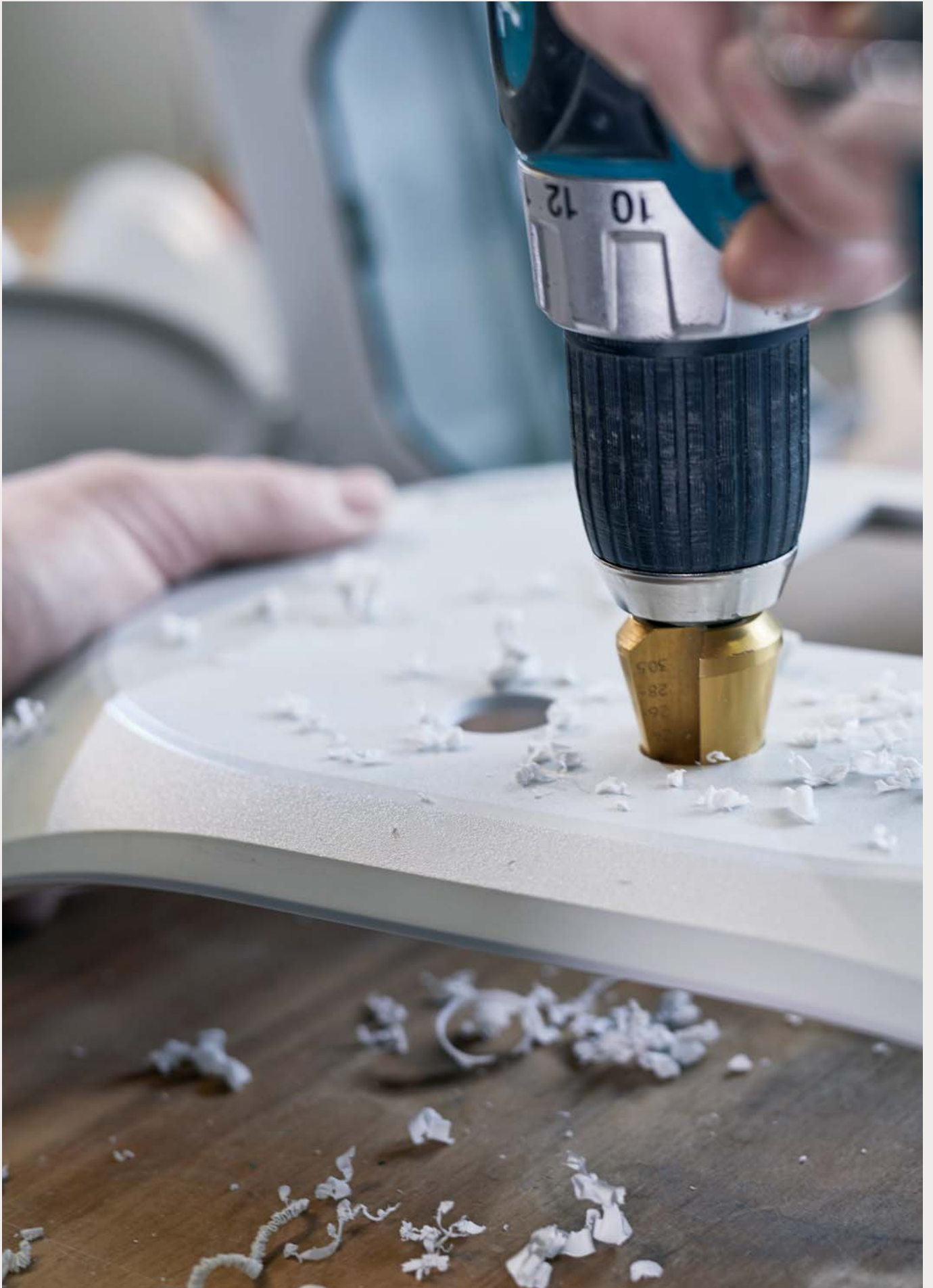




ENYFLEX –
EMPTY ENCLOSURES
FOR PRO'S

hensel-electric.de

HENSEL



The right empty enclosures for every application

according to IEC 62208,
for customer-specific solutions and individual applications.



