




NEW
Degree of protection
IP 66

Product information As at: 7/2014

ENYSTAR®

**Distribution Boards up to 250 A
with Door According to IEC 61 439-3**

**„Distribution Boards Intended to be
Operated by Ordinary Persons (DBO)“**

- Combinable enclosure system
- Degree of protection IP 66
- Protection class II 
- Made from polycarbonate



Design fast, simply, more clever
www.ENYGUIDE.eu

NEU Interfaces according to IEC 61439-3

- For protected outdoor installation
 - Degree of protection IP 66
 - Combinable enclosure system, extendible in all directions
 - 4 enclosure sizes in grid of 90 mm
 - EMC compliant busbar system
 - Wall- or floor-mounting
- Distribution board up to 250 A intended to be operated by ordinary persons (DBO)
 - according to IEC 61439-3
 - Protection class II up to a rated current of 250 A
 - Flexible through standardised and tested kits
 - Spacious connection areas
 - Fulfill the requirements for operation by ordinary persons (DBO)



BLACK BOX
with the 4 interfaces
for the rating of
power switchgear
assemblies



ENYSTAR
Distribution Board

Combinable enclosure system,
insulation-enclosed, totally insulated, IP 66,
**for the assembly of
distribution boards up to 250 A
intended to be operated by ordi-
nary persons (DBO) according to
IEC 61439-3**

The requirements of all installed electrical functions
demonstrate compliance with the applicable require-
ments of IEC 61439-3.

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



- Electric circuit / final circuit
 - Circuit-breaker up to 250 A
 - Switch disconnector up to 250 A
 - Fuse switch disconnector up to 250 A
 - Bus-mounted fuse base up to 63 A
 - Connection with cable from above / from below
 - Connection: conductors from copper / aluminium
 - Optional connection of CEE sockets according to EN 60309 and sockets with earthing contact according to DIN 49440-1
- Rated voltage $U_N = 690 \text{ V a.c.} / 1000 \text{ V d.c.}$
 - Rated current I_N up to 250 A
 - Circuit-breaker up to 250 A
 - Switch disconnector up to 250 A
 - Fuse switch disconnector up to 250 A
 - 5-conductor systems
 - Connection with cable from above / from below

NEU IEC 61439 causes new product presentation

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

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

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

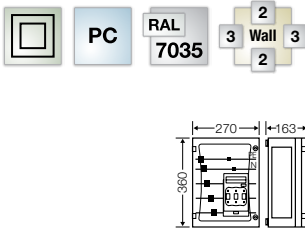
Info Further technical information can be found on the Internet
www.hensel-electric.de -> Products

Example: Product presentation in accordance with nach IEC 61439



FP 3226
1 x fuse switch disconnector 125 A, HRC 001, 3-pole
Rated current of busbars 250 A

- incoming terminals 10-70 mm², Cu, round conductors connection of wiring strip Mi VS 100/160
- outgoing terminals: 1.5-50 mm², Cu, round connectors per PE and N terminals 1 x 4-35 mm², Cu, round connectors
- N conductor with the same current carrying capacity as the phase conductors
- cable connection from the top, changeable to bottom connection
- with transparent door
- door fastener with tool operation
- door locking sealable
- box size 2
- connector: 6 items
- order closing plate sets, single closing plates and flanges separately



**I_{nc} and
number of circuits**

rated voltage:	$U_n = 690 \text{ V a.c.}$
rated current of a circuit	$I_{nc} = 100 \text{ A}$
number of circuits	1
busbar system - polarity	5
busbar thickness	L1-L3, N, PE: 5 mm
centreline spacing of busbars	60 mm
tightening torque for terminal	4 Nm terminal



Combinable enclosure system with doors



Easy operation of the devices behind a door with protection against accidental contact.



Quick assembly



Facilities for earth connection according to British Standard

Distribution Boards with Door up to 250 A
combinable enclosure system, insulation-enclosed,
for the assembly of distribution boards up to 250 A
intended to be operated by ordinary persons (DBO),
degree of protection IP 66, made from polycarbonate,
in accordance with IEC 61 439-3

Distribution Boards up to 250 A with Door

- for indoor and protected outdoor installation
- dust-proof and protected against water (IP 66)
- protection class II
- colour: grey, RAL 7035

Doors

- All enclosure sizes with door
- Transparent and opaque
- Door hinge changeable
- Sealable
- Locking facilities: lockable, door fasteners for tool or hand operation
- Operation of the devices behind the door protected with covers, no overhangig handles

Quick Assembly

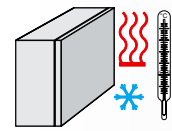
- Closed or open enclosure walls, which can fast and easily be closed with closing plate sets
- Integrated gaskets
- Safe connectors

Pre-assembled Enclosures with Electrical Functions

- Electrical functions in enclosures with protection covers
- Connection Box for installation of devices that must be operated externally, such as plug devices, pushbuttons and switches
- EMC compliant busbar system
- N conductors with the same current carrying capacity as the phase conductors
- Bus-mounted fusegear
- Cable entry via flanges up to 72 mm cable diameter



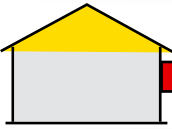
As standard busbar system EMC-compliant with N/PEN conductor in the area of phase conductors and with the same current carrying capacity as the phase conductors.



Environmental conditions

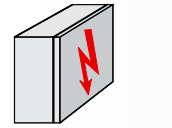
Ambient temperature

- for distribution boards in accordance with IEC 60 439-3:
-5° C up to 35° C, max. + 40° C
Relative humidity: 50% at 40° C, 100% at 25° C
- for empty enclosures: - 25°C up to + 70° C
The ambient temperature for distribution boards is reduced by the installed equipment technology!



