HENSEL

PASSION FOR POWER.

ENYSTAR

Load Centers up to 250 A

according to IEC 61439-3

for commercial and industrial buildings

Download at www.hensel-electric.en

made in GERMANY since 1931

ENYSTAR®

ENYSTAR®

Load Centers
up to 250 A
according to IEC 61439-3
for commercial and industrial buildings

Competence in distribution board systems

The HENSEL company was founded in 1931. At that time, more and more technical products for electrical installations were being manufactured from modern thermosetting materials instead of cast iron or steel. With an innovative range of modern installation and distribution systems for the national and international market HENSEL has become one of the leading companies in distributing electrical power in the field of low voltage. Technical competence and creative development ideas make us a partner for electrictricians' and panel builders' needs today and tomorrow.

Headquarters in Lennestadt / Germany

Headquarters of Hensel Electric India Pvt. Ltd.

ENYSTAR®

- Modular distribution board system
- Pre-assembled with vertical busbar system
- Free for use with devices of different manufacturers and brands

NEW

Electrical characteristics

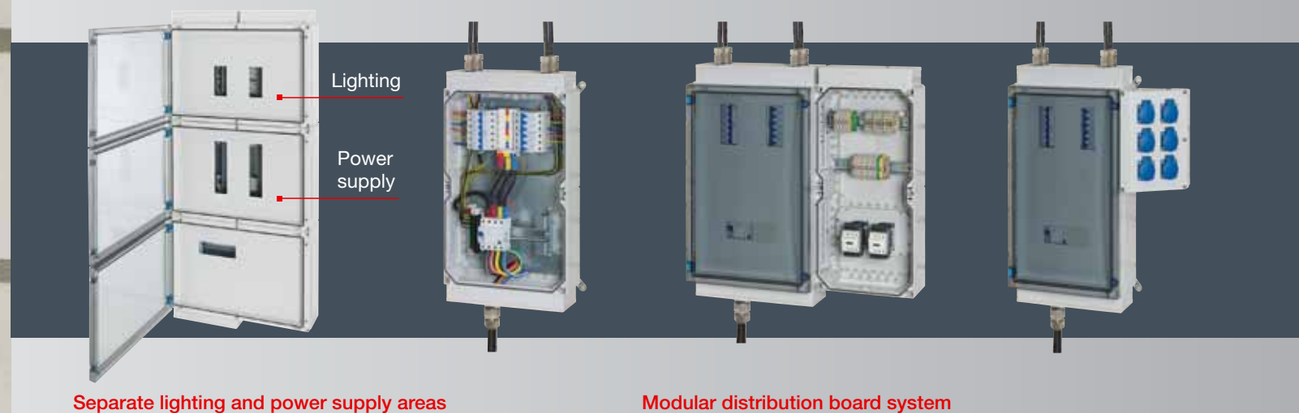
Rated voltage: max. 690 V a.c.
Rated insulation voltage: 690 V a.c., 1000 V d.c.
Rated current: max. 250 A
Rated short-time withstand current: max. 7.2 kA

Safe and reliable in harsh environments.

For use with devices from different manufacturers.

Load Centers supply electrical power especially thoughout commercial and industrial buildings. Developed for the requirements of harsh industrial atmospheres they ensure reliable supply of electricity especially in demanding environmental conditions.

Load centers are used to control light, heat or power circuits which are installed in enclosures made from polycarbonate. Equipment of various manufacturers and brands can be applied individually according to demands on site.



Separate lighting and power supply areas
via division of busbars from 12 modules on allow in case of power failures the supply of special circuits by generator, for example lighting.

Pre-assembled
with vertical busbar system and support for devices.
Built-in devices can be installed on site.

Modular distribution board system
combinable within the standard ENYSTAR enclosure system, for example to operate external devices, such as plug devices, push buttons and switches.

System description

Characteristics dependent on the system

protected outdoors — **Protected outdoor installation and harsh environment.**
Hint: Please consider climatic influences and effects on the built-in devices.

Protection class I, protective earth connection ⏚
suitable for metal armoured cables

IK08 (5Joule) — **High impact resistance**
IK 08 (5Joule)

IP 66 — **Dust-proof, protected against water**
IP 66

For operating and ambient conditions refer to page 26.

