



PASSION FOR POWER.

ENYSTAR

Load Centers up to 250 A

according to IEC 61439-3
for commercial and industrial buildings



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 made in **GERMANY**
since 1931

ENYSTAR[®]



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

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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 interna-

tional 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 electriciticians' and panel builders' needs today and tomorrow.



Headquarters in Lennestadt / Germany



Headquarters of Hensel Electric India Pvt. Ltd.



Load Centers up to 250 A

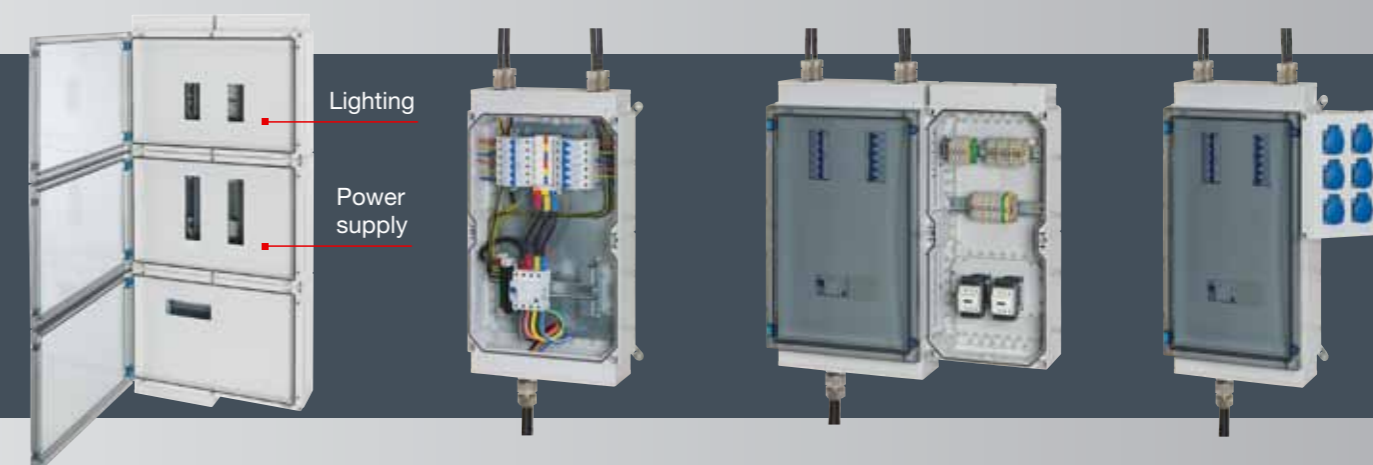
Safe and reliable in harsh environments.

For use with devices from different manufacturers.

Load Centers supply electrical power especially throughout 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.

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



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 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



High impact resistance
IK 08 (5Joule)



Dust-proof, protected against water
IP 66

For operating and ambient conditions refer to page 26.

Characteristics dependent on the material



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



UV resistance
according to IEC 61439



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



Silicone- and halogene-free



Resistant to weather influences
(humidity, temperature, wind)

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

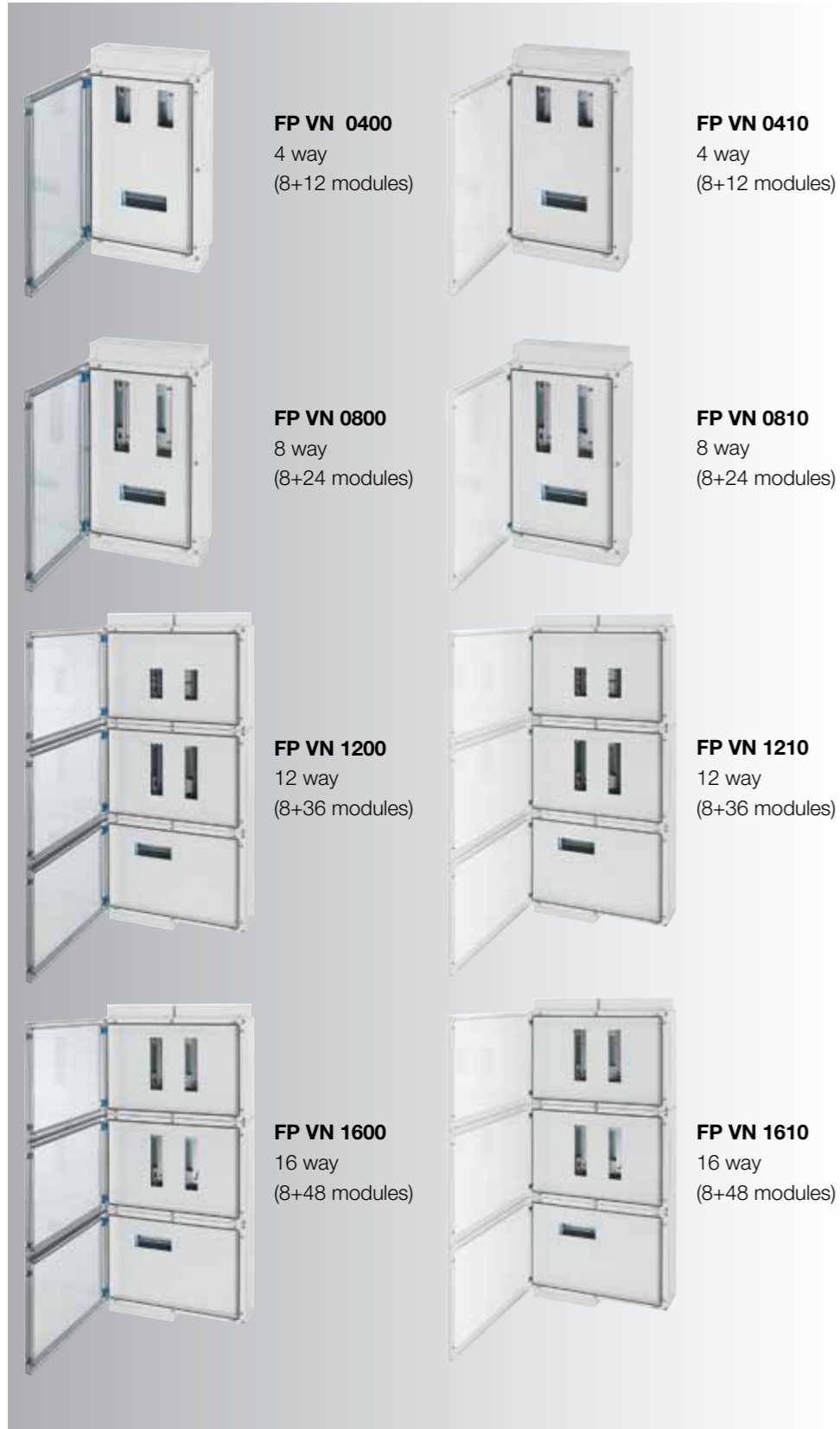
Rated short-time withstand current: max. 7.2 kA

**Incoming: for isolator/MCB/RCCB or RCBO
up to 125 A**

Outgoing: SP/TP MCBs up to 63 A

transparent door

opaque door



Incoming: for MCCB up to 125 A

Outgoing: SP/TP MCBs up to 63 A

transparent door

opaque door

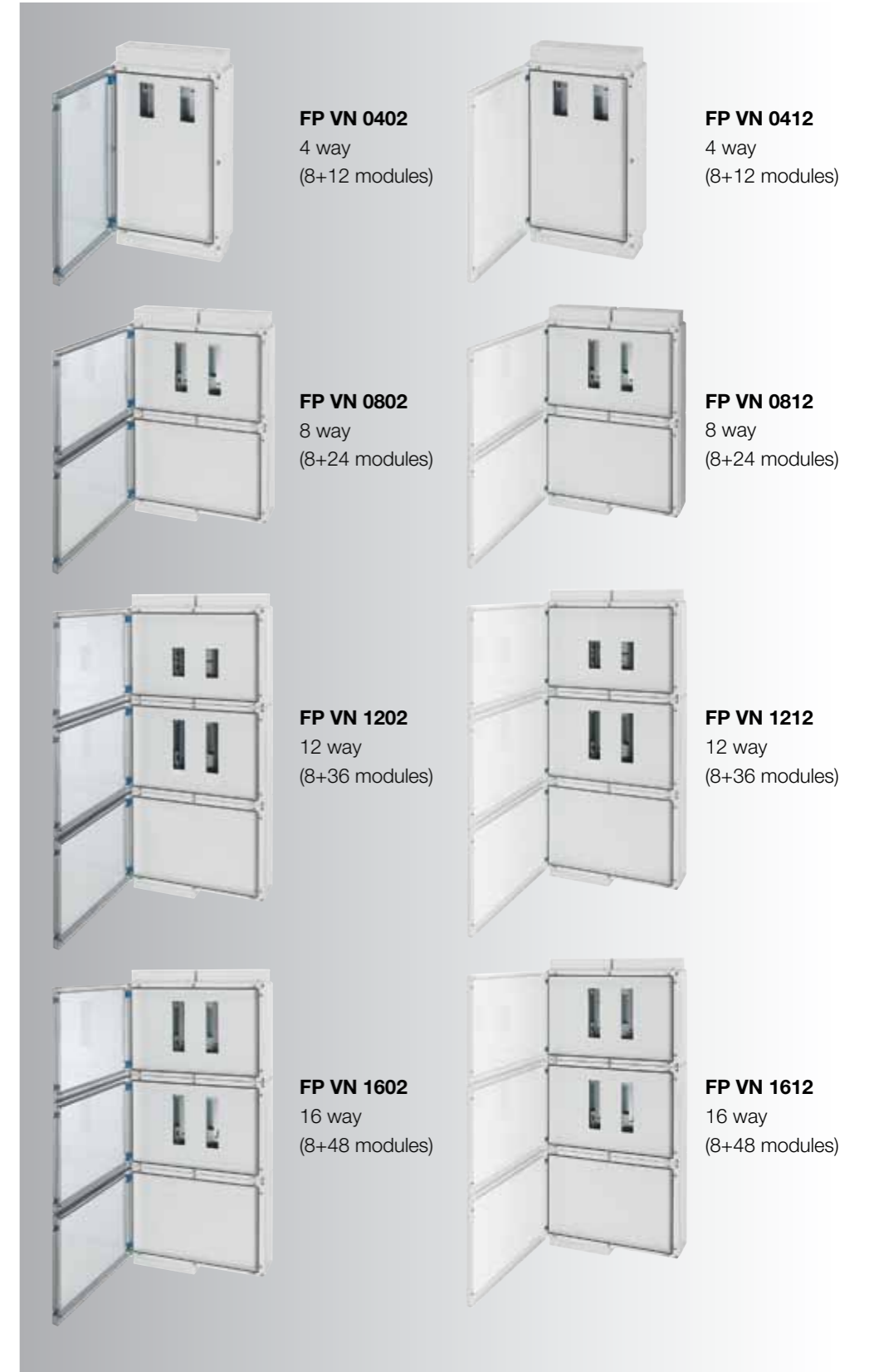


Incoming: for MCCB up to 250 A

Outgoing: SP/TP MCBs up to 63 A

transparent door

opaque door



ENYSTAR
Load Centers
Incoming for isolator/MCB/RCCB or RCBO

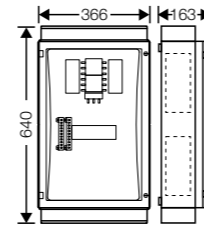
ENYSTAR
Load Centers
Incoming for isolator/MCB/RCCB or RCBO



FP VN 0400
Incoming up to 125 A
4 ways with MCB max. 63 A
with transparent door

- 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

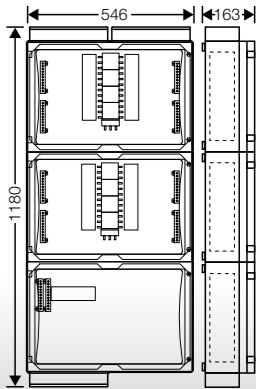
rated voltage	$U_n = 690 \text{ V a.c.}$
rated short-time withstand current	$I_{cw} = 3.6 \text{ kA} / 1 \text{ s}$
installable power dissipation	$P_{DSL} = 1.2 \text{ W} / \text{K}$



FP VN 1600
Incoming up to 125 A
16 ways with MCB max. 63 A
with transparent door

- 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

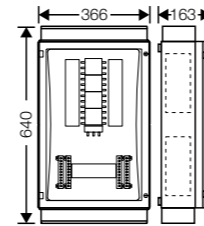
rated voltage	$U_n = 690 \text{ V a.c.}$
rated short-time withstand current	$I_{cw} = 3.6 \text{ kA} / 1 \text{ s}$
installable power dissipation	$P_{DSL} = 2.5 \text{ W} / \text{K}$



FP VN 0800
Incoming up to 125 A
8 ways with MCB max. 63 A
with transparent door

- 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

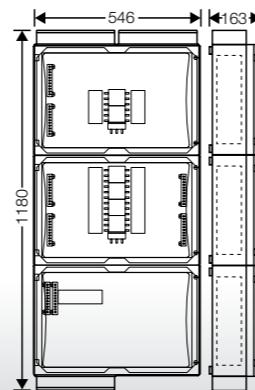
rated voltage	$U_n = 690 \text{ V a.c.}$
rated short-time withstand current	$I_{cw} = 3.6 \text{ kA} / 1 \text{ s}$
installable power dissipation	$P_{DSL} = 1.2 \text{ W} / \text{K}$



FP VN 1200
Incoming up to 125 A
12 ways with MCB max. 63 A
with transparent door

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



ENYSTAR
Load Centers
Incoming for isolator/MCB/RCCB or RCBO

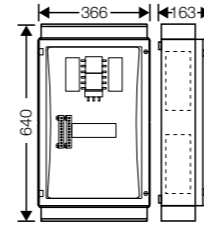
ENYSTAR
Load Centers
Incoming for isolator/MCB/RCCB or RCBO



FP VN 0410
Incoming up to 125 A
4 ways with MCB max. 63 A
with opaque door

- 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

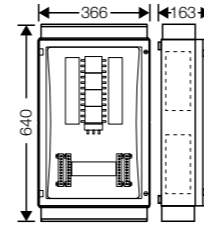
rated voltage	$U_n = 690 \text{ V a.c.}$
rated short-time withstand current	$I_{cw} = 3.6 \text{ kA} / 1 \text{ s}$
installable power dissipation	$P_{DSL} = 1.2 \text{ W} / \text{K}$



FP VN 0810
Incoming up to 125 A
8 ways with MCB max. 63 A
with opaque door

- 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

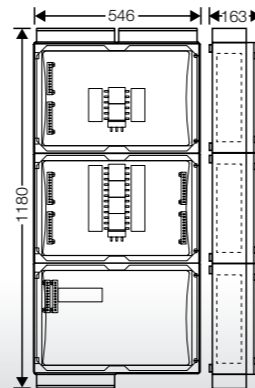
rated voltage	$U_n = 690 \text{ V a.c.}$
rated short-time withstand current	$I_{cw} = 3.6 \text{ kA} / 1 \text{ s}$
installable power dissipation	$P_{DSL} = 1.2 \text{ W} / \text{K}$



FP VN 1210
Incoming up to 125 A
12 ways with MCB max. 63 A
with opaque door

- 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

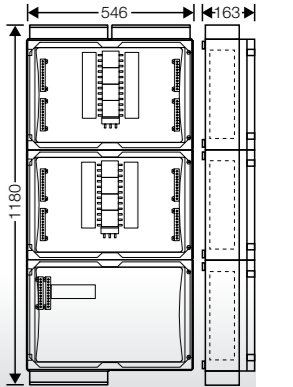
rated voltage	$U_n = 690 \text{ V a.c.}$
rated short-time withstand current	$I_{cw} = 3.6 \text{ kA} / 1 \text{ s}$
installable power dissipation	$P_{DSL} = 2.5 \text{ W} / \text{K}$



FP VN 1610
Incoming up to 125 A
16 ways with MCB max. 63 A
with opaque door

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



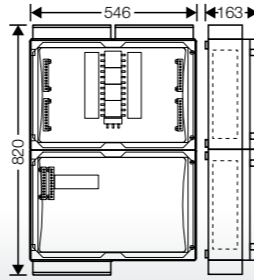


FP VN 0801

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

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

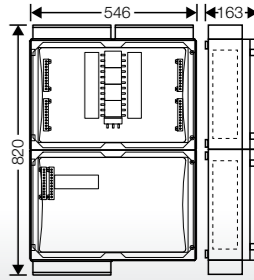


FP VN 0811

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

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



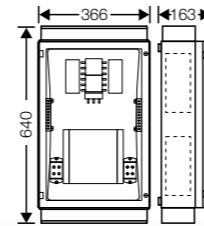


FP VN 0402

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

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

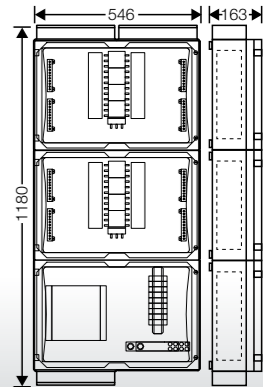


FP VN 1602

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

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

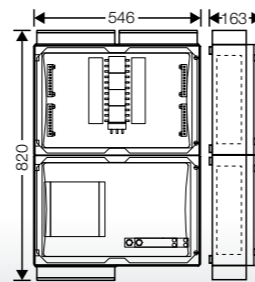


FP VN 0802

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

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

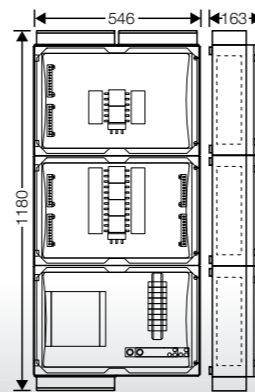


FP VN 1202

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

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



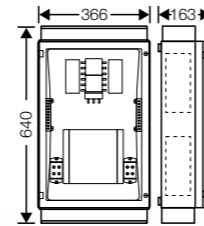


FP VN 0412

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

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

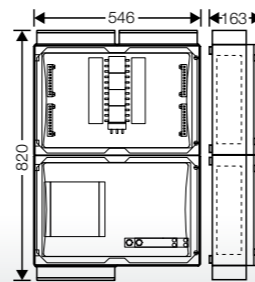


FP VN 0812

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

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

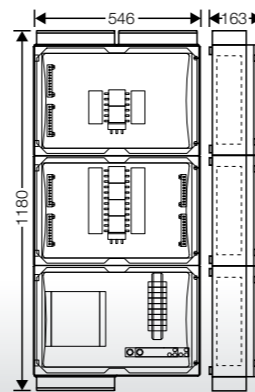


FP VN 1212

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

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

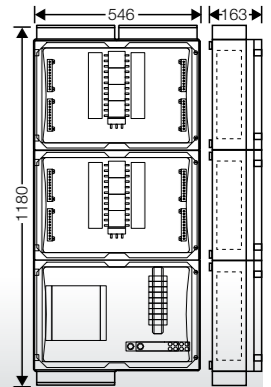


FP VN 1612

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

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



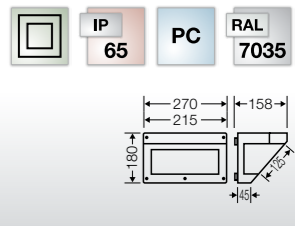


Connection Box	19
Sealing device for covers, blanking strips	20
Closing plates, metal insert for closing plates	21
Flanges for cable entry	22
Ventilation flanges	23
Fixing devices	24



FP CB 210
Connection Box

- 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

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

RAL
7035



AS 18
Blanking strip
18 modules

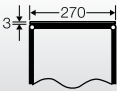
- 18 X 18 mm, divisible every 9 mm
- for the covering of spare equipment openings, for material thickness up to 3 mm

RAL
7035



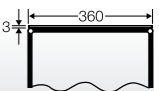
FP VP 27
Closing plate
270 mm

- with 2 fixing elements
- without knockouts



FP VP 36
Closing plate
360 mm

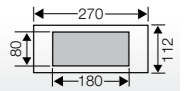
- with 2 fixing elements
- without knockouts



FP VM 27
Metal insert for closing plates

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

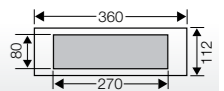
mounting width	215 mm
mounting height	80 mm



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 British Standard installation via built-in metal insert.

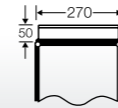




FP FG 200
Flange
without knockouts

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

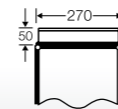
mounting width	240 mm
mounting height	92 mm



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

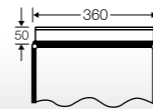
mounting width	240 mm
mounting height	92 mm



FP FG 300
Flange
without knockouts

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

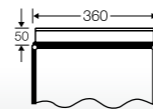
mounting width	330 mm
mounting height	92 mm



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
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

IP
44



FP BF 36
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

IP
44



BE 44
Ventilation insert

IP
44

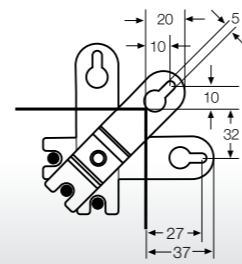
Ventilation:





FP AL 40
4 stainless steel external brackets

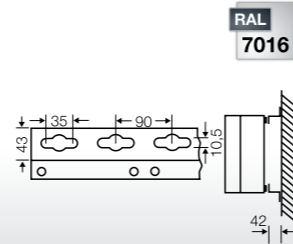
- for external fixing of enclosures



FP MS 1
Profile for wall mounting

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

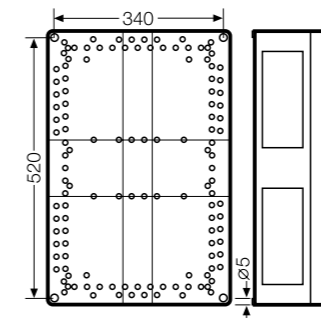
length	1980 mm
material	sendzimir galvanised steel profile with structured powder coating



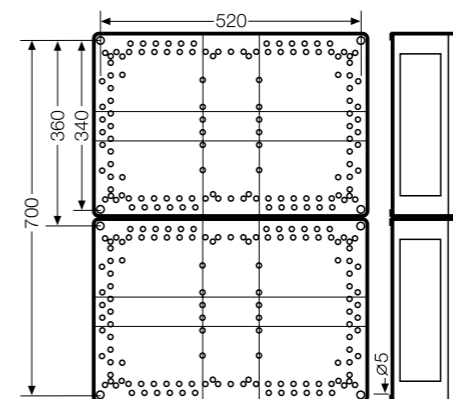
Operating and ambient conditions	26
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Installation instruction incoming	28
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	Load centers
Application area	Suitable for indoor installation and outdoor installation protected against weather influences 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	+ 35° C The ambient temperature for enclosures with electrical functions (distribution boards)
- Maximum value	+ 40° C is reduced by the installed equipment technology!
- Minimum value	- 5° C
Relative humidity	50% at 40° C
- short-time	100% at 25° C
Fire protection	Demands placed on electrical devices from standards and laws:
in the event of internal faults	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	960° C
- UL Subject 94	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".

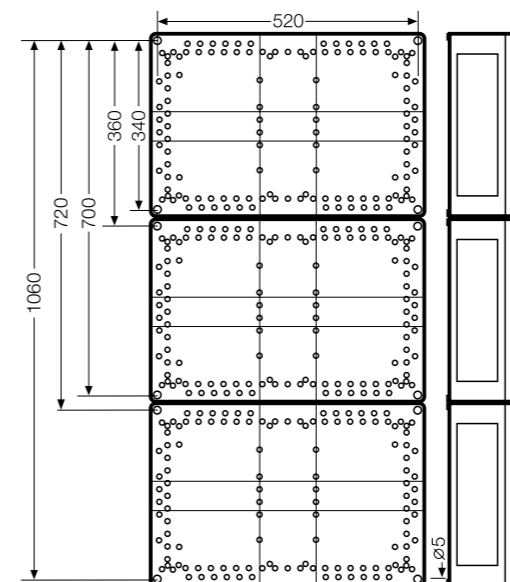
Standards and regulations	- IEC 61439-3 ... low-voltage switchgear and controlgear assemblies intended to be in places where unskilled persons have access to their use - distribution boards
	- IEC 60999, connecting devices Safety requirements for screw-type and screwless-type clamping units for electrical 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



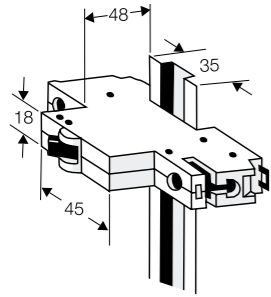
FP VN 0801
FP VN 0811
FP VN 0802
FP VN 0812



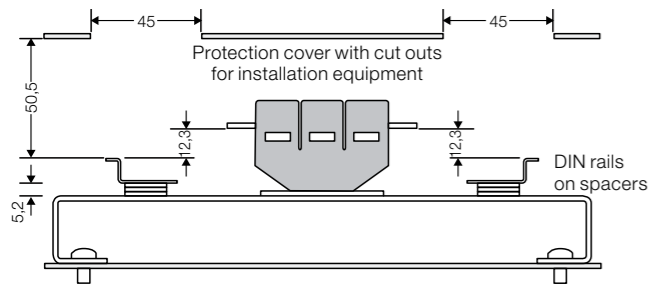
FP VN 1200
FP VN 1210
FP VN 1202
FP VN 1212
FP VN 1600
FP VN 1610
FP VN 1602
FP VN 1612

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.

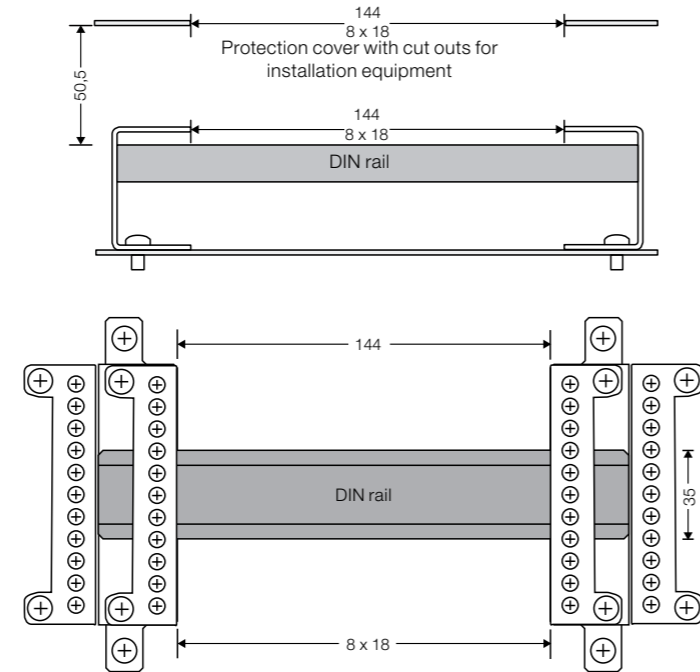


Incoming

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

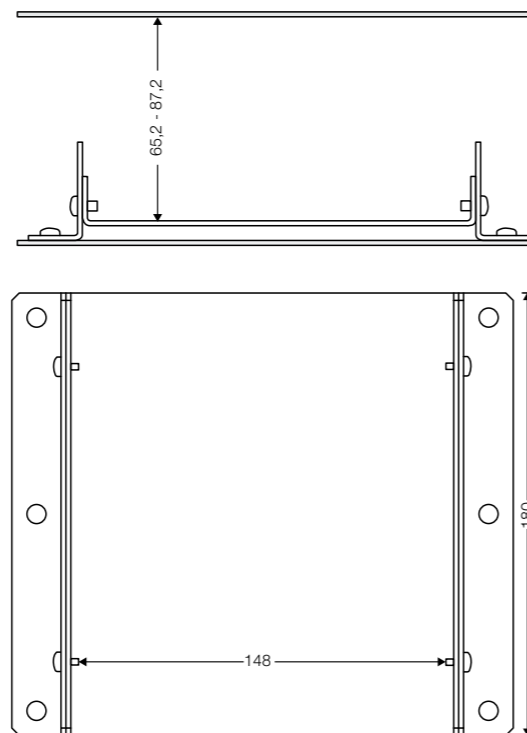
The protection cover provides cut-outs of 144 x 45 mm for 8 modules 18 mm each.

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

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.

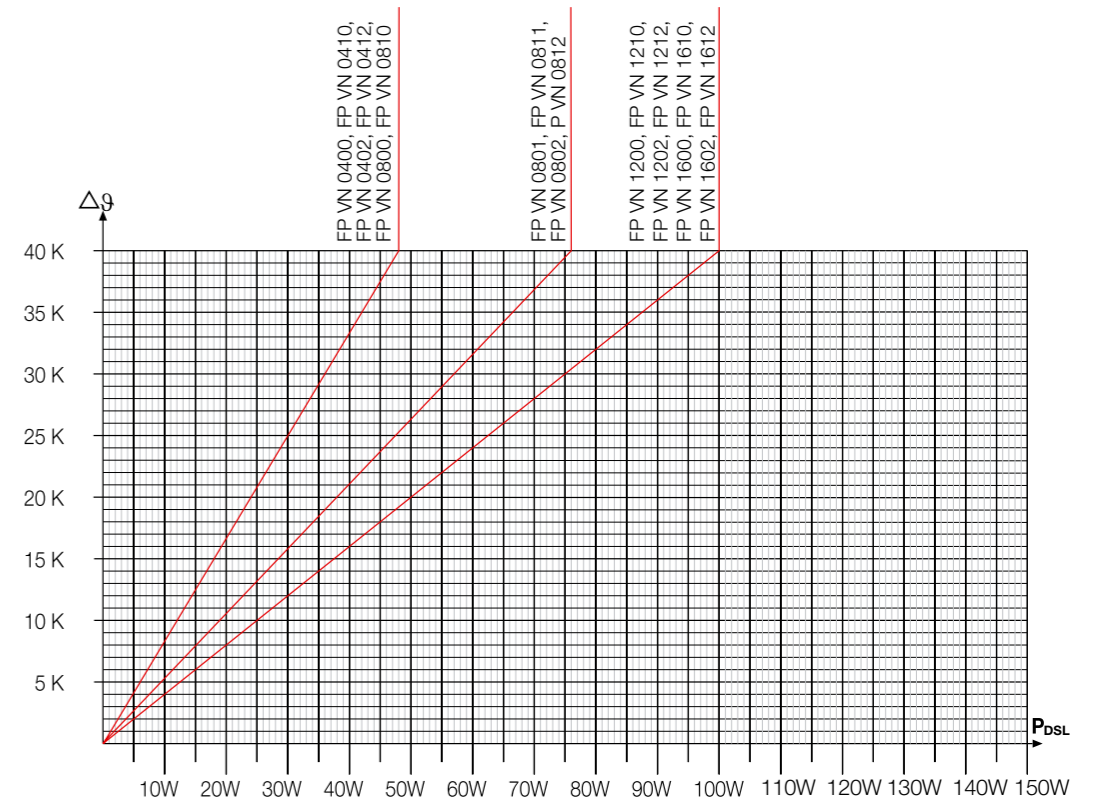
Table 101 from IEC 61439-3

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:



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).

- With a **positive difference** of installed and dissipated power dissipation, the rated diversity factor (RDF) is equal to the assumed load factor.

Calculated operating current

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

- With a **negative difference**, the HENSEL calculation tool automatically calculates the rated diversity factor (RDF) according to formula 2.

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 simultaneously loaded taken into account the mutual thermal influences."

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: $I_B = 12 \text{ A}$ and $I_{nc} = 16 \text{ A}$

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

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

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 mm ²	1,5 Nm	125 A
Terminals for outgoing cables	Cu, r (rigid), f (flexible)	6-10 mm ²	2 Nm	125 A
Terminals for outgoing cables	Cu, r (rigid), f (flexible)	10-16 mm ²	3 Nm	125 A
Terminals for incoming cables	Cu, r (rigid), f (flexible)	10-16 mm ²	1.5 Nm	125 A
Terminals for incoming cables	Cu, r (rigid), f (flexible)	16-25 mm ²	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 mm ²	1,5 Nm	160 A
Terminals for outgoing cables	Cu, r (rigid), f (flexible)	6-10 mm ²	2 Nm	160 A
Terminals for outgoing cables	Cu, r (rigid), f (flexible)	10-16 mm ²	3 Nm	160 A
Terminal for incoming cables	Cu, r (rigid)	6-25 mm ²	12 Nm	250 A
Terminal for incoming cables	Cu, r (rigid)	35-95 mm ²	22 Nm	250 A
Terminals for incoming cables	Cu, r (rigid), f (flexible)	M 10	20 Nm	250 A

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



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As at 08/2015/ASIA

 made in **GERMANY**
since 1931



PASSION FOR POWER.

Industrial enclosures for individual customisation

in accordance with IEC 62208



More information at www.hensel.in

 made in **GERMANY**

since 1931

Industrial enclosures for individual customisation

offering highly individualized design options

The robust enclosures developed, manufactured and distributed by HENSEL are suitable as universal encapsulation to fulfill many demanding tasks in industrial and commercial sites. They protect individual installations of electrical devices and electronic components in manufacturing processes,

in the automation of machines and plants or in the industrial control sector. They are used as industrial, display and operating enclosures in a wide variety of industries, applications and environments. Configure your best product and find the best solution for your application!



Customized solutions

tailored to meet individual needs in industrial processes

Enclosures made from thermoplastics can be easily and quickly machined for customized applications. Whether drilling, milling or sawing, the enclosures can be easily machined with conventional tools.

Wherever sensitive electronic or electrical components and other sensitive components need to be protected against external influences, Hensel's robust enclosures are used. The high quality enclosures offer the highest level of protection against dust and water, corrosion, impact and UV radiation. They can easily be used in extreme industrial environments and under tough conditions.



Enclosure with START-STOP button on a mobile and stationary vehicle.



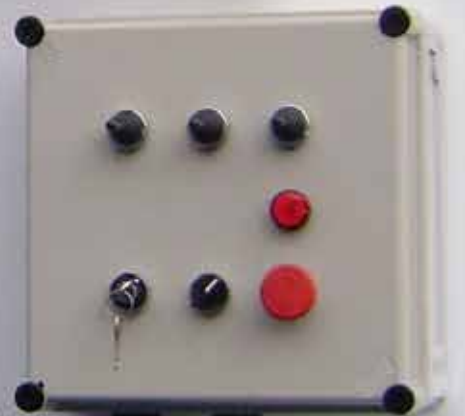
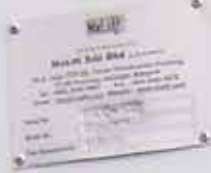
Enclosure used as a control unit in a fertilizer factory.




Waste water treatment plant to start / stop the pumps.



SL PMA 16313



Empty enclosures in accordance with IEC 62208

- for customized solutions and individual applications
- for example for low-voltage switchgear and controlgear assemblies in accordance with the IEC 61439-series
- degree of protection IP 55-IP 65
- made from thermoplastics
- protection class II, 

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KG empty enclosures, cable entry via metric knockouts	15 - 18
K empty enclosures, box walls without knockouts, can be drilled individually	19 - 22
Accessories	23 - 44
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Further technical information can be found on the Internet
www.hensel-electric.de -> Products

IEC 62208

Enclosures for low-voltage switchgear and controlgear assemblies.

General requirements

General information

The IEC 62208 standard applies to empty enclosures, prior to the incorporation of switchgear and controlgear components by the user, as supplied by the enclosure manufacturer.