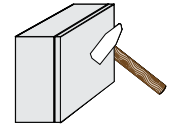
Application area

The enclosures are suitable for the protected outdoor installation - harsh environment and / or protected outdoor.
However the climatic influences and effects on the equipment are to be considered, see Technical Details: Operating and Ambient Conditions



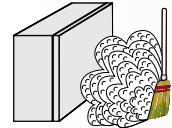
Insulation

Insulated enclosures
(Protection class II)



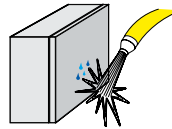
Impact strength

Degree of protection against mechanical load IK 08 (5 Joule)
in accordance with IEC 62 262



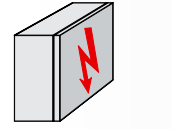
Protection against foreign solid objects and direct contact

Dust-proof
degree of protection IP 66



Protection against ingress of water with harmful effects

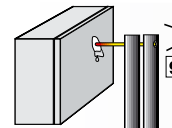
Protected against water
degree of protection IP 66



Electrical parameters

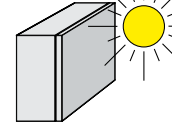
Rated current: 250 A
Rated insulation voltage ¹⁾: AC 690 V, DC 1000 V, IEC 60 664
¹⁾ the rated insulation voltage is possibly reduced by the installed equipment technology

Material: Polycarbonate



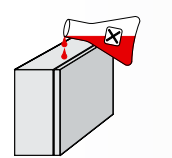
Burning behaviour

Glow wire test 960°C in accordance with IEC 60 695-2-11
flame-retardant, self-extinguishing



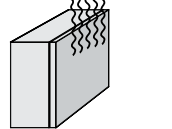
UV resistance

UV resistance according to IEC 61 439-1
The material is examined for UV resistance



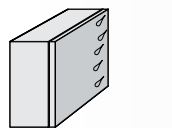
Chemical resistance

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



Toxic behaviour

Silicone- and halogen-free



Corrosion resistance

Resistant to weather influences such as humidity, temperature, wind

Dependent on the system

Dependent on material

Enclosures with electrical functions

Empty enclosures

door locking with **hand operation**
Operation and access also by unskilled persons

door locking with **tool operation**
Operation and access only by skilled persons

Circuit breaker boxes

KWH meter boxes

HRC fuse boxes with fuse switch disconnectors

Busbr boxes

HRC fuse boxes with fuse switch disconnectors

Isolator boxes with built-in switch disconnectors and MCCB circuit-breaker boxes

Combinable distribution boards with door

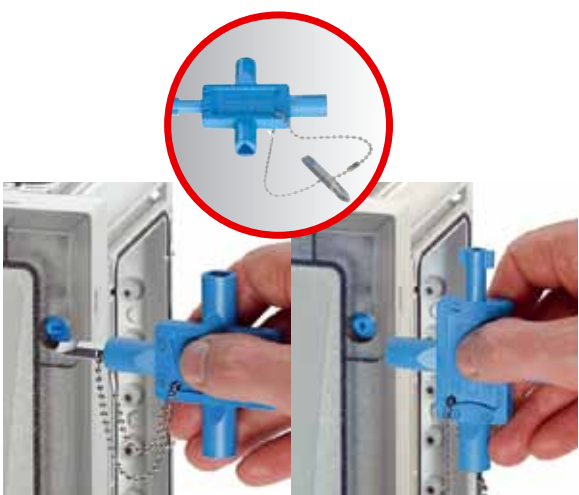


Combinable enclosures with door and closing plates

Empty enclosures with closing plates
order flanges separately



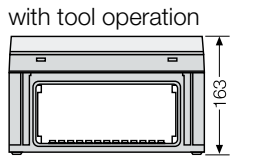
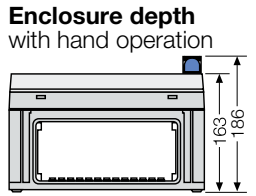
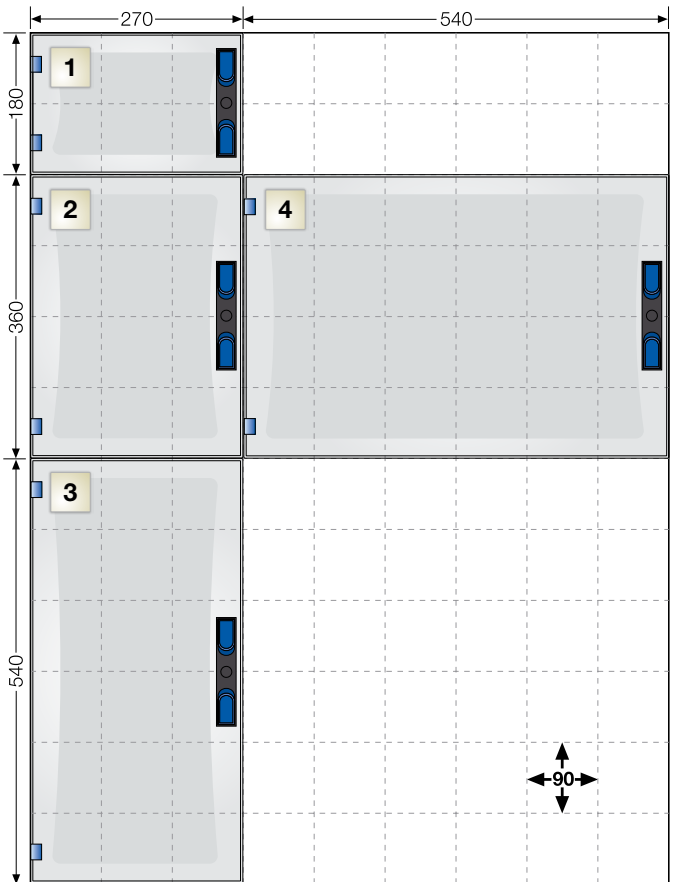
Circuit breaker boxes with closing plates
order flanges separately



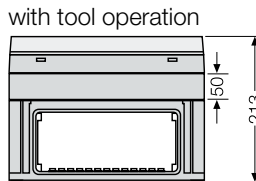
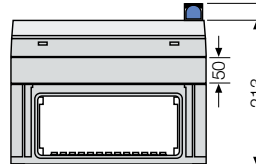
■ Multikey for door locking systems:
Standard locking system for tool-operation with slot screwdriver and triangle 8 mm, optional square lock 8 mm and double-bit.

Combinable distribution boards with door

- modular structure of enclosures in grid of 90 mm
- 4 enclosure sizes:
270 x 180 mm,
270 x 360 mm,
270 x 540 mm and
540 x 360 mm
- to assemble fast and simply to larger combinations
- Order closing plate sets, single closing plates and flanges separately.



Extension frame
for extending installation depths by 50 mm with hand operation



Combinable enclosures with door and closing plates

- 4 box sizes:
276 x 186 mm,
276 x 366 mm,
276 x 546 mm and
546 x 366 mm



Empty enclosures and circuit breaker boxes additionally with closing plate sets for closing enclosure walls



Enclosure walls closed via closing plates



Flanges to be ordered separately



■ Hand-operated locking facilities in areas, where electrotechnical unskilled persons operate equipment



■ Locking option with key mit Schlüssel prevents unauthorized access



Can be combined and extended in all directions

Because of the increasing requirements, flexibility is essential in the electrical installation. ENYSTAR enclosures can be combined and arranged freely in order to adapt the system flexibly to the individual requirements in site: **Combination next to each other or one above the other.**



Combination of enclosures in **vertical** direction.



