Mi Power distribution boards up to 630 A

as power switchgear and controlgear assembly (PSC) in accordance with IEC 61 439 Part 1 and Part 2

- combinable enclosure system
- degree of protection IP 65; single boxes without flanges and components mounted in the lid IP 66
- made of high-quality thermoplastics
- protection class II, ⧈
- certified by ASTA

ENYGUIDE

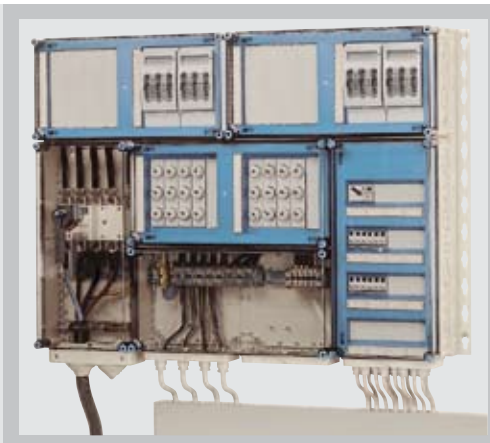
Design fast, simply, more clever

www.enyguide.eu

Assembly movie

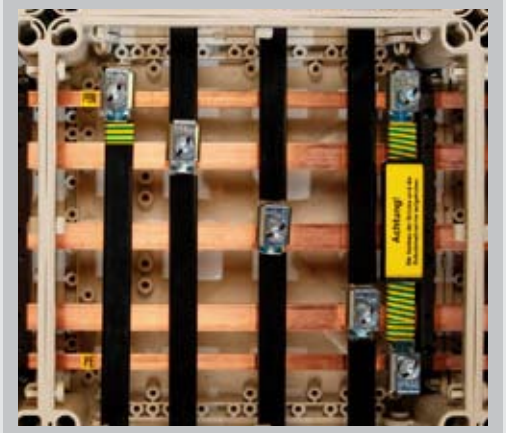
Mi Distribution boards
Contents

Additional information and planning assistance
(e.g. CAD parts libraries)
can be found on the digital catalogue
and online at www.hensel-electric.de



example

Degree of protection IP 65 dust-proof and water-proof.



EMC compliant busbar system

Mi system Farming for the application in ammonia-loaded atmosheres

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 61 439 Part 1 and 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 indoor and outdoor installation - harsh environment and /or outdoor.
  However the climatic influences and effects on the equipment are to be considered.

- Material: Thermoplastic
- Burning behaviour: Glow wire test in accordance with IEC 60 695-2-11, self-extinguishing, flame-retardant
- UV resistance:
  The material is examined for UV resistance and thereby suitable for the outdoor installation during UV effects.
- Toxic behaviour: silikone- and halogen-free
- Chemical resistance:
  resistant against acid, lye, benzene and mineral oil

- Enclosure system:
  Pre-assembled enclosures with standardised kits up to 630 A
- Covers made from thermoplastic
- Covers with protected and captive marking labels
- Operable devices and bus-mounted devices with protection cover

- As standard main busbar system EMC-compliant, with N/PEN conductor in the area of phase conductors and with the same current carrying capacity as the phase conductors.

EMV gerechte Sammelschienensysteme

- Cover plates for mounting electrical equipment
- 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 for the installation of devices that must be operated externally, such as plugs, pushbuttons and switches.
- Mi empty boxes and single empty boxes conform to the RoHS Directive 2002/95/EC

Mi Distribution boards for the application in ammonia-loaded atmosheres, for example in farming buildings, refer to special product information »Mi System Farming«.

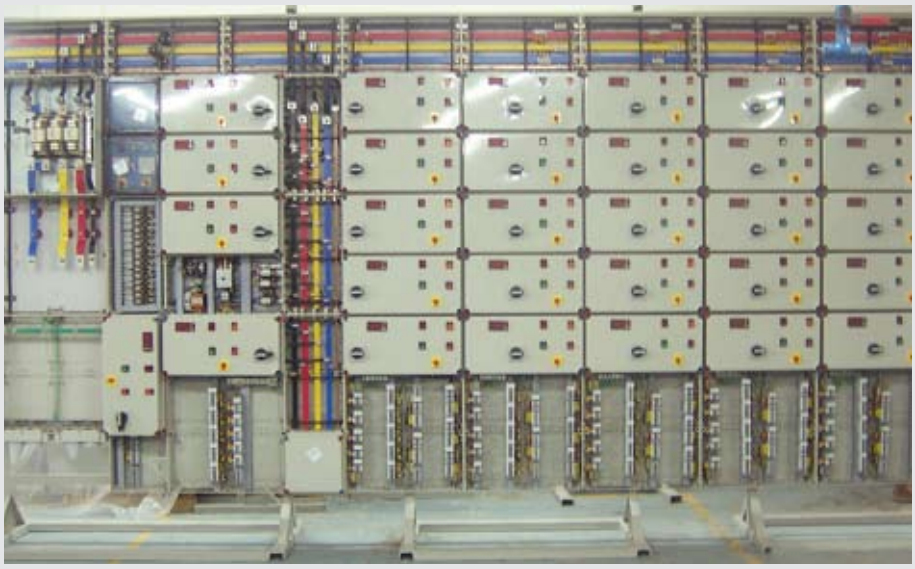
Tested and certified by ASTA

Key benefits

Material	Thermoplastic material
Corrosion-proof	yes
Degree of protection	IP 65 (dust proof, jet water proof)
Protection against mechanical impact	no lasting deformations, elastic
Weight	”light“
Subsequent handling (such as openings)	”easy“
Transparent doors / 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

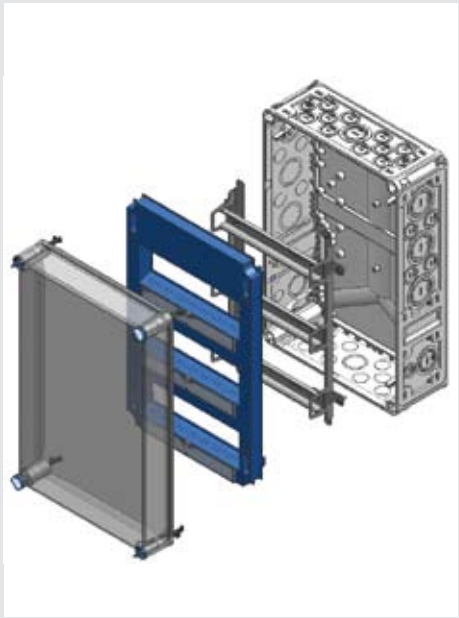
Suitable also for typical devices or the installation of armoured cables with earth connections

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.

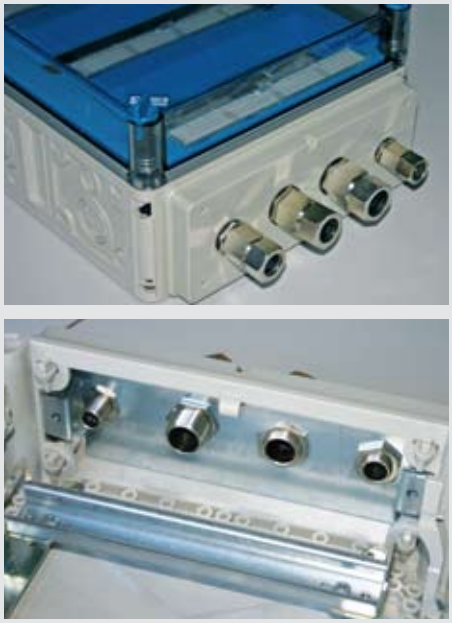


Application:
Removable DIN rail rack for integrated earth bounding in each Mi Circuit breaker box.

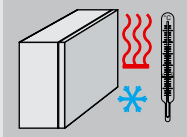
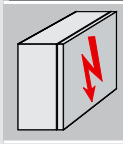
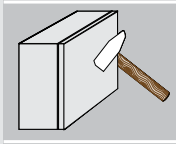
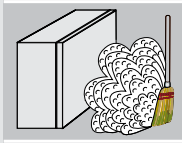
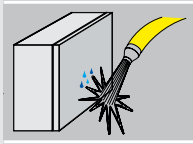
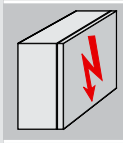
Cable entry for armoured cables via metal glands for earth connection according to British Standards.



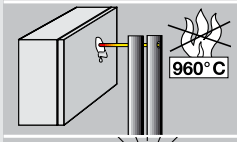
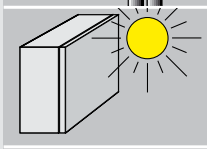
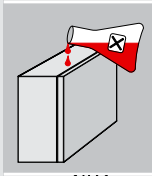
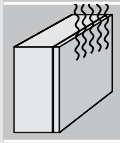
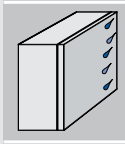
Integrated earth bounding in each circuit breaker box



Cable entry for armoured cables via metal glands

 **Ambient conditions**	Ambient temperature ■ for empty enclosures: - 25°C up to + 70° C ■ for distribution boards[1] in accordance with IEC 61 439: - 5°C up to + 35° C, max. + 40° C humidity: 50% at 40° C, 100% at 25° C [1] The rated insulation voltage is possibly reduced by the installed equipment technology.
 **Application area**	**The enclosures are suitable for the outdoor installation - harsh environment and / or outdoor.** However the climatic influences and effects on the equipment are to be considered.
 **Insulation**	Instulated enclosures (Protection class II) ⧈
 **Impact strength**	Degree of protection against mechanical load IK 08 (5 Joule) in accordance with IEC 62 262
 **Protection against froeign solid objects and direct contact**	Dust-proof Degree of protection IP **6**5
 **Protection against ingress of water with harmful effects**	Protected against water jets Degree of protection IP 6**5** Note: Single enclosures without any flanges and components mounted in the lid have degree of protection IP 66
 **Electrical parameters**	Rated current: 630 A Rated insulation voltage: AC 690 V, DC 1000 V*, IEC 60 664 * The rated insulation voltage is possibly reduced by the installed equipment technology

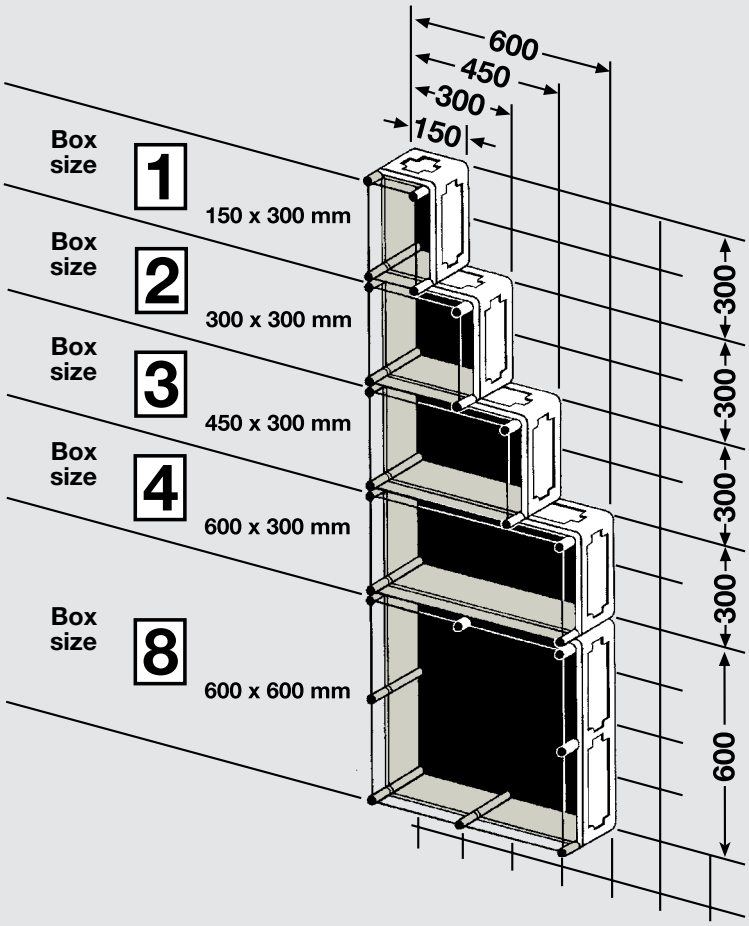
Dependent on the system

	Material: Thermoplastic
 **Burning behaviour**	Glow wire test 960°C in accordance with IEC 60 695-2-1, flame-retardant, self-extinguishing UL Subject 94, V-2
 **UV resistance**	The Material is examined and therefore qualified for the outdoor installation (harsh environment and / or outdoor) during direct sun radiation
 **Chemical resistance**	Resistance against acid 10% and lye 10%, petrol and mineral oil Mi system Farming also resistant against ammonia
 **Toxic behaviour**	Silicone- and halogen-free
 **Resistance to corrosion**	Resistant against humidity.

Dependent on material

Mi Distribution boards

- modular enclosure system in grid of 150 mm
- 5 enclosure sizes: 150 x 300 mm, 300 x 300 mm, 450 x 300 mm, 600 x 300 mm and 600 x 600 mm
- for the assembly of type-tested low-voltage switchgear assemblies up to 630 A
- Enclosures can be used as well as single boxes.




Mi Empty box


Mi Circuit breaker box


Mi KWH meter box


Mi HRC fuse boxes, sizes HRC 00, HRC 1, HRC 2, HRC 3, 3-pole


Mi HRC fuse boxes with fuse switch disconnector, sizes HRC 00, HRC 1, HRC 2, HRC 3, 3-pole


Mi HRC fuse boxes on busbars, Mi HRC fuse boxes with fuse switch disconnector with busbars, Mi busbar boxes up to 630 A


Mi isolator boxes, Mi MCCB circuit-breaker boxes with thermal and magnetic release up to 630 A


Empty boxes **with hinged lids**

Combinable and extendable in all directions

Application examples

Combinable and extendable in all directions

Application examples

Application with canopy

Mi empty boxes pages 256 - 259

Mi 0100
mounting dimensions
272x122x146 mm

Mi 0101
mounting dimensions
272x122x146 mm

Mi 0200
mounting dimensions
272x272x146 mm

Mi 0201
mounting dimensions
272x272x146 mm

Mi 0210
mounting dimensions
272x272x191 mm

Mi 0211
mounting dimensions
272x272x191 mm

Mi 0220
mounting dimensions
272x272x115 mm
hinged lid

Mi 0221
mounting dimensions
272x272x115 mm
hinged lid

Mi 0300
mounting dimensions
272x422x146 mm

Mi 0301
mounting dimensions
272x422x146 mm

Mi 0310
mounting dimensions
272x422x191 mm

Mi 0311
mounting dimensions
272x450x214 mm

Mi 0400
mounting dimensions
272x572x146 mm

Mi 0401
mounting dimensions
272x572x146 mm

Mi 0410
mounting dimensions
272x572x191 mm

Mi 0411
mounting dimensions
272x572x191 mm

Mi 0800
mounting dimensions
572x572x146 mm

Mi 0801
mounting dimensions
572x572x146 mm

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

Mi Circuit breaker boxes, pages 260 - 264, 268

Mi 1109
1x9x18 mm,
PE+N

Mi 1112
1x12x18 mm,
PE+N
Mi 1115
1x12x18 mm
without PE+N

Mi 1111
1x12x18 mm,
PE+N,
1 hinged flap
Mi 1117
1x12x18 mm,
without PE+N,
1 hinged flap

Mi 1224
2x12x18 mm,
PE+N
Mi 1225
2x12x18 mm
without PE+N

Mi 1222
2x12x18 mm,
PE+N,
2 hinged flaps
Mi 1227
2x12x18 mm,
without PE+N,
2 hinged flaps

Mi 1220
2x12x18 mm,
PE+N,
hinged lid
Mi 1226
2x12x18 mm
without PE+N,
hinged lid

Mi 1336
3x12x18 mm,
PE+N
Mi 1335
3x12x18 mm
without PE+N

Mi 1333
3x12x18 mm,
PE+N,
3 hinged flaps
Mi 1337
3x12x18 mm,
without PE+N,
3 hinged flaps

Mi 1448
4x12x18 mm,
PE+N

Mi 1444
4x12x18 mm,
PE+N,
4 hinged flaps
Mi 1445
4x12x18 mm,
without PE+N,
4 hinged flaps

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

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

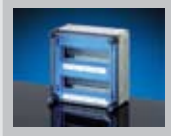
Mi 1281
for miniature circuit-breakers (MCB),
1x6x18 mm, PEN

Circuit breaker boxes for the installation of DIN rail equipment in accordance with DIN 43 880 from 9 to 84 modules. Unused DIN rail openings in covers are stripped with attached blanking strips.

Mi Circuit breaker boxes
with removable DIN rail rack for earth connection (BS),
pages 261, 265 - 267

Mi 1118
1x12x18 mm
without PE+N

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



Mi 1228
2x12x18 mm
without PE+N

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

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

Mi 1338
3x12x18 mm
without PE+N

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

Mi 1446
3x12x18 mm,
without PE+N

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

Mi 1456
2x28x18 mm,
without PE+N

Mi 1455
2x28x18 mm
without PE+N

Mi 1884
3x28x18 mm,
without PE+N

Mi 1885
3x28x18 mm
without PE+N

Removable DIN rail rack
e.g. for earth connection

Circuit breaker boxes for the installation of DIN rail equipment in accordance with DIN 43 880 from 9 to 84 modules. Unused DIN rail openings in covers are stripped with attached blanking strips. With earth connection.

Mi KWH meter boxes, pages 269 - 271

Mi 2200
max. installation
depth 146 mm

Mi 2300
max. installation
depth 146 mm

Mi 2312
with support for
1 electronic
consumer meter
(eHz)

new

Mi 2310
max. installation
depth 190 mm

Mi 2313
with support for
2 electronic
consumer meter
(eHz)

new

Mi 2400
max. installation
depth 146 mm

Mi 2413
max. installation
depth 190 mm,
+ KWH meter
window flap,
sealable

Mi 2410
max. installation
depth 190 mm

Mi 2420
max. installation
depth 146 mm,
+ hinged flap

Mi 2800
max. installation
depth 146 mm

Mi 2820
max. installation
depth 146 mm,
+ hinged flap

KWH meter boxes for the use in unmetered area after consultation with local power supply companies. With installed KWH meter support and meter fixing screws. Meter boxes sealable.

Mi HRC fuse boxes,
pages 273 - 274

Mi 4150
1xHRC 00, 125 A
new

Mi 4205
1xHRC 00, 125 A
new

Mi 4250
2xHRC 00, 125 A
new

Mi 4350
3xHRC 00, 125 A
new

Mi 4451
1xHRC 1, 250 A
new

Mi 4452
1xHRC 2, 400 A
new

with fuse bases, 3-pole

PE and N terminals

Mi HRC fuse boxes with fuse switch disconnector,
pages 275 - 276

Mi 5150
3-pole + PE + N
1xHRC 00, 125 A
new

Mi 5250
3-pole + PE + N
1xHRC 00, 125 A
new

Mi 5260
4-pole + PE
1xHRC 00, 125 A
new

Mi 5451
3-pole + PE + N
1xHRC 1, 250 A
new

Mi 5452
3-pole + PE + N
1xHRC 2, 400 A
new

Mi 5853
3-pole + PE + N
1xHRC 3, 630 A
new

Mi 5860
4-pole + PE
1xHRC 3, 630 A
new

with fuse switch disconnector, 3- and 4-pole

PE and N terminals

Mi HRC fuse boxes with busbar system,
pages 277 - 278

Mi 6212
1xHRC 00, 250 A
Mi 6213
1xHRC 00, 400 A
Mi 6214
1xHRC 00, 630 A

Mi 6422
2xHRC 00, 250 A
Mi 6423
2xHRC 00, 400 A
Mi 6424
2xHRC 00, 630 A

Mi 6432
3xHRC 00, 250 A
Mi 6433
3xHRC 00, 400 A
Mi 6434
3xHRC 00, 630 A

Mi 6461
4xHRC 00, 250 A
Mi 6462
4xHRC 00, 400 A
Mi 6463
4xHRC 00, 630 A

Mi 6474
1xHRC 1, 400 A
Mi 6475
1xHRC 1, 630 A

Mi 6476
1xHRC 2, 400 A
Mi 6477
1xHRC 2, 630 A

with fuse bases, 3-pole

As standard main busbar system EMC compliant, with N/PEN conductor in the area of phase conductors and with the same current carrying capacity as the phase conductors.

PE and N terminals

Mi HRC fuse box with fuse switch disconnector and busbar system
pages 279 - 280

Mi 6226
1xHRC 00, 250 A
Mi 6227
1xHRC 00, 400 A
Mi 6228
1xHRC 00, 630 A

Mi 6426
2xHRC 00, 250 A
Mi 6427
2xHRC 00, 400 A
Mi 6428
2xHRC 00, 630 A

Mi 6436
3xHRC 00, 250 A
Mi 6437
3xHRC 00, 400 A
Mi 6438
3xHRC 00, 630 A

Mi 6465
4xHRC 00, 250 A
Mi 6466
4xHRC 00, 400 A
Mi 6467
4xHRC 00, 630 A

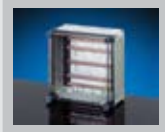
Mi 6478
1xHRC 1, 400 A
Mi 6479
1xHRC 1, 630 A

with fuse switch disconnector, 3-pole

As standard main busbar system EMC compliant, with N/PEN conductor in the area of phase conductors and with the same current carrying capacity as the phase conductors.

PE and N terminals

Mi busbar boxes,
pages 281 - 283



Mi 6252 250 A
Mi 6255 400 A
Mi 6256 630 A

Mi 6352 250 A
Mi 6355 400 A
Mi 6356 630 A

Mi 6457 250 A
Mi 6458 400 A
Mi 6459 630 A

Mi 6452 250 A
Mi 6455 400 A
Mi 6456 630 A

Mi 6856 630 A

Mi 6202 250 A
+ busbar adapter for miniature circuit-breakers (MCB)
Mi 6204 400 A
+ busbar adapter for miniature circuit-breakers (MCB)
Mi 6206 630 A
+ busbar adapter for miniature circuit-breakers (MCB)

Mi 6202 250 A
+ busbar adapter for miniature circuit-breakers (MCB)
Mi 6204 400 A
+ busbar adapter for miniature circuit-breakers (MCB)
Mi 6206 630 A
+ busbar adapter for miniature circuit-breakers (MCB)

Busbar boxes for combination with Mi fuse boxes

Busbar boxes for combination without feed-in terminals.
As standard main busbar system EMC compliant, with N/PEN conductor in the area of phase conductors and with the same current carrying capacity as the phase conductors.

Mi Isolator boxes , pages 284 - 287

Mi 7103
63 A, 3-pole + PE + N,
switch disconnector
Mi 7104
63 A, **4-pole + PE**,
switch disconnector

Mi 7213
100 A, 3-pole + PE + N,
switch disconnector

Mi 7214
100 A, **4-pole + PE**,
switch disconnector

Mi 7256
160 A, 3-pole + PE + N,
switch disconnector

Mi 7257
160 A, **4-pole + PE**,
switch disconnector

Mi 7456
160 A, 3-pole + PE + N
switch disconnector

Mi 7457
160 A, **4-pole + PE**
switch disconnector

Mi 7455
250 A, 3-pole + PE + N
switch disconnector

Mi 7454
250 A, **4-pole + PE**
Lasttrennschalter

Mi 7445
400 A
3-pole + PE + N
switch disconnector

Mi 7846
400 A
4-pole + PE
switch disconnector

Mi 7865
630 A
3-pole + PE + N
switch disconnector

Mi 7866
630 A
4-pole + PE
switch disconnector

with switch disconnectors

Isolator boxes with built-in switch disconnectors.
Switch disconnectors in accordance with IEC 60 947-3, with PE and N terminals, lockable handles.

Mi change-over switch boxes (I-0-II),
pages 291

Mi 7481
160 A
4-pole + PE
changeover switch

Mi 7882
250 A
4-pole + PE
changeover switch

with change-over switches

Change-over switches in accordance with IEC 60 947-3, with PE terminals, lockable handles.

Mi MCCB circuit-breaker boxes,
pages 292 - 293

Mi 7431
128-160 A
circuit-breaker

Mi 7432
200-250 A
circuit-breaker

Mi 7434
160-400 A
circuit-breaker

Mi 7836
250-630 A
circuit-breaker

with MCCB circuit-breakers

MCCB circuit-breaker boxes with circuit-breaker in accordance with IEC 60 947-2,
MCCB with overload and short-circuit release, with PE and N terminals,
lockable handles.

Connection Box,
pages 302

Mi CB 10

Mi Connection Box for attachment to 300 mm box walls.
For built-in equipment, that must be operated externally, such as plug devices, pushbuttons and switches.
Hinged mounting area for an easy assembly.

