
wöhner
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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, ⧈**

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
- Connecton 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
- Connecton 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

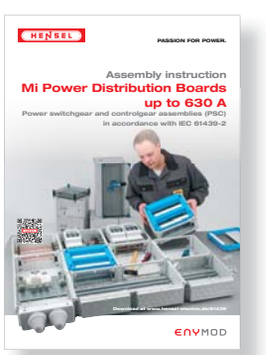
Dust- and waterresistant:
Mi Distribution Boards can withstand the highest loads

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 instalation 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 attentionto the climatic effects on the installed equipment, rsee 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 **6**5

Protection against ingress of water with harmful effects

protected against water
degree of protection IP 6**5**

Single enclosures without any flanges and components mounted in the lid have degree of protection IP 6**6**

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

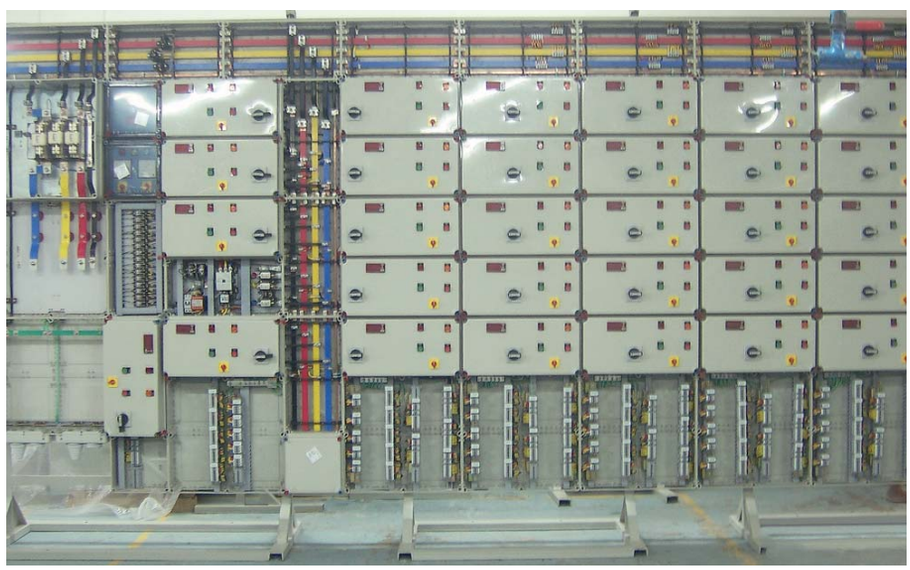
silicone- and halogen-free

Tested and certified by ASTA

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

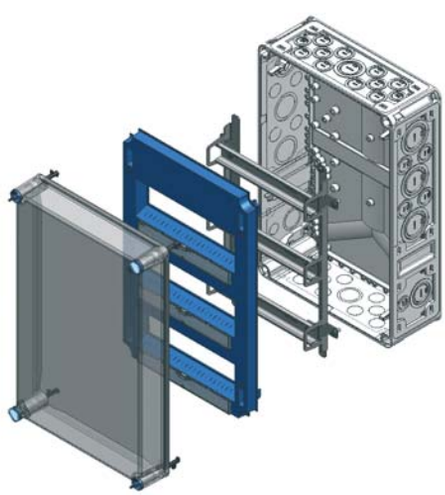
Suitable also for typical devices or the installation of armoured cables with earth connections



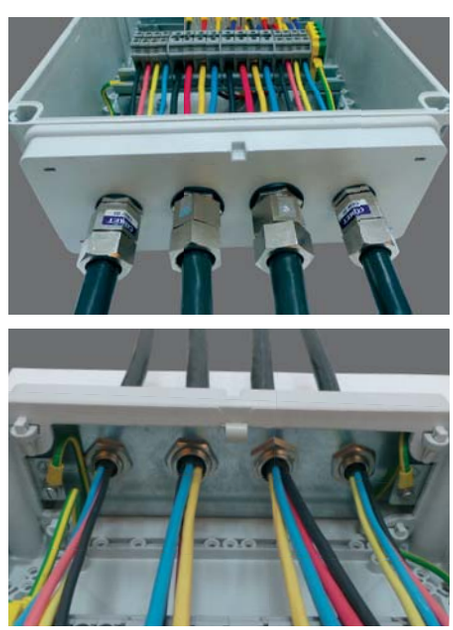
Application:
Motor Control Centre based on Mi System
This Motor Control Centre installed in a big paper mill consists of 33 feeders ranging from 2.2 kW to 50 kW including complete wiring with main incomer of 630 A.

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.



Integrated earth bounding in each circuit breaker box



Cable entry for armoured cables via metal glands

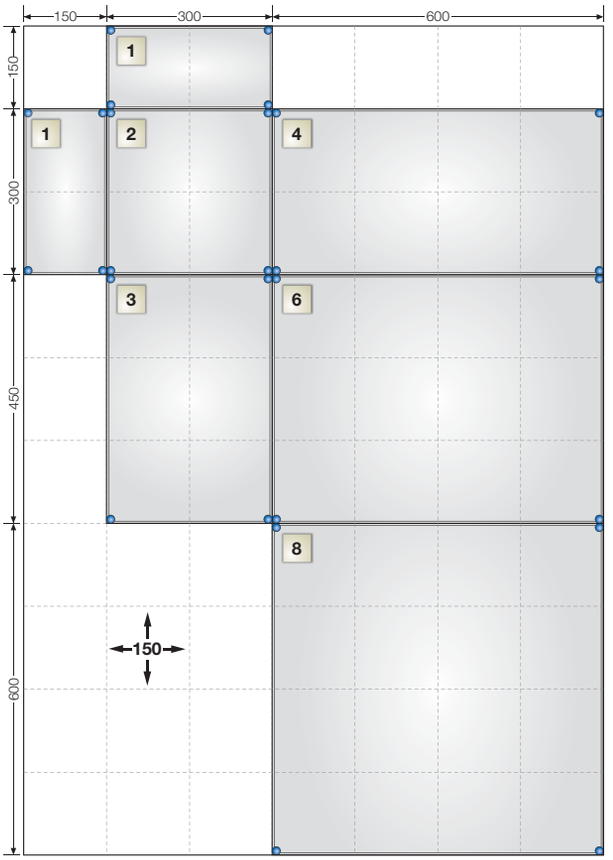
Combinable and extendable in all directions

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).

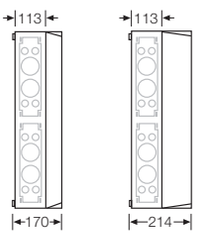


figure 1

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

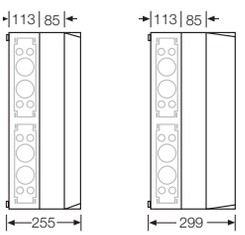
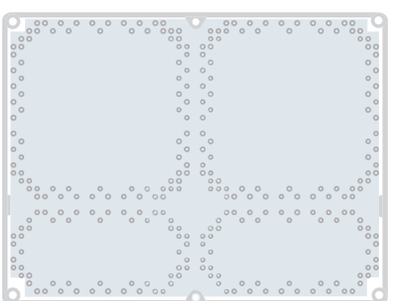


figure 2

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.

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

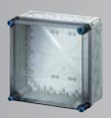
Example:
Mi hinges for lids enable to operate installation device within a large area

Example:
Locking option with triangle prevents unauthorized access

Empty enclosures
transparent or opaque lids

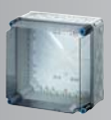
Mi 0100
built-in dimensions
275x125x146 mm

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

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 enclosures
hinged transparent or opaque lids

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 with hinged lids applicable as single empty box for he 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 1112
1x12x18 mm,
PE+N