Combination of enclosures in **horizontal** direction.



extendable

Distribution boards intended to be operated by ordinary persons

Example 1:
Distribution board with 72 modules (6 x 12 x 18 mm) built-up of 2 x FP 1318 with closing plates



Example 2:
Distribution board with 125 A feeding, 36 modules (3 x 12 x 18 mm) and a terminal box for PE and N



ENYSTAR®
Connection Box

The ENYSTAR Connection Box allows a simple and fast installation of devices that must be operated externally. Such as plug devices, pushbuttons, switches or also touch panels. The new Connection Box is installed via safe plug connectors.

The ENYSTAR Connection Box is available in different designs and standard equipments.



Requirements for Distribution Boards in Industry, in Buildings and in Commercial Applications

Distribution boards are usually used in working place proximity. Their application is various.

Here the demands and requirements that result from the installation site must be adhered to.

General requirements concerning distribution boards:

1. Clear separation between operation area and distribution area

For areas in distribution boards to which unskilled persons have access, standards require special protective measures:

- Life parts are to be protected against accidental contact by a cover.
- Devices, which may be operated only by an electrical skilled person, are to be arranged in a separate area, which is to be opened only with tool.

2. Fast and safe operating of the intended devices, e.g. series built-in equipment and switching devices

3. No removable covers or parts

so that electrotechnical unskilled persons can easily operate.

Additional specific requirements when used in commercial and industrial applications:

1. High degree of protection IP 66

dust-proof and waterproof

2. Robust material for use in rough environments

high-quality thermoplastic material for high mechanical loads.

3. Corrosion resistance

Material resistant to corrosion by atmospheric humidity or industrial processes.



Distribution Boards up to 250 A According to IEC 61 439-3 „Distribution Boards Intended to be Operated by Ordinary Persons“

Modular distribution boards for special requirements in commercial and industrial applications ...



- Total insulated enclosures, protection class II
- High degree of protection IP 66: dust-proof and water-proof
- Corrosion-resistant enclosures by high-quality thermoplastic material
- High mechanical strength IK 08 for heavy duty usage in commercial and industrial applications

... and with clearly separated functional areas!

- Modular design for clear separation of access and operation areas for electrical skilled persons and unskilled persons.
- Large, transparent doors for a quick control and convenient operation of the built-in equipment
- Fast opening and closing of the doors in a single operation
- At any time an expandable, modular system

Operation
also by electrotechnical unskilled persons



Requirements in accordance with IEC 61 439-3:

1. Only installation equipment, like series built-in equipment, fuses up to 63 A, circuit-breakers and IT-components are permitted. For the access a tool-operated door locking facility is **NOT** necessary.
2. Other switching devices must be installed behind separate lids or doors, which can only be opened using a tool: **protection against direct contact with hazardous live parts IP XXC.**

Optionally, the door lock can also be used key-lockable.

Access and operation
only by electrical skilled persons



To the following areas **only an electrical skilled person** may have access:

- feeding-in
- back-up fuse
- outgoing terminals.

Therefore access is possible **only with appropriate tools**. Electrotechnical unskilled persons have no access here.

Empty enclosures
with transparent door
with hand operation



FP 0140
Mounting dimensions
220x130x140 mm



FP 0141
Mounting dimensions
220x130x140 mm
with closing plates



FP 0240
Mounting dimensions
220x310x140 mm



FP 0241
Mounting dimensions
220x310x140 mm
with closing plates



FP 0340
Mounting dimensions
220x490x140 mm



FP 0341
Mounting dimensions
220x490x140 mm
with closing plates



FP 0440
Mounting dimensions
490x310x140 mm



FP 0441
Mounting dimensions
490x310x140 mm
with closing plates



FP 0461
Mounting dimensions
310x490x140 mm
with closing plates

Empty enclosures
with opaque door
with hand operation



FP 0150
Mounting dimensions
220x130x140 mm



FP 0151
Mounting dimensions
220x130x140 mm
with closing plates



FP 0250
Mounting dimensions
220x310x140 mm



FP 0251
Mounting dimensions
220x310x140 mm
with closing plates



FP 0350
Mounting dimensions
220x490x140 mm



FP 0351
Mounting dimensions
220x490x140 mm
with closing plates



FP 0450
Mounting dimensions
490x310x140 mm



FP 0451
Mounting dimensions
490x310x140 mm
with closing plates



FP 0471
Mounting dimensions
310x490x140 mm
with closing plates

Circuit breaker boxes
for devices up to 63 A
with PE and N terminals



FP 1109
1x9x18 mm



FP 1108
1x9x18 mm
with closing plates



FP 1219
2x12x18 mm



FP 1218
2x12x18 mm
with closing plates



FP 1319
3x12x18 mm



FP 1318
3x12x18 mm
with closing plates



FP 1409
2x27x18 mm
with closing plates



FP 1408
2x27x18 mm
with closing plates



FP 1418
3x17x18 mm
with closing plates



FP 1211
1x12x18 mm
for miniature circuit breakers (MCB)

Circuit breaker boxes for the installation of DIN rail equipment in accordance with DIN 43 880 from 9 up to 54 modules.

Circuit breaker boxes
for devices up to 63 A
without PE and N terminals



FP 1105
1x12x18 mm



FP 1215
2x12x18 mm



FP 1315
3x12x18 mm



FP 1415
2x27x18 mm

Circuit breaker boxes
for devices up to 63 A
with removable DIN rail rack
without PE and N terminals



FP 1106
1x9x18 mm



FP 1107
1x9x18 mm
with closing plates



FP 1216
2x12x18 mm



FP 1217
2x12x18 mm
with closing plates



FP 1316
3x12x18 mm



FP 1317
3x12x18 mm
with closing plates



FP 1406
2x27x18 mm
with closing plates



FP 1417
2x27x18 mm
with closing plates



Removable DIN rail rack
for e.g. earth connection
(British Standard)

Circuit breaker boxes for the installation of DIN rail equipment in accordance with DIN 43 880 from 9 up to 54 modules.

Circuit breaker boxes
for devices up to 100 A
without PE and N terminals



FP 1101
1x12x18 mm



FP 1249
2x12x18 mm



FP 1349
3x12x18 mm



FP 1439
2x27x18 mm



FP 1211
1x12x18 mm
for miniature circuit breakers (MCB)
with PE and N terminals



FP 1100
terminal box

KWH meter boxes




FP 2212
with support
for 1 electronic consumer meter (eHz)




FP 2213
with support
for 2 electronic consumer meters (eHz)

Busbar boxes
with device equipping
(fuse elements 63 A, Neozed)



FP 3235
250 A, 5-pole
4 D0 2
with terminals



FP 3435
250 A, 5-pole
11 D0 2
with terminals

KWH meter boxes for the use in un-metered area after consultation with local power supply companies. Meter boxes sealable.