Mi Empty boxes with hinged lids, pages 298 - 299

Mi 9100
mounting dimensions 122x272x146 mm, hinged lid

Mi 9101
mounting dimensions 122x272x146 mm, hinged lid

Mi 9200
mounting dimensions 272x272x146 mm, hinged lid

Mi 9201
mounting dimensions 272x272x146 mm, hinged lid

Mi 9210
mounting dimensions 272x272x191 mm, hinged lid

Mi 9211
mounting dimensions 272x272x191 mm, hinged lid

Mi 9300
mounting dimensions 272x422x146 mm, hinged lid

Mi 9301
mounting dimensions 272x422x146 mm, hinged lid

Mi 9310
mounting dimensions 272x422x191 mm, hinged lid

Mi 9311
mounting dimensions 272x422x191 mm, hinged lid

Mi 9400
mounting dimensions 272x572x146 mm, hinged lid

Mi 9401
mounting dimensions 272x572x146 mm, hinged lid

Mi 9410
mounting dimensions 272x572x191 mm, hinged lid

Mi 9411
mounting dimensions 272x572x191 mm, hinged lid

Empty boxes with hinged lids trilaterally combinable.
The lid keeps permanently connected to the box.
Easy to operate equipment and meterings can be comfortably managed ambidextrous.

Mi Distribution boards

Empty boxes with transparent lid

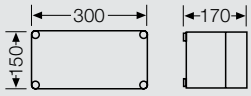
- lid fasteners for tool operation
- please order DIN rails, mounting plates or covers additionally

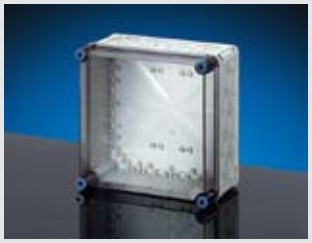
- material: thermoplastic
- colour grey, RAL 7032
- degree of protection: IP 65

Mi empty boxes conform to the RoHS Directive 2002/95/EC, for more information refer to technical data

Mi 0100 **box size 1**

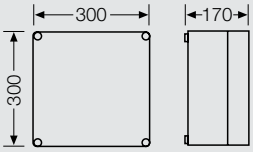
max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm

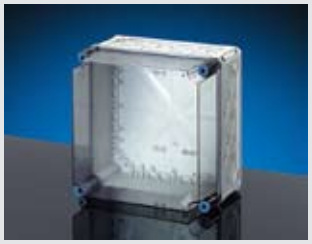




Mi 0200 **box size 2**

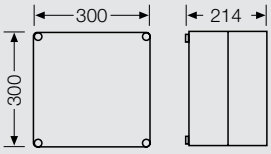
max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm

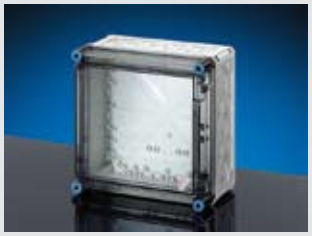




Mi 0210 **box size 2**

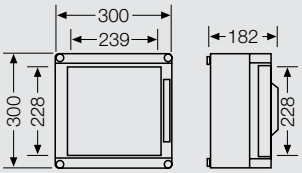
max. installation depth
with built-in mounting plate 191 mm
with built-in DIN rail 180 mm

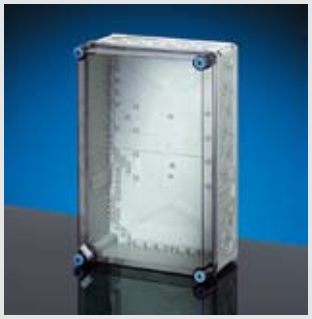




Mi 0220 **box size 2**

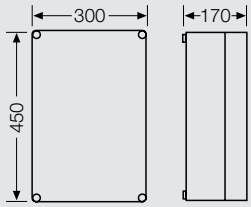
max. installation depth
with built-in mounting plate 115 mm
with built-in DIN rail 104 mm
with hinged lid for built-in equipment with protection cover which must be operated

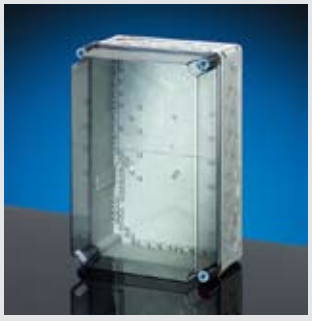




Mi 0300 **box size 3**

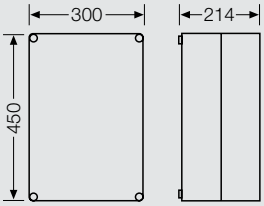
max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm



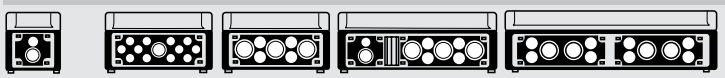


Mi 0310 **box size 3**

max. installation depth
with built-in mounting plate 191 mm
with built-in DIN rail 180 mm



Box walls with metric cable entry:



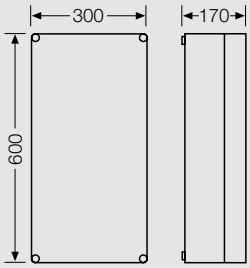
Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

- lid fasteners for tool operation
- please order DIN rails, mounting plates or covers additionally
- material: thermoplastic
- colour grey, RAL 7032
- degree of protection: IP 65

Mi empty boxes conform to the RoHS Directive 2002/95/EC, for more information refer to technical data

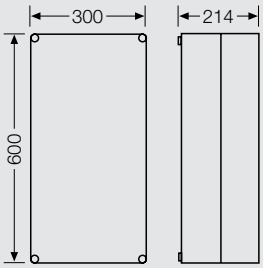
Mi 0400 **box size 4**

max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm



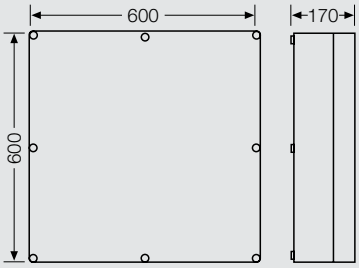
Mi 0410 **box size 4**

max. installation depth
with built-in mounting plate 191 mm
with built-in DIN rail 180 mm

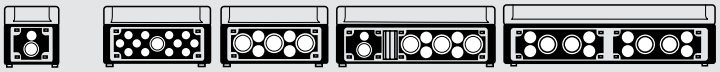


Mi 0800 **box size 8**

max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm
cable entry only possible via flange



Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

Mi Distribution boards

Empty boxes with opaque lid

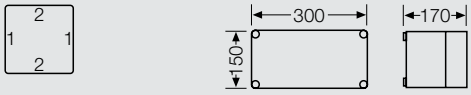
- lid fasteners for tool operation
- please order DIN rails, mounting plates or covers additionally

- material: thermoplastic
- colour grey, RAL 7032
- degree of protection: IP 65

Mi empty boxes conform to the RoHS Directive 2002/95/EC, for more information refer to technical data

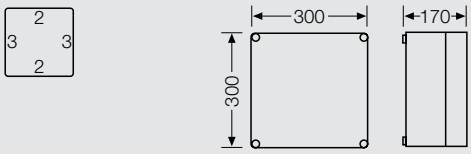
Mi 0101 **box size 1**

max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm



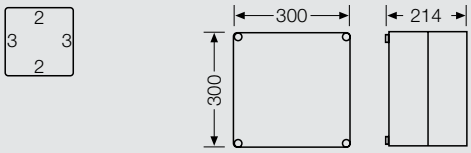
Mi 0201 **box size 2**

max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm



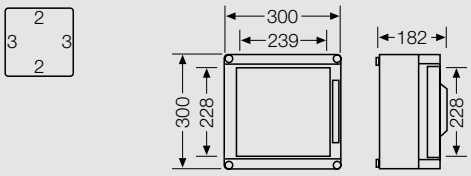
Mi 0211 **box size 2**

max. installation depth
with built-in mounting plate 191 mm
with built-in DIN rail 180 mm



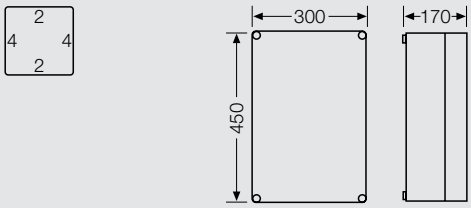
Mi 0221 **box size 2**

max. installation depth
with built-in mounting plate 115 mm
with built-in DIN rail 104 mm
with hinged lid for built-in equipment with protection cover which must be operated



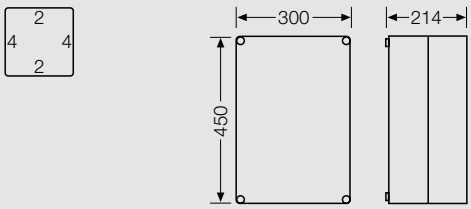
Mi 0301 **box size 3**

max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm

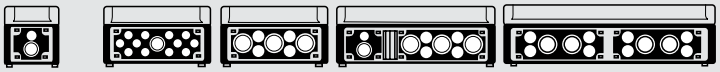


Mi 0311 **box size 3**

max. installation depth
with built-in mounting plate 191 mm
with built-in DIN rail 180 mm



Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

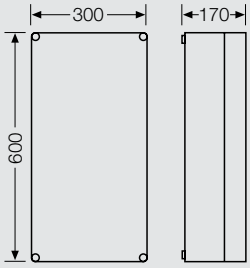
- lid fasteners for tool operation
- please order DIN rails, mounting plates or covers additionally

- material: thermoplastic
- colour grey, RAL 7032
- degree of protection: IP 65

Mi empty boxes conform to the RoHS Directive 2002/95/EC, for more information refer to technical data

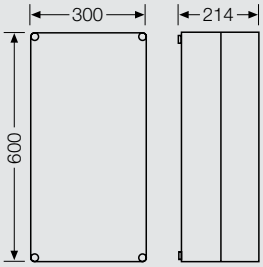
Mi 0401 **box size 4**

max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm



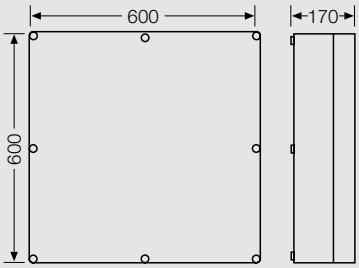
Mi 0411 **box size 4**

max. installation depth
with built-in mounting plate 191 mm
with built-in DIN rail 180 mm

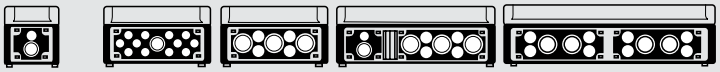


Mi 0801 **box size 8**

max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm
cable entry only possible via flange



Box walls with metric cable entry:

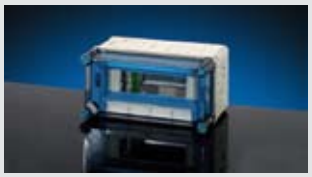


Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

Mi Distribution boards

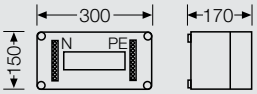
Circuit-breaker boxes
for installation of DIN rail equipment in accordance with DIN 43 880

- **with PE and N for copper conductors**
- lid fasteners for hand operation
- with blanking strips for unused DIN rail openings
- material: thermoplastic
- colour grey, RAL 7032
- degree of protection: IP 65



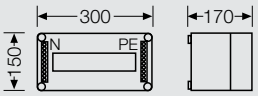
Mi 1109 — **9 modules: 1 x 9 x 18 mm**

1-row
FIXCONNECT® terminal technology for PE and N
PE+N x cross section
2 x 25 mm², Cu
8 x 4 mm², Cu



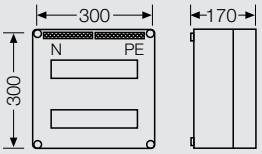
Mi 1112 — **12 modules: 1 x 12 x 18 mm**

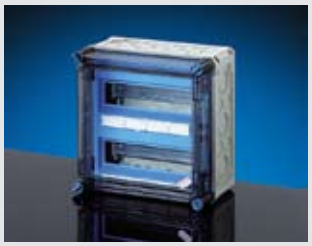
1-row
with PE and N screw-type terminals for copper conductors
PE+N x cross section
10 x 16 mm², Cu



Mi 1224 — **24 modules: 2 x 12 x 18 mm**

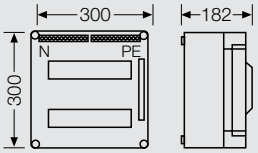
2-row
FIXCONNECT® terminal technology for PE and N
disconnectable N-potentials in one bar
PE+N x cross section
3 x 25 mm², Cu
12 x 4 mm², Cu





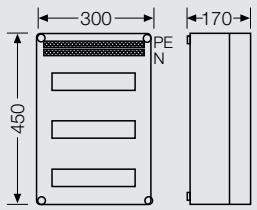
Mi 1220 — **24 modules, 2 x 12 x 18 mm**

2-row
with hinged lid
FIXCONNECT® terminal technology for PE and N
disconnectable N-potentials in one bar
PE+N x cross section
3 x 25 mm², Cu
12 x 4 mm², Cu



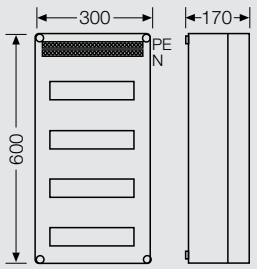
Mi 1336 — **36 modules, 3 x 12 x 18 mm**

3-row
FIXCONNECT® terminal technology for PE and N
disconnectable N-potentials in one bar
PE+N x cross section
6 x 25 mm², Cu
24 x 4 mm², Cu

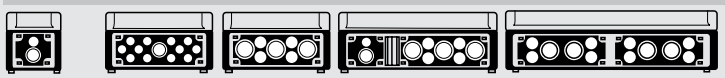


Mi 1448 — **48 modules, 4 x 12 x 18 mm**

4-row
FIXCONNECT® terminal technology for PE and N
disconnectable N-potentials in one bar
PE+N x cross section
6 x 25 mm², Cu
24 x 4 mm², Cu



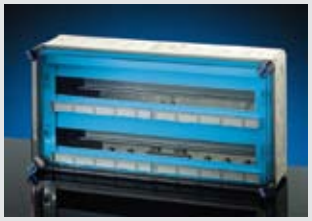
Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

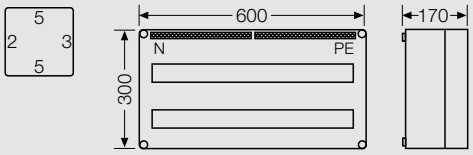
Mi Distribution boards ⧈
Circuit-breaker boxes
for installation of DIN rail equipment in accordance with DIN 43 880

- **with removable DIN rail rack for earth connection**
- **with PE and N for copper conductors**
- lid fasteners for hand operation
- with blanking strips for unused DIN rail openings
- material: thermoplastic
- colour grey, RAL 7032
- degree of protection: IP 65



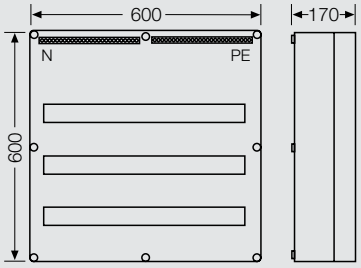
Mi 1456 — **56 modules: 2 x 28 x 18 mm**

2-row
with removable DIN rail rack and earth connection
FIXCONNECT® terminal technology for PE and N
disconnectable N-potentials in one bar
PE+N
6 x 25 mm², Cu
24 x 4 mm², Cu



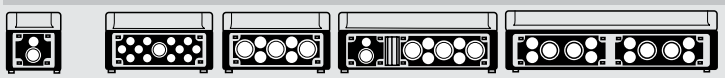
Mi 1884 — **84 modules: 3 x 28 x 18 mm**

3-row
with removable DIN rail rack and earth connection
FIXCONNECT® terminal technology for PE and N
disconnectable N-potentials in one bar
PE+N
6 x 25 mm², Cu
24 x 4 mm², Cu
cable entry only possible via flanges



Removable DIN rail rack for earth connection

Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

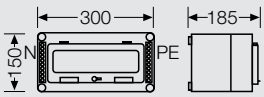
Mi Distribution boards

Circuit-breaker boxes
for installation of DIN rail equipment in accordance with DIN 43 880

- **with PE and N for copper conductors**
- lid fasteners for hand operation
- with blanking strips for unused DIN rail openings
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65

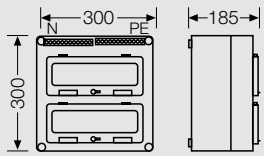
Mi 1111 — **12 modules: 1 x 12 x 18 mm**

1-row
mit 1 hinged flap
hinged flap lockable with accessories
with screw-type terminals for PE/N, for copper conductors
PE+N x cross section
10 x 16 mm², Cu



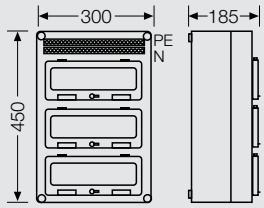
Mi 1222 — **24 modules: 2 x 12 x 18 mm**

2-row
with 2 hinged flaps
hinged flap lockable with accessories
FIXCONNECT® terminal technology for PE and N
disconnectable N-potentials in one bar
PE+N x cross section
3 x 25 mm², Cu
12 x 4 mm², Cu



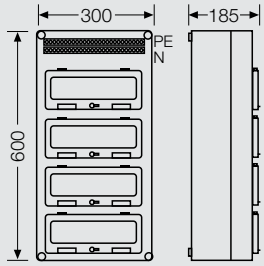
Mi 1333 — **36 modules: 3 x 12 x 18 mm**

3-row
with 3 hinged flaps
hinged flap lockable with accessories
FIXCONNECT® terminal technology for PE and N
disconnectable N-potentials in one bar
PE+N x cross section
6 x 25 mm², Cu
24 x 4 mm², Cu

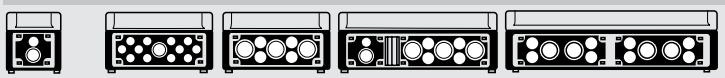


Mi 1444 — **48 modules: 4 x 12 x 18 mm**

4-row
with 4 hinged flaps
hinged flap lockable with accessories
FIXCONNECT® terminal technology for PE and N
disconnectable N-potentials in one bar
PE+N x cross section
6 x 25 mm², Cu
24 x 4 mm², Cu



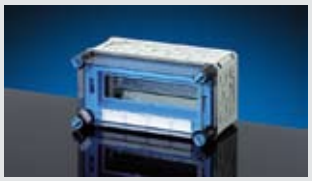
Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

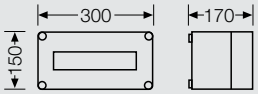
Mi Distribution boards ⧈
Circuit-breaker boxes
for installation of DIN rail equipment in accordance with DIN 43 880

- **without PE and N for copper conductors**
- lid fasteners for hand operation
- with blanking strips for unused DIN rail openings
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65



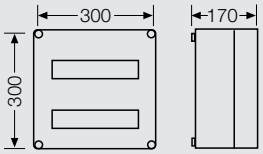
Mi 1115 **12 modules: 1 x 12 x 18 mm**

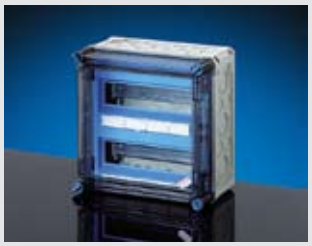
1-row



Mi 1225 **24 modules: 2 x 12 x 18 mm**

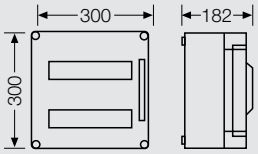
2-row





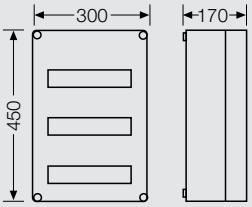
Mi 1226 **24 modules: 2 x 12 x 18 mm**

2-row
with hinged lid



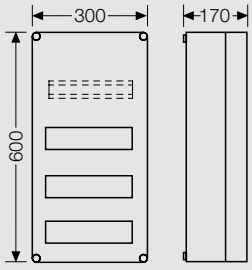
Mi 1335 **36 modules: 3 x 12 x 18 mm**

3-row

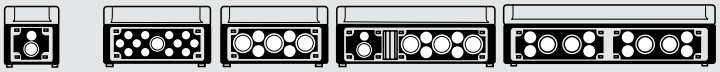


Mi 1440 **36 modules: 3 x 12 x 18 mm**

4-row
with 1 DIN rail 216 mm wide
(for installation depth of 72 mm)



Box walls with metric cable entry:



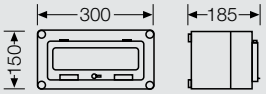
Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

Mi Distribution boards ⧈
Circuit-breaker boxes
for installation of DIN rail equipment in accordance with DIN 43 880

- **without PE and N for copper conductors**
- lid fasteners for hand operation
- with blanking strips for unused DIN rail openings
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65

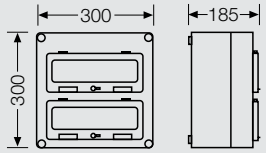
Mi 1117 — **12 modules: 1 x 12 x 18 mm**

1-row
mit 1 hinged flap
hinged flap lockable with accessories



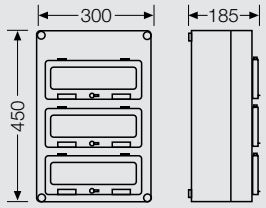
Mi 1227 — **24 modules: 2 x 12 x 18 mm**

2-row
with 2 hinged flaps
hinged flap lockable with accessories



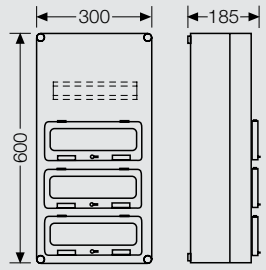
Mi 1337 — **36 modules: 3 x 12 x 18 mm**

3-row
with 3 hinged flaps
hinged flap lockable with accessories



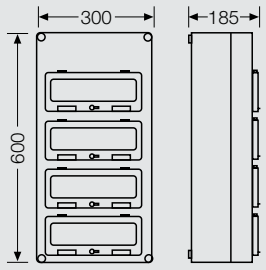
Mi 1443 — **36 modules: 3 x 12 x 18 mm**

4-row
with 3 hinged flaps
hinged flap lockable with accessories
with 1 DIN rail 216 mm wide
(for installation depth of 72 mm)

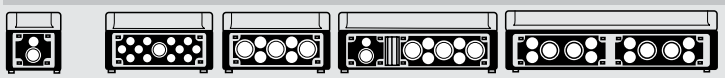


Mi 1445 — **48 modules: 4 x 12 x 18 mm**

4-row
with 4 hinged flaps
hinged flap lockable with accessories



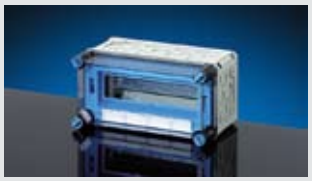
Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

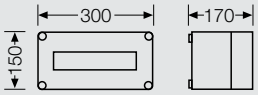
Mi Distribution boards ⧈
Circuit-breaker boxes
for installation of DIN rail equipment in accordance with DIN 43 880

- **with removable DIN rail rack for earth connection**
- without PE and N terminal
- lid fasteners for hand operation
- with blanking strips for unused DIN rail openings
- material: thermoplastic
- colour grey, RAL 7032
- degree of protection IP 65



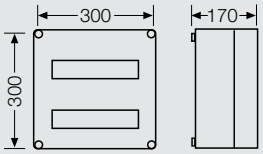
Mi 1118 **12 modules, 1 x 12 x 18 mm**

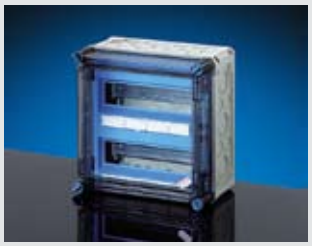
1-row



Mi 1228 **24 modules, 2 x 12 x 18 mm**

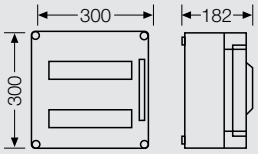
2-row





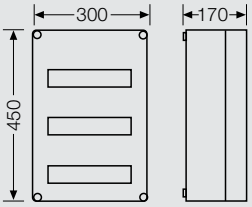
Mi 1221 **24 modules, 2 x 12 x 18 mm**

2-row
with hinged lid



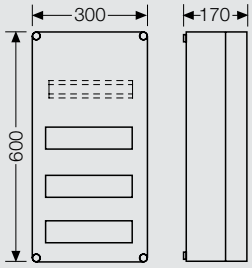
Mi 1338 **36 modules, 3 x 12 x 18 mm**

3-row



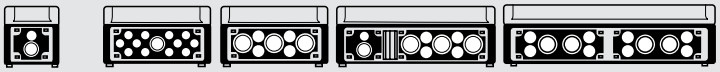
Mi 1446 **36 modules, 3 x 12 x 18 mm**

4-row
with 1 DIN rail 216 mm wide (for installation depth of 72 mm)



Removable DIN rail rack for earth connection

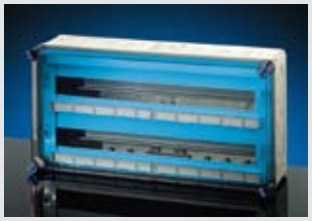
Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