Characteristics dependent on the material

960 °C — Flame-retardant, self-extinguishing
Glow wire test 960° C

UV resistant — **UV resistance**
according to IEC 61439

Chemical resistant — **Chemical resistance**
against acid 10%, alkaline 10%, petrol and mineral oil

Toxicity — Silicone- and halogene-free

Corrosion proof — Resistant to weather influences (humidity, temperature, wind)

Incoming: for isolator/MCB/RCCB or RCBO up to 125 A
Outgoing: SP/TP MCBs up to 63 A

transparent door | **opaque door**

FP VN 0400
4 way
(8+12 modules)

FP VN 0410
4 way
(8+12 modules)

FP VN 0800
8 way
(8+24 modules)

FP VN 0810
8 way
(8+24 modules)

FP VN 1200
12 way
(8+36 modules)

FP VN 1210
12 way
(8+36 modules)

FP VN 1600
16 way
(8+48 modules)

FP VN 1610
16 way
(8+48 modules)

Incoming: for MCCB up to 125 A
Outgoing: SP/TP MCBs up to 63 A

transparent door | **opaque door**

FP VN 0801
8 way
(8+24 modules)

FP VN 0811
8 way
(8+24 modules)

Incoming: for MCCB up to 250 A
Outgoing: SP/TP MCBs up to 63 A

transparent door | **opaque door**

FP VN 0402
4 way
(8+12 modules)

FP VN 0412
4 way
(8+12 modules)

FP VN 0802
8 way
(8+24 modules)

FP VN 0812
8 way
(8+24 modules)

FP VN 1202
12 way
(8+36 modules)

FP VN 1212
12 way
(8+36 modules)

FP VN 1602
16 way
(8+48 modules)

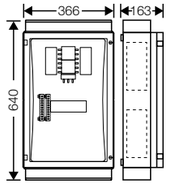
FP VN 1612
16 way
(8+48 modules)

FP VN 0400

Incoming up to 125 A
4 ways with MCB max. 63 A
with transparent door

IP 66 | PC | RAL 7035

- modules: 8+12
- incoming via isolator/MCB/RCCB or RCBO
- PE and N terminals
- per PE/N 1 x 6-35 mm², 8 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 330 mm, height 92 mm
- door fastener with tool operation



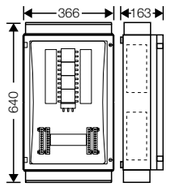
rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 3.6 kA / 1 s
installable power dissipation	P_{DSL} = 1.2 W / K

FP VN 0800

Incoming up to 125 A
8 ways with MCB max. 63 A
with transparent door

IP 66 | PC | RAL 7035

- modules: 8+24
- incoming via isolator/MCB/RCCB or RCBO
- PE and N terminals
- per PE/N 1 x 6-35 mm², 16 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 330 mm, height 92 mm
- door fastener with tool operation



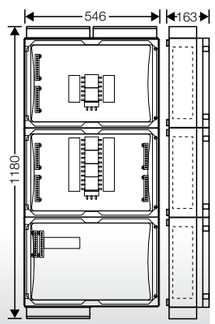
rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 3.6 kA / 1 s
installable power dissipation	P_{DSL} = 1.2 W / K

FP VN 1200

Incoming up to 125 A
12 ways with MCB max. 63 A
with transparent door

IP 66 | PC | RAL 7035

- modules: 8+36
- incoming via isolator/MCB/RCCB or RCBO
- PE and N terminals
- per PE/N 1 x 6-35 mm², 24 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 240 mm, height 92 mm
- door fastener with tool operation



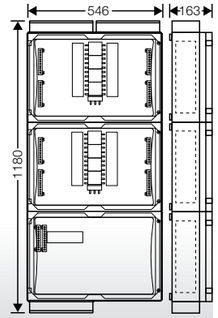
rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 3.6 kA / 1 s
installable power dissipation	P_{DSL} = 2.5 W / K

FP VN 1600

Incoming up to 125 A
16 ways with MCB max. 63 A
with transparent door

IP 66 | PC | RAL 7035

- modules: 8+48
- incoming via isolator/MCB/RCCB or RCBO
- PE and N terminals
- per PE/N 1 x 6-35 mm², 32 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 240 mm, height 92 mm
- door fastener with tool operation



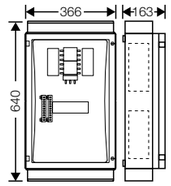
rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 3.6 kA / 1 s
installable power dissipation	P_{DSL} = 2.5 W / K

