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safe.inspiring.**green.**

Catalogue
2017 / 2018

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When you turn to Spelsberg, you are choosing a partner who is always a step ahead thanks to several decades of experience with state-of-the-art technology. High-quality, refined products and a strong focus on customers assures maximum assurance for everyone involved.

This applies for the functionality of the components - all process steps from consultation and offer preparation to delivery and service, which guarantees that our customers will feel secure with us. In the process, we keep everyone in mind: the assembler who installs our products quickly and easily and our partners in retail, for whom ordering and stocking of products are made easy with modular designs and accompanying accessories.

The enthusiasm and knowledge of our employees are the essential key to our success. Consequently, unique, high-quality products and tailored solution are only possible with the commitment and passion of our staff. Our customers value us as a series supplier with a comprehensive catalogue and finely tuned systems. We are also an expert consultant for demanding questions involving the housing.

We develop, test and produce tailor-made, comprehensive solutions - but we also make small adjustments according to customer wishes.

Our founder, Ernst Spelsberg would certainly be proud that his values still guide our company after four generations and our staff has the same pioneering spirit of the early years of the company.

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We are there for you **nationally** and **internationally**
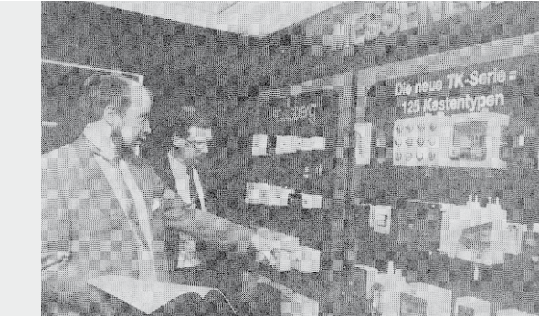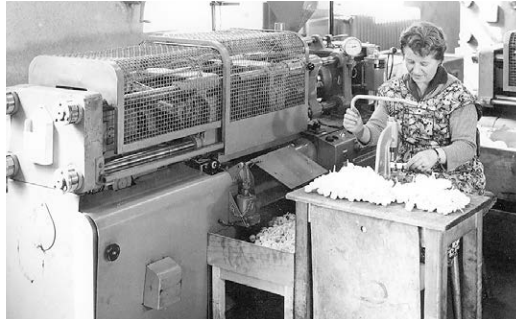
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What began with the **vision** of the founding father, Ernst Spelsberg - of making electrical installation **easier** and **safer** - is still being rigorously pursued today in the fourth generation of the family business. **Practical** brand-name products for the branching, protection and distribution of electrical power have long been part of our daily business. But we have never lost sight of our **pioneering** **spirit** and make every effort to develop safer, user-specific products. **Spelsberg makes life easier for customers.**

Founding father **Ernst Spelsberg**

Spelsberg I Then
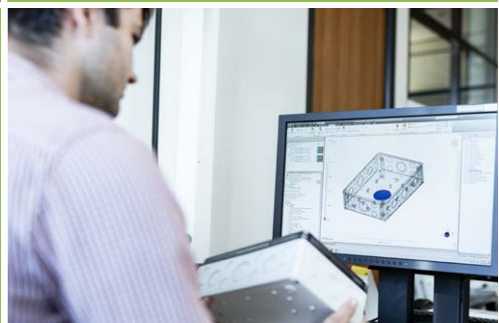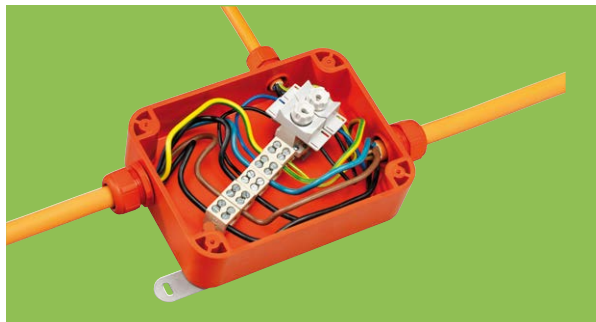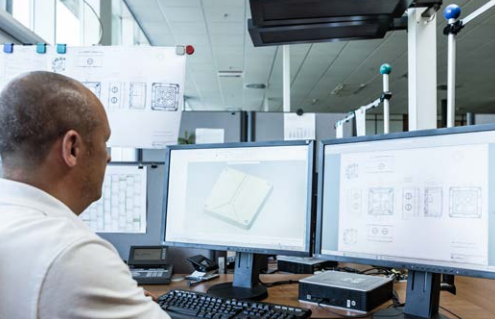
Regardless of whether **non-standard small enclosure**, customised **enclosure** or **complete modules** – we are a committed **development partner** as regards the implementation of **customer wishes**. By focusing on the **project business**, we create **tailor-made, individual solutions** for industry every day.

Located **fully**, at the site in Schalksmühle, a consistent **process chain** – from project management through development, construction, prototyping, tool design, tool making and production – enables fast, **high-quality implementation** of projects. Testing and certifications in accordance with **VDE** and **UL** are carried out in our **in-house testing laboratory**.

More than 700 active tools weighing up to 8.9 tons. Use of more than 2,500 tons of material per year.

Our eyes on the future

IK level impact testing

Housing production

Tool production

Customers who purchase products from Spelsburg receive brand-name quality that is **developed**, **manufactured** and **tested in Germany**. In addition to our headquarters in Schalksmühle, we have a production facility in Buttstädt, Thüringen. Spelsberg is also represented by a dense network of company-owned subsidiaries and sales offices worldwide.

Schalksmühle – where it all began!
Spelsberg is still headquartered in the city where the first insulating tubes were developed and manufactured in 1904. The company grew continuously and increasingly expanded its production facilities until it outgrew the city centre. As a result, the company relocated to an industrial area in the 1990s, where the

new administrative and production centre were built. All technical departments work together closely and are interlinked there. This is the driving force behind the **innovative power** and short reaction times. Therefore, it is only natural to always remain a step ahead within the sector.

Spelsberg | Schalksmühle

Small distribution board production

Silos

Abox automation junction boxes

Buttstädt – the plastics centre

The more than 100 million plastic parts produced by Spelsberg each year do not originate from Schalksmühle alone. The company has also had a production location in Buttstädt, Thüringen, where the high-quality housings are manufactured.

Whether a two-component injection mould, seal foam or a custom mix of materials, Buttstädt also provides the expected variety and quality with state-of-the-art machinery and a large supply of tools.

**100 %
Made in Germany**

**All processes
under one roof**

Plant I und II | Buttstädt (Thüringen)

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UL impact testing

Air conditioning cabinets tested to -30 degrees

When you are looking for tested **safety** and brand-name quality, Spelsberg is the answer. We only use high-quality **brand-name** European raw materials for the more than 100 million injection-moulded parts that we produced each year.

We use a total of 400 raw material types – 95 per cent of which are produced according to our own recipe. Our products with especially high durability bear the **iQ** mark **for industrial quality**.

Tested safety ▎Always in focus

Dust cabinet

Cover tensile testing
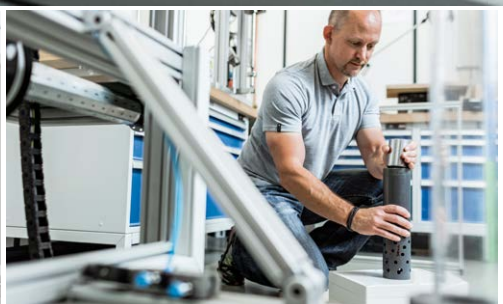
IK impact testing

Water protection testing

Spelsberg operates an **in-house test laboratory** at its headquarters in Schalksmühle for certification purposes. The laboratory and devices are not just **VDE**-certified, they are also **UL-certified**, thus enabling all of the necessary inspections for the international use of series products and special solutions to be conducted in-house.

This possibility is especially important when developing **tailor-made solutions** together with our partners. The aim here is to help our customers get their products to market readiness as rapidly as possible.

The test laboratory is equipped to **state-of-the-art** standards and is the subject of ongoing further development. UL conducts and annual audit as part of the Client Test Data Program to assure that work continues to be carried out at a consistently high standard.

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IP66	IP66	**Class of protection** (IP code) acc.to DIN EN 60529 (VDE 0470-1)
3	3	Maximum number of **distribution units**
E30-E90	E30-E90	**Electrical functional integrity** acc.to DIN 4102-12 "E" stands for functional integrity, "30-90" stands for the duration in minutes.
FE180	FE180	**Insulation integrity** according to VDE 0472-814, IEC 60331 "FE" stands for the impact of flames or fire, "180" stands for the time in minutes
F400	F400	**Operating duration** acc. to DIN EN 12101-3 120 minutes function at 400 °C
	90	Tested acc. to DIN 4102-2. **Functional integrity F90** (according to E90) for protecting the electrical installations as per MLAR 2005. Can be individually equipped with type-tested operating materials.
	90	Tested acc. to DIN 4102-2. **Fire load insulation F90** (according to E90) for protecting the exit and escape routes as per MLAR 2005.
S90		**Fire-resistance class S 90** acc. to DIN 4102-9
Ü		**Certificate of conformity.** Conformity of the construction product with the technical regulations is documented by the "Ü label"
ABZ		**The German general building supervisory approval** (AbZ) attests the usability of an object under approval in the sense of the building regulations. It is granted by the German Institute of Structural Engineering (DIBt), Berlin, for construction products and types of construction, where no harmonised European standards have yet been applied for them and which are also not regulated by German standards or regulations.
ABP		**German general building inspection test certificate** (AbP) is granted for unregulated construction products and construction methods whose use is not intended to meet the full safety criteria for structures. The granting is carried out by recognised testing bodies.
10^2	10^2	**Nominal cross section** The greatest permissible wire cross-section that can be connected acc. to DIN EN 60998 (VDE 0613) and DIN EN 60999 (VDE 0609)
IK09	IK09	**Level of protection** (IK code) to mechanical impact acc. to DIN EN 50102 (VDE 0470-100)
▣	▣	**Protection class II** operating materials with protective insulation to DIN VDE 0100-410
	1000V DC	Maximum **voltage DC** (DC voltage) as per product standard (system voltage in the PV sector)
690V AC	690V AC	**Nominal AC voltage** (AC voltage). Highest permissible voltage on the junction as per product norm

Legends Pictograms

15A		**Rated current** (maximum current in continuous operation) as per product norm
H		Products for **installation in cavity walls or furnishings** acc. to DIN VDE 0606-1.
B		Products for **use in concrete construction** acc. to DIN VDE 0606-1
COOL BEAM Max. 50W		Suitable for the installation of lamps in which dichroic reflector lamps **(cool beam reflectors)** can be used. Reduces the thermal load in the light bundle.
LED		Suitable for LED lights
90°C		Suitable for use in concrete. **Resistant to momentary temperatures of up to +90 °C** during the hardening process.
960°C		**960°C glowing wire testing**
	c UL us	**c UL us** (Underwriters Laboratories) **approved** (American and Canadian approval)
	UL EU	**UL EU** New European test certificate for certification recognised across Europe.
	DLG	**DLG FokusTest** for special innovations of machines and technical products - predominantly in agricultural and forestry applications.
	AIR	**AK Air** Ventilation elements to prevent accumulation of condensate while maintaining protection class IP65.
VDE	VDE	The **VDE symbol** stands for the tested safety of the product with regard to electrical, mechanical, thermal and other hazards.
(Vattenfall)		**Vattenfall approval**
	eHZ	Suitable for the installation of an **electronic domestic supply meter**
halogen-free	halogen-free	**Halogen-free enclosure,** without halogens such as fluorine, chlorine and bromine.
IQ		**Industrial quality**

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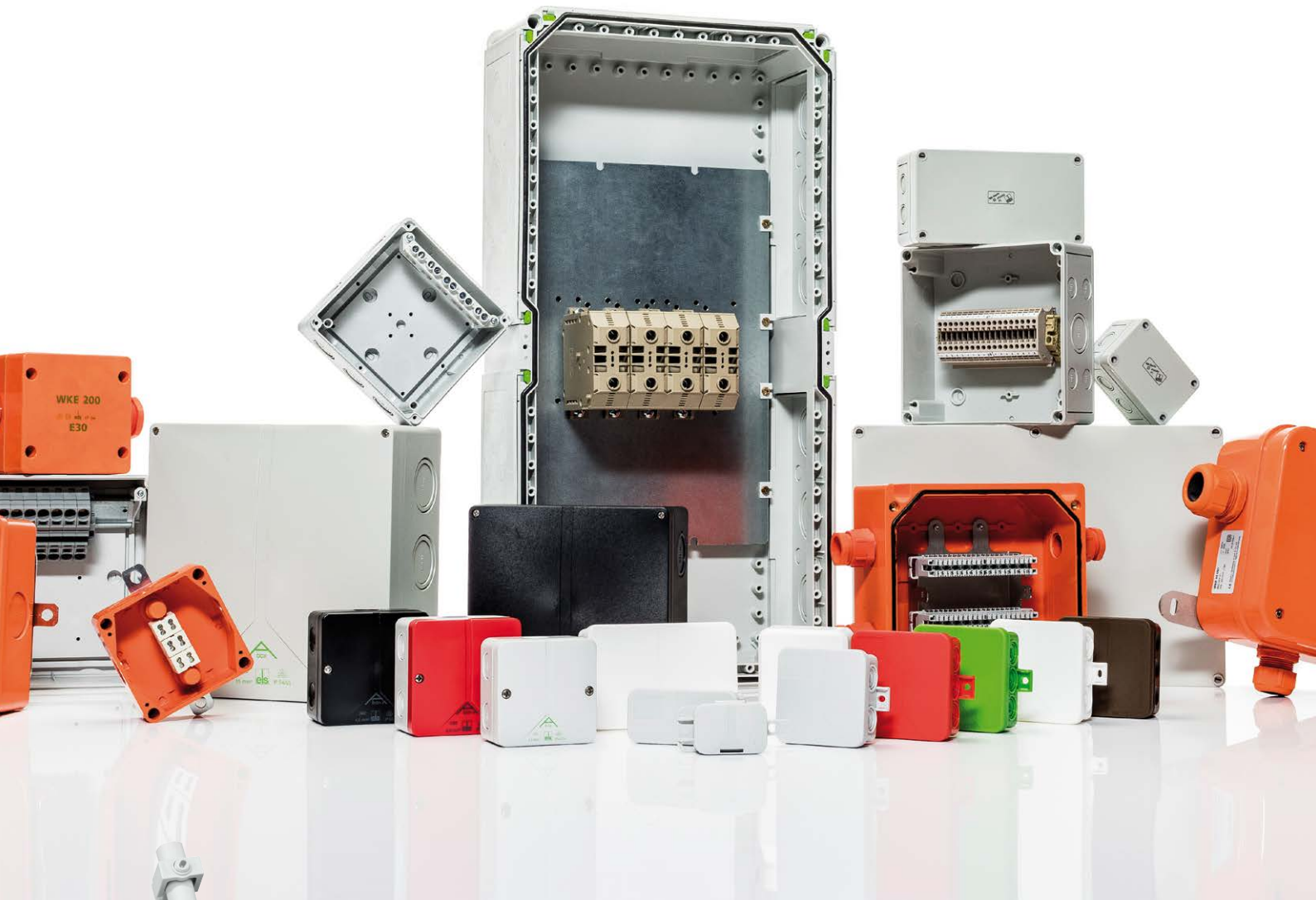
Our junction boxes offer lots of space for installation. For example, our popular Abox series with raised terminals. They allow quick and orderly wiring.

From the classic wet room installation about waterproof versions with IP68 up to junction boxes with functional integrity to E90. We have the right solution for every application.

Junction boxes

	Protection rating	Max. rated cross-section	Types	Page
	IP65	2.5 mm²	Junction boxes for protected installations with metric knock-outs **Abox m**	14-16
	IP65	70 mm²	Junction boxes for protected installations **Abox 025 to 700**	17-22
	IP65	16 mm²	Junction boxes with screwless terminal technology **Abox _SL_**	24-26
	IP66	2.5 mm²	Junction boxes for protected installations with metric knock-outs **Abox-i m 025 to Abox-i m 40**	27-29
	IP65	240 mm²	Junction boxes **Abox-i 025 to Abox-i 40**	30-37
	IP65	16 mm²	Junction boxes with screwless terminal technology **Abox-i _SL_**	38-40
	IP68	10 mm²	Junction boxes for use with cast resin **Abox-i _XT_**	41-43
	IP65/54	35 mm²	Junction boxes with stepped nipples **Abox HA**	44
	IP54	25 mm²	Junction boxes for wet-room installations **Red Range**	52-61
	IP55	10 mm²	Junction boxes with stepped nipples **HP 70 to HP 190**	62-65
	IP54	25 mm²	Junction boxes made from duroplastic **WK 007 to WK 250**	66-70
			Technical information - terminal	48-51
			General accessories for junction boxes	71

Junction boxes Content

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Mounting points for attaching the Abox terminal in 2 different positions

Cover fastener with 2 stainless steel cross slot screws. Sealing via Abox PST sealing set in accessories

Front now featuring 3 x M20 inlets for Abox(-i) m 040

Rear side featuring teeth for secure placement on the subsurface

59

M20/25

040
4,0 mm²
els
IP 54/65

**NEW!**
With metric knock-outs

- Toothing for easier positioning during installation
- Abox m 040 with 3 x M20 knockouts on one end face
- Abox m 025 and Abox m 040: 2K cover with integrated cover seal and insulating plugs

25 new variations
(2.5 mm² and 4 mm²) with metric knock-outs on the sides and in the base

IP65 2,5² IK07 690V AC DVE halogen-free

Junction boxes Abox m 025 to 40

Abox m 025
82 x 82 x 51 mm
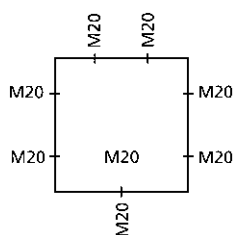
Description	Order no.

Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, with knock-outs, with IP54 attachment bushes, with blanking plug M20, seal range 8 - 13.5 mm

IP65 IP54	2,5²	IK07	□	690V AC	DVE	halogen-free

Abox m 025-L Grey, without terminal	807 907 01
Abox m 025-2,5² Grey, with screw terminal, 5-pole - 2.5 mm² (4 x 1.5² / 4 x 2.5²)	807 407 01
Abox m 025 SB-L red cover, without terminal, for identifying circuits for safety lighting	807 707 01

Abox m 025 AB
82 x 82 x 51 mm

Description	Order no.

Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, with knock-outs, with IP54 attachment bushes, with blanking plug M20, seal range 8 - 13.5 mm, with external attachment lugs

IP65 IP54	2,5²	IK07	□	690V AC	DVE	halogen-free

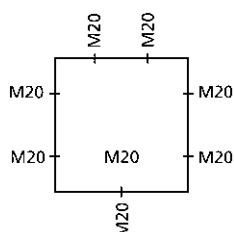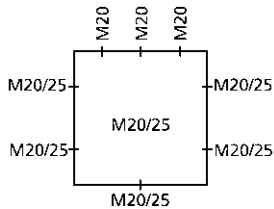|	
Abox m 025 AB-L Grey, without terminal	808 907 01
Abox m 025 AB-2,5² Grey, with screw terminal, 5-pole - 2.5 mm² (4 x 1.5² / 4 x 2.5²)	808 407 01
Abox m 025 AB SB-L red cover, without terminal, for identifying circuits for safety lighting	808 707 01

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Abox m 040

94 x 94 x 56 mm

Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, with knock-outs, with IP54 attachment bushes, M20, M20/M25, seal range 8 - 13.5 mm, seal range 9 - 18.5 mm

IP65 IP54	4²	IK07	▣	690V AC	VDE	halogen-free

Abox m 040-L Grey, without terminal	811 907 01
Abox m 040-4² Grey, screw terminal, 5-pole - 2.5/4 mm² (4 x 1.5² / 4 x 2.5² / 3 x 4²)	811 407 01
Abox m 040 SB-L Red cover, without terminals, for identifying circuits for safety lighting	811 707 01

Abox m 040 AB

94 x 94 x 56 mm
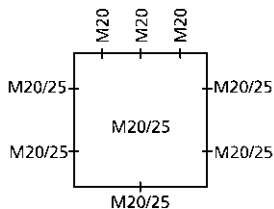
Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, with knock-outs, with IP54 attachment bushes, M20, M20/M25, seal range 8 - 13.5 mm, seal range 9 - 18.5 mm, with external attachment lugs

IP65 IP54	4²	IK07	▣	690V AC	VDE	halogen-free

Abox m 040 AB-L Grey, without terminal	812 907 01
Abox m 040 AB-4² Grey, screw terminal, 5-pole - 2.5/4 mm² (4 x 1.5² / 4 x 2.5² / 3 x 4²)	812 407 01

Junction boxes Abox m 025 to 40

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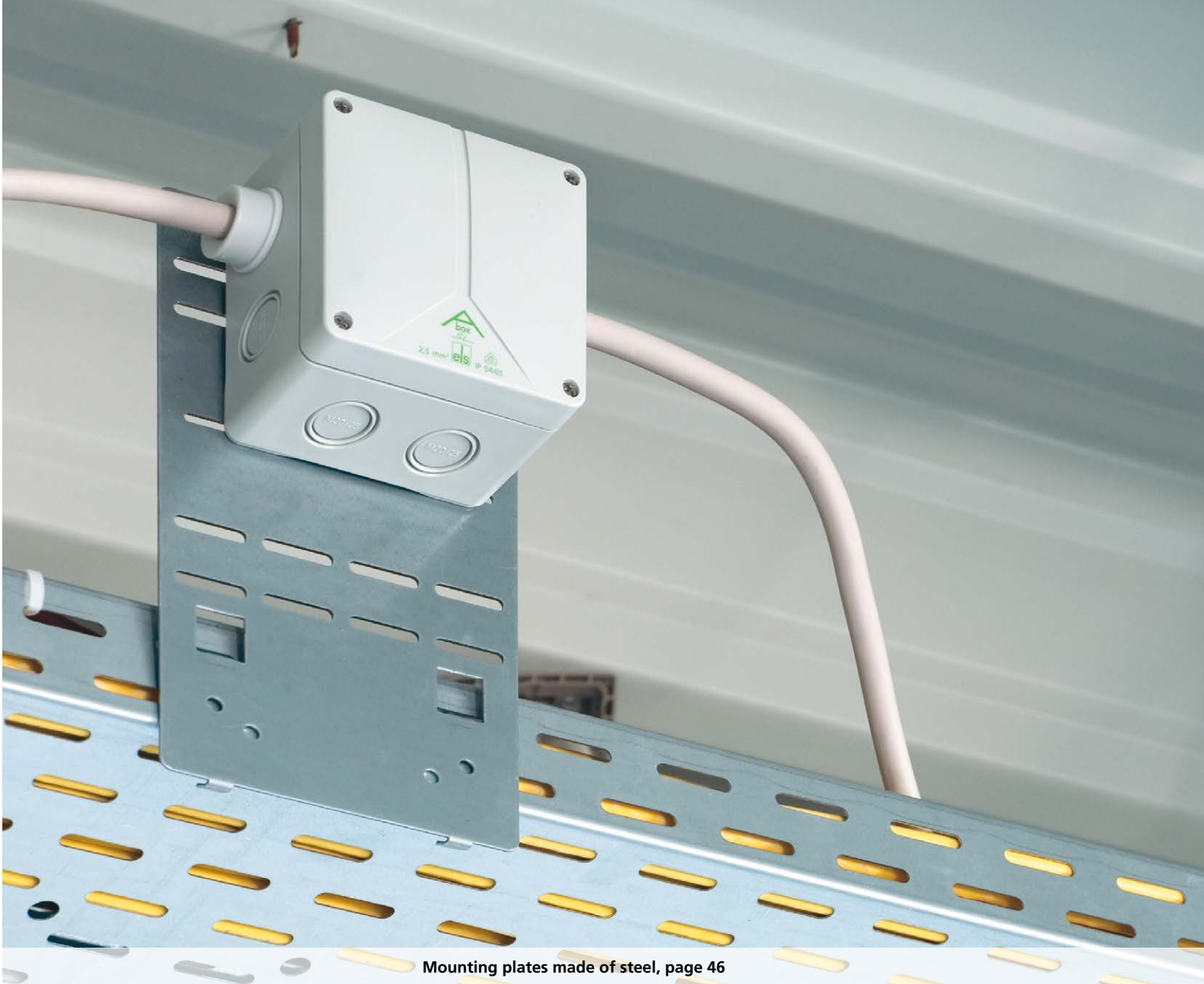
Mounting plates made of steel, page 46

· Ample room for connection
· Simple test method
· Raised terminals for quick and orderly wiring (from Abox-i 060)
· Quick installation with self-sealing membrane entries (on Abox-i 025 and 040)

· With red cover for identifying circuits for safety lighting
· Also suitable for use under extreme conditions

| IP65 | 70² | IK07 | ▣ | 690V AC | VDE | halogen-free |

Junction boxes Abox 025 to 700

Abox 025
80 x 80 x 52 mm

Description	Order no.
Junction box acc. to DIN EN 60670 (VDE 0606), U_i=690V, with self-sealing, soft inlet membranes, M20, seal range 2 - 16 mm	

IP65 | 2,5² | IK07 | ▢ | 690V AC | VDE | halogen-free

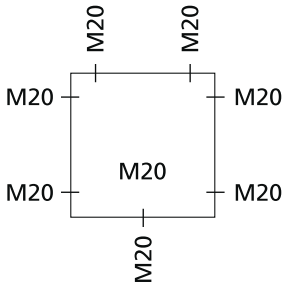|	
Abox 025-L Grey, without terminal	802 907 01
Abox 025-2,5² Grey, with screw terminal, 5-pole - 2.5 mm² (4 x 1.5² / 4 x 2.5²)	802 407 01
Abox 025-L/w white, without terminal	802 607 01
Abox 025-2,5²/w White, with screw terminal, 5-pole - 2.5 mm² (4 x 1.5² / 4 x 2.5²)	802 107 01
Abox 025 SB-L red cover, without terminal, for identifying circuits for safety lighting	802 707 01

Abox 025 AB
80 x 80 x 52 mm

Description	Order no.
Junction box acc. to DIN EN 60670 (VDE 0606), U_i=690V, with self-sealing, soft inlet membranes, M20, seal range 2 - 16 mm, with external fixing lugs	

IP65 | 2,5² | IK07 | ▢ | 690V AC | VDE | halogen-free

Abox 025 AB-L Grey, without terminal	803 907 01
Abox 025 AB-2,5² Grey, with screw terminal, 5-pole - 2.5 mm² (4 x 1.5² / 4 x 2.5²)	803 407 01
Abox 025 AB-L/w white, without terminal	803 607 01
Abox 025 AB-Pot Grey, with 15 mm standard rail TS 15, PE terminal strip 4²	803 427 01
Abox 025 AB-2,5²/w White, with screw terminal, 5-pole - 2.5 mm² (4 x 1.5² / 4 x 2.5²)	803 107 01

Abox 040
93 x 93 x 55 mm

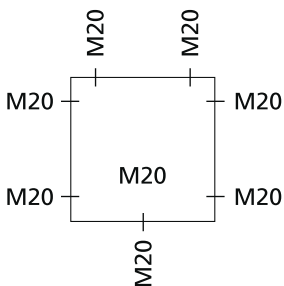| M20 | M20 |
M20	M20 M20
M20	M20
	M20

Description | **Order no.**

Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, with self-sealing, soft inlet membranes, M20, seal range 2 - 16 mm

| IP65 | 4^2 | IK07 | | 690V AC | DYE | halogen-free |

Abox 040-L Grey, without terminal	804 907 01
Abox 040-4,0² Grey, screw terminal, 5-pole - 2.5/4 mm² (4 x 1.5² / 4 x 2.5² / 3 x 4²)	804 407 01
Abox 040-L/w white, without terminal	804 607 01
Abox 040-4,0²/w White, with screw terminal, 5-pole - 2.5/4 mm² (4 x 1.5² / 4 x 2.5² / 3 x 4²)	804 107 01
Abox 040 SB-L Red cover, without terminals, for identifying circuits for safety lighting	804 707 01

Abox 040 AB
93 x 93 x 55 mm

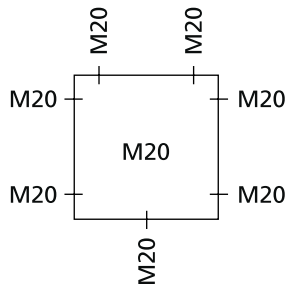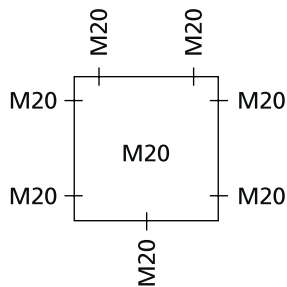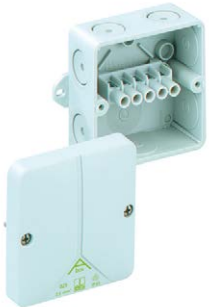| M20 | M20 |
M20	M20 M20
M20	M20
	M20

Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, with self-sealing, soft inlet membranes, M20, seal range 2 - 16 mm, with external fixing lugs

| IP65 | 4^2 | IK07 | | 690V AC | DYE | halogen-free |

Abox 040 AB-L Grey, without terminal	805 907 01
Abox 040 AB-4² Grey, screw terminal, 5-pole - 2.5/4 mm² (4 x 1.5² / 4 x 2.5² / 3 x 4²)	805 407 01
Abox 040 AB-L/w white, without terminal	805 607 01
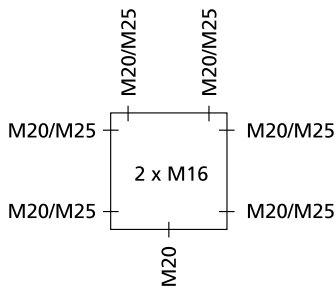
Junction boxes Abox 025 to 700

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Abox 060
110 x 110 x 67 mm

Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, with IP54 attachment bushes, with blanking plug M25, seal range 9 - 18.5 mm

IP65 IP54	6²	IK07	⬜	690V AC	VDE	halogen-free

Abox 060-L Grey, without terminal	806 907 01
Abox 060-6² Grey, with high-set screw terminal, 5-pole - 6 mm² (4 x 2.5² / 4 x 4² / 3 x 6²)	806 407 01
Abox 060 SB-L Red cover, without terminals, for identifying circuits for safety lighting	806 707 01
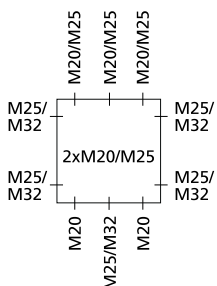
M20/M25   M20/M25
M20/M25   M20/M25
2 x M16
M20/M25   M20/M25
M20

Abox 100
140 x 140 x 79 mm

Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, with IP54 attachment bushes, with blanking plug M32, seal range 13 - 23 mm

IP65 IP54	10²	IK07	⬜	690V AC	VDE	halogen-free

Abox 100-L Grey, without terminal	810 910 01
Abox 100-10² Grey, with high-set screw terminal, 5-pole - 10 mm² (4 x 4² / 4 x 6² / 4 x 10²)	810 410 01
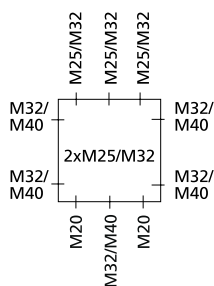
M20/M25   M20/M25   M20/M25
M25/M32   M25/M32
2xM20/M25
M25/M32   M25/M32
M20   M25/M32   M20

Junction boxes Abox 025 to 700

Abox 160
180 x 180 x 91 mm

Description	Order no.

Junction box acc. to DIN EN 60670 (VDE 0606), U_i=690V, with IP54 attachment bushes, with blanking plug M40, seal range 17 - 30 mm, with sealing kit

IP65 IP54	16²	IK07	▢	690V AC	DYE	halogen-free

Abox 160-L Grey, without terminals	816 910 01
Abox 160-16² Grey, with high-set screw terminal, 5-pole - 16 mm² (4 x 6² / 4 x 10² / 4 x 16²)	816 410 01

Abox 250
250 x 200 x 115 mm

Junction box acc. to DIN EN 60670 (VDE 0606), U_i=690V, with IP54 attachment bushes, with blanking plug M40, seal range 17 - 30 mm, with sealing kit

IP65 IP54	25²	IK07	▢	690V AC	DYE	halogen-free

Abox 250-L Grey, without terminals	825 910 01
Abox 250-25² Grey, with high-set screw terminal, 5-pole - 25 mm² (4 x 10² / 4 x 16² / 4 x 25²)	825 410 01

Junction boxes Abox 025 to 700

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Abox 350

250 x 250 x 115 mm


```
        M40/M50  M40/M50  M40/M50
M40/                                M40/
M50                                 M50
M40/                                M40/
M50            2x                   M50
M40/           M25/M32              M40/
M50                                 M50
        M40/M50  M40/M50  M40/M50
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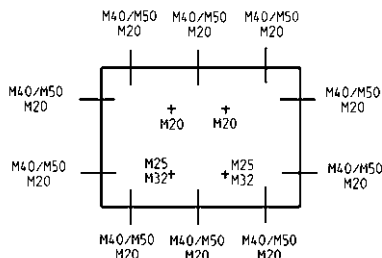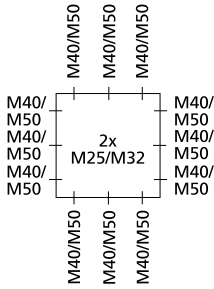| Description	Order no.
Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, with IP54 attachment bushes, with blanking plug M40, seal range 17 - 30 mm, with sealing kit	

| IP65 IP54 | 35² | IK07 | ▣ | 690V AC | DVE | halogen-free |

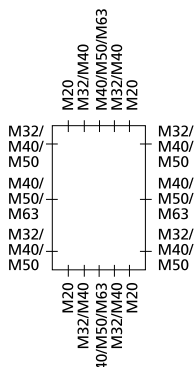| Description	Order no.
Abox 350-L Grey, without terminals	835 910 01
Abox 350-35² Grey, with high-set screw terminal, 5-pole - 35 mm² (4 x 10² / 4 x 16² / 4 x 25² / 4 x 35²)	835 410 01

Abox 700

300 x 450 x 132 mm