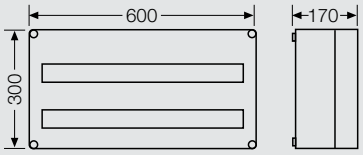
Mi Distribution boards ⧈
Circuit-breaker boxes
for installation of DIN rail equipment in accordance with DIN 43 880

- **with removable DIN rail rack for earth connection**
- **without PE and N for copper conductors**
- lid fasteners for hand operation
- with blanking strips for unused DIN rail openings
- material: thermoplastic
- colour grey, RAL 7032
- degree of protection: IP 65



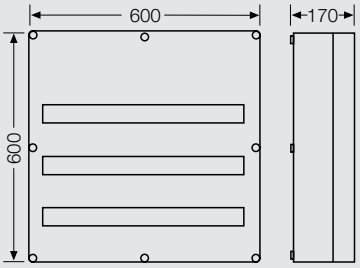
Mi 1455 — **56 modules: 2 x 28 x 18 mm**

2-row
with removable DIN rail rack
for earth connection



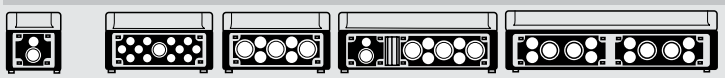
Mi 1885 — **84 modules: 3 x 28 x 18 mm**

3-row
with removable DIN rail rack
for earth connection
cable entry only possible via flanges



Removable
DIN rail rack
for earth
connection

Box walls with metric cable entry:



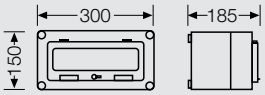
Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

Mi Distribution boards ⧈
Circuit-breaker boxes
for installation of DIN rail equipment in accordance with DIN 43 880

- **with removable DIN rail rack for earth connection**
- **without PE and N terminal**
- lid fasteners for hand operation
- with blanking strips for unused DIN rail openings
- material: thermoplastic
- colour grey, RAL 7032
- degree of protection IP 65

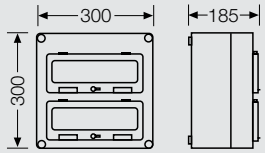
Mi 1119 **12 modules, 1 x 12 x 18 mm**

1-row
with 1 hinged flap



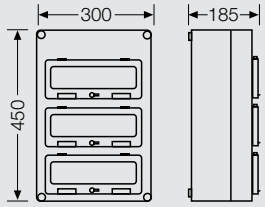
Mi 1229 **24 modules, 2 x 12 x 18 mm**

2-row
with 2 hinged flaps



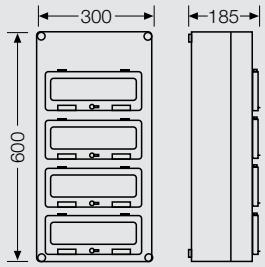
Mi 1339 **36 modules, 3 x 12 x 18 mm**

3-row
with 3 hinged flaps



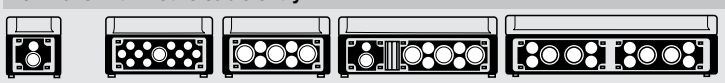
Mi 1449 **48 modules, 4 x 12 x 18 mm**

4-row
with 4 hinged flaps



Removable DIN rail rack for earth connection

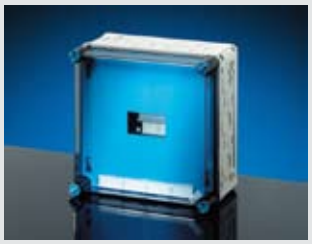
Box walls with metric cable entry:



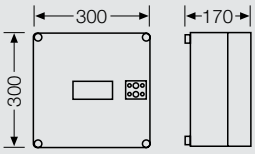
Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

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

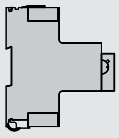
- lid fasteners for hand operation
- with 1-pole main branch terminal for copper conductors
- protection cover can be sealed, with lockable cover strip
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65



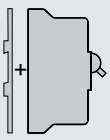
Mi 1281	6 modules: 1 x 6 x 18 mm
	1-row PEN number and cross-section 1 x 25 mm², Cu 2 x 16 mm², Cu



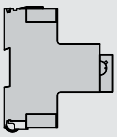
Note:
Prepared for the installation of currently commercially available miniature circuit-breakers (MDB)



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

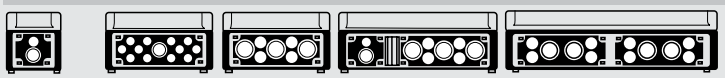


for example
ABB Type S 701/S 703
+ adapter for DIN rail
S 700 BT3
(1 pc. for S 701, 2 pc. for S 703)
SHU (voltage dependent)



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

Box walls with metric cable entry:

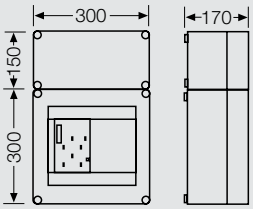


Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

- lid fasteners for tool operation
- can be sealed twice
- **use in unmetered area after consultation with local power supply companies**
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65

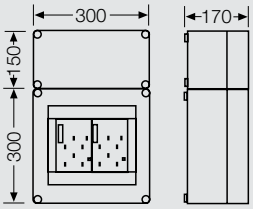
Mi 2312 **new**

with BKE-I meter panel and support for
1 electronic consumer meter (eHz)
max. mounting depth 108 mm
connection cable length:
incoming: 4 x 1000 mm
outgoing: 3 x 1000 mm
protection cover can be sealed



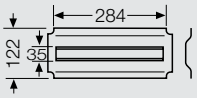
Mi 2313 **new**

with BKE-I meter panel and support for
2 electronic consumer meters (eHz)
max. mounting depth 108 mm
connection cable length:
incoming: 4 x 1000 mm
outgoing: 3 x 1000 mm
protection cover can be sealed

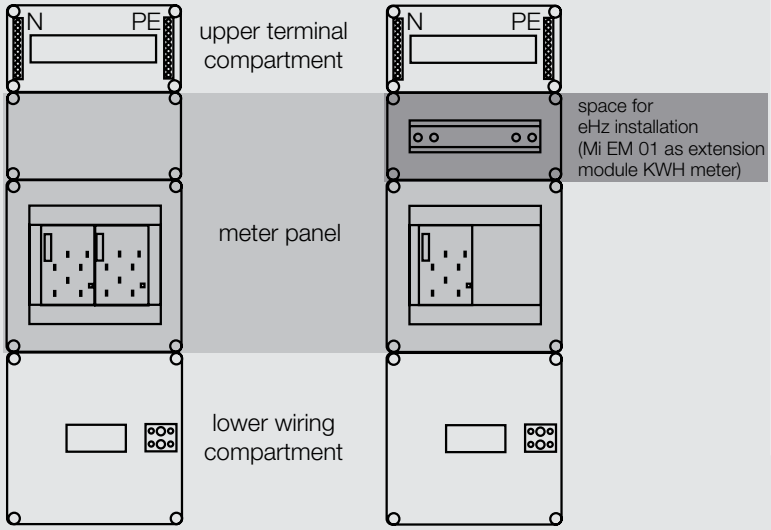


Mi EM 01 **extension module KWH meter (eHZ)** **new**

DIN rail in accordance with DIN EN 60 715
for the installation of interfaces to data communication of the metering point (KWh meter)
with protection cover for KWH meter wiring
for retrofitting in top enclosure of Mi 2312 and Mi 2313
mounting depth: 100 mm

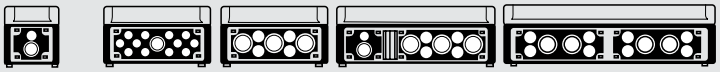


Design of a measuring and supply unit in accordance with DIN 43 870 for meter panels



KWH meter box with electronic consumer meter (eHz) and extension module KWH meter

Box walls with metric cable entry:



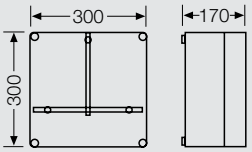
Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

Mi Distribution boards
KWH meter boxes

- lid fasteners for tool operation
- can be sealed twice
- **use in unmetered area after consultation with local power supply companies**
- material: thermoplastic
- colour: grey, RAL 7032

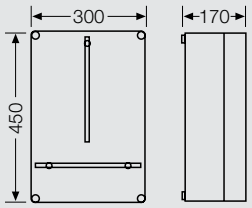
Mi 2200

max. installation depth 146 mm
degree of protection: IP 65
with installed KWH meter support and meter fixing screws



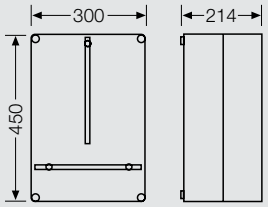
Mi 2300

max. installation depth 146 mm
degree of protection: IP 65
with installed KWH meter support and meter fixing screws



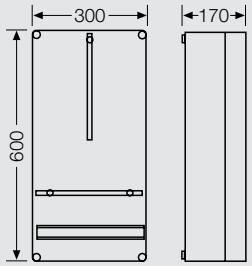
Mi 2310

max. installation depth 190 mm
degree of protection: IP 65
with installed KWH meter support and meter fixing screws



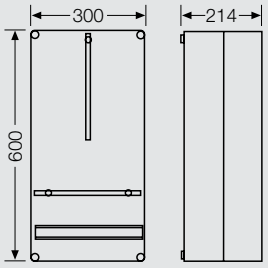
Mi 2400

max. installation depth 146 mm
with additional DIN rail
degree of protection: IP 65
with installed KWH meter support and meter fixing screws

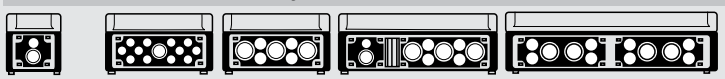


Mi 2410

max. mounting depth 190 mm
with additional DIN rail
degree of protection: IP 65
with installed KWH meter support and meter fixing screws



Box walls with metric cable entry:

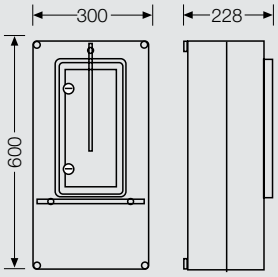


Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

- lid fasteners for tool operation
- can be sealed twice
- **use in unmetered area after consultation with local power supply companies**
- material: thermoplastic
- colour: grey, RAL 7032

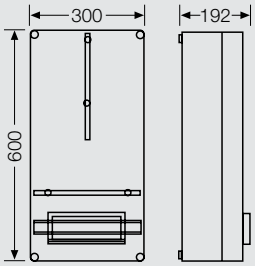
Mi 2413

max. installation depth 190 mm
without DIN rail
with KWH meter window flap, sealable
standard opening dimensions 140 x 310 mm
for tool or manual operation
for maximum KWH meters,
time switches etc.
for padlock (clip Ø max. 6 mm)
degree of protection: IP 54
with installed KWH meter support and meter fixing screws

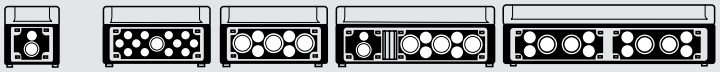


Mi 2420

max. installation depth 146 mm
hinged flap with protection cover for
12 modules (1 x 12 x 18 mm) and
associated DIN rail
degree of protection: IP 65
with installed KWH meter support and meter fixing screws



Gehäusewände mit metrischen Kabeleinführungen:



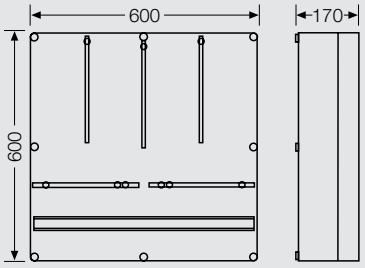
Wand 1	Wand 2	Wand 3	Wand 4	Wand 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

Mi Distribution boards ⧈
KWH meter boxes

- lid fasteners for tool operation
- can be sealed twice
- **use in unmetered area after consultation with local power supply companies**
- material: thermoplastic
- colour: grey, RAL 7032

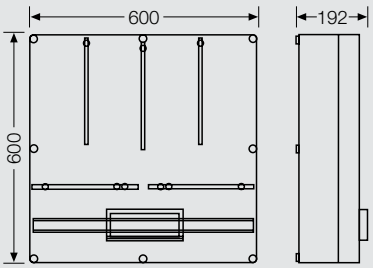
Mi 2800

max. mounting depth 146 mm
with additional DIN rail
cable entry only possible via flange
degree of protection: IP 65
with 3 KWH meter supports and meter fixing screws



Mi 2820

max. mounting depth 146 mm
Klappdeckel mit Berührungsschutz für
12 Teilungseinheiten (1 x 12 x 18 mm) und
dazugehöriger Tragschiene
cable entry only possible via flange
degree of protection: IP 65
with 3 KWH meter supports and meter fixing screws



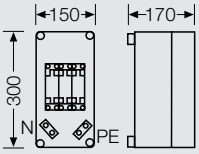
Mi Distribution boards ⧈

HRC fuse box
with fuse bases, 3-pole, in accordance with IEC 60 269

- lid fasteners for tool operation
- with PE and N for copper conductors
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65
- rated voltage: AC 690 V

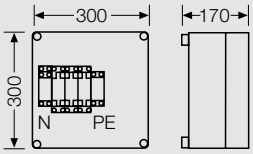
Mi 4150 **Fuse size 1 x HRC 00, 3-pole** new

max. rated current fuse link: 125 A
terminals PE+N
connection 4-35 mm²
for terminal technology refer to index technical data



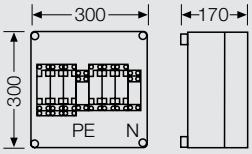
Mi 4205 **Fuse size 1 x HRC 00, 3-pole** new

max. rated current fuse link: 125 A
terminals PE+N
connection 4-35 mm² / Mi VS 100/160
for terminal technology refer to index technical data



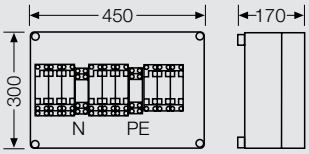
Mi 4250 **Fuse size 2 x HRC 00, 3-pole** new

max. rated current fuse link: 125 A
terminals PE+N
connection 4-35 mm² / Mi VS 100/160
with double saddle clamping unit for connecting the incoming cables of the fuse bases
for terminal technology refer to index technical data

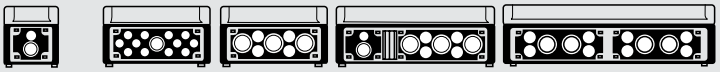


Mi 4350 **Fuse size 3 x HRC 00, 3-pole** new

max. rated current fuse link: 125 A
terminals PE+N
connection 4-35 mm² / Mi VS 100/160
with double saddle clamping unit for connecting the incoming cables of the fuse bases
for terminal technology refer to index technical data



Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

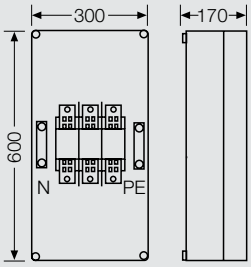
Mi Distribution boards

HRC fuse box
with fuse bases, 3-pole, in accordance with IEC 60 269

- lid fasteners for tool operation
- with PE and N for copper conductors
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65
- rated voltage: AC 690 V

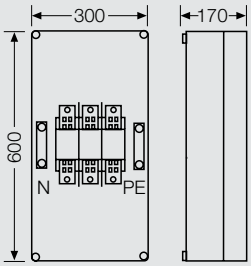
Mi 4451 **Fuse size HRC 1, 3-pole** **new**

max. rated current fuse link: 250 A
terminals PE+N
connection M 10 / VA 400 + Mi VS 250
for terminal technology refer to index technical data

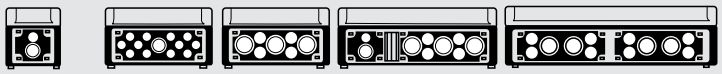


Mi 4452 **Fuse size HRC 2, 3-pole** **new**

max. rated current fuse link: 400 A
terminals PE+N
connection M 10 / VA 400 + Mi VS 400
for terminal technology refer to index technical data



Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

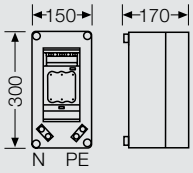
Mi Distribution boards ⧈

HRC fuse box
with fuse switch disconnector, 3-pole, in accordance with IEC 60 947-3

- lid fasteners for tool operation
- with PE and N for copper conductors
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65
- rated voltage: AC 690 V

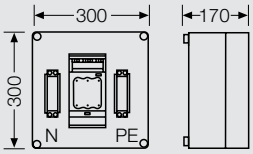
Mi 5150 **Fuse size 1 x HRC 00, 3-pole** new

max. rated current fuse link: 125 A
terminals PE+N
connection 4-35 mm²
for terminal technology refer to index technical data



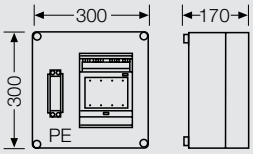
Mi 5250 **Fuse size 1 x HRC 00, 3-pole** new

max. rated current fuse link: 125 A
terminals PE+N
connection 4-35 mm² / Mi VS 100/160
for terminal technology refer to index technical data



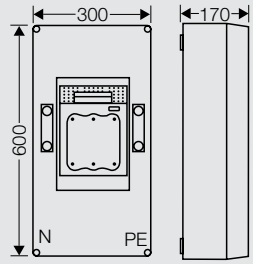
Mi 5260 **Fuse size 1 x HRC 00, 4-pole** new

max. rated current fuse link: 125 A
terminals PE
connection 1.5-35 mm² / Mi VS 100/160
for terminal technology refer to index technical data
N leading



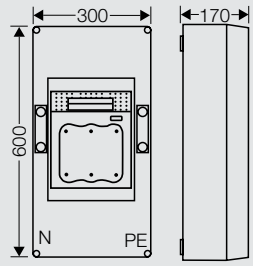
Mi 5451 **Fuse size HRC 1, 3-pole** new

max. rated current fuse link: 250 A
terminals PE+N
connection M 10 / Mi VS 250 + VA 400
for terminal technology refer to index technical data

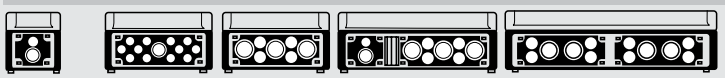


Mi 5452 **Fuse size HRC 2, 3-pole** new

max. rated current fuse link: 400 A
terminals PE+N
connection M 10 / Mi VS 400 + VA 400
for terminal technology refer to index technical data



Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

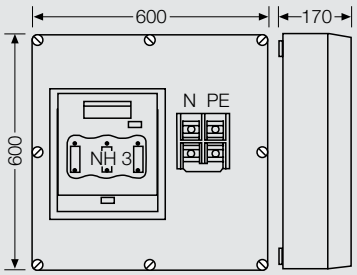
Mi Distribution boards

HRC fuse box
with fuse switch disconnector, 3-pole, in accordance with IEC 60 947-3

- lid fasteners for tool operation
- with PE and N for copper conductors
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65
- rated voltage: AC 690 V

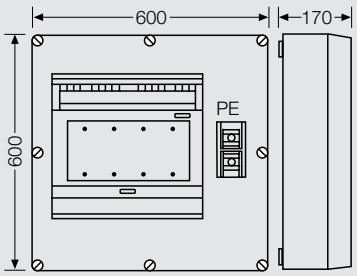
Mi 5853 **Fuse size HRC 3, 3-pole** **new**

with removable jumper between PE and N
L1 - L3: M 12 / VA 630 + Mi VS 630
PE + N: 1 x 120-300 / 2 x 95-185, Cu / Mi VS 630
for terminal technology refer to index technical data
rated operating current:
475 A with incoming cable from the top
530 A with incoming cable from the bottom
cable entry only possible via flange



Mi 5860 **Fuse size HRC 3, 4-pole** **new**

rated connecting capacity
L1 - L3, N: M 10 / VA 630 + Mi VS 630
PE: 1 x 120-300/2 x 95-185, Cu/Mi VS 630
for terminal technology refer to index technical data
rated operating current:
475 A with incoming cable from the top
530 A with incoming cable from the bottom
cable entry only possible via flange
N leading



Mi DA 61 **Terminal set for direct connection to equipment**

terminal for direct pressure
set with 3 pieces
rated connecting capacity:
1 x 150-300 mm² s (round), Cu/Alu
1 x 150-300 mm² s (sector), Cu/Alu
15.5x10x0.8 mm² Mi VS 630, on fuse switch disconnector size HRC 3

Reference to the preparation of aluminum conductors:

1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before start-up and after the first 200 operation hours.

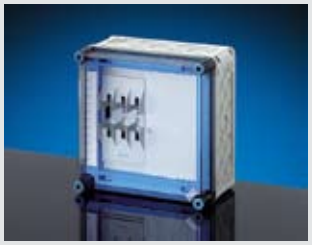
Mi DA 62 **Terminal set for direct connection to equipment**

terminal for direct pressure
set with 3 pieces
rated connecting capacity:
2 x 150-185 mm² s (round), Cu
2 x 150-185 mm² s (sector), Cu
15.5x10x0.8 mm² Mi VS 630, on fuse switch disconnector size HRC 3

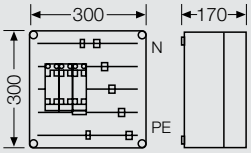
Mi Distribution boards ⧈

HRC fuse box
with fuse elements, 3-pole, in accordance with IEC 60 269

- **mounted onto busbars, 5-pole**
- with PE and N for copper conductors
- N conductor with the same current carrying capacity as the phase conductors
- centreline spacing of busbars: 60 mm
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65
- rated voltage: AC 690 V
- lid fasteners for tool operation

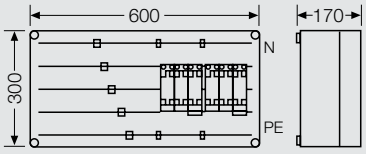


Fuse size 1 x HRC 00, 3-pole
outgoings at the top
1 terminal per PE+N
terminals for outgoing cables 4-35 mm²
terminals for incoming cables 25-70 mm², Cu / Mi VS 100/160/250/400
for terminal technology refer to index technical data
max. rated current fuse link: 125 A
with cover



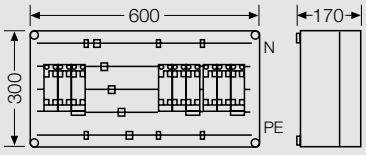
	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6212	**250 A**	12x10	12x5	12x5
Mi 6213	**400 A**	20x10	12x10	12x5
Mi 6214	**630 A**	30x10	25x10	12x10

Fuse size 2 x HRC 00, 3-pole
outgoings at the top
2 terminals per PE+N
terminals for outgoing cables 4-35 mm²
terminals for incoming cables 25-70 mm², Cu / Mi VS 100/160/250/400
for terminal technology refer to index technical data
max. rated current fuse link: 125 A
with cover



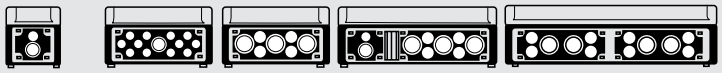
	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6422	**250 A**	12x10	12x5	12x5
Mi 6423	**400 A**	20x10	12x10	12x5
Mi 6424	**630 A**	30x10	25x10	12x10

Fuse size 3 x HRC 00, 3-pole
outgoings at the top
3 terminals per PE+N
terminals for outgoing cables 4-35 mm²
terminals for incoming cables 25-70 mm², Cu / Mi VS 100/160/250/400
for terminal technology refer to index technical data
max. rated current fuse link: 125 A
with cover



	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6432	**250 A**	12x10	12x5	12x5
Mi 6433	**400 A**	20x10	12x10	12x5
Mi 6434	**630 A**	30x10	25x10	12x10

Box walls with metric cable entry:



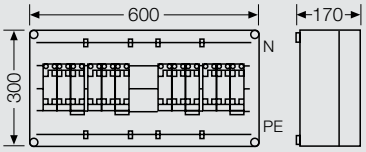
Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

Mi Distribution boards

HRC fuse box
with fuse elements, 3-pole, in accordance with IEC 60 269

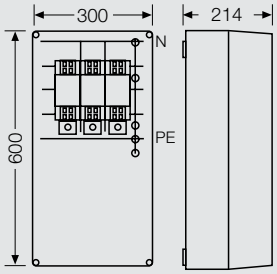
- **mounted onto busbars, 5-pole**
- with PE and N for copper conductors
- N conductor with the same current carrying capacity as the phase conductors
- centreline spacing of busbars: 60 mm
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65
- rated voltage: AC 690 V
- lid fasteners for tool operation

Fuse size 4 x HRC 00, 3-pole
only for combination
outgoings at the top
4 terminals per PE+N
terminals for outgoing cables 4-35 mm²
without supply cable
for terminal technology refer to index technical data
max. rated current fuse link: 125 A
with cover



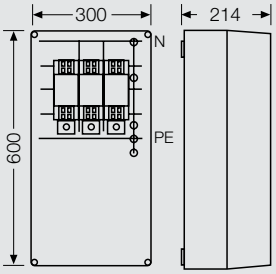
	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6461	**250 A**	12x10	12x5	12x5
Mi 6462	**400 A**	20x10	12x10	12x5
Mi 6463	**630 A**	30x10	25x10	12x10