It specifies general definitions, classifications, characteristics and test requirements of enclosures to be used as part of switchgear and controlgear assemblies (e.g. in accordance with the IEC 61439-series).



Compliance with the safety requirements of the applicable product standard (e.g. IEC 61439-series) is the responsibility of the assembly manufacturer and not of the enclosure manufacturer.



Protection against electric shock

In order to protect individuals in the event of faults against electric shock and the accompanying risks, enclosures are classified with protection class I (electrical earth) and protection class II (protection by total or reinforced insulation). HENSEL empty enclosures are manufactured from insulating material and provide protection against electric shock according to protection class II.



IP-Codes for protecting electrical equipment against dust and water

Electrical equipment must be protected from external influences and conditions for safety reasons. The two-digit IP-Codes indicate to what extent the enclosure provides protection against hazardous parts and ingress of dust (1st digit) or water (2nd digit). For example IP 65: Electrical equipment inside the enclosure is protected against dust and harmful water and humidity.

Therefore the IP-Codes indicate the suitability of enclosures for different environmental conditions.

Effects on the degree of protection (IP-Code) when devices are built in the lid

If any switches, displays, push buttons or other equipment are built into the lid of an enclosure, the manufacturer must consider the effects on the degree of protection at that specific point.

The installation of electrical equipment into the lid, door or wall of an enclosure can reduce the degree of protection of the enclosure in that specific installation area depending on the degree of protection of the equipment and depending on additional measures for sealing the point of entry.

Example: The installation of an IP 44 socket into the lid of an IP 65 enclosure reduces the degree of protection in that specific area to IP 44. The enclosure itself still provides IP 65, but the manufacturer has to draw attention to the fact, that the socket only provides IP 44 for the area where it is installed.

Operating and ambient conditions

Empty enclosures according to IEC 62208 are applicable in ambient temperatures from -25 °C to +40 °C (outdoor installation) or from -5 °C to +40 °C (indoor installation).

The IEC 62208 requires the specification of the power dissipation capability P_{de} of the enclosures

Temperature rise in enclosures and power dissipation

In relationship with the outside temperatures the temperature rise inside of enclosures, caused by the flowing current and the power loss P_D of the installed electrical equipment, has to be considered.

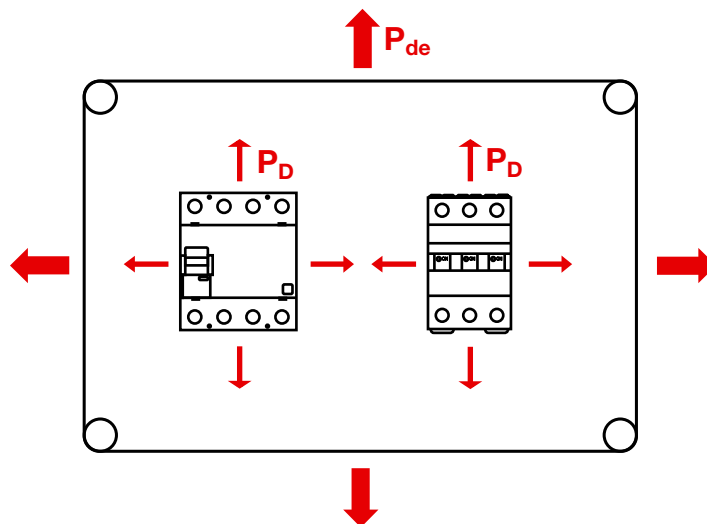
Most devices are designed for maximum ambient temperatures of +40 °C to +55 °C. Accordingly there may only be a narrow range for the temperature rise inside of the enclosure if the ambient temperature is close to the maximum operating temperature of the installed equipment.

The enclosure with its power dissipation capability P_{de} has to be able to dissipate the power loss P_D of the installed electrical equipment inside of the enclosure without exceeding the limits of operating and ambient temperatures.

This ensures that the inside of an enclosure is not heated inadmissibly at a defined installed power loss and guarantees the operative readiness and reliable performance of the built-in electrical equipment.

The power dissipation P_D of the electrical equipment is given in the technical data of the respective manufacturers. The power dissipation capability P_{de} of Hensel empty enclosures are given in the technical data of this catalogue.

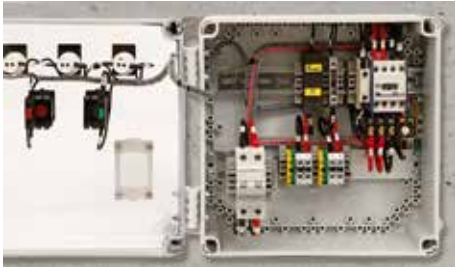
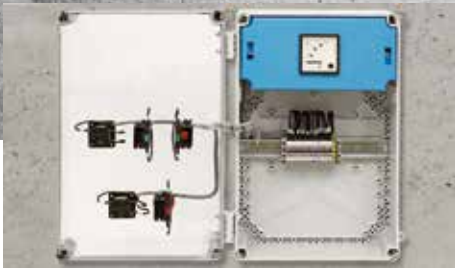
The temperature inside of enclosures rises by the flowing current and the power loss of the installed electrical equipment.



The enclosure with its power dissipation capability P_{de} has to be able to dissipate the power loss P_D of the installed electrical equipment inside of the enclosure without exceeding the limits of operating and ambient temperatures.

P_{de} = power dissipation capability


P_D = power dissipation



ENYFLEX

Empty enclosures in accordance with IEC 62208

For customized solutions and individual applications

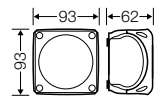
- For low-voltage switchgear and controlgear assemblies, for example in accordance with IEC 61439-series
- For the installation of devices that must be operated externally, such as plug devices, push buttons and switches
- Installation of electrical equipment via DIN rails or mounting plates
- Cable entry via metric knockouts respectively by drilling individually using ESM grommets or AKM/ASS cable glands
- Fasteners for tool operation as standard
- Screws made of stainless steel V2A
- Hinges for K-series lids available for operating installation devices within a large area
- Material: PS polystyrene or PC polycarbonate, UV-resistant
- Burning behaviour:
Glow wire test in accordance with IEC 60695-2-11: 750 °C / 960 °C, flame-retardant, self-extinguishing
- Empty enclosures are equipment with protection class II,  in accordance with IEC 61439-1, section 8.4.4
- Degree of protection: up to IP 66
- Colour: grey, RAL 7035 or black, RAL 9011



EB 02 G

Built-in dimensions W 74 x H 74 x D 47 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- with opaque lid
- fastener for tool operation
- sealable
- box walls without knockouts
- external brackets for wall fixing included
- colour: grey, RAL 7035
- material: PC (polycarbonate)



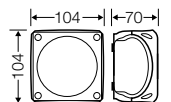
rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 09 (10 Joule)
static load	mounting plate or DIN rail = 0.7 kg lid = 0.2 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 3.5 \text{ watts}$
wall thickness	enclosure = 2 mm lid = 2 mm



EB 04 G

Built-in dimensions W 83 x H 83 x D 55 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- with opaque lid
- fastener for tool operation
- sealable
- box walls without knockouts
- external brackets for wall fixing included
- colour: grey, RAL 7035
- material: PC (polycarbonate)



rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 09 (10 Joule)
static load	mounting plate or DIN rail = 1.1 kg lid = 0.25 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 4.5 \text{ watts}$
wall thickness	enclosure = 2 mm lid = 2 mm

Applicaton:



EB empty enclosure with emergency stop and START/STOP button



EB empty enclosure with an emergency stop

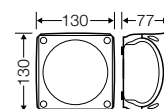


EB 06 G

Built-in dimensions W 102 x H 102 x D 62 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- with opaque lid
- fastener for tool operation
- sealable
- box walls without knockouts
- external brackets for wall fixing included
- colour: grey, RAL 7035
- material: PC (polycarbonate)

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 09 (10 Joule)
static load	mounting plate or DIN rail = 2.0 kg lid = 0.5 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 6 \text{ watts}$
wall thickness	enclosure = 2 mm lid = 2 mm

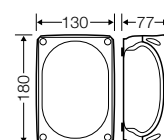


EB 10 G

Built-in dimensions W 97 x H 150 x D 62 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- with opaque lid
- fastener for tool operation
- sealable
- box walls without knockouts
- external brackets for wall fixing included
- colour: grey, RAL 7035
- material: PC (polycarbonate)

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 09 (10 Joule)
static load	mounting plate or DIN rail = 2.8 kg lid = 0.75 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 8 \text{ watts}$
wall thickness	enclosure = 2 mm lid = 2 mm

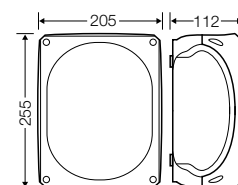


EB 25 G

Built-in dimensions W 170 x H 220 x D 96 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- with opaque lid
- fastener for tool operation
- sealable
- box walls without knockouts
- external brackets for wall fixing included
- colour: grey, RAL 7035
- material: PC (polycarbonate)

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 09 (10 Joule)
static load	mounting plate or DIN rail = 5.4 kg lid = 1.5 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 20 \text{ watts}$
wall thickness	enclosure = 2,5 mm lid = 2 mm



**Empty enclosures in accordance with IEC 62208
for customized solutions and individual applications**
Box walls without knockouts, can be drilled individually

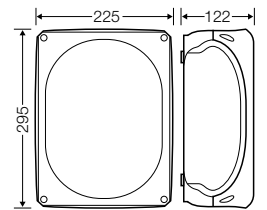


EB 35 G

Built-in dimensions W 190 x H 260 x D 106 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- with opaque lid
- fastener for tool operation
- sealable
- box walls without knockouts
- external brackets for wall fixing included
- colour: grey, RAL 7035
- material: PC (polycarbonate)

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 09 (10 Joule)
static load	mounting plate or DIN rail = 6.4 kg lid = 2.1 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 24 \text{ watts}$
wall thickness	enclosure = 2,8 mm lid = 2 mm

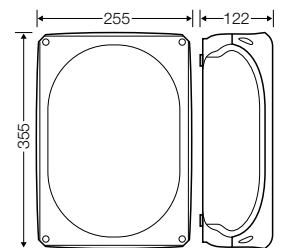


EB 50 G

Built-in dimensions W 215 x H 320 x D 106 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- with opaque lid
- fastener for tool operation
- sealable
- box walls without knockouts
- external brackets for wall fixing included
- colour: grey, RAL 7035
- material: PC (polycarbonate)

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 09 (10 Joule)
static load	mounting plate or DIN rail = 8.3 kg lid = 2.6 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 27 \text{ watts}$
wall thickness	enclosure = 3 mm lid = 2 mm



Applicaton:



EB empty enclosure with emergency stop and START/STOP button



EB empty enclosure with an emergency stop

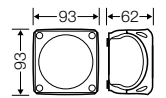


EB 02 B

Built-in dimensions W 74 x H 74 x D 47 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- with opaque lid
- fastener for tool operation
- sealable
- box walls without knockouts
- external brackets for wall fixing included
- colour: black, RAL 9011
- material: PC (polycarbonate)

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 09 (10 Joule)
static load	mounting plate or DIN rail = 0.7 kg lid = 0.2 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 3.5 \text{ watts}$
wall thickness	enclosure = 2 mm lid = 2 mm

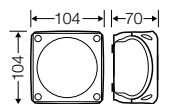


EB 04 B

Built-in dimensions W 83 x H 83 x D 55 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- with opaque lid
- fastener for tool operation
- sealable
- box walls without knockouts
- external brackets for wall fixing included
- colour: black, RAL 9011
- material: PC (polycarbonate)

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 09 (10 Joule)
static load	mounting plate or DIN rail = 1.1 kg lid = 0.25 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 4.5 \text{ watts}$
wall thickness	enclosure = 2 mm lid = 2 mm

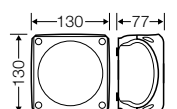


EB 06 B

Built-in dimensions W 102 x H 102 x D 62 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- with opaque lid
- fastener for tool operation
- sealable
- box walls without knockouts
- external brackets for wall fixing included
- colour: black, RAL 9011
- material: PC (polycarbonate)

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 09 (10 Joule)
static load	mounting plate or DIN rail = 2.0 kg lid = 0.5 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 6 \text{ watts}$
wall thickness	enclosure = 2 mm lid = 2 mm

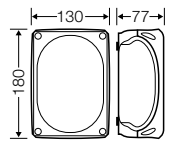




EB 10 B

Built-in dimensions W 97 x H 150 x D 62 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- with opaque lid
- fastener for tool operation
- sealable
- box walls without knockouts
- external brackets for wall fixing included
- colour: black, RAL 9011
- material: PC (polycarbonate)



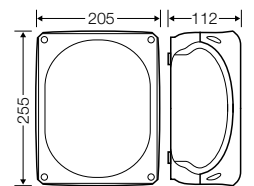
rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 09 (10 Joule)
static load	mounting plate or DIN rail = 2.8 kg lid = 0.75 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 8 \text{ watts}$
wall thickness	enclosure = 2 mm lid = 2 mm



EB 25 B

Built-in dimensions W 170 x H 220 x D 96 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- with opaque lid
- fastener for tool operation
- sealable
- box walls without knockouts
- external brackets for wall fixing included
- colour: black, RAL 9011
- material: PC (polycarbonate)



rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 09 (10 Joule)
static load	mounting plate or DIN rail = 5.4 kg lid = 1.5 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 20 \text{ watts}$
wall thickness	enclosure = 2,5 mm lid = 2 mm

Applicaton:



EB empty enclosure with emergency stop and START/STOP button



EB empty enclosure with an emergency stop

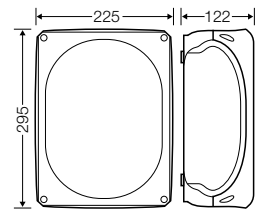


EB 35 B

Built-in dimensions W 190 x H 260 x D 106 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- with opaque lid
- fastener for tool operation
- sealable
- box walls without knockouts
- external brackets for wall fixing included
- colour: black, RAL 9011
- material: PC (polycarbonate)

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 09 (10 Joule)
static load	mounting plate or DIN rail = 6.4 kg lid = 2.1 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 24 \text{ watts}$
wall thickness	enclosure = 2,8 mm lid = 2 mm

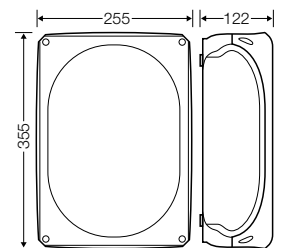


EB 50 B

Built-in dimensions W 215 x H 320 x D 106 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- with opaque lid
- fastener for tool operation
- sealable
- box walls without knockouts
- external brackets for wall fixing included
- colour: black, RAL 9011
- material: PC (polycarbonate)

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 09 (10 Joule)
static load	mounting plate or DIN rail = 8.3 kg lid = 2.6 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 27 \text{ watts}$
wall thickness	enclosure = 3 mm lid = 2 mm

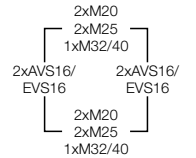
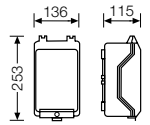




KG 9001

Built-in dimensions W 101 x H 205 x D 95 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- max. installation depth with built-in mounting plate 95 mm, with built-in DIN rail 89 mm
- with transparent hinged lid
- fastener for tool operation
- sealable
- cable entry via metric knockouts
- included cable entry:
 2 ESM 25, sealing range \varnothing 9-17 mm and
 1 ESM 32, sealing range \varnothing 9-23 mm
- colour: grey, RAL 7035
- material: PS (polystyrene)



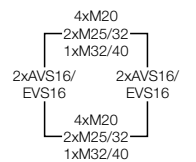
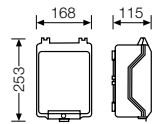
rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 08 (5 Joule)
static load	mounting plate or DIN rail = 1.3 kg lid = 1.2 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 16.5 \text{ watts}$
wall thickness	enclosure = 3 mm lid = 3 mm



KG 9002

Built-in dimensions W 133 x H 205 x D 95 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- max. installation depth with built-in mounting plate 95 mm, with built-in DIN rail 89 mm
- please order DIN rails or mounting plates additionally
- with transparent hinged lid
- fastener for tool operation
- sealable
- cable entry via metric knockouts
- included cable entry:
 2 ESM 25, sealing range \varnothing 9-17 mm and
 1 ESM 32, sealing range \varnothing 9-23 mm
- colour: grey, RAL 7035
- material: PS (polystyrene)



rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 08 (5 Joule)
static load	mounting plate or DIN rail = 1.6 kg lid = 1.2 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 16.8 \text{ watts}$
wall thickness	enclosure = 3 mm lid = 3 mm

Applicaton:



KG empty enclosures with transparent lid



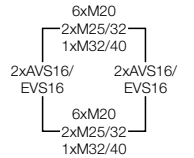
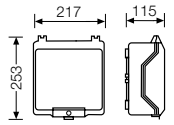
KG empty enclosures with opaque lid



KG 9003

Built-in dimensions W 182 x H 205 x D 95 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- max. installation depth with built-in mounting plate 95 mm, with built-in DIN rail 89 mm
- please order DIN rails or mounting plates additionally
- with transparent hinged lid
- fastener for tool operation
- sealable
- cable entry via metric knockouts
- included cable entry:
 2 ESM 25, sealing range Ø 9-17 mm and
 1 ESM 32, sealing range Ø 9-23 mm
- colour: grey, RAL 7035
- material: PS (polystyrene)



rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 08 (5 Joule)
static load	mounting plate or DIN rail = 1.6 kg lid = 1.6 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 17.6 \text{ watts}$
wall thickness	enclosure = 3 mm lid = 3 mm

Installation example:



Installation example::

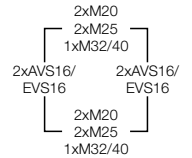
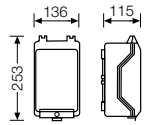




KG 9001 IN

Built-in dimensions W 101 x H 205 x D 95 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- max. installation depth with built-in mounting plate 95 mm, with built-in DIN rail 89 mm
- with opaque hinged lid
- fastener for tool operation
- sealable
- cable entry via metric knockouts
- included cable entry:
 2 ESM 25, sealing range Ø 9-17 mm and
 1 ESM 32, sealing range Ø 9-23 mm
- colour: grey, RAL 7035
- material: PS (polystyrene)



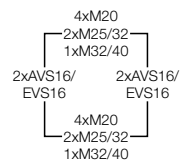
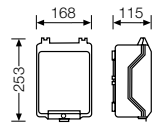
rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 08 (5 Joule)
static load	mounting plate or DIN rail = 1.3 kg lid = 1.2 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 16.5 \text{ watts}$
wall thickness	enclosure = 3 mm lid = 3 mm



KG 9002 IN

Built-in dimensions W 133 x H 205 x D 95 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- max. installation depth with built-in mounting plate 95 mm, with built-in DIN rail 89 mm
- with opaque hinged lid
- fastener for tool operation
- sealable
- cable entry via metric knockouts
- included cable entry:
 2 ESM 25, sealing range Ø 9-17 mm and
 1 ESM 32, sealing range Ø 9-23 mm
- colour: grey, RAL 7035
- material: PS (polystyrene)



rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 08 (5 Joule)
static load	mounting plate or DIN rail = 1.6 kg lid = 1.2 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 16.8 \text{ watts}$
wall thickness	enclosure = 3 mm lid = 3 mm

Applicaton:



KG empty enclosures with transparent lid



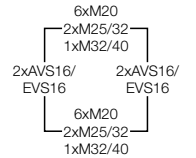
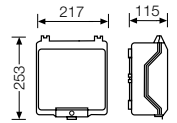
KG empty enclosures with opaque lid



KG 9003 IN

Built-in dimensions W 182 x H 205 x D 95 mm

- for installation equipment on DIN rails or mounting plates (order separately)
- max. installation depth with built-in mounting plate 95 mm, with built-in DIN rail 89 mm
- with opaque hinged lid
- fastener for tool operation
- sealable
- cable entry via metric knockouts
- included cable entry:
 2 ESM 25, sealing range Ø 9-17 mm and
 1 ESM 32, sealing range Ø 9-23 mm
- colour: grey, RAL 7035
- material: PS (polystyrene)



rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
impact strength	IK 08 (5 Joule)
static load	mounting plate or DIN rail = 1.6 kg lid = 1.6 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 17.6 \text{ watts}$
wall thickness	enclosure = 3 mm lid = 3 mm

Installation example:



Installation example:

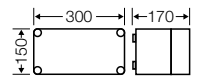




K 0100

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

- enclosure size 1, type Mi
- for installation equipment on DIN rails or mounting plates (order separately)
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- with transparent lid
- lid fasteners for tool operation
- sealable
- box walls without knockouts
- optional hinges for device installation in the lid
- external brackets for wall fixing as accessories
- colour: grey, RAL 7035
- material: PC (polycarbonate)



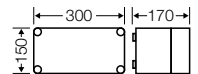
rated insulation voltage	U _i = 690 V a.c. / 1000 V d.c.
impact strength	IK 08 (5 Joule)
static load	mounting plate or DIN rail = 3.2 kg lid = 1.3 kg
power dissipation capability at Δθ = 40 K	P _{de} = 33 watts
wall thickness	enclosure = 3 mm lid = 3 mm



K 0101

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

- enclosure size 1, type Mi
- for installation equipment on DIN rails or mounting plates (order separately)
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- with opaque lid
- lid fasteners for tool operation
- sealable
- box walls without knockouts
- optional hinges for device installation in the lid
- external brackets for wall fixing as accessories
- colour: grey, RAL 7035
- material: PC (polycarbonate)



rated insulation voltage	U _i = 690 V a.c. / 1000 V d.c.
impact strength	IK 08 (5 Joule)
static load	mounting plate or DIN rail = 3.2 kg lid = 1.3 kg
power dissipation capability at Δθ = 40 K	P _{de} = 33 watts
wall thickness	enclosure = 3 mm lid = 3 mm

Applicaton:



Empty enclosures with installed equipment on DIN rail and mounting plate



DIN rails for equipment or terminals with clip-on mounting



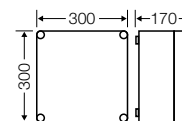
Device installation on mounting plates



K 0200

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

- enclosure size 2, type Mi
- for installation equipment on DIN rails or mounting plates (order separately)
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- with transparent lid
- lid fasteners for tool operation
- sealable
- box walls without knockouts
- optional hinges for device installation in the lid
- external brackets for wall fixing as accessories
- colour: grey, RAL 7035
- material: PC (polycarbonate)



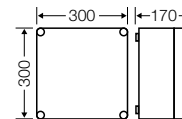
rated insulation voltage	$U_i = 690 \text{ V a.c.} / 1000 \text{ V d.c.}$
impact strength	IK 08 (5 Joule)
static load	mounting plate or DIN rail = 6.5 kg lid = 1.6 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 53 \text{ watts}$
wall thickness	enclosure = 3 mm lid = 3 mm



K 0201

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

- enclosure size 2, type Mi
- for installation equipment on DIN rails or mounting plates (order separately)
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- with opaque lid
- lid fasteners for tool operation
- sealable
- box walls without knockouts
- optional hinges for device installation in the lid
- external brackets for wall fixing as accessories
- colour: grey, RAL 7035
- material: PC (polycarbonate)



rated insulation voltage	$U_i = 690 \text{ V a.c.} / 1000 \text{ V d.c.}$
impact strength	IK 08 (5 Joule)
static load	mounting plate or DIN rail = 6.5 kg lid = 1.6 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 53 \text{ watts}$
wall thickness	enclosure = 3 mm lid = 3 mm

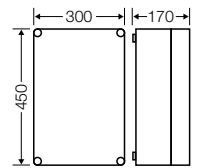
**Empty enclosures in accordance with IEC 62208
for customized solutions and individual applications
Box walls without knockouts, can be drilled individually**



K 0300

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

- enclosure size 3, type Mi
- for installation equipment on DIN rails or mounting plates (order separately)
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- with transparent lid
- lid fasteners for tool operation
- sealable
- box walls without knockouts
- optional hinges for device installation in the lid
- external brackets for wall fixing as accessories
- colour: grey, RAL 7035
- material: PC (polycarbonate)



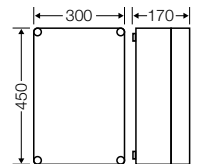
rated insulation voltage	$U_i = 690 \text{ V a.c.} / 1000 \text{ V d.c.}$
impact strength	IK 08 (5 Joule)
static load	mounting plate or DIN rail = 9.2 kg lid = 3.2 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 71 \text{ watts}$
wall thickness	enclosure = 3 mm lid = 3 mm



K 0301

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

- enclosure size 3, type Mi
- for installation equipment on DIN rails or mounting plates (order separately)
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- with opaque lid
- lid fasteners for tool operation
- sealable
- box walls without knockouts
- optional hinges for device installation in the lid
- external brackets for wall fixing as accessories
- colour: grey, RAL 7035
- material: PC (polycarbonate)



rated insulation voltage	$U_i = 690 \text{ V a.c.} / 1000 \text{ V d.c.}$
impact strength	IK 08 (5 Joule)
static load	mounting plate or DIN rail = 9.2 kg lid = 3.2 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 71 \text{ watts}$
wall thickness	enclosure = 3 mm lid = 3 mm

Applicaton:



Empty enclosures with installed equipment on DIN rail and mounting plate



DIN rails for equipment or terminals with clip-on mounting



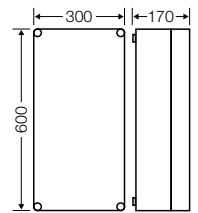
Device installation on mounting plates



K 0400

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

- enclosure size 4, type Mi
- for installation equipment on DIN rails or mounting plates (order separately)
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- with transparent lid
- lid fasteners for tool operation
- sealable
- box walls without knockouts
- optional hinges for device installation in the lid
- external brackets for wall fixing as accessories
- colour: grey, RAL 7035
- material: PC (polycarbonate)



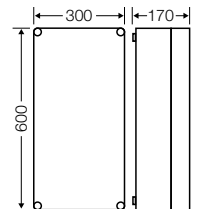
rated insulation voltage	$U_i = 690 \text{ V a.c.} / 1000 \text{ V d.c.}$
impact strength	IK 08 (5 Joule)
static load	mounting plate or DIN rail = 9.2 kg lid = 3.2 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 93 \text{ watts}$
wall thickness	enclosure = 3 mm lid = 3 mm



K 0401

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

- enclosure size 4, type Mi
- for installation equipment on DIN rails or mounting plates (order separately)
- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- with opaque lid
- lid fasteners for tool operation
- sealable
- box walls without knockouts
- optional hinges for device installation in the lid
- external brackets for wall fixing as accessories
- colour: grey, RAL 7035
- material: PC (polycarbonate)



rated insulation voltage	$U_i = 690 \text{ V a.c.} / 1000 \text{ V d.c.}$
impact strength	IK 08 (5 Joule)
static load	mounting plate or DIN rail = 9.2 kg lid = 3.2 kg
power dissipation capability at $\Delta\theta = 40 \text{ K}$	$P_{de} = 93 \text{ watts}$
wall thickness	enclosure = 3 mm lid = 3 mm

Installation example:





Empty enclosures in accordance with IEC 62208

Accessories

for EB empty enclosures

DIN rails	24
Mounting plates	25
Mounting kits for pipe and post installation	26

for KG empty enclosures

Mounting plates, DIN rails	27
PE and N terminals	28

for K empty enclosures

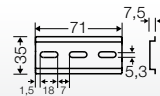
DIN rails	29
Mounting plates	30
External fixing, sealing, conversion sets for lid fasteners lid locks	31
Lid fasteners, multikey, conversionset for padlock, mounting kits for pipe and post installation	32
Hinges, extension frame	33
Cable entry systems (grommets, cable glands, combi climate glands)	34 - 44



DK TS 01

DIN rail

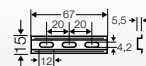
- for DK 02....., DK 04....., KF 02....., KF 04....., EB 02.., EB 04..
- for the installation of terminal blocks
- with fixing screws



DK TS 02

DIN rail

- for DK 02....., KF 02....., EB 02..
- for the installation of terminal blocks
- with fixing screws



DK TS 04

DIN rail

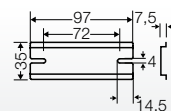
- for DK 04, KF 04....., EB 04..
- for the installation of terminal blocks
- with fixing screws



DK TS 06

DIN rail

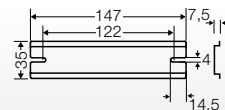
- for DK 06.... , KF 06....., EB 06..
- for the installation of terminal blocks
- with fixing screws



DK TS 10

DIN rail

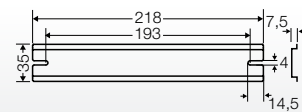
- for DK 10....., KF 10....., EB 10..
- for the installation of terminal blocks
- with fixing screws



DK TS 25

DIN rail

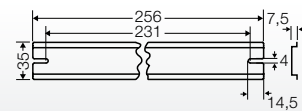
- for DK 25....., KF 25....., EB 25..
- for the installation of terminal blocks
- with fixing screws



DK TS 35

DIN rail

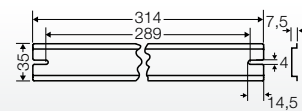
- for DK 35....., KF 35....., EB 35..
- for the installation of terminal blocks
- with fixing screws



DK TS 50

DIN rail

- for DK 50....., KF 50....., EB 50..
- for the installation of terminal blocks
- with fixing screws





EB MP 02

Mounting plate W 71,5 x H 71,5 mm

- material thickness 4 mm
- for EB 02.. empty boxes
- with fixing screws

material

laminated paper, coated



EB MP 04

Mounting plate W 81,5 x H 81,5 mm

- material thickness 4 mm
- for EB 04.. empty boxes
- with fixing screws

material

laminated paper, coated



EB MP 06

Mounting plate W 104,5 x H 104,5 mm

- material thickness 4 mm
- for EB 06.. empty boxes
- with fixing screws

material

laminated paper, coated



EB MP 10

Mounting plate W 104,5 x H 154,5 mm

- material thickness 4 mm
- for EB 10.. empty boxes
- with fixing screws

material

laminated paper, coated



EB MP 25

Mounting plate W 174,5 x H 224,5 mm

- material thickness 4 mm
- for EB 25.. empty boxes
- with fixing screws

material

laminated paper, coated



EB MP 35

Mounting plate W 192 x H 262 mm

- material thickness 4 mm
- for EB 35.. empty boxes
- with fixing screws

material

laminated paper, coated



EB MP 50

Mounting plate W 319,5 x H 219,5 mm

- material thickness 4 mm
- for EB 50.. empty boxes
- with fixing screws

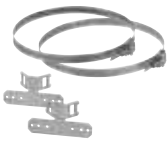
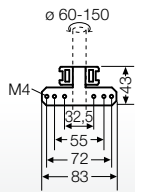
material

laminated paper, coated



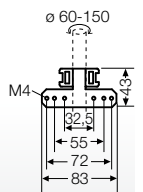
DK MB 1
Mounting kit
for pipe and post installation

- for cable junction boxes DK 02.. X, KF 02.. X, EB 02 X
- for cable junction boxes DK 04.. X, KF 04.. X, EB 04 X
- for cable junction boxes DK 06.. X, KF 06.. X, EB 06 X
- suitable for pole diameters of 60 - 150 mm



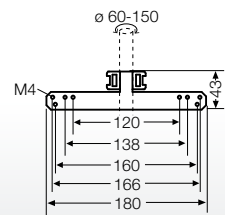
DK MB 2
Mounting kit
for pipe and post installation

- for cable junction boxes DK 10.. X, KF 10.. X, EB 10 X
- for cable junction boxes DK 16.. X, KF 16.. X
- suitable for pole diameters of 60 - 150 mm



DK MB 3
Mounting kit
for pipe and post installation

- for cable junction boxes DK 25.. X, KF 25.. X, EB 25 X
- for cable junction boxes DK 35.. X, KF 35.. X, EB 35 X
- for cable junction boxes DK 50.. X, KF 50.. X, EB 50 X
- suitable for pole diameters of 60 - 150 mm



Applicaton:



Pipe and post installation of enclosures

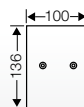


KG MP 01

**Mounting plate
W 100 x H 136 mm**

- material thickness 4 mm
- for KG 9001 empty enclosures
- with fixing screws

material	laminated paper, coated
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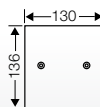


KG MP 02

**Mounting plate
W 130 x H 136 mm**

- material thickness 4 mm
- for KG 9002 empty enclosures
- with fixing screws

material	laminated paper, coated
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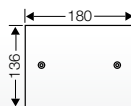


KG MP 03

**Mounting plate
W 180 x H 136 mm**

- material thickness 4 mm
- for KG 9003 empty enclosures
- with fixing screws

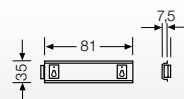
material	laminated paper, coated
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KG TS 01

DIN rail for KG 9001

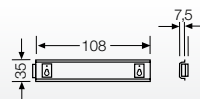
- in accordance with DIN EN 60715
- for equipment or terminals with clip-on mounting
- with fixing screws



KG TS 02

DIN rail for KG 9002

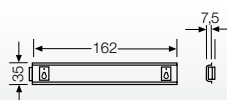
- in accordance with DIN EN 60715
- for equipment or terminals with clip-on mounting
- with fixing screws



KG TS 03

DIN rail for KG 9003

- in accordance with DIN EN 60715
- for equipment or terminals with clip-on mounting
- with fixing screws





KG PN 01

PE and N terminal

- for KG 9001
- per PE/N number x cross section 3 x 25 mm², 3 x 4 mm² Cu, screw-type terminal

rated insulation voltage

$U_i = 400 \text{ V a.c.}$



KG PN 02

PE and N terminal

- for KG 9002
- per PE/N number x cross section 3 x 25 mm², 5 x 4 mm² Cu, screw-type terminal

rated insulation voltage

$U_i = 400 \text{ V a.c.}$



KG PN 03

PE and N terminal

- for KG 9003
- per PE/N number x cross section 4 x 25 mm², 7 x 4 mm² Cu, screw-type terminal

rated insulation voltage

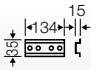
$U_i = 400 \text{ V a.c.}$



Mi TS 15

DIN rail
length 134 mm

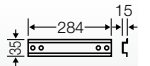
- in accordance with DIN EN 60715
- for Mi-Empty boxes sizes 1, 6
- for equipment or terminals with clip-on mounting
- with fixing screws



Mi TS 30

DIN rail
length 284 mm

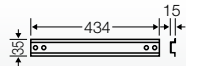
- in accordance with DIN EN 60715
- for Mi-Empty boxes sizes 1, 2, 3, 4, 6, 8
- for equipment or terminals with clip-on mounting
- with fixing screws



Mi TS 45

DIN rail
length 434 mm

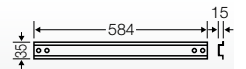
- in accordance with DIN EN 60715
- for Mi-Empty boxes sizes 3, 6
- for equipment or terminals with clip-on mounting
- with fixing screws



Mi TS 60

DIN rail
length 584 mm

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



Applicaton:



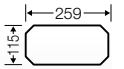
DIN rails for equipment
 or terminals with clip-on
 mounting



Mi MP 1

Mounting plate
W 259 x H 115 mm

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



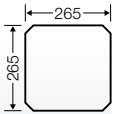
material	laminated paper, coated
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Mi MP 2

Mounting plate
W 265 x H 265 mm

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



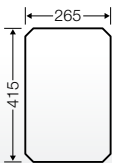
material	laminated paper, coated
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Mi MP 3