```
           M20
           M32/M40
           M40/M50/M63
           M32/M40
           M20
M32/                    M32/
M40/                    M40/
M50                     M50
M40/                    M40/
M50/                    M50/
M63                     M63
M32/                    M32/
M40/                    M40/
M50                     M50
           M20
           M32/M40
           10/M50/M63
           M32/M40
           M20
```

Description	Order no.
Junction boxes, U^i=690V, with 3 twist nipples and lock nut, IP54, M63, seal range 24 - 43 mm, standard version sealable	

| IP65 IP54 | 70² | IK07 | ▣ | 690V AC | halogen-free |

Description	Order no.
Abox 700-L Grey, without terminals	870 910 01
Abox 700-70² Grey, 4 terminal blocks 4 x 70 mm², 16-70²	870 410 01
Accessories	
Abox 700 KLS-70² 1-pole - 70 mm²	840 070 01
NS35-216/3 universal floor fixing	795 030 01
AK MPI 3 AKL/AKi 3-4, Abox 700	795 003 01

Junction boxes Abox 025 to 700

M20/25

M25/25

M20/25

- · The Abox SL combines the wiring philosophy of the Abox series with screwless terminal technology.
- · Standard installation in wet rooms
- · Installation on flammable surfaces
- · Installation in agricultural and horticultural premises

- · Installation in areas with increased requirements for vibration and shock resistance
- · Quick installation thanks to screwless terminal technology
- · Maintenance-free
- · Vibration- and shock-proof
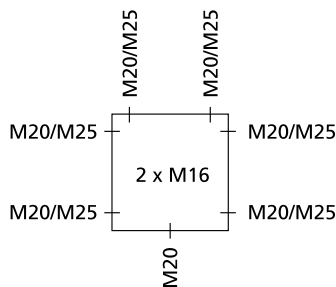
* <u>SL</u> = Screwless terminal technology

| IP65 | 16² | IK07 | □ | 400V AC | DYE | halogen-free |

Junction boxes Abox <u>SL</u>*

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Abox *SL*-2,5/4²

110 x 110 x 67 mm

NEW!

M20/M25	M20/M25
M20/M25		M20/M25
	2 x M16	
M20/M25		M20/M25
	M20	

Description	Order no.

Junction box acc. to DIN EN 60670 (VDE 0606), with IP54 attachment bushes, with blanking plug M25, seal range 9 - 18.5 mm

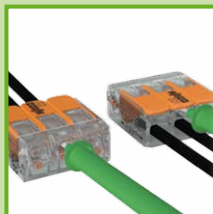| IP65 IP54 | 4² | IK07 | ☐ | 400V AC | DↃE | halogen-free |

Abox *SL*-2,5/4²
Grey, with 5-pole high-set screwless terminal,
max. cross-section acc. DIN EN 60998:4 mm²,
for current carrying capacity of 24 A,
cross sections that can be clamped per pole:
3 x 0.2 up to 4 mm² rigid and 3 x 0.14 up to 4.0 mm² flexible
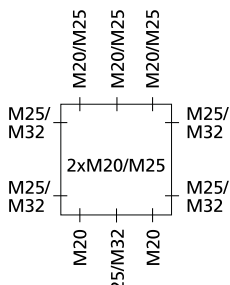**806 107 01**

Abox *SL*-2,5-KT
Grey, with high-set terminal carrier, without terminal
806 197 02

Abox *SL*-6²

140 x 140 x 79 mm

M20/M25	M20/M25	M20/M25
M25/ M32		M25/ M32
	2xM20/M25	
M25/ M32		M25/ M32
M20	25/M32	M20

Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V,
with IP54 attachment bushes, with blanking plug M32, seal range 13 - 23 mm

| IP65 IP54 | 6² | IK07 | ☐ | 690V AC | DↃE | halogen-free |

Abox *SL*-6²
Grey, with 5-pole high-set screwless terminal,
max. cross-section acc. EN 60998: 6 mm²,
for current carrying capacity of 41 A,
cross sections that can be clamped per pole:
4 x 0.5 up to 10 mm² rigid and flexible
810 810 01

Junction boxes Abox *SL*

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Abox *SL*-10²

180 x 180 x 91 mm

M25/M32 M25/M32 M25/M32

M32/M40 · · M32/M40

2xM25/M32

M32/M40 · · M32/M40

M20 M32/M40 M20

Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, with IP54 attachment bushes, with blanking plug M40, seal range 17 - 30 mm, with sealing kit

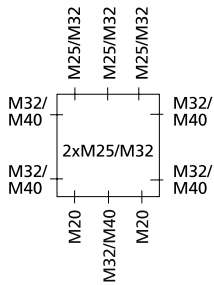| IP65 IP54 | 10² | IK07 | □ | 690V AC | DVE | halogen-free |

Abox *SL*-10²

Grey, with 5-pole high-set screwless terminal,
max. cross-section acc. EN 60998: 10 mm²,
for current carrying capacity of 57 A,
cross sections that can be clamped per pole:
4 x 0.5 up to 16 mm² rigid and flexible

816 810 01

Abox *SL*-16²

250 x 200 x 115 mm

M20/M40/M50 M20/M40/M50 M20/M40/M50

M20/M40/M50 · · M20/M40/M50

2xM20
2xM25/32

M20/M40/M50 · · M20/M40/M50
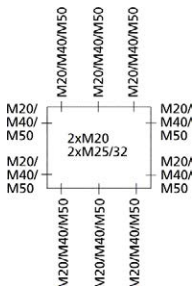
M20/M40/M50 M20/M40/M50 M20/M40/M50

Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, with IP54 attachment bushes, with blanking plug M40, seal range 17 - 30 mm, with sealing kit

| IP65 IP54 | 16² | IK07 | □ | 690V AC | DVE | halogen-free |

Abox *SL*-16²

Grey, with 5-pole high-set screwless terminal,
max. cross-section acc. EN 60998: 16 mm²,
for current carrying capacity of 76 A,
cross sections that can be clamped per pole:
4 x 0.5 up to 16 mm², rigid, 4 x 0.5 up to 25 mm² flexible

835 810 01

Junction boxes Abox *SL*

www.spelsberg.com

Mounting points for attaching the Abox terminal in 2 different positions

Cover fastener with 2 stainless steel cross slot screws. Sealing via Abox PST sealing set in accessories

Front now featuring 3 x M20 inlets for Abox(-i) m 040

Rear side featuring teeth for secure placement on the subsurface

59

M20/25

040
4,0 mm²   els   IP 54/65

NEW!
With metric knock-outs

G. SPELSBERG JUNCTION BOX SERIES ABOX-I WITH ACCESSORIES
✔ **Resistance to Ammonia**
DLG Test Report 6398

APPROVED 2016
DLG
WWW.DLG.ORG

· Toothing for easier positioning during installation
· Abox-*i* m 040 with 3 x M20 knockouts on one end face
· Abox-*i* m 025 and Abox-*i* m 040: 2K cover with integrated cover seal and insulating plugs
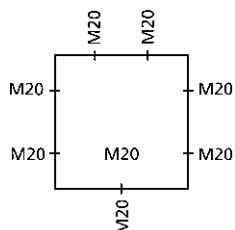
25 new variations
(2.5 mm² and 4 mm²) with metric
knock-outs on the sides and in the base

IP66	2,5²	IK07		690V AC	D^/E	DLG	halogen-free	iQ

Junction boxes Abox-*i* m 025 to 40

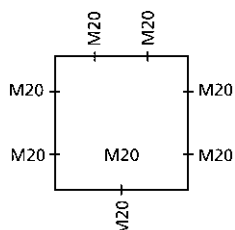els spelsberg

Abox-*i* m 025

82 x 82 x 51 mm

Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670 (VDE 0606), U^i=690V, weatherproof, shock-proof, with knock-outs, M20, For IP66 double membrane seals, for suitable cable in-feeds see accessories

| IP66 | 2,5² | IK08 | □ | 690V AC | VDE | DLG | halogen-free | iQ |

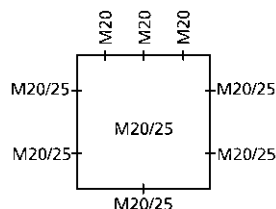| Description	Order no.
Abox-*i* m 025-L Grey, without terminal	496 902 01
Abox-*i* m 025-2,5² Grey, with screw terminal, 5-pole - 2.5 mm² (4 x 1.5² / 4 x 2.5²)	496 402 01
Abox-*i* m 025-L/sw black, without terminal	498 902 01
Abox-*i* m 025-2,5²/sw Black, with screw terminal, 5-pole - 2.5 mm² (4 x 1.5² / 4 x 2.5²)	498 402 01

Abox-*i* m 025 AB

82 x 82 x 51 mm

Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670 (VDE 0606), U^i=690V, weatherproof, shock-proof, with knock-outs, M20, For IP66 double membrane seals, with external attachment lugs, for suitable cable in-feeds see accessories

| IP66 | 2,5² | IK08 | □ | 690V AC | VDE | DLG | halogen-free | iQ |

Description	Order no.
Abox-*i* m 025 AB-L Grey, without terminal	499 902 01
Abox-*i* m 025 AB-2,5² Grey, with screw terminal, 5-pole - 2.5 mm² (4 x 1.5² / 4 x 2.5²)	499 402 01
Abox-*i* m 025 AB-L/sw black, without terminal	499 903 01

Junction boxes Abox-*i* m 025 to 40

Abox-*i* m 040

94 x 94 x 56 mm

M20 | M20 | M20

M20/25 — M20/25
M20/25 — M20/25
M20/25 — M20/25
M20/25

Description	Order no.
Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670 (VDE 0606), U^i=690V, weatherproof, shock-proof, with knock-outs, M20, M20/M25, for IP66 double membrane seals, for suitable cable in-feeds see accessories	

IP66 | 4² | IK08 | | 690V AC | | | | iQ

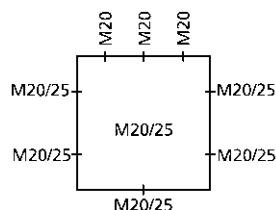|	
Abox-*i* m 040-L Grey, without terminal	501 904 01
Abox-*i* m 040-4² Grey, with screw terminal, 5-pole - 2.5/4 mm² (4 x 1.5² / 4 x 2.5² / 3 x 4²)	501 404 01
Abox-*i* m 040-L/sw black, without terminal	502 904 01
Abox-*i* m 040-4²/sw Black, with screw terminal, 5-pole - 2.5/4 mm² (4 x 1.5² / 4 x 2.5² / 3 x 4²)	502 404 01

Abox-*i* m 040 AB

94 x 94 x 56 mm

M20 | M20 | M20

M20/25 — M20/25
M20/25 — M20/25
M20/25

Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670 (VDE 0606), U^i=690V, weatherproof, shock-proof, with knock-outs, M20, M20/M25, for IP66 double membrane seals, with external attachment lugs, for suitable cable in-feeds see accessories	

IP66 | 4² | IK08 | | 690V AC | | | | iQ

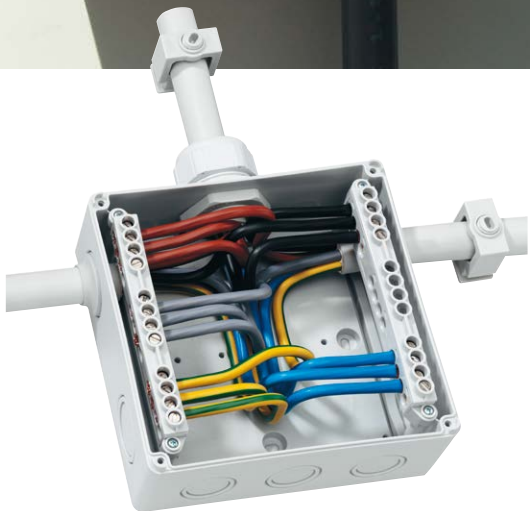|	
Abox-*i* m 040 AB-L Grey, without terminal	503 904 01
Abox-*i* m 040 AB-4² Grey, screw terminal, 5-pole - 2.5/4 mm² (4 x 1.5² / 4 x 2.5² / 3 x 4²)	503 404 01
Abox-*i* m 040 AB-L/sw black, without terminal	503 905 01

Junction boxes Abox-*i* m 025 to 40

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**G. SPELSBERG
JUNCTION BOX SERIES ABOX-I
WITH ACCESSORIES**

✔ **Resistance to Ammonia**
DLG Test Report 6398

APPROVED 2016
DLG
WWW.DLG.ORG

- · Shockproof
- · Ample room for connection
- · Simple test method
- · Raised terminals for quick and orderly wiring (from Abox-i 060)
- · Quick installation with self-sealing membrane entries (on Abox-i 025 and 040)

- · Impact-resistant and shatterproof (e.g. in sports halls)
- · With red cover for identifying circuits for safety lighting
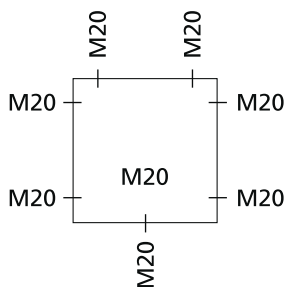- · Also suitable for use under extreme conditions

| IP65 | 240² | IK08 | ▣ | 690V AC | VDE | DLG | halogen-free | iQ |

Junction boxes Abox-*i* 025 to 2400

Abox-*i* 025

80 x 80 x 52 mm

Description	Order no.
Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670 (VDE 0606), U^i=690V, weatherproof, shock-proof, halogen-free, with self-sealing, soft inlet membranes, M20, seal range 2 - 16 mm	

IP65 | 2,5² | IK08 | | 690V AC | | | halogen-free | iQ

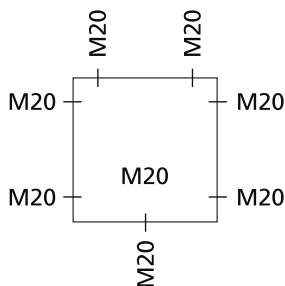|	
Abox-*i* 025-L Grey, without terminal	490 902 01
Abox-*i* 025-2,5² Grey, with screw terminal, 5-pole - 2.5 mm² (4 x 1.5² / 4 x 2.5²)	490 402 01
Abox-*i* 025 SB-L red cover, without terminal, for identifying circuits for safety lighting	490 702 01
Abox-*i* 025-L/sw black, without terminal	491 902 01
Abox-*i* 025-2,5²/sw Black, with screw terminal, 5-pole - 2.5 mm² (4 x 1.5² / 4 x 2.5²)	491 402 01

Abox-*i* 025 AB

80 x 80 x 52 mm

Description	Order no.
Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670 (VDE 0606), U^i=690V, weatherproof, with self-sealing, soft inlet membranes, M20, seal range 2 - 16 mm, with external fixing lugs	

IP65 | 2,5² | IK08 | | 690V AC | | | halogen-free | iQ

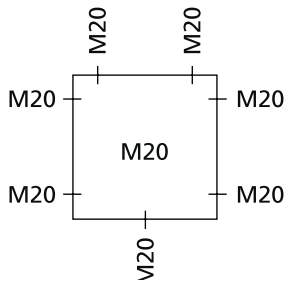|	
Abox-*i* 025 AB-L Grey, without terminal	494 902 01
Abox-*i* 025 AB-2,5² Grey, with screw terminal, 5-pole - 2.5 mm² (4 x 1.5² / 4 x 2.5²)	494 402 01
Abox-*i* 025 SB AB-L red cover, without terminal, for identifying circuits for safety lighting	494 702 01
Abox-*i* 025 AB-L/sw black, without terminal	491 903 01

Junction boxes Abox-*i* 025 to 2400

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Abox-*i* 040

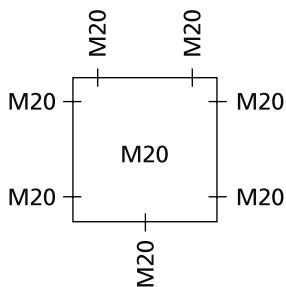93 x 93 x 55 mm

M20 / M20
M20 — M20
M20
M20 — M20
M20

Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670 (VDE 0606), U^i=690V, weatherproof, shock-proof, halogen-free, with self-sealing, soft inlet membranes, M20, seal range 2 - 16 mm

| IP65 | 4² | IK08 | ▢ | 690V AC | VDE | DLG | halogen-free | iQ |

Description	Order no.
Abox-*i* 040-L Grey, without terminal	490 904 01
Abox-*i* 040-4² Grey, with screw terminal, 5-pole - 2.5/4 mm² (4 x 1.5² / 4 x 2.5² / 3 x 4²)	490 404 01
Abox-*i* 040 SB-L Red cover, without terminals, for identifying circuits for safety lighting	490 704 01
Abox-*i* 040-L/sw black, without terminal	491 904 01
Abox-*i* 040-4²/sw Black, with screw terminal, 5-pole - 2.5/4 mm² (4 x 1.5² / 4 x 2.5² / 3 x 4²)	491 404 01

Abox-*i* 040 AB

93 x 93 x 55 mm
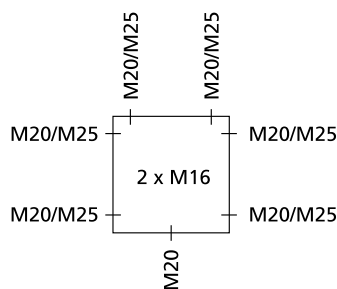

M20 / M20
M20 — M20
M20
M20 — M20
M20

Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670 (VDE 0606), U^i=690V, weatherproof, shock-proof, halogen-free, with self-sealing, soft inlet membranes, M20, seal range 2 - 16 mm

| IP65 | 4² | IK08 | ▢ | 690V AC | VDE | DLG | halogen-free | iQ |

Description	Order no.
Abox-*i* 040 AB-L Grey, without terminal	494 904 01
Abox-*i* 040 AB-4² Grey, screw terminal, 5-pole - 2.5/4 mm² (4 x 1.5² / 4 x 2.5² / 3 x 4²)	494 404 01
Abox-*i* 040 SB AB-L red cover, without terminal, for identifying circuits for safety lighting	494 707 01
Abox-*i* 040 AB-L/sw black, without terminal	491 905 01

Junction boxes Abox-*i* 025 to 2400

Abox-*i* 060

110 x 110 x 67 mm

Description	Order no.

Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670 (VDE 0606), U^i=690V, weatherproof, shock-proof, halogen-free, with IP66 double-membrane seals, M25, seal range 9 - 16 mm

IP65	6^2	IK08		690V AC	DVE	DLG	halogen-free	IQ

Abox-*i* 060-L Grey, without terminal	490 906 01
Abox-*i* 060-6² Grey, with high-set screw terminal, 5-pole - 6 mm² (4 x 2.5² / 4 x 4² / 3 x 6²)	490 406 01
Abox-*i* 060-L/sw black, without terminal	491 906 01
Abox-*i* 060-6²/sw black, with high-set screw terminal, 5-pole - 6 mm² (4 x 2.5² / 4 x 4² / 3 x 6²)	491 406 01

Abox-*i* 100

140 x 140 x 79 mm
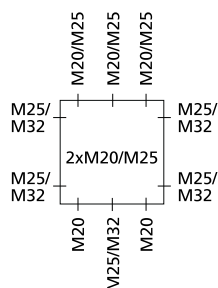
Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670 (VDE 0606), U^i=690V, weatherproof, shock-proof, halogen-free, with IP66 double-membrane seals, M32, seal range 14 - 21 mm

IP65	10^2	IK08		690V AC	DVE	DLG	halogen-free	IQ

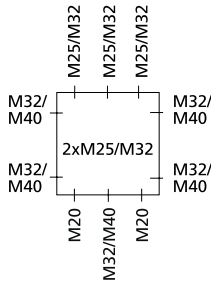|	
Abox-*i* 100-L Grey, without terminal	490 910 01
Abox-*i* 100-10² Grey, with high-set screw terminal, 5-pole - 10 mm² (4 x 4² / 4 x 6² / 4 x 10²)	490 410 01
Abox-*i* 100-L/sw black, without terminal	491 910 01
Abox-*i* 100-10²/sw Black, with high-set screw terminals, 5-pole - 10 mm² (4 x 4² / 4 x 6² / 4 x 10²)	491 410 01

Junction boxes Abox-*i* 025 to 2400
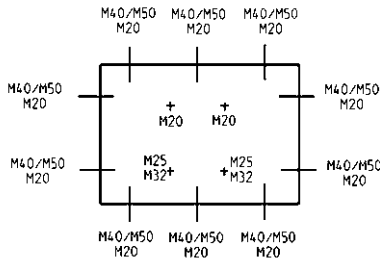
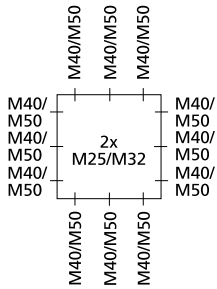els spelsberg

Abox-*i* 160

180 x 180 x 91 mm

Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670 (VDE 0606), U^i=690V, weatherproof, shock-proof, halogen-free, with sealing kit, for suitable cable in-feeds see accessories

| IP65 | 16² | IK08 | ▢ | 690V AC | VDE | DLG | halogen-free | iQ |

Description	Order no.
Abox-*i* 160-L Grey, without terminals	490 916 01
Abox-*i* 160-16² Grey, with high-set screw terminal, 5-pole - 16 mm² (4 x 6² / 4 x 10² / 4 x 16²)	490 416 01
Abox-*i* 160-L/sw Black, without terminals	491 916 01
Abox-*i* 160-16²/sw Black, with high-set screw terminals, 5-pole - 16 mm² (4 x 6² / 4 x 10² / 4 x 16²)	491 416 01

Abox-*i* 250

250 x 200 x 115 mm

Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670 (VDE 0606), U^i=690V, weatherproof, shock-proof, halogen-free, with sealing kit, for suitable cable in-feeds see accessories

| IP65 | 25² | IK08 | ▢ | 690V AC | VDE | DLG | halogen-free | iQ |

Description	Order no.
Abox-*i* 250-L Grey, without terminals	490 925 01
Abox-*i* 250 25² Grey, with high-set screw terminal, 5-pole - 25 mm² (4 x 10² / 4 x 16² / 4 x 25²)	490 425 01

Junction boxes Abox-*i* 025 to 2400

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Abox-*i* 350
250 x 250 x 115 mm

M40/M50 M40/M50 M40/M50

M40/ M50 M40/ M50 M40/ M50	2x M25/M32	M40/ M50 M40/ M50 M40/ M50

M40/M50 M40/M50 M40/M50

Description	Order no.

Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670 (VDE 0606), U^i=690V, weatherproof, shock-proof, halogen-free, with sealing kit, for suitable cable in-feeds see accessories

IP65	35²	IK08	▢	690V AC	VDE	DLG	halogen-free	iQ

Abox-*i* 350-L Grey, without terminals	490 935 01
Abox-*i* 350-35² Grey, with high-set screw terminal, 5-pole - 35 mm² (4 x 10² / 4 x 16² / 4 x 25² / 4 x 35²)	490 435 01
Abox-*i* 350-L/sw Black, without terminals	491 935 01
Abox-*i* 350-35²/sw Black, with high-set screw terminals, 5-pole - 35 mm² (4 x 10² / 4 x 16² / 4 x 25² / 4 x 35²)	491 435 01

Abox-*i* 700
440 x 320 x 179 mm

Entries end:
8 x M20/M25
2 x M32/M40
1 x M40/M50
Entries on each side:
4 x M16
3 x M40/M50

Junction box - **I**ndustrial **Q**uality, U^i=690V, weatherproof, shock-proof, halogen-free, sealable, for suitable cable in-feeds see accessories

IP65	70²	IK08	▢	690V AC	halogen-free	iQ

Abox-*i* 700-70² Grey, with 4-pole terminal blocks 4 x 70 mm², 16 - 70²	490 470 01
Accessories	
Abox 700 KLS-70² 1-pole - 70 mm²	840 070 01
GKE 32 Side of enclosure 320 mm, for 2 x 75 mm Ø cables	073 032 01
GKE 43 Side of enclosure 440 mm, for 3 x 75 mm Ø cables	073 043 01
Clamping capacity 48-51	

Junction boxes Abox-*i* 025 to 2400

Abox-*i* 1500

440 x 320 x 179 mm

Entries end:
8 x M20/M25
2 x M32/M40
1 x M40/M50
Entries on each side:
4 x M16
3 x M40/M50

Description	Order no.
Junction box - **I**ndustrial **Q**uality, U^i=690V, weatherproof, shock-proof, halogen-free, sealable, special screw terminal for conductor entry on top, per pole up to 2 x 150² or 4 x 70², for suitable cable in-feeds see accessories	

IP65	150²	IK08	▣	690V AC	halogen-free	iQ

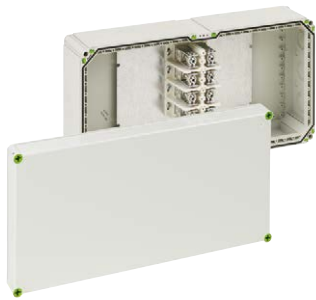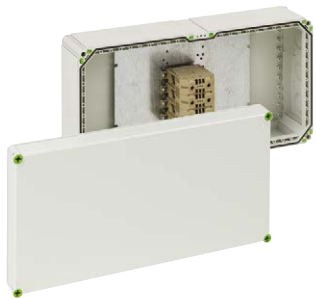|	
Abox-*i* 1500-150² Grey, 4-pole - 50 up to 2 x 150 mm², AL/CU	490 485 01
Accessories	
AKL 125 250 A	076 125 01
GKE 43 Side of enclosure 440 mm, for 3 x 75 mm Ø cables	073 043 01
GTi 1-g with grey cover	010 401 01
GFL 20	072 200 01
GZE 3 Side of enclosure 320 mm, for 1 x 75 mm cable	073 003 01
GKE 32 Side of enclosure 320 mm, for 2 x 75 mm Ø cables	073 032 01
GFG 3 Side of enclosure 320 mm, with sealing	072 803 01
Clamping capacity 48-51	

Abox-*i* 1500 DK

440 x 320 x 179 mm

Entries end:
8 x M20/M25
2 x M32/M40
1 x M40/M50
Entries on each side:
4 x M16
3 x M40/M50

Junction box - **I**ndustrial **Q**uality, U^i=690V, weatherproof, shock-proof, halogen-free, with terminal block mounting, for suitable cable in-feeds see accessories	

IP65	150²	IK08	▣	690V AC	halogen-free	iQ

Abox-*i* 1500 DK-150² Grey, with 4-pole terminal strip 50 - 150 mm²	490 585 01
Accessories	
AKL 125 250 A	076 125 01
GKE 43 Side of enclosure 440 mm, for 3 x 75 mm Ø cables	073 043 01
GTi 1-g with grey cover	010 401 01
GFL 20	072 200 01
GZE 3 Side of enclosure 320 mm, for 1 x 75 mm cable	073 003 01
GKE 32 Side of enclosure 320 mm, for 2 x 75 mm Ø cables	073 032 01
GFG 3 Side of enclosure 320 mm, with sealing	072 803 01
Clamping capacity 48-51	

Abox-*i* 2400

640 x 320 x 179 mm

Entries end:
8 x M16
6 x M40/M50
Entries on each side:
4 x M16
3 x M40/M50

Description	Order no.
Junction box - **I**ndustrial **Q**uality, U^i=690V, weatherproof, shock-proof, halogen-free, sealable, special screw terminal for conductor entry on top, per pole up to 2 x 185²/240² or 4 x 120², for suitable cable in-feeds see accessories	

| IP65 | 240² | IK08 | | 690V AC | halogen-free | iQ |

Abox-*i* 2400-240² Grey, 4-pole - 50 up to 2 x 240 mm², AL/CU	490 494 01
Accessories	
AKL 125 250 A	076 125 01
GKE 43 Side of enclosure 440 mm, for 3 x 75 mm Ø cables	073 043 01
GTi 1-g with grey cover	010 401 01
GFL 20	072 200 01
GZE 3 Side of enclosure 320 mm, for 1 x 75 mm cable	073 003 01
GKE 32 Side of enclosure 320 mm, for 2 x 75 mm Ø cables	073 032 01
GFG 3 Side of enclosure 320 mm, with sealing	072 803 01
Clamping capacity 48-51	

Abox-*i* 2400 DK

640 x 320 x 179 mm

Entries end:
8 x M16
6 x M40/M50
Entries on each side:
4 x M16
3 x M40/M50

Junction box - **I**ndustrial **Q**uality, U^i=690V, weatherproof, shock-proof, halogen-free, sealable, with terminal block mounting, for suitable cable in-feeds see accessories	

| IP65 | 240² | IK08 | | 690V AC | halogen-free | iQ |

Abox-*i* 2400 DK-240² Grey, with 4-pole terminal strip 70 - 240 mm²	490 594 01
Accessories	
AKL 125 250 A	076 125 01
GKE 43 Side of enclosure 440 mm, for 3 x 75 mm Ø cables	073 043 01
GTi 1-g with grey cover	010 401 01
GFL 20	072 200 01
GZE 3 Side of enclosure 320 mm, for 1 x 75 mm cable	073 003 01
GKE 32 Side of enclosure 320 mm, for 2 x 75 mm Ø cables	073 032 01
GFG 3 Side of enclosure 320 mm, with sealing	072 803 01
Clamping capacity 48-51	

Junction boxes Abox-*i* 025 to 2400

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· The Abox-i SL combines the wiring philosophy of the Abox series with screwless terminal technology.
· Standard installation in wet rooms
· Installation on flammable surfaces
· Installation in agricultural and horticultural premises

· Installation in areas with increased requirements for vibration and shock resistance
· Quick installation thanks to screwless terminal technology
· Maintenance-free
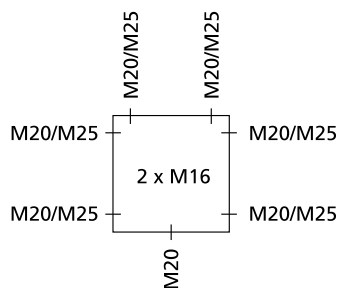· Vibration- and shock-proof

*SL = Screwless terminal technology

G. SPELSBERG
JUNCTION BOX SERIES ABOX-I
WITH ACCESSORIES
✔ Resistance to Ammonia
DLG Test Report 6398

IP65   16²   IK08   400V AC

Junction boxes Abox-i SL*

Abox-*i* <u>SL</u>-2,5/4²

110 x 110 x 67 mm

Description	Order no.

Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670-1/-22, weatherproof, shock-proof, halogen-free, with IP66 double-membrane seals, M25, seal range 9 - 18.5 mm, for suitable cable in-feeds see accessories

IP65	4²	IK08	▢	400V AC	VDE	DLG	halogen-free	IQ

Abox-*i* <u>SL</u>-2,5/4²
Grey, with 5-pole high-set screwless terminal,
for current carrying capacity of 24 A,
max. cross-section acc. DIN EN 60998:4 mm²,
cross sections that can be clamped per pole:
3 x 0.2 up to 4 mm² rigid and 3 x 0.14 up to 4.0 mm² flexible

490 106 01

Abox-*i* <u>SL</u>-2,5-KT
Grey, with high-set terminal carrier, without terminal

490 196 02
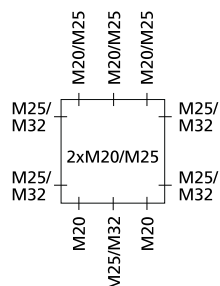
M20/M25 (top left)
M20/M25 (top right)
M20/M25
M20/M25
2 x M16
M20/M25
M20/M25
M20

Abox-*i* <u>SL</u>-6²

140 x 140 x 79 mm

Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670-1/-22, U^i=690V, weatherproof, shock-proof, halogen-free, with IP66 double-membrane seals, M32, seal range 14 - 21 mm

IP65	6²	IK08	▢	690V AC	VDE	DLG	halogen-free	IQ

Abox-*i* <u>SL</u>-6²
Grey, with 5-pole high-set screwless terminal,
max. cross-section acc. EN 60998: 6 mm²,
for current carrying capacity of 41 A,
cross sections that can be clamped per pole:
4 x 0.5 up to 10 mm² rigid and flexible

490 810 01
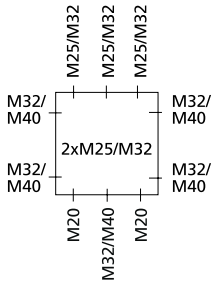
M20/M25
M20/M25
M20/M25
M25/M32
M25/M32
2xM20/M25
M25/M32
M25/M32
M20
M25/M32
M20

Junction boxes Abox-*i* <u>SL</u>

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Abox-*i* <u>SL</u>-10²

180 x 180 x 91 mm

Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670-1/-22, U^i=690V, weatherproof, shock-proof, halogen-free, with sealing kit, for suitable cable in-feeds see accessories

IP65	10²	IK08	□	690V AC	DVE	DLG	halogen-free	iQ

Abox-*i* <u>SL</u>-10²
Grey, with 5-pole high-set screwless terminal,
max. cross-section acc. EN 60998: 10 mm²,
for current carrying capacity of 57 A,
cross sections that can be clamped per pole:
4 x 0.5 up to 16 mm² rigid and flexible

490 816 01

Abox-*i* <u>SL</u>-16²

250 x 200 x 115 mm
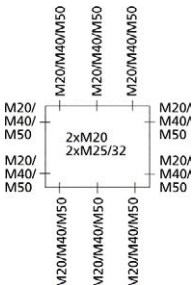
Junction box - **I**ndustrial **Q**uality - acc. to DIN EN 60670-1/-22, U^i=690V, weatherproof, shock-proof, halogen-free, with sealing kit, for suitable cable in-feeds see accessories

IP65	16²	IK08	□	690V AC	DVE	DLG	halogen-free	iQ

Abox-*i* <u>SL</u>-16²
Grey, with 5-pole high-set screwless terminal,
max. cross-section acc. EN 60998: 16 mm²,
for current carrying capacity of 76 A,
cross sections that can be clamped per pole:
4 x 0.5 up to 16 mm², rigid, 4 x 0.5 up to 25 mm² flexible

490 835 01

Junction boxes Abox-*i* <u>SL</u>

- **Simple reinstallation as the cast resin is easy to remove**
- **Testing in accordance with DIN EN 60 529, IP 68, 168 h to a water depth of 15 metres**
- **Testing in accordance with DIN VDE 0278-623, sleeve tests up to 0.6 / 1 kV**
- **For cable cross-sections of 1.5 to 10 mm²**
- **Impact-resistant and shatterproof, flame retardant**
- **UV- and weather-resistant**

▶ The box can be filled cleanly using mixing bags and funnels

Applications & use
- Areas subject to flooding
- Washing systems
- Tunnels
- Port facilities

The **Abox _XT_** series can defy even the presence of standing water in extreme cases

| IP68 | 10² | IK08 | ▢ | 690V AC | VDE | iQ |

Junction boxes Abox _XT_

Abox XT 025-2,5²

80 x 80 x 52 mm
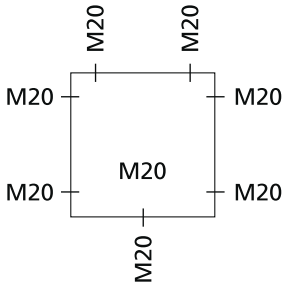
M20 M20
M20 | M20
M20 | M20 M20
M20
M20

Junction box - **I**ndustrial **Q**uality - with connecting terminals for encapsulating
acc. DIN EN 60670 and DIN EN 60529, weather-resistant and shockproof, for the assembly
in flooded areas and in the ground without traffic loads, U^i=690V, with self-sealing, soft
inlet membranes, M20, seal range 2 - 16 mm, with cast resin bag 250 ml (marking-free),
funnel, ventilation seals and disposable gloves,
Attention: Note the expiration date of the cast resin bag

| IP68 | 2,5² | IK08 | ▢ | 690V AC | DVE | iQ |

Abox XT 025-2,5²	492 402 01
Grey, with screw terminal, 5-pole - 2.5 mm² (4 x 1.5² / 4 x 2.5²)	
Accessories	
GHB 1	492 502 01
Cast-resin bag	

Abox XT 040-4²

93 x 93 x 55 mm
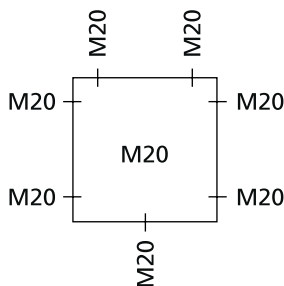
M20 M20
M20 | M20
M20 | M20 M20
M20
M20

Junction box - **I**ndustrial **Q**uality - with connecting terminals for encapsulating
acc. DIN EN 60670 and DIN EN 60529, weather-resistant and shockproof, for the assembly
in flooded areas and in the ground without traffic loads, U^i=690V, with self-sealing, soft
inlet membranes, M20, seal range 2 - 16 mm, with cast resin bag 350 ml (marking-free),
funnel, ventilation seals and disposable gloves,
Attention: Note the expiration date of the cast resin bag

| IP68 | 4² | IK08 | ▢ | 690V AC | DVE | iQ |

Abox XT 040-4²	492 404 01
Grey, with screw terminal, 5-pole - 2.5/4 mm² (4 x 1.5² / 4 x 2.5² / 3 x 4²)	
Accessories	
GHB 2	492 504 01
Cast-resin bag	

Abox XT 060-6²

110 x 110 x 67 mm
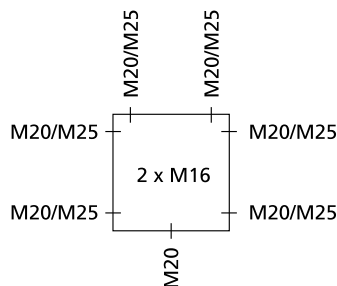
Junction box - **I**ndustrial **Q**uality - with connecting terminals for encapsulating acc. DIN EN 60670 and DIN EN 60529, weather-resistant and shockproof, for the assembly in flooded areas and in the ground without traffic loads, U^i=690V, with double-membrane seals M25, seal range 9 - 16 mm, with cast resin bag 600 ml (marking-free), funnel, ventilation seals and disposable gloves, Attention: Note the expiration date of the cast resin bag

IP68	6²	IK08	▢	690V AC	DVE	halogen-free	IQ

	Order no.
Abox XT 060-6² Grey, with high-set screw terminal, 5-pole - 6 mm² (4 x 2.5² / 4 x 4² / 3 x 6²)	492 406 01
Accessories	
GHB 3 Cast-resin bag	492 506 01

M20/M25 · M20/M25

M20/M25   M20/M25

2 x M16

M20/M25   M20/M25

M20

Abox XT 100-10²

140 x 140 x 79 mm
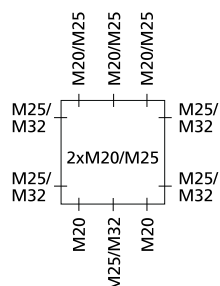
Junction box - **I**ndustrial **Q**uality - with connecting terminals for encapsulating acc. DIN EN 60670 and DIN EN 60529, weather-resistant and shockproof, for the assembly in flooded areas and in the ground without traffic loads, U^i=690V, with double-membrane seals M32, seal range 14 - 21 mm, with cast resin bag 1200 ml (marking-free), funnel, ventilation seals and disposable gloves, Attention: Note the expiration date of the cast resin bag

IP68	10²	IK08	▢	690V AC	DVE	halogen-free	IQ

	Order no.
Abox XT 100-10² Grey, with high-set screw terminal, 5-pole - 10 mm² (4 x 4² / 4 x 6² / 4 x 10²)	492 410 01
Accessories	
GHB 4 Cast-resin bag	492 510 01

M20/M25 · M20/M25 · M20/M25

M25/M32   M25/M32

2xM20/M25

M25/M32   M25/M32

M20 · M25/M32 · M20

Junction boxes Abox *XT*

Abox HA 250

250 x 250 x 115 mm
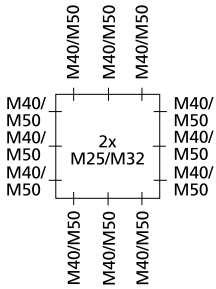
M40/M50 | M40/M50 | M40/M50

M40/M50
M40/M50
M40/M50

2x M25/M32

M40/M50
M40/M50
M40/M50

M40/M50 | M40/M50 | M40/M50

Description	Order no.

Junction box acc. to DIN EN 60670 (VDE 0606), with main cable junction terminal, 25 mm², with IP54 attachment bushes, with blanking plug M40, with twist nipple M50, screw terminal 4-pole 25 mm², Input per pole 2 x 25 mm², Output per pole 4 x 16 mm², with sealing kit

IP65 IP54 | 25² | IK07 | | 690V AC | | halogen-free

Abox HA 250 Grey, with 4 pole screw terminal 25 mm²	480 425 01

Abox HA 350

250 x 250 x 115 mm

M40/M50 | M40/M50 | M40/M50

M40/M50
M40/M50
M40/M50

2x M25/M32

M40/M50
M40/M50
M40/M50

M40/M50 | M40/M50 | M40/M50
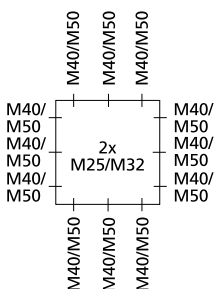
Junction box acc. to DIN EN 60670 (VDE 0606), with main cable junction terminal, 35 mm², with IP54 attachment bushes, with blanking plug M40, with twist nipple M50, screw terminal 4-pole 35 mm², Input per pole 2 x 35 mm², Output per pole 4 x 35 mm², with sealing kit

IP65 IP54 | 35² | IK07 | | 690V AC | | halogen-free

Abox HA 350 Grey, with 4 pole screw terminal 35 mm²	480 435 01

Abox / Abox-*i* terminals
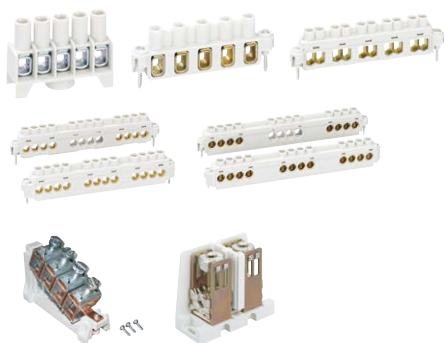
Description		Order no.
Connecting terminal acc. to DIN EN 60998 (VDE 0613), U^i=690V		
	Terminals	
Abox 025/040 KLS-2,5²/4²	5-pole - 2.5/4 mm²	840 004 01
Abox 060 KLS-6²	5-pole - 6 mm²	840 006 01
Abox 100 KLS-10²	5-pole - 10 mm²	840 010 01
Abox 160 KLS-16²	5-pole - 16 mm²	840 016 01
Abox 250/350 KLS-25²/35²	5-pole - 35 mm²	840 035 01
Abox 700 KLS-70²		840 070 01
AKL 125	1-pole - 150 mm²	076 125 01
AKL 140	1-pole - 240 mm²	076 140 01

Abox PST

Sealing set	
Abox PST for junction boxes Abox/Abox-*i* 025 to 100, (from Abox/Abox-*i* 160, contained as standard in the delivery)	890 010 01

Cable infeeds

Cable entry via module with folded rubber for cables of up to 75 mm diameter for Abox-*i* 700 / 1500 / 2400 series	
GKE 32 Side of enclosure 320 mm, for 2 x 75 mm Ø cables	073 032 01
GKE 43 Side of enclosure 440 mm, for 3 x 75 mm Ø cables	073 043 01

Strain reliefs
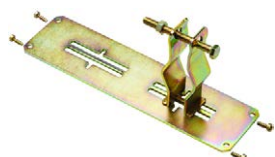
Cable strain relief for cables up to 75 mm for Abox-*i* 2400 series	
GZE 3 Side of enclosure 320 mm, for 1 x 75 mm cable	073 003 01
GZE 4 Side of enclosure 440 mm, for 1 x 75 mm cable	073 004 01

Colors

	grey	similar **RAL 7035**
	green	similar **RAL 6018**
	red	similar **RAL 3020**
	black	similar **RAL 9005**
	white	similar **RAL 9010**

Junction boxes Abox / Abox-i accessories

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Standard rails

35 mm

Standard rail acc. to DIN EN 60715, 35 x 7.5, width 35 mm, incl. fixing screws

Description	Order no.
NS 35-81 TK PS/PC 1111/1309/1313/1809/1811 + TK AL 1111/1313/1811, Abox/Abox-*i* 060	198 081 01
NS 35-106 TK PS/PC 1309/1313 + TK AL 1111/1313, Abox/Abox-*i* 100	198 106 01
NS35-144/2 Abox/Abox-*i* 160, Abox/Abox-*i* 250	894 016 01
NS35-216/2 Abox/Abox-*i* 350	894 035 01
NS35-216/3 universal floor fixing, length 216 mm, with fixing screws	795 030 01

Mounting plates

Mounting plate made from insulating material, incl. fixing screws

	Enclosure type	Order no.
Abox 060 MPI	Abox/Abox-i 060	895 006 01
Abox 100 MPI	Abox/Abox-i 100	895 010 01
Abox 160 MPI	Abox/Abox-i 160	895 016 01
Abox 250 MPI	Abox/Abox-i 250	895 025 01
Abox 350 MPI	Abox/Abox-i 350	895 035 01
AK MPI 3	AKL/AKi 3-4	795 003 01
GMI 3	Abox-i 700	071 013 01

Mounting plate cable tray

150 mm · 249 mm
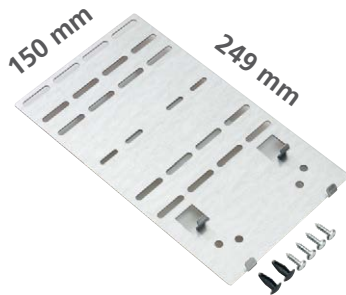
Mounting plate made of sheet steel, incl. fixing screws, for mounting on Stago/van Geel cable tray, for mouting of Abox junction boxes, fastening space of up to 130 mm

	Order no.
MPS-KRI	194 101 01

	840 004 01 Abox 025/40 KLS 2,5²/4²			840 006 01 Abox 060 KLS 6²	840 010 01 Abox 100 KLS 10²	840 016 01 Abox 160 KLS 16²
Installed in junction box	Abox 025-2,5² Abox 025 AB-2,5² Abox-i 025-2,5² Abox-i 025-2,5²/sw Abox 040-4,0² Abox 040-4,0²/w Abox 040 AB-4,0² Abox-i 040-4,0² Abox-i 040-4,0²/sw	Abox 060-6² Abox-i 060-6² Abox-i 060-6²/sw Abox 100-10² Abox-i 100-10² Abox-i 100-10²/sw Abox 160-16² Abox-i 160-16² Abox-i 160-16²/sw	Abox 350-35² Abox-i 350-35² Abox-i 350-35²/sw	Abox 060-6² Abox-i 060-6² Abox-i 060-6²/sw	Abox 100-10² Abox-i 100-10² Abox-i 100-10²/sw	Abox 160-16² Abox-i 160-16² Abox-i 160-16²/sw
Rated connection capacity	6 mm²			10 mm²	16 mm²	25 mm²
Rated insulation voltage [V]	690			690	690	690
Rated current [A]	41			57	76	101
Clamping points per pole	1			1	2	4
Number of conductors in a clamping point, conductor cross-section, type of conductor	1..5 x 1,5² re 1..6 x 2,5² re 1..4 x 4² re 1..2 x 6² re			1...5 x 2,5² re 1...5 x 4² re 1...4 x 6² re 1...2 x 10² re	1..8 x 2,5² re 1..6 x 4² re 1..4 x 6² re 1..2 x 10² re 1 x 16² re	1..6 x 4² re 1..4 x 6² re 1..2 x 10² re 1 x 16² re 1 x 25² re
Type of conductor	Cu			Cu	Cu	Cu
Number of poles	5			5	5	5
Stripped length	11 mm			11 mm	11 mm	11 mm
Tightening torque	1,2 Nm			2,0 Nm	2,0 Nm	2,5 Nm
Type of terminal	Screw terminal M4			High-position screw terminal M5	High-position screw terminal M5	High-position screw terminal M6

re = single-wire, round conductor   **se** = single-wire, sector conductor   **rm** = multi-wire, round conductor

Technical data for terminals

840 035 01	840 070 01	076 125 01	670 650 01	670 740 01	076 140 01	460 525 01
Abox 250/350 KLS 25²/35²	Abox 700 KLS 70²	AKL 125150²	URS RK1 150²	URS RK1 240²	AKL 140 240²	WK 007 KLS-2,5²
Abox 250-25² Abox-i 250-25² Abox 350-35² Abox-i 350-35² Abox-i 350-35²/sw	Abox 700-70² Abox-i 700-70²	Abox-i 1500-150²	Abox-i 1500-150² DK	Abox-i 2400-240² DK	Abox-i 2400-240²	WK 007-2,5²
35 mm²	70 mm²	150 mm²	150 mm²	240 mm²	240 mm²	2,5 mm²
690	690	690	1000	1000	690	660
125	150	250	309	380	400	24
4	4	4	2	2	4	1
1..4 x 10² re 1..2 x 16² re 1 x 25² re 1 x 35² re	1x16² re;rm;se;sm 1x25² re;rm;se;sm 1x35² re;rm;se;sm 1x50² re;rm;se;sm 1x70² re;rm;se;sm	Cu/AL 1x16-50 re, Cu/AL1x16-150 rm, Cu/AL1x50-150 se, Cu 1x35-150 sm, AL 1x50-120 sm, Cu/AL 2x16-50 re, Cu/AL 2x16-70 rm, Cu/AL 2x50-70 se, Cu 2x35-70 sm, AL 2x35-50 sm	eindrähtig starr 35-150 / mehrdrähtig flexibel 50-150 feindrähtig 50-150 / feindrähtig Aderend-hülse 50-150 Bandleiter bis 20x8	eindrähtig starr 50-240 / mehrdrähtig flexibel 50-240, feindrähtig 50-240 / feindrähtig Aderendhülse 50-240 Bandleiter bis 20x12	1x25-50 re Al Cu, 1x25-240 rm Cu, 1x50-185 se Al Cu, 1x35-240 sm Cu, 1x95-185 sm Al, 2x25-50 re Cu Al, 2x25-120 rm Cu Al, 2x50-120 se Al Cu, 2x35-120 sm Cu, 2x50-95 sm Al, Flach Cu 25x15	6 x 1²-1,5² re,rm 4 x 2,5² re, rm
Cu	Cu	Cu/AL	Cu	Cu	Cu/AL	Cu
5	1	1	1	1	1	5
11 mm	15 mm	38 mm	38 mm	37 mm	45 mm	11 mm
4,0 Nm	4,0 Nm	20 Nm	10-20 Nm	10-20 Nm	40 Nm	1,2 Nm
High-position screw terminal M8	Screw terminal	Screw terminal cable insertion from above	Serial through-feed terminal M10 Allen head	Serial through-feed terminal M10 Allen head	Screw terminal cable insertion from above	Screw terminal

sm = multi-wire, sector conductor

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	460 506 01 WK 060 KLS-6²	460 510 01 WK 100 KLS-10²	460 516 01 WK 160 KLS-16²	460 535 01 WK 250 KLS-25²	076 125 01 AKL 125
Art. no. terminal					
Installed in junction box	WK 060-6²	WK 100-10²	WK 160-16²	WK 250-25²	Abox-i 1500-150²
Rated connection capacity	6mm²	10mm²	16mm²	25mm²	150mm²
Rated insulation voltage [V]	690	690	690	690	1000
Rated current [A]	41	57	76	101	250
Clamping points per pole	1	1	1	1	2
Number of conductors in a clamping point, conductor cross-section, type of conductor	3 x 2,5²-6² re, rm	3 x 4²-10² re, rm	3 x 6²-16² re, rm	3 x 10²-25² re, rm	Cu/Al 1x16-50 re, Cu/Al 1x16-150 rm, Cu/Al 1x50-150 se, CU 1x35-150 sm, Al 1x50-150 sm, Cu/Al 2x16-50 re, Cu/Al 2x16-70 rm, Cu/Al 2x50-70 se, CU 2x35-70 sm, Al 2x35-50 sm
Type of conductor	Cu	Cu	Cu	Cu	Cu / AL
Number of poles	5	5	5	5	1
Stripped length	15 mm	15 mm	23 mm	28 mm	--------
Tightening torque	2,0 Nm	2,0 Nm	2,5 Nm	2,5 Nm	20 Nm
Type of terminal	Screw terminal	Screw terminal	Screw terminal	Screw terminal	Screw terminal

 re= single-wire, round conductor   **se**= single-wire, sector conductor   **rm**= multi-wire, round conductor

Technical data for terminals

| 076 140 01 AKL 140	--------------	--------------	--------------	--------------
Abox-i 2400-240²	Abox SL 2,5² Abox-i SL 2,5/4²	Abox SL 6² Abox-i SL 6²	Abox SL 10² Abox-i SL 10²	Abox SL 16² Abox-i SL 16²
240mm²	4mm²	6mm²	10mm²	16mm²
1000	450	800	800	800
400	32	41	57	76
2	3	2	2	2
Cu/Al 1x25-50 re, Cu/Al 1x25-240 rm, Cu/Al 1x50-185 se, CU 1x35-240 sm, Al 1x95-185 sm, Cu/Al 2x25-50 re, Cu/Al 2x25-120 rm, Cu/Al 2x50-120 se, CU 2x35-120 sm, Al 2x50-95 sm	Single wire 0.2-4² Multi-wire 0.2-4² Fine-wire 0.14-4²	Single wire 0.5-10² Fine-wire 0.5-10² Fine-wire wire end ferrule 1.5²	Single wire 0.5-16² Fine wire 0.5-16² Fine-wire wire end ferrule 2.5²	Single wire 0.5-16² Fine-wire 0.5-25² Fine-wire wire end ferrule 2.5²
Cu / AL	Cu	Cu	Cu	Cu
1	1	1	1	1
-----------	11 mm	15 mm	19 mm	20 mm
20 Nm	-----------	---------	----------	-----------
Screw terminal	Push-in terminal	Spring-type terminal	Spring-type terminal	Spring-type terminal

sm= multi-wire, sector conductor

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· Mounting on wood or other combustible
  materials
· Safe opening and closing mechanism
· Colour variants (sw=black / sb=red /
  gr=green) for reliable identification
  of circuits

· Knock-out entries can be removed
  with a knife
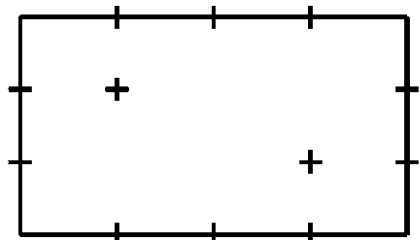· Patented external mounting bracket
· Labelling area

IP55 2,5² IK07 ▣ 400V AC VDE halogen-free
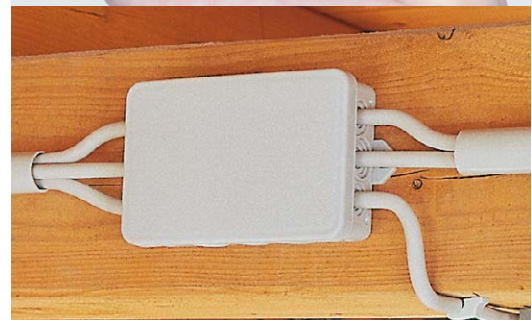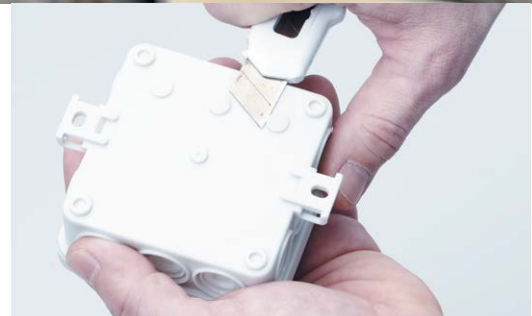
Junction boxes Red Range

Mini 25
89 x 43 x 37 mm

Description	Order no.
Junction box acc. to DIN EN 60670 (VDE 0606), 10 entries, 2 floor entries, suitable for confined installation environments such as suspended ceilings and cable ducts, complete with punching tool and blanking plug, with external fixing positions	

IP55	2,5²	IK07	▣	400V AC	DYE	halogen-free

Mini 25-L Grey, without terminals, for VDE approved single terminals	310 908 01
Mini 25-2,5² Grey, with 3 interlockable screw terminals 2.5 mm²	310 408 01

Sd 7
75 x 75 x 37 mm
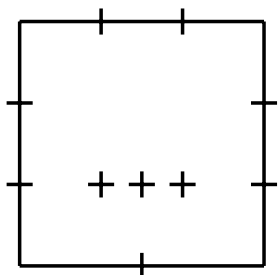
Description	Order no.
Junction box acc. to DIN EN 60670 (VDE 0606), 7 entries, 3 floor entries, complete with punching tool and blanking plug, with external fixing positions	

IP55	2,5²	IK07	▣	400V AC	DYE	halogen-free

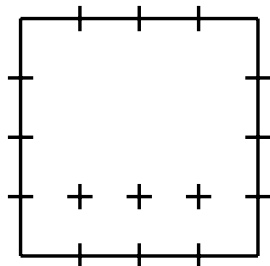|	
Sd 7-L Grey, without terminals, for VDE approved single terminals	332 907 01
Sd 7-2,5² Grey, with 5 interlockable screw terminals 2.5 mm²	332 407 01
Sd 7 SB-L Red, without terminals, for VDE approved single terminals, for identifying circuits for safety lighting	332 707 01

Junction boxes Red Range

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i 12
85 x 85 x 37 mm

Description	Order no.
Junction box acc. to DIN EN 60670 (VDE 0606), 12 entries, 3 floor entries, complete with punching tool and blanking plug, with external fixing positions	

IP55 | 2,5² | IK07 | ▢ | 400V AC | VDE | halogen-free

|	
i 12-L Grey, without terminals, for VDE approved single terminals	332 912 01
i 12 -2,5²/w White, with 5 modular screw terminals 2.5 mm²	332 112 01
i 12-2,5² Grey, with 5 interlockable screw terminals 2.5 mm²	332 412 01
i 12-L/w White, without terminals, for VDE approved single terminals	332 612 01
i 12 SB-L Red, without terminals, for VDE approved single terminals, for identifying circuits for safety lighting	332 712 01
i 12-L/gr Green, without terminals, for VDE approved single terminals, for identifying auxiliary power supply electrical circuits	332 512 01
i 12 -L/sw Black, without terminals, for VDE approved single terminals	332 212 01

2K-12
85 x 85 x 37 mm
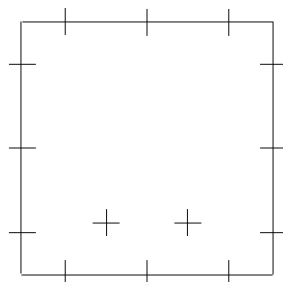
Description	Order no.
Junction box acc. to DIN EN 60670 (VDE 0606), 12 entries, 2 floor entries, with self-sealing, soft inlet membranes, tools not required for opening the cable entry, seal range 2 - 14 mm, with internal fixing positions	

IP55 | 2,5² | IK07 | ▢ | 400V AC | VDE | halogen-free

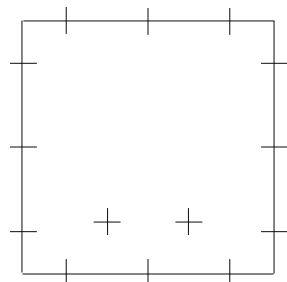|	
2K-12-L Grey, without terminals, for VDE approved single terminals	344 912 01
2K-12-L/br Brown, without terminal, for VDE approved single terminals	344 012 01
2K-12-2,5² Grey, with screw terminal 5-pole - 2.5 mm²	344 412 01
2K-12-L/w White, without terminals, for VDE approved single terminals	344 612 01
2K-12-2,5²/w White, with screw terminal 5-pole - 2.5 mm²	344 112 01

Junction boxes Red Range

2K-12 AB
85 x 85 x 37 mm

Description	Order no.
Junction box acc. to DIN EN 60670 (VDE 0606), 12 entries , 2 floor entries, with self-sealing, soft inlet membranes, tools not required for opening the cable entry, seal range 2 - 14 mm, with external fixing positions	

IP55	2,5²	IK07	▢	400V AC	DVE	halogen-free

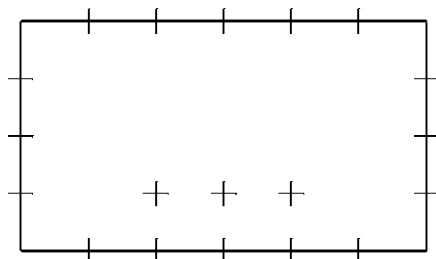| Description	Order no.
2K-12 AB-L Grey, without terminals, for VDE approved single terminals	345 912 01
2K-12 AB-2.5² Grey, with screw terminal 5-pole - 2.5 mm², for VDE approved single terminals	345 412 01
2K-12 AB-L/w White, without terminals, for VDE approved single terminals	345 612 01
2K-12 AB-2,5²/w White, with screw terminal 5-pole - 2.5 mm²	345 112 01

i 16
130 x 85 x 37 mm

Description	Order no.
Junction box acc. to DIN EN 60670 (VDE 0606), 16 entries , 3 floor entries, complete with punching tool and blanking plug, with external fixing positions	

IP55	2,5²	IK07	▢	400V AC	DVE	halogen-free

Description	Order no.
i 16-L Grey, without terminals, for VDE approved single terminals	333 916 01
i 16-2,5² Grey, with screw terminal 5-pole - 2.5 mm²	333 416 01
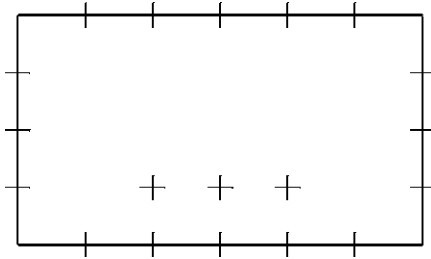
Junction boxes Red Range

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2K-16
130 x 85 x 37 mm

Junction box acc. to DIN EN 60670 (VDE 0606), 16 entries, 3 floor entries, with self-sealing, soft inlet membranes, tools not required for opening the cable entry, seal range 2 - 14 mm, with internal fixing positions

| IP55 | 2,5² | IK07 | | 400V AC | VDE | halogen-free |

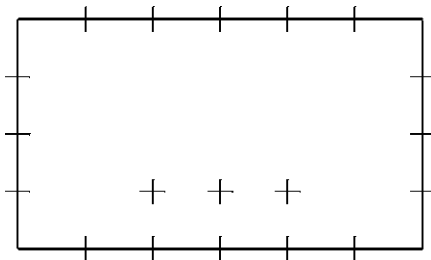|	Order no.
2K-16-L Grey, without terminals, for VDE approved single terminals	346 916 01
2K-16-2,5² Grey, with screw terminal 5-pole - 2.5 mm²	346 416 01
2K-16-L/w White, without terminals, for VDE approved single terminals	346 616 01
2K-16-2,5²/w White, with screw terminal 5-pole - 2.5 mm²	346 116 01

2K-16 AB
130 x 85 x 37 mm

Junction box acc. to DIN EN 60670 (VDE 0606), 16 entries, 3 floor entries, with self-sealing, soft inlet membranes, tools not required for opening the cable entry, seal range 2 - 14 mm, with external fixing positions

| IP55 | 2,5² | IK07 | | 400V AC | VDE | halogen-free |

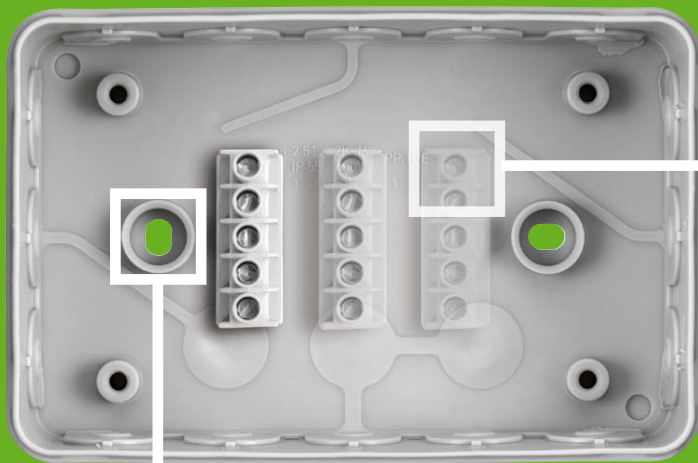|	Order no.
2K-16 AB-L Grey, without terminals, for VDE approved single terminals	348 916 01
2K-16 AB-2,5² Grey, with screw terminal 5-pole - 2.5 mm²	348 416 01
2K-16 AB-L/w White, without terminals, for VDE approved single terminals	348 616 01
2K-16 AB-2,5²/w White, with screw terminal 5-pole - 2.5 mm²	348 116 01

Junction boxes Red Range

3 fixture points for attaching the screw terminal and the pull relief

Exterior and interior mounting, or with interior mounting only
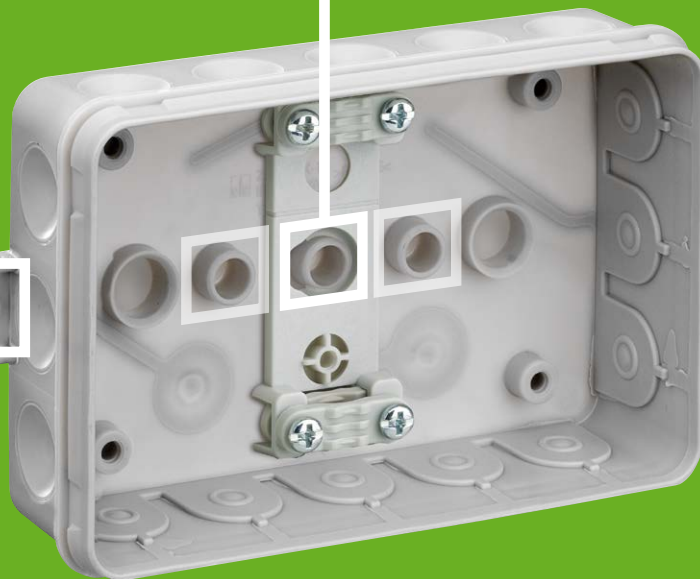
2K-16

2K-16

- Junction box as per DIN EN 60670 (VDE 0606)
- 16 entry points
- 3 base inlets consisting of self-sealing, soft inlet membranes
- With exterior and interior mounting, or with interior mounting only

- 3 fixture points for attaching the screw terminal and the strain relief
- Tool for opening the line inlet not required, sealing range 2-14 mm
- Connection table in the lid

- More secure opening and closing mechanism:
  1. Lockable without tools
  2. Can only be opened with a tool
- With practical labelling strip

IP55 2,5² IK07 □ 400V AC DVE halogen-free

Junction boxes 2K-16

NEW!

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- · Quick installation with cable entry from above
- · Pre-wired circuit can be inserted subsequently
- · Strain relief for suspended lights
- · Contact protection
- · Enclosure height only 23 mm

- · An innovation for suspended ceilings and double floors
- · Clamping possible outside the box
- · VDE-compliant retrofitting of electrical systems
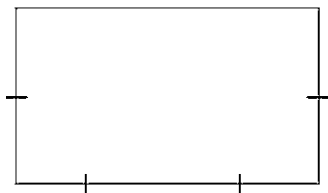
IP30 IP20   2,5²   IK07   400V AC

Junction boxes Red Range

Q 4
56 x 40 x 23 mm

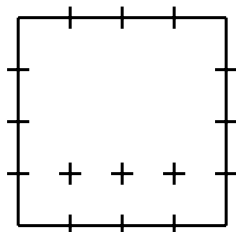| Description	Order no.
Junction box acc. to DIN EN 60598 (VDE 0711), 4 entries , with strain relief acc. VDE 0606 for NYM 3 x 2.5 mm², 2 of which are accessible from the top, Strain relief clamp for pendulum lights (max. 60W), with external fixing positions	

IP20	2,5²	IK07	▢	400V AC	DYE	halogen-free

Q 4-L Grey, without terminal	334 904 01

Q 12
85 x 85 x 37 mm

Description	Order no.
Junction box acc. to DIN EN 60670 (VDE 0606), 12 entries, with conductor retention acc. to VDE 0606 for NYM 5 x 2.5 mm², 7 of which are accessible from the top, 3 floor entries, with external fixing positions	

IP20	2,5²	IK07	▢	400V AC	DYE	halogen-free

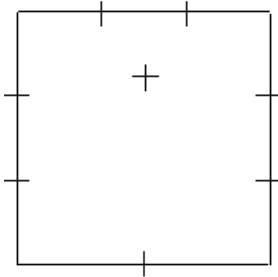| Q 12-L Grey, without terminals, for VDE approved single terminals	334 912 01
Q 12-2,5² Grey, with 5 interlockable screw terminals 2.5 mm²	334 412 01
Q 12 SB-L Red, without terminals, for VDE approved single terminals, for identifying circuits for safety lighting	334 712 01

Junction boxes Red Range

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AP 7

78 x 78 x 27 mm

Description	Order no.
Junction box acc. VDE 0606, Surface mounting, 7 entries, 1 bottom entry, central quick lock lid	

IP30	2,5²	IK07	▣	400V AC	VDE

	Order no.
AP 7 - L White, without terminals, for VDE approved single terminals	315 607 01
AP 7 - 2,5² White, with 5-pole HandyGrip terminal 2.5 mm²	315 107 01

Strain relief ZEL 2K-12

Description	
Strain relief, for assembly in 2K-12 junction boxes, Strain relief possible for up to 2 entries, Strain relief can be split without tools, 2 strain relief clamps are required for T wiring	

		Order no.
ZEL 2K-12	Grey	344 001 01

UP 6

32 mm Height, Ø 80 mm

	Description	
IP54	Junction box acc. to DIN EN 60670 (VDE 0606), with self-sealing inlet membranes, with separate flush-fitting lid	

	Order no.
UP 6-L Grey, without terminals, for VDE approved single terminals	306 906 01
UP 6-2,5² Grey, with screw terminal 5-pole - 2.5 mm²	306 406 01

VST RR

Description	
Sealing plugs, for subsequent closing of previously opened entries on junction boxes in Red Range	

		Order no.
VST RR	Grey	300 407 01

Junction boxes Red Range

2K-12 with integrated strain relief

Junction boxes Red Range
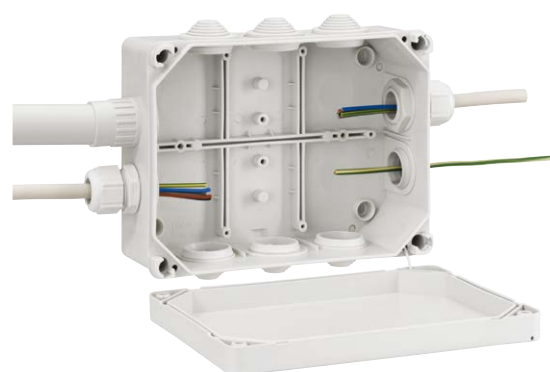
- · **6 sizes**
- · **Mounting on wood or other combustible materials**
- · **Mounted stepped nipples**
- · **Cross-sectional area of 1.5 mm² to 10 mm²**
- · **Insertion points are equally suitable for metric mounting accessories**

Suitable for installation

- in damp and wet areas and rooms
- in installations for gatherings of people
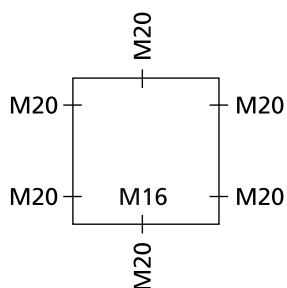- in temporary buildings, cars and caravans

IP55   10²   IK07   ⊡   400V AC   VDE

Junction boxes HP

HP 70

75 x 75 x 42 mm
Internal dimension: 68 x 68 x 38 mm

M20		M20
M20	M16	M20
	M20	

(box diagram nipple layout: M20 top, M20 left top/bottom, M20 right top/bottom, M16 center, M20 bottom)

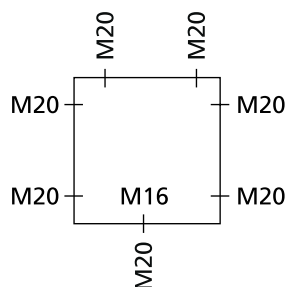| Description	Order no.
Junction box acc. to DIN EN 60670 (VDE 0606), 3 recessed stepped nipples, and two loose ones enclosed, seal range 5 - 16 mm, for terminals up to 2.5 mm²	

IP55 | 2,5² | IK07 | ▢ | 400V AC | DYE

| HP 70-L | 320 970 01 |
| Grey, without terminals | |

HP 80

85 x 85 x 42 mm
Internal dimension: 78 x 78 x 38 mm

M20	M20	
M20		M20
M20	M16	M20
	M20	

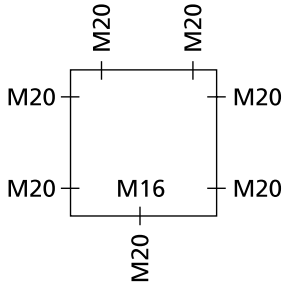| Description	Order no.
Junction box acc. to DIN EN 60670 (VDE 0606), 7 recessed stepped nipples, seal range 5 - 16 mm, for terminals up to 2.5 mm²	

IP55 | 2,5² | IK07 | ▢ | 400V AC | DYE

| HP 80-L | 322 980 01 |
| Grey, without terminals | |

Junction boxes HP

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HP 90

90 x 90 x 45 mm
Internal dimension: 82 x 82 x 38 mm

Junction box acc. to DIN EN 60670 (VDE 0606), 7 recessed stepped nipples, seal range 5 - 16 mm, for terminals up to 4 mm²
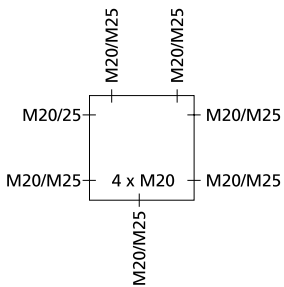
IP55	4²	IK07	▣	400V AC	VDE

HP 90-L Grey, without terminals	325 990 01

Diagram:
M20 M20 (top)
M20 — M20
M20 — M16 — M20
M20 (bottom)

HP 100

113 x 113 x 58 mm
Internal dimension: 103,5 x 103,5 x 32 mm

Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, 7 recessed stepped nipples, seal range 5 - 21 mm, for terminals up to 10 mm²
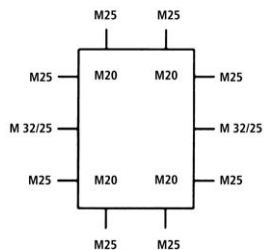
IP55	10²	IK07	▣	690V AC	VDE

HP 100-L Grey, without terminals	326 900 01

Diagram:
M20/M25 M20/M25 (top)
M20/25 — M20/M25
M20/M25 — 4 x M20 — M20/M25
M20/M25 (bottom)

Junction boxes HP

HP 150

164 x 119 x 77 mm
Internal dimension: 155 x 110 x 70 mm

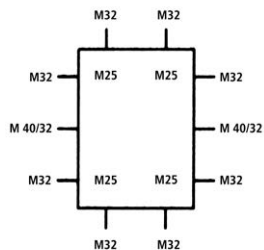| Description	Order no.
Junction box, U^i=690V, 10 recessed stepped nipples, seal range 5 - 21 mm	

IP55	IK07	▣	690V AC	DYE

HP 150-L Grey, without terminals, with cover retainer	326 950 01

	M25	M25	
M25	M20	M20	M25
M 32/25			M 32/25
M25	M20	M20	M25
	M25	M25	

HP 190

199 x 149 x 77 mm
Internal dimension: 190 x 140 x 70 mm

Description	Order no.
Junction box, U^i=690V, 10 recessed stepped nipples, seal range 13 - 26.5 mm	

IP55	IK07	▣	690V AC	DYE

HP 190-L Grey, without terminals, with cover retainer	326 990 01

	M32	M32	
M32	M25	M25	M32
M 40/32			M 40/32
M32	M25	M25	M32
	M32	M32	
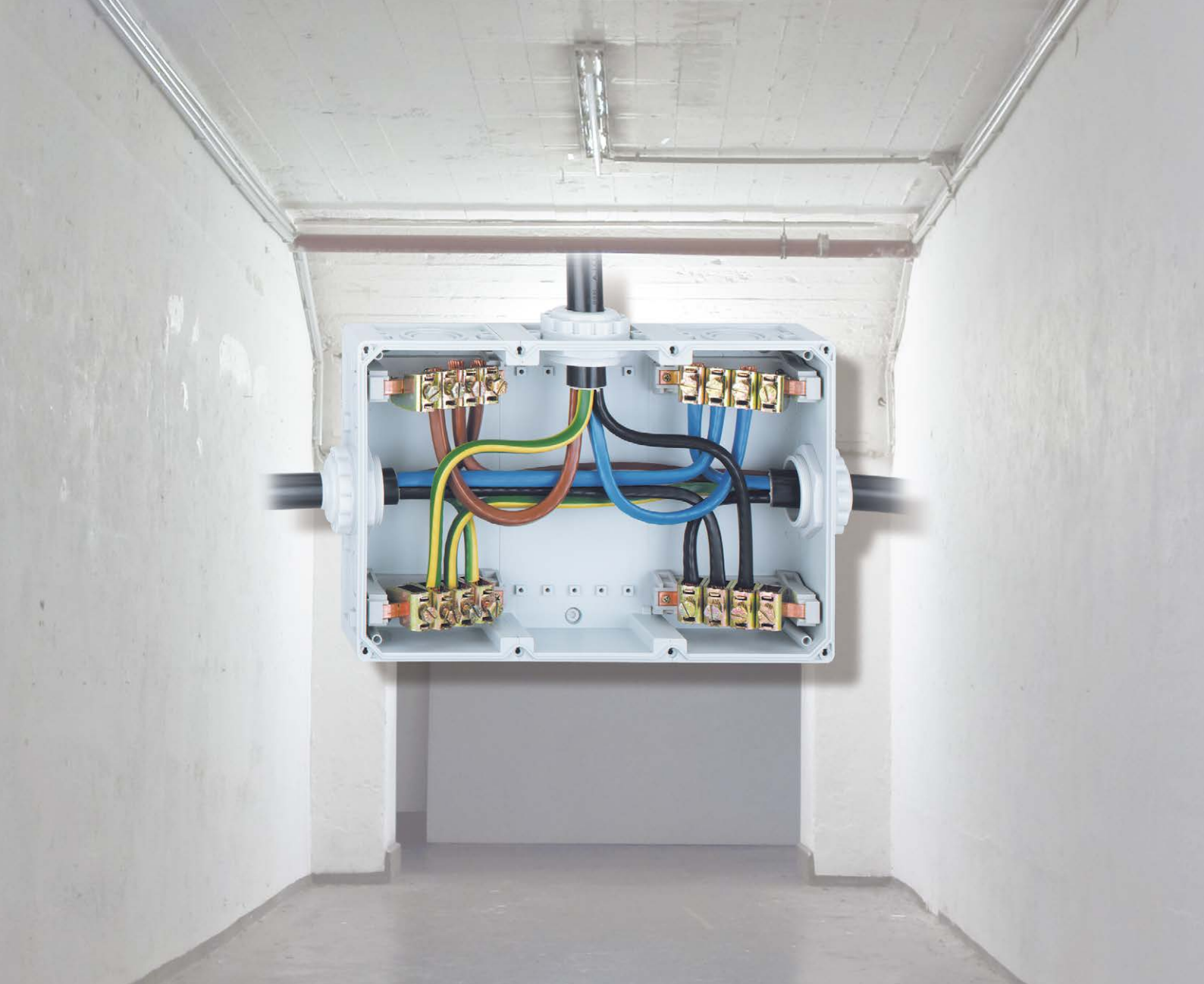
Junction boxes HP

- · **Halogen-free duroplastic**
- · **Glow-wire test as per VDE 0471 up to 960°C**
- · **Cable cross-sections of 2.5² to 25²**

Suitable for use

- in locations that are subject to fire hazards
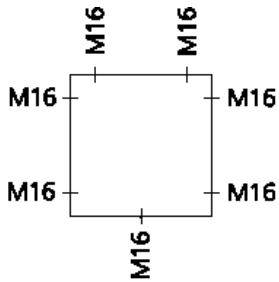 as per VDE 0100 Part 482

IP54 25² IK05 ⬚ 400V 690V AC halogen-free

Junction boxes WK

WK 007

80 x 80 x 38 mm

Description	Order no.
Junction box acc. to DIN EN 60670 (VDE 0606), Duroplastic, halogen-free, with IP54 attachment bushes, with blanking plug M16, seal range 6 - 10 mm	

IP54	2,5²	IK05	▣	400V AC	halogen-free

WK 007-L Grey, without terminal	402 907 01
WK 007-2,5² Grey, with screw terminal 5-pole - 2.5 mm², (6 x 1.5² / 4 x 2.5²)	402 407 01

WK 040

87 x 87 x 45 mm
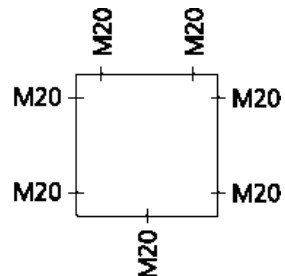
Description	Order no.
Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, Duroplastic, halogen-free, with IP54 attachment bushes, with blanking plug M20, seal range 8 - 13.5 mm	

IP54	4²	IK05	▣	690V AC	halogen-free

WK 040-L Grey, without terminal	404 907 01
WK 040-S Grey, without terminals	455 907 01
WK 040-4² Grey, with screw terminal 5-pole - 4 mm², (6 x 2.5² / 4 x 4²)	404 407 01
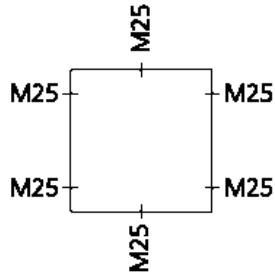
Junction boxes WK

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WK 060

100 x 100 x 50 mm

M25

| M25 | | M25 |
| M25 | | M25 |

M25

Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, Duroplastic, halogen-free, with IP54 attachment bushes, with blanking plug M25, seal range 9 - 18.5 mm

| IP54 | 6² | IK05 | ▣ | 690V AC | halogen-free |

WK 060-L Grey, without terminal	406 906 01
WK 060-6² Grey, with 5-pole screw terminal - 6 mm², (5 x 4² / 4 x 6²)	406 406 01

WK 100

115 x 115 x 66 mm
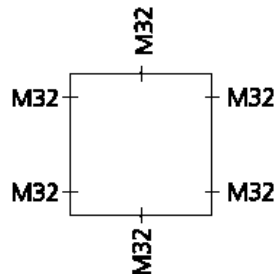
M32

| M32 | | M32 |
| M32 | | M32 |

M32

Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, Duroplastic, halogen-free, with IP54 attachment bushes, with blanking plug M32, seal range 13 - 23 mm, with sealing kit

| IP54 | 10² | IK05 | ▣ | 690V AC | halogen-free |

WK 100-L Grey, without terminal	410 906 01
WK 100-10² Grey, with 5-pole screw terminal - 10 mm², (5 x 4² / 4 x 6² / 3 x 10²)	410 406 01

Junction boxes WK

WK 160

165 x 165 x 76 mm
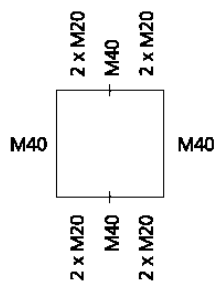
2 x M20	M40	2 x M20
M40		M40
2 x M20	M40	2 x M20

Description	Order no.

Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, Duroplastic, halogen-free, with IP54 attachment bushes, with blanking plug M40, seal range 17 - 30 mm, with sealing kit

IP54	16²	IK05	▢	690V AC	halogen-free

WK 160-L	416 912 01
Grey, without terminal	
WK 160-16²	416 412 01
Grey, with 5-pole screw terminal - 16 mm², (5 x 10² / 3 x 16²)	

WK 250

256 x 171 x 106 mm
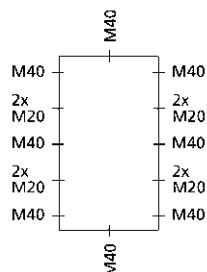
	M40	
M40		M40
2x M20		2x M20
M40		M40
2x M20		2x M20
M40		M40
	M40	

Junction box acc. to DIN EN 60670 (VDE 0606), U^i=690V, Duroplastic, halogen-free, with IP54 attachment bushes, with blanking plug M40, seal range 17 - 30 mm, with sealing kit
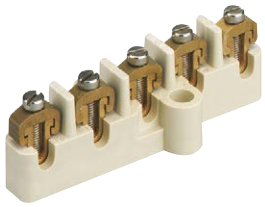
IP54	25²	IK05	▢	690V AC	halogen-free

WK 250-L	425 916 01
Grey, without terminal	
WK 250-25²	425 416 01
Grey, with 5-pole screw terminal - 25 mm², (5 x 16² / 3 x 25²)	

Junction boxes WK

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WK Terminal block

Connecting terminal, U^i=400V / 690V

	Terminals	Enclosure type	
WK 007 KLS-2,5²	5-pole - 2.5 mm²	WK 007	460 525 01
Abox 025/040 KLS-2,5²/4²	5-pole - 2.5/4 mm²	WK 040	840 004 01
WK 060 KLS-6²	5-pole - 6 mm²	WK 060	460 506 01
WK 100 KLS-10²	5-pole - 10 mm²	WK 100	460 510 01
WK 160 KLS-16²	5-pole - 16 mm²	WK 160	460 516 01
WK 250 KLS-25²	5-pole - 25 mm²	WK 250	460 535 01

HandyQuick - 1,5²

Screwless connecting terminal for single-wire conductors
acc. to DIN EN 60998 (VDE 0613), U^i=400 V

HandyQuick **SQ 31**	light grey, 3 x 0.75-1.5 mm²	688 310 01

HandyQuick - 2,5²

Screwless connecting terminal for single-wire conductors
acc. to DIN EN 60998 (VDE 0613), U^i=400 V

HandyQuick **SQ 32**	Dark grey, 3 x 1.0-2.5 mm²	688 320 01
HandyQuick **SQ 52**	Dark grey, 5 x 1.0-2.5 mm²	688 520 01

HandyGrip - 2,5²
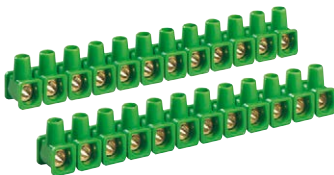
12-pole screw terminal, rated cross-section 2.5 mm², U^i=400 V

HandyGrip **VG 20**	Sorted according to colour	685 020 01
HandyGrip **VG 21**	Closed on one side, sorted according to colour	685 021 01
HandyGrip **VG 21 w**	Closed on one site, white	685 121 01

Junction boxes WK accessories

Cable gland

IP68

Description			Order no.
Cable gland with strain relief, polyamide, M_ x 1.5 mm, with lock nut			
	Thread lenght/mm	**Sealing area/mm**	
KVR M12-MGM	8	2 - 6.5	227 412 01
KVR M16-MGM	8	4 - 10.0	227 416 01
KVR M20-MGM	9	6 - 12.0	227 420 01
KVR M20-GDB/MGM	9	7 - 14.0	227 421 01
KVR M25-MGM	11	9 - 16	227 425 01
KVR M32-MGM	11	11 - 21.0	227 432 01
KVR M40-MGM	11	16 - 28.0	227 440 01
KVR M50-MGM	13	21 - 34.5	227 450 01
KVR M63-MGM	17	30 - 44.5	227 463 01

Double membrane seals

IP66

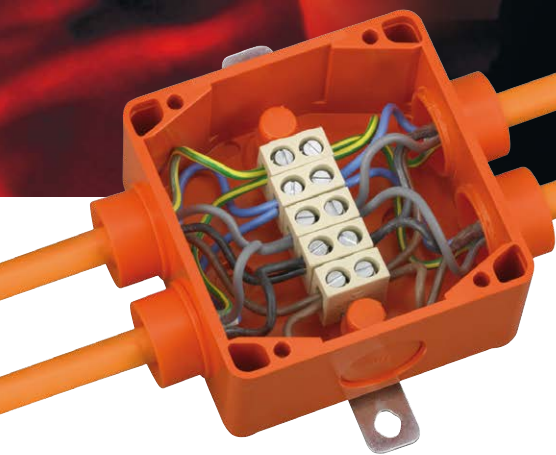| Description			Order no.
Double membrane seals made of elastic plastic with two sealing membranes, closed			
	f. wall thicknesses/mm	**Sealing area/mm**	
DMS M16	1.5 - 4.5	5 - 9	260 416 01
DMS M20	1.5 - 4.5	7 - 12	260 420 01
DMS M25	1.5 - 4.5	9 - 16	260 425 01
DMS M32	1.5 - 4.5	14 - 21	260 432 01
DMS M40	1.5 - 4.5	19 - 28	260 440 01

Junction boxes accessories

els spelsberg

You can rely on our WKE products for maintaining electrical function. For example, we presented the first fire-proof, freely configurable small distributor with the WKE AK. It has a VDE certificate and also meets on-site requirements, giving you space for sure planning.

Intrinsic fire resistance

Intrinsic fire resistance Content

els spelsberg

- ■ The right solution for every crosssection and application
- ■ **Extensive range of accessories such as rawlplugs and attachment bushes for all junction boxes**
- ■ External mounting brackets for quick installation
- ■ State-tested by the MPA NRW
- ■ **Completely pre-assembled**
- ■ **Upgradable to IP65**
- ■ **Ideal for building installations**

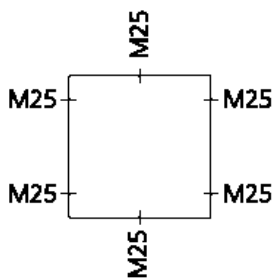| IP65 IP54 | E30-E90 | FE180 | F400 | 6-16² | IK05 | | 450V AC/DC | | |

Junction boxes WKE 2 - 5 Duo / WKE 1 - 5

WKE 2 - Duo 3 x 6²
100 x 100 x 50 mm

Cable junction and connection box with IP54 / IP65 certified acc. EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics, rapid mounting thanks to external fixing brackets and wall + ceiling fastening parts kit D6

| IP65 IP54 | E30-E90 | FE180 | F400 | 6² | ⬜ | 450V AC/DC | DVE | halogen-free |

WKE 2 - Duo 3 x 6²
Connection box 3-pole 0.5 - 6 mm²,
Junction box 3-pole 0.5 - 6 mm²,
Number of conductors per pole:
16 x 0,5² / 8 x 0,75² / 12 x 1² / 12 x 1,5² / 4 x 2,5² / 4 x 4² / 4 x 6²

Accessories supplied:
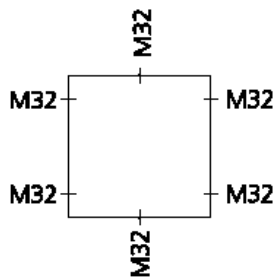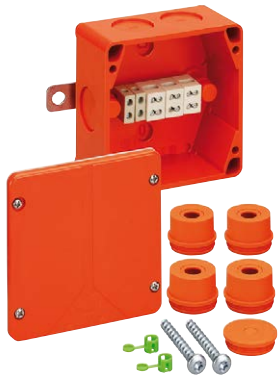Drilling template, D6 wall + ceiling attachment set,
4 IP54 attachment bushes M25,
seal range 9 - 18.5 mm,
1 IP54 sealing plug M25, seal range 9 - 18.5 mm

861 400 01

M25 / M25 / M25 / M25 / M25 / M25

WKE 3 - Duo 3 x 6² / 2 x 6²
115 x 115 x 66 mm

Cable junction and connection box with IP54 / IP65 certified acc. EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics, rapid mounting thanks to external fixing brackets and wall + ceiling fastening parts kit D6

| IP65 IP54 | E30-E90 | FE180 | F400 | 10² | ⬜ | 450V AC/DC | DVE | halogen-free |

WKE 3 - Duo 3 x 6² / 2 x 6²
Connection box 5-pole 0.5 - 6 mm², Junction box 3-pole 0.5 - 6 mm²,
Number of conductors per pole:
16 x 0,5² / 8 x 0,75² / 12 x 1² / 12 x 1,5² / 4 x 2,5² / 4 x 4² / 4 x 6²,
in 2-pole continuity 8 x 0,5² / 4 x 0,75² / 6 x 1² / 6 x 1,5² / 2 x 2,5² / 2 x 4 / 2 x 6²

Accessories supplied:
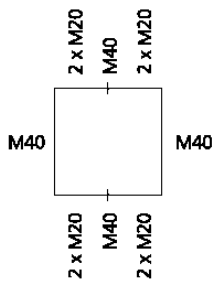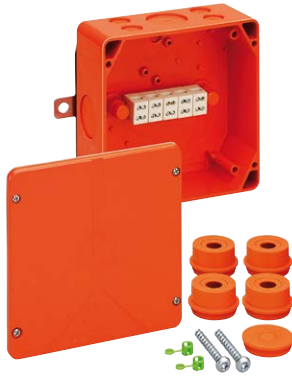Drilling template, D6 wall + ceiling attachment set,
4 IP54 attachment bushes M32,
seal range 13 - 23 mm, 1 IP54 sealing plug M32,
seal range 13 - 23 mm

861 710 01

M32 / M32 / M32 / M32 / M32 / M32

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WKE 4 - Duo 5 x 6²

165 x 165 x 76 mm

Cable junction and connection box with IP54 / IP65 certified acc. EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics, rapid mounting thanks to external fixing brackets and wall + ceiling fastening parts kit D6

IP65 IP54	E30-E90	FE180	F400	16²	□	450V AC/DC	DVE	halogen-free

WKE 4 - Duo 5 x 6²
Connection box 5-pole 0.5 - 6 mm², Junction box 5-pole 0.5 - 6 mm²,
Number of conductors per pole:
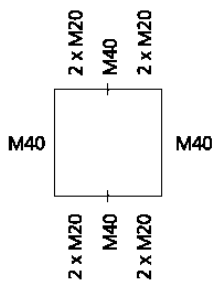16 x 0,5² / 8 x 0,75² / 12 x 1² / 12 x 1,5² / 4 x 2,5² / 4 x 4² / 4 x 6²

Accessories supplied:
Drilling template, D6 wall + ceiling attachment set,
4 IP54 attachment bushes M40,
seal range 17 - 30 mm, 1 IP54 sealing plug M40,
seal range 17 - 30 mm

861 410 01

WKE 4 - Duo 3 x 10²

165 x 165 x 76 mm

Cable junction and connection box with IP54 / IP65 certified acc. EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics, rapid mounting thanks to external fixing brackets and wall + ceiling fastening parts kit D6

IP65 IP54	E30-E90	FE180	F400	16²	□	450V AC/DC	DVE	halogen-free

WKE 4 - Duo 3 x 10²
Connection box 3-pole 1 - 10 mm², Junction box 3-pole 1 - 10 mm²,
Number of conductors per pole:
20 x 1² / 16 x 1,5² / 12 x 2,5² / 8 x 4² / 4 x 6² / 4 x 10²
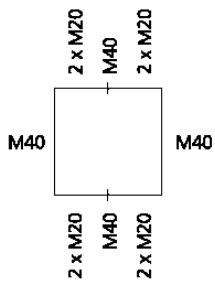
Accessories supplied:
Drilling template, D6 wall + ceiling attachment set,
4 IP54 attachment bushes M40,
seal range 17 - 30 mm, 1 IP54 sealing plug M40,
seal range 17 - 30 mm

861 500 01

Junction boxes WKE 2 - 5 Duo

WKE 4 - Duo 3 x 16²

165 x 165 x 76 mm

2 x M20 **M40** **2 x M20**

M40 **M40**

2 x M20 **M40** **2 x M20**

Description	Order no.

Cable junction and connection box with IP54 / IP65 certified acc. EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics, rapid mounting thanks to external fixing brackets and wall + ceiling fastening parts kit D6

IP65 IP54 | E30-E90 | FE180 | F400 | 16² | ☐ | 450V AC/DC | DVE | halogen-free
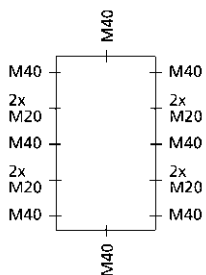
WKE 4 - Duo 3 x 16²
Connection box 3-pole 1.5 - 16 mm², Junction box 3-pole 1.5 - 16 mm²,
Number of conductors per pole:
20 x 1.5² / 16 x 2.5² / 12 x 4.0² / 8 x 6² / 4 x 10² / 4 x 16²

Accessories supplied:
Drilling template, D6 wall + ceiling attachment set,
4 IP54 attachment bushes M40, seal range 17 - 30 mm,
1 IP54 sealing plug M40, seal range 17 - 30 mm

861 600 01

WKE 5 - Duo 7 x 6²

171 x 256 x 106 mm

M40

M40 | M40
2x M20 | 2x M20
M40 | M40
2x M20 | 2x M20
M40 | M40

M40

Cable junction and connection box with IP54 / IP65 certified acc. EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics, rapid mounting thanks to external fixing brackets and wall + ceiling fastening parts kit D6

IP65 IP54 | E30-E90 | FE180 | F400 | 6² | ☐ | 450V AC/DC | DVE | halogen-free

WKE 5 - Duo 7 x 6²
Connection box 7-pole 0.5 - 6 mm², Junction box 7-pole 0.5 - 6 mm²,
Number of conductors per pole:
16 x 0,5² / 8 x 0,75² / 12 x 1² / 12 x 1,5² / 4 x 2,5² / 4 x 4² / 4 x 6²

Accessories supplied:
Drilling template, D6 wall + ceiling attachment set,
6 IP54 attachment bushes M20, seal range 8 - 13 mm,
2 IP54 double end connectors M40, seal range 17 - 30 mm,
2 IP54 attachment bushes M40, seal range 17 - 30 mm,
1 IP54 sealing plug M20, seal range 8 - 13.5 mm,
1 IP54 sealing plug M40, seal range 17 - 30 mm

861 420 01

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WKE 5 - Duo 5 x 10²

171 x 256 x 106 mm
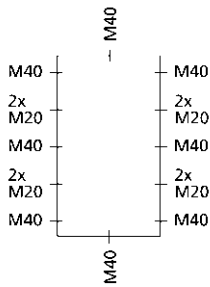
Cable junction and connection box with IP54 / IP65 certified acc. EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics, rapid mounting thanks to external fixing brackets and wall + ceiling fastening parts kit D6

| IP65 IP54 | E30-E90 | FE180 | F400 | 6² | | 450V AC/DC | | |

WKE 5 - Duo 5 x 10²
Connection box 5-pole 1 - 10 mm², Junction box 5-pole 1 - 10 mm²,
Number of conductors per pole:
20 x 1² / 16 x 1,5² / 12 x 2,5² / 8 x 4² / 4 x 6² / 4 x 10²

Accessories supplied:
Drilling template, D6 wall + ceiling attachment set,
6 IP54 attachment bushes M20, seal range 8 - 13 mm,
2 IP54 double end connectors M40, seal range 17 - 30 mm,
2 IP54 attachment bushes M40, seal range 17 - 30 mm,
1 IP54 sealing plug M20, seal range 8 - 13.5 mm,
1 IP54 sealing plug M40, seal range 17 - 30 mm

861 510 01

WKE 5 - Duo 5 x 16²

171 x 256 x 106 mm
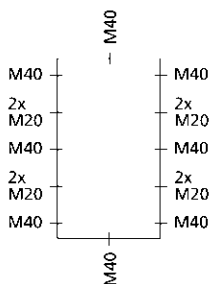
Cable junction and connection box with IP54 / IP65 certified acc. EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics, rapid mounting thanks to external fixing brackets and wall + ceiling fastening parts kit D6

| IP65 IP54 | E30-E90 | FE180 | F400 | 6² | | 450V AC/DC | | |

WKE 5 - Duo 5 x 16²
Connection box 5-pole 1.5 - 16 mm², Junction box 5-pole 1.5 - 16 mm²,
Number of conductors per pole:
20 x 1.5² / 16 x 2.5² / 12 x 4.0² / 8 x 6² / 4 x 10² / 4 x 16²

Accessories supplied:
Drilling template, D6 wall + ceiling attachment set,
6 IP54 attachment bushes M20, seal range 8 - 13 mm,
2 IP54 double end connectors M40, seal range 17 - 30 mm,
2 IP54 attachment bushes M40, seal range 17 - 30 mm,
1 IP54 sealing plug M20, seal range 8 - 13.5 mm,
1 IP54 sealing plug M40, seal range 17 - 30 mm

861 610 01

Junction boxes WKE 2 - 5 Duo