Mi 1115
1x12x18 mm
without PE+N

Mi 1224
2x12x18 mm,
PE+N

Mi 1225
2x12x18 mm
without PE+N

Mi 1220
2x12x18 mm,
PE+N,
Scharnierdeckel

Mi 1226
2x12x18 mm
without PE+N,
hinged lid

Mi 1336
3x12x18 mm,
PE+N

Mi 1335
3x12x18 mm
without PE+N

Mi 1448
4x12x18 mm,
PE+N

Mi 1440
3x12x18 mm,
1 DIN rail,
without PE+N

Mi 1456 *
2x28x18 mm,
PE+N

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

Mi 1111
1x12x18 mm,
PE+N,
1 hinged lid

Mi 1117
1x12x18 mm,
without PE+N,
1 hinged flap

Mi 1222
2x12x18 mm,
PE+N,
2 hinged flaps

Mi 1227
2x12x18 mm,
without PE+N,
2 hinged flaps

Mi 1333
3x12x18 mm,
PE+N,
3 hinged flaps

Mi 1337
3x12x18 mm,
without PE+N,
3 hinged flaps

Mi 1444
4x12x18 mm,
PE+N,
4 hinged flaps

Mi 1445
4x12x18 mm,
without PE+N,
4 hinged flaps

Mi 1443
3x12x18 mm,
1 DIN rail,
without PE+N,
3 hinged flaps

Mi 1281
for miniature
circuit breakers
1x6x18 mm,
PEN

Circuit breaker boxes
removable DIN rail rack and earth connection

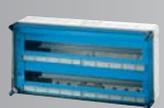
Mi 1118 *
1x12x18 mm,
without PE+N

Mi 1228 *
2x12x18 mm,
without PE+N

Mi 1221 *
2x12x18 mm,
without PE+N
with hinged lid

Mi 1338 *
3x12x18 mm,
without PE+N

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

Mi 1119 *
1x12x18 mm,
without PE+N,
1 hinged flap

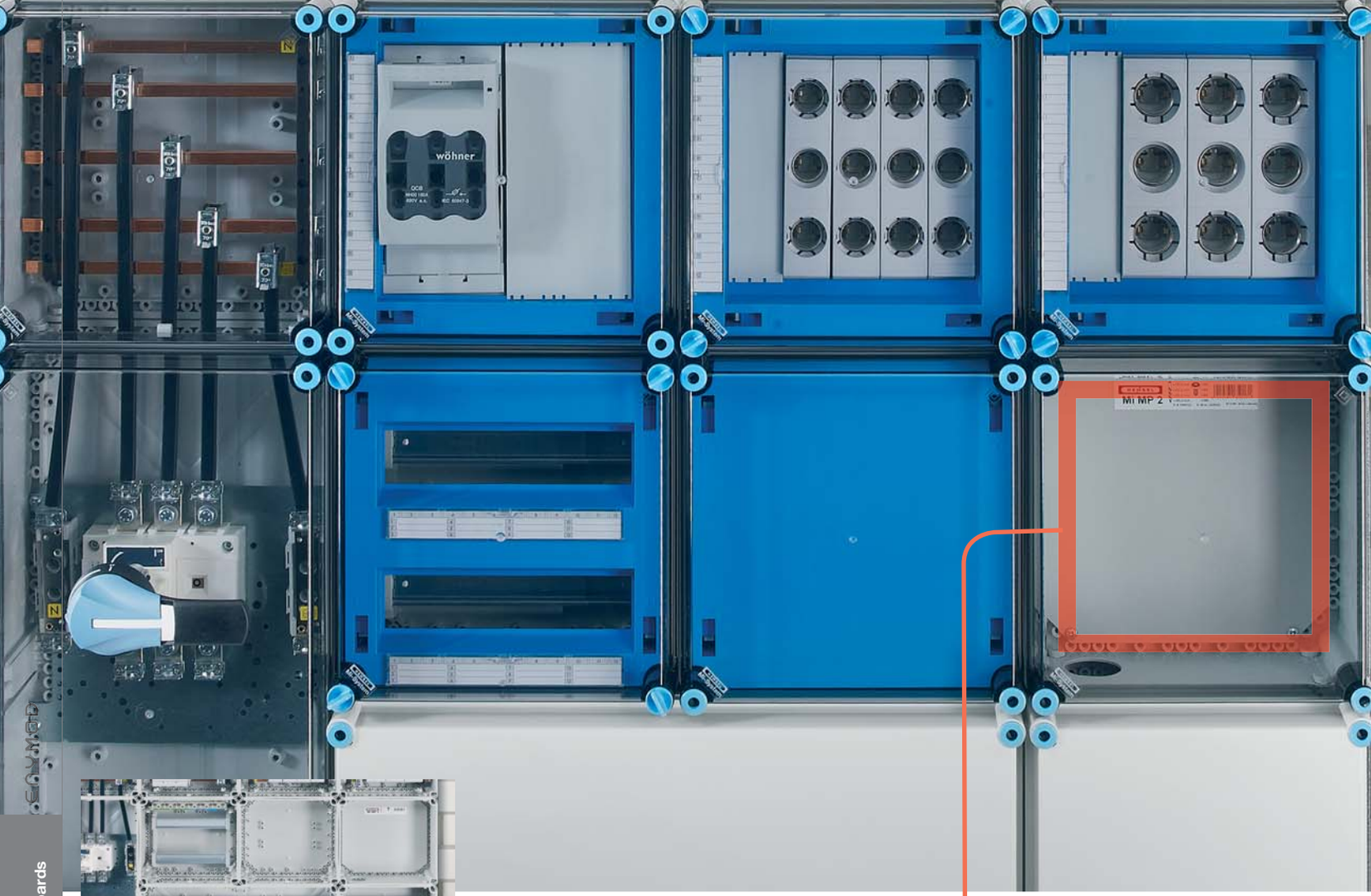
Mi 1229 *
2x12x18 mm,
without PE+N,
2 hinged flaps

Mi 1339 *
3x12x18 mm,
without PE+N,
3 hinged flaps

Mi 1449 *
4x12x18 mm,
without PE+N,
4 hinged flaps

* 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 Distribution Boards

Empty boxes

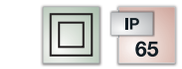
for the assembly of power distribution boards (PSC) up to 630 A in accordance with IEC 61430-2

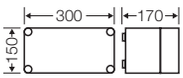
- Transparent or opaque enclosure lids
- Empty enclosure with hinged lid, trilaterally combinable
- Device installation either on mounting plates or DIN rails
- Installation depths extendable by using lids of different heights or extension frames
- Enclosures can also be used as single boxes
- Protection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

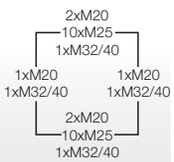
Mi 0100

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



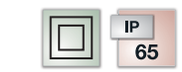


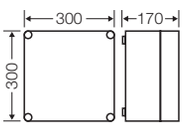


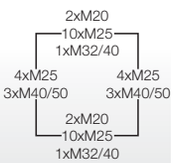
Mi 0200

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



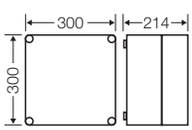


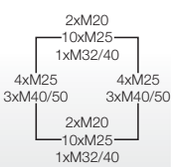


Mi 0210

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:

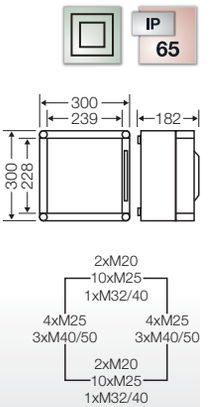
Terminals for incoming/ outgoing cables under accessories

Covers for protection of installation device, see accessories

Mi 0220

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

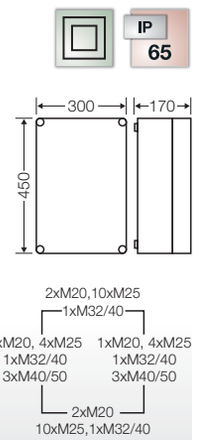
- max. installation depth with built-in mounting plate 115 mm, with built-in DIN rail 104 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- with hinged lid for built-in equipment with protection cover which must be operated
- with transparent lid
- lid fasteners for tool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



Mi 0300

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

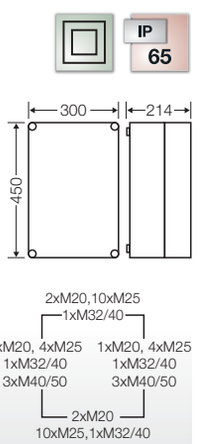
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation



Mi 0310

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

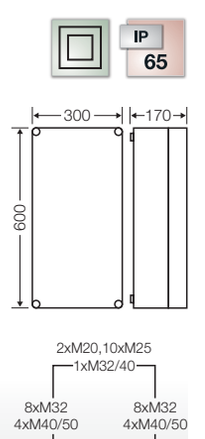
- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation



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

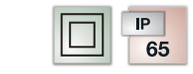


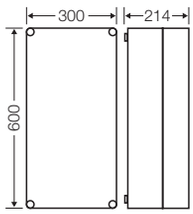
Mi Distribution Boards
Empty boxes with transparent lid

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

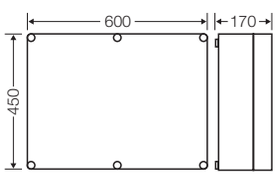


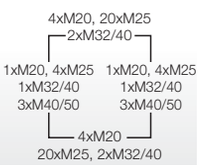


Mi 0600

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

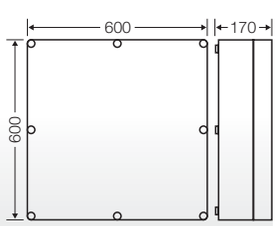




Mi 0800

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:

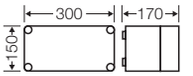
Terminals for incoming/ outgoing cables under accessories

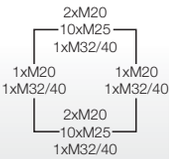
Covers for protection of installation device, see accessories

Mi 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

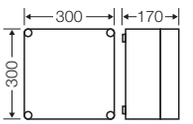


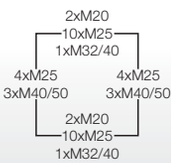


Mi 0201

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

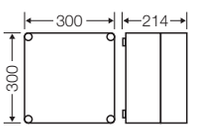


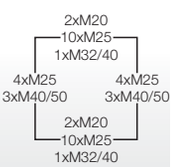


Mi 0211

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

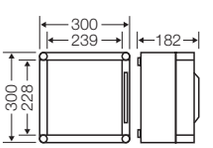


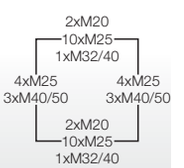


Mi 0221

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

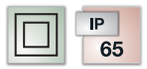


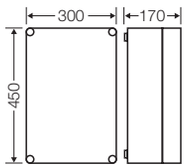


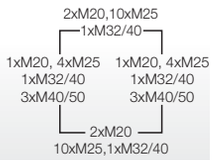
Mi 0301

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



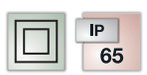


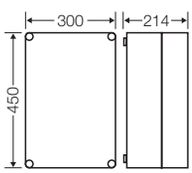


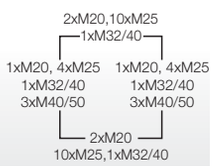
Mi 0311

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



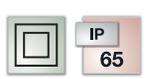


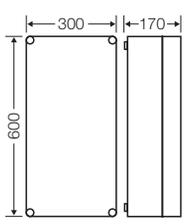


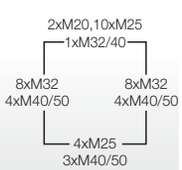
Mi 0401

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:

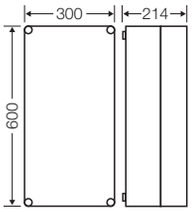
Terminals for incoming/ outgoing cables under accessories