FP VN 0410

Incoming up to 125 A
4 ways with MCB max. 63 A
with opaque door

IP 66 | PC | RAL 7035

- modules: 8+12
- incoming via isolator/MCB/RCCB or RCBO
- PE and N terminals
- per PE/N 1 x 6-35 mm², 8 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 330 mm, height 92 mm
- door fastener with tool operation



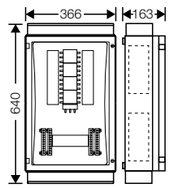
rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 3.6 kA / 1 s
installable power dissipation	P_{DSL} = 1.2 W / K

FP VN 0810

Incoming up to 125 A
8 ways with MCB max. 63 A
with opaque door

IP 66 | PC | RAL 7035

- modules: 8+24
- incoming via isolator/MCB/RCCB or RCBO
- PE and N terminals
- per PE/N 1 x 6-35 mm², 16 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 330 mm, height 92 mm
- door fastener with tool operation



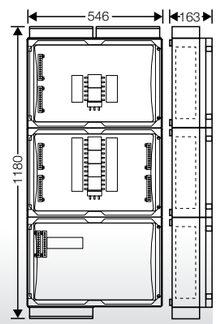
rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 3.6 kA / 1 s
installable power dissipation	P_{DSL} = 1.2 W / K

FP VN 1210

Incoming up to 125 A
12 ways with MCB max. 63 A
with opaque door

IP 66 | PC | RAL 7035

- modules: 8+36
- incoming via isolator/MCB/RCCB or RCBO
- PE and N terminals
- per PE/N 1 x 6-35 mm², 24 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 240 mm, height 92 mm
- door fastener with tool operation



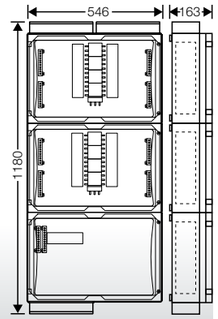
rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 3.6 kA / 1 s
installable power dissipation	P_{DSL} = 2.5 W / K

FP VN 1610

Incoming up to 125 A
16 ways with MCB max. 63 A
with opaque door

IP 66 | PC | RAL 7035

- modules: 8+48
- incoming via isolator/MCB/RCCB or RCBO
- PE and N terminals
- per PE/N 1 x 6-35 mm², 32 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 240 mm, height 92 mm
- door fastener with tool operation



rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 3.6 kA / 1 s
installable power dissipation	P_{DSL} = 2.5 W / K

ENYSTAR

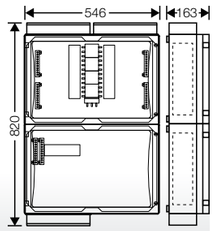
ENYSTAR
Load Centers
Incoming for MCCB

FP VN 0801

Incoming for MCCB up to 125 A
8 ways with MCB max. 63 A
with transparent door

IP 66 | PC | RAL 7035

- modules: 8+24
- PE and N terminals
- per PE/N 1 x 6-5 mm², 16 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 240 mm, height 92 mm
- door fastener with tool operation



rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 3.6 kA / 1 s
installable power dissipation	P_{DSL} = 1.9 W / K

ENYSTAR

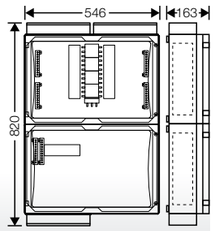
ENYSTAR
Load Centers
Incoming for MCCB

FP VN 0811

Incoming for MCCB up to 125 A
8 ways with MCB max. 63 A
with opaque door

IP 66 | PC | RAL 7035

- modules: 8+24
- PE and N terminals
- per PE/N 1 x 6-35 mm², 16 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 240 mm, height 92 mm
- door fastener with tool operation



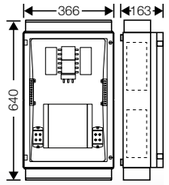
rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 3.6 kA / 1 s
installable power dissipation	P_{DSL} = 1.9 W / K

FP VN 0402

Incoming for MCCB up to 250 A
4 ways with MCB max. 63 A
with transparent door

IP 66 | PC | RAL 7035

- modules: 8+12
- PE and N terminals
- per PE/N 1 x 6-95 mm², 8 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 330 mm, height 92 mm
- door fastener with tool operation