WKE 1 - 5 x 2,5²

100 x 100 x 50 mm
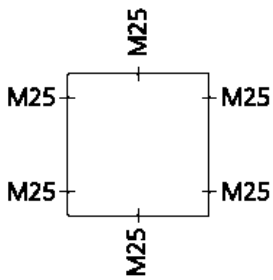
Description	Order no.

Junction box with IP54 / IP65 certified as per EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics

IP65 IP54	E30-E90	2,5²	▢	450V AC/DC	DVE	halogen-free

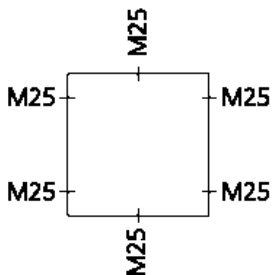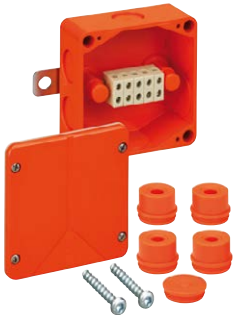|	
WKE 1 - 5 x 2,5² Junction box 3 pole 0.5 - 2.5 mm², Branch box 3 pole 0.5 - 1.5 mm², Number of conductors per pole: 8 x 0,5² / 4 x 0,75² / 6 x 1² / 6 x 1,5² / 2 x 2,5² **Accessories supplied:** 4 IP54 attachment bushes M25, seal range 9 - 18.5 mm, 1 IP54 sealing plug M25, seal range 9 - 18.5 mm	860 103 01

M25 M25 M25 M25 M25

WKE 2 - 5 x 6²

100 x 100 x 50 mm

Junction box with IP54 / IP65 certified as per EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics, rapid mounting thanks to external fixing brackets and wall + ceiling fastening parts kit D6

IP65 IP54	E30-E90	FE180	F400	6²	▢	450V AC/DC	DVE	halogen-free

|	
WKE 2 - 5 x 6² Connection box 5-pole 0.5 - 6 mm², Junction box 5-pole 0.5 - 1.5 mm², Number of conductors per pole: 8 x 0.5² / 4 x 0.75² / 6 x 1² / 6 x 1.5² / 2 x 2.5² / 2 x 4² / 2 x 6² **Accessories supplied:** Drilling template, D6 wall + ceiling attachment set, 4 IP54 attachment bushes M25, seal range 9 - 18.5 mm, 1 IP54 sealing plug M25, seal range 9 - 18.5 mm	860 502 01

M25 M25 M25 M25 M25

Junction boxes WKE 1 - 5

WKE 2 - 3 x 10²
100 x 100 x 50 mm
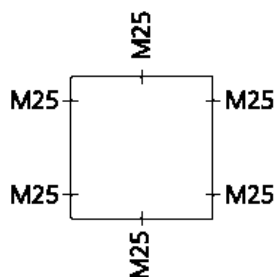
Junction box with IP54 / IP65 certified as per EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics, rapid mounting thanks to external fixing brackets and wall + ceiling fastening parts kit D6

| IP65 IP54 | E30-E90 | FE180 | F400 | 10² | □ | 450V AC/DC | DVE | halogen-free |

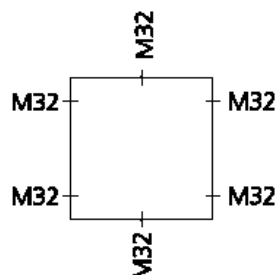|	
WKE 2 - 3 x 10² Connection box 3-pole 1 - 10 mm², Junction box 3-pole 1 - 4 mm², Number of conductors per pole: 10 x 1² / 8 x 1.5² / 6 x 2.5² / 4 x 4² / 2 x 6² / 2 x 10² **Accessories supplied:** Drilling template, D6 wall + ceiling attachment set, 4 IP54 attachment bushes M25, seal range 9 - 18.5 mm, 1 IP54 sealing plug M25, seal range 9 - 18.5 mm	860 512 01

M25 / M25 / M25 / M25 / M25 / M25

WKE 3 - 5 x 10²
115 x 115 x 66 mm

Junction box with IP54 / IP65 certified as per EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics, rapid mounting thanks to external fixing brackets and wall + ceiling fastening parts kit D6

| IP65 IP54 | E30-E90 | FE180 | F400 | 10² | □ | 450V AC/DC | DVE | halogen-free |

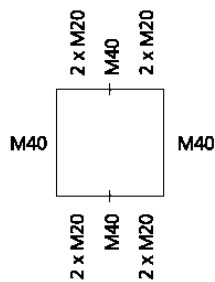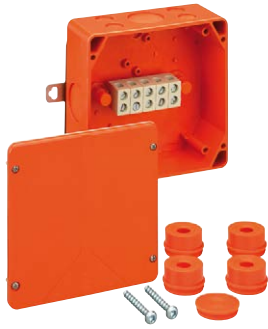|	
WKE 3 - 5 x 10² Connection box 5-pole 1 - 10 mm², Junction box 5-pole 1 - 4 mm², Number of conductors per pole: 10 x 1² / 8 x 1.5² / 6 x 2.5² / 4 x 4² / 2 x 6² / 2 x 10² **Accessories supplied:** Drilling template, D6 wall + ceiling attachment set, 4 IP54 attachment bushes M32, seal range 13 - 23 mm, 1 IP54 sealing plug M32, seal range 13 - 23 mm	860 503 01

M32 / M32 / M32 / M32 / M32 / M32

Junction boxes WKE 1 - 5

WKE 4 - 5 x 16²

165 x 165 x 76 mm

2 x M20 · M40 · 2 x M20

M40   M40

2 x M20 · M40 · 2 x M20

Description	Order no.

Junction box with IP54 / IP65 certified as per EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics, rapid mounting thanks to external fixing brackets and wall + ceiling fastening parts kit D6

| IP65 IP54 | E30-E90 | FE180 | F400 | 16² | ▢ | 450V AC/DC | DVE | halogen-free |

WKE 4 - 5 x 16²   860 504 01
Connection box 5-pole 1.5 - 16 mm², Junction box 5-pole 1.5 - 6 mm²,
Number of conductors per pole:
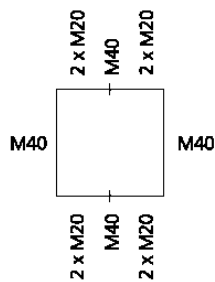10 x 1.5² / 8 x 2.5² / 4 x 4² / 4 x 6² / 2 x 10² / 2 x 16²

Accessories supplied:
Drilling template, D6 wall + ceiling attachment set,
4 IP54 attachment bushes M40, seal range 17 - 30 mm,
1 IP54 sealing plug M40, seal range 17 - 30 mm

WKE 4 - 8 x 6²

165 x 165 x 76 mm

2 x M20 · M40 · 2 x M20

M40   M40

2 x M20 · M40 · 2 x M20

Junction box with IP54 / IP65 certified as per EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics, rapid mounting thanks to external fixing brackets and wall + ceiling fastening parts kit D6

| IP65 IP54 | E30-E90 | FE180 | F400 | 6² | ▢ | 450V AC/DC | DVE | halogen-free |

WKE 4 - 8 x 6²   860 514 01
Connection box 8-pole 0.5 - 6 mm², Junction box 8-pole 0.5 - 1.5 mm²,
Number of conductors per pole:
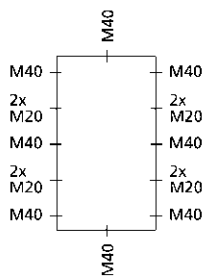8 x 0.5² / 4 x 0.75² / 6 x 1² / 6 x 1.5² / 2 x 2.5² / 2 x 4² / 2 x 6²

Accessories supplied:
Drilling template, D6 wall + ceiling attachment set,
2 IP54 attachment bushes M40, seal range 17 - 30 mm,
2 IP54 double end connectors M40, seal range 8 - 13 mm,
1 IP54 sealing plug M20, seal range 8 - 13.5 mm,
1 IP54 sealing plug M40, seal range 17 - 30 mm

WKE 5 - 15 x 6²

171 x 256 x 106 mm

Junction box with IP54 / IP65 certified as per EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics, rapid mounting thanks to external fixing brackets and wall + ceiling fastening parts kit D6

| IP65 IP54 | E30-E90 | FE180 | F400 | 6² | □ | 450V AC/DC | DVE | halogen-free |

WKE 5 - 15 x 6²

Connection box 15-pole 0.5 - 6 mm², Junction box 15-pole 0.5 - 1.5 mm², Number of conductors per pole:
8 x 0.5² / 4 x 0.75² / 6 x 1² / 6 x 1.5² / 2 x 2.5² / 2 x 4² / 2 x 6²

Accessories supplied:
Drilling template, D6 wall + ceiling attachment set,
6 IP54 attachment bushes M20, seal range 8 - 13 mm,
2 IP54 attachment busches M40, seal range 17 - 30 mm,
2 IP54 double end connectors M40, seal range 17 - 30 mm,
1 IP54 sealing plug M20, seal range 8 - 13.5 mm,
1 IP54 sealing plug M40, seal range 17 - 30 mm

860 505 01

WKE 5 - 20 x 6²

171 x 256 x 106 mm
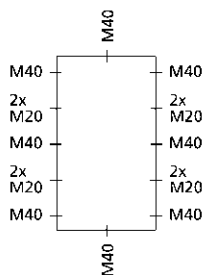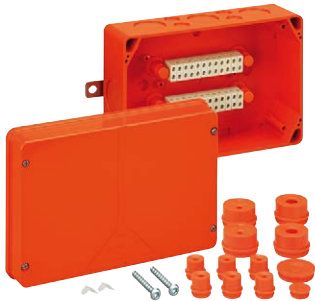
Junction box with IP54 / IP65 certified as per EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics, rapid mounting thanks to external fixing brackets and wall + ceiling fastening parts kit D6

| IP65 IP54 | E30-E90 | FE180 | F400 | 6² | □ | 450V AC/DC | DVE | halogen-free |

WKE 5 - 20 x 6²

Connection box 2 x 10-pole 0.5 - 6 mm²,
Junction box 2 x 10-pole 0.5 - 1.5 mm², Number of conductors per pole:
8 x 0.5² / 4 x 0.75² / 6 x 1² / 6 x 1.5² / 2 x 2.5² / 2 x 4² / 2 x 6²

Accessories supplied:
Drilling template, D6 wall + ceiling attachment set,
6 IP54 attachment bushes M20, seal range 8 - 13 mm,
2 IP54 attachment bushes M40, seal range 17 - 30 mm,
2 IP54 double end connectors M40, seal range 17 - 30 mm,
1 IP54 sealing plug M20, seal range 8 - 13.5 mm,
1 IP54 sealing plug M40, seal range 17 - 30 mm

860 505 20

Junction boxes WKE 1 - 5

WKE 5 - 24 x 6²

171 x 256 x 106 mm
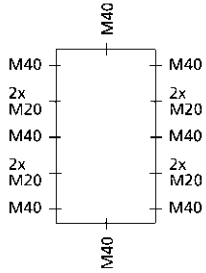
			M40		
M40				M40	
2x M20				2x M20	
M40				M40	
2x M20				2x M20	
M40				M40	
			M40		

Description   **Order no.**

Junction box with IP54 / IP65 certified as per EN 60670, with electrical functional integrity E30 – E90 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, halogen-free enclosure made from special duroplastic, terminals made from high temperature-proof special ceramics, rapid mounting thanks to external fixing brackets and wall + ceiling fastening parts kit D6

IP65 IP54	E30-E90	FE180	F400	6²	▢	450V AC/DC	DVE	halogen-free

WKE 5 - 24 x 6²
Connection box 2 x 12-pole 0.5 - 6 mm²,
Junction box 2 x 12-pole 0.5 - 1.5 mm², Number of conductors per pole:
8 x 0.5² / 4 x 0.75² / 6 x 1² / 6 x 1.5² / 2 x 2.5² / 2 x 4² / 2 x 6²

Accessories supplied:
Drilling template, D6 wall + ceiling attachment set,
6 IP54 attachment bushes M20, seal range 8 - 13 mm,
2 IP54 attachment busches M40, seal range 17 - 30 mm,
2 IP54 double end connectors M40, seal range 17 - 30 mm,
1 IP54 sealing plug M20, seal range 8 - 13.5 mm,
1 IP54 sealing plug M40, seal range 17 - 30 mm

860 505 24

Sealing plugs

IP54

Blanking plug with closed sealing membrane, no lock nuts required,
for wall thickness 1.5 - 4.0 mm

	Sealing area/mm	
VST M20-or	8 - 13.5	231 620 01
VST M25-or	9 - 16	231 625 01
VST M32-or	13 - 23	231 632 01
VST M40-or	17 - 30	231 640 01

Attachment bushes

IP54

Attachment bushes with open sealing membrane, for wall thickness 1.5 - 4.0 mm

	Sealing area/mm	
AST M20-or	8 - 13.5	230 620 01
AST M25-or	9 - 18.5	230 625 01
AST M32-or	13 - 23	230 632 01
AST M40-or	17 - 30	230 640 01

Cable gland

IP68

Cable gland for WKE 2-5, with strain relief, polyamide, M_ x 1.5 mm, with lock nut

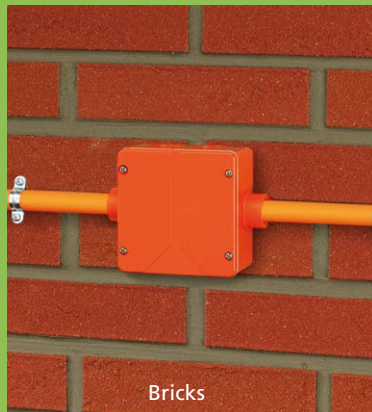|	Thread lenght/mm	Sealing area/mm	
KVR M20-MGM/or	9	7 - 14.0	227 620 01
KVR M25-MGM/or	11	9 - 16	227 625 01
KVR M32-MGM/or	11	11 - 21.0	227 632 01
KVR M40-MGM/or	11	16 - 28.0	227 640 01

els spelsberg

1. MARK

2. DRILL (Ø 6 mm)

3. SCREW

4. FINISHED

Sand-lime bricks

Bricks

Breeze blocks

Concrete

WKE 2-5 installation... time savings of at least 50%.
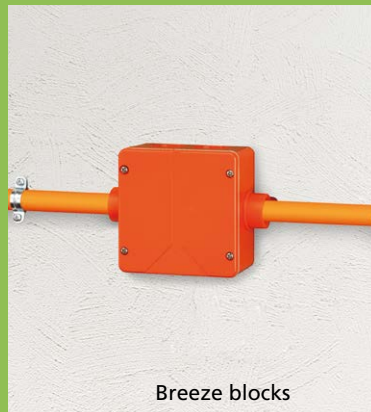
The D6 attachment set is approved for installation in cracked and uncracked concrete as well as many other building materials, including: clinker bricks, natural stone (such as marble), sand-lime bricks, hollow concrete blocks, solid bricks.

Junction boxes WKE 1 - 5

Cable gland clamping areas

= Cable gland	= Clamping area	Nm
M 12 x 1,5	4 - 6,5	2
M 16 x 1,5	4 - 10	2,5
M 20 x 1,5	6 - 12	4
M 20 x 1,5	7 - 14	4
M 25 x 1,5	9 - 16	6
M 32 x 1,5	11 - 21	7
M 40 x 1,5	16 - 28	7,5

= Cable gland
= Clamping area
Nm = Rated torque
= Cable cross-section

Number of conductors that can be clamped for each pole

Cable cross-section	Terminal 6² Rated torque 0,8 Nm			Terminal 10² Rated torque 1,2 Nm			Terminal 16² Rated torque 2,0 Nm		
0,5²	16	8	4						
0,75²	8	4	2						
1,0²	12	6	3	20	10	5			
1,5²	12	6	3	16	8	4	20	10	5
2,5²	4	2	1	12	6	3	16	8	4
4²	4	2	1	8	4	2	12	6	3
6²	4	2	1	4	2	1	8	4	2
10²				4	2	1	4	2	1
16²							4	2	1

= Single terminal, 2 clamping points = Clamping point = Double terminal, 2 clamping points

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E30-E90

Maintaining electrical function
according to DIN 4102 Part 12

- E stands for electrical function
- 30-90 represents the duration in minutes

FE180

Insulation integrity
based on VDE 0472-814 IEC 60331

- FE stands for flame or fire effects
- 180 for the time in minutes

F400

Functional life
according to EN 12101-3

- Functions for 120 minutes at 400°C

▲ **External mounting brackets**
for quick installation

- **Fuse-protected branch with maintained function**
- **Clamping area up to 35²**
- **Especially sturdy**
- **Ideal for time and material savings in building installation planning**
- **State-tested by the MPA NRW**

- **Current test certificate available online at www.spelsberg.com**
- **Extensive range of accessories such as rawlplugs and cable glands for all junction boxes**
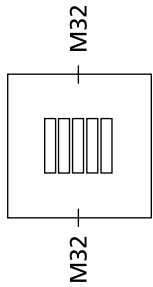- **The right solution for every cross-section and application**

| IP66 | E30 | FE180 | F400 | 35² | IK08 | □ | 450V AC/DC | VDE | halogen-free | iQ |

Junction boxes WKE 200 - 400 RK

WKE 202 RK
115 x 115 x 93 mm

Junction box with IP66 certified as per EN 60670, with electrical functional integrity E30 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, enclosure and terminal strips made from halogen-free special duroplastic

| IP66 | E30 | FE180 | F400 | 6^2 | ▢ | 450V AC/DC | DVE | halogen-free | iQ |

WKE 202 RK
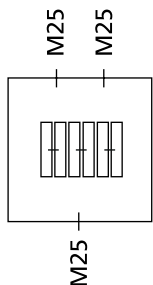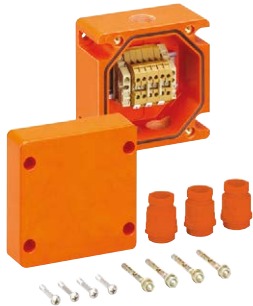Junction box 5-pole, termination capability per pole 2 x 0.5 - 6 mm²

Accessories supplied:
Wall plug set ø 6 mm, 2 cable glands M32,
seal range 17 - 26 mm

862 202 01

M32

M32

WKE 203 RK
115 x 115 x 93 mm

Cable junction and connection box with IP66 certified acc. EN 60670, with electrical functional integrity E30 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, enclosure and terminal strips made from halogen-free special duroplastic

| IP66 | E30 | FE180 | F400 | 4^2 | ▢ | 450V AC/DC | DVE | halogen-free | iQ |

WKE 203 RK
Junction box 3-pole, termination capability for each pole 4 x 0.5 - 4 mm²

Accessories supplied:
Wall plug set ø 6 mm, 3 cable glands M25,
seal range 6 - 15 mm

862 203 01

M25 M25

M25

Intrinsic fire resistance

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WKE 204 RK

115 x 115 x 93 mm

Cable junction and connection box with IP66 certified acc. EN 60670, with electrical functional integrity E30 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, enclosure and terminal strips made from halogen-free special duroplastic

| IP66	E30	FE180	F400	4^2		450V AC/DC			iQ
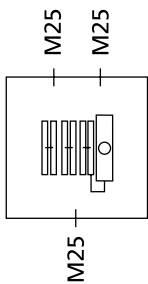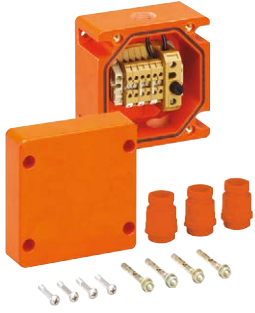
WKE 204 RK
Junction box with fused E30 branch, 3-pole in transition area, termination capability for each pole 4 x 0.5 - 4 mm², 3-pole in fused E30 branch, termination capability for each pole 1 x 0.5 - 4 mm²,
Fuse (20 x to 5 mm) max. 6.3A,

Accessories supplied:
Wall plug set ø 6 mm, 3 cable glands M25,
seal range 6 - 15 mm

862 204 01

M25 M25

M25

WKE 302 RK

160 x 160 x 110 mm
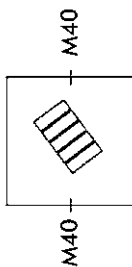
Junction box with IP66 certified as per EN 60670, with electrical functional integrity E30 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, enclosure and terminal strips made from halogen-free special duroplastic

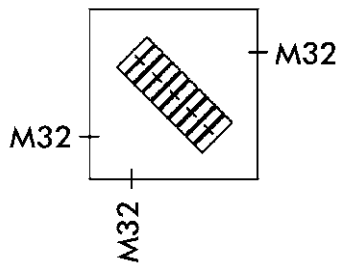| IP66	E30	FE180	F400	16^2		450V AC/DC			iQ

WKE 302 RK
Junction box 5-pole, termination capability for each pole 4 x 4 - 16 mm²

Accessories supplied:
Wall plug set ø 6 mm, 2 cable glands M40,
seal range 17 - 27 mm

862 302 01

M40

M40

Junction boxes WKE 200 - 400 RK

WKE 303 RK

160 x 160 x 110 mm

Description	Order no.
Junction box with IP66 certified as per EN 60670, with electrical functional integrity E30 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, enclosure and terminal strips made from halogen-free special duroplastic	

IP66	E30	FE180	F400	10²	□	450V AC/DC	DVE	halogen-free	IQ

WKE 303 RK Junction box 5-pole, termination capability for each pole 4 x 2.5 - 10 mm² Accessories supplied: Wall plug set ø 6 mm, 3 cable glands M32, seal range 17 - 26 mm	862 303 01

M32

M32

M32

WKE 304 RK

160 x 160 x 110 mm
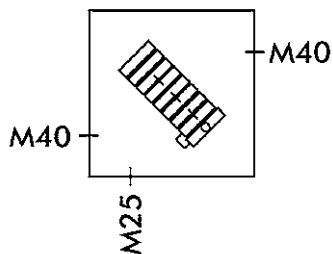
Description	Order no.
Cable junction and connection box with IP66 certified acc. EN 60670, with electrical functional integrity E30 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, enclosure and terminal strips made from halogen-free special duroplastic	

IP66	E30	FE180	F400	10²	□	450V AC/DC	DVE	halogen-free	IQ

WKE 304 RK Junction box with fused E30 branch, 5-pole in transition area, termination capability for each pole 2 x 2.5 - 10 mm², 3-pole in fused E30 branch, termination capability for each pole 1 x 1.5 - 10 mm², Fuse (20 x to 5 mm) max. 6.3A Accessories supplied: Wall plug set ø 6 mm, 2 cable glands M40, seal range 17 - 27 mm, 1 cable gland M25, seal range 6 - 15 mm	862 304 01

M40

M40

M25

WKE 402 RK
200 x 200 x 110 mm

Cable junction and connection box with IP66 certified acc. EN 60670, with electrical functional integrity E30 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, enclosure and terminal strips made from halogen-free special duroplastic

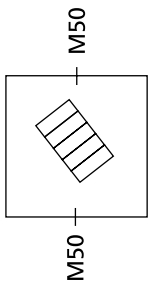| IP66 | E30 | FE180 | F400 | 35² | ▢ | 450V AC/DC | | | iQ |

WKE 402 RK
Junction box 5-pole, termination capability for each pole 2 x 2.5 - 35 mm²

Accessories supplied:
Wall plug set ø 6 mm, 2 cable glands M50,
seal range 23 - 34 mm

862 402 01

M50
M50

WKE 403 RK
200 x 200 x 110 mm

Junction box with IP66 certified as per EN 60670, with electrical functional integrity E30 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, enclosure and terminal strips made from halogen-free special duroplastic
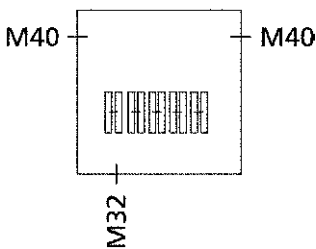
| IP66 | E30 | FE180 | F400 | 16² | ▢ | 450V AC/DC | | | iQ |

WKE 403 RK
Junction box 5-pole, termination capability for each pole 4 x 4 - 16 mm²

Accessories supplied:
Wall plug set ø 6 mm, 2 cable glands M40,
seal range 17 - 27 mm, 1 cable gland M32, seal range 17 - 26 mm

862 403 01

M40   M40
M32

Junction boxes WKE 200 - 400 RK

WKE 404 RK

200 x 200 x 110 mm

Description	Order no.

Cable junction and connection box with IP66 certified acc. EN 60670, with electrical functional integrity E30 acc. to DIN 4102 Part 12, with insulation integrity FE180 acc. IEC 60331-11 as well as functional class F400 acc. EN 12101, enclosure and terminal strips made from halogen-free special duroplastic
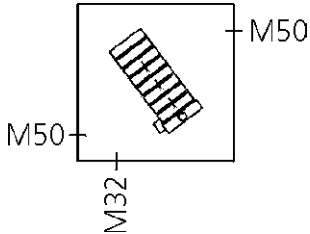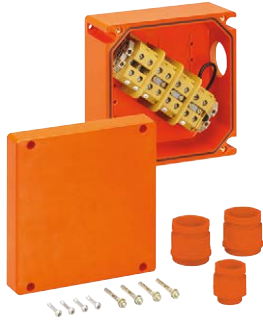
| IP66 | E30 | FE180 | F400 | 35^2 | □ | 450V AC/DC | VDE | halogen-free | iQ |

WKE 404 RK
Junction box with fused E30 branch, 5-pole in transition area, termination capability for each pole 2 x 2.5 - 35 mm², 3-pole in fused E30 branch, termination capability for each pole 1 x 1.5 - 10 mm², Fuse (20 x to 5 mm) max. 6.3A

Accessories supplied:
Wall plug set ø 6 mm, 2 cable glands M50, seal range 23 - 34 mm, 1 cable gland M32, seal range 17 - 26 mm

862 404 01

WKE 405 LSA

200 x 200 x 110 mm
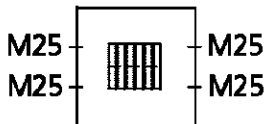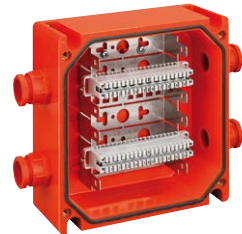
Tested system: WKE 405 - cable junction boxes with time-saving (solder, screw and stripping free) connection technology for cables with functional integrity according to DIN 4102 Part 12 - tested by the MPA Dresden

| IP66 | E30 | □ | halogen-free | iQ | LSA plus |

WKE 405 LSA
Junction box equipped with two LSA-Plus connector blocks, respectively for 10 double wires (2 x 10 DA), the LSA-Plus contacts are suitable for a solid conductor with 0.4 to 0.8 mm diameter and an outside insulation diameter of 0.7 to 1.6 mm

Accessories supplied:
Wall plug set ø 6 mm, 4 cable glands M25, seal range 9 - 19 mm

862 405 01

External fixing lugs

External fastening kit V2A

WKE 200 ABL
External fastening kit V2A, for WKE 200 up to WKE 400, Material stainless steel V2A (1.4301), Set = 4 pcs.
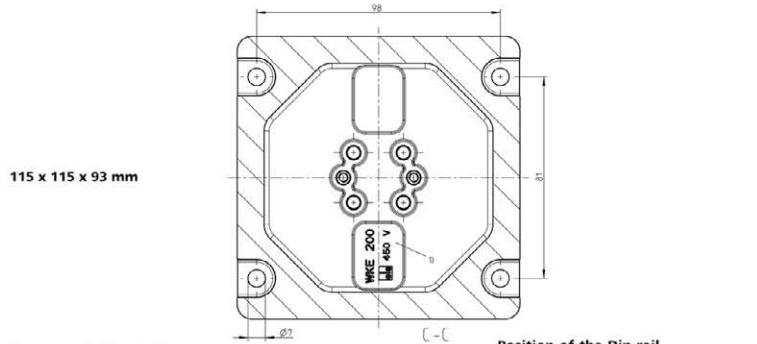
860 400 01

KVS
Cable gland protection set, is needed for IK 09 when cable glands are used, for WKE 200 up to WKE 400, IK09, Material stainless steel V2A (1.4301), Set = 3 pcs.

890 040 01

WKE 200 Assembly of entries and terminals

Construction project: _____

Customer: _____

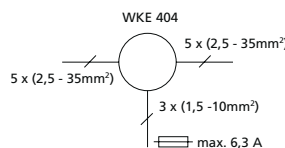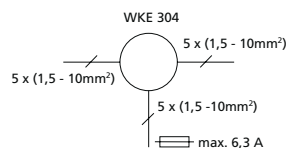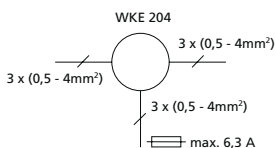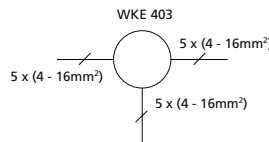If required, please attach sketch for pre-wiring of terminal!

115 x 115 x 93 mm

Please mark threaded holes accordingly
M20 / M25 / M32 / M40 / M50

Position of the Din rail
The rail can be fixed in 5 different positions horizontally and diagonally. Please mark accordingly!

Outer diameter of the cables:	_____ mm
Cross-section of the wire:	_____ mm²
Cross-section of the terminals:	_____ mm²
Cross connector:	_____ pieces
Qty of terminals:	_____ pieces
External fixing lugs:	☐ 2 pieces ☐ 4 pieces
Dowel WKE V4A	☐ 4 pieces
Required quantity:	_____ pieces

Attention; cable glands and external fixing lugs are enclosed just like in standard parts.

WKE 202 — 5 x (0,5 - 6mm²), 5 x (0,5 - 6mm²)

WKE 302 — 5 x (4 - 16mm²), 5 x (4 - 16mm²)

WKE 402 — 5 x (2,5 - 35mm²), 5 x (2,5 - 35mm²)

WKE 203 — 3 x (0,5 - 4mm²), 3 x (0,5 - 4mm²), 3 x (0,5 - 4mm²)

WKE 303 — 5 x (1,5 - 10mm²), 5 x (1,5 - 10mm²), 5 x (1,5 - 10mm²)

WKE 403 — 5 x (4 - 16mm²), 5 x (4 - 16mm²), 5 x (4 - 16mm²)

WKE 204 — 3 x (0,5 - 4mm²), 3 x (0,5 - 4mm²), 3 x (0,5 - 4mm²), max. 6,3 A

WKE 304 — 5 x (1,5 - 10mm²), 5 x (1,5 - 10mm²), 5 x (1,5 -10mm²), max. 6,3 A

WKE 404 — 5 x (2,5 - 35mm²), 5 x (2,5 - 35mm²), 3 x (1,5 -10mm²), max. 6,3 A
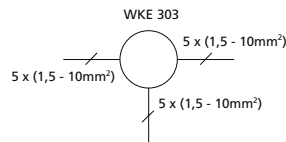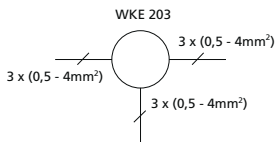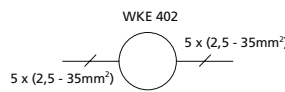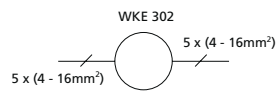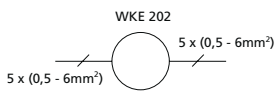
- **0.5² to 35²**
- **Protection rating IP66**
- **6.3 A fuse**
- **Particularly robust quality**
- **High impact strength**
- **Maintained function to class E30 as per DIN 4102 Part 12**
- **Maintained function for the fused branch**
- **Halogen-free duroplastic housing**
- **Sealable**
- **Delivered as complete package including accessories**
- **MPA test certificate**
- **VDE approved**
- **Colour similar to RAL 2004**
- **Terminal blocks and fuse terminals made of duroplastic**

Junction boxes WKE 200 - 400 RK

Cabling scheme WKE 200 - 400 RK

Fire area
2nd floor
Corridor 3

Fire area
1st floor
Corridor 2

Fire area
Ground floor
Corridor 1

Fire area
2nd floor
Corridor 3

Fire area
1st floor
Corridor 2

Fire area
Ground floor
Corridor 1
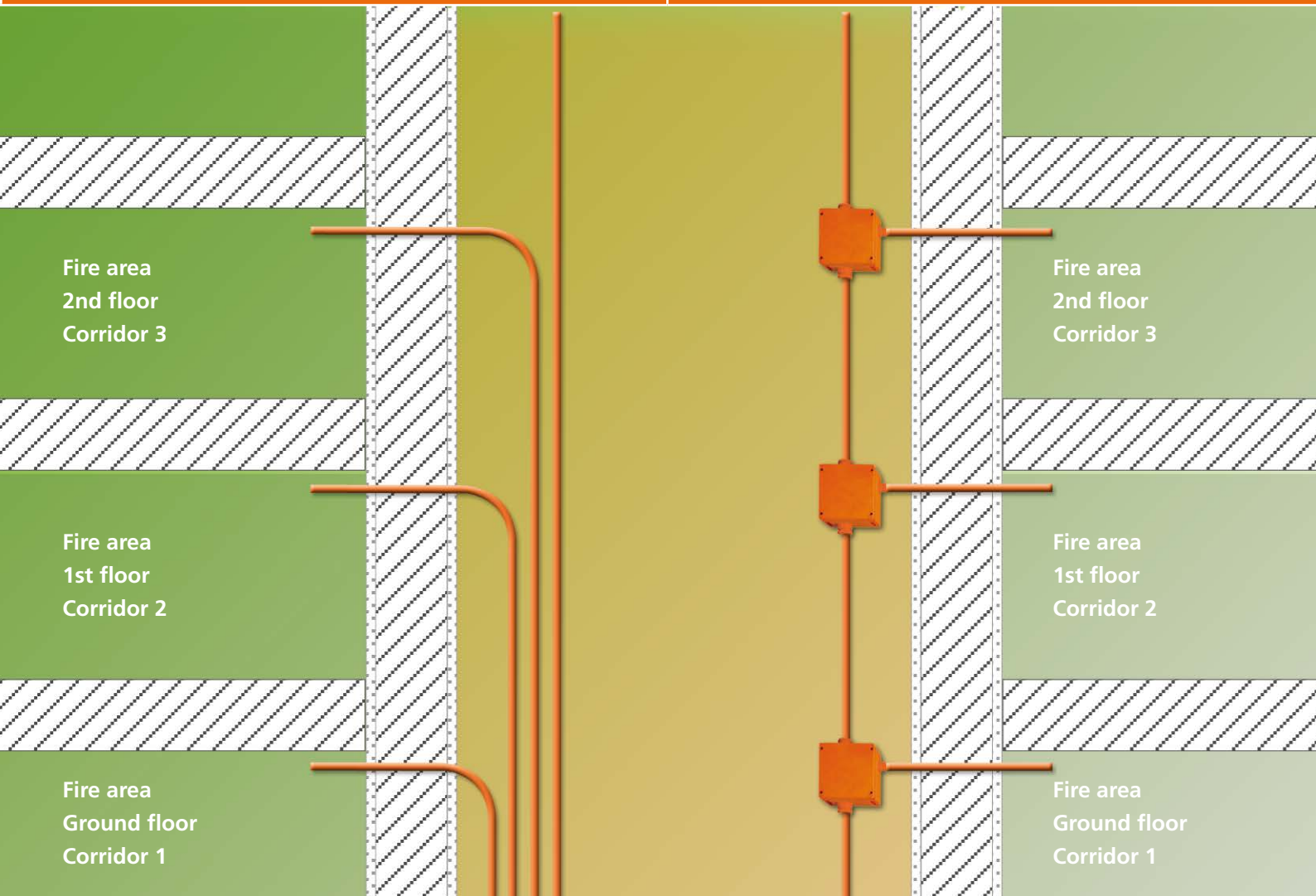
WKE terminal block

Terminal designation	Conductor cross-section (single-wire)		Conductor cross-section (multiwire)		Tightening torque	
	min.	max.	min.	max.	min.	max.
WKE SAK 2.5 / 35	0.5 mm²	6 mm²	0.5 mm²	4 mm²	0.4 Nm	0.6 Nm
WKE SAK 6 / 35	0.5 mm²	10 mm²	1.5 mm²	6 mm²	0.8 Nm	1.6 Nm
WKE SAK 10 / 35	1.5 mm²	10 mm²	1.5 mm²	16 mm²	2 Nm	2.4 Nm
WKE SAK 16 / 35	2.5 mm²	16 mm²	4 mm²	16 mm²	2 Nm	2.4 Nm
WKE SAK 35 / 35	2.5 mm²	16 mm²	4 mm²	35 mm²	4 Nm	5 Nm

Cable gland clamping areas

		Nm
M 20 x 1.5	6 - 13	4
M 25 x 1.5	6 - 15	6
M 25 x 1.5	9 - 19	6
M 32 x 1.5	17 - 26	7
M 40 x 1.5	17 - 27	7.5
M 50 x 1.5	23 - 34	7.5

= Cable gland

= Clamping area

Nm = Rated torque

E30   **Intrinsic fire resistance.**
according to DIN 4102 Part 12
· E stands for electrical function
· 30 represents the duration in minutes

FE180   **Insulation integrity**
based on VDE 0472-814, IEC 60331
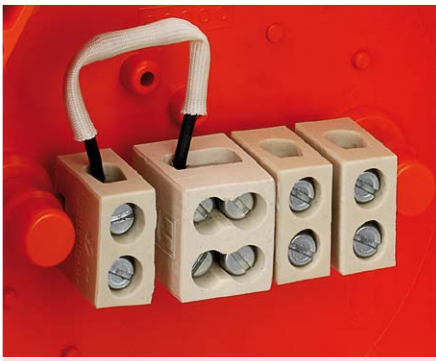· FE stands for flame or fire effects
· 180 for the time in minutes

F400   **Functional life**
according to EN 12101-3
· Functions for 120 minutes at 400°C

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■ Exchangeable fuses

■ Exchangeable fuses
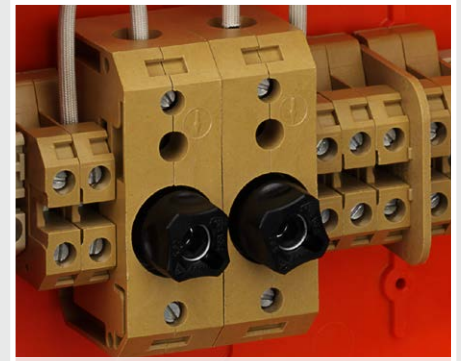
■ D02 fuse terminal block

WKE 2-5 SB

| IP65 IP54 | E30-E90 | 16² | IK05 | ▣ |
| 450V AC/DC | halogen-free | | | |

WKE 54

| IP67 | E30-E90 | FE180 | 16² | IK07 | ▣ |
| 690V AC/DC | VDE | halogen-free | iQ | | |

WKE 200-400 SB

| IP66 | E30 | 35² | IK08 | ▣ |
| 450V AC/DC | VDE | halogen-free | iQ | |

Products should always also be tested and certified under special operating conditions, to ensure electrical functional integrity. Unfortunately, this is generally disregarded by many users and manufacturers, and products and systems are offered and installed that have only been electrically tested under standard conditions. It has therefore not been verified that these function under the special operating conditions (fire).

Spelsberg is the first manufacturer to have its cable junction and connection boxes tested and certified by VDE under fire conditions. The new junction boxes with fused branch maintain the through-feed function for up to 90 minutes.

Two different variants of the fused branch are available in the WKE range:

WKE 2-5 SB and WKE 54:
The through-feed functions in case of fire and the fused branch is switched off by a fuse element in case of a fault.

WKE 200-400 SB:
The through-feed and the fused branch function in case of a fire.

Junction and connection boxes
WKE SB with fused junction

NEW!

WKE 2 – 3/1 x 6² 1SB

100 x 100 x 50 mm

Description	Order no.

Cable junction and connection boxes with IP54/IP65 certified as per EN 61439-2, with intrinsic fire resistance E30 – E90 acc. To DIN 4102 Part 12 in the bore, halogen-free enclosure made from special duroplastic
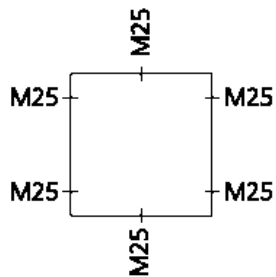
IP65 IP54	E30-E90	6²		450V AC/DC	VDE	halogen-free

WKE 2 - 3/1 x 6² 1SB	863 721 01

Clamp 0.5 – 6² from high-temperature resistant special ceramic, Junction 2 A

Accessories supplied:
Drill template, Wall + ceiling attachment set D6,
4 IP54 attachment bushes M25, seal range 9 - 18.5 mm,
1 IP54 sealing plug M25, seal range 9 - 18.5 mm

M25
M25 — — M25
M25 — — M25
M25

WKE 4 - 4/3 x 6² 2SB

165 x 165 x 76 mm

Cable junction and connection boxes with IP54/IP65 certified as per EN 61439-2, with intrinsic fire resistance E30 – E90 acc. To DIN 4102 Part 12 in the bore, halogen-free enclosure made from special duroplastic

IP65 IP54	E30-E90	6²		450V AC/DC	VDE	halogen-free

WKE 4 - 4/3 x 6² 2SB	863 747 01

Clamp 0.5 – 6² from high-temperature resistant special ceramic, junction 2 A

Accessories supplied:
4 IP54 attachment bushes M20
2 IP54 attachment busches M40,
1 IP54 sealing plug M20,
1 IP54 sealing plug M40,
2 IP54 double end connectors M40

2 x M20   M40   2 x M20
M40   M40
2 x M20   M40   2 x M20

WKE 4 – 3/1 x 16² 1SB
165 x 165 x 76 mm

Description	Order no.

Cable junction and connection boxes with IP54/IP65 certified as per EN 61439-2, with intrinsic fire resistance E30 – E90 acc. To DIN 4102 Part 12 in the bore, halogen-free enclosure made from special duroplastic

IP65 IP54	E30-E90	16²	▢	450V AC/DC	VDE	halogen-free

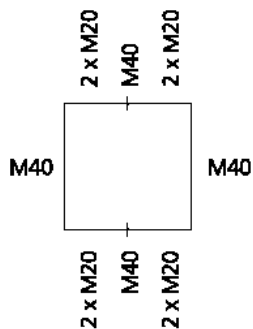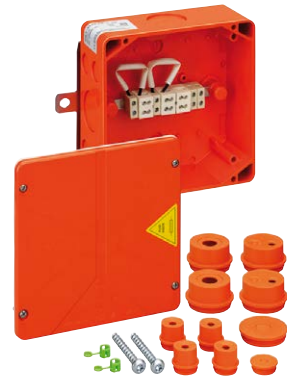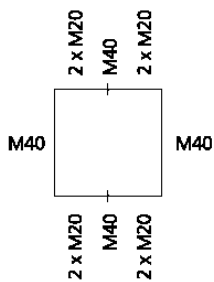|	
WKE 4 - 3/1 x 16² 1SB Clamp 1.5 – 16² from high-temperature resistant special ceramic, Junction 2 A Accessories supplied: Drill template, Wall + ceiling attachment set D6, 2 IP54 attachment busches M40, seal range 17 - 30 mm, 2 IP54 double end connectors M40, seal range 8 - 13.5 mm, 1 IP54 sealing plug M20, seal range 8 - 13.5 mm, 1 IP54 sealing plug M40, seal range 17 - 30 mm	863 921 01

(diagram: 2 x M20 / M40 / 2 x M20 top, M40 left, M40 right, 2 x M20 / M40 / 2 x M20 bottom)

WKE 5 – 4/3 x 16² 2SB
256 x 171 x 106 mm
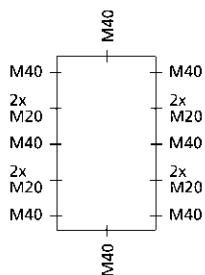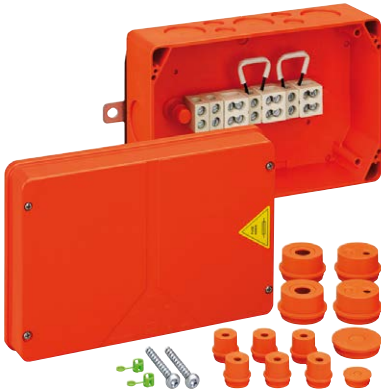
Cable junction and connection boxes with IP54/IP65 certified as per EN 61439-2, with intrinsic fire resistance E30 – E90 acc. To DIN 4102 Part 12 in the bore, halogen-free enclosure made from special duroplastic

IP65 IP54	E30-E90	16²	▢	450V AC/DC	VDE	halogen-free

WKE 5 – 4/3 x 16² 2SB Clamp 1.5 – 16² from high-temperature resistant special ceramic, junction 2 A Accessories supplied: Drill template, Wall + ceiling attachment set D6, 6 IP54 attachment bushes M20, seal range 8 - 13.5 mm, 2 IP54 attachment busches M40, seal range 17 - 30 mm, 2 IP54 double end connectors M40, seal range 8 - 13.5 mm, 1 IP54 sealing plug M20, Sealing range 8 - 13.5 mm, 1 IP54 sealing plug M40, seal range 17 - 30 mm	863 748 01

(diagram: M40 top; M40 / 2x M20 / M40 / 2x M20 / M40 left; M40 / 2x M20 / M40 / 2x M20 / M40 right; M40 bottom)

Junction boxes WKE 2 - 5 SB

Sealing plugs

IP54 Blanking plug with closed sealing membrane, no lock nuts required,
for wall thickness 1.5 - 4.0 mm

	Sealing area/mm	
VST M20-or	8 - 13.5	231 620 01
VST M25-or	9 - 16	231 625 01
VST M32-or	13 - 23	231 632 01
VST M40-or	17 - 30	231 640 01

Attachment bushes

IP54 Attachment bushes with open sealing membrane, for wall thickness 1.5 - 4.0 mm

	Sealing area/mm	
AST M20-or	8 - 13.5	230 620 01
AST M25-or	9 - 18.5	230 625 01
AST M32-or	13 - 23	230 632 01
AST M40-or	17 - 30	230 640 01

Cable gland

IP68 Cable gland for WKE 2-5, with strain relief, polyamide, M_ x 1.5 mm, with lock nut

	Thread lenght/mm	Sealing area/mm	
KVR M20-MGM/or	9	7 - 14.0	227 620 01
KVR M25-MGM/or	11	9 - 16	227 625 01
KVR M32-MGM/or	11	11 - 21.0	227 632 01
KVR M40-MGM/or	11	16 - 28.0	227 640 01

WKE BS F2A spare fuses

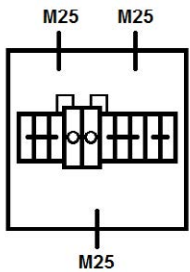Spare fuses for WKE 2-5 in the "SB" versions,
wired device fuses F2A in the size 5x20 mm coated with a glass fibre sleeve

WKE BS F2A 10 pieces per packaging unit	863 001 01

Intrinsic fire resistance

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WKE 300 8 x 6² 2FS

160 x 160 x 110 mm

Description	Order no.

Cable junction and connection boxes with IP66 certified as per EN 61439-2, with electrical functional integrity E30 according to DIN 4102 Part 12 in the duct

IP66	E30	6²	□	450V AC/DC	DVE	halogen-free	iQ

WKE 300 8x 6² 2FS Terminal blocks 0.5 – 6² and fuse holder (max. 6,3 A) made from halogen-free special thermoset Accessories supplied: 8 terminal clamps 0.5 - 6 mm², 2 micro-fuse terminals, 1.5 - 10 mm², 3 M25 cable glands (9 -16mm)	862 262 01

M25　M25

M25

WKE 400 7 x 10² 1D0

200 x 200 x 110 mm

Cable junction and connection boxes with IP66 certified as per EN 61439-2, with electrical functional integrity E30 according to DIN 4102 Part 12 in the duct

IP66	E30	10²	□	450V AC/DC	DVE	halogen-free	iQ

WKE 400 7 x 10² 1D0 Terminal clamps 2.5 – 10² and fuse holder (max. 6 A) made from halogen-free special thermoset Accessories supplied: 7 terminal blocks 2.5 - 10 mm², 1 D0 fuse terminal, 1.5 - 10 mm², 2 M32 cable glands (11 -21mm), 1 M25 cable glands (9 -16mm)	862 355 01

M32　M32

M25

Junction boxes WKE 200 - 400 SB

WKE 400 7 x 10² 2D0

200 x 200 x 110 mm

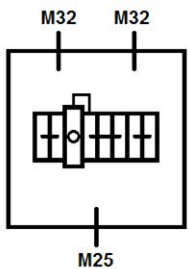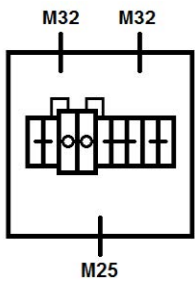| Description	Order no.
Cable junction and connection boxes with IP66 certified as per EN 61439-2, with electrical functional integrity E30 according to DIN 4102 Part 12 in the duct	

IP66 | E30 | 10² | | 450V AC/DC | | halogen-free | IQ

WKE 400 7 x 10² 2D0 Terminal clamps 2.5 – 10² and fuse holder (max. 6 A) made from halogen-free special thermoset Accessories supplied: 7 terminal blocks 2.5 - 10 mm², 2 D0 fuse terminals, 1.5 - 10 mm², 2 M32 cable glands (11 -21mm), 1 M25 cable glands (9 -16mm)	862 356 01

M32   M32

M25

External fixing lugs

External fastening kit V2A	
WKE 200 ABL External fastening kit V2A, for WKE 200 up to WKE 400, Material stainless steel V2A (1.4301), Set = 4 pcs.	860 400 01
KVS Cable gland protection set, is needed for IK 09 when cable glands are used, for WKE 200 up to WKE 400, IK09, Material stainless steel V2A (1.4301), Set = 3 pcs.	890 040 01

- Fuse-protected branch
- 16² double terminal
- Ideal for use in tunnels and industrial settings

E90 maintained function
- According to DIN 4102 Part 12
- Functioning electrical installation over 90 minutes
- Tested by MPA Dresden

IP67 protection rating
- According to DIN EN 60670
- No penetration by dust
- Protection against temporary immersion in water, IK07 degree of protection
- According to VDE 0470 part 100; EN 50102
- Protection against external mechanical stress

Pressure and suction resistance
- Testing according to the „Safety Lighting Installations for Rail Tunnels" specifications in Germany

Maintained function is assured if no short-circuit occurs during a fire and if the current flow is not interrupted in the electrical wiring system. Components according to DIN 4102 Part 12 are high-voltage cables, installation cables and wires, busbar trunking, cable ducts, coatings, claddings and necessary fasteners, carrying equipment and fixtures. Cable testing is always performed as an entire system by inspection bodies approved by the German Institute for Building Technology (DiBt).

| IP67 | E90 | FE180 | F400 | 16² | IK07 | ▣ | 690V AC/DC | VDE | halogen-free | iQ |

Junction boxes WKE 54

WKE 54
278 x 208 x 107 mm

Cable junction and connection boxes with IP66 /67, certified according to EN 61439-2, With intrinsic fire resistance E30 – E90 acc. To DIN 4102 Part 12 in the bore, halogen-free enclosure made from special duroplastic, terminals made of a high-temperature-resistant special ceramic, rapid mounting by external brackets

IP67	E30-E90	FE180	F400	16²	☐	690V AC/DC	halogen-free	VDE	iQ

WKE 54   860 254 01
WKE 54 5 x 16² double terminal,
to be used as a junction box with fused branch,
connection box 5-pole 1.5 - 16 mm²,
Junction box 5-pole 1.5 - 10 mm², Number of conductors per pole:
20 x 1.5² / 16 x 2.5² / 12 x 4.0² / 8 x 6² / 4 x 10² / 4 x 16²,
2 fuse bases D01 max. 16 A

Accessories supplied:
2 cable glands M40 , seal range 16 - 28 mm,
1 cable gland M32, seal range 11 - 21 mm

Accessories:

KVR M20-MGM/or   227 620 01

KVR M25-MGM/or   227 625 01

KVR M32-MGM/or   227 632 01

KVR M40-MGM/or   227 640 01

Intrinsic fire resistance

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- VDE tested according to EN 61 439-2
- 14-70 distribution units
- Freely plannable in accordance with the low-voltage switchgear directive
- Individually configurable with type-tested components
- Tested according to DIN 4102 part 2 by MPA Dresden
- Fire load insulation F90 (based on I90) for protection of escape and rescue routes according to MLAR 2005
- F90 (based on E90) maintained electrical function for protection of electrical equipment according to MLAR 2005
- One enclosure for all applications

IP65 | 90 | 90 | 14–140 | IK10 | | 400V AC/DC | DVE | halogen-free | IQ

Small distributors WKE AK 14-70

WKE AK 14
400 x 540 x 230 mm

Entries top end:
17 x M20
2 x M20/M25
1 x M32/M40

Description	Order no.

Fire protection small-scale distributors, VDE certificated compliant with EN 61 439 Part 2, VDE tested and certified under specific operating conditions to be compliant with EN 61 439-2, tested compliant with DIN 4102 Part 2 by MPA Dresden, F90 for internal flame impingement according to DIN 4102 based on I90, F90 for external flame impingement according to DIN 4102 based on E90, can be individually equipped with type-tested operating materials

| IP65 | 90 | 90 | 14 | IK10 | □ | 400V AC/DC | halogen-free | VDE | IQ |

WKE AK 14
stop left, 1-row, 14 distribution units, U_i=400V, screwless PE/N terminal rails each with 3 screwable clamping points, 2.5 - 16 mm², 14 screwless terminal points , 1.5 - 4 mm², elastic entries on top, with cable covering, masking and labelling strips, additional double-membrane seals and other accessories

865 414 01

WKE AK 14 R
Stop right, 1-row, 14 distribution units, U_i=400V, screwless PE/N terminal rails each with 3 screwable clamping points, 2.5 - 16 mm², 14 screwless terminal points , 1.5 - 16 mm², elastic entries on top, with cable covering, masking and labelling strips, additional double-membrane seals and other accessories

865 514 01

WKE AK 28
400 x 690 x 230 mm

Entries top end:
17 x M20
2 x M20/M25
1 x M32/M40

Fire protection small-scale distributors, VDE certificated compliant with EN 61 439 Part 2, VDE tested and certified under specific operating conditions to be compliant with EN 61 439-2, tested compliant with DIN 4102 Part 2 by MPA Dresden, F90 for internal flame impingement according to DIN 4102 based on I90, F90 for external flame impingement according to DIN 4102 based on E90, can be individually equipped with type-tested operating materials

| IP65 | 90 | 90 | 28 | IK10 | □ | 400V AC/DC | halogen-free | VDE | IQ |

WKE AK 28
stop left, 2 row, 28 distribution units, U_i=400V, 150 mm rail spacing, screwless PE/N terminal rails each with 3 screwable clamping points 1.5 - 4 mm², 21 / 2 x 14 screwless clamping points 1.5 mm² - 4 mm², elastic entries on top, with cable covering, masking and labelling strips, additional double-membrane seals and other accessories

865 428 01

WKE AK 28 R
Stop right, 2 row, 28 modules, U_i=400V, 150 mm rail spacing, screwless PE/N terminal rails each with 3 screwable clamping points 1.5 - 4 mm², 21 / 2 x 14 screwless clamping points 1.5 mm² - 4 mm², elastic entries on top, with cable covering, masking and labelling strips, additional double-membrane seals and other accessories

865 528 01

WKE AK 42

400 x 840 x 230 mm

Entries top end:
17 x M20
2 x M20/M25
1 x M32/M40

Fire protection small-scale distributors, VDE certificated compliant with EN 61 439 Part 2, VDE tested and certified under specific operating conditions to be compliant with EN 61 439-2, tested compliant with DIN 4102 Part 2 by MPA Dresden, F90 for internal flame impingement according to DIN 4102 based on I90, F90 for external flame impingement according to DIN 4102 based on E90, can be individually equipped with type-tested operating materials

| IP65 | 90 | 90 | 42 | IK10 | □ | 400V AC/DC | halogen-free | VDE | iQ |

WKE AK 42
stop left, 3 row, 42 distribution units, U_i=400V, 150 mm rail spacing, screwless PE/N terminal rails each with 6 screwable clamping points, 2.5 - 16 mm², 21 / 2 x 14 screwless clamping points 1.5 mm² - 4 mm², elastic entries on top, with cable covering, masking and labelling strips, additional double-membrane seals and other accessories

865 442 01

WKE AK 42 R
Stop right, 3 row, 42 distribution units, U_i=400V, 150 mm rail spacing, screwless PE/N terminal rails each with 6 screwable clamping points, 2.5 - 16 mm², 21 / 2 x 14 screwless clamping points 1.5 mm² - 4 mm², elastic entries on top, with cable covering, masking and labelling strips, additional double-membrane seals and other accessories

865 542 01

WKE AK 56

400 x 990 x 230 mm

Entries top end:
17 x M20
2 x M20/M25
1 x M32/M40

Fire protection small-scale distributors, VDE certificated compliant with EN 61 439 Part 2, VDE tested and certified under specific operating conditions to be compliant with EN 61 439-2, tested compliant with DIN 4102 Part 2 by MPA Dresden, F90 for internal flame impingement according to DIN 4102 based on I90, F90 for external flame impingement according to DIN 4102 based on E90, can be individually equipped with type-tested operating materials

| IP65 | 90 | 90 | 56 | IK10 | □ | 400V AC/DC | halogen-free | VDE | iQ |

WKE AK 56
stop left, 4 row, 56 distribution units, U_i=400V, 150 mm rail spacing, screwless PE/N terminal rails each with 6 screwable clamping points, 2.5 - 16 mm², 21 / 2 x 14 screwless clamping points 1.5 mm² - 4 mm², elastic entries on top, additional double-membrane seals and other accessories

865 456 01

WKE AK 56 R
Stop right, 4 row, 56 distribution units, U_i=400V, 150 mm rail spacing, screwless PE/N terminal rails each with 3 screwable clamping points, 2.5 - 16 mm², 21 / 2 x 14 screwless clamping points 1.5 mm² - 4 mm², elastic entries on top, additional double-membrane seals and other accessories

865 556 01

Small distributors WKE AK 14-70

WKE AK 70
400 x 1.140 x 230 mm

Entries top end:
17 x M20
2 x M20/M25
1 x M32/M40

Description	Order no.

Fire protection small-scale distributors, VDE certificated compliant with EN 61 439 Part 2, VDE tested and certified under specific operating conditions to be compliant with EN 61 439-2, tested compliant with DIN 4102 Part 2 by MPA Dresden, F90 for internal flame impingement according to DIN 4102 based on I90, F90 for external flame impingement according to DIN 4102 based on E90, can be individually equipped with type-tested operating materials

IP65	90	90	70	IK10		400V AC/DC	halogen-free	VDE	iQ

WKE AK 70
70 distribution units, stop left, 5 row, U_i=400V, 150 mm rail spacing, screwless PE/N terminal rails each with 6 screwable clamping points, 2.5 - 16 mm², 21 / 2 x 14 screwless clamping points 1.5 mm² - 4 mm², elastic entries on top, additional double-membrane seals and other accessories

865 470 01

WKE AK 70 R
70 distribution units, Stop right, 5-row, U_i=400V, 150 mm rail spacing, screwless PE/N terminal rails each with 3 screwable clamping points, 2.5 - 16 mm², 21 distribution units, elastic entries on top, additional double-membrane seals and other accessories

865 570 01

WKE AK 14/2
700 x 540 x 230 mm

Entries, 2 each at
the front side top:
17 x M20
2 x M20/M25
1 x M32/M40

Fire protection small-scale distributors, VDE certificated compliant with EN 61 439 Part 2, VDE tested and certified under specific operating conditions to be compliant with EN 61 439-2, tested compliant with DIN 4102 Part 2 by MPA Dresden, F90 for internal flame impingement according to DIN 4102 based on I90, F90 for external flame impingement according to DIN 4102 based on E90, can be individually equipped with type-tested operating materials

IP65	90	90	28	IK10		400V	halogen-free	VDE	iQ

WKE AK 14/2
stop left, 1-row, 28 modules, U_i=400V, screwless PE/N terminal rails each with 6 screwable clamping points, 2.5 - 16 mm², 28 screwless terminals, 1.5 - 4 mm², elastic entries on top, with cable covering, masking and labelling strips, additional double-membrane seals and other accessories

865 614 01

WKE AK 14/2 R
Stop right, 1-row, 28 modules, U_i=400V, screwless PE/N terminal rails each with 3 screwable clamping points, 2.5 - 16 mm², 28 screwless terminals, 1.5 - 16 mm², elastic entries on top, with cable covering, masking and labelling strips, additional double-membrane seals and other accessories

865 714 01

WKE AK 28/2
700 x 690 x 230 mm

Fire protection small-scale distributors, VDE certificated compliant with EN 61 439 Part 2, VDE tested and certified under specific operating conditions to be compliant with EN 61 439-2, tested compliant with DIN 4102 Part 2 by MPA Dresden, F90 for internal flame impingement according to DIN 4102 based on I90, F90 for external flame impingement according to DIN 4102 based on E90, can be individually equipped with type-tested operating materials

IP65	90	90	56	IK10	□	400V	halogen-free	VDE	iQ

WKE AK 28/2
stop left, 2 row, 56 distribution units, U_i=400V, 150 mm rail spacing, screwless PE/N terminal rails each with 3 screwable clamping points 1.5 - 4 mm², 42 screwless terminals 1,5-4 mm², elastic entries on top, with cable covering, masking and labelling strips, additional double-membrane seals and other accessories
     865 628 01

WKE AK 28/2 R
Stop right, 2 row, 56 distribution units, U_i=400V, 150 mm rail spacing, screwless PE/N terminal rails each with 3 screwable clamping points 1.5 - 4 mm², 42 screwless terminals 1,5-4 mm², elastic entries on top, with cable covering, masking and labelling strips, additional double-membrane seals and other accessories
     865 728 01

Entries, 2 each at the front side top:
17 x M20
2 x M20/M25
1 x M32/M40

WKE AK 42/2
700 x 840 x 230 mm

Fire protection small-scale distributors, VDE certificated compliant with EN 61 439 Part 2, VDE tested and certified under specific operating conditions to be compliant with EN 61 439-2, tested compliant with DIN 4102 Part 2 by MPA Dresden, F90 for internal flame impingement according to DIN 4102 based on I90, F90 for external flame impingement according to DIN 4102 based on E90, can be individually equipped with type-tested operating materials

IP65	90	90	84	IK10	□	400V	halogen-free	VDE	iQ

WKE AK 42/2
stop left, 3 row, 84 modules, U_i=400V, 150 mm rail spacing, screwless PE/N terminal rails each with 6 screwable clamping points, 2.5 - 16 mm², 42 screwless terminals 1,5-4 mm², elastic entries on top, with cable covering, masking and labelling strips, additional double-membrane seals and other accessories
     865 642 01

WKE AK 42/2 R
Stop right, 3 row, 84 modules, U_i=400V, 150 mm rail spacing, screwless PE/N terminal rails each with 6 screwable clamping points, 2.5 - 16 mm², 42 screwless terminals 1,5-4 mm², elastic entries on top, with cable covering, masking and labelling strips, additional double-membrane seals and other accessories
     865 742 01

Entries, 2 each at the front side top:
17 x M20
2 x M20/M25
1 x M32/M40

Small distributors WKE AK 14-70

WKE AK 56/2

700 x 990 x 230 mm

Entries, 2 each at the
front side top:
17 x M20
2 x M20/M25
1 x M32/M40

Description	Order no.
Fire protection small-scale distributors, VDE certificated compliant with EN 61 439 Part 2, VDE tested and certified under specific operating conditions to be compliant with EN 61 439-2, tested compliant with DIN 4102 Part 2 by MPA Dresden, F90 for internal flame impingement according to DIN 4102 based on I90, F90 for external flame impingement according to DIN 4102 based on E90, can be individually equipped with type-tested operating materials	

IP65	90	90	112	IK10	□	400V	halogen-free	VDE	iQ

|	
WKE AK 56/2 stop left, 4 row, 112 spacing units, U$_i$=400V, 150 mm rail spacing, screwless PE/N terminal rails each with 6 screwable clamping points, 2.5 - 16 mm², 42 screwless terminals 1,5-4 mm², elastic entries on top, additional double-membrane seals and other accessories	865 656 01
WKE AK 56/2 R Stop right, 4 row, 112 spacing units, U$_i$=400V, 150 mm rail spacing, screwless PE/N terminal rails each with 3 screwable clamping points, 2.5 - 16 mm², 42 screwless terminals 1,5-4 mm², elastic entries on top, additional double-membrane seals and other accessories	865 756 01

WKE AK 70/2

700 x 1.140 x 230 mm

Entries, 2 each at the
front side top:
17 x M20
2 x M20/M25
1 x M32/M40

Description	
Fire protection small-scale distributors, VDE certificated compliant with EN 61 439 Part 2, VDE tested and certified under specific operating conditions to be compliant with EN 61 439-2, tested compliant with DIN 4102 Part 2 by MPA Dresden, F90 for internal flame impingement according to DIN 4102 based on I90, F90 for external flame impingement according to DIN 4102 based on E90, can be individually equipped with type-tested operating materials	

IP65	90	90	140	IK10	□	400V	halogen-free	VDE	iQ

WKE AK 70/2 stop left, 5 row, 140 spacing units, U$_i$=400V, 150 mm rail spacing, screwless PE/N terminal rails each with 6 screwable clamping points, 2.5 - 16 mm², 42 screwless terminals 1,5-4 mm², elastic entries on top, additional double-membrane seals and other accessories	865 670 01
WKE AK 70/2 R Stop right, 5-row, 140 spacing units, U$_i$=400V, 150 mm rail spacing, screwless PE/N terminal rails each with 3 screwable clamping points, 2.5 - 16 mm², 42 screwless terminals 1,5-4 mm², elastic entries on top, additional double-membrane seals and other accessories	865 770 01

Specially designed for tunnel systems, industrial halls and the construction industry (structural engineering).
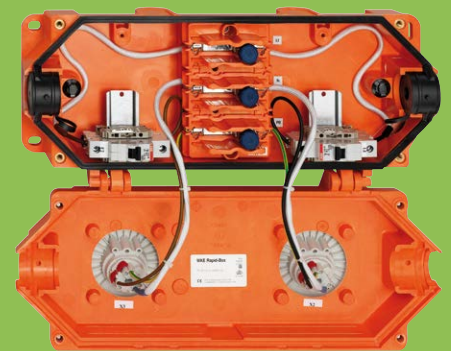
- Contacting of uncut conductors up to 50 mm², also retrospectively
- Maintenance-free and fused sheath terminals with rotating, sprung pressure piece and reverse lock
- Tap via spring-cage terminal
- Simplified line mounting during installation

- More economical, lower maintenance system operation
- Uninterruptible power supply via uncut conductors

Properties
- 2 basic versions:
- Standard in accordance with IEC 61439-2 (VDE)
- Functional integrity E30 / E60 / E90 per EN 1363 (MPA)

- 2 entry points with terminal to the uncut conductor branch
- Pre-wired to fuse / outlet
- With exterior mounting positions
- Dimensions: 447 x 190 x 105 mm

Product variants
- Fused branch with conductor
- CEE sockets 3-pole
- CEE sockets 5-pole

| IP67 IP66 | E30-E90 | 50² | IK09 | ▣ | 400V AC/DC | DVE | halogen-free | low smoke | IQ |

WKE *Rapid*-Box
The VDE and MPA-certified switchgear combination

108

Rapid-Box 10-50² KV

190 x 446 x 106 mm

Description	Order no.

Junction box and connection enclosure certified in accordance with EN 61 439, maintenance-free terminal for uncut cables in feed-through, contacting at junction using maintenance-free spring clamp technology, simple attachment by external attachment points, halogen-free enclosure of special Duroplast, suitable for outdoor installation in accordance with EN 61439-2, terminal can withstand a rated current of max. 100 A, clamping range for uncut cables 10² - 50², clamping range for cut cables 2.5² - 35²

IP67 IP66	50²	IK09	▢	400V AC/DC	DVE	halogen-free	low smoke	iQ

Rapid-Box 10-50² KV 1 x S 1 fuse, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², 1-pole pre-wired junction, protected with 10 A circuit breaker	301 111 01
Rapid-Box 10-50² KV 2 x S 2 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², 2-pole pre-wired junction, protected with 10 A circuit breaker per pole	301 121 01

Rapid-Box 10-50² STV

190 x 446 x 161 mm

Junction box and connection enclosure certified in accordance with EN 61 439, maintenance-free terminal for uncut cables in feed-through, contacting at junction using maintenance-free spring clamp technology, simple attachment by external attachment points, halogen-free enclosure of special Duroplast, suitable for outdoor installation in accordance with EN 61439-2, terminal can withstand a rated current of max. 100 A, clamping range for uncut cables 10² - 50², clamping range for cut cables 2.5² - 35²

IP67 IP66	50²	IK09	▢	400V AC/DC	DVE	halogen-free	low smoke	iQ

Rapid-Box 10-50² STV 1 x 3-pole 1 fuse, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², cover with 3-pole CEE socket, pre-wired with circuit breakers	301 131 01
Rapid-Box 10-50² STV 2 x 3-pole 2 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², cover with two 3-pole CEE sockets, pre-wired with circuit breakers	301 141 01
Rapid-Box 10-50² STV 1 x 5-pole 3 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², cover with 5-pole CEE socket, pre-wired with circuit breakers	301 151 01
Rapid-Box 10-50² STV 2 x 5-pole 6 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², cover with 5-pole CEE socket, pre-wired with circuit breakers	301 161 01

Rapid-Box 2,5-16² KV

190 x 446 x 106 mm

Description	Order no.
Junction box and connection enclosure certified in accordance with EN 61 439, Maintenance-free terminal for uncut cables in feed-through, contacting at junction using maintenance-free spring clamp technology, simple attachment by external attachment points, halogen-free enclosure of special Duroplast, suitable for outdoor installation in accordance with EN 61439-2, Terminal can withstand a rated current of max. 63 A, Clamping range for uncut cables 2.5² - 16², clamping range for cut cables 2.5² - 10²	

IP67 IP66 | 50² | IK09 | 400V AC/DC | DVE | halogen-free | low smoke | iQ

Rapid-Box 2,5-16² KV 1 x S 1 fuse, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², 1-pole pre-wired junction, protected with 10 A circuit breaker	301 011 01
Rapid-Box 2,5-16² KV 2 x S 2 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², 2-pole pre-wired junction, protected with 10 A circuit breaker per pole	301 021 01

Rapid-Box 2,5-16² STV

190 x 446 x 161 mm

Junction box and connection enclosure certified in accordance with EN 61 439, Maintenance-free terminal for uncut cables in feed-through, contacting at junction using maintenance-free spring clamp technology, simple attachment by external attachment points, halogen-free enclosure of special Duroplast, suitable for outdoor installation in accordance with EN 61439-2, Terminal can withstand a rated current of max. 63 A, Clamping range for uncut cables 2.5² - 16², clamping range for cut cables 2.5² - 10²

IP67 IP66 | 50² | IK09 | 400V AC/DC | DVE | halogen-free | low smoke | iQ

Rapid-Box 2.5-16² STV 1 x 3-pole 1 fuse, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², cover with 3-pole CEE socket, pre-wired with circuit breakers	301 031 01
Rapid-Box 2.5-16² STV 2 x 3-pole 2 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², cover with two 3-pole CEE sockets, pre-wired with circuit breakers	301 041 01
Rapid-Box 2.5-16² STV 1 x 5-pole 3 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², cover with 5-pole CEE socket, pre-wired with circuit breakers	301 051 01
Rapid box 2,5-16² STV 2 x 5-pole 6 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², cover with 5-pole CEE socket, pre-wired with circuit breakers	301 061 01

Cable junction and connection WKE *Rapid-Box*

Rapid-Box E30 10-50² KV

190 x 446 x 106 mm

Description	Order no.

Junction box and connection enclosure certified in accordance with EN 61 439, MPA checked as per DIN 4102-2 and EN 1363-2, functional integrity in the feed-through 30 minutes for cable E30, suitable for max. 5-pole E30 cable, maintenance-free terminal for uncut cables in feed-through, contacting at junction using maintenance-free spring clamp technology, simple attachment by external attachment points, halogen-free enclosure of special Duroplast, suitable for outdoor installation in accordance with EN 61439-2, terminal can withstand a rated current of max. 100 A, clamping range for uncut cables 10² - 50², clamping range for cut cables 2.5² - 35²

IP67 IP66	E30-E90	50²	IK09	▣	400V AC/DC	DVE	halogen-free	low smoke	IQ

Rapid-Box E30 10-50² KV 1 x S 1 fuse, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², 1-pole pre-wired junction, protected with 10 A circuit breaker	301 511 01
Rapid-Box E30 10-50² KV 2 x S 2 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², 2-pole pre-wired junction, protected with 10 A circuit breaker per pole	301 521 01

Rapid-Box E30 10-50² STV

190 x 446 x 161 mm

Junction box and connection enclosure certified in accordance with EN 61 439, MPA checked as per DIN 4102-2 and EN 1363-2, functional integrity in the feed-through 30 minutes for cable E30, suitable for max. 5-pole E30 cable, maintenance-free terminal for uncut cables in feed-through, contacting at junction using maintenance-free spring clamp technology, simple attachment by external attachment points, halogen-free enclosure of special Duroplast, suitable for outdoor installation in accordance with EN 61439-2, terminal can withstand a rated current of max. 100 A, clamping range for uncut cables 10² - 50², clamping range for cut cables 2.5² - 35²

IP67 IP66	E30-E90	50²	IK09	▣	400V AC/DC	DVE	halogen-free	low smoke	IQ

Rapid box E30 10-50² STV 1 x 3-pole 1 fuse, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², cover with 3-pole CEE socket, pre-wired with circuit breakers	301 531 01
Rapid-Box E30 10-50² STV 2 x 3-pole 2 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², cover with two 3-pole CEE sockets, pre-wired with circuit breakers	301 541 01
Rapid-Box E30 10-50² STV 1 x 5-pole 3 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², cover with 5-pole CEE socket, pre-wired with circuit breakers	301 551 01
Rapid-Box E30 10-50² STV 2 x 5-pole 6 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², cover with 5-pole CEE socket, pre-wired with circuit breakers	301 561 01

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Rapid-Box E30 2.5-16² KV

190 x 446 x 106 mm

Description	Order no.

Junction box and connection enclosure certified in accordance with EN 61 439, MPA checked as per DIN 4102-2 and EN 1363-2, functional integrity in the feed-through 30 minutes for cable E30, suitable for max. 5-pole E30 cable, maintenance-free terminal for uncut cables in feed-through, contacting at junction using maintenance-free spring clamp technology, simple attachment by external attachment points, halogen-free enclosure of special Duroplast, suitable for outdoor installation in accordance with EN 61439-2, Terminal can withstand a rated current of max. 63 A, clamping range for uncut cables 2.5² - 16², clamping range for cut cables 2.5² - 10²

IP67 IP66	E30-E90	50²	IK09	▣	400V AC/DC	DVE	halogen-free	low smoke	iQ

	Order no.
Rapid-Box E30 2,5-16² KV 1 x S 1 fuse, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², 1-pole pre-wired junction, protected with 10 A circuit breaker	301 411 01
Rapid-Box E30 2,5-16² KV 2 x S 2 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², 2-pole pre-wired junction, protected with 10 A circuit breaker per pole	301 421 01

Rapid-Box E30 2,5-16² STV

190 x 446 x 161 mm

Junction box and connection enclosure certified in accordance with EN 61 439, MPA checked as per DIN 4102-2 and EN 1363-2, functional integrity in the feed-through 30 minutes for cable E30, suitable for max. 5-pole E30 cable, maintenance-free terminal for uncut cables in feed-through, contacting at junction using maintenance-free spring clamp technology, simple attachment by external attachment points, halogen-free enclosure of special Duroplast, suitable for outdoor installation in accordance with EN 61439-2, Terminal can withstand a rated current of max. 63 A, clamping range for uncut cables 2.5² - 16², clamping range for cut cables 2.5² - 10²

IP67 IP66	E30-E90	50²	IK09	▣	400V AC/DC	DVE	halogen-free	low smoke	iQ

	Order no.
Rapid-Box E30 2.5-16² STV 1 x 3-pole 1 fuse, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², cover with 3-pole CEE socket, pre-wired with circuit breakers	301 431 01
Rapid-Box E30 2.5-16² STV 2 x 3-pole 2 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², cover with two 3-pole CEE sockets, pre-wired with circuit breakers	301 441 01
Rapid-Box E30 2.5-16² STV 1 x 5-pole 3 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², cover with 5-pole CEE socket, pre-wired with circuit breakers	301 451 01
Rapid-Box E30 2.5-16² STV 2 x 5-pole 6 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², cover with 5-pole CEE socket, pre-wired with circuit breakers	301 461 01

Cable junction and connection WKE *Rapid-Box*

Rapid-Box E60 10-50² KV
190 x 446 x 106 mm

Description	Order no.

Junction box and connection enclosure certified in accordance with EN 61 439, MPA checked as per DIN 4102-2 and EN 1363-2, functional integrity in feed-through 60 minutes for cable E60, suitable for max. 5-pole E60 cable, maintenance-free terminal for uncut cables in feed-through, contacting at junction using maintenance-free spring clamp technology, simple attachment by external attachment points, halogen-free enclosure of special Duroplast, suitable for outdoor installation in accordance with EN 61439-2, terminal can withstand a rated current of max. 100 A, clamping range for uncut cables 10² - 50², clamping range for cut cables 2.5² - 35²

IP67 IP66	E30-E90	50²	IK09		400V AC/DC			low smoke	IQ

Rapid-Box E60 10-50² KV 1 x S
1 fuse, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², 1-pole pre-wired junction, protected with 10 A circuit breaker, with external attachment lugs — 301 711 01

Rapid-Box E60 10-50² KV 2 x S
2 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², 2-pole pre-wired junction, protected with 10 A circuit breaker per pole, with external attachment lugs — 301 721 01

Rapid-Box E60 10-50² STV
190 x 446 x 106 mm

Junction box and connection enclosure certified in accordance with EN 61 439, MPA checked as per DIN 4102-2 and EN 1363-2, functional integrity in feed-through 60 minutes for cable E60, suitable for max. 5-pole E60 cable, maintenance-free terminal for uncut cables in feed-through, contacting at junction using maintenance-free spring clamp technology, simple attachment by external attachment points, halogen-free enclosure of special Duroplast, suitable for outdoor installation in accordance with EN 61439-2, terminal can withstand a rated current of max. 100 A, clamping range for uncut cables 10² - 50², clamping range for cut cables 2.5² - 35²

IP67 IP66	E30-E90	50²	IK09		400V AC/DC			low smoke	IQ

Rapid-Box E60 10-50² STV 1 x 3-pole
1 fuse, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², cover with 3-pole CEE socket, pre-wired with circuit breakers, with external attachment lugs — 301 731 01
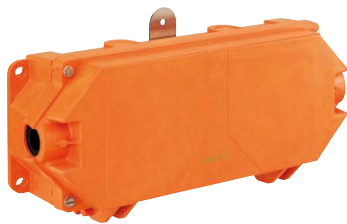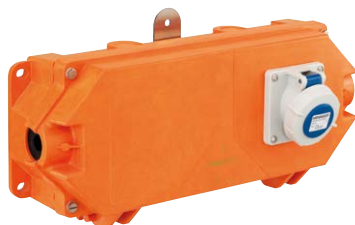
Rapid-Box E60 10-50² STV 2 x 3-pole
2 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², cover with two 3-pole CEE sockets, pre-wired with circuit breakers, with external attachment lugs — 301 741 01

Rapid-Box E60 10-50² STV 1 x 5-pole
3 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², cover with 5-pole CEE socket, pre-wired with circuit breakers, with external attachment lugs — 301 751 01

Rapid-Box E60 10-50² STV 2 x 5-pole
6 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², cover with 5-pole CEE socket, pre-wired with circuit breakers, with external attachment lugs — 301 761 01

Rapid-Box E60 2,5-16² KV
190 x 446 x 106 mm

Description	Order no.

Junction box and connection enclosure certified in accordance with EN 61 439, MPA checked as per DIN 4102-2 and EN 1363-2, functional integrity in feed-through 60 minutes for cable E60, suitable for max. 5-pole E60 cable, maintenance-free terminal for uncut cables in feed-through, contacting at junction using maintenance-free spring clamp technology, simple attachment by external attachment points, halogen-free enclosure of special Duroplast, suitable for outdoor installation in accordance with EN 61439-2, Terminal can withstand a rated current of max. 63 A, clamping range for uncut cables 2.5² - 16², clamping range for cut cables 2.5² - 10²

IP67 IP66 | E30-E90 | 50² | IK09 | | 400V AC/DC | | | low smoke | iQ

Rapid-Box E60 2.5-16² KV 1 x S
1 fuse, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², 1-pole pre-wired junction, protected with 10 A circuit breaker, with external attachment lugs
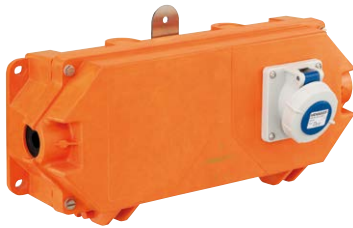
301 611 01

Rapid-Box E60 2.5-16² KV 2 x S
2 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², 2-pole pre-wired junction, protected with 10 A circuit breaker per pole, with external attachment lugs

301 621 01

Rapid-Box E60 2,5-16² STV
190 x 446 x 106 mm

Junction box and connection enclosure certified in accordance with EN 61 439, MPA checked as per DIN 4102-2 and EN 1363-2, functional integrity in feed-through 60 minutes for cable E60, suitable for max. 5-pole E60 cable, maintenance-free terminal for uncut cables in feed-through, contacting at junction using maintenance-free spring clamp technology, simple attachment by external attachment points, halogen-free enclosure of special Duroplast, suitable for outdoor installation in accordance with EN 61439-2, Terminal can withstand a rated current of max. 63 A, clamping range for uncut cables 2.5² - 16², clamping range for cut cables 2.5² - 10²

IP67 IP66 | E30-E90 | 50² | IK09 | | 400V AC/DC | | | low smoke | iQ

Rapid-Box E60 2.5-16² STV 1 x 3-pole
1 fuse, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², cover with 3-pole CEE socket, pre-wired with circuit breakers, with external attachment lugs

301 631 01

Rapid-Box E60 2.5-16² STV 2 x 3-pole
2 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², cover with two 3-pole CEE sockets, pre-wired with circuit breakers, with external attachment lugs

301 641 01

Rapid-Box E60 2.5-16² STV 1 x 5-pole
3 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², cover with 5-pole CEE socket, pre-wired with circuit breakers, with external attachment lugs

301 651 01

Rapid-Box E60 2.5-16² STV 2 x 5-pole
6 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², cover with 5-pole CEE socket, pre-wired with circuit breakers, with external attachment lugs