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

Isolator boxes



FP 5101
63 A
3-pole, PE + N



FP 5103
63 A
4-pole + PE



FP 5102
100 A
3-pole, PE + N



FP 5104
100 A
4-pole + PE



FP 5201
125 A
3-pole, PE + N



FP 5202
125 A
4-pole, PE



FP 5211
160 A
3-pole, PE + N



FP 5213
160 A
4-pole + PE



FP 5312
250 A
3-pole, PE + N

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

Empty boxes for the installation of different electrical devices either directly over attachments in the bottom or on DIN rails or mounting plates.
Built-in equipment must be suitable for operation by electrotechnical unskilled persons and has to be protected by a cover against direct contact with hazardous life parts.

Empty enclosures
with transparent door
with tool operation



FP 0100
Mounting dimensions
220x130x140 mm



FP 0101
Mounting dimensions
220x130x140 mm
with closing plates



FP 0210
Mounting dimensions
220x310x140 mm



FP 0211
Mounting dimensions
220x310x140 mm
with closing plates



FP 0310
Mounting dimensions
220x490x140 mm



FP 0311
Mounting dimensions
220x490x140 mm
with closing plates



FP 0400
Mounting dimensions
490x310x140 mm



FP 0401
Mounting dimensions
490x310x140 mm
with closing plates



FP 0411
Mounting dimensions
310x490x140 mm
with closing plates

Empty enclosures
with opaque door
with tool operation



FP 0120
Mounting dimensions
220x130x140 mm



FP 0121
Mounting dimensions
220x130x140 mm
with closing plates



FP 0230
Mounting dimensions
220x310x140 mm



FP 0231
Mounting dimensions
220x310x140 mm
with closing plates



FP 0330
Mounting dimensions
220x490x140 mm
with closing plates



FP 0331
Mounting dimensions
220x490x140 mm
with closing plates



FP 0420
Mounting dimensions
490x310x140 mm



FP 0421
Mounting dimensions
490x310x140 mm
with closing plates



FP 0431
Mounting dimensions
310x490x140 mm
with closing plates

KWH meter boxes



FP 2211
with support
for 1 KWH meter



FP 2312
with support for 2
KWH meters or
1 meter + 1 DIN rail

Busbr boxes



FP 3212
250 A, 5-pole



FP 3402
250 A, 5-pole



FP AP 21
cover for fusegear
space units: 12



FP AP 41
cover vor fusegear
space units:
10 + 16



FP BA 70
blanking cover
H 160 x B 126 mm
space units: 7



NH RT 00C
HRC 00C bus-
mounted fuse
switch disconnect-
tor, 3-pole, 125 A
space units: 5



ZS RS 18
D0 2 bus-mounted
fuse base 63 A
space units: 2

Busbar boxes
with device equipping
(fuse switch disconnectors)



FP 3226
250 A, 5-pole
1 HRC 00C
with terminals



FP 3426
250 A, 5-pole
2 HRC 00C
with terminals

HRC fuse boxes
with fuse switch
disconnecter



FP 4211
1xHRC 00C, 125 A
3-pole, PE + N



FP 4212
2xHRC 00C, 125 A
3-pole, PE + N



FP 4312
1xHRC 1, 250 A
3-pole, PE + N

MCCB circuit-breaker boxes



FP 5216
160 A
3-pole, PE + N



FP 5325
250 A
3-pole, PE + N

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

KWH meter boxes for the use in unmeasured area after consultation with local power supply companies. Meter boxes sealable.

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

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

HRC fuse boxes with fuse switch disconnectors in accordance with IEC 60 947-3

MCCB circuit-breaker boxes with circuit-breaker in accordance with IEC 60 947-2, MCCB with overload and short-circuit release

FP CB 210
 Connection Box
 for mounting on
 enclosure walls
 size 2 (270 mm)

FP ZR 30
 Extension frame
 for ENYSTAR
 enclosures size 3

FP ZR 40
 Extension frame
 for ENYSTAR-
 enclosures size 4

FP TS 27
 DIN rail for empty
 enclosures
 sizes 1, 2 and 3

FP TS 36
 Tragschiene
 für Leergehäuse
 Größen 2 und 4

FP TS 54
 DIN rail for empty
 enclosures
 sizes 3 and 4

FP DS 02
 Spacer
 for spacing
 DIN rails

FP MP 10
 mounting plate
 216 x 126 mm

FP MP 20
 mounting plate
 216 x 306 mm

FP MP 30
 mounting plate
 216 x 486 mm

FP MP 40
 mounting plate
 486 x 306 mm

FP BZ 13
 Fixing screw
 for assembling DIN
 rails or mounting
 plates

FP AP 10
 Cover without cut-
 outs as protection
 cover or for installa-
 tion of equipment in
 enclosures size 1

FP AP 20
 Cover without cut-
 outs as protection
 cover or for installa-
 tion of equipment in
 enclosures size 2

FP AP 30
 Cover without cut-
 outs as protection
 cover or for installa-
 tion of equipment in
 enclosures size 3

FP AP 40
 Cover without cut-
 outs as protection
 cover or for installa-
 tion of equipment in
 enclosures size 4

FP PL 2
 Sealing device
 for covers

FP TW 18
 Partition
 (180 mm)

FP TW 27
 Partition
 (270 mm)

FP TW 36
 Partition
 (360 mm)

AS 12
 Blanking strip of
 18 modules 18 mm
 each

AS 18
 Blanking strip of
 18 modules 18 mm
 each

FC PN 20
 PE and N terminal
 FIXCONNECT® ter-
 minal technology
 for enclosures with
 1x12 modules

FP FC 24
 PE and N terminal
 FIXCONNECT® ter-
 minal technology
 for enclosures with
 2x12 modules

FP FC 36
 PE and N terminal
 FIXCONNECT® ter-
 minal technology
 for enclosures with
 3x12 modules

FP FC 51
 PE and N terminal
 FIXCONNECT® ter-
 minal technology
 for enclosures with
 3x17 modules

FP FC 54
 PE and N terminal
 FIXCONNECT® ter-
 minal technology
 for enclosures with
 2x27 modules

FC PE 10
 PE terminal
 FIXCONNECT® ter-
 minal technology
 for enclosures with
 1x12 TE

FP FC 054
 PE terminal
 FIXCONNECT® ter-
 minal technology
 for enclosures with
 2x12 TE, 3x12 TE,
 2x27 TE

FP BS 5
 Labelling system
 for FIXCONNECT®
 terminals, not for
 plug-in terminals
 2x25 + 4x4 mm²