Covers for protection of installation device, see accessories

Mi 0411

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

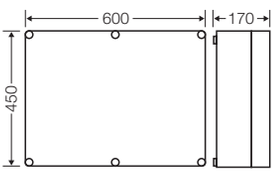
- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- with opaque lid
- lid fasteners for tool operation

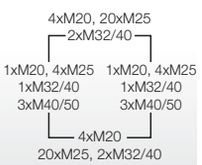


Mi 0601

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

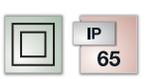


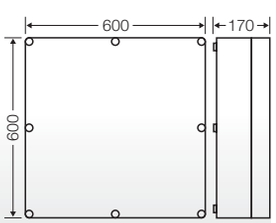


Mi 0801

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



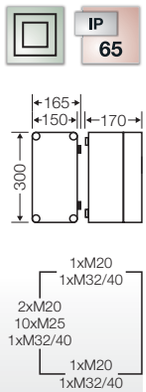


Mi Distribution Boards
Empty boxes
with hinged, transparent lid

Mi 9100

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

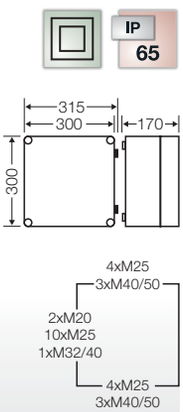
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 1
- please order DIN rails, mounting plates or covers additionally
- 3 walls with metric knockouts for cable entry and assembly
- trilaterally combinable
- lid hinges attached
- with transparent, hinged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



Mi 9200

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

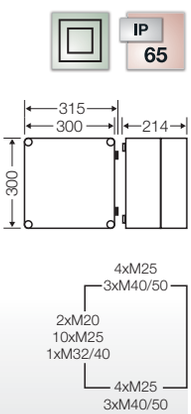
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with transparent, hinged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

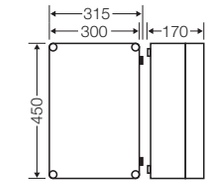
Mi Distribution Boards

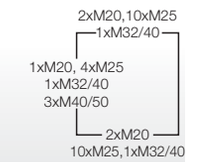
Empty boxes
with hinged, transparent lid

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

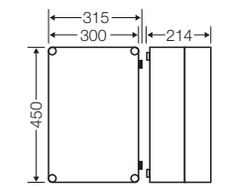


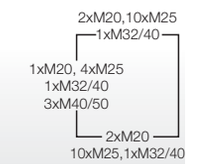


Mi 9310

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

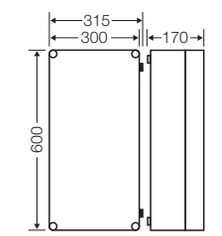


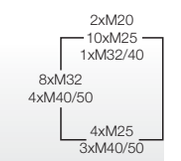


Mi 9400

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



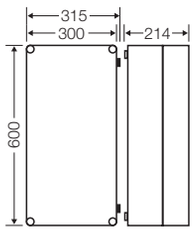


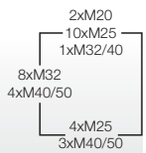
Mi Distribution Boards
Empty boxes
with hinged, transparent lid

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

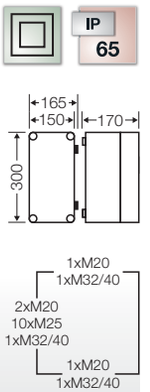
Mi Distribution Boards

Empty boxes
with hinged, opaque lid

Mi 9101

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

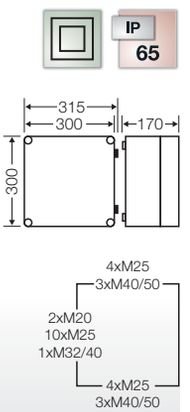
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 1
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged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



Mi 9201

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

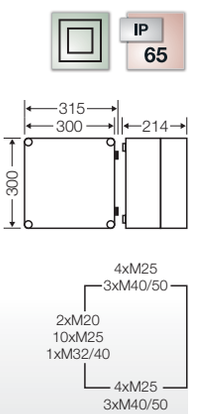
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged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



Mi 9211

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

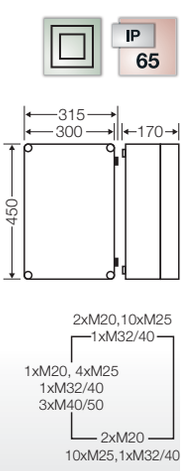
- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged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

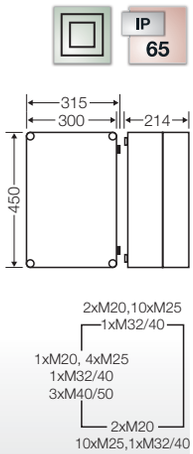


Mi Distribution Boards
Empty boxes
with hinged, opaque lid

Mi 9311

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

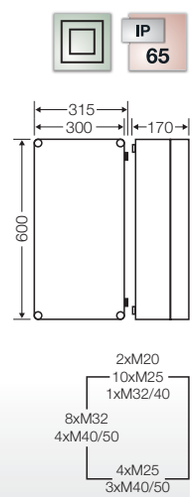
- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged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



Mi 9401

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

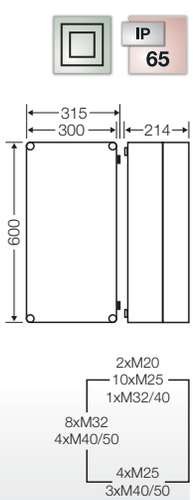
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged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

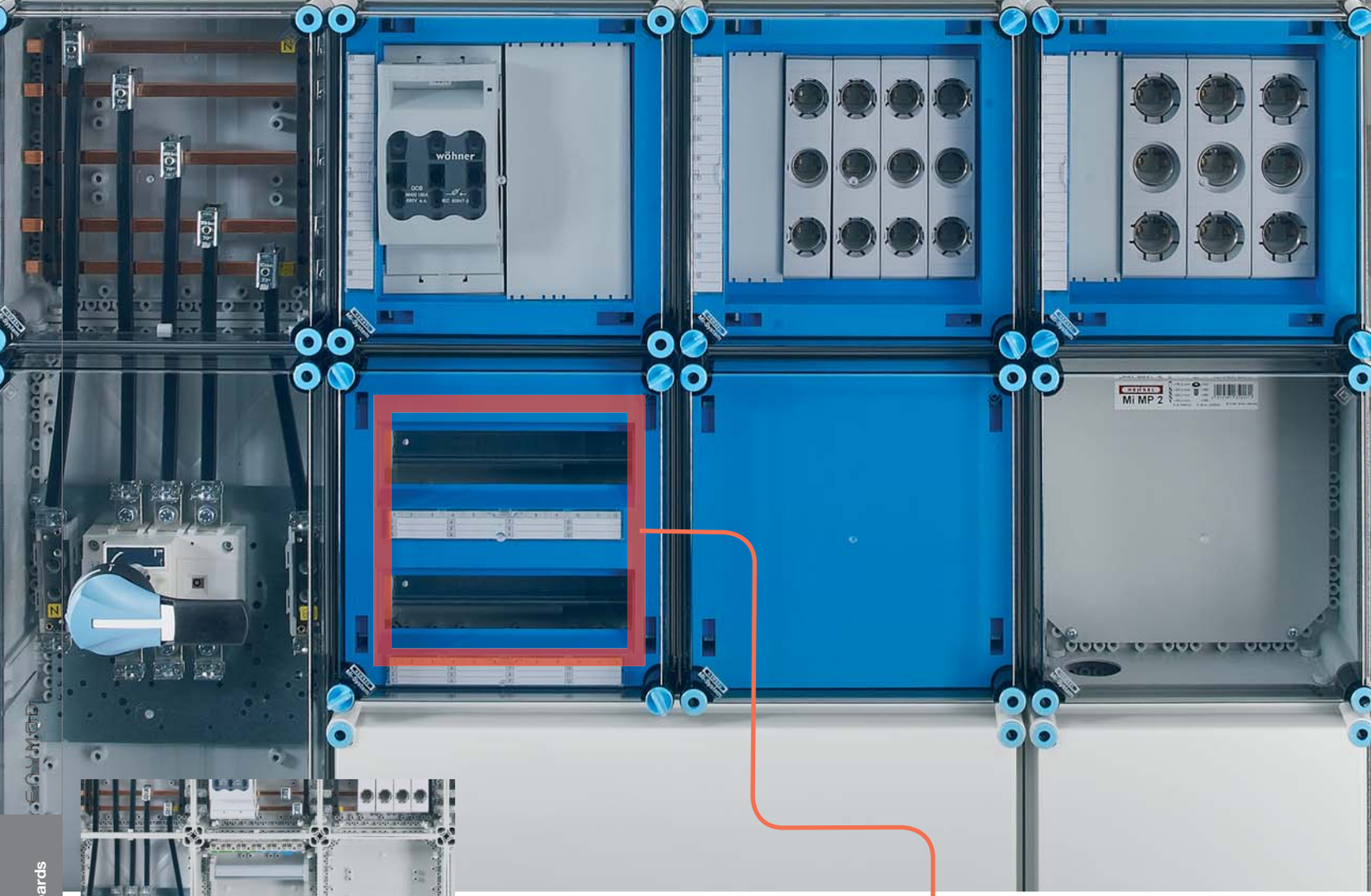


Please note:

Terminals for incoming/ outgoing cables under accessories

Covers for protection of installation device, see accessories

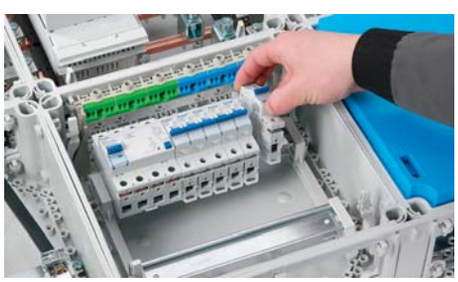
Empty enclosures with hinged lids



Mi 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



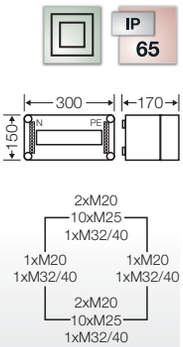
- Transparent lids
- Hinged flap or hinged lid for an easy operation of installation devices
- Hinged flap lock against unauthorised opening under accessories
- Circuit breaker boxes with or without PE and N terminals
- Protection against direct contact with hazardous live parts for operable installation 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

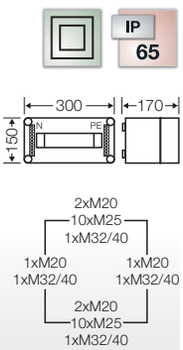
- 1-row
- FIXCONNECT® plug-in terminal technology for PE and N
- PE/N 2 x 25 mm², 8 x 4 mm², Cu each
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1112

12 modules: 1 x 12 x 18 mm

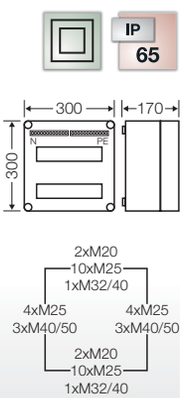
- 1-row
- with screw-type terminals for PE/N, for copper conductors
- per PE/N 10 x 16 mm², Cu
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1224

24 modules: 2 x 12 x 18 mm

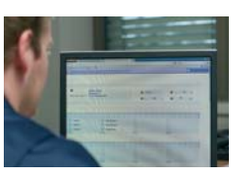
- 2-row
- FIXCONNECT® plug-in terminal technology for PE and N
- per PE/N 3 x 25 mm², 12 x 4 mm², Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



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

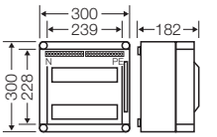
Mi Distribution Boards

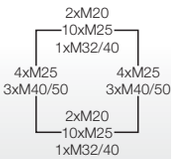
Circuit breaker box with PE and N terminals

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

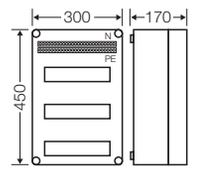


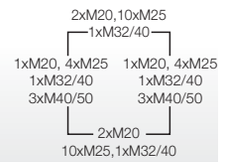


Mi 1336

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

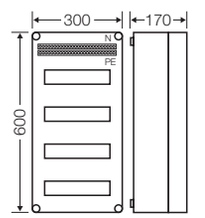




Mi 1448

48 modules: 4 x 12 x 18 mm

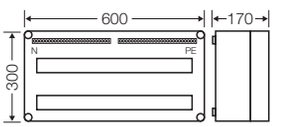
- 4-row
- FIXCONNECT® plug-in terminal technology for PE and N
- per PE/N 6 x 25 mm², 24 x 4 mm², Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation

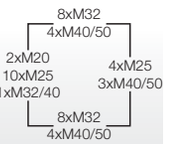


Mi 1456

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

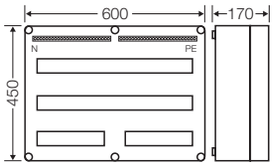
Circuit breaker box with PE and N terminals

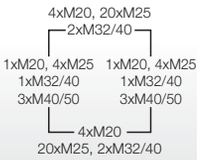
Mi 1684

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

IP 65



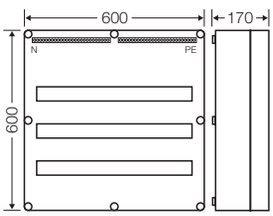


Mi 1884

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

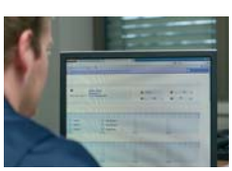
IP 65



Please note:

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

Cover cutouts against direct contact with hazardous live parts



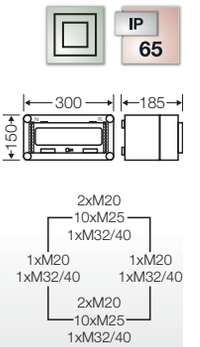
Editable labelling strips: www.hensel-electric.de

Mi Distribution Boards
circuit breaker box with flap

Mi 1111

12 modules: 1 x 12 x 18 mm

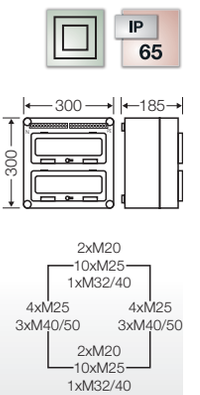
- 1-row
- with 1 hinged flap
- hinged flap lockable with accessories
- with screw-type terminals for PE/N, for copper conductors
- per PE/N 10 x 16 mm², Cu
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand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



Mi 1222

24 modules: 2 x 12 x 18 mm

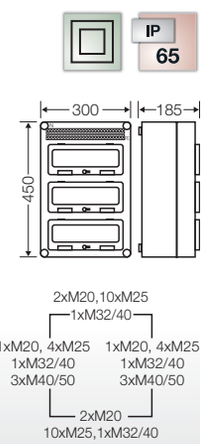
- 2-row
- with 2 hinged flaps
- hinged flap lockable with accessories
- FIXCONNECT® plug-in terminal technology for PE and N
- per PE/N 3 x 25 mm², 12 x 4 mm², Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused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



Mi 1333

36 modules: 3 x 12 x 18 mm

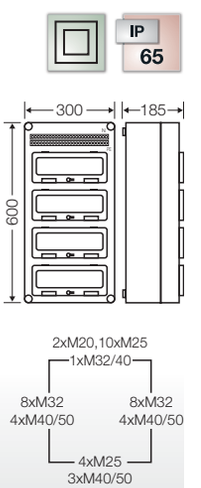
- 3-row
- with 3 hinged flaps
- hinged flap lockable with accessories
- FIXCONNECT® plug-in terminal technology for PE and N
- per PE/N 6 x 25 mm², 24 x 4 mm², Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused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

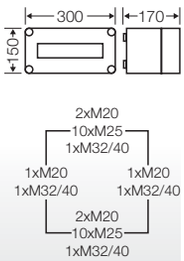
Circuit breaker box without PE and N terminals

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

IP 65

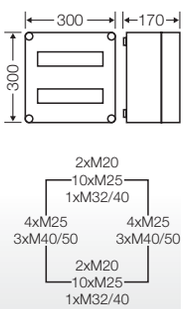


Mi 1225

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

IP 65

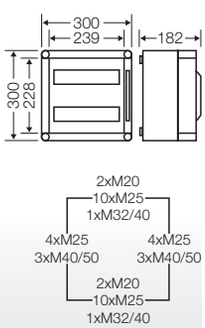


Mi 1226

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

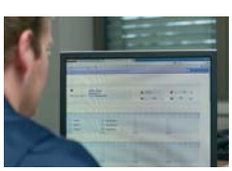
IP 65



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

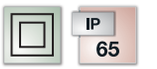
Mi Distribution Boards

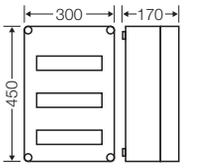
Circuit breaker box without PE and N terminals

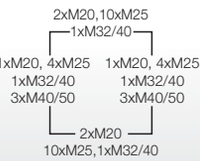
Mi 1335

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



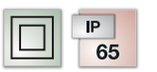


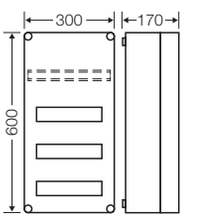


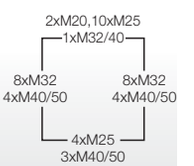
Mi 1440

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



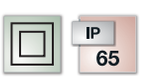


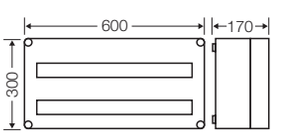


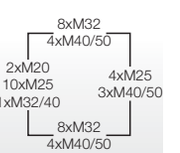
Mi 1455

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



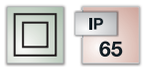


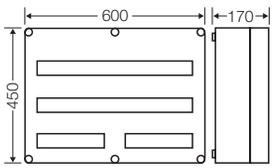


Mi 1683

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

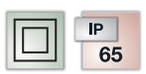


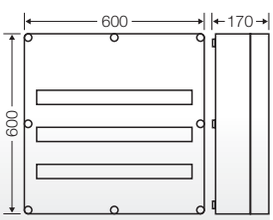


Mi 1885

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

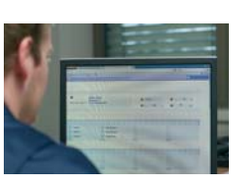




Please note:

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

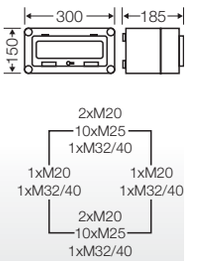
Mi Distribution Boards

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

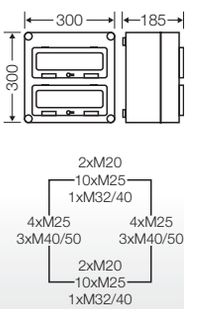
- 1-row
- with 1 hinged flap
- hinged flap lockable with accessories
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1227

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

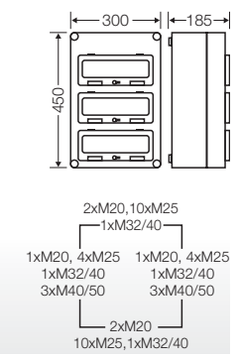
- 2-row
- with 2 hinged flaps
- hinged flap lockable with accessories
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi 1337