301 661 01

Cable junction and connection WKE *Rapid-Box*

Rapid-Box E90 10-50² KV
190 x 446 x 106 mm

Description	Order no.

Junction box and connection enclosure certified in accordance with EN 61 439, MPA checked as per DIN 4102-2 and EN 1363-2, functional integrity in feed-through 90 minutes for cable E90, suitable for max. 5-pole E90 cable, maintenance-free terminal for uncut cables in feed-through, contacting at junction using maintenance-free spring clamp technology, simple attachment by external attachment points, halogen-free enclosure of special Duroplast, suitable for outdoor installation in accordance with EN 61439-2, terminal can withstand a rated current of max. 100 A, clamping range for uncut cables 10² - 50², clamping range for cut cables 2.5² - 35²

IP67 IP66	E30-E90	50²	IK09	▣	400V AC/DC	DVE	halogen-free	low smoke	iQ

Rapid-Box E90 10-50² KV 1 x S 1 fuse, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², 1-pole pre-wired junction, protected with 10 A circuit breaker, with external attachment lugs	301 311 01
Rapid-Box E90 10-50² KV 2 x S 2 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², 2-pole pre-wired junction, protected with 10 A circuit breaker per pole, with external attachment lugs	301 321 01

Rapid-Box E90 10-50² STV
190 x 446 x 106 mm

Junction box and connection enclosure certified in accordance with EN 61 439, MPA checked as per DIN 4102-2 and EN 1363-2, functional integrity in feed-through 90 minutes for cable E90, suitable for max. 5-pole E90 cable, maintenance-free terminal for uncut cables in feed-through, contacting at junction using maintenance-free spring clamp technology, simple attachment by external attachment points, halogen-free enclosure of special Duroplast, suitable for outdoor installation in accordance with EN 61439-2, terminal can withstand a rated current of max. 100 A, clamping range for uncut cables 10² - 50², clamping range for cut cables 2.5² - 35²

IP67 IP66	E30-E90	50²	IK09	▣	400V AC/DC	DVE	halogen-free	low smoke	iQ

|	
Rapid-Box E90 10-50² STV 1 x 3-pole 1 fuse, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², cover with 3-pole CEE socket, pre-wired with circuit breakers, with external attachment lugs	301 331 01
Rapid-Box E90 10-50² STV 2 x 3-pole 2 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², cover with two 3-pole CEE sockets, pre-wired with circuit breakers, with external attachment lugs	301 341 01
Rapid-Box E90 10-50² STV 1 x 5-pole 3 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², cover with 5-pole CEE socket, pre-wired with circuit breakers, with external attachment lugs	301 351 01
Rapid-Box E90 10-50² STV 2 x 5-pole 6 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 50 mm², cover with 5-pole CEE socket, pre-wired with circuit breakers, with external attachment lugs	301 361 01

Rapid-Box E90 2,5-16² KV

190 x 446 x 106 mm

Junction box and connection enclosure certified in accordance with EN 61 439, MPA checked as per DIN 4102-2 and EN 1363-2, functional integrity in feed-through 90 minutes for cable E90, suitable for max. 5-pole E90 cable, maintenance-free terminal for uncut cables in feed-through, contacting at junction using maintenance-free spring clamp technology, simple attachment by external attachment points, halogen-free enclosure of special Duroplast, suitable for outdoor installation in accordance with EN 61439-2, Terminal can withstand a rated current of max. 63 A, clamping range for uncut cables 2.5² - 16², clamping range for cut cables 2.5² - 10²

IP67 IP66	E30-E90	50²	IK09	⊡	400V AC/DC	VDE	halogen-free	low smoke	iQ

Rapid-Box E90 2.5-16² KV 1 x S 1 fuse, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², 1-pole pre-wired junction, protected with 10 A circuit breaker, with external attachment lugs	301 211 01
Rapid-Box E90 2.5-16² KV 2 x S 2 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², 2-pole pre-wired junction, protected with 10 A circuit breaker per pole, with external attachment lugs	301 221 01

Cable junction and connection WKE *Rapid-Box*

Rapid-Box E90 2,5-16² STV

190 x 446 x 106 mm

Junction box and connection enclosure certified in accordance with EN 61 439, MPA checked as per DIN 4102-2 and EN 1363-2, functional integrity in feed-through 90 minutes for cable E90, suitable for max. 5-pole E90 cable, maintenance-free terminal for uncut cables in feed-through, contacting at junction using maintenance-free spring clamp technology, simple attachment by external attachment points, halogen-free enclosure of special Duroplast, suitable for outdoor installation in accordance with EN 61439-2, Terminal can withstand a rated current of max. 63 A, clamping range for uncut cables 2.5² - 16², clamping range for cut cables 2.5² - 10²

| IP67 IP66 | E30-E90 | 50² | IK09 | ▢ | 400V AC/DC | DVE | halogen-free | low smoke | iQ |

	Order no.
Rapid-Box E90 2.5-16² STV 1 x 3-pole 1 fuse, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², cover with 3-pole CEE socket, pre-wired with circuit breakers, with external attachment lugs	301 231 01
Rapid-Box E90 2.5-16² STV 2 x 3-pole 2 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², cover with two 3-pole CEE sockets, pre-wired with circuit breakers, with external attachment lugs	301 241 01
Rapid-Box E90 2.5-16² STV 1 x 5-pole 3 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², cover with 5-pole CEE socket, pre-wired with circuit breakers, with external attachment lugs	301 251 01
Rapid-Box E90 2.5-16² STV 2 x 5-pole 6 fuses, Sealing range cable diameter 9 - 14 mm, Terminal 16 mm², cover with 5-pole CEE socket, pre-wired with circuit breakers, with external attachment lugs	301 261 01

Intrinsic fire resistance
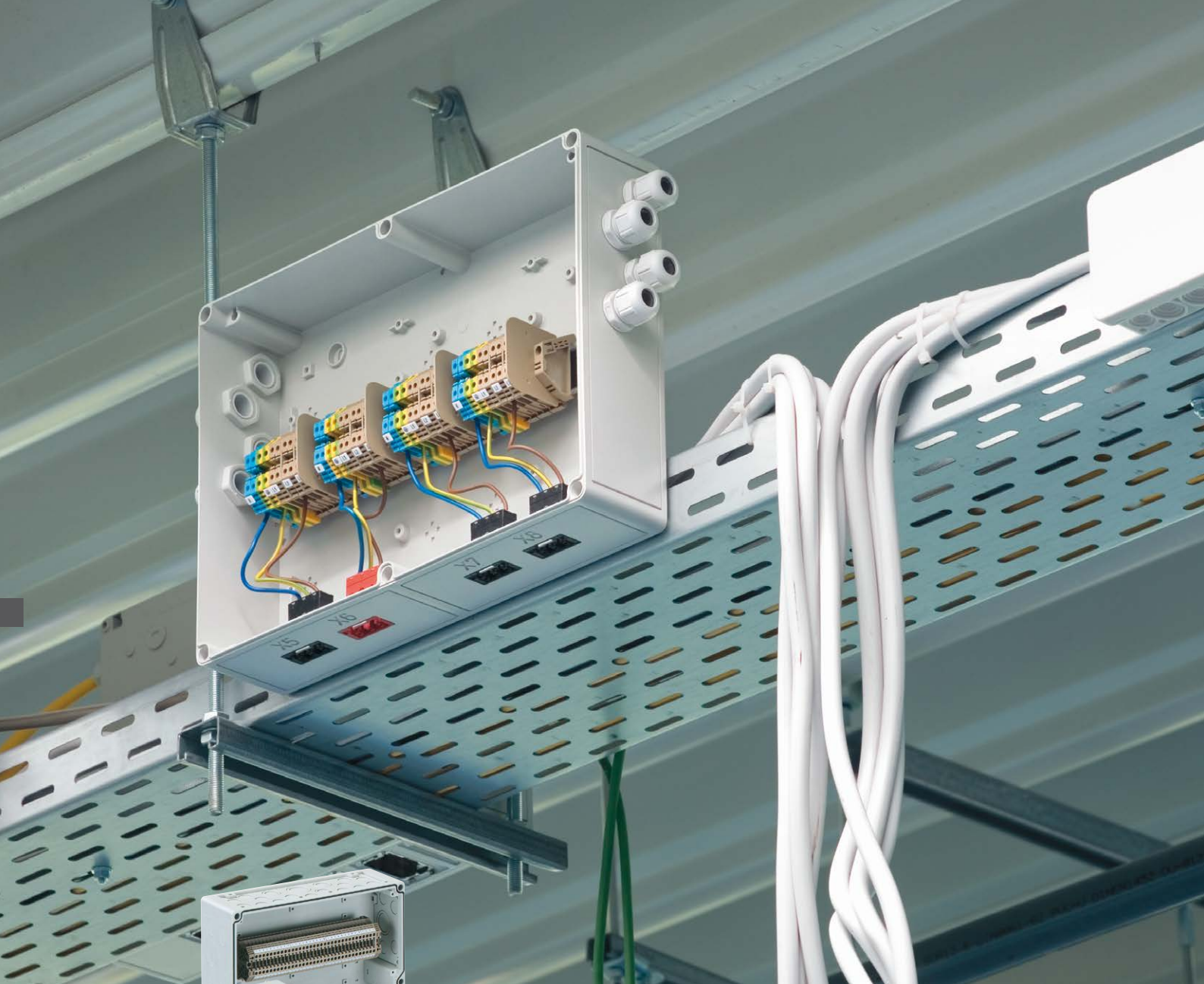
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Empty or fully fitted, compact or with plenty of space for up to 136 terminals - RK terminal block housings from Spelsberg offer space for a variety of solutions for every installation.

Terminal block housings

	Protection rating	Number of terminals	Types	Page
	IP66	5 to 22 x 4²	Terminal block housings with terminal blocks **RK Compact**	120-123
	IP66 / IP54	5 to 22 x 4²	Terminal block housings with terminal blocks **RKi Compact**	124-127
	IP66	7 to 100 x 4²	Terminal block housings **RK**	128-131
	IP65	34 to 136 x 4²	Terminal block housings combinable **RKA**	132-135
	IP65	34 to 136 x 4²	Terminal block housings combinable, industrial quality **AKi-R**	132-135
	IP66	5 to 22 x 4²	Aluminium terminal block housings **ALR Compact**	136-138
	IP66	14 to 47 x 4²	Aluminium terminal block housings **ALR-L**	137-138
	General accessories for terminal block housings			139
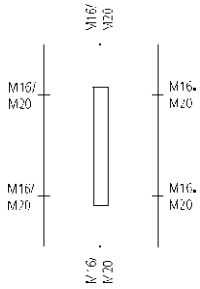
Terminal block housings

Terminal block housings Content

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RKK 4/05

94 x 65 x 57 mm

Terminal block enclosure, flat design, Polystyrene, light grey, similar to RAL 7035, equipped with 5-pole terminal block 0.2-4 mm² (screw connection), incl. 3 attachment bushes M20, seal range 8 - 13.5 mm, IP54

IP66 IP54	4²	IK07	▣	400V AC	halogen-free

RKK 4/05-5x4²	605 404 01

RKK 4/07
RKK 4/08

94 x 94 x 57 mm
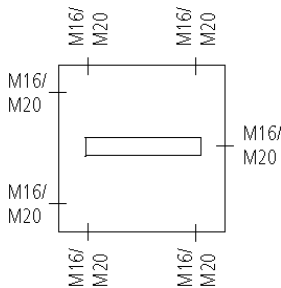
Terminal block enclosure, flat design, Polystyrene, light grey, similar to RAL 7035, equipped with 7- or 8-pole terminal block 0.2-4 mm² (screw connection), incl. 4 attachment bushes M20, seal range 8 - 13.5 mm, IP54

IP66 IP54	4²	IK07	▣	400V AC	halogen-free

RKK 4/07-7x4² (with 7-pole block terminal)	600 407 01
RKK 4/08-8x4² (with 8-pole block terminal)	606 404 01
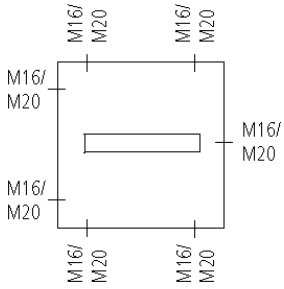
Terminal block housings RK *Compact*

RKK 4/10
94 x 94 x 57 mm

Terminal block enclosure, flat design, Polystyrene, light grey, similar to RAL 7035, equipped with 10-pole terminal block 0.2-4 mm² (screw connection), incl. 4 attachment bushes M20, seal range 8 - 13.5 mm, IP54

IP66 IP54	4²	IK07	▣	400V AC	halogen-free

RKK 4/10-10x4²	607 404 01

RKK 4/12
110 x 110 x 66 mm
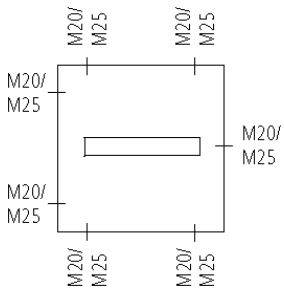
Terminal block enclosure, flat design, Polystyrene, light grey, similar to RAL 7035, equipped with 12-pole terminal block 0.2-4 mm² (screw connection), incl. 4 attachment bushes M20, seal range 8 - 13.5 mm, IP54

IP66 IP54	4²	IK07	▣	400V AC	halogen-free

RKK 4/12-12x4²	610 404 01
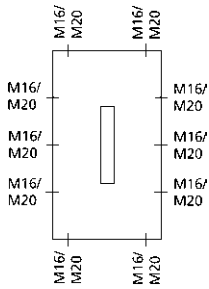
Terminal block housings

els spelsberg

RKK 4/12 XL
130 x 94 x 57 mm

Terminal block enclosure, flat design, Polystyrene, light grey, similar to RAL 7035, equipped with 12-pole terminal block 0.2-4 mm² (screw connection), incl. 6 attachment bushes M20, seal range 8 - 13.5 mm, IP54

IP66 IP54	4²	IK07		400V AC	halogen-free

RKK 4/12 XL-12x4²	600 412 01

RKK 4/15
130 x 94 x 57 mm
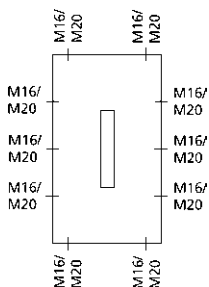
Terminal block enclosure, flat design, Polystyrene, light grey, similar to RAL 7035, equipped with 15-pole terminal block 0.2-4 mm² (screw connection), incl. 6 attachment bushes M20, seal range 8 - 13.5 mm, IP54

IP66 IP54	4²	IK07		400V AC	halogen-free

RKK 4/15-15x4²	612 404 01
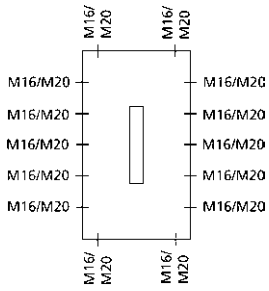
Terminal block housings RK *Compact*

RKK 4/18

180 x 94 x 57 mm

Terminal block enclosure, flat design, Polystyrene, light grey, similar to RAL 7035, equipped with 18-pole terminal block 0.2-4 mm² (screw connection), incl. 6 attachment bushes M20, seal range 8 - 13.5 mm, IP54

| IP66 IP54 | 4² | IK07 | ☐ | 400V AC | halogen-free |

| **RKK 4/18-18x4²** | **600 418 01** |

RKK 4/22

180 x 94 x 57 mm
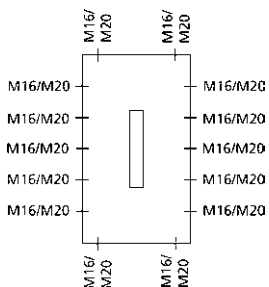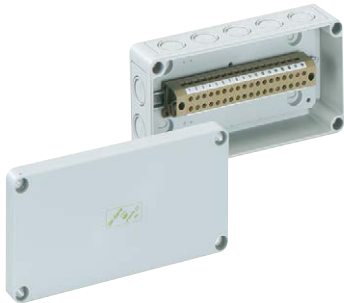
Terminal block enclosure, flat design, Polystyrene, light grey, similar to RAL 7035, equipped with 22-pole terminal block 0.2-4 mm² (screw connection), incl. 6 attachment bushes M20, seal range 8 - 13.5 mm, IP54

| IP66 IP54 | 4² | IK07 | ☐ | 400V AC | halogen-free |

| **RKK 4/22-22x4²** | **614 404 01** |
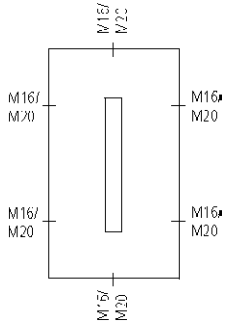
Terminal block housings

RKKi 4/05

94 x 65 x 57 mm

Terminal block enclosure, flat design, polycarbonate, grey similar RAL 7035, equipped with 5-pole terminal block 0.2-4 mm² (screw connection), incl. 3 attachment bushes M20, seal range 8 - 13.5 mm, IP54

| IP66 IP54 | 4² | IK08 | ▣ | 400V AC | halogen-free | iQ |

RKKi 4/05-5x4²	635 404 01

RKKi 4/07
RKKi 4/08

94 x 94 x 57 mm
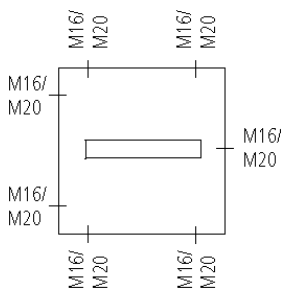
Terminal block enclosure, flat design, polycarbonate, grey similar RAL 7035, equipped with 7- or 8-pole terminal block 0.2-4 mm² (screw connection), incl. 4 attachment bushes M20, seal range 8 - 13.5 mm, IP54

| IP66 IP54 | 4² | IK08 | ▣ | 400V AC | halogen-free | iQ |

RKKi 4/07-7x4² (with 7-pole block terminal)	630 407 01
RKKi 4/08-8x4² (with 8-pole block terminal)	636 404 01

RKKi 4/10

94 x 94 x 57 mm
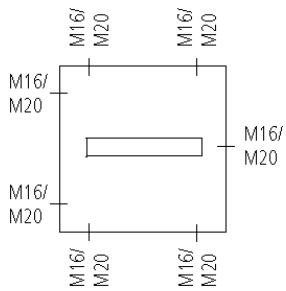
Terminal block enclosure, flat design, polycarbonate, grey similar RAL 7035, equipped with 10-pole terminal block 0.2-4 mm² (screw connection), incl. 4 attachment bushes M20, seal range 8 - 13.5 mm, IP54

IP66 IP54	4²	IK08	▣	400V AC	halogen-free	iQ

RKKi 4/10-10x4²	637 404 01

RKKi 4/12

110 x 110 x 66 mm
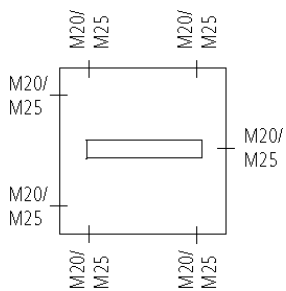
Terminal block enclosure, flat design, polycarbonate, grey similar RAL 7035, equipped with 12-pole terminal block 0.2-4 mm² (screw connection), incl. 4 attachment bushes M20, seal range 8 - 13.5 mm, IP54

IP66 IP54	4²	IK08	▣	400V AC	halogen-free	iQ

RKKi 4/12-12x4²	630 404 01

RKKi 4/12 XL

130 x 94 x 57 mm
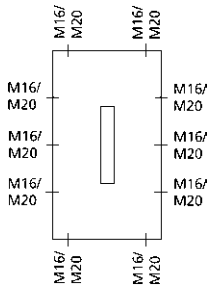
Description	Order no.
Terminal block enclosure, flat design, polycarbonate, grey similar RAL 7035, equipped with 12-pole terminal block 0.2-4 mm² (screw connection), incl. 6 attachment bushes M20, seal range 8 - 13.5 mm, IP54	

IP66 IP54	4²	IK08		400V AC	halogen-free	iQ

RKKi 4/12 XL-12x4²	630 412 01

RKKi 4/15

130 x 94 x 57 mm
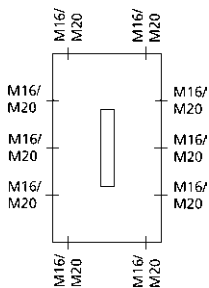
Description	Order no.
Terminal block enclosure, flat design, polycarbonate, grey similar RAL 7035, equipped with 15-pole terminal block 0.2-4 mm² (screw connection), incl. 6 attachment bushes M20, seal range 8 - 13.5 mm, IP54	

IP66 IP54	4²	IK08		400V AC	halogen-free	iQ

RKKi 4/15-15x4²	632 404 01

RKKi 4/18

180 x 94 x 57 mm
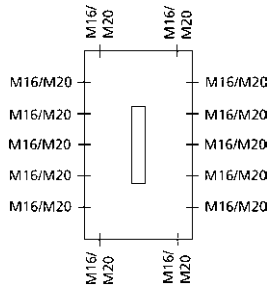
Terminal block enclosure, flat design, polycarbonate, grey similar RAL 7035, equipped with 18-pole terminal block 0.2-4 mm² (screw connection), incl. 6 attachment bushes M20, seal range 8 - 13.5 mm, IP54

IP66 IP54	4²	IK08	▣	400V AC	halogen-free	iQ

RKKi 4/18-18x4²	630 418 01

RKKi 4/22

180 x 94 x 57 mm
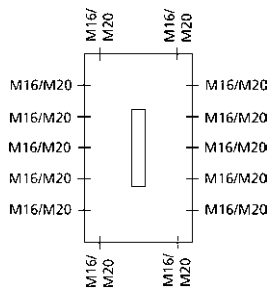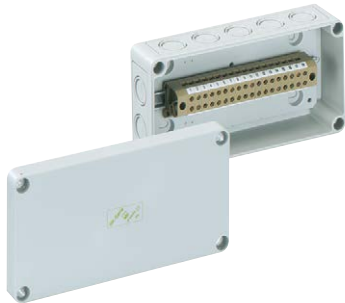
Terminal block enclosure, flat design, polycarbonate, grey similar RAL 7035, equipped with 22-pole terminal block 0.2-4 mm² (screw connection), incl. 6 attachment bushes M20, seal range 8 - 13.5 mm, IP54

IP66 IP54	4²	IK08	▣	400V AC	halogen-free	iQ

RKKi 4/22-22x4²	634 404 01
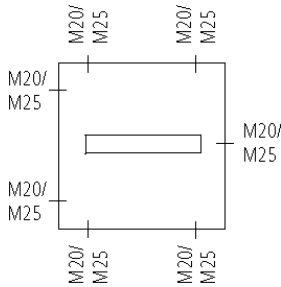
Terminal block housings

els spelsberg

RK 4/07

110 x 110 x 90 mm

Terminal block enclosure, Polystyrene, light grey, similar to RAL 7035, incl. 4 attachment bushes M20, seal range 8 - 13.5 mm, IP54, 1 attachment bush M25, seal range 9 - 18.5 mm, IP54

| IP66 IP54 | IK07 | ▣ | halogen-free |

RK 4/07-L
without terminals, with NS 35 — 619 907 01

RK 4/07-7x4²
with 7 screw terminals 4 mm², (type Weidmüller WDU 4) — 615 007 01

RK 4/07 SL-7x4²
with 7 screwless terminals 4 mm², (type Weidmüller ZDU 4) — 610 007 01

RK 4/12

130 x 130 x 75 mm
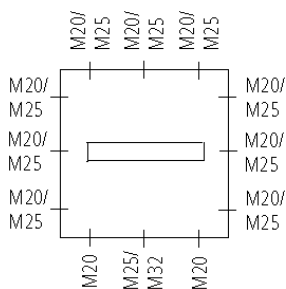
Terminal block enclosure, Polystyrene, light grey, similar to RAL 7035, incl. 4 attachment bushes M20, seal range 8 - 13.5 mm, IP54, 1 attachment bush M25, seal range 9 - 18.5 mm, IP54

| IP66 IP54 | IK07 | ▣ | halogen-free |

RK 4/12-L
without terminals, with NS 35 — 613 906 01

RK 4/12-12x4²
with 12 screw terminals 4 mm², (type Weidmüller WDU 4) — 615 012 01

RK 4/12 SL-12x4²
with 12 screwless terminals 4 mm², (type Weidmüller ZDU 4) — 610 012 01
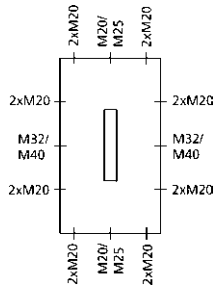
Terminal block housings RK

RK 4/18 K
180 x 110 x 90 mm

Terminal block enclosure, Polystyrene, light grey, similar to RAL 7035, incl. 8 attachment bushes M20, seal range 8 - 13.5 mm, IP54, 2 attachment bushes M25, seal range 9 - 18.5 mm, IP54, 1 attachment bush M32, seal range 13 - 23 mm, IP54

IP66 IP54   **IK07**

	Order no.
RK 4/18 K-L without terminals, with NS 35	615 912 01
RK 4/18 K-18x4² with 18 screw terminals 4 mm², (type Weidmüller WDU 4)	615 018 01
RK 4/18 KSL-18x4² with 18 screwless terminals 4 mm², (type Weidmüller ZDU 4)	610 018 01

RK 4/18
182 x 180 x 90 mm
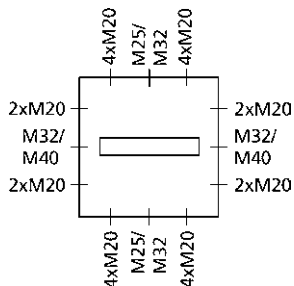
Terminal block enclosure, Polystyrene, light grey, similar to RAL 7035, incl. 8 attachment bushes M20, seal range 8 - 13.5 mm, IP54, 2 attachment bushes M25, seal range 9 - 18.5 mm, IP54, 1 attachment bush M32, seal range 13 - 23 mm, IP54

IP66 IP54   **IK07**

	Order no.
RK 4/18-L without terminals, with NS 35	616 912 01
RK 4/18-18x4² with 18 screw terminals 4 mm², (type Weidmüller WDU 4)	615 019 01
RK 4/18 SL-18x4² with 18 screwless terminals 4 mm², (type Weidmüller ZDU 4)	610 019 01

els spelsberg

RK 4/25

254 x 180 x 90 mm
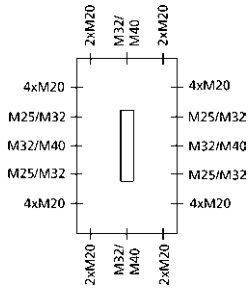
Terminal block enclosure, Polystyrene, light grey, similar to RAL 7035, incl. 8 attachment bushes M20, seal range 8 - 13.5 mm, IP54, 2 attachment bushes M25, seal range 9 - 18.5 mm, IP54, 1 attachment bush M32, seal range 13 - 23 mm, IP54

| IP66 IP54 | IK07 | | |

Description	Order no.
RK 4/25-L without terminals, with NS 35	625 916 01
RK 4/25-25x4² with 25 screw terminals 4 mm², (type Weidmüller WDU 4)	615 025 01
RK 4/25 SL-25x4² with 25 screwless terminals 4 mm², (type Weidmüller ZDU 4)	610 025 01

RK 4/34

254 x 180 x 90 mm
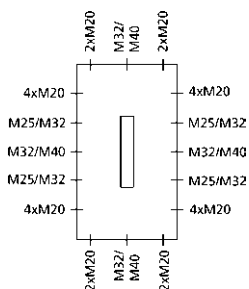
Terminal block enclosure, with standard rails NS 35, incl. 8 attachment bushes M20, seal range 8 - 13.5 mm, IP54, 2 attachment bushes M25, seal range 9 - 18.5 mm, IP54, 1 attachment bush M32, seal range 13 - 23 mm, IP54

| IP66 IP54 | IK07 | | |

Description	Order no.
RK 4/34-L without terminals, with NS 35	625 917 01
RK 4/34-34x4² with 34 screw terminals 4 mm², (type Weidmüller WDU 4)	615 034 01
RK 4/34 SL-34x4² with 34 screwless terminals 4 mm², (type Weidmüller ZDU 4)	610 034 01
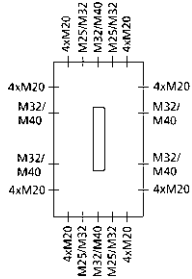
Terminal block housings RK

RK 4/50
360 x 254 x 111 mm

Description	Order no.

Terminal block enclosure, Polystyrene, light grey, similar to RAL 7035, incl. 18 attachment bushes M20, seal range 8 - 13.5 mm, IP54, 4 IP54 attachment bushes M25, seal range 9 - 18.5 mm, 2 attachment bushes M32, Seal range 11 - 23 mm, IP54, 1 attachment bush M40, seal range 17 - 30 mm, IP54

IP66 IP54	IK07		

RK 4/50-L	616 950 01
without terminals, with NS 35	
RK 4/50-50x4²	615 050 01
with 50 screw terminals 4 mm², (type Weidmüller WDU 4)	
RK 4/50 SL-50x4²	610 050 01
with 50 screwless terminals 4 mm², (type Weidmüller ZDU 4)	

RK 4/100
360 x 254 x 111 mm
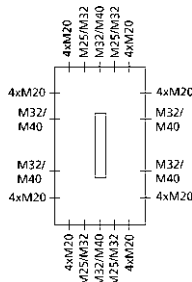
Terminal block enclosure, Polystyrene, light grey, similar to RAL 7035, incl. 18 attachment bushes M20, seal range 8 - 13.5 mm, IP54, 4 IP54 attachment bushes M25, seal range 9 - 18.5 mm, 2 attachment bushes M32, seal range 13 - 23 mm, IP54, 1 attachment bush M40, seal range 17 - 30 mm, IP54

IP66 IP54	IK07		

RK 4/100-L	626 922 01
without terminals, with NS 35	
RK 4/100-100x4²	615 100 01
with 100 screw terminals 4 mm², (type Weidmüller WDU 4)	
RK 4/100 SL-100x4²	610 100 01
with 100 screwless terminals 4 mm², (type Weidmüller ZDU 4)	

RKA 4/34

300 x 150 x 132 mm

Entries end:
15 x M20
2 x M20/M25
1 x M32/M40
Entries on each side:
4 x M20
1 x M25/M32

Terminal block enclosure, incl. 10 DMS nozzle M20, seal range 7 - 12 mm, 2 DMS seals M25, seal range 9 - 16 mm, 2 DMS nozzles M32, seal range 14 - 21 mm, 1 DMS seals M40, Sealing range 19 - 28 mm

| IP65 | IK07 | | |

RKA 4/34-L without terminals, with NS 35	629 901 01
RKA 4/34-34x4² with 34 screw terminals 4 mm², (type Weidmüller WDU 4)	625 034 01
RKA 4/34 SL-34x4² with 34 screwless terminals 4 mm², (type Weidmüller ZDU 4)	620 034 01

AKi-R 4/34

300 x 150 x 132 mm

Entries end:
15 x M20
2 x M20/M25
1 x M32/M40
Entries on each side:
4 x M20
1 x M25/M32

Terminal strip enclosure - industrial quality - , incl. 10 DMS nozzle M20, seal range 7 - 12 mm, 2 DMS seals M25, seal range 9 - 16 mm, 2 DMS nozzles M32, seal range 14 - 21 mm, 1 DMS seals M40, Sealing range 19 - 28 mm

| IP65 | IK08 | | | IQ |

AKi-R 4/34-L without terminals, with NS 35	741 901 01
AKi-R 4/34 with 34 screw terminals 4 mm², (type Weidmüller WDU 4)	742 034 01
AKi-R 4/34-SL with 34 screwless terminals 4 mm², (type Weidmüller ZDU 4)	743 034 01

Terminal block housings RKA / AKi-R

RKA 4/68

300 x 300 x 132 mm

Entries top end:
15 x M20
2 x M20/M25
1 x M32/M40
Entries bottom end:
2 x M20
2 x M32/M40/M50
1 x M40/M50/M63
Entries on each side:
4 x M20
1 x M25/M32
1 x M32/M40/M50

Description	Order no.
Terminal block enclosure, incl. 10 DMS nozzle M20, seal range 7 - 12 mm, 2 DMS seals M25, seal range 9 - 16 mm, 2 DMS nozzles M32, seal range 14 - 21 mm, 1 DMS seals M40, Sealing range 19 - 28 mm, IP66, 2 twist nipples M50 incl. lock nut, IP54	

IP65 IP54 **IK07**

RKA 4/68-L without terminals, with NS 35	629 902 01
RKA 4/68-68x4² with 68 screw terminals 4 mm², (type Weidmüller WDU 4)	625 068 01
RKA 4/68 SL-68x4² with 68 screwless terminals 4 mm², (type Weidmüller ZDU 4)	620 068 01

AKi-R 4/68

300 x 300 x 132 mm

Entries top end:
15 x M20
2 x M20/M25
1 x M32/M40
Entries bottom end:
2 x M20
2 x M32/M40/M50
1 x M40/M50/M63
Entries on each side:
4 x M20
1 x M25/M32
1 x M32/M40/M50

Description	Order no.
Terminal strip enclosure - industrial quality - , incl. 10 DMS nozzle M20, seal range 7 - 12 mm, 2 DMS seals M25, seal range 9 - 16 mm, 2 DMS nozzles M32, seal range 14 - 21 mm, 1 DMS seals M40, Sealing range 19 - 28 mm, IP66, 2 twist nipples M50 incl. lock nut, IP54	

IP65 IP54 **IK08**

AKi-R 4/68-L without terminals, with NS 35	741 902 01
AKi-R 4/68 with 68 screw terminals 4 mm², (type Weidmüller WDU 4)	742 068 01
AKi-R 4/68-SL with 68 screwless terminals 4 mm², (type Weidmüller ZDU 4)	743 068 01

Terminal block housings

els spelsberg

RKA 4/102

300 x 450 x 132 mm

Entries top end:
15 x M20
2 x M20/M25
1 x M25/M32
Entries bottom end:
2 x M20
2 x M32/M40
1 x M40/M50/M63
Entries on each side:
8 x M20
2 x M25/M32
1 x M32/M40/M50

Description	Order no.

Terminal block enclosure, incl. 10 DMS nozzle M20, seal range 7 - 12 mm, 2 DMS seals M25, seal range 9 - 16 mm, 2 DMS nozzles M32, seal range 14 - 21 mm, 1 DMS seals M40, Sealing range 19 - 28 mm, IP66, 2 twist nipples M50 incl. lock nut, IP54

IP65 IP54   IK07

RKA 4/102-L without terminals, with NS 35	629 903 01
RKA 4/102-102x4² with 102 screw terminals 4 mm², (type Weidmüller WDU 4)	625 102 01
RKA 4/102 SL-102x4² with 102 screwless terminals 4 mm², (type Weidmüller ZDU 4)	620 102 01

AKi-R 4/102

300 x 450 x 132 mm

Entries top end:
15 x M20
2 x M20/M25
1 x M25/M32
Entries bottom end:
2 x M20
2 x M32/M40
1 x M40/M50/M63
Entries on each side:
8 x M20
2 x M25/M32
1 x M32/M40/M50

Terminal strip enclosure - industrial quality - , incl. 10 DMS nozzle M20, seal range 7 - 12 mm, 2 DMS seals M25, seal range 9 - 16 mm, 2 DMS nozzles M32, seal range 14 - 21 mm, 1 DMS seals M40, Sealing range 19 - 28 mm, IP66, 2 twist nipples M50 incl. lock nut, IP54

IP65 IP54   IK08   iQ

AKi-R 4/102-L without terminals, with NS 35	741 903 01
AKi-R 4/102 with 102 screw terminals 4 mm², (type Weidmüller WDU 4)	742 102 01
AKi-R 4/102-SL with 102 screwless terminals 4 mm², (type Weidmüller ZDU 4)	743 102 01

Terminal block housings RKA / AKi-R

RKA 4/136

300 x 600 x 132 mm

Entries top end:
15 x M20
2 x M20/M25
2 x M25/M32
Entries bottom end:
2 x M20
2 x M32/M40
1 x M40/M50/M63
Entries on each side:
12 x M20
3 x M25/M32
1 x M32/M40/M50

Description	Order no.
Terminal block enclosure, incl. 10 DMS nozzle M20, seal range 7 - 12 mm, 2 DMS seals M25, seal range 9 - 16 mm, 2 DMS nozzles M32, seal range 14 - 21 mm, 1 DMS seals M40, Sealing range 19 - 28 mm, IP66, 2 twist nipples M50 incl. lock nut, IP54	

IP65 IP54 **IK07**

RKA 4/136-L without terminals, with NS 35	629 904 01
RKA 4/136-136x4² with 136 screw terminals 4 mm², (type Weidmüller WDU 4)	625 136 01
RKA 4/136 SL-136x4² with 136 screwless terminals 4 mm², (type Weidmüller ZDU 4)	620 136 01

AKi-R 4/136

300 x 600 x 132 mm

Entries top end:
15 x M20
2 x M20/M25
1 x M25/M32
Entries bottom end:
2 x M20
2 x M32/M40
1 x M40/M50/M63
Entries on each side:
12 x M20
3 x M25/M32
1 x M32/M40/M50

Terminal strip enclosure - industrial quality - , incl. 10 DMS nozzle M20, seal range 7 - 12 mm, 2 DMS seals M25, seal range 9 - 16 mm, 2 DMS nozzles M32, seal range 14 - 21 mm, 1 DMS seals M40, Sealing range 19 - 28 mm, IP66, 2 twist nipples M50 incl. lock nut, IP54	

IP65 IP54 **IK08**

AKi-R 4/136-L without terminals, with NS 35	741 904 01
AKi-R 4/136 with 136 screw terminals 4 mm², (type Weidmüller WDU 4)	742 136 01
AKi-R 4/136-SL with 136 screwless terminals 4 mm², (type Weidmüller ZDU 4)	743 136 01

ALR 88-4

75 x 80 x 57 mm

Terminal block enclosure in compact design - **I**ndustrial **Q**uality - Aluminium, powder-coated painting silver grey RAL 7001, equipped with 5-pole terminal block 0.2-4 mm² (screw connection)

IP66 | IK09

ALR 88-4²	160 405 01

ALR 1308-4

125 x 80 x 57 mm

Terminal block enclosure in compact design - **I**ndustrial **Q**uality - Aluminium, powder-coated painting silver grey RAL 7001, equipped with 12-pole terminal block 0.2-4 mm² (screw connection)

IP66 | IK09

ALR 1308-4²	160 406 01

ALR 1808-4

175 x 80 x 57 mm
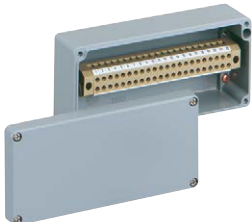
Terminal block enclosure in compact design - **I**ndustrial **Q**uality - Aluminium, powder-coated painting silver grey RAL 7001, equipped with 22-pole terminal block 0.2-4 mm² (screw connection)

IP66 | IK09

ALR 1808-4²	160 407 01

ALR 1010-4

100 x 100 x 81 mm

Terminal block enclosure in compact design - **I**ndustrial **Q**uality - Aluminium, powder-coated painting silver grey RAL 7001, equipped with 10-pole terminal block 0.2-4 mm² (screw connection)

IP66 | IK09

ALR 1010-4²	160 408 01

Terminal block housings ALR

ALR 1212
122 x 120 x 81 mm

Description	Order no.
Terminal block enclosure in compact design - **I**ndustrial **Q**uality - Aluminium, powder-coated painting silver grey RAL 7001	

IP66 IK09

| **ALR 1212-L**
without terminals, with NS 35 | 160 909 01 |
| **ALR 1212-4²**
fitted with 14 screw terminals 4 mm² | 160 409 01 |

ALR 2212
220 x 120 x 81 mm
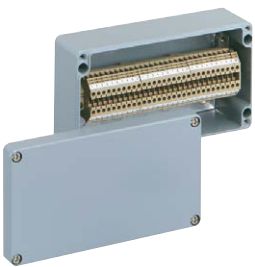
Description	Order no.
Terminal block enclosure - **I**ndustrial **Q**uality - Aluminium, powder-coated painting silver grey RAL 7001	

IP66 IK09

| **ALR 2212-L**
without terminals, with NS 35 | 160 910 01 |
| **ALR 2212-4²**
fitted with 30 screw terminals 4 mm² | 160 410 01 |

ALR 1616
160 x 160 x 91 mm
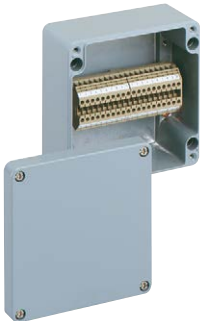
Description	Order no.
Terminal block enclosure - **I**ndustrial **Q**uality - Aluminium, powder-coated painting silver grey RAL 7001	

IP66 IK09

| **ALR 1616-L**
without terminals, with NS 35 | 160 911 01 |
| **ALR 1616-4²**
fitted with 20 screw terminals 4 mm² | 160 411 01 |

ALR 2616
260 x 160 x 91 mm
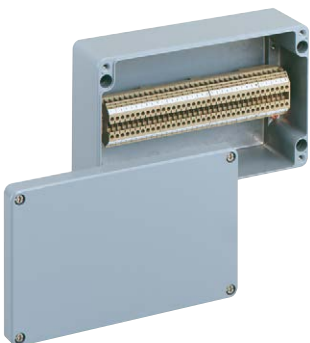
Description	Order no.
Terminal block enclosure - **I**ndustrial **Q**uality - Aluminium, powder-coated painting silver grey RAL 7001	

IP66 IK09

| **ALR 2616-L**
without terminals, with NS 35 | 160 912 01 |
| **ALR 2616-4²**
fitted with 36 screw terminals 4 mm² | 160 412 01 |

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ALR 3616
360 x 160 x 91 mm

Description	Order no.
Terminal block enclosure - **I**ndustrial **Q**uality - Aluminium, powder-coated painting silver grey RAL 7001	
IP66 IK09	
ALR 3616-L without terminals, with NS 35	160 913 01
ALR 3616-4² fitted with 52 screw terminals 4 mm²	160 413 01

ALR 2320
230 x 200 x 111 mm

Description	Order no.
Terminal block enclosure - **I**ndustrial **Q**uality - Aluminium, powder-coated painting silver grey RAL 7001	
IP66 IK09	
ALR 2320-L without terminals, with NS 35	160 914 01
ALR 2320-4² fitted with 40 screw terminals 4 mm²	160 414 01

ALR 2823
280 x 230 x 111 mm
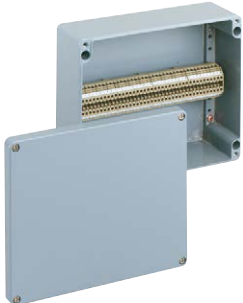
Description	Order no.
Terminal block enclosure - **I**ndustrial **Q**uality - Aluminium, powder-coated painting silver grey RAL 7001	
IP66 IK09	
ALR 2823-L without terminals, with NS 35	160 915 01
ALR 2823-4² fitted with 40 screw terminals 4 mm²	160 415 01

ALR 3323
330 x 230 x 111 mm

Description	Order no.
Terminal block enclosure - **I**ndustrial **Q**uality - Aluminium, powder-coated painting silver grey RAL 7001	
IP66 IK09	
ALR 3323-L without terminals, with NS 35	160 916 01
ALR 3323-4² fitted with 47 screw terminals 4 mm²	160 416 01

Terminal block housings ALR and accessories

Cable gland

IP68

Description | Order no.

Cable gland with strain relief, polyamide, M_ x 1.5 mm, with lock nut

	Thread lenght/mm	Sealing area/mm	
KVR M12-MGM	8	2 - 6.5	227 412 01
KVR M16-MGM	8	4 - 10.0	227 416 01
KVR M20-MGM	9	6 - 12.0	227 420 01
KVR M20-GDB/MGM	9	7 - 14.0	227 421 01
KVR M25-MGM	11	9 - 16	227 425 01
KVR M32-MGM	11	11 - 21.0	227 432 01
KVR M40-MGM	11	16 - 28.0	227 440 01
KVR M50-MGM	13	21 - 34.5	227 450 01
KVR M63-MGM	17	30 - 44.5	227 463 01

Double membrane seals

IP66

Double membrane seals made of elastic plastic with two sealing membranes, closed

	f. wall thicknesses/mm	Sealing area/mm	
DMS M16	1.5 - 4.5	5 - 9	260 416 01
DMS M20	1.5 - 4.5	7 - 12	260 420 01
DMS M25	1.5 - 4.5	9 - 16	260 425 01
DMS M32	1.5 - 4.5	14 - 21	260 432 01
DMS M40	1.5 - 4.5	19 - 28	260 440 01

Attachment bushes

IP54

Attachment bushes with open sealing membrane, no lock nuts required

	Sealing area/mm	
AST M16	6 - 10	230 416 01
AST M20	8 - 13.5	230 420 01
AST M25	9 - 18.5	230 425 01
AST M32	13 - 23	230 432 01
AST M40	17 - 30	230 440 01

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With a rail spacing of 150 millimetres, the AK series of small distributors provides plenty of space for wiring the installed devices. The screwless PE/N terminal rails also ensure safe and time-saving installation.

Distribution boards AK

Distribution boards

Distribution boards Content

Integrated air ventilation elements

Prevention of condensate water in preservation of protection class IP65

Metric knock-outs

A number of knock-outs enable **variable cable entries**

Three-point installation
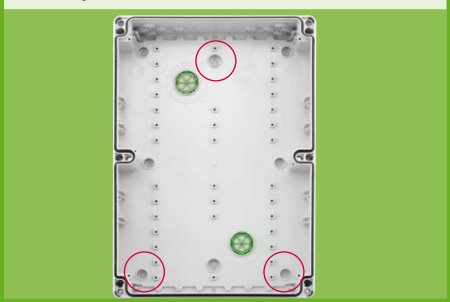
Easy installation via keyhole mounting

Cable cover mounting

Follow-up installation of optional cable cover possible

AK | The Difference

Height-adjustable mounting rail

For serial installation devices sizes 1 to 3 and special designs

Labelling for installation dimensions

Engraved dimensions simplify installation

Optional exterior installation

Installation via **external fixing lugs**
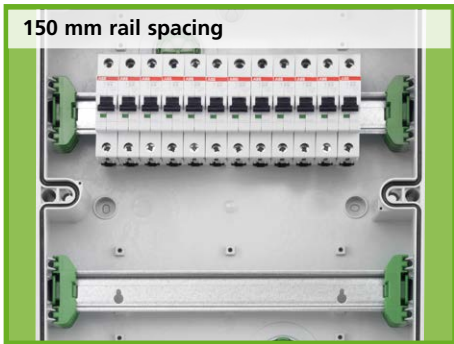
150 mm rail spacing

Offers plenty of space for wiring

Combinable

Easily lateral combination via optional **M50 combination connectors**

Lateral knock-outs M40/M50

Option for Schuko sockets

Optimised hinged window

With ergonomically shaped grips for simple opening and replacement of door end stop

New installation option

Installation outside of sealing area suitable for systems featuring a maximum measured insulation voltage of 1,000V AC / 1,500V DC

Lid able to be lead-sealed

Protects against unauthorised access
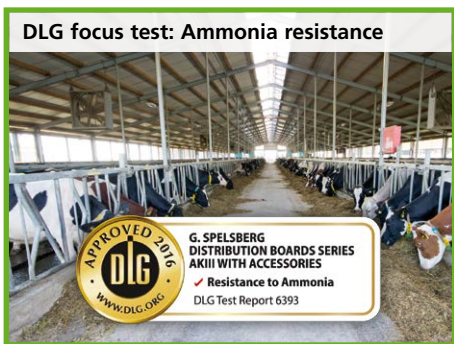
DLG focus test: Ammonia resistance

Resistance against stable air for minimum 20 years

Indoor and outdoor installation

One distribution board for every application

Free of halogen, PVC and silicone

Highly flame-retardant

IP65 | 14/70 | IK08 | | 400V AC¹ | 1000V AC² | 1500V DC² | | DLG | AIR | halogen-free | iQ

1 = acc. DIN EN 60670-24 **2** = acc. DIN EN 61439-2

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AK 14
315 x 300 x 155 mm

Front side
top/bottom entries:
1 x M32/M40
4 x M20/M25
15 x M20
2 x M16
Entries on each side:
2 x M40/M50
1 x M20
Rear entries:
2 x M32/M40
4 x M20/M25

315 x 450 x 155 mm

Front side
top/bottom entries:
1 x M32/M40
4 x M20/M25
15 x M20
2 x M16
Entries on each side:
2 x M40/M50
2 x M20/M25
2 x M20
Rear entries:
2 x M32/M40
6 x M20/M25

Description	Order no.
Small-scale distributors - **I**ndustrial **Q**uality -, 1-row, 14 distribution units, integrated ventilation elements to reduce the formation of condensate water, elastic entries on top, masking and labelling strips, additional double-membrane seals and other accessories	

IP65 | 14 | IK08 | | 400V AC | DVE | UL EU | AIR | DLG | halogen-free

AK 14 screwless PE/N terminal rails each with 3 screwable clamping points, Clamping units 2.5 - 16 mm², 14 screwless type clamping units 1.5 - 4 mm²	733 414 01
AK 14 Plus with additional connection space, with 35 mm standard rails, without PE/N terminal rails	733 614 01

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AK 28
315 x 450 x 155 mm

Front side
top/bottom entries:
1 x M32/M40
4 x M20/M25
15 x M20
2 x M16
Entries on each side:
2 x M40/M50
2 x M20/M25
2 x M20
Rear entries:
2 x M32/M40
6 x M20/M25

315 x 600 x 155 mm

Front side
top/bottom entries:
1 x M32/M40
4 x M20/M25
15 x M20
2 x M16
Entries on each side:
2 x M40/M50
4 x M20/M25
3 x M20
Rear entries:
2 x M32/M40
8 x M20/M25

Small-scale distributors - **I**ndustrial **Q**uality -, 2-row, 28 distribution units, 150 mm rail spacing, integrated ventilation elements to reduce the formation of condensate water, elastic entries on top, masking and labelling strips, additional double-membrane seals and other accessories	

IP65 | 28 | IK08 | | 400V AC | DVE | UL EU | AIR | DLG | halogen-free

AK 28 Screwless PE/N terminal rail, each with 6 screw-type clamping units 2.5 - 16 mm², 21 / 2 x 14 screwless clamping points 1.5 mm² - 4 mm²	733 428 01
AK 28 Plus with additional connection space, with 35 mm standard rails, without PE/N terminal rails	733 628 01

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AK 42

315 x 600 x 155 mm

Front side
top/bottom entries:
1 x M32/M40
4 x M20/M25
15 x M20
2 x M16
Entries on each side:
2 x M40/M50
4 x M20/M25
3 x M20
Rear entries:
2 x M32/M40
8 x M20/M25

315 x 750 x 155 mm

Front side
top/bottom entries:
1 x M32/M40
4 x M20/M25
15 x M20
2 x M16
Entries on each side:
2 x M40/M50
6 x M20/M25
4 x M20
Rear entries:
2 x M32/M40
10 x M20/M25

Small-scale distributors - **I**ndustrial **Q**uality -, 3-row, 42 distribution units, 150 mm rail spacing, integrated ventilation elements to reduce the formation of condensate water, elastic entries on top, masking and labelling strips, additional double-membrane seals and other accessories

| IP65 | 42 | IK08 | | 400V AC | DVE | UL EU | AIR | DLG | halogen-free |

AK 42
Screwless PE/N terminal rail, each with 6 screw-type clamping units 2.5 - 16 mm², 21 / 2 x 14 screwless clamping points 1.5 mm² - 4 mm²

733 442 01

AK 42 Plus
with additional connection space, with 35 mm standard rails, without PE/N terminal rails

733 642 01

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Distribution boards

AK 56

315 x 750 x 155 mm

Front side
top/bottom entries:
1 x M32/M40
4 x M20/M25
15 x M20
2 x M16
Entries on each side:
2 x M40/M50
6 x M20/M25
4 x M20
Rear entries:
2 x M32/M40
10 x M20/M25

Small-scale distributors - **I**ndustrial **Q**uality -, 4-row, 56 distribution units, 150 mm rail spacing, integrated ventilation elements to reduce the formation of condensate water, screwless PE/N terminal rails each with 6 screwable clamping points, 2.5 - 16 mm², 21 / 2 x 14 screwless clamping points 1.5 mm² - 4 mm², elastic entries on top, masking and labelling strips, additional double membrane seals and further accessories

| IP65 | 56 | IK08 | □ | 400V AC | DVE | UL EU | AIR | DLG | halogen-free |

| AK 56 | 733 456 01 |

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AK 70

315 x 1.050 x 155 mm

Entries top end:
1 x M32/M40
4 x M20/M25
15 x M20
2 x M16
Entries bottom end:
Flange
1 x M40/M50
2 x M32/M40
2 x M20
Entries on each side:
4 x M40/50
6 x M20/M25
5 x M20
Rear entries:
4 x M32/M40,
14 x M20/25

Small-scale distributors - **I**ndustrial **Q**uality -, comprised of 2 individual housings, 70 distribution units, 150 mm rail spacing, integrated ventilation elements to reduce the formation of condensate water, screwless PE/N terminal rails each with 6 screwable clamping points, 2.5 - 16 mm², 21 / 2 x 14 screwless clamping points 1.5 mm² - 4 mm², elastic entries on top, masking and labelling strips, additional double-membrane seals and other accessories

| IP65 | 70 | IK08 | □ | 400V AC | DVE | UL EU | AIR | DLG | halogen-free |

| AK 70 | 733 470 01 |

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AK-F 14

315 x 300 x 155 mm

Face open,
Number of entries
depending on
flange type
Entries on each
side:
2 x M40/50
1 x M20
Rear entries:
2 x M32/40
4 x M20/25

315 x 450 x 155 mm

Face open,
Number of
entries depending
on flange type
Entries on each
side:
2 x M40/50
2 x M20/25
2 x M20
Rear entries:
2 x M32/40
6 x M20/25

Description	Order no.

Small-scale distributors - **I**ndustrial **Q**uality, **Flange type**, with open front sides, for the use with various flanges, for the combination of several AK-F distributors via combination flange, 1-row, 14 distribution units, integrated ventilation elements to reduce the formation of condensate water, masking and labelling strips, additional double-membrane seals and other accessories, flange and flange set must be purchased separately

| IP65 | 14 | IK08 | | 400V | VDE | AIR | DLG | halogen-free | IQ |

AK-F 14 Screwless PE/N terminal rail, each with 3 screw-type clamping units 2.5 - 16 mm², 14 screwless type clamping units 1.5 - 4 mm²	733 514 01
AK-F 14 Plus with additional connection space, with 35 mm standard rails, without PE/N terminal rails	733 714 01

Required accessories:
Extension flange and combination flange, see page 152

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✓ Resistance to Ammonia
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AK-F 28

315 x 450 x 155 mm

Face open,
Number of entries
depending on
flange type
Entries on each
side:
2 x M40/50
2 x M20/25
2 x M20
Rear entries:
2 x M32/40
6 x M20/25

315 x 600 x 155 mm

Face open,
Number of
entries depending
on flange type
Entries on each
side:
2 x M40/50
4 x M20/25
3 x M20
Rear entries:
2 x M32/40
8 x M20/25

Small-scale distributors - **I**ndustrial **Q**uality, **Flange type**, with open front sides, for the use with various flanges, for the combination of several AK-F distributors via combination flange, 2-row, 28 distribution units, 150 mm rail spacing, integrated ventilation elements to reduce the formation of condensate water, masking and labelling strips, additional double-membrane seals and other accessories, flange and flange set must be purchased separately

| IP65 | 28 | IK08 | | 400V | VDE | AIR | DLG | halogen-free | IQ |

AK-F 28 Screwless PE/N terminal rail, each with 6 screw-type clamping units 2.5 - 16 mm², 21 / 2 x 14 screwless clamping points 1.5 mm² - 4 mm²	733 528 01
AK-F 28 Plus with additional connection space, with 35 mm standard rails, without PE/N terminal rails	733 728 01

Required accessories:
Extension flange and combination flange, see page 152

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Distribution boards AK-F / AK-F Plus

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AK-F 42

Flange type

315 x 600 x 155 mm

Face open,
Number of entries
depending on
flange type
Entries on each
side:
2 x M40/50
4 x M20/25
3 x M20
Rear entries:
2 x M32/40
8 x M20/25

315 x 750 x 155 mm

Face open,
Number of entries
depending on
flange type
Entries on each
side:
2 x M40/50
6 x M20/25
4 x M20
Rear entries:
2 x M32/40
10 x M20/25

Description	Order no.

Small-scale distributors - **I**ndustrial **Q**uality, **Flange type**, with open front sides, for the use with various flanges, for the combination of several AK-F distributors via combination flange, 3-row, 42 distribution units, 150 mm rail spacing, integrated ventilation elements to reduce the formation of condensate water, masking and labelling strips, additional double-membrane seals and other accessories, flange and flange set must be purchased separately

IP65	42	IK08	□	400V	DVE	AIR	DLG	halogen-free	iQ

AK-F 42 Screwless PE/N terminal rail, each with 6 screw-type clamping units 2.5 - 16 mm², 21 / 2 x 14 screwless clamping points 1.5 mm² - 4 mm²	733 542 01
AK-F 42 Plus with additional connection space, with 35 mm standard rails, without PE/N terminal rails	733 742 01

Required accessories:
Extension flange and combination flange, see page 152

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AK-F 56

315 x 750 x 155 mm

Flange type

Face open,
Number of entries
depending on
flange type
Entries on each
side:
2 x M40/50
6 x M20/25
4 x M20
Rear entries:
2 x M32/40
10 x M20/25

Small-scale distributors - **I**ndustrial **Q**uality, **Flange type**, with open front sides, for the use with various flanges, for the combination of several AK-F distributors via combination flange, 4-row, 56 distribution units, 150 mm rail spacing, integrated ventilation elements to reduce the formation of condensate water, screwless PE/N terminal rails each with 6 screwable clamping points, 2.5 - 16 mm², 21 / 2 x 14 screwless clamping points 1.5 mm² - 4 mm², masking and labelling strips, additional double-membrane seals and other accessories, flange and flange set must be purchased separately

IP65	56	IK08	□	400V	DVE	AIR	DLG	halogen-free	iQ

AK-F 56	733 556 01

Required accessories:
Extension flange and combination flange, see page 152

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AKIII WITH ACCESSORIES
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AK 14 L

315 x 300 x 147 mm

Front side
top/bottom entries:
1 x M32/M40
4 x M20/M25
15 x M20
2 x M16
Entries on each side:
2 x M40/M50
1 x M20
Rear entries:
2 x M32/M40
4 x M20/M25

Description   Order no.

Expansion enclosure / empty enclosure - industrial quality, for small distribution boards AK 14-56, for individual expansion with standard rails or mounting plates, integrated ventilation elements to reduce the formation of condensate water, for installation of rail-mounted devices as per DIN 43880 model size 1-3, U_n=400 V, U_i=1.000V AC / 1.500V DC, I_n=125A

IP65	IK08	▢	400V AC	AIR	DLG	halogen-free	IQ

AK 14 L-g with grey cover	733 410 01
AK 14 L-t with transparent cover	733 411 01

DVE

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INSTALLATIONS-KLEINVERTEILER
SERIE AK III MIT ZUBEHÖR
✔ Ammoniakbeständigkeit
DLG-Prüfbericht 6393

Expansion enclosure / empty enclosure AK 14L / AK-F 14L / AK-F/DMS 14L

AK-F 14 L
315 x 300 x 147 mm

Flange type

Front side open
Number of entries depending on flange type
Entries on each side:
2 x M40/M50
1 x M20
Rear entries:
2 x M32/M40
4 x M20/M25

Expansion enclosure / empty enclosure - industrial quality, for small distribution boards AK-F 14-56, for individual expansion with standard rails or mounting plates, integrated ventilation elements to reduce the formation of condensate water, for installation of rail-mounted devices as per DIN 43880 model size 1-3, U_n=400 V, U_i=1.000V AC / 1.500V DC, I_n=125A

IP65	IK08	▣	400V AC	AIR	DLG	halogen-free	iQ

AK-F 14 L-g
with grey cover

733 510 01

AK-F 14 L-t
with transparent cover

733 511 01

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AKIII WITH ACCESSORIES
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VDE

AK-F/DMS 14 L

315 x 300 x 147 mm

Entries top end:
2 x M16
15 x M20
4 x M20/M25
1 x M32/M40
Entries bottom end:
Number of entries
depending on flange
type
Entries on each side:
2 x M40/M50
1 x M20
Rear entries:
2 x M32/M40
4 x M20/M25

Expansion enclosure / empty enclosure - industrial quality, for small distribution boards AK-F 14-56, for individual expansion with standard rails or mounting plates, integrated ventilation elements to reduce the formation of condensate water, for installation of rail-mounted devices as per DIN 43880 model size 1-3, U_n=400 V, U_i=1.000V AC / 1.500V DC, I_n=125A

| IP65 | IK08 | □ | 400V AC | AIR | DLG | halogen-free | iQ |

AK-F/DMS 14 L-g with grey cover, with additional double membrane seals	733 310 01
AK-F/DMS 14 L-t with transparent cover, with additional double membrane seals	733 311 01

VDE

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DISTRIBUTION BOARDS SERIES
AKIII WITH ACCESSORIES
✔ Resistance to Ammonia
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AK3 KS M50

IP65	Combination cable glands M50 for the lateral connection of housings AK/AK-F 14/28/42/56/70, as well as Plus types	
	AK3 KS M50	733 830 01

AK3 FL

IP65	Enclosure wall including flange connector for sealing the face of AK-F enclosures	
	AK3 FL00 without pre-embossings	733 820 01
	AK3 FL01 with pre-embossings: 1 x M50/M40, 2 x M40/32, 2 x M20	733 821 01
	AK3 FL02 with pre-embossings: 5 x M25/M20, 4 x M20, 2 x M16	733 822 01
	AK3 FL13 with insert via double membrane seals DMS M32 and opening for flange types FL13 as per standard SEN 28 09 01	733 828 01

AK3 KFL
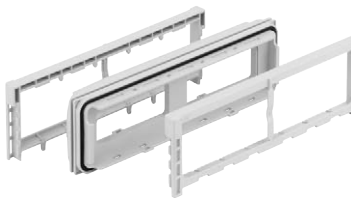
IP65	Combination flange incl. flange connector for the front connection of AK-F housings	
	AK3 KFL	733 829 01

AK3 KBL

Cable cover for the attachment to AK/AK-F 14/28/42/56/70 housings, as well as Plus types, Can be retroactively mounted on the end	
AK3 KBL	733 831 01

AK3 STD

Schuko® mounting socket 16 A, IP54, for the lateral assembly on housings AK/AK-F 14/28/42/56/70, as well as Plus types	
AK3 STD	733 834 01

	Description	Order no.
AK3 TW	divider made of plastic, suitable for the interior subdivision of AK/AK-F 14/28/42/56 housings, as well as Plus types, with pre-embossing for the cable bushing	
	AK3 TW	733 832 01
Mounting plate insulating material	Mounting plate made from insulating material, incl. fixing screws	
	AK3 MPI 14 L for AK 14 L addition and empty enclosure	733 838 01
	AK3 MPI With opening for AIR ventilation element, for Plus range	733 835 01
AK3 AS IP65	External hinge set	
	AK3 AS only for AK 14 L - addition and empty enclosure	733 837 01
AK3 ABL-ES	Stainless steel external fixing lugs, suitable for enclosure AK/AK-F 14/28/42/56/70, as well as Plus types, 1 set = 4 pcs.	
	AK3 ABL-ES	733 833 01
AK3 NS35	Standard rail as profile rail 35 x 7.5 mm	
	AK3 NS35-14 for 14 TE, Incl. profile rail mount for all AK/AK-F 14/28/42/56/70, as well as Plus types	733 812 01
	AK3 NS35-275 Length 275 mm, Incl. universal floor fixing mounts for all AK/AK-F 14/28/42/56/70, as well as Plus types and AKi empty enclosures	733 813 01
AK3 KF	AK3 hinged window as a replacement part for all AK/AK-F 14/28/42/56, as well as Plus types, Incl. hinge and handle	
	AK3 KF	733 801 01
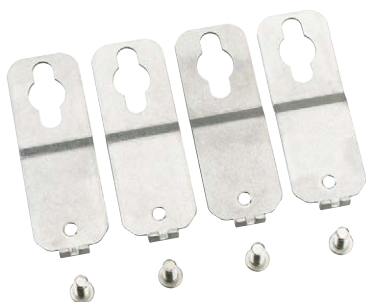
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· **Individual transparent doors can be lead sealed, blanking off of individual rows**

▶ Including PE/N terminals

▶ Including stepped nipples for cable entry

IP55

3/48

IK07

400V AC

halogen-free

Distribution boards AKe

AKe 03
100 x 150 x 96 mm

Pre-embossing:
top end:
3 x M20
Entries bottom end:
2 x M20/M25
Entries on each side:
2 x M20
Entries on floor:
1 x M20

Small-scale distributors, 1-row, masking and labelling strips, insulating seals, additional stepped nipples

| IP55 | 3 | IK07 | ▣ | 400V AC | halogen-free |

AKe 03 PE/N terminal 2x4-pole, 6/16 mm²	735 503 01
AKe 03-L Without PE/N terminals	735 603 01

AKe 05
125 x 200 x 122 mm

Pre-embossing:
Top/bottom end:
4 x M20
1 x M20/M25
Entries on each side:
2 x M20
Entries on floor:
1 x M20

Small-scale distributors, 1-row, masking and labelling strips, insulating seals, additional stepped nipples

| IP55 | 5 | IK07 | ▣ | 400V AC | halogen-free |

AKe 05 PE/N terminal 2x5-pole, 6/16 mm²	735 505 01
AKe 05-L Without PE/N terminals	735 605 01

AKe 09
200 x 200 x 122 mm

Pre-embossing:
Top/bottom end:
8 x M20
1 x M25/M32
Entries on each side:
2 x M20
Entries on floor:
1 x M20/M25

Small-scale distributors, 1-row, masking and labelling strips, insulating seals, additional stepped nipples

| IP55 | 9 | IK07 | ▣ | 400V AC | halogen-free |

AKe 09 PE/N terminal 2x7-pole, 6/16 mm²	735 509 01
AKe 09-L Without PE/N terminals	735 609 01

Distribution boards

els spelsberg

AKe 12
250 x 200 x 122 mm

Pre-embossing:
Top/bottom end:
8 x M20
2 x M20/M25
1 x M32/M40
Entries on each side:
2 x M20
Entries on floor:
2 x M20/M25

Small-scale distributors, 1-row, masking and labelling strips, insulating seals, additional stepped nipples

| IP55 | 12 | IK07 | □ | 400V AC | halogen-free |

| **AKe 12**
PE/N terminal 2x12-pole, 6/16 mm² | 735 512 01 |
| **AKe 12-L**
Without PE/N terminals | 735 612 01 |

AKe 24
250 x 370 x 122 mm

Pre-embossing:
Top/bottom end:
8 x M20
2 x M20/M25
1 x M32/M40
Entries on each side:
8 x M20
2 x M32/M40
Entries on floor:
2 x M20/M25

Small-scale distributors, 2-row, 150 mm rail spacing, masking and labelling strips, insulating seals, additional stepped nipples

| IP55 | 24 | IK07 | □ | 400V AC | halogen-free |

| **AKe 24**
PE/N terminal 2 x 16-pole, 6/16 mm² | 735 724 01 |
| **AKe 24-L**
Without PE/N terminals | 735 824 01 |

AKe 36
300 x 600 x 142 mm

Pre-embossing:
top end:
17 x M20
2 x M20/M25
1 x M32/M40
Entries on each side:
16 x M20
4 x M25/M32
Entries bottom end:
15 x M20
2 x M20/M25
1 x M32/M40

Small-scale distributors, 3-row, 150 mm rail spacing, masking and labelling strips, insulating seals, additional stepped nipples

| IP55 | 36 | IK07 | □ | 400V AC | halogen-free |

| **AKe 36**
PE/N terminal 2 x 25-pole, 6/16/25 mm² | 735 536 01 |
| **AKe 36-L**
Without PE/N terminals | 735 636 01 |

Distribution boards AKe

AKe 48

300 x 750 x 142 mm

Pre-embossing:
top end:
17 x M20
2 x M20/M25
1 x M32/M40
Entries on each side:
20 x M20
5 x M20/M25
Entries bottom end:
15 x M20
2 x M20/M25
1 x M32/M40

Small-scale distributors, 4-row, 150 mm rail spacing, masking and labelling strips, insulating seals, additional stepped nipples

| IP55 | 48 | IK07 | ☐ | 400V AC | halogen-free |

AKe 48
PE/N terminal 2 x 25-pole, 6/16/25 mm²   735 548 01

AKe 48-L
Without PE/N terminals   735 648 01

Distribution boards

- Quick installation thanks to patented sealing membranes
- Special designs on request

- Cylinder lock can be installed later
- Simple combination options

| IP65 | 3-24 | IK07 | | 400V AC | halogen-free | | |
| IP65 | 3-24 | IK08 | | 400V AC | halogen-free | iQ | Industrial Quality |

Distribution boards AK / AKi Compact

158

AK 03

100 x 150 x 96 mm

Entries top end:
3 x M20
Entries bottom end:
2 x M20/M25
Entries on each side:
2 x M20
Entries on floor:
1 x M20

Small-scale distributors, 3 distribution units, PE/N terminal, with each 1 clamping point 16 mm², 3 clamping points 6 mm², 3 elastic entries on top, masking and labelling strips, insulating seals, additional double-membrane seals

| IP65 | 3 | IK07 | □ | 400V AC | halogen-free |

| AK 03 | | | | | 735 403 01 |

AK 05

125 x 200 x 122 mm

Entries end:
4 x M20
1 x M20/M25
Entries on each side:
2 x M20
Entries on floor:
1 x M20

Small-scale distributors, 5 distribution units, PE/N terminal, with each 2 clamping points 16 mm², 3 clamping points 6 mm², 4 elastic entries on top, masking and labelling strips, insulating seals, additional double-membrane seals

| IP65 | 5 | IK07 | □ | 400V AC | halogen-free |

| AK 05 | | | | | 735 405 01 |

AK 09

200 x 200 x 122 mm

Entries end:
8 x M20
1 x M25/M32
Entries on each side:
2 x M20
Entries on floor:
2 x M20/M25

Small-scale distributors, 9 distribution units, PE/N terminal, with each 2 clamping points 16 mm², 5 clamping points 6 mm², 6 elastic entries on top, masking and labelling strips, insulating seals, additional double-membrane seals

| IP65 | 9 | IK07 | □ | 400V AC | halogen-free |

| AK 09 | | | | | 735 409 01 |

AK 12

250 x 200 x 122 mm

Entries end:
8 x M20
2 x M20/M25
1 x M32/M40
Entries on each side:
2 x M20
Entries on floor:
2 x M20/M25

Small-scale distributors, 12 distribution units, PE/N terminal, with each 2 clamping points 16 mm², 10 clamping points 6 mm², 8 elastic entries on top, masking and labelling strips, insulating seals, additional double-membrane seals

| IP65 | 12 | IK07 | □ | 400V AC | halogen-free |

| AK 12 | | | | | 735 412 01 |

AK 24

250 x 370 x 122 mm

Entries end:
8 x M20
2 x M20/M25
1 x M32/M40
Entries on each side:
8 x M20
2 x M32/M40
Entries on floor:
4 x M20/M25

Small-scale distributors, 24 distribution units, PE/N terminal, with each 2 clamping points 16 mm², 14 clamping points 6 mm², 8 elastic entries on top, masking and labelling strips, insulating seals, additional double-membrane seals

| IP65 | 24 | IK07 | □ | 400V AC | halogen-free |

| AK 24 | | | | | 735 424 01 |

Distribution boards

AKi 03
100 x 150 x 96 mm

Entries top end:
3 x M20
Entries bottom end:
2 x M20/M25
Entries on each side:
2 x M20
Entries on floor:
1 x M20

Description	Order no.
Small-scale distributors - **I**ndustrial **Q**uality -, 3 distribution units, PE/N terminal, with each 1 clamping point 16 mm², 3 clamping points 6 mm², 3 elastic entries on top, masking and labelling strips, insulating seals, additional double-membrane seals	

IP65 | 3 | IK08 | □ | 400V AC | halogen-free | iQ

AKi 03	736 403 01

AKi 05
125 x 200 x 122 mm

Entries end:
4 x M20
1 x M20/M25
Entries on each side:
2 x M20
Entries on floor:
1 x M20

Small-scale distributors - **I**ndustrial **Q**uality -, 5 distribution units, PE/N terminal, with each 2 clamping points 16 mm², 3 clamping points 6 mm², 4 elastic entries on top, masking and labelling strips, insulating seals, additional double-membrane seals

IP65 | 5 | IK08 | □ | 400V AC | halogen-free | iQ

AKi 05	736 405 01

AKi 09
200 x 200 x 122 mm

Entries end:
8 x M20
1 x M25/M32
Entries on each side:
2 x M20
Entries on floor:
2 x M20/M25

Small-scale distributors - **I**ndustrial **Q**uality -, 9 distribution units, PE/N terminal, with each 2 clamping points 16 mm², 5 clamping points 6 mm², 6 elastic entries on top, masking and labelling strips, insulating seals, additional double-membrane seals

IP65 | 9 | IK08 | □ | 400V AC | halogen-free | iQ

AKi 09	736 409 01

AKi 12

250 x 200 x 122 mm

Entries end:
8 x M20
2 x M20/M25
1 x M32/M40
Entries on each side:
2 x M20
Entries on floor:
2 x M20/M25

Small-scale distributors - **I**ndustrial **Q**uality -, 12 distribution units, PE/N terminal, with each 2 clamping points 16 mm², 10 clamping points 6 mm², 8 elastic entries on top, masking and labelling strips, insulating seals, additional double-membrane seals

| IP65 | 12 | IK08 | ▢ | 400V AC | halogen-free | iQ |

| AKi 12 | 736 412 01 |

AKi 24

250 x 370 x 122 mm

Entries end:
8 x M20
2 x M20/M25
1 x M32/M40
Entries on each side:
8 x M20
2 x M32/M40
Entries on floor:
4 x M20/M25

Small-scale distributors - **I**ndustrial **Q**uality -, 24 distribution units, PE/N terminal, with each 2 clamping points 16 mm², 14 clamping points 6 mm², 8 elastic entries on top, masking and labelling strips, insulating seals, additional double-membrane seals

| IP65 | 24 | IK08 | ▢ | 400V AC | halogen-free | iQ |

| AKi 24 | 736 424 01 |

Distribution boards
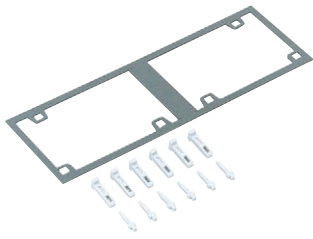
AK combi set

	Description	Order no.
IP65	Combi set, for horizontal or vertical combination of all AK enclosures for 300 mm width, complete with wedge connectors and intermediate sealing for 150 and 300 mm enclosure sides, each 300 mm = 1 combi set	
	AK KS-IP65	791 001 01

AK combi set

	Description	Order no.
IP30	Combi set without intermediate enclosure seal, for horizontal or vertical combination of all AK enclosures for 300 mm width, 1 set = 10 wedge connectors	
	AK KS-IP30	591 100 01

Combi connector

	Description		Order no.
IP54	Combi connector, for connecting enclosures, thermoplastic		
		f. wall thicknesses/mm	
	KST M32	1,5 - 4,0	193 032 01

Combi set

	Description			Order no.
IP66	Combi set, for side connection of enclosures with metric entries, complete with lock nuts and intermediate wall seal inserts			
		f. wall thicknesses/mm	**Thread lenght/mm**	
	KS M20	2 x 3,0	12	192 020 01
	KS M25	2 x 3,0	12	192 025 01
	KS M25-gro	2,0 x 8,0	22	192 026 01
	KS M32	2 x 3,5	14	192 032 01

Double membrane seals

	Description			Order no.
IP66	Double membrane seals made of elastic plastic with two sealing membranes, closed			
		f. wall thicknesses/mm	**Sealing area/mm**	
	DMS M16	1.5 - 4.5	5 - 9	260 416 01
	DMS M20	1.5 - 4.5	7 - 12	260 420 01
	DMS M25	1.5 - 4.5	9 - 16	260 425 01
	DMS M32	1.5 - 4.5	14 - 21	260 432 01

Accessories AKe / AK / AKi Compact

Cable gland

IP68

Description | Order no.

Cable gland with strain relief, Polyamide, M_ x 1.5 mm, with lock nut

	Thread lenght/mm	Sealing area/mm	
KVR M12-MGM	8	2 - 6.5	227 412 01
KVR M16-MGM	8	4 - 10.0	227 416 01
KVR M20-MGM	9	6 - 12.0	227 420 01
KVR M20-GDB/MGM	9	7 - 14.0	227 421 01
KVR M25-MGM	11	9 - 16	227 425 01
KVR M32-MGM	11	11 - 21.0	227 432 01
KVR M40-MGM	11	16 - 28.0	227 440 01
KVR M50-MGM	13	21 - 34.5	227 450 01
KVR M63-MGM	17	30 - 44.5	227 463 01

Ventilation seal

IP44

With ventilation seal to avoid condensation formation in enclosures, flow rate 100 l/min. at 0.1 bar overpressure, thermoplastic elastomer, grey, recommended for insertion on the left and right enclosure sides in different heights (see Technical Appendix - Protection against condensate water)

	f. wall thicknesses/mm	
BST M20	1,5 - 4,5	262 420 01

AK Mounting flange

Enclosure wall, for installation in the components of the AK enclosure system for 300 mm wide end walls, with cable covers as standard

AK ABF 1 with pre-embossing, 2 x M32 / M40 / M50, 1 x M40 / M50 / M63	795 048 01
AK ABF 2 Smooth for self-drilling	795 050 01

AKi Mounting flange

Enclosure wall, for attachment to components of AKi enclosure system to 300 mm wide sides, with cable covers as standard

AKi ABF 1 with pre-embossing, 2 x M32 / M40 / M50, 1 x M40 / M50 / M63	796 051 01
AKi ABF 2 Smooth for self-drilling	796 050 01

Lock fittings

Lock fittings, for installation in hinged doors of distribution boxes AK 03 to AK/AKi 70 and AK/AKi Plus 14 to 56, with 2 keys and installation instructions

AK SGA-1 Identical locks	706 102 01
AK SGA-2 Different closures, max. 10 different closures possible	706 902 01

Distribution boards

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	Description	Order no.

Lock bolt set

Lock bolt set, for installation in AKe 36 to 48, in conjunction with the lock fittings 706 102 01 / 706 902 01 several hinged windows can be safely locked by only one single lock.

AK SRS	706 104 01

Partition wall

Partition wall, for installation in the components of the AK enclosure system, from AKe 36/48, universal application for various enclosure heights, with break-out openings, grey

AK TW	797 910 01

Cable cover
300 x 125 x 90 mm

for installation in the components of the AK enclosure system for 300 mm wide end walls, with cable covers as standard

AK KBL	792 400 01

Masking off strips

Masking off strips, to close off unused circuit-breaker positions, detachable, grey

AK AS Width 108 mm for 6 distribution units	799 012 01
AK AS-v Width 216 mm for 12 distribution units, lockable	799 013 01

Bord Case

On-board case, for closing off unused circuit breaker positions, width 54 mm for 3 distribution units, for 35 mm standard rail, e.g. to house fuses, operating instructions, etc.

AK BC	799 103 01

Accessories AKe / AK / AKi Compact

Standard rail NS 35

Description	Order no.
Standard rail acc. to DIN EN 60715, 35 x 7.5, width 35 mm	
AK NS35-250 from 300 x 300 mm, length 250 mm, including spacers	562 735 01
NS35-216/3 universal floor fixing, length 216 mm, with fixing screws	795 030 01

AK External attachment set

External fixing lugs, for mounting separate enclosures or small units on flat wall surfaces, can be fixed to the box base at an angle of 0°, 45°, or 90°, wall gap 7 mm, material stainless steel, suitable for all AK enclosures from 300 mm front,	
AK ABL-ES Set = 4 pcs.	793 004 01

Z-wall profile

|	
Z-wall profile, length 2 m, with 8 M6 cylinder screws and 8 captive push nuts, wall clearance 70 mm, Material: galvanised steel	
ZPR	070 800 01

KF 12 hinged window
228 x 80 mm

IP65

Hinged window, for fitting to enclosure cover, for maximum 12 distribution units à 17.5 mm, with transparent hinged window, frame with sealing on both sides, with drilling template and fixing screws	
KF 12	567 412 01

SF 12 inspection window
228 x 80 mm

IP65

Inspection window, for fitting to enclosure cover, transparent inspection glass, with drilling template and fixing screws	
SF 12	568 012 01

PE/N terminal block

PE/N terminal block for mounting onto 35 mm standard rail, e.g. in meter housings

KLS N 35 N terminal (blue) 3 x 25 mm², 2 x 16 mm²	790 905 01
KLS PE 35 PE terminal (green) 3 x 25 mm², 2 x 16 mm²	790 805 01

PE/N screwless terminal rail
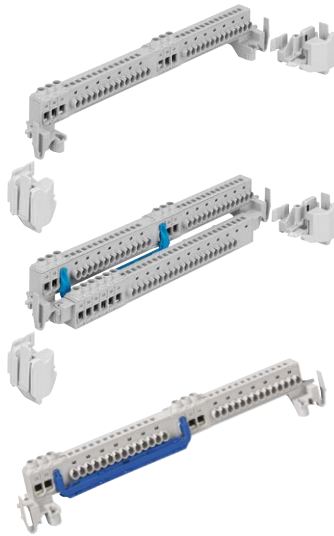
PE/N screwless terminal, for installation in AK/AKi small-scale distributors from AK/AKi 14, as additional terminals or for replacement

AK 14 PEN-SL Single-stage PE/N terminal rail with each, 3 screwable clamping points, 2.5 mm² - 16 mm² and , 14 screwless terminal points , 1.5 - 4 mm²	790 317 01
AK 28 PEN-SL Two-row PE/N terminal rail each with, 6 screwable clamping points, 2.5 mm² - 16 mm² and , 21 / 2 x 14 screwless clamping points 1.5 mm² - 4 mm²	790 327 01
AK N-SL Single-stage N terminal rail, with 4 screwable clamping points 2.5 mm² - 16 mm², and 28 screwless clamping points 1.5 mm² - 4 mm², Following removal of the cross-connection, distribution into, 2 N potentials each with 3 screwable terminal points, 2.5 mm² - 16 mm² and 14 screwless, Terminal points 1.5 mm² - 4 mm²	790 318 01

PE/N terminal rail

PE/N terminal rail, for installation in AK/AKi small-scale distributors as additional terminals or for replacement

	Number of pole	Clamping range	
AK 03 PEN-S	2 x 4-pole	1x16 / 3x6 mm²	790 204 01
AK 05 PEN-S	2 x 5-pole	2x16 / 3x6 mm²	790 205 01
AK 09 PEN-S	2 x 7-pole	2x16 / 5x6 mm²	790 207 01
AK 12 PEN-S	2 x 12-pole	2x16 / 10x6 mm²	790 211 01
AK 24 PEN-S	2 x 16-pole	2x16 / 14x6 mm²	790 218 01
AK 14/28 PEN-S	2 x 17-pole	1x25 / 4x16 / 12x6 mm²	790 217 01
AK 42 PEN-S	2 x 25-pole	1x25 / 6x16 / 18x6 mm²	790 225 01

Accessories AKe / AK / AKi Compact

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4-way neutral conductor terminal

Auxiliary terminal, for subsequent attachment to AK PE/N basic terminals from AK 14	
AK N 47-S 4 x 7-pole,, with each 2 clamping points 16 mm², 5 clamping points 6 mm²	790 047 01

1-way neutral conductor terminal

Auxiliary terminal, for subsequent attachment to AK PE/N-S basic terminals from AK 42	
AK N 17-S 1 x 7-pole,, with each 2 clamping points 16 mm², 5 clamping points 6 mm²	790 007 01

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STV-L

Empty, without fittings but with
PE/N terminal

· **High mechanical strength**
· **Insensitive to temperature**
· **Compact dimensions**
· **Uses quality sockets**
· **Can be combined**

▶ The housing can also be combined
horizontally with AKi Kompakt
small distributors.

▶ The special knockout contour allows
other components to be installed, such
as switch disconnectors.

Empty socket distribution boxes

STV
empty enclosures

STV 502-L

STV 504-L

STV 512-L

STV 904-L

STV 912-L

STV 922-L

STV 923-L

STV 1208-L

STV 1222-L

STV 1224-L