Fuse size 1 x HRC 1, 3-pole
connection M 10
for terminal technology refer to index technical data
max. rated current fuse link: 250 A



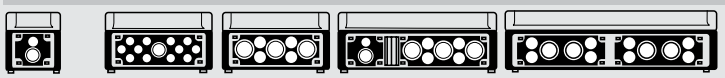
	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6474	**400 A**	20x10	12x10	12x5
	can be combined with Mi busbar boxes 250 A or 400 A			
Mi 6475	**630 A**	30x10	25x10	12x10
	can be combined with Mi busbar boxes 630 A			

Fuse size 1 x HRC 2, 3-pole
connection M 10
for terminal technology refer to index technical data
max. rated current fuse link: 400 A



	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6476	**400 A**	20x10	12x10	12x5
	can be combined with Mi busbar boxes 250 A or 400 A			
Mi 6477	**630 A**	30x10	25x10	12x10
	can be combined with Mi busbar boxes 630 A			

Box walls with metric cable entry:



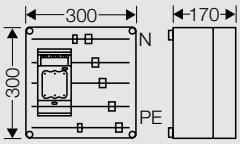
Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

Mi Distribution boards ⧈

HRC fuse box
with fuse switch disconnector, 3-pole, in accordance with IEC 60 947-3

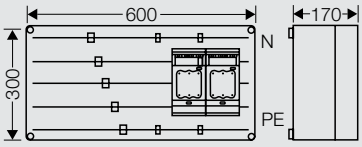
- **mounted onto busbars, 5-pole**
- with PE and N for copper conductors
- N conductor with the same current carrying capacity as the phase conductors
- centreline spacing of busbars: 60 mm
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65
- rated voltage: AC 690 V
- lid fasteners for tool operation

Fuse size 1 x HRC 00, 3-pole
1 terminal per PE+N
terminals for outgoing cables 4-35 mm²
terminals for incoming cables 25-70 mm², Cu / Mi VS 100/160/250/400
outgoing cables can be changed to top or bottom
for terminal technology refer to index technical data
max. rated current fuse link: 125 A
with cover



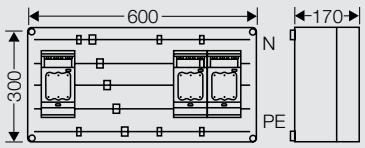
	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6226	**250 A**	12x10	12x5	12x5
Mi 6227	**400 A**	20x10	12x10	12x5
Mi 6228	**630 A**	30x10	25x10	12x10

Fuse size 2 x HRC 00, 3-pole
2 terminals per PE+N
terminals for outgoing cables 4-35 mm²
terminals for incoming cables 25-70 mm², Cu / Mi VS 100/160/250/400
outgoing cables can be changed to top or bottom
for terminal technology refer to index technical data
max. rated current fuse link: 125 A
with cover



	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6426	**250 A**	12x10	12x5	12x5
Mi 6427	**400 A**	20x10	12x10	12x5
Mi 6428	**630 A**	30x10	25x10	12x10

Fuse size 3 x HRC 00, 3-pole
3 terminals per PE+N
terminals for outgoing cables 4-35 mm²
terminals for incoming cables 25-70 mm², Cu / Mi VS 100/160/250/400
outgoing cables can be changed to top or bottom
for terminal technology refer to index technical data
max. rated current fuse link: 125 A
with cover



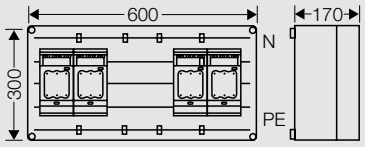
	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6436	**250 A**	12x10	12x5	12x5
Mi 6437	**400 A**	20x10	12x10	12x5
Mi 6438	**630 A**	30x10	25x10	12x10

Mi Distribution boards

HRC fuse box
with fuse switch disconnector, 3-pole, in accordance with IEC 60 947-3

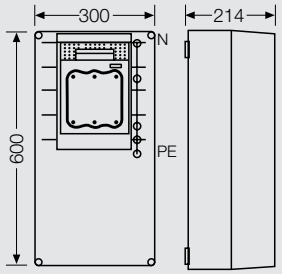
- **mounted onto busbars, 5-pole**
- with PE and N for copper conductors
- N conductor with the same current carrying capacity as the phase conductors
- centreline spacing of busbars: 60 mm
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65
- rated voltage: AC 690 V
- lid fasteners for tool operation

Fuse size 4 x HRC 00, 3-pole
only for combination
4 terminals per PE+N
terminals for outgoing cables 4-35 mm²
without supply cable
outgoing cables can be changed to top or bottom
for terminal technology refer to index technical data
max. rated current fuse link: 125 A
with cover



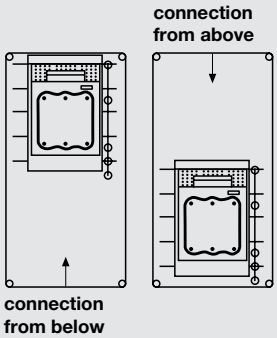
	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6465	**250 A**	12x10	12x5	12x5
Mi 6466	**400 A**	20x10	12x10	12x5
Mi 6467	**630 A**	30x10	25x10	12x10

Fuse size 1 x HRC 1, 3-pole
connection M 10
outgoing cables can be changed to top or bottom *
for terminal technology refer to index technical data
max. rated current fuse link: 250 A

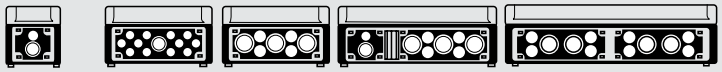


	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6478	**400 A** can be combined with Mi busbar boxes 250 A or 400 A	20x10	12x10	12x5
Mi 6479	**630 A** can be combined with Mi busbar boxes 630 A	30x10	25x10	12x10

* outgoing cables can be changed to top or bottom



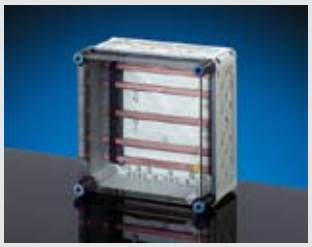
Box walls with metric cable entry:



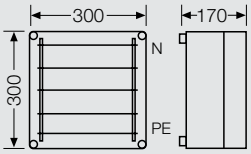
Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

Mi Distribution boards ⧈
Busbar boxes
for combination with Mi boxes

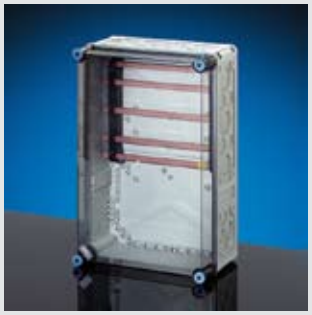
- lid fasteners for tool operation
- N conductor with the same current carrying capacity as the phase conductors
- centreline spacing of busbars: 60 mm
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65
- 5-pole



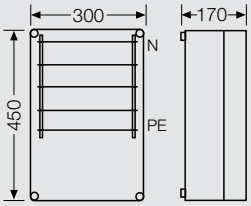
without supply cable
distance between busbar supports to be equipped: 225 mm



	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6252	**250 A**	12x10	12x5	12x5
Mi 6255	**400 A**	20x10	12x10	12x5
Mi 6256	**630 A**	30x10	25x10	12x10

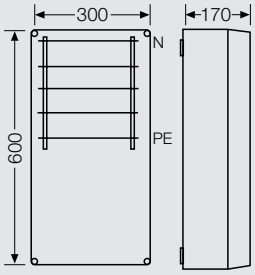


without supply cable
distance between busbar supports to be equipped: 225 mm



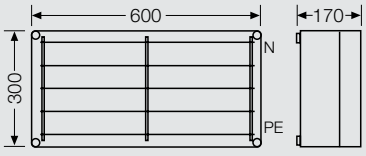
	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6352	**250 A**	12x10	12x5	12x5
Mi 6355	**400 A**	20x10	12x10	12x5
Mi 6356	**630 A**	30x10	25x10	12x10

without supply cable
distance between busbar supports to be equipped: 225 mm



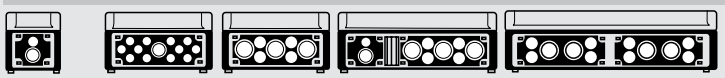
	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6457	**250 A**	12x10	12x5	12x5
Mi 6458	**400 A**	20x10	12x10	12x5
Mi 6459	**630 A**	30x10	25x10	12x10

without supply cable
distance between busbar supports to be equipped: 450 mm



	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6452	**250 A**	12x10	12x5	12x5
Mi 6455	**400 A**	20x10	12x10	12x5
Mi 6456	**630 A**	30x10	25x10	12x10

Box walls with metric cable entry:



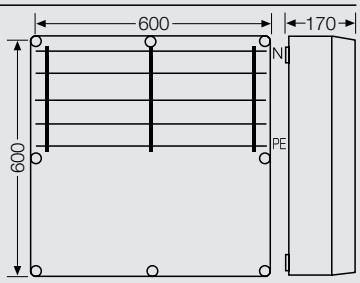
Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

Mi Distribution boards ⧈
Busbar boxes
for combination with Mi boxes

- lid fasteners for tool operation
- N conductor with the same current carrying capacity as the phase conductors
- centreline spacing of busbars: 60 mm
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65
- 5-pole

without supply cable
cable entry only possible via flanges
distance between busbar supports to be equipped: 450 mm

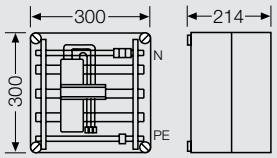
	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6856	**630 A**	30x10	25x10	12x10



Mi Distribution boards ⧈
Busbar boxes
prepared for miniature circuit-breakers (MCB)

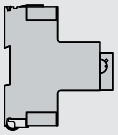
- N conductor with the same current carrying capacity as the phase conductors
- protection cover can be sealed
- with lockable blanking strips
- lid fasteners for hand operation
- centreline spacing of busbars: 60 mm
- material: thermoplastic
- colour grey, RAL 7032
- degree of protection IP 65
- 5-pole

with busbar adapter for miniature circuit-breakers (MCB) up to 63 A rated current
up to 63 A rated current
for installation on DIN rail
with 1 x PE terminal and 3 x N terminals
1.5 - 16 mm²
cut-out of 6 modules

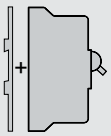


	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6202	**250 A**	12x10	12x5	12x5
Mi 6204	**400 A**	20x10	12x10	12x5
Mi 6206	**630 A**	30x10	25x10	12x10

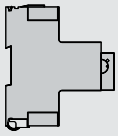
Note:
Prepared for the installation of currently commercially available miniature circuit-breakers (MCB):



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

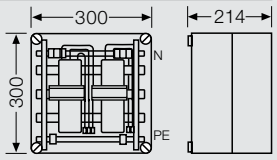


for example
ABB type S 701/S 703
+ adapter for DIN rail S 700 BT3
(1 pc. for S 701, 2 pcs. for S 703)
SHU (voltage independent)



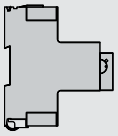
for example
ABB type S 80.-...
SHU (voltage independent)

with 2 busbar adapters for miniature circuit breakers (MCB)
up to 63 A rated current
for installation on DIN rail
with 2 x PE terminals and 6 x N terminals
1.5 -16 mm²
cut-out of 2 x 6 modules

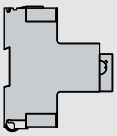


	Busbar rated current	Dimensions of busbars in mm L1-L3	N	PE
Mi 6203	**250 A**	12x10	12x5	12x5
Mi 6205	**400 A**	20x10	12x10	12x5
Mi 6207	**630 A**	30x10	25x10	12x10

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

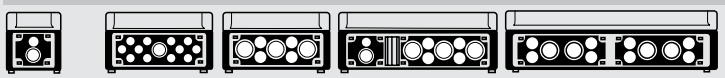


for example
ABN type XHA 3..-4
Hager type HTN..E
etc.
SHA (voltage dependent)



for example
ABB type S 80.-...
SHU (voltage independent)

Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

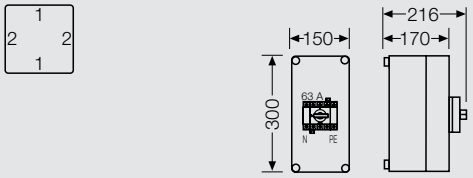
Mi Distribution boards

Mi isolator boxes
with built-in switch disconnectors in accordance with IEC 60 947-3

- lid fasteners for tool operation
- lockable handle
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65

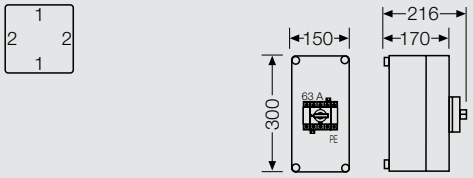
Mi 7103 **63 A**

3-pole + PE + N
connection: 2.5-35 mm², Cu / Mi VS 100
switching capacity: AC 23 A/B 400 V 30 kW
maximum back-up fuse: 80 A
rated voltage: AC 690 V



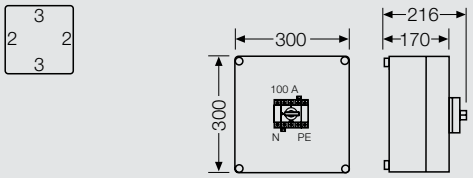
Mi 7104 **63 A**

4-pole + PE
connection: 2.5-35 mm², Cu / Mi VS 100
switching capacity: AC 23 A/B 400 V 30 kW
maximum back-up fuse: 80 A
rated voltage: AC 690 V



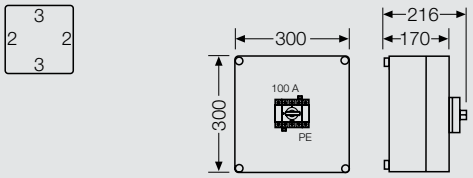
Mi 7213 **100 A**

3-pole + PE + N
connection: 10-35 mm², Cu / Mi VS 100
switching capacity: AC 22 A/B 400 V 40 kW
maximum back-up fuse: 100 A
rated voltage: AC 690 V



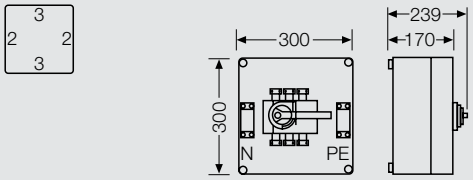
Mi 7214 **100 A**

4-pole + PE
connection: 10-35 mm², Cu / Mi VS 100
switching capacity: AC 22 A/B 400 V 40 kW
maximum back-up fuse: 100 A
rated voltage: AC 690 V



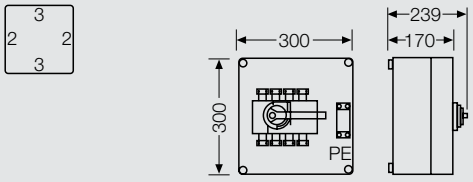
Mi 7256 **160 A**

3-pole + PE + N
connection: 6-70 mm², Cu / Mi VS 160
for terminal technology refer to index technical data
switching capacity: AC 23 A/B 400 V 80 kW
maximum back-up fuse: 160 A
rated voltage: AC 500 V

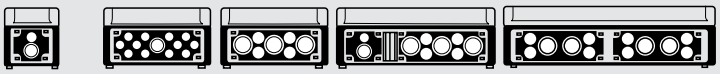


Mi 7257 **160 A**

4-pole + PE
connection: 6-70 mm², Cu / Mi VS 160
for terminal technology refer to index technical data
switching capacity: AC 23 A/B 400 V 80 kW
maximum back-up fuse: 160 A
rated voltage: AC 500 V



Box walls with metric cable entry:



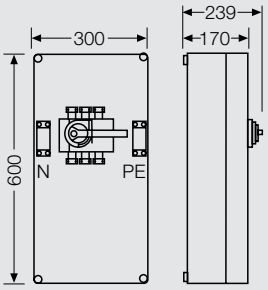
Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

Mi Distribution boards ⧈
Mi isolator boxes
with built-in switch disconnectors in accordance with IEC 60 947-3

- lid fasteners for tool operation
- lockable handle
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65

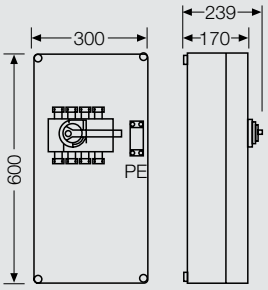
Mi 7456 **160 A**

3-pole + PE + N
connection: 6-70 mm², Cu / Mi VS 160
for terminal technology refer to index technical data
switching capacity: AC 23 A/B 400 V 80 kW
maximum back-up fuse: 160 A
rated voltage: AC 500 V



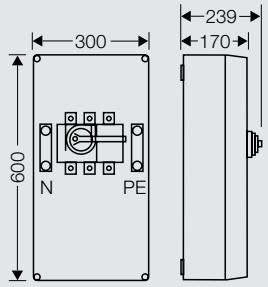
Mi 7457 **160 A**

4-pole + PE
connection: 6-70 mm², Cu / Mi VS 160
for terminal technology refer to index technical data
switching capacity: AC 23 A/B 400 V 80 kW
maximum back-up fuse: 160 A
rated voltage: AC 500 V



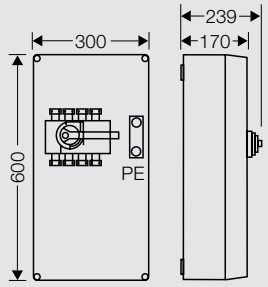
Mi 7455 **250 A**

3-pole + PE + N
connection: M 10 (max. 1 x 150 mm² per phase) or VA 400 + Mi VS 250
for terminal technology refer to index technical data
switching capacity: AC 23 A/B 400 V 132 kW
maximum back-up fuse: 250 A
rated voltage: AC 500 V

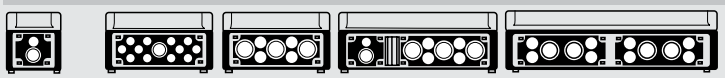


Mi 7454 **250 A**

4-pole + PE
connection: M 10 (max. 1 x 150 mm² je Phase) oder VA 400 + Mi VS 250
for terminal technology refer to index technical data
switching capacity: AC 23 A/B 400 V 132 kW
maximum back-up fuse: 250 A
rated voltage: AC 500 V



Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

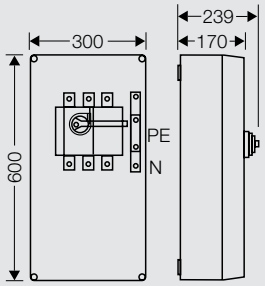
Mi Distribution boards ⧈

Mi isolator boxes
with built-in switch disconnectors in accordance with IEC 60 947-3

- lid fasteners for tool operation
- lockable handle
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65

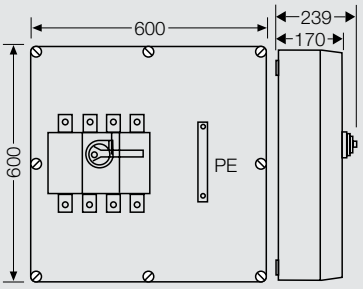
Mi 7445 **400 A**

3-pole + PE + N
connection: M 10 (max. 1 x 240 mm² per phase) or VA 400 + Mi VS 400
switching capacity: AC 23 A/B 400 V 220 kW
maximum back-up fuse: 400 A
rated voltage: AC 500 V

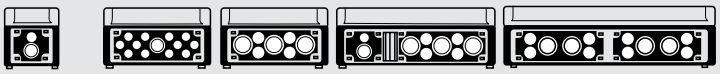


Mi 7846 **400 A**

4-pole + PE
connection: M 10 (max. 1 x 240 mm² per phase) or VA 400 + Mi VS 400
for terminal technology refer to index technical data
switching capacity: AC 23 A/B 400 V 220 kW
maximum back-up fuse: 400 A
rated voltage: AC 500 V
cable entry only possible via flanges



Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

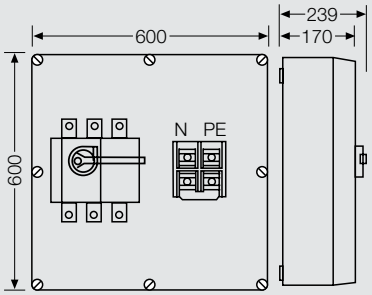
Mi Distribution boards ⧈

Mi isolator boxes
with built-in switch disconnectors in accordance with IEC 60 947-3

- lid fasteners for tool operation
- lockable handle
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65

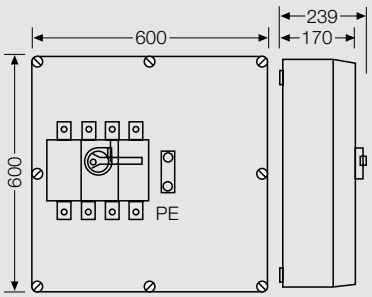
Mi 7865 **630 A**

3-pole + PE + N
with removable jumper between PE and N
connection L1 - L3:
M 12 / VA 630 + Mi VS 630
for terminal technology refer to index technical data
connection PE + N:
1 x 120-300 / 2 x 95-185, Cu / Mi VS 630
switching capacity: AC 23 A/B 400 V 280 kW
maximum back-up fuse: 630 A
rated voltage: AC 500 V
rated operating current:
480 A with incoming cable from the top,
580 A with incoming cable from the bottom
cable entry only possible via flange



Mi 7866 **630 A**

4-pole + PE
connection L1 - L3:
M 12 / VA 630 + Mi VS 630
for terminal technology refer to index technical data
connection PE + N:
1 x 120-300 / 2 x 95-185, Cu / Mi VS 630
switching capacity: AC 23 A/B 400 V 280 kW
maximum back-up fuse: 630 A
rated voltage: AC 500 V
rated operating current:
480 A with incoming cable from the top,
580 A with incoming cable from the bottom
cable entry only possible via flange



Mi DA 72 **Terminal set for direct connection to equipment**

terminal for copper and aluminium conductors
set with 3 pieces
1 x 120-300 mm² s / f (round)
1 x 120-300 mm² s (sector)
1 x 120-185 mm² sol (sector)
2 x 70-150 mm² s / f (round)
2 x 95-150 mm² s (sector)
2 x 70 mm² sol (round)
2 x 95-150 mm² sol (sector)
for the connection of switch disconnector 630 A (Mi 7865)

Reference to the preparation of aluminum conductors:

1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before start-up and after the first 200 operation hours.

Mi DA 74 **Terminal set for direct connection to equipment**

terminal for copper and aluminium conductors
set with 4 pieces
1 x 120-300 mm² s / f (round)
1 x 120-300 mm² s (sector)
1 x 120-185 mm² sol (sector)
2 x 70-150 mm² s / f (round)
2 x 95-150 mm² s (sector)
2 x 70 mm² sol (round)
2 x 95-150 mm² sol (sector)
for the connection of switch disconnector 630 A (Mi 7866)

Reference to the preparation of aluminum conductors:

1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before start-up and after the first 200 operation hours.

Mi Distribution boards

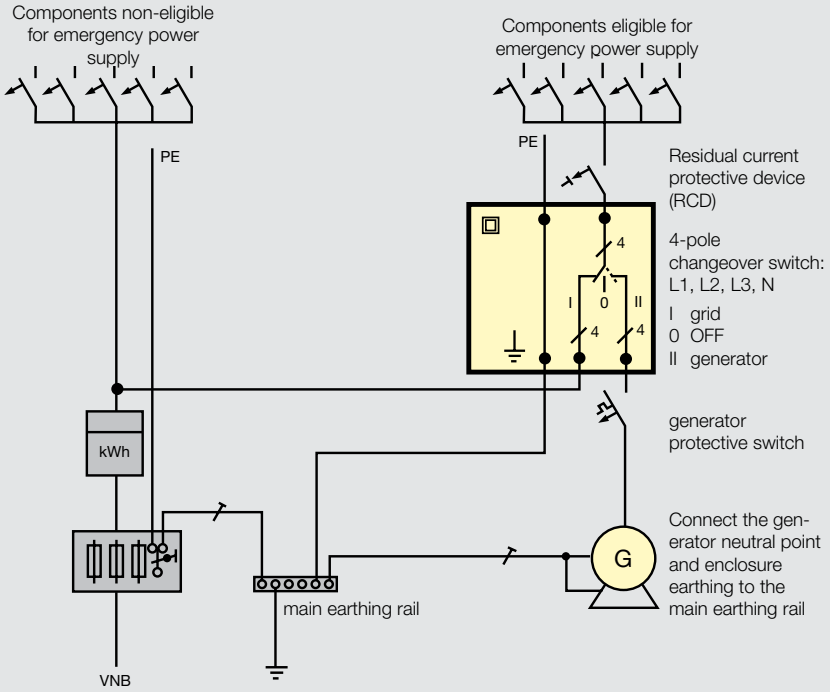
Use of mains changeover switches for substitute power supply systems

Mains changeover switches (I-0-II) from Hensel reliably switch over to a stand-by power source

Mains changeover switches are required as per VDE/IEC regulations and the Association of Network Operators (VDN). They help in switching and isolating electrical load circuits and are used for changing over to the stand-by power source manually incase of a power failure.