EB empty enclosures
box walls without knockouts

14_17



KG empty enclosures
with metric knockouts

18



K empty enclosures
with metric knockouts

19

For customized solutions and individual applications

The robust enclosures developed, manufactured and marketed by HENSEL are suitable as universal encapsulation for many demanding tasks in trade and industry.

For example, they protect individual installation of electrical devices and electronic components in manufacturing processes, in the automation of machines and systems or in the field of industrial control systems. They are used as industrial, display and operating enclosures in a variety of industries, applications and environments.



Please scan the QR code or
see our website
hensel-electric.de
to get detailed information.

MORE THAN 90 YEARS OF EXPERIENCE – YOUR ELECTRICAL ENERGY POWERS US

Electrical energy flows everywhere. It provides light, heat and movement. As a family-owned company operating worldwide, we guarantee the safe distribution of electrical energy in industry, commerce and infrastructure.

With over 1,000 employees, 640 of them in Germany, 14 subsidiaries in Germany and abroad, we have been operating successfully in the market for over 90 years. We work enthusiastically to take our products and services to the next level. Solutions for photovoltaics and e-mobility are becoming increasingly important. In this way, we are making an active contribution to the energy transition and working towards a safer electric future.

**Please scan the QR code or see our website
www.hensel-electric.de
for more detailed information.**



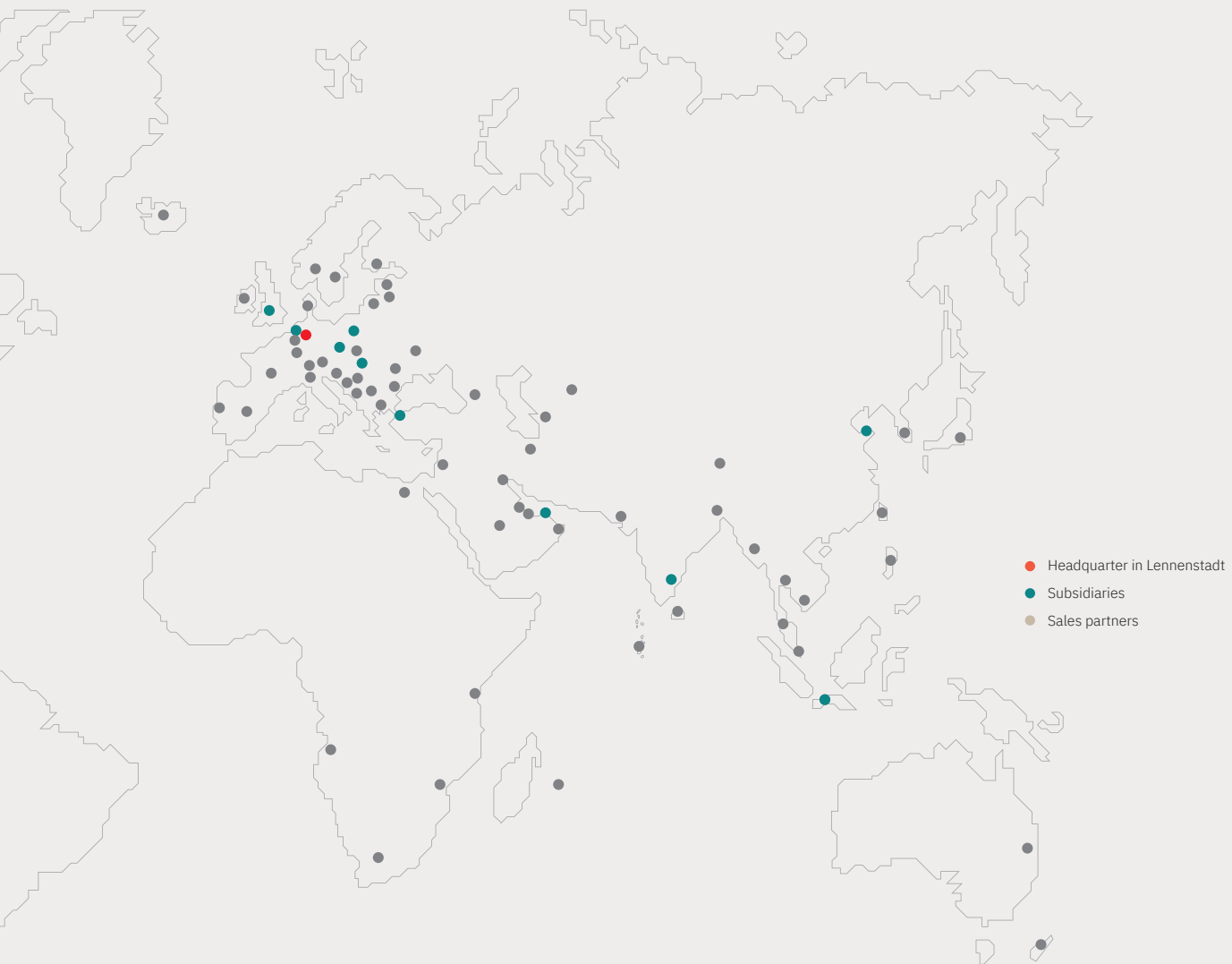
FAMILY
COMPANY



SINCE
1931

International presence

HENSEL guarantees local support and a high degree of availability thanks to its 4 locations in Germany, 10 locations own by HENSEL and 60 international partners.



MORE THAN 60 INTERNATIONAL PARTNERS



ELECTRICAL INSTALLATION AND DISTRIBUTION SYSTEMS



1000 EMPLOYEES



13 SUBSIDIARIES NATIONALLY AND INTERNATIONALLY

EMPTY ENCLOSURES FOR INDUSTRIAL APPLICATIONS

We help you to find exactly the right enclosures and components that fit your application and make your product work in any environment.

EMPTY ENCLOSURES
ACCORDING TO IEC 62208





For customized solutions and individual applications

The robust enclosures developed, manufactured and marketed by HENSEL are suitable as universal encapsulation for many demanding tasks in trade and industry.

For example, they protect individual installation of electrical devices and electronic components in manufacturing processes, in the automation of machines and systems or in the field of industrial control systems. They are used as industrial, display and operating enclosures in a variety of industries, applications and environments.