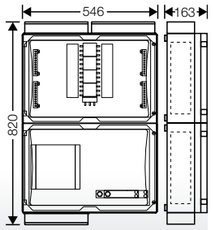
rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 7.2 kA / 1 s
installable power dissipation	P_{DSL} = 1.2 W / K

FP VN 0802

Incoming for MCCB up to 250 A
8 ways with MCB max. 63 A
with transparent door

IP 66 | PC | RAL 7035

- modules: 8+24
- PE and N terminals
- per PE/N 1 x M10, 16 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 240 mm, height 92 mm
- door fastener with tool operation



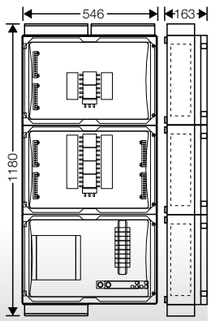
rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 7.2 kA / 1 s
installable power dissipation	P_{DSL} = 1.9 W / K

FP VN 1202

Incoming for MCCB up to 250 A
12 ways with MCB max. 63 A
with transparent door

IP 66 | PC | RAL 7035

- modules: 8+36
- PE and N terminals
- per PE/N 1 x M10, 24 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 240 mm, height 92 mm
- door fastener with tool operation



rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 7.2 kA / 1 s
installable power dissipation	P_{DSL} = 2.5 W / K

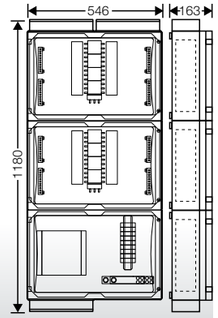
ENYSTAR
Load Centers
Incoming for MCCB

FP VN 1602

Incoming for MCCB up to 250 A
16 ways with MCB max. 63 A
with transparent door

IP 66 | PC | RAL 7035

- modules: 8+48
- PE and N terminals
- per PE/N 1 x M10, 32 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 240 mm, height 92 mm
- door fastener with tool operation



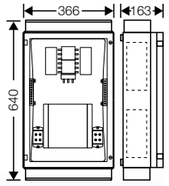
rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 7.2 kA / 1 s
installable power dissipation	P_{DSL} = 2.5 W / K

FP VN 0412

Incoming for MCCB up to 250 A
4 ways with MCB max. 63 A
with opaque door

IP 66 | PC | RAL 7035

- modules: 8+12
- PE and N terminals
- per PE/N 1 x 6-95 mm², 8 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 330 mm, height 92 mm
- door fastener with tool operation



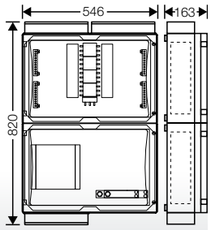
rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 7.2 kA / 1 s
installable power dissipation	P_{DSL} = 1.2 W / K

FP VN 0812

Incoming for MCCB up to 250 A
8 ways with MCB max. 63 A
with opaque door

IP 66 | PC | RAL 7035

- modules: 8+24
- PE and N terminals
- per PE/N 1 x M10, 16 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 240 mm, height 92 mm
- door fastener with tool operation



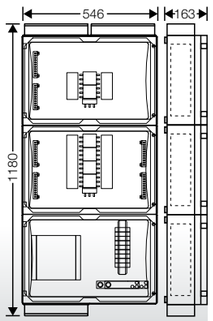
rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 7.2 kA / 1 s
installable power dissipation	P_{DSL} = 1.9 W / K

FP VN 1212

Incoming for MCCB up to 250 A
12 ways with MCB max. 63 A
with opaque door

IP 66 | PC | RAL 7035

- modules: 8+36
- PE and N terminals
- per PE/N 1 x M10, 24 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 240 mm, height 92 mm
- door fastener with tool operation



rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 7.2 kA / 1 s
installable power dissipation	P_{DSL} = 2.5 W / K

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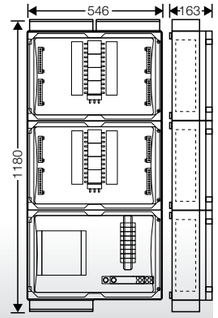
Load Centers
Incoming for MCCB

FP VN 1612

Incoming for MCCB up to 250 A
16 ways with MCB max. 63 A
with opaque door

IP 66 | PC | RAL 7035

- modules: 8+48
- PE and N terminals
- per PE/N 1 x M10, 32 x 1,5-16 mm², Cu
- flanges with integrated earthing plate
  installation dimensions: width 240 mm, height 92 mm
- door fastener with tool operation