The parallel operation of networks is reliably prevented due to the 0 setting.
A short term parallel operation is impossible, therefore no synchronisation is required.

Functional circuit diagram for a stand-by power supply in the TN system



If a stand-by power source, such as, e.g., a generator is used as switchable substitute power supply to the public power grid, then it must have a changeover switch according to the standard!

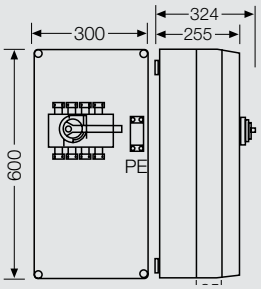
Mi Distribution boards ⧈

Mi changeover switch boxes
with built-in changeover switches in accordance with IEC 60 947-3

- lid fasteners for tool operation
- lockable handle
- with PE terminal
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65

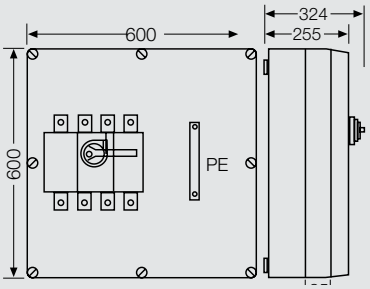
Mi 7481 **160 A**

4-pole + PE
connection: 6 - 70 mm², Cu / Mi VS 160
switching capacity: AC 23 A/B 400 V 80 kW
maximum back-up fuse: 160 A
rated voltage: AC 500 V
kind of switch: I - 0 - II

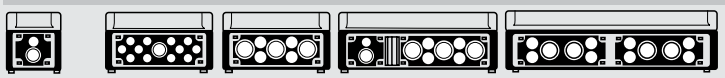


Mi 7882 **250 A**

4-pole + PE
connection: M 10 (max. 1 x 150 mm² per phase) oder Mi VS 250 + VA 400
switching capacity:
AC 23 A/B 400 V 132 kW
maximum back-up fuse: 250 A
rated voltage: AC 500 V
kind of switch: I - 0 - II



Box walls with metric cable entry:

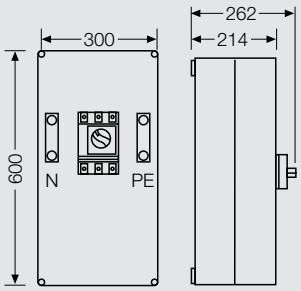


Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

- lid fasteners for tool operation
- lockable handle
- MCCB with overload and short-circuit release
- 3-pole PE + N
- material: thermoplastic
- colour grey, RAL 7032
- degree of protection IP 55
- rated voltage: AC 690 V

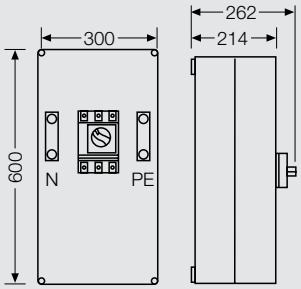
Mi 7431 **160 A**

connection 70 mm², Cu / Mi VS 160
setting range overload release: 112-160 A
rated ultimate short-circuit breaking capacity $I_{cs} = I_{cu}$:
at AC 690 V 8 kA
at AC 415 V 36 kA



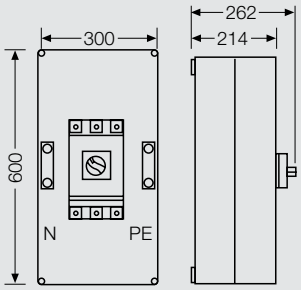
Mi 7432 **250 A**

connection 150 mm², Cu / Mi VS 250
setting range overload release: 175-250 A
rated ultimate short-circuit breaking capacity $I_{cs} = I_{cu}$:
at AC 690 V 8kA
at AC 415 V 36 kA

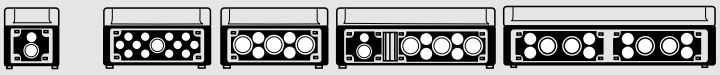


Mi 7434 **400 A**

connection M 10 / VA 400 + Mi VS 400
for terminal technology refer to index technical data
setting range overload release: 160-400 A
rated ultimate short-circuit breaking capacity $I_{cs} = I_{cu}$:
at AC 690 V 10 kA
at AC 415 V 36 kA



Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

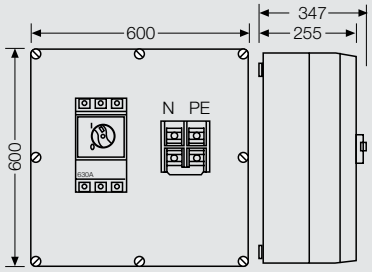
Mi Distribution boards ⧈

Mi MCCB circuit-breaker boxes with circuit-breaker in accordance with IEC 60 947-2

- lid fasteners for tool operation
- lockable handle
- MCCB with overload and short-circuit release
- 3-pole + PE + N
- with removable jumper between PE and N
- material: thermoplastic
- colour grey RAL 7032
- degree of protection IP 55
- rated voltage: AC 690 V

Mi 7836	630 A

connection L1 - L3:
M 10 / VA 630 + Mi VS 630
for terminal technology refer to index technical data
connection PE + N:
1 x 120-300 / 2 x 95-185, Cu /
Mi VS 630 mm², Cu
setting range overload release: 250-630 A
rated ultimate short-circuit breaking capacity $I_{cs} = I_{cu}$:
at AC 690 V 10 kA
at AC 415 V 45 kA
rated operating current:
475 A with incoming cable from the top
530 A with incoming cable from the bottom
cable entry only possible via flange



Mi Distribution boards ⧈
Empty boxes with hinged lid

960° C

- Empty boxes with hinged lids.
- Stable, impact-resistant boxes (IK 08) for many electrical and non-electrical applications.
- Degree of protection IP 65
- Applicable as single empty box for the installation of device via DIN rails or mounting plates.
- Easy and fast assembly.
- Lid suitable for the installation of signallers.
- Accessories available: Flanges, terminals, lid locks, DIN rails, mounting plates etc.

Material:

- high-quality PC polycarbonate impact-resistant, IK 08 (5 Joule) - halogen- and silicone-free
- Burning behaviour: Glow wire test IEC 60 695-2-11: 960° C - UL Subject 94: V-2 - flame-retardant, self-extinguishing
- Application area: Mi Distribution boards are suitable for the outdoor installation - harsh environment and / or outdoor. However the climatic influences and effects on the equipment are to be considered.

Mi empty boxes conform to the RoHS Directive 2002/95/EC, for more information refer to technical data.

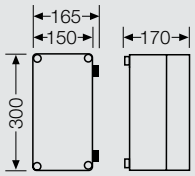
Mi Distribution boards

Empty boxes with transparent hinged lids

- **3 walls with metric knockouts for cable entry and assembly**
- lid fasteners for tool operation
- please order DIN rails, mounting plates or covers additionally
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65

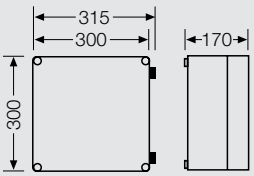
Mi 9100 **box size 1**

lid hinges attached
with transparent, hinged lid
max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm
please order DIN rails, mounting plates or covers additionally



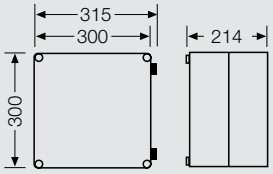
Mi 9200 **box size 2**

lid hinges attached
with transparent, hinged lid
max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm
please order DIN rails, mounting plates or covers additionally



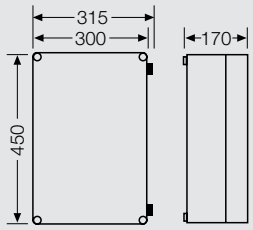
Mi 9210 **box size 2**

lid hinges attached
with transparent, hinged lid
max. installation depth
with built-in mounting plate 191 mm
with built-in DIN rail 180 mm
please order DIN rails, mounting plates or covers additionally



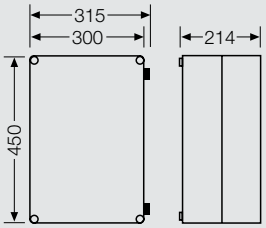
Mi 9300 **box size 3**

lid hinges attached
with transparent, hinged lid
max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm
please order DIN rails, mounting plates or covers additionally

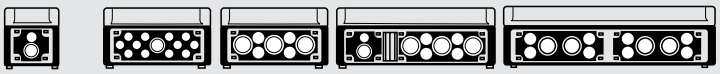


Mi 9310 **box size 3**

lid hinges attached
with transparent, hinged lid
max. installation depth
with built-in mounting plate 191 mm
with built-in DIN rail 180 mm
please order DIN rails, mounting plates or covers additionally



Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

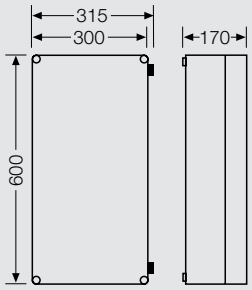
Mi Distribution boards

Empty boxes with transparent hinged lids

- **3 walls with metric knockouts for cable entry and assembly**
- lid fasteners for tool operation
- please order DIN rails, mounting plates or covers additionally
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65

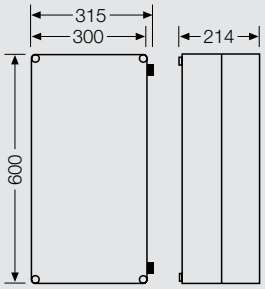
Mi 9400 **box size 4**

lid hinges attached
with transparent, hinged lid
max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm
please order DIN rails, mounting plates or covers additionally

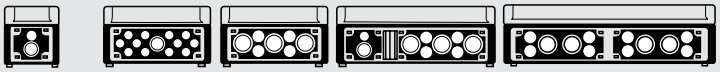


Mi 9410 **box size 4**

lid hinges attached
with transparent, hinged lid
max. installation depth
with built-in mounting plate 191 mm
with built-in DIN rail 180 mm
please order DIN rails, mounting plates or covers additionally



Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

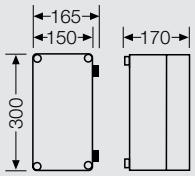
Mi Distribution boards

Empty boxes with opaque hinged lids

- **3 walls with metric knockouts for cable entry and assembly**
- lid fasteners for tool operation
- please order DIN rails, mounting plates or covers additionally
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65

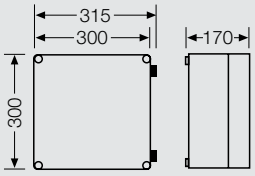
Mi 9101 **box size 1**

lid hinges attached
with opaque, hinged lid
max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm
please order DIN rails, mounting plates or covers additionally



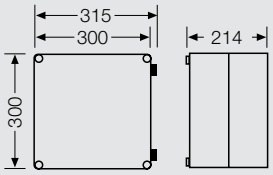
Mi 9201 **box size 2**

lid hinges attached
with opaque, hinged lid
max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm
please order DIN rails, mounting plates or covers additionally



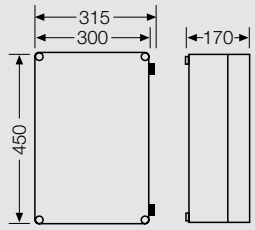
Mi 9211 **box size 2**

lid hinges attached
with opaque, hinged lid
max. installation depth
with built-in mounting plate 191 mm
with built-in DIN rail 180 mm
please order DIN rails, mounting plates or covers additionally



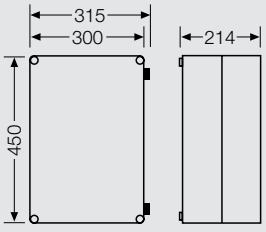
Mi 9301 **box size 3**

lid hinges attached
with opaque, hinged lid
max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm
please order DIN rails, mounting plates or covers additionally

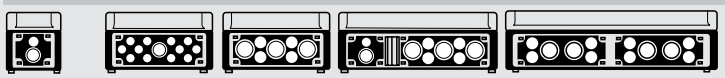


Mi 9311 **box size 3**

lid hinges attached
with opaque, hinged lid
max. installation depth
with built-in mounting plate 191 mm
with built-in DIN rail 180 mm
please order DIN rails, mounting plates or covers additionally



Box walls with metric cable entry:

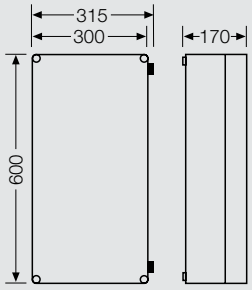


Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

- **3 walls with metric knockouts for cable entry and assembly**
- lid fasteners for tool operation
- please order DIN rails, mounting plates or covers additionally
- material: thermoplastic
- colour: grey, RAL 7032
- degree of protection: IP 65

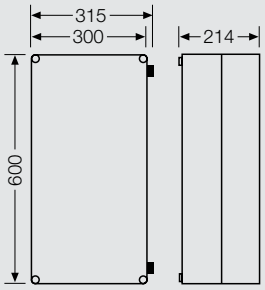
Mi 9401 **box size 4**

lid hinges attached
with opaque, hinged lid
max. installation depth
with built-in mounting plate 146 mm
with built-in DIN rail 135 mm
please order DIN rails, mounting plates or covers additionally

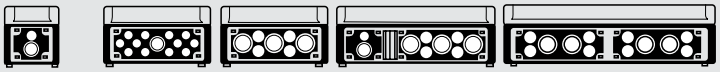


Mi 9411 **box size 4**

lid hinges attached
with opaque, hinged lid
max. installation depth
with built-in mounting plate 191 mm
with built-in DIN rail 180 mm
please order DIN rails, mounting plates or covers additionally



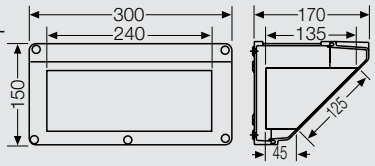
Box walls with metric cable entry:



Wall 1	Wall 2	Wall 3	Wall 4	Wall 5
1 x M 20 1 x M 32/40	2 x M 20 10 x M 25 1 x M 32/40	4 x M 25 3 x M 40/50	1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50	8 x M 32 4 x M 40/50

Mi CB 10 **Connection Box**

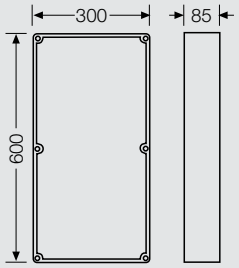
for mounting to box walls 300 mm
hinged mounting area
with wall gasket
material: thermoplastic
colour: grey, RAL 7032
for the installation of devices that must be operated externally, such as plug devices, push buttons and switches
degree of protection: IP 65



Example:
The Connection Box allows a simple and fast installation of devices, that must be operated externally.

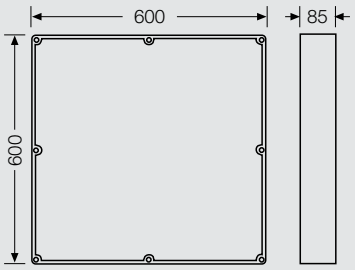
Mi ZR 4 **Zwischenrahmen**

for Mi boxes size 4
for subsequent 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 Mi boxes size 8
for subsequent 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

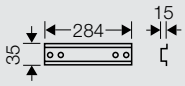


Mi TS 15 **DIN rail**

in accordance with EN 60 715
for Mi-Empty box size 1
for equipment or terminals with clip-on mounting with fixing screws

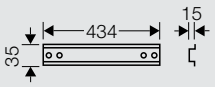
Mi TS 30 **DIN rail**

in accordance with EN 60 715
for Mi empty box sizes 1 to 8
for equipment or terminals with clip-on mounting with fixing screws



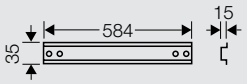
Mi TS 45 **DIN rail**

in accordance with EN 60 715
for Mi empty box size 3
for equipment or terminals with clip-on mounting with fixing screws



Mi TS 60 **DIN rail**

in accordance with EN 60 715
for Mi empty box sizes 4 and 8
for equipment or terminals with clip-on mounting with fixing screws



Mi DS 25 **Spacer**

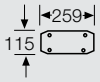
for spacing DIN-rails Mi TS ..
2 pieces
with fixing screws for base of box and DIN rail
height: 25 mm

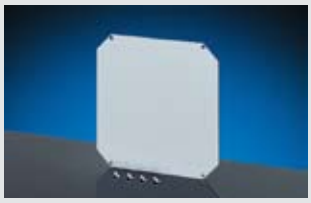
Mi DS 50 **Spacer**

for spacing DIN-rails Mi TS ..
2 pieces
with fixing screws for base of box and DIN rail
height: 50 mm

Mi MP 1 **Mounting plate**

material: laminated paper
material thickness 4 mm
for Mi-Empty boxes sizes 1, 3, 4
with fixing screws



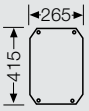


Mi MP 2 **Mounting plate**

material: laminated paper
material thickness 4 mm
for Mi-Empty boxes sizes 2 to 8
with fixing screws

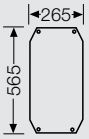
Mi MP 3 **Mounting plate**

material: laminated paper
material thickness 4 mm
for Mi-Empty boxes sizes 3, 4
with fixing screws



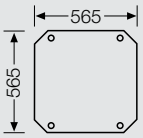
Mi MP 4 **Mounting plate**

material: laminated paper
material thickness 4 mm
for Mi-Empty boxes sizes 4, 8
with fixing screws



Mi MP 8 **Mounting plate**

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



Mi BZ 11 **Fixing screw**

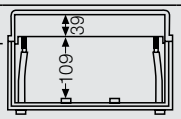
for assembling DIN rails or mounting plates at the base of the box
for material thicknesses of 1 to 2.5 mm
self-tapping
galvanised
length 11 mm

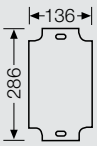
Mi BZ 13 **Fixing screw**

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
length 13 mm

Mi EP 01 **Cover**

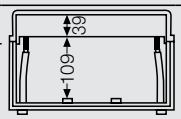
for Mi empty box size 1
for retrofitting
cover without cut-outs made of thermo-plastics, as protection cover or for the installation of devices
with fastening material

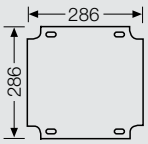




Mi EP 02 **Cover**

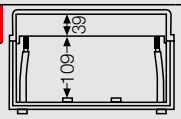
for Mi empty box size 2
for retrofitting
cover without cut-outs made of thermo-plastics, as protection cover or for the installation of devices
with fastening material

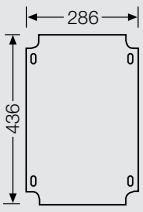




Mi EP 03 **Cover** **new**

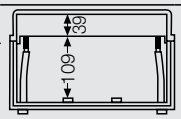
for Mi empty box size 3
for retrofitting
cover without cut-outs made of thermo-plastics, as protection cover or for the installation of devices
with fastening material

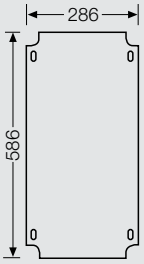




Mi EP 04 **Cover**

for Mi empty box size 4
for retrofitting
cover without cut-outs made of thermo-plastics, as protection cover or for the installation of devices
with fastening material





AS 12 **Blanking strip**

for the covering of spare equipment openings, for material thickness up to 3 mm
12 modules 18 mm each
divisible every 9 mm
colour grey, similar RAL 7035

AS 18 **Blanking strip**

for the covering of spare equipment openings, for material thickness up to 3 mm
18 modules 18 mm each
divisible every 9 mm
colour grey, similar RAL 7035

Terminals for direct busbar connection
For solid (sol), stranded (s), flexible (f) copper conductors with gas-tight crimped end sleeve and for laminated wiring strip

Remarks:
For observance of insulation resistance clearances of 10 mm are necessary between different potentials and of 15 mm between conductive metal parts.

Type	for busbars	Width	conductor cross section	wiring strip	tightening torque
KS 16 F	... x 5 mm	11 mm	1.5-16 mm² Cu		4 Nm

KS 16 Z	... x 10 mm	11 mm	1.5-16 mm² Cu		4 Nm

KS 35 F	... x 5 mm	16 mm	4-35 mm² Cu	100 A: Mi VS 100 160 A: Mi VS 160	6 Nm

KS 35 Z	... x 10 mm	16 mm	4-35 mm² Cu	100 A: Mi VS 100 160 A: Mi VS 160	6 Nm

KS 70 F	... x 5 mm	21 mm	10-70 mm² Cu	100 A: Mi VS 100 160 A: Mi VS 160	10 Nm

KS 70 Z	... x 10 mm	21 mm	10-70 mm² Cu	100 A: Mi VS 100 160 A: Mi VS 160	10 Nm

KS 120 F	... x 5 mm	25 mm	25-120 mm² Cu	250 A: Mi VS 250 400 A: Mi VS 400	20 Nm

KS 120 Z	... x 10 mm	25 mm	25-120 mm² Cu	250 A: Mi VS 250 400 A: Mi VS 400	20 Nm

	Aluminium conductors must be prepared prior to connection in accordance with the relevant technical recommendations.				
KS 240/12	12x5 mm/ 12x10 mm	32 mm	35-240 mm² Cu/Alu		40 Nm

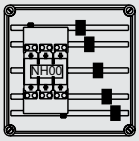
KS 150	12x5 mm/ 12x10 mm	34 mm	35-150 mm² Cu	630 A: Mi VS 630	20 Nm

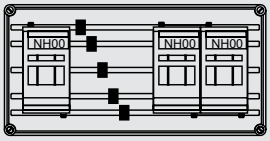
	Aluminium conductors must be prepared prior to connection in accordance with the relevant technical recommendations.			20x10 mm/	
KS 185	25x10 mm/ 30x10 mm	38 mm	95-185 mm² Cu/Alu		30 Nm

KS 240 V	20x10 mm/ 25x10 mm/ 30x10 mm	38 mm		630 A: Mi VS 630	30 Nm

	Aluminium conductors must be prepared prior to connection in accordance with the relevant technical recommendations.				
KS 300	20x10 mm/ 25x10 mm/ 30x10 mm	38 mm	120-300 mm² Cu/Alu		30 Nm

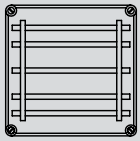
Mi HRC fuse boxes, fuse bases and fuse switch disconnector

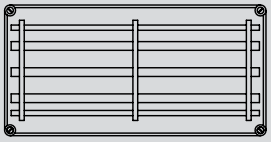




Busbar rated current		
250 A	400 A	630 A
N PE	PE	
L1 L2 L3	N L1 L2 L3	N L1 L2 L3 PE
1) N PE	1) PE	
L1 L2 L3	N L1 L2 L3	N L1 L2 L3 PE
N PE	PE	
L1 L2 L3	N L1 L2 L3	N L1 L2 L3 PE
1) N PE	1) PE	
1) L1 L2 L3	1) N L1 L2 L3	1) N L1 L2 L3 PE

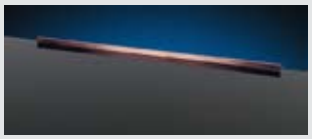
Mi busbar boxes





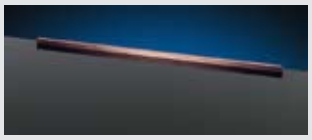
Busbar rated current		
250 A	400 A	630 A
N PE	PE	
L1 L2 L3	N L1 L2 L3	N L1 L2 L3 PE
N PE	PE	
L1 L2 L3	N L1 L2 L3	N L1 L2 L3 PE
N PE	PE	
L1 L2 L3	N L1 L2 L3	N L1 L2 L3 PE
N PE	PE	
L1 L2 L3	N L1 L2 L3	N L1 L2 L3 PE
PE N L1 L2 L3	N PE	PE
PE N L1 L2 L3	N PE	PE
	L1 L2 L3	N L1 L2 L3
	L1 L2 L3	N L1 L2 L3
	L1 L2 L3	N L1 L2 L3

1) Terminals in the delivery of the functional boxes, see technical descriptions.



