



Technical Data

RoHS REACH

Directive 2002/95/EC (RoHS)

We state all these details according to the best of our knowledge. They correspond to the present state of the art. This information is not to be understood as a warranty in the sense of warranty law.

HENSEL test enclosures according to this standard.

Under the intended use, our products do not fall within the scope of the Electrical Equipment Act (Electrical and Electronic Equipment) and therefore outside the scope of Directive 2002/95/EC (RoHS). If they should be provided for use in products falling within the scope of RoHS, compliance with the requirements of RoHS have to be contracted bilaterally.

The following product series comply with Directive 2002/95/EC (RoHS):

- **ENYCASE**® DK Cable Junction Boxes
- **ENYBOARD** KV Small-type Distribution Boards
- **ENYSTAR**® Enclosure System (Empty enclosures, Circuit Breaker Boxes)
- **ENYMOD** Mi Distribution Boards (Empty Boxes, Circuit Breaker Boxes)
- **ENYFIT** Cable Entry Systems

Regulation (EC)

No 1907/2006 REACH

Gustav Hensel GmbH & Co. KG meets the requirements set by REACH (EG) No. 1907/2006. We shall inform you in the framework of our business relations about the changes to our products resulting from REACH and agree on suitable measures on a case-by-case basis.

As far as article 33 of REACH is concerned, we hereby inform you as follows:

It is not possible yet to provide information whether the substances that have been added to the candidate list (new date 15.12.2010) according to article 59 (1. 10) of the above-mentioned regulation (see the website of the European Chemicals Agency (ECHA) <http://echa.europa.eu/>) are contained in the article or in the packaging materials in a concentration above 0.1 % weight by weight, because we must first obtain the relevant information from our suppliers.

As regards the substances included on the previous candidate list (earlier date 18.06.2010), we would like to inform you of the following: The article and its packaging materials contain no substances included on the candidate list (date 18.06.2010) according to article 59 (1. 10) of the above-mentioned regulation in a concentration above 0.1 % weight by weight.

Lennestadt, January 2011



Technical Data

Degrees of Protection Provided by Enclosures (IP Code)

Degrees of protection according to IEC 60 529

Degree of protection of electrical equipment

Electrical equipment must be protected for safety reasons from external influences and conditions. Enclosures provide the protection of electrical equipment against access to hazardous parts and against solid foreign objects, as well as dust, humidity and water.

The international standard IEC 60 529, the german standard *DIN EN 60 529 / VDE 0470 Part 1 September 2000* with the title

“Degrees of protection provided by enclosures (IP Code)”, form the basis for the determination and designation of the degree of protection.

The degree of protection provided by an enclosure is proven by means of standardized testing methods.

The becoming “aged” of test samples before carrying out the actual type tests are part of the standardized testing methods.

Ageing is made by an more-active increased thermal treatment.

IP		1st characteristic numeral: Protection against foreign solid objects and direct contact		Additional letter	
		Meaning for the protection of equipment against ingress of solid foreign objects and of persons against access to hazardous parts with (non-protected) back of hand, finger, tool or wire.		Additional letter where the actual protection against access to hazardous parts is higher than that indicated by the 1st characteristic numeral (e.G. IP 20C)	
		Protection against ingress of solid foreign objects ...	Protection against access to hazardous parts with ...	Short form: Protection against access with ...	
IP 0X	non-protected	non-protected	non-protected		
IP 1X	solid foreign objects ≥ 50 mm Ø	the back of a hand		A	the back of the hand
IP 2X	solid foreign objects ≥ 12.5 mm Ø	a finger		B	a finger
IP 3X	solid foreign objects ≥ 2.5 mm Ø	a tool ≥ 2.5 mm Ø		C	a tool ≥ 2.5 mm Ø
IP 4X	solid foreign objects ≥ 1.0 mm Ø	a wire ≥ 1 mm Ø		D	a wire ≥ 1 mm Ø
IP 5X	dust-protected	with any auxiliary equipment (wire)			
IP 6X	dust-tight	contact with any auxiliary equipment (wire)			

Meaning of the first characteristic numeral

The first characteristic numeral indicates, to what extent the enclosure provides protection for persons against the access to (affecting of) hazardous parts. This protection is reached, when the penetration into an enclosure of a part of the body or a foreign object, which is held by a person, is prevented or limited. At the same time the enclosure provides protection of equipment against the penetration of solid foreign objects. This is the reason for having two descriptions and two definitions to each first characteristic numeral.

Meaning of the second characteristic numeral

The second characteristic numeral indicates the protection of the enclosure against ingress of water with harmful effects on the electrical equipment.

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The marking system consists of the code letters **IP** and two following characteristic numerals.