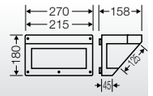
rated voltage	U_n = 690 V a.c.
rated short-time withstand current	I_{cw} = 7.2 kA / 1 s
installable power dissipation	P_{DSL} = 2.5 W / K

FP CB 210

Connection Box

IP 65 | PC | RAL 7035

- for mounting on box walls (270 mm)
- hinged mounting area
- for the installation of devices that must be operated externally, such as plug devices, push buttons and switches



Example:
The Connection Box allows a simple and fast installation of devices that must be operated externally, such as plug devices, push buttons and switches.

FP PL 2

Sealing device for covers
not suitable for circuit-breaker boxes

- can be retrofitted
- 2 pieces
- with fixing screws

AS 12

Blanking strip
12 modules

RAL 7035

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

AS 18

Blanking strip
18 modules

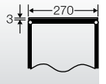
RAL 7035

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

FP VP 27

Closing plate
270 mm

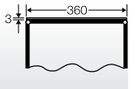
- with 2 fixing elements
- without knockouts



FP VP 36

Closing plate
360 mm

- with 2 fixing elements
- without knockouts

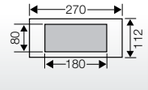


FP VM 27

Metal insert for closing plates

- box size 2 (270 mm)
- for earthing of metal armoured cables
- without knockouts

mounting width	215 mm
mounting height	80 mm

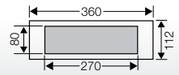


FP VM 36

Metal insert for closing plates

- for box wall 3 (360 mm)
- for earthing of metal armoured cables
- without knockouts

mounting width	215 mm
mounting height	80 mm



Closing plate:

Earth connection according to Britsh Standard installation via built-in metal insert.

FP FG 200

Flange
without knockouts

- box size 2 (270 mm)
- attached enclosure connectors: 2 items

mounting width	240 mm
mounting height	92 mm

FP FG 201

Flange
without knockouts
with metal insert

- box size 2 (270 mm)
- for earthing of metal armoured cables
- attached enclosure connectors: 2 items

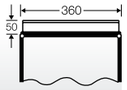
mounting width	240 mm
mounting height	92 mm

FP FG 300

Flange
without knockouts

- for box wall 3 (360 mm)
- attached enclosure connectors: 2 items

mounting width	330 mm
mounting height	92 mm

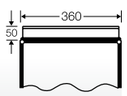


FP FG 301

Flange
without knockouts
with metal insert

- for box wall 3 (360 mm)
- for earthing of metal armoured cables
- attached enclosure connectors: 2 items

mounting width	330 mm
mounting height	92 mm



FP BF 27

IP 44

Ventilation flange
270 mm

- for ventilation of ENYSTAR Distribution boards in the event of extremely high internal temperatures or a risk of water condensation
- for vertical installation on box walls
- with 2 fixing elements

FP BF 36

IP 44

Ventilation flange
360 mm

- for ventilation of ENYSTAR Distribution boards in the event of extremely high internal temperatures or a risk of water condensation
- for vertical installation on box walls
- with 2 fixing elements

BE 44

IP 44

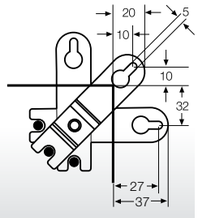
Ventilation insert

Ventilation:

FP AL 40

4 stainless steel external brackets

- for external fixing of enclosures



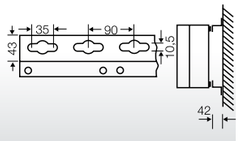
FP MS 1

Profile for wall mounting

RAL 7016

- for ENYSTAR distribution board assemblies up to 810 x 1260 mm
- with 8 screws, washers and nuts for fastening of enclosures

length	1980 mm
material	sendzimir galvanised steel profile with structured powder coating