Mi SS 22 **Busbar 12 x 5 mm**

length 2400 mm
conductor material Cu
busbar rated current 250 A as N/PE,
400 A as PE



Mi SS 25 **Busbar 12 x 10 mm**

length 2400 mm
conductor material Cu
busbar rated current 250 A as L1-L3,
400 A as N, 630 A as PE

Mi SS 40 **Busbar 20 x 10 mm**

length 2400 mm
conductor material Cu
busbar rated current 400 A as L1-L3

Mi SS 45 **Busbar 25 x 10 mm**

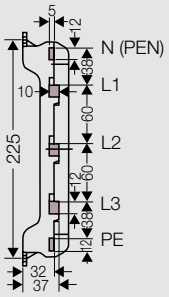
length 2400 mm
conductor material Cu
busbar rated current 630 A as N

Mi SS 63 **Busbar 30 x 10 mm**

length 2400 mm
conductor material Cu
busbar rated current 630 A as L1-L3

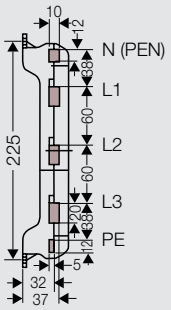
Mi ST 25 **Busbar support 250 A**

for assembly in Mi-Empty boxes
centreline spacing of busbars 60 mm
for busbars 12 x 10 mm (L1 - L3)
for busbars 12 x 5 mm (N+PE)
with fixing screws



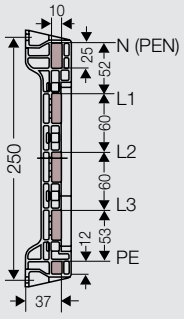
Mi ST 41 **Busbar support 400 A**

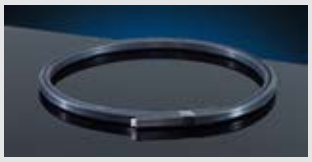
for assembly in Mi-Empty boxes
centreline spacing of busbars 60 mm
for busbars 20 x 10 mm (L1 - L3)
for busbars 12 x 5 mm (PE)
for busbars 12 x 10 mm (N)



Mi ST 63 **Busbar support 630 A**

for assembly in Mi-Empty boxes
centreline spacing of busbars 60 mm
for busbars 30 x 10 mm (L1 - L3)
for busbars 12 x 10 mm (PE)
for busbars 25 x 10 mm (N)





Mi VS 100 **Wiring strip rated current 100 A**

for connections of 100 A between busbars and built-in equipment
wiring instructions for equipment (e.g. wire range ...mm²) must be observed
length 2000 mm,
number of sheets: 3 pieces,
width of sheet: 9 mm,
material thickness: per sheet 0.8 mm

Mi VS 160 **Wiring strip rated current 160 A**

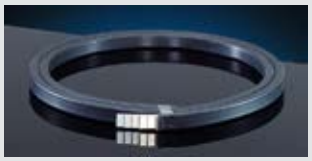
for connections of 160 A between busbars and built-in equipment
wiring instructions for equipment (e.g. wire range ...mm²) must be observed
length 2000 mm,
number of sheets: 6 pieces,
width of sheet: 9 mm,
material thickness: per sheet 0.8 mm

Mi VS 250 **Wiring strip rated current 250 A**

for connections of 250 A between busbars and built-in equipment
wiring instructions for equipment (e.g. wire range ...mm²) must be observed
length 2000 mm,
number of sheets: 6 pieces,
width of sheet: 15.5 mm,
material thickness: per sheet 0.8 mm

Mi VS 400 **Wiring strip rated current 400 A**

for connections of 400 A between busbars and built-in equipment
wiring instructions for equipment (e.g. wire range ...mm²) must be observed
length 2000 mm,
number of sheets: 10 pieces,
width of sheet: 15.5 mm,
material thickness: per sheet 0.8 mm



Mi VS 630 **Wiring strip rated current 630 A**

for connections of 630 A between busbars and built-in equipment
wiring instructions for equipment (e.g. wire range ...mm²) must be observed
length 2000 mm,
number of sheets: 11 pieces,
width of sheet: 20 mm,
material thickness: per sheet 1 mm

VA 400 **Wiring terminal up to 400 A**

terminal for direct connection of laminated copper wiring strip
(Mi VS 250 and Mi VS 400) up to 400 A
onto switchgear with flat contact M10
tightening torque 8.0 Nm

VA 630 **Wiring terminal up to 630 A**

terminal for direct connection of laminated copper wiring strip
(Mi VS 630) up to 630 A
onto switchgear with flat contact M12
tightening torque 22 - 24 Nm

DA 240 **Terminal for direct connection up to 400 A**

for mounting onto switchgear with flat contact M10
with insulating cover
rated connecting capacity
35-70 mm² s (round), Cu/Alu
50-185 mm² s (sector), Cu/Alu
35-50 mm² sol, Cu/Alu
70-240 mm² sol (sector), Cu/Alu
tightening torque terminal: 22.0 Nm

Prior to connection, aluminium conductors must be prepared
according to the relevant technical recommendations.

Mi DA 61 **Terminal set for direct connection to equipment**

terminal for direct pressure
set with 3 pieces
rated connecting capacity:
1 x 150-300 mm² s (round), Cu/Alu
1 x 150-300 mm² s (sector), Cu/Alu
15.5x10x0.8 mm² Mi VS 630, on fuse switch disconnector size HRC 3

Reference to the preparation of aluminum conductors:

1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before start-up and after the first 200 operation hours.

Mi DA 62 **Terminal set for direct connection to equipment**

terminal for direct pressure
set with 3 pieces
rated connecting capacity:
2 x 150-185 mm² s (round), Cu
2 x 150-185 mm² s (sector), Cu
15.5x10x0.8 mm² Mi VS 630, on fuse switch disconnector size HRC 3

Mi DA 72 **Terminal set for direct connection to equipment**

terminal for copper and aluminium conductors
set with 3 pieces
1 x 120-300 mm² s / f (round)
1 x 120-300 mm² s (sector)
1 x 120-185 mm² sol (sector)
2 x 70-150 mm² s / f (round)
2 x 95-150 mm² s (sector)
2 x 70 mm² sol (round)
2 x 95-150 mm² sol (sector)
for the connection of switch disconnector 630 A (Mi 7865)

Reference to the preparation of aluminum conductors:

1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before start-up and after the first 200 operation hours.

Mi DA 74 **Terminal set for direct connection to equipment** **new**

terminal for copper and aluminium conductors
set with 4 pieces
1 x 120-300 mm² s / f (round)
1 x 120-300 mm² s (sector)
1 x 120-185 mm² sol (sector)
2 x 70-150 mm² s / f (round)
2 x 95-150 mm² s (sector)
2 x 70 mm² sol (round)
2 x 95-150 mm² sol (sector)
for the connection of switch disconnector 630 A (Mi 7866)

Reference to the preparation of aluminum conductors:

1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before start-up and after the first 200 operation hours.

Mi HS 20	Auxiliary contact

2-pole
rated current 6 A
2 changeover contacts for retrofitting on switch disconnectors 160-630 A
connection with flat connector 6.3 mm

MK 0107	Auxiliary changeover contact

1-pole
rated current 6 A
for circuit-breakers 160-630 A
The auxiliary switches can report different functions
depending on their mounting location in the circuit-breaker.
circuit-breaker 160/250 A = 2x ON/OFF signal + 1x tripping signal
circuit-breaker 400/630 A = 3x ON/OFF signal + 1x tripping signal
+ 1x electric error signal

MK 0106	Open-circuit shunt release

for circuit-breakers 160-630 A
AC 50/60 Hz, 200 to 240 V
the main contacts of the circuit-breaker are opened
when voltage of more than 0.7 x U_n is applied

MK 0105	Undervoltage release

for circuit-breakers 160-630 A
AC 50/60 Hz, 200 to 240 V
when the control voltage drops below 0.35 - 0.7 x U_n,
the main contacts of the circuit-breaker are opened
the closing of the contacts can only take place with voltages above 0.85 x U_n

MK 0108	Circuit-breaker terminal for direct connection

for circuit breaker 400 A and 630 A
set with 3 pieces
rated connecting capacity: 1 x 35-300 mm², Cu/Alu

Reference to the preparation of aluminum conductors:

1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before start-up and after the first 200 operation hours.

MK 0109	Circuit-breaker terminal for direct connection

for circuit breaker 400 A and 630 A
set with 3 pieces
rated connecting capacity: 2 x 70-240 mm², Cu/Alu

Reference to the preparation of aluminum conductors:

1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before start-up and after the first 200 operation hours.

- for copper and aluminium conductors
- for the installation in Mi empty boxes sizes 2 to 8
- Prior to connection, aluminium conductors must be prepared according to the relevant technical recommendations.
- completely pre-mounted on mounting plate 300 x 300 mm
- with fixing screws
- for terminal technology refer to technical data

Mi VE 120 **Terminal for incoming/outgoing cables**

current carrying capacity 250 A
4-pole
clamping units per pole: 2 x 16-150 mm², 4 x 16-70 mm²
for terminal technology refer to technical data
outgoing wiring strip Mi VS ..
tightening torque for terminal 20.0 Nm

Mi VE 125 **Terminal for incoming/outgoing cables**

current carrying capacity 250 A
5-pole
clamping units per pole: 2 x 16-150 mm², 4 x 16-70 mm²
for terminal technology refer to technical data
outgoing wiring strip Mi VS ..
tightening torque for terminal 20.0 Nm

Mi VE 240 **Terminal for incoming/outgoing cables**

current carrying capacity 400 A
4-pole
incoming or outgoing cables per pole: 2 x 50-240 mm², 4 x 25-120 mm²
for terminal technology refer to technical data
outgoing wiring strip Mi VS ..
tightening torque for terminal 40.0 Nm

Mi VE 245 **Terminal for incoming/outgoing cables**

current carrying capacity 400 A
5-pole
incoming or outgoing cables per pole: 2 x 50-240 mm², 4 x 25-120 mm²
for terminal technology refer to technical data
outgoing wiring strip Mi VS ..
tightening torque for terminal 40.0 Nm

Mi VE 302 **Terminal for incoming/outgoing cables**

current carrying capacity 630 A
2-pole
incoming or outgoing cables per pole: 2 x 120-300 mm², 4 x 95-185 mm²
for terminal technology refer to technical data
outgoing wiring strip Mi VS 630
tightening torque for terminal 50.0 Nm

Mi VE 303 **Terminal for incoming/outgoing cables**

current carrying capacity 630 A
3-pole
incoming or outgoing cables per pole: 2 x 120-300 mm², 4 x 95-185 mm²
for terminal technology refer to technical data
outgoing wiring strip Mi VS 630
tightening torque for terminal 50.0 Nm

Mi VE 304 **Terminal for incoming/outgoing cables**

current carrying capacity 630 A
4-pole
incoming or outgoing cables per pole: 2 x 120-300 mm², 4 x 95-185 mm²
for terminal technology refer to technical data
outgoing wiring strip Mi VS 630
tightening torque for terminal 50.0 Nm

Mi NK 1 **Connecting terminal**

conductor material Cu
rated connecting capacity 2 x 35 mm²
current carrying capacity 125 A

Mi NK 2 **Connecting terminal**

conductor material Cu
rated connecting capacity 1 x 70 mm², 2 x 35 mm²
current carrying capacity 160 A

Mi NK 3 **Connecting terminal**

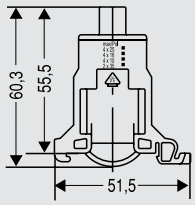
conductor material Cu
rated connecting capacity 4 x 35 mm²
current carrying capacity 160 A

Mi NK 4 **Connecting terminal**

conductor material Cu
rated connecting capacity 2 x M 10
current carrying capacity 400 A

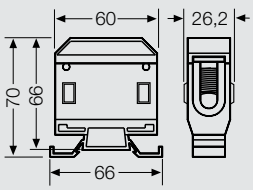
KKL 25 **Connecting terminal**

as a connecting terminal
for installation on DIN rails in accordance with
IEC 60 715, top hat profile 35 mm
with two connected clamping units
for solid, stranded or flexible copper conductors,
with gas-tight crimped end sleeve
current carrying capacity 102 A
width: 29 mm
conductor cross section:
1 x 35 mm², 2 x 25 mm²,
2 x 16 mm², 3 x 10 mm², 3 x 6 mm²



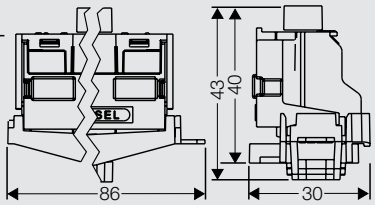
KKL 50 **Connecting terminal**

as a connecting terminal
for installation on DIN rails in accordance with
IEC 60 715, top hat profile 35 mm
for solid or stranded copper conductors
current carrying capacity 150 A
width: 25 mm
conductor cross section:
2 x 70 mm², 4 x 50 mm², 4 x 35 mm²,
4 x 25 mm², 6 x 16 mm²



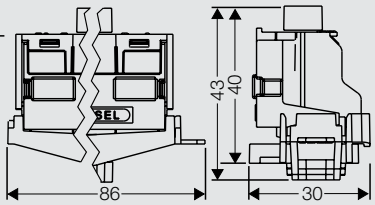
FC L 10 **FIXCONNECT® terminal**

for installation on DIN rails in accordance with IEC 60 715, top hat profile 35 mm
Number x cross-section per conductor
2 x 25 mm², 8 x 4 mm², Cu
current carrying capacity 80 A



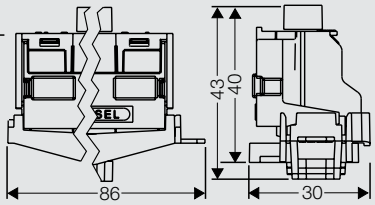
FC N 10 **FIXCONNECT® terminal for N conductors**

for installation on DIN rails in accordance with IEC 60 715, top hat profile 35 mm
number x cross-section per N
2 x 25 mm², 8 x 4 mm², Cu
current carrying capacity 80 A



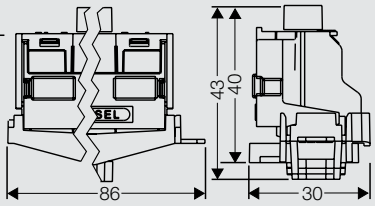
FC PE 10 **PE terminal**

for installation on DIN rails in accordance with IEC 60 715, top hat profile 35 mm
number x cross-section per PE
2 x 25 mm², 8 x 4 mm², Cu
current carrying capacity 80 A



FC PN 10 **FIXCONNECT® terminal for PE and N conductors**

for installation on DIN rails in accordance with IEC 60 715, top hat profile 35 mm
PE+N 1 x 25 mm², 4 x 4 mm², Cu
current carrying capacity 80 A



FC BS 5 **FIXCONNECT® labelling system**

Labelling system for FIXCONNECT terminals,
not for plug-in terminals 2x25 + 4x4 mm²
for attaching of labelling strips or marking with felt tip pen
set with 5 pieces

FC PN 30 **FIXCONNECT® terminal for PE and N conductors** **new**

Plug-in terminal for solid and flexible conductors from 1.5 mm² to 4 mm²
and screw-type terminals from 1.5 mm² to 25 mm²
1-row
PE+N x cross section
3 x 25 mm², 12 x 4 mm², Cu

FC PN 60 **FIXCONNECT® terminal for PE and N conductors** **new**

Plug-in terminal for solid and flexible conductors from 1.5 mm² to 4 mm²
and screw-type terminals from 1.5 mm² to 25 mm²
2-row
PE+N x cross section
6 x 25 mm², 24 x 4 mm², Cu

FC N 30 **FIXCONNECT® terminal for N conductors** **new**

Plug-in terminal for solid and flexible conductors from 1.5 mm² to 4 mm²
and screw-type terminals from 1.5 mm² to 25 mm²
1-row
N x cross section
6 x 25 mm², 24 x 4 mm², Cu

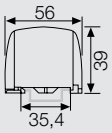
FC PE 30 **FIXCONNECT® terminal for PE conductors** **new**

Plug-in terminal for solid and flexible conductors from 1.5 mm² to 4 mm²
and screw-type terminals from 1.5 mm² to 25 mm²
1-row
PE x cross section
6 x 25 mm², 24 x 4 mm², Cu

Mi NK 14 **Connecting terminal**

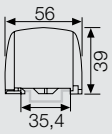
fixing on DIN rail
for retrofitting in Mi Empty box
Number x cross-section per conductor
1 x 25 mm², Cu
12 x 16 mm², Cu

KKL 34 **Main line branch terminal**



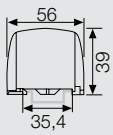
3-pole as connecting terminal 25 mm²
per pole 4 x 1.5-25 mm² as L1-L3
for installation on DIN rails in accordance with IEC 60 715, top hat profile 35 mm
conductor material: Cu
current carrying capacity 80 A
width 61 mm

KKL 48 **Main line branch terminal**



4-pole as connecting terminal 25 mm²
per pole 4 x 1.5-25 mm² as L1-L3, 8 x 1.5-25 mm² as N
for installation on DIN rails in accordance with IEC 60 715, top hat profile 35 mm
conductor material: Cu
current carrying capacity 80 A
width 100 mm

KKL 54 **Main line branch terminal**



5-pole as connecting terminal 25 mm²
per pole 4x1.5-25 mm² as L1-L3, 4x1.5-25mm² as N,
4x1.5-25 mm² as PE
for installation on DIN rail in accordance with EN 60 715,
35 mm DIN rail
current carrying capacity: 80 A
width: 100 mm

MN ST 00	HRC fuse switch disconnector

125 A,
3-pole
for mounting on mounting plate
rated voltage: AC 690 V
terminal connection with saddle clamping unit 1,5-70 mm², Cu

MS HRC 00	NH bus-mounted fuse switch disconnector

125 A,
3-pole
height: 216 mm x Breite: 105 mm
for retrofitting on busbars
for busbar thickness 10 mm and centreline spacing 60 mm
rated voltage: AC 690 V
terminal connection with saddle clamping unit 1,5-70 mm², Cu

Mi SU 00	HRC fuse base

125 A,
3-pole
for mounting on mounting plate
rated voltage: 125 A
terminal connection with saddle clamping unit 1,5-70 mm², Cu
Zugang mit Doppelschellenklemme 1,5-35 mm², Cu

HRC SU 00	NH bus-mounted fuse base

125 A,
3-pole
height: 216 mm x Breite: 105 mm
for retrofitting on busbars
for busbar thickness 10 mm and centreline spacing 60 mm
rated voltage: AC 690 V
terminal connection with saddle clamping unit 5-70 mm² Cu

Mi BA	Blanking cover

for sealing protection covers
in Mi-screw-type fuse boxes, diazed or neozed
width: 108 mm

Mi BA 6	Blanking cover

for sealing protection covers
in Mi-HRC fuse boxes
width: 108 mm

Mi WD 2	Wall gasket

for the assembly of Mi boxes
box walls 150 or 300 mm
consisting of 1 seal, 4 wedge links, 1 bracket

Mi SV 25	Busbar connector

5-pole
busbar rated current 250 A
with wall gasket
for the assembly of Mi boxes containing busbars
tightening torque for terminal 6,0 Nm
Busbars 250 A and 400 A can only be connected with busbar connector Mi SV 25.
Connecting of busbars with different rated current only under care and attention of the corresponding short circuit and overload standards.

Mi SV 45	Busbar connector

5-pole
busbar rated current 400 A / 630 A
with wall gasket
for the assembly of Mi boxes containing busbars
tightening torque for terminal 10,0 Nm

Mi WT 1	Wall separator

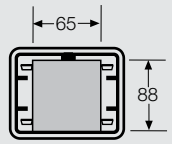
for subdivision of 300 mm box walls into 2 x 150 mm
for flange or box mounting

Mi BE	Fixing spares

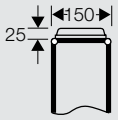
for the assembly of Mi boxes
when converting existing installations
consisting of 4 wedge links and 5 wedges

Mi FP 15 **Flange**

with fixing wedges and seal
box wall 150 mm
without knockouts



usable mounting area

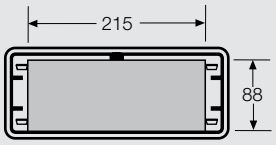


Mi FM 15 **Flange**

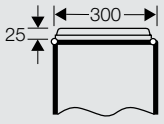
with fixing wedges and seal
box wall 150 mm
knockouts:
3 x M 20, 1 x M 32/40/50

Mi FP 20 **Flange**

with fixing wedges and seal
box wall 300 mm
without knockouts



usable mounting area

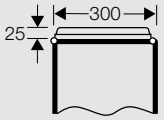


Mi FP 30 **Metal insert for flanges**

for earthing armoured cables
box wall 300 mm
without knockouts

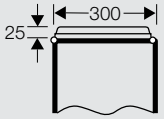
Mi FM 20 **Flange**

with fixing wedges and seal
box wall 300 mm
knockouts:
15 x M 16, 15 x M 20



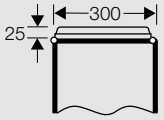
Mi FM 25 **Flange**

with fixing wedges and seal
box wall 300 mm
knockouts:
19 x M 16/25



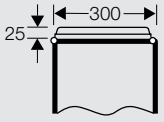
Mi FM 32 **Flange**

with fixing wedges and seal
box wall 300 mm
knockouts:
8 x M 25/32, 1 x M 25/32/40



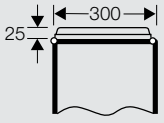
Mi FM 40 **Flange**

with fixing wedges and seal
box wall 300 mm
knockouts:
2 x M 25/32, 5 x M 32/40



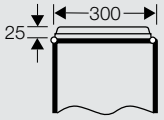
Mi FM 50 **Flange**

with fixing wedges and seal
box wall 300 mm
knockouts:
2 x M 20, 4 x M 32/40/50



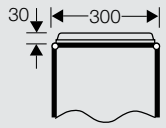
Mi FM 60 **Flange**

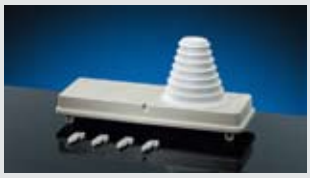
with fixing wedges and seal
box wall 300 mm
knockouts:
3 x M 40/50/63



Mi FP 38 **Flange**

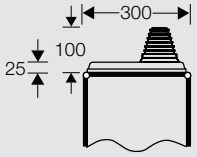
with fixing wedges and seal
cable entry via integrated elastic membranes
degree of protection: IP 65
box wall 300 mm
sealing range:
29 x Ø 7-12 mm
4 x Ø 7-14 mm
4 x Ø 11-20 mm
1 x Ø 16-29 mm





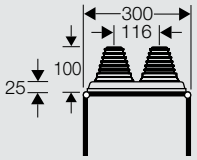
Mi FP 70 **Flange**

with fixing wedges and seal
using 1 cable entry
max. 72 mm external diameter
degree of protection: IP 65
box wall 300 mm
sealing range: Ø 30-72 mm



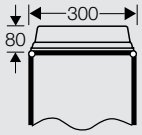
Mi FP 72 **Kabeleinführungsflansch**

with fixing wedges and seal
for 2 cables
max. 72 mm external diameter
degree of protection: IP 65
box wall 300 mm
sealing range: 2 x je Ø 30-72 mm



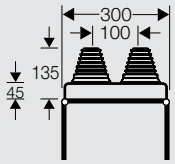
Mi FM 63 **Flange**

with fixing wedges and seal
with extended cable arrangement space
box wall 300 mm
knockouts:
3 x M 40/50/63



Mi FP 82 **Cable insert**

divisible
degree of protection IP 54 only with additional strain and pressure relief (e.g. Mi ZE 62)
for 2 cables
max. 72 mm external diameter
degree of protection: IP 54
box wall 300 mm
sealing range: 2 x je Ø 30-72 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
cannot be installed in Mi 6856

Mi GS 30 **Box fin**

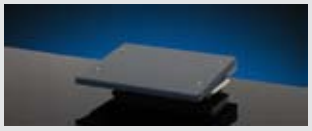
removable
for inserting cables across 2 boxes
for box walls 300 mm
can be retrofitted

Mi BF 20 **Ventilation flange**

for ventilation of Mi-Distribution boards
in the event of extremely high internal temperatures or a risk of water condensation
for vertical installation on the lateral box walls
degree of protection IP 23

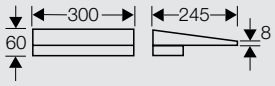
Mi DB 15	**Canopy**	**new**

for box wall 150 mm
width 150 mm
depth 245 mm
with fastening material



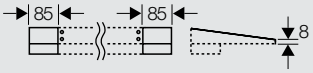
Mi DB 30	**Canopy**	**new**

for box wall 300 mm
width 300 mm
depth 245 mm
with fastening material



Mi DB 01	**End plate for canopy**	**new**

for canopy width 270 mm and 360 mm



Example: Mi distributor protected by canopy

Mi PL 2	Sealing caps
	2 sealing caps for converting the lid fasteners

Mi SR 4	Conversion set
	4 fastening covers for converting lid fasteners for manual operation to tool operation

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

Mi DV 01	Locking device insertion
	only in connection with Mi PL 2, Mi SR 4 or Mi SN 4

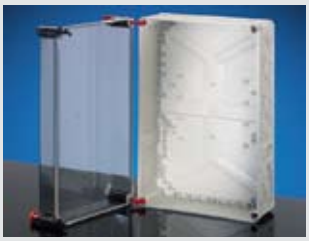
Mi ZS 11	Lid lock
	locking device I Is being used instead of fasteners for hand or tool operation in order to prevent unauthorised opening of the lids consisting of: cylinder lock, key, locking device insertion, dust cover

Mi ZS 12	Lid lock
	locking device II Is being used instead of fasteners for hand or tool operation in order to prevent unauthorised opening of the lids consisting of: cylinder lock, key, 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

Mi ZS 20 Mi hinge for lids

for Mi box sizes 1, 2, 3 and 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.



