls for electrical connection and cable entry

Box walls are knocked out for the electrical connection within the distribution board.

For the assembly of the enclosures, the appropriate openings of the wedge joints are knocked out as well.



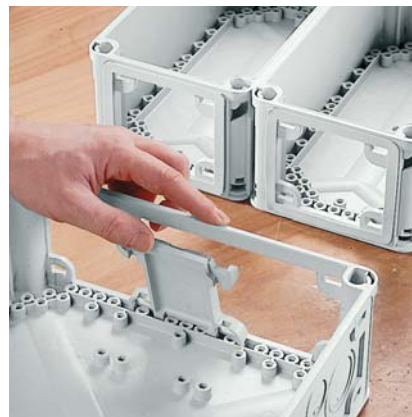
Assembly of boxes

For sealing the boxes in position, a self-adhesive wall gasket is stuck to the box wall (applies to closed box walls, too.)

The box assembly is carried out by a wedge connection.

To increase stability, press wall clamps onto the box fins.

Use a wall separator for subdividing 300 mm box walls into two 150 mm walls for flange or box mounting.



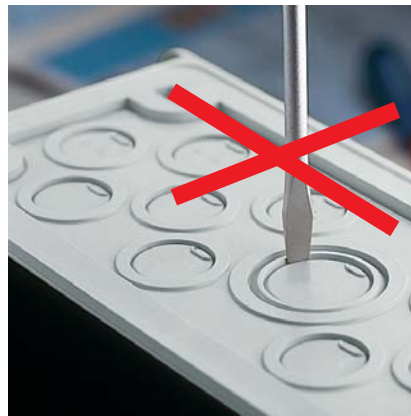
Flanges

Attach flanges by means of 4 wedge links and 1 clamp to the box wall.



Cable entry

Knock out the appropriate cable entries within flanges or box walls with screwdriver.



Cable glands

Insert cable gland into the appropriate knockout and fasten with lock nut.



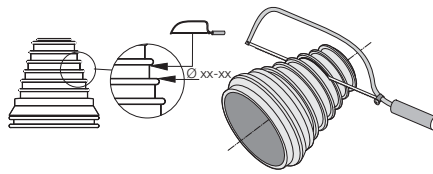
Assembly of cable insertion

Knock out the respective box wall and saw out the upper box fin next to the wedge fastening.

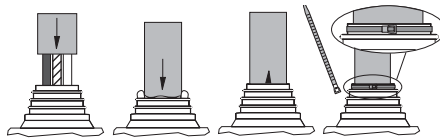
Screw mount the cable insertion and insert the rubber entries.



Adjust stepped grommet on the cable diameter.



Insert cable and fix it with cable ties.



Insert the cable into the box from the front.

Installation of extension frame

Fix attachments for extension frame in base of enclosure.

Right:
Place extension frame on base of enclosure.



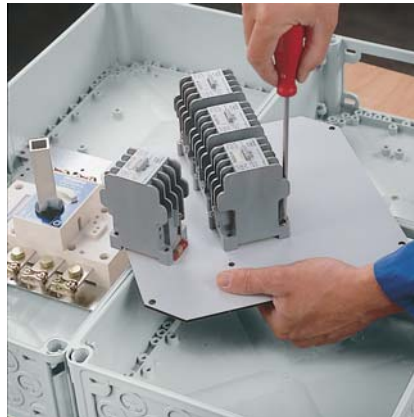
Fix extension frame with screws onto base of enclosure.



Device installation on mounting plates or DIN rails

Fasten installation devices on mounting plates with self-threading screws.

Screw mounting plate onto base of box.



Mount DIN rails directly onto base of boxes or on spacers Mi DS .. in heights of 25 or 50 mm.



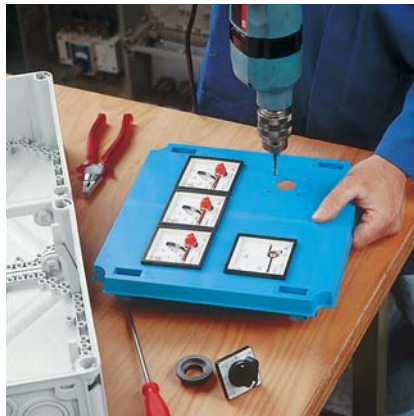
Installation of equipment in cover plates

Pre-drill the sections at the corners and saw out with piercing saw. Use saw blades with rough teeth for plastics.