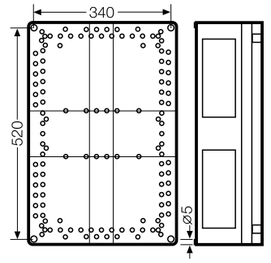


	Load centers
Application area	**Suitable for indoor installation and outdoor installation protected against weather influences** However, pay attention to the climatic effects on the installed equipment, for example, high or low ambient temperatures or forming of condensed water
Ambient temperature - Average value over 24 hours - Maximum value - Minimum value	 + 35° C + 40° C – 5° C The ambient temperature for enclosures with electrical functions (distribution boards) is reduced by the installed equipment technology!
Relative humidity - short-time	50% at 40° C 100% at 25° C
Fire protection in the event of internal faults	Demands placed on electrical devices from standards and laws: Minimum requirements - Glow wire test in accordance with IEC 60695-2-11: - 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
Degree of protection against mechanical load	IK 08 (5 Joule)
Toxic behaviour	halogen-free [1] silicone-free

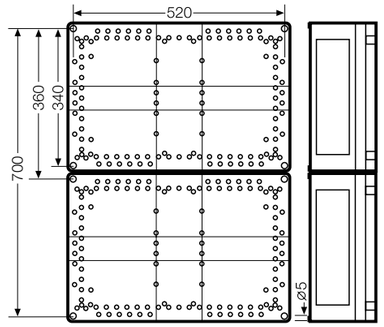
[1] “Halogen-free” in accordance with IEC 60754-2 “Common test methods for cables - Determination of the amount of halogen acid gas”.

Standards and regulations

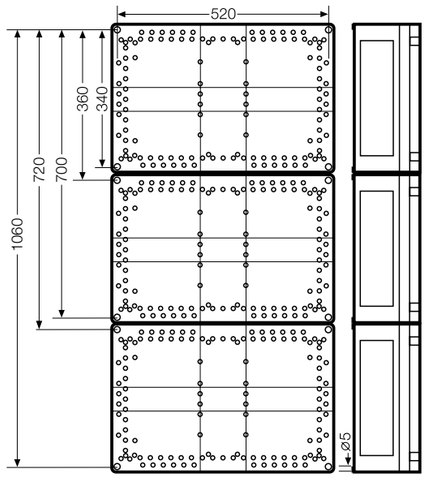
- IEC 61439-3
  ... low-voltage switchgear and controlgear assemblies intended to be in places where unskilled persons have access to their use - distribution boards
- IEC 60999, connecting devices
  Safety requirements for screw-type and screwless-type clamping units for electrical copper conductors
- DIN 43880
  Built-in equipment for electrical installations; overall dimensions and related mounting dimensions
- IEC 60529
  Degrees of protection provided by enclosures (IP-Code)



FP VN 0400
FP VN 0410
FP VN 0800
FP VN 0810
FP VN 0402
FP VN 0412



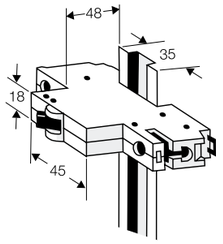
FP VN 0801
FP VN 0811
FP VN 0802
FP VN 0812



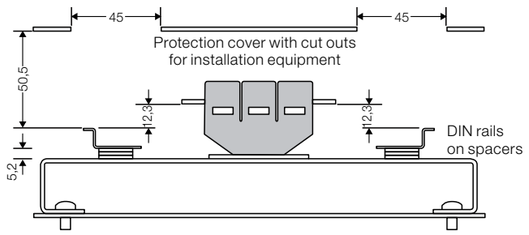
FP VN 1200
FP VN 1210
FP VN 1202
FP VN 1212
FP VN 1600
FP VN 1610
FP VN 1602
FP VN 1612

Outgoing circuits

The cutout in the protection cover is provided for devices with the following dimensions:



The DIN rail for installation of the electrical devices is adjustable in height. The distance from top edge of the DIN rail to the connecting strap of the busbar may be 12.3 to 17.5 mm. To adjust the height use spacers enclosed in each enclosure.

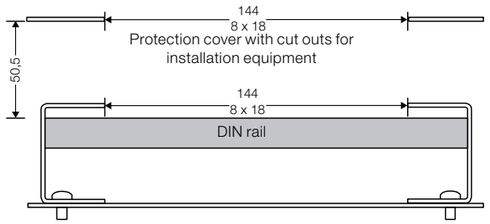


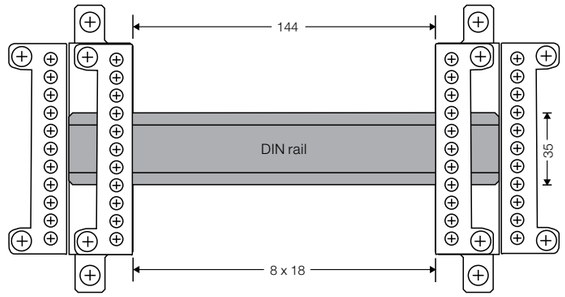
Incoming

In enclosures with busbars 125 A, the incoming device is installed on a DIN rail.