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

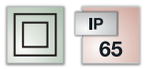
- 3-row
- with 3 hinged flaps
- hinged flap lockable with accessories
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



Mi Distribution Boards

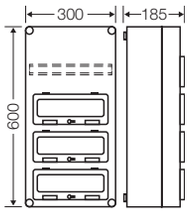
Circuit breaker boxes without PE and N terminals with hinged flaps

Mi 1443

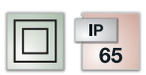


36 modules: 3 x 12 x 18 mm without PE and N terminal with additional DIN rail

- 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

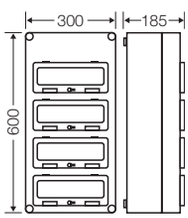


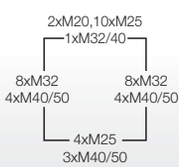
Mi 1445



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

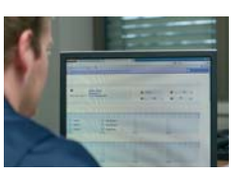




Please note:

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

Cover cutouts against direct contact with hazardous live parts



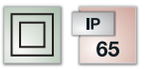
Editable labelling strips: www.hensel-electric.de

Mi Distribution Boards

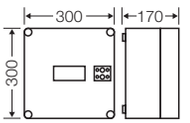
Circuit breaker boxes for miniature circuit-breakers (MCB)

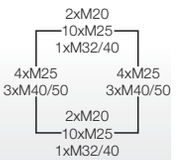
Mi 1281

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

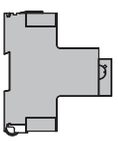


- 1-row
- with 1-pole main branch terminal for copper conductors
- PEN 2 x 25 mm², 2 x 16 mm², Cu, round conductors
- protection cover can be sealed, with lockable cover strip
- lid fasteners for hand operation

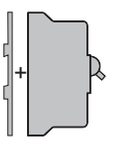




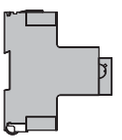
Note:
Prepared for the installation of currently commercially available miniature circuit-breakers (MDB)



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

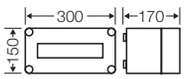
Circuit breaker box
with removable DIN rail rack for earth connection

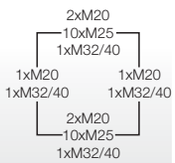
Mi 1118

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

IP 65



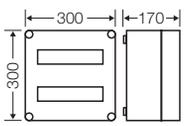


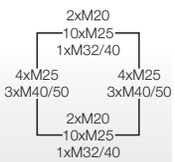
Mi 1228

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

IP 65



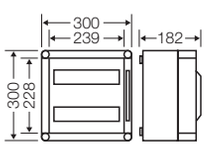


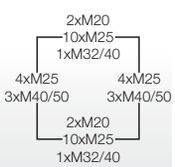
Mi 1221

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

IP 65

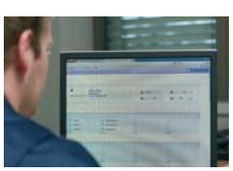




Please note:

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

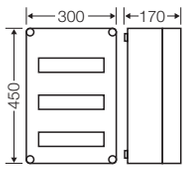
Mi Distribution Boards

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

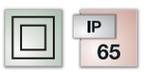
- 3-row
- for installation of DIN rail equipment in accordance with DIN 43880
- with blanking strips for unused DIN rail openings
- order PE/N terminals separately
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- DIN rail rack can be earthed

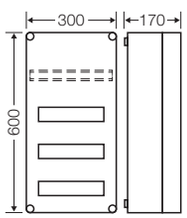


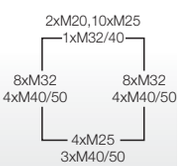
Mi 1446

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



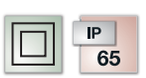


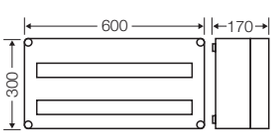


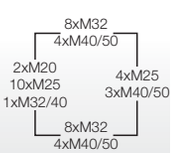
Mi 1455

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

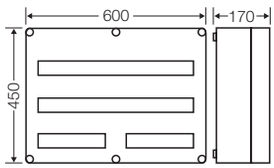
Mi Distribution Boards

Circuit breaker box
with removable DIN rail rack for earth connection

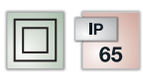
Mi 1683

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

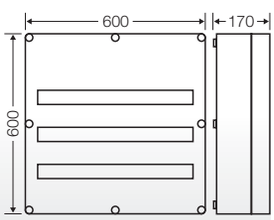


Mi 1885



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

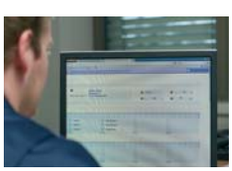
- 3-row
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- cable entry only possible via flange



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

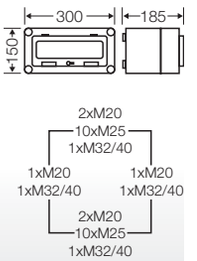
Mi Distribution Boards

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

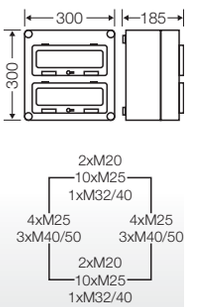
- 1-row
- with 1 hinged flap
- hinged flap lockable with accessories
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth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



Mi 1229

24 modules: 2 x 12 x 18 mm

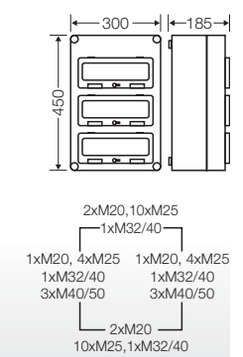
- 2-row
- with 2 hinged flaps
- hinged flap lockable with accessories
- for installation of DIN rail equipment in accordance with DIN 43880
- without PE and N terminal
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection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

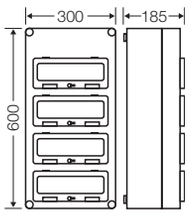
Mi Distribution Boards

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

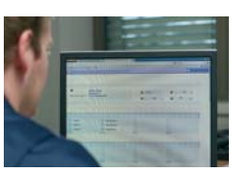
- 4-row
- with 4 hinged flaps
- hinged flap lockable with accessories
- for installation of DIN rail equipment in accordance with DIN 43880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth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

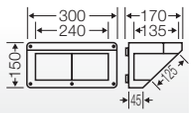
Mi Distribution Boards

Accessories

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



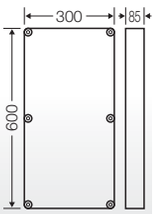
Application:

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

Mi ZR 4

Extension frame for enclosure size 4

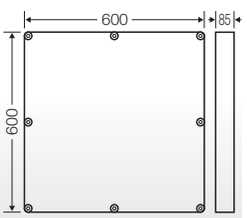
- for extension of the installation depth by 85 mm
- degree of protection IP 65 is maintained with use of up to two extension frames
- inclusive fixing material



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

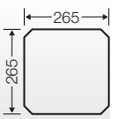
mounting plate
W 259 x H 115 mm

- 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

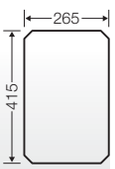
- material thickness 4 mm
- for Mi-Empty boxes sizes 2, 3, 4, 6, 8
- with fixing screws



Mi MP 3

mounting plate
W 265 x H 415 mm

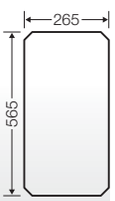
- material thickness 4 mm
- for Mi-Empty boxes sizes 3, 4, 6
- with fixing screws



Mi MP 4

mounting plate
W 265 x H 565 mm

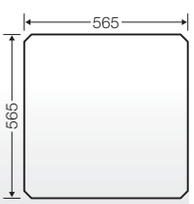
- material thickness 4 mm
- for Mi-Empty boxes sizes 4, 6, 8
- with fixing screws



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

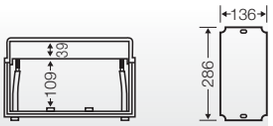
fixing screw
length 13 mm

- 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

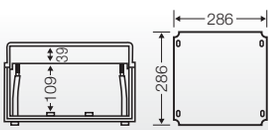
- for retrofitting
- cover without cut-outs made of plastics, as protection cover or for the installation of devices
- with fastening material



Mi EP 02

Cover
for Mi Empty box size 2

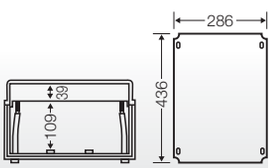
- for retrofitting
- cover without cut-outs made of plastics, as protection cover or for the installation of devices
- with fastening material



Mi EP 03

Cover
for Mi-Empty boxes sizes 3, 6

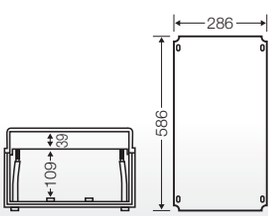
- for retrofitting
- 2 covers are required for Mi empty enclosure size 6
- cover without cut-outs made of plastics, as protection cover or for the installation of devices
- with fastening material



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

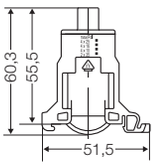
Application:

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



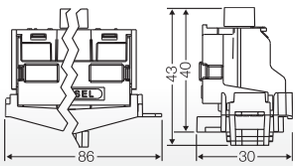
rated insulation voltage	Ui = 690 V a.c./d.c.
dismantling length	16 mm
tightening torque for terminal	3.0 Nm

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	Ui = 690 V a.c.

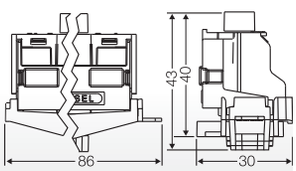


FC N 10

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	Ui = 690 V a.c.