Mounting plate
W 265 x H 415 mm

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



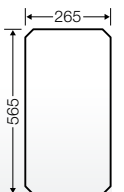
material	laminated paper, coated
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Mi MP 4

Mounting plate
W 265 x H 565 mm

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



material	laminated paper, coated
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Applicaton:



Device installation on mounting plates



Mi PL 2

Sealing cap

- 2 sealing caps for converting the lid fasteners



Mi SR 4

**Conversion set
for hand operation on tool operation**

- 4 fastening covers



Mi SN 4

**Conversion set
for converting lid fasteners from tool to manual operation**

- 4 manual actuators



Mi SV 2

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

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



Mi DV 01

Locking device insertion

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



Mi ZS 11

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

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



Mi ZS 12

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

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



Mi DR 04

**Lid fastener for tool operation
triangle 8 mm**

- is being used in place of fasteners for hand- or tool operation to prevent unauthorised opening of lids
- 4 locking devices with triangle 8 mm and key





DS 1
Triangular key 8 mm



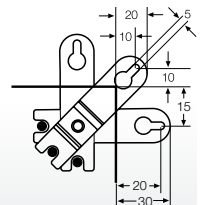
US 1
Multikey

- triangular 8 mm, square 8 mm, double-bit and slot



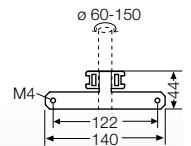
Mi AL 40
4 stainless steel external brackets

- for external fixing of enclosures



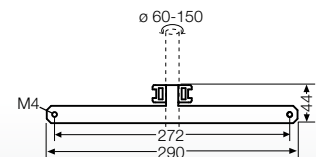
Mi MB 1
Mounting kit
for pipe and post installation

- for Mi boxes
- for enclosure width 150 mm
- suitable for pole diameters of 60 - 150 mm



Mi MB 2
Mounting kit
for pipe and post installation

- for Mi boxes
- for enclosure width 300 mm
- suitable for pole diameters of 60 - 150 mm

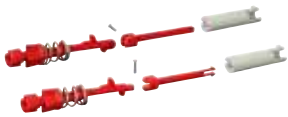


Applicaton:



Pipe and post installation of enclosures

Empty enclosures in accordance with IEC 62208
Accessories
for K empty enclosures



Mi ZS 20
Mi hinge for lids
for Mi boxes sizes 1, 2, 3, 4

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



Mi ZS 30
Hinge for lids

- for empty boxes K 0xxx
- with lamellar plugs for 2 lid fixing tubes
- The lid keeps permanently connected to the box



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



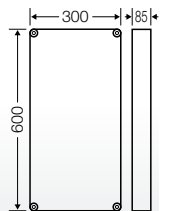
Mi ZS 60
Mi hinge for lids
for Mi boxes sizes 4 and 8 with extension frame

- 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 ZR 4
Extension frame
for enclosure size 4

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



Applicaton:



Mi hinges for lids for operating within a large area



Mi hinges for lids for operating within a large area



ESM 16

**Grommets
for knockouts M 16**

- sealing range: Ø 4.8-11 mm
- bore-hole: Ø 16.5 mm
- wall thickness 1.5-3.5 mm
- for indoor - normal environment and (or) protected outdoor installation
- ambient temperature - 25 °C to + 35 °C
- glow wire test IEC 60695-2-11: 750 °C
- colour: grey, RAL 7035



ESM 20

**Grommets
for knockouts M 20**

- sealing range: Ø 6-13 mm
- bore-hole: Ø 20.5 mm
- wall thickness 1.5-3.5 mm
- for indoor - normal environment and (or) protected outdoor installation
- ambient temperature - 25 °C to + 35 °C
- glow wire test IEC 60695-2-11: 750 °C
- colour: grey, RAL 7035



ESM 25

**Grommets
for knockouts M 25**

- sealing range: Ø 9-17 mm
- bore-hole: Ø 25.5 mm
- wall thickness 1.5-3.5 mm
- for indoor - normal environment and (or) protected outdoor installation
- ambient temperature - 25 °C to + 35 °C
- glow wire test IEC 60695-2-11: 750 °C
- colour: grey, RAL 7035



ESM 32

**Grommets
for knockouts M 32**

- sealing range: Ø 9-23 mm
- bore-hole: Ø 32.5 mm
- wall thickness 1.5-3.5 mm
- for indoor - normal environment and (or) protected outdoor installation
- ambient temperature - 25 °C to + 35 °C
- glow wire test IEC 60695-2-11: 750 °C
- colour: grey, RAL 7035



ESM 40

**Grommets
for knockouts M 40**

- sealing range: Ø 17-30 mm
- bore-hole: Ø 40.5 mm
- wall thickness 1.5-3.5 mm
- for indoor - normal environment and (or) protected outdoor installation
- ambient temperature - 25 °C to + 35 °C
- glow wire test IEC 60695-2-11: 750 °C
- colour: grey, RAL 7035





AKM 12

Cable glands for knockouts M 12



- sealing range: Ø 4-6 mm
- ISO thread M 12 x 1.5
- bore-hole: Ø 12.3 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2-11: 960 °C
- colour: grey, RAL 7035



tightening torque	0,9 Nm
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AKM 16

Cable glands for knockouts M 16



- sealing range: Ø 5-10 mm
- ISO thread M 16 x 1.5
- bore-hole: Ø 16.3 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2-11: 960 °C
- colour: grey, RAL 7035



tightening torque	3,0 Nm
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AKM 20

Cable glands for knockouts M 20



- sealing range Ø 6,5-13,5 mm
- ISO thread M 20 x 1.5
- bore-hole: Ø 20.3 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2-11: 960 °C
- colour: grey, RAL 7035



tightening torque	4,0 Nm
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AKM 25

Cable glands for knockouts M 25



- sealing range Ø 11-17 mm
- ISO thread M 25 x 1.5
- bore-hole: Ø 25.3 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2-11: 960 °C
- colour: grey, RAL 7035



tightening torque	7,5 Nm
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AKM 32

Cable glands for knockouts M 32



- sealing range \varnothing 15-21 mm
- ISO thread M 32 x 1.5
- bore-hole: \varnothing 32.3 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2-11: 960 °C
- colour: grey, RAL 7035



tightening torque	10,0 Nm
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AKM 40

Cable glands for knockouts M 40



- sealing range: \varnothing 19-28 mm
- ISO thread M 40 x 1.5
- bore-hole: \varnothing 40.3 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2-11: 960 °C
- colour: grey, RAL 7035



tightening torque	10,0 Nm
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AKM 50

Cable glands for knockouts M 50



- sealing range: \varnothing 27-35 mm
- ISO thread M 50 x 1.5
- bore-hole: \varnothing 50.3 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2-11: 960 °C
- colour: grey, RAL 7035

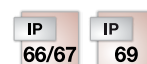


tightening torque	10,0 Nm
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AKM 63

Cable glands for knockouts M 63



- sealing range: \varnothing 35-42 mm
- ISO thread M 63 x 1.5
- bore-hole: \varnothing 63.3 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2-11: 960 °C
- colour: grey, RAL 7035



tightening torque	10,0 Nm
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ASS 12

Cable glands for knockouts M 12



- sealing range: Ø 2-5 mm
- ISO thread M 12 x 1.5
- bore-hole: Ø 12.3 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2: 960 °C
- colour: black, RAL 9005



tightening torque	0,9 Nm
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ASS 16

Cable glands for knockouts M 16



- sealing range: Ø 3-10 mm
- ISO thread M 16 x 1.5
- bore-hole: Ø 16.3 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2: 960 °C
- colour: black, RAL 9005



tightening torque	3,0 Nm
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ASS 20

Cable glands for knockouts M 20



- sealing range: Ø 5-13 mm
- ISO thread M 20 x 1.5
- bore-hole: Ø 20.3 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2: 960 °C
- colour: black, RAL 9005



tightening torque	4,0 Nm
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ASS 25

Cable glands for knockouts M 25



- sealing range: Ø 8-17 mm
- ISO thread M 25 x 1.5
- bore-hole: Ø 25.3 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2: 960 °C
- colour: black, RAL 9005



tightening torque	7,5 Nm
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ASS 32

Cable glands for knockouts M 32



- sealing range: Ø 12-21 mm
- ISO thread M 32 x 1.5
- bore-hole: Ø 32.3 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2: 960 °C
- colour: black, RAL 9005



tightening torque	10,0 Nm
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ASS 40

Cable glands for knockouts M 40



- sealing range: Ø 16-28,5 mm
- ISO thread M 40 x 1.5
- bore-hole: Ø 40.3 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2: 960 °C
- colour: black, RAL 9005



tightening torque	10,0 Nm
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ASS 50

Cable glands for knockouts M 50



- sealing range: Ø 21-35 mm
- ISO thread M 50 x 1.5
- bore-hole: Ø 50.3 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2: 960 °C
- colour: black, RAL 9005



tightening torque	10,0 Nm
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ASS 63

Cable glands for knockouts M 63



- sealing range: Ø 20-48 mm
- ISO thread M 63 x 1.5
- bore-hole: Ø 63.3 mm
- wall thickness up to 3 mm
- with counter nut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2: 960 °C
- colour: black, RAL 9005



tightening torque	10,0 Nm
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KBM 20

Combi climate gland for knockouts M 20

- to reduce condensation through pressure compensation
- sealing range: Ø 6-13 mm
- ISO thread M 20 x 1.5
- bore-hole: Ø 20.5 mm
- wall thickness up to 3,5 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2: 960 °C
- In order not to exceed leakage limit of 0.07 bar with pressure compensation, one combi climate gland M20 must be used per 6 litres (6000 cm³) of enclosure volume.
- Example: enclosure size 27 cm x 27 cm x 17 cm = 12393 cm³ = 12,393 litres. Number of necessary combi climate glands KB. 20 (M20) ≥ 3 pieces.
- When using different gland sizes the values for the enclosure volumes of the used combi climate glands can be added on.
- If the quantity of the necessary climate glands for pressure compensation is larger, than the number of necessary cable glands for cable entry, the unused climate glands can be sealed with sealing plugs.
- colour: grey, RAL 7035

IP
66/67



tightening torque

3,0 Nm



KBM 25

Combi climate gland for knockouts M 25

- to reduce condensation through pressure compensation
- sealing range: Ø 9-17 mm
- ISO thread M 25 x 1.5
- bore-hole: Ø 25.5 mm
- wall thickness up to 3,5 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2: 960 °C
- In order not to exceed leakage limit of 0.07 bar with pressure compensation, one combi climate gland M25 must be used per 10 litres (10000 cm³) of enclosure volume.
- Example: enclosure size 27 cm x 27 cm x 17 cm = 12393 cm³ = 12,393 litres. Number of necessary combi climate glands KB. 25 (M25) ≥ 2 pieces
- When using different gland sizes the values for the enclosure volumes of the used combi climate glands can be added on.
- If the quantity of the necessary climate glands for pressure compensation is larger, than the number of necessary cable glands for cable entry, the unused climate glands can be sealed with sealing plugs.
- colour: grey, RAL 7035

IP
66/67



tightening torque

4,0 Nm



KBM 32

Combi climate gland for knockouts M 32

- to reduce condensation through pressure compensation
- sealing range: Ø 13-21 mm
- ISO thread M 32 x 1.5
- bore-hole: Ø 32.5 mm
- wall thickness up to 3,5 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2: 960 °C
- In order not to exceed leakage limit of 0.07 bar with pressure compensation, one combi climate gland M32 must be used per 12 litres (12000 cm³) of enclosure volume.
- Example: enclosure size 27 cm x 27 cm x 17 cm = 12393 cm³ = 12,393 litres. Number of necessary combi climate glands KB. 32 (M32) ≥ 2 piece.
- When using different gland sizes the values for the enclosure volumes of the used combi climate glands can be added on.
- If the quantity of the necessary climate glands for pressure compensation is larger, than the number of necessary cable glands for cable entry, the unused climate glands can be sealed with sealing plugs.
- colour: grey, RAL 7035

tightening torque

4,0 Nm

IP
66/67



KBM 40

Combi climate gland for knockouts M 40

- to reduce condensation through pressure compensation
- sealing range: Ø 16-28 mm
- ISO thread M 40 x 1.5
- bore-hole: Ø 40.5 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2: 960 °C
- In order not to exceed leakage limit of 0.07 bar with pressure compensation, one combi climate gland M40 must be used per 16 litres (16000 cm³) of enclosure volume.
- Example: enclosure size 27 cm x 27 cm x 17 cm = 12393 cm³ = 12.393 litres. Number of necessary KB. 40 (M40) ≥ 1 piece.
- When using different gland sizes the values for the enclosure volumes of the used combi climate glands can be added on.
- If the quantity of the necessary climate glands for pressure compensation is larger, than the number of necessary cable glands for cable entry, the unused climate glands can be sealed with sealing plugs.
- colour: grey, RAL 7035

tightening torque

6,0 Nm

IP
66/67



Applicaton:



Combi climate glands



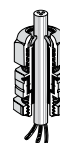
KBS 20

Combi climate gland for knockouts M 20

- to reduce condensation through pressure compensation
- sealing range: Ø 6-13 mm
- ISO thread M 20 x 1.5
- bore-hole: Ø 20.5 mm
- wall thickness up to 3,5 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2: 960 °C
- In order not to exceed leakage limit of 0.07 bar with pressure compensation, one combi climate gland M20 must be used per 6 litres (6000 cm³) of enclosure volume.
- Example: enclosure size 27 cm x 27 cm x 17 cm = 12393 cm³ = 12,393 litres. Number of necessary combi climate glands KB. 20 (M20) ≥ 3 pieces.
- When using different gland sizes the values for the enclosure volumes of the used combi climate glands can be added on.
- If the quantity of the necessary climate glands for pressure compensation is larger, than the number of necessary cable glands for cable entry, the unused climate glands can be sealed with sealing plugs.
- colour: black, RAL 9005

tightening torque	3,0 Nm
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IP
66/67



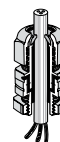
KBS 25

Combi climate gland for knockouts M 25

- to reduce condensation through pressure compensation
- sealing range: Ø 9-17 mm
- ISO thread M 25 x 1.5
- bore-hole: Ø 25.5 mm
- wall thickness up to 3,5 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2: 960 °C
- In order not to exceed leakage limit of 0.07 bar with pressure compensation, one combi climate gland M25 must be used per 10 litres (10000 cm³) of enclosure volume.
- Example: enclosure size 27 cm x 27 cm x 17 cm = 12393 cm³ = 12,393 litres. Number of necessary combi climate glands KB. 25 (M25) ≥ 2 pieces
- When using different gland sizes the values for the enclosure volumes of the used combi climate glands can be added on.
- If the quantity of the necessary climate glands for pressure compensation is larger, than the number of necessary cable glands for cable entry, the unused climate glands can be sealed with sealing plugs.
- colour: black, RAL 9005

tightening torque	4,0 Nm
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IP
66/67





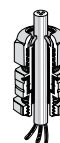
KBS 32

Combi climate gland for knockouts M 32

- to reduce condensation through pressure compensation
- sealing range: Ø 13-21 mm
- ISO thread M 32 x 1.5
- bore-hole: Ø 32.5 mm
- wall thickness up to 3,5 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2: 960 °C
- In order not to exceed leakage limit of 0.07 bar with pressure compensation, one combi climate gland M32 must be used per 12 litres (12000 cm³) of enclosure volume.
- Example: enclosure size 27 cm x 27 cm x 17 cm = 12393 cm³ = 12,393 litres. Number of necessary combi climate glands KB. 32 (M32) ≥ 2 piece.
- When using different gland sizes the values for the enclosure volumes of the used combi climate glands can be added on.
- If the quantity of the necessary climate glands for pressure compensation is larger, than the number of necessary cable glands for cable entry, the unused climate glands can be sealed with sealing plugs.
- colour: black, RAL 9005

tightening torque	4,0 Nm
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IP
66/67



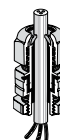
KBS 40

Combi climate gland for knockouts M 40

- to reduce condensation through pressure compensation
- sealing range: Ø 16-28 mm
- ISO thread M 40 x 1.5
- bore-hole: Ø 40.5 mm
- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- glow wire test IEC 60695-2: 960 °C
- In order not to exceed leakage limit of 0.07 bar with pressure compensation, one combi climate gland M40 must be used per 16 litres (16000 cm³) of enclosure volume.
- Example: enclosure size 27 cm x 27 cm x 17 cm = 12393 cm³ = 12.393 litres. Number of necessary KB. 40 (M40) ≥ 1 piece.
- When using different gland sizes the values for the enclosure volumes of the used combi climate glands can be added on.
- If the quantity of the necessary climate glands for pressure compensation is larger, than the number of necessary cable glands for cable entry, the unused climate glands can be sealed with sealing plugs.
- colour: black, RAL 9005

tightening torque	6,0 Nm
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IP
66/67



Applicaton:



Combi climate glands

**VSB 13****Sealing plug
diameter 13 mm**

- for sealing combi climate glands M20 or M25, which are not used for cable entry
- ambient temperature - 25 °C to + 55 °C
- colour: red, RAL 3000

**VSB 21****Sealing plug
diameter 21 mm**

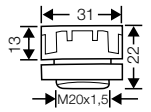
- for sealing combi climate glands M32 and M40, which are not used for cable entry
- ambient temperature - 25 °C to + 55 °C
- colour: red, RAL 3000



BM 20G

Pressure compensation element for M 20 knockouts

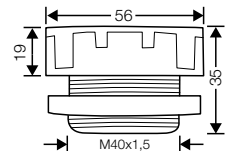
- for the reduction of condensation by pressure compensation in power distribution systems
- ISO thread M 20 x 1.5
- bore-hole: Ø 20.3 mm
- wall thickness up to 4 mm
- with counter nut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- In order not to exceed leakage limit of 0.07 bar with pressure compensation, one pressure compensation element BM 20G must be used per 28 litres (28000 cm³) of enclosure volume.
- Example:
enclosure size 30 cm x 60 cm x 17 cm = 30600 cm³ = 30.6 litres.
Number of necessary BM 20G (M32) = 2 piece.
- technical changes reserved
- colour: grey, RAL 7035



BM 40G

Pressure compensation element for M 40 knockouts

- for the reduction of condensation by pressure compensation in power distribution systems
- ISO thread M 40 x 1.5
- bore-hole: Ø 40.3 mm
- wall thickness of up to 8 mm
- with counter nut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- In order not to exceed leakage limit of 0.07 bar with pressure compensation, one pressure compensation element BM 40G must be used per 122 litres (122000 cm³) of enclosure volume.
- Example:
enclosure size 60 cm x 60 cm x 17 cm = 61200 cm³ = 61.2 litres.
Number of necessary BM 40G (M40) = 1 piece.
- technical changes reserved
- colour: grey, RAL 7035



Pressure compensation elements reduce condensation in power distribution systems





Empty enclosures in accordance with IEC 62208

Technical details

Operating and ambient conditions	46 - 47
Dimensions in mm for EB empty enclosures	58 - 51
Power dissipation	52 - 53
Recommendation for outdoor installations, formation of condensed water	54 - 55
Application examples	56 - 57
Material properties	58

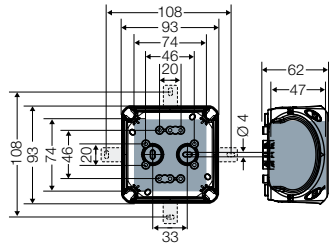
	Empty enclosures EB ...	Empty enclosures KG ...	Empty enclosures K ...
Application area	Suitable for outdoor installation (harsh environment and/or outdoor). To reduce the formation and accumulation of condensed water see pages 55-56.	Suitable for indoor installation and outdoor installation, protected against weather influences However, pay attention to the climatic effects on the installed equipment, for example, high or low ambient temperatures or formation of condensed water see pages 55-56.	
Resistant to occasional cleaning procedures	Resistance to occasional cleaning procedures (direct jet) with high-pressure cleaner without cleaning additives, water pressure: max 100 bar, water temperature: max 80 °C, distance ≥ 0.15 m, in accordance with DIN EN 60529:2014-09 (IEC 60529:2013) = IP 69. Box and cable entries at least IP 66.		
Ambient temperature			
- Average value over 24 hours	+ 55 °C	—	+35 °C
- Maximum value	+ 70 °C	+60 °C	+40 °C
- Minimum value	- 25 °C	-25 °C	-25 °C
Relative humidity	50% at 40 °C	—	50% at 40 °C
- short-time	100% at 25 °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	960 °C	750 °C	960 °C
- UL Subject 94	V-0 flame-retardant self-extinguishing	V-2 flame-retardant self-extinguishing	V-2 flame-retardant self-extinguishing
Degree of protection against mechanical load	IK09 (10 Joule)	IK 08 (5 Joule)	IK 08 (5 Joule)
Toxic behaviour	halogen-free ¹⁾ silicone-free	halogen-free ¹⁾ silicone-free	halogen-free ¹⁾ silicone-free

¹⁾ "Halogen-free" in accordance with IEC 60754-2"

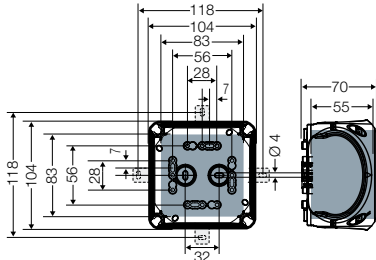
Common test methods for cables - Determination of the amount of halogen acid gas".

For material properties see page 45.

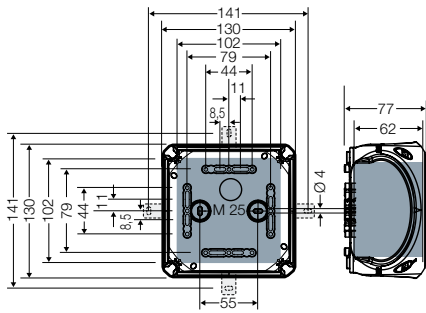
	ESM ...	AKM ... ASS ...	AKS ... KBM ... / KBS ... BM ..G
Application area	Suitable for indoor installation (normal environment and/or protected outdoor)	Suitable for outdoor installation - harsh environment and / or outdoor	
Ambient temperature			
- Average value over 24 hours	+ 35 °C	+ 55 °C	+ 55 °C
- Maximum value	+ 40 °C	+ 70 °C	+ 70 °C
- Minimum value	- 25 °C	- 25 °C	- 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		
Burning behaviour			
- Glow wire test IEC 60695-2-11	750 °C	960 °C	960 °C
- UL Subject 94	- flame-retardant self-extinguishing	V-0 flame-retardant self-extinguishing	V-2 flame-retardant self-extinguishing
Toxic behaviour	halogen-free silicone-free	halogen-free silicone-free	halogen-free silicone-free
	¹⁾ "Halogen-free" in accordance with IEC 60754-2" Common test methods for cables - Determination of the amount of halogen acid gas". For material properties see page 45.		



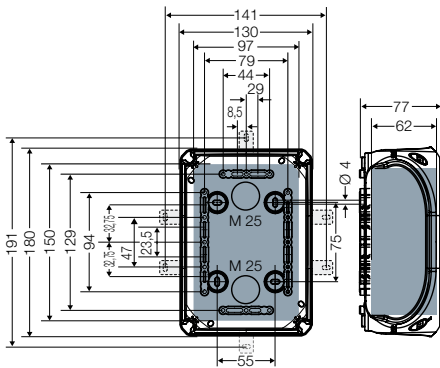
EB 02 G
 EB 02 B



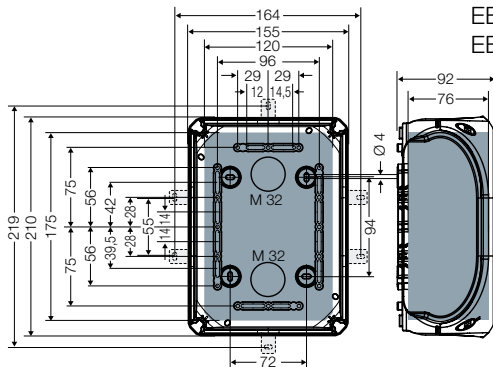
EB 04 G
 EB 04 B



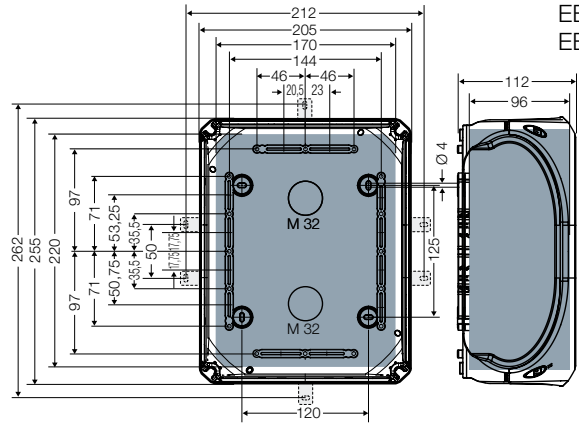
EB 06 G
 EB 06 B



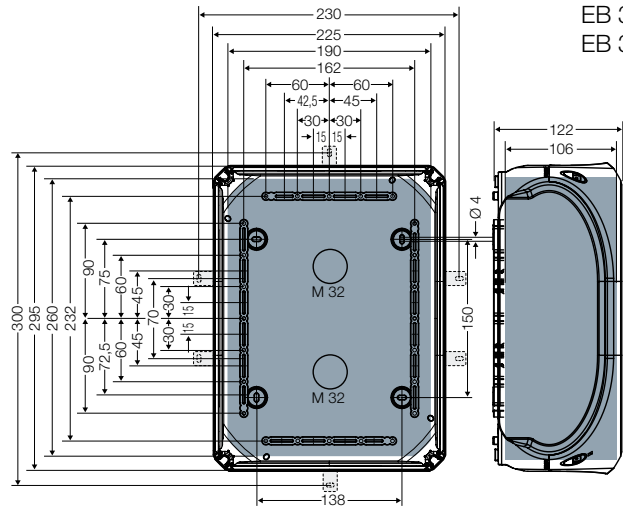
EB 10 G
 EB 10 B



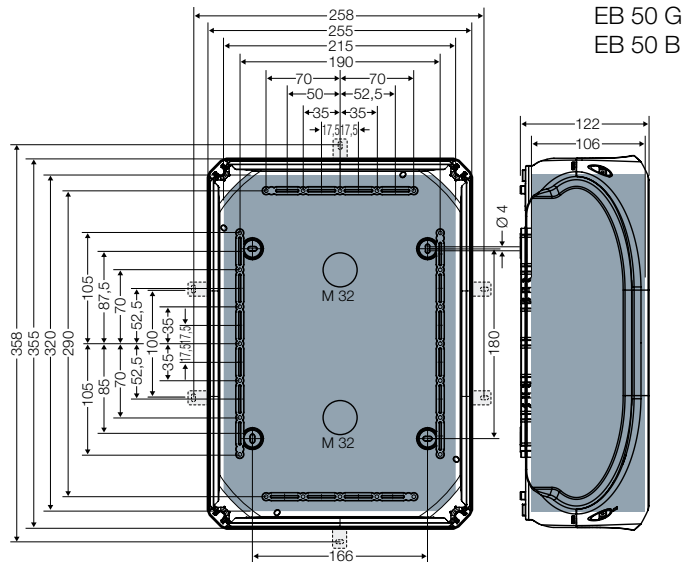
EB 16 G
 EB 16 B



EB 25 G
 EB 25 B



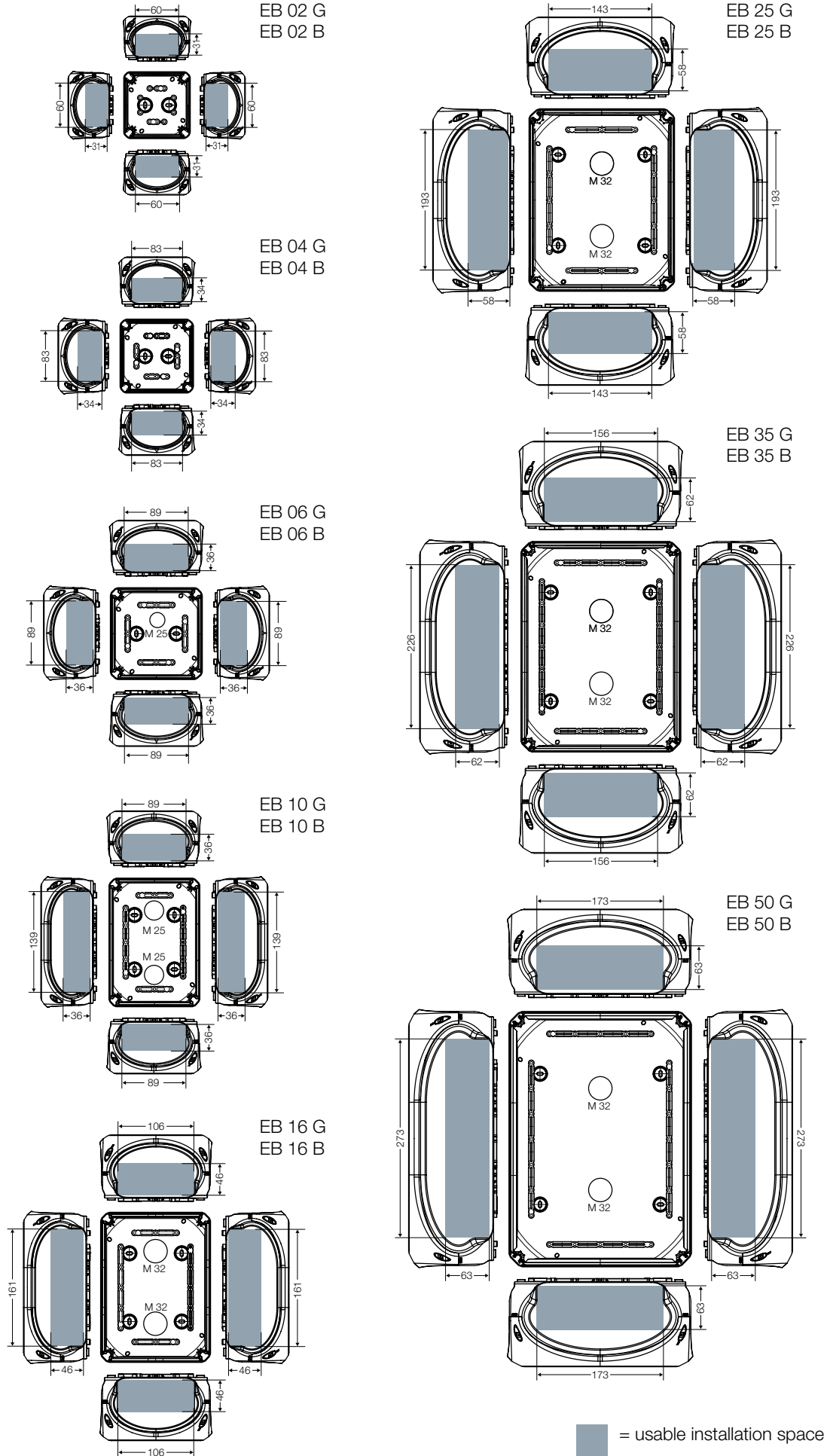
EB 35 G
 EB 35 B



EB 50 G
 EB 50 B

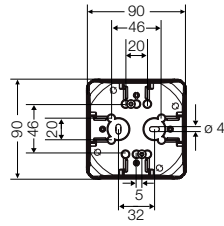
= usable installation space with mounted cable glands

Dimensions of the usable installation space in walls

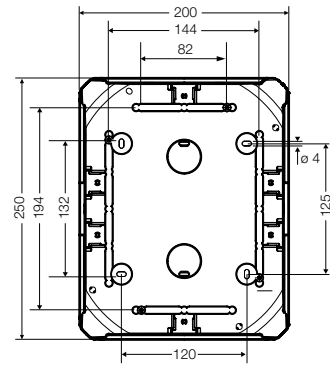


■ = usable installation space

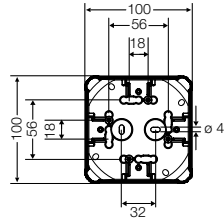
Empty enclosures in accordance with IEC 62208
Technical details
Dimensions in mm for enclosure mounting from the back



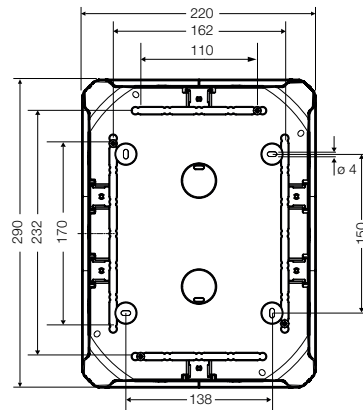
EB 02 G
EB 02 B



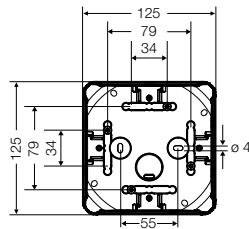
EB 25 G
EB 25 B



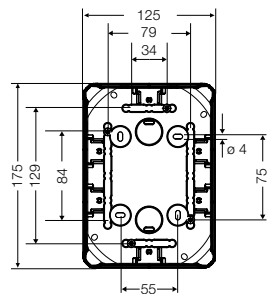
EB 04 G
EB 04 B



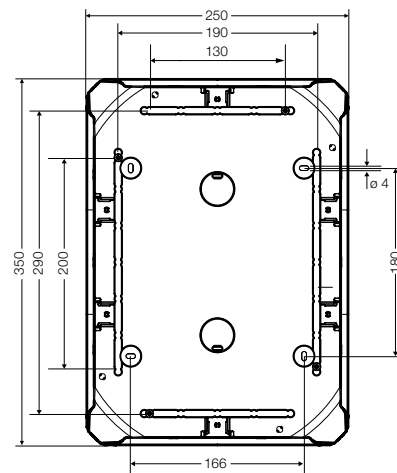
EB 35 G
EB 35 B



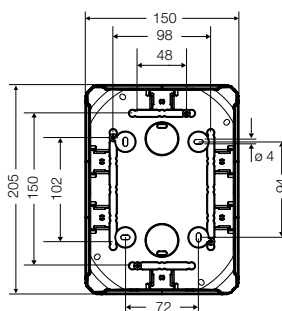
EB 06 G
EB 06 B



EB 10 G
EB 10 B



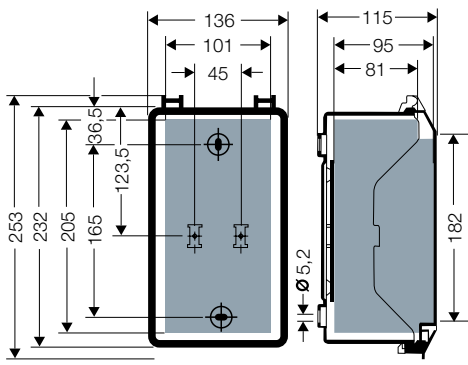
EB 50 G
EB 50 B



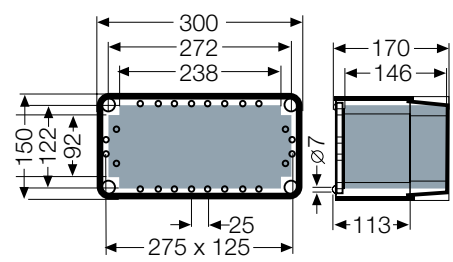
EB 16 G
EB 16 B

Empty enclosures in accordance with IEC 62208
 Technical details
 Dimensions in mm

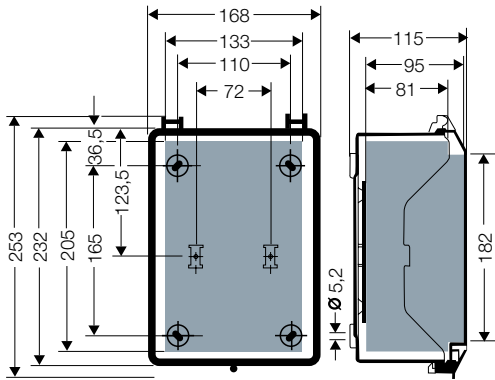
Dimensions of the interior installation depth with installed mounting plates.