The protection cover provides cut-outs of 144 x 45 mm for 8 modules 18 mm each.

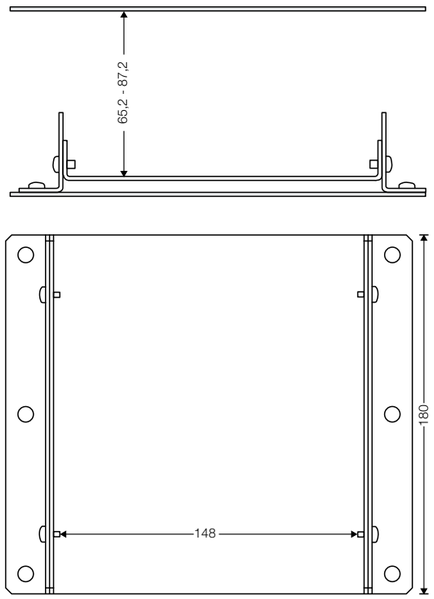
The distance between top edge of the DIN rail to bottom edge of the protection cover is 50.5 mm.





In enclosures with busbars 250 A, the incoming device is installed on a mounting plate.

The position of the feeder is freely selectable on the mounting plate. The mounting plate is adjustable in height every 2 mm from 65.2 mm to 87.2 mm.



Outgoing circuits

IEC 61439-1 section 5.3.2
Rated current of a circuit (I_{nc})
*„The rated current of a circuit (I_{nc}) is the value of the current, that can be carried by this circuit **loaded alone**, under normal service conditions.“*

Assumed load factor for load centers

Table:
Temperature rise (Δϑ) with load centers by power dissipation of electrical devices

Determination of the rated current of the outgoing circuits I_{nC}

- First, the installation equipment of the outgoing circuits is selected based on the electrical function, e.g. MCBs, etc.
- Then the short list is based on the rated current of the circuits (I_{nc}).
  According to IEC 61439 the rated current of the circuit (I_{nc}) must not exceed 80% of the rated current of the installation equipment.

The power dissipation of all installed devices and busbars within the distribution have to be considered. The total power dissipation of the installed devices and busbars must not be greater than the power dissipation which the enclosure is able to dissipate.

With parallel operation of several circuits and when the user does not make any further requirements, the assumed rated loading factor from Table 101 of the IEC 61439-3 can be used.

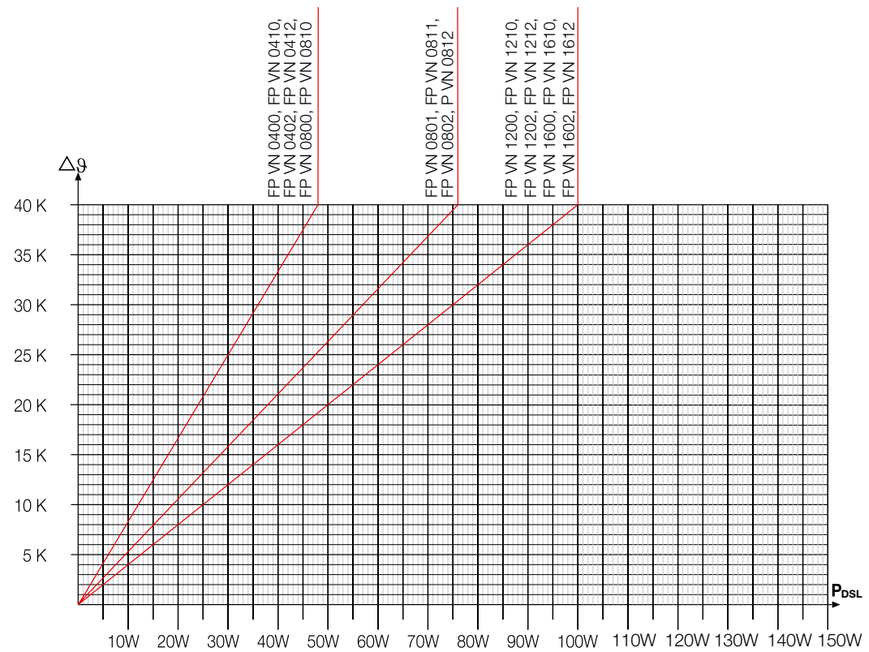
Table 101 from IEC 61439-3

Number of outgoing circuits	Load centers IEC 61439-3 assumed rated loading factor
2-3	0.8
4-5	0.7
6-9	0.6
10 or more	0.5

Determination of the power dissipation (P_V)

The permissible power dissipation (P_V) for the entire assembly is determined from the difference of
- installed power loss through installed equipment, busbars and wiring and
- power dissipation of the enclosures, e.g. heat.