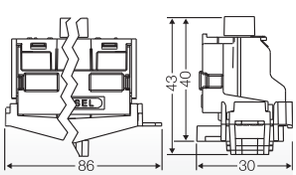


FC PE 10

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	Ui = 690 V a.c.

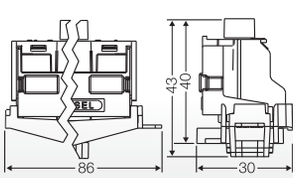


FC PN 10

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

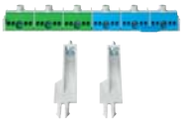
rated insulation voltage	Ui = 690 V a.c.



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

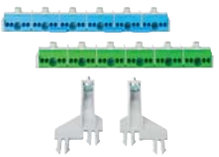


FC PN 30

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

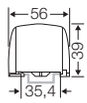
PE terminal
per PE 6 x 25 mm², 24 x 4 mm², Cu

- 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

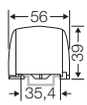


- as a connecting terminal
- for installation on DIN rails in accordance with IEC 60715, top hat profile 35 mm
- connections per terminal L1-L3: 4x
- connection: 1.5-16 mm² f* or 2.5-25mm², Cu, round conductor
  f* = with gas-tight end ferrule
- current carrying capacity: 80 A
- width: 61 mm

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

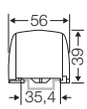


- as a connecting terminal
- for installation on DIN rails in accordance with IEC 60715, top hat profile 35 mm
- connections per terminal L1-L3, 4x
  connections per terminal N: 8x
- connection: 1.5-16 mm² f* or 2.5-25mm², Cu, round conductor
  f* = with gas-tight end ferrule
- current carrying capacity: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



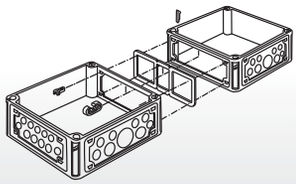
- as a connecting terminal
- for installation on DIN rails in accordance with IEC 60715, top hat profile 35 mm
- connections per terminal L1-L3: 4x
  connections per terminal N: 4x
  connections per terminal PE: 4x
- connection: 1.5-16 mm² f* or 2.5-25mm², Cu, round conductor
  f* = with gas-tight end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

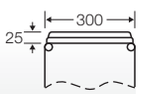
- box wall 150 mm
- with fixing wedges and seal

Mi FP 20

Flange
without knockouts

- box wall 300 mm
- with fixing wedges and seal

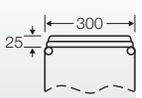
mounting width	215 mm
mounting height	88 mm



Mi FM 20

Flange
knockouts 15 x M 16, 15 x M 20

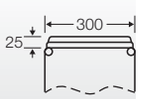
- box wall 300 mm
- with fixing wedges and seal



Mi FM 25

Flange
knockouts: 19 x M 16/25

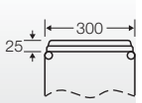
- box wall 300 mm
- with fixing wedges and seal



Mi FM 32

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

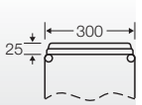
- box wall 300 mm
- with fixing wedges and seal



Mi FM 40

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

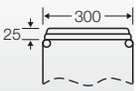
- box wall 300 mm
- with fixing wedges and seal



Mi FM 50

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

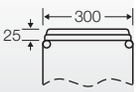
- box wall 300 mm
- with fixing wedges and seal



Mi FM 60

Flange
knockouts: 3 x M 40/50/63

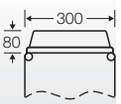
- box wall 300 mm
- with fixing wedges and seal



Mi FM 63

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

- box wall 300 mm
- with fixing wedges and seal

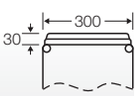


Mi FP 38

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

IP 65

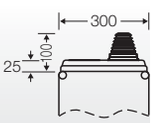


Mi FP 70

Flange
sealing range: 1 x Ø 30-72 mm

- box wall 300 mm
- with fixing wedges and seal

IP 65

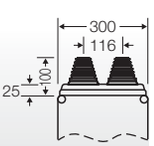


Mi FP 72

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

- box wall 300 mm
- with fixing wedges and seal

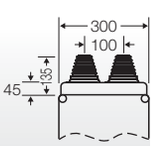
IP 65



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

IP 44

Ventilation flange
for vertical installation on box walls

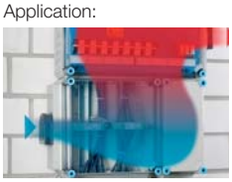
- box wall 300 mm
- for ventilation of Mi-Distribution boards in the event of extremely high internal temperatures or a risk of water condensation

BE 44

IP 44

Ventilation insert

Application:

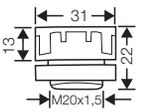


Ventilation via ventilation flange or ventilation insert

BM 20G

Pressure compensation element for M 20 knockouts

IP 54

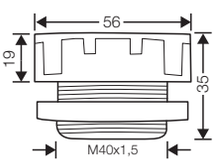


- for the reduction of condensation by pressure compensation in power distribution systems
- ISO thread M 20 x 1.5
- bore-hole: Ø 20.3 mm
- wall thickness up to 4 mm
- with counter nut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- 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

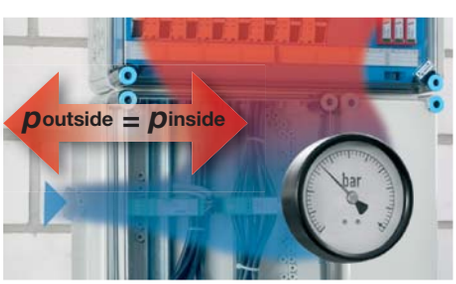
Pressure compensation element for M 40 knockouts

IP 54



- 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

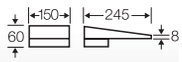
Pressure compensation element



Mi DB 15

Canopy
for box wall 150 mm

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



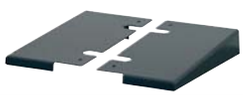
material	stainless steel powder-coated

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

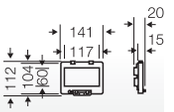
Mi hinges for lids for operating within a large area

Mi KL 6

Hinged flap
opening dimensions 117 x 60 mm

IP 65

- 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

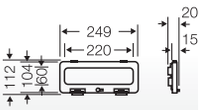


Mi KL 12

Hinged flap
opening dimensions 220 x 60 mm

IP 65

- 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

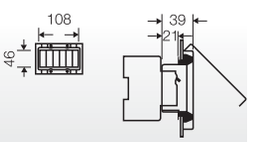


Mi BS 6

Protection cover
for Mi KL 6

- with fixing screws

modules	6 1 x 6 x 18 mm

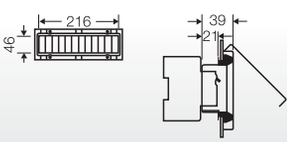


Mi BS 12

Protection cover
for Mi KL 12

- with fixing screws

modules	12 1 x 12 x 18 mm



Mi SK 01

Hinged flap lock

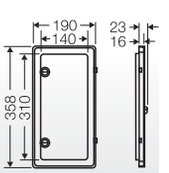
- for retrofitting in hinged flaps of 6 or 12 modules width
- for protecting the switchgear located behind the hinged flap against unauthorised access
  (only effective in connection with lid lock Mi ZS ..)
- consisting of:
- 1 lock (Mi KL), 2 keys, 1 grooved pin

NZ KL 54

KWH meter window flap
standard opening dimensions 140 x 310 mm

IP 54

- 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

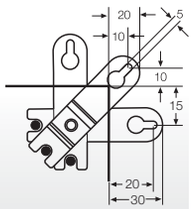
Dust protection cover

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

Mi AL 40

4 stainless steel external brackets

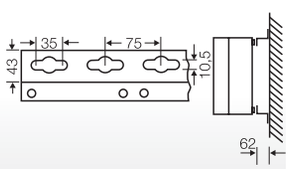
- for external fixing of enclosures



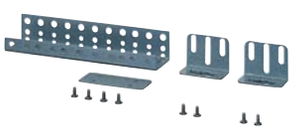
Mi MS 2

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

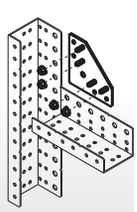
- constisting of:
  1 x mounting rail, 2 x fixing brackets,
  1 x flat connector with connecting screws

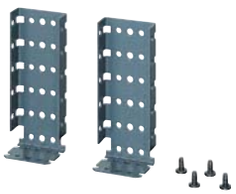
length	1950 mm
material	sheet steel, galvanised and powder-coated

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

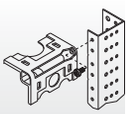
- 2 x couplers with connecting screws

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

Mi Distribution Boards

Technical details
Operating and ambient conditions

	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 - Average value over 24 hours - Maximum value - Minimum value	 – + 70 °C – 25 °C	 + 35 °C + 40 °C – 5 °C	 The ambient temperature is reduced at distribution boares by the installed equipment technology!
Relative humidity - short-time	– –	50% at 40 °C 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 - UL Subject 94	 960 °C V-2 flame-retardant self-extinguishing	 960 °C 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

Technical details
Standard and regulations

Mi Distribution Boards comply with the requirements 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 Technics.

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)

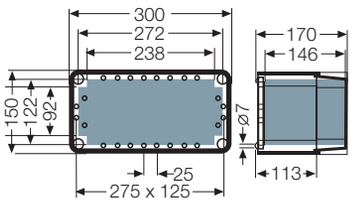
Mi Distribution Boards

Technical details
Dimensions in mm

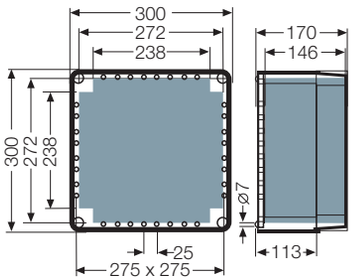
Dimensions of the interior installation depth with installed mounting plates.