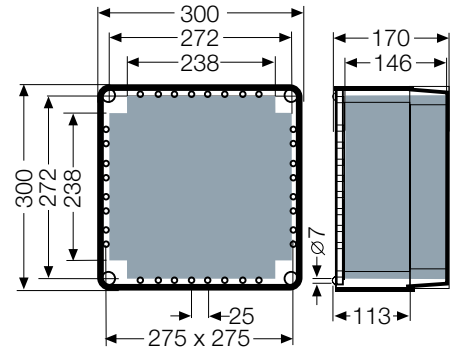
KG 9001
 KG 9001 IN



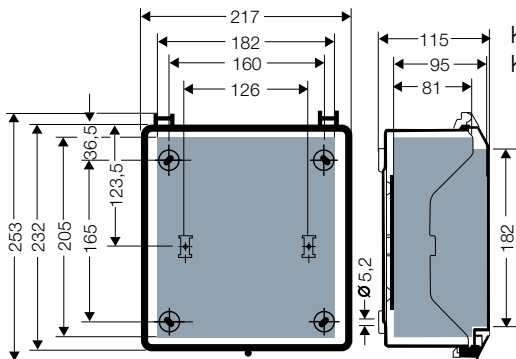
K 0100
 K 0101



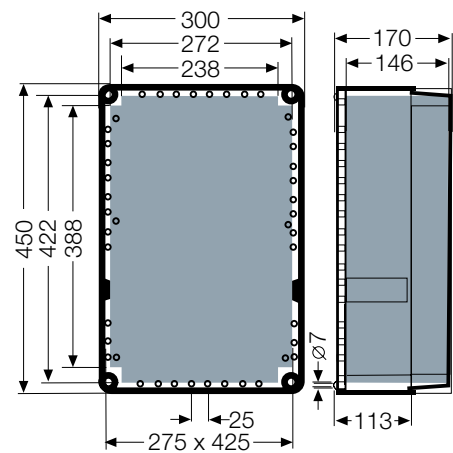
KG 9002
 KG 9002 IN



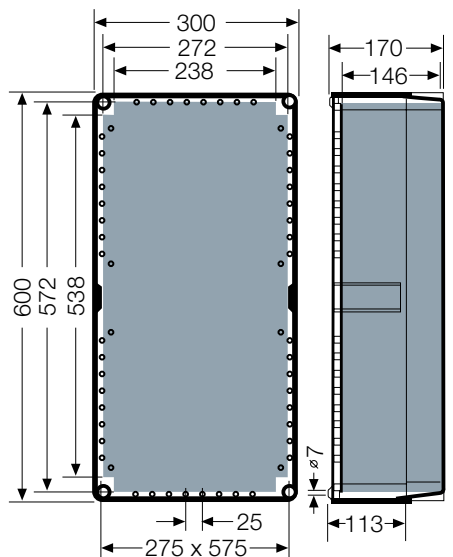
K 0200
 K 0201



KG 9003
 KG 9003 IN



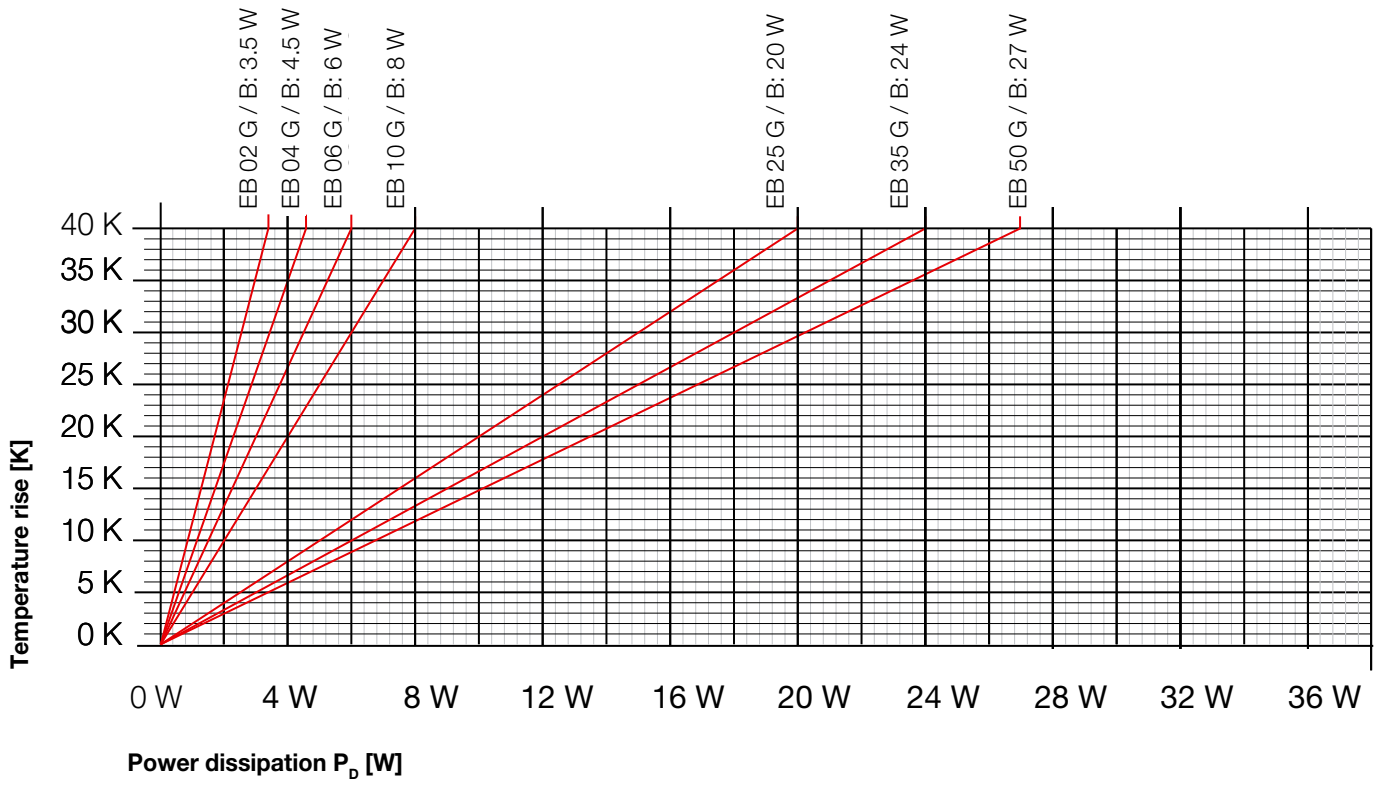
K 0300
 K 0301



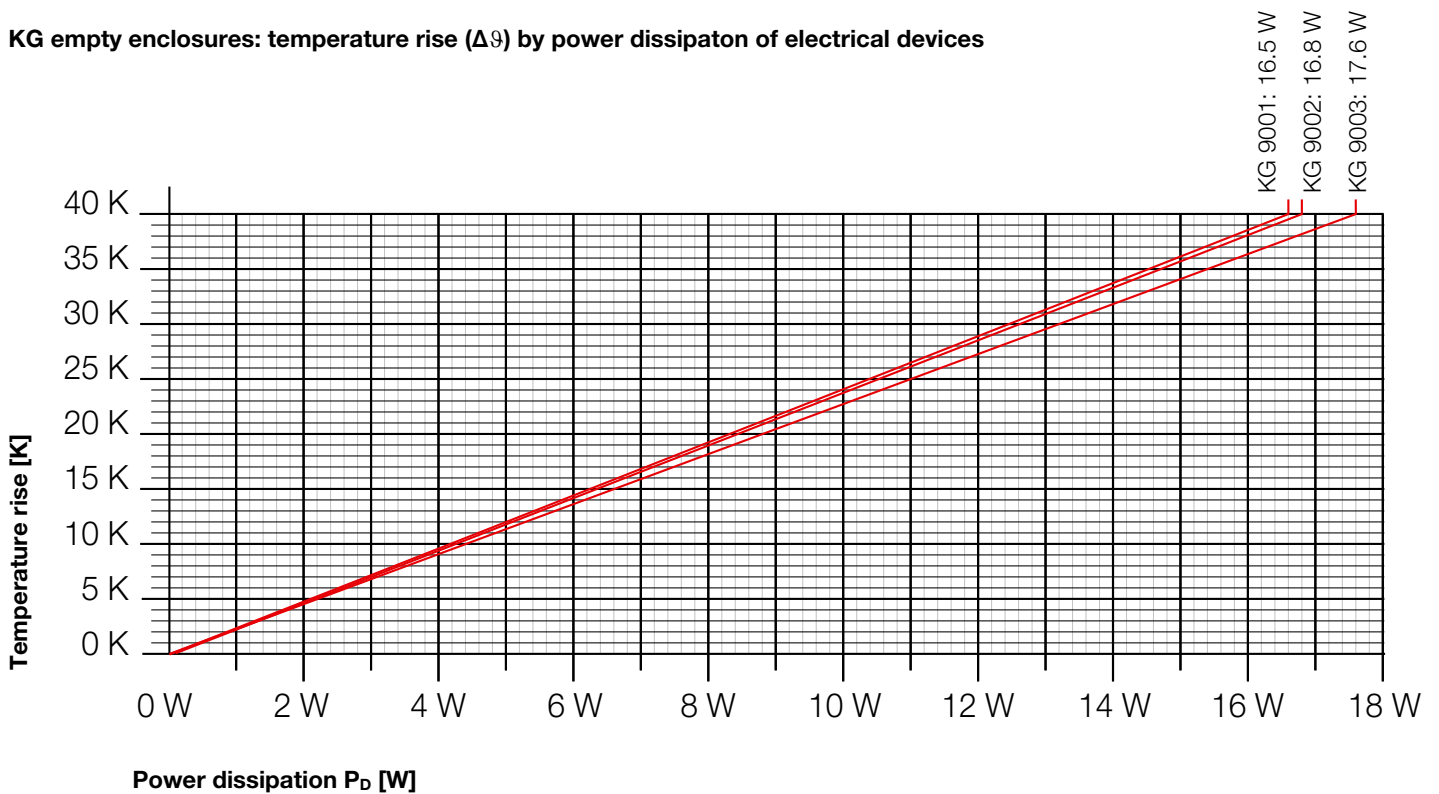
K 0400
 K 0401

= usable installation space with mounted cable glands

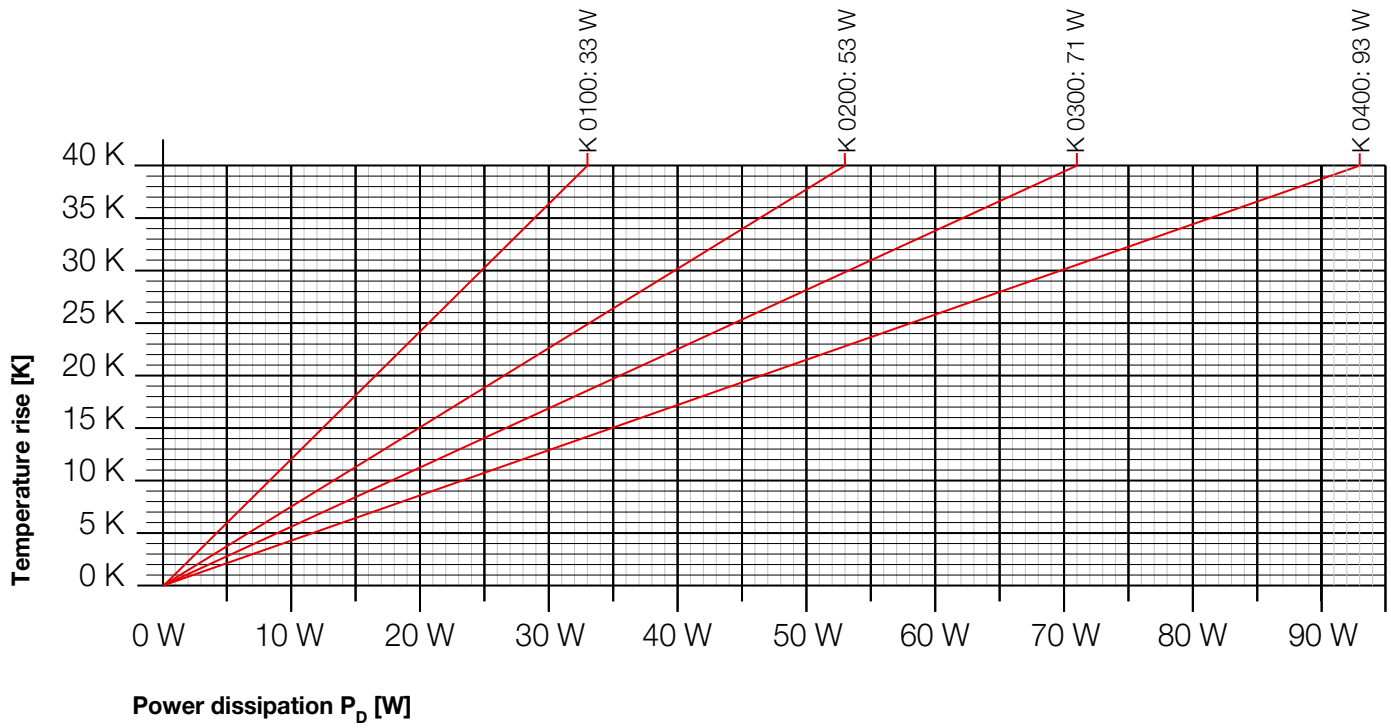
EB empty enclosures: temperature rise ($\Delta\theta$) by power dissipation of electrical devices



KG empty enclosures: temperature rise ($\Delta\theta$) by power dissipation of electrical devices



K empty enclosures: temperature rise ($\Delta\theta$) by power dissipation of electrical devices



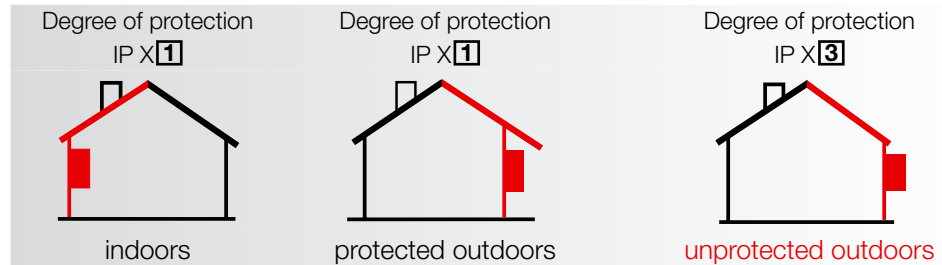
Country-specific requirements have to be observed!

Requirements of German standard DIN VDE 0100 Part 737 for compliance with IP degree of protection

1. Requirement

Protection against ingress of water for all electrical equipment (devices) with the appropriate encapsulation (2nd characteristic numeral)

1.1. Minimum requirement for electrical equipment:



Note for outdoor installation:

„Protected outdoors“

Electrical equipment has to be protected from precipitation (like rain, snow or hail) as well as from direct sunlight.

„Non-protected outdoors“

Electrical equipment can be exposed to precipitation or direct sunlight.

With both assembly sites the climatic effects on the installed equipment must be observed, for example, high or low ambient temperatures or condensation.

1.2. Minimum requirements for electrical equipment, that must withstand higher environmental stresses:

degree of protection IP X 4

with **non-direct** jets of water within occasional cleaning procedures, e.g. agriculture



degree of protection IP X 5

with **non-direct** jets of water within operational cleaning procedures, e.g. carwash



degree of protection IP X 5 and additional consultation with the manufacturer:

with **direct** jets of water within occasional cleaning procedures of enclosures, e.g. butcher's shop



Country-specific requirements have to be observed!

2. Requirement of German Standard DIN VDE 0100 Part 737

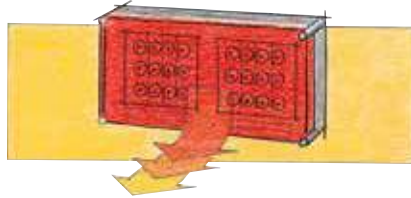
4.1 Electrical equipment must be selected taking into account the external influences to which they may be exposed. Proper operation and the effectiveness of the required degrees of protection must be assured.

Note: Data from the manufacturer!

How does condensed water occur in enclosures with a high degree of protection?

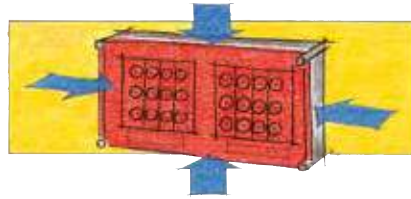
Condensed water only forms in enclosures with a higher degree of protection than IP 54 due to temperature difference from inside to outside. Humidity can not evaporate because of the high degree of protection of the enclosure.

System switched on.



The internal temperature is higher than the external temperature due to the power dissipation of the built-in devices.

System switched on.



The warm air inside the enclosure attempts to accumulate moisture. This comes from outside through the seal as the enclosures are not gas-tight.

System switched off.

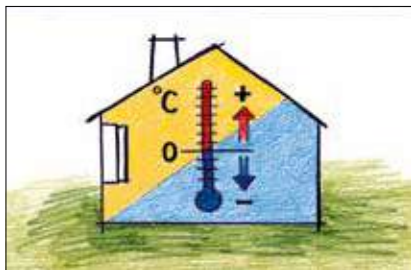


The internal temperature is reduced by cooling down the system e.g. by switching off the loads. The cooler air emits moisture which is collected as condensed water on the cooling inner surfaces.

How does condensed water occur in enclosures with a high degree of protection?

Formation of condensed water for **indoor installations:**

Formation of condensed water in **protected outdoor installations** (protected against weather influences) **or unprotected outdoor** installations:



In areas where high levels of air humidity and large temperature fluctuations are expected e.g. in laundry rooms, kitchens., car washes etc.



Here condensed water can be formed dependent on the weather, high air humidity, direct sunlight and temperature differences compared to the wall.



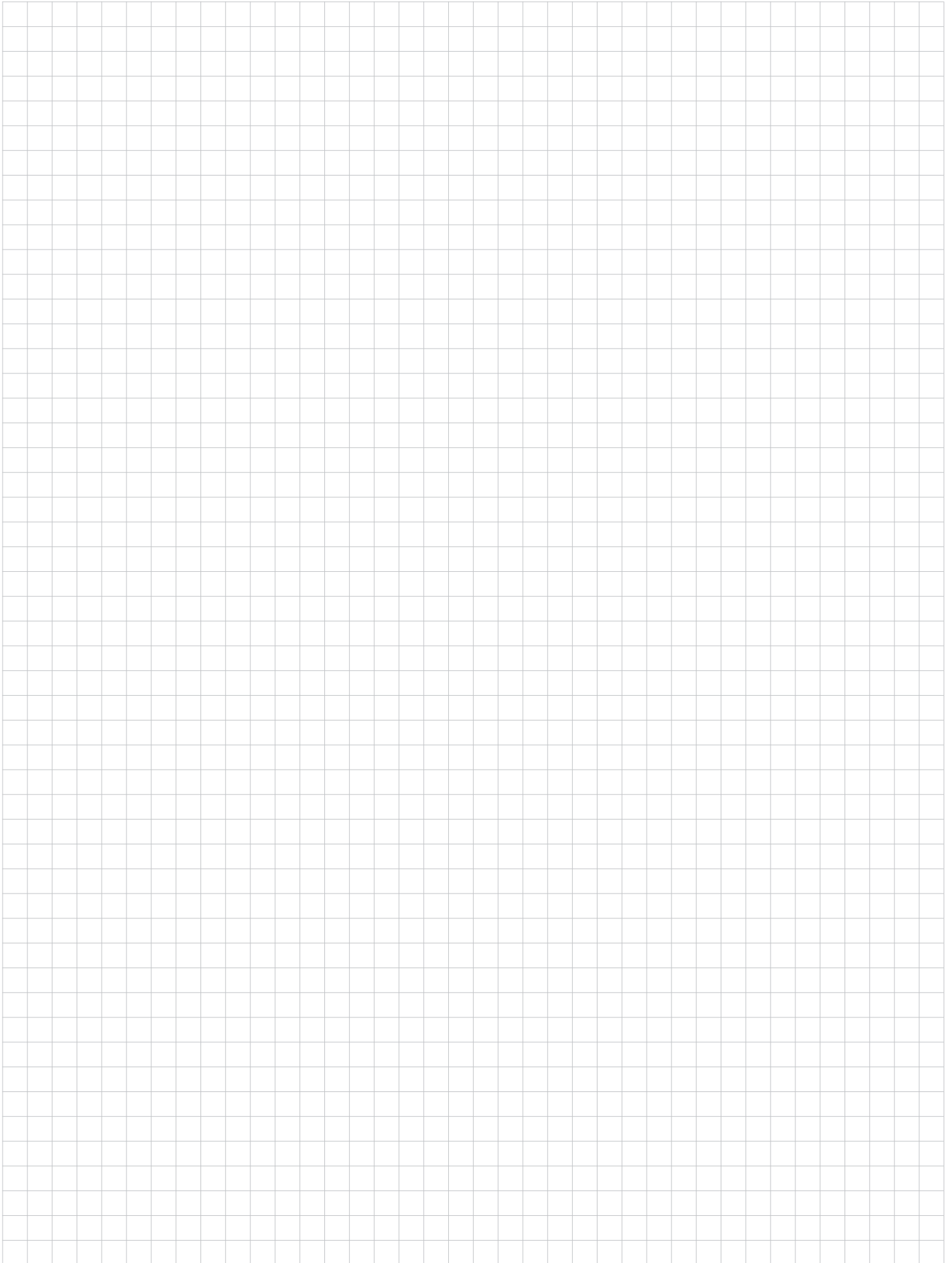


Products	Material used	Glow wire test IEC 60695-2-11	UL Subject 94	Temperature resistance	Chemical resistance ¹⁾					
					Acid 10 %	Lye 10 %	Alcohol	Petrol (MAK) ²⁾	Benzene (MAK) ²⁾	Mineral oil
EB ... bottom parts K ... bottom parts	PC (Polycarbonate) with GFS	960 °C	V-0	-40 °C / +120 °C	+	+	0	+	-	+
K ... lids KG ... hinged lids	PC (Polycarbonate)	960 °C	V-2	-40 °C / +120 °C	+	+	0	+	-	+
KG ...	PS (Polystyrene)	750 °C	V-2	-40 °C / +70 °C	+	+	+	-	-	0
Sealing EB 02.. / EB 04.. / EB 06.. / EB 10.. / EB 16.. KG ... ESM ..	TPE (Evoprene)	750 °C	-	-25 °C / +100 °C	+	+	+	0	0	0
Sealing EB 25.. / EB 35.. / EB 50../ K ...	PUR (Polyurethane)	-	-	-25 °C / +80 °C	0	+	0	0	-	+
AKM .. / ASS .. / BM ...	PA (Polyamide)	960 °C	V-0	-40 °C / +100 °C	+	0	+	+	+	+
KBM .. / KBS ..	PA (Polyamide)	960 °C	V-2	-40 °C / +100 °C	+	0	+	+	+	+
Sealing AKM .. / AKS .. /	CR/NBR (Polychloroprene - nitrile rubber)	-	-	-20 °C / +100 °C	+	+	+	0	-	0
Sealing - inner part ASS ..	TPE (Evoprene)	-	-	-30 °C / +100 °C	+	-	+	-	-	-
Sealing - outer part ASS ..	CR (Chloroprene rubber)	-	-	-30 °C / +100 °C	+	+	+	0	-	0
Sealing KBM .. / KBS ..	EPDM (Ethylene propylene diene monomer rubber)	-	-	-40 °C / +130 °C	+	+	+	-	-	-

(+ = resistance; 0 = partially resistance; - = not resistant)

1) The specifications on chemical resistance are a general guide. In individual cases it may be necessary to check resistance in combination with other chemicals and ambient conditions (temperature, concentration, etc.)

2) (MAK) - Maximum allowable concentration (work place)





Hensel Electric India Pvt Ltd
Industrial Electrical Power Distribution Systems

35 Kunnam Village, Sunguvarchathram
Walajabad Road
Sriperumbudur - 631 604
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www.hensel.in

 made in **GERMANY**
since 1931



Efficient in any weathers!




Weatherproof KV Small-type distributors are quite great in safe and economical power distribution for outdoor installations and in industrial applications and buildings. Safe through highest material quality. Conforming to standards with Hensel expertise.

- Small-type distribution board IP 65 for outdoor installation
- For DIN-rail mounted devices up to 63 A according to DIN 43 871
- Operation and access by unskilled persons.



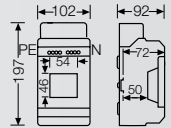
**KV Small-type distribution boards
for outdoor installation
(harsh environment and/or protected outdoor)**

Circuit-breaker box

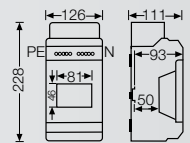
- made of polycarbonate, for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- total insulation, protection class II, 
- degree of protection IP 65
- for the installation of DIN rail equipment, top hat profile 35 mm
- FIXCONNECT® - Terminal technology for PE and N
- with transparent lid, sealable
- with cable entry cover
- protective cover can be cut out or with blanking strip
- rated insulation voltage: AC 400 V



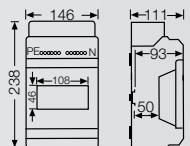
KV PC 9103 NEW
3 modules: 1 x 3 x 18 mm
 ■ 1-row



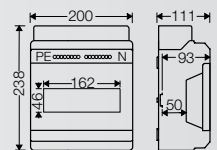
KV PC 9104 NEW
4,5 modules: 1 x 4,5 x 18 mm
 ■ 1-row



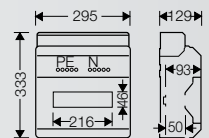
KV PC 9106 NEW
6 modules: 1 x 6 x 18 mm
 ■ 1-row



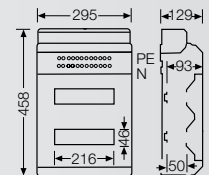
KV PC 9109 NEW
9 modules: 1 x 9 x 18 mm
 ■ 1-row



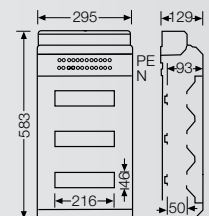
KV PC 9112 NEW
12 modules: 1 x 12 x 18 mm
 ■ 1-row



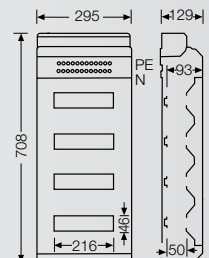
KV PC 9224 NEW
24 modules: 2 x 12 x 18 mm
 ■ 2-row



KV PC 9336 NEW
36 modules: 3 x 12 x 18 mm
 ■ 3-row



KV PC 9448 NEW
48 modules: 4 x 12 x 18 mm
 ■ 4-row



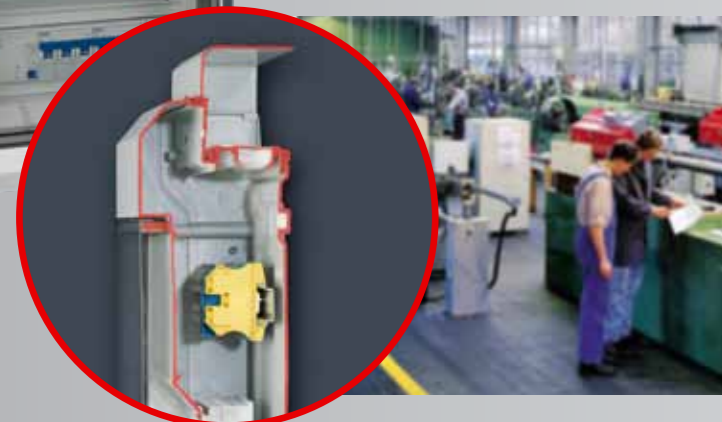
98 17 0787 7-12/3/10



KV Extra

with additional space for electrical devices not to be manually actuated

In the same enclosure standard-conforming installation devices (sizes according to DIN 43880) and non-operator-controlled devices can be installed at the same time.



KV PC "weatherproof"

for outdoor installation (harsh environment and/or outdoor)



KV small-type distribution boards "weatherproof" are big in the safe and economical power supply in outdoor installations and in commercial and industrial applications.



Hensel Electric India Pvt Ltd

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www.hensel.in



The Big One among the Little Ones

KV Small-type Distribution Boards

Representations abroad

- Africa**
- Angola
- Egypt
- Mozambique
- South Africa
- America**
- Argentina
- USA
- Asia**
- Bangladesh
- Bhutan
- Cambodia
- Georgia
- India
- Indonesia
- Kazakhstan
- Malaysia
- Maldives
- Myanmar
- Pakistan
- People's Republic of China
- Philippines
- Singapore
- South Korea
- Sri Lanka
- Taiwan
- Thailand
- Europe**
- Austria
- Belgium
- Bulgaria
- Croatia
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Great Britain
- Greece
- Hungary
- Iceland
- Ireland
- Israel
- Italy
- Latvia
- Lithuania
- Luxembourg
- Montenegro
- Netherlands
- Norway
- Poland
- Portugal
- Romania
- Russia
- Serbia and Montenegro
- Slovakia
- Spain
- Sweden
- Switzerland
- Turkey
- Ukraine
- Middle East**
- United Arab Emirates
- Bahrain
- Iran
- Kuwait
- Oman
- Qatar
- Saudi Arabia
- Oceania**
- Australia
- New Zealand



www.hensel.in



Range Overview

Circuit Breaker Boxes



KV small-type distribution boards are big in the safe and economical power supply in buildings and commercial and industrial applications. Close to working places. Safe through using highest material quality. Conforming to standards with Hensel expertise.