Socket casing - industrial quality, empty enclosure, prepared for the installation of Schuko- and CEE- sockets, with PE/N clip, masking and labelling strips, insulating seals, additional double-membrane seals

IP44

Description	Order no.
STV 502-L **125 x 200 x 122 mm,** 4 TE	728 902 01
STV 504-L **125 x 400 x 122 mm,** 5 TE	728 904 01
STV 512-L **125 x 400 x 122 mm,** 5 TE	728 912 01
STV 904-L **200 x 200 x 122 mm,** 8 TE	729 904 01
STV 912-L **200 x 400 x 122 mm,** 9 TE	729 912 01
STV 922-L **200 x 400 x 122 mm,** 9 TE	729 922 01
STV 923-L **200 x 400 x 122 mm,** 9 TE	729 923 01
STV 1208-L **250 x 400 x 122 mm,** 12 TE	731 908 01
STV 1222-L **250 x 400 x 122 mm,** 12 TE	731 922 01
STV 1224-L **250 x 400 x 122 mm,** 12 TE	731 924 01

IP44

Empty socket distribution boxes

STV KS combi set
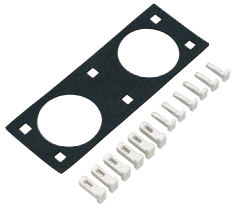
IP65	For horizontal combination with AKi 05/09 small distributors, complete with wedge connectors and intermediate seals	
	STV KS-IP 65	791 002 01

Double membrane seals

IP66	Double membrane seals made of elastic plastic with two sealing membranes, closed			
		f. wall thicknesses/mm	**Sealing area/mm**	
	DMS M16	1.5 - 4.5	5 - 9	260 416 01
	DMS M20	1.5 - 4.5	7 - 12	260 420 01
	DMS M25	1.5 - 4.5	9 - 16	260 425 01
	DMS M32	1.5 - 4.5	14 - 21	260 432 01
	DMS M40	1.5 - 4.5	19 - 28	260 440 01

Cable gland

IP68	Cable gland with strain relief, polyamide, M_ x 1.5 mm, with lock nut			
		Thread lenght/mm	**Sealing area/mm**	
	KVR M12-MGM	8	2 - 6.5	227 412 01
	KVR M16-MGM	8	4 - 10.0	227 416 01
	KVR M20-MGM	9	6 - 12.0	227 420 01
	KVR M20-GDB/MGM	9	7 - 14.0	227 421 01
	KVR M25-MGM	11	9 - 16	227 425 01
	KVR M32-MGM	11	11 - 21.0	227 432 01
	KVR M40-MGM	11	16 - 28.0	227 440 01
	KVR M50-MGM	13	21 - 34.5	227 450 01
	KVR M63-MGM	17	30 - 44.5	227 463 01

KD BD blank cover

Blank cleat for empty enclosures, for closing off unused socket openings	
KD BD/CEE	510 060 01
KD BD/Schuko®	510 038 01

STV Accessories

Handle

Description		Order no.
Handle made of plastic, for mobile use of housing, screw spacing 120 mm		
TG 2	with self-cutting screws	191 805 01
TG 1	with screws M6 and nuts made of plastic	191 800 01

Supply line

Description	Order no.
Supply line kit for socket combinations up to 16 A, 2 m cable HO7RN-F 5G2.5	
NAL 2 m-S16 with CEE connector 16 A, 5-pole	500 025 01

Supply line

Description	Order no.
Supply line kit for socket combinations up to 32 A, 2 m cable HO7RN-F 5G4	
NAL 2 m-S32 with CEE connector 16 A, 5-pole	500 040 01

Combi set

IP66

	f. wall thicknesses/mm	Thread lenght/mm	Order no.
Combi set, for side connection of enclosures with metric entries, complete with lock nuts and intermediate wall seal inserts			
KS M20	2 x 3,0	12	192 020 01
KS M25	2 x 3,0	12	192 025 01
KS M25-gro	2,0 x 8,0	22	192 026 01
KS M32	2 x 3,5	14	192 032 01

AKi WSD
400 x 580 x 270 mm

Description	Order no.
Stainless steel, for external housing applications from AKi series up to 300 x 450 mm	
AKi WSD	793 100 01

Double membrane seals

IP66

Description			Order no.
Double membrane seals made of elastic plastic with two sealing membranes, closed			

	f. wall thicknesses/mm	Sealing area/mm	
DMS M16	1.5 - 4.5	5 - 9	260 416 01
DMS M20	1.5 - 4.5	7 - 12	260 420 01
DMS M25	1.5 - 4.5	9 - 16	260 425 01
DMS M32	1.5 - 4.5	14 - 21	260 432 01
DMS M40	1.5 - 4.5	19 - 28	260 440 01

Cable gland

IP68

Cable gland with strain relief, polyamide, M_ x 1.5 mm, with lock nut

	Thread lenght/mm	Sealing area/mm	
KVR M12-MGM	8	2 - 6.5	227 412 01
KVR M16-MGM	8	4 - 10.0	227 416 01
KVR M20-MGM	9	6 - 12.0	227 420 01
KVR M20-GDB/MGM	9	7 - 14.0	227 421 01
KVR M25-MGM	11	9 - 16	227 425 01
KVR M32-MGM	11	11 - 21.0	227 432 01
KVR M40-MGM	11	16 - 28.0	227 440 01
KVR M50-MGM	13	21 - 34.5	227 450 01
KVR M63-MGM	17	30 - 44.5	227 463 01

Ventilation seal

IP44

With ventilation seal to avoid condensation formation in enclosures, flow rate 100 l/min. at 0.1 bar overpressure, thermoplastic elastomer, grey, recommended for insertion on the left and right enclosure sides in different heights (see Technical Appendix - protection against condensate water)

	f. wall thicknesses/mm	Color	
BST M20	1,5 - 4,5	Grey	262 420 01
BST M20/sw	1,5 - 4,5	black	262 020 01

Cable cover
300 x 125 x 90 mm

for installation in the components of the AK enclosure system for 300 mm wide end walls, with cable covers as standard

	Order no.
AK KBL	792 400 01

Bord Case

Description	Order no.
On-board case, for closing off unused circuit breaker positions, width 54 mm for 3 distribution units, for 35 mm standard rail, e.g. to house fuses, operating instructions, etc.	
AK BC	799 103 01

Lock fittings

Description	Order no.
Lock fittings, for installation in hinged doors of distribution boxes AK 03 to AK/AKi 70 and AK/AKi Plus 14 to 56, with 2 keys and installation instructions	
AK SGA-1 Identical locks	706 102 01
AK SGA-2 Different closures, max. 10 different closures possible	706 902 01

AK External attachment set

Description	Order no.
External fixing lugs, for mounting separate enclosures or small units on flat wall surfaces, can be fixed to the box base at an angle of 0°, 45°, or 90°, wall gap 7 mm, material stainless steel, suitable for all AK enclosures from 300 mm front,	
AK ABL-ES Set = 4 pcs.	793 004 01

Z-wall profile

Description	Order no.
Z-wall profile, length 2 m, with 8 M6 cylinder screws and 8 captive push nuts, wall clearance 70 mm, material: galvanised steel	
ZPR	070 800 01

Empty socket
distribution boxes

els spelsberg

NEW!

The empty enclosures from Spelsberg offer a wide variety of housing sizes and materials. However, should you not find exactly what you are looking for among the many variations of standard products, we would be pleased to design a product with you that is tailored precisely to your needs. Take advantage of the space available for this customisation.

Empty enclosures

	Protection rating	Size	Types	Page
	IP66	65 x 65 mm to 361 x 254 mm	Empty enclosures made of polystyrene TK PS	176-194
	IP66	50 x 52 mm to 361 x 254 mm	Empty enclosures made of polycarbonate TK PC	176-194
	IP66 NEW!	89 x 89 mm to 388 x 270 mm	Aluminium empty enclosures TK AL	195-197
	IP66 / IP67	84 x 82 mm to 302 x 232 mm	Empty enclosures made of ABS TG ABS	204-221
	IP66 / IP67	84 x 82 mm to 302 x 232 mm	Empty enclosures made of polycarbonate TG PC	204-221
	IP65	150 x 300 mm to 300 x 600 mm	Combinable empty enclosures made of polystyrene AKL	224-229
	IP65	150 x 300 mm to 300 x 600 mm	Combinable empty enclosures made of polycarbonate AKi-L	224-229
	IP66	50 x 45 mm to 330 x 230 mm	Aluminium empty enclosures AL	234-235
	Accessories for TK			198-202
	Accessories for TG			222-223
	Accessories for AKL/AKi-L			230-233
	Accessories for AL			236
	General accessories for empty enclosures			237
	IP65 /IP54	---	Automatic machine enclosures, empty enlosures SVi A, SVi L	238-241

Empty enclosures

Empty enclosures Content

els spelsberg

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Empty enclosures TK PC

▷ **Ammonia resistance**

▷ **Resistance against stable air for minimum 20 years**

APPROVED 2016
WWW.DLG.ORG
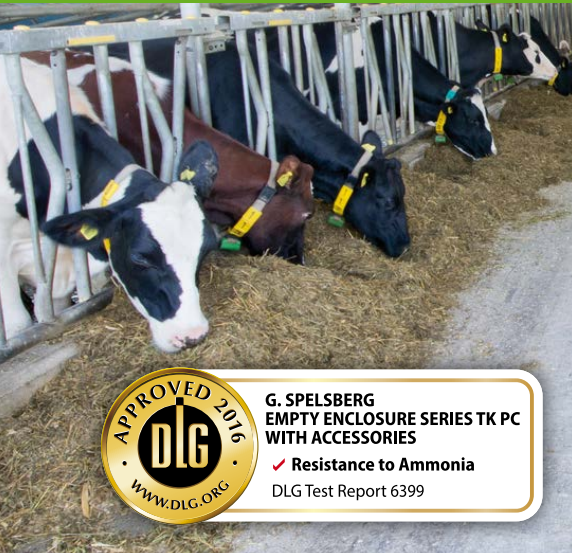
G. SPELSBERG
EMPTY ENCLOSURE SERIES TK PC WITH ACCESSORIES
✔ **Resistance to Ammonia**
DLG Test Report 6399

- 14 basic enclosures with up to three different cover heights
- Grey or transparent covers
- Plastic: choice of polystyrene (TK PS) or glass-fibre-reinforced polycarbonate (TK PC)

- Side walls smooth or with metric knockouts
- Modular tools: Economical customisation

IP66	IK07		690V AC	1000V DC	halogen-free
IP66	IK08		690V AC	1000V DC	c UL us	halogen-free	iQ	DLG

Example of TK designation scheme

Material
PS= Polystyrene
PC= Polycarbonate

approx. **height** in cm

Cover material
t= transparent
k.A.= grey

PS 1309-8-tm

approx. **length x width** in cm

m = metric knockouts
o = without knockouts
v = with moulded cable gland

Empty enclosures TK PS / TK PC

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- 8 aluminium enclosures
- Powder-coated for corrosion protection
- Colour: light grey, similar to RAL 7035
- Material: Aluminium die-cast

- Effective protection against electromagnetic interference (EMI) and electrostatic discharge (ESD)
- Internal dimensions similar to TK PS / TK PC, mounting plates and standard rails likewise compatible

| IP66 | IK09 | ⏚ | halogen-free | iQ |

Empty enclosures TK AL

els spelsberg

TK 55   52 x 50 mm

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 55-4-m	35	127 455 01
TK PC 55-4-o	35	120 455 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 55-4-v	35	129 455 01

sealing area/mm: 5-10

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 55-4-tm	35	137 455 01
TK PC 55-4-to	35	130 455 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 55-4-tv	35	139 455 01

Dichtber./mm: 5-10

TK 75   65 x 50 mm

Base and cover **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 75-4-m	35	127 475 01
TK PC 75-4-o	35	120 475 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 75-4-v	35	129 475 01
TK PC 75-4-2v	35	128 475 01

sealing area/mm: 5-10

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 75-4-tm	35	137 475 01
TK PC 75-4-to	35	130 475 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 75-4-tv	35	139 475 01
TK PC 75-4-2tv	35	138 475 01

sealing area/mm: 5-10

TK 77   65 x 65 mm

Base and cover: **Polystyrene**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PS 77-6-m	57	105 401 01
TK PS 77-8-m	81	105 901 01
TK PS 77-6-o	57	110 401 01
TK PS 77-8-o	81	110 901 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 77-6-m	57	127 401 01
TK PC 77-8-m	81	127 901 01

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PS 77-6-tm	57	106 001 01
TK PS 77-8-tm	81	106 501 01
TK PS 77-6-to	57	111 001 01
TK PS 77-8-to	81	111 501 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 77-6-tm	57	137 001 01
TK PC 77-8-tm	81	137 501 01

also available in aluminium, see page 196

TK Empty enclosures | With and without knockouts

All dimensions in mm

With knockouts

Metric types
⊘ = M 12/16
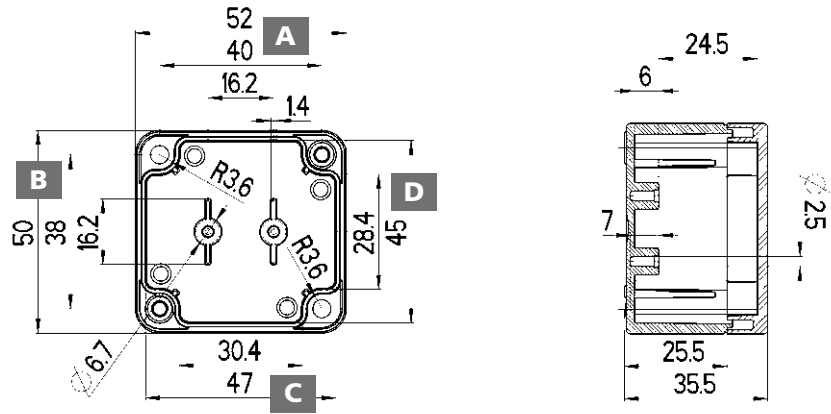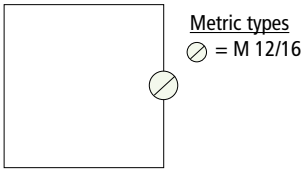
Without knockouts
Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	1	1	-	-	-	-	-
B/D	1	1	-	-	-	-	-

With knockouts

Metric types
⊘ = M 12/16
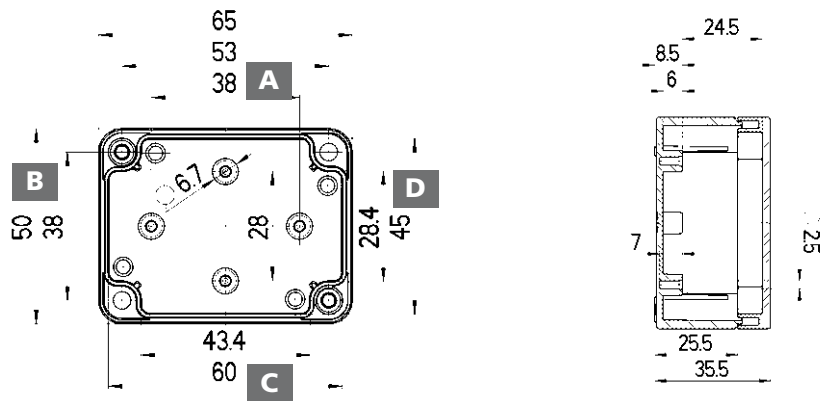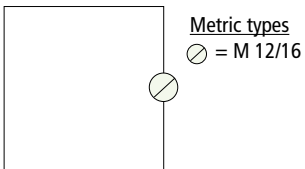
Without knockouts
Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	2	1	-	-	-	-	-
B/D	1	1	-	-	-	-	-

With knockouts
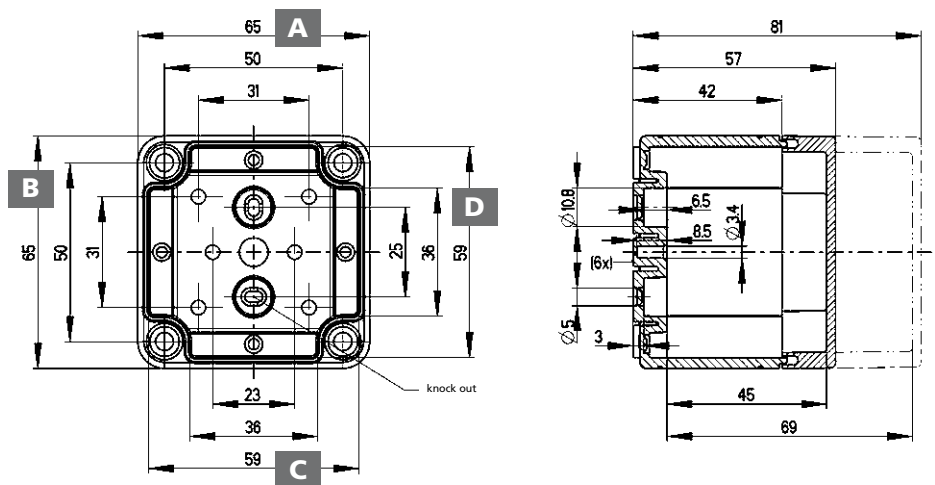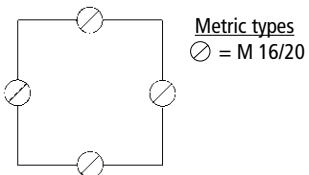
Metric types
⊘ = M 16/20

Without knockouts
Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	2	1	1	-	-	-	-
B/D	2	1	1	-	-	-	-

knock out

Base and cover: **Polystyrene**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PS 97-6-m	57	105 402 01
TK PS 97-8-m	81	105 902 01
TK PS 97-6-o	57	110 402 01
TK PS 97-8-o	81	110 902 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 97-6-m	57	127 402 01
TK PC 97-8-m	81	127 902 01

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PS 97-6-tm	57	106 002 01
TK PS 97-8-tm	81	106 502 01
TK PS 97-6-to	57	111 002 01
TK PS 97-8-to	81	111 502 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 97-6-tm	57	137 002 01
TK PC 97-8-tm	81	137 502 01

Base and cover: **Polystyrene**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PS 99-6-m	57	105 403 01
TK PS 99-8-m	81	105 903 01
TK PS 99-6-o	57	110 403 01
TK PS 99-8-o	81	110 903 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 99-6-m	57	127 403 01
TK PC 99-8-m	81	127 903 01

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PS 99-6-tm	57	106 003 01
TK PS 99-8-tm	81	106 503 01
TK PS 99-6-to	57	111 003 01
TK PS 99-8-to	81	111 503 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 99-6-tm	57	137 003 01
TK PC 99-8-tm	81	137 503 01
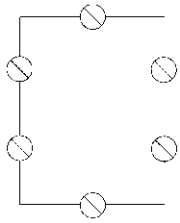
TK Empty enclosures | With and without knockouts

All dimensions in mm

With knockouts

<u>Metric types</u>
⊘ = M 16/20

Without knockouts

Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	2	1	1	1	-	-	-
B/D	3	2	2	1	-	-	-
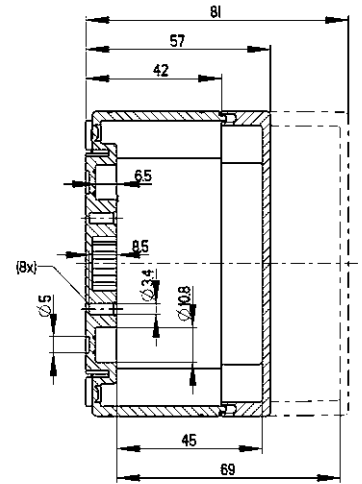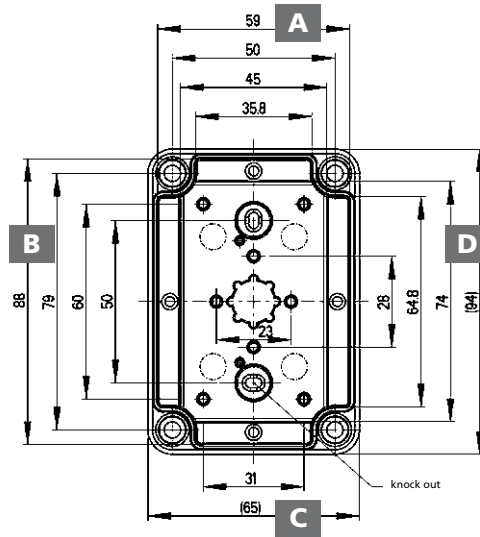
With knockouts
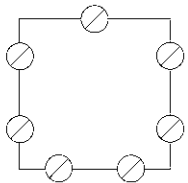
<u>Metric types</u>
⊘ = M 16/20

Without knockouts

Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	3	2	2	-	-	-	-
B/D	3	2	2	-	-	-	-
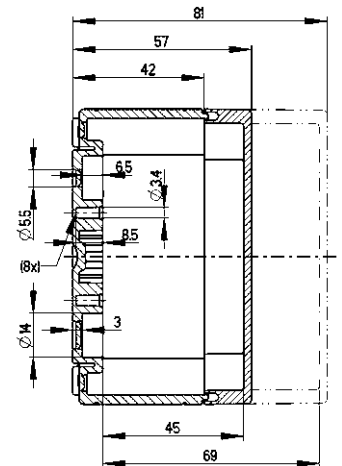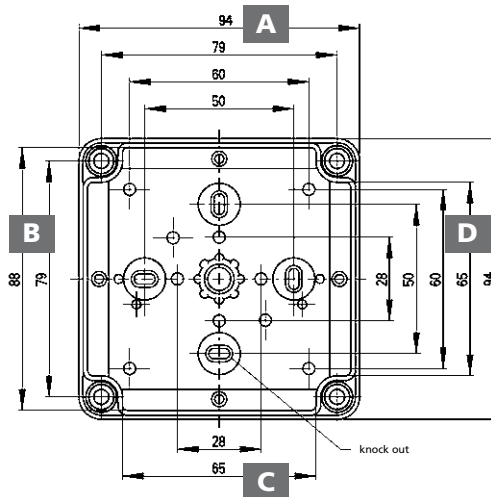
Empty enclosures

els spelsberg

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Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 1005-4-m	37	127 480 01
TK PC 1005-4-o	37	120 480 01

NEW!

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 1005-4-tm	37	137 480 01
TK PC 1005-4-to	37	130 480 01

NEW!

TK 1111   110 x 110 mm

Base and cover: **Polystyrene**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PS 1111-7-m	66	105 404 01
TK PS 1111-9-m	90	105 904 01
TK PS 1111-7-o	66	110 404 01
TK PS 1111-9-o	90	110 904 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 1111-7-m	66	127 404 01
TK PC 1111-9-m	90	127 904 01

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PS 1111-7-tm	66	106 004 01
TK PS 1111-9-tm	90	106 504 01
TK PS 1111-7-to	66	111 004 01
TK PS 1111-9-to	90	111 504 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 1111-7-tm	66	137 004 01
TK PC 1111-9-tm	90	137 504 01

TK Empty enclosures | With and without knockouts

All dimensions in mm

With knockouts
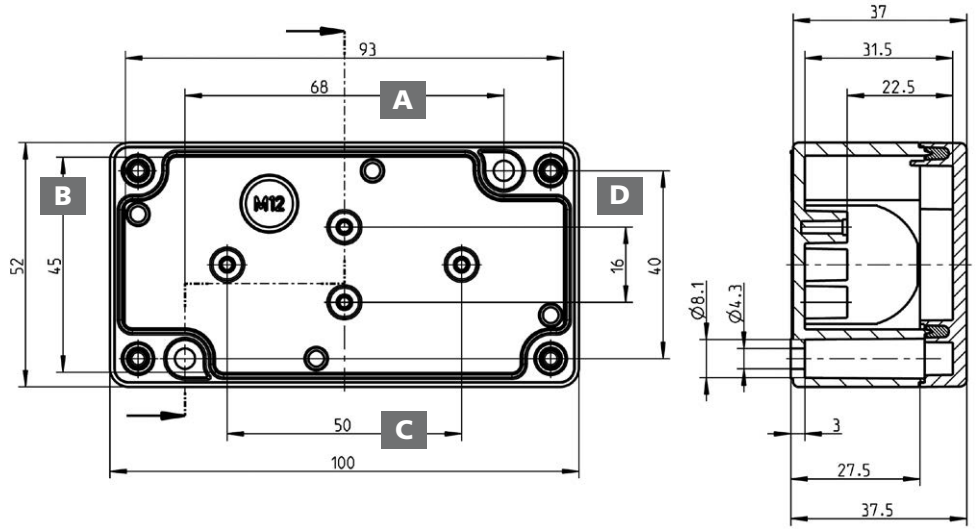
Metric types

⊘ = M 12/16

Without knockouts

Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	2	2	-	-	-	-	-
B/D	1	1	-	-	-	-	-

With knockouts
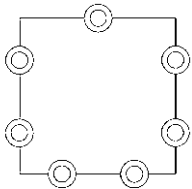
Metric types

= M 20/25
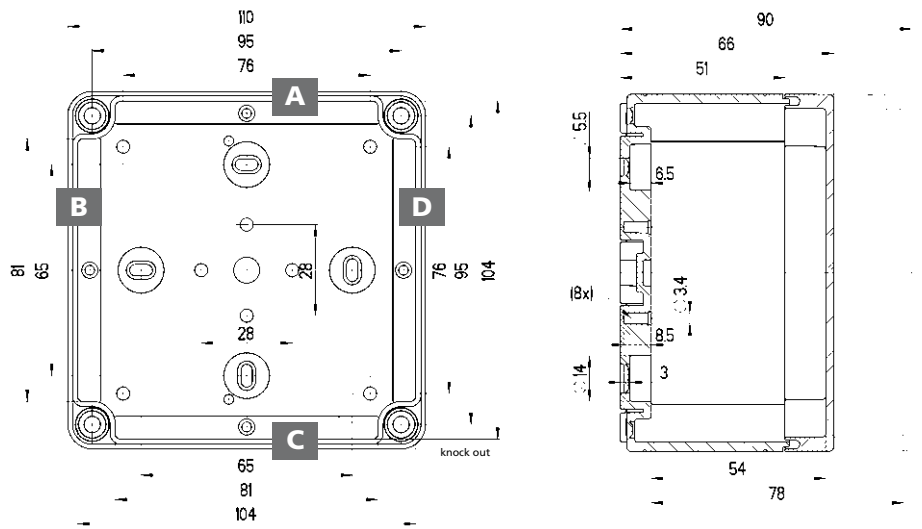
Without knockouts

Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	8	4	2	2	-	-	-
B/D	8	4	2	2	-	-	-

TK 1309 — 130 x 94 mm

Base and cover: **Polystyrene**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PS 1309-6-m	57	105 409 01
TK PS 1309-8-m	81	105 909 01
TK PS 1309-6-o	57	110 409 01
TK PS 1309-8-o	81	110 909 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 1309-6-m	57	127 409 01
TK PC 1309-8-m	81	127 909 01

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PS 1309-6-tm	57	106 009 01
TK PS 1309-8-tm	81	106 509 01
TK PS 1309-6-to	57	111 009 01
TK PS 1309-8-to	81	111 509 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 1309-6-tm	57	137 009 01
TK PC 1309-8-tm	81	137 509 01

TK 1313 — 130 x 130 mm

Base and cover: **Polystyrene**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PS 1313-7-m	75	105 405 01
TK PS 1313-10-m	99	105 905 01
TK PS 1313-7-o	75	110 405 01
TK PS 1313-10-o	99	110 905 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 1313-7-m	75	127 405 01
TK PC 1313-10-m	99	127 905 01

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PS 1313-7-tm	75	106 005 01
TK PS 1313-10-tm	99	106 505 01
TK PS 1313-7-to	75	111 005 01
TK PS 1313-10-to	99	111 505 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 1313-7-tm	75	137 005 01
TK PC 1313-10-tm	99	137 505 01

also available in aluminium, see page 196

TK 1809 — 180 x 94 mm

Base and cover: **Polystyrene**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PS 1809-6-m	57	105 410 01
TK PS 1809-8-m	81	105 910 01
TK PS 1809-6-o	57	110 410 01
TK PS 1809-8-o	81	110 910 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 1809-6-m	57	127 410 01
TK PC 1809-8-m	81	127 910 01

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PS 1809-6-tm	57	106 010 01
TK PS 1809-8-tm	81	106 510 01
TK PS 1809-6-to	57	111 010 01
TK PS 1809-8-to	81	111 510 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 1809-6-tm	57	137 010 01
TK PC 1809-8-tm	81	137 510 01
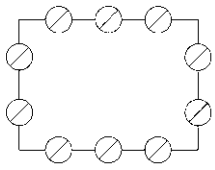
TK Empty enclosures | With and without knockouts

All dimensions in mm

With knockouts
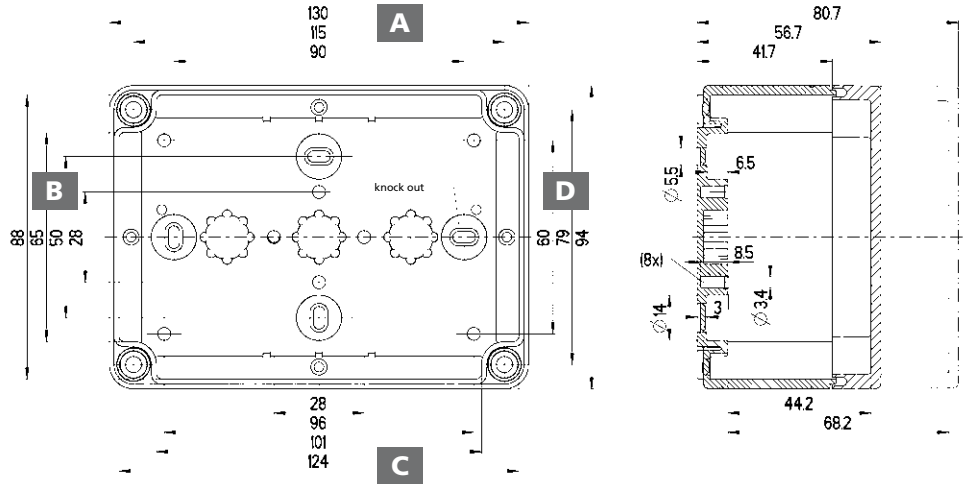
Metric types
⊘ = M 16/20

Without knockouts
Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	5	4	3	2	-	-	-
B/D	3	2	2	1	-	-	-

With knockouts
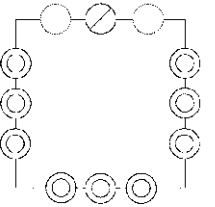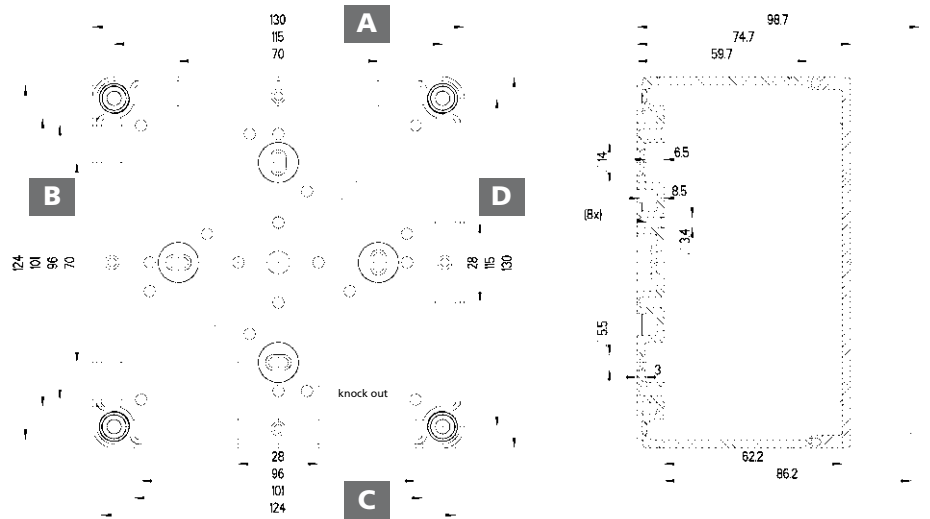
Metric types
= M 20
= M 20/25
= M 25/32

Without knockouts
Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	10	6	3	3	2	-	-
B/D	10	6	3	3	2	-	-

With knockouts
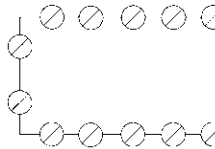
Metric types
⊘ = M 16/20
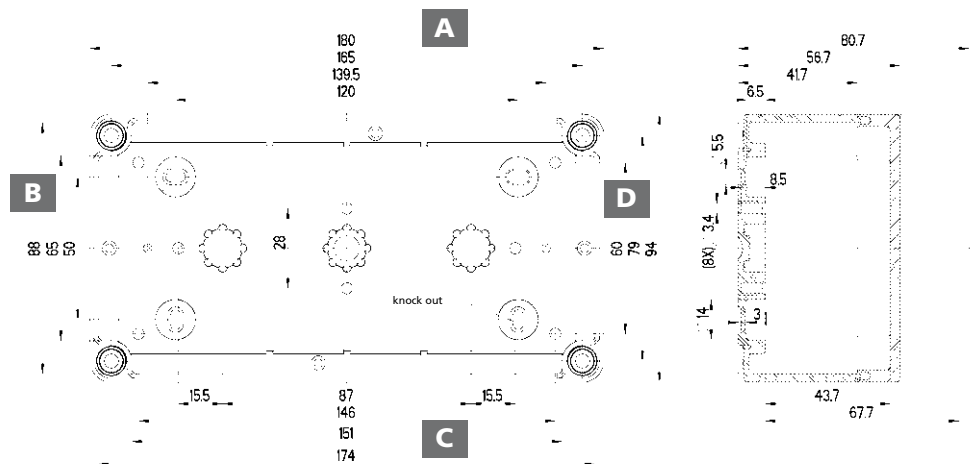
Without knockouts
Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	8	6	5	4	-	-	-
B/D	3	2	2	1	-	-	-

flat

Base and cover: **Polystyrene**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PS 1811-6f-m	63	105 414 01
TK PS 1811-8f-m	84	105 914 01
TK PS 1811-13f-m	137	104 414 01
TK PS 1811-6f-o	63	110 414 01
TK PS 1811-8f-o	84	110 914 01
TK PS 1811-13f-o	137	109 414 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 1811-6f-m	63	127 414 01
TK PC 1811-8f-m	84	127 914 01
TK PC 1811-13f-m	137	128 414 01

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PS 1811-6f-tm	63	106 014 01
TK PS 1811-8f-tm	84	106 514 01
TK PS 1811-13f-tm	137	107 014 01
TK PS 1811-6f-to	63	111 014 01
TK PS 1811-8f-to	84	111 514 01
TK PS 1811-13f-to	137	112 014 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 1811-6f-tm	63	137 014 01
TK PC 1811-8f-tm	84	137 514 01
TK PC 1811-13f-tm	137	138 014 01

Base and cover: **Polystyrene**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PS 1811-9-m	90	105 406 01
TK PS 1811-11-m	111	105 906 01
TK PS 1811-16-m	165	104 406 01
TK PS 1811-9-o	90	110 406 01
TK PS 1811-11-o	111	110 906 01
TK PS 1811-16-o	165	109 406 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 1811-9-m	90	127 406 01
TK PC 1811-11-m	111	127 906 01
TK PC 1811-16-m	165	128 406 01

Base: **Polystyrene**, grey, similar to RAL 7035
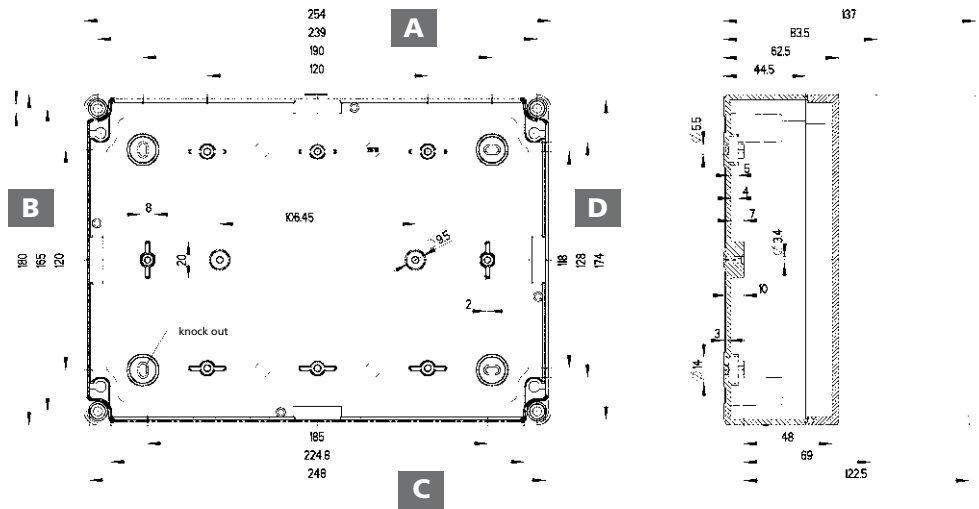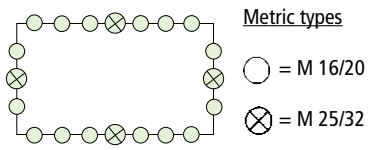Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PS 1811-9-tm	90	106 006 01
TK PS 1811-11-tm	111	106 506 01
TK PS 1811-16-tm	165	107 006 01
TK PS 1811-9-to	90	111 006 01
TK PS 1811-11-to	111	111 506 01
TK PS 1811-16-to	165	112 006 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 1811-9-tm	90	137 006 01
TK PC 1811-11-tm	111	137 506 01
TK PC 1811-16-tm	165	138 006 01

also available in aluminium, see page 197

TK Empty enclosures | With and without knockouts

All dimensions in mm
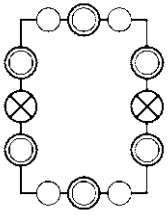
With knockouts

Metric types

◯ = M 12

◎ = M 16/20

⊗ = M 25/32

Without knockouts

Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	4	3	2	2	1	-	-
B/D	8	4	4	3	2	-	-
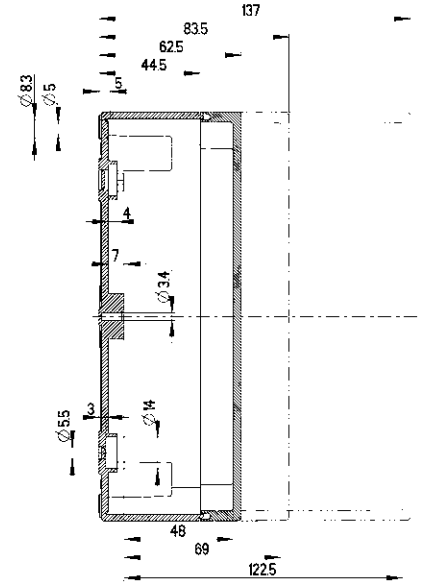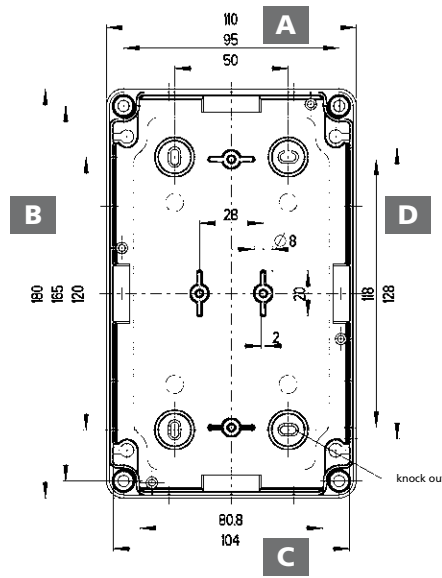
With knockouts
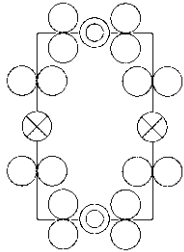
Metric types

◯ = M 20

◎ = M 20/25

⊗ = M 32/40

Without knockouts

Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	12	6	5	3	1	1	1
B/D	20	10	8	5	3	2	1
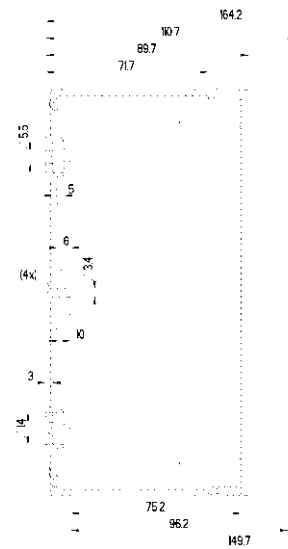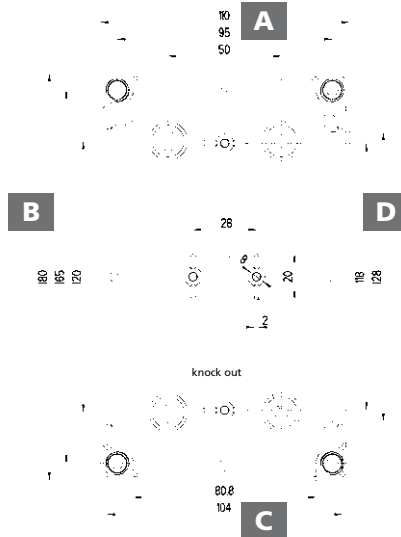
TK 1813   180 x 130 mm

flat

Base and cover: **Polystyrene**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PS 1813-6f-m	63	105 415 01
TK PS 1813-8f-m	84	105 915 01
TK PS 1813-13f-m	137	104 415 01
TK PS 1813-6f-o	63	110 415 01
TK PS 1813-8f-o	84	110 915 01
TK PS 1813-13f-o	137	109 415 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 1813-8f-m	84	127 915 01
TK PC 1813-6f-m	63	127 415 01
TK PC 1813-13f-m	137	128 415 01

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PS 1813-6f-tm	63	106 015 01
TK PS 1813-8f-tm	84	106 515 01
TK PS 1813-13f-tm	137	107 015 01
TK PS 1813-8f-to	84	111 515 01
TK PS 1813-13f-to	137	112 015 01
TK PS 1813-6f-to	63	111 015 01

Base: **Polycarbonate**, grey, similar to RAL 70
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 1813-6f-tm	63	137 015 01
TK PC 1813-13f-tm	137	138 015 01
TK PC 1813-8f-tm	84	137 515 01

TK 1813   180 x 130 mm

Base and cover: **Polystyrene**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PS 1813-9-m	90	105 416 01
TK PS 1813-11-m	111	105 916 01
TK PS 1813-16-m	165	104 416 01
TK PS 1813-9-o	90	110 416 01
TK PS 1813-11-o	111	110 916 01
TK PS 1813-16-o	165	109 416 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 1813-9-m	90	127 416 01
TK PC 1813-11-m	111	127 916 01
TK PC 1813-16-m	165	128 416 01

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PS 1813-9-tm	90	106 016 01
TK PS 1813-11-tm	111	106 516 01
TK PS 1813-16-tm	165	107 016 01
TK PS 1813-9-to	90	111 016 01
TK PS 1813-11-to	111	111 516 01
TK PS 1813-16-to	165	112 016 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 1813-9-tm	90	137 016 01
TK PC 1813-11-tm	111	137 516 01
TK PC 1813-16-tm	165	138 016 01
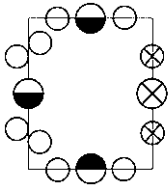
TK Empty enclosures | With and without knockouts

All dimensions in mm

With knockouts

Metric types

◒ = M 20/25
⊗ = M 25/32
○ = M 12/16
⊗ = M 16/20

Without knockouts
Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	10	4	3	2	1	-	-
B/D	12	5	4	4	1	-	-
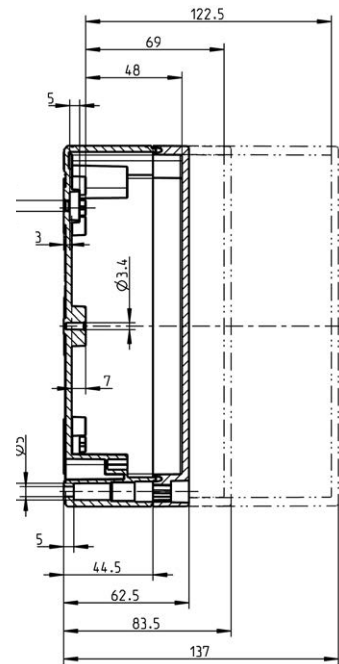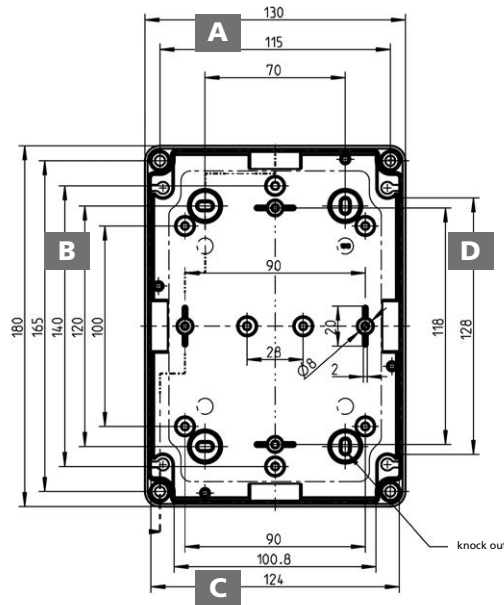
With knockouts
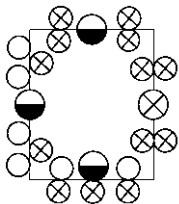
Metric types

◒ = M 20/25
⊗ = M 25/32
○ = M 12/16
⊗ = M 16/20

Without knockouts
Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	15	8	6	3	2	1	1
B/D	20	10	8	5	3	2	1

Empty enclosures

els spelsberg
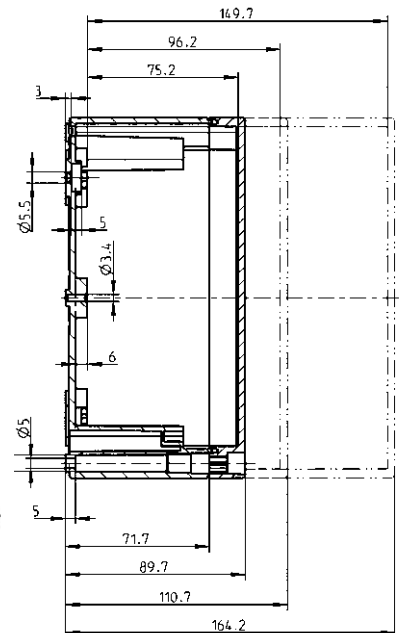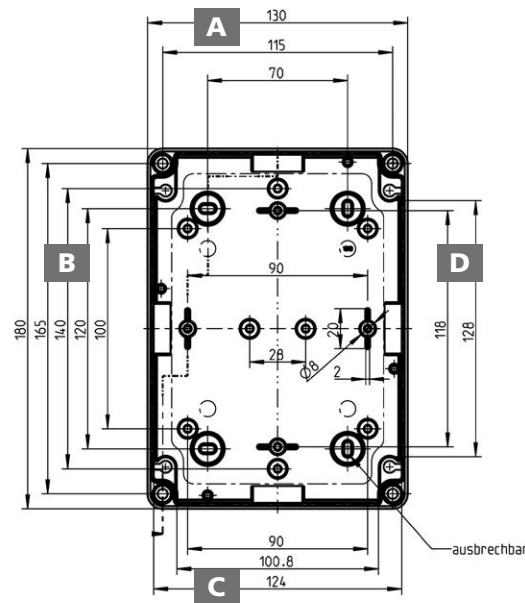
TK 1818   182 x 180 mm

flat

Base and cover: **Polystyrene**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PS 1818-6f-m	63	105 413 01
TK PS 1818-8f-m	84	105 913 01
TK PS 1818-13f-m	137	104 413 01
TK PS 1818-6f-o	63	110 413 01
TK PS 1818-8f-o	84	110 913 01
TK PS 1818-13f-o	137	109 413 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 1818-6f-m	63	127 413 01
TK PC 1818-8-fm	84	127 913 01
TK PC 1818-13f-m	137	128 413 01

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, <u>transparent</u>

Enclosure type	Height	Order No.
TK PS 1818-6f-tm	63	106 013 01
TK PS 1818-8f-tm	84	106 513 01
TK PS 1818-13f-tm	137	107 013 01
TK PS 1818-6f-to	63	111 013 01
TK PS 1818-8f-to	84	111 513 01
TK PS 1818-13f-to	137	112 013 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, <u>transparent</u>

Enclosure type	Height	Order No.
TK PC 1818-6f-tm	63	137 013 01
TK PC 1818-8f-tm	84	137 513 01
TK PC 1818-13f-tm	137	138 013 01

TK 1818   182 x 180 mm

Base and cover: **Polystyrene**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PS 1818-9-m	90	105 407 01
TK PS 1818-11-m	111	105 907 01
TK PS 1818-16-m	165	104 407 01
TK PS 1818-9-o	90	110 407 01
TK PS 1818-11-o	111	110 907 01
TK PS 1818-16-o	165	109 407 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 1818-9-m	90	127 407 01
TK PC 1818-11-m	111	127 907 01
TK PC 1818-16-m	165	128 407 01

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, <u>transparent</u>

Enclosure type	Height	Order No.
TK PS 1818-9-tm	90	106 007 01
TK PS 1818-11-tm	111	106 507 01
TK PS 1818-16-tm	165	107 007 01
TK PS 1818-9-to	90	111 007 01
TK PS 1818-11-to	111	111 507 01
TK PS 1818-16-to	165	112 007 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, <u>transparent</u>

Enclosure type	Height	Order No.
TK PC 1818-9-tm	90	137 007 01
TK PC 1818-11-tm	111	137 507 01
TK PC 1818-16-tm	165	138 007 01
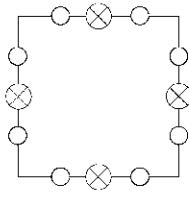
TK Empty enclosures | With and without knockouts

All dimensions in mm

With knockouts

Metric types

◯ = M 16/20

⊗ = M 25/32

Without knockouts
Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	12	6	4	3	1	-	-
B/D	12	6	4	3	1	-	-
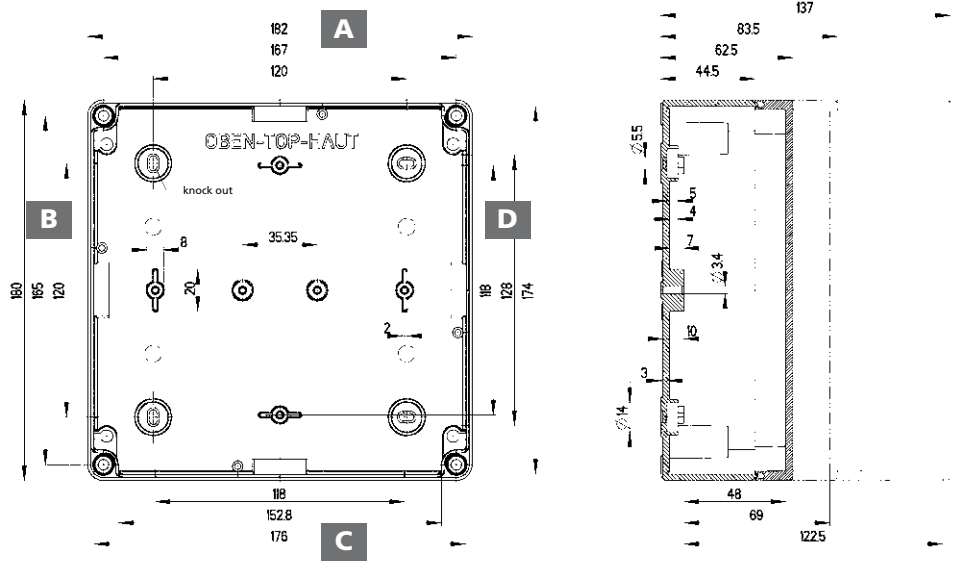
With knockouts
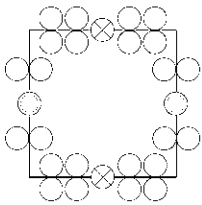
Metric types

◯ = M 20

◎ = M 32/40

⊗ = M 25/32

Without knockouts
Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	23	12	10	5	3	3	2
B/D	20	10	8	5	3	2	1
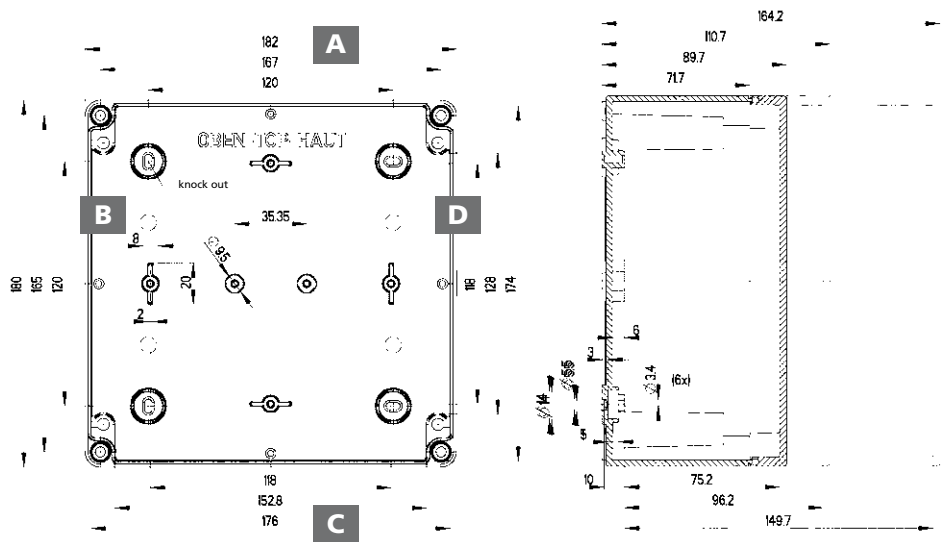
TK 2518   254 x 180 mm

flat

Base and cover: **Polystyrene**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PS 2518-6f-m	63	105 411 01
TK PS 2518-8f-m	84	105 911 01
TK PS 2518-13f-m	137	104 411 01
TK PS 2518-6f-o	63	110 411 01
TK PS 2518-8f-o	84	110 911 01
TK PS 2518-13f-o	137	109 411 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 2518-6f-m	63	127 411 01
TK PC 2518-8f-m	84	127 911 01
TK PC 2518-13f-m	137	128 411 01

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PS 2518-6f-tm	63	106 011 01
TK PS 2518-8f-tm	84	106 511 01
TK PS 2518-13f-tm	137	107 011 01
TK PS 2518-6f-to	63	111 011 01
TK PS 2518-8f-to	84	111 511 01
TK PS 2518-13f-to	137	112 011 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 2518-6f-tm	63	137 011 01
TK PC 2518-8f-tm	84	137 511 01
TK PC 2518-13f-tm	137	138 011 01

TK 2518   254 x 180 mm

Base and cover: **Polystyrene**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PS 2518-9-m	90	105 408 01
TK PS 2518-11-m	111	105 908 01
TK PS 2518-16-m	165	104 408 01
TK PS 2518-9-o	90	110 408 01
TK PS 2518-11-o	111	110 908 01
TK PS 2518-16-o	165	109 408 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 2518-9-m	90	127 408 01
TK PC 2518-11-m	111	127 908 01
TK PC 2518-16-m	165	128 408 01

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PS 2518-9-tm	90	106 008 01
TK PS 2518-11-tm	111	106 508 01
TK PS 2518-16-tm	165	107 008 01
TK PS 2518-9-to	90	111 008 01
TK PS 2518-11-to	111	111 508 01
TK PS 2518-16-to	165	112 008 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 2518-9-tm	90	137 008 01
TK PC 2518-11-tm	111	137 508 01
TK PC 2518-16-tm	165	138 008 01

TK Empty enclosures | With and without knockouts

All dimensions in mm

With knockouts

<u>Metric types</u>

◯ = M 16/20

⊗ = M 25/32

Without knockouts

Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	22	10	7	6	1	-	-
B/D	12	5	4	3	1	-	-

With knockouts
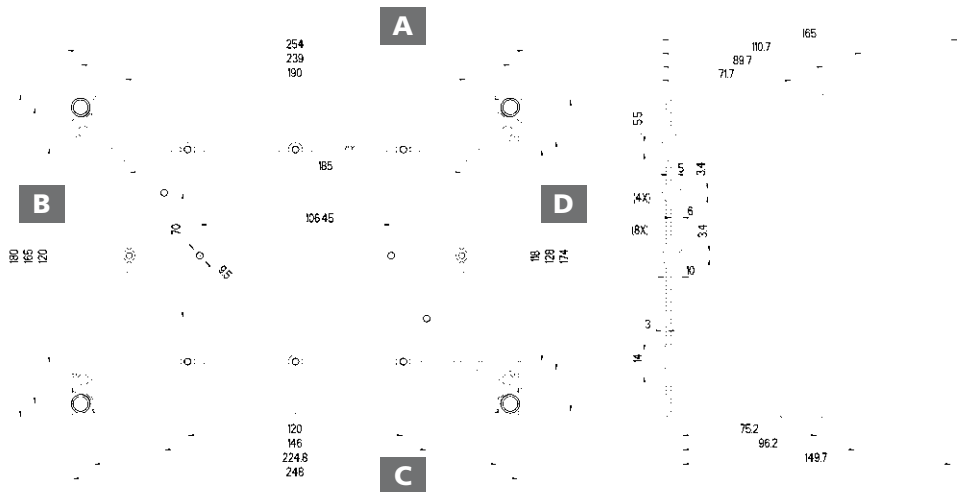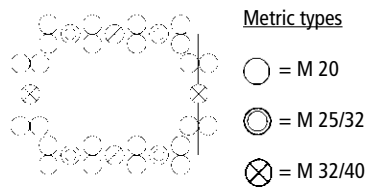
<u>Metric types</u>

◯ = M 20

◎ = M 25/32

⊗ = M 32/40

Without knockouts

Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	33	18	14	11	5	4	3
B/D	20	10	8	5	3	2	1

Empty enclosures

els spelsberg

Base and cover: **Polystyrene**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PS 3625-11-m	111	105 412 01
TK PS 3625-16-m	165	105 912 01
TK PS 3625-11-o	111	110 412 01
TK PS 3625-16-o	165	110 912 01

Base and cover: **Polycarbonate**, grey, similar to RAL 7035

Enclosure type	Height	Order No.
TK PC 3625-11-m	111	127 412 01
TK PC 3625-16-m	165	127 912 01

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PS 3625-11-tm	111	106 012 01
TK PS 3625-16-tm	165	106 512 01
TK PS 3625-11-to	111	111 012 01
TK PS 3625-16-to	165	111 512 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TK PC 3625-11-tm	111	137 012 01
TK PC 3625-16-tm	165	137 512 01

also available in aluminium, see page 197

With knockouts

Metric types

◯ = M 20

◎ = M 25/32

⊗ = M 32/40

Without knockouts
Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	42	24	16	14	6	4	4
B/D	33	18	14	11	5	4	3

TK Empty enclosures | With and without knockouts

All dimensions in mm
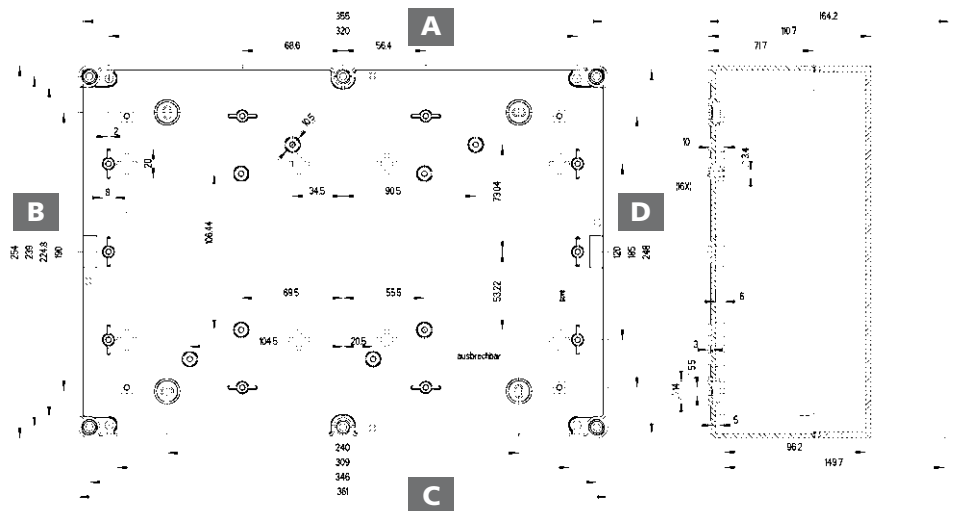
Empty enclosures TK AL

- 8 aluminium enclosures
- Powder-coated for corrosion protection
- Colour: light grey, similar to RAL 7035
- Material: Aluminium die-cast

- Effective protection against electromagnetic interference (EMI) and electrostatic discharge (ESD)
- Internal dimensions similar to TK PS / TK PC, mounting plates and standard rails likewise compatible

IP66   IK09   halogen-free   iQ   **Industrial Quality**

Empty enclosures TK AL

TK AL 77-6   89 x 89 mm

Base and cover: **Aluminium**, powder-coated, light grey similar RAL 7035

Enclosure type	Height	Order No.
TK AL 77-6	64	151 001 01

Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	2	1	1	-	-	-	-
B/D	1	1	1	-	-	-	-
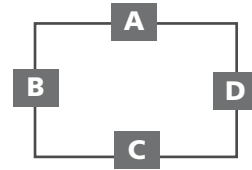
TK AL 99-6   119 x 119 mm

Base and cover: **Aluminium**, powder-coated, light grey similar RAL 7035

Enclosure type	Height	Order No.
TK AL 99-6	64	151 003 01

Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	6	3	2	1	-	-	-
B/D	3	1	1	1	-	-	-
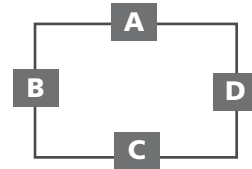
TK AL 1111-7   139 x 139 mm

Base and cover: **Aluminium**, powder-coated, light grey similar RAL 7035

Enclosure type	Height	Order No.
TK AL 1111-7	73	151 004 01

Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	8	3	3	2	1	-	-
B/D	6	5	2	1	1	-	-
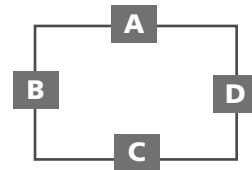
TK AL 1313-7   154 x 154 mm

Base and cover: **Aluminium**, powder-coated, light grey similar RAL 7035

Enclosure type	Height	Order No.
TK AL 1313-7	81	151 005 01

Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	10	6	5	3	2	-	-
B/D	8	5	3	2	1	-	-

TK AL Empty enclosures | Without knockouts

All dimensions in mm
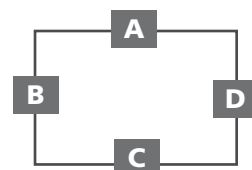
TK AL 1811-9   199 x 114 mm

Base and cover: **Aluminium**, powder-coated, light grey similar RAL 7035

Enclosure type	Height	Order No.
TK AL 1811-9	95	151 006 01

Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	21	10	8	6	3	2	2
B/D	6	3	2	1	1	-	-
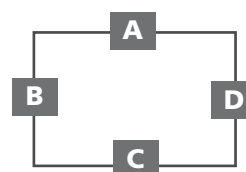
TK AL 1818-9   199 x 199 mm

Base and cover: **Aluminium**, powder-coated, light grey similar RAL 7035

Enclosure type	Height	Order No.
TK AL 1818-9	95	151 007 01

Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	21	14	8	8	3	2	2
B/D	18	9	8	6	1	2	-
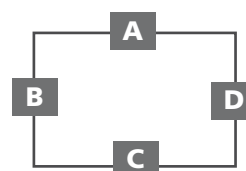
TK AL 2518-9   273 x 205 mm

Base and cover: **Aluminium**, powder-coated, light grey similar RAL 7035

Enclosure type	Height	Order No.
TK AL 2518-9	95	151 008 01

Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	33	18	14	12	5	4	3
B/D	18	10	8	6	3	2	1
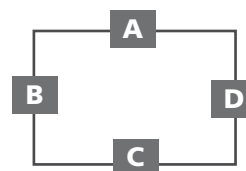
TK AL 3625-11   388 x 270 mm

Base and cover: **Aluminium**, powder-coated, light grey similar RAL 7035

Enclosure type	Height	Order No.
TK AL 3625-11	117	151 012 01

Maximum possible through openings per box side

M	12	16	20	25	32	40	50
A/C	48	35	22	17	8	6	4
B/D	27	18	12	9	4	3	2
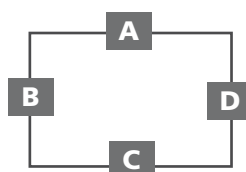
Empty enclosures

Mounting plate insulating material

Description		Order no.
Mounting plate made from insulating material with mounting plate bracket for assembly without tools, set of 5 pieces		
	Enclosure type	
TK MPI-55	TK PS/PC 55	195 055 01
TK MPI-75	TK PS/PC 75	195 075 01

Mounting plate insulating material

Description		Order no.
Mounting plate made from insulating material, incl. fixing screws and spacers		
	Enclosure type	
TK MPI-77	TK PS/PC/AL 77	195 001 01
TK MPI-97	TK PS/PC 97	195 002 01
TK MPI-99	TK PS/PC/AL 99	195 003 01
TK MPI-1111	TK PS/PC/AL 1111	195 004 01
TK MPI-1309	TK PS/PC 1309	195 009 01
TK MPI-1313	TK PS/PC/AL 1313	195 005 01
TK MPI-1809	TK PS/PC 1809	195 010 01

Mounting plate insulating material

Description		Order no.
Mounting plate made from insulating material, incl. fixing screws		
	Enclosure type	
TK MPI-1811	TK PS/PC/AL 1811	195 006 01
TK MPI-1813	TK PS/PC 1813	195 011 01
TK MPI-1818	TK PS/PC/AL 1818	195 007 01
TK MPI-2518	TK PS/PC/AL 2518	195 008 01
TK MPI-3625	TK PS/PC/AL 3625	195 012 01

Mounting plate stainless steel

Description		Order no.
Mounting plate made from stainless steel, incl. fixing screws and spacers		
	Enclosure type	
TK MPS-77	TK PS/PC/AL 77	197 001 01
TK MPS-97	TK PS/PC 97	197 002 01
TK MPS-99	TK PS/PC/AL 99	197 003 01
TK MPS-1111	TK PS/PC/AL 1111	197 004 01
TK MPS-1309	TK PS/PC 1309	197 009 01
TK MPS-1313	TK PS/PC/AL 1313	197 005 01
TK MPS-1809	TK PS/PC 1809	197 010 01

Mounting plate stainless steel

Description		Order no.
Mounting plate made from stainless steel, incl. fixing screws		
	Enclosure type	
TK MPS-1811	TK PS/PC/AL 1811	197 006 01
TK MPS-1813	TK PS/PC 1813	197 011 01
TK MPS-1818	TK PS/PC/AL 1818	197 007 01
TK MPS-2518	TK PS/PC/AL 2518	197 008 01
TK MPS-3625	TK PS/PC/AL 3625	197 012 01

Accessories Empty enclosures TK

Standard rail NS 35

35 x 7,5 mm

Description		Order no.
Standard rail acc. to DIN EN 60715, 35 x 7.5, width 35 mm, incl. fixing screws		

	Enclosure type	Order no.
NS 35-81	TK PS/PC 1111/1309/1313/1809/1811 + TK AL 1111/1313/1811	198 081 01
NS 35-106	TK PS/PC 1309/1313 + TK AL 1111/1313	198 106 01
NS 35-144	TK PS/PC 1809/1811/1813/1818/2518 + TK AL 1811/1818	198 144 01
NS 35-216	TK PS/PC 2518/3625 + TK AL 2518/3625	198 216 01
NS 35-336	TK PS/PC/AL 3625	198 336 01

Standard rail TS 15

15 x 5 mm

Description		Order no.
Standard rail acc. to DIN EN 60715, 15 x 5, width 15 mm, incl. fixing screws		

	Enclosure type	Order no.
TS 15-49,5	TK PS/PC 77/97 + TK AL 77	197 049 01
TS 15-80	TK PS/PC 97/99/1111/1309/1313/1809/1811 + TK AL 99/1111/1313/1811	197 080 01
TS 15-92	TK PS/PC 1111/1309/1313/1809/1811 + TK AL 1111/1313/1811	197 092 01
TS 15-111	TK PS/PC 1309/1313 + TK AL 1111/1313	197 111 01
TS 15-154	TK PS/PC 1809/1811/1813/1818/2518 + TK AL 1818/2518	197 154 01

Spacer kit TK DST
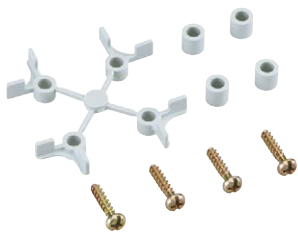
Description	Order no.
Spacer kit TK DST for creating a space between enclosure bottom and conductor or mounting plate 4 pieces spacing 6 mm, 4 pieces spacing 8 mm, incl. fixing screws for TK PS/PC	
TK DST	194 100 01

Mounting/PCB holder
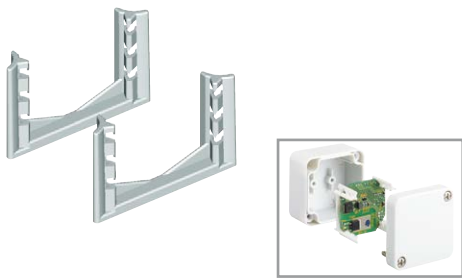
Description	Order no.
Mounting/PCB holder made of plastic, suitable for assembly without tools in TK 55 and TK 75	
TK MLH-55/75 Set = 25 pairs	194 110 01

External fixing plate

Description	Order no.
External mounting plate made of plastic, for TK 55 and TK 75	
TK ABP-55/75 Set = 10 pcs.	194 002 01

Empty enclosures

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External hinge set

Description	Order no.
External hinge set for retrofitting the enclosure cover to hinged door, incl. 2 hinges, fixing screws, cover plugs and drilling template	
ASS-kl External hinge set small, TK PS/PC 77 bis TK PS/PC 1809	190 002 01
ASS-gro External hinge set large, from TK PS/PC 1811 and from AKL/AKi 1	190 005 01

Padlock kit

Description	Order no.
Padlock kit for upgrading the housing cover to lockable hinged door, incl. padlock, 2 hinges, fixing screws, cover plugs and drilling template	
VSG from TK PS/PC 1811 onwards and AKL/AKi 1	190 100 01

External fixing lugs set

Description	Order no.
External fixing lugs set made of plastic, for all TK PS/PC, RK enclosures, from TK PS/PC 77	
TK ABL Set = 4 pcs.	194 001 01

Mounting material

Description	Order no.
Mounting material made of plastic, for clipping on the standard cover screw, from TK PS/PC 77	
HBA Set = 4 pcs.	190 001 01

Partition wall

Description	Order no.
divider made of plastic, suitable for the separation of two electric circuits	
TK TW-n for TK PS/PC 1309-6 and TK PS/PC 1809-6	196 009 01
TK TW-h for TK PS/PC 1309-8 and TK PS/PC 1809-8	196 909 01

Accessories Empty enclosures TK

Description	Order no.

External hinge set

For retrofitting the enclosure cover to hinged door. Incl. 2 hinges, fixing screws, masking-off strips and drilling template

		Order no.
AL ASS	for AL/ALR 1010, 1212, 1616, 2212, 2320, 2616, 2823, 3323, 3616, for TK AL 1313, 1811, 1818, 2518, 3625	154 210 01

External fixing lugs

External fixing lugs

		Order no.
AL ALS-kl	for AL/ALR 88, 1006, 1010, 1308, 1506, 1808, for TK AL 77/99	154 004 01
AL ALS-gro	for AL/ALR 1212, 1616, 2212, 2320 , 2616, 2823, 3323, 3616, for TK AL 1111, 1313, 1811, 1818, 2518, 3625	154 006 01

Handle

Handle made of plastic, for mobile use of housing, screw spacing 120 mm

		Order no.
TG 2	with self-cutting screws	191 805 01
TG 1	with screws M6 and nuts made of plastic	191 800 01

Combi set

IP66

Combi set, for side connection of enclosures with metric entries, complete with lock nuts and intermediate wall seal inserts

	f. wall thicknesses/ mm	Thread lenght/mm	Order no.
KS M20	2 x 3,0	12	192 020 01
KS M25-gro	2,0 x 8,0	22	192 026 01
KS M25	2 x 3,0	12	192 025 01
KS M32	2 x 3,5	14	192 032 01

Combi set
176 x 65 mm
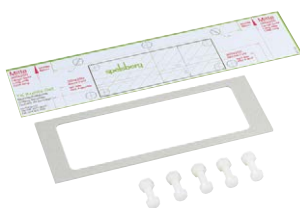
IP66

Combi set for combining enclosures from TK PS/PC 1811 (except for flat design), complete with screws and nuts made from plastic, intermediate sealing and drilling template

	Order no.
TK KS GRO	192 018 01

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Special screwdriver

Description	Order no.
Special screwdriver for actuating the TK lid screw	
TK SDR T40	195 018 01

Cover screw

Cover screw as additional screw, from TK PS/PC 77

	for cover	Color	
TK DS-ku/g	flat	Grey	190 010 01
TK DS-ku/sw	flat	black	190 012 01
TK DS-lg/g	high	Grey	190 011 01
TK DS-lg/sw	high	black	190 013 01

Hole cutter
79 mm

Hole cutter	
LFR Through opening: M16-32, drill hole: 16.5-32.5 mm	195 995 01

Installation screw

Self-cutting screw, for mounting assembly parts in TK PC 55 / 75 / 1005	
TK ES-55/75/1005	190 200 01

Cover screw with special head

Cover screw prevents opening by unauthorised persons, can be sealed additionally, special screwdriver required, set=12 pieces, from TK PS/PC 77

	for cover	Color	
TK DS-ku/g/T40	flat	Grey	190 014 01
TK DS-ku/sw/T40	flat	black	190 015 01
TK DS-lg/g/T40	high	Grey	190 016 01
TK DS-lg/sw/T40	high	black	190 017 01

Accessories Empty enclosures TK

Empty enclosures
TG PC

▷ **Ammonia resistance**

▷ **Resistance against stable air for minimum 20 years**
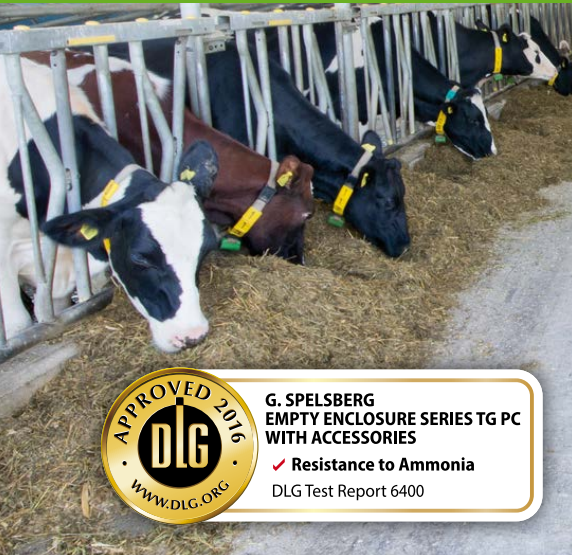
G. SPELSBERG
EMPTY ENCLOSURE SERIES TG PC
WITH ACCESSORIES
✔ **Resistance to Ammonia**
DLG Test Report 6400

APPROVED 2016
WWW.DLG.ORG

- 9 basic enclosures in various heights
- High-quality design with a stylish high-gloss appearance
- Grey or transparent covers
- Plastic, choice of ABS (TG ABS) or polycarbonate (TG PC)

- Smooth side walls for added flexibility
- Attachment points in the usual positions
- Time-saving stainless steel snap lock
- Cover screws available on request

IP67 IP66	IK07	□	690V AC	1000V DC	halogen-free

IP67 IP66	IK08	□	690V AC	1000V DC	c UL us	halogen-free	iQ	DLG

Empty enclosure TG ABS / TG PC

www.spelsberg.com

- ▶ Recess in cover facilitates placement of decals or membrane keypads
- ▶ Individual choice of attachments
- ▶ Internal hinges

Base and cover: **ABS**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG ABS 88-6-o	55	100 403 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG PC 88-6-o	55	200 403 01

Base: **ABS**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG ABS 88-6-to	55	101 003 01

Base: **Polycarbonate**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG PC 88-6-to	55	201 003 01

TG 88-9   84 x 82 mm

Base and cover: **ABS**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG ABS 88-9-o	85	100 903 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG PC 88-9-o	85	200 903 01

Base: **ABS**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG ABS 88-9-to	85	101 503 01

Base: **Polycarbonate**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG PC 88-9-to	85	201 503 01

TG Empty enclosures | Without knockouts

All dimensions in mm

Maximum possible metric
through openings per box
side

M	A/C	B/D
12	3	2
16	2	1
20	1	1
25	-	-
32	-	-
40	-	-
50	-	-
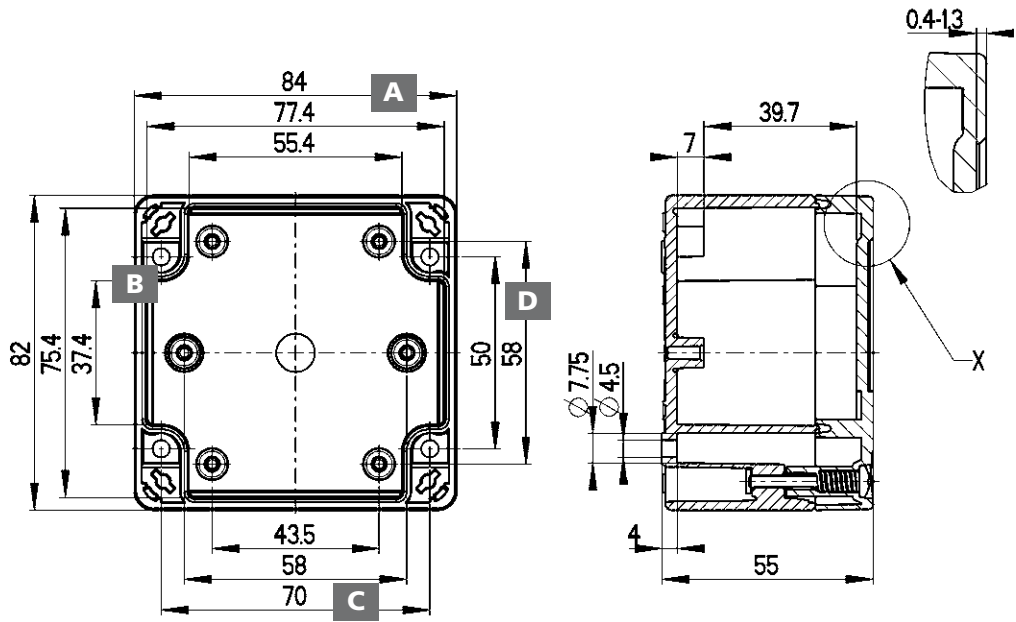
Maximum possible metric
through openings per box
side

M	A/C	B/D
12	6	4
16	4	2
20	2	2
25	1	1
32	1	-
40	-	-
50	-	-
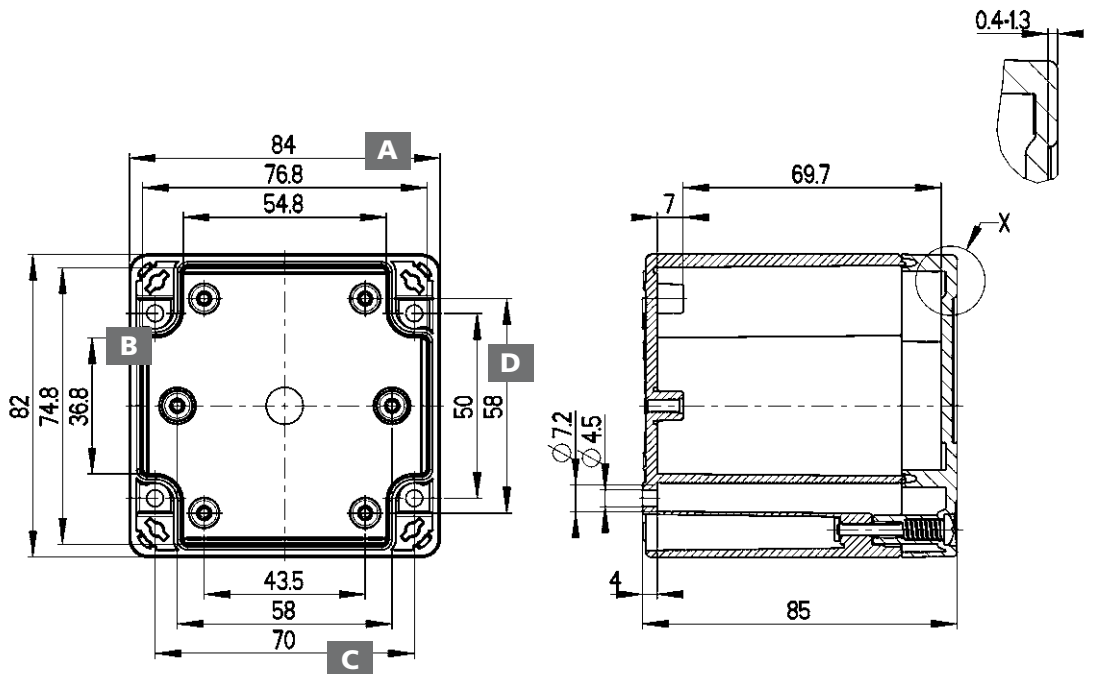
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Base and cover: **ABS**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG ABS 1208-6-o	55	100 404 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG PC 1208-6-o	55	200 404 01

Base: **ABS**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG ABS 1208-6-to	55	101 004 01

Base: **Polycarbonate**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG PC 1208-6-to	55	201 004 01

Base and cover: **ABS**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG ABS 1208-9-o	85	100 904 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG PC 1208-9-o	85	200 904 01

Base: **ABS**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG ABS 1208-9-to	85	101 504 01

Base: **Polycarbonate**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG PC 1208-9-to	85	201 504 01

TG Empty enclosures | Without knockouts

All dimensions in mm

Maximum possible metric
through openings per box
side

M	A/C	B/D
12	5	2
16	3	1
20	2	-
25	2	-
32	-	-
40	-	-
50	-	-
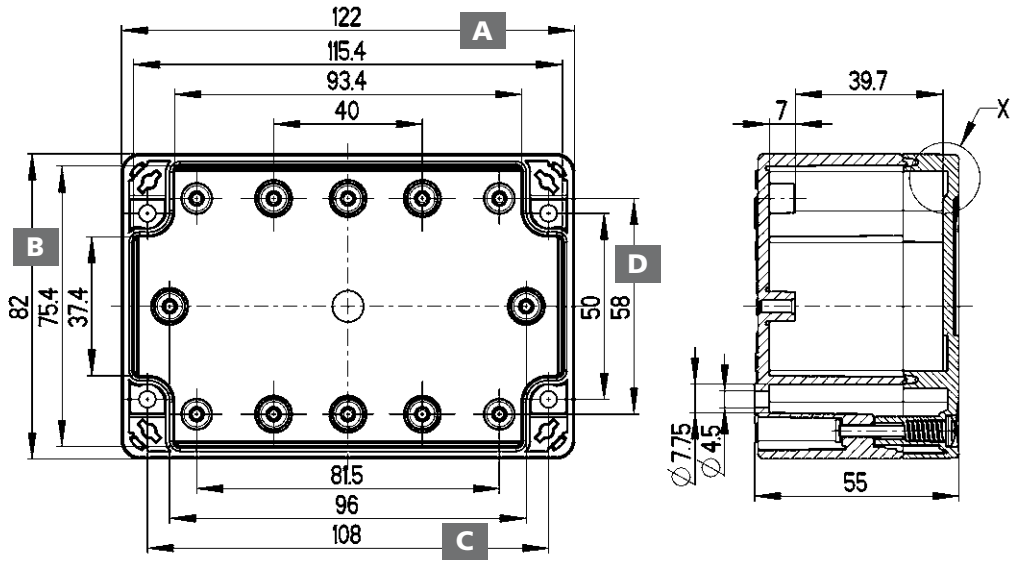
Maximum possible metric
through openings per box
side

M	A/C	B/D
12	12	4
16	6	2
20	6	1
25	3	1
32	2	-
40	1	-
50	-	-
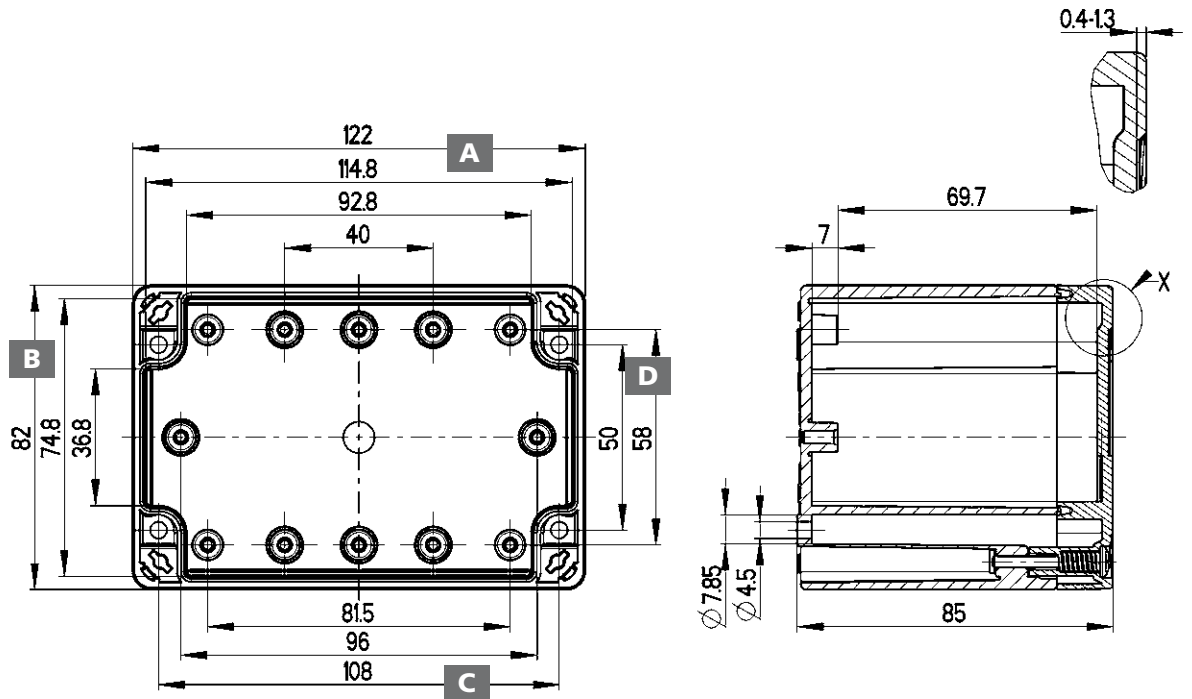
Empty enclosures

TG 1212-6   124 x 122 mm

Base and cover: **ABS**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG ABS 1212-6-o	55	100 405 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG PC 1212-6-o	55	200 405 01

Base: **ABS**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG ABS 1212-6-to	55	101 005 01

Base: **Polycarbonate**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG PC 1212-6-to	55	201 005 01

TG 1212-9   124 x 122 mm

Base and cover: **ABS**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG ABS 1212-9-o	85	100 905 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG PC 1212-9-o	85	200 905 01

Base: **ABS**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG ABS 1212-9-to	85	101 505 01

Base: **Polycarbonate**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG PC 1212-9-to	85	201 505 01

TG Empty enclosures | Without knockouts

All dimensions in mm

Maximum possible metric
through openings per box
side

M	A/C	B/D
12	6	5
16	3	3
20	3	2
25	2	2
32	-	-
40	-	-
50	-	-
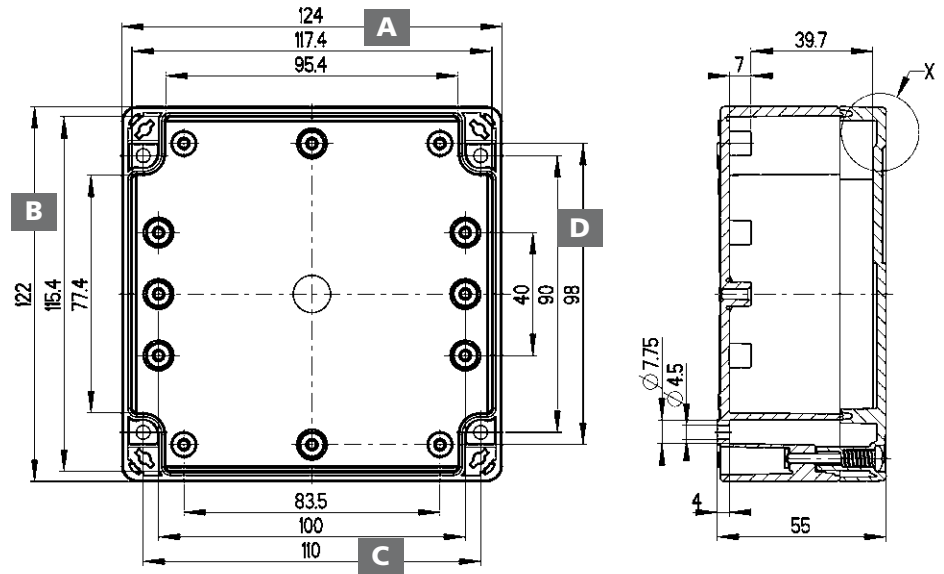
Maximum possible metric
through openings per box
side

M	A/C	B/D
12	12	9
16	6	6
20	6	4
25	3	2
32	2	1
40	1	1
50	1	-
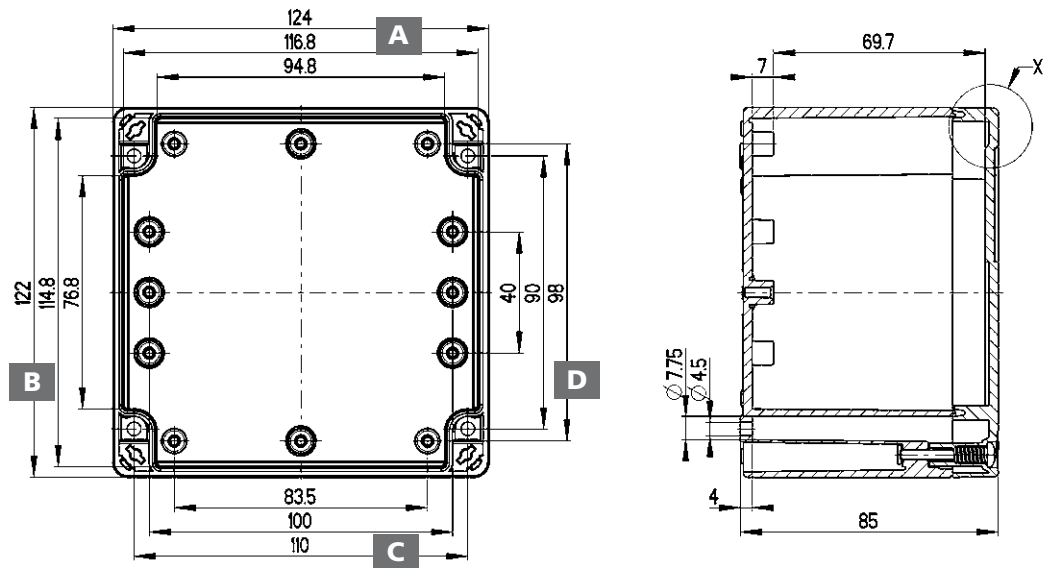
TG 1608-6   162 x 82 mm

Base and cover: **ABS**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG ABS 1608-6-o	55	100 406 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG PC 1608-6-o	55	200 406 01

Base: **ABS**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG ABS 1608-6-to	55	101 006 01

Base: **Polycarbonate**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG PC 1608-6-to	55	201 006 01

TG 1608-9   162 x 82 mm

Base and cover: **ABS**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG ABS 1608-9-o	85	100 906 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG PC 1608-9-o	85	200 906 01

Base: **ABS**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG ABS 1608-9-to	85	101 506 01

Base: **Polycarbonate**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG PC 1608-9-to	85	201 506 01

TG Empty enclosures | Without knockouts

All dimensions in mm

Maximum possible metric
through openings per box
side

M	A/C	B/D
12	9	2
16	5	1
20	4	1
25	-	-
32	-	-
40	-	-
50	-	-
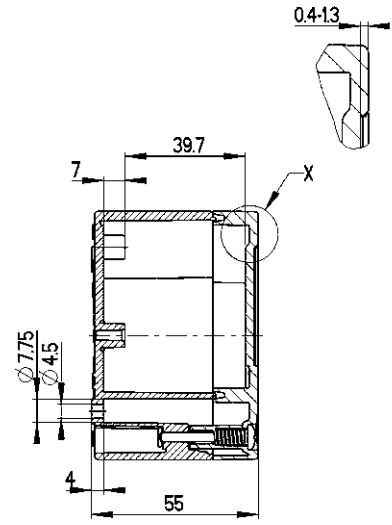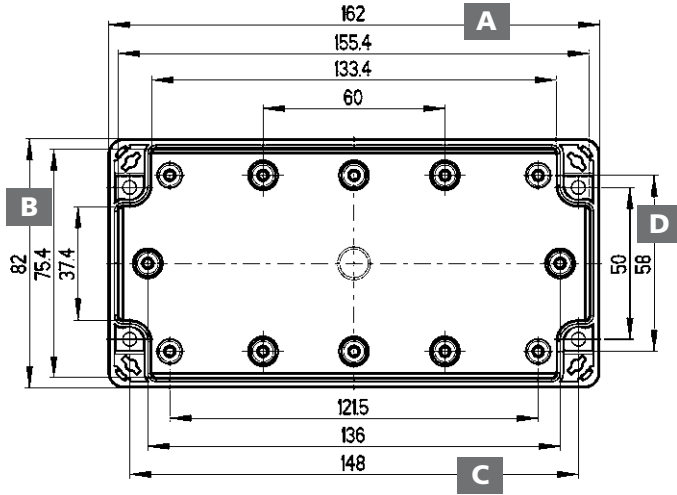
Maximum possible metric
through openings per box
side

M	A/C	B/D
12	18	4
16	10	2
20	8	2
25	4	1
32	3	-
40	2	-
50	2	-

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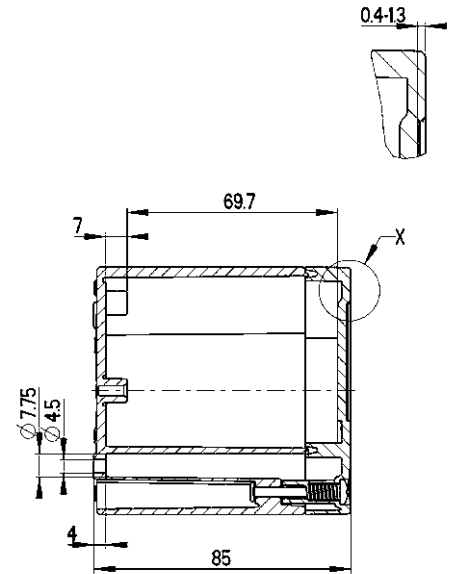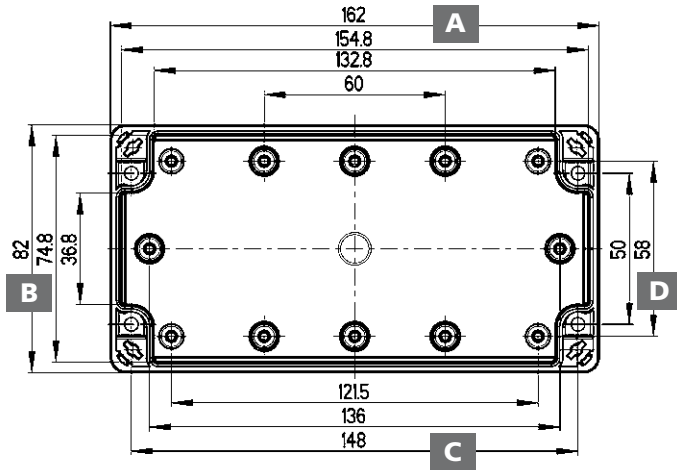
TG 1612-9   162 x 122 mm

Base and cover: **ABS**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG ABS 1612-9-o	90	100 407 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG PC 1612-9-o	90	200 407 01

Base: **ABS**, grey, similar RAL 7035
Cover: **Polycarbonate**, <u>transparent</u>

Enclosure type	Height	Order No.
TG ABS 1612-9-to	90	101 007 01

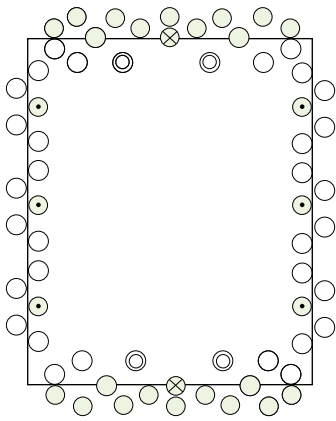Base: **Polycarbonate**, grey, similar RAL 7035
Cover: **Polycarbonate**, <u>transparent</u>

Enclosure type	Height	Order No.
TG PC 1612-9-to	90	201 007 01

TG 2012-8   202 x 122 mm

Base and Cover: **ABS**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG ABS 2012-8-o	75	100 408 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG PC 2012-8-o	75	200 408 01

Base: **ABS**, grey, similar RAL 7035
Cover: **Polycarbonate**, <u>transparent</u>

Enclosure type	Height	Order No.
TG ABS 2012-8-to	75	101 008 01

Base: **Polycarbonate**, grey, similar RAL 7035
Cover: **Polycarbonate**, <u>transparent</u>

Enclosure type	Height	Order No.
TG PC 2012-8-to	75	201 008 01

TG Empty enclosures | Without knockouts

All dimensions in mm

Maximum possible metric through openings per box side

M	A/C	B/D
12	9	2
16	5	1
20	4	1
25	-	-
32	-	-
40	-	-
50	-	-
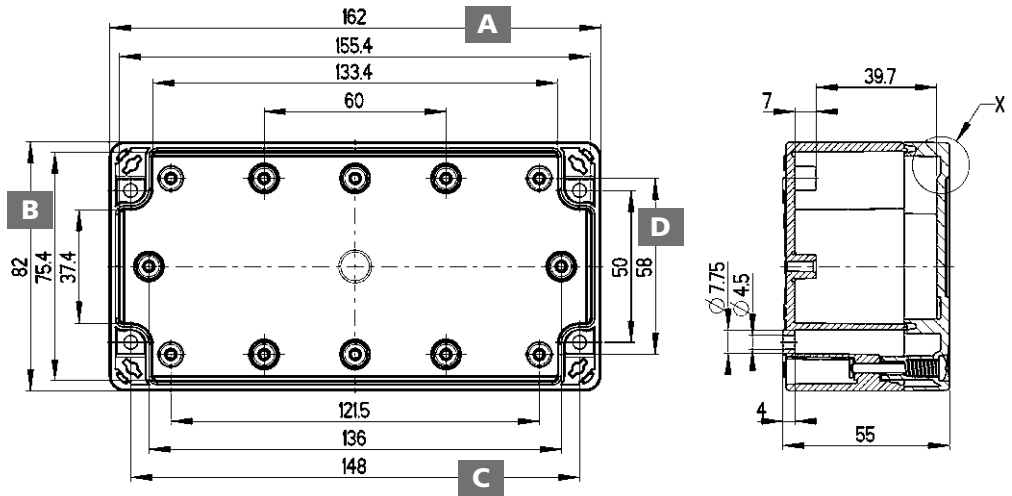
Maximum possible metric through openings per box side

M	A/C	B/D
12	16	6
16	8	3
20	5	2
25	4	2
32	-	-
40	-	-
50	-	-
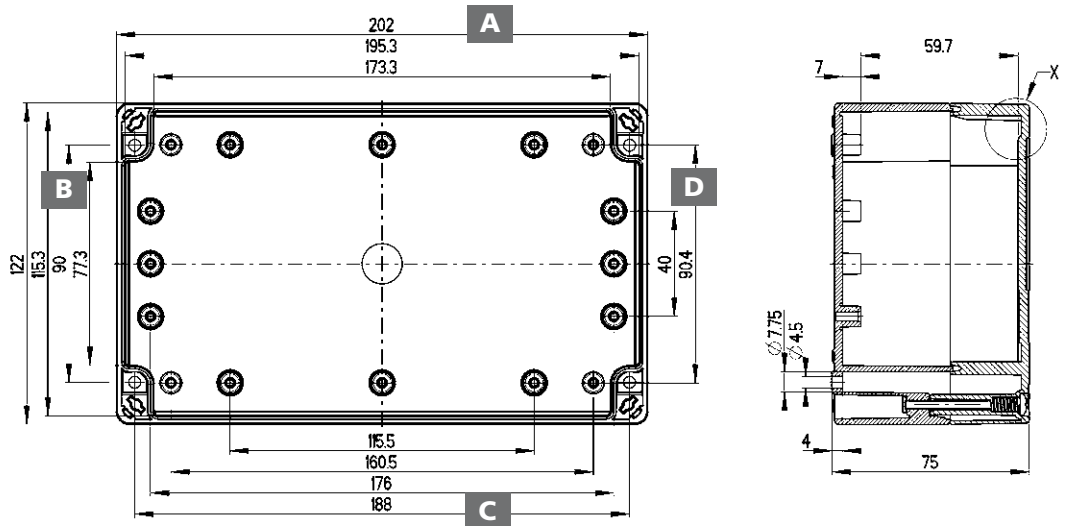
Base and cover: **ABS**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG ABS 2012-9-o	90	100 908 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG PC 2012-9-o	90	200 908 01

Base: **ABS**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG ABS 2012-9-to	90	101 508 01

Base: **Polycarbonate**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG PC 2012-9-to	90	201 508 01

TG 2015-9   202 x 152 mm

Base and cover: **ABS**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG ABS 2015-9-o	90	100 409 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG PC 2015-9-o	90	200 409 01

Base: **ABS**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG ABS 2015-9-to	90	101 009 01

Base: **Polycarbonate**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG PC 2015-9-to	90	201 009 01

TG Empty enclosures | Without knockouts

All dimensions in mm

Maximum possible metric through openings per box side

M	A/C	B/D
12	16	6
16	12	3
20	5	3
25	4	2
32	3	1
40	-	-
50	-	-
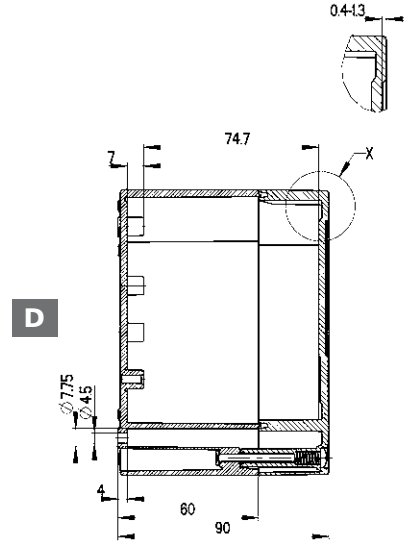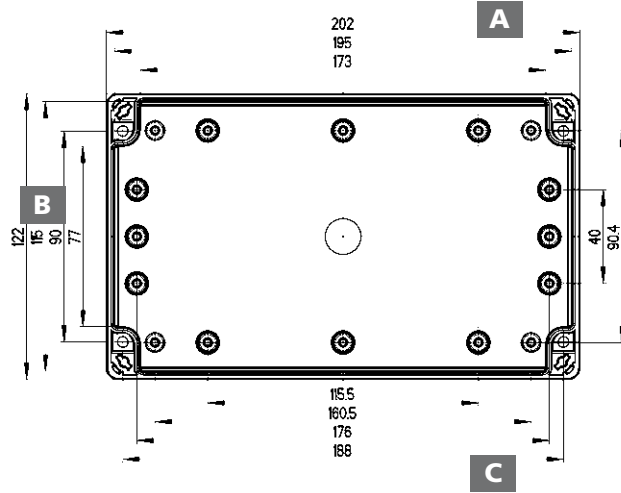
Maximum possible metric through openings per box side

M	A/C	B/D
12	16	10
16	12	8
20	5	4
25	4	3
32	3	2
40	-	-
50	-	-

Base and cover: **ABS**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG ABS 2516-9-o	90	100 412 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG PC 2516-9-o	90	200 412 01

Base: **ABS**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG ABS 2516-9-to	90	101 012 01

Base: **Polycarbonate**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG PC 2516-9-to	90	201 012 01

TG 2516-12   252 x 162 mm

Base and cover: **ABS**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG ABS 2516-12-o	120	100 912 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG PC 2516-12-o	120	200 912 01

Base: **ABS**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG ABS 2516-12-to	120	101 512 01

Base: **Polycarbonate**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG PC 2016-12-to	120	201 512 01

TG Empty enclosures | Without knockouts

All dimensions in mm

Maximum possible metric through openings per box side

M	A/C	B/D
12	20	10
16	12	8
20	6	3
25	4	3
32	4	2
40	2	2
50	-	-
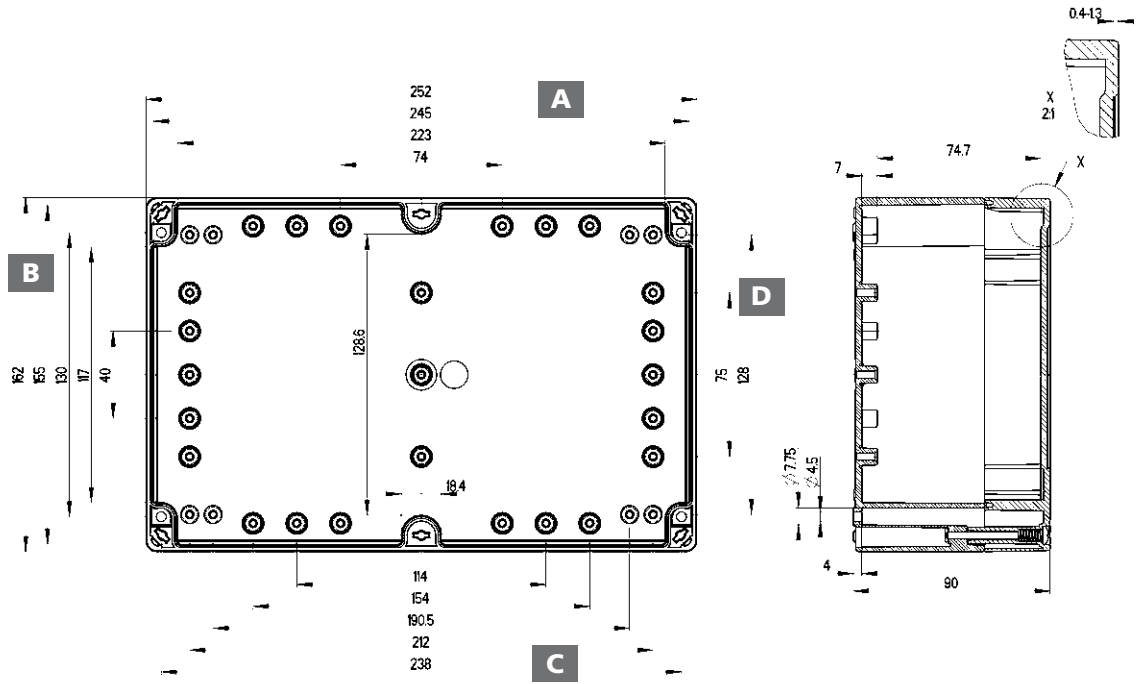
Maximum possible metric through openings per box side

M	A/C	B/D
12	40	20
16	18	12
20	12	8
25	8	6
32	6	3
40	2	2
50	2	1

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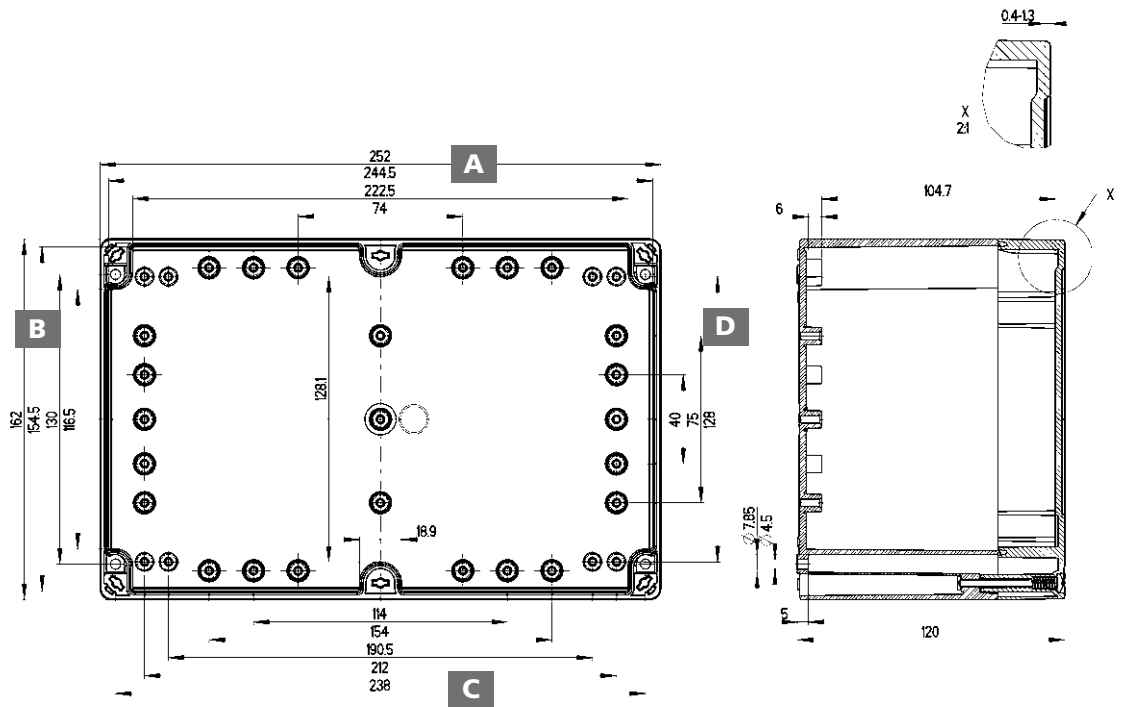
TG 3023-9　　302 x 232 mm

Base and cover: **ABS**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG ABS 3023-9-o	90	100 413 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG PC 3023-9-o	90	200 413 01

Base: **ABS**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG ABS 3023-9-to	90	101 013 01

Base: **Polycarbonate**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG PC 3023-9-to	90	201 013 01

TG 3023-11　　302 x 232 mm

Base and cover: **ABS**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG ABS 3023-11-o	110	100 913 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
TG PC 3023-11-o	110	200 913 01

Base: **ABS**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG ABS 3023-11-to	110	101 513 01

Base: **Polycarbonate**, grey, similar RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
TG PC 3023-11-to	110	201 513 01

TG Empty enclosures | Without knockouts

All dimensions in mm

Maximum possible metric
through openings per box
side

M	A/C	B/D
12	24	18
16	16	14
20	8	6
25	6	5
32	4	4
40	4	2
50	-	-
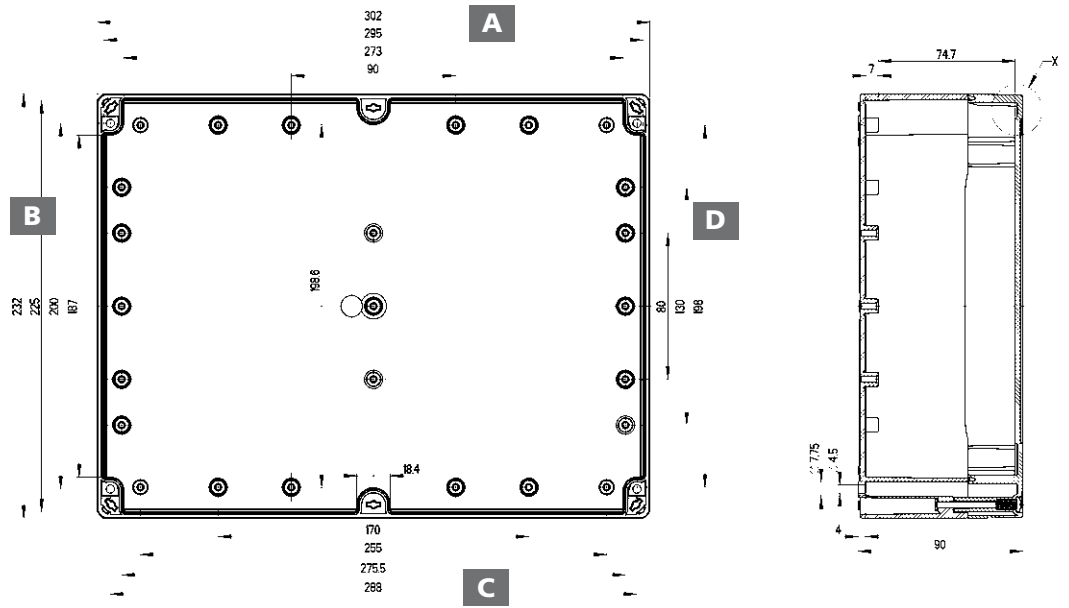
Maximum possible metric
through openings per box
side

M	A/C	B/D
12	36	27
16	26	20
20	16	12
25	12	9
32	6	4
40	4	3
50	2	2
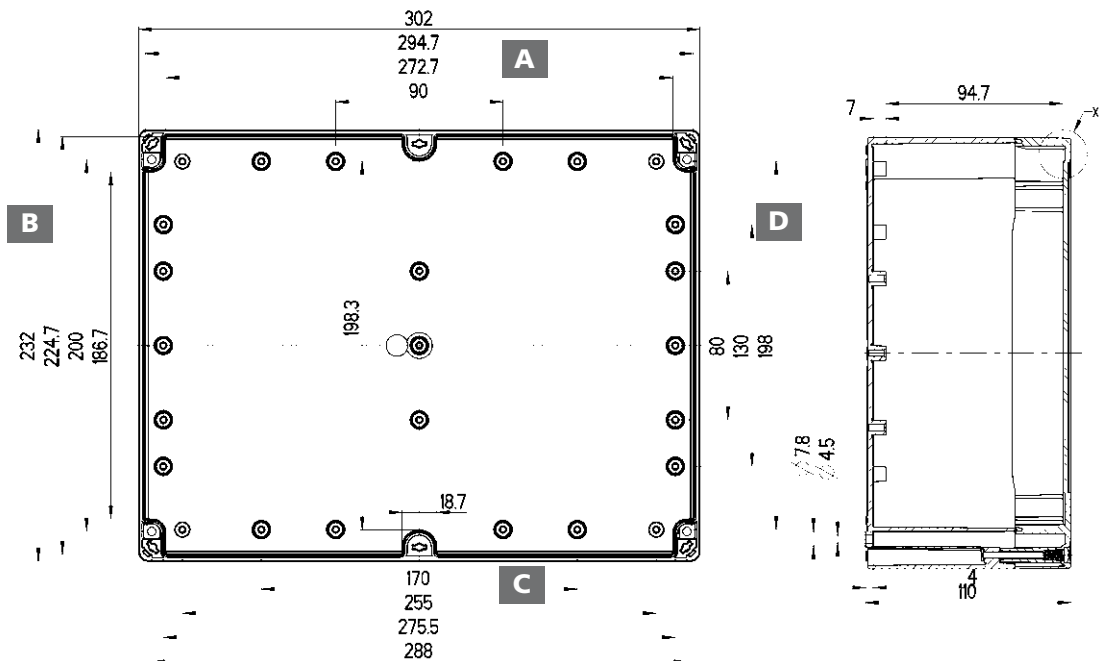
Mounting plate insulating material

Description		Order no.
Mounting plate made from insulating material		
	Enclosure type	
TG MPI-88	TG 88	186 003 01
TG MPI-1208	TG 1208	186 004 01
TG MPI-1212	TG 1212	186 005 01
TG MPI-1608	TG 1608	186 006 01
TG MPI-1612	TG 1612	186 007 01
TG MPI-2012	TG 2012	186 008 01
TG MPI-2015	TG 2015	186 009 01
TG MPI-2516	TG 2516	186 012 01
TG MPI-3023	TG 3023	186 013 01

Mounting plate stainless steel

Mounting plate made from stainless steel		
	Enclosure type	
TG MPS-88	TG 88	187 003 01
TG MPS-1208	TG 1208	187 004 01
TG MPS-1212	TG 1212	187 005 01
TG MPS-1608	TG 1608	187 006 01
TG MPS-1612	TG 1612	187 007 01
TG MPS-2012	TG 2012	187 008 01
TG MPS-2015	TG 2015	187 009 01
TG MPS-2516	TG 2516	187 012 01
TG MPS-3023	TG 3023	187 013 01

Standard rail NS 35
35 x 7,5 mm

Standard rail acc. to DIN EN 60715, 35 x 7.5, width 35 mm		
	Enclosure type	
NS 35-66	TG 88	198 068 01
NS 35-104	TG 1208	198 107 01
NS 35-108	TG 1212	198 110 01
NS 35-144/2	TG 1608, TG 1612	198 146 01
NS 35-184	TG 2012	198 186 01
NS 35-168	TG 2015	198 170 01
NS 35-220	TG 2516	198 222 01
NS 35-283,5	TG 3023	198 285 01

Standard rail TS 15
15 x 5 mm

Standard rail according to DIN EN 60715, 15 x 5 width		
	Enclosure type	
TS 15-66	TG 88	197 069 01
TS 15-104	TG 1208	197 107 01
TS 15-108	TG 1212	197 110 01
TS 15-144	TG 1608, TG 1612	197 146 01
TS 15-184	TG 2012	197 186 01
TS 15-168	TG 2015	197 170 01
TS 15-220	TG 2516	197 222 01
TS 15-283,5	TG 3023	197 285 01

Accessories Empty enclosures TG

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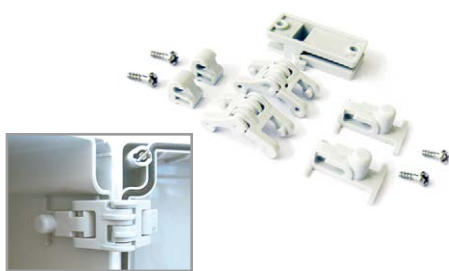
	Description	Order no.
Interior hinge set	Interior hinge set for retrofitting the housing cover to a hinged door, incl. 2 hinges, fixing screws and drilling template	
application example	**TG ISS** for TG 1612, TG 2012, TG 2015, TG 2516, TG 3023	182 001 01
External fixing lugs set	External fixing lugs set, made of plastic	
	TG ABL for all TG enclosures, set = 4 pcs.	182 002 01
Sealing set	Sealing set	
application example	**TG PST1** for TG 88, TG 1208, TG 1212, TG 1608	182 004 01
	TG PST2 for TG 1612, TG 2012, TG 2015, TG 2516, TG 3023	182 005 01
Cover retainer	Spare cover retainer, set = 10 pcs.	
	TG DVS-42 for TG 88, TG 1208, TG 1212, TG 1608 **TG DVS-57** for TG 1612, TG 2012, TG 2015, TG 2516, TG 3023	182 006 01 182 007 01
Hole cutter 79 mm	Hole cutter	
	LFR Through opening: M16-32, drill hole: 16.5-32.5 mm	195 995 01

- 4 basic enclosures up to 600 x 300 mm, with two different cover heights
- Box: choice of polystyrene (AKL) or glass-fibre-reinforced polycarbonate, grey, similar to RAL 7035
- Cover: grey (polystyrene or polycarbonate) or transparent (polycarbonate)
- Side walls with metric knockouts
- Can be combined up to protection class IP 65 with AK / AKi small distributors from AK 14

IP65	IK07	□	690V AC	1000V DC	halogen-free		
IP65	IK08	□	690V AC	1000V DC	halogen-free	iQ	Industrial Quality

Empty enclosures AKL / AKi-L

External brackets ▶

External hinges ▶

Easy combination ▶

Empty enclosures AKL / AKi-L

Base and cover: **Polystyrene**, grey, similar RAL 7035

Enclosure type	Height	Order No.
AKL 1-g	132	740 401 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
AKi 1-g	132	741 401 01

Entries end: 15 x M20, 2 x M20/M25, 1 x M32/M40 **|** Entries on each side: 4 x M20, 1 x M25/M32

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
AKL 1-t	132	744 001 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
AKi 1-t	132	745 001 01

Entries end: 15 x M20, 2 x M20/M25, 1 x M32/M40 **|** Entries on each side: 4 x M20, 1 x M25/M32

Base and cover: **Polystyrene**, grey, similar RAL 7035

Enclosure type	Height	Order No.
AKL 2-g	132	740 402 01
AKL 2-gh	209	742 902 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
AKi 2-g	132	741 402 01
AKi 2-gh	209	743 902 01

Entries end: 15 x M20, 2 x M20/M25, 1 x M32/M40 **|** Entries on each side: 8 x M20, 2 x M25/M32

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
AKL 2-t	132	744 002 01
AKL 2-th	209	746 902 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
AKi 2-t	132	745 002 01
AKi 2-th	209	747 902 01
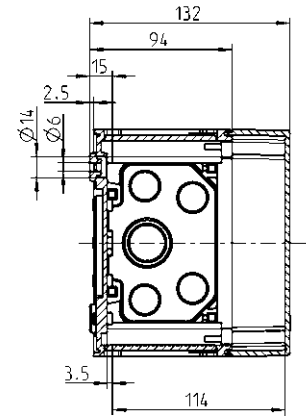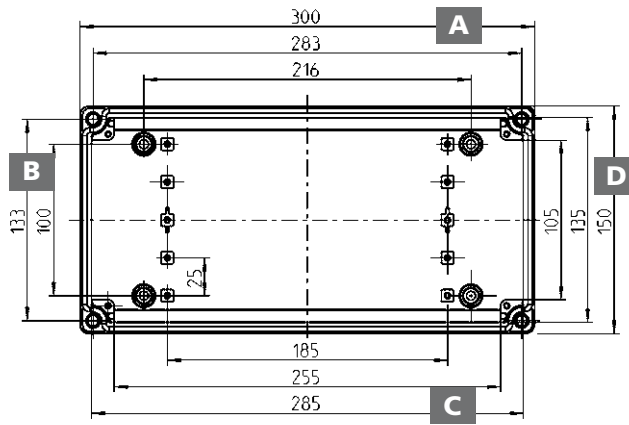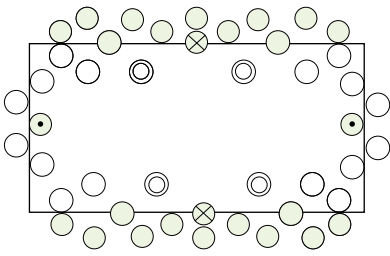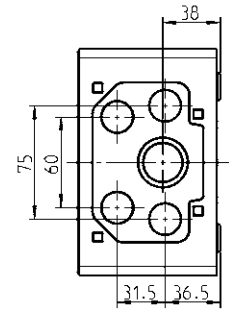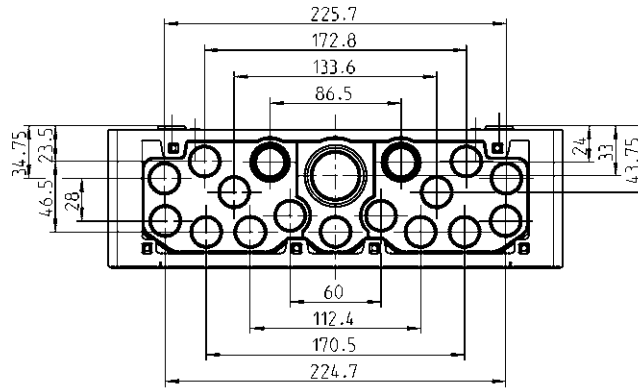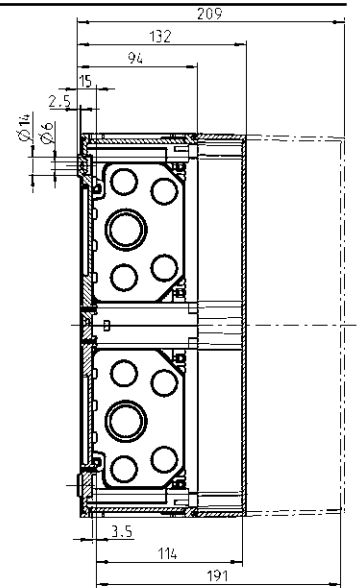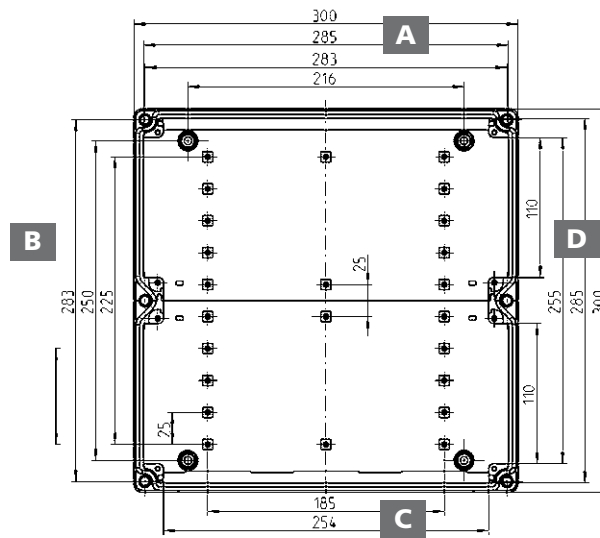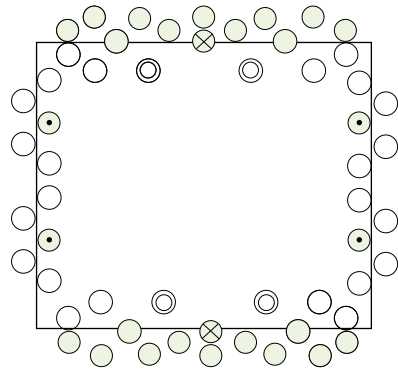
Entries end: 15 x M20, 2 x M20/M25, 1 x M32/M40 **|** Entries on each side: 8 x M20, 2 x M25/M32

AKL / AKi-L **Empty enclosures**

All dimensions in mm

With knockouts

Metric types

◯ = M 20

◎ = M 20/25

⊙ = M 25/32

⊗ = M 32/40

With knockouts

Metric types

◯ = M 20

◎ = M 20/25

⊙ = M 25/32

⊗ = M 32/40

Empty enclosures

227
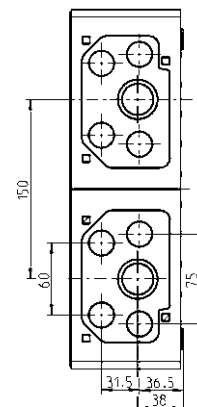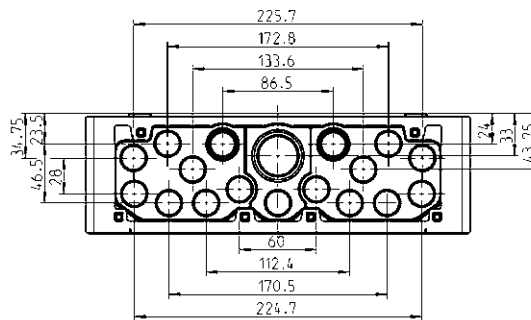
Base and cover: **Polystyrene**, grey, similar RAL 7035

Enclosure type	Height	Order No.
AKL 3-g	132	740 403 01
AKL 3-gh	209	742 903 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
AKi 3-g	132	741 403 01
AKi 3-gh	209	743 903 01

Entries end: 15 x M20, 2 x M20/M25, 1 x M32/M40 | Entries on each side: 12 x M20, 3 x M25/M32

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
AKL 3-t	132	744 003 01
AKL 3-th	209	746 903 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
AKi 3-t	132	745 003 01
AKi 3-th	209	747 903 01

Entries end: 15 x M20, 2 x M20/M25, 1 x M32/M40 | Entries on each side: 12 x M20, 3 x M25/M32

Base and cover: **Polystyrene**, grey, similar RAL 7035

Enclosure type	Height	Order No.
AKL 4-g	132	740 404 01
AKL 4-gh	209	742 904 01

Base and cover: **Polycarbonate**, grey, similar RAL 7035

Enclosure type	Height	Order No.
AKi 4-g	132	741 404 01
AKi 4-gh	209	743 904 01

Entries end: 15 x M20, 2 x M20/M25, 1 x M32/M40 | Entries on each side: 16 x M20, 4 x M25/M32

Base: **Polystyrene**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
AKL 4-t	132	744 004 01
AKL 4-th	209	746 904 01

Base: **Polycarbonate**, grey, similar to RAL 7035
Cover: **Polycarbonate**, transparent

Enclosure type	Height	Order No.
AKi 4-t	132	745 004 01
AKi 4-th	209	747 904 01
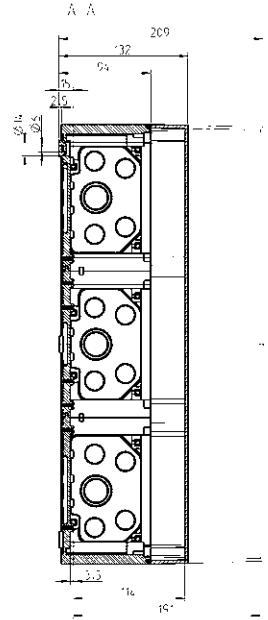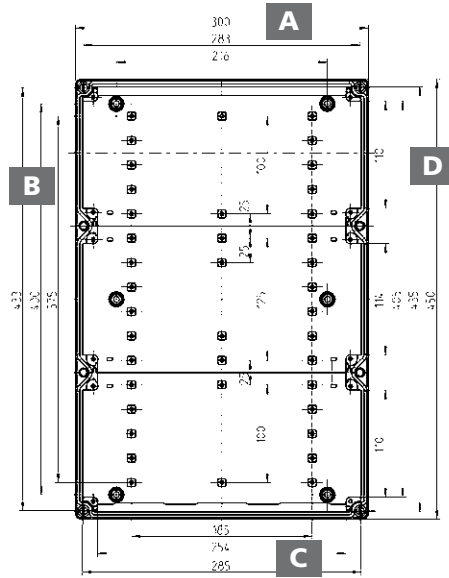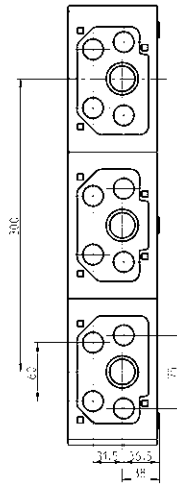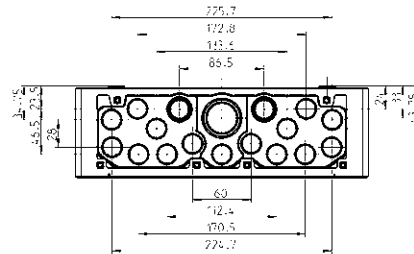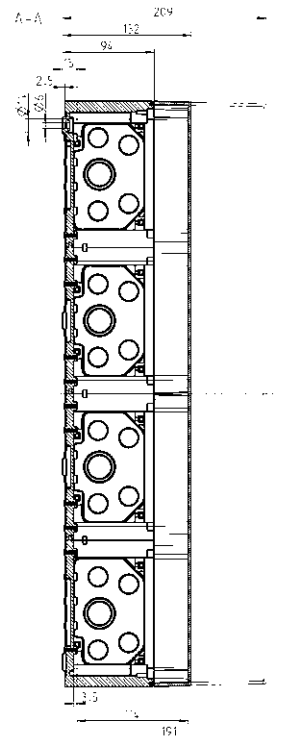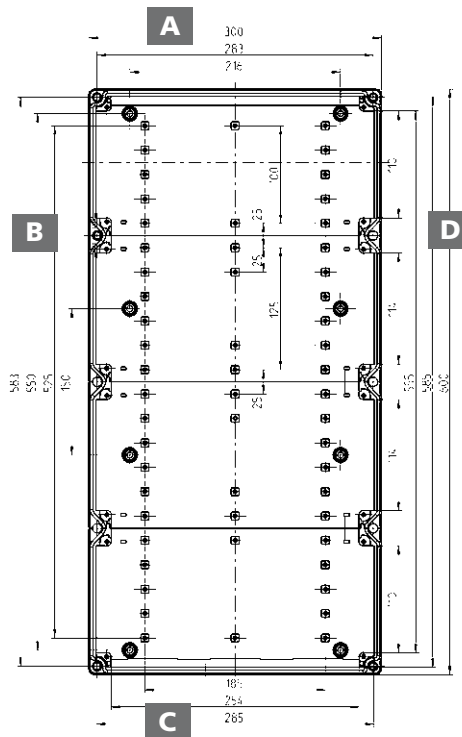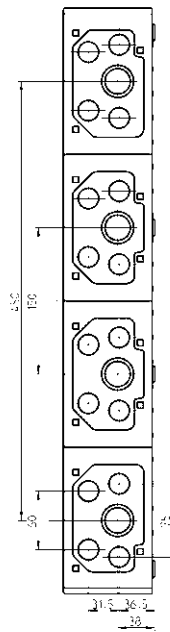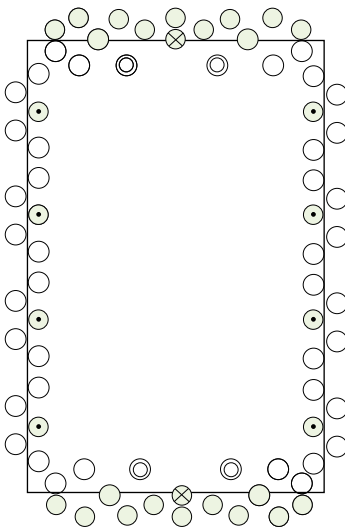
Entries end: 15 x M20, 2 x M20/M25, 1 x M32/M40 | Entries on each side: 16 x M20, 4 x M25/M32

AKL / AKi-L **Empty enclosures**

All dimensions in mm

With knockouts

Metric types

○ = **M 20**
◎ = **M 20/25**
⊙ = **M 25/32**
⊗ = **M 32/40**

With knockouts

Metric types

○ = **M 20**
◎ = **M 20/25**
⊙ = **M 25/32**
⊗ = **M 32/40**

Empty enclosures
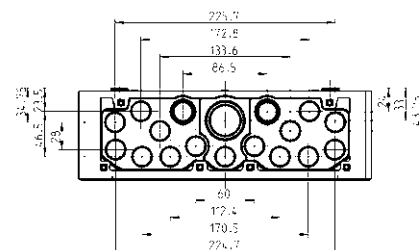
Mounting plate insulating material

Description	Order no.
Mounting plate made from insulating material, incl. fixing screws	

	Enclosure type	Order no.
AK MPI 1	AKL/AKi 1-4	795 001 01
AK MPI 2	AKL/AKi 2-4	795 002 01
AK MPI 3	AKL/AKi 3-4	795 003 01
AK MPI 4	AKL/AKi 4	795 004 01

Mounting plate stainless steel
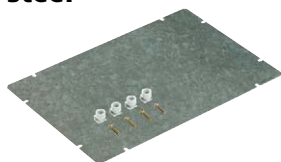
Description	
Mounting plate made from stainless steel, incl. fixing screws	

	Enclosure type	Order no.
AK MPS 2	AKL/AKi 2-4	795 012 01
AK MPS 3	AKL/AKi 3-4	795 013 01
AK MPS 4	AKL/AKi 4	795 014 01

Standard rail NS 35

Standard rail acc. to DIN EN 60715, 35 x 7.5, width 35 mm

	Order no.
AK NS35-250 from 300 x 300 mm, length 250 mm, including spacers	562 735 01
NS35-216/3 universal floor fixing, length 216 mm, with fixing screws	795 030 01
AK NS35-406 universal floor fixing, incl. fixing screws, length 406 mm	795 045 01
AK NS35-556 universal floor fixing, incl. fixing screws, length 556 mm	795 060 01

Support for standard rails

Carrier for standard rails acc. to DIN EN 60715, 35 x 7.5 mm, set = 10 pcs.

	Height	Order no.
TR NS35-20	20	795 020 01
TR NS35-34	34,5	795 034 01
TR NS35-42	42,5	795 042 01
TR NS35-58	58,5	795 058 01
TR NS35-64	64	795 064 01
TR NS35-91	91	795 091 01

Carrier NS fixing screws

fixing screws for 1 TR NS35-xx, set of 30 pieces

	Order no.
SR NS35 Fixing screws for 1 support set TR NS35/xx	795 413 01

Accessories Empty enclosures AKL / AKi-L

	Description	Order no.

KF 12 hinged window
228 x 80 mm

`IP65`

Hinged window, for fitting to enclosure cover, for maximum 12 distribution units à 17.5 mm, with transparent hinged window, frame with sealing on both sides, with drilling template and fixing screws

KF 12	567 412 01

SF 12 inspection window
228 x 80 mm

`IP65`

Inspection window, for fitting to enclosure cover, transparent inspection glass, with drilling template and fixing screws

SF 12	568 012 01

AK combi set
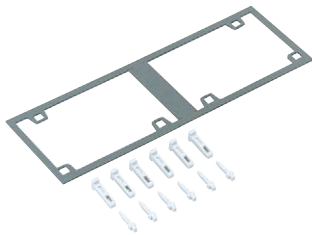
`IP65`

Combi set, for horizontal or vertical combination of all AK enclosures from 300 x 150 mm, complete with wedge connectors and intermediate sealing for 150 and 300 mm enclosure sides, each 300 mm = 1 combi set

AK KS-IP65	791 001 01

AK combi set

`IP30`

Combi set without intermediate enclosure seal, for horizontal or vertical combination of all AK enclosures from 300 x 150 mm, 1 set = 10 wedge connectors

AK KS-IP30	591 100 01

Combi connector

`IP54`

Combi connector, for connecting enclosures, thermoplastic

	f. wall thicknesses/mm	
KST M32	1,5 - 4,0	193 032 01
KST M25-33	1,5 - 4,0	193 026 01
KST M25-17	1,5 - 4,0	193 025 01

Empty enclosures

Accessories Empty enclosures AKL / AKi-L

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Combi set

	Description			Order no.
IP66	Combi set, for side connection of enclosures with metric entries, complete with lock nuts and intermediate wall seal inserts			

	f. wall thicknesses/ mm	Thread lenght/mm	
KS M20	2 x 3,0	12	192 020 01
KS M25	2 x 3,0	12	192 025 01
KS M25-gro	2,0 x 8,0	22	192 026 01
KS M32	2 x 3,5	14	192 032 01

AK Mounting flange

Enclosure wall, for installation in the components of the AK enclosure system for 300 mm wide end walls, with cable covers as standard

	Order no.
AK ABF 1 with pre-embossing, 2 x M32 / M40 / M50, 1 x M40 / M50 / M63	795 048 01
AK ABF 2 Smooth for self-drilling	795 050 01

AKi Mounting flange

Enclosure wall, for attachment to components of AKi enclosure system to 300 mm wide sides, with cable covers as standard

	Order no.
AKi ABF 1 with pre-embossing, 2 x M32 / M40 / M50, 1 x M40 / M50 / M63	796 051 01
AKi ABF 2 Smooth for self-drilling	796 050 01

Padlock kit

Padlock kit for upgrading the housing cover to lockable hinged door, incl. padlock, 2 hinges, fixing screws, cover plugs and drilling template

	Order no.
VSG from TK PS/PC 1811 onwards and AKL/AKi 1	190 100 01

Hinge set

External hinge set for retrofitting the enclosure cover to hinged door, incl. 2 hinges, fixing screws, cover plugs and drilling template

	Order no.
ASS-gro External hinge set large, from TK PS/PC 1811 and from AKL/AKi 1	190 005 01

Accessories Empty enclosures AKL / AKi-L

Partition wall

Description	Order no.
Partition wall, for installation in the components of the AK enclosure system, from AK 28 / AKL 2 / AKi 2, universal application for various enclosure heights, with break-out openings, grey	
AK TW	797 910 01

AK External attachment set

Description	Order no.
External fixing lugs, for mounting separate enclosures or small units on flat wall surfaces, can be fixed to the box base at an angle of 0°, 45°, or 90°, wall gap 7 mm, material stainless steel, suitable for all AK enclosures from 300 mm front,	
AK ABL-ES Set = 4 pcs.	793 004 01

Z-wall profile

Description	Order no.
Z-wall profile, length 2 m, with 8 M6 cylinder screws and 8 captive push nuts, wall clearance 70 mm, material: galvanised steel	
ZPR	070 800 01

Empty enclosures

- 16 standard enclosure sizes up to 330 x 230 mm
- Powder coating to prevent corrosion
- Colour: silver grey, similar to RAL 7001
- Material: Aluminium die-cast

- Effective protection against electromagnetic interference (EMI) and electrostatic discharges (ESD)
- An even higher level of protection can be achieved by using conductive seals (available on request) between the components of the enclosure
- High resistance to chemicals
- Special designs on customer request

IP66   IK09   halogen-free   iQ

Industrial Quality

Empty enclosures AL

Empty enclosures AL		Dimensions (mm)
Enclosure type	Order No.	
AL 55-3	**150 001 01**	**50 x 45 x 30**
AL 66-3	**150 002 01**	**64 x 58 x 34**
AL 88-6	**150 005 01**	**80 x 75 x 57**
AL 1006-3	**150 003 01**	**98 x 64 x 34**
AL 1010-8	**150 008 01**	**100 x 100 x 81**
AL 1212-8	**150 009 01**	**122 x 120 x 81**
AL 1308-6	**150 006 01**	**125 x 80 x 57**
AL 1506-3	**150 004 01**	**150 x 64 x 34**
AL 1616-9	**150 011 01**	**160 x 160 x 91**
AL 1808-6	**150 007 01**	**175 x 80 x 57**
AL 2212-8	**150 010 01**	**220 x 120 x 81**
AL 2320-11	**150 014 01**	**230 x 200 x 111**
AL 2616-9	**150 012 01**	**260 x 160 x 91**
AL 2823-11	**150 015 01**	**280 x 230 x 111**
AL 3323-11	**150 016 01**	**330 x 230 x 111**
AL 3616-9	**150 013 01**	**360 x 160 x 90**

External brackets

External hinges

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Mounting plate stainless steel

Description		Order no.
Mounting plate made from stainless steel		
	Enclosure type	
AL MPS-88	AL 88	155 005 01
AL MPS-1010	AL 1010	155 008 01
AL MPS-1212	AL 1212	155 009 01
AL MPS-1308	AL 1308	155 006 01
AL MPS-1616	AL 1616	155 011 01
AL MPS-1808	AL 1808	155 007 01
AL MPS-2212	AL 2212	155 010 01
AL MPS-2320	AL 2320	155 014 01
AL MPS-2616	AL 2616	155 012 01
AL MPS-2823	AL 2823	155 015 01
AL MPS-3323	AL 3323	155 016 01
AL MPS-3616	AL 3616	155 013 01

Standard rail NS 35

Description			Order no.
Standard rail acc. to DIN EN 60715, 35 x 7.5, width 35 mm			
	Length	**Enclosure type**	
AL NS35-110	110	AL 1212	162 009 01
AL NS35-145	145	AL 1616	162 011 01
AL NS35-186	186	AL 2320	162 014 01
AL NS35-208	208	AL 2212	162 010 01