KKL 34
 Main line branch
 terminal
 3-pole

KKL 48
 Main line branch
 terminal
 4-pole

KKL 54
 Main line branch
 terminal
 5-pole

FP AP 21
 cover for fusegear
 space units: 12

FP AP 41
 cover for fusegear
 space units:
 10 + 16

FP BA 70
 blanking cover
 H 160 x B 126 mm
 space units: 7

NH RT 00C
 HRC 00C bus-
 mounted fuse
 switch disconnect-
 or, 3-pole, 125 A
 space units: 5

ZS RS 18
 DO 2 bus-mounted
 fuse base 63 A
 space units: 2

KS 16 F
 Terminal for direct
 connection on
 busbar
 ... x 5 mm

KS 35 F
 Terminal for direct
 connection on
 busbar
 ... x 5 mm

KS 70 F
 Terminal for direct
 connection on
 busbar
 ... x 5 mm

KS 150 F
 Terminal for direct
 connection on
 busbar
 12 x 5 mm

KS 240/12
 Terminal for
 direct connection on
 busbar
 12 x 5 mm

AM RK 150
 Connection module
 5-pole
 space units: 8

Mi SS 22
 Busbar 12 x 5
 mm, busbar rated
 current 250 A as
 N/PE

FP ST 25
 Busbar support
 250 A

Mi VS 100
 Wiring strip
 rated current 100 A

Mi VS 160
 Wiring strip
 rated current 160 A

Mi VS 250
 Wiring strip
 rated current 250 A

FP SV 25
 Busbar connector

Mi HS 20
 Auxiliary contact

MK 0107
 Auxiliary change-
 over contact

MK 0106
 Open-circuit shunt
 release

MK 0105
 Undervoltage
 release

VA 400
 Wiring terminal
 up to 400 A

DA 185
 Terminal for direct
 connection, Cu

FP WT 1
 Wall separator

FP VP 18
 Closing plate for
 box wall 1
 (180 mm)

FP VP 27
 Closing plate for
 box wall 2
 (270 mm)

FP VP 36
 Closing plate for
 box wall 3
 (360 mm)

FP VS 10
 Closing plate set
 for box size 1

FP VS 20
 Closing plate set
 for box size 2

FP VS 30
 Closing plate set
 for box size 3

FP VS 40
 Closing plate set
 for box size 4

FP BF 18
 Ventilation flange
 degree of protec-
 tion IP 44 for box
 walls 1 (180 mm)

FP BF 27
 Ventilation flange
 degree of protec-
 tion IP 44 for box
 walls 2 (270 mm)

FP BF 36
 Ventilation flange
 degree of protec-
 tion IP 44 for box
 walls 3 (360 mm)

BE 44
 Ventilation insert
 degree of protec-
 tion IP 44

BM 32
 pressure compen-
 sation element for
 M 32 knockouts

FP DB 27
 Canopy
 for box wall 270 mm
 width: 270 mm,
 height: 245 mm

FP DB 36
 Canopy
 for box wall 360 mm
 width: 360 mm,
 height: 245 mm

Mi DB 01
 End plate for canopy
 width 270 mm and
 360 mm

FP FG 200
 Flange for box wall 2
 (270 mm),
 usable mounting area:
 240 x 92 mm

FP FG 222
 Flange for box wall 2
 (270 mm)
 sealing range:
 17x Ø 6-13 mm,
 2 x Ø 9-17 mm,
 2 x Ø 8-23 mm,
 1 x Ø 11-30 mm

FP FM 225
 Flange for box wall 2
 (270 mm)
 7 x M 16/25,
 13 x M 20/25

FP FM 232
 Flange for box wall 2
 (270 mm)
 8 x M 25/32,
 2 x M 25/32/40

FP FM 240
 Flange for box wall 2
 (270 mm)
 2 x M 25/32,
 5 x M 25/32/40

FP FM 263
 Flange for box wall 2
 (270 mm)
 2xM20, 2xM25/32,
 2xM32/40/50,
 1xM 40/50/63

FP FG 272
 Flange for box wall 2
 (270 mm)
 1 cable 72 mm max.
 external diameter
 sealing range:
 Ø 30-72 mm

FP FG 273
 Flange for box wall 2
 (270 mm)
 2 cable 72 mm max.
 external diameter
 sealing range:
 je Ø 30-72 mm

FP FG 282
 Cable insert, divisible
 box wall 2 (270 mm)
 only with additional
 strain and pressure reli-
 ef (e.g. FP ZE 272)
 2 cables 72 mm max.
 external diameter
 sealing range:
 2 x Ø 30-72 mm

FP GS 27
 Box fin, removable, for
 box walls 270 mm,
 for inserting cables
 across 2 boxes

FP ZE 272
 Cable strain relief
 for box walls 2
 (270 mm)

FP FG 300
 Flange for
 box wall 3 (360 mm)
 usable mounting
 area 330 x 92 mm

FP FG 331
 Flange with integra-
 ted grommets,
 box wall 3 (360 mm)
 sealing range:
 22x Ø 6-13 mm,
 6 x Ø 9-17 mm,
 2 x Ø 8-23 mm,
 1 x Ø 11-30 mm

FP GV 10
 Connector
 set of 10 pieces

FP PL 3
 Facility for sealing
 set of 2 pieces

FP TS 1
 Door lock for
 converting door
 fasteners to key
 operation

FP TS 2
 Spare key
 for door lock
 FP TS 1

FP TW 2
 Tool key for
 double-bit,
 conversion kit to
 tool operation

FP TW 3
 Tool key for trian-
 gular lock, 8 mm,
 conversion kit to tool
 operation