Usable in Mi boxes:

Backstop of lids:	Position of box: vertical				Position of box: horizontal			
	left	right	top	bottom	left	right	top	bottom
size 1:	●	●	●	●	●	●	●	●
size 2:	●	●	●	●	●	●	●	●
size 3:	●	●	●	-	-	-	●	●
size 4:	●	●	●	-	-	-	●	●

Mi ZS 40 Mi hinge for lids

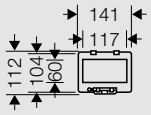
for Mi boxes sizes 1 to 8
For operating installation device within a large area.
The lid keeps permanently connected to the box.
Wall connectors or flanges are necessary for assembly.
Not applicable in boxes with covers.

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.

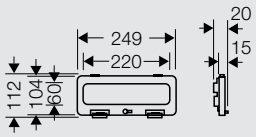
Mi KL 6 **Hinged flap**

modules 1 x 6 x 18 mm
with drill and saw template
opening dimensions 117 x 60 mm
sealable
wall thickness 1.5-4.5 mm



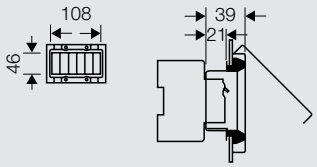
Mi KL 12 **Hinged flap**

modules 1 x 12 x 18 mm
with drill and saw template
opening dimensions 220 x 60 mm
sealable
wall thickness 1.5-4.5 mm



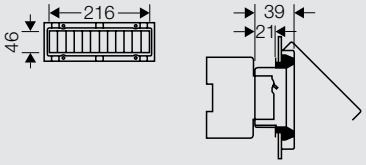
Mi BS 6 **Protection cover**

for Mi KL 6
with fixing screws
modules 1 x 6 x 18 mm



Mi BS 12 **Protection cover**

for Mi KL 12
with fixing screws
modules 1 x 12 x 18 mm

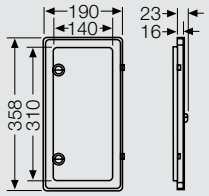


Mi SK 01 **Hinged flap lock**

for retrofitting in hinged flaps for 6 or 12 modules
for protecting the switchgear located behind the hinged flap against unauthorised access
(only effective in connection with lid lock Mi ZS ..)

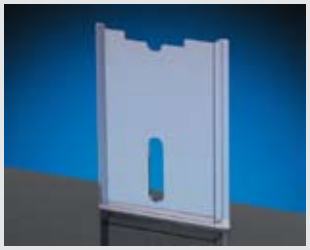
NZ KL 54 **KWH meter window flap**

according to DIN 43 870
standard opening dimensions 140 x 310 mm
for tool or manual operation
sealable
can be locked with padlock (clip diameter max. 6 mm)
complete with screws
degree of protection IP 54



Mi SA 2 **Dust protection cover**

for 2 lid fittings
for box sizes 1 to 4
set consisting of 4 parts



MT SP 01 **Wallet for circuit diagram**

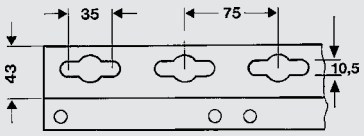
DIN A 5
self-adhesive

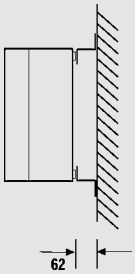
Mi AL 40 **External brackets**

for external box fixing with Mi enclosures
set consisting of 4 fixing brackets, 4 screws

Mi MS 2 **Mounting profile**

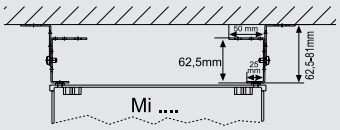
for wall-mounted assembly of Mi-distribution boards up to 900x1200 mm
with 8 screws M6 x 16, washers and nuts for mounting enclosures
sendzimir galvanised steel profile with structured powder coating
colour RAL 7032 grey
length 1950 mm

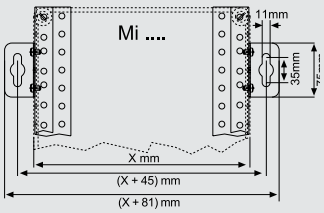




MX 0101 **Mounting profile set**

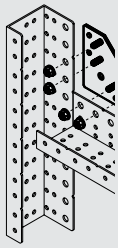
U-profile for constructing a mounting frame
consisting of:
1 x mounting rail, length 1950 mm
2 x fixing brackets
1 x flat connector with connecting screws
sheet steel galvanised with a structured powder coating
colour: RAL 7016 anthracite grey





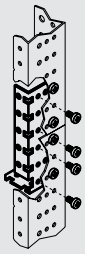
MX 0112 **Fixing elements for T or L connections**

for constructing a mounting frame
consisting of: 2 couplers with screws and nuts
sheet steel, galvanised



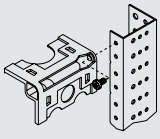
MX 0105 **Coupler set**

consisting of:
2 x couplers with connecting screws
sheet steel galvanised with a structured powder coating
colour RAL 7016 anthracite grey



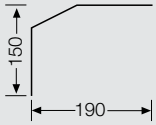
MX 0111 **Mounting profile**

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



Z RK 19 **Cable entry cover**

height: 150 mm x depth 190 mm
length: 2000 mm
material: plastics
colour: RAL 7030



Z RKW 19 **Support for cable entry cover**

height: 150 mm x depth 190 mm
material: plastics

Z RKZ 19 **End caps for cable entry cover**

height: 150 mm x depth 190 mm
material: plastics
colour: RAL 7030

Operating and ambient conditions	Empty boxes Mi 0... Mi 9...	Boxes with electrical functions Mi 1... / Mi 2... / Mi 3... / Mi 4... / Mi 5... / Mi 6 ... / Mi 7... / Mi 8 ...
Application area	**Mi Distribution boards are suitable for the outdoor installation - harsh environment and / or outdoor.** However the climatic influences and effects on the equipment are to be considered. [1]	
	Resistant to occasional cleaning procedures (direct jet) max. with high-pressure cleaner without additives water pressure: max. 65 bar, water temperature: max. 50° C, distance ≥ 0.5 m single enclosures without lid components (no enclosure assemblies), **box and cable entries 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
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	halogen-free [2] silicone-free	halogen-free [2] silicone-free

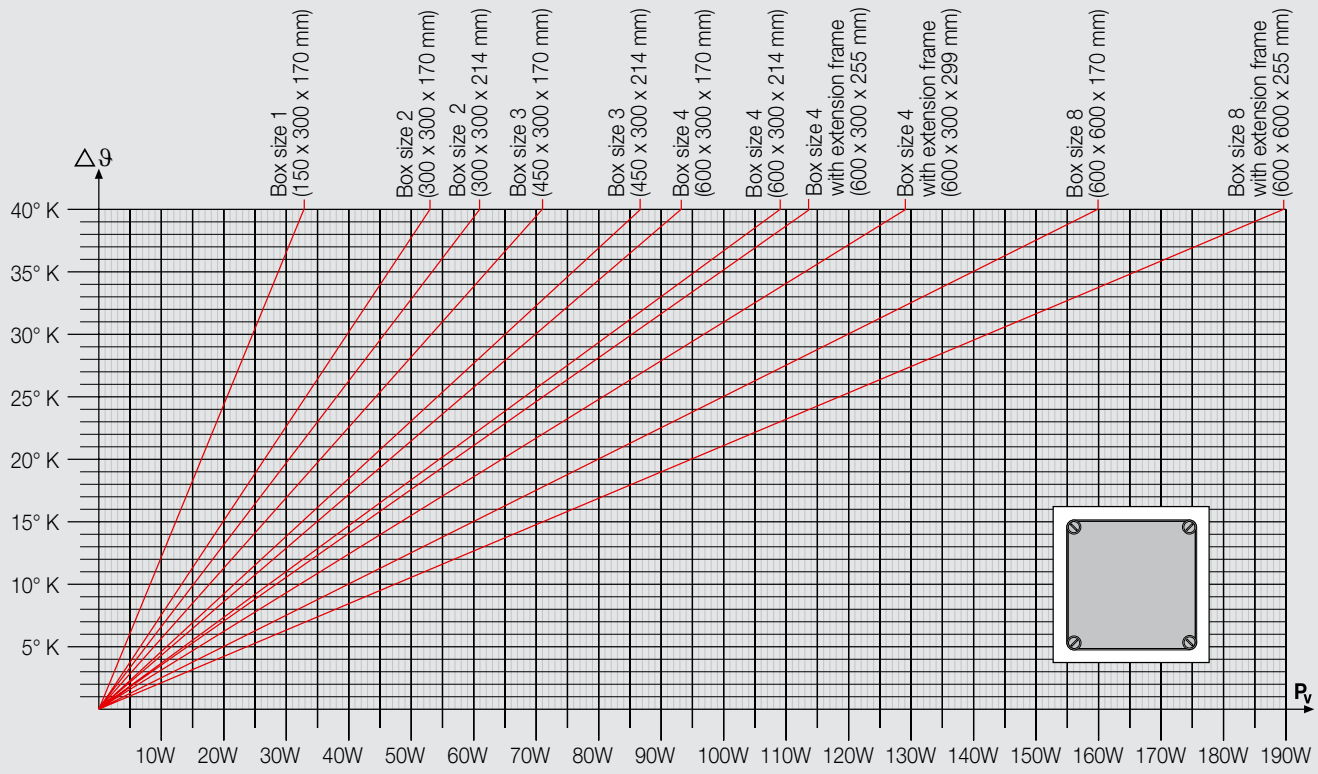
1) Supplementing references regarding outdoor installation - harsh environment and / or outdoor:
- **The materials used for the Mi System are basically UV resistant, so that the mechanical resistance of the boxes is maintained during UV effect.**
  Depending on the intensity of the UV effect e.g. transparent lids can become intransparent.
- **The top side of the boxes should be protected by a cover against weather influences such as rains, ice and snow.**
- **Further on, also chemical influences have to be considered with the selection of the installation place - apart from the IP rating and climatic effects.**
- **In order to keep the maximum permissible ambient temperature of the installed equipment as well as for the prevention from condensation additional measures as ventilation and/or heating may be necessary.**

2) "Halogen-free" in accordance with IEC 754-2 "Common test methods for cables - Determination of the amount of halogen acid gas".

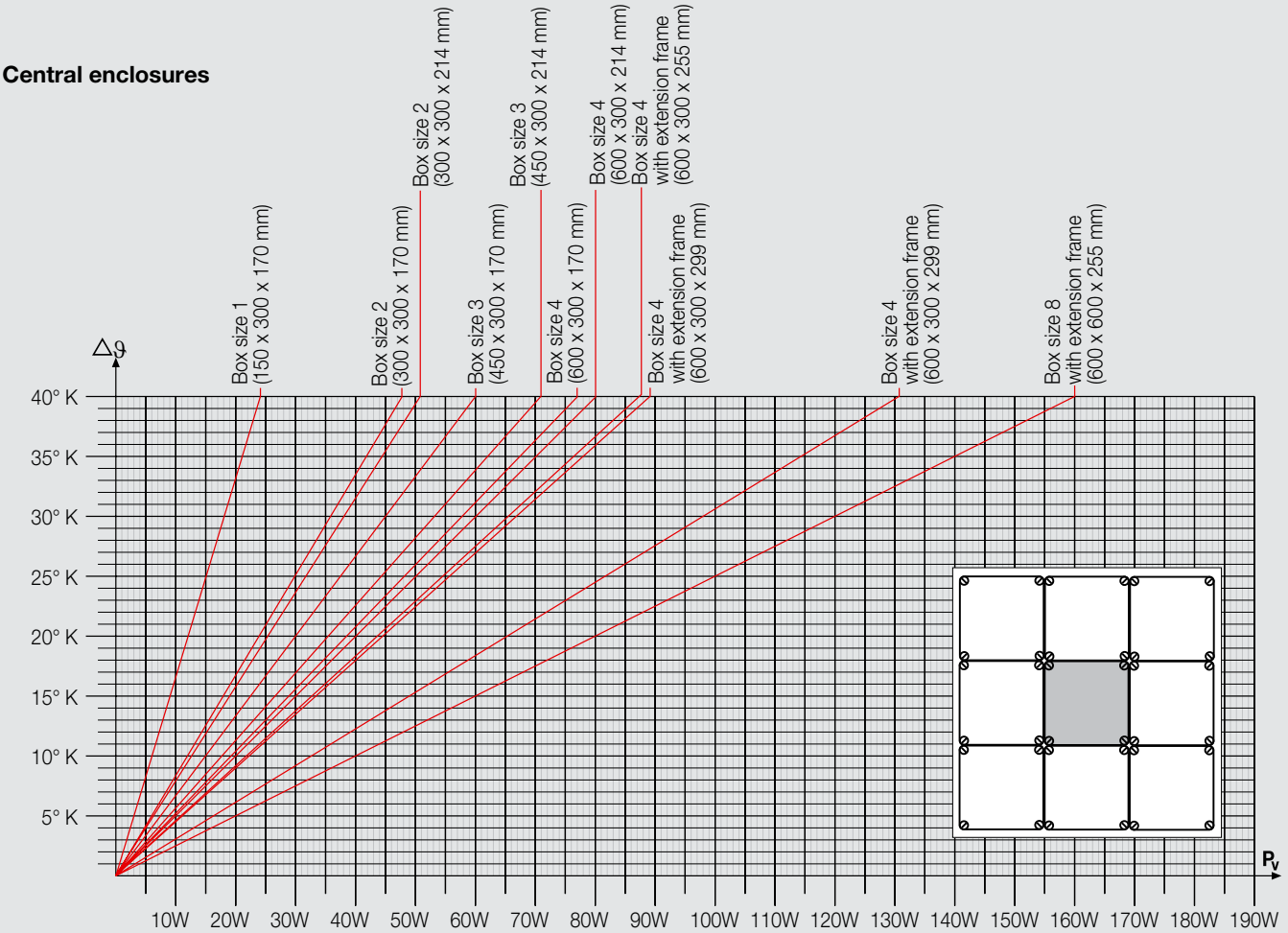
To material properties see technical data.

Temperature rise (Δϑ) with Mi-Distribution boards by power dissipation of electrical devices

Single enclosures

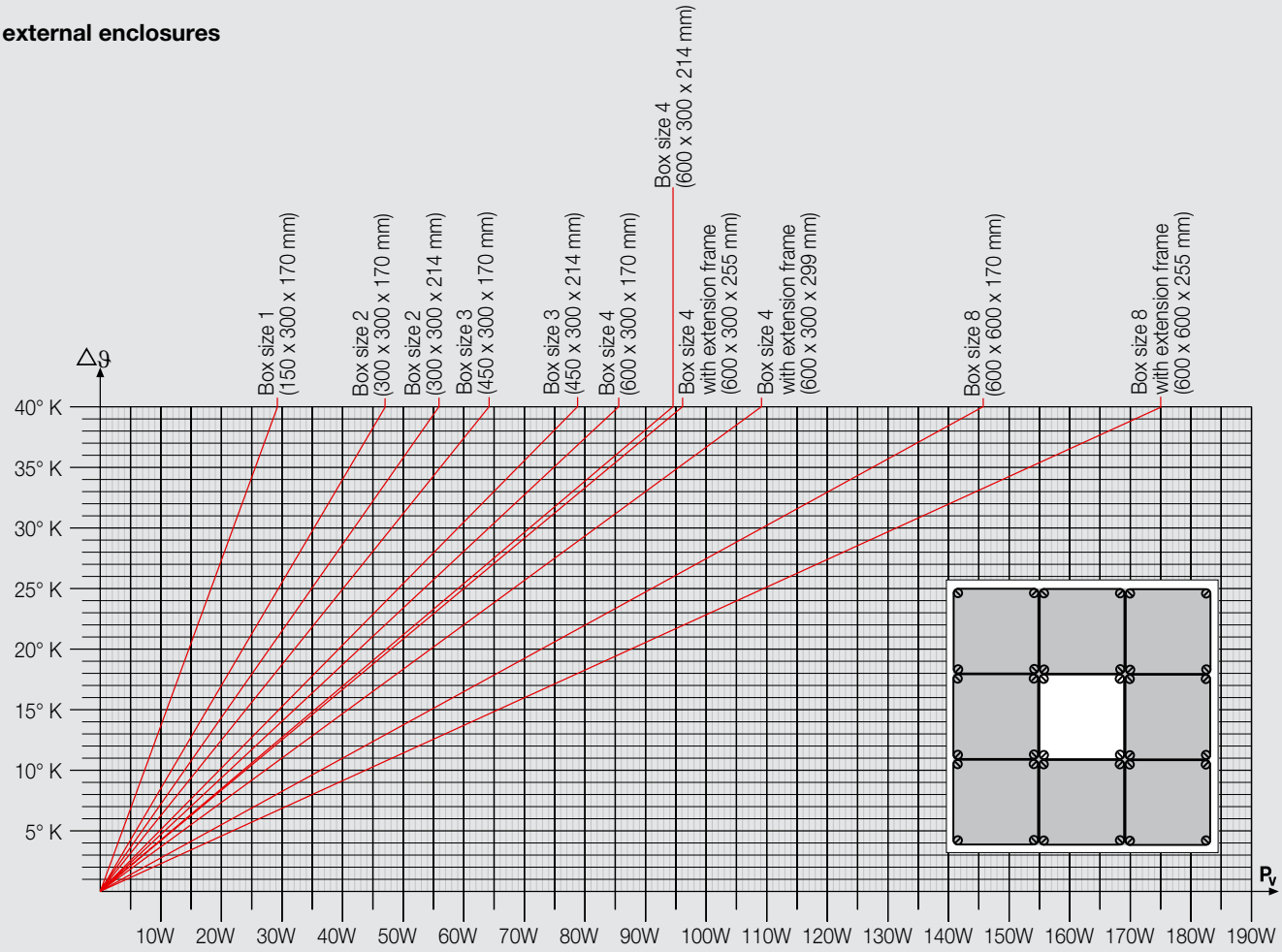


Central enclosures



Temperature rise (Δϑ) with Mi-Distribution boards by power dissipation of electrical devices

external enclosures



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 Temperatur resistance of the enclosure materials and the cable entries etc.

Example: Computation 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: $\Delta\vartheta = \vartheta_{imax} - \vartheta_u = 55°C - 25°C = 30$ 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):

Single enclosure: Pv = 53 W
Central enclosure: Pv = 45 W
External enclosure: Pv = 48 W

Example: Computation 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: Δϑ
Enclosure size 3 (450 x 300 x 170 mm):

Single enclosure: $\Delta\vartheta = 17$ K; $\vartheta_i = \vartheta_U + \Delta\vartheta = 25°C + 17$ K = 42°C
Central enclosure: $\Delta\vartheta = 20$ K; $\vartheta_i = \vartheta_U + \Delta\vartheta = 25°C + 20$ K = 45°C
External enclosure: $\Delta\vartheta = 19$ K; $\vartheta_i = \vartheta_U + \Delta\vartheta = 25°C + 19$ K = 44°C

Mi distribution boards comply with the requirements for power switchgear combinations (PSC) in accordance with IEC 61 439 Part 1 and Part 2.

Power switchgear combinations (PSC) are switchgear and controlgear assemblies which are 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 switchgear must consist of the 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 Technical data.
3. Once the switchgear 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 switchgear must be provided with a manufacturer’s identification mark. Compliance with important data such as
   - limit of temperature rise
   - dielectric strength
   - short-circuit withstand capacity
   - short-circuit withstand capacity of the PE conductor
   - IP degrees of protection
   - creepage distances and clearances

   is verified by type tests for this system.

Standards and regulations

- IEC 61 439 Part 1 and Part 2
  Low voltage switchgear and control gear assemblies (PSC)

- IEC 60 999
  Safety requirements for screw-type and screwless-type clamping units for electrical copper conductors

- DIN EN 50 262
  Metric threaded cable glands for electrical installations

- IEC 60 269
  Low voltage fuses

- DIN 43 880
  Built-in equipment for electrical installations; overall dimensions and related mounting dimensions

- IEC 60 529
  Degrees of protection provided by enclosures (IP-Code)

- IEC 60 947-2
  Low voltage switchgear -Part 2, circuit-breakers

- IEC 60 947-3
  Low voltage switchgear -Part 3, Switches, disconnectors, switch-disconnectors and fuse-combination units

- IEC 60 269
  Low-voltage fuses

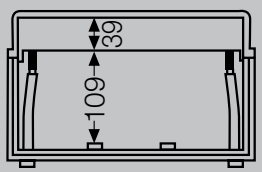
Approvals:
EZU Czech Republic
MEEI Hungary
GOST
ASTA

Detail dimensions in mm

Dimensions of the interior installation depth with installed mounting plates.

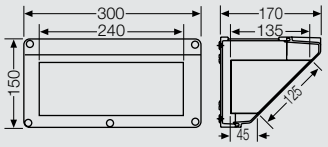
The width of Mi Empty boxes Mi 9... enlarges about 15 mm because of the laterally mounted lid hinges, refer to product pages.

Installation of equipment in protection plates:

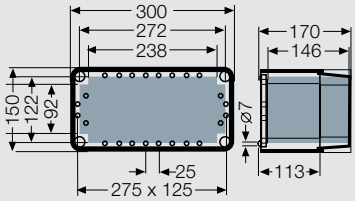


Pre-drill the sections at the corners, then saw away the section from the protection plate by using a piercing saw at middle to low cutting speed.
Use coarse toothed saw blades for plastics (e.g. Bosch T 101 B).

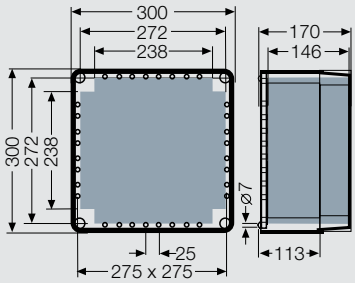
Mi CB 10



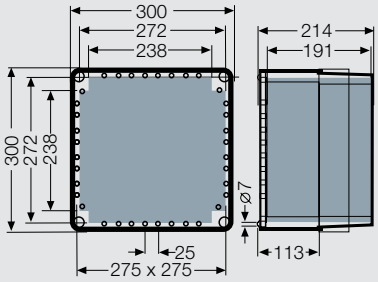
Mi 0100
Mi 0101
Mi 9120
Mi 9121



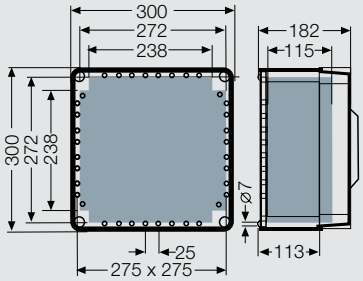
Mi 0200
Mi 0201
Mi 9220
Mi 9221



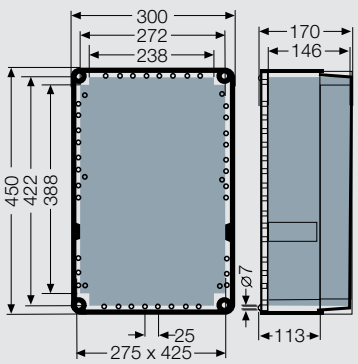
Mi 0210
Mi 0211
Mi 9230
Mi 9231



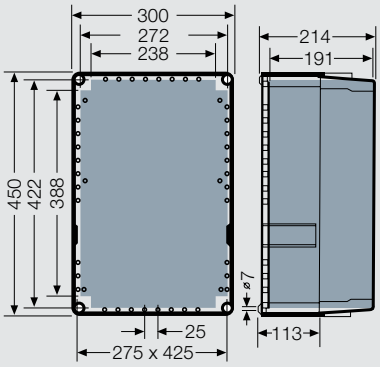
Mi 0220
Mi 0221



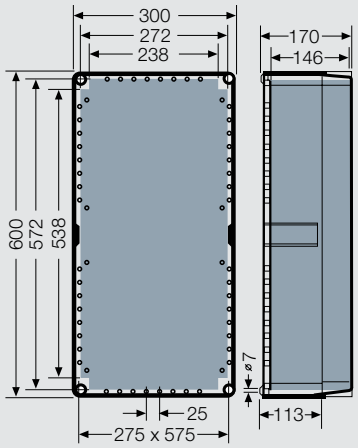
Mi 0300
Mi 0301
Mi 9320
Mi 9321



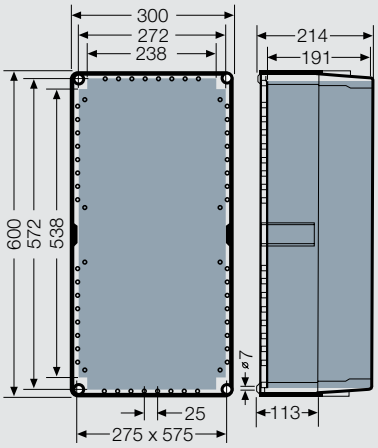
Mi 0310
Mi 0311
Mi 9330
Mi 9331



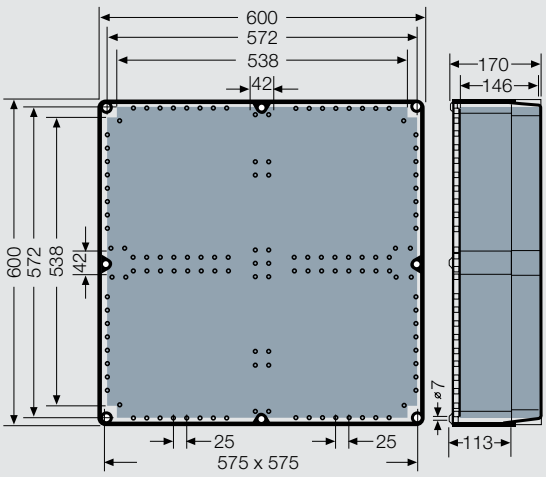
Mi 0400
Mi 0401
Mi 9420
Mi 9421



Mi 0410
Mi 0411
Mi 9430
Mi 9431

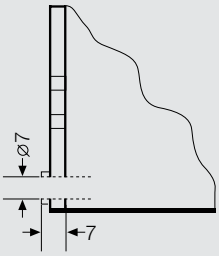


Mi 0800
Mi 0801



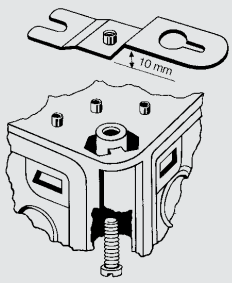
Wall mounting

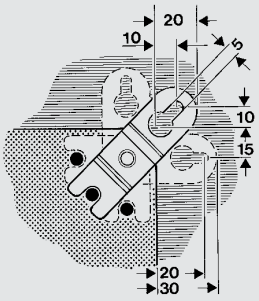
Dimensions for wall mounting in mm



External brackets
for external box fixing.