Example:
IP 6 7



2nd characteristic numeral: Protection against ingress of water with harmful effects

	IP X0	IP X1	IP X2	IP X3	IP X4	IP X5	IP X6	IP X7
Application	Non-protected	Protection against vertical dripping water	Protected against dripping water, when the housing is tilted up to 15°	Protection for occasional cleaning procedures, not direct spraying of the equipment (spraying water)	Protection for occasional cleaning procedures, not direct spraying of the equipment (splashing water)	Protection of operational processes, not direct spraying of the equipment (water jets)	Protection of operational processes, not direct spraying of the equipment (powerful water jets)	Protection against the effects of temporary immersion in water
Symbol								
	IP 20							
	IP 30	IP 31						
	IP 40	IP 41	IP 42	IP 43	IP 44			
					IP 54	IP 55		
						IP 65	IP 66	IP 67

Additional letters to the IP Code

The IP Code can still be extended by additional letters. Additional letters indicate the degree of protection against access to hazardous parts. Additional letters follow the two characteristic numerals. Additional letters are only used, - if the actual protection against access to hazardous parts is higher than by the first characteristic numeral indicated; or - if only the protection against access to hazardous parts is indicated and the degree of protection against solid foreign objects is not considered. The first characteristic numeral being then replaced by an X. An enclosure shall only be designated with a stated degree of protection indicated by the additional letter if the enclosure also complies with all lower degrees of protection.



Technical Data

Outside Diameter of Conventional Cable Cross-Sections Short Forms of Cables

The outside diameters are average values of different products.

Cable cross-section	NYM	NYY	NYCY NYCWY
mm ²	mm Ø	mm Ø	mm Ø
1x4	8	9	—
1x6	8.5	10	—
1x10	9.5	10.5	—
1x16	11	12	—
1x25	—	14	—
1x35	—	15	—
1x50	—	16.5	—
1x70	—	18	—
1x95	—	20	—
1x120	—	21	—
1x150	—	23	—
1x185	—	25	—
1x240	—	28	—
1x300	—	30	—
2x1.5	10	12	—
2x2.5	11	13	—
2x4	—	15	—
2x6	—	16	—
2x10	—	18	—
2x16	—	20	—
2x25	—	—	—
2x35	—	—	—
3x1.5	10.5	12.5	13
3x2.5	11	13	14
3x4	13	16	16
3x6	15	17	17
3x10	18	19	18
3x16	20	21	21
3x25	—	26	—
3x35	—	—	—
3x50	—	—	—
3x70	—	—	—
3x95	—	—	—
3x120	—	—	—
3x150	—	—	—
3x185	—	—	—
3x240	—	—	—
3x25/16	—	27	27
3x35/16	—	28	27
3x50/25	—	32	32
3x70/35	—	32-36	36
3x95/50	—	37-41	40
3x120/70	—	42	43
3x150/70	—	46	47
3x185/95	—	52	48-54
3x240/120	—	57-63	60
3x300/150	—	63-69	—

Cable cross-section	NYM	NYY	NYCY NYCWY
mm ²	mm Ø	mm Ø	mm Ø
4x1.5	11	13.5	14
4x2.5	12.5	14.5	15
4x4	14.5	17.5	17
4x6	16.5	18	18
4x10	18.5	20	20
4x16	23.5	23	23
4x25	28.5	28	28
4x35	32	26-30	29
4x50	—	30-35	34
4x70	—	34-40	37
4x95	—	38-45	42
4x120	—	42-50	47
4x150	—	46-53	52
4x185	—	53-60	60
4x240	—	59-71	70
4x25/16	—	—	30
4x35/16	—	—	30
4x50/25	—	—	34-37
4x70/35	—	—	40
4x95/50	—	—	44.5
4x120/70	—	—	48.5
4x150/70	—	—	53
4x185/95	—	—	—
4x240/120	—	—	—
5x1.5	12	15	15
5x2.5	13.5	16	17
5x4	15.5	16.5	18
5x6	18	19	20
5x10	20	21	—
5x16	26	24	—
5x25	31.5	—	—
7x1.5	13	16	—
7x2.5	14.5	16.5	—
19x1.5	—	22	—
24x1.5	—	25	—

Short forms of cables

- NYM Light plastic-sheathed cable
- NYY Plastic-sheathed cable
- NYCY Plastic-sheathed cable with concentric conductor
- NYCWY Plastic-sheathed cable with concentric undulated conductor



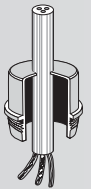
Technical Data

Assignment of Cable Outside Diameters to Cable Glands Standards



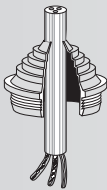
Outside diameter of cables		Cable entry metric
min. mm Ø	max. mm Ø	
3	6.5	ASM/AKM/ASS 12
5	10	ASM/AKM/ASS 16
6.5	13.5	ASM/AKM/ASS 20
10	17	ASM/AKM/ASS 25
14	21	ASM/AKM/ASS 32
20	28	ASM/AKM/ASS 40
25	35	ASM/AKM/ASS 50
35	48	ASM/AKM/ASS 63
5	10	AFM 16
8	13	AFM 20
11	17	AFM 25
15	21	AFM 32

Cable glands ASM/AKM/ASS
 Degree of protection: up to IP 67
 With strain relief and counternut.