AL NS35-245	245	AL 1616	162 012 01
AL NS35-266	266	AL 2823	162 015 01
AL NS35-316	316	AL 3323	162 016 01
AL NS35-345	345	AL 3616	162 013 01

External fixing lugs

Description		Order no.
External fixing lugs		
AL ALS-kl	for AL/ALR 88, 1006, 1010, 1308, 1506, 1808, for TK AL 77/99	154 004 01
AL ALS-gro	for AL/ALR 1212, 1616, 2212, 2320, 2616, 2823, 3323, 3616, for TK AL 1111, 1313, 1811, 1818, 2518, 3625	154 006 01

Application example

External hinge set

Description		Order no.
For retrofitting the enclosure cover to hinged door. Incl. 2 hinges, fixing screws, masking-off strips and drilling template		
AL ASS	for AL/ALR 1010, 1212, 1616, 2212, 2320, 2616, 2823, 3323, 3616, for TK AL 1313, 1811, 1818, 2518, 3625	154 210 01

Accessories Empty enclosures AL

Ventilation seal

`IP44`

Description				Order no.
With ventilation seal to avoid condensation formation in enclosures, flow rate 100 l/min. at 0.1 bar overpressure, thermoplastic elastomer, grey, recommended for insertion on the left and right enclosure sides in different heights (see Technical Appendix - protection against condensate water)				

	f. wall thicknesses/mm	Color		Order no.
BST M20	1,5 - 4,5	grey		262 420 01
BST M20/sw	1,5 - 4,5	black		262 020 01

Pressure compensation device

`IP68`
`IP66`

Pressure compensation device with air-permeable and watertight special membrane foil to reduce condensation formation in enclosures, flow rate 0.8 l/min. at 0.1 bar overpressure, grey polyamide, without lock nut

	Order no.
DAE M12 M12 x 1.5 mm, Thread length 10 mm	262 412 01

Double membrane seals

`IP66`

Double membrane seals made of elastic plastic with two sealing membranes, closed

	f. wall thicknesses/mm	Sealing area/mm	Order no.
DMS M16	1.5 - 4.5	5 - 9	260 416 01
DMS M20	1.5 - 4.5	7 - 12	260 420 01
DMS M25	1.5 - 4.5	9 - 16	260 425 01
DMS M32	1.5 - 4.5	14 - 21	260 432 01
DMS M40	1.5 - 4.5	19 - 28	260 440 01

Cable gland

`IP68`

Cable gland with strain relief, polyamide, M_ x 1.5 mm, with lock nut

	Thread lenght/mm	Sealing area/mm	Order no.
KVR M12-MGM	8	2 - 6.5	227 412 01
KVR M16-MGM	8	4 - 10,0	227 416 01
KVR M20-MGM	9	6 - 12.0	227 420 01
KVR M20-GDB/MGM	9	7 - 14.0	227 421 01
KVR M25-MGM	11	9 - 16	227 425 01
KVR M32-MGM	11	11 - 21.0	227 432 01
KVR M40-MGM	11	16 - 28.0	227 440 01
KVR M50-MGM	13	21 - 34.5	227 450 01
KVR M63-MGM	17	30 - 44.5	227 463 01

Attachment bushes

`IP54`

Attachment bushes with open sealing membrane, no lock nuts required

	Sealing area/mm	Order no.
AST M16	6 - 10	230 416 01
AST M20	8 - 13.5	230 420 01
AST M25	9 - 18.5	230 425 01
AST M32	13 - 23	230 432 01
AST M40	17 - 30	230 440 01

Empty enclosures

Accessories Empty enclosures

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Application areas

· Stops
· Pumping systems
· Measuring stations
· Telecommunications
  devices
· Charging stations
· Urban furnishings
· Allotments

Characteristics

· Compact construction
· For AC connections

SVi:

Flexible communication options,
numerous housing variants

Benefits

· No corrosion
· For use in harsh environments
· Easy installation
· Individual adaptation to
  spatial conditions
· Application-optimised mains connection
  solutions, quick to implement

IP65 IP54 | IK07 | | 400V AC | halogen-free | iQ

Automatic machine enclosure SVi

Description	Order no.

Automatic machine enclosure - **I**ndustrial **Q**uality -
1x PE/N terminal (2x (1 x 25 mm² + 7 x 4(6) mm²))

IP65 · 400V AC · IK07 · halogen-free · iQ

SVi A 6
150 x 300 x 156 mm

SVi A 6 1-row, 6 distribution units, arranged at the top, with hinged window	591 061 01

SVi A 2x6
150 x 300 x 156 mm

SVi A 2x6 2-row, 2 x 6 distribution units, with hinged window	591 064 01

SVi A 12
300 x 150 x 156 mm

SVi A 12 1-row, 12 distribution units, with hinged window	591 132 01

Empty enclosures

SVi L
150 x 300 mm

Description		Order no.
Empty Enclosure - **I**ndustrial **Q**uality, for individual expansion with standard rails or mounting plates		

IP65 | IK07 | 400V AC | □ | halogen-free | iQ

	Height mm	
SVi L-g	137	591 120 01
SVi L-gh	162	591 121 01
SVi L-t	137	591 110 01
SVi L-th	162	591 112 01

SVi LQ
150 x 150 x 137 mm

Description		Order no.
Empty Enclosure - **I**ndustrial **Q**uality, for individual expansion with standard rails		

IP65 | IK07 | 400V AC | □ | 400V | halogen-free | iQ

	Order no.
SVi LQ-t Protective insulation, box + lid polycarbonate, box grey, simil. RAL 7035, cover transparent	591 210 01
SVi LQ-g Protective insulation, box + lid polycarbonate, grey, simil. RAL 7035	591 220 01

SVi LS
150 x 300 mm

Description		Order no.
Empty Enclosure - **I**ndustrial **Q**uality, with sliding seal and cable clamp		

IP54 | IK07 | 400V AC | □ | halogen-free | iQ

	Order no.
SVi LS-g	591 122 01
SVi LS-gh	591 123 01
SVi LS-t	591 113 01
SVi LS-th	591 114 01

Automatic machine enclosure SVi

Support for standard rails

Description		Order no.
Carrier for standard rails acc. to DIN EN 60715, 35 x 7.5 mm, Set = 10 pcs.		
	Height	
TR NS35-20	20	795 020 01
TR NS35-34	34,5	795 034 01
TR NS35-42	42,5	795 042 01
TR NS35-58	58,5	795 058 01
TR NS35-64	64	795 064 01
TR NS35-91	91	795 091 01

Carrier NS fixing screws

Description	Order no.
fixing screws for 1 TR NS35-xx, set of 30 pieces	
SR NS35 Fixing screws for 1 support set TR NS35/xx	795 413 01

Mounting plate insulating material

Description		Order no.
Mounting plate made from insulating material, incl. fixing screws		
	Enclosure type	
SVI MPI	SVi-L	591 900 01

Standard rail NS 35

Description		Order no.
Standard rail acc. to DIN EN 60715, 35 x 7.5, width 35 mm, incl. fixing screws		
	Enclosure type	
NS35-125	SVi-L/SVi A 6	591 906 01
NS35-260	SVi-L	591 912 01

Empty enclosures

Accessories SVi

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As solid as concrete – our IBT enclosures for concrete installation. With the IBTronic XL system, you have many choices for installation in all kinds of spaces thanks to integrated Fermacell® plasterboard. And without the need for lengthy, tedious planning.

Concrete Installation

	Types	Pages
	Junction boxes for concrete construction **IBT**	244-256
	The reinforcement box - Installation solutions for architectural concrete **IBT**	248-249
	Junction boxes for lightweight concrete construction **IBT**	257-260
	Junction boxes for Export versions **IBT**	259-260
	Accessories for **IBT**	262-267
	Luminaire housings for sitecast concrete and precast concrete construction **IBTronic**	268-270
	Universal mounting enclosure **IBT LED** for installing NV/HV/LED luminaires and loudspeakers NEW!	272-273
	Luminaire housings for precast concrete construction **IBTronic XL**	274-275
	For subsequent installation in prefabricated ceilings **IBTronic XL Drillbox**	276-279

Concrete Installation

Concrete Installation Content

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U 71 FD flat box

71 x 71 x 38 mm, Ø 60 mm

Entries:
2 x to 20 mm Ø

Description	Order no.
Flat box for installation in concrete, flat construction type for extremely thin walls, 2 screw bosses with 60 mm screw spacing, combinable with normal 71 mm spacing, fully insulated cable transition, suitable for all types of formwork and opposing formwork	

IP30 | B | 90°C | halogen-free

U 71 FD with smooth face for nail and adhesive fixing	971 035 01
Accessories	
VD 75, Sealing cap	979 100 01

U 71 GRD receptacle

71 x 71 x 50 mm (U 71 GRD-D=45 mm), Ø 60 mm

Entries:
2 x to 25 mm Ø
U71 GRD-D: 2 x up to 20 mm Ø

Description	Order no.
Receptacle for installation in concrete, 2-part, 2 screw bosses with 60 mm screw spacing, combinable with normal 71 mm spacing, fully insulated cable transition, suitable for all types of formwork and opposing formwork, VDE certified as per DIN EN 60670 (VDE 0606)	

IP30 | B | 90°C | VDE | halogen-free

U 71 GRD for nail and magnet installation	971 045 01
U 71 K GRD with smooth face for nail and adhesive fixing	971 745 01
U 71 GRD-D receptacle for extremely thin walls, only 45 mm deep, for nail and magnet installation, can be combined with corresponding interconnection frame	971 045 02
Accessories	
VD 75, Sealing cap	979 100 01

U 71 KUD dome box

71 x 71 x 91 mm, Ø 60 mm

Entries:
4 x to 25 mm Ø, 45°
2 x to 25 mm Ø

Description	Order no.
Dome box for installation in concrete, 2-part, also usable as a ceiling socket, 2 screw bosses with 60 mm screw spacing, combinable with normal 71 mm spacing, fully insulated cable transition, suitable for all types of formwork and opposing formwork	

IP30 | B | 90°C | halogen-free

U 71 KUD Ffor nail and magnet installation	971 047 01
U 71 KUD-M5 with M5 threaded bush to take a ceiling hook (979 122 01), for nail and magnet installation	971 248 01
Accessories	
DH 90 Ceiling hook, length 90 mm	979 116 01
VD 75, Sealing cap	979 100 01
DH 90-M5, Ceiling hook	979 122 01

U 71 GVD-2 branch socket
2-piece
71 x 71 x 68 mm, Ø 60 mm

Entries:
6 x to 25 mm Ø
2 x to 20 mm Ø

Description	Order no.
Equipment junction box for installation in concrete, 2-part, with enlarged connection space, 4 screw bosses with 60 mm screw spacing, combinable with normal 71 mm spacing, fully insulated cable transition, suitable for all types of formwork and opposing formwork, VDE certified as per DIN EN 60670 (VDE 0606)	

IP30 B 90°C DVE halogen-free

U 71 GVD-2 for nail and magnet installation	971 065 01
U 71 K GVD-2 with smooth face for nail and adhesive fixing	971 765 01
Accessories	
VD 75, Sealing cap	979 100 01

U 71 GVD-3 branch socket
3-piece
71 x 71 x 68 mm, Ø 60 mm

Entries:
6 x to 25 mm Ø
2 x to 20 mm Ø

Description	Order no.
Equipment junction box for installation in concrete in component factories, 3-part, 4 screw bosses with 60 mm screw spacing, combinable with normal 71 mm spacing, fully insulated cable transition, suitable for all types of formwork and opposing formwork, VDE certified as per DIN EN 60670 (VDE 0606)	

IP30 B 90°C DVE halogen-free

U 71 GVD-3 for nail and magnet installation	971 365 01
U 71 K GVD-3 with smooth face for nail and adhesive fixing	971 865 01
Accessories	
VD 75, Sealing cap	979 100 01

U 71 GRO large conduit box
71 x 71 x 76 mm, Ø 60 mm

Entries:
4 x to 37 mm Ø

Description	Order no.
Large conduit box for installation in concrete, 2-part, 4 screw bosses with 60 mm screw spacing, combinable with normal 71 mm spacing, fully insulated cable transition, suitable for all types of formwork and opposing formwork, VDE certified as per DIN EN 60670 (VDE 0606)	

IP30 B 90°C DVE halogen-free

U 71 GRO for nail and magnet installation	972 960 01
U 71 K GRO with smooth face for nail and adhesive fixing	972 760 01
Accessories	
VD 75, Sealing cap	979 100 01

Concrete Installation

els spelsberg

U 71 TD deep box
71 x 71 x 49 mm, Ø 60 mm

Entries:
972 945 01:
4 x to 32 mm Ø
972 925 01:
6 x to 25 mm Ø
2 x to 20 mm Ø

Description	Order no.
Deep box for installation in concrete, as top enclosure for all U 71 boxes when using large conduits, screw spacing 60 mm	
[B] 90°C halogen-free	
U 71 TD-44 deep box M25, 44 mm deep	972 925 01
U 71 TD-49 deep box M32, 49 mm deep	972 945 01
Accessories	
U 71 KP-M5, dome with threaded bush	971 748 01
GWD, threaded base M5	979 110 01
U 71 BSK-K, blank base for adhesive fixing	979 538 01
U 71 BSK, blank base for magnet fixing	979 539 01

WAD wall outlet box
71 x 71 x 48 mm, Ø 35 mm

Entries:
2 x to 20 mm Ø

Description	Order no.
Wall outlet box for installation in concrete, for connecting wall luminaires acc. to VDE 0100, with screwed hole for light fixing, combinable, front outlet of 35 mm	
IP30 [B] 90°C DVE halogen-free	
WAD suitable for opposing formwork	970 560 01
Accessories	
WAD VD Sealing cover white, 35 mm Ø, outlet cover	970 562 01

U 71 DAD
ceiling luminaire junction box
71 x 71 mm, Ø 35 mm

Entries:
971 548 01
4 x to 25 mm Ø, 45°
2 x to 20 mm Ø
971 549 01
6 x to 25 mm Ø
4 x to 20 mm Ø

Description	Order no.
Ceiling luminaire junction box for installation in concrete, combinable, front outlet of 35 mm, VDE certified as per DIN EN 60670 (VDE 0606)	
IP30 [B] 90°C halogen-free	
U 71 DAD 2-part, suitable for opposing formwork, 89 mm high, rearward dome with M5 threaded bushing to take a ceiling hook	971 548 01
U 71 DAD-3 3-part, suitable for opposing formwork, 106 mm high, with M5 threaded bushing to take a ceiling hook	971 549 01
Accessories	
WAD VD, Sealing cap	970 562 01
DH 90-M5, Ceiling hook	979 122 01
DH 100-M5, Ceiling hook	979 119 01

U 71 Perilex® receptacle
71 x 71 x 50 mm, Ø 70 mm

Description	Order no.
Perilex® receptacle for installation in concrete, 2-part, 67 mm screw spacing, for Perilex® inserts 16 A, FR-UP equipment, CEE sockets 5-pole 16 A	

IP30 · B · 90°C · halogen-free

U 71 Perilex suitable for opposing formwork, For nail and magnet installation	973 050 01
Accessories **VD 75, Sealing cap**	979 100 01

Entries:
6 x to 22.5 mm Ø

U 71 DGR
ceiling large conduit box
71 x 71 x 89 mm, Ø 60 mm

U 71 DGR cover large conduit box, for installation in concrete, in two parts, diameter 60 mm Ø, 4 screw bosses with a 60 mm screw spacing, combinable, with M5 threaded bushing to take a ceiling hook, suitable for opposing formwork	

IP30 · B · 90°C · halogen-free

U 71 DGR with smooth face for nail and adhesive fixing	972 770 01
Accessories	
DH 90-M5, Ceiling hook	979 122 01
DH 100-M5, Ceiling hook	979 119 01

Entries:
4 x to 37 mm Ø

U 71 DVD
ceiling junction box
71 x 71 x 79 mm /81, Ø 60 mm

Ceiling connection box for installation in concrete, 4 screw bosses with 60 mm screw spacing, with M5 threaded bush to take a ceiling hook, combinable with a standard spacing of 71 mm, fully insulated cable transition, suitable for opposing formwork, VDE certified as per DIN EN 60670 (VDE 0606)	

IP30 · B · 90°C · DVE · halogen-free

U 71 DVD-2 2-part, for nail and magnet installation	971 066 01
U 71 K DVD-2 2-part, with smooth face for nail and adhesive fixing	971 766 01
U 71 K DVD-3 3-part, with smooth face for nail and adhesive fixing	971 866 01
Accessories	
VD 75, Sealing cap	979 100 01
DH 75, Ceiling hook	979 117 01

Entries:
6 x to 25 mm Ø
2 x to 20 mm Ø

Concrete Installation

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Installation solutions for exposed concrete

The visible face of exposed concrete is a reflection of the formwork surface. Perfect surfaces with installation material: The innovative reinforcement box enables a perfect electrical installation within exposed concrete surfaces, without causing damage to the formwork surfaces.

Patented spring technology

The patented spring system of the reinforcement box compensates for different depths of concrete cover over the reinforcement and ensures optimum pressure on the formwork. The reinforcement box precisely adapts to every wall thickness like a shock absorber and guarantees an exact fit in the exposed concrete wall.

The reinforcement box - reveals the best side of exposed concrete

U 71 reinforcement adapter

300 x 76 x 35 mm

Reinforcement adapter for the support of all U71 sockets (except for Perilex), combinable with a standard spacing of 71 mm, face concrete for the opposing formwork without support with preinstallation in the reinforcement for the concrete construction

| | B | 90°C | halogen-free |

| **IBT BWA** | 979 330 01 |

U71 reinforcement box

300 x 76 mm
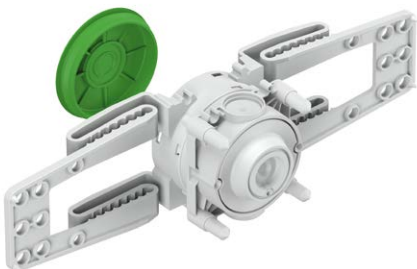
Reinforcement box, in two parts, green rearward base with max. 1 x 25 mm insert , combinable, Suitable for opposing formwork without support, pre-installation in the reinforcement bars, for concrete installation, combinable with a standard spacing of 71 mm

| IP30 | B | 90°C | DVE | halogen-free |

| **U 71 BWD WAD-35** | 970 160 01 |
| height 65mm, 35 mm Ø Discharge at the front, Entries: 2 x to 20 mm Ø, concrete cover for the reinforcement of 20-40 mm, for connecting wall lights according to VDE 0100, with screw hole for light fitting | |

| **U 71 BWD GVD-2-60** | 971 165 01 |
| height 85mm, 60 mm Ø Discharge at the front, entries: 6 x to 25 mm Ø, 2 x to 20 mm Ø, concrete cover for the reinforcement of 20-60 mm, VDE certified as per DIN EN 60670 (VDE 0606) | |

Concrete Installation

U 86 DVD universal ceiling socket

106 mm Height, Ø 74/92 mm

Entries:
8 x to 26 mm Ø

Description	Order no.
Universal ceiling socket for installation in concrete, for slab ceilings up to 4.5 cm thick, with M5 threaded bush to take a ceiling hook, VDE certified as per DIN EN 60670 (VDE 0606)	

IP30	B	90°C	VDE	halogen-free

U 86 DVD-2 2-part, For nail and magnet installation	973 081 02
U 86 K DVD-2 2-part, with smooth face for nail and adhesive fixing	973 781 01
U 86 K DVD-3 3-part, with smooth face for nail and adhesive fixing	973 783 01
Accessories	
VD 75, Sealing cap	979 100 01
HD VD 67, Sealing cap	925 100 01
DH 100-M5, Ceiling hook	979 119 01

U 120 GRO large conduit ceiling socket

122 mm Height, Ø 80/92 mm

Entries:
4 x to 35 mm Ø
8 x to 26 mm Ø

Description	Order no.
Large conduit ceiling socket for installation in concrete, for slab ceilings up to 6.5 cm thickness, with M5 threaded bush to take a ceiling hook	

IP30	B	90°C	halogen-free

U 120 GRO-3 3-part, for nail and magnet installation	973 312 01
U 120 K GRO-3 3-part, with smooth face for nail and adhesive fixing	973 713 01
U 120 K GRO-2 in two parts, with smooth face for nail and adhesive fixing	973 712 01
Accessories	
VD 75, Sealing cap	979 100 01
HD VD 67, Sealing cap	925 100 01
DH 115-M5, Ceiling hook	979 121 01

ROP conduit ferrule

Description	Order no.
Conduit ferrule for installation in concrete with bottom section, to take various conduit diameters	

B	90°C	halogen-free

ROP 20 hole 18 Ø, for conduit type M20, external pipe diameter 20 mm, suitable for opposing formwork	970 518 01
ROP 25 hole 23 mm Ø, for conduit type M25, external diameter 25 mm, suitable for opposing formwork	970 523 01
ROP 32 hole 30 mm Ø, for conduit type M32, external diameter Ø 32 mm, suitable for opposing formwork	970 530 01
ROP 40 hole 37 mm Ø, for conduit type M40, external diameter Ø 40 mm	970 537 01

ROK conduit elbow

Conduit elbow for 30° insert to insert into conduit ferrule

B	90°C	halogen-free

ROK 1 30° small for conduit ferrule 970 518 01, M20	970 425 01
ROK 2 30° average for conduit ferrule 970 523 01, M25	970 430 01
ROK 3 30° large for conduit ferrule 970 530 01, M32	970 435 01
Accessories	
DH 55, Ceiling hook	979 115 01

ROK conduit ferrule/Conduit elbow set

Conduit ferrule / conduit elbow for installation in concrete, 3-part, consisting of conduit ferrule with bottom section and conduit elbow 30°

B	90°C	halogen-free

ROK 20 S for conduit type M20	970 720 01
ROK 25 S for conduit type M25	970 725 01
ROK 32 S for conduit type M32	970 732 01

KOT cone funnel

Cone funnel for installation in concrete for wall-to-wall connection in large panel constructions and for connections from risers (e.g. telephone TV) also suitable for magnet fixing and opposing formwork

B	90°C	halogen-free

KOT 20 71 x 71 x 87 mm, hole Ø 18 mm, for conduit type M20	970 618 01
KOT 25 71 x 71 x 112 mm, hole Ø 23 mm, for conduit type M25	970 623 01
KOT 32 71 x 71 x 112 mm, hole Ø 30 mm, for conduit type M32	970 630 01
KOT 40 71 x 71 x 112 mm, hole Ø 37 mm, for conduit type M40	970 637 01

Concrete Installation

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KUT dome funnel

71 x 71 x 62 mm /64, Ø 60 mm

Dome funnel for installation in concrete, 2-part, as a ceiling outlet for internal partition or as luminaire outlet, combinable with normal 71 mm spacing, with smooth face for nail and adhesive fixing, suitable for opposing formwork

| IP30 | B | 90°C | halogen-free |

| **U 71 KUT** | 970 540 01 |
| **U 71 KUT-M5** with M5 threaded bush | 970 748 01 |

Accessories

| **DH 65-M5, Ceiling hook with M5 thread** | 979 120 0x |

Entries:
4 x to 25 mm Ø, 45°

KUK dome box

90 x 40 x 55 mm

As a dome box for installation in concrete as ceiling outlet in cast-in-place concrete or large panel construction

| B | 90°C | halogen-free |

| **KUK** As a wall-ceiling connection in large panel construction | 970 550 01 |

Entries:
10 x up to 22.5 mm Ø

VBK connection box

95 x 90 x 50 mm

Junction box for installation in concrete
as a wall/ceiling transfer in large panel construction

| IP30 | B | 90°C | halogen-free |

| **VBK** As a wall junction box in cast-in-place concrete | 970 690 01 |

Accessories

| **VD 75, Sealing cap** | 979 100 0x |

Entries:
3 x to 28.3 mm Ø

DAL universal outlet cleats

Universal outlet cleats for installation in concrete, usable as a ceiling outlet with a large tolerance compensation, DAL 1 and DAL 2 can be combined next to each other and one behind the other without tools

B   **90°C**   halogen-free

Description	Order no.
DAL 1 for conduits M20, M25 (171 x 49 x 35 mm)	970 705 01
DAL 2 for conduits M25 (171 x 49 x 35 mm)	970 706 01
DAL 4 for conduits M32, M40 (315 x 80 x 90 mm), reusable	970 704 01

VST Sealing plug

Blanking plugs with closed diaphragm are needed when DAL 1 / DAL 2 are combined one behind the other, for wall thickness 1.5 - 4.0 mm

IP54   **B**   **90°C**   halogen-free

	Sealing area/mm	
VST M20-or	8 - 13.5	231 620 01
VST M25-or	9 - 16	231 625 01
VST M32-or	13 - 23	231 632 01
VST M40-or	17 - 30	231 640 01

UVA universal outlet 90°
126 x 86 x 57 mm

Universal outlet for installation in concrete, for easy conduit transfer in the wall and ceiling area or for continuing conduits under the screed, entries for conduits up to M25, suitable for adhesive fixing and opposing shuttering

B   **90°C**   halogen-free

Description	Order no.
UVA 90 Universal outlet 90°, (support spar technology= wall thickness minus 2 cm)	970 716 01
Accessories	
RVB 20, Conduit connector M20	970 220 01
RVB 25, Conduit connector M25	970 225 01
U 71 BSK-K, blank base for adhesive fixing	979 538 01
U 71 BSK, blank base for magnet fixing	979 539 01

Top entries:
1 x M20/M25
Back entries:
1 x M20/M25

Concrete Installation

els spelsberg

K0 EK mounting box

111 x 71 x 61 mm

Entries:
6 x up to 32 mm Ø
2 x to 25 mm Ø

Description	Order no.
Mounting box for installation in concrete, suitable as a junction box, screw spacing 83.5 mm (3 9/32 inch) and 100 mm, complies with AFI standard, for installing "American Standard 432", equipment per NEMA Publ. NO.OS 1, combinable	

IP30 | B | 90°C | halogen-free

K0 EK suitable for opposing formwork, for nail and magnet installation	977 001 01
Accessories	
K0 VD, Sealing cap for K0 EK	977 100 01
K0 K15 BL, 2 blank cleats per box required	979 532 01

K15 EK mounting box

116 x 111 x 61 mm

Entries:
8 x to 32 mm Ø
4 x to 25 mm Ø

Description	Order no.
Mounting box for installation in concrete, suitable as a junction box with large terminal space, screw spacing 2 x 83.5 mm (3 9/32 inch) and 1 x 100 mm, complies with AFI standard, mounting box for installation in concrete, for installing "American Standard", equipment acc. to NEMA Publ. NO.OS 1, corresponds to the »"4" square box« for 2 units, screw spacing 2 x 83.5 mm (3 9/32 inch.), combinable	

IP30 | B | 90°C | halogen-free

K15 EK suitable for opposing formwork, for nail and magnet installation	977 002 01
Accessories	
K15 VD, Sealing cap K15 EK	977 105 01
K0 K15 BL, 2 blank cleats per box required	979 532 01

K1 EK mounting box

85 x 91 x 53 mm

Entries:
6 x to 23 mm Ø

Description	Order no.
Mounting box for installation in concrete, suitable as a junction box or mounting box for Zettler light call E1	

IP30 | B | 90°C | halogen-free

K1 EK suitable for opposing formwork, for nail and magnet installation	975 001 01
Accessories	
K1 VD, Sealing cap for K1 EK	975 100 01
K0 K15 BL, 2 blank cleats per box required	979 532 01

K2 EK mounting box

91 x 149 x 53 mm

Entries:
10 x up to 23 mm Ø

Description	Order no.
Mounting box for installation in concrete, suitable as a junction box or mounting box for Zettler light call E2 or for diverse intercom systems	
IP30 B 90°C halogen-free	
K2 EK suitable for opposing formwork, for nail and magnet installation	975 002 01
Accessories	
K2 VD, Sealing cap for K2 EK	975 102 01
9795310x	979 531 01

K3 EK mounting box

142 x 142 x 70 mm
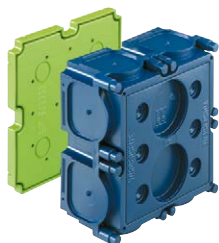
Entries:
8 x to 47.5 mm Ø

Description	Order no.
Mounting box for installation in concrete, prepared to take the WK terminal blocks 2.5 - 25 mm², suitable to take a 20-pole telephone terminal strip or as a telephone continuity box to DIN 47614-615, combinable	
IP30 B 90°C halogen-free	
K3 EK suitable for opposing formwork, for nail and magnet installation	980 002 01
Accessories	
K3 VD, Sealing cap for K3 EK	980 100 01
K3 TW, partition panel for K3 EK	980 105 01

K4 EK mounting box

311 x 202 x 87 mm

Entries:
16 x to 47.5 mm Ø

Description	Order no.
Mounting box for installation in concrete, prepared to take the WK terminal blocks 2.5 – 25 mm², suitable to take a 40-pole telephone terminal strip, as a telephone continuity box acc. to DIN 47614-615 or IBT distribution set UP 015 (1-row, 15 distribution units), combinable	
IP30 B 90°C halogen-free	
K4 EK suitable for opposing formwork, for nail and magnet installation	980 004 01
Accessories	
K4 VD, Sealing cap for K4 EK	980 104 01

Concrete Installation

K4 - H EK mounting box

311 x 202 x 158 mm / 171

Entries:
32 x to 47.5 mm Ø

Description	Order no.
Mounting box for installation in concrete, prepared to take the WK terminal blocks 2.5 – 25 mm², suitable to take a 40-pole telephone terminal strip, as a telephone continuity box acc. to DIN 47614-615 or IBT distribution set UP 015 (1-row, 15 distribution units), halogen-free, for installing NV/HV/LED luminaires and loudspeakers.	

IP30   B   90°C   halogen-free

K4-H EK suitable for opposing formwork, for nail and magnet installation, without Fermacell® plasterboard, Lamp output max. 50W/LED 40W	980 005 01
K4-H-P EK Fermacell® plasterboard with recess (max. load-bearing capacity 10 kg), variable to max. 220 x 150 mm, max. installation height LV lights: 130 mm, HV lights: 135 mm, electronic transformer up to max. 150 VA, lamp output max. 50W/LED 40W	980 006 01
Accessories	
K4 VD, Sealing cap for K4 EK	980 104 01

UP 015 – Distributor kit

311 x 202 x 87 mm

Description	Order no.
Distributor kit 1-row, 15 distribution units, plastic frame and door, white, with spring latch, 35 mm DIN standard rails, PE/N terminals, masking off strips and labelling strips	

B   90°C   halogen-free

UP 015 for installation box K4 EK	986 000 01

◄ Can be combined tool-free at standard spacing of 71 mm

Boxes for wall thicknesses in excess of 100 mm were developed specially for the lightweight concrete industry to satisfy the special requirements of its production techniques.

Different fronts ensure shorter installation times and reduced installation costs.

· **Universal mounting options (front part smooth, open and with embossing)**
· **Box for mounting devices on both sides (100 mm wall thickness)**

Crack formation in lightweight concrete walls is now a thing of the past! The new lightweight concrete boxes from Spelsberg have deep-set conduit entries up to 4 x M25 / M32. The concrete cover of up to 37 mm ensures **crack-free walls**.

IP30	▽ B	90°C	halogen-free

Concrete Installation IBT Junction boxes for lightweight concrete

els spelsberg

LB 71 GVD 86

71 x 71 x 86 mm Height, Ø 60 mm

Entries:
4 x to 32 mm Ø

Equipment junction box for installation in concrete, 2-part, universal socket with large interior space, 4 screw bosses with 60 mm screw spacing, combinable with a standard spacing of 71 mm, fully insulated cable transition

IP30	B	90°C	halogen-free

	Order no.
LB 71 M GVD 86 for nail and magnet installation	981 084 01
LB 71 K GVD 86 with smooth face for nail and adhesive fixing	981 784 01
LB 71 O GVD 86 suitable for use in form work table	981 884 01

LB 71 GVD 100

71 x 71 x 100 mm Height, Ø 60 mm

Entries:
4 x to 32 mm Ø

Equipment junction box for installation in concrete, 2-part, universal socket for mounting the devices on both sides with large interior space, 4 screw bosses with 60 mm screw spacing, combinable with a standard spacing of 71 mm, fully insulated cable transition

IP30	B	90°C	halogen-free

	Order no.
LB 71 M GVD 100 for nail and magnet installation	981 010 01
LB 71 K GVD 100 with smooth face for nail and adhesive fixing	981 710 01
LB 71 O GVD 100 suitable for use in form work table	981 810 01

BS 1 equipment installation box
86 x 86 x 60 mm

Entries:
8 x to 32 mm Ø

Description	Order no.
Equipment installation box for installation in concrete, "1-way box" for installing "British Standard" equipment, screw spacing 60.3 mm (2³/8 inch.), delivered with earthing screw	

IP30　B　90°C　halogen-free

BS 1 suitable for opposing formwork, for nail and magnet installation	974 001 01
Accessories	
BS 1-BSK 86 x 86 x 25 mm	974 431 01
BS MBR 2 pcs. required per box	974 120 01
BS ES-30 3.5 x 30 mm	974 130 01
BS ES-40 3.5 x 40 mm	974 135 01
BS ES-50 3.5 x 50 mm	974 150 01
BS 1 VD for equipment installation box BS 1, 86 x 86 mm	974 100 01

BS 2 equipment installation box
146 x 86 x 60 mm

Entries:
10 x up to 32 mm Ø

Description	Order no.
Equipment installation box for installation in concrete, "2-way box" for installing "British Standard" equipment, screw spacing 120.6 mm (4¾ inch.), delivered with earthing screw	

IP30　B　90°C　halogen-free

BS 2 suitable for opposing formwork, for nail and magnet installation	974 002 01
Accessories	
BS 2-BSK 146 x 86 x 25 mm	974 432 01
BS MBR 2 pcs. required per box	974 120 01
BS ES-30 3.5 x 30 mm	974 130 01
BS ES-40 3.5 x 40 mm	974 135 01
BS ES-50 3.5 x 50 mm	974 150 01
BS 2 VD for equipment installation box BS 2, 146 x 86 mm	974 102 01

Concrete Installation
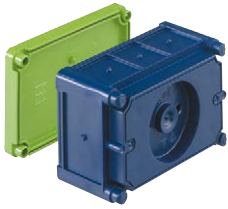
els spelsberg

K0 EK mounting box
111 x 71 x 61 mm

Entries:
6 x up to 32 mm Ø
2 x to 25 mm Ø

Mounting box for installation in concrete, suitable as a junction box, screw spacing 83.5 mm (3 9/32 inch) and 100 mm, complies with AFI standard, for installing "American Standard 432", equipment per NEMA Publ. NO.OS 1, combinable

| IP30 | B | 90°C | halogen-free |

	Order no.
K0 EK suitable for opposing formwork, for nail and magnet installation	977 001 01
Accessories	
K0 VD, Sealing cap for K0 EK	977 100 01
K0 K15 BL, 2 blank cleats per box required	979 532 01

K15 EK mounting box
116 x 111 x 61 mm

Entries:
8 x to 32 mm Ø
4 x to 25 mm Ø

Mounting box for installation in concrete, suitable as a junction box with large terminal space, screw spacing 2 x 83.5 mm (3 9/32 inch) and 1 x 100 mm, complies with AFI standard, mounting box for installation in concrete, for installing "American Standard", equipment acc. to NEMA Publ. NO.OS 1, corresponds to the »''4" square box« for 2 units, screw spacing 2 x 83.5 mm (3 9/32 inch.), combinable

| IP30 | B | 90°C | halogen-free |

	Order no.
K15 EK suitable for opposing formwork, for nail and magnet installation	977 002 01
Accessories	
K15 VD, Sealing cap K15 EK	977 105 01
K0 K15 BL, 2 blank cleats per box required	979 532 01

Terminal block
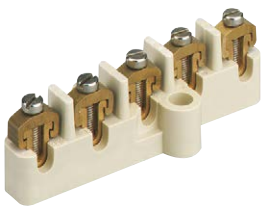
Terminal blocks, for installation in IBT mounting boxes

	Order no.
Abox 025/040 KLS-2,5²/4² 5x2.5/4 mm², for K0-, K15, K1-, K2-EK boxes	840 004 01
WK 060 KLS-6² 5x6 mm² , for K15, K2-, K3-EK boxes	460 506 01
WK 100 KLS-10² 5x10 mm² , for K15, K3-, K4-EK boxes	460 510 01
WK 160 KLS-16² 5x16 mm² , for K3-, K4-EK boxes	460 516 01
WK 250 KLS-25² 5x25 mm², for K4-EK boxes	460 535 01

Concrete Installation IBT Junction boxes for lightweight concrete

IBT ST plugs

Description	Order no.
IBT plug	
IBT ST protects the screw bosses from ingress of concrete	979 205 01

GWB threaded base M5
15 mm Height

Threaded base M5	
GWB With M5 threaded bushing to take a ceiling hook, converts every U71 junction box to a ceiling socket	979 110 01

U 71 KP dome
43 mm Height

Dome with threaded bush M5, suitable as an attachment for U 71 boxes as well as magnet and adhesive blank bases	
U 71 KP-M5 (suitable for series U 71)	971 748 01

Accessories for combinations

Interconnection frames for the combination of boxes under extreme loading	
VB 71 for a spacing 71 mm	979 212 01
VB 80/85 for a spacing 80 and 85 mm	979 213 01
VB 90 for a spacing 90 mm	979 214 01
VB 105 for a spacing 105 mm	979 215 01

Accessories for combinations

Compound nipple as a seal and cable routing duct for a spacing of 71 mm	
VBN (for U 71 receptacle 971 045 02)	979 210 01

Concrete Installation

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VD sealing cap

Description		Order no.
Sealing cap, white, flame retardant, for special boxes		

	Enclosure type	
K0 VD	K0 EK	977 100 01
K1 VD	K15 EK	975 100 01
K2 VD	K1 EK	975 102 01
K3 VD	K2 EK	980 100 01
K4 VD	K3 EK	980 104 01
K15 VD	K4 EK	977 105 01

VD sealing cap

Description			Order no.
Sealing cap for junction boxes, flame resistant, white			

	Diameter	**Enclosure type**	
VD 75	75 mm	U71, U86, U120	979 100 01
HW VD-60	90 mm	U71	925 101 01
HW VD-67	90 mm	U86, U120	925 100 01
U 71 VDF	80 mm	U71	979 102 01
U 86 VDF	90 mm	U86	979 103 01
U 71 VDS	80 mm	U71	979 104 01

BS VD sealing cap

Description	Order no.
Sealing cap BS, white, flame-retardant, with fixing screws and assembly bridges	
BS 1 VD for equipment installation box BS 1, 86 x 86 mm	974 100 01
BS 2 VD for equipment installation box BS 2, 146 x 86 mm	974 102 01

DH ceiling hook

Description			Order no.
Ceiling hook, insulated, with wood screw thread			

	Shaft length	**Enclosure type**	
DH 55	55	ROK 1	979 115 01
DH 65	65	U 71 KUT	979 118 01
DH 90	90	U 71 KUD	979 116 01

DH ceiling hook

Description			Order no.
Ceiling hook, insulated, with M5 thread			

	Enclosure type	**Shaft length**	
DH 65-M5	U 71 KUT-M5	65	979 120 01
DH 75-M5	U 71 KUD-M5	75	979 117 01
DH 90-M5	U 71 KUD-M5	90	979 122 01
DH 100-M5	U 86 DVD-2	100	979 119 01
DH 115-M5	U 120 GRO-3	115	979 121 01
DH 135-M5	U 71 KUT-M5	135	979 123 01

Accessories **Concrete Installation** IBT

U 71 blank base BSK
71 x 71 x 25 mm / 21

Description	Order no.
Blank base, base for supporting IBT boxes and boxes in opposing formwork in conjunction with support spars, can be combined via snap-in connection, if fitting the blank base using nails, magnet, adhesive, the fixing points must be plastered subsequently, for fitting: 1. the U 71 boxes in opposing formwork, at a 71 mm spacing, can also be combined with interconnecting frame for extreme loading, 2. the mounting boxes K3 EK and K4 EK with opposing shuttering with 2 or 4 sockets and 3 support spars each in the corners	
U 71 BSK-NA height 25 mm, for nail fixing	979 530 01
U 71 BSK-2 height 25 mm, for exposed concrete, minimum visibility of the feet	979 530 02
U 71 BSK-K height 21 mm, for adhesive fixing	979 538 01
U 71 BSK height 21 mm, for magnet fixing, magnet hole has to be plastered later	979 539 01

BL blank strip
21 x 110 x 15 mm

Blank cleat for mounting the mounting box K0 EK and the mounting box K15 EK for opposing formwork, 2 pieces are required for each box	
K0 K15 BL 2 blank cleats per box required	979 532 01

K1 K2 BL blank cleats
21 x 90 x 15 mm

Blank cleat for fixing: 1. The special boxes K1 EK and K2 EK boxes for opposing formwork, 2. The cone funnel for transfer from risers, 2 pieces are required for each insert	
K1 K2 BL	979 531 01

BS blank base
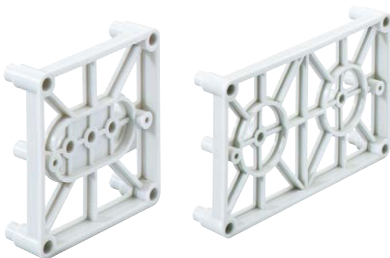
Blank base BS to support the BS boxes, for opposing formwork in conjunction with support spars	
BS 1-BSK 86 x 86 x 25 mm, blank base	974 431 01
BS 2-BSK 146 x 86 x 25 mm	974 432 01

Concrete Installation

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BSK blank base

Description	Order no.
Blank base to support the conduit elbows including conduit ferrules, for opposing formwork in conjunction with support spars	
BSK 1 for conduit ferrules 970 518 01	970 500 01
BSK 2 for conduit ferrules 970 523 01 / 970 530 01	970 505 01

STH-STU support buffer

Description	Order no.
Support buffer as an attachment for support spars when using magnetic clamps or adhesive in vertical formwork (instead of the blank base)	
STH-STU	979 535 01

STH support spars
Ø 6 mm

Support spars for various wall thicknesses in opposing formwork,
always used in conjunction with blank base or back mounted box,
spar length = wall thickness minus 1 cm, 2 support spars per socket, 4 support spars for extreme loads

	Wall thickness	Spar length	
STH 70	8 cm	7 cm	979 570 01
STH 90	10 cm	9 cm	979 590 01
STH 100	11 cm	10 cm	979 600 01
STH 110	12 cm	11 cm	979 610 01
STH 130	14 cm	13 cm	979 630 01
STH 140	15 cm	14 cm	979 640 01
STH 150	16 cm	15 cm	979 650 01
STH 170	18 cm	17 cm	979 670 01
STH 190	20 cm	19 cm	979 690 01
STH 230	24 cm	23 cm	979 730 01
STH 240	25 cm	24 cm	979 740 01
STH 290	30 cm	29 cm	979 790 01

Fixings for wood / plastic formwork

Description	Order no.
Fixings for wood / plastic formwork, for site cast concrete or poured concrete construction on wooden formwork, use 2 nails for extreme loading	
NA-AL aluminium nail, 40 mm, long-ridged	979 242 01
NA-AL/gl aluminium nail, 40 mm, smooth	979 243 01

Fixings for plastic/steel formwork
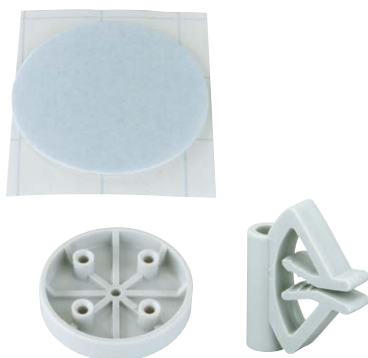
Description	Order no.
Fixings for plastic/steel formwork	
KR adhesive black, as a non-damaging fixing, when using blank and flange, (usable several times), with vertical formwork, also use support spars	979 248 01
HFL support flange 50 mm Ø, plastic	979 250 01
HC support clip for mesh thickness as an auxiliary fixing for the boxes onto (2 to 3 clips per box), only usable with support spars	979 245 01

Fixings for steel formwork

Description	Order no.
Fixings for steel formwork	
NAS-AL Spreader nail, aluminium 40 mm, with plastic plug for fixing the boxes on the steel formwork (drilled hole 5.5 mm), has proven excellent for tunnel formwork	979 240 01
ANSW weld on screw M6 x 10 mm, Inexpensive, secure fixing of the box, onto steel formwork without drilling	979 260 01
HM magnetic clamps, 50 mm Ø, normal, pull-off strength 120 +/- 20 N	979 280 01
HM-UNI magnetic clamps, 50 mm Ø, extra strong, pull-off strength 300 +/- 20 N=30 kp	979 299 01
MA magnetic lifter for dismounting the magnetic clamps HM and HM-UNI, in two parts	979 300 01

Fixings for conduits and cables
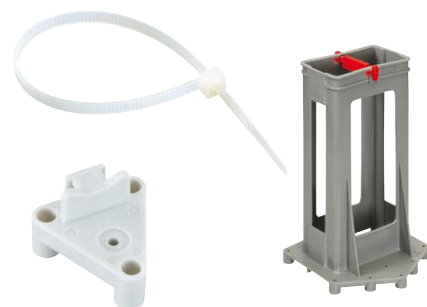
Description	Order no.
Fixings for conduits and cables	
KBI 1 clip 4.6 x 180 mm	979 136 01
ABH 1 spacer, 40 x 40 x 33 mm	979 135 01
ROS conduit support, grey, height 21 cm	979 230 01

RVB conduit connector

Description	Order no.
Conduit coupling (without conduit) with strain relief, grey, for flexible metric electrical installation conduits	
RVB 20 for long-ridged pipes M20	970 220 01
RVB 25 for long-ridged pipes M25	970 225 01
RVB 32 for long-ridged pipes M32	970 232 01
RVB 40 for long-ridged pipes M40	970 240 01

Concrete Installation

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IBT LZA hand hole punch

Description		Order no.
Hand hole punch, punching tool for making precision fit entries in concrete boxes, perforation always 1 - 3 mm smaller than the conduit / conductor diameter		
IBT LZA-OE	without punch set	978 100 01
IBT LZA-18	with 18 mm punch set for pipe M20	978 118 01
IBT LZA-23	with 23 mm punch set for pipe M25	978 123 01

WED expansion mandrel

Description	Order no.
Expansion mandrel, assembly tool when inserting conduit	
WED expansion range 9 - 25 mm Ø	979 155 01

Punch sets

Punch sets as replacements or where expansion is required for IBT LZA hand hole punch

	hole diameter	for cable / conduit type (outside Ø)	
IBT STE-LZA/10	10 mm	NYY 3 x 1.5 (11mm)	978 910 01
IBT STE-LZA/14	14 mm	M16 (16 mm)	978 914 01
IBT STE-LZA/18	18 mm	M20 (20 mm)	978 918 01
IBT STE-LZA/23	23 mm	M25 (25 mm)	978 923 01

LST hole punch

Hole punch for large scale operation in component factories, with fixing devices

	Order no.
LST with 18 mm and 23 mm punch sets, as well as expansion mandrel	979 162 01

Punch sets

Punch sets for LST hole punch

|	hole diameter	for cable / conduit type (outside Ø)	
IBT STE-LST/14	14 mm	M16 (16 mm)	978 814 01
IBT STE-LST/18	18 mm	M20 (20 mm)	978 818 01
IBT STE-LST/23	23 mm	M25 (25 mm)	978 823 01
IBT STE-LST/30	30 mm	M32 (32 mm)	978 830 01
IBT STE-LST/39	39 mm	M40 (40 mm)	978 839 01

	Description	Order no.

BS MBR assembly bridge

Assembly bridge for the installation of British standard equipment in boxes BS 1 and BS 2, can be clicked into place and moved sideways

BS MBR 2 pcs. required per box	974 120 01

BS ES installation screws

Installation screws for fixing BS equipment

BS ES-30	3.5 x 30 mm	974 130 01
BS ES-40	3.5 x 40 mm	974 135 01
BS ES-50	3.5 x 50 mm	974 150 01

HW LFR hole cutter

Hole cutter, 120 mm Ø, suitable for wood and gypsum concrete plates

HW LFR-120 HW hole cutter HW LFR-120, will fit any commercial drill chuck, diameter 120 mm Ø, cutting depth 40 mm	925 121 01

Hole cutter
79 mm

Hole cutter

LFR through opening: M16-32, drill hole: 16.5-32.5 mm	195 995 01

ES installation screws

Additional device screws for mounting built-in devices in cavity wall outlet sockets

ES-10	3.1 x 10 mm	979 105 01
ES-18	3.1 x 18 mm	979 106 01
ES-25	3.1 x 25 mm	979 107 01

Concrete Installation

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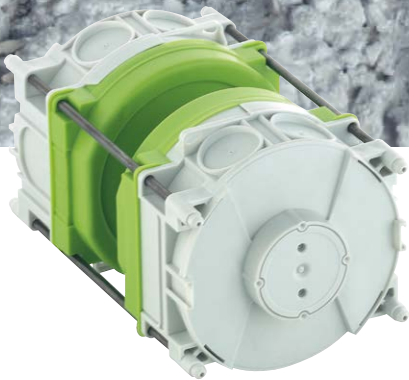
- ▲ Use as a back mounted box from wall thickness of 240 mm
- ▶ Integrated M25/M32 conduit stopper prevents the conduits from being pushed right through

- ▶ Simple assembly in site-cast concrete ceilings and walls as well as in pre-cast concrete

- ▶ IBTronic makes it possible to conveniently and elegantly integrate halogen and LED lights, loudspeakers and high-quality electronic components into concrete ceilings.

- ▶ IBTronic-TT enables simple installation of electronic safety transformers.

IP30   B   90°C   halogen-free
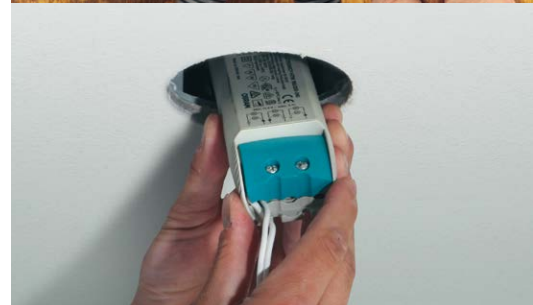
Concrete Installation IBTronic

IBTronic
150 x 150 x 106 mm

Entries: 4 x up to Ø 34 mm,
Integrated conduit stopper for M25 conduits,
M32

Description	Order no.
Universal mounting enclosure for site cast concrete or prefabricated concrete structure, for the installation of NV/HV/LED luminaires. Suitable for adhesive fixing and opposing formwork, for installation in ceilings from 140 mm, wall installation with IBT support spars, recommended accessories for mounting in site cast concrete applications: Nailing tool NAH IBTronic H120 order no. 979 218 01, use 4 support spars STH each for support spar technology, for the installation of VDE-approved lights per DIN EN 60598 (VDE 0711), as well as with F identification or MM identification, Max, installation height LV lights: 75 mm, HV lights: 80 mm, lamp rating max. 50 W	

IP30 B 90°C halogen-free

IBTronic H120-S1 outlet aperture: 1-way receptacle	976 001 01
IBTronic H120-S2 outlet aperture: 2-way receptacle	976 002 01
IBTronic H120-68 outlet aperture:Ø 68 mm	976 005 01
IBTronic H120-0 selectable outlet aperture:Ø 108/120 mm	976 003 01
IBTronic H120-P selectable outlet aperture: Fermacell® plasterboard, variable up to Ø 100 mm	976 004 01

IBTronic
150 x 150 x 151 mm

Entries: 8 x up to Ø 34 mm,
Integrated conduit stopper for M25 conduits,
M32

Description	Order no.
Universal mounting enclosure for site cast concrete or prefabricated concrete structure, for the installation of NV/HV/LED luminaires. Suitable for adhesive fixing and opposing formwork, for installation in ceilings from 180 mm, wall installation with IBT support spars, recommended accessories for mounting in site cast concrete applications: Nailing tool NAH IBTronic H120 order no. 979 218 01, use 4 support spars STH each for support spar technology, For the installation of VDE-approved lights per DIN EN 60598 (VDE 0711), as well as with F identification or MM identification, Max, installation height LV lights: 120 mm, HV lights: 125 mm, lamp rating max. 50 W	

IP30 B 90°C halogen-free

IBTronic H120-S1-S2 selectable outlet aperture:1-way or 2-way receptacle	976 101 01
IBTronic H120-S1-0 selectable outlet aperture:1-way receptacle or Ø 108 / 120 mm	976 103 01
IBTronic H120-68-O selectable outlet aperture:Ø 68 mm or Ø 108 / 120 mm	976 105 01
IBTronic H120-P-O selectable outlet aperture: Fermacell® plasterboard, variable up to max. Ø 100 mm or Ø 108 / 120 mm	976 104 01

Concrete Installation

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IBTronic TT

306 x 150 x 106 mm

Entries: 6 x up to Ø 34 mm,
Integrated conduit stopper for M25 conduits,
M32

Universal mounting enclosure with separate connection space (e.g. for the installation of a safety transformer up to max. 150 VA) for site cast or prefabricated concrete structures, for the installation of NV/HV/LED-luminaires and loudspeakers and high-quality electronic components, suitable for adhesive fixing and opposing shuttering, for installation in ceilings from 140 mm, wall installation with IBT support spars, recommended accessories for mounting in site cast concrete applications:
Nailing tool NAH IBTronic H120 order no. 979 218 01, use 4 support spars STH each for support spar technology, for the installation of VDE-approved lights per DIN EN 60598 (VDE 0711), as well as with F identification or MM identification, Max, installation height LV lights: 75 mm, HV lights: 80 mm, lamp rating max. 50 W

IP30	B	90°C	halogen-free

Description	Order no.
IBTronic H120TT-S1 outlet aperture: 1-way receptacle	976 201 01
IBTronic H120TT-S2 outlet aperture: 2-way receptacle	976 202 01
IBTronic H120TT-68 outlet aperture:Ø 68 mm	976 205 01
IBTronic H120TT-0 outlet aperture:Ø 108 / 120 mm	976 203 01
IBTronic H120TT-P selectable outlet aperture: Fermacell® plasterboard, variable up to Ø 100 mm	976 204 01

IBTronic TT

306 x 150 x 151 mm

Entries: 6 x up to Ø 34 mm,
Integrated conduit stopper for M25 conduits,
M32

Universal mounting enclosure with separate connection space (e.g. for the installation of a safety transformer up to max. 150 VA) for site cast or prefabricated concrete structures, for the installation of NV/HV/LED-luminaires and loudspeakers and high-quality electronic components, suitable for adhesive fixing and opposing shuttering, for installation in ceilings from 180 mm, wall installation with IBT support spars, recommended accessories for mounting in site cast concrete applications:
Nailing tool NAH IBTronic H120 order no. 979 218 01, use 4 support spars STH each for support spar technology, for the installation of VDE-approved lights per DIN EN 60598 (VDE 0711), as well as with F identification or MM identification, Max, installation height LV lights: 120 mm, HV lights: 125 mm, lamp rating max. 50 W

IP30	B	90°C	halogen-free

Description	Order no.
IBTronic H120TT-S1-0 outlet aperture: 1-way receptacle	976 301 01
IBTronic H120TT-S2-0 outlet aperture: 2-way receptacle	976 302 01
IBTronic H120TT-68-O outlet aperture:Ø 68 mm	976 305 01
IBTronic H120TT-O-O outlet aperture:Ø 108 / 120 mm	976 303 01
IBTronic H120TT-P-O selectable outlet aperture: Fermacell® plasterboard variable up to max. Ø 100 mm or Ø 108 / 120 mm	976 304 01

Concrete Installation IBTronic

Accessories

Description	Order no.
Recommended accessories:	
K0 K15 BL 2 blank cleats per box required	979 532 01
NS 35-90 standard rail (35 mm) for subsequent installation in IBTronic-TT H120TT-S2	979 800 01
FPD 120 Fermacell® plasterboard for retrospective installation in H120 P	979 801 01
HW LFR-120 HW hole cutter HW LFR-120, will fit any commercial drill chuck, diameter 120 mm Ø, cutting depth 40 mm	925 121 01

NAH

For fitting the IBTronic-P universal installation enclosure in site cast concrete applications.
Four nailing tools per enclosure required, 1 set = 4 pcs.

Description	Order no.
NAH IBTronic H 120	979 218 01

STH support spars
Ø 6 mm

Support spars for various wall thicknesses in opposing formwork, always used in conjunction with blank base or back mounted box, spar length = wall thickness minus 1 cm,
2 support spars per socket, 4 support spars for extreme loads

	Wall thickness	Spar length	
STH 70	8 cm	7 cm	979 570 01
STH 90	10 cm	9 cm	979 590 01
STH 100	11 cm	10 cm	979 600 01
STH 110	12 cm	11 cm	979 610 01
STH 130	14 cm	13 cm	979 630 01
STH 140	15 cm	14 cm	979 640 01
STH 150	16 cm	15 cm	979 650 01
STH 170	18 cm	17 cm	979 670 01
STH 190	20 cm	19 cm	979 690 01
STH 230	24 cm	23 cm	979 730 01
STH 240	25 cm	24 cm	979 740 01
STH 290	30 cm	29 cm	979 790 01

Concrete Installation

els spelsberg

- For use with cast-in-place concrete and precast factory
- Low costs, faster installation
- Conduit adaptation without special tools
- Centreline marking on the housing
- Easy alignment of the housing on the formwork table
- Nail fastening outside the housing
- Conduit entry points above the prefabricated ceiling

- LED power, 15-47 watts
- 8 integrated conduit entry points for straight and corrugated conduits (4 x M20, 4 x M25)
- Integrated conduit stoppers and strain relief
- Simplified feed-in and through-wiring
- Knockout diaphragm entries

Available from June 2017!

| IP30 | ▽ B | 90°C | halogen-free | LED |

Universal mounting enclosure IBT LED
for installing <u>NV/HV/LED luminaires</u> and <u>loudspeakers</u>

NEW!

www.spelsberg.com

IBT LED 1

152 x 200 x 135 mm

Description	Order no.
Universal mounting enclosure, for prefabricated construction, Halogen-free, for installing NV/HV/LED luminaires and loudspeakers., as well as messaging and call systems, suitable for adhesive fixing, for the installation of VDE-approved lights per DIN EN 60598 (VDE 0711), as well as with F identification or MM identification, maximum installation height for lamps, loudspeakers, messaging and call systems: 100 mm, Lamp output LED max. 15 W	

IP30 | B | 90°C | halogen-free | LED

IBT LED 1 outlet aperture: Fermacell® plasterboard, variable up to max. 100 x 100 mm, 8 combi-conduit entry points 4 x M20, 4 x M25 integrated conduit stopper and strain relief for conduits M20, M25	982 100 01
IBT LED 1 E outlet aperture: Fermacell® plasterboard, variable up to max. 100 x 100 mm, 8 combi-conduit entry points 4 x M16, 4 x M19 integrated conduit stopper and strain relief for conduits M16, M19	982 100 02

IBT LED 2

202 x 250 x 135 mm

Description	Order no.
Universal mounting enclosure, for prefabricated construction, halogen-free, for installing NV/HV/LED luminaires and loudspeakers, as well as messaging and call systems, suitable for adhesive fixing, for the installation of VDE-approved lights per DIN EN 60598 (VDE 0711), as well as with F identification or MM identification, maximum installation height for lamps, loudspeakers, messaging and call systems: 100 mm, Lamp output LED max. 20 W	

IP30 | B | 90°C | halogen-free | LED

IBTLED 2 outlet aperture: Fermacell® plasterboard, Variable up to max. 150 x 150 mm, 8 combi-conduit entry points 4 x M20, 4 x M25 integrated conduit stopper and strain relief for conduits M20, M25	982 150 01
IBT LED 2 E outlet aperture: Fermacell® plasterboard, Variable up to max. 150 x 150 mm, 8 combi-conduit entry points 4 x M16, 4 x M19 integrated conduit stopper and strain relief for conduits M16, M19	982 150 02

IBT LED 3

350 x 400 x 165 mm

Description	Order no.
Universal mounting enclosure, for prefabricated construction, Halogen-free, for installing NV/HV/LED luminaires and loudspeakers., as well as messaging and call systems, suitable for adhesive fixing, for the installation of VDE-approved lights per DIN EN 60598 (VDE 0711), as well as with F identification or MM identification, maximum installation height for lamps, loudspeakers, messaging and call systems: 130 mm, Lamp output LED max. 47 W	

IP30 | B | 90°C | halogen-free | LED

IBTLED 3 outlet aperture: Fermacell® plasterboard, variable up to max. 200 x 300 mm, 8 combi-conduit entry points 4 x M20, 4 x M25 integrated conduit stopper and strain relief for conduits M20, M25	982 200 01
IBT LED 3 E outlet aperture: Fermacell® plasterboard, variable up to max. 200 x 300 mm, 8 combi-conduit entry points 4 x M16, 4 x M19 integrated conduit stopper and strain relief for conduits M16, M19	982 200 02

Concrete Installation

- · Universal installation housing for mounting LV/HV/LED luminaires and loudspeakers in pre-cast concrete
- · Fermacell®-plasterboard with tolerance compensation of Ø 185 mm
- · Outlet aperture: variable to max. 150 mm
- · Integrated transformer tunnel up to max. 150 VA
- · Volume of 4.5 litres
- · Simplified installation of transformers due to short cable runs
- · Easy alignment due to marking of the centre of cover and enclosure

- · 4 stainless steel clamps for secure hold, Fermacell® plasterboard can be used throughout
- · No problem to find again after plastering thanks to plaster mark
- · Stackable: - Minimal stock
  - Protects Fermacell® plasterboard

▶ **Light installation**

- · Drilling of ceiling aperture up to Ø 150 mm with the Spelsberg Profi hole cutter
- · Transformer installation up to 150 VA
- · For installation of VDE-approved luminaires according to DIN EN 60598 and with ▽ or ▽▽ marking, luminaire power up to 50 W

IPX4   ▽B   90°C   halogen-free

Concrete Installation IBTronic XL H 185

274

IBTronic XL

255 x 280 x 130 mm

Universal mounting enclosure with additional connection space (e.g. for installing an electronic safety transformer) for pre-cast concrete structures, halogen-free, for installing NV/HV/LED luminaires and loudspeakers, suitable for adhesive and nail fixing, for the installation of VDE-approved lights per DIN EN 60598 (VDE 0711), as well as with F identification or MM identification, Max, installation height LV lights: 105 mm, HV lights: 110 mm, Lamp output max. 50W/LED 25W

| IPX4 | B | 90°C | halogen-free | COOL BEAM Max. 50W |

IBTronic XL H 185 F outlet aperture: Fermacell® plasterboard, variable to max. Ø 150 mm, 8 combi-conduit entries 4 x M20, 4 x M25, integrated conduit stopper for conduits M20, M25	976 604 01
IBTronic XL H 185 FE outlet aperture: Fermacell® plasterboard, variable to max. Ø 150 mm, **8 combi-conduit entries 4 x 16 mm, 4 x 19 mm, integrated conduit stopper and strain relief for 16 mm and 19 mm pipes**	976 604 02

Concrete Installation

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- Universal installation housings for subsequent mounting in prefabricated ceilings
- For installation of LV/HV/LED luminaires
- The 2-part light adapter can easily compensate ceiling thickness of 45-70 mm without any problem. The ceiling aperture is 76 mm, the outer ring diameter of the luminaire must be at least 85 mm. The retaining springs are locked in the light adapter. The light unit is mounted so that the luminaire's cover ring is flush.

▶ **Light installation**

- Ø 82 mm core hole drilling
- Fix enclosure and install conduits
- Transformer installation up to 150 VA
- For installation of VDE-tested luminaires according to DIN EN 60598 and with ▽ or ▽▽ marking, luminaire power up to 50 W Alu

▶ **Flexible entry method**

- 8 integrated conduit entries for smooth and corrugated conduits (4 x M20, 4 x M25)
- Integrated conduit stopper and strain relief
- Knock-out membrane entries, conduit entries above the prefabricated ceiling

B | 90°C | halogen-free | Max.50W

Concrete Installation IBTronic XL Drillbox

IBTronic XL Drillbox
255 x 280 x 92 mm

Description	Order no.
Universal mounting enclosure with additional connection space (e.g. for installing an electronic safety transformer) for pre-cast concrete structures, halogen-free, for installing NV/HV/LED luminaires, suitable for subsequent installation in prefabricated ceilings 45-70 mm with Ø 82 mm core drilling, for the installation of VDE-approved lights per DIN EN 60598 (VDE 0711), as well as with F identification or MM identification, max. installation height LV lights: 105 mm, HV lights: 110 mm, lamp rating max. 50 W Alu	

▽ B   90°C   halogen-free

IBTronic XL Drillbox outlet aperture: Ø 76 mm, ORD (Outer Ring Diameter), min. Ø 85 mm, 8 combi-conduit entries 4 x M20, 4 x M25, integrated conduit stopper for conduits M20, M25	976 801 01
IBTronic XL Drillbox E outlet aperture: Ø 76 mm, ORD (Outer Ring Diameter), min. Ø 85 mm, 8 combi-conduit entries 4 x 16 mm, 4 x 19 mm, integrated conduit stopper and strain relief for 16 mm and 19 mm pipes	976 801 02

Accessories

Recommended accessories: IBTronic XL Drillbox, as replacement requirement	
LMK 76 luminaire assembly kit LMK 76, for subsequent installation in IBTronic XL Drillbox 976 801 01	979 803 01

Accessories
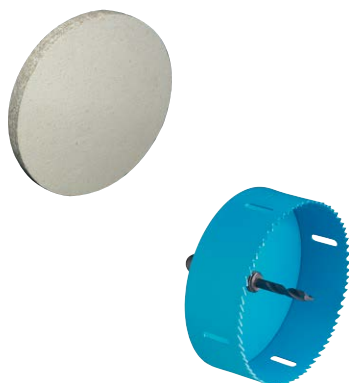
Recommended accessories:	
FPD 120 Fermacell® plasterboard for retrospective installation in H120 P	979 801 01
HW LFR-120 HW hole cutter HW LFR-120, will fit any commercial drill chuck, diameter 120 mm Ø, cutting depth 40 mm	925 121 01

Concrete Installation

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Flexible entry method

· 8 integrated conduit entries for smooth and corrugated conduits (4 x M20, 4 x M25)
· Integrated conduit stopper and strain relief
· Knock-out membrane entries, conduit entries above the prefabricated ceiling

· **Universal installation housings for subsequent mounting in prefabricated ceilings**
· **For installation of LV/HV/LED luminaires and loudspeakers**
· **Ø 150 mm core hole drilling**
· **Fermacell® plasterboard with tolerance compensation of max. Ø 100 mm**
· **For installation of VDE-tested luminaires according to DIN EN 60598 and with ▽F or ▽▽▽ marking, luminaire power up to 50 W Cool Beam**

Concrete Installation IBTronic XL Drillbox 150

IBTronic XL Drillbox 150

255 x 280 x 92 mm

Description	Order no.
Universal mounting enclosure with additional connection space (e.g. for installing an electronic safety transformer) for pre-cast concrete structures, halogen-free, for installing NV/HV/LED luminaires and loudspeakers, suitable for subsequent installation in prefabricated ceilings 45-70 mm with Ø 150 mm core drilling.	

B 90°C halogen-free COOL BEAM Max. 50W

IBTronic XL Drillbox 150 selectable outlet aperture: Fermacell® plasterboard, variable up to Ø 100 mm, 8 combi-conduit entries 4 x M20, 4 x M25, integrated conduit stopper for conduits M20, M25	976 804 01
IBTronic XL Drillbox 150 E selectable outlet aperture: Fermacell® plasterboard, variable up to Ø 100 mm, 8 combi-conduit entries 4 x 16 mm, 4 x 19 mm, integrated conduit stopper for pipes 16 mm, 19 mm	976 804 02
Accessories	
HW LFR-35 Diameter 35 mm Ø	925 135 01
HW LFR-68 Diameter 68 mm Ø	925 168 01
HW LFR-74 Diameter 74 mm Ø	925 174 01

Accessories

Hole cutter with spring for ejection of PCB, drilling depth up to 30 mm

	Diameter	
HW LFR-35	35	925 135 01
HW LFR-68	68	925 168 01
HW LFR-74	74	925 174 01
HW LFR-120	120	925 121 01

Concrete Installation

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Cavity wall installation system

· Automatic cable restraint for conduits up
  to 20 mm Ø or cables NYM up to 5x2.5²
· Fast, easy installation thanks to favour-
  able positioning of claws
· No special tools needed
· Pattress boxes with integrated combi-
  bridge for insulated wiring, no extra
  parts needed
· Combination of different heights possible
· Flush installation standard, no countersink
  necessary

Trunking boxes

· Patented entries with strain relief
· Convenient insertion of the connecting
  cables from above
· For cables up to 5 x 2.5² and data lines
· Universal 1-way or 2-way boxes in various
  heights
· For switches, sockets (screw spacing
  60 mm), CEE 16 A (screw spacing 67 mm)
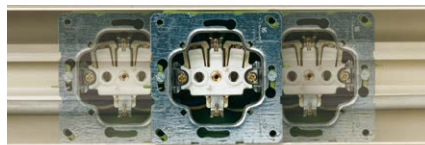
<u>Fast installation</u>

· Snap box into place
· Connect device outside the box
· Insert the device and connecting cable
  from above and position the box
· Tighten screws - done!

Cavity wall installation system

Cavity wall installation system Content

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	Description	Order no.

HW 040 - Outlet socket
40 mm

Cavity wall outlet socket, flame resistant, for lighting outlets acc. to VDE 0100, for plate thicknesses from 1 to 30 mm, screwing distance 27 mm, including white sealing cap

IP30

HW 040 Drilled hole Ø 35 mm, 40 mm deep		924 040 01

HW 035 - Flat box
35 mm

Cavity wall flat box, flame resistant, special box with small installation depth (35 mm), for thin walls with plate thicknesses from 1 to 20 mm, with moulded patented combi jumpers, device screw spacing 60 mm

IP30

HW 035 Drilled hole Ø 68 mm, 35 mm deep		920 035 01

HW 035 H
35 mm

Cavity wall flat box, flame resistant, special box with small installation depth (35 mm), for thin walls with plate thicknesses from 1 to 20 mm, with moulded patented combi jumpers, device screw spacing 60 mm

IP30   960°C   halogen-free

HW 035 H Drilled hole Ø 68 mm, 35 mm deep		920 235 01

HW 050 - Receptacle
50 mm

Cavity wall receptacle, flame resistant, universal socket for plate thicknesses from 1 to 40 mm with moulded patented combi jumpers and punching tool, device screw spacing 60 mm

IP30

HW 050 drilled hole Ø 68 mm, 50 mm deep		920 050 01
HW 050 WD with closed membrane entries, drilled hole Ø 68 mm, 50 mm deep		920 350 01

Cavity wall installation system HW

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HW 050 H
50 mm

Cavity wall receptacle, flame resistant, universal socket for plate thicknesses from 1 to 40 mm with moulded patented combi jumpers and punching tool, device screw spacing 60 mm

IP30 960°C DVE halogen-free

HW 050 H drilled hole Ø 68 mm, 50 mm deep	920 250 01

HW 065 - branch socket box
65 mm

Cavity wall channel junction box, flame resistant, with enlarged connection space, universal socket for plate thicknesses from 1 to 40 mm, with moulded, patented combi jumpers and punching tool, device screw spacing 60 mm

IP30 DVE

HW 065 drilled hole Ø 68 mm, 65 mm deep	920 065 01
HW 065 WD with closed membrane entries, drilled hole Ø 68 mm, 65 mm deep	920 365 01

HW 065 H
65 mm