- Small-type distribution board up to IP 65
- For DIN-rail mounted devices up to 63 A according to DIN 43 871
- Operation and access by unskilled persons.
- In accordance with DIN EN 60 439-3



Modules (1 mod = 18 mm)	IP 54	IP 65	IP 65 KV metric	IP 65 KV Extra	IP 65 "weather-proof"
3 modules 1-row 3 mods each	KV 1503	KV 9103	KV 7103		KV PC 9103
4.5 modules 1-row 4.5 mods each	KV 1504	KV 9104	KV 7104		KV PC 9104
6 modules 1-row 6 mods each	KV 1506	KV 9106	KV 7106		KV PC 9106
9 modules 1-row 9 mods each	KV 1509	KV 9109	KV 7109		KV PC 9109
12 modules 1-row 12 mods each	KV 1512	KV 9112	KV 9112 M	KV 9220	KV PC 9112
18 modules 1-row 18 mods each	KV 1518	KV 9118	KV 9118 M	KV 9230	
24 modules 2-row 12 mods each	KV 2524	KV 9224	KV 9224 M	KV 9330	KV PC 9224
36 modules 2-row 18 mods each	KV 2536	KV 9236	KV 9236 M	KV 9350	
36 modules 3-row 12 mods each	KV 3536	KV 9336	KV 9336 M	KV 9440	KV PC 9336
48 modules 4-row 12 mods each	KV 4548	KV 9448	KV 9448 M		KV PC 9448
54 modules 3-row 18 mods each	KV 3554	KV 9354	KV 9354 M		

ENYBOARD

Securely locked

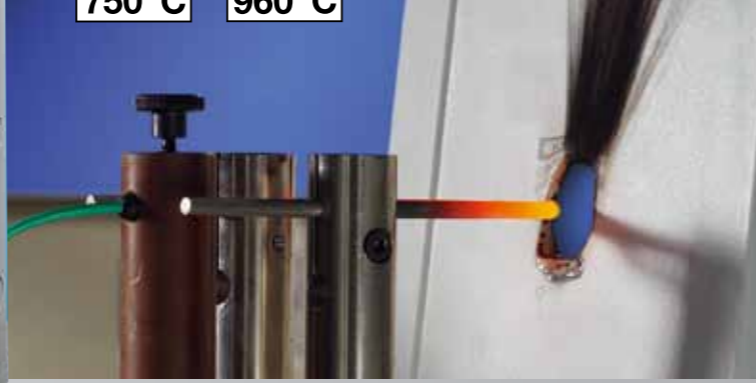
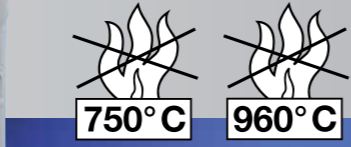
through closing mechanism and sealing



- Lockable door via locking device and/or sealable
- Sealing of top and bottom part
- Door hinging interchangeable fast and easy from left to right

High quality material

for demanding areas of application



- Flame-retardant, self-extinguishing
 Burning behaviour: Glow wire test according to IEC 60 695-2-11

Modern enclosure

with lots of space for installation and wiring



- Perfect installation solution for cable trunking
- Multiple enclosure fixing - also on pillars or narrow components
- More space for wiring, convenient access to the wiring
- DIN-rails with stopper for proper position of installation device
- Variable installation depth through mounting DIN-rails in different levels
- Included blanking strips

Practical solutions

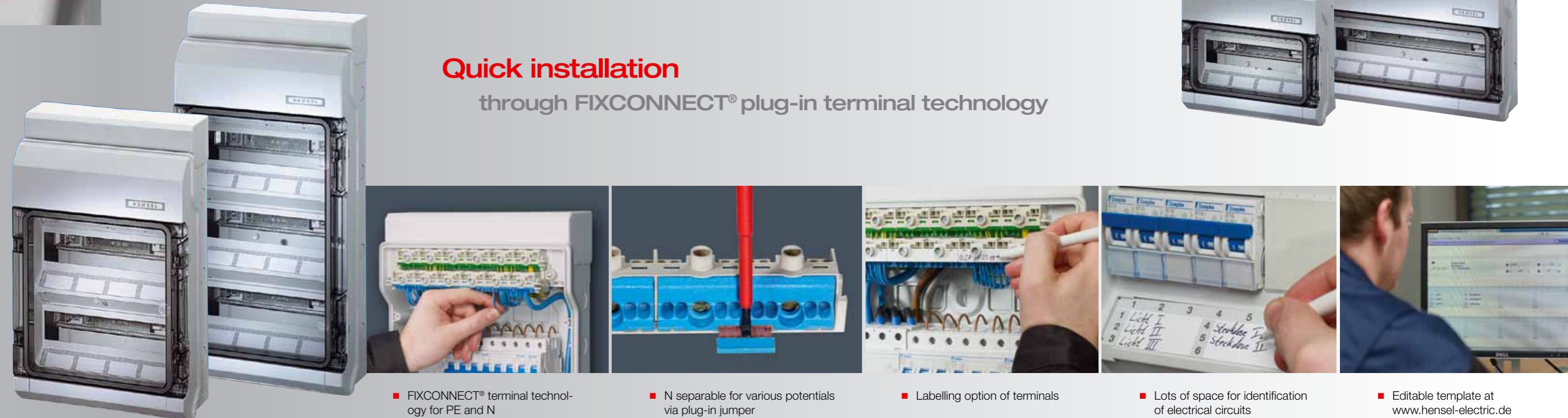
for cable entry and accessories



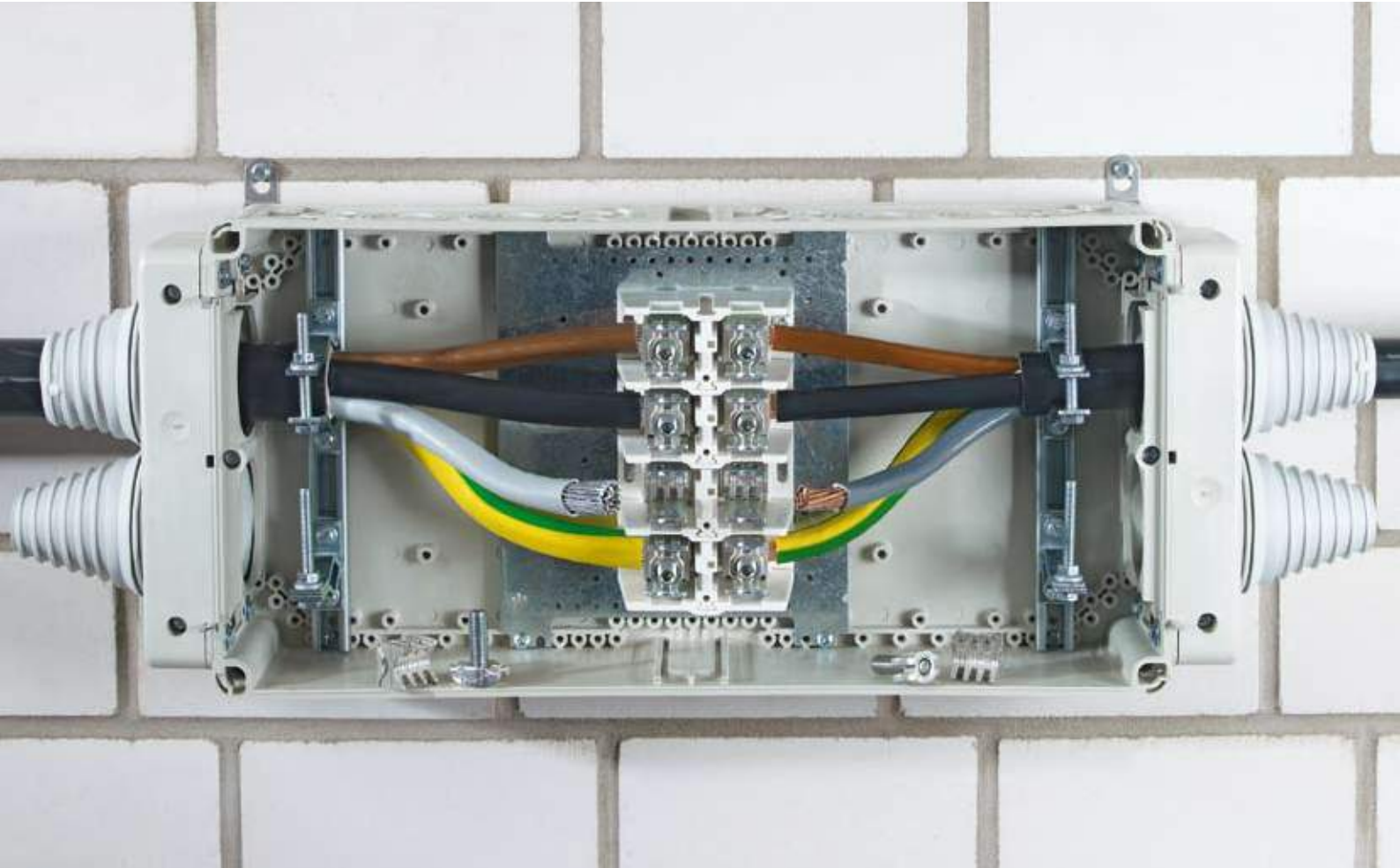
- Cable entry IP 65 with integrated, elastic membranes
- Cable entry via metric knockouts and cable glands
- Integrated compartment - everything is always in its place, nothing will be lost
- Compact user friendly solution, optically optimized by cable entry cover

Quick installation

through FIXCONNECT® plug-in terminal technology



- FIXCONNECT® terminal technology for PE and N
- N separable for various potentials via plug-in jumper
- Labelling option of terminals
- Lots of space for identification of electrical circuits
- Editable template at www.hensel-electric.de



Product information as at: 03/2011

DK Cable junction boxes with terminals for copper and aluminium conductors

- **separate clamping units for aluminium and copper conductors**
- **rated connecting capacity
1.5 up to 240 mm²**
- **degree of protection up to IP 65,
for twisted cables IP 54 with cable
glands**

Gustav Hensel GmbH & Co. KG
Industrial Electrical Power Distribution Systems

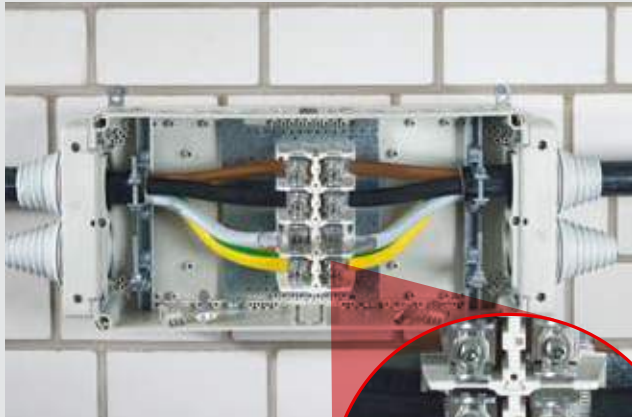
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Gustav-Hensel-Straße 6
D-57368 Lennestadt, Germany

P.O. Box 1461
D-57344 Lennestadt, Germany

Phone: +49 (0)27 23/609-0
Fax: +49 (0)27 23/600 52
E-Mail: info@hensel-electric.de
www.hensel-electric.de

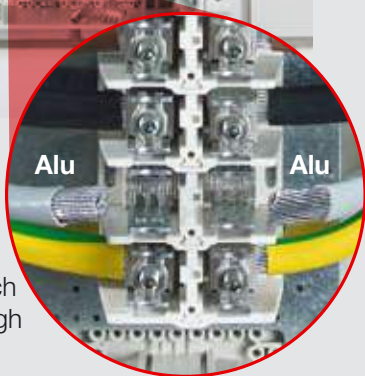
Connection of aluminium conductors in cable junction boxes of Hensel

Connection of two aluminium conductors

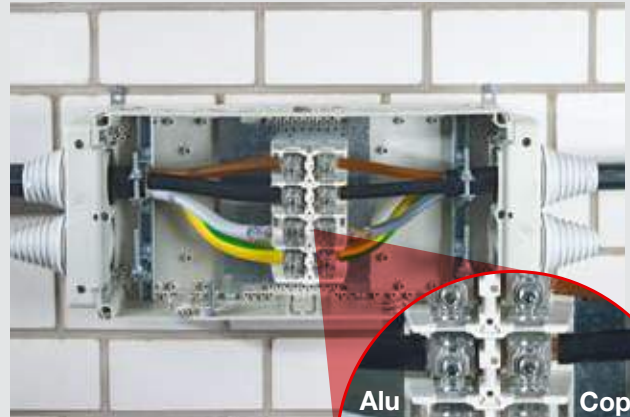


Select appropriate cable junction boxes with terminals for the aluminium conductor cross section.

The box size selected in such a manner should offer enough space for wiring.

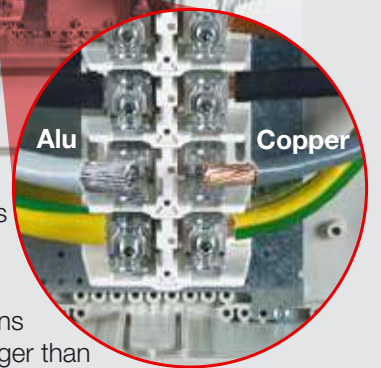


Connection of aluminium and copper conductors



Select appropriate cable junction boxes with terminals for the **largest conductor cross section**.

The conductor cross sections for aluminium cables are larger than copper cables with the same rated operating current.



Chemical basics

The special conducting characteristics of aluminium can be seen in the fact that the surface of an aluminium conductor is immediately covered in a **non-conducting oxide layer** upon exposure to oxygen. This characteristic leads to an increase in the temporary resistance between the aluminium conductors and the terminal body. This can lead to the terminal overheating and in the worst case fire.

Despite these special conditions, aluminium conductors can be connected if the following work procedures are taken into consideration: The terminal used is well suitable; aluminium conductors need to be appropriately prepared before being connected as well as terminals need to be re-tightened (torque) after the first 200 operating hours.

Hensel cable junction boxes for safe connection of aluminium copper conductors:



D 9041



K 2404

D 9041	1.5-2,5 mm ²	Cu/Alu	5-pole ¹⁾
K 9061	1.5-4 mm ²	Cu/Alu	5-pole ¹⁾
K 9351	6-16 mm ²	Cu/Alu	5-pole ¹⁾
KF 9251	1.5-50 mm ²	Cu/Alu	5-pole ¹⁾
KF 9501	1.5-50 mm ²	Cu/Alu	5-pole ¹⁾
K 7051	2.5-50 mm ²	Cu/Alu	5-pole ¹⁾
K 7042	10-95 mm ²	Cu/Alu	4-pole ²⁾
K 7052	10-95 mm ²	Cu/Alu	5-pole ¹⁾
K 9951	6-95 mm ²	Cu/Alu	5-pole ¹⁾
K 1204	16-150 mm ²	Cu/Alu	4-pole ²⁾
K 1205	16-150 mm ²	Cu/Alu	5-pole ²⁾
K 2404	25-240 mm ²	Cu/Alu	4-pole ²⁾
K 2405	25-240 mm ²	Cu/Alu	5-pole ²⁾
K 2401	35-240 mm ²	Cu/Alu	5-pole ¹⁾

¹⁾ = conductors were plugged into clamping unit

²⁾ = conductors can be inserted into the clamping unit from the front

Cable junction boxes for aluminium cables from Hensel can connect the various conductor cross sections and conductor types from aluminium and copper in a single terminal.



HENSEL

PASSION FOR POWER.

The new black series
DK Cable junction boxes

for proper installation with black cables



More information at www.hensel.in

 made in **GERMANY**
Since 1931

DK Cable junction boxes
For normal environment and protected outdoor
Cable entry via integrated elastic membranes

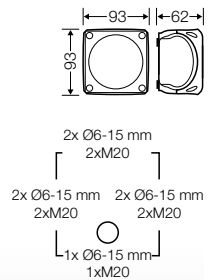


DK 0202 B NEW
0.75-2.5 mm², Cu 3~

- terminal with 2 clamping units per pole
- 5-pole per pole 8 x 0,75 mm² sol / f, 6 x 1,5 mm² sol / f, 4 x 2,5 mm² sol / f, 2 x 4 mm² sol / f
- with integrated elastic membranes, which can be removed for cable entry via cable glands, sealing range 6.0-15.0 mm
- with one cable entry in the bottom, sealing range Ø 6.0-13.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	U _i = 690 V a.c./d.c.
rated current	20 A
material	PP (polypropylene)

IP
66

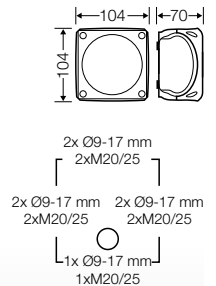


DK 0404 B NEW
1.5-4 mm², Cu 3~

- terminal with 2 clamping units per pole
- 5-pole per pole 8 x 1,5 mm² sol / f, 6 x 2,5 mm² sol / f, 4 x 4 mm² sol / f, 2 x 6 mm² sol / f
- with elastic membranes, which can be removed for cable entry via cable glands, sealing range 9.0-17.0 mm
- with one cable entry in the bottom, sealing range Ø 6.0-15.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	U _i = 690 V a.c./d.c.
rated current	32 A
material	PP (polypropylene)

IP
66

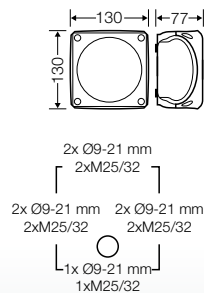


DK 0606 B NEW
2.5-6 mm², Cu 3~

- terminal with 2 clamping units per pole
- 5-pole per pole 6 x 1,5 mm² sol / f, 4 x 2,5 mm² sol / f, 4 x 4 mm² sol / f, 4 x 6 mm² sol / f, 2 x 10 mm² sol / f
- with elastic membranes, which can be removed for cable entry via cable glands, sealing range 9.0-21.0 mm
- with one cable entry in the bottom, sealing range Ø 9.0-20.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	U _i = 690 V a.c./d.c.
rated current	40 A
material	PP (polypropylene)

IP
66

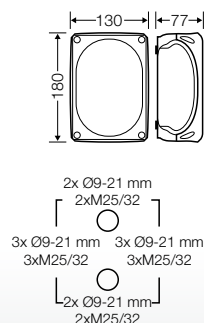


DK 1010 B NEW
4-10 mm², Cu 3~

- terminal with 2 clamping units per pole
- 5-pole per pole 6 x 2.5 mm² sol, 4 x 4 mm² sol, 4 x 6 mm² sol, 4 x 10 mm² sol, 2 x 16 mm² s
- with elastic membranes, which can be removed for cable entry via cable glands, sealing range 9.0-21.0 mm
- with two cable entries in the bottom, sealing range Ø 9.0-20.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	U _i = 690 V a.c./d.c.
rated current	63 A
material	PP (polypropylene)

IP
66



DK Cable junction boxes
For normal environment and protected outdoor
Cable entry via integrated elastic membranes

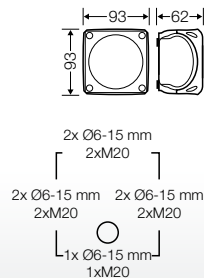


DK 0200 B NEW

- without terminals
- with integrated elastic membranes, which can be removed for cable entry via cable glands, sealing range 6.0-15.0 mm
- with one cable entry in the bottom, sealing range Ø 6.0-13.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
material	PP (polypropylene)

IP
66

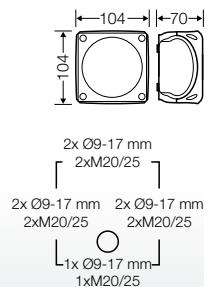


DK 0400 B NEW

- without terminals
- with elastic membranes, which can be removed for cable entry via cable glands, sealing range 9.0-17.0 mm
- with one cable entry in the bottom, sealing range Ø 6.0-15.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
material	PP (polypropylene)

IP
66

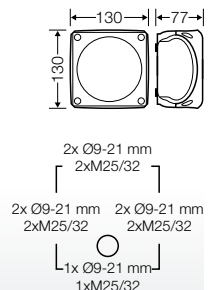


DK 0600 B NEW

- without terminals
- with elastic membranes, which can be removed for cable entry via cable glands, sealing range 9.0-21.0 mm
- with one cable entry in the bottom, sealing range Ø 9.0-20.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
material	PP (polypropylene)

IP
66

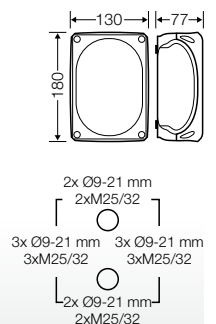


DK 1000 B NEW

- without terminals
- with elastic membranes, which can be removed for cable entry via cable glands, sealing range 9.0-21.0 mm
- with two cable entries in the bottom, sealing range Ø 9.0-20.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
material	PP (polypropylene)

IP
66



Accessories



Cable retention via retention rings for cables



Hensel Electric India Pvt Ltd
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www.hensel.in

02/2020

The range

DK Cable junction boxes

The most suitable solution for every application.



DK series: IP 66
for normal environment and protected outdoor
integrated elastic membranes or metric knockouts



KF series: IP 66 / IP 67 / IP 69
weatherproof, for outdoor installation
metric knockouts



WP series: IP 68
submersion up to 20 meters, 168 hours
watertproof, for encapsulation
metric knockouts



FK series:
E30/E60/E90 intrinsic fire resistance
PH120 insulation integrity

made in **GERMANY**
since 1931



**NEW and Only
with HENSEL:
Tunnel Box
up to 50 mm²**

Product Information 11/2013

ENYCASE[®]

**DK Cable Junction Boxes
Tested for Intrinsic Fire Resistance
in accordance with DIN 4102**

- Tunnel Box for large cable cross sections up to 50 mm²
- Communication junction box
- Boxes made from high-quality stainless steel or sheet steel

Hensel Electric India Pvt Ltd
Industrial Electrical Power Distribution Systems

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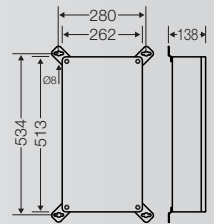
Tunnel Box

Tested for Intrinsic Fire Resistance

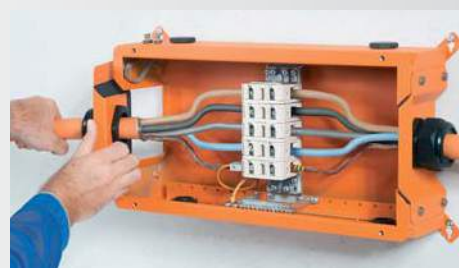
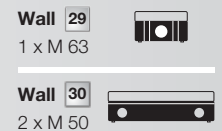
FK 6505 NEW

Cable junction box E90 16-35 mm², Cu, "r" Connection box E90 16-50 mm², Cu, "r"

- 5-pole per pole 6 x 16 mm², 4 x 25 mm², 4 x 35 mm², 2 x 50 mm²
- connecting terminal made from ceramic with resistance to high temperatures
- Intrinsic fire resistance in accordance with DIN 4102 part 12 in combination with function-retaining cables
- Tested with the cable manufacturers Dätwyler and Eupen for the intrinsic fire resistance E90, see test certificate no.: P-1011 DMT DO, download available at www.hensel-electric.de > Type - Documents
- mounted using exterior wall fixings, keyhole (6.5 mm dowel refer to technical data)
- for normal environment and protected outdoor



Rated insulation voltage	U _i = 690 V a.c./d.c.
Current carrying capacity	150 A
Material	External brackets for wall fixing: Stainless steel 1.4462, resistance class IV Enclosure including lid and outer screws: Stainless steel 1.4571, resistance class III powder-coated



- Tunnel Box for the connection of large cable cross sections up to 50 mm²
- Intrinsic fire resistance E90
- Cable is fed in to the box from the front
- Mounted using exterior wall fixings

DK Cable Junction Boxes

Communication Junction Box

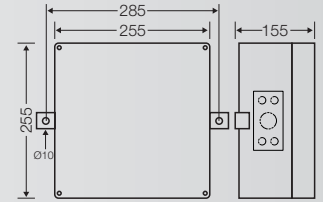
Tested for Intrinsic Fire Resistance



FK 5000 NEW

Communication junction box E30 for the installation of connecting device for telecommunications

- without terminals
- with mounting brackets for the installation of connecting device for telecommunications
- Intrinsic fire resistance in accordance with DIN 4102 part 12 in combination with function-retaining cables
- cable entry via integrated elastic membranes
- cable entries on 4 sides 1 x up to Ø 35 mm, 4 x up to Ø 16 mm each
- The enclosed screw anchors can be used for concrete C20/25, limestone blocks KSV 12, building bricks MZ 12 and clinker bricks KS 12.
- The use of this equipment requires the approval from the planning and building control office for individual cases



Wall 31

4 x up to Ø 16 mm
1 x up to Ø 35 mm

rated insulation voltage

Un = 100 V a.c.

FK 5110 NEW

Connecting device for telecommunications screwless for 10 pairs

- LSA connection technology, solder and screwless, no insulation removal is required
- for installation on mounting brackets in FK 5000
- suitable for a solid conductor with diameter of 0.4 up to 0.8 mm or for two identical solid conductors with diameters of 0.4 up to 0.65 mm
- outer diameter of insulation 0.7 up to 1.6 mm
- with fixing screws



rated insulation voltage

Un = 100 V a.c.

FK 5120 NEW

Connecting device for telecommunications screwless for 20 pairs

- LSA connection technology, solder and screwless, no insulation removal is required
- for installation on mounting brackets in FK 5000
- suitable for a solid conductor with diameter of 0.4 up to 0.8 mm or for two identical solid conductors with diameters of 0.4 up to 0.65 mm
- outer diameter of insulation 0.7 up to 1.6 mm
- with fixing screws



rated insulation voltage

Un = 100 V a.c.

FK 5210 NEW

Connecting device for telecommunications Screw-type connection for 10 pairs

- screw/screw connection technology
- for installation on mounting brackets in FK 5000
- suitable for a solid conductor with diameter of 0.4 up to 0.8 mm or for two identical solid conductors with diameters of 0.4 up to 0.65 mm
- with fixing screws
- with labelling strips



rated insulation voltage

Un = 100 V a.c.

FK 5220 NEW

Connecting device for telecommunications screw-type connection for 20 pairs

- screw/screw connection technology
- for installation on mounting brackets in FK 5000
- suitable for a solid conductor with diameter of 0.4 up to 0.8 mm or for two identical solid conductors with diameters of 0.4 up to 0.65 mm
- with fixing screws
- with labelling strips



rated insulation voltage

Un = 100 V a.c.

Product range of cable junction boxes tested for functional Integrity in the event of fire

Boxes made from duroplast

IP 65 Duro-plastic RAL 2003



FK 7045

Cable junction box \varnothing 0.8 mm / 0.5-1.5 mm², Cu
 Connection box \varnothing 0.8 mm / 0.5-4 mm², Cu



FK 7105

Cable junction box 1.5-4 mm², Cu
 Connection box 1.5-10 mm², Cu



FK 7165

Cable junction box 1.5-6 mm², Cu
 Connection box 1.5-16 mm², Cu

Boxes made from sheet steel

IP 66 Sheet steel RAL 2003



FK 9025

Cable junction box \varnothing 0.8 mm / 0.5-1.5 mm², Cu
 Connection box \varnothing 0.8 mm / 0.5-4 mm², Cu



FK 9105

Cable junction box 1.5-4 mm², Cu
 Connection box 1.5-10 mm², Cu



FK 9255

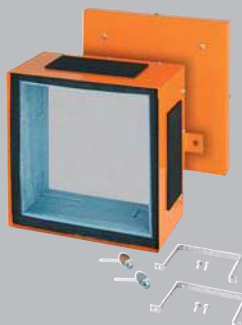
Cable junction box 1.5-6 mm², Cu
 Connection box 1.5-16 mm², Cu



FK 9259

Cable junction box 1.5-10 mm², Cu
 with fused outgoing unit

IP 55 Sheet steel RAL 2003



FK 5000 **NEW**

Communication junction box E30
 intended for the installation of connecting device for telecommunications

Boxes made from stainless steel

IP 65 Stainless steel RAL 2003



FK 6505 **NEW**

Tunnel box

Cable junction box E90 16-35 mm², Cu, „r“
 Connection box E90 16-50 mm², Cu, „r“

HENSEL

PASSION FOR POWER.

Reliable power supply, even in the event of fire

Cable junction boxes

with intrinsic fire resistance
and insulation integrity



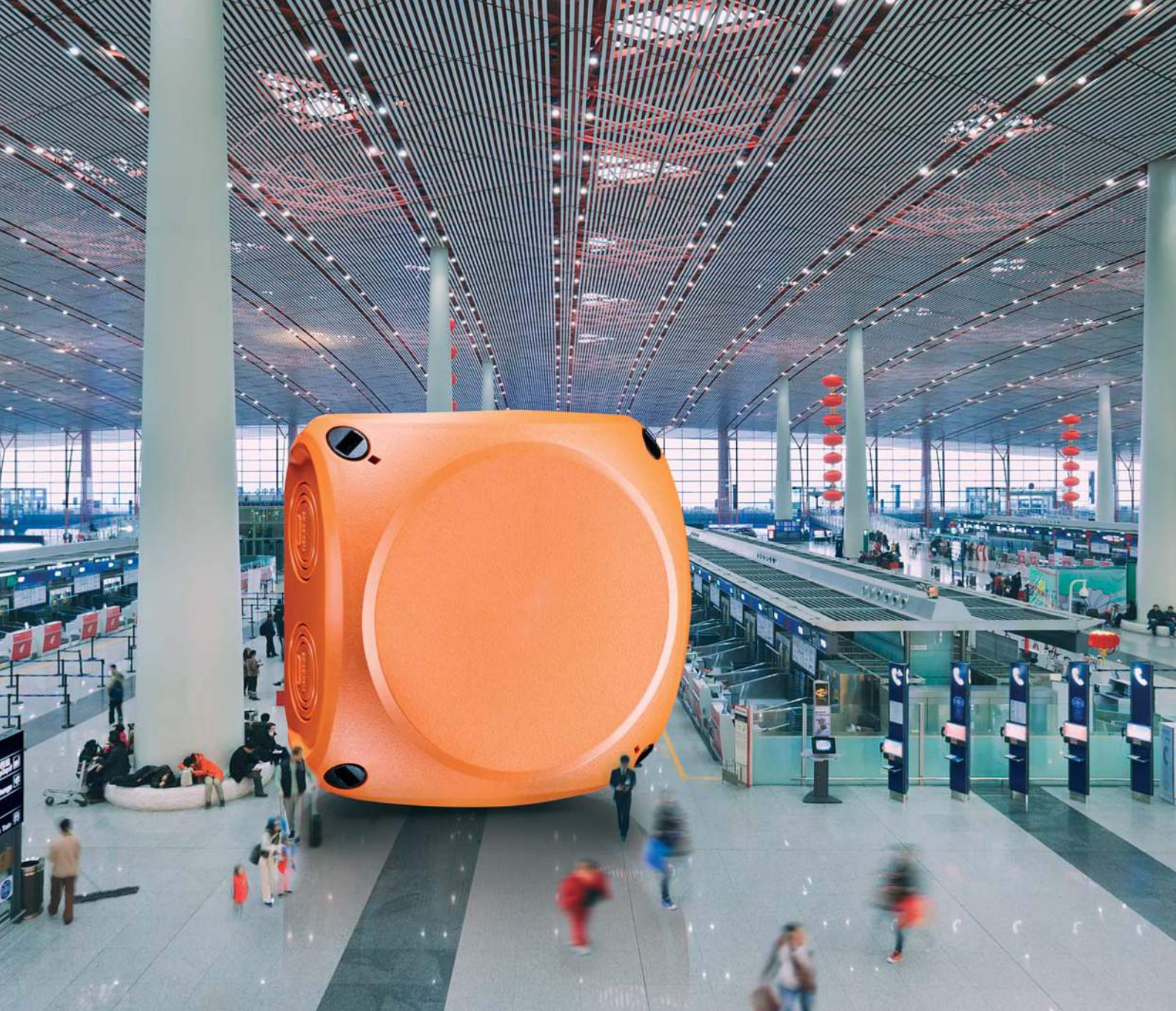
E30 E60 E90
PH120



For more information see www.hensel-electric.in



ENYCASE®



Planning process for intrinsic fire resistance and insulation integrity

1. Requirements

Country-specific requirements and national laws have to be observed!

The relevant local regulations of legislators, fire brigades or similar services, which are placed on the building and its use must be observed.

2. E30 / E60 / E90 PH120?

Are there any requirements for

- intrinsic fire resistance in electrical installations E30/E60/E90 or
- insulation integrity PH120 according to BS EN 50200?

Reliable power supply - even in the event of fire!

- Cable junction boxes approved for intrinsic fire resistance and insulation integrity
- Degree of protection IP 65 / IP 66
- Boxes made of thermoplastic or sheet steel
- No toxic or corrosive emissions
- Intrinsic fire resistance according to DIN 4102 Part 12 (German Standard) in connection with function-retaining cables of 1.5-16 mm²
- Insulation integrity PH120 in accordance with BS EN 50200
- Colour orange RAL 2003



3. Selection of material

Selection should be carried out according to

- intrinsic fire resistance E30 or E90 or insulation integrity e.g. PH120
- cable junction or cable connection
- installation procedure in buildings
- type of cable installation
- anchoring method on the building material
- approval of materials according to certificate

4. Manufacturer

Country-specific requirements and national laws have to be observed!

The selection of a cable manufacturer is carried out according to

- type of cable installation
- required cable junction or cable connection

5. Operating

Country-specific requirements and national laws have to be observed!

Professional execution of the installation work.

Safety in the event of a fire

Cable junction boxes from Hensel are tested for insulation integrity PH120 and intrinsic fire resistance in electrical systems E30/E60/E90

Especially in buildings with public traffic as department stores, airports, hospitals, etc. and other public places security is top priority. The emergency power supply in accordance with regional building regulations is generally required. In the event of fire, the functional integrity of the emergency power supply must be guaranteed for a specific period of time. This ensures that electric devices, such as emergency lighting, lifts, smoke extractors, alarms, etc. remain operational for 30, 60 or 90 minutes and that people can leave the building and rescue services can work in case of fire. In addition to these requirements electrical installation systems must fulfill especially the electrical parameters with all components.

Generally two, but completely different standards and testing procedures have been established.



BS BS EN 50200 Flame exposure period	Classifi- cation
15 minutes	PH15
30 minutes	PH30
60 minutes	PH60
90 minutes	PH90
120 minutes	PH120

Insulation integrity PH120

Testing for resistance to fire of unprotected cable lines (cables with cable junction boxes) for use in emergency circuits.

This test method considers single tested products regardless of their usage.

This test determines the period for which a mechanically unloaded cable maintains a minimum insulation integrity under fire exposure.

The test is passed, if after a test period of 120 minutes the current still flows and no short circuit or cable break can be detected. The tested product achieves PH120 Classification.

Testing for insulation integrity is a hardness test, which only high quality materials can pass.

Complete cable installations are not subject of this test.

Hensel products comply with the PH120 Classification of standard BS EN 50200. Local requirements must be considered additionally. E.g. British Standard BS 5839-1:2013 places additional demands to enhance the fire-resisting level.

Testing for insulation integrity PH120:
BS EN 50200 (> 842 °C)

Cable junction boxes with connected cables after testing



DIN 4102-12 Intrinsic fire resistance for	Classifica- tion
30 minutes	E30
60 minutes	E60
90 minutes	E90

Intrinsic fire resistance E30/E60/E90 places higher demands

In contrast to insulation integrity, the testing of intrinsic fire resistance accesses not just a single test product, but the cable system as a whole including all components.

The German standard DIN 4102-12 sets the requirements on a complete cable system to achieve the functional integrity in the event of fire.

The classifications E30, E60, E90 indicate the period for which a complete cable system ensures functional integrity so that emergency power supply remains operational in case of fire, for example E90 is 90 minutes.

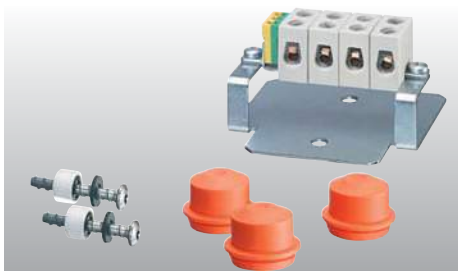
The test approves a cable system as a whole under real-life conditions including all components as support systems, cable junction boxes and mounting device.

Testing of functional integrity sets extreme but realistic demands on a complete cable system in combination with all installed components.

Therefore this method of test allows meaningful conclusions to be drawn on the realistic behaviour in the event of fire (full intrinsic fire resistance).