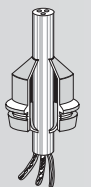
Outside diameter of cables		Cable entry metric
min. mm Ø	max. mm Ø	
4.8	11	ESM 16
6	13	ESM 20
9	17	ESM 25
9	23	ESM 32
17	30	ESM 40

Grommets ESM
 Degree of protection: IP 55
 Grommets are inserted into knockouts.
 No nut is necessary!



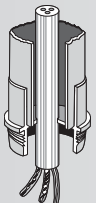
Outside diameter of cables		Cable entry metric
min. mm Ø	max. mm Ø	
3.5	12	STM 16
5	16	STM 20
5	21	STM 25
13	26.5	STM 32
13	34	STM 40

Stepped grommets STM
 Degree of protection: IP 55
 Stepped grommets are inserted into knock outs.
 No nut is necessary!



Outside diameter of cables		Cable entry metric
min. mm Ø	max. mm Ø	
5	10	EDK 16
6	13	EDK 20
9	17	EDK 25
8	23	EDK 32
11	30	EDK 40

Grommets EDK
 Degree of protection: IP 65
 Grommets are inserted into knock outs.
 No nut is necessary!



Outside diameter of cables		Cable entry metric
min. mm Ø	max. mm Ø	
Conduit		
M 16		EDR 16
M 20		EDR 20
M 25		EDR 25
M 32		EDR 32
M 40		EDR 40

Grommets for conduits EDR
 Degree of protection: IP 65
 Grommets for conduits are inserted into knock outs.
 No nut is necessary!

Hensel cable entries comply with the following standards and regulations:

- EN 50 262
Metric cable entries for electrical installations
- EN 60 423
Conduits for electrical purposes - Outside diameter of conduits for electrical installations and threads for conduits and fittings
- IEC 60 529
Degrees of protection provided by enclosures (IP-Code)



Technical Data

Preparation of Aluminium Conductors

Connection of aluminium conductors

I. Chemical basics

The special conducting characteristics of aluminum can be seen in the fact that the surface of an aluminum 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 aluminum conductors and the terminal body.

This can lead to terminal overheating and in the worst case fire.

Despite these special conditions, aluminum conductors can be connected if the terminal used is appropriate and the following conditions are taken into consideration when connecting.

II. Special terminal requirements for the connection of aluminium conductors

The suitability of terminal for connections with aluminium conductors needs to be evaluated and confirmed by the terminal manufacturer.

1. These terminals will thus meet the requirements for an aligned **electrochemical voltage sequence**. A disintegration of the base material (aluminum) will be prevented.

2. The terminal has an appropriate shape and surface to penetrate the grease layer or a very thin oxide layer on the aluminum conductor upon connection.

III. Appropriate preparation and handling of aluminium conductors



The non-insulated conductor ends need to have the oxide layer carefully scraped clean using a knife for example. In doing so no files, sand paper or brushes may be used.



Immediately after removing the oxide layer, the conductor end needs to be rubbed with an acid and alkali free grease such as technical vaseline and then immediately connected to the terminal. This in turn prevents oxygen from forming a non-conducting oxide layer.



Due to the flow tendency in aluminum the terminals need to be tightened before start up and after the first **200 operating hours** (note the appropriate torque).



The steps listed above need to be repeated if the conductor is removed and re-connected. I.e. the conductor has to be scraped again, greased and immediately connected, because it will be connected at a different position.



Technical Data

Types of Conductors

IK Code

International short forms of types of conductors

		Type of conductor	Symbol	Designation of cables
r (rigid)	sol (solid)	round solid	●	RE (round single)
		sector-type	▼	SE (sector solid)
	s (stranded)	round stranded	⊗	RM (round stranded)
		sector-type	▼	SM (sector, stranded)
f (flexible)		⊗		

IK Code

Protection against mechanical shock (impact strength)

IK Code: Demand energy value [W] in Joules.

The European standard for enclosures EN 50298:98 includes also the IK Code for impact strength. With the DIN EN 50102 (VDE 0470 part of 100) "Degrees of protection by enclosures for electrical operational funds (equipment) against outside mechanical loads (IK Code)". is defined with the identification letters IK.

This standard regulates the methods for the description of the protection of enclosures against outside mechanical loads.

This indicates the degree of protection, which is provided by an enclosure against a mechanical load (demand energy in joules).

HENSEL tests its enclosures and enclosure systems additionally also according to this standard.

Classification of the impact strength by the IK Code

IK Code	[W] in J		IK Code	[W] in J	
IK00	kein Schutz		IK06	1	
IK01	0,14		IK07	2	
IK02	0,2		IK08	5	
IK03	0,35		IK09	10	
IK04	0,5		IK10	20	
IK05	0,7				



Technical Data

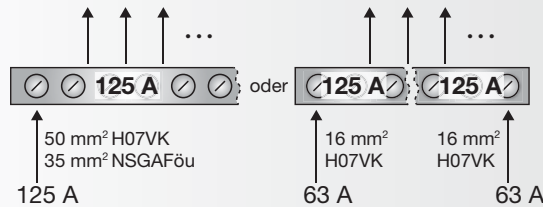
Rating of Insulated Conductors in Switchgear Assemblies Overload and Short-Circuit Protection

Rating of insulated conductors in switchgear assemblies

The choice of cross-section for the conductors within switchgear assemblies is subject to the responsibility of the manufacturer in accordance with IEC 61 439-1. We recommend the following cross-sections dependent on the series-connected protective devices. The values of Table 1 are based on the phase conductors. Wiring information for devices (e.g. conductor size min. ... mm²) must be noted as a matter of priority.