FP TW 4
 Tool key for square
 lock, 8 mm,
 conversion kit to tool
 operation

US 1
 Multikey
 triangular 8 mm,
 square 8 mm,
 double-bit and slot

DS 1
 Triangular key 8 mm

FP TA 1
 Dust protection
 cover

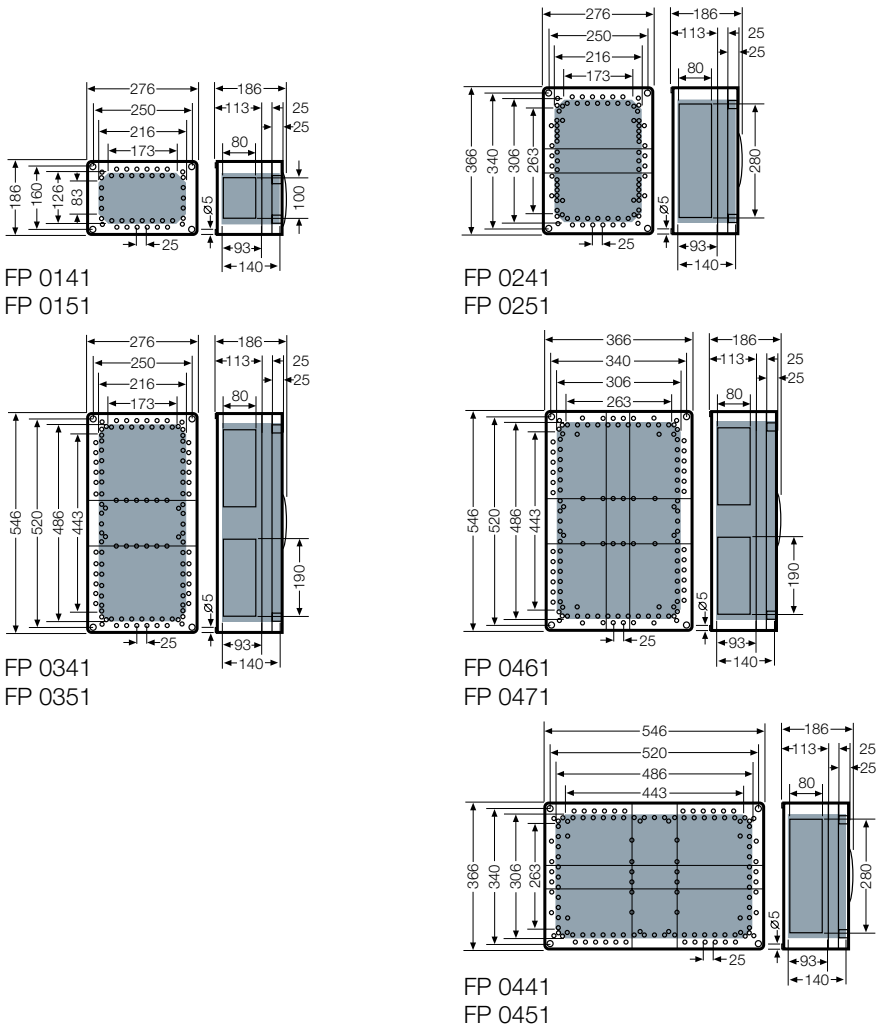
FP AL 40
 External brackets for
 fixing enclosures

FP MS 1
 Mounting profile
 for wall mounting
 length: 1980 mm

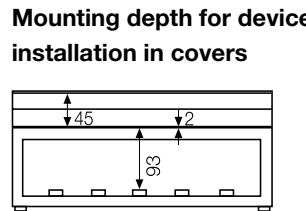
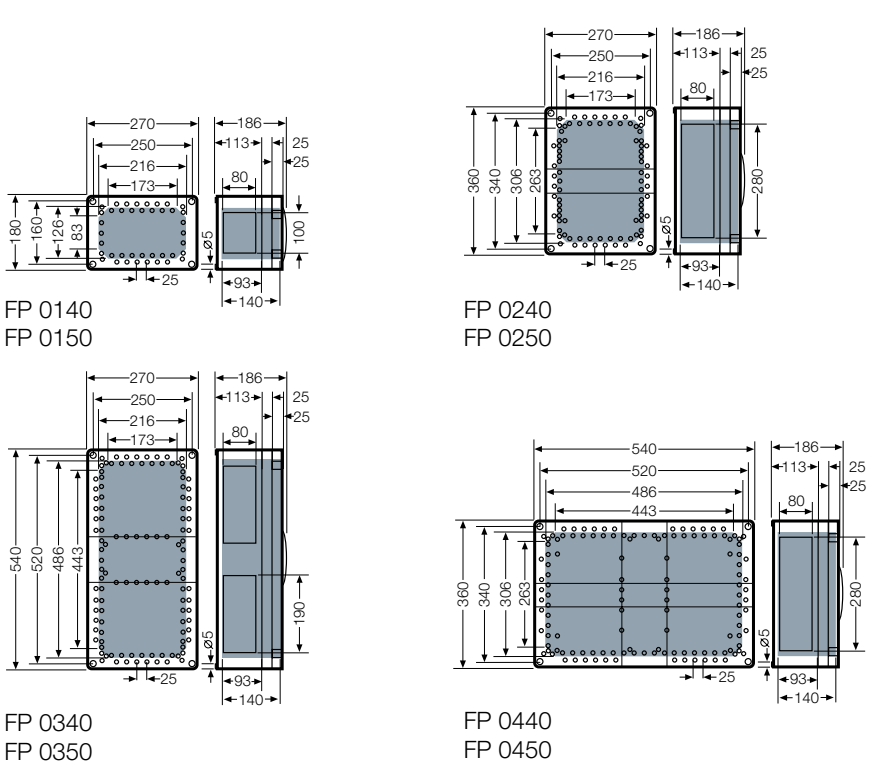
Varnishing pen
RAL 7016, 12 ml

= usable installation space with mounted cable glands

ENYSTAR distribution boards with door lockings for hand operation and closing plates