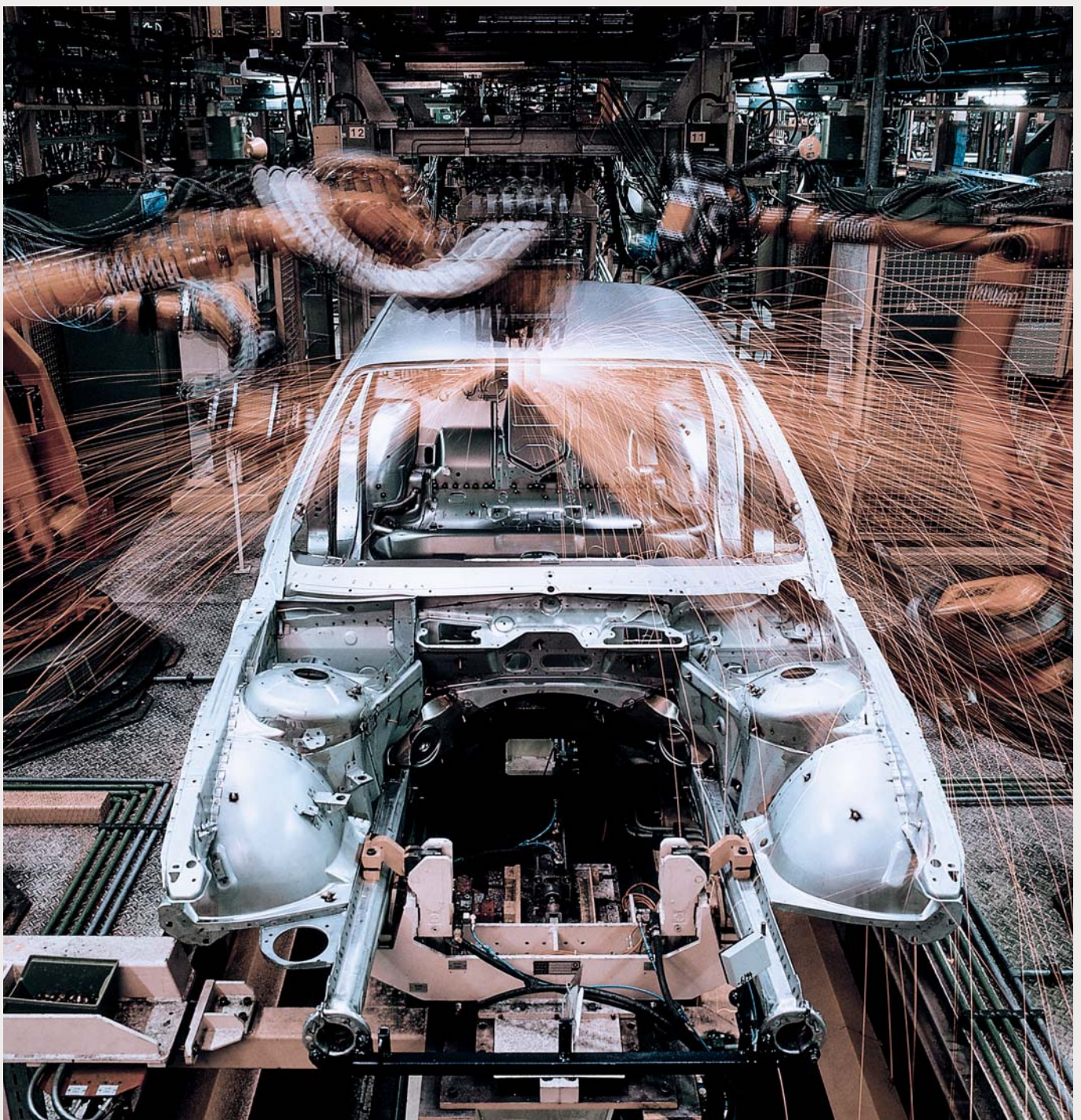
Simple, quick and safe

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.





GENERAL INFORMATION

IEC 62208 Enclosures for low-voltage switchgear and controlgear assemblies.



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).

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.

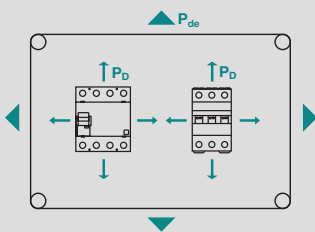
Example: The installation of an IP 44 socket into the lid of an IP 65 enclosure reduces the degree of protection in that specific area to IP 44. The enclosure itself still provides IP 65, but the manufacturer has to draw attention to the fact, that the socket only provides IP 44 for the area where it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

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

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.

EXAMPLES OF APPLICATION

EMPTY ENCLOSURES
ACCORDING TO IEC 62208





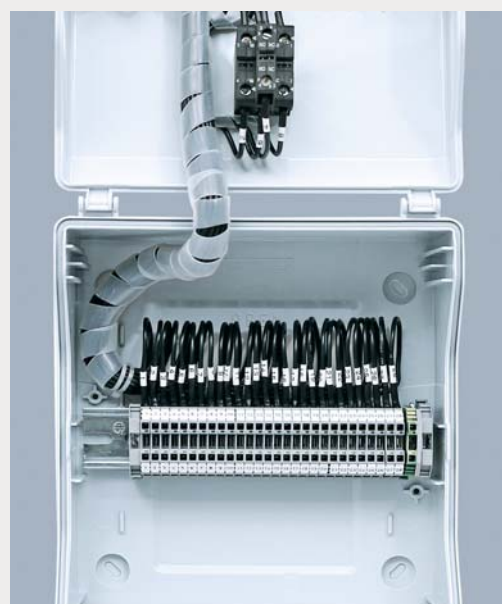
EMPTY ENCLOSURES

FOR CUSTOMIZED SOLUTIONS AND
INDIVIDUAL APPLICATIONS

in accordance with IEC 62208

IP
66








System properties

- + 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



Please scan the QR code or see our website hensel-electric.de to get detailed information.