Screw support for the protection cover Mi EP .. onto base of box.

Attach protection cover.

Close unused equipment openings in protection covers with attached blanking strips.



Mi Distribution Boards

**Technical details
Device installation, covers**

Device installation in circuit breaker boxes

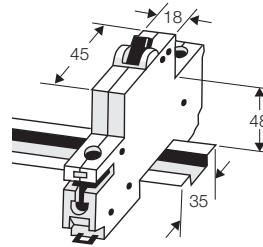
Circuit breaker boxes can be fitted with any DIN rail equipment, if per row (12 modules 12x18 mm) the assigned backup fuse won't exceed 80 A.



PE and N terminals for copper conductors (installed)

Note to Mi Circuit breaker boxes:
Spare equipment openings in protection covers are to be covered with blanking strips to prevent accidental contact (blanking strips are enclosed for 50 % of equipment openings)

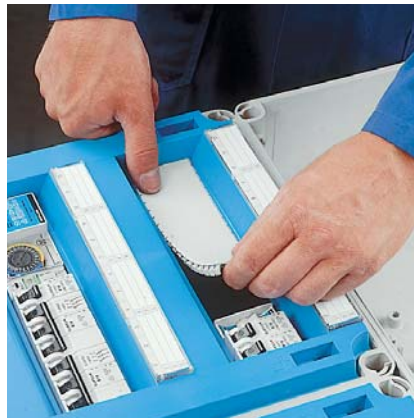
Dimension of 1 module:
1 Module = 18 mm




Dimensions according to DIN 43880 for DIN rail mounted device

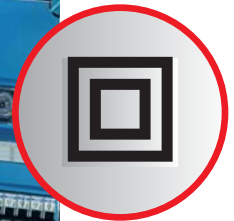
Protection covers

Cover unused equipment openings with blanking strips to prevent accidental contact.



Provide for total protection against access to hazardous parts for accessible devices and busbar-mounted equipment.

Protection class II, 
(Total insulation)



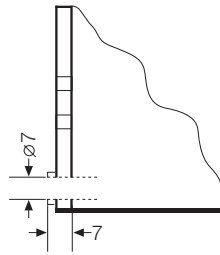
Mi Distribution Boards

Technical details

Wall mounting, floor standing

Wall mounting

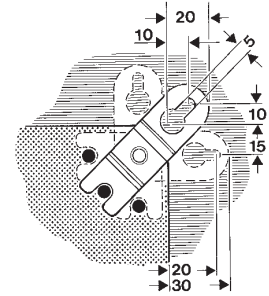
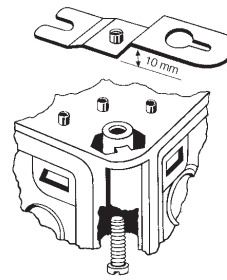
directly through the base of the box



External brackets

for external box fixing

Mi AL 40 (4 brackets)



Mounting profile

for wall-mounted installation of Mi-Distribution boards, steel profile, 1950 mm long, dividable in the grid of 150 mm.

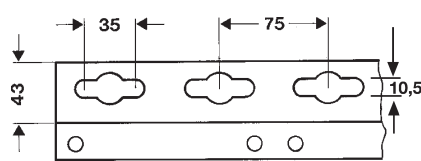
Mi MS 2



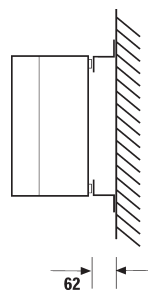
Note:

Please fix mounting profile in vertical position to enable a cable routing behind the assembly.

For cutting the required profile length fix mounting profile eg with a clamp to a desk.



Fixing matrix of mounting profile



Transport

Regarding transportation its recommendable to protect the assembly against deflection. For that please screw the assembly to a solid timber.