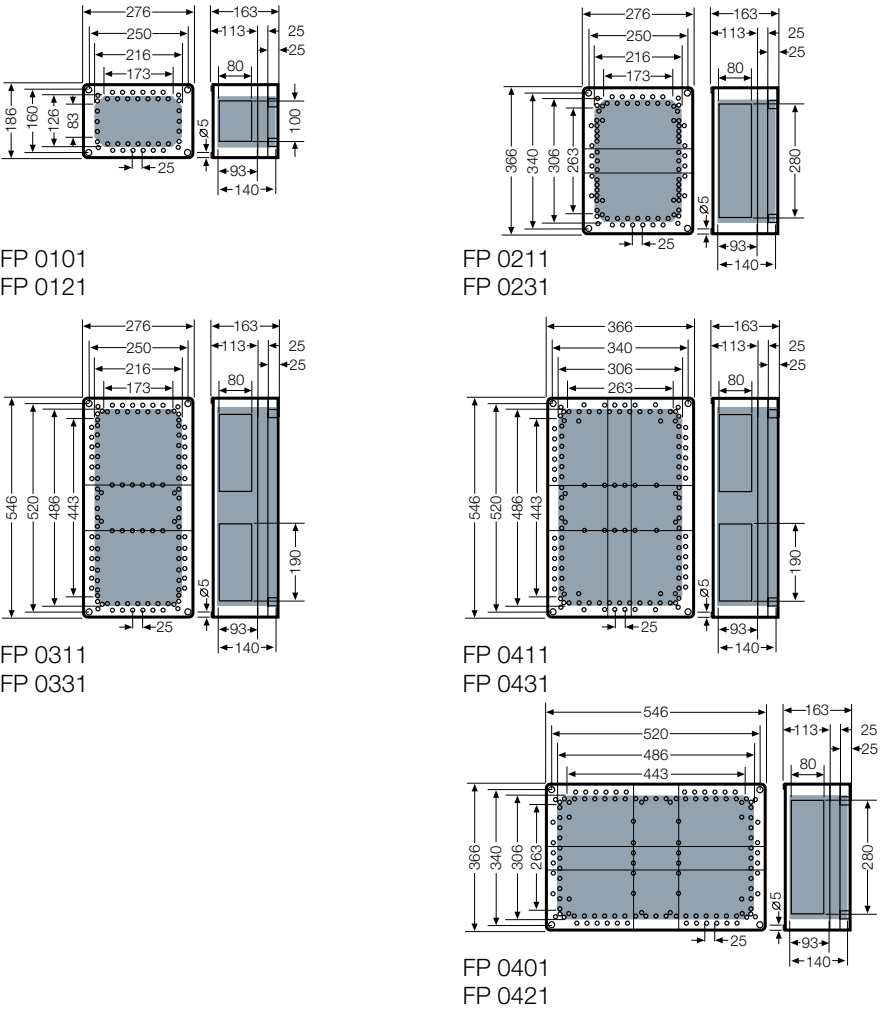


ENYSTAR distribution boards with door lockings for hand operation

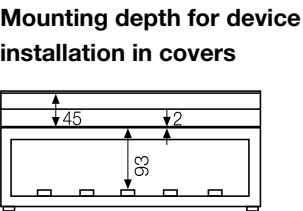
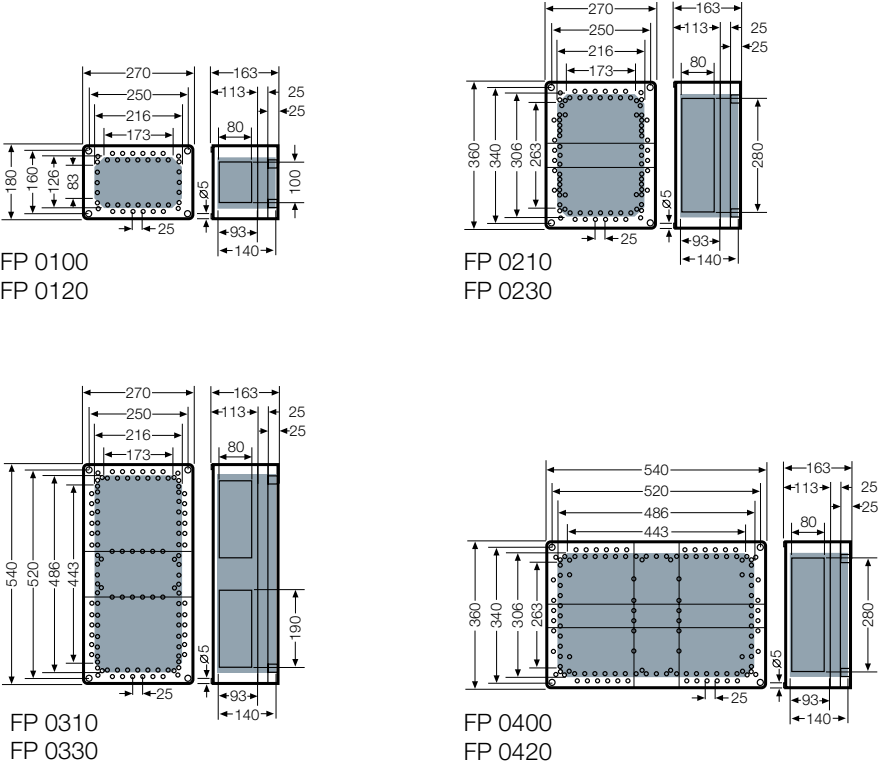


= usable installation space with mounted cable glands

ENYSTAR distribution boards with door lockings for tool-operation and closing plates



ENYSTAR distribution boards with door lockings for tool-operation



ENYGUIDE

Comfortable project engineering fast and easily with the planning tool configurator ENYGUIDE

Determination of planning basis

Planning tool configurator
- online via Internet
- or offline
www.enyguide.eu

Homepage
of the configurator
www.enyguide.eu

Basis are the data for equipment assembly, technical data such as rated voltage and rated current as well as requirements to the system. These are to be determined in site or for project engineering technical specifications respectively tender documents are available.

Check list

1. Place of assembly

Building: **industrial**

Degree of protection: ☐ IP 54 ☒ IP 66

Mounting area: Width **max. 1,50 m**
Height **max. 1,20 m**
Depth **max. 0,50 m**

Conditions of installation:
☐ in the locked electrical operating room
☐ in the workshops ☐ in corridors
☒ freely accessible (operable by unauthorized people)

2. Type of distribution board

ENYSTAR distribution board ...

☒ wall-mounted ☐ floor-mounted

3. Power supply data

System: ☐ TT (L1/L2/L3/N) ☒ TN (L1/L2/L3/PE/N)

Rated current of incoming supply: **160 A**

Technical specifications

Insulation-enclosed box-type low-voltage switchgear assembly as distribution board in accordance with IEC 61 439 Part 3 built-up of combinable enclosures with door as **wall-mounted assembly**

largest permissible dimensions:
H/W/D in mm: **1200x1500x500**

Enclosure bases with door made of thermoplastic.

Burning behaviour according to IEC 60 695-2-11
Glow wire test 960°C, halogenfree

Colour: grey, RAL 7035

transparent, lockable doors

Incoming cables from **the floor**

...



The CONFIGURATOR is a professional planning aid, with which the electrical specialist can provide himself 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 like the number of wall separators or closing plates for enclosure walls.



Start directly with the project of ENYSTAR distribution boards or use the advantages of registration:

- personal project management
- user administration
- on demand the Hensel specialist can examine your project or take over your project data for the further processing.

ENYGUIDE

Comfortable project engineering of ENYSTAR distribution boards with the configurator ENYGUIDE

Selection of the enclosures with electrical functions and equipment

Selection of accessories for installation and wiring

Specification of accessory

Connection of enclosures and closing of the remaining enclosure walls



Simply and fast positioning of the enclosures and components on the drawing page

- bus-mounted fusegear
- busbar connectors
- terminals for direct busbar connection
- covers
- DIN rails
- mounting plates
- PE and N terminals
- wiring and terminals

- flanges for cable entry
- if necessary locking device for doors
- wall fixtures
- partition walls