Mi AL 40 (4 fixing brackets)



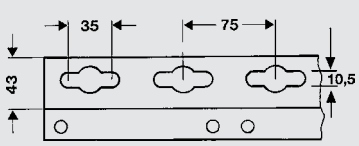


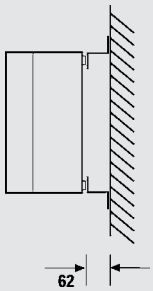
Mounting profile
for wall-mounted installation of Mi-Distribution boards, steel profile, 1950 mm long, dividable in the grid of 150 mm.

Mi MS 2

Note:
Please fix mounting profile in vertical position as possible in order to give occation to cable routing behind the assembly. For cutting to the required length fix mounting profile for example with a clamp to a desk.

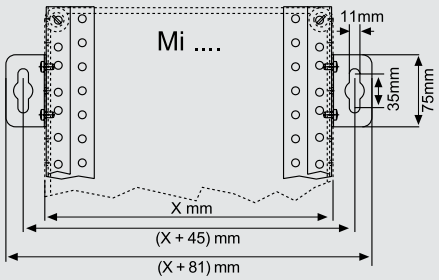
Transport
Regarding transportation its recommendable to protect the assembly against deflection. For that please screw the assembly to a solid timber.

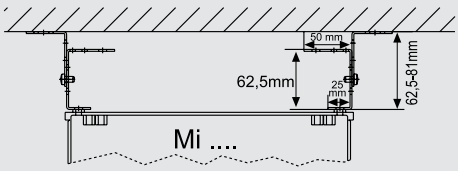


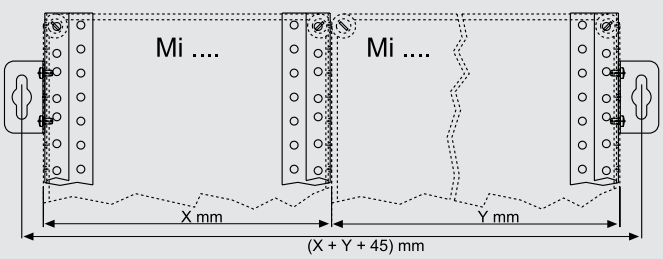


Fixing matrix of mounting profile

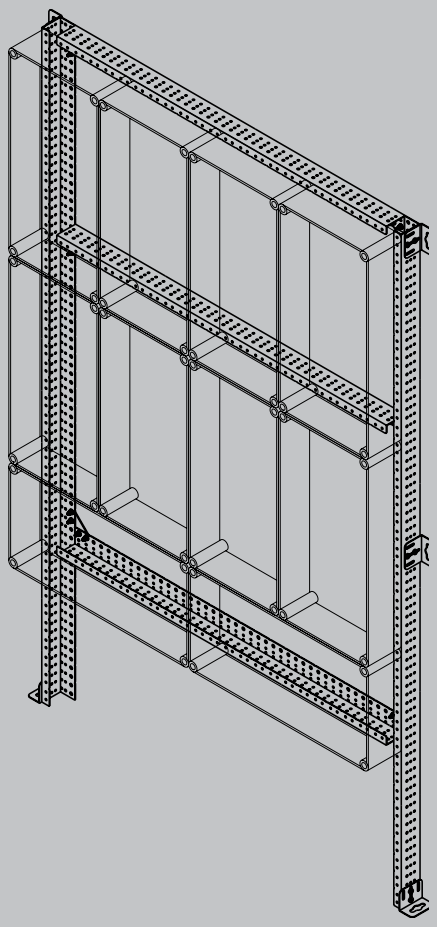
Mounting profiles
U profiles for constructing a mounting frame.

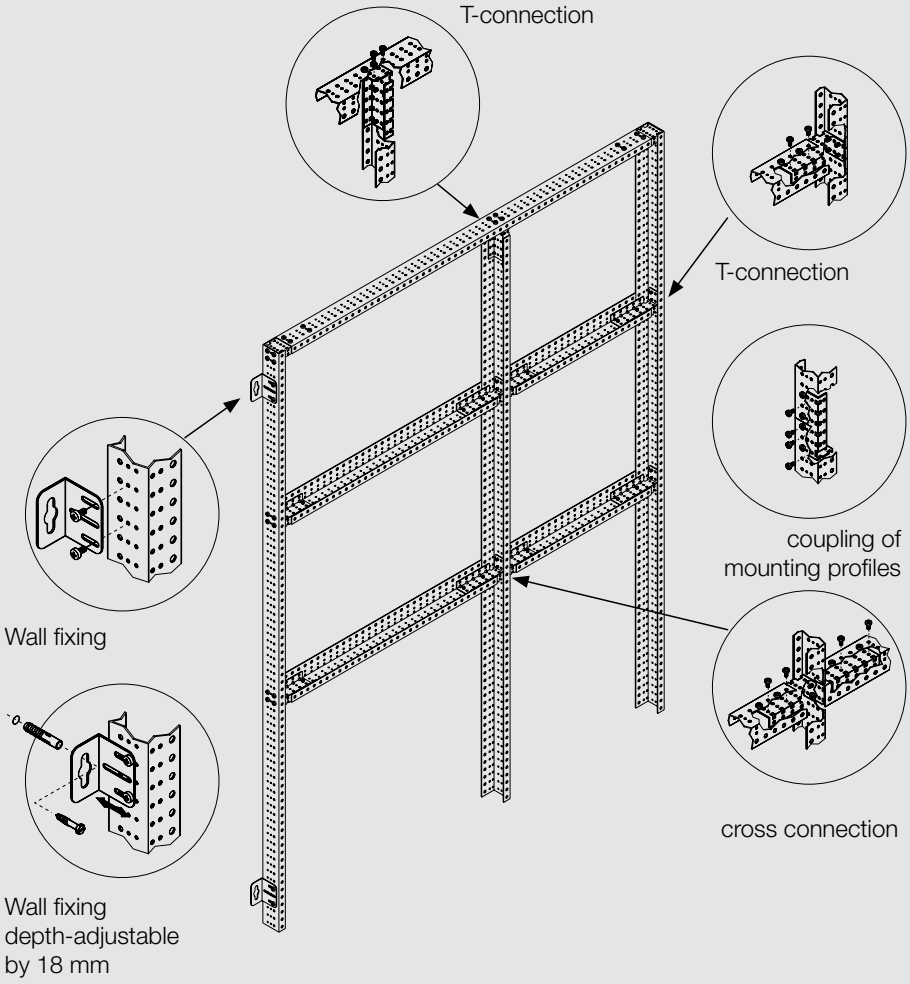






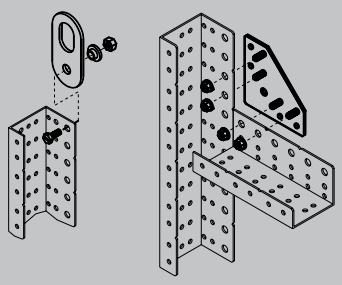
Mounting profile





Mounting profile

To stabilize larger distributions boards
for the transport and assembly on site.



MX 0101

MX 0112

MX 0105

MX 0111

Lid hinges for Mi distribution boards

Mi ZS 20

When assembling several boxes, the insertion can only be carried out for the external boxes.
For operating installation device within a large area.

The lid keeps permanently connected to the box.

Usable in Mi boxes:

Back-stop of lids:	Position of box: vertical				Position of box: horizontal			
	left	right	top	bot-tom	left	right	top	bot-tom
size 1:	●	●	●	●	●	●	●	●
size 2:	●	●	●	●	●	●	●	●
size 3:	●	●	●	-	-	-	●	●
size 4:	●	●	●	-	-	-	●	●

Mi heavy-duty hinge joints

Mi ZS 40

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.

Lid is fastened with plastic screw to secure the total insulation ⧈.

Mi hinge for lids

Mi ZS 60

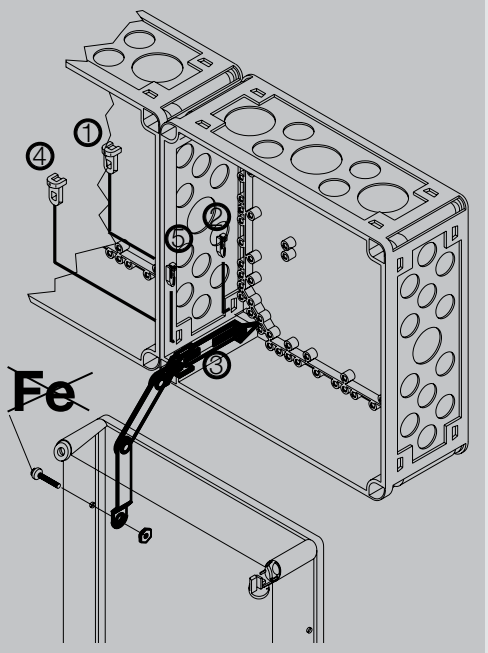
For operating installation device within a large area.

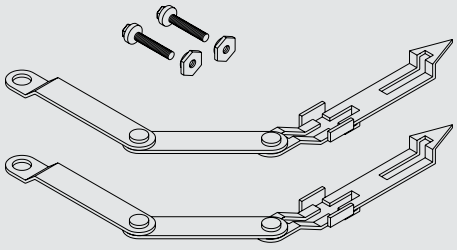
The lid keeps permanently connected to the box.

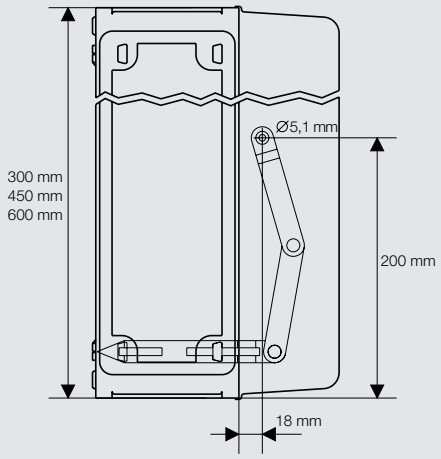
Not applicable in boxes with covers.

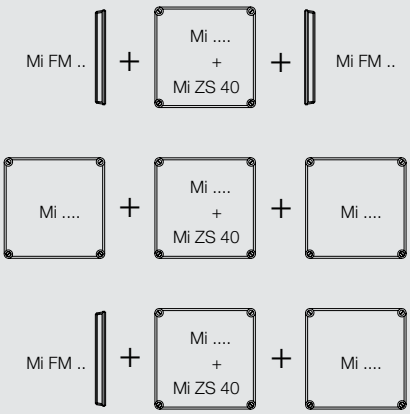
Mi heavy-duty hinge joints

Mi ZS 40 are to be mounted on the inside of the boxes.







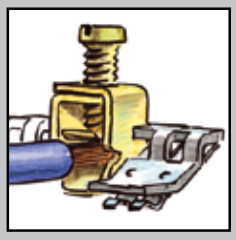


PE and N FIXCONNECT® terminal

Rated connecting capacity of PE and N terminals

Clamping unit

screw-type terminal 25 mm²



plug-in terminal 4 mm²

corresponding cross-sections/copper			
max. number	**from - to max.**	**max. number**	**from - to max.**
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		
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	

Innovative FIXCONNECT® terminal technology for PE/N in Mi Circuit breaker boxes:

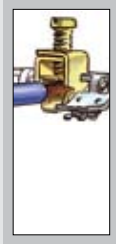
1. Rapid connection

Plug in terminal 1.5 - 4 mm²

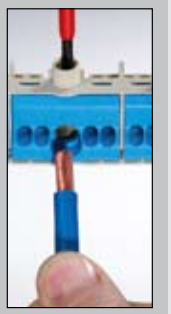
Solid conductors:
Simply plug-in the conductor!

Flexible conductors:
1. Open the clamping unit with a tool.
2. Insert the conductor!

Screw-type terminal 1.5 - 25 mm²



Connection of solid and stranded conductors.

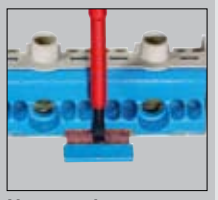


connection of untreated, flexible conductors (without end ferrule).

3. Variable and simple separation of N

Plug-in jumper

Plug-in jumper
Several N potentials are provided and linked by plug-in jumpers in the supplied state.



N separation
The N potential can be separated and reconnected via the plug-in jumper.

4. Good accessibility during connection

Arrangement of the PE and N terminals in Mi Circuit breaker boxes:

Terminals are fixed staggered in height

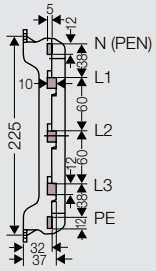
More space when connecting the conductors:
Removable N terminal for a simple connection of the conductors. Free accessibility of PE clamping units when inserting the conductors. The N terminal is then simply snapped in place.

2. More clamping units for practical use

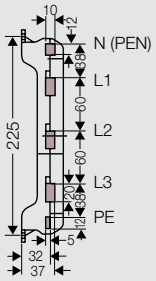
row(s) for modules	Terminals for PE and N until now mounted in Mi Circuit breaker boxes		Hensel FIXCONNECT® plug-in technology for PE/N Plug-in terminal	Screw-type terminal
2 (24 TE)	10 x 4 mm²	2 x 25 mm²	**12 x 4 mm²**	**3 x 25 mm²**
3 (36 TE)	16 x 4 mm²	4 x 25 mm²	**24 x 4 mm²**	**6 x 25 mm²**
4 (48 TE)	20 x 4 mm²	5 x 25 mm²	**24 x 4 mm²**	**6 x 25 mm²**

Position of busbars
Note:
For containing short-circuit resistance the distance between busbar suppoerts must not exceed 300 mm.

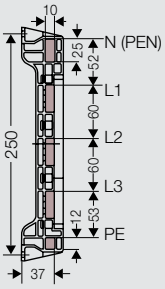
250 A



400 A



630 A

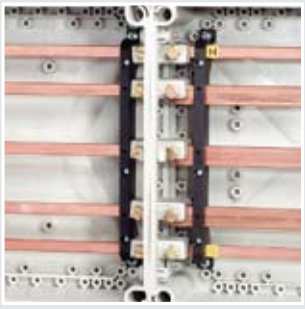


Equipment for busbar supports:

	Mi ST 25	Mi ST 41	Mi ST 63
Rated busbar current	**250 A**	**400 A**	**630 A**
L1, L2, L3	12x10 mm	20x10 mm	30x10 mm
N	12x5 mm	12x10 mm	25x10 mm
PE	12x5 mm	12x5 mm	12x10 mm

Note to Mi busbar boxes:
Busbars 250 A and 400 A can only be connected with busbar connector Mi SV 25.

Busbar connector



Rated current and short circuit resistance of busbars

Rated current A	Busbar cross-section mm	Material	Rated peak withstand current I_{pk} kA	 cos φ	Distances between busbar supports max. mm
250	12x10	Cu	30	0,3	300
400	20x10	Cu	30	0,3	300
630	30x10	Cu	45	0,3	300

Terminals for incoming cables

2-5-pole,
for Cu- and aluminium[1)] wires,
to be assembled in Mi empty boxes
sizes 2 to 8,
pre-mounted on mounting plates 300 x 300 mm, with fastening screws.

Terminals for incoming cables	**Mi VE 120** 4-pole	**Mi VE 125** 5-pole	**Mi VE 240** 4-pole	**Mi VE 245** 5-pole	**Mi VE 302** 2-polig	**Mi VE 303** 3-pole	**Mi VE 304** 4-pole
Rated connecting capacity	150 mm²		240 mm²		300 mm²		
Current carrying capacity	250 A		400 A		630 A		
Tightening torque	20 Nm		40 Nm		50 Nm		
Clamping units per pole	2	4	2	4	2		4
Type of conductor sol (round)	16-50	16-50	25-50	25-50	-		35-70
Type of conductor s (round), f (flexible)	16-150	16-70	25-240	25-120	150-300		35-185
Type of conductor sol (sector)	50-150	50-70	50-185	50-120	150-185		95-185
Type of conductor Copper s (sector)	35-150	35-70	35-240	35-120	150-240		95-185
Type of conductor Aluminium s (sector)	50-120	35-50	95-185	50-95	150-240		95-185
Outgoing wiring strip (Cu)	Mi VS 100 to Mi VS 630	Mi VS 100 to Mi VS 630	Mi VS 100 to Mi VS 630	Mi VS 100 bis Mi VS 630	Mi VS 630		Mi VS 630

1) Reference to the preparation of aluminum conductors:

1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before start-up and after the first 200 operation hours.

Planning aids

With the simply and fast project engineering and ordering of Mi distributors we support you with different planning aids:

- **Project engineering with the main catalog**

- **Project engineering with personal computers and standard software**

With the EDP planning software HENPAS, the electrician can edit simple, fast and professional computer-assembly drawings and circuit diagrams.

The parts libraries contain all elements which are required for the editing of assembly plans.

You can download the CAD Parts library of signs and symbols on the InterNet at www.hensel-electric.de, download area.

Software requirements:
AutoSketch, AutoCAD or DXF compatible CAD programs.

Design fast, simply and more clever:
www.enyguide.eu
Configurator supports project engineering

- **online via InterNet**
- **or offline**

ENYGUIDE is a professional planning aid for electricians for a simple and quick editing of design drawings and parts lists.

With the configuration software ENYGUIDE electricians can provide themself fast and easily layouts and parts lists without any time-consuming program installation at the computer.

The professional planning aid plots the distribution board

- as precise 3-dimensional image for final customers and/or the user or
- as 2-dimensional drawing for the assembler.
- The user can choose via several layers between the projection of assemblies, covers and doors.
- ENYGUIDE figures out independently the necessary accessories.
- The software particulary facilitates a reliable basis for calculations via automatically generated order and parts lists and guarantees a meaningful documentation for each project.

ENYGUIDE

Step 1:

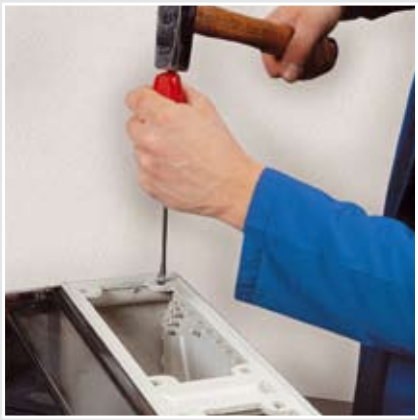
Assembly of Mi Distribution boards according to assembly draft

Step 2:

Knock out of box walls to provide electrical connection

Knock out the box walls to provide for the electrical connection inside the distributors.

Knock out the appropriate openings of the wedge joints for the assembly of boxes.



Step 3:

Assembly of the boxes

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

The boxes are assembled by means of wedge connections. Screws M 6x15 may be used instead of wedges.

The wall clamp is pressed onto the box fins to increase the rigidity.

Wall separator for subdivision of 300 mm box walls into 2 x 150 mm for flange or box mounting.

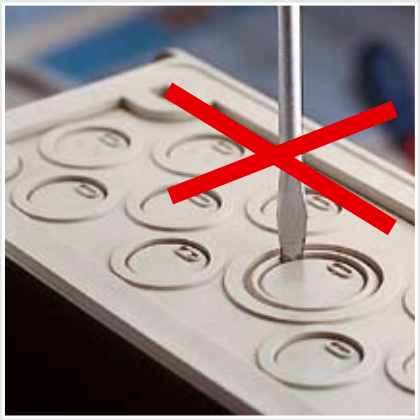
Step 3:

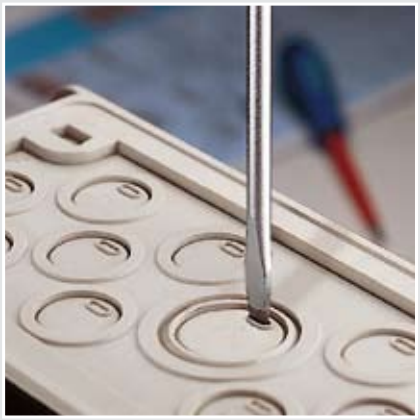
Assembly of the boxes

Cable entry via flanges.

Flanges are attached to the boxes by means of 4 wedge links and 1 clamp.

Knock out for cable entries by means of a screwdriver.





The respective box wall is knocked out and the upper box fin next to the wedge fastening is sawed out.

Then the cable insertion is screwed on and the rubber entries are fitted.

The cable is inserted into the box from the front.

Step 3:

Assembly of the boxes

Subsequent installation of upper box fin.

Mounting canopy
for the unprotected installation outdoors

Easy assembly by means of wedge connections.

Step 4:

Installing equipment

Installation devices can be fastened on mounting plates with self-threading screws.

DIN rail fastening on spacers Mi DS 50

Step 4:

Installation of equipment in cover plates

Pre-drill the sections at the cor-ners. Then saw away the sections from the protection plate by using a piercing saw with coarse toothed saw blades for plastics (e.g. Bosch T 101 B).

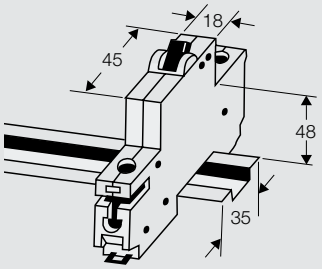
Screw the support for the protection plate Mi EP 02 at the base of the box.

Put on the protection plate.

Blanking strips (attached) for unused equip-ment openings in protection covers.

PE and N terminals for copper conductors (installed).

Dimension of 1 module
1 module = 18 mm



Dimensions in accordance withDIN 43 880 for DIN rail equipment

Notes to Mi Circuit breaker boxes

Spare equipment openings in protection covers are to be covered with the blanking strips to prevent accidental contact (blanking strips are enclosed for 50 % of equipment openings).

Circuit breaker boxes can be fitted with any DIN rail equipment, if per row (12 modules 12 x 18 mm) the assigned back-up fuse won‘t exceed 80 A.

Step 5:

Wiring

Allocation of terminals for direct busbar connection to cross-section and Mi-boxes:

refer to table on pages 266 and 267.

Connection from 100 A to 630 A between busbars and built-in equipment

Wiring strip

from laminated copper, insulated, supplied length 2000 mm

Wiring supply terminals

terminal for direct connection of laminated copper wiring strip (Mi VS 250 and Mi VS 400) up to 400 A to switchgear by means of flat contact M 10.

VA 400

Wiring strip

Mi VS 100/160
with terminal for direct busbar connection
KS 35 F

Mi VS 250/400
with terminal for direct busbar connection
KS 120 Z

Direct connection of copper conductors (s) to busbars

Copper conductors with KS 120 Z

Copper conductors with KS 240/12

Copper conductors with KS 240/20

Connection of wiring strip 160 A, 250 A and 400 A

Wiring strip Mi VS ..
with wiring supply terminals VA 400

Wiring strip Mi VS ..
with terminal for direct busbar connection
KS 120

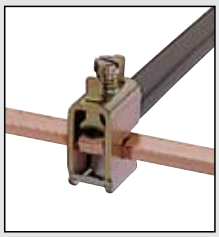
Connection of wiring strip 630 A
Mi VS 630

Wiring strip Mi VS 630
with wiring supply terminal VA 630

Wiring strip Mi VS 630
with terminal for direct busbar connection
KS 240 V

Mi VS 100 for rated current 100 A
Mi VS 160 for rated current 160 A
Mi VS 250 for rated current 250 A
Mi VS 400 for rated current 400 A
Mi VS 630 for rated current 630 A

Wiring instructions for equipment are duly to be observed (e.g. cross-sections of connectors min. … mm^2).



Connection between busbars and built-in equipment with wiring strip Mi VS 100 or Mi VS 160 resp. Mi VS 250 or Mi VS 400 and terminals for direct busbar connection KS 35 .. resp. KS 120 ..