Protective device	PVC H07V-K max. 70° C	NSGAFöu max. 90° C	Verdrahtungsbund max. 105° C
20 A	2.5 mm ²	2.5 mm ²	
25 A	4 mm ²	4 mm ²	
32/35 A	6 mm ²	6 mm ²	
40/50 A	10 mm ²	10 mm ²	
63 A	16 mm ²	16 mm ²	
80 A	25 mm ²	25 mm ²	
100 A	35 mm ²	25 mm ²	Mi VS 100
125 A	50 mm ²	35 mm ²	Mi VS 160
160 A	70 mm ²	70 mm ²	Mi VS 160
200 A	95 mm ²	95 mm ²	Mi VS 250
250 A	120 mm ²	120 mm ²	Mi VS 250
315 A		150 mm ²	Mi VS 400
400 A			Mi VS 400
630 A			Mi VS 630

Examples

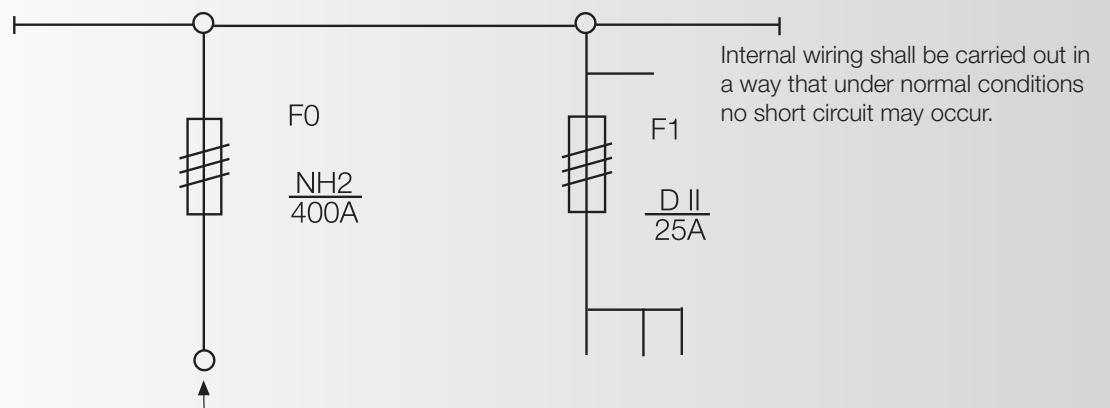


Overload and short-circuit protection

Each cable must be protected against overload and short circuits.

The dimensioning according to Table 1 requires a series-connected protective device for the overload and short-circuit protection.

In some cases, it may occur that the series-connected protective device cannot take over this protection e.g. when picking off one or several small loads from a busbar, see the following diagram.



The protective device F0 that is connected in series to the busbar system adopts neither the overload nor short-circuit protection of the outgoing cable to F1.

For this reason, the cable must be laid in front of the fuse F1 so that no short circuits may occur under normal conditions.

The following apply as short-circuit-proof cable installations e.g.

- rigid connections which do not come into contact with each other even in the event of a short circuit (fixing of the conductors)
- cables with special insulation e.g. NSAFou kV



Technical Data

Rating of Conductors

Diversity Factors

Rating of the PE and N conductor per circuit

Phase conductor $\leq 16 \text{ mm}^2$: as phase conductor

Phase conductor $> 16 \text{ mm}^2$: 1/2 phase conductor cross-section, at least however 16 mm^2 , (not EMC-compliant)

In buildings with a high proportion of a.c. loads or sources of harmonic voltages (electronic ballasts or PCs), it can be necessary to implement the N conductor with the same current carrying capacity as the phase conductors.

For all Hensel busbar systems up to 630 A. the N conductor must be implemented with the same current carrying capacity.

Diversity factor for built-in devices according to IEC 61 439-2

The following loading factors may be applied where more than one circuit is installed in one box or installation assembly and if no details of the rated current are known:

Number of circuits	Factor
2-3	0.9
4-5	0.8
6-9	0.7
10 and more	0.6



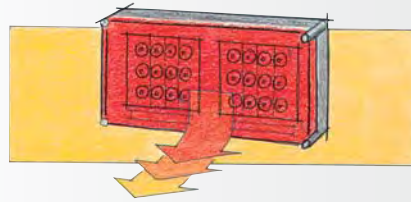
Technical Data

Formation of Condensed Water and Retaliatory Actions

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

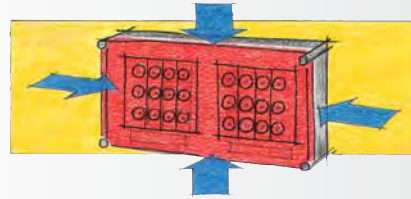
The problem of condensed water forming in electrical installations only occurs in enclosures with a degree of protection \geq IP 54 since the temperature adjustment that is carried out from inside to outside is too low due to the high density of the enclosure and its material.