EMPTY ENCLOSURES – EMPTY ENCLOSURES IN ACCORDANCE WITH IEC 62208
 EB EMPTY BOXES, BOX WALLS WITHOUT KNOCKOUTS

	EB 02 G	<ul style="list-style-type: none"> + for installation equipment on DIN rails or mounting plates + installation dimensions height x width x depth: 74 x 74 x 47 mm + box walls without knockouts + dimensions H x W x D: 93 x 93 x 62 mm 	   
	EB 02 B	<ul style="list-style-type: none"> + for installation equipment on DIN rails or mounting plates + installation dimensions height x width x depth: 74 x 74 x 47 mm + box walls without knockouts + dimensions H x W x D: 93 x 93 x 62 mm 	   
	EB 04 G	<ul style="list-style-type: none"> + for installation equipment on DIN rails or mounting plates + installation dimensions height x width x depth: 83 x 83 x 55 mm + box walls without knockouts + dimensions H x W x D: 104 x 104 x 70 mm 	   
	EB 04 B	<ul style="list-style-type: none"> + for installation equipment on DIN rails or mounting plates + installation dimensions height x width x depth: 83 x 83 x 55 mm + box walls without knockouts + dimensions H x W x D: 104 x 104 x 70 mm 	   
	EB 06 G	<ul style="list-style-type: none"> + for installation equipment on DIN rails or mounting plates + installation dimensions height x width x depth: 102 x 102 x 62 mm + box walls without knockouts + dimensions H x W x D: 130 x 130 x 77 mm 	   
	EB 06 B	<ul style="list-style-type: none"> + for installation equipment on DIN rails or mounting plates + installation dimensions height x width x depth: 102 x 102 x 62 mm + box walls without knockouts + dimensions H x W x D: 130 x 130 x 77 mm 	   
	EB 10 G	<ul style="list-style-type: none"> + for installation equipment on DIN rails or mounting plates + installation dimensions height x width x depth: 97 x 150 x 62 mm + box walls without knockouts + dimensions H x W x D: 130 x 180 x 77 mm 	   
	EB 10 B	<ul style="list-style-type: none"> + for installation equipment on DIN rails or mounting plates + installation dimensions height x width x depth: 97 x 150 x 62 mm + box walls without knockouts + dimensions H x W x D: 130 x 180 x 77 mm 	   



EB 25 G

- + for installation equipment on DIN rails or mounting plates
- + installation dimensions height x width x depth: 170 x 220 x 96 mm
- + box walls without knockouts
- + dimensions H x W x D: 205 x 255 x 112 mm



EB 25 B

- + for installation equipment on DIN rails or mounting plates
- + installation dimensions height x width x depth: 170 x 220 x 96 mm
- + box walls without knockouts
- + dimensions H x W x D: 205 x 255 x 112 mm



EB 35 G

- + for installation equipment on DIN rails or mounting plates
- + installation dimensions height x width x depth: 190 x 260 x 106 mm
- + box walls without knockouts
- + dimensions H x W x D: 225 x 295 x 122 mm



EB 35 B

- + for installation equipment on DIN rails or mounting plates
- + installation dimensions height x width x depth: 190 x 260 x 106 mm
- + box walls without knockouts
- + dimensions H x W x D: 225 x 295 x 122 mm



EB 50 G

- + for installation equipment on DIN rails or mounting plates
- + installation dimensions height x width x depth: 215 x 320 x 106 mm
- + box walls without knockouts
- + dimensions H x W x D: 255 x 355 x 122 mm



























EB 50 B

- + for installation equipment on DIN rails or mounting plates
- + installation dimensions height x width x depth: 215 x 320 x 106 mm
- + box walls without knockouts
- + dimensions H x W x D: 255 x 355 x 122 mm



EMPTY ENCLOSURES — EMPTY ENCLOSURES IN ACCORDANCE WITH IEC 62208
KG EMPTY BOXES, BOX WALLS WITH METRIC KNOCKOUTS

	KG 9001	<ul style="list-style-type: none">+ for installation equipment on DIN rails or mounting plates+ installation dimensions height x width x depth: 205 x 101 x 95 mm+ with metric knockouts+ dimensions H x W x D: 253 x 136 x 115 mm	 
	KG 9001 IN	<ul style="list-style-type: none">+ for installation equipment on DIN rails or mounting plates+ installation dimensions height x width x depth: 205 x 101 x 95 mm+ with metric knockouts+ dimensions H x W x D: 253 x 136 x 115 mm	 
	KG 9002	<ul style="list-style-type: none">+ for installation equipment on DIN rails or mounting plates+ installation dimensions height x width x depth: 205 x 133 x 95 mm+ with metric knockouts+ dimensions H x W x D: 253 x 168 x 115 mm	 
	KG 9002 IN	<ul style="list-style-type: none">+ for installation equipment on DIN rails or mounting plates+ installation dimensions height x width x depth: 205 x 133 x 95 mm+ with metric knockouts+ dimensions H x W x D: 253 x 168 x 115 mm	 
	KG 9003	<ul style="list-style-type: none">+ for installation equipment on DIN rails or mounting plates+ installation dimensions height x width x depth: 205 x 182 x 95 mm+ with metric knockouts+ dimensions H x W x D: 253 x 217 x 115 mm	 
	KG 9003 IN	<ul style="list-style-type: none">+ for installation equipment on DIN rails or mounting plates+ installation dimensions height x width x depth: 205 x 182 x 95 mm+ with metric knockouts+ dimensions H x W x D: 253 x 217 x 115 mm	 