Testing on functional integrity E30/E60/E90 of cable systems in the event of fire:

DIN 4102-12 (E30-E90) German Standard



DK Cable junction boxes

Approved for intrinsic fire resistance with grommets

- Intrinsic fire resistance in accordance with DIN 4102 Part 12 (German standard) in combination with function-retaining cables
- Insulation integrity PH120 in accordance with BS EN 50200 in combination with insulation retaining cables
- Included screw anchors, connecting terminal made from ceramic with resistance to high temperatures E30 - E90 and cable entries as standard
- Multi-level knockouts for cable glands in different sizes
- Closes quickly by a quarter turn – closed position is visible
- Material: PC-GFS polycarbonate
- Colour: orange, RAL 2003
- Glow wire test in accordance with IEC 60695-2-11: 960 °C, flame-retardant, self-extinguishing
- Resistance to impact: IK 09 (10 Joule)
- Degree of protection: IP 65/66

DK Cable junction boxes
Approved for intrinsic fire resistance,
with included grommets

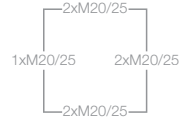
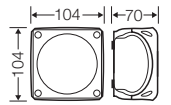


FK 0402

Cable junction box 1.5 mm², Cu
Connection box 1.5-2.5 mm², Cu



- 5-pole per pole 4 x 1.5 mm² sol and 2 x 2.5 mm² sol
- connecting terminal made from ceramic with resistance to high temperatures
- included cable entry: 3 EDKF 25, sealing range: Ø 9-17 mm, IP 65
- IP 66 using AKMF cable glands, please order separately
- intrinsic fire resistance in accordance with DIN 4102 Part 12 (German standard) in combination with function-retaining cables
- tested with the cable manufacturer Dätwyler and Eupen for the intrinsic fire resistance E30 up to E90, see test certificate no.: P-MPA-E-15-018, valid until 27 January 2021, download available from www.hensel-electric.de > type - documents
- tested for insulation integrity PH120 in combination with insulation retaining cables in accordance with BS EN 50200, see test certificate, download available from www.hensel-electric.de > type - documents
- screw anchors enclosed can be used for concrete C20/25, limestone blocks KSV 12, building bricks MZ 12 and clinker bricks KS 12
- for normal environment and protected outdoor



rated insulation voltage	U _i = 400 V a.c./d.c.
current carrying capacity	24 A
tightening torque for terminal material	0,5 Nm PC (Polycarbonate)

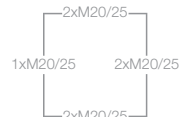
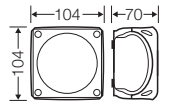


FK 0404

Cable junction box 1.5-2.5 mm², Cu
Connection box 1.5-4 mm², Cu



- 5-pole per pole 8 x 1.5 mm² sol, 4 x 2.5 mm² sol, 2 x 4 mm² sol
- connecting terminal made from ceramic with resistance to high temperatures
- included cable entry: 3 EDKF 25, sealing range: Ø 9-17 mm, IP 65
- IP 66 using AKMF cable glands, please order separately
- intrinsic fire resistance in accordance with DIN 4102 Part 12 (German standard) in combination with function-retaining cables
- tested with the cable manufacturer Dätwyler and Eupen for the intrinsic fire resistance E30 up to E90, see test certificate no.: P-MPA-E-15-018, valid until 27 January 2021, download available from www.hensel-electric.de > type - documents
- tested for insulation integrity PH120 in combination with insulation retaining cables in accordance with BS EN 50200, see test certificate, download available from www.hensel-electric.de > type - documents
- screw anchors enclosed can be used for concrete C20/25, limestone blocks KSV 12, building bricks MZ 12 and clinker bricks KS 12
- for normal environment and protected outdoor



rated insulation voltage	U _i = 400 V a.c./d.c.
current carrying capacity	32 A
tightening torque for terminal material	1.2 Nm PC (Polycarbonate)

DK Cable junction boxes

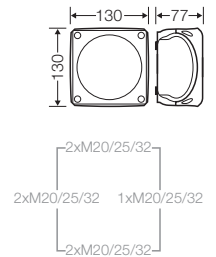
Approved for intrinsic fire resistance with included grommets



FK 0604

**Cable junction box 1.5-2.5 mm², Cu
Connection box 1.5-6 mm², Cu**

- 5-pole per pole 8 x 1.5 mm² sol, 4 x 2.5 mm² sol, 2 x 4 mm² sol, 2 x 6 mm² sol
- connecting terminal made from ceramic with resistance to high temperatures
- included cable entry: 3 EDKF 32, sealing range: 8-23 mm, IP 65
- IP 66 using AKMF cable glands, please order separately
- intrinsic fire resistance in accordance with DIN 4102 Part 12 (German standard) in combination with function-retaining cables
- tested with the cable manufacturer Dätwyler and Eupen for the intrinsic fire resistance E30 up to E90, see test certificate no.: P-MPA-E-15-018, valid until 27 January 2021, download available from www.hensel-electric.de > type - documents
- tested for insulation integrity PH120 in combination with insulation retaining cables in accordance with BS EN 50200, see test certificate, download available from www.hensel-electric.de > type - documents
- screw anchors enclosed can be used for concrete C20/25, limestone blocks KSV 12, building bricks MZ 12 and clinker bricks KS 12
- for normal environment and protected outdoor



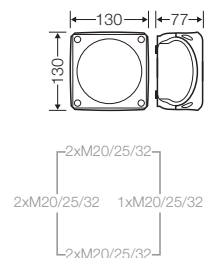
rated insulation voltage	U _i = 400 V a.c./d.c.
current carrying capacity	41 A
tightening torque for terminal material	1.2 Nm PC (Polycarbonate)



FK 0606

**Cable junction box 1.5-6 mm², Cu
Connection box 1.5-6 mm², Cu**

- 5-pole per pole 12 x 1.5 mm² sol, 8 x 2.5 mm² sol, 6 x 4 mm² sol, 4 x 6 mm² sol
- connecting terminal made from ceramic with resistance to high temperatures
- included cable entry: 3 EDKF 32, sealing range: 8-23 mm, IP 65
- IP 66 using AKMF cable glands, please order separately
- intrinsic fire resistance in accordance with DIN 4102 Part 12 (German standard) in combination with function-retaining cables
- tested with the cable manufacturer Dätwyler and Eupen for the intrinsic fire resistance E30 up to E90, see test certificate no.: P-MPA-E-15-018, valid until 27 January 2021, download available from www.hensel-electric.de > type - documents
- tested for insulation integrity PH120 in combination with insulation retaining cables in accordance with BS EN 50200, see test certificate, download available from www.hensel-electric.de > type - documents
- screw anchors enclosed can be used for concrete C20/25, limestone blocks KSV 12, building bricks MZ 12 and clinker bricks KS 12
- for normal environment and protected outdoor



rated insulation voltage	U _i = 400 V a.c./d.c.
current carrying capacity	41 A
tightening torque for terminal material	2.0 Nm PC (Polycarbonate)

DK Cable junction boxes

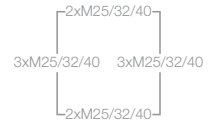
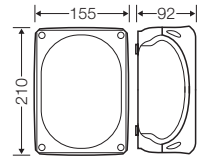
Approved for intrinsic fire resistance with included grommets



FK 1606

**Cable junction box 1.5-6 mm², Cu
Connection box 1.5-6 mm², Cu**

- 5 terminals per pole 12 x 1,5 mm² sol, 8 x 2,5 mm² sol, 6 x 4 mm² sol, 4 x 6 mm² sol
- terminal for 4 x 1,5 mm² sol or 2 x 2,5 mm² sol and PE terminal
- connecting terminal made from ceramic with resistance to high temperatures
- included cable entry: 3 EDKF 32, sealing range: 8-23 mm, IP 65
- IP 66 using AKMF cable glands, please order separately
- intrinsic fire resistance in accordance with DIN 4102 Part 12 (German standard) in combination with function-retaining cables
- tested with the cable manufacturer Dätwyler and Eupen for the intrinsic fire resistance E30 up to E90, see test certificate no.: P-MPA-E-15-018, valid until 27 January 2021, download available from www.hensel-electric.de > type - documents
- tested for insulation integrity PH120 in combination with insulation retaining cables in accordance with BS EN 50200, see test certificate, download available from www.hensel-electric.de > type - documents
- screw anchors enclosed can be used for concrete C20/25, limestone blocks KSV 12, building bricks MZ 12 and clinker bricks KS 12
- for normal environment and protected outdoor



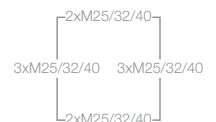
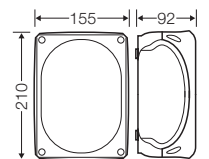
rated insulation voltage	U _i = 400 V a.c./d.c.
current carrying capacity	41 A
tightening torque for terminal	2.0 Nm 0,5 Nm
material	PC (Polycarbonate)



FK 1608

**Cable junction box 1.5 mm², Cu
Connection box 1.5-2.5 mm², Cu**

- 10-pole per pole 4 x 1.5 mm² sol and 2 x 2.5 mm² sol
- connecting terminal made from ceramic with resistance to high temperatures
- included cable entry: 4 EDKF 25, sealing range: Ø 9-17 mm, IP 65
- IP 66 using AKMF cable glands, please order separately
- intrinsic fire resistance in accordance with DIN 4102 Part 12 (German standard) in combination with function-retaining cables
- tested with the cable manufacturer Dätwyler and Eupen for the intrinsic fire resistance E30 up to E90, see test certificate no.: P-MPA-E-15-018, valid until 27 January 2021, download available from www.hensel-electric.de > type - documents
- tested for insulation integrity PH120 in combination with insulation retaining cables in accordance with BS EN 50200, see test certificate, download available from www.hensel-electric.de > type - documents
- screw anchors enclosed can be used for concrete C20/25, limestone blocks KSV 12, building bricks MZ 12 and clinker bricks KS 12
- for normal environment and protected outdoor



rated insulation voltage	U _i = 400 V a.c./d.c.
current carrying capacity	24 A
tightening torque for terminal	0,5 Nm
material	PC (Polycarbonate)

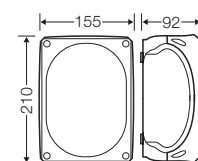
DK Cable junction boxes

Approved for intrinsic fire resistance
with included grommets

FK 1610

Cable junction box 1.5-2.5 mm², Cu Connection box 1.5-10 mm², Cu

- 5-pole per pole 8 x 1.5 mm² sol, 4 x 2.5 mm² sol, 2 x 4 mm² sol, 2 x 6 mm² sol, 2 x 10 mm² sol
- connecting terminal made from ceramic with resistance to high temperatures
- included cable entry: 3 EDKF 32, sealing range: 8-23 mm, IP 65
- IP 66 using AKMF cable glands, please order separately
- intrinsic fire resistance in accordance with DIN 4102 Part 12 (German standard) in combination with function-retaining cables
- tested with the cable manufacturer Dätwyler and Eupen for the intrinsic fire resistance E30 up to E90, see test certificate no.: P-MPA-E-15-018, valid until 27 January 2021, download available from www.hensel-electric.de > type - documents
- tested for insulation integrity PH120 in combination with insulation retaining cables in accordance with BS EN 50200, see test certificate, download available from www.hensel-electric.de > type - documents
- screw anchors enclosed can be used for concrete C20/25, limestone blocks KSV 12, building bricks MZ 12 and clinker bricks KS 12
- for normal environment and protected outdoor

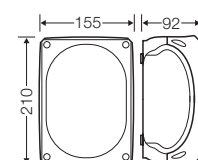


rated insulation voltage	$U_i = 400 \text{ V a.c./d.c.}$
current carrying capacity	57 A
tightening torque for terminal material	1.2 Nm
	PC (Polycarbonate)

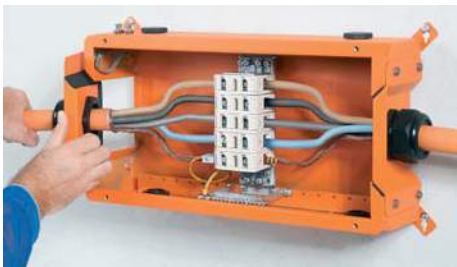
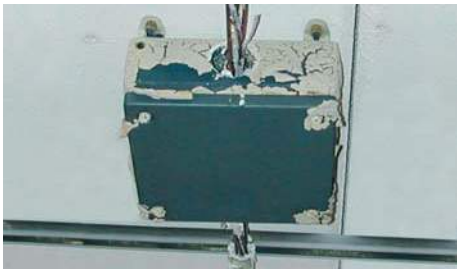
FK 1616

Cable junction box 1.5-6 mm², Cu Connection box 1.5-16 mm², Cu

- 5-pole per pole 12 x 1.5 mm² sol, 8 x 2.5 mm² sol, 6 x 4 mm² sol, 4 x 6 mm² sol, 2 x 10 mm² sol, 2 x 16 mm² r
- connecting terminal made from ceramic with resistance to high temperatures
- included cable entry: 3 EDKF 40, sealing range: 11-30 mm, IP 65
- IP 66 using AKMF cable glands, please order separately
- intrinsic fire resistance in accordance with DIN 4102 Part 12 (German standard) in combination with function-retaining cables
- tested with the cable manufacturer Dätwyler and Eupen for the intrinsic fire resistance E30 up to E90, see test certificate no.: P-MPA-E-15-018, valid until 27 January 2021, download available from www.hensel-electric.de > type - documents
- tested for insulation integrity PH120 in combination with insulation retaining cables in accordance with BS EN 50200, see test certificate, download available from www.hensel-electric.de > type - documents
- screw anchors enclosed can be used for concrete C20/25, limestone blocks KSV 12, building bricks MZ 12 and clinker bricks KS 12
- for normal environment and protected outdoor



rated insulation voltage	$U_i = 400 \text{ V a.c./d.c.}$
current carrying capacity	76 A
tightening torque for terminal material	2.0 Nm
	PC (Polycarbonate)



DK Cable junction boxes

Approved for intrinsic fire resistance with grommets

- intrinsic fire resistance in accordance with DIN 4102 Part 12 (German standard) in combination with function-retaining cables
- Insulation integrity PH120 in accordance with BS EN 50200 in combination with insulation retaining cables
- Protection against accidental contact is ensured with the housing
- Mounted using exterior wall fixing
- Cable junction box for tunnel application for large conductor cross-sections up to 50 mm²
- Communication junction box for the installation of connecting device for telecommunications
- Material: sheetsteel, powder-coated
- Colour: orange, RAL 2003
- Resistance to impact: IK 10 (20 Joule)
- Degree of protection: IP 66
- Low fire load

DK Cable junction boxes

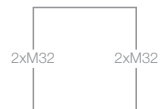
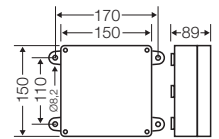
Approved for intrinsic fire resistance
cable entry via mounted grommets



FK 9025

Cable junction box Ø 0.8 mm / 0.5-1.5 mm², Cu
Connection box Ø 0.8 mm / 0.5-4 mm², Cu

- 5-pole per pole 4 x Ø 0.8 mm / 0.5 mm² sol, 4 x 1.5 mm² sol, 2 x 2.5 mm² sol, 2 x 4 mm² sol
- connecting terminal made from ceramic with resistance to high temperatures
- mounted grommets 4 EDKF 32, sealing range: Ø 8-23 mm, closed
- intrinsic fire resistance in accordance with DIN 4102 Part 12 (German standard) in combination with function-retaining cables
- Tested with cable manufacturers Dätwyler, Eupen, Nexans, Studer, Pirelli and Lynenwerk for the intrinsic fire resistance E30 and E90, see test certificate no.: P-MPA-E-02-032, valid till March 20, 2018, download available from www.hensel-electric.de
- tested for insulation integrity PH120 in combination with insulation retaining cables in accordance with BS EN 50200, see test certificate, download available from www.hensel-electric.de > type - documents
- mounted using exterior wall fixings, bore hole 8.2 mm (for dowels refer to technical data)
- for normal environment and protected outdoor



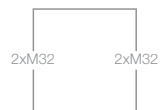
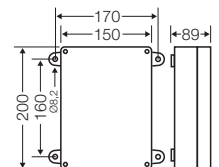
rated insulation voltage	U _i = 400 V a.c./d.c.
current carrying capacity	32 A
tightening torque for terminal	0,5 Nm
material	sheet steel, powder-coated



FK 9105

Cable junction box 1.5-4 mm², Cu
Connection box 1.5-10 mm², Cu

- 5-pole per pole 4 x 1.5 mm² sol, 4 x 2.5 mm² sol, 4 x 4 mm² sol, 2 x 6 mm² sol, 2 x 10 mm² sol
- connecting terminal made from ceramic with resistance to high temperatures
- mounted grommets 4 EDKF 32, sealing range: Ø 8-23 mm, closed
- intrinsic fire resistance in accordance with DIN 4102 Part 12 (German standard) in combination with function-retaining cables
- Tested with cable manufacturers Dätwyler, Eupen, Nexans, Studer, Pirelli and Lynenwerk for the intrinsic fire resistance E30 and E90, see test certificate no.: P-MPA-E-02-032, valid till March 20, 2018, download available from www.hensel-electric.de
- tested for insulation integrity PH120 in combination with insulation retaining cables in accordance with BS EN 50200, see test certificate, download available from www.hensel-electric.de > type - documents
- mounted using exterior wall fixings, bore hole 8.2 mm (for dowels refer to technical data)
- for normal environment and protected outdoor



rated insulation voltage	U _i = 400 V a.c./d.c.
current carrying capacity	40 A
tightening torque for terminal	1.2 Nm
material	sheet steel, powder-coated

DK Cable junction boxes

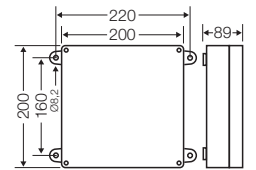
**Approved for intrinsic fire resistance
cable entry via mounted grommets**



FK 9255

**Cable junction box 1.5-6 mm², Cu
Connection box 1.5-16 mm², Cu**

- 5-pole per pole 4 x 1.5 mm² sol, 4 x 2.5 mm² sol, 4 x 4 mm² sol, 4 x 6 mm² sol, 2 x 10 mm² sol, 2 x 16 mm² r (remove cable protection)
- connecting terminal made from ceramic with resistance to high temperatures
- mounted grommets 4 EDKF 40, sealing range Ø 11-30 mm, closed
- intrinsic fire resistance in accordance with DIN 4102 Part 12 (German standard) in combination with function-retaining cables
- Tested with cable manufacturers Dätwyler, Eupen, Nexans, Studer, Pirelli and Lynenwerk for the intrinsic fire resistance E30 and E90, see test certificate no.: P-MPA-E-02-032, valid till March 20, 2018, download available from www.hensel-electric.de
- tested for insulation integrity PH120 in combination with insulation retaining cables in accordance with BS EN 50200, see test certificate, download available from www.hensel-electric.de > type - documents
- mounted using exterior wall fixings, bore hole 8.2 mm (for dowels refer to technical data)
- for normal environment and protected outdoor



rated insulation voltage	U _i = 400 V a.c./d.c.
current carrying capacity	63 A
tightening torque for terminal	2.0 Nm
material	sheet steel, powder-coated

DK Cable junction boxes

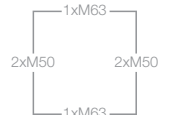
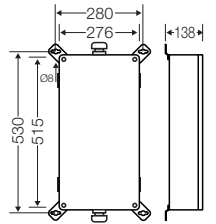
Approved for intrinsic fire resistance
cable entry via mounted cable glands



FK 6505

Cable junction box E90 16-35 mm², Cu, "r"
Connection box E90 16-50 mm², Cu, "r"

- 5-pole per pole 6 x 16 mm² r, 4 x 25 mm² r, 4 x 35 mm² r, 2 x 50 mm² r
- connecting terminal made from ceramic with resistance to high temperatures
- mounted cable entries 2 ASS 63, sealing range Ø 20-48 mm
- on the longitudinal sides each with 2 locking screws M 50
- intrinsic fire resistance in accordance with DIN 4102 Part 12 (German standard) in combination with function-retaining cables
- Tested with cable manufacturers Dätwyler, Prysmian and Eupen for the intrinsic fire resistance E90, see test certificate no.: P-1011 DMT DO, download at www.hensel-electric.de > Type - Documents
- mounted using exterior wall fixings, keyhole 8 mm (dowel refer to technical data)
- for normal environment and protected outdoor



rated insulation voltage	$U_i = 690 \text{ V a.c./d.c.}$
current carrying capacity	150 A
tightening torque for terminal material	4.0 Nm
	External brackets for wall fixing: Stainless steel 1.4462, resistance class IV
	Enclosure including lid and outer screws: Stainless steel 1.4571, resistance class III powder-coated

For tunnel application stainless steel enclosures are required.



DK Cable junction boxes

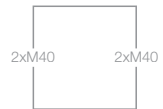
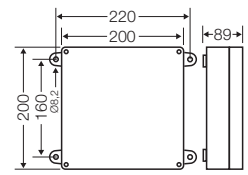
**Approved for intrinsic fire resistance
cable entry via mounted grommets**



FK 9259

Cable junction box 1.5-10 mm², Cu

- cable junction box with fused outgoing unit
- D 01 neozed fuse base
- 5-pole terminal with 2 connecting terminals, 2 junction terminals and 2 PE terminals, each 1.5-10 mm² sol
- terminal block made from ceramic with resistance to high temperatures
- mounted grommets 4 EDKF 40, sealing range Ø 11-30 mm, closed
- intrinsic fire resistance E30 in accordance with DIN 4102 part 12
- the use of this equipment requires the approval from the building and regulatory authorities for the individual case
- Tested with cable manufacturers Dätwyler and Nexans for the intrinsic fire resistance E30, see test certificate no.: P-MPA-E-02-032, valid till March 20, 2018, download available from www.hensel-electric.de
- mounted using exterior wall fixings, bore hole 8.2 mm (for dowels refer to technical data)
- for normal environment and protected outdoor

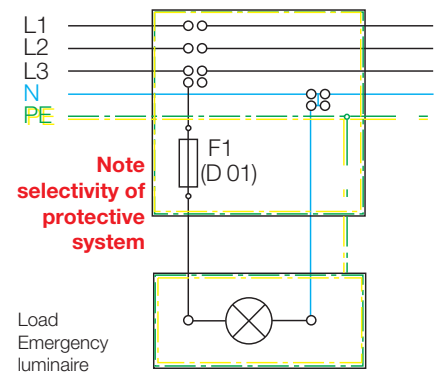


rated insulation voltage	$U_i = 400 \text{ V a.c.}$
current carrying capacity	40 A
tightening torque for terminal material	2.0 -2.4 Nm sheet steel, powder-coated

FK 9259, with fused outgoing circuit

Can be used in emergency lighting in installations that cover a large area (e.g. tunnels). The use of a fused branch circuit makes it possible to supply a group of emergency luminaires with one supply lead. If one or several emergency luminaires are damaged during a fire, the back-up fuse is tripped and ensures that the power supply of the common supply lead is maintained.

The use of this equipment requires approval from the planning department and building control office for individual cases.



DK Cable junction boxes

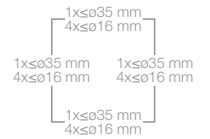
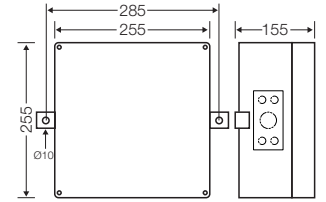
Approved for intrinsic fire resistance
Communication box



FK 5000

**Communication junction box E30
for the installation of connecting device
for telecommunications**

- without terminals
- with mounting brackets for the installation of connecting device for telecommunications
- intrinsic fire resistance in accordance with DIN 4102 Part 12 (German standard) in combination with function-retaining cables
- cable entry via integrated elastic membranes
- cable entry on 4 sides each 1 x up to \varnothing 36 mm and 4 x up to \varnothing 14 mm
- the attached screw anchors must be used for concrete \geq C20/25, B25 up to \leq C50/60, B55
- the use of this equipment requires the approval from the building and regulatory authorities for the individual case
- general approval by the German building authorities DIBt: Z-86.1-37, Celsion fire protection systems, download at www.hensel-electric.de > FK 5000 - documents



material

sheet steel, powder-coated



FK 5110

**Connecting device for telecommunications
screwless for 10 pairs**

- LSA connection technology, solder and screwless, no insulation removal is required
- for installation on mounting brackets in FK 5000
- suitable for a solid conductor with diameter of 0.4 up to 0.8 mm or for two identical solid conductors with diameters of 0.4 up to 0.65 mm
- outer diameter of insulation 0.7 up to 1.6 mm
- with fixing screws

rated insulation voltage	$U_i = 100$ V a.c. $U_i = 125$ V d.c.
current carrying capacity	Solid conductor up to \varnothing 0.6 mm max. 2.1 A Solid conductor \varnothing 0.8 mm max. 5.0 A



FK 5120

**Connecting device for telecommunications
screwless for 20 pairs**

- LSA connection technology, solder and screwless, no insulation removal is required
- for installation on mounting brackets in FK 5000
- suitable for a solid conductor with diameter of 0.4 up to 0.8 mm or for two identical solid conductors with diameters of 0.4 up to 0.65 mm
- outer diameter of insulation 0.7 up to 1.6 mm
- with fixing screws

rated insulation voltage	$U_i = 100$ V a.c. $U_i = 125$ V d.c.
current carrying capacity	Solid conductor up to \varnothing 0.6 mm max. 2.1 A Solid conductor \varnothing 0.8 mm max. 5.0 A

DK Cable junction boxes

Approved for intrinsic fire resistance
Communication box



FK 5210

Connecting device for telecommunications
Screw-type connection for 10 pairs

- screw/screw connection technology
- for installation on mounting brackets in FK 5000
- suitable for a solid conductor with diameter of 0.4 up to 0.8 mm or for two identical solid conductors with diameters of 0.4 up to 0.65 mm
- with fixing screws
- with labelling strips

rated insulation voltage	U _i = 100 V a.c. U _i = 125 V d.c.
current carrying capacity	Solid conductor up to Ø 0.6 mm max. 2.1 A Solid conductor Ø 0.8 mm max. 5.0 A



FK 5220

Connecting device for telecommunications
screw-type connection for 20 pairs

- screw/screw connection technology
- for installation on mounting brackets in FK 5000
- suitable for a solid conductor with diameter of 0.4 up to 0.8 mm or for two identical solid conductors with diameters of 0.4 up to 0.65 mm
- with fixing screws
- with labelling strips

rated insulation voltage	U _i = 100 V a.c. U _i = 125 V d.c.
current carrying capacity	Solid conductor up to Ø 0.6 mm max. 2.1 A Solid conductor Ø 0.8 mm max. 5.0 A

DK Cable junction boxes

Approved for intrinsic fire resistance
Cable entry



Cable glands

- wall thickness up to 3 mm
- with strain relief and locknut
- for indoor - normal environment and (or) protected outdoor installation
- ambient temperature - 25 °C up to + 55 °C
- glow wire test IEC 60695-2-11: 960 °C

Sealing range	ISO thread	Bore-hole	Tightening torque
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AKMF 20

Cable glands for knockouts M 20

Ø 6.5 -13.5 mm	M 20 x 1.5	Ø 20.3 mm	4.0 Nm
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AKMF 25

Cable glands for knockouts M 25

Ø 11-17 mm	M 25 x 1.5	Ø 25.3 mm	7.5 Nm
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AKMF 32

Cable glands for knockouts M 32

Ø 15-21 mm	M 32 x 1.5	Ø 32.3 mm	10.0 Nm
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AKMF 40

Cable glands for knockouts M 40

Ø 19-28 mm	M 40 x 1.5	Ø 40.3 mm	10.0 Nm
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IP
66



Grommets

- wall thickness 1.5-3.5 mm
- for indoor - normal environment and (or) protected outdoor installation
- ambient temperature - 25 °C up to + 35 °C
- glow wire test IEC 60695-2-11: 750 °C

Sealing range	Bore-hole
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EDKF 20

Grommets for knockouts M 20

Ø 6-13 mm	Ø 20.5 mm
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EDKF 25

Grommets for knockouts M 25

Ø 9-17 mm	Ø 25.5 mm
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EDKF 32

Grommets for knockouts M 32

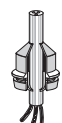
Ø 8-23 mm	Ø 32.5 mm
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EDKF 40

Grommets for knockouts M 40

Ø 11-30 mm	Ø 40.5 mm
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IP
65/66



Ambient conditions in working operation:

Type	FK 04xx, FK 06xx, FK 16xx	FK 5000, FK 6505, FK 9xx5	FK 9259
Application area	Suitable for indoor installation (normal environment and/or protected outdoor)		
Ambient temperature			
- Average value over 24 hours	+ 35 °C	+ 35 °C	+ 35 °C
- Maximum value	+ 40 °C	+ 40 °C	+ 40 °C
- Minimum value	- 25 °C	- 25 °C	- 5 °C
Relative humidity			
- short-time	50 % at 40 °C 100 % at 25 °C	50 % at 40 °C 100 % at 25 °C	50 % at 40 °C 100 % at 25 °C
Material	PC (polycarbonate) halogen-free	sheet steel, powder-coated halogen-free	
Degree of protection against mechanical load	IK09 (10 Joule)	IK10 (20 Joule)	

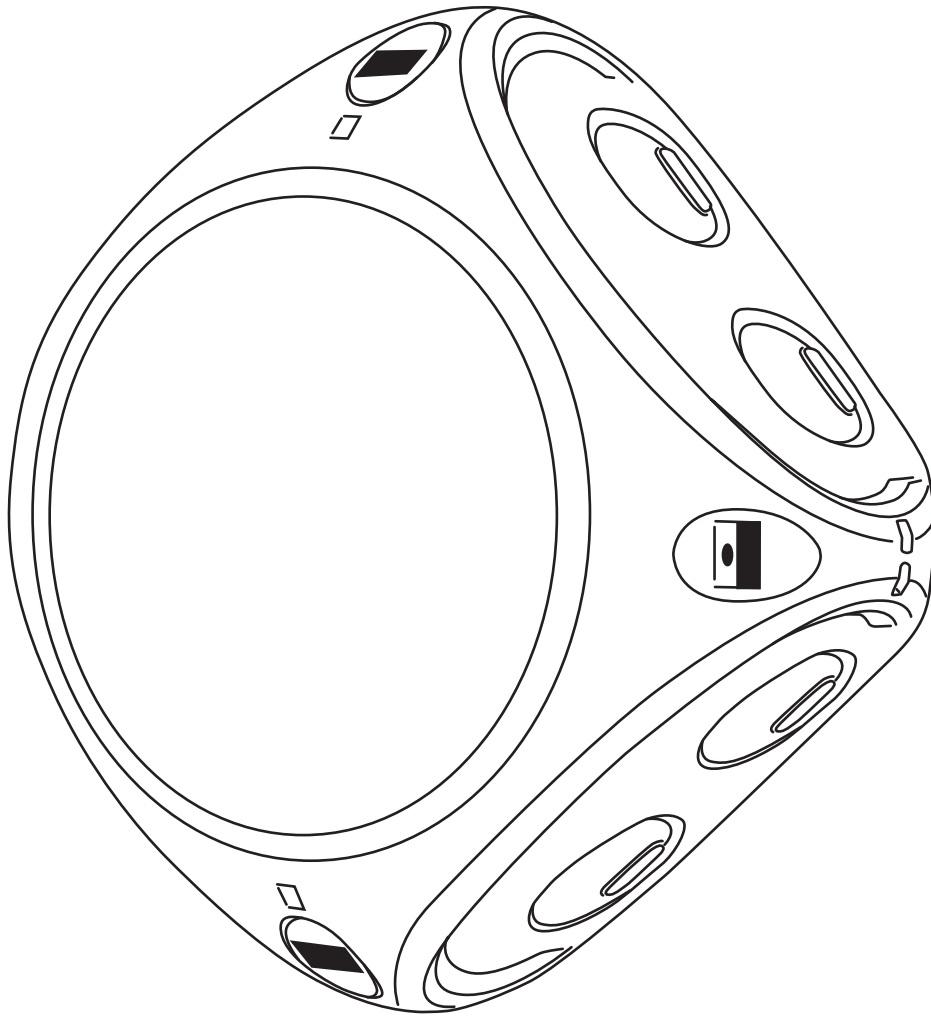
Box fixing with anchors:

Anchor (building materials)	Fischer type ...					Hilti type ...		
	FIS V..	FNA..	FBS..	FBN..	FHY..	HUS..	HSA..	HIT-HY..
Limestone blocks KS 12	x					x		x
Building bricks Mz 12	x					x		x
Airbricks HLz 12	x							x
Limestone air blocks KSL 12	x							x
Prestressed concrete slabs					x			
Porous concrete slabs => 3.3						x		x
Porous concrete blocks => 4						x		x
Concrete => B25 / =< B55		x	x	x		x	x	

Please observe the current approvals and notes from the manufacturer of the anchors.

Standards and regulations:

- **IEC 60998-1, DIN EN 60998 Teil 1**
Connecting devices for low-voltage circuits for household and similar purpose
Part 1: General requirements
- **IEC 60998-2-1, DIN EN 60998 Teil 2-1**
Connecting devices for low-voltage circuits for household and similar purposes.
Part 2-1. Particular requirements for connecting devices as separate entities with screw-type terminals
- **IEC 60670-22**
Particular requirements for connecting boxes and enclosures
- **IEC 60529, DIN VDE 0470 Teil 1 (German standard)**
Degrees of protection provided by enclosures (IP Code)
- **EN 60947-7-1**
Low-voltage switchgear and controlgear -
Part 7-1: Auxiliary equipment - Terminal blocks for copper conductors
- **DIN EN 50262**
Metric cable glands for electrical installations
- **DIN 4102 Part 12 (German standard)**
Fire behaviour of building materials and structural elements) -
Part 12 - Intrinsic fire resistance of electric cable systems; requirements and tests
- **EN 50200**
Method of test for resistance to fire of unprotected small cables for use in emergency circuits.



Hensel Electric India Pvt Ltd
Industrial Electrical Power Distribution Systems

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10.2016

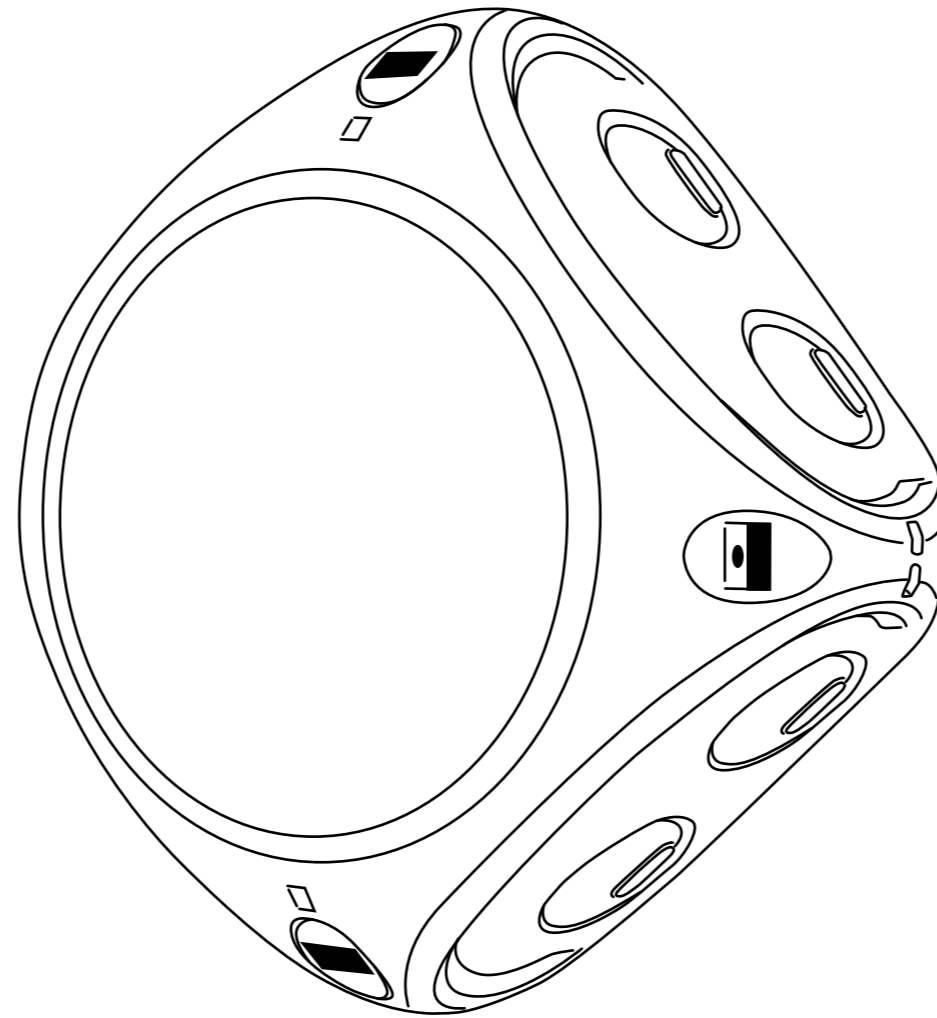
 made in **GERMANY**
since 1931

with terminal, 5-pole for Cu conductors	Types	
	Color: grey	Color: black
1.5-2.5 mm ²	KF 0202 G KF 0402 G	KF 0202 B KF 0402 B
1.5-4 mm ²	KF 0404 G KF 0604 G	KF 0404 B KF 0604 B
2.5-6 mm ²	KF 0606 G KF 1006 G	KF 0606 B KF 1006 B
4-10 mm ²	KF 1010 G KF 1610 G	KF 1010 B KF 1610 B
6-16 mm ²	KF 1616 G	KF 1616 B
10-25 mm ²	KF 2525 G	KF 2525 B

without terminal	Types	
	Color: grey	Color: black
	KF 0200 G	KF 0200 B
	KF 0400 G	KF 0400 B
	KF 0600 G	KF 0600 B
	KF 1000 G	KF 1000 B
	KF 1600 G	KF 1600 B
	KF 2500 G	KF 2500 B
	KF 3500 G	KF 3500 B
	KF 5000 G	KF 5000 B

without terminal, without knockouts	Types	
	Color: grey	Color: black
	KF 0200 H	KF 0200 C
	KF 0400 H	KF 0400 C
	KF 0600 H	KF 0600 C
	KF 1000 H	KF 1000 C
	KF 1600 H	KF 1600 C
	KF 2500 H	KF 2500 C
	KF 3500 H	KF 3500 C
	KF 5000 H	KF 5000 C

Product range



Hensel Electric India Pvt Ltd
Industrial Electrical Power Distribution Systems

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E-Mail: info@hensel-electric.in
www.hensel.in
01.2016

Robust and waterproof! Cable Junction Boxes for Offshore-Applications

Degree of protection: IP 66 / IP 67 / IP 69
Saltwater-proof
UV-resistant



made in **GERMANY**
since 1931



ENYCASE®
High quality material for offshore applications

- Degree of protection: IP 66 / IP 67 / IP 69
- Material: Polycarbonate
- Saltwater-proof
- UV resistant
- Temporary submersion up to 1 meter, max. 15 minutes



- VDE approved
- DNV GL - Certificate-No.: TAE00000EE
- Russian Maritime Register of Shipping, Documentation-No. 250-A-1180-108795



- Significant weight reduction compared to boxes made of sheet steel or brass
- Impact strength IK09 (10 Joule)



- Glow wire test according to IEC 60695-2-11: 960 °C
- UL Subject: V-0 flame-retardant, self-extinguishing
- halogen-free, silicone-free: low toxicity, low fume development

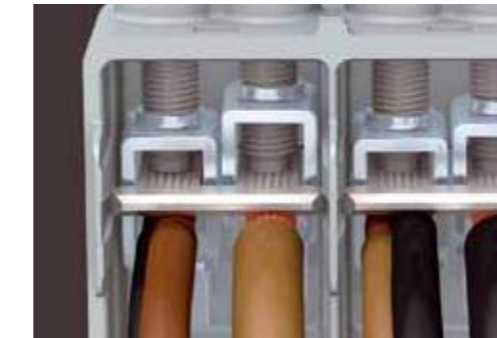
Modern terminal technology
 innovative and flexible solutions



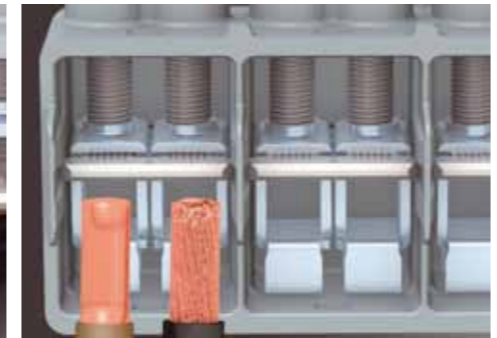
- Different terminal positions and fastening options
- 2 terminals - also of different sizes - can be fixed in cable junction boxes up to 10 mm²



- High-position terminals with more space for wiring - also with maximum conductor assembly



- All terminals with 2 clamping units per pole
- Various conductor cross sections



- Various conductor types - solid and flexible conductors in one pole



- Several conductors can be connected in one pole and clamping unit
- Protected against self-loosing

Variable cable entry
 the appropriate solution for every application



- Multi-level knockouts for cable glands in different sizes



- Cable entry also possible from the rear side

External brackets, cover closes & labelling system
 perfectly equipped



- External brackets for fastening are always included



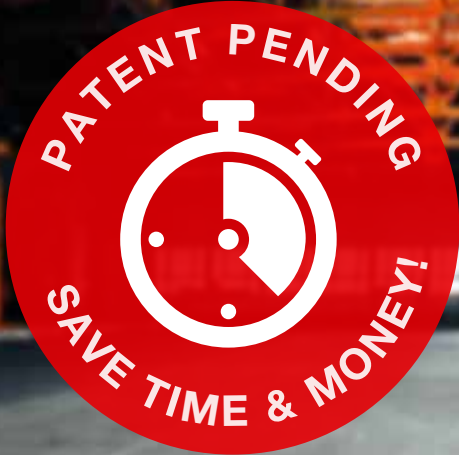
- Lid closes quickly by a quarter turn, open/closed position is directly visible
- Professional identification of the circuits (optional)



CONNECTING STEEL WIRE ARMoured CABLES (SWA)

Cable junction boxes with PE inlay

Indoors, outdoors and in harsh environment, IP 66/IP 67



For more information see www.hensel.in

ENYCASE®

Fast and safe connection of steel wire armoured cables (SWA)

in cable junction boxes with PE inlay

Steel wire armoured cables can be quickly and safely inserted and connected in Hensel cable junction boxes using GSC glands and are thus protected up to IP 66 / IP 67. The armouring of the cable is electrically connected via the GSC gland and the built-in PE inlay. Using an included PE bridge, even non-armoured cables can be easily connected to armoured cables in one cable junction box.