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

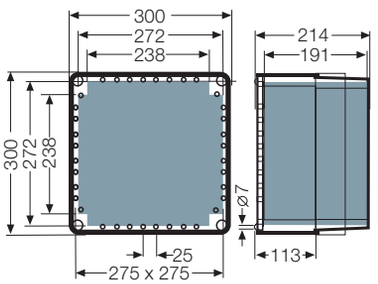
= usable installation space with mounted cable glands



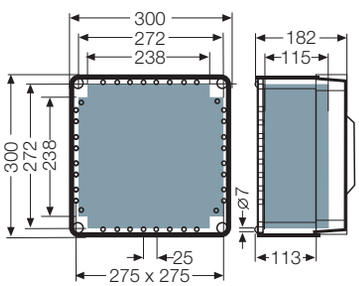
Mi 0100
Mi 0101
Mi 9100
Mi 9101



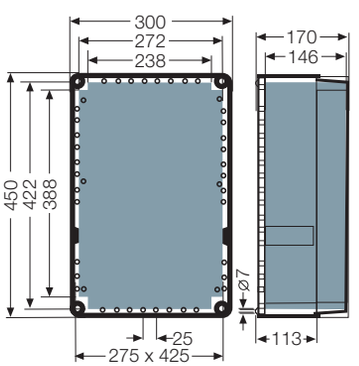
Mi 0200
Mi 0201
Mi 9200
Mi 9201



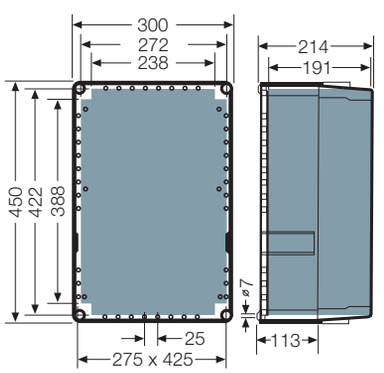
Mi 0210
Mi 0211
Mi 9210
Mi 9211



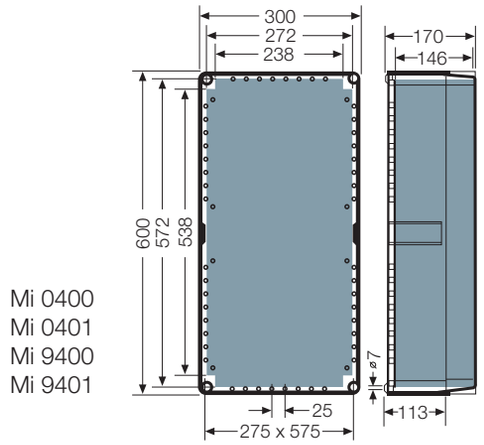
Mi 0220
Mi 0221



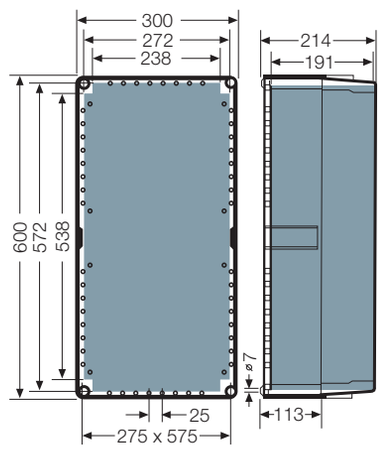
Mi 0300
Mi 0301
Mi 9310
Mi 9311



Mi 0310
Mi 0311
Mi 9310
Mi 9311

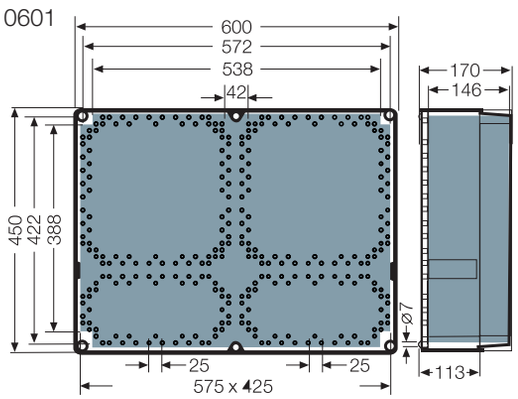


Mi 0400
Mi 0401
Mi 9400
Mi 9401

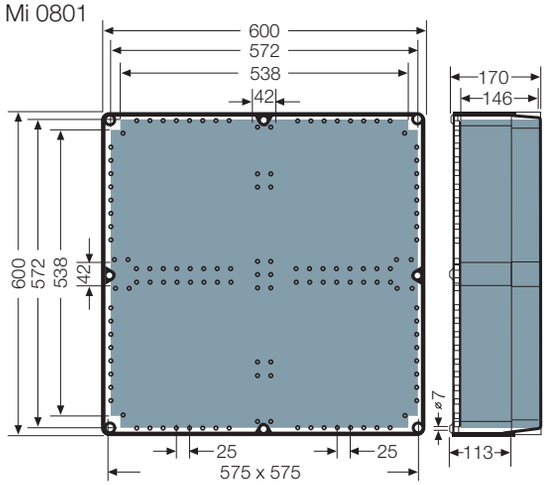


Mi 0410
Mi 0411
Mi 9410
Mi 9411

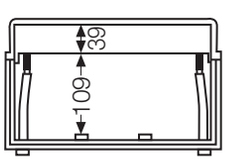
Mi 0600
Mi 0601



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).



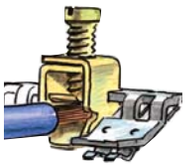
Mi Distribution Boards

Technical details
Terminals

PE und N FIXCONNECT®-Klemme

Rated connecting capacity of PE and N terminals

Current carrying capacity:
75 A

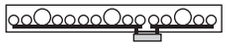
Clamping unit	Corresponding cross-sections / copper			
	max. number	from - to max.	max. number	from - to max.
 Screw-type terminal 25 mm²	1	25 mm², s	1	25 mm², f
	1	16 mm², s	1	16 mm², f
	1	10 mm², sol	1	10 mm², f
	3	6 mm², sol	1	6 mm², f
	3	4 mm², sol	1	4 mm², f
	4	2.5 mm², sol	1	2.5 mm², f
	4	1.5 mm², sol	1	1.5 mm², f
	Tested as connecting terminal for several conductors of the same cross-sections for using in one circuit			
 Plug-in terminal 4 mm²	1	1.5 - 4 mm², sol	1	1.5 - 4 mm², 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

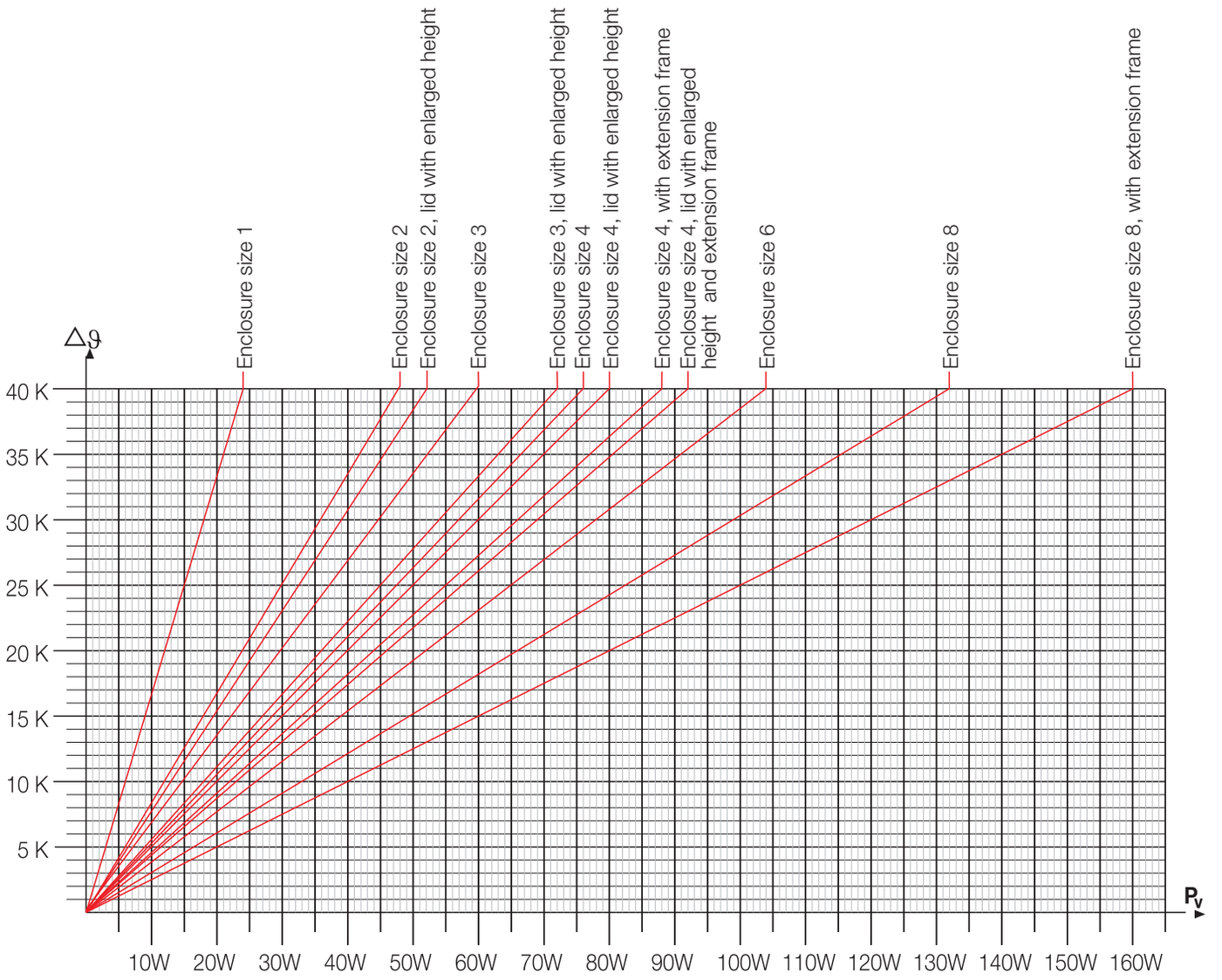
PE terminal

Number of modules	Mounted in Mi Circuit breaker boxes	PE terminal	
		up to 4 mm²	up to 25 mm²
24 (2-row)	Mi 1224 Mi 1220 Mi 1222	 12x4 mm²	2x25 mm²
36 (3-row) 48 (4-row)	Mi 1336 Mi 1333 Mi 1448 Mi 1444	 24x4 mm²	6x25 mm²