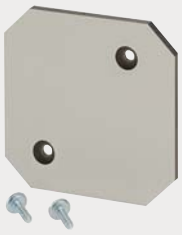
	K 0100	<ul style="list-style-type: none"> + for installation equipment on DIN rails or mounting plates + installation dimensions height x width x depth: 125 x 275 x 146 mm + box walls without knockouts + dimensions H x W x D: 150 x 300 x 170 mm 	 
	K 0200	<ul style="list-style-type: none"> + for installation equipment on DIN rails or mounting plates + installation dimensions height x width x depth: 275 x 275 x 146 mm + box walls without knockouts + dimensions H x W x D: 300 x 300 x 170 mm 	 
	K 0300	<ul style="list-style-type: none"> + for installation equipment on DIN rails or mounting plates + installation dimensions height x width x depth: 425 x 275 x 146 mm + box walls without knockouts + dimensions H x W x D: 450 x 300 x 170 mm 	 
	K 0400	<ul style="list-style-type: none"> + for installation equipment on DIN rails or mounting plates + installation dimensions height x width x depth: 575 x 275 x 146 mm + box walls without knockouts + dimensions H x W x D: 600 x 300 x 170 mm 	 
	K 0101	<ul style="list-style-type: none"> + for installation equipment on DIN rails or mounting plates + installation dimensions height x width x depth: 125 x 275 x 146 mm + box walls without knockouts + dimensions H x W x D: 150 x 300 x 170 mm 	 
	K 0201	<ul style="list-style-type: none"> + for installation equipment on DIN rails or mounting plates + installation dimensions height x width x depth: 275 x 275 x 146 mm + box walls without knockouts + dimensions H x W x D: 300 x 300 x 170 mm 	 
	K 0301	<ul style="list-style-type: none"> + for installation equipment on DIN rails or mounting plates + installation dimensions height x width x depth: 425 x 275 x 146 mm + box walls without knockouts + dimensions H x W x D: 450 x 300 x 170 mm 	 
	K 0401	<ul style="list-style-type: none"> + for installation equipment on DIN rails or mounting plates + installation dimensions height x width x depth: 575 x 275 x 146 mm + box walls without knockouts + dimensions H x W x D: 600 x 300 x 170 mm 	 

EMPTY ENCLOSURES ACCESSORIES

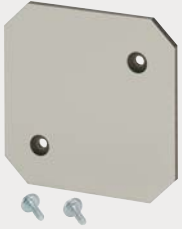


	DK TS 01	+ DIN rail 35 mm + DIN rail 35 x 7.5 mm, 71 mm long
	DK TS 02	+ DIN rail 15 mm + DIN rail 15 x 5.5 mm, 67 mm long
	DK TS 04	+ DIN rail 15 mm + DIN rail 15 x 5.5 mm, 77 mm long
	DK TS 06	+ DIN rail 35 mm + DIN rail 35 x 7.5 mm, 97 mm long
	DK TS 10	+ DIN rail 35 mm + DIN rail 35 x 7.5 mm, 147 mm long
	DK TS 25	+ DIN rail 35 mm + DIN rail 35 x 7.5 mm, 218 mm long
	DK TS 35	+ DIN rail 35 mm + DIN rail 35 x 15 mm, 256 mm long
	DK TS 50	+ DIN rail 35 mm + DIN rail 35 x 15 mm, 314 mm long