The following table specifies the values of power dissipation for all types of Load Centers:



Technical details
Determining the rated diversity factor (RDF)

Specified operating current
If the operating current (I_B) is specified and not calculated, formula 1 can be used to determine the rated diversity factor (RDF).

Calculated operating current
If the operating current (I_B) is calculated, the rated diversity factor (RDF) is determined via the power dissipation (P_V).

IEC 61439 / EN 61439 -1 Section 5.4
Rated diversity factor RDF (Rated Diversity Factor)
"The rated diversity factor is the per unit value of the rated current, assigned by the assembly manufacturer, to which outgoing circuits of an assembly can be continuously and simultaneaously loaded taken into account the mutual thermal influences."

- With **a positive difference** of installed and dissipated power dissipation, the rated diversity factor (RDF) is equal to the assumed load factor.
- With a **negative difference**, the HENSEL calculation tool automatically calculates the rated diversity factor (RDF) according to formula 2.

Formula 1:

$$RDF = \frac{I_B}{I_{nc}}$$

Formula 2:

$$RDF = \sqrt{\frac{\text{dissipated power dissipation}}{\text{installed power dissipation}}}$$

Determining the rated diversity factor RDF

Example 1:
WITH specified operating current

The customer specifies the operating current I_B.

This value is used in Formula 1.

$$RDF = \frac{I_B \text{ according to customer specification}}{I_{nc}}$$

Example: I_B =12 A and I_{nc} = 16 A

$$RDF = \frac{12\ A}{16\ A} = 0.75$$

RDF = 0.75

Example 2: WITHOUT specifying the operating current

- With a positive difference, the RDF corresponds to the assumed load factor.
- With a negative difference, the RDF must be determined by means of a calculation. For this purpose, the values from the calculation tool for dissipated power dissipation and installed power dissipation are used.

$$RDF = \sqrt{\frac{\text{dissipated power dissipation}}{\text{installed power dissipation}}}$$

Example:
Result from the calculation table is 0.75.

RDF = 0.75

The ONLINE calculation tool from Hensel supports designer and panel builder to determine the power dissipation of an assembly quickly and easily.
www.hensel-electric.de/61439

Technical details
Terminal Technology

N and PE terminals
Flexible conductors can be used only with end ferrule!

Incoming up to 125 A	Type of conductor	Cross-section	Tightening torque	Current carrying capacity
Terminals for outgoing cables	Cu, r (rigid), f (flexible)	1,5-6 mm²	1,5 Nm	125 A
Terminals for outgoing cables	Cu, r (rigid), f (flexible)	6-10 mm²	2 Nm	125 A
Terminals for outgoing cables	Cu, r (rigid), f (flexible)	10-16 mm²	3 Nm	125 A
Terminals for incoming cables	Cu, r (rigid), f (flexible)	10-16 mm²	1.5 Nm	125 A
Terminals for incoming cables	Cu, r (rigid), f (flexible)	16-25 mm²	2 Nm	125 A

Incoming up to 250 A	Type of conductor	Cross-section	Tightening torque	Current carrying capacity
Terminals for outgoing cables	Cu, r (rigid), f (flexible)	1,5-6 mm²	1,5 Nm	160 A
Terminals for outgoing cables	Cu, r (rigid), f (flexible)	6-10 mm²	2 Nm	160 A
Terminals for outgoing cables	Cu, r (rigid), f (flexible)	10-16 mm²	3 Nm	160 A
Terminal for incoming cables	Cu, r (rigid)	6-25 mm²	12 Nm	250 A
Terminal for incoming cables	Cu, r (rigid)	35-95 mm²	22 Nm	250 A
Terminals for incoming cables	Cu, r (rigid), f (flexible)	M 10	20 Nm	250 A

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