System switched on.



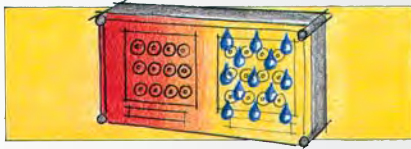
The internal temperature is higher than the external temperature due to the power dissipation of the built-in devices.

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.

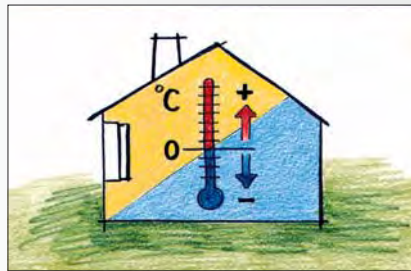
System switched off.



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.

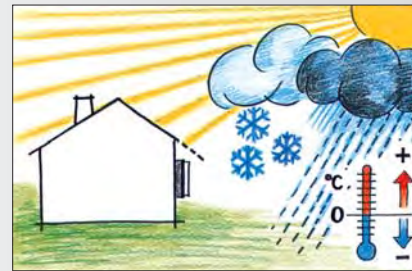
How does condensed water occur in enclosures with a high degree of protection?

Formation of condensed water for indoor installations:



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

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



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

Measure against accumulation of condensed water

e. g. Cable junction boxes

1. Select the installation site (avoid temperature differences).
2. Open condensed water membrane at the lowest point of the cable junction box (maybe drill hole \varnothing 5 mm).
3. Enable exchange of air via ventilation.



Example:
Open condensation water membrane

Measures against formation of condensation water

e. g. Mi Distribution boards

Ventilation flange for vertical mounting on lateral box walls in case of extremely high inside temperature **or the risk of water condensation**, degree of protection IP 44.



Cable entry and ventilation

Combi climate glands ensure pressure compensation between enclosure interior and ambient air via an inserted, breathable membrane and ingress of water from outside is prevented.





Technical Data

Definition of Terms

Definition of Terms

Rated values for setting up low-voltage switchgear are given in the standard IEC 61 439-1

Rated voltage (U_n)

highest nominal value of the a.c. (r.m.s.) or d.c. voltage, declared by the assembly manufacturer, to which the main circuit(s) of the assembly is (are) designed to be connected.

Rated operational voltage (U_o) (of a circuit of an assembly)

value of voltage, declared by the assembly manufacturer, which combined with the rated current determines its application.

Rated insulation voltage (U_i)

r.m.s. withstand voltage value, assigned by the assembly manufacturer to the equipment or to a part of it, characterising the specified (long-term) withstand capability of the insulation.

Rated impulse voltage (U_{imp})

impulse withstand voltage value, declared by the assembly manufacturer, characterising the specified withstand capability of the insulation against transient overvoltages.

Rated current (I_n)

value of current, declared by the assembly manufacturer taking into consideration the ratings of the components, their disposition and application, which can be carried without the temperature-rise of various parts of the assembly exceeding specified limits under specified conditions.

Prospective short circuit current (I_{cp})

current which flows when the supply conductors to the circuit are short-circuited by a conductor of negligible impedance located as near as practicable to the supply terminals of the assembly.

Rated peak withstand current (I_{pk})

value of peak short-circuit current, declared by the assembly manufacturer, that can be withstood under specified conditions.

Rated short-time withstand current (I_{cw})

r.m.s value of short-time current, declared by the assembly manufacturer, that can be carried without damage under specified conditions, defined in terms of a current and time.

Rated conditional short-circuit current (I_{cc})

value of prospective short-circuit current, declared by the assembly manufacturer, that can be withstood for the total operating time (clearing time) of the short-circuit protective device (SCPD) under specified conditions.

Rated current of the assembly (I_{nA})

The rated current of the assembly is the smaller of:

- the sum of the rated currents of the incoming circuits within the assembly operated in parallel;

- the total current which the main busbar is capable of distributing in the particular assembly arrangement.

This current shall be carried without the temperature rise of the individual parts exceeding the limits specified in the standard.

Rated current of a circuit (I_{nc})

The rated current of a circuit is stated by the assembly manufacturer, taking into consideration the ratings of the devices within the circuit, their disposition and application. This current shall be carried without the temperature rise of the various parts of the assembly exceeding the limits specified in the standard when the circuit is loaded alone.

Rated diversity factor (RDF)

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 taking into account the mutual thermal influences.