EMPTY ENCLOSURES — ACCESSORIES
FOR EB EMPTY BOXES



EB MP 02 + mounting plate
+ for EB 02.. empty boxes



EB MP 04 + mounting plate
+ for EB 04.. empty boxes



EB MP 06 + mounting plate
+ for EB 06.. empty boxes



EB MP 10 + mounting plate
+ for EB 10.. empty boxes



EB MP 25 + mounting plate
+ for EB 25.. empty boxes



EB MP 35 + mounting plate
+ for EB 35.. empty boxes



EB MP 50 + mounting plate
+ for EB 50.. empty boxes



- DK MB 1**
- + pipe and pole mounting set
 - + for cable junction boxes DK 02.. X, KF 02.. X, WP 02.. X, EB 02 X
 - + for cable junction boxes DK 04.. X, KF 04.. X, WP 04.. X, EB 04 X
 - + for cable junction boxes DK 06.. X, KF 06.. X, WP 06.. X, EB 06 X



- DK MB 2**
- + pipe and pole mounting set
 - + for cable junction boxes DK 10.. X, KF 10.. X, WP 10.. X, EB 10 X
 - + for cable junction boxes DK 16.. X, KF 16.. X



- DK MB 3**
- + pipe and pole mounting set
 - + 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

EMPTY ENCLOSURES — ACCESSORIES
FOR KG EMPTY BOXES



- KG TS 01**
- + DIN rail 35 mm
 - + DIN rail 35 x 7.5 mm, 81 mm long



- KG TS 02**
- + DIN rail 35 mm
 - + DIN rail 35 x 7.5 mm, 108 mm long



- KG TS 03**
- + DIN rail 35 mm
 - + DIN rail 35 x 7.5 mm, 162 mm long



- KG MP 01**
- + mounting plate
 - + for KG 9001 empty enclosures









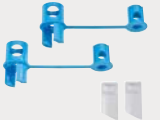










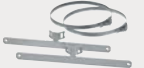
- KG MP 02**
- + mounting plate
 - + for KG 9002 empty enclosures



- KG MP 03**
- + mounting plate
 - + for KG 9003 empty enclosures

EMPTY ENCLOSURES — ACCESSORIES
FOR K EMPTY BOXES

	Mi TS 15	+ DIN rail + DIN rail 35 x 15 mm, 134 mm long
	Mi TS 30	+ DIN rail + DIN rail 35 x 15 mm, 284 mm long
	Mi TS 45	+ DIN rail + DIN rail 35 x 15 mm, 434 mm long
	Mi TS 60	+ DIN rail + DIN rail 35 x 15 mm, 584 mm long
	Mi MP 1	+ mounting plate + suitable for box size: 1, 2, 3, 4, 6 + dimensions H x W x D: 115 x 259 x 4 mm
	Mi MP 2	+ mounting plate + suitable for box size: 2, 3, 4, 6, 8 + dimensions H x W x D: 265 x 265 x 4 mm
	Mi MP 3	+ mounting plate + suitable for box size: 3, 4, 6 + dimensions H x W x D: 415 x 265 x 4 mm
	Mi MP 4	+ mounting plate + suitable for box size: 4, 6, 8 + dimensions H x W x D: 565 x 265 x 4 mm

	Mi PL 2	<ul style="list-style-type: none"> + locking device insertion conversion kit + seal closure + set with 2 pieces 	
	Mi SR 4	<ul style="list-style-type: none"> + locking device insertion conversion kit + tool operation + set with 4 pieces 	
	Mi SN 4	<ul style="list-style-type: none"> + Locking device insertion conversion kit + Hand closure + Set with 4 pieces 	
	Mi SV 2	<ul style="list-style-type: none"> + locking device insertion conversion kit + for padlock + set with 2 pieces 	
	Mi DV 01	+ Locking device insertion	
	Mi DR 04	<ul style="list-style-type: none"> + locking device insertion + triangle + set with 4 pieces 	
	DS 1	<ul style="list-style-type: none"> + spare key + triangle 	
	US 1	+ spare key	
	Mi AL 40	<ul style="list-style-type: none"> + external brackets + set with 4 pieces 	
	Mi ZS 20	<ul style="list-style-type: none"> + hinge + set with 2 pieces 	
	Mi ZS 30	+ hinge	
	Mi ZR 4	<ul style="list-style-type: none"> + extension frame + for enclosure size 4 + for extension of the installation depth by 85 mm + dimensions H x W x D: 600 x 300 x 85 mm 	
	Mi MB 1	<ul style="list-style-type: none"> + pipe and pole mounting set + for enclosure width 150 mm 	
	Mi MB 2	<ul style="list-style-type: none"> + pipe and pole mounting set + for enclosure width 300 mm 	