Cavity wall channel junction box, flame resistant, with enlarged connection space, universal socket for plate thicknesses from 1 to 40 mm, with moulded, patented combi jumpers and punching tool, device screw spacing 60 mm

IP30 960°C DVE halogen-free

HW 065 H drilled hole Ø 68 mm, 65 mm deep	920 265 01

HW - Ceiling socket
50 mm

Cavity wall lighting connection socket, flame resistant, for plate thicknesses from 0.5 to 33 mm, with M5 brass bush to take a ceiling hook from the accessory range, acc. to DIN EN 60670-21, but max. loading on hook 20 N (2 kg)

IP30

HW DD drilled hole Ø 68 mm, 50 mm deep	927 050 01

Cavity wall trunking boxes

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HW 070 - channel junction box
58 mm

Cavity wall connection socket, flame resistant, for plate thicknesses from 1 to 30 mm, device screw spacing 67 mm

IP30

HW 070 Drilled hole Ø 74 mm, 58 mm deep	925 070 01

HW 120 - Connection socket
65 mm

Cavity wall connection socket, flame resistant, for plate thicknesses from 7 to 35 mm, for terminals up to 4 mm², including white sealing cap

IP30

HW 120 Drilled hole Ø 120 mm, 65 mm deep	925 120 01

HW 050 - Double socket
50 mm

Cavity wall double socket, flame resistant, for plate thicknesses from 1 to 40 mm, with moulded patented combi jumpers and punching tool, device screw spacing 60 mm

IP30

HW 050/2 drilled hole Ø 2 x 68 mm, 50 mm deep, combination spacing 71 mm	923 050 01
HW 050/2 WD with closed membrane entries, drilled hole Ø 2 x 68 mm, 50 mm deep, Combination spacing 71 mm	923 350 01

HWK - Terminal boxes
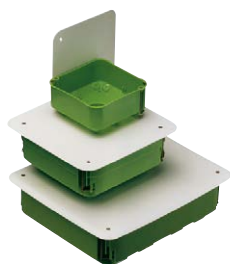
Cavity wall terminal boxes, flame resistant, for plate thicknesses from 7 to 35 mm, including white sealing cap

IP30   **VDE**

HWK 1 107 x 107 x 53 mm, with drilling template for 35 mm drilled holes	928 001 01
HWK 2 165 x 165 x 72 mm, with drilling template for 68 mm drilled holes	928 002 01
HWK 3 235 x 205 x 72 mm, with drilling template for 68 mm drilled holes	928 003 01

Cavity wall installation system HW

HW - Sealing cap
Ø 90 mm

Description	Order no.
Sealing cap for junction boxes, polystyrene, flame resistant, white	
HW VD-60 for type HW 035 / HW 050 / HW 065, screw spacing 60 mm	925 101 01
HW VD-67 for type HW 070, screw spacing 67 mm	925 100 01

Cover with ceiling hook
Ø 90 mm

Sealing cap for cavity wall sockets, polystyrene, flame resistant, white, with isolated metal ceiling hooks M5 x 55 mm and fixing screws	
HW 050 DD-VD for ceiling socket HW DD	927 100 01

DH ceiling hook

Metal ceiling hook, insulated with M5 thread for ceiling sockets

	Shaft length	Order no.
DH 75-M5	75	979 117 01
DH 100-M5	100	979 119 01
DH 115-M5	115	979 121 01
DH 135-M5	135	979 123 01

HW device screws

Additional device screws for mounting built-in devices in cavity wall outlet sockets

		Order no.
ES-10	3.1 x 10 mm	979 105 01
ES-18	3.1 x 18 mm	979 106 01
ES-25	3.1 x 25 mm	979 107 01

HW hole cutter

Hole cutter with spring for ejection of PCB, drilling depth up to 30 mm

	Diameter	Order no.
HW LFR-35	35	925 135 01
HW LFR-68	68	925 168 01
HW LFR-74	74	925 174 01
HW LFR-120	120	925 121 01

Cavity wall
trunking boxes

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Spare parts for hole cutter

Description		Order no.
Saw blade for hole cutter type 925 onwards		
	Diameter	
HW LFR-35/SBL	35	929 935 01
HW LFR-68/SBL	68	929 968 01
HW LFR-74/SBL	74	929 969 01

Profi suitcase hole cutter

Description	Order no.
Hole cutter set comprising: 1 x profi cutter 35 mm, 1 x profi cutter 68 mm, 1 x profi cutter 74 mm, 1 x drive arbour, 1 x ejector spring, 1 x plastic case	
HW LFRP-Sort	925 199 01

HW Profi hole cutter

Description		Order no.
Closed HSS bi-metallic cutter for long-term use with spring for ejection of PCB, drilling depth up to 40 mm		
	Diameter	
HW LFRP-35	35	926 935 01
HW LFRP-68	68	926 968 01
HW LFRP-74	74	926 974 01

RVB conduit connector

Description	Order no.
Conduit coupling (without conduit) with strain relief, grey, for flexible metric electrical installation conduits	
RVB 20 for long-ridged pipes M20	970 220 01
RVB 25 for long-ridged pipes M25	970 225 01
RVB 32 for long-ridged pipes M32	970 232 01
RVB 40 for long-ridged pipes M40	970 240 01
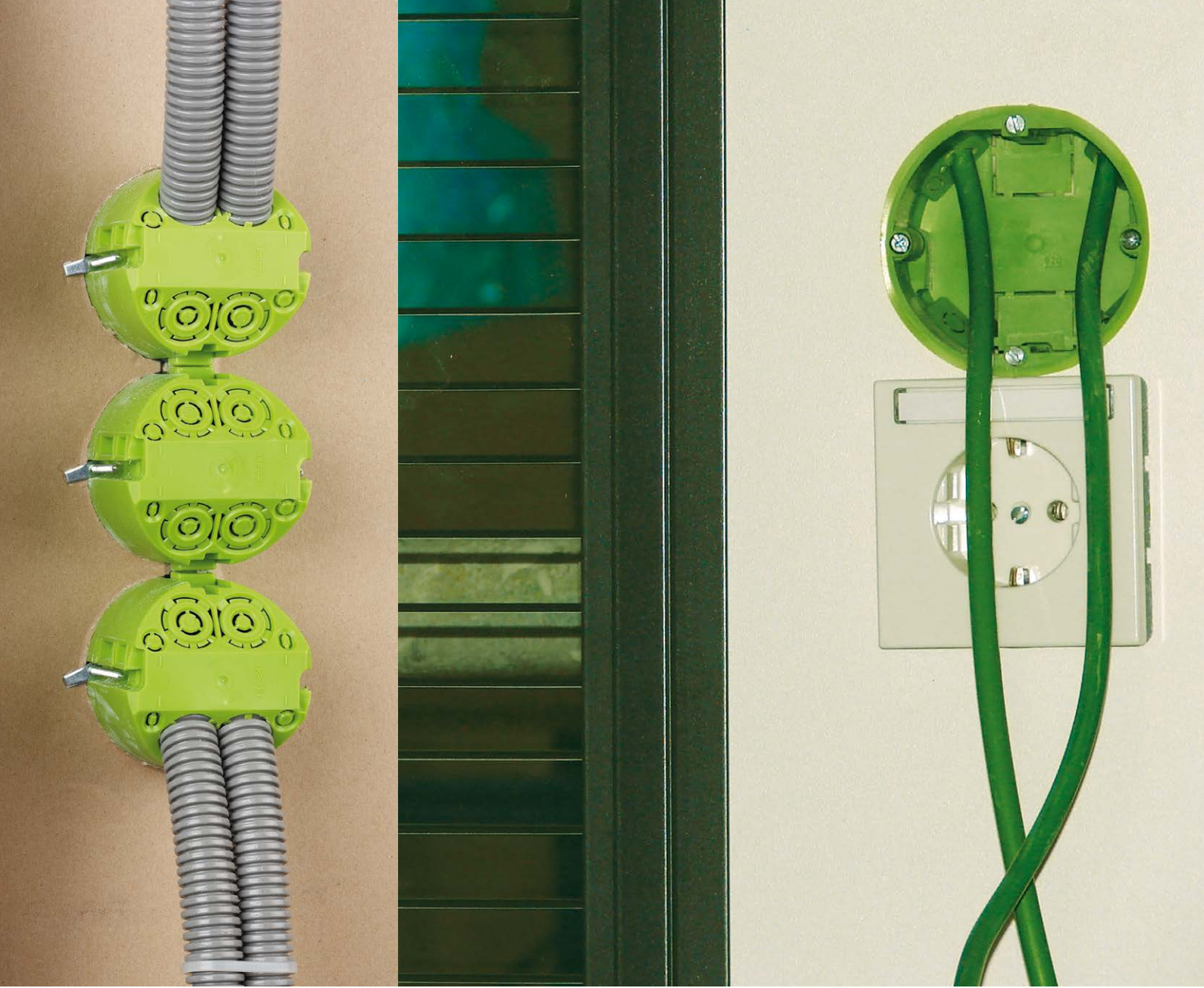
Cavity wall installation system HW accessories

Floor-mounted trunking boxes
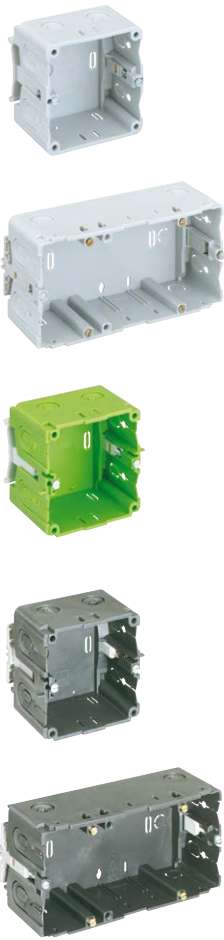
Trunking boxes		Tehalit	Gewiss	Rehau	
	Trunking	BR wall trunking PVC/ Alu	BR wall trunking PVC/Alu/Steel FB device installation trunking	Wall trunking PVC/Alu/ Steel (signo BK, BS, BA) FBK window sill trunking	
		from BR 70130	All sizes	All sizes	
Height 47 mm	1-way		370 047 01 Colour: grey		
	2-way		382 047 01 Colour: grey		
Height 50 mm	1-way				
	2-way				
Height 52 mm	1-way		370 052 01 Colour: green		
	2-way		382 052 01 Colour: green		
Height 55 mm	1-way	391 055 01 Colour: black			
	1-way				
	1-way			370 055 01 Colour: grey	
	2-way	392 055 01 Colour: black			
	2-way				
	2-way			382 055 01 Colour: grey	

Floor-mounted junction box with cover

Trunking boxes		Gewiss	Rehau
	Trunking	BR wall trunking PVC/Alu/Steel FB device installation trunking	Wall trunking PVC/Alu/ Steel (signo BK, BS, BA) FBK window sill trunking
		All sizes	All sizes
Height 42 mm	1-way	370 042 01 Colour: green	370 042 01 Colour: green
	1-way		

Trunking boxes for other manufacturers available on request

Trunking boxes KD

	Kleinhuis		Ackermann
	HKL installation trunking (from HKL60110) GL device installation trunking	BS wall trunkin PVC, insertion width 80/112 mm	Wall installation trunking WIK2, insertion width 110 mm steel
	GL (all sizes)	All sizes	from WIK2 65/133
	370 450 01 (*1) Colour: white	370 450 01 Colour: white	
	382 450 01 (*1) Colour: white	382 450 01 Colour: white	
			391 055 01 Colour: black
		370 455 01 Colour: grey	
			392 055 01 Colour: black
		382 455 01 Colour: grey	

	Kleinhuis		Niedax
	HKL installation trunking (from HKL60110) GL device installation trunking	BS wall trunking PVC, insertion width 80/112 mm	Device installation trunking GK 100, insertion width 110 mm steel
	GL (all sizes)	All sizes	All sizes
			370 042 01 (*2) Colour: green
	370 442 01 Colour: green	370 442 01 Colour: green	

(*1) = from GL 80150 only in conjunction with Kleinhuis bridge GLB80

(*2) = GK with depth of 80 mm and adapter rail TS 35 top-hat profile

■ = Device installation for integrated appliances with cover frame

□ = Device installation for integrated appliances with central disc

Front-mounted trunking boxes

		Gewiss	Rehau	Niedax
Trunking ↘ **Trunking boxes**		BR wall trunking Insertion width 80 mm BR-PVC BR-Alu BR Steel (profiled)	Wall trunking PVC/Alu/Steel (signo BK, BS, BA)	Device installation trunking GK 78, Insertion width 78 mm Steel/Alu
Height 47 mm	1-way	361 107 01 Colour: grey	361 107 01 Colour: grey	
	1-way			361 407 01 Colour: green
Height 44 mm	2-way	362 104 01 Colour: grey	362 104 01 Colour: grey	
	2-way			362 404 01 Colour: green

CEE Mounting kit

Description	Order No.	Packing Qty
Installation kit for CEE devices 16 A (straight design) with flange dimensions 75 x 75 mm, spacing of the fixing holes 60 mm, suitable for individual boxes		
KD EBZ-CEE Check dimensions beforehand owing to large number of CEE devices available on the market.	372 100 01	

Trunking boxes for other manufacturers available on request

▢ = Device installation for integrated appliances with cover frame

Fixing clamps

Description	Order No.	Packing Qty
Fixing clamps as additional fixing points for devices, to be snapped into sidewalls of individual boxes (bottom profile)		
KD GN-SND with self-cutting screws	370 400 01	

Strain relief

Description	Order No.	Packing Qty
Strain relief for installation in channel socket wall for increasing mechanical security, e.g. for vertical conduit laying, universal, to be retrofitted		
KD ZEL	370 402 01	

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Twist plug

IP54 Twist plug M_ x 1.5 mm with closed sealing membrane, polyethylene

	Thread lenght/mm	Sealing area/mm	
WST M16	9	5 - 10	203 416 01
WST M20	12	8 - 13.5	203 420 01
WST M25	12	9 - 16	203 425 01
WST M32	14	11 - 22	203 432 01
WST M40	14	17 - 24	203 440 01
WST M50	18	22 - 35	203 450 01
WST M63	20	24 - 43	203 463 01

Twist plug

IP54 Twist plug M_ x 1.5 mm with closed sealing membrane, polyethylene

	Thread lenght/mm	Sealing area/mm	
WST M16/sw	9	5 - 10	203 016 01
WST M20/sw	12	8 - 13.5	203 020 01
WST M25/sw	12	9 - 16	203 025 01

Twist nipple

IP54 Twist nipple M_ x 1.5 mm with open sealing membrane, polyethylene

	Thread lenght/mm	Sealing area/mm	
WNI M16	9	5 - 10	213 416 01
WNI M20	12	8 - 13.5	213 420 01
WNI M25	12	9 - 16	213 425 01
WNI M32	14	13 - 23	213 432 01

Twist nipple

IP54 Twist nipple M_ x 1.5 mm with open sealing membrane, polyethylene

	Thread lenght/mm	Sealing area/mm	
WNI M16/sw	9	5 - 10	213 016 01
WNI M20/sw	12	8 - 13.5	213 020 01
WNI M25/sw	12	9 - 16	213 025 01

Sealing plugs

IP54 Blanking plug with closed sealing membrane, thermoplastic elastomer (TPE), no lock nuts required

	f. wall thicknesses/mm	Sealing area/mm	
VST M16	1,5 - 4,5	6 - 10	231 416 01
VST M20	1,5 - 4,5	8 - 13.5	231 420 01
VST M25	1,5 - 4,5	9 - 16	231 425 01
VST M32	1,5 - 4,5	13 - 23	231 432 01
VST M40	1,5 - 4,5	17 - 30	231 440 01

Universal accessories

PA blanking plug

IP68

Description			Order no.
Blanking plug M_ x 1.5 mm, polyamide			

	f. wall thicknesses/mm	Thread lenght/mm	
VSS PA M16	0,5 - 3,0	6	211 116 01
VSS PA M20	0,5 - 3,0	6	211 120 01
VSS PA M25	0,5 - 3,0	11	211 125 01
VSS PA M32	0,5 - 3,0	11	211 132 01

Attachment bushes

IP54

Attachment bushes with open sealing membrane, no lock nuts required

	Sealing area/mm	
AST M16	6 - 10	230 416 01
AST M20	8 - 13.5	230 420 01
AST M25	9 - 18.5	230 425 01
AST M32	13 - 23	230 432 01
AST M40	17 - 30	230 440 01

Double membrane seals

IP66

Double membrane seals made of elastic plastic with two sealing membranes, closed

	f. wall thicknesses/mm	Sealing area/mm	
DMS M16	1.5 - 4.5	5 - 9	260 416 01
DMS M20	1.5 - 4.5	7 - 12	260 420 01
DMS M25	1.5 - 4.5	9 - 16	260 425 01
DMS M32	1.5 - 4.5	14 - 21	260 432 01
DMS M40	1.5 - 4.5	19 - 28	260 440 01

Double membrane seals

IP66

Double membrane seals made of elastic plastic with two sealing membranes, closed

	f. wall thicknesses/mm	Sealing area/mm	
DMS M20/sw	1.5 - 4.5	7 - 12	260 020 01
DMS M25/sw	1.5 - 4.5	9 - 16	260 025 01
DMS M32/sw	1.5 - 4.5	14 - 21	260 032 01

Double membrane seals

IP66

Double membrane seals made of elastic plastic with two sealing membranes, max. four cable entries for control cables

	f. wall thicknesses/mm	Sealing area/mm	
DMS M32/4	1,5 - 4,5	4 x 3.5 - 6	260 433 01

Stepped nipple

Order no.

IP55

Stepped nipple with closed sealing membrane, can be cut in several steps, thermoplastic elastomer

	f. wall thicknesses/mm	Sealing area/mm	
SNI M20	1,5 - 4,5	5 - 16	216 420 01
SNI M25	1,5 - 4,5	5 - 21	216 425 01
SNI M32	1,5 - 4,5	13 - 26.5	216 432 01
SNI M40	1,5 - 4,5	13 - 34,0	216 440 01

Ventilation seal

IP44

With ventilation seal to avoid condensation formation in enclosures, flow rate 100 l/min. at 0.1 bar overpressure, thermoplastic elastomer, grey, recommended for insertion on the left and right enclosure sides in different heights (see Technical Appendix - protection against condensate water)

	f. wall thicknesses/mm	Color	
BST M20	1,5 - 4,5	Grey	262 420 01
BST M20/sw	1,5 - 4,5	black	262 020 01

Ventilation element set

IP65

IK08

BEL Air ventilation element set, For preventing condensation build-up in housings, For vertical installation in housing walls and GFL combi flanges with corresponding knock-outs, At least two ventilation elements are required per housing

BEL Air M40 M40, Set = 2 pcs., Air exchange rate: 30 l / day / set	263 440 01

Pressure compensation device

IP68
IP66

Pressure compensation device with air-permeable and watertight special membrane foil to reduce condensation formation in enclosures, flow rate 0.8 l/min. at 0.1 bar overpressure, grey polyamide, without lock nut

DAE M12 M12 x 1.5 mm, Thread length 10 mm	262 412 01

Combi connector

IP54

Combi connector, for connecting enclosures, thermoplastic, for wall thickness 1.5 - 4.0 mm

	f. wall thicknesses/mm	
KST M32	1,5 - 4,0	193 032 01
KST M25-33	1,5 - 4,0	193 026 01
KST M25-17	1,5 - 4,0	193 025 01

Universal accessories

Combi set

IP66		

Description   **Order no.**

Combi set, for side connection of enclosures with metric entries, complete with lock nuts and intermediate wall seal inserts

	f. wall thicknesses/mm	Thread lenght/mm	
KS M20	2 x 3,0	12	192 020 01
KS M25	2 x 3,0	12	192 025 01
KS M25-gro	2,0 x 8,0	22	192 026 01
KS M32	2 x 3,5	14	192 032 01

Cable gland

IP68

Cable gland with strain relief, polyamide, M_ x 1.5 mm, with lock nut

	Thread lenght/mm	Sealing area/mm	
KVR M12-MGM	8	2 - 6.5	227 412 01
KVR M16-MGM	8	4 - 10.0	227 416 01
KVR M20-MGM	9	6 - 12.0	227 420 01
KVR M20-GDB/MGM	9	7 - 14.0	227 421 01
KVR M25-MGM	11	9 - 16	227 425 01
KVR M32-MGM	11	11 - 21.0	227 432 01
KVR M40-MGM	11	16 - 28.0	227 440 01
KVR M50-MGM	13	21 - 34.5	227 450 01
KVR M63-MGM	17	30 - 44.5	227 463 01

Cable gland

IP68

Cable gland with strain relief, polyamide, M_ x 1.5 mm, without lock nut

	Thread lenght/mm	Sealing area/mm	
KVR M12	8	2 - 6.5	247 412 01
KVR M16	8	4 - 10.0	247 416 01
KVR M20	9	6 - 12.0	247 420 01
KVR M20-GDB	9	7 - 14.0	247 421 01
KVR M25	11	9 - 16	247 425 01
KVR M32	11	11 - 21.0	247 432 01
KVR M40	11	16 - 28.0	247 440 01
KVR M50	13	21 - 34.5	247 450 01
KVR M63	17	30 - 44.5	247 463 01

Cable gland

IP68

Cable gland with strain relief, polyamide, M_ x 1.5 mm, black, with lock nut

	Thread lenght/mm	Sealing area/mm	
KVR M20-MGM/sw	9	6 - 12.0	227 020 01
KVR M20-GDB/MGM/sw	9	7 - 14.0	227 021 01
KVR M25-MGM/sw	11	9 - 16	227 025 01
KVR M32-MGM/sw	11	11 - 21.0	227 032 01
KVR M40-MGM/sw	11	16 - 28.0	227 040 01
KVR M50-MGM/sw	13	21 - 34.5	227 050 01

Accessories, Technical appendix, etc.

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Conduit connectors

IP54

halogen-free

Description			Order no.
Conduit connector to take smooth conduits with lock nut, polystyrene			
	for conduits		
RST M16		Ø 16	288 416 01
RST M20		Ø 20	288 420 01
RST M20-16		Ø 16	288 421 01
RST M20-19		Ø 19	288 422 01
RST M25		Ø 25	288 425 01
RST M32		Ø 32	288 432 01

Lock nut

Lock nut for metric twist nipple and cable glands, polyamide		
	Thread	
GMU PA M12	M12 x 1.5	208 412 01
GMU PA M16	M16 x 1.5	208 416 01
GMU PA M20	M20 x 1.5	208 420 01
GMU PA M25	M25 x 1.5	208 425 01
GMU PA M32	M32 x 1.5	208 432 01
GMU PA M40	M40 x 1.5	208 440 01
GMU PA M50	M50 x 1.5	208 450 01
GMU PA M63	M63 x 1.5	208 463 01

Sealing washers

Sealing washers M_ x 1.50 mm for twist nipple and cable gland with metric thread, polyethylene			
	Internal Ø	**External Ø**	
ADR M12	12.0 mm	16.0 mm	249 012 01
ADR M16	16.0 mm	20.0 mm	249 016 01
ADR M20	20.4 mm	25.0 mm	249 020 01
ADR M25	25.0 mm	30.0 mm	249 025 01
ADR M32	32.0 mm	38.0 mm	249 032 01
ADR M40	40.0 mm	45.0 mm	249 040 01
ADR M50	50.0 mm	56.0 mm	249 050 01
ADR M63	63.0 mm	70.0 mm	249 063 01

Adapter ring without thread

Adapter ring for attaching metric accessories in housing with PG entries, for example for upgrades, polyethylene			
	Thread	**Housing Insert**	
ARI Pg 9	M12	Pg 9	251 112 01
ARI Pg 11	M16	Pg 11	251 216 01
ARI Pg 16	M20	Pg 16	251 420 01
ARI Pg 21	M25	Pg 21	251 525 01
ARI Pg 29	M32	Pg 29	251 632 01

Universal accessories
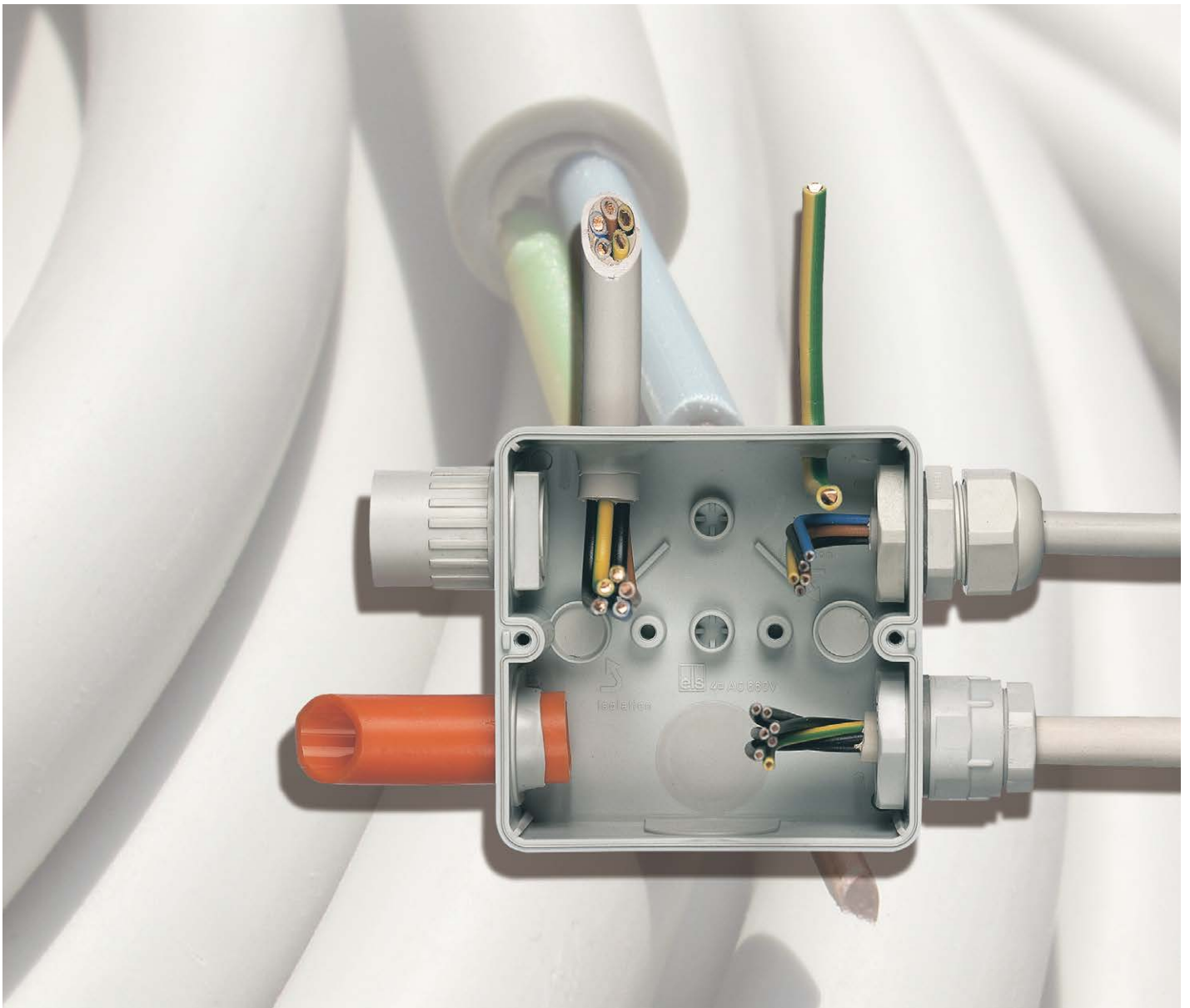
Always the right accessories ...

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IP66	IP66	**Class of protection** (IP code) acc.to DIN EN 60529 (VDE 0470-1)
3	3	Maximum number of **distribution units**
E30-E90	E30-E90	**Electrical functional integrity** acc.to DIN 4102-12 "E" stands for functional integrity, "30-90" stands for the duration in minutes.
FE180	FE180	**Insulation integrity** according to VDE 0472-814, IEC 60331 "FE" stands for the impact of flames or fire, "180" stands for the time in minutes
F400	F400	**Operating duration** acc. to DIN EN 12101-3 120 minutes function at 400 °C
	90	Tested acc. to DIN 4102-2. **Functional integrity F90** (according to E90) for protecting the electrical installations as per MLAR 2005. Can be individually equipped with type-tested operating materials.
	90	Tested acc. to DIN 4102-2. **Fire load insulation F90** (according to E90) for protecting the exit and escape routes as per MLAR 2005.
S90		**Fire-resistance class S 90** acc. to DIN 4102-9
Ü		**Certificate of conformity.** Conformity of the construction product with the technical regulations is documented by the "Ü label"
ABZ		**The German general building supervisory approval** (AbZ) attests the usability of an object under approval in the sense of the building regulations. It is granted by the German Institute of Structural Engineering (DIBt), Berlin, for construction products and types of construction, where no harmonised European standards have yet been applied for them and which are also not regulated by German standards or regulations.
ABP		**German general building inspection test certificate** (AbP) is granted for unregulated construction products and construction methods whose use is not intended to meet the full safety criteria for structures. The granting is carried out by recognised testing bodies.
10²	10²	**Nominal cross section** The greatest permissible wire cross-section that can be connected acc. to DIN EN 60998 (VDE 0613) and DIN EN 60999 (VDE 0609)
IK09	IK09	**Level of protection** (IK code) to mechanical impact acc. to DIN EN 50102 (VDE 0470-100)
▣	▣	**Protection class II** operating materials with protective insulation to DIN VDE 0100-410
	1000V DC	Maximum **voltage DC** (DC voltage) as per product standard (system voltage in the PV sector)

Explanation of pictograms

690V AC	**690V AC**	**Nominal AC voltage** (AC voltage). Highest permissible voltage on the junction as per product norm
	15A	**Rated current** (maximum current in continuous operation) as per product norm
H		Products for **installation in cavity walls or furnishings** acc. to DIN VDE 0606-1
B		Products for **use in concrete construction** acc. to DIN VDE 0606-1
COOL BEAM Max. 50W		Suitable for the installation of lamps in which dichroic reflector lamps **(cool beam reflectors)** can be used. Reduces the thermal load in the light bundle.
LED		Suitable for LED lights
90°C		Suitable for use in concrete. **Resistant to momentary temperatures of up to +90 °C** during the setting process.
960°C		**960°C glowing wire testing**
VDE	**VDE**	The **VDE symbol** stands for the tested safety of the product with regard to electrical, mechanical, thermal and other hazards.
	c UL us	**c UL us** (Underwriters Laboratories) **approved** (US and Canadian approval)
	UL EU	**UL EU** New European test certificate for certification recognised across Europe.
	DLG	**DLG FokusTest** for special innovations of machines and technical products - predominantly in agricultural and forestry applications.
	AIR	**AK Air** Ventilation elements to prevent accumulation of condensate while maintaining protection class IP65.
Vattenfall		**Vattenfall approval**
halogen-free	**halogen-free**	**Halogen-free enclosure**, without halogens such as fluorine, chlorine and bromine.
	iQ	**Industrial quality**

Industrial quality

Industrial quality stands for products designed for special requirements and use in demanding environments. Such categories include installations in wet rooms and outdoors as well as on combustible surfaces or in locations that are subject to fire hazards. Enclosures used in such environments must all have one thing in common: **Resilience, safety, ruggedness and longevity.**

Products with this symbol indicate at a glance boxes and enclosures for applications with particularly stringent requirements with respect to material that has been tested as flame resistant and self-extinguishing in accordance with VDE 0471/EN60695/UL94 and consequently offers added security. The Abox-i*, Abox-i SL, AK*, AKi, GTi, TK-PC, TG-PC, WKE and ZKi series, made from high-quality technical plastics, satisfy the strictest material requirements.
* Abox-i 060 or higher
* AK 14 or higher

Common features of all products featuring the IQ symbol:

- Operating temperature from -35°C to 80°C

- Resistant to petrol, petroleum, fats,
  diesel fuel, turpentine and, to a limited extent, acids and alcohol

- Protection rating up to IP68

- UV- and weather-resistant

- Flame-resistant and self-extinguishing 960°C as per VDE 0471 / EN 60695 / UL94

- Impact-resistant and shatterproof under mechanical stress up to IK09

- Free of halogens, heavy metals, PVC and silicone

Definition of terms
as per DIN VDE 0660-600-1
(see DIN VDE 0100-200)

Rated voltage U_n

The manufacturer's specified maximum nominal AC voltage (effective value) or DC voltage for which the main circuits of the switchgear assembly are designed.

Rated operating voltage U_e

The manufacturer's specified voltage value which, combined with the rated current, determines the usage.

Rated insulation voltage U_i

Withstand voltage (effective value), which is specified by the manufacturer for a device or a part thereof and which specifies the defined (long-term) endurance of its associated insulation.

Rated surge voltage U_{imp}

The value of an impulse voltage specified by the manufacturer, which specifies the defined endurance of the insulation with respect to transient overvoltages.

Rated current I_n

The manufacturer's stated current value, which takes into account the ratings of the equipment and their location and use and which can be fulfilled without exceeding the specified temperature limits of the various parts of the switchgear assembly under specified conditions.

Short-circuit current I_c

Overcurrent that occurs in the case of a short circuit due to an error or an incorrect connection in an electrical circuit.

Prospective short-circuit current I_{cp}

Current that flows in a circuit due to a short circuit caused by a conductor of negligible impedance in the immediate vicinity of the terminals of the switchgear assembly.

Rated surge current resistance I_{pk}

The largest instantaneous value of the short-circuit current specified by the manufacturer, which will be sustained under the specified conditions.

Rated short-term current resistance I_{cw}

The effective value of the short-time current specified by the manufacturer, indicated as current and time, which can be fulfilled under specified conditions without damage.

Rated conditional short-circuit current I_{cc}

The value of the prospective short-circuit current specified by the manufacturer, which can be withstood by a circuit protected by a short-circuit protection device (SCPD1) during the total break time (duration of current flow) of the device under specified conditions.

Rated current I_n

The manufacturer's stated current value, which takes into account the ratings of the equipment and their location and use and which can be fulfilled without exceeding the specified temperature limits of the various parts of the switchgear assembly under specified conditions.

Rated load factor RDF[2]

The manufacturer's specified percentage of the rated current, with which the outflow of a switchgear assembly can be loaded continuously and simultaneously taking into account the mutual thermal influences.

[1] **SCPD**= **S**hort **C**ircuit **P**rotection **D**evice
[2] **RDF**= **R**ated **D**iversity **F**actor

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Index of order numbers

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Table 1	Empty enclosures			Enclosures with fittings						
	Ambient temperature Minimum value	Ambient temperature Maximum value	Ambient temperature Average value over 24 h	Ambient temperature Minimum value	Ambient temperature Maximum value	Ambient temperature Average value over 24 h	Maximum relative humidity at 40°C	Maximum relative humidity at 25°C (short-term)	Protection rating according to 60529 / VDE 0470-1 [1]	Shock-proof as per DIN EN 50102 / DE 0470 Part 100
Red range / HP	-25°C	40°C	35°C	-25°C	35°C	25°C	50%	95%	IP55	IK07
Abox Junction boxes	-25°C	40°C	35°C	-25°C	35°C	25°C	50%	95%	IP65	IK07
Abox-i Junction boxes	-35°C	80°C	60°C	-25°C	35°C	25°C	50%	95%	IP65	IK08
WK Junction boxes	-25°C	40°C	35°C	-25°C	35°C	25°C	50%	95%	IP54	IK05
WKE 2-5 Junction boxes	-25°C	40°C	35°C	-25°C	35°C	25°C	50%	95%	IP65	IK05
WKE 200-400 Junction boxes	-25°C	40°C	35°C	-25°C	35°C	25°C	50%	95%	IP66	IK08
WKE 54 Junction boxes	-25°C	40°C	35°C	-25°C	35°C	25°C	50%	95%	IP67	IK07
WKE AK Housing system	-25°C	40°C	35°C	-25°C	35°C	25°C	50%	95%	IP54	IK10
RK / RKA Terminal block housing	-25°C	40°C	35°C	-25°C	35°C	25°C	50%	95%	IP65	IK07
AL / ALR / TK AL Aluminium housings	-35°C	75°C	60°C	-25°C	40°C	35°C	50%	95%	IP66	IK09
IBT / IBTronic Concrete installation system	-25°C	40°C	35°C	-25°C	35°C	25°C	50%	n.a.	IP30	n.a.
AK Kompakt Distribution boards	-25°C	40°C	35°C	-25°C	40°C	35°C	50%	95%	IP65	IK07
AKi Kompakt Distribution boards	-35°C	80°C	60°C	-25°C	40°C	35°C	50%	95%	IP65	IK08
AK Air Distribution boards	-35°C	80°C	60°C	-25°C	40°C	35°C	50%	95%	IP65	IK08
AKL Empty enclosures	-25°C	40°C	35°C	-25°C	40°C	35°C	50%	95%	IP65	IK07
AKi Empty enclosures	-35°C	80°C	60°C	-25°C	40°C	35°C	50%	95%	IP65	IK08
SVi Automatic machine enclosures	-35°C	80°C	60°C	-25°C	40°C	35°C	50%	95%	IP65 [4]	IK07
STV Empty socket distribution boxes	-35°C	80°C	60°C	-25°C	40°C	35°C	50%	95%	IP44 [2]	IK08
TK-PS (Polystyrol) Empty enclosures	-25°C	40°C	35°C	-25°C	40°C	35°C	50%	95%	IP66	IK07
TK-PC (Polycarbonat) [3] Empty enclosures	-35°C	80°C	60°C	-25°C	40°C	35°C	50%	95%	IP66	IK08
TG ABS empty enclosures	-25°C	40°C	35°C	-25°C	40°C	35°C	50%	95%	IP66/IP67	IK07
TG-PC (Polycarbonat) [3] Empty enclosures	-35°C	80°C	60°C	-25°C	40°C	35°C	50%	95%	IP66/IP67	IK08
HW Cavity wall installation system	-25°C	40°C	35°C	-25°C	40°C	35°C	50%	n.a.	IP30	n.a.
KD Channel installation system	-25°C	40°C	35°C	-25°C	40°C	35°C	50%	n.a.	IP20	n.a.

Additional note:
The specified temperatures may be limited by the installed devices.

[1] For use with suitable connectors or cable glands
[2] With closed socket covers
[3] V-2 material has passed the flame test of UL 746C (see note on page 329).

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The materials used by Spelsberg were subjected to a weathering test according to DIN 53 387 (replaced by DIN EN ISO 4892-2), a 1000 hour test at the „State Examination Office" in Dortmund. The materials used in the IQ products demonstrate optimum results here. The material also passed a test for UV resistance according to UL 746 C, without any limitations.

Table 2

Material	Use in the products	Weak acids	Strong acids	Weak bases	Strong bases	Alcohol	Petrol	Benzene	Mineral oil	Diesel	Ammonia, liquid	Ammonia, gaseous (DLG Fokustest)	Vegetable fats	Animal fats	Halogen-free	Free of heavy metals, PVC and silicone	Flammability acc. to DIN EN 60695 (VDE 0471) / UL94
Polystyrene, shock-proof	AK compact system, Abox, RK / RKA, TK-PS	O	Ø	O	O	O	X	X	O	X	O	n.a.	O	X	yes	yes	650°C / HB
ABS (Acrylonitrile-Butadiene-Styrene)	TG-ABS	O	Ø	O	O	O	X	X	O	O	O	n.a.	Ø	Ø	yes	yes	650°C / HB
Polycarbonate, glass fibre-reinforced	Abox-i, STV/STG, AK, GTi system, AKi, TK-PC, ZKi, ZVi, SVi	O	X	X	X	O	Ø	X	O	Ø	X	O	O	Ø	yes	yes	960°C / V-2 (5VA*)
Polycarbonate	TG-PC, AK	O	X	X	X	O	Ø	X	O	Ø	X	O	O	Ø	yes	yes	960°C / V-2 (5VA*)
Polycarbonate, transparent	Hinged lid AK small-scale distributor and STV, lid AKL, AKi, GTi, TK-PC	O	X	X	X	Ø	Ø	X	O	Ø	X	O	O	O	yes	yes	850°C / V-2
Polyethylene	Attachment bushes, twist nipple, Red Range (bottom section)	O	O	O	O	O	Ø	X	O	X	O	n.a.	O	O	yes	yes	650°C / HB
Polypropylene	HW series, KD channelsockets, HP	O	O	O	O	O	Ø	Ø	O	X	O	n.a.	O	O	no	yes	960°C / V-2
Polypropylene copolymer	IBT / IBTronic Red Range (lid)	O	O	O	O	O	Ø	Ø	Ø	Ø	O	n.a.	O	O	yes	yes	650°C / HB
Polyurethane	All types with foamed lid seal	Ø	Ø	Ø	Ø	Ø	Ø	Ø	X	Ø	Ø	O	O	O	yes	yes	650°C / ---
Aluminium	AL, ALR, TK AL	O	Ø	O	O	O	O	O	O	O	O	n.a.	O	O	yes	yes	---
Duroplastic	WK junction boxes, WKE fireproof junction boxes, S-Box junction boxes	Ø	Ø	Ø	Ø	O	O	O	O	O	O	n.a.	O	O	yes	yes	960°C / V-0
Duroplastic	WK series integrated terminal block except for 4 mm²	X	X	Ø	X	O	O	O	O	O	O	n.a.	O	O	yes	yes	960°C / V-0
Polyamide 6, glass fibre-reinforced	Screw fittings to IP 68, Cover screws	X	X	O	O	O	O	O	O	O	O	O	O	O	yes	yes	750°C / HB/V-2
Thermoplastic elastomer	Double-membrane glands, inlet membranes (Abox 025 / 040, 2K-12)	O	Ø	O	Ø	O	Ø	Ø	Ø	Ø	Ø	O	O	O	yes	yes	750°C / HB

O = resistant   Ø = partially resistant   X = not resistant

* Material (TK-PC, TG-PC) has passed the flame test of UL 94 / UL 746C (see note on page 329)

When selecting the installation location, the climatic conditions and the occurrence of chemical influences should generally be examined in addition to the protection rating. Details of material properties and chemical resistance of the materials used can be referenced in the tables, though these are simply guide values.

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Power loss details for AK distribution boards

The AK distribution board can be used both as a GP (universal) housing and as a PD housing for pre-defined equipment installations per standard EN 60670-24.

Table 3	Max. power output characteristics (Pde) for **GP housings** per EN 60670-24 [for each profile rail] [1]	Achievable power loss in **PD housings** per EN 60670-24 [for each profile rail] [2]
Type		
AK 14 / AK-F 14	26W[26W]	35W[35W]
AK 28 / AK-F 28	35W[17,5W]	48W[24W]
AK 42 / AK-F 42	45W[15W]	62W[20W]
AK 56 / AK-F 56	56W[14W]	77W[19W]
AK 70	66W[13W]	90W[18W]

	Max. power output characteristics (Pde) for **GP housings** per EN 60670-24 [for each profile rail] [1]	Achievable power loss in **PD housings** per EN 60670-24 [for each profile rail] [2]
Type		
AK 14 Plus / AK-F 14 Plus	52W [52W]	70W[70W]
AK 28 Plus / AK-F 28 Plus	61W[30,5W]	92W[46W]
AK 42 Plus / AK-F 42 Plus	70W[23W]	113W[36,5W]
AK 56 Plus / AK-F 56 Plus	79W[19,5W]	134W[33,5W]

1) Verification of the maximum power output characteristics (P_{de}) for universal housings - GP housings

The verification of the heating for GP empty housings and GP basic housings was carried out with AK distribution boards with substitute resistors, which created the maximum power loss for each standard rail as listed in the table. In doing so the outer surface does not heat up by more than 30K. Here, the temperature rise inside the housing is higher and may exceed the permissible operating temperature of the operating equipment used.

2) Verification of the heating of the housing for pre-defined equipment installations - PD housings

The verification of the heating for PD empty housings and PD basic housings was carried out with AK distribution boards with a combination of operating equipment, which created the maximum power losses for each standard rail as listed in the table. In doing so the outer surface does not heat up by more than 40K. Here, the temperature rise inside the housing is higher and may exceed the permissible operating temperature of the operating equipment used.

Technical Appendix

Power loss information for AK/AKi installation distribution boards and individually mounted AK/AKi/GTi empty enclosures

Permissible power loss Pper in Watts per DIN VDE 0660-507 for **individually mounted, surface-mounted installation distribution boards** and **surface-mounted empty enclosures** with stipulated ΔT. Power loss at 50% housing height and [75%] housing height.

Table 4

	individually mounted			
	[W]			
Type	ΔT= 10K	ΔT= 20K	ΔT= 30K	ΔT= 40K
AK 03 / AKi 03	2,4	5,7	9,4	13,4
	[1,8]	[4,4]	[7,2]	[10,4]
AK 05 / AKi 05	3,8	9,0	14,9	21,4
	[2,9]	[6,9]	[11,5]	[16,4]
AK 09 / AKi 09	5,0	11,8	19,5	27,9
	[4,1]	[9,6]	[15,9]	[22,8]
AK 12 / AKi 12	5,7	13,6	22,5	32,2
	[4,8]	[11,4]	[18,9]	[27,1]
AK 24 / Aki 24	8,9	21,2	35,1	50,2
	[6,9]	[16,4]	[27,2]	[38,8]

	Traverse mounting				Vertical mounting			
	[W]				**[W]**			
Type	ΔT= 10K	ΔT= 20K	ΔT= 30K	ΔT= 40K	ΔT= 10K	ΔT= 20K	ΔT= 30K	ΔT= 40K
AK 14 L / AK-F 14 L / AK-F / DMS 14 L	9,7	23,0	38,0	54,4	9,7	23,0	38,0	54,4
	[8,0]	[18,8]	[31,2]	[44,6]	[8,0]	[18,8]	[31,2]	[44,6]
AKL 1-g/t / AKi 1-g/t	5,7	13,4	22,2	31,7	5,9	14,0	23,2	33,2
	[5,0]	[11,9]	[19,7]	[28,2]	[4,5]	[10,6]	[17,5]	[25,0]
AKL 2-g/t / AKi 2-g/t	8,9	21,1	35,0	50,1	8,9	21,1	35,0	50,1
	[7,3]	[17,2]	[28,5]	[40,8]	[7,3]	[17,2]	[28,5]	[40,8]
AKL 2-g/t-h / AKi 2-g/t-h / AKi-Z 2	11,3	26,8	44,3	63,4	11,3	26,8	44,3	63,4
	[9,2]	[21,8]	[36,1]	[51,7]	[9,2]	[21,8]	[36,1]	[51,7]
AKL 3-g/t / AKi 3-g/t	11,8	28,0	46,4	66,4	12,1	28,6	47,4	67,8
	[10,2]	[24,1]	[39,9]	[57,0]	[9,3]	[22,1]	[36,6]	[52,4]
AKL 3-g/t-h / AKi 3-g/t-h / AKi-Z 3	14,7	34,7	57,5	82,3	15,1	35,7	59,0	84,4
	[12,6]	[29,8]	[49,4]	[70,7]	[11,6]	[27,5]	[45,6]	[65,2]
AKL4-g/t / AKi 4-g/t	14,7	34,8	57,6	82,4	15,2	35,9	59,5	85,1
	[13,0]	[30,9]	[51,1]	[73,1]	[11,4]	[27,1]	[44,8]	[64,1]
AKL 4-g/t-h / AKi 4-g/t-h / AKi-Z 400/*	18,0	42,5	70,4	100,8	18,7	44,4	73,5	105,1
	[15,9]	[37,7]	[62,5]	[89,4]	[14,1]	[33,4]	[55,3]	[79,1]
SVi Enclosure (150 x 300 x 137 mm)	5,8	13,7	22,7	32,4	6,1	14,3	23,7	34,0
	[5,1]	[12,1]	[20,1]	[28,7]	[4,6]	[10,8]	[17,9]	[25,6]
SVi Enclosure (150 x 300 x 162 mm)	6,4	15,1	24,9	35,6	6,7	15,8	26,2	37,5
	[5,6]	[13,4]	[22,1]	[31,6]	[5,0]	[11,9]	[19,7]	[28,2]
SVi LQ Enclosure (150 x 150 x 137 mm)	3,7	8,8	14,5	20,8	3,7	8,8	14,5	20,8
	[3,0]	[7,2]	[11,8]	[16,9]	[3,0]	[7,2]	[11,8]	[16,9]
GTi 1 (-g)	8,8	20,9	34,6	49,5	9,1	21,5	35,5	50,8
	[7,6]	[17,9]	[29,6]	[42,4]	[7,0]	[16,6]	[27,5]	[39,4]
GTi 1 (-g) w. frame	10,9	25,7	42,6	60,9	11,2	26,5	43,9	62,8
	[9,3]	[22,0]	[36,5]	[52,2]	[8,7]	[20,6]	[34,0]	[48,7]
GTi 2 (-g)	11,3	26,8	44,3	63,4	11,3	26,8	44,3	63,4
	[9,2]	[21,8]	[36,1]	[51,7]	[9,2]	[21,8]	[36,1]	[51,7]
GTi 2 (-g) w. frame	13,7	32,5	53,8	77,0	13,7	32,5	53,8	77,0
	[11,2]	[26,5]	[43,9]	[62,8]	[11,2]	[26,5]	[43,9]	[62,8]
GTi 3 (-g)	13,9	33,0	54,7	78,2	14,2	33,7	55,7	79,7
	[11,9]	[28,1]	[46,5]	[66,5]	[11,1]	[26,3]	[43,5]	[62,3]
GTi 3 (-g) w. frame	16,7	39,6	65,6	93,8	17,1	40,5	67,0	95,9
	[14,2]	[33,7]	[55,7]	[79,7]	[13,4]	[31,6]	[52,4]	[74,9]
GTi 4 (-g)	18,3	43,3	71,6	102,4	19,0	44,9	74,4	106,4
	[16,2]	[38,4]	[63,5]	[90,9]	[14,3]	[33,8]	[56,0]	[80,1]
GTi 4 (-g) w. frame	21,6	51,2	84,8	121,2	22,6	53,5	88,6	126,7
	[19,2]	[45,4]	[75,2]	[107,5]	[17,0]	[40,3]	[66,7]	[95,4]
GTi 5 (-g)	22,7	53,7	89,0	127,2	23,1	54,7	90,7	129,6
	[19,4]	[46,0]	[76,2]	[108,9]	[17,9]	[42,5]	[70,3]	[100,5]
GTi 5 (-g) w. frame	26,5	62,7	103,8	148,4	27,1	64,1	106,1	151,8
	[22,6]	[53,6]	[88,8]	[127,0]	[21,0]	[49,7]	[82,3]	[117,7]

* AKi-Z 410K, AKi-Z 410KK

Permissible power loss Pper in Watts per DIN VDE 0660-507 for **group-mounted, surface-mounted empty enclosures** with stipulated ΔT. Power loss at 50% housing height and [75%] housing height.

Table 5 / Part 1	Traverse mounting [W]				Vertical mounting [W]			
Type	ΔT= 10K	ΔT= 20K	ΔT= 30K	ΔT= 40K	ΔT= 10K	ΔT= 20K	ΔT= 30K	ΔT= 40K
AKL 1-g/t	4,2	9,9	16,3	23,4	4,4	10,4	17,2	24,5
	[3,7]	[8,8]	[14,5]	[20,7]	[3,3]	[7,8]	[12,9]	[18,5]
AKL 2-g/t	7,0	16,5	27,4	39,1	7,0	16,5	27,4	39,1
	[5,7]	[13,5]	[22,3]	[31,9]	[5,7]	[13,5]	[22,3]	[31,9]
AKL 2-g/t-h	8,3	19,6	32,4	46,4	8,3	19,6	32,4	46,4
	[6,7]	[16,0]	[26,4]	[37,8]	[6,7]	[16,0]	[26,4]	[37,8]
AKL 3-g/t	9,5	22,5	37,2	53,2	9,7	22,9	38,0	54,3
	[8,2]	[19,3]	[32,0]	[45,7]	[7,5]	[17,7]	[29,3]	[42,0]
AKL 3-g/t-h	11,0	26,1	43,2	61,8	11,3	26,8	44,4	63,4
	[9,5]	[22,4]	[37,1]	[53,1]	[8,7]	[20,7]	[34,3]	[49,0]
AKL4-g/t	12,0	28,3	46,9	67,0	12,3	29,2	48,3	69,1
	[10,6]	[25,1]	[41,6]	[59,5]	[9,3]	[22,0]	[36,4]	[52,0]
AKL 4-g/t-h	13,7	32,4	53,7	76,8	14,3	33,8	56,0	80,1
	[12,2]	[28,8]	[47,7]	[68,2]	[10,8]	[25,5]	[42,2]	[60,3]
AKi 1-g/t	4,2	9,9	16,3	23,4	4,4	10,4	17,2	24,5
	[3,7]	[8,8]	[14,5]	[20,7]	[3,3]	[7,8]	[12,9]	[18,5]
AKi 2-g/t	7,0	16,5	27,4	39,1	7,0	16,5	27,4	39,1
	[5,7]	[13,5]	[22,3]	[31,9]	[5,7]	[13,5]	[22,3]	[31,9]
AKi 2-g/t-h / AKi-Z 2	8,3	19,6	32,4	46,4	8,3	19,6	32,4	46,4
	[6,7]	[16,0]	[26,4]	[37,8]	[6,7]	[16,0]	[26,4]	[37,8]
AKi 3-g/t	9,5	22,5	37,2	53,2	9,7	22,9	38,0	54,3
	[8,2]	[19,3]	[32,0]	[45,7]	[7,5]	[17,7]	[29,3]	[42,0]
AKi 3-g/t-h / AKi-Z 3	11,0	26,1	43,2	61,8	11,3	26,8	44,4	63,4
	[9,5]	[22,4]	[37,1]	[53,1]	[8,7]	[20,7]	[34,3]	[49,0]
AKi 4-g/t	12,0	28,3	46,9	67,0	12,3	29,2	48,3	69,1
	[10,6]	[25,1]	[41,6]	[59,5]	[9,3]	[22,0]	[36,4]	[52,0]
AKi 4-g/t-h / AKi-Z 400/*	13,7	32,4	53,7	76,8	14,3	33,8	56,0	80,1
	[12,2]	[28,8]	[47,7]	[68,2]	[10,8]	[25,5]	[42,2]	[60,3]
SVi (150 x 300 x 137 mm)	3,6	8,5	14,1	20,2	3,8	9,0	15,0	21,4
	[3,2]	[7,6]	[12,5]	[17,9]	[2,9]	[6,8]	[11,3]	[16,1]
SVi (150 x 300 x 162 mm)	3,9	9,3	15,4	22,0	4,2	9,9	16,4	23,4
	[3,5]	[8,2]	[13,6]	[19,5]	[3,1]	[7,4]	[12,3]	[17,6]
SVi LQ (150 x 150 x 137 mm)	2,3	5,4	8,9	12,8	2,3	5,4	8,9	12,8
	[1,9]	[4,4]	[7,3]	[10,4]	[1,9]	[4,4]	[7,3]	[10,4]
GTi 1 (-g)	6,5	15,3	25,4	36,3	6,6	15,7	26,1	37,3
	[5,5]	[13,1]	[21,7]	[31,0]	[5,2]	[12,2]	[20,2]	[28,9]
GTi 1 (-g) w. frame	7,6	17,9	29,7	42,5	7,8	18,5	30,7	43,9
	[6,5]	[15,3]	[25,4]	[36,3]	[6,1]	[14,4]	[23,8]	[34,0]
GTi 2 (-g)	8,5	20,2	33,5	47,9	8,5	20,2	33,5	47,9
	[7,0]	[16,5]	[27,3]	[39,0]	[7,0]	[16,5]	[27,3]	[39,0]
GTi 2 (-g) w. frame	9,9	23,3	38,7	55,3	9,9	23,3	38,7	55,3
	[8,0]	[19,0]	[31,5]	[45,1]	[8,0]	[19,0]	[31,5]	[45,1]
GTi 3 (-g)	10,8	25,5	42,2	60,3	11,0	26,0	43,0	61,5
	[9,1]	[21,7]	[35,9]	[51,3]	[8,6]	[20,3]	[33,6]	[48,0]
GTi 3 (-g) w. frame	12,3	29,0	48,1	68,7	12,5	29,7	49,2	70,3
	[10,4]	[24,7]	[40,9]	[58,4]	[9,8]	[23,2]	[38,4]	[54,9]
GTi 4 (-g)	14,4	34,0	56,4	80,6	14,9	35,3	58,5	83,6
	[12,8]	[30,2]	[50,0]	[71,5]	[11,2]	[26,6]	[44,0]	[62,9]
GTi 4 (-g) w. frame	16,2	38,3	63,4	90,7	16,9	40,1	66,3	94,9
	[14,3]	[34,0]	[56,2]	[80,4]	[12,7]	[30,2]	[49,9]	[71,4]
GTi 5 (-g)	18,4	43,5	72,0	102,9	18,7	44,2	73,3	104,8
	[15,7]	[37,2]	[61,6]	[88,1]	[14,5]	[34,3]	[56,8]	[81,3]
GTi 5 (-g) w. frame	20,4	48,3	79,9	114,3	20,8	49,4	81,7	116,9
	[17,4]	[41,3]	[68,4]	[97,8]	[16,2]	[38,3]	[63,4]	[90,6]

* AKi-Z 410K, AKi-Z 410KK

Technical Appendix

Power loss details for STV empty enclosures

Permissible power loss Pper in Watts per DIN VDE 0660-507 for **surface-mounted empty enclosures** with stipulated ΔT. Power loss at 50% housing height and [75%] housing height.

Table 5 / Part 2

Type	[W]			
	ΔT= 10K	ΔT= 20K	ΔT= 30K	ΔT= 40K
STV 502-L / -S	3,8	9,0	14,9	21,4
	[2,9]	[6,9]	[11,5]	[16,4]
STV 512-L / -S	6,5	15,4	25,5	36,5
	[5,1]	[12,1]	[20,0]	[28,6]
STV 904-L / -S	5,0	11,8	19,5	27,9
	[4,1]	[9,6]	[15,9]	[22,8]
STV 912-L / -S STV 922-L / -S STV 923-L / -S	8,3	19,7	32,6	46,6
	[6,3]	[14,8]	[24,5]	[35,1]
STV 1222-L / -S STV 1208-L / -S STV 1224-L / -S / -S32	9,5	22,5	37,3	53,3
	[7,3]	[17,3]	[28,6]	[40,9]

Power loss details for individually mounted TK empty enclosures

Permissible power loss Pper in Watts per DIN VDE 0660-507 for **individually-mounted empty enclosures** with stipulated ΔT. Power loss at 50% housing height and [75%] housing height.

Table 6 / Part1	Traverse mounting				Vertical mounting			
	[W]				[W]			
Type	ΔT= 10K	ΔT= 20K	ΔT= 30K	ΔT= 40K	ΔT= 10K	ΔT= 20K	ΔT= 30K	ΔT= 40K
TK 55-4	0,4	1,0	1,7	2,4	0,4	1,0	1,7	2,4
	[0,4]	[0,8]	[1,4]	[2,0]	[0,3]	[0,8]	[1,4]	[2,0]
TK 75-2	0,5	1,2	1,9	2,8	0,5	1,2	2,0	2,8
	[0,4]	[1,0]	[1,6]	[2,3]	[0,4]	[0,9]	[1,6]	[2,2]
TK 75-4	0,5	1,2	1,9	2,8	0,5	1,2	2,0	2,8
	[0,4]	[1,0]	[1,6]	[2,3]	[0,4]	[0,9]	[1,6]	[2,2]
TK 77-6	0,8	1,8	3,0	4,3	0,8	1,8	3,0	4,3
	[0,6]	[1,5]	[2,5]	[3,5]	[0,6]	[1,5]	[2,5]	[3,5]
TK 77-8	1,0	2,3	3,8	5,5	1,0	2,3	3,8	5,5
	[0,8]	[1,9]	[3,1]	[4,5]	[0,8]	[1,9]	[3,1]	[4,5]
TK 97-6	1,0	2,3	3,8	5,5	1,0	2,4	3,9	5,6
	[0,8]	[2,0]	[3,3]	[4,7]	[0,8]	[1,8]	[3,0]	[4,3]
TK 97-8	1,2	2,9	4,7	6,8	1,2	2,9	4,9	7,0
	[1,0]	[2,4]	[4,0]	[5,8]	[1,0]	[2,3]	[3,8]	[5,4]
TK 99-6	1,2	2,9	4,8	6,9	1,2	2,9	4,8	6,9
	[1,0]	[2,4]	[4,0]	[5,7]	[1,0]	[2,4]	[4,0]	[5,7]
TK 99-8	1,5	3,6	5,9	8,5	1,5	3,6	5,9	8,5
	[1,2]	[2,9]	[4,8]	[6,9]	[1,2]	[2,9]	[4,8]	[6,9]
TK 1005-4	0,7	1,7	2,8	4,0	0,7	1,8	2,9	4,1
	[0,6]	[1,5]	[2,5]	[3,5]	[0,6]	[1,3]	[2,2]	[3,1]
TK 1111-7	1,6	3,9	6,4	9,2	1,6	3,9	6,4	9,2
	[1,3]	[3,2]	[5,2]	[7,5]	[1,3]	[3,2]	[5,2]	[7,5]
TK 1111-9	2,0	4,6	7,7	11,0	2,0	4,6	7,7	11,0
	[1,6]	[3,8]	[6,3]	[9,0]	[1,6]	[3,8]	[6,3]	[9,0]
TK 1309-6	1,5	3,6	6,0	8,6	1,6	3,7	6,1	8,7
	[1,3]	[3,1]	[5,1]	[7,3]	[1,2]	[2,9]	[4,8]	[6,8]
TK 1309-8	1,8	4,4	7,2	10,3	1,9	4,5	7,4	10,6
	[1,6]	[3,7]	[6,2]	[8,8]	[1,5]	[3,5]	[5,8]	[8,3]
TK 1313-7	2,2	5,2	8,6	12,3	2,2	5,2	8,6	12,3
	[1,8]	[4,2]	[7,0]	[10,0]	[1,8]	[4,2]	[7,0]	[10,0]
TK 1313-10	2,6	6,0	10,0	14,3	2,6	6,0	10,0	14,3
	[2,1]	[4,9]	[8,2]	[11,7]	[2,1]	[4,9]	[8,2]	[11,7]
TK 1809-6	1,9	4,6	7,5	10,8	2,0	4,7	7,8	11,2
	[1,7]	[4,0]	[6,7]	[9,5]	[1,5]	[3,6]	[5,9]	[8,4]
TK1809-8	2,3	5,4	9,0	12,9	2,4	5,7	9,4	13,4
	[2,0]	[4,8]	[8,0]	[11,4]	[1,8]	[4,3]	[7,1]	[10,1]
TK 1811-6f	2,2	5,3	8,8	12,5	2,3	5,4	9,0	12,9
	[1,9]	[4,6]	[7,6]	[10,9]	[1,8]	[4,2]	[6,9]	[9,9]
TK 1811-8f	2,6	6,1	10,1	14,4	2,7	6,3	10,4	14,9
	[2,2]	[5,3]	[8,8]	[12,5]	[2,0]	[4,8]	[8,0]	[11,4]
TK 1811-13f	3,4	8,1	13,4	19,2	3,6	8,4	14,0	20,0
	[3,0]	[7,0]	[11,7]	[16,7]	[2,7]	[6,5]	[10,7]	[15,3]
TK 1811-9	2,7	6,3	10,5	15,0	2,8	6,5	10,8	15,5
	[2,3]	[5,5]	[9,1]	[13,0]	[2,1]	[5,0]	[8,3]	[11,9]
TK 1811-11	3,0	7,1	11,8	16,9	3,1	7,4	12,3	17,5
	[2,6]	[6,2]	[10,3	[14,7]	[2,4]	[5,7]	[9,4]	[13,4]
TK 1811-16	3,9	9,2	15,2	21,7	4,0	9,5	15,8	22,6
	[3,4]	[8,0]	[13,2]	[18,8]	[3,1]	[7,3]	[12,1]	[17,3]

Technical Appendix

Permissible power loss Pper in Watts per DIN VDE 0660-507 for **individually-mounted empty enclosures** with stipulated ΔT. Power loss at 50% housing height and [75%] housing height.

Table 6 / Part2	Traverse mounting				Vertical mounting			
	[W]				[W]			
Type	ΔT= 10K	ΔT= 20K	ΔT= 30K	ΔT= 40K	ΔT= 10K	ΔT= 20K	ΔT= 30K	ΔT= 40K
TK 1813-9	3,0	7,0	11,7	16,7	3,0	7,2	11,9	17,0
	[2,5]	[6,0]	[9,9]	[14,2]	[2,4]	[5,6]	[9,3]	[13,3]
TK 1813-11	3,3	7,9	13,1	18,7	3,4	8,1	13,4	19,1
	[2,8]	[6,7]	[11,1]	[15,9]	[2,7]	[6,3]	[10,4]	[14,9]
TK 1813-16	4,3	10,1	16,7	23,9	4,4	10,3	17,1	24,5
	[3,6]	[8,6]	[14,2]	[20,3]	[3,4]	[8,1]	[13,4]	[19,1]
TK 1813-6f	2,5	5,9	9,8	14,0	2,5	6,0	10,0	14,3
	[2,1]	[5,0]	[8,3]	[11,9]	[2,0]	[4,7]	[7,8]	[11,1]
TK 1813-8f	2,9	6,8	11,2	16,1	2,9	6,9	11,5	16,4
	[2,4]	[5,8]	[9,6]	[13,7]	[2,3]	[5,4]	[9,0]	[12,8]
TK 1813-13f	3,8	8,9	14,8	21,2	3,9	9,2	15,2	21,7
	[3,2]	[7,6]	[12,6]	[18,0]	[3,0]	[7,2]	[11,9]	[17,0]
TK 1818-6f	3,2	7,5	12,5	17,8	3,2	7,5	12,5	17,8
	[2,6]	[6,1]	[10,2]	[14,6]	[2,6]	[6,1]	[10,2]	[14,5]
TK 1818-8f	3,6	8,5	14,2	20,2	3,6	8,6	14,2	20,3
	[2,9]	[7,0]	[11,6]	[16,5]	[2,9]	[7,0]	[11,5]	[16,5]
TK 1818-13f	4,7	11,1	18,3	26,2	4,7	11,1	18,3	26,2
	[3,8]	[9,0]	[15,0]	[21,4]	[3,8]	[9,0]	[14,9]	[21,4]
TK 1818-9	3,7	8,8	14,6	20,9	3,7	8,8	14,6	20,9
	[3,0]	[7,2]	[11,9]	[17,1]	[3,0]	[7,2]	[11,9]	[17,0]
TK 1818-11	4,2	9,8	16,3	23,3	4,2	9,8	16,3	23,3
	[3,4]	[8,0]	[13,3]	[19,0]	[3,4]	[8,0]	[13,3]	[19,0]
TK 1818-16	5,2	12,4	20,5	29,3	5,2	12,4	20,5	29,4
	[4,3]	[10,1]	[16,7]	[23,9]	[4,3]	[10,1]	[16,7]	[23,9]
TK 2518-6f	4,0	9,6	15,8	22,7	4,1	9,7	16,1	23,0
	[3,4]	[8,2]	[13,5]	[19,3]	[3,2]	[7,6]	[12,5]	[17,9]
TK 2518-8f	4,5	10,7	17,8	25,4	4,6	10,9	18,1	25,9
	[3,9]	[9,2]	[15,2]	[21,7]	[3,6]	[8,5]	[14,1]	[20,2]
TK 2518-13f	5,8	13,6	22,6	32,3	5,9	14,0	23,1	33,1
	[4,9]	[11,6]	[19,3]	[27,6]	[4,6]	[10,9]	[18,0]	[25,8]
TK 2518-9	4,7	11,1	18,3	26,2	4,8	11,3	18,7	26,7
	[4,0]	[9,4]	[15,6]	[22,4]	[3,7]	[8,8]	[14,5]	[20,8]
TK 2518-11	5,2	12,2	20,2	29,0	5,3	12,5	20,7	29,6
	[4,4]	[10,4]	[17,3]	[24,7]	[4,1]	[9,7]	[16,1]	[23,0]
TK 2518-16	6,4	15,2	25,1	35,9	6,6	15,5	25,7	36,8
	[5,5]	[12,9]	[21,4]	[30,6]	[5,1]	[12,1]	[20,0]	[28,7]
TK 3625-11	8,4	19,8	32,8	46,9	8,5	20,2	33,4	47,7
	[7,1]	[16,9]	[28,0]	[40,0]	[6,6]	[15,7]	[26,0]	[37,1]
TK 3625-16	10,0	23,8	39,4	56,3	10,3	24,3	40,3	57,6
	[8,6]	[20,3]	[33,6]	[48,1]	[8,0]	[18,9]	[31,3]	[44,8]

Permissible power loss Pper in Watts per DIN VDE 0660-507 for **individually-mounted empty enclosures** with stipulated ΔT. Power loss at 50% housing height and [75%] housing height.

Table 7	Traverse mounting				Vertical mounting			
	[W]				[W]			
Type	ΔT= 10K	ΔT= 20K	ΔT= 30K	ΔT= 40K	ΔT= 10K	ΔT= 20K	ΔT= 30K	ΔT= 40K
TK-AL 77-6	1,2	2,9	4,8	6,9	1,2	2,9	4,8	6,9
	[1,0]	[2,4]	[3,9]	[5,6]	[1,0]	[2,4]	[3,9]	[5,6]
TK-AL 99-6	1,8	4,2	7,0	10,1	1,8	4,2	7,0	10,1
	[1,5]	[3,5]	[5,7]	[8,2]	[1,5]	[3,5]	[5,7]	[8,2]
TK-AL 1111-7	2,4	5,6	9,2	13,2	2,4	5,6	9,2	13,2
	[1,9]	[4,6]	[7,5]	[10,8]	[1,9]	[4,6]	[7,5]	[10,8]
TK-AL 1313-7	2,9	6,8	11,2	16,0	2,9	6,8	11,2	16,0
	[2,3]	[5,5]	[9,1]	[13,0]	[2,3]	[5,5]	[9,1]	[13,0]
TK-AL 1811-9	3,0	7,1	11,8	16,9	3,1	7,4	12,3	17,6
	[2,6]	[6,2]	[10,3]	[14,8]	[2,4]	[5,6]	[9,3]	[13,3]
TK-AL 1818-9	4,4	10,3	17,1	24,4	4,4	10,3	17,1	24,4
	[3,6]	[8,4]	[13,9]	[19,9]	[3,6]	[8,4]	[13,9]	[19,9]
TK-AL 2518-9	5,5	13,1	21,6	30,9	5,6	13,3	22,0	31,4
	[4,7]	[11,1]	[18,3]	[26,2]	[4,4]	[10,4]	[17,2]	[24,6]
TK-AL 3625-11	9,4	22,2	36,8	52,7	9,6	22,7	37,5	53,7
	[8,0]	[19,0]	[31,5]	[45,0]	[7,4]	[17,6]	[29,1]	[41,7]

Permissible power loss Pper in Watts per DIN VDE 0660-507 for **individually-mounted, surface-mounted empty enclosures** with stipulated ΔT. Power loss at 50% housing height and [75%] housing height.

	Traverse mounting				Vertical mounting			
	[W]				[W]			
Type	ΔT= 10K	ΔT= 20K	ΔT= 30K	ΔT= 40K	ΔT= 10K	ΔT= 20K	ΔT= 30K	ΔT= 40K
TG 88-6	1,0	2,4	4,0	5,8	1,0	2,4	4,1	5,8
	[0,8]	[2,0]	[3,3]	[4,7]	[0,8]	[2,0]	[3,3]	[4,7]
TG 88-9	1,3	3,2	5,3	7,5	1,3	3,2	5,3	7,5
	[1,1]	[2,6]	[4,3]	[6,1]	[1,1]	[2,6]	[4,3]	[6,1]
TG 1208-6	1,3	3,1	5,2	7,4	1,3	3,2	5,3	7,6
	[1,1]	[2,7]	[4,4]	[6,3]	[1,0]	[2,5]	[4,1]	[5,8]
TG 1208-9	1,7	4,0	6,6	9,4	1,7	4,1	6,8	9,7
	[1,4]	[3,4]	[5,6]	[8,1]	[1,3]	[3,2]	[5,2]	[7,5]
TG 1212-6	1,7	4,1	6,8	9,8	1,7	4,1	6,8	9,8
	[1,4]	[3,4]	[5,6]	[8,0]	[1,4]	[3,4]	[5,6]	[8,0]
TG 1212-9	2,2	5,2	8,5	12,2	2,2	5,2	8,6	12,2
	[1,8]	[4,2]	[7,0]	[10,0]	[1,8]	[4,2]	[7,0]	[9,9]
TG 1608-6	1,6	3,8	6,3	9,0	1,7	4,0	6,6	9,4
	[1,4]	[3,4]	[5,6]	[8,0]	[1,3]	[3,0]	[4,9]	[7,1]
TG 1608-9	2,0	4,8	7,9	11,4	2,1	5,0	8,3	11,9
	[1,8]	[4,2]	[7,0]	[10,1]	[1,6]	[3,8]	[6,3]	[9,0]
TG 1612-9	2,7	6,3	10,4	14,9	2,7	6,4	10,6	15,2
	[2,3]	[5,3]	[8,8]	[12,6]	[2,1]	[5,0]	[8,3]	[11,9]
TG 2012-8	2,8	6,7	11,0	15,8	2,9	6,9	11,4	16,3
	[2,4]	[5,8]	[9,6]	[13,7]	[2,2]	[5,3]	[8,7]	[12,4]
TG 2012-9	3,1	7,3	12,1	17,3	3,2	7,6	12,5	17,9
	[2,7]	[6,4]	[10,5]	[15,0]	[2,4]	[5,8]	[9,6]	[13,7]
TG 2015-9	3,6	8,4	14,0	20,0	3,6	8,6	14,2	20,3
	[3,0]	[7,1]	[11,8]	[16,9]	[2,8]	[6,7]	[11,1]	[15,9]
TG 2516-9	4,3	10,3	17,0	24,3	4,4	10,5	17,4	24,9
	[3,7]	[8,8]	[14,6]	[21,0]	[3,4]	[8,1]	[13,4]	[19,2]
TG 2516-12	5,0	11,8	19,6	28,0	5,1	12,2	20,2	28,8
	[4,3]	[10,2]	[16,9]	[24,2]	[4,0]	[9,4]	[15,5]	[22,2]
TG 3023-9	6,3	15,0	24,8	35,5	6,4	15,2	25,1	35,9
	[5,3]	[12,6]	[20,9]	[29,9]	[5,0]	[11,9]	[19,8]	[28,3]
TG 3023-11	6,9	16,3	27,0	38,6	7,0	16,5	27,4	39,2
	[5,8]	[13,8]	[22,8]	[32,6]	[5,5]	[13,0]	[21,5]	[30,8]

Technical Appendix

Power loss of the els product installations

Guide values for stipulated power loss for operating equipment in the GTi and AKi products (per device), pos. **without** fuse elements. The exact data can be found in the product data for the individual products at **www.spelsberg.com**

Table 8	Size	Rated current	Power loss at rated current
Component / device			
Fuse base	NH 00	160 A	12 W
	NH 1	250 A	32 W
	NH 2	400 A	45 W
Tab fuse base	NH 00	160 A	12 W
	NH 1	250 A	32 W
	NH 2	400 A	45 W
Fuse load disconnector	NH 00	160 A	9 W
	NH 1	250 A	16 W
	NH 2	400 A	22 W
Tab fuse load disconnector	NH 00	160 A	14 W
	NH 1	250 A	22 W
Tab screw fuse base	D02	63 A	5,5 W
	DII	25 A	4 W
	DIII	63 A	7 W
Circuit breaker		160 A	45 W
		250 A	53,4 W
		400 A	58,5 W
		630 A	123 W
Load circuit breaker		63 A	2,3 W
		80 A	1,8 W
		100 A	1,8 W
		160 A	9 W
		250 A	17,4 W
		400 A	32,4 W
		630 A	93 W

Loading factor for switchgear combinations

Example calculation:

9 NH 00 fuses with a power loss of 9 W per device.

The loading factor per EN 61439-2, table 101 is 0.7.

$$P_{vred.} = P_v \cdot \text{Rated load factor}^2$$
$$= 9\,W \cdot 0{,}7 \cdot 0{,}7 = \underline{\mathbf{4{,}41\ W}}\ \text{(per fuse)}$$

Because 9 fuses are installed this gives:

$$P_{vges} = 4{,}41\,W \cdot 9$$
$$= \underline{\mathbf{36{,}69\ W}}$$

DIN EN 61439-2, 5.4

If there is no agreement between the manufacturer of the switchgear combination and the user with regard to the actual load currents, the assumed loading of the output circuits or a group of output circuits of the switchgear combination shall be based on the values in the following table.

Type of loading	Assumed loading factor
2 and 3 circuits	0.9
4 and 5 circuits	0.8
6 and 9 circuits	0.7
10 or more circuits	0.6

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1. Mounting of junction boxes on wood and other combustible materials

According to the **VdS Directive 2023**, electrical connections and conductor connections may only be installed, in the case of mounting on flammable supports, with clamps in suitable electrical installation enclosures and boxes, as outlined by **DIN VDE 0606 and DIN EN 60670**. This is because the enclosures are closed towards the mounting surface and also because of the strict safety requirements of the standard with respect to fire resistance.

Examples:

Entire wooden buildings, buildings with wooden construction elements, wooden construction materials or other flammable materials, cavity walls constructed from flammable materials, but also synthetic heat- and sound-insulation materials.

All els installation system products meet these requirements.

2. Halogen-free installation materials

Because of the reduction in toxic materials released in the case of fire, **DIN VDE 0100-718** provides for some deviations (simplifications) from the prescribed installation methods, however, with respect to the use of halogen-free conductors. These deviations are of a highly specialised nature and are therefore not described in detail here. However, the Building Regulations of the various Federal States and other regulations for installations in public areas (rescue routes, lifts) increasingly require the use of halogen-free installation systems. In such situations, the use of high-grade, halogen-free materials is definitely advisable. The reason for this is the improved level of protection of people and materials in the case of fire, since halogen-free materials produce less smoke in the case of fire, the proportion of toxic combustion gases is reduced to a minimum and no corrosive gases are released, which can react with extinguishing agents to form hydrochloric acid. Material damage to buildings and their contents is thereby reduced.

**Spelsberg offers completely halogen-free els installation systems for these areas
(except HW, KD)**

Assembly and installation notes

UV Radiation

Thermo Radiadion e.g. sun

Chemical influences

Condensation

Rain, Snow

Backwater - Frost

3. Outdoor installation – Damp and wet areas and rooms

3.1 Basics

In general when selecting components, the manufacturer's instructions as to the product properties simply act as a guide for the user. These properties should always be viewed in the context of the relevant installation requirements such as the installation regulations according to DIN VDE 0100-ff.

Depending on the local circumstances, additional protective measures may have to be fulfilled by the user. The individual factors are described in greater detail below.

3.2 Protection against UV radiation

UV radiation can cause severe structural damage or even destruction in a wide variety of plastics. Products made from the material polystyrene (PS) must therefore not be used outdoors. Spelsberg developed the IQ series products for this scenario. A material is used for these products that has a high resistance to UV radiation. In a weathering test according to **DIN 53 387** (replaced by DIN EN ISO 4892-2), this material produced optimum results in a 1000-hour test. This material also passed a weathering test according to UL 746 C, without any limitations.

3.3 Protection against high temperatures

Installed electrical appliances generate power loss during operation. The enclosures manufactured by **Spelsberg** are tested during the approval test for the maximum power loss in the enclosure. Detailed tables on this topic are provided in the catalogue, taking account of the ambient temperature and the installation type.

Switchgear assemblies are designed for ambient temperatures of between -25°C and +35°C (24-hour average). A temporary increase in temperature to 40°C is not a problem.

Even if, for example, iQ products from Spelsberg are suitable for temperatures of between -40°C and +80°C, the manufacturer's instructions and the requirements of the relevant product safety standards must be checked for installed devices such as line protection, fault-current circuit breakers or fuses when designing the housing.

Solar radiation or other heat sources can cause additional increases in the internal temperature which are not permitted and must therefore be avoided. Reliable operation of electrical equipment no longer be guaranteed under certain circumstances.

DIN VDE 0100-520 (VDE 0100-520):
522.1.2 Cable and conductor systems including accessories may only be installed or moved under ambient temperatures which are within the limit values specified by the manufacturer or in the relevant product standard.

3.4 Protection against chemical influences

For installations in areas with increased levels of hazardous substances in the environment, the suitability may be correspondingly reduced. Information is available in the table „Material characteristics".

iQ products are resistant to mineral oil, vegetable fats and animal fats.
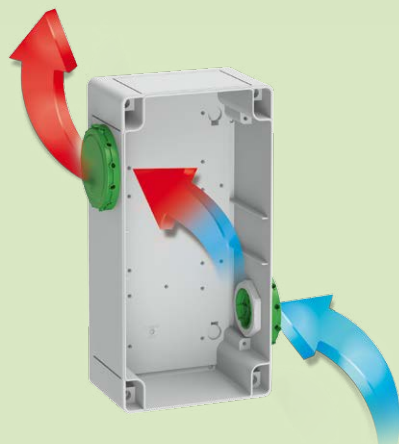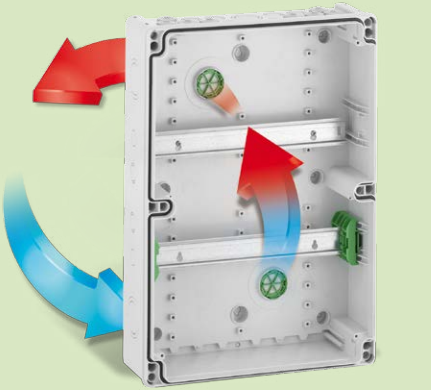
3.5 Protection against condensation

The more tightly sealed the equipment, for example junction boxes or distributor housings, the greater the likelihood of condensation forming. This is especially the case at locations where highly fluctuating temperatures are to be expected. These effects are intensified by the power loss generated in the enclosures.

Owing to the differences in temperature, a difference also arises in the pressure conditions, which causes the enclosure to draw in air when the temperature changes. The next time the temperature increases, the humidity in this air condenses on the cold surface of the housing, for example on the lid. This process is only reversible to a limited extent, so the water collects in the housing. Since this effect occurs regularly, even daily to an extent, a considerable volume of water may collect internally. If this housing has an increased protection rating, it no longer discharges this water with the result that its seal actually has a negative impact. Damage will result.

Under **DIN VDE 0100-520**, precautions must be taken with respect to drainage of water if water collects or condensation can occur within cable and conductor systems.

Spelsberg junction boxes in the various product groups have break-out condensation openings on the rear housing or mounting surfaces. These should be opened in such a way that when installed they are on the underside of the housing so that any condensation can drain off.

This only applies under the condition that no increased demands are imposed with respect to protection against accidental contact or foreign bodies (> IP2X or dust protection).

If requirements for contact protection or foreign body protection are also imposed on the housing, for example IP3X, we recommend use of els ventilation seals. These seals come in the size M20, are fitted in the corresponding cable inlet openings on the underside and the side surfaces and offer splash water protection up to IPX4 when properly installed. We recommend an installation that offers a so-called chimney effect.

AK Air and BEL Air ventilation elements

The Air ventilation elements prevent condensation, whilst maintaining the high IP65 protection rating. Any condensate occurring is transported out of the enclosure immediately via air exchange. The continuous and high rate of air exchange allows the interior air to mix constantly with the environmental air and transports the moisture outwards. Air exchange also takes place in environments with almost constant air humidity and temperature, as the air in the interior of the housing heats up, e.g. due to the components.

Recommendation: At least one complete air exchange is provided per day via the BEL Air. With one set, this is achieved with a housing volume of up to 35 dm³.

All housing parts, such as the seals, are permanently relieved of pressure through the constant pressure equalisation. The high air exchange rate guarantees a permanent exchange of the moist air with the surroundings. No appreciable pressure differences are required for this. However, with the pressure equalisation elements it is exactly these appreciable pressure differences that are required, at least temporarily, in order to implement an air exchange. The Air ventilation elements therefore have a very large, open filter surface that guarantees a high air exchange without influencing the air flow. The constant pressure equalisation prevents pressure differences thus ensuring that no mechanical forces can be exerted on the housing and seals.

DIN EN 61439-1

Section 8.2.2 concerns the protection against contact with live parts and the prevention of penetration of solid foreign objects and water. In addition, closed switchgear assemblies must be protected from condensate inside the housing without changing the type of protection.

Installation only in protected outdoor areas!

Please note that in the case of installations under solar fields, the joints between modules must not be above the housings, or the housings must also be covered by a protective shelter.

3.6 Protection against rain / snow (precipitation)

The protection rating tests carried out under DIN EN 60529 are used as comparative tests and for classification of properties. The tests are limited to a **few minutes** and cannot emulate exposure to rain / snow or cleaning with water jets. In addition, the local conditions may differ so greatly that a general exposure test cannot be defined. The installation regulations for the respective installation situation must be taken into account for this reason.

DIN VDE 0100-520:
522.3.1 Cable and conductor systems must be selected and installed such that damage cannot be caused by condensation or ingress of water.
DIN VDE 0100-712: Photovoltaic systems
712.522.8.3 External influences that can be anticipated, such as wind, ice formation, temperatures and solar radiation, must be taken into account.

3.7 Protection against retained water (frost)

Water frequently collects on surfaces and in recesses in installations that are not protected against precipitation. If this collected water cannot drain off unhindered, it will accumulate. In the event of low temperatures, this water can freeze and cause unpermitted mechanical strains on the housing. This can cause damage to the housing.

DIN VDE 0100-712:

712.522.8.3 External influences that can be anticipated, such as wind, ice formation, temperatures and solar radiation, must be taken into account. It should therefore be ensured during installation that the housing is protected by a roof construction. (See 3.6)

This roof construction may
• already be present in existing structures
• be set up by the user
• be supplied in the form of accessory products from the Spelsberg range.

3.8 Protection against plants and/or mould growth

The plastics used in electrical installation are organic materials. The risk of harm from plants, algae or mould must therefore be considered.

DIN VDE 0100-520:
522.9.1 If experience or empirical evidence shows that plants and / or mould growth can cause damage, the cable and conductor system must be selected accordingly or special protection measures must be provided.
Comment: A laying method that allows corresponding removal of such vegetation must be selected (see Section 529).

Conclusion:
Taking account of the aforementioned parameters, a protected installation is absolutely mandatory for outdoor use and is also described extensively in the installation standards.
This is the only way to ensure safe operation of the protective devices.

Supplementary information on outdoor installation – UV-resistance:
The information on the type of protection and UV-resistance is often considered the only characteristics for outdoor installations. However, other factors such as absolute temperature, frequency of temperature change, humidity and chemical influences in particular play an important role with outdoor installations. In addition to impairments through UV-effects, in outdoor installations damage is expected to arise predominantly as a result of chemical influences. So, the outside areas in the vicinity of filling stations, chemical facilities, landfill sites, compressors, sewerage treatment plants etc. should be subjected to particularly critical investigations beforehand.

4. Installing cables in concrete

The commonly-used NYM sheathed cables may be installed in concrete, with the exception of concrete which is stamped or vibrated during pouring. According to **VDE 0276**, high-voltage NYY cables may, however, be used without restriction in concrete. However, in comparison with NYM, a considerably larger minimum bending radius must be complied with.

5. Protection classes of electrical equipment

This classification is not for the purpose of describing the safety level of the equipment but is simply a statement of the measures with which this safety level can be achieved.

Protection Class I equipment is that in which protection against electric shock is not just provided by the basic insulation. Additional protection is provided by the fact that parts are connected to the earth lead of the fixed installation so that in case of failure of the basic insulation no voltage can remain.