Technical Data Copy template Power Dissipation Calculation

Design certification of the max. permissible operating temperature according to IEC 61 439-1 Section 10.10

Client: _____ Kom. No.: _____
 Pos. No.: _____

Max. enclosure interior temperature 55° C
 Max. ambient temperature 35° C
 Temperature difference 20 K

1. Installed power dissipation of the devices

	Pos.	No.	Manufacturer	Type	Description	I_n / A	Derating	I_{nc} / A	P_v / Watt	$\Sigma P_v / \text{Watt}$
Feeding	E 1									
Outgoings	A 1					①	②	③		
	A 2									
	A 3									
	A 4									
	A 5									
	A 6									
	A 7									
	A n									
Total installed power dissipation of the devices (W)										

2. Installed power dissipation of busbars

Pos.	Length	Description	P_v / Watt	$\Sigma P_v / \text{Watt}$
1		Busbars 250 A		
2		Busbars 400 A		
3		Busbars 630 A		
Total installed power dissipation of busbars (W)				

3. Power dissipation of enclosures

Pos.	Number	Description	P_v / Watt	$\Sigma P_v / \text{Watt}$
1				
2		④	⑤	
3				
4				
5				
6				
Total power dissipation of enclosures (W)				

4. Calculating

Pos. 1	Total installed power dissipation of the devices	(W).....
Pos. 2	Total installed power dissipation of busbars	(W).....
	Proportional wiring of Pos. 2 and 3 (e.g. 30% recommended)	(W).....
	... % Reserve for additional equipment acc. to specification	(W).....
	Subtotal	(W).....
Pos. 3	Total power dissipation of enclosures	(W).....
	Difference between power dissipation and installed power dissipation	(W).....

Note:

- ① Rated current
- ② DERATING: According to the manufacturer, but at least 0.8 according to DIN EN 61 439 Part 1
- (Relation of rated operating current at rated current)
- ③ The current I_{nc} defines the value for feeding I_{nA}
- ④ Data for power switchgear and controlgear assemblies made of sheet steel as well as for insulation-enclosed assemblies in box-type design are possible.
- ⑤ Power dissipation according to the original manufacturer.

Through ventilation or larger enclosures the power dissipation can be increased in case of a negative difference. Another measure could be the reduction of the RDF.

Calculating reduced RDF:
$$RDF = \sqrt{\frac{\text{power dissipation}}{\text{installed power dissipation}}}$$

ENVCASE
 ENVBOARD
 ENVSTAR
 ENVMOD
 ENVFIT
 Technical Data



Technical Data
Declaration of EC Conformity
DK Cable Junction Boxes

Erklärung
der EG-Konformität

Nr./No. K 6009a

Declaration of EC-Conformity

Das Produkt,
The product

Typ / Type: **D ..., DE ..., DM ..., DN ..., DP ..., DPC ..., K ..., KC ..., KM ...**

Hersteller:
Manufacturer: **Gustav Hensel GmbH & Co. KG**
Gustav-Hensel-Straße 6
57368 Lennestadt

Beschreibung:
Description: **Kabelabzweikästen**
cable junction boxes

auf das sich diese Erklärung bezieht, stimmt mit folgenden Normen oder normativen Dokumenten überein:
to which this declaration relates is in conformity with the following standard(s) or normative document(s):

Norm / Standard: **DIN EN 60670-22**
EN 60670-22
IEC 60670-22

und entspricht den Bestimmungen der folgenden EG-Richtlinie(n):
and is in accordance with the provisions of the following EC-directive(s)

Niederspannungs-Richtlinie 2006/95/EG
Low voltage directive 2006/95/EC

Diese Konformitätserklärung entspricht der Europäischen Norm EN 17050-1 „Allgemeine Anforderungen für Konformitätserklärungen von Anbietern“. Das Unternehmen Gustav Hensel GmbH & Co. KG ist Mitglied von ALPHA, Gesellschaft zur Prüfung und Zertifizierung von Niederspannungsgeräten e.V.. Diese Erklärung gilt weltweit als Erklärung des Herstellers zur Übereinstimmung mit den oben genannten internationalen und nationalen Normen.

This Declaration of Conformity is suitable to the European Standard EN 17050-1 "General requirements for supplier's declaration of conformity". The company Gustav Hensel GmbH & Co. KG is member of ALPHA, Association for testing and certification of low voltage equipment. The declaration is world-wide valid as the manufacturer's declaration of compliance with the requirements of the a.m. national and international standards.

Jahr der Anbringung der
CE-Kennzeichnung: **2012**
Year of affixing CE-Marking

Ausstellungsdatum: **01.02.2013**
Date of issue:

Gustav Hensel GmbH & Co. KG

R. Cater
- Technische Geschäftsleitung -
- *Technical Managing Director* -



Technical Data
Declaration of EC Conformity
DK Cable Junction Boxes

Erklärung

der EG-Konformität

Declaration of EC-Conformity

Nr./No. K 6010

Das Produkt,
The product

Typ / Type: **KD ..., KF ..., KF WP**

Hersteller:
Manufacturer: **Gustav Hensel GmbH & Co. KG**
Gustav-Hensel-Straße 6
57368 Lennestadt

Beschreibung:
Description: **Kabelabzweiggästen für besondere Umgebungsbedingungen**
cable junction boxes for special environmental conditions

auf das sich diese Erklärung bezieht, stimmt mit folgenden Normen oder normativen Dokumenten überein:
to which this declaration relates is in conformity with the following standard(s) or normative document(s):