EMPTY ENCLOSURES

THE RIGHT ACCESSORIES FOR EVERY BOX

Use the high-quality cable glands from HENSEL and you can rely on tested system solutions

for EB empty enclosures

- + DIN rails
- + mounting plates
- + Mounting sets for box installation on round poles

for KG empty enclosures

- + DIN rails
- + mounting plates

for K empty enclosures

- + DIN rails
- + mounting plates
- + Mounting sets for box installation on round poles

CABLE ENTRY –

THE RIGHT CABLE GLAND FOR EVERY BOX

Use the high-quality cable glands from HENSEL and you can rely on tested system solutions

- + Large selection of cable glands and screw fittings
- + Degree of protection tests from IP 31 - IP 69
- + Hexagon nut and necessary sealing rings always included
- + Available in grey, black and orange

IP
31-69





POLE MOUNTING MADE EASY

**Professional assembly solutions for
housing installation on round poles**

MORE ACCESSORIES



[hensel-electric.de](https://www.hensel-electric.de)

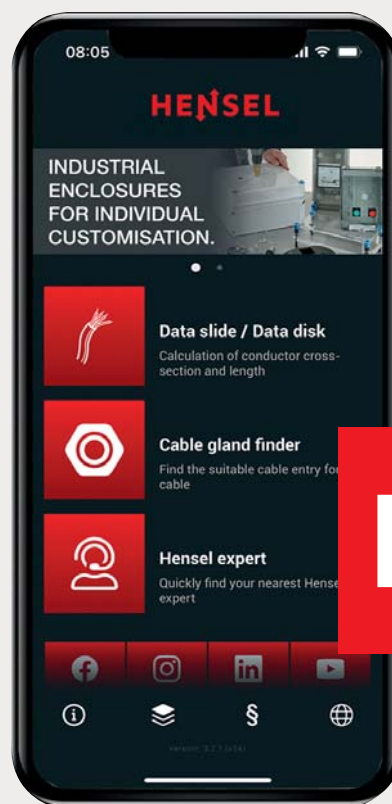
Pole mounting solutions for simple, secure and flexible installation

- + For mounting installation housings on round poles via profile clamps
- + Profile clamps and fixing screws included
- + Clamping range 60 to 150 mm
- + Easy assembly: Mounting holes with pre-cut M4 threads
- + Weatherproof thanks to stainless steel V2A
- + Available for cable junction boxes, KV small-type distribution boards and Mi distributors

ENYEXPERT – MORE KNOWLEDGE IN YOUR HAND

Always be up-to-date on the go. In addition to useful information, the HENSEL app offers simple and practical tools to make your everyday work easier.

- + **Data slide / Data disc**
Calculation of conductor cross section and length
- + **Cable gland finder**
Find the suitable cable entry for your cable
- + **HENSEL expert**
Quickly find your nearest HENSEL expert



AVAILABLE FOR ANDROID AND
IOS (FREE OF CHARGE)



ANDROID
Scan QR-Code



IOS
Scan QR-Code

SERVICE@HENSEL – DIGITAL, ANALOGUE AND ON SITE

In addition to the ENYEXPERT app, HENSEL offers other useful and innovative tools that significantly facilitate the everyday work in the electrical trade:



+ **MY HENSEL-BOX**

Your Logo on the HENSEL-box

Use the HENSEL-box as a business card for your installation services



Please contact your HENSEL expert:
hensel-electric.de

+ **ENYGUIDE**

The 3D Configurator for Mi- and ENYSTAR distribution boards

Whether as a 2D drawing or as a three-dimensional image – The intuitive 3D planning tool ENYGUIDE supports electrical specialists in the planning, project planning and ordering of HENSEL ENYSTAR and Mi Distribution boards.



More:
enyguide.de

+ **CALCULATION TOOL**

for the verification of the permissible temperature rise

The online tool for quickly and easily determining the power loss.



+ **PORTAL 61439**

The platform with all information about design and assembly according to IEC 61439 / EN 61439.





FOR A SAFE
ELECTRIC FUTURE.

HENSEL



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