- Installation example: armoured cables with GSC glands and non-armoured cables with ASS glands are quickly and safely connected in one cable junction box.

Thermoplastic cable junction boxes

for industrial and commercial buildings and outdoor installation

Thermoplastics cable junction boxes offer many advantages over traditional metal junction boxes. Ease of installation, lighter material with comparable strength to metal, cost savings and longer durability. Thermoplastics also offer greater flexibility of design whilst staying RUST FREE in harsher environments.



- for indoor and protected outdoor installation in industrial and commercial buildings
- weatherproof, for unprotected outdoor installation in harsh environment and offshore applications
- can be easily used in extreme environments and under tough conditions

Cable junction boxes with many assembly advantages for your everyday installation work



- Armoured cables are electrically connected via a steel PE inlay and the GSC screw-type gland.
- The PE bridge connector (included) enables armoured and non-armoured cables to be connected in one box.
- Detail: Armoured and non-armoured cables in one cable junction box
- **Modern terminal technology**
 - ample wiring space
 - different sizes of terminals can be installed in one box
 - all terminals with 2 clamping units per pole
 - every pole accepts different sized conductors
- **Variable cable entry**
 - via integrated elastic membranes
 - via cable glands after removing the elastic membrane and extension ring
 - via metric knockouts (series KF)
- **Flexible mounting options**
 - via external brackets, always included
 - through the bottom of the housing
 - from the outside on the back



Series DK

Cable junction boxes with PE inlay

Cable entry via integrated elastic membranes or metric knockouts

- With PE inlay to connect the armour of SWA cable
- With pre-assembled cable for easy connection from PE inlay to terminal
- Closes quickly by a quarter turn - locked position well visible (open - locked)
- High-position terminals with more space for wiring
- Every pole allows the connection of various conductor cross sections and conductor types
- Terminals prevent damage of conductors, also with flexible conductors without ferrule
- Different terminal positions and fastening options
- Material: polypropylene or polycarbonate
- Burning behaviour: Glow wire test in accordance with IEC 60695-2-11: 750 °C / 960 °C, flame-retardant, self-extinguishing
- Colour: grey RAL 7035 or black RAL 9011

ENYCASE®

Series DK

Cable junction boxes with PE inlay

Cable entry via integrated elastic membranes

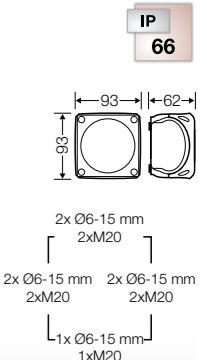


DK 0202 U

0.75-2.5 mm², Cu 3~

- terminal with 2 clamping units per pole
- 5-pole per pole 8 x 0,75 mm² f, 6 x 1,5 mm² r / f, 4 x 2,5 mm² r / f, 2 x 4 mm² r / f
- with PE inlay to connect the armour of SWA cable
- with integrated elastic membranes, which can be removed for cable entry via cable glands, sealing range 6.0-15.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	U _i = 690 V a.c./d.c.
rated current	20 A
material	PP (polypropylene)

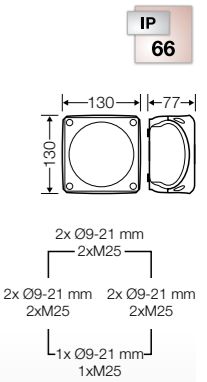


DK 0604 U

1.5-4 mm², Cu 3~

- terminal with 2 clamping units per pole
- 5-pole per pole 8 x 1,5 mm² r / f, 6 x 2,5 mm² r / f, 4 x 4 mm² r / f, 2 x 6 mm² r / f
- with PE inlay to connect the armour of SWA cable
- with elastic membranes, which can be removed for cable entry via cable glands, sealing range 9.0-21.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	U _i = 690 V a.c./d.c.
rated current	32 A
material	PP (polypropylene)



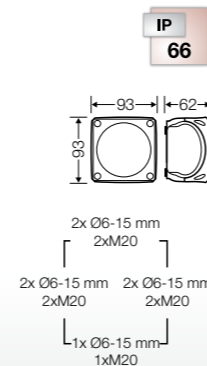
Series DK
Cable junction boxes with PE inlay
Cable entry via integrated elastic membranes



DK 0200 U

- without terminals
- with PE inlay to connect the armour of SWA cable
- with integrated elastic membranes, which can be removed for cable entry via cable glands, sealing range 6.0-15.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

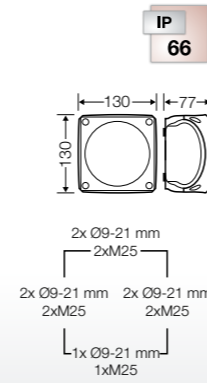
rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
material	PP (polypropylene)
rated current	20 A



DK 0600 U

- without terminals
- with PE inlay to connect the armour of SWA cable
- with elastic membranes, which can be removed for cable entry via cable glands, sealing range 9.0-21.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
material	PP (polypropylene)
rated current	32 A



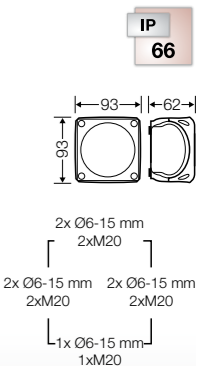
Series DK
Cable junction boxes with PE inlay
Cable entry via integrated elastic membranes



DK 0202 V
0.75-2.5 mm², Cu 3~

- terminal with 2 clamping units per pole
- 5-pole per pole 8 x 0,75 mm² f, 6 x 1,5 mm² r / f, 4 x 2,5 mm² r / f, 2 x 4 mm² r / f
- with PE inlay to connect the armours of SWA cables
- with integrated elastic membranes, which can be removed for cable entry via cable glands, sealing range 6.0-15.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

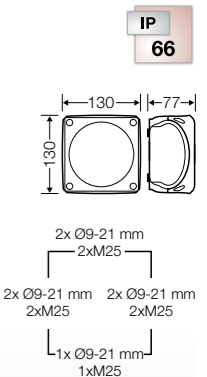
rated insulation voltage	$U_i = 690 \text{ V a.c./d.c.}$
rated current	20 A
material	PP (polypropylene)



DK 0604 V
1.5-4 mm², Cu 3~

- terminal with 2 clamping units per pole
- 5-pole per pole 8 x 1,5 mm² r / f, 6 x 2,5 mm² r / f, 4 x 4 mm² r / f, 2 x 6 mm² r / f
- with PE inlay to connect the armour of SWA cable
- with elastic membranes, which can be removed for cable entry via cable glands, sealing range 9.0-21.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	$U_i = 690 \text{ V a.c./d.c.}$
rated current	32 A
material	PP (polypropylene)



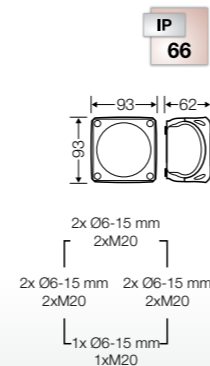
Series DK
Cable junction boxes with PE inlay
Cable entry via integrated elastic membranes



DK 0200 V

- without terminals
- with PE inlay to connect the armour of SWA cable
- with integrated elastic membranes, which can be removed for cable entry via cable glands, sealing range 6.0-15.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

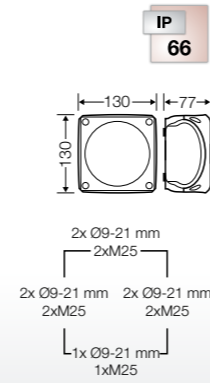
rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
material	PP (polypropylene)
rated current	20 A



DK 0600 V

- without terminals
- with PE inlay to connect the armour of SWA cable
- with elastic membranes, which can be removed for cable entry via cable glands, sealing range 9.0-21.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
material	PP (polypropylene)
rated current	32 A



Series DK
Cable junction boxes with PE inlay
Cable entry via metric knockouts

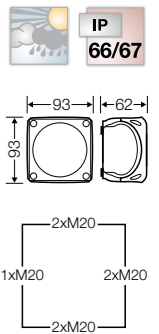


KF 0202 U

0.75-2.5 mm², Cu 3~

- terminal with 2 clamping units per pole
- 5-pole per pole 8 x 0,75 mm² f, 6 x 1,5 mm² r / f, 4 x 2,5 mm² r / f, 2 x 4 mm² r / f
- with PE inlay to connect the armour of SWA cable
- cable entries via knockouts, order AKM / GSC separately
- „weatherproof“ resistant to weather influences (UV due to solar radiation, protected against rainwater, temperature resistant, impact resistant, etc.)
- saltwater-proof
- "offshore applications"
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	$U_i = 690 \text{ V a.c./d.c.}$
rated current	20 A
material	PC-GFS (polycarbonate)

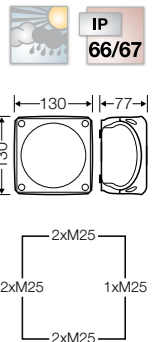


KF 0604 U

1.5-4 mm², Cu 3~

- terminal with 2 clamping units per pole
- 5-pole per pole 8 x 1,5 mm² r / f, 6 x 2,5 mm² r / f, 4 x 4 mm² r / f, 2 x 6 mm² r / f
- with PE inlay to connect the armour of SWA cable
- cable entries via knockouts, order AKM / GSC separately
- „weatherproof“ resistant to weather influences (UV due to solar radiation, protected against rainwater, temperature resistant, impact resistant, etc.)
- saltwater-proof
- "offshore applications"
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	$U_i = 690 \text{ V a.c./d.c.}$
rated current	32 A
material	PC-GFS (polycarbonate)



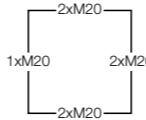
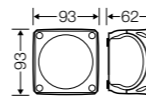
Series DK
Cable junction boxes with PE inlay
Cable entry via metric knockouts



KF 0200 U

- without terminals
- with PE inlay to connect the armour of SWA cable
- cable entries via knockouts, order AKM / GSC separately
- „weatherproof“ resistant to weather influences (UV due to solar radiation, protected against rainwater, temperature resistant, impact resistant, etc.)
- saltwater-proof
- "offshore applications"
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

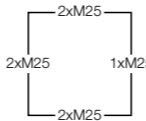
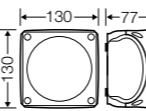
rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
material	PC-GFS (polycarbonate)
rated current	20 A



KF 0600 U

- without terminals
- with PE inlay to connect the armour of SWA cable
- cable entries via knockouts, order AKM / GSC separately
- „weatherproof“ resistant to weather influences (UV due to solar radiation, protected against rainwater, temperature resistant, impact resistant, etc.)
- saltwater-proof
- "offshore applications"
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
material	PC-GFS (polycarbonate)
rated current	32 A



Series DK
Cable junction boxes with PE inlay
Cable entry via metric knockouts

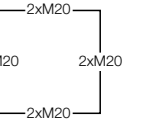
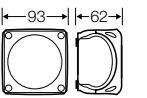
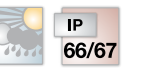


KF 0202 V

0.75-2.5 mm², Cu 3~

- terminal with 2 clamping units per pole
- 5-pole per pole $8 \times 0,75 \text{ mm}^2 \text{ f}$, $6 \times 1,5 \text{ mm}^2 \text{ r / f}$, $4 \times 2,5 \text{ mm}^2 \text{ r / f}$, $2 \times 4 \text{ mm}^2 \text{ r / f}$
- with PE inlay to connect the armour of SWA cable
- cable entries via knockouts, order ASS / GSC separately
- „weatherproof“ resistant to weather influences (UV due to solar radiation, protected against rainwater, temperature resistant, impact resistant, etc.)
- saltwater-proof
- "offshore applications"
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	$U_i = 690 \text{ V a.c./d.c.}$
rated current	20 A
material	PC-GFS (polycarbonate)

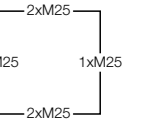
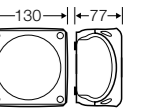
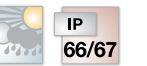


KF 0604 V

1.5-4 mm², Cu 3~

- terminal with 2 clamping units per pole
- 5-pole per pole $8 \times 1,5 \text{ mm}^2 \text{ r / f}$, $6 \times 2,5 \text{ mm}^2 \text{ r / f}$, $4 \times 4 \text{ mm}^2 \text{ r / f}$, $2 \times 6 \text{ mm}^2 \text{ r / f}$
- with PE inlay to connect the armour of SWA cable
- cable entries via knockouts, order ASS / GSC separately
- "weatherproof" resistant to weather influences (UV due to solar radiation, protected against rainwater, temperature resistant, impact resistant, etc.)
- saltwater-proof
- "offshore applications"
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	$U_i = 690 \text{ V a.c./d.c.}$
rated current	32 A
material	PC-GFS (polycarbonate)



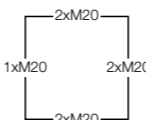
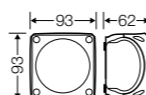
Series DK
Cable junction boxes with PE inlay
Cable entry via metric knockouts



KF 0200 V

- without terminals
- with PE inlay to connect the armour of SWA cable
- cable entries via knockouts, order ASS / GSC separately
- „weatherproof“ resistant to weather influences (UV due to solar radiation, protected against rainwater, temperature resistant, impact resistant, etc.)
- saltwater-proof
- "offshore applications"
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

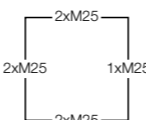
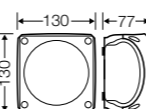
rated insulation voltage	U _i = 1000 V a.c./d.c.
material	PC-GFS (polycarbonate)
rated current	20 A



KF 0600 V

- without terminals
- with PE inlay to connect the armour of SWA cable
- cable entries via knockouts, order ASS / GSC separately
- „weatherproof“ resistant to weather influences (UV due to solar radiation, protected against rainwater, temperature resistant, impact resistant, etc.)
- saltwater-proof
- "offshore applications"
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	U _i = 1000 V a.c./d.c.
material	PC-GFS (polycarbonate)
rated current	32 A



Cable entry systems
Cable glands for steel wire armoured cables (SWA)



GSC 20

Cable gland for SWA cable for knockouts M 20

- sealing range: Ø 11,5-16 mm
- ISO thread M 20 x 1.5
- bore-hole: Ø 20.2 mm
- wall thickness of up to 5 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- colour: black

tightening torque	10,0 Nm
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GSC 21

Cable gland for SWA cable for knockouts M 20

- sealing range: Ø 14,5-20,5 mm
- ISO thread M 20 x 1.5
- bore-hole: Ø 20.2 mm
- wall thickness of up to 5 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- colour: black

tightening torque	10,0 Nm
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GSC 25

Cable gland for SWA cable for knockouts M 25

- sealing range: Ø 20,5-26,5 mm
- ISO thread M 25 x 1.5
- bore-hole: Ø 25.2 mm
- wall thickness of up to 5 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- colour: black

tightening torque	15,0 Nm
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GSC 32

Cable gland for SWA cable for knockouts M 32

- sealing range: Ø 26,5-33,5 mm
- ISO thread M 32 x 1.5
- bore-hole: Ø 32.3 mm
- wall thickness of up to 5 mm
- with strain relief and locknut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- ambient temperature - 25 °C to + 55 °C
- colour: black

tightening torque	20 Nm
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Cable entry systems
Cable glands for steel wire armoured cables (SWA)



ET 20

- Earth tag to connect armours of steel wire armoured cables
- for cable glands GSC 20 and GSC 21



ET 25

- Earth tag to connect armours of steel wire armoured cables
- for cable glands GSC 25

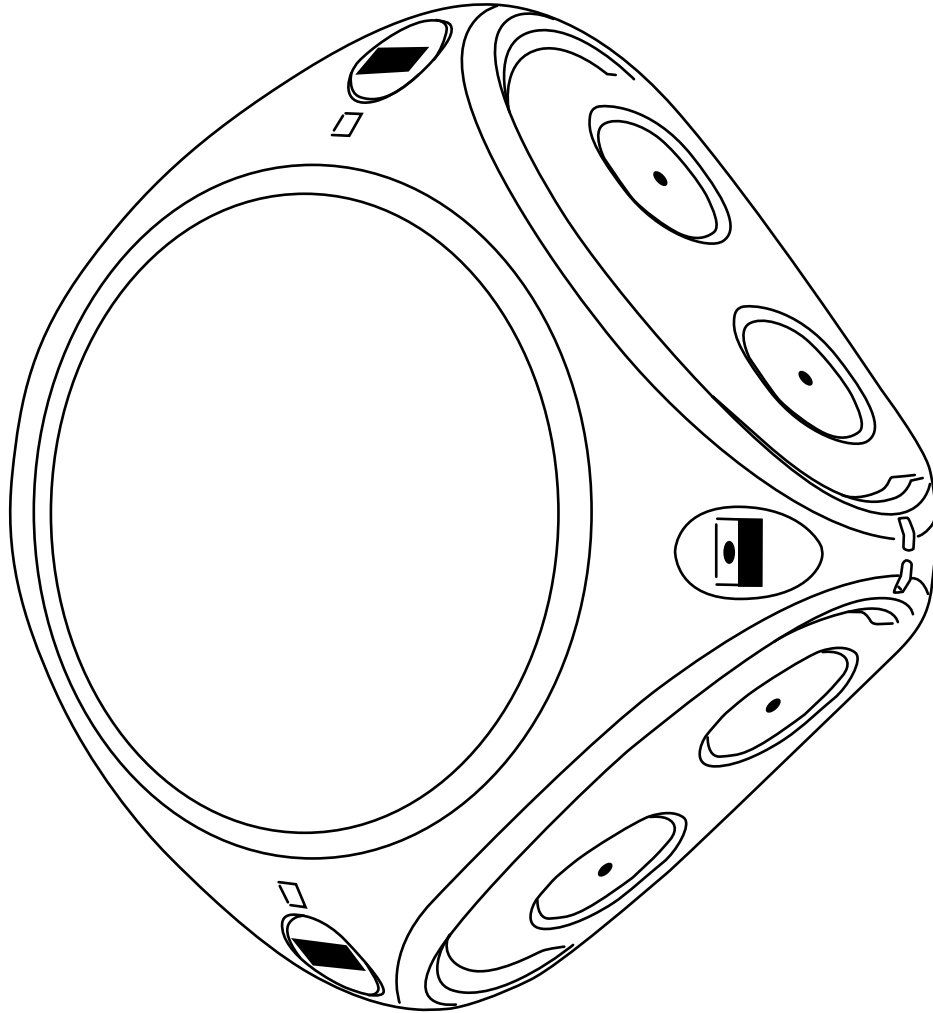


ET 32

- Earth tag to connect armours of steel wire armoured cables
- for cable glands GSC 32

Series DK
Technical details
Operating and ambient conditions

	Boxes with /without terminals	Boxes with /without terminals	GSC cable glands
	DK ... V DK ... U	KF ... V KF ... U	GSC cable glands for steel wire armoured cable
Application area	Suitable for indoor installation and outdoor installation, protected against weather influences	Suitable for for outdoor installation (harsh environment and/or outdoor)	Suitable for for outdoor installation (harsh environment and/or outdoor)
Ambient temperature			
- Average value over 24 hours	-	+ 55 °C	+ 55 °C
- Maximum value	+ 40 °C	+ 70 °C	+ 70 °C
- Minimum value	- 25 °C	- 25 °C	- 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 60695-2-11	750 °C	960 °C	650 °C
- UL Subject 94	V-2 flame-retardant self-extinguishing	V-0 flame-retardant self-extinguishing	HB flame-retardant self-extinguishing
Degree of protection against mechanical load	IK07 (2 Joule)	IK09 (10 Joule)	
Toxic behaviour	halogen-free silicone-free	halogen-free silicone-free	halogen-free silicone-free
	"Halogen-free" in accordance with IEC 60754-2 "Common test methods for cables - Determination of the amount of halogen acid gas".		



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www.hensel.in

08.20/IN

 made in **GERMANY**
since 1931



CABLE JUNCTION BOXES

The Hensel Box

wide range of applications - robust and solid - flexible in use

**Including
the new
Black Series**





The Hensel cable junction box: A success story!

Since its founding, Gustav Hensel GmbH und Co. KG has continuously met the challenges of the times! The invention of the first cable junction box made of thermoset plastics in 1931 revolutionised an entire generation's everyday work routine: A multitude of installation tasks could be solved in a most simple method. A convenience that has become indispensable by now and the start of an unprecedented success story.

The new Generation

We have raised the original to the next level of evolution, followed up on impulses from practical experience and rendered them in the form of new features in the ENYCASE cable junction boxes. They are the embodiment of our very own competency because our know-how flourishes particularly in demanding settings, under difficult conditions, in industry and trade.

The series of innovative and high-quality junction boxes made of state-of-the-art materials are manufactured by means of pioneering production procedures. Our products have made their case for many generations. It is our claim to always continue the development and optimise our original for you.

Cable junction boxes from Hensel

up to 240 mm², degree of protection IP 54-69,
according to IEC 60 670-22

Perfect
solutions
for every
application



Various cable entry - push-in and it's done



cable entry via integrated elastic membranes in box walls for fast cable entry up to degree of protection IP 66



alternatively, a cable gland can be set after removing the elastic membrane and extension ring



multi-level knockouts for cable glands in different sizes



cable entry through the bottom of the box via integrated elastic membrane

Modern terminal technology - innovative und flexible



all terminals with 2 clamping units per pole, also for flexible conductors without ferrule



box allows two terminals and different terminal positions



high-position terminals with more space for wiring



every pole allows the connection of various conductor cross sections and conductor types

Flexible fixation - equipped for every requirement



external brackets for fastening are always included



internal fixation



rear fixation

More helpful features of the Hensel Box



retaining strap prevents the lid from falling or losing



closes quickly by a quarter turn



sealable without accessories



box walls without knockouts for individual cable entries



Burning behaviour: glow wire test according to IEC 60695-2-11: up to 960 °C, flame-retardant, self-extinguishing



DK Cable junction boxes for normal environment and protected outdoor

Cable entry via integrated elastic membranes or metric knockouts



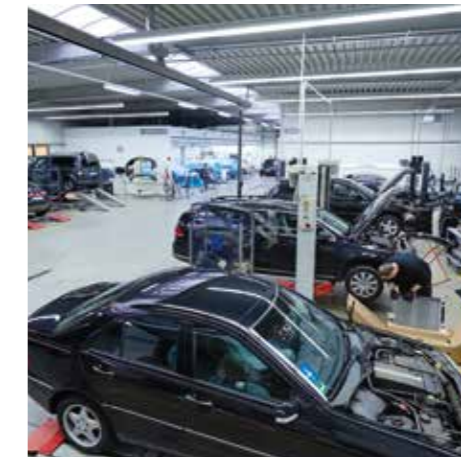
System features

- Cable entry via integrated elastic membranes up to IP 66, alternatively, a cable gland can be used after removing the elastic membrane
- Multi-level knockouts for cable glands in different sizes
- Degree of protection: IP 66
- Material: polypropylene or polycarbonate



The HENSEL-Box sets the standards!

- with / without terminals for copper conductors
- with plug-in terminals
- with terminals for aluminium and copper conductors
- for safety lighting circuits
- with terminal blocks for copper conductors
- with main line branch terminals for copper conductors



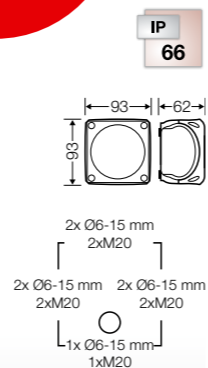
DK Cable junction boxes
For normal environment and protected outdoor
Cable entry via integrated elastic membranes



DK 0202 B
0.75-2.5 mm², Cu 3~

- terminal with 2 clamping units per pole
- 5-pole per pole 8 x 0,75 mm² sol / f, 6 x 1,5 mm² sol / f, 4 x 2,5 mm² sol / f, 2 x 4 mm² sol / f
- with integrated elastic membranes, which can be removed for cable entry via cable glands, sealing range 6.0-15.0 mm
- with one cable entry in the bottom, sealing range Ø 6.0-13.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

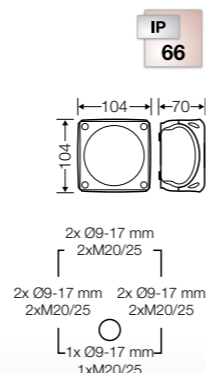
rated insulation voltage	U _i = 690 V a.c./d.c.
rated current	20 A
material	PP (polypropylene)



DK 0404 B
1.5-4 mm², Cu 3~

- terminal with 2 clamping units per pole
- 5-pole per pole 8 x 1,5 mm² sol / f, 6 x 2,5 mm² sol / f, 4 x 4 mm² sol / f, 2 x 6 mm² sol / f
- with elastic membranes, which can be removed for cable entry via cable glands, sealing range 9.0-17.0 mm
- with one cable entry in the bottom, sealing range Ø 6.0-15.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

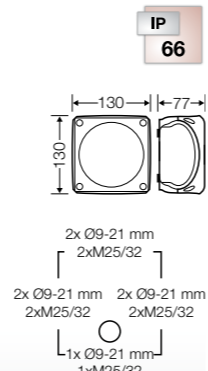
rated insulation voltage	U _i = 690 V a.c./d.c.
rated current	32 A
material	PP (polypropylene)



DK 0606 B
2.5-6 mm², Cu 3~

- terminal with 2 clamping units per pole
- 5-pole per pole 6 x 1,5 mm² sol / f, 4 x 2,5 mm² sol / f, 4 x 4 mm² sol / f, 4 x 6 mm² sol / f, 2 x 10 mm² sol / f
- with elastic membranes, which can be removed for cable entry via cable glands, sealing range 9.0-21.0 mm
- with one cable entry in the bottom, sealing range Ø 9.0-20.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

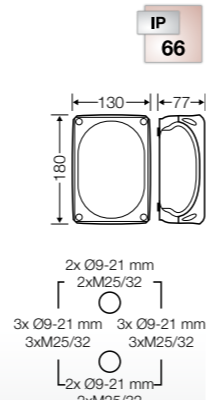
rated insulation voltage	U _i = 690 V a.c./d.c.
rated current	40 A
material	PP (polypropylene)



DK 1010 B
4-10 mm², Cu 3~

- terminal with 2 clamping units per pole
- 5-pole per pole 6 x 2,5 mm² sol, 4 x 4 mm² sol, 4 x 6 mm² sol, 4 x 10 mm² sol, 2 x 16 mm² s
- with elastic membranes, which can be removed for cable entry via cable glands, sealing range 9.0-21.0 mm
- with two cable entries in the bottom, sealing range Ø 9.0-20.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	U _i = 690 V a.c./d.c.
rated current	63 A
material	PP (polypropylene)



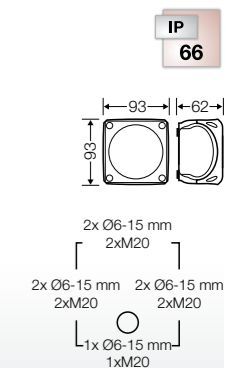
DK Cable junction boxes
For normal environment and protected outdoor
Cable entry via integrated elastic membranes



DK 0200 B

- without terminals
- with integrated elastic membranes, which can be removed for cable entry via cable glands, sealing range 6.0-15.0 mm
- with one cable entry in the bottom, sealing range Ø 6.0-13.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

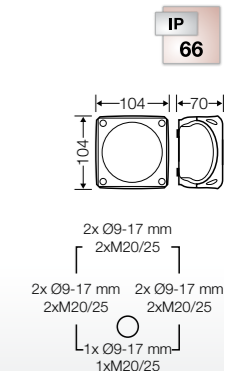
rated insulation voltage	U _i = 1000 V a.c./d.c.
material	PP (polypropylene)



DK 0400 B

- without terminals
- with elastic membranes, which can be removed for cable entry via cable glands, sealing range 9.0-17.0 mm
- with one cable entry in the bottom, sealing range Ø 6.0-15.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

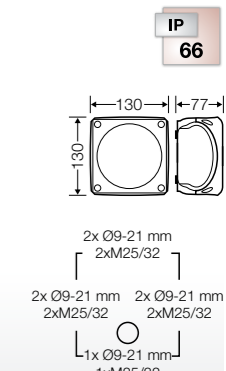
rated insulation voltage	U _i = 1000 V a.c./d.c.
material	PP (polypropylene)



DK 0600 B

- without terminals
- with elastic membranes, which can be removed for cable entry via cable glands, sealing range 9.0-21.0 mm
- with one cable entry in the bottom, sealing range Ø 9.0-20.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

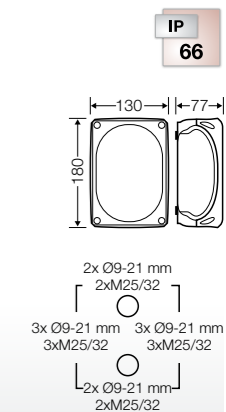
rated insulation voltage	U _i = 1000 V a.c./d.c.
material	PP (polypropylene)



DK 1000 B

- without terminals
- with elastic membranes, which can be removed for cable entry via cable glands, sealing range 9.0-21.0 mm
- with two cable entries in the bottom, sealing range Ø 9.0-20.0 mm
- lid fasteners sealable without accessories
- retaining strap and external brackets for wall fixing included

rated insulation voltage	U _i = 1000 V a.c./d.c.
material	PP (polypropylene)



Accessories



Cable retention via retention rings for cables

KF Cable junction boxes „weatherproof“, for outdoor installation

Cable entry via metric knockouts



System features

- VDE approved, DNV GL - Certificate, Russian Maritime Register of Shipping
- Degree of protection IP 66 / IP 67 / IP 69 with cable glands, for temporary submersion and direct blasting with a high-pressure cleaner
- Weatherproof: UV resistant, rainproof, temperature resistant
- Material: polycarbonate



WP Cable junction boxes „waterproof“, for encapsulating

for outdoor installation and use in harsh environmental conditions with risk of condensation and ingress of water as well as for installation in the ground without traffic loads.

Applications

- Pump shafts
- Ground-level installation ducts in outdoor areas
- Flood areas close to rivers
- Unprotected outdoor installations which are in close proximity to the ground

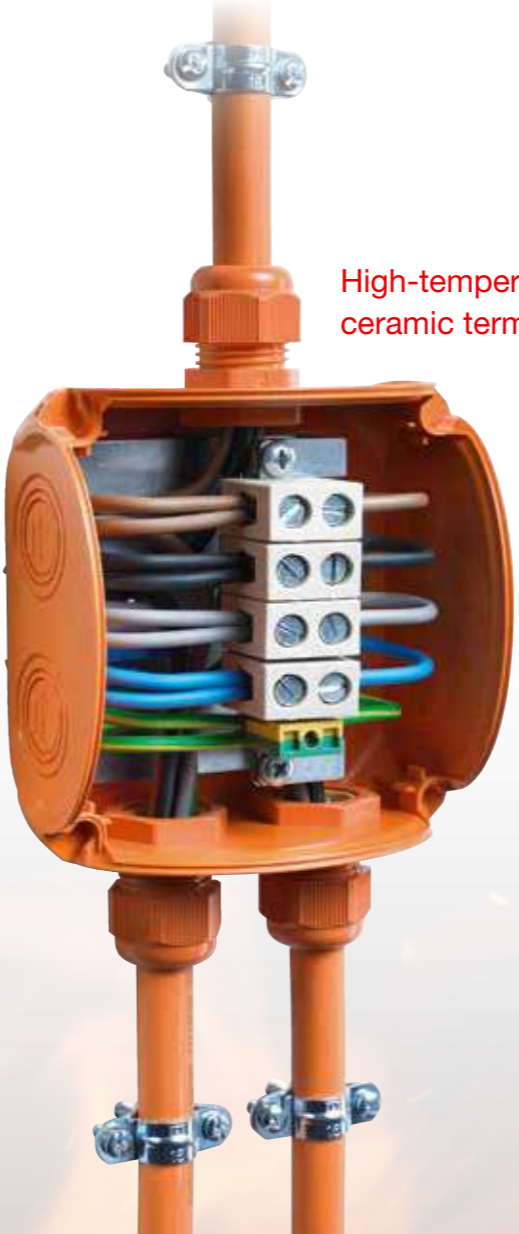
System features

- Cable entry via metric knockouts
- Degree of protection IP 68, submersion up to 20 meter, 168 hours
- Sealing compound always fits to the product:
The amount of sealing compound always fits to the product - never too much or too little material in the processing.
- Measurement and re-installation:
The lid can be removed to measure electrical voltage.
- Material: polycarbonate



FK Cable junction boxes approved for intrinsic fire resistance and insulation integrity

Cable entry via metric knockouts



High-temperature-resistant ceramic terminal

System features

- Intrinsic fire resistance E30-E90 according to DIN 4102 Part 12 (German standard) together with function-retaining cables
- Insulation integrity PH120 according to BS EN 50200 in combination with insulation retaining cables
- Degree of protection IP 66
- Multi-level knockouts for cable glands in different sizes
- Material: polycarbonate

E30
E60
E90

PH120





The right cable entry for every box

System tested and ready for immediate use!