Norm / Standard: **DIN EN 60670-22**
EN 60670-22
IEC 60670-22
DIN VDE V 0606-22-100 (KF WP)

und entspricht den Bestimmungen der folgenden EG-Richtlinie(n):
and is in accordance with the provisions of the following EC-directive(s)

Niederspannungs-Richtlinie 2006/95/EG
Low voltage directive 2006/95/EC

Diese Konformitätserklärung entspricht der Europäischen Norm EN 17050-1 „Allgemeine Anforderungen für Konformitätserklärungen von Anbietern“. Das Unternehmen Gustav Hensel GmbH & Co. KG ist Mitglied von ALPHA, Gesellschaft zur Prüfung und Zertifizierung von Niederspannungsgeräten e.V.. Diese Erklärung gilt weltweit als Erklärung des Herstellers zur Übereinstimmung mit den oben genannten internationalen und nationalen Normen.

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Jahr der Anbringung der
CE-Kennzeichnung: **2012**
Year of affixing CE-Marking

Ausstellungsdatum: **01.02.2013**
Date of issue:

Gustav Hensel GmbH & Co. KG

R. Cater
- Technische Geschäftsleitung -
- *Technical Managing Director* -



Technical Data
Declaration of EC Conformity
DK Cable Junction Boxes

Erklärung

der EG-Konformität

Declaration of EC-Conformity

Nr./No. K 9011a

Das Produkt,
The product

Typ / *Type*: **FK 9025, FK 9105, FK 9255,
FK 7045, FK 7105, FK 7165**

Hersteller:
Manufacturer: **Gustav Hensel GmbH & Co. KG
Gustav-Hensel-Straße 6
57368 Lennestadt**

Beschreibung:
Description: **Kabelabzweigkästen mit Funktionserhalt E30-E90
Cable junction boxes tested for intrinsic fire resistance E30-E90**

auf das sich diese Erklärung bezieht, stimmt mit folgenden Normen oder normativen Dokumenten überein:
to which this declaration relates is in conformity with the following standard(s) or normative document(s):

Norm / *Standard*: **DIN EN 60670-22
EN 60670-22
IEC 60670-22
DIN 4102-12**

und entspricht den Bestimmungen der folgenden EG-Richtlinie(n):
and is in accordance with the provisions of the following EC-directive(s)

**Niederspannungs-Richtlinie 2006/95/EG
Low voltage directive 2006/95/EC**

Diese Konformitätserklärung entspricht der Europäischen Norm EN 17050-1 „Allgemeine Anforderungen für Konformitätserklärungen von Anbietern“. Das Unternehmen Gustav Hensel GmbH & Co. KG ist Mitglied von ALPHA, Gesellschaft zur Prüfung und Zertifizierung von Niederspannungsgeräten e.V.. Diese Erklärung gilt weltweit als Erklärung des Herstellers zur Übereinstimmung mit den oben genannten internationalen und nationalen Normen.

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Jahr der Anbringung der
CE-Kennzeichnung: **2009**
Year of affixing CE-Marking

Ausstellungsdatum: **01.02.2013**
Date of issue:

Gustav Hensel GmbH & Co. KG

R. Cater 
- Technische Geschäftsleitung -
- *Technical Managing Director* -



Technical Data
Declaration of EC Conformity
KV Small Distribution Boards

Erklärung

der EG-Konformität

Declaration of EC-Conformity

Nr./No. K 6104a

Das Produkt,
The product

Typ/ *Type:* **Kleinverteiler**
Small distribution boards
Typ / type: KV

Hersteller:
Manufacturer: **Gustav Hensel GmbH & Co. KG**
Gustav-Hensel-Straße 6
57368 Lennestadt

Beschreibung:
Description: **Isolierstoffgehäuse, geeignet zum Bau von Niederspannungs-Schaltgeräte-Kombinationen bis 63 A, zu deren Bedienung Laien Zugang haben**
Enclosures, made of insulating material, suitable for assembling of low-voltage switchgear and controlgear assemblies up to 63 A intended to be installed in places where unskilled persons have access for their use

auf das sich diese Erklärung bezieht, stimmt mit folgenden Normen oder normativen Dokumenten überein:
to which this declaration relates is in conformity with the following standard(s) or normative document(s):

Norm / *Standard:* **DIN EN 60439-3**
EN 60439-3
IEC 60439-3

und entspricht den Bestimmungen der folgenden EG-Richtlinie(n):
and is in accordance with the provisions of the following EC-directive(s)

Niederspannungs-Richtlinie 2006/95/EG
Low voltage directive 2006/95/EC

Diese Konformitätserklärung entspricht der Europäischen Norm EN 17050-1 „Allgemeine Anforderungen für Konformitätserklärungen von Anbietern“. Das Unternehmen Gustav Hensel GmbH & Co. KG ist Mitglied von ALPHA, Gesellschaft zur Prüfung und Zertifizierung von Niederspannungsgeräten e.V.. Diese Erklärung gilt weltweit als Erklärung des Herstellers zur Übereinstimmung mit den oben genannten internationalen und nationalen Normen.