N terminal

Number of modules	Mounted in Mi Circuit breaker boxes	N terminal		
		up to 4 mm²	up to 25 mm²	plug-in jumper
24 (2-row)	Mi 1224 Mi 1220 Mi 1222	 12x4 mm²	3x25 mm²	
36 (3-row) 48 (4-row)	Mi 1336 Mi 1333 Mi 1448 Mi 1444	 24x4 mm²	6x25 mm²	

Temperature rise (Δϑ) 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 (ϑ_{imax}) 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) (ϑ_{imax}):	e.g. 55 °C
ambient temperature of the enclosure(s) (ϑ_U):	25 °C
maximally permissible heating up inside the enclosure:	$\Delta\vartheta = \vartheta_{umax} - \vartheta_U$ = 55 °C - 25 °C = 30 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 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 K; $\vartheta_i = \vartheta_U + \Delta\vartheta$ = 25 °C + 17 K = 42 °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.

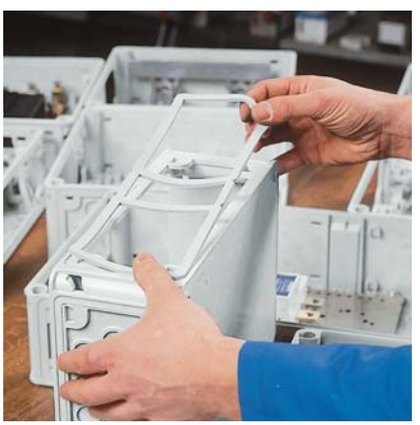
Assembly of boxes

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.

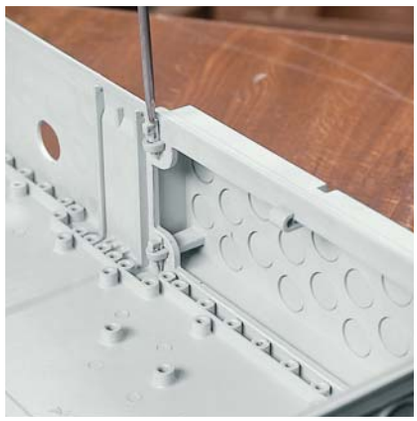


Mi Distribution Boards

Technical details
Flanges, cable entries

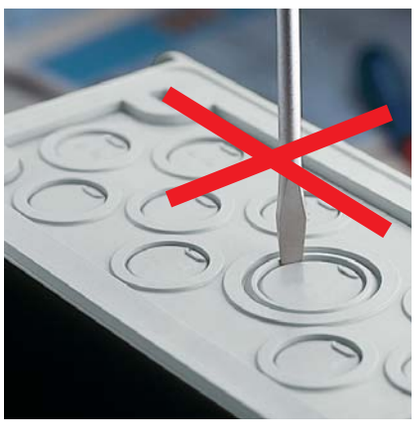
Flanges

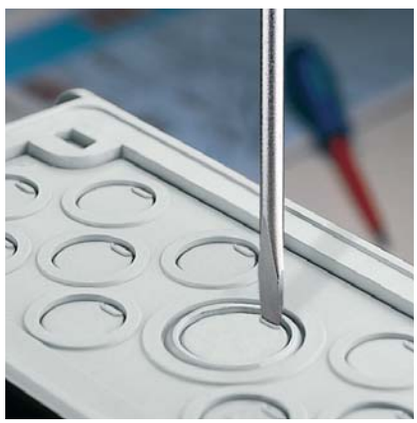
Attach flanges by means of 4 wedge links and 1 clamp to the box wall.



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.

Mi Distribution Boards

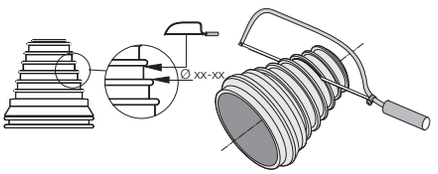
Technical details
Cable insertion / extension frame

Assembly of cable insertion

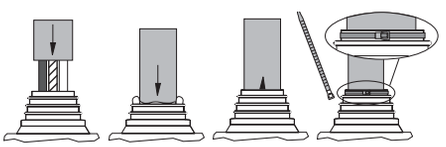
Knock out the respective box wall and saw out the upper box fin next to the wedge fastening.

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.

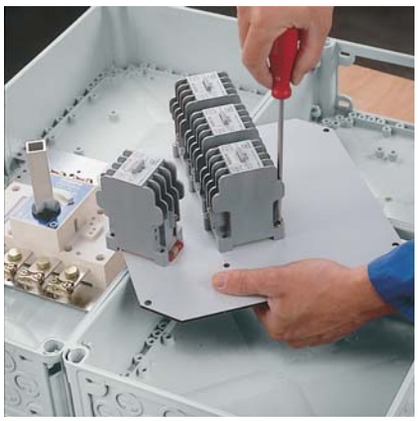
Right:
Place extension frame on base of enclosure.

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.

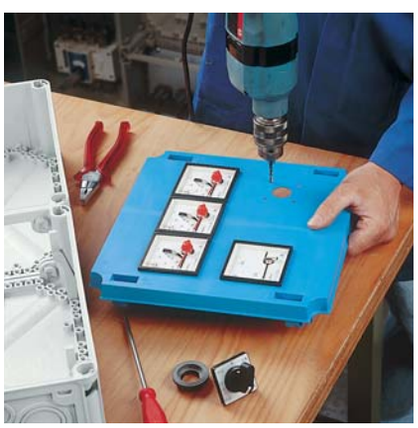
Screw mounting plate onto base of box.



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

Installaton 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.

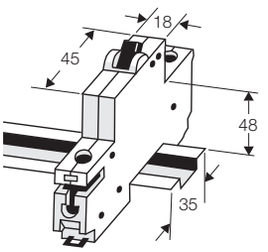
Device installation in circuit breaker boxes

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



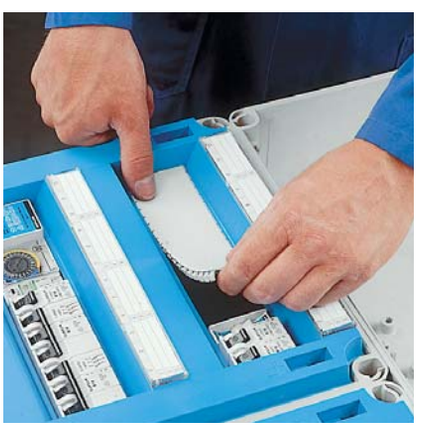
Dimensions according to DIN 43880 for DIN rail mounted device

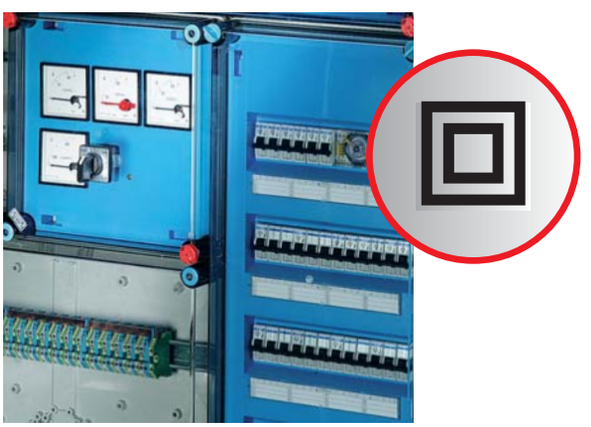
Protection covers

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)

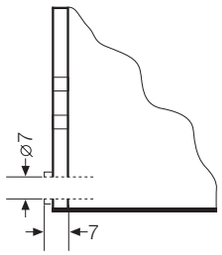




Mi Distribution Boards

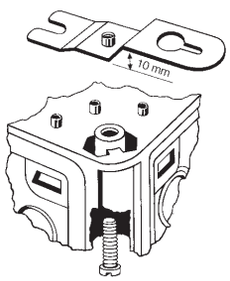
Technical details
Wall mounting, floor standing

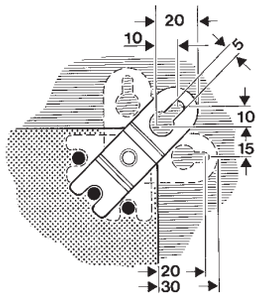
Wall mounting
directly through the base of the box



External brackets
for external box fixing

Mi AL 40 (4 brackets)



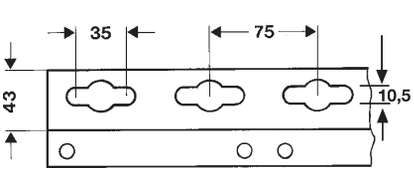


Mounting profile
for wall-mounted installation of Mi-Distribution boards, steel profile, 1950 mm long, dividable in the grid of 150 mm.

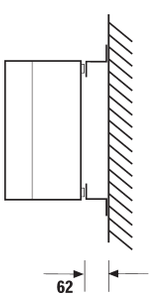
Mi MS 2

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.