Use the high-quality cable entries from Hensel and rely on tested system solutions

- large selection of grommets and cable glands
- degree of protection tests IP 31 - IP 69
- locknut and necessary sealing rings are always included
- colours: grey, black and orange

Pipe / pole mounting kits for enclosures

Professional mounting of enclosures to large diameter pipes and poles



Pipe and pole mounting solutions make installations easy, safe and flexible!

- for mounting installation enclosures on pipes/poles via clamps and screws.
- clamps and screws included
- clamping range 60 to 150 mm
- easy installation: mounting holes with pre-cut M4 threads
- material: stainless steel V2A
- for cable junction boxes, KV small-type distribution boards and Mi enclosures

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NEW!

KX – THE FLEXIBLE
CABLE JUNCTION BOXES FOR
EX ENVIRONMENTS

hensel-electric.de/atex

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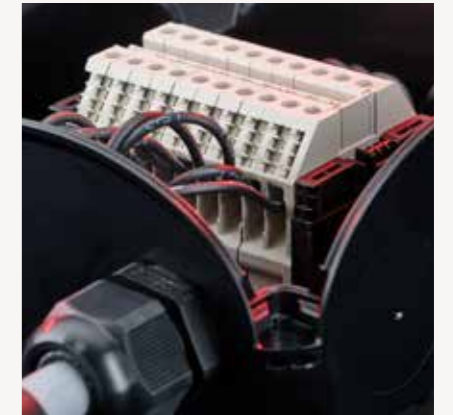
WHEN SAFETY IS CRITICAL.

For electrical installation in potentially explosive atmospheres, or hazardous areas for short, according to European **Directive 2014/34/EU (also known as “ATEX directive”)** specially tested products are required. The electrical specialist must select suitable equipment taking the operational environment into account.

It goes without saying that this equipment must meet the necessary quality requirements for explosion hazardous areas. At the same time, however, they should also be able to be used flexibly and be adaptable to the many challenges present on construction sites.

REQUIREMENTS CAN CHANGE QUICKLY. THE SOLUTION: FLEXIBLE PRODUCTS FOR CONSTRUCTION SITES.

Thanks to modern terminal technology and variable cable entry, many requirements can be solved on site with just a few product variants of the KX-series cable junction boxes – flexible and safe.





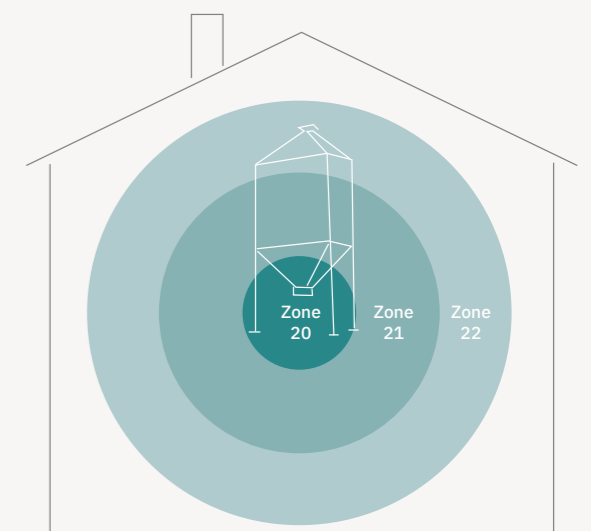
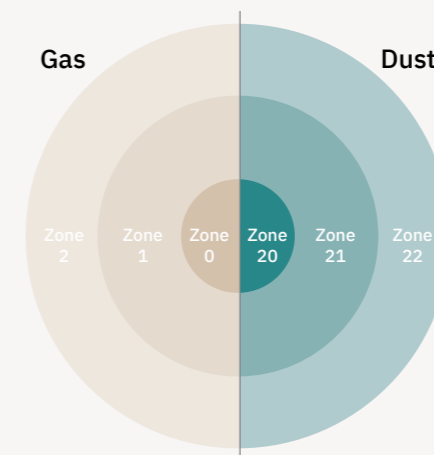
EQUIPMENT SELECTION FOR HAZARDOUS AREAS:



What requirements do Cable Junction Boxes need to comply with?

As well as being suitable for hazardous areas, the operational conditions of use, actual requirements and influences on the equipment must be taken into account. Approx. 80% of all electrical installations in hazardous areas are within Ex Zone 2 or 22.

Here, construction sites can present a challenge: Whether due to other installations or because the site owner changes things at short notice. If a cable junction box cannot be adjusted flexibly on site for example, if more cables need to enter and be terminated than originally planned, then a complex process of finding and procuring an alternative becomes necessary. This costs time and money.



Schematic representation of the Ex zones



Function and safety

Equipment in potentially explosive atmospheres must be procured and operated in such a way that no potential ignition hazards arise in operational conditions, for example thro

- + Avoiding electrostatic charge
- + Limiting surface temperatures
- + Protection against ingress of flammable and/or conductive dusts

For electrical devices in category 3 (zone 2 and 22) the manufacturer has to issue a declaration of conformity as a confirmation of the conformity assessment according to the ATEX directive 2014/34/EU.

Special tests have to be performed for this to verify the special product features regarding explosion protection. For category 2 and 1 (zone 1 and 21 resp. zone 0 and 20), an additional type examination certificate and a special certification and auditing process of the quality assessment system by a notified body are necessary.

Flexibility on the construction site

Nothing is as constant as change - construction sites demand flexibility. For example for the following situations:

- + More cable entries into the housing are required. The pre-installed cable glands are not sufficient.
- + More cables need to enter and be terminated per pole than planned - there is insufficient space on the terminal.

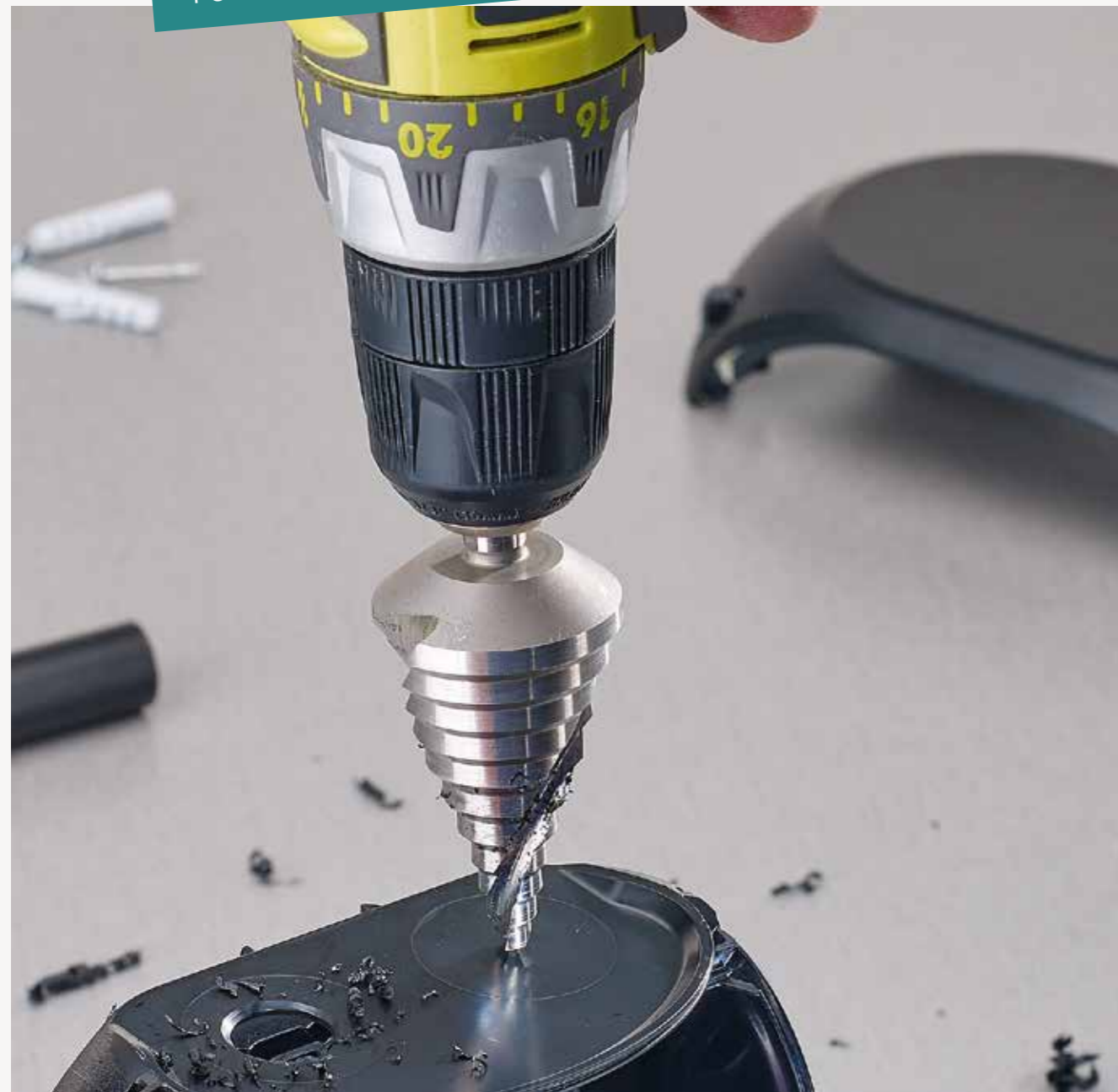


NEW EX CABLE JUNCTION BOXES AND CABLE GLANDS FOR EX ZONES 2 AND 22

with many benefits for the electrical specialist

CABLE JUNCTION BOXES
FOR HAZARDOUS AREAS

IP
66



Flexible cable entry

allows easy adaptation to new installation situations on site

- + Smooth walls can be custom-drilled for cable entries.
- + Drill markings for easy positioning of the drill.
- + Depending on the box size a maximum of 7 to 10 cable entries can be created.



Flexible terminal technology

allows plenty of space for wiring

- + Modern terminal technology with 2 clamping units per pole also combines different conductor cross sections and conductor types in a single pole.
- + High-positioned terminal for more space for wiring, even when the maximum number of conductors are installed
- + Variable positioning of the terminal in the housing according to the position of the cable entry.
- + Integrated wire protection and protection against loosening.

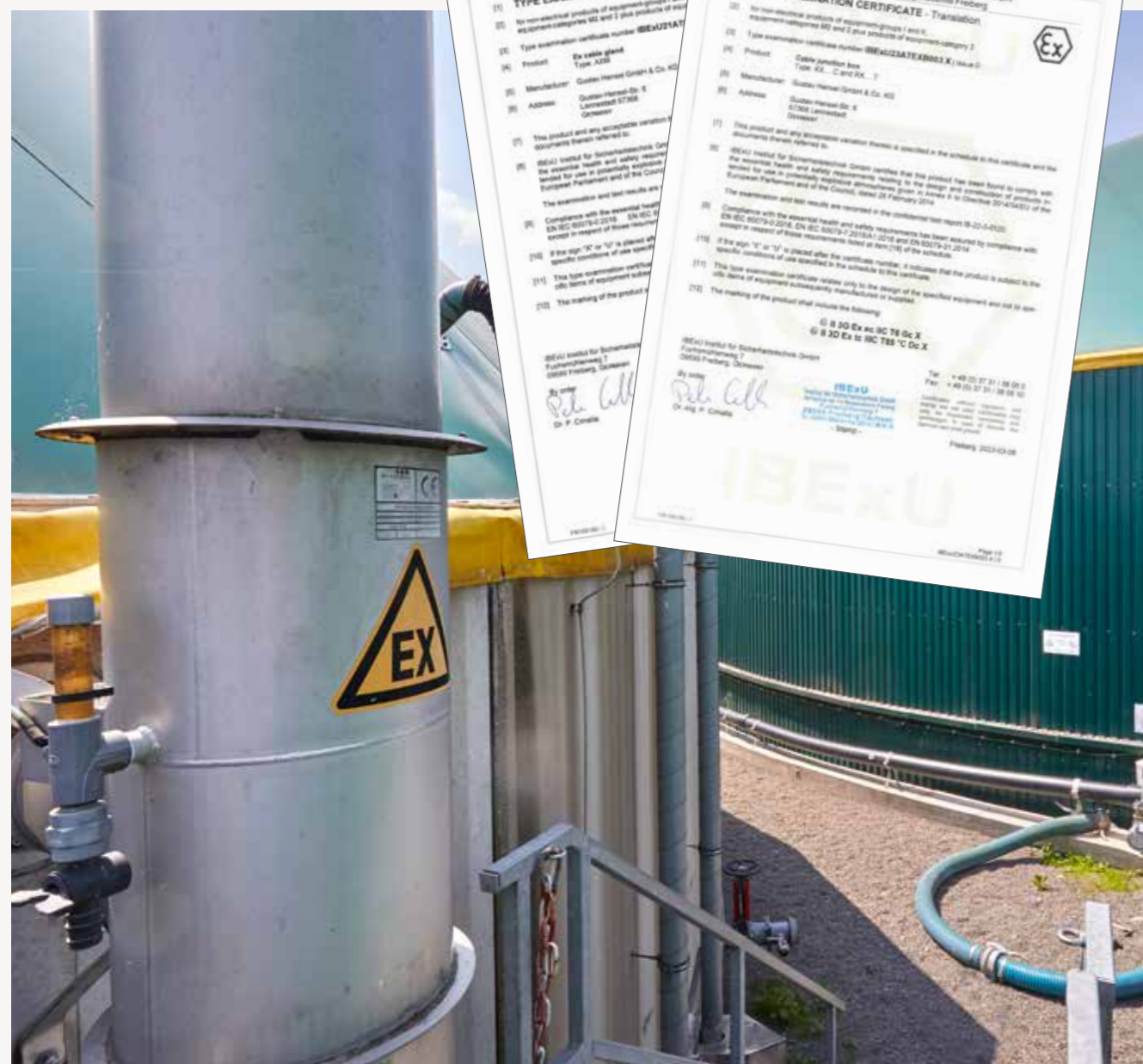


Easy assembly

with pluggable external brackets

- + Plug-in external brackets always included
- + Easy marking due to optimal accessibility
- + Slotted holes for perfect alignment





KX SERIES

CABLE JUNCTION BOXES FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES

suitable for Ex zone 2 and 22



**FLEXIBLE – ROBUST
SAFE**

**IP
66**

System properties

- + EEx marking for explosive gas atmospheres: II 3G Ex ec IIC T6 Gc
- + Ex marking for explosive dust atmospheres: II 3D Ex tc IIIC T85 Dc
- + With drill markings on the box walls for flexible positioning of the cable entries
- + Degree of protection IP 66, Ex cable glands available as an accessory
- + Suitable for areas with a high level of mechanical hazards
- + Can be closed quickly by a quarter turn - locked position well visible
- + With high-position terminal or terminal blocks
- + Various conductor cross sections and types
- + Terminals with wire protection including for flexible conductors without ferrules
- + Various terminal positions
- + Material: Polycarbonate
- + Burning behaviour: Glow wire test according to IEC 60695-2-11: 750°C, flame retardant, self-extinguishing
- + Colour: black, similar to RAL 9011

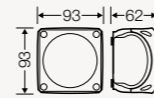




KX 0202 C

0.75-2.5 mm², Cu 3~

- + Terminal with 2 clamping units per pole
- + 5-pole per pole 8 x 0.75-1 mm² r / f, 6 x 1.5 mm² r / f, 4 x 2.5 mm² r / f, 2 x 4 mm² r / f
- + Rated current of the terminal depends on the conductor crosssection. For this see installation instructions or www.hensel-electric.de > Products
- + for explosive environments, can be used on Zone 2 and 22
- + „weatherproof“ resistant to weather influences (UV due to solar radiation, protected against rainwater, temperature resistant, impact resistant, etc.)
- + Cable entries can be custom-drilled, order AXM separately (see cable entry systems LES)
- + Permitted size of the cable entry system: M20
- + External brackets for wall fixing included



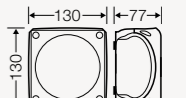
Rated insulation voltage	U _i = 690 V a.c./d.c.
Rated current	13,5 A (2,5 mm ²) 10,6 A (1,5 mm ²)
Tightening torque of terminal	0.5 Nm



KX 0606 C

1.5-6 mm², Cu 3~

- + Terminal with 2 clamping units per pole
- + 5-pole per pole 6 x 1.5 mm² r / f, 4 x 2.5 mm² r / f, 4 x 4 mm² r / f, 4 x 6 mm² r / f, 2 x 10 mm² r / f
- + Rated current of the terminal depends on the conductor crosssection. For this see installation instructions or www.hensel-electric.de > Products
- + for explosive environments, can be used on Zone 2 and 22
- + „weatherproof“ resistant to weather influences (UV due to solar radiation, protected against rainwater, temperature resistant, impact resistant, etc.)
- + Cable entries can be custom-drilled, order AXM separately (see cable entry systems LES)
- + Permitted size of the cable entry system: M20 to M32
- + External brackets for wall fixing included



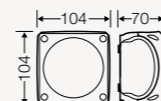
Rated insulation voltage	U _i = 690 V a.c./d.c.
Rated current	23,7 A (6 mm ²) 19,6 A (4 mm ²) 14,7 A (2,5 mm ²)
Tightening torque of terminal	1.5 Nm



KX 0404 C

1.5-4 mm², Cu 3~

- + Terminal with 2 clamping units per pole
- + 5-pole per pole 8 x 1.5 mm² r / f, 6 x 2.5 mm² r / f, 4 x 4 mm² r / f, 2 x 6 mm² r / f
- + Rated current of the terminal depends on the conductor crosssection. For this see installation instructions or www.hensel-electric.de > Products
- + for explosive environments, can be used on Zone 2 and 22
- + „weatherproof“ resistant to weather influences (UV due to solar radiation, protected against rainwater, temperature resistant, impact resistant, etc.)
- + Cable entries can be custom-drilled, order AXM separately (see cable entry systems LES)
- + Permitted size of the cable entry system: M20 and M25
- + External brackets for wall fixing included



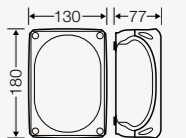
Rated insulation voltage	U _i = 690 V a.c./d.c.
Rated current	18,4 A (4 mm ²) 13,9 A (2,5 mm ²) 11,5 A (1,5 mm ²)
Tightening torque of terminal	0.7 Nm



KX 1010 C

2.5-10 mm², Cu 3~

- + Terminal with 2 clamping units per pole
- + 5-pole per pole 6 x 2.5 mm² r / f, 4 x 4 mm² r / f, 4 x 6 mm² r / f, 4 x 10 mm² r / f, 2 x 16 mm² r / f
- + Rated current of the terminal depends on the conductor crosssection. For this see installation instructions or www.hensel-electric.de > Products
- + for explosive environments, can be used on Zone 2 and 22
- + „weatherproof“ resistant to weather influences (UV due to solar radiation, protected against rainwater, temperature resistant, impact resistant, etc.)
- + Cable entries can be custom-drilled, order AXM separately (see cable entry systems LES)
- + Permitted size of the cable entry system: M20 and M32
- + External brackets for wall fixing included



Rated insulation voltage	U _i = 690 V a.c./d.c.
Rated current	32,3 A (10 mm ²) 24,1 A (6 mm ²) 20 A (4 mm ²)
Tightening torque of terminal	2.0 Nm

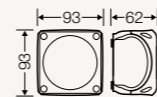




RX 0203 T

0.5-4 mm², Cu

- + 3 terminal blocks WKM 2.5/15
- + per terminal 2 x 0.5-2.5 mm² f or 2 x 0.5-4 mm² sol, for detailed terminal allocation see technical appendix DK Cable junction boxes
- + Terminal blocks from Wieland
- + Neutral terminal labelling
- + for explosive environments, can be used on Zone 2 and 22
- + Cable entries can be custom-drilled, order AXM separately (see cable entry systems LES)
- + Permitted size of the cable entry system: M20
- + „weatherproof“ resistant to weather influences (UV due to solar radiation, protected against rainwater, temperature resistant, impact resistant, etc.)
- + External brackets for wall fixing included



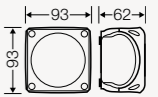
Rated insulation voltage	U _i = 275 V a.c./d.c.
Rated current	13,1 A (4 mm ²) 11,5 A (2,5 mm ²) 9,8 A (1,5 mm ²)
Tightening torque of terminal	0.4 Nm



RX 0207 T

0.5-4 mm², Cu

- + 7 terminal blocks WKM 2.5/15
- + per terminal 2 x 0.5-2.5 mm² f or 2 x 0.5-4 mm² sol, for detailed terminal allocation see technical appendix DK Cable junction boxes
- + Terminal blocks from Wieland
- + Neutral terminal labelling
- + for explosive environments, can be used on Zone 2 and 22
- + Cable entries can be custom-drilled, order AXM separately (see cable entry systems LES)
- + Permitted size of the cable entry system: M20
- + „weatherproof“ resistant to weather influences (UV due to solar radiation, protected against rainwater, temperature resistant, impact resistant, etc.)
- + External brackets for wall fixing included



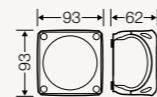
Rated insulation voltage	U _i = 275 V a.c./d.c.
Rated current	11,5 A (4 mm ²) 9,8 A (2,5 mm ²) 8,2 A (1,5 mm ²)
Tightening torque of terminal	0.4 Nm



RX 0205 T

0.5-4 mm², Cu

- + 5 terminal blocks WKM 2.5/15
- + per terminal 2 x 0.5-2.5 mm² f or 2 x 0.5-4 mm² sol, for detailed terminal allocation see technical appendix DK Cable junction boxes
- + Terminal blocks from Wieland
- + Neutral terminal labelling
- + for explosive environments, can be used on Zone 2 and 22
- + Cable entries can be custom-drilled, order AXM separately (see cable entry systems LES)
- + Permitted size of the cable entry system: M20
- + „Outdoor - harsh environment and (or) outdoor“ resistant to the effects of weather (such as UV radiation due to solar irradiation, protected against rainwater, temperature resistant, impact-resistant etc.)
- + External brackets for wall fixing included



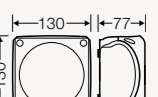
Rated insulation voltage	U _i = 275 V a.c./d.c.
Rated current	12,3 A (4 mm ²) 10,6 A (2,5 mm ²) 9 A (1,5 mm ²)
Tightening torque of terminal	0.4 Nm



RX 0610 T

0.5-6 mm², Cu

- + 10 terminal blocks WT 4
- + per terminal 2 x 0.5-6 mm² sol / f, for detailed terminal allocation see technical appendix DK Cable junction boxes
- + Terminal blocks from Wieland
- + Connector plug for terminal blocks: Manufacturer Wieland IVB WKF 4
- + Neutral terminal labelling
- + for explosive environments, can be used on Zone 2 and 22
- + Cable entries can be custom-drilled, order AXM separately (see cable entry systems LES)
- + Permitted size of the cable entry system: M20 to M32
- + „weatherproof“ resistant to weather influences (UV due to solar radiation, protected against rainwater, temperature resistant, impact resistant, etc.)
- + External brackets for wall fixing included



Rated insulation voltage	U _i = 690 V a.c./d.c.
Rated current	12,3 A (6 mm ²) 10,6 A (4 mm ²) 9 A (2,5 mm ²)
Tightening torque of terminal	0.5 Nm

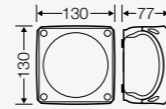




RX 0614 T

0.5-6 mm², Cu

- + 14 terminal blocks WT 4
- + per terminal 2 x 0.5-6 mm² sol / f, for detailed terminal allocation see technical appendix DK Cable junction boxes
- + Terminal blocks from Wieland
- + Connector plug for terminal blocks: Manufacturer Wieland IVB WKF 4
- + Neutral terminal labelling
- + for explosive environments, can be used on Zone 2 and 22
- + Cable entries can be custom-drilled, order AXM separately (see cable entry systems LES)
- + Permitted size of the cable entry system: M20 to M32
- + „weatherproof“ resistant to weather influences (UV due to solar radiation, protected against rainwater, temperature resistant, impact resistant, etc.)
- + External brackets for wall fixing included



Rated insulation voltage	U _i = 690 V a.c./d.c.
Rated current	11,5 A (6 mm ²)
	9,8 A (4 mm ²)
	8,2 A (2,5 mm ²)
Tightening torque of terminal	0.5 Nm



AXM 20

Ex cable glands for Ex zones 2 and 22
for knockouts M 20

- + Sealing range Ø 8-13 mm
- + ISO thread M 20 x 1.5
- + Bore-hole Ø 20.2 mm
- + Wall thickness up to 3 mm
- + with strain relief and locknut
- + for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- + Glow wire test IEC 60695-2-11: 960°C
- + Colour: black, RAL 9005

Tightening torque	4 Nm
-------------------	------



AXM 25

Ex cable glands for Ex zones 2 and 22
for knockouts M 25

- + Sealing range Ø 10-17 mm
- + ISO thread M 25 x 1.5
- + Bore-hole Ø 25.2 mm
- + Wall thickness up to 3 mm
- + with strain relief and locknut
- + for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- + Glow wire test IEC 60695-2-11: 960°C
- + Colour: black, RAL 9005

Tightening torque	6 Nm
-------------------	------



AXM 32

Ex cable glands for Ex zones 2 and 22
for knockouts M 32

- + Sealing range Ø 14-21 mm
- + ISO thread M 32 x 1.5
- + Bore-hole Ø 32.3 mm
- + Wall thickness up to 3 mm
- + with strain relief and locknut
- + for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
- + Glow wire test IEC 60695-2-11: 960°C
- + Colour: black, RAL 9005

Tightening torque	6 Nm
-------------------	------

PRODUCT OVERVIEW CABLE JUNCTION BOXES

The most suitable solution for every application



FOR A SAFE ELECTRICAL FUTURE



DK serie: IP 66
for protected installation
elastic membranes or
metric knockouts



KF serie: IP 66 / IP 67 / IP 69
weatherproof, for unprotected
outdoor installation
metric knockouts



WP serie: IP 66 / IP 68 / IP 69
submersion up to 20 meters, 168 hours
waterproof, encapsulating for
extreme applications
metric knockouts



FK serie:
E30/E60/E90 intrinsic fire resistance
PH120 insulation integrity



KX serie:
for use in potentially explosive
atmospheres
Suitable for Ex zone 2 and 22



NEW!

**NO COMPROMISES,
FULL FLEXIBILITY.**

**The new KX series cable junction boxes from
HENSEL for hazardous areas.**

As usual with full flexibility and unique installation
comfort of the HENSEL-box. Made for daily work on
the construction site.



Hensel Electric India Pvt. Ltd.

35, Kunnam Village

Sunguvarchathram - Walajabad Road

Sriperumbudur- 631 604

Kanchipuram Dist, Tamil Nadu

Tel : + 91 44 6712 7700

Fax : + 91 44 6712 7724

info@hensel-electric.in

hensel.in



FOR A SAFE ELECTRIC FUTURE.

SMALLER IS SOMETIMES
BIG ENOUGH

NEW



DK 0200



DK 0100

THE NEW ENYCASE DK 0100

The compact entry into the HENSEL world.
With all the advantages of the HENSEL Junction Boxes.

hensel.in

HENSEL

NEW

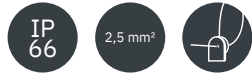
DK CABLE JUNCTION BOXES – for normal environment and protected outdoor

THE NEW ENYCASE DK 0100



DK 0100 G without terminals

- + dimensions H x W x D: 84 x 84 x 55 mm
- + with integrated elastic membranes, which can be removed for cable entry via cable glands, sealing range Ø 6.0-15.0 mm
- + lid fasteners sealable without accessories
- + external brackets for wall fixing included

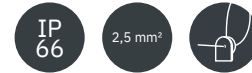


rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
material	PP (polypropylene)



DK 0100 B without terminals

- + dimensions H x W x D: 84 x 84 x 55 mm
- + with integrated elastic membranes, which can be removed for cable entry via cable glands, sealing range Ø 6.0-15.0 mm
- + lid fasteners sealable without accessories
- + external brackets for wall fixing included



rated insulation voltage	$U_i = 1000 \text{ V a.c./d.c.}$
material	PP (polypropylene)



DK 0102 W 0.75-2.5 mm², Cu 3~

- + dimensions H x W x D: 84 x 84 x 55 mm
- + with 5 x Wago 221-413 3-conductor compact terminal
- + per compact terminal 3 x 0.14-4mm² f, 3 x 0.2-4 mm² r
- + with integrated elastic membranes, which can be removed for cable entry via cable glands, sealing range Ø 6.0-15.0 mm
- + lid fasteners sealable without accessories
- + external brackets for wall fixing included

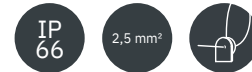


rated insulation voltage	$U_i = 450 \text{ V a.c./d.c.}$
rated current	32 A
material	PP (polypropylene)



DK 0102 X 0.75-2.5 mm², Cu 3~

- + dimensions H x W x D: 84 x 84 x 55 mm
- + with 5 x Wago 221-413 3-conductor compact terminal
- + per compact terminal 3 x 0.14-4mm² f, 3 x 0.2-4 mm² r
- + with integrated elastic membranes, which can be removed for cable entry via cable glands, sealing range Ø 6.0-15.0 mm
- + lid fasteners sealable without accessories
- + external brackets for wall fixing included



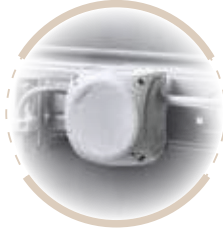
rated insulation voltage	$U_i = 450 \text{ V a.c./d.c.}$
rated current	32 A
material	PP (polypropylene)

The right box for every application

In dry, damp, wet or even fire-prone areas –
Cable junction boxes from HENSEL distribute electricity for all areas
of application always safe and reliable.



DK series: IP 66
for harsh environmental conditions,
with and without terminals,
elastic membranes or
metric knockouts



RK series: IP 66
with terminal blocks,
elastic membranes



KF series: IP 66 / IP 67 / IP 69
weatherproof, for unprotected
outdoor installation,
with and without terminals,
metric knockouts



WP series: IP 66 / IP 68 / IP 69
submersion up to 20 meters, 168 hours
waterproof, encapsulating for
extreme applications
with terminals,
metric knockouts



FK series: IP 66
E30/E60/E90 intrinsic fire resistance
PH120 insulation integrity
with terminals



KX series: IP 66
for use in potentially explosive
atmospheres
suitable for Ex zone 2 and 22,
with terminals

Hensel Electric India Pvt Ltd
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Phone: +91-44-3727 0202
E-Mail: info@hensel-electric.in
www.hensel.in



CONFIGURE YOUR
INDIVIDUAL BOX!

HN MY BOX
Your logo in colour
on the Hensel box

CONFIGURE YOUR
INDIVIDUAL BOX!



YOUR LOGO
ON THE HENSEL-BOX

DK-Series

Cable Junction Boxes for normal environment and protected outdoor

Degree of protection IP 66



without terminals	
DK 0200 G 93x93x62	DK 0200 B 210x155x92
DK 0400 G 104x104x70	DK 0400 B 104x104x70
DK 0600 G 130x130x77	DK 0600 B 130x130x77
DK 1000 G 180x130x77	DK 1000 B 180x130x77
DK 1600 G 210x155x92	
DK 2500 G 255x205x112	
DK 3500 G 295x225x122	
DK 5000 G 355x255x122	



with terminals		
DK 0202 G 93x93x62	DK 0202 B 93x93x62	0,75 - 2,5 mm ²
DK 0402 G 104x104x70		
DK 0404 G 104x104x70	DK 0404 B 104x104x70	1,5 - 4 mm ²
DK 0604 G 130x130x77		
DK 0606 G 130x130x77	DK 0606 B 130x130x77	2,5 - 6 mm ²
DK 1006 G 180x130x77		
DK 1010 G 180x130x77	DK 1010 B 180x130x77	4 - 10 mm ²
DK 1610 G 210x155x92		
DK 1616 G 210x155x92		6 - 16 mm ²
DK 2525 G 255x205x112		
DK 3535 G 295x225x122		10 - 25 mm ²
DK 5054 G 355x255x122		
DK 5055 G 355x255x122		16 - 35 mm ²
		16 - 50 mm ²

KF-Series

Cable Junction Boxes „weatherproof“ for outdoor installations

Degree of protection IP 66/IP 67/IP 69



without terminals			
KF 0200 G 93x93x62	KF 0200 B 93x93x62	KF 0200 H 93x93x62	KF 0200 C 93x93x62
KF 0400 G 104x104x70	KF 0400 B 104x104x70	KF 0400 H 104x104x70	KF 0400 C 104x104x70
KF 0600 G 130x130x77	KF 0600 B 130x130x77	KF 0600 H 130x130x77	KF 0600 C 130x130x77
KF 1000 G 180x130x77	KF 1000 B 180x130x77	KF 1000 H 180x130x77	KF 1000 C 180x130x77
KF 1600 G 210x155x92	KF 1600 B 210x155x92	KF 1600 H 210x155x92	KF 1600 C 210x155x92
KF 2500 G 255x205x112	KF 2500 B 255x205x112	KF 2500 H 255x205x112	KF 2500 C 255x205x112
KF 3500 G 295x225x122	KF 3500 B 295x225x122	KF 3500 H 295x225x122	KF 3500 C 295x225x122
KF 5000 G 355x255x122	KF 5000 B 355x255x122	KF 5000 H 355x255x122	KF 5000 C 355x255x122

with terminals		
KF 0202 G 93x93x62	KF 0202 B 93x93x62	0,75 - 2,5 mm ²
KF 0402 G 104x104x70	KF 0402 B 104x104x70	
KF 0404 G 104x104x70	KF 0404 B 104x104x70	1,5 - 4 mm ²
KF 0604 G 130x130x77	KF 0604 B 130x130x77	
KF 0606 G 130x130x77	KF 0606 B 130x130x77	2,5 - 6 mm ²
KF 1006 G 180x130x77	KF 1006 B 180x130x77	
KF 1010 G 180x130x77	KF 1010 B 180x130x77	4 - 10 mm ²
KF 1610 G 210x155x92	KF 1610 B 210x155x92	
KF 1616 G 210x155x92	KF 1616 B 210x155x92	6 - 16 mm ²
KF 2525 G 255x205x112	KF 2525 B 255x205x112	
KF 3535 G 295x225x122	KF 3535 B 295x225x122	10 - 25 mm ²
KF 5050 G 355x255x122	KF 5050 B 355x255x122	
		16 - 35 mm ²
		16 - 50 mm ²

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