This Declaration of Conformity is suitable to the European Standard EN 17050-1 "General requirements for supplier's declaration of conformity". The company Gustav Hensel GmbH & Co. KG is member of ALPHA, Association for testing and certification of low voltage equipment. The declaration is world-wide valid as the manufacturer's declaration of compliance with the requirements of the a.m. national and international standards.

Jahr der Anbringung der
CE-Kennzeichnung: **2012**
Year of affixing CE-Marking

Ausstellungsdatum: **01.02.2013**
Date of issue:

Gustav Hensel GmbH & Co. KG

R. Cater 
- Technische Geschäftsleitung -
- *Technical Managing Director* -



Technical Data
Declaration of EC Conformity
ENYSTAR

Erklärung

der EG-Konformität

Declaration of EC-Conformity

Nr./No. ENY 2009a

Das Produkt,
The product

Typ / Type: **ENYSTAR**
Typ / type: FP

Hersteller:
Manufacturer: **Gustav Hensel GmbH & Co. KG**
Gustav-Hensel-Straße 6
57368 Lennestadt

Beschreibung:
Description: **Installationsverteiler bis 250A "DBO"**
Distribution boards up to 250A "DBO"

auf das sich diese Erklärung bezieht, stimmt mit folgenden Normen oder normativen Dokumenten überein:
to which this declaration relates is in conformity with the following standard(s) or normative document(s):

Norm / Standard: **DIN EN 61439-3**
EN 61439-3
IEC 61439-3

und entspricht den Bestimmungen der folgenden EG-Richtlinie(n):
and is in accordance with the provisions of the following EC-directive(s)

Niederspannungs-Richtlinie 2006/95/EG
Low voltage directive 2006/95/EC

Diese Konformitätserklärung entspricht der Europäischen Norm EN 17050-1 „Allgemeine Anforderungen für Konformitätserklärungen von Anbietern“. Das Unternehmen Gustav Hensel GmbH & Co. KG ist Mitglied von ALPHA, Gesellschaft zur Prüfung und Zertifizierung von Niederspannungsgeräten e.V.. Diese Erklärung gilt weltweit als Erklärung des Herstellers zur Übereinstimmung mit den oben genannten internationalen und nationalen Normen.

This Declaration of Conformity is suitable to the European Standard EN 17050-1 "General requirements for supplier's declaration of conformity". The company Gustav Hensel GmbH & Co. KG is member of ALPHA, Association for testing and certification of low voltage equipment. The declaration is world-wide valid as the manufacturer's declaration of compliance with the requirements of the a.m. national and international standards.

Jahr der Anbringung der
CE-Kennzeichnung: **2013**
Year of affixing CE-Marking

Ausstellungsdatum: **01.02.2013**
Date of issue:

Gustav Hensel GmbH & Co. KG

R. Cater
- Technische Geschäftsleitung -
- *Technical Managing Director* -



Technical Data
Declaration of EC Conformity
Mi Power Distribution Boards

Erklärung

der EG-Konformität

Declaration of EC-Conformity

Nr. K 2010a

Das Produkt,
The product

Typ / Type: **Mi-Verteiler**
Mi-Distributor
Typ / type: **Mi**

Hersteller:
Manufacturer **Gustav Hensel GmbH & Co. KG**
Gustav-Hensel-Straße 6
57368 Lennestadt

Beschreibung:
Description: **Niederspannungs-Schaltgerätekombination „PSC“**
Low-voltage switchgear and controlgear assemblies “PSC”

auf das sich diese Erklärung bezieht, stimmt mit folgenden Normen oder normativen Dokumenten überein:
to which this declaration relates is in conformity with the following standard(s) or normative document(s):

Norm / Standard: **DIN EN 61439-2**
EN 61439-2
IEC 61439-2

und entspricht den Bestimmungen der folgenden EG-Richtlinie(n):
and is in accordance with the provisions of the following EC-directive(s)

Niederspannungs-Richtlinie 2006/95/EG
Low voltage directive 2006/95/EC

EMV-Richtlinie (EMC) 2004/108/EG
Electromagnetic Compatibility (EMC) Directive 2004/108/EC

Diese Konformitätserklärung entspricht der Europäischen Norm EN 17050-1 „Allgemeine Anforderungen für Konformitätserklärungen von Anbietern“. Das Unternehmen Gustav Hensel GmbH & Co. KG ist Mitglied von ALPHA, Gesellschaft zur Prüfung und Zertifizierung von Niederspannungsgeräten e.V.. Diese Erklärung gilt weltweit als Erklärung des Herstellers zur Übereinstimmung mit den oben genannten internationalen und nationalen Normen.

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Jahr der Anbringung der
CE-Kennzeichnung: **2012**
Year of affixing CE-Marking.

Ausstellungsdatum: **19.02.2013**
Date of issue:

Gustav Hensel GmbH & Co. KG

R. Cater 
- Technische Geschäftsleitung -
- *Technical Managing Director* -