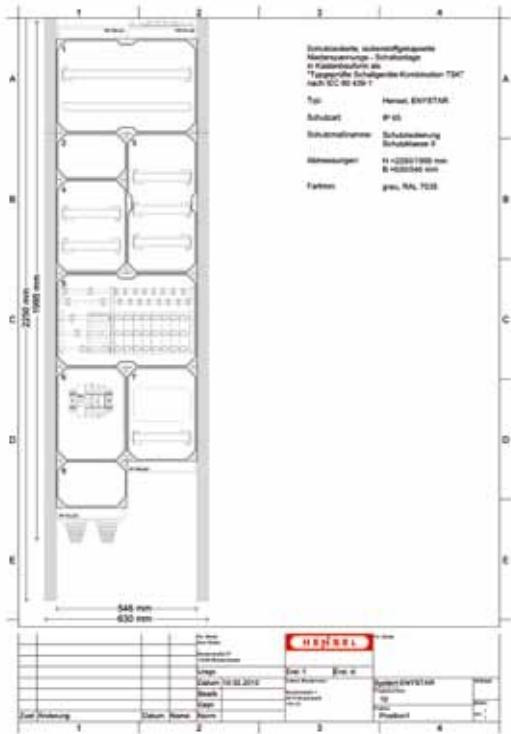
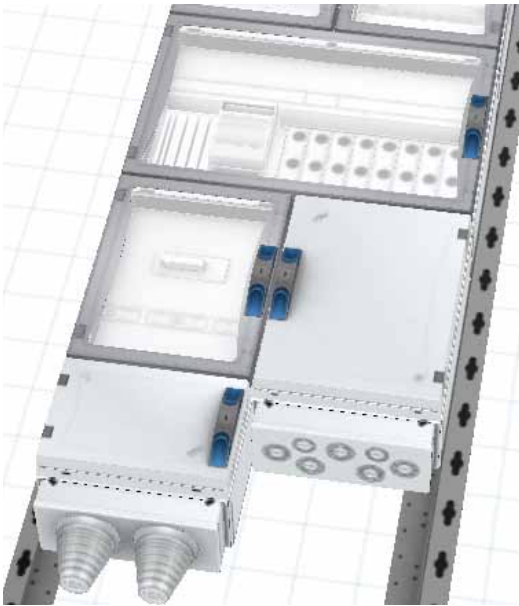
A test function determines the required accessories with the configurator independently such as the number of wall separators and closing plates for enclosure walls.



ENYGUIDE

Comfortable project engineering fast and easily with the planning tool configurator ENYGUIDE

- Creating a layout
- as 3-dimensional image for acquisition at your customer or
 - as 2-dimensional drawing of the layers enclosures with equipment, covers and doors for the assembler.



Automatically creating of parts list and order list according to the layout.

HENSEL

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Projektleiter: Musterstraße 1
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E-Mail:

Kunde: Fa. Müller
Ansprechpartner: Herr Müller
Strasse Nr.: Musterstraße 97
PLZ/Ort: 12345 Musterhausen
Tel.:

Projekt: 10
Name: Fa. Müller
Anschrieb: PLZ/Ort:

Druckdatum:

Stückliste

Ausgewählte Verteilungen: Verteilung 1 Säule

Nr.	Geräte- nummer	Typ	Menge in Stück	Bezeichnung	Gewicht in kg	Wertpreis in EUR
1	1.00	FP 0420	1	Leergehäuse mit nichtdurchdringender Tür Einbaubreite 480 mm, Einbauhöhe 310 mm.	3,62	0,00
2	1.01	FP TS 54	2	Tragschiene für ENYSTAR Leergehäuse Größen 3 und 4 Höhe: 35 mm Halbprofil, Länge 486 mm.	0,32	0,00
3	1.02	FP FM	1	Anbauflansch Gehäusewand 270 mm - 232	0,40	0,00
4	1.03	FP DS 02	1	Distanzstück zum Aufbau von ENYSTAR- Tragschienen Höhe: 29,5 - 53,5 mm	0,00	0,00
5	1.04	FP VP 36	2	Verschließplatte mit 2 Befestigungselementen Gehäusewand 360 mm, Vorprägungen: ohne	0,18	0,00
6	1.05	FP FG 222	1	Anbauflansch mit integriertem Einstack- Kabelknoten zur Kabelzuführung Durchmesser 8-13 mm 17 x Ø, Gehäusewand 270 mm	0,45	0,00
7	2.00	FP 0100	1	Leergehäuse mit transparenter Tür Einbaubreite 220 mm, Einbauhöhe 130 mm	1,42	0,00
8	2.01	FP VP 18	1	Verschließplatte mit 2 Befestigungselementen Gehäusewand 180 mm, Vorprägungen: ohne	0,09	0,00
9	3.06	FP 1313	1	Automatengehäuse mit transparenter Tür Teilungseinheiten: 36, Tragschienen: 3- reihig	3,95	0,00
10	3.01	FP TW 27	1	Trennwand zum Einstacken zwischen Gehäusen Breite: 182 mm, Gehäusewand 270 mm	0,04	0,00
Zwischensumme:					10,96	0,00

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Ansprechpartner: Herr Müller
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PLZ/Ort: 12345 Musterhausen
Tel.:

Projekt: 10
Name: Fa. Müller
Anschrieb: PLZ/Ort:

Druckdatum:

Bestellliste

Ausgewählte Verteilungen: Verteilung 1 Säule

Nr.	EAN	Menge in Stück	Typ	Einheitspreis in EUR	Gesamtpreis in EUR
1	4012591103809	1	FP 0100	66,80	66,80
2	4012591103851	1	FP 0130	66,80	66,80
3	4012591103868	1	FP 0230	82,10	82,10
4	4012591103882	1	FP 0430	157,80	157,80
5	4012591103974	1	FP 1212	115,50	115,50
6	4012591103981	1	FP 1313	178,90	178,90
7	4012591104218	1	FP 3402	218,70	218,70
8	4012591104360	1	FP 5211	254,80	254,80
9	4012591104308	1	FP AP 41	31,70	31,70
10	4012591104315	1	FP BA 70	2,40	2,40
11	4012591104490	1	FP DS 02	4,90	4,90
12	4012591104490	1	FP DS 02	4,90	4,90
13	4012591104902	1	FP FG 222	19,30	19,30
14	4012591104964	1	FP FG 273	28,60	28,60
15	4012591105827	1	FP FM 232	12,60	12,60
16	4012591105834	1	FP FM 240	12,60	12,60
17	4012591104813	1	FP MP 10	10,00	10,00
18	4012591105138	4	FP MS 1	27,50	110,00
19	4012591104438	1	FP TS 27	3,85	3,85
20	4012591104483	2	FP TS 54	6,38	12,70
Zwischensumme:					1394,75

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The Company



Headquarters in Germany

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Subsidiaries abroad

- Czech Republic**
Hensel s.r.o.
www.hensel.cz
- Hungary**
Hensel Hungaria Villamossági
Kft, www.hensel.hu
- Poland**
Hensel Polska Sp. z o. o.
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www.hensel-electric.com.tr
- People's Republic of China**
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Electrical Installation and Distri-
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