Protection Class II equipment is that in which protection against electric shock is not just provided by the basic insulation but also by additional safety measures, such as double insulation or reinforced insulation. There is no possibility of connecting an earth lead.

Protection Class III equipment is that in which protection against electric shock is based on a protective low voltage (SELV1) and in which voltages that are higher than the protective low voltage cannot be produced.

All „els" empty enclosures made from plastic comply with Class II protection requirements. Metal housings, or metal-coated housings are intended for connection of an earth lead and comply with Class I protection requirements.

[1] SELV = (**S**afety **E**xtra **L**ow **V**oltage)

According to DIN EN 61140 (VDE 0140-1) equipment is classified into protection classes according to its construction.

Protection class I
(only symbolises the earthing, protection class I itself does not have a symbol)

Protection class II

Protection class III

6. Protection types according to EN 60529 (VDE 0470-1)

The appropriate degree of protection is demonstrated in our in-house test laboratory. The tests are performed according to DIN EN 60670-1, DIN EN 61439-1 and DIN EN 62208 (depending on type).

The first digit of the IP Code stands for the level of protection against contact with dangerous parts and the ingress of solid bodies.

	IP	Protection level	Definition
⚡	0x	No contact protection, no protection against solid foreign bodies	
> 50 mm	1x	Protection against large area contact (with the hand), protection against foreign bodies > 50 mm Ø	The object probe, a sphere 50 mm in diameter, must not fully penetrate
> 12 mm	2x	Protection against contact with the fingers, protection against foreign bodies >12 mm Ø	The object probe, a sphere 12.5 mm in diameter, must not fully penetrate
> 2,5 mm	3x	Protection against contact with tools, wires etc. >2.5 mm Ø, protection against foreign bodies >2.5 mm Ø	The object probe, a sphere 2.5 mm in diameter, must not penetrate at all
> 1 mm	4x	Protection against contact with tools, wires etc. >1 mm Ø, protection against foreign bodies >1 mm Ø	The object probe, a sphere 1.0 mm in diameter, must not penetrate at all
	5x	Contact protection, protection against dust deposits on the inside	The ingress of dust is not totally prevented, but dust must not penetrate in a quantity to interfere with satisfactory operation of the devices
	6x	Full contact protection, protection against ingress of dust	No penetration of dust

Test probe according to DIN 60529

Spelsberg-products with NEMA protection class

Els-products	Nema
TK PC-o	4X, 12
TK PC-m	4X, 12K
TG PC-o	12*

*on request TG PC-o in Nema 4X, 12 design

Comparison table between IP code and NEMA types
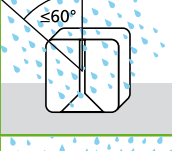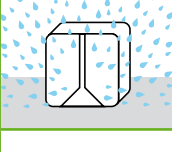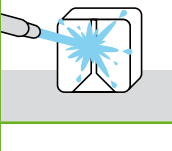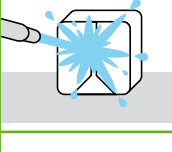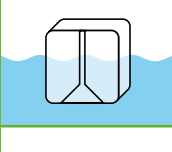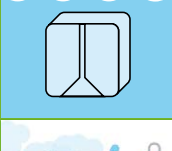
IEC 60529	Nema 250													IEC 60529
Contact / Dust	1	2	3	3R	3S	4	4X	5	6	6P	12	12K	13	Water
														x8
														x7
6x														x6
5x														x5
4x														x4
3x														x3
2x														x2
1x														x1
0x														x0
IP	21	22	55	24	55	66	66	53	67	68	54	54	54	

Interpretationrule

Technical appendix, Index of order numbers

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**The second digit of the IP code stands for the level of protection
against the harmful ingress of water.**

	IP	Protection level	Definition
	x0	no protection	
	x1	Protection against vertically falling dripping water	Vertically falling drops shall have no harmful effects
≤15°	**x2**	Protection against vertically falling water drops when the enclosure is tilted up to 15°	Vertically falling drops must not have any harmful effects when the enclosure is tilted up to 15° on either side of the vertical
≤60°	**x3**	Protection against falling spray water if angled up to 60° from the vertical	Water sprayed at an angle of up to 60° on either side of the vertical shall have no harmful effects
	x4	Protection against splash water from all directions	Water splashed on the enclosure from any direction shall have no harmful effects
	x5	Protection against jet water from all directions	Water directed at the enclosure from any direction in a jet shall have no harmful effects
	x6	Protection against heavy jet water	Water directed at the enclosure from every direction in a powerful jet shall have no harmful effects
	x7	Protection against temporary immersion in water	Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is temporarily immersed in water
	x8	Protection against effects of long-term immersion in water	Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is continuously immersed in water
	x9	Protection against heavy jet water (high pressure) with high temperature	Water directed at the enclosure from every direction in a powerful jet shall have no harmful effects

Outside diameter of average cable cross-sections

Cable cross section mm²		NYM mm Ø	NYY NYCWY" mm Ø	„NYCY mm Ø	Cable cross section mm²		NYM mm Ø	NYY NYCWY" mm Ø	„NYCY mm Ø
1 x	4	8	9	-	4 x	1,5	11	13,5	14
1 x	6	8,5	10	-	4 x	2,5	12,5	14,5	15
1 x	10	9,5	10,5	-	4 x	4	14,5	17,5	17
1 x	16	11	12	-	4 x	6	16,5	18	18
1 x	25	-	14	-	4 x	10	18,5	20	20
1 x	32	-	15	-	4 x	16	23,5	23	23
1 x	50	-	16,5	-	4 x	25	28,5	28	28
1 x	70	-	18	-	4 x	35	32	26-30	29
1 x	95	-	20	-	4 x	50	-	30-33	34
1 x	120	-	21	-	4 x	70	-	34-40	37
1 x	150	-	23	-	4 x	95	-	38-44	42
1 x	185	-	25	-	4 x	120	-	42-58	47
1 x	240	-	28	-	4 x	150	-	46-52	52
1 x	300	-	30	-	4 x	185	-	53-58	60
2 x	1,5	10	12	13	4 x	240	-	59-71	70
2 x	2,5	11	13	14	4 x	25/16	-	-	30
2 x	4	12	15	16	4 x	35/16	-	-	30
2 x	6	14	16	17	4 x	50/25	-	-	36,5
2 x	10	17	18	18	4 x	70/35	-	-	40
2 x	16	20	20	21	4 x	95/50	-	-	44,5
2 x	25	24	-	-	4 x	120/70	-	-	48,5
2 x	35	27	-	-	4 x	150/70	-	-	53
3 x	1,5	10,5	12,5	13	5 x	1,5	12	15	15
3 x	2,5	11	13	14	5 x	2,5	13,5	16	17
3 x	4	13	16	16	5 x	4	15,5	16,5	18
3 x	6	15	17	17	5 x	6	18	19	20
3 x	10	18	19	18	5 x	10	20	21	-
3 x	16	20	21	21	5 x	16	26	24	-
3 x	25	26	25	-	5 x	25	31,5	-	-
3 x	35	28	-	-	7 x	1,5	13	16	-
3 x	25/16	-	26,5	27	7 x	2,5	14,5	16,5	-
3 x	35/35	-	28	27	19 x	1,5	-	22	-
3 x	50/25	-	32	32	24 x	1,5	-	25	-
3 x	70/35	-	32-35	36					
3 x	95/50	-	37-41	40					
3 x	120/70	-	42	43					
3 x	150/70	-	46	47					
3 x	185/95	-	52	48-54					
3 x	240/120	-	57-62	60					
3 x	300/150	63-68	-						
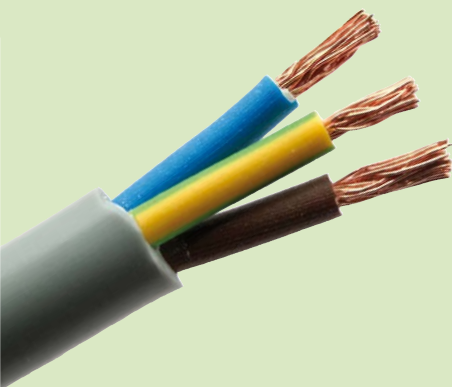
Overview of cable entries and the associated sealing ranges

Gland size	Cable gland IP68		Double-mem-brane seal IP66	Stepped nipple IP55	Attachment bush IP54
	Sealing range [mm]	Nenndrehmoment [Nm]	Sealing range [mm]	Sealing range [mm]	Sealing range [mm]
M12	2 – 6,5	2	---	---	---
M16	4 – 10	2,5	5 – 9	---	6 – 10
M20	6 – 12	4	7 – 12	5 – 16	8 – 13,5
M20	7 – 14	4	---	---	---
M25	9 – 16	6	9 – 16	5 – 21	9 – 18,5
M32	11 – 21	7	14 – 21	13 – 26,5	13 – 23
M40	16 – 28	7,5	---	13 – 24	17 – 30
M50	21 – 34,5	8	---	---	---
M63	32 – 44,5	9	---	---	---

7. Protection against mechanical stress, IK code

According to DIN EN 50102 (VDE 0470-100) «Protection types from enclosures for electrical operating media (equipment) against external mechanical damage (IK code)», the degree of protection provided by an enclosure against mechanical damage is indicated by an IK code. The IK codes allocated to the individual stress energy values are given in the adjacent table. The data on the IK values of the individual els products is given in Table 1 (page 304).

IK-Code	stress energy [J]
IK00	---
IK01	0,15
IK02	0,2
IK03	0,35
IK04	0,5
IK05	0,7
IK06	1
IK07	2
IK08	5
IK09	10
IK10	20

Technical Appendix
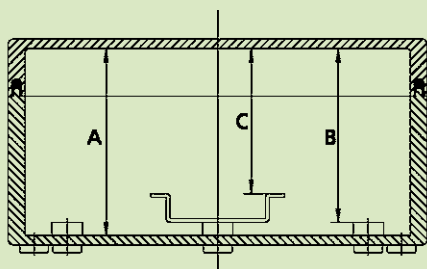
8. Installation dimensions of the els installation products

Clear installation heights of important product series

Product series	A	B	C
Abox / Abox-i	[mm]	[mm]	[mm]
Abox / Abox-i 025	42	36	---
Abox / Abox-i 040	45	39	34
Abox / Abox-i 060 / Abox SL 2,5²	49	49	41,5
Abox / Abox-i 100 / Abox SL 6²	60	60	52,5
Abox / Abox-i 160 / Abox SL 10²	71	71	63,5
Abox / Abox-i 250	92	92	84,5
Abox / Abox-i 350 / Abox HA	92	92	84,5
Abox 700	117,5	114	106,5
Abox / Abox-i 700 / 1500 / 2400	146	---	---

	A	B	C
Abox m	[mm]	[mm]	[mm]
Abox 025 m / Abox 025 AB m	41,5	35,5	28
Abox 040 m / Abox 040 AB m	46	40	33

	A	B	C
Terminal block cases	[mm]	[mm]	[mm]
RKK serie	45	45	40
RK 4/07	53	53	45,5
RK 4/12	63	63	55,5
RK 4/18, 4/25, 4/34	81	75	67,5
RK 4/50, 4/100	103	97	75,5
RKA serie / AKi-R	117,5	114	90

	A	B	C
AK III-Serie	[mm]	[mm]	[mm]
AK 14-70	82,5	77,5	48/60
AK 05 bis 12	111	105	98,5

	A	B	C
AK- / AKi serie	[mm]	[mm]	[mm]
AK 03	85	79	71,5
AK 05 to 12	111	105	98,5
AK 14 to 42 Plus	128	122	100
AKi 14 to 70	117,5	114	96

	A	B	C
AKL- / AKi-empty enclosure	[mm]	[mm]	[mm]
AKL 1 to 4 / AKi 1 to 4	117,5	114	106,5
AKL 2-h to 4-h / AKi 2-h to 4-h	194,5	191	183,5

	A	B	C
SVi empty enclosure	[mm]	[mm]	[mm]
SVi Hight 137mm	119	111,5	—
SVi Hight 162mm	144	136,5	—

9. PE/N disconnect terminals

DIN VDE 0100-718 requires that junction boxes of the power supply are constructed such that a simple measurement of the insulation resistance of all conductors to earth is possible for each individual circuit leaving the box. For circuits with a conductor cross section less than 10 mm², this measurement must be possible without disconnecting the neutral conductor, for example by installing neutral-lead disconnect terminals. For this reason an expanded terminal compartment is provided with sufficient space for installing standard terminal blocks.

	Red Range / HP Junction boxes	Abox Junction boxes	Abox-i Junction boxes	WK Junction boxes	TG / TK-PC Empty enclosures	TG-ABS / TK-PS Empty enclosures	RK / RKA Terminal block housings	AK compact Housing system	AK / AKi / SVi Housing system	GTi Housing system	STV / STG Socket combinations	HW Cavity wall installation system	IBT / IBTronic Concrete installation system
Protection against direct contact (basic protection) according to DIN VDE 0100-410	●	●	●	●	●	●	●	●	●	●	●	●	●
Rooms with baths or showers according to DIN VDE 0100-701	●	●	●	●	●	●	●	●	●	●	●	●	●
Covered swimming pools and outdoor swimming pools according to DIN VDE 0100-702			●				●		●	●	●		
Agricultural and horticultural estates according to DIN VDE 0100-705		●	●	●			●	●	●	●	●		
Electrical equipment at camping and caravan sites and similar areas according to DIN VDE 0100-708	●	●	●		●	●	●	●	●	●	●		
Electrical equipment for pleasure craft or houseboat marinas and similar areas according to DIN VDE 0100-709 Electrical equipment for caravans and motor caravans according to DIN VDE 0100-721			●						●	●	●	●	
Photovoltaic systems according to DIN VDE 0100-712					●		●		●	●			
Electrical equipment in furniture according to DIN VDE 0100-724												●	
• Damp and wet environments and rooms △ Protected outdoor installations □ Unprotected outdoor installations according to DIN VDE 0100-737	●	●	● △ □1)	●	● △	●	●	●	● △	● △	● △		
Temporary electrical equipment, for example at fairgrounds, amusement parks and circuses according to DIN VDE 0100-740	●	●	●		●	●	●	●	●	●	●		

1) only applies for Abox XT series (casting resin technique)

Additional information for outdoor installations, UV resistance:

Statements regarding the protection rating and UV resistance are often seen as the only criteria for outdoor installation.
However, other factors such as temperature, frequency of temperature change, air humidity and particularly chemical influences also play a significant role for outdoor installations. In addition to the effects of UV, chemical influences can be expected to be the main source of damage for outdoor installations. From the outset, outdoor areas of filling stations, chemical works, waste disposal sites, compressors, sewage works etc, should be examined particularly carefully.

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Protection against direct contact (basic protection) under standard conditions according to DIN VDE 0100-410

Important protection requirements:

- Live parts (AC voltages higher than 50 V and DC voltages higher than 120 V) must be enclosed or mounted behind covers which at least conform to protection rating IP2X.

- Horizontal upper surfaces of covers or enclosures that are easily accessible must at least conform to protection rating IP4X.

- Covers and enclosures must be securely fixed and have sufficient strength and durability to maintain the required protection class and sufficient distance from the live components under the conditions and external influences to be expected under normal operation. The covers must only be able to be removed using tools.

All „els" products satisfy these requirements
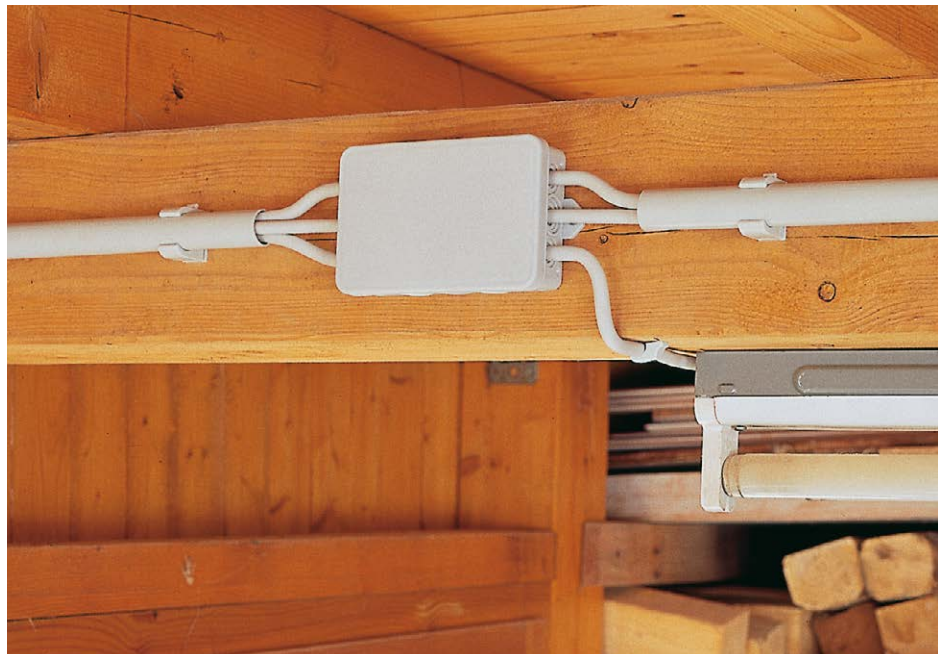
Example: Living rooms, hotel rooms, attics, heated and ventilated cellars

Rooms with bath or shower per DIN VDE 0100-701

Important protection requirements:

• The following switchgear, controllers and installation devices are permitted in these areas:

Area 0 - None.

Area 1 - Junction boxes and terminal boxes for the supply of electrical consumers that are permitted in zones 0 and 1 per 701.55.

- Installation devices, including sockets for power circuits that are protected through low voltage by means of SELV[1] or PELV[2] with a nominal voltage that does not exceed 25 VAC or 60 VDC. The current source must be installed outside area 0 or 1.

Area 2 - Installation devices, with the exception of sockets.

- Installation devices, including sockets for power circuits that are protected through low voltage by means of SELV[1] or PELV[2]. The current source must be installed outside area 0 or 1.

- Shaver points per DIN EN 61558-2-5 (VDE 0570-2-5).

- Installation devices, including sockets for signalling and communications equipment assuming that such equipment is protected through low voltage by means of SELV[1] or PELV[2].

• Electrical equipment must have the following type of protection as a minimum:

In area 0: IPX7

In area 1: IPX4

In area 2: IPX4
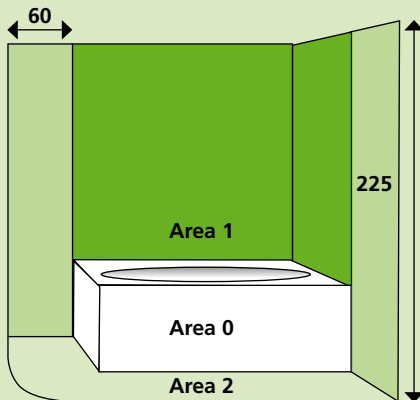
The requirements do not apply to shaver points per DIN EN 61558-2-5 (VDE 0570-2-5), that are installed in area 2 and that are unlikely to be hit by direct spray whilst showering.

Electrical equipment that is exposed to **water jets,** e.g. for cleaning purposes in public baths, must comply with **protection type IPX5** as a minimum when installed in **areas 1 and 2.**

Particularly suitable: Abox-i, AK, AKi and GTi housing systems.

[1] SELV = **S**afety **E**xtra **L**ow **V**oltage
[2] PELV = **P**rotective **E**xtra **L**ow **V**oltage

60

225

Area 1

Area 0

Area 2

Swimming pool basins and other basins according to DIN VDE 0100-702

Important protection requirements:
- When using SELV[1], protection from direct contact must be ensured, regardless of the voltage level, though:

  - Coverings or enclosures of protection type IP2X or IPXXB (protected against access by fingers) as a minimum, or

  - Insulation that can withstand a test voltage of 500 VAC for a minimum of one minute.

  • Electrical equipment must comply with the following types of protection as a minimum:
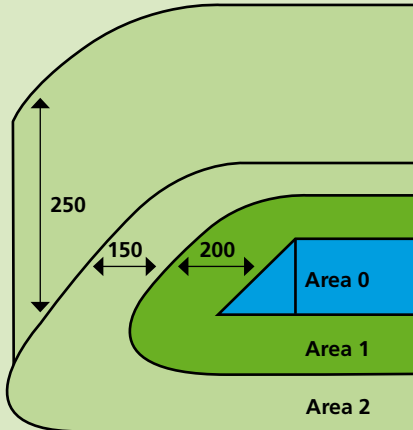
Area	**Outdoors**, for cleaning work <u>with</u> water jet	**Outdoors**, <u>without</u> water jet	**Indoors**, for cleaning work with water jet	**Indoors**, without water jet
0	IPX5/IPX8	IPX8	IPX5/IPX8	IPX8
1	IPX5	IPX4	IPX5	IPX4
2	IPX5	IPX4	IPX5	IPX2

• It is not permitted to install junction boxes in area 0.
In area 1, only junction boxes for electrical circuits with protection through low voltage by means of SELV[1] are permitted.

Particularly suitable:
Abox-i, the STV range as well as the AK, AKi, GTi, TK-PC and TG-PC housing systems.

[1] SELV = **S**afety **E**xtra **L**ow **V**oltage

Agricultural and horticultural estates according to DIN VDE 0100-705

Important protection requirements:

The following shut-off equipment should be provided in circuits, regardless of which systems, depending on the type of earth connection:
- In end circuits with sockets, a fault-current circuit breaker (RCD1) with a trip current = 30 mA
- In all other circuits, excluding those that supply distributors, fault-current circuit breakers (RCD1) with a trip current = 300 mA.

Fault-current circuit breakers (RCD[2]) with a trip current = 300 mA must be set up for fire protection. The fault-current circuit breakers (RCD[2]) must disconnect all live conductors. In cases where improved maintenance of supply is required, these fault-current circuit breakers (RCD[2]) must comply with design type S or disconnect with a time delay.

In areas where there is a risk of fire, conductors for low-voltage circuits must either be supplied with covers or sheathing with protection rating IPXXD or IP4X or be supplied with sheathing made from insulating material in addition to their basic protection insulation.

Particularly suitable: STV, Abox, Abox-i, the AK, AKi, GTi, TK-PC and TG-PC housing system.

[2] RCD = **R**esidual **C**urrent **D**evice

Example:

Stables, henhouses, pig-fattening units, incubation rooms and hatcheries, rooms for fodder preparation, hay-lofts, storage areas for straw, fertilizer and cereals

Note:
For installations in areas with increased levels of air contamination, the suitability may be correspondingly limited. Information is available in Table 2 (Page 305)

Damp and wet areas and rooms and systems installed outdoors per DIN VDE 0100-737.

Examples:

Commercial kitchens, unheated and unventilated cellar, laundry rooms, cold rooms, a wine cellar, greenhouses, laundry

Important protection requirements:

- In damp and wet areas and rooms, the electrical equipment must be protected from dripping water (protection type IPX1) as a minimum.

- In areas and rooms where water will be jetted and where electrical equipment will not normally be directly jetted for cleaning purposes, the equipment must be protected from splashed water (protection type IPX4) as a minimum.
  In areas and rooms where water will be jetted, electrical equipment that is directly exposed to the water stream must have a type of water protection appropriate to the type of water jet exposure or must have an additional protective measure that does not impair the operation of the equipment protected by it.

  Note: The scope of protection afforded by protection type IPX5 does not permit the cleaning of the equipment with pressurised water, e.g. spraying with a water hose or with high pressure cleaners.

- Metal parts exposed to corrosive vapours or mists must be protected against corrosion, e.g. through protective coatings or by using corrosion-proof materials.

Examples of unprotected outdoor installations:

Streets, paths and plazas, courtyards, passages and gardens, on construction sites, railway platforms, ramps and roofs, on cranes, construction machinery, filling stations and walls of buildings and external walls.

Examples of protected outdoor installations:

Systems in covered railway platforms, in entrance gates and covered filling stations, on houses with sufficient roof projection, with additional weather protection

Systems installed outdoors

Important protection requirements:

- In protected outdoor systems, the equipment must be protected from dripping water (protection type IPX1) as a minimum.

- In unprotected outdoor systems, the equipment must be protected from sprayed water (protection type IPX3) as a minimum.

- The requirements for protection through automatic shutoff of the power supply for

  - sockets in outdoor installations and

  - sockets intended for the occasional supply of outdoor portable equipment, are contained in DIN VDE 0100-470 (VDE 0100 part 470):1996-02, section 471.2.3.

Particularly suitable:
Abox-i, AK, AKi, GTi, STV/STG, TG-PC and TK-PC
In unprotected outdoor areas: Abox XT

See chapter 3 (page 315 ff.) for information on outdoor installations.
In addition, ventilation and/or drainage is essential!

Electrical systems on caravan pitches, camping pitches and similar areas per DIN VDE 0100-708

Important protection requirements:

- The use of equipment with protection class 0 is not permitted.

- Equipment on a caravan pitch must have a protection type of IPX4 as a minimum in order to protect it from splashed water.
  Note: If the electrical equipment will be sprayed during the washing process with high pressure cleaners etc., protection type IPX5 must be selected for the equipment itself or the use of an additional protective housing should be considered.

- Equipment that will be erected on a caravan/tent pitch must have or be provided with a protection type of IP4X as a minimum in order to protect it from penetration of very small objects.

- Equipment that will be erected on a caravan pitch must be protected against mechanical stresses.

The protection is achieved through one or more of the following measures:

- The position or location of the equipment must be selected such that damage due to any reasonably foreseeable event is avoided

- Provision of local or general mechanical protection

- Electrical equipment must be erected in compliance with a minimum protection against external mechanical stresses per IK07

Particularly suitable: Red range, Abox, Abox-i, RK, RKA, AK, AKi, GTi and the STV range.

Electrical systems for caravans and motorhomes per DIN VDE 0100-721

Important protection requirements:

- The nominal AC power supply for the caravan system must not exceed 230 V in the case of single-phase power or 400 V in the case of 3-phase power. The nominal DC power supply for the caravan system must not exceed 48V.

- Where accessories are sited in a position where moisture may be present, the accessory must be constructed or enclosed such that a protection class of no less than IP44 is achieved.

Electrical systems for water sport vehicles or houseboats, marinas and similar areas per DIN VDE0100-709

Important protection requirements:

- In marinas, equipment erected at or above a landing stage, launching point, pier or pontoon must be selected in accordance with the external influences that may occur, as follows:

  - Splashed water (AD4): IPX4

  - Water jet (AD5): IPX5

  - Waves (AD6): IPX6

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els spelsberg

- Equipment that will be erected at or above a landing stage, launching point, pier or pontoon must be selected with a protection class of at least IP4X in order to prevent penetration by very small foreign objects (AE3).

- Equipment that will be erected at or above a landing stage, launching point, pier or pontoon must be suitable for exposure to corrosive atmospheres or contaminated substances (AF2$_1$). AF3$_1$ should be used if exposure to hydrocarbons is possible.

- Equipment that will be erected at or above a landing stage, launching point, pier or pontoon must be protected against mechanical stresses.(medium mechanical stresses AG2). The protection must be achieved through one or more of the following requirements:

  - The position or location of the equipment must be selected such that damage due to any reasonably foreseeable event is avoided
  - Provision of local or general mechanical protection
  - Equipment erected in compliance with a minimum protection against external mechanical stresses per IK07

Particularly suitable after the feed point: Abox, Abox-i, Abox XT, AK, AKi, GTi, TK-PC, TG-PC, STV, and the STG series.

[1] Abbreviation for the classification of external influences per DIN VDE 0100-510, table ZA.1

Primarily electrical systems erected, for example at fairgrounds, amusement parks and circuses per DIN VDE 0100-740

Important protection requirements:

- The nominal supply voltage shall not exceed 230/400 VAC or 440 VDC.

- Regardless of the number of current sources for power supply, outer conductors and neutral conductors for the various current sources shall not be connected to one another after the feed point. The instructions from the DSO[2] shall be complied with.

- All final circuits for lights, sockets up to 32 A rated current and portable equipment that is connected via flexible cable or wiring with a current load capacity up to 32 A, must be additionally protected with residual current devices (RCD[3]) with a rated fault current = 30 mA.

- Each separated electrical system and each distribution circuit that supplies an outdoor system, must be equipped with its own, easily accessible and correctly identifiable disconnection device.

- Switchgear and controllers shall only be installed in boxes that can be opened exclusively with keys or tools. Exceptions to this are parts that are intended to be operated by electrical lay-persons.

- Electrical equipment must comply with protection type IP44 as a minimum.

- Each electrical system must have its own easily-accessible device for disconnection and switching and to provide over-current protection.

- Housings that contain rectifiers and transformers must be reasonably ventilated and the openings must not be covered during operation.

Particularly suitable: Red range, Abox, Abox-i, RK, RKA, AK, AKi, GTi and the STV range.

[2] DSO = **D**istribution **S**ystem **O**perator
[3] RCD = **R**esidual **C**urrent **D**evice
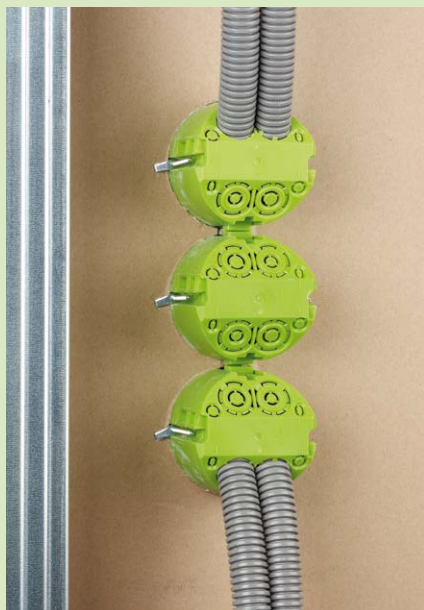
Electrical systems in furniture and similar furnishings
DIN VDE 0100-724

Important protection requirements:

- Wiring must be either permanently routed or routed in suitable hollow spaces. With permanent routing, the wiring must be equipped with suitable strain relief at the point of entry to the furnishing object. With routing in hollow spaces within the furnishing object, the wiring must be equipped with suitable pushing/strain relief at the point of entry to the furnishing object and at the equipment itself.

- Junction boxes and equipment boxes, installation distribution boards and similar devices or recessed installations must comply with the test requirements for cavity wall sockets per DIN 57606 / VDE 0606 and must be marked accordingly.

- Electrical installation devices for flush-mounting must not be fastened into cavity wall sockets with claws.

- Cavity wall sockets and cavity wall distribution boards must be installed such that they are protected from mechanical damage.

- Note: This can be done by means of installation in inaccessible cavities, in recesses or through additional mechanical protection, for example.

Particularly suitable: The cavity wall socket range

Photovoltaic systems per DIN VDE 0100-712

The peripherals for photovoltaic systems are generally installed outdoors. For this reason, the following important protection requirements apply:

- External influences that are to be expected such as wind, ice formation, temperature and solar radiation must be taken into account.

- The heat arising from direct solar radiation in photovoltaic systems must be reliably dissipated.

- All terminal boxes (PV generator terminal boxes and PV sub-array terminal boxes) must be equipped with a warning that active components in the terminal boxes may still be live after being separated from the PV inverter.

- The requirements for switching off the PV system for maintenance work are contained in VDE 0100-712, section 53.

Particularly suitable: RK-PV, AK, AKi, GTi,TK-PC and TG-PC

See chapter 3 (page 305 ff.) for information on outdoor installations.
In addition, ventilation and/or drainage is essential!

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The mentioned tests are based on the following standards:

- **DIN EN 60670-1 (VDE 0606-1),**
- **DIN EN 61439-1 (VDE 0660-600-1),**
- **DIN EN 62208 (VDE 0660-511)**

with all associated amendments and extensions.

The tests described below are carried out, documented, analysed and evaluated there.

- **DIN EN 60670-1, VDE 0606-1**

  This standard applies for sockets, housings and housing parts for electrical installation equipment with a rated voltage of less than 1000 VAC and 1500 VDC, which are intended for household and similar fixed electrical installations both indoors and outdoors.

  (DIN EN 60670-1, 1 Application Area)

- **DIN EN 61439-1, VDE 0660-600-1**

  This standard defines terms and specifies the operating conditions, construction requirements, technical characteristics and requirements for certification of low-voltage switch gear assemblies whose rated voltage is below 1000 VAC and 1500 VDC and which are movable or fixed. (DIN EN 61439-1, 1 Application Area)

- **DIN EN 62208, VDE 0660-511**

  This standard applies for empty enclosures, as supplied by the manufacturer before any equipment is installed by the manufacturer of the switchgear assembly.

  (DIN EN 62208, 1 Application Area)

Note:

Our in-house testing laboratory is certified according to:

- UL (Underwriters Laboratories)
- DIN EN 60670-1, 60670-22, 60529

The tests described below are carried out, documented, analysed and evaluated there.

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Proof of mechanical structure

DIN EN 60670-1:
Lids, covers or cover plates or parts thereof

DIN EN 61439-1:
Design verification of switchgear assemblies

DIN EN 62208:
Type testing of empty enclosures

Proof of non-removable lids
DIN EN 60670-1
The forces are applied perpendicular to the mounting surface, at the middle of the lid, gradually increasing for one minute.

Proof of removable lids
DIN EN 60670-1
The forces are applied ten times, gradually increasing, to the device to remove the lid. The equipment under test shall be free of damage afterwards.

Proof of resistance to ingress of solid foreign bodies

DIN EN 60670-1
DIN EN 62208, 9.8.1.2

The equipment under test is set up as in normal use and any existing cable inlets are fitted with cables. Protection is achieved if the probe cannot penetrate into the tested equipment (IP4X).

For protection level IP5X, no part of the inner surface may be covered by dust from the outside. For protection level IP6X, no dust may penetrate the into the tested equipment. (See IP code, page 309)

Prüfsonden nach DIN EN 60529

Proof of resistance to harmful effects of water ingress

DIN EN 60670-1:
DIN EN 61439-1:
DIN EN 62208:

The equipment under test is set up as in normal use and any existing cable inlets are fitted with cables. The equipment under test then has amounts of water applied in accordance with its protection rating (see IP code, page 309). The ingress of water is detected by lining the interior of the equipment under test with absorbent paper. The indicator paper is examined immediately after the test.

Proof of the strength of materials and parts

DIN EN 60670-1:

Mechanical strength of boxes and enclosures

DIN EN 61439-1:
Corrosion resistance of switchgear assemblies

DIN EN 62208, 9.13
Corrosion resistance of empty enclosures

Proof of heat resistance

DIN EN 60670-1:
A steel ball with a 5-mm diameter is pressed down on the surface of the box or enclosure with a force of 20 ± 2 N. This formation is set up in a heating cabinet and left there for an hour at a temperature of 125 ± 2°C. After the time has elapsed, the equipment under test must be cooled to room temperature within 10 seconds by immersing it in a water tank. Proof is furnished if the diameter of the impression left behind by the sphere is not larger than 2 mm.

Start of test
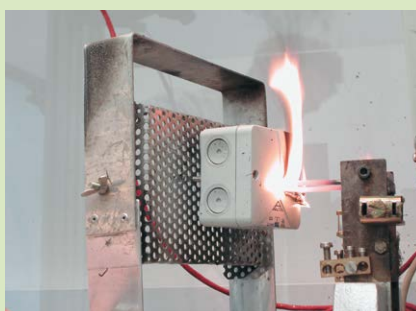
End of test

Proof of durability of plastics against excessive heat and fire

DIN EN 60670-1:
DIN EN 61439-1:
DIN EN 62208:

The resistance is determined by the glow wire test. The equipment under test is brought into contact with the hot filament for 30 seconds. The temperature amounts to:

- 960 ± 15 °C for parts containing live components,
- 850 ± 15 °C for cavity wall parts,
- 650 ± 15 °C for all others.

The test is passed if the housing does not burn or glow or if the flames and the glow extinguish independently 30 seconds after removal of the glow wire. The tissue paper spread below the test set must not be ignited by falling parts.

Proof of electrical stability

DIN EN 60670-1:
Insulation resistance and electric strength of boxes and enclosures

DIN EN 61439-1:
Protection against electric shock and continuity of earth leads in switchgear assemblies

DIN EN 62208:
Proof of insulation resistance of empty enclosures

Proof of protection against electric shock

DIN EN 61439-1:
DIN EN 62208:

The test must demonstrate that all conductive parts of the device are effectively connected to the external earth lead. A resistance meter must be used here, which can supply at least 10 A. The test must result in a circuit resistance of $\leq 0.1\ \Omega$.

Proof of electric strength

DIN EN 60670-1:

The test voltage is applied between two metal foils as for proof of insulation resistance. The test starts with about half the specified voltage and then increases rapidly to full voltage. The test is passed if no breakdown or flashover occurs.

Rated insulation voltage [V]	Test voltage [V]	Test voltage protection class II [V]
130	1250	1875
> 130 and ≤ 250	2000	3000
> 250 and ≤ 450	2500	3750
> 450 and ≤ 750	3000	4500
> 750	3500	5250

DIN EN 61439-1:

The test voltage is applied

• between the connected poles of the main circuit and the earthed enclosure,
• between the unconnected poles of the main circuit,
• between the control and auxiliary circuit and the main circuit as well as the earthed enclosure.

In order to furnish proof, the overcurrent relay must not trigger and there should be no breakdown.

Rated insulation voltage (phase-to-phase) [V]	Insulation test voltage (AC) [V]	Insulation test voltage (DC) [V]
$U_i \leq 60$	100	1415
$60 < U_i \leq 300$	150	2120
$300 < U_i \leq 690$	1890	2670
$690 < U_i \leq 800$	2000	1830
$800 < U_i \leq 1000$	2200	3110
$1000 < U_i \leq 1500$	---	3820

Rated insulation voltage (phase-to-phase) [V]	Insulation test voltage (AC) [V]
$U_i \leq 12$	250
$12 < U_i \leq 60$	500
$60 < U_i$	$2 \cdot U_i + 1000$ min. 1500

Proof of clearances and creepage distances and distances through casting compound

DIN EN 60670-22:

DIN EN 61439-1:

The intervals may not be less than described in Table 21 and are measured between live parts of different polarity, live parts and metal caps or sockets without insulation and live parts and the base mounting surface.

Rated insulation voltage [V]	Creepage distances, clearances and distances through casting compound [mm]
≤ 130	1,5
> 130 and ≤ 250	3
> 250 and ≤ 450	4
> 450 and ≤ 750	6
> 750	8

The clearances and creepage distances are evaluated as follows:
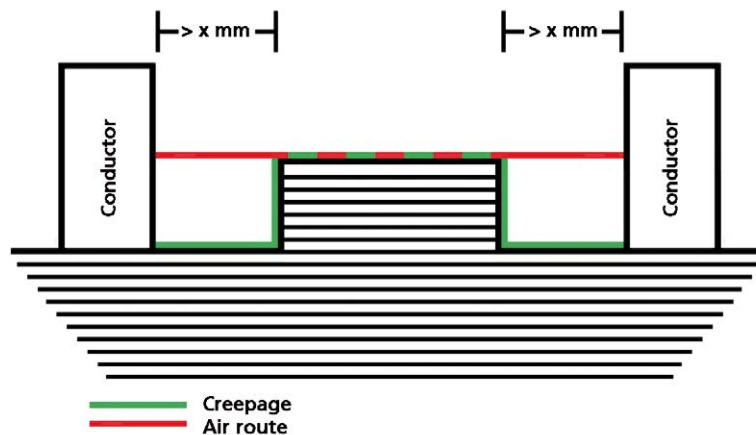
Creepage
Air route

The distance x must be between 0.25 mm and 2.5 mm depending on the degree of contamination (see Table 22), otherwise it may not be used to extend the creepage. In this case, the creepage distance would be equal to the clearance, based on the example in the figure above (DIN EN 61439-1, Appendix F).

Degree of contamination	Smallest width x of grooves [mm]
1	0,25
2	1
3	1,5
4	2,5

Tests and test methods UL – Underwriters Laboratories

The tests referred to are based on the following standards:

- **UL 94**

- **UL 50**

- **UL 746C**

with all associated amendments and extensions.

UL 94
„Tests for Flammability of Plastic Materials for Parts in Devices and Applications"

This regulation describes the test for evaluating and classifying the flammability of plastics.

UL 50
„Standard for electrical equipment intended to be installed and used in non-hazardous locations"

This regulation sets standards for electrical appliances that are not intended for use in areas subject to explosion hazards.

UL 746C
„Standard for safety for polymeric materials – use in electrical equipment evaluations"

This regulation sets standards for materials made of polymer, for use in electrical equipment.

Tests for Flammability of Plastic Materials for Parts in Devices and Applications.

UL 94

The test is conducted with an open flame. Depending on the classification, the flame has a power of 50 watts (20 mm high flame) or 500 watts (125 mm high flame). The ignition source acts on the test object for 30 s in the case of the horizontal burning test (HB), twice for 10 s with the vertical burn test (V) and five times for 5 s with the 5V test and is then removed again. The burning time and also the fragmentation of burning parts in the case of V-tests are assessed. A cotton ball placed under the test set must not ignite.

Classifications:

A material sample (thickness <3 mm) is placed horizontally above a 50 W flame 20 mm high.

Classification	Conditions
HB	Self-extinguishing
HB75	Burning < 75 mm/min.
HB45	Burning < 40 mm/min.

A material sample is placed vertically above a flame with 50W power and a height of 20 mm.

Classification	Conditions
V-2	Self-extinguishing up to 30 s following removal of the flame, burning drops permitted
V-1	Self-extinguishing up to 30 s following removal of the flame, no burning drops permitted
V-0	Self-extinguishing up to 10 s following removal of the flame, no burning drops permitted

A material sample is placed vertically above a 500 W flame with a height of 125 mm ± 10 mm.

Classification	Conditions
5VB	Self-extinguishing, no burning drops, burn holes are permitted
5VA	Self-extinguishing, no burning drops, burn holes are not permitted

Note:

As an alternative to materials with the material classification 5VA , the UL 50 regulation also permits material that has the classification HB and has passed the flame test according to UL 746C, Selection 17 „Flammability 127 mm (5 inch) flame". The material thus tested is comparable to material with the classification 5VA according to UL 50.

Test of proof against mechanical stress

UL 746C

In order to prove protection against mechanical stress, impact stress must be

applied to the equipment under test.
Equipment intended for outdoor use is cooled for three hours in a cold chamber at -35 ± 2°C and then mounted on a rigid frame appropriate to its planned use. In the cold state, a single blow is applied with a steel ball of 50.8 mm (2 inches) in diameter and weighing 0.535 kg (1.18 pounds) to the surface being tested.

In order to furnish proof, the equipment under test must be free of any damage that may interfere with its proper use. Furthermore, the intended protection rating must not be changed negatively.

The splinters are ice residue from the cooling process at -35°C.
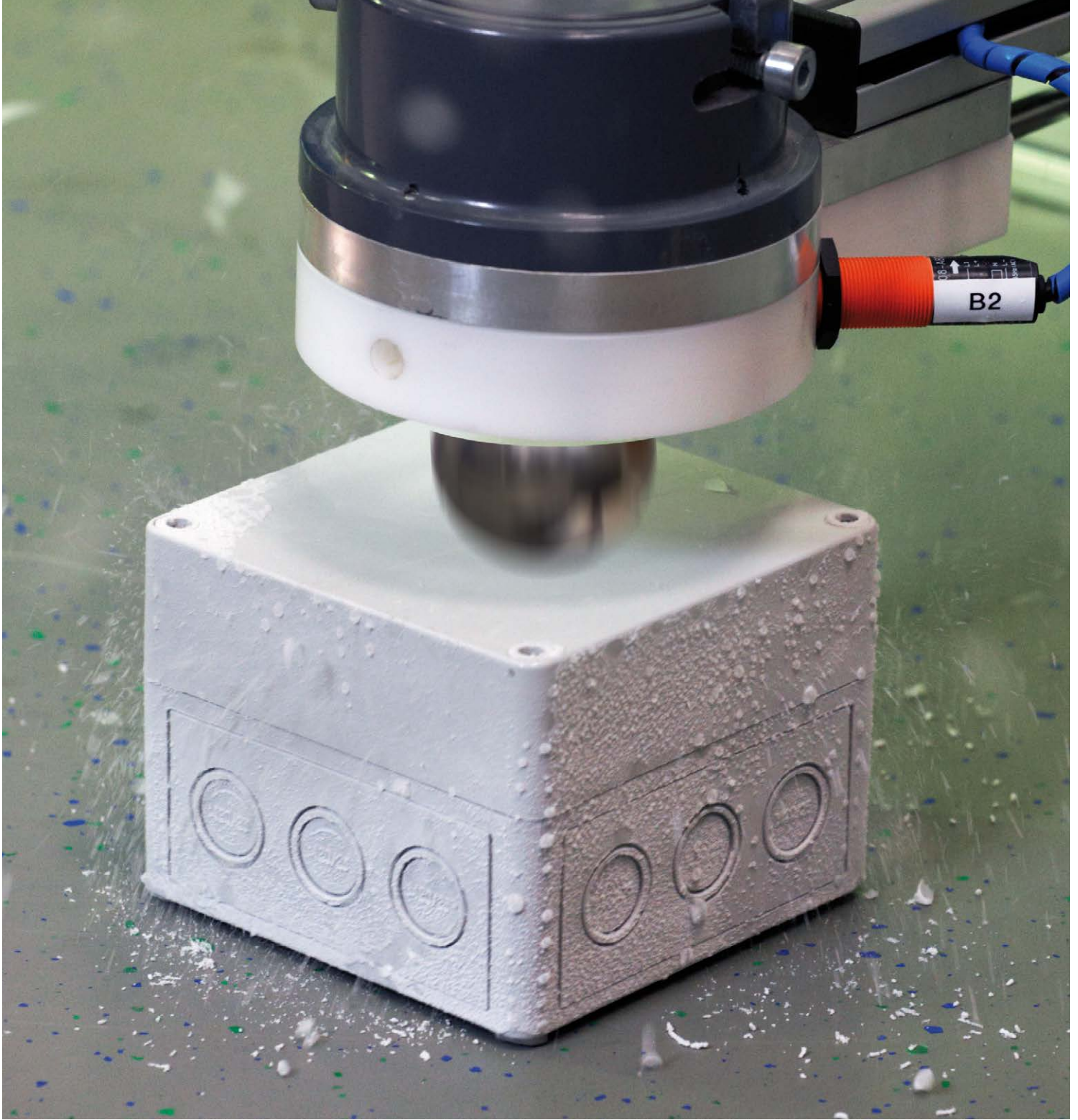
A distinction is made between different network types in the context of the safety assessment. The differences relate to the number of live conductors and earthing points.

Note:

Neutral conductor (N)

Earth lead (PE)

PEN conductor (PEN)

The network types are as follows:

• **TN networks** • **TT networks** • **IT networks**

T = Terra (Latin for earth)

N = Neutral

I = Isolation

S = Séparé (French for separate)

C = Combiné (French for combined)

The neutral point of the source is earthed directly in the **TN network**.
The bodies of the connected devices are connected to the neutral point of the network via an earth lead.
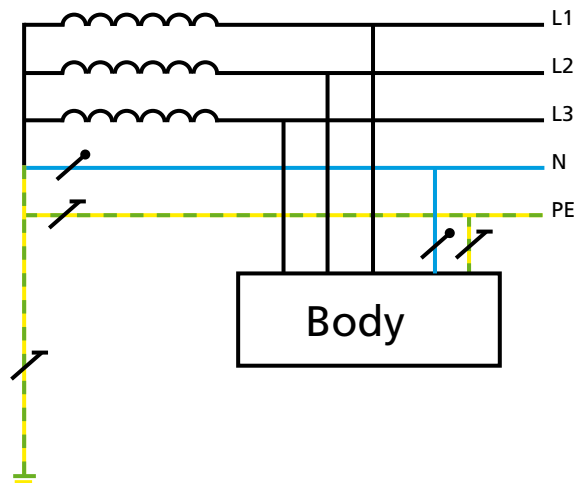
TN-Network

TN-S network: Neutral conductor and earth lead separated

TN-Network
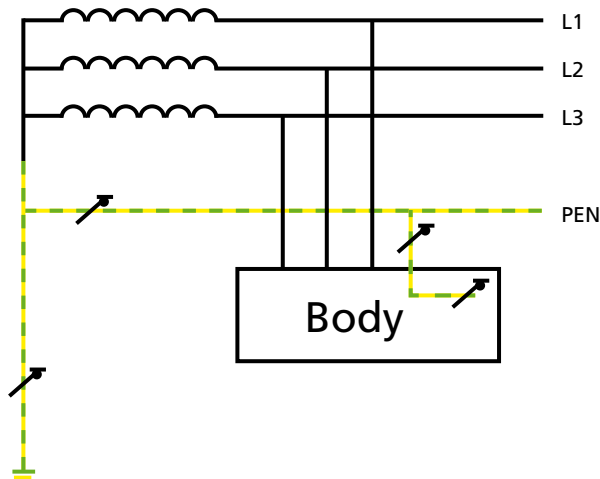
TN-C network: Neutral conductor and earth lead combined in PEN conductor.

TN-Network
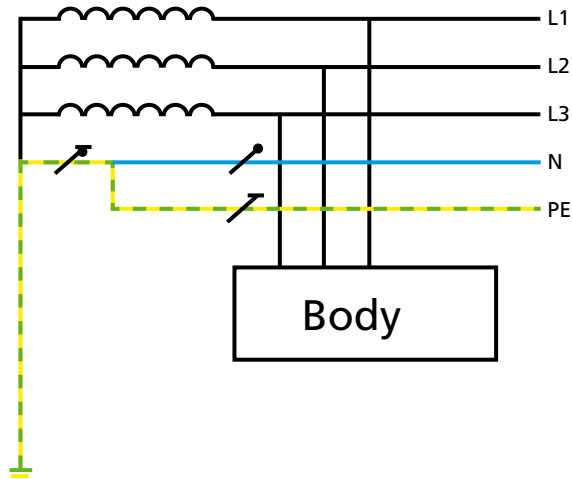
TN-C-S-Network: Neutral conductors and earth leads are combined initially so that they can then be separated. (cross-section reduction)

TT-Network
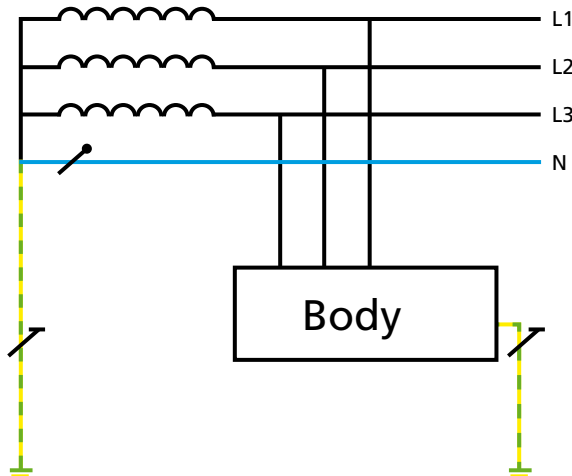
In the **TT network**, the neutral point of the network and the bodies of the connected devices are separately connected directly to earth.

IT-Network
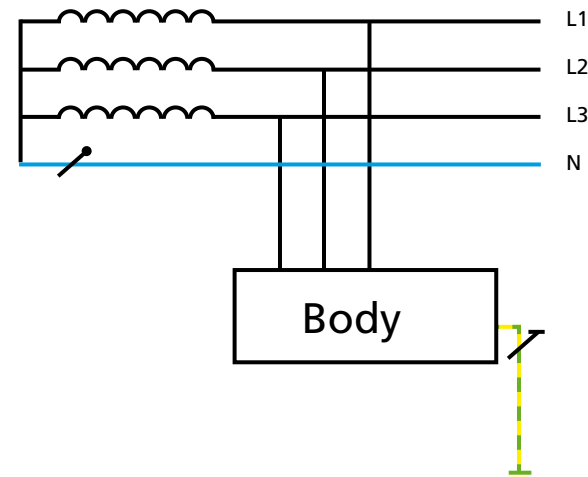
The neutral point of the network is not earthed in the **IT network.**
The bodies of the connected devices are separately connected directly to earth.
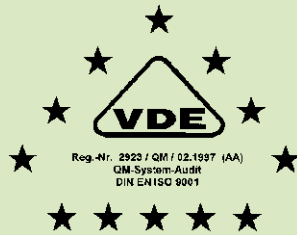
The development, testing and production per national regulations, European standards and special approvals document the high safety standard of els brand products.

Quality management system per DIN EN ISO 9001

„Register number: 2923 / QM 02.97 (AA) from the VDE testing and certification institute"

DIN VDE 0606 part 1

Connection material up to 690 V
Part 1: Installation boxes for mounting devices and/or connecting terminals

DIN VDE 60670

Boxes and enclosures for electrical accessories for household and similar fixed electrical installations

Part 1: General requirements

Part 21: Special requirements for boxes and enclosures with hanging fasteners

Part 22: Special requirements for junction boxes

Part 23: Special requirements for underfloor boxes

DIN EN 60999, VDE 0609 part 1

Connection materials (electrical copper conductors) safety requirements for screw terminal points and screw-less terminal points

Part 1: General requirements and special requirements for clamping points for conductors with a cross-section of 0.2 mm² up to and including 35 mm²

DIN EN 60998 (VDE 0613)

Connection materials for low voltage circuits for households and similar purposes

Part 1: General requirements

Part 2-1: Special requirements for connection materials as independent equipment with screw terminals

Part 2-2: Special requirements for connection materials as independent equipment with screw-less clamping points

DIN EN 60947-7-1 (VDE 0611 part 1)

Low voltage switchgear

Part 7-1: Auxiliary devices – terminal blocks – for copper conductors

DIN VDE 0603

Installation distribution boards and meter plates 400 VAC

Part 1: Installation distribution boards and meter plates

Part 2: Main line branch terminals

DIN EN 62208 (VDE 0660-511)

Empty enclosures for low-voltage switchgear combinations, general requirements

DIN EN 61439 / VDE 0660-600

Low-voltage switchgear combinations

Approval through Bureau Veritas

Certificate no.: 2661 D / 2869 / CO / PRSO BV
File no.: ACE 15 / 241 / 01

Shock-testing at the Bundesamt für Zivilschutz [Federal authority for civil defence]

Regulation class RK 0.63 / 6.3 safety factor A, certificate of use 23 / 95
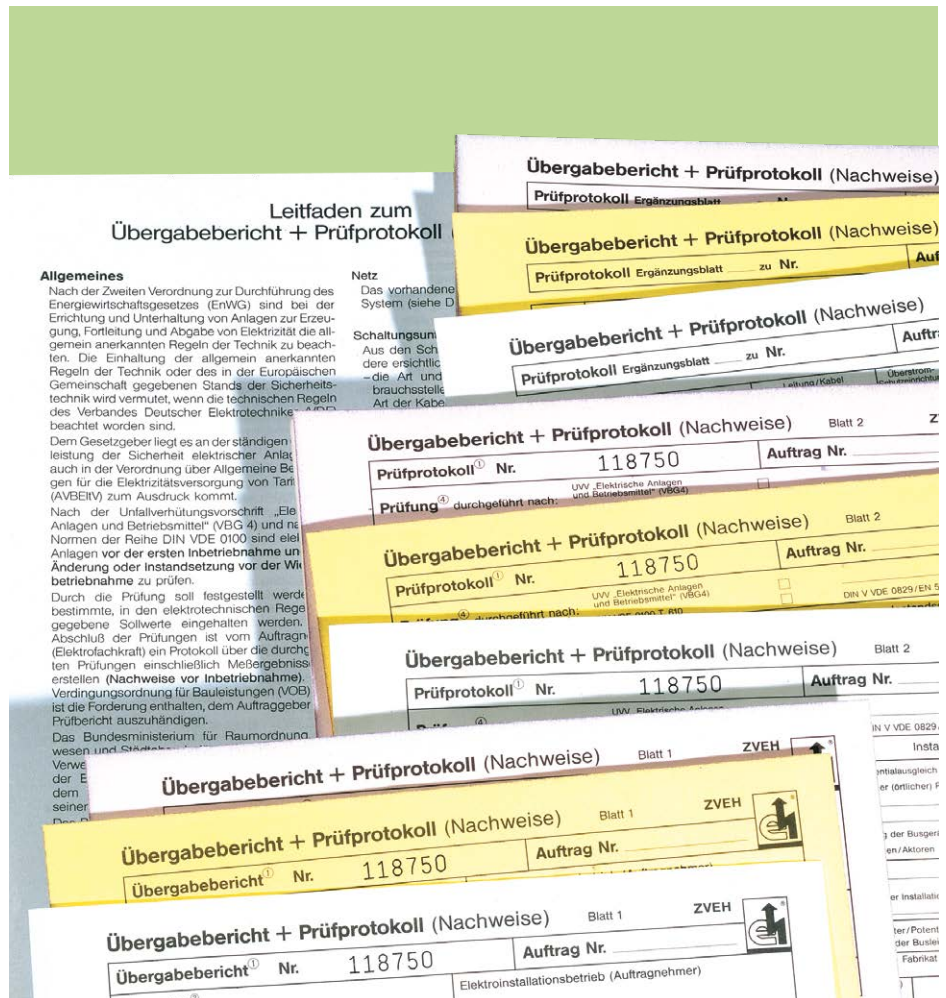
Extract from the determination of inspection intervals from the DGUV regulation 3 (formerly BGV A3):

Electrical systems and stationary equipment:
Inspection interval 4 years

Portable electrical equipment:
Guide value 6 months, 3 months
on construction sites

Fault current, differential current and fault voltage circuit breakers:
6 months in stationary systems, every
working day in non-stationary systems

Acceptance by the end customer and handover of fully functional system
An acceptance procedure and handover
to the end customer is carried out
at the conclusion of the commissioning.
The order is completed with the issue
of the associated final documentation, test
logs and handover reports.

It is advisable to generate a handover report and a test log.
There is a template from the ZVEH available for this.

Inspection intervals
The operator shall ensure that the electrical system and equipment is checked to ensure that it is in a proper condition:

1. Prior to initial commissioning and after any change or repair work, before the recommissioning by an electrician or under the guidance and supervision of an electrician.
2. At defined intervals.
   The intervals are to be set such that defects that would normally be expected to arise are detected in good time.

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072 200 01	GFL 20 Flange	360	36
072 803 01	GFG 3 Flange bar	360	36
073 003 01	GZE 3 Strain relief	360	36
073 004 01	GZE 4 Strain relief	360	45
073 032 01	GKE 32 Cable entry	360	35
073 043 01	GKE 43 Cable entry	360	35
076 125 01	AKL 125 Terminal	360	36
076 140 01	AKL 140 Terminal	360	45
100 403 01	TG ABS 88-6-o Empty enclosure	800	206
100 404 01	TG ABS 1208-6-o Empty enclosure	800	208
100 405 01	TG ABS 1212-6-o Empty enclosure	800	210
100 406 01	TG ABS 1608-6-o Empty enclosure	800	212
100 407 01	TG ABS 1612-9-o Empty enclosure	800	214
100 408 01	TG ABS 2012-8-o Empty enclosure	800	214
100 409 01	TG ABS 2015-9-o Empty enclosure	800	216
100 412 01	TG ABS 2516-9-o Empty enclosure	800	218
100 413 01	TG ABS 3023-9-o Empty enclosure	800	220
100 903 01	TG ABS 88-9-o Empty enclosure	800	206
100 904 01	TG ABS 1208-9-o Empty enclosure	800	208
100 905 01	TG ABS 1212-9-o Empty enclosure	800	210
100 906 01	TG ABS 1608-9-o Empty enclosure	800	212
100 908 01	TG ABS 2012-9-o Empty enclosure	800	216
100 912 01	TG ABS 2516-12-o Empty enclosure	800	218
100 913 01	TG ABS 3023-11-o Empty enclosure	800	220
101 003 01	TG ABS 88-6-to Empty enclosure	800	206
101 004 01	TG ABS 1208-6-to Empty enclosure	800	208
101 005 01	TG ABS 1212-6-to Empty enclosure	800	210
101 006 01	TG ABS 1608-6-to Empty enclosure	800	212
101 007 01	TG ABS 1612-9-to Empty enclosure	800	214
101 008 01	TG ABS 2012-8-to Empty enclosure	800	214
101 009 01	TG ABS 2015-9-to Empty enclosure	800	216
101 012 01	TG ABS 2516-9-to Empty enclosure	800	218
101 013 01	TG ABS 3023-9-to Empty enclosure	800	220
101 503 01	TG ABS 88-9-to Empty enclosure	800	206
101 504 01	TG ABS 1208-9-to Empty enclosure	800	208
101 505 01	TG ABS 1212-9-to Empty enclosure	800	210
101 506 01	TG ABS 1608-9-to Empty enclosure	800	212
101 508 01	TG ABS 2012-9-to Empty enclosure	800	216
101 512 01	TG ABS 2516-12-to Empty enclosure	800	218
101 513 01	TG ABS 3023-11-to Empty enclosure	800	220
104 406 01	TK PS 1811-16-m Empty enclosure	600	186
104 407 01	TK PS 1818-16-m Empty enclosure	600	190
104 408 01	TK PS 2518-16-m Empty enclosure	600	192
104 411 01	TK PS 2518-13f-m Empty enclosure	600	192
104 413 01	TK PS 1818-13f-m Empty enclosure	600	190
104 414 01	TK PS 1811-13f-m Empty enclosure	600	186
104 415 01	TK PS 1813-13f-m Empty enclosure	600	188
104 416 01	TK PS 1813-16-m Empty enclosure	600	188
105 401 01	TK PS 77-6-m Empty enclosure	600	178
105 402 01	TK PS 97-6-m Empty enclosure	600	180
105 403 01	TK PS 99-6-m Empty enclosure	600	180
105 404 01	TK PS 1111-7-m Empty enclosure	600	182
105 405 01	TK PS 1313-7-m Empty enclosure	600	184
105 406 01	TK PS 1811-9-m Empty enclosure	600	186
105 407 01	TK PS 1818-9-m Empty enclosure	600	190
105 408 01	TK PS 2518-9-m Empty enclosure	600	192
105 409 01	TK PS 1309-6-m Empty enclosure	600	184
105 410 01	TK PS 1809-6-m Empty enclosure	600	184

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105 411 01	TK PS 2518-6f-m Empty enclosure	600	192
105 412 01	TK PS 3625-11-m Empty enclosure	600	194
105 413 01	TK PS 1818-6f-m Empty enclosure	600	190
105 414 01	TK PS 1811-6f-m Empty enclosure	600	186
105 415 01	TK PS 1813-6f-m Empty enclosure	600	188
105 416 01	TK PS 1813-9-m Empty enclosure	600	188
105 901 01	TK PS 77-8-m Empty enclosure	600	178
105 902 01	TK PS 97-8-m Empty enclosure	600	180
105 903 01	TK PS 99-8-m Empty enclosure	600	180
105 904 01	TK PS 1111-9-m Empty enclosure	600	182
105 905 01	TK PS 1313-10-m Empty enclosure	600	184
105 906 01	TK PS 1811-11-m Empty enclosure	600	186
105 907 01	TK PS 1818-11-m Empty enclosure	600	190
105 908 01	TK PS 2518-11-m Empty enclosure	600	192
105 909 01	TK PS 1309-8-m Empty enclosure	600	184
105 910 01	TK PS 1809-8-m Empty enclosure	600	184
105 911 01	TK PS 2518-8f-m Empty enclosure	600	192
105 912 01	TK PS 3625-16-m Empty enclosure	600	194
105 913 01	TK PS 1818-8f-m Empty enclosure	600	190
105 914 01	TK PS 1811-8f-m Empty enclosure	600	186
105 915 01	TK PS 1813-8f-m Empty enclosure	600	188
105 916 01	TK PS 1813-11-m Empty enclosure	600	188
106 001 01	TK PS 77-6-tm Empty enclosure	600	178
106 002 01	TK PS 97-6-tm Empty enclosure	600	180
106 003 01	TK PS 99-6-tm Empty enclosure	600	180
106 004 01	TK PS 1111-7-tm Empty enclosure	600	182
106 005 01	TK PS 1313-7-tm Empty enclosure	600	184
106 006 01	TK PS 1811-9-tm Empty enclosure	600	186
106 007 01	TK PS 1818-9-tm Empty enclosure	600	190
106 008 01	TK PS 2518-9-tm Empty enclosure	600	192
106 009 01	TK PS 1309-6-tm Empty enclosure	600	184
106 010 01	TK PS 1809-6-tm Empty enclosure	600	184
106 011 01	TK PS 2518-6f-tm Empty enclosure	600	192
106 012 01	TK PS 3625-11-tm Empty enclosure	600	194
106 013 01	TK PS 1818-6f-tm Empty enclosure	600	190
106 014 01	TK PS 1811-6f-tm Empty enclosure	600	186
106 015 01	TK PS 1813-6f-tm Empty enclosure	600	188
106 016 01	TK PS 1813-9-tm Empty enclosure	600	188
106 501 01	TK PS 77-8-tm Empty enclosure	600	178
106 502 01	TK PS 97-8-tm Empty enclosure	600	180
106 503 01	TK PS 99-8-tm Empty enclosure	600	180
106 504 01	TK PS 1111-9-tm Empty enclosure	600	182
106 505 01	TK PS 1313-10-tm Empty enclosure	600	184
106 506 01	TK PS 1811-11-tm Empty enclosure	600	186
106 507 01	TK PS 1818-11-tm Empty enclosure	600	190
106 508 01	TK PS 2518-11-tm Empty enclosure	600	192
106 509 01	TK PS 1309-8-tm Empty enclosure	600	184
106 510 01	TK PS 1809-8-tm Empty enclosure	600	184
106 511 01	TK PS 2518-8f-tm Empty enclosure	600	192
106 512 01	TK PS 3625-16-tm Empty enclosure	600	194
106 513 01	TK PS 1818-8f-tm Empty enclosure	600	190
106 514 01	TK PS 1811-8f-tm Empty enclosure	600	186
106 515 01	TK PS 1813-8f-tm Empty enclosure	600	188
106 516 01	TK PS 1813-11-tm Empty enclosure	600	188
107 006 01	TK PS 1811-16-tm Empty enclosure	600	186
107 007 01	TK PS 1818-16-tm Empty enclosure	600	190
107 008 01	TK PS 2518-16-tm Empty enclosure	600	192
107 011 01	TK PS 2518-13f-tm Empty enclosure	600	192
107 013 01	TK PS 1818-13f-tm Empty enclosure	600	190
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Index of order numbers

els spelsberg

■ = NEW product

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187 003 01	TG MPS-88 Mounting plate	800	222	197 007 01	TK MPS-1818 Mounting plate	600	198
187 004 01	TG MPS-1208 Mounting plate	800	222	197 008 01	TK MPS-2518 Mounting plate	600	198
187 005 01	TG MPS-1212 Mounting plate	800	222	197 009 01	TK MPS-1309 Mounting plate	600	198
187 006 01	TG MPS-1608 Mounting plate	800	222	197 010 01	TK MPS-1809 Mounting plate	600	198
187 007 01	TG MPS-1612 Mounting plate	800	222	197 011 01	TK MPS-1813 Mounting plate	600	198
187 008 01	TG MPS-2012 Mounting plate	800	222	197 012 01	TK MPS-3625 Mounting plate	600	198
187 009 01	TG MPS-2015 Mounting plate	800	222	197 049 01	TS 15-49,5 Standard rail	600	199
187 012 01	TG MPS-2516 Mounting plate	800	222	197 069 01	TS 15-66 Standard rail	600	222
187 013 01	TG MPS-3023 Mounting plate	800	222	197 080 01	TS 15-80 Standard rail	600	199
190 001 01	HBA Mounting material	600	200	197 092 01	TS 15-92 Standard rail	600	199
190 002 01	ASS-kl External hinge set	600	200	197 107 01	TS 15-104 Standard rail	600	222
190 005 01	ASS-gro External hinge set	600	200	197 110 01	TS 15-108 Standard rail	600	222
190 010 01	TK DS-ku/g Lid screw	600	202	197 111 01	TS 15-111 Standard rail	600	199
190 011 01	TK DS-lg/g Lid screw	600	202	197 146 01	TS 15-144 Standard rail	600	222
190 012 01	TK DS-ku/sw Lid screw	600	202	197 154 01	TS 15-154 Standard rail	600	199
190 013 01	TK DS-lg/sw Lid screw	600	202	197 170 01	TS 15-168 Standard rail	600	222
190 014 01	TK DS-ku/g/T40 Lid screw	600	202	197 186 01	TS 15-184 Standard rail	600	222
190 015 01	TK DS-ku/sw/T40 Lid screw	600	202	197 222 01	TS 15-220 Standard rail	600	222
190 016 01	TK DS-lg/g/T40 Lid screw	600	202	197 285 01	TS 15-283,5 Standard rail	600	222
190 017 01	TK DS-lg/sw/T40 Cover screw	600	202	198 068 01	NS 35-66 Standard rail	600	222
190 100 01	VSG Padlock kit	600	200	198 081 01	NS 35-81 Standard rail	600	46
190 200 01	TK ES-55/75/1005 Installation screw	600	202	198 106 01	NS 35-106 Standard rail	600	46
191 800 01	TG 1 Handle	600	171	198 107 01	NS 35-104 Standard rail	600	222
191 805 01	TG 2 Handle	600	171	198 110 01	NS 35-108 Standard rail	600	222
192 018 01	TK KS GRO Combi set	600	201	198 144 01	NS 35-144 Standard rail	600	199
192 020 01	KS M20 Combi set	600	162	198 146 01	NS 35-144/2 Standard rail	600	222
192 025 01	KS M25 Combi set	600	162	198 170 01	NS 35-168 Standard rail	600	222
192 026 01	KS M25-gro Combi set	600	162	198 186 01	NS 35-184 Standard rail	600	222
192 032 01	KS M32 Combi set	600	162	198 216 01	NS 35-216 Standard rail	600	199
193 025 01	KST M25-17 Combi connector	320	231	198 222 01	NS 35-220 Standard rail	600	222
193 026 01	KST M25-33 Combi connector	320	231	198 285 01	NS 35-283,5 Standard rail	600	222
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194 001 01	TK ABL External fixing lugs kit	600	200	200 403 01	TG PC 88-6-o Empty enclosure	800	206
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194 100 01	TK DST Spacing kit	600	199	200 405 01	TG PC 1212-6-o Empty enclosure	800	210
194 101 01	MPS-KRI Mounting plate	600	46	200 406 01	TG PC 1608-6-o Empty enclosure	800	212
194 110 01	TK MLH-55/75 Mounting / PCB holder	600	199	200 407 01	TG PC 1612-9-o Empty enclosure	800	214
195 001 01	TK MPI-77 Mounting plate	600	198	200 408 01	TG PC 2012-8-o Empty enclosure	800	214
195 002 01	TK MPI-97 Mounting plate	600	198	200 409 01	TG PC 2015-9-o Empty enclosure	800	216
195 003 01	TK MPI-99 Mounting plate	600	198	200 412 01	TG PC 2516-9-o Empty enclosure	800	218
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195 005 01	TK MPI-1313 Mounting plate	600	198	200 903 01	TG PC 88-9-o Empty enclosure	800	206
195 006 01	TK MPI-1811 Mounting plate	600	198	200 904 01	TG PC 1208-9-o Empty enclosure	800	208
195 007 01	TK MPI-1818 Mounting plate	600	198	200 905 01	TG PC 1212-9-o Empty enclosure	800	210
195 008 01	TK MPI-2518 Mounting plate	600	198	200 906 01	TG PC 1608-9-o Empty enclosure	800	212
195 009 01	TK MPI-1309 Mounting plate	600	198	200 908 01	TG PC 2012-9-o Empty enclosure	800	216
195 010 01	TK MPI-1809 Mounting plate	600	198	200 912 01	TG PC 2516-12-o Empty enclosure	800	218
195 011 01	TK MPI-1813 Mounting plate	600	198	200 913 01	TG PC 3023-11-o Empty enclosure	800	220
195 012 01	TK MPI-3625 Mounting plate	600	198	201 003 01	TG PC 88-6-to Empty enclosure	800	206
195 018 01	TK SDR T40 Screwdriver	600	202	201 004 01	TG PC 1208-6-to Empty enclosure	800	208
195 055 01	TK MPI-55 Mounting plate	600	198	201 005 01	TG PC 1212-6-to Empty enclosure	800	210
195 075 01	TK MPI-75 Mounting plate	600	198	201 006 01	TG PC 1608-6-to Empty enclosure	800	212
195 995 01	LFR Stepped drill	600	202	201 007 01	TG PC 1612-9-to Empty enclosure	800	214
196 009 01	TK TW-n Partition wall	600	200	201 008 01	TG PC 2012-8-to Empty enclosure	800	214
196 909 01	TK TW-h Partition wall	600	200	201 009 01	TG PC 2015-9-to Empty enclosure	800	216
197 001 01	TK MPS-77 Mounting plate	600	198	201 012 01	TG PC 2516-9-to Empty enclosure	800	218
197 002 01	TK MPS-97 Mounting plate	600	198	201 013 01	TG PC 3023-9-to Empty enclosure	800	220
197 003 01	TK MPS-99 Mounting plate	600	198	201 503 01	TG PC 88-9-to Empty enclosure	800	206
197 004 01	TK MPS-1111 Mounting plate	600	198	201 504 01	TG PC 1208-9-to Empty enclosure	800	208
197 005 01	TK MPS-1313 Mounting plate	600	198	201 505 01	TG PC 1212-9-to Empty enclosure	800	210

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201 508 01	TG PC 2012-9-to Empty enclosure	800	216	230 625 01	AST M25-or Attachment bushes	400	83
201 512 01	TG PC 2516-12-to Empty enclosure	800	218	230 632 01	AST M32-or Attachment bushes	400	83
201 513 01	TG PC 3023-11-to Empty enclosure	800	220	230 640 01	AST M40-or Attachment bushes	400	83
203 016 01	WST M16/sw Twist plug	400	292	231 416 01	VST M16 Sealing plugs	400	292
203 020 01	WST M20/sw Twist plug	400	292	231 420 01	VST M20 Sealing plugs	400	292
203 025 01	WST M25/sw Twist plug	400	292	231 425 01	VST M25 Sealing plugs	400	292
203 416 01	WST M16 Twist plug	400	292	231 432 01	VST M32 Sealing plugs	400	292
203 420 01	WST M20 Twist plug	400	292	231 440 01	VST M40 Sealing plugs	400	292
203 425 01	WST M25 Twist plug	400	292	231 620 01	VST M20-or Sealing plugs	400	83
203 432 01	WST M32 Twist plug	400	292	231 625 01	VST M25-or Sealing plugs	400	83
203 440 01	WST M40 Twist plug	400	292	231 632 01	VST M32-or Sealing plugs	400	83
203 450 01	WST M50 Twist plug	400	292	231 640 01	VST M40-or Sealing plugs	400	83
203 463 01	WST M63 Twist plug	400	292	247 412 01	KVR M12 Cable gland	400	295
208 412 01	GMU PA M12 Lock nut	400	296	247 416 01	KVR M16 Cable gland	400	295
208 416 01	GMU PA M16 Lock nut	400	296	247 420 01	KVR M20 Cable gland	400	295
208 420 01	GMU PA M20 Lock nut	400	296	247 421 01	KVR M20-GDB Cable gland	400	295
208 425 01	GMU PA M25 Lock nut	400	296	247 425 01	KVR M25 Cable gland	400	295
208 432 01	GMU PA M32 Lock nut	400	296	247 432 01	KVR M32 Cable gland	400	295
208 440 01	GMU PA M40 Lock nut	400	296	247 440 01	KVR M40 Cable gland	400	295
208 450 01	GMU PA M50 Lock nut	400	296	247 450 01	KVR M50 Cable gland	400	295
208 463 01	GMU PA M63 Lock nut	400	296	247 463 01	KVR M63 Cable gland	400	295
211 116 01	VSS PA M16 Blanking plug	400	293	249 012 01	ADR M12 Sealing ring	400	296
211 120 01	VSS PA M20 Blanking plug	400	293	249 016 01	ADR M16 Sealing ring	400	296
211 125 01	VSS PA M25 Blanking plug	400	293	249 020 01	ADR M20 Sealing ring	400	296
211 132 01	VSS PA M32 Blanking plug	400	293	249 025 01	ADR M25 Sealing ring	400	296
213 016 01	WNI M16/sw Twist nipple	400	292	249 032 01	ADR M32 Sealing ring	400	296
213 020 01	WNI M20/sw Twist nipple	400	292	249 040 01	ADR M40 Sealing ring	400	296
213 025 01	WNI M25/sw Twist nipple	400	292	249 050 01	ADR M50 Sealing ring	400	296
213 416 01	WNI M16 Twist nipple	400	292	249 063 01	ADR M63 Sealing ring	400	296
213 420 01	WNI M20 Twist nipple	400	292	251 112 01	ARI Pg 9 Adapter ring	400	296
213 425 01	WNI M25 Twist nipple	400	292	251 216 01	ARI Pg 11 Adapter ring	400	296
213 432 01	WNI M32 Twist nipple	400	292	251 420 01	ARI Pg 16 Adapter ring	400	296
216 420 01	SNI M20 Stepped nipple	400	294	251 525 01	ARI Pg 21 Adapter ring	400	296
216 425 01	SNI M25 Stepped nipple	400	294	251 632 01	ARI Pg 29 Adapter ring	400	296
216 432 01	SNI M32 Stepped nipple	400	294	260 020 01	DMS M20/sw Double-membrane seals	400	293
216 440 01	SNI M40 Stepped nipple	400	294	260 025 01	DMS M25/sw Double-membrane seals	400	293
227 020 01	KVR M20-MGM/sw Cable gland	400	295	260 032 01	DMS M32/sw Double-membrane seals	400	293
227 021 01	KVR M20-GDB/MGM/sw Cable gland	400	295	260 416 01	DMS M16 Double-membrane seals	400	71
227 025 01	KVR M25-MGM/sw Cable gland	400	295	260 420 01	DMS M20 Double-membrane seals	400	71
227 032 01	KVR M32-MGM/sw Cable gland	400	295	260 425 01	DMS M25 Double-membrane seals	400	71
227 040 01	KVR M40-MGM/sw Cable gland	400	295	260 432 01	DMS M32 Double-membrane seals	400	71
227 050 01	KVR M50-MGM/sw Cable gland	400	295	260 433 01	DMS M32/4 Double-membrane seals	400	293
227 412 01	KVR M12-MGM Cable gland	400	71	260 440 01	DMS M40 Double-membrane seals	400	71
227 416 01	KVR M16-MGM Cable gland	400	71	262 020 01	BST M20/sw Ventilation seal	400	172
227 420 01	KVR M20-MGM Cable gland	400	71	262 412 01	DAE M12 Pressure balance element	400	237
227 421 01	KVR M20-GDB/MGM Cable gland	400	71	262 420 01	BST M20 Ventilation seal	400	163
227 425 01	KVR M25-MGM Cable gland	400	71	263 440 01	BEL Air M40 Ventilation element	400	294
227 432 01	KVR M32-MGM Cable gland	400	71	288 416 01	RST M16 Conduit connector	400	296
227 440 01	KVR M40-MGM Cable gland	400	71	288 420 01	RST M20 Conduit connector	400	296
227 450 01	KVR M50-MGM Cable gland	400	71	288 421 01	RST M20-16 Conduit connector	400	296
227 463 01	KVR M63-MGM Cable gland	400	71	288 422 01	RST M20-19 Conduit connector	400	296
227 620 01	KVR M20-MGM/or Cable gland	400	83	288 425 01	RST M25 Conduit connector	400	296
227 625 01	KVR M25-MGM/or Cable gland	400	83	288 432 01	RST M32 Conduit connector	400	296
227 632 01	KVR M32-MGM/or Cable gland	400	83	300 407 01	VST RR Sealing plugs	400	60
227 640 01	KVR M40-MGM/or Cable gland	400	83	301 011 01	Rapid-Box 2,5-16² KV 1 x S Junction box	220	110
230 416 01	AST M16 Attachment bushes	400	139	301 021 01	Rapid-Box 2,5-16² KV 2 x S Junction box	220	110
230 420 01	AST M20 Attachment bushes	400	139	301 031 01	Rapid-Box 2.5-16² STV 1 x 3-pole Junction box	220	110
230 425 01	AST M25 Attachment bushes	400	139	301 041 01	Rapid-Box 2.5-16² STV 2 x 3-pole Junction box	220	110
230 432 01	AST M32 Attachment bushes	400	139	301 051 01	Rapid-Box 2.5-16² STV 1 x 5-pole Junction box	220	110
230 440 01	AST M40 Attachment bushes	400	139	301 061 01	Rapid box 2,5-16² STV 2 x 5-pole Junction box	220	110

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861 610 01	WKE 5 - Duo 5 x 16² Cable junction box	200	78	924 040 01	HW 040 Outlet socket	100	282
861 710 01	WKE 3 - Duo 3 x 6² / 2 x 6² Cable junction box	200	75	925 070 01	HW 070 Junction box	100	284
862 202 01	WKE 202 RK Cable junction box	200	87	925 100 01	HW VD-67 Sealing cap	100	250
862 203 01	WKE 203 RK Cable junction box	200	87	925 101 01	HW VD-60 Sealing cap	100	262
862 204 01	WKE 204 RK Cable junction box	200	88	925 120 01	HW 120 Junction box	100	284
862 262 01	WKE 304 SB Cable junction box	200	98	925 121 01	HW LFR-120 HW hole cutter	100	267
862 302 01	WKE 302 RK Cable junction box	200	88	925 135 01	HW LFR-35 HW hole cutter	100	279
862 303 01	WKE 303 RK Cable junction box	200	89	925 168 01	HW LFR-68 HW hole cutter	100	279
862 304 01	WKE 304 RK Cable junction box	200	89	925 174 01	HW LFR-74 HW hole cutter	100	279
862 355 01	WKE 407 SB Cable junction box	200	98	925 199 01	HW LFRP-Sort Profi suitcase hole cutter	100	286
862 356 01	WKE 408 SB Cable junction box	200	99	926 935 01	HW LFRP-35 Profi hole cutter	100	286
862 402 01	WKE 402 RK Cable junction box	200	90	926 968 01	HW LFRP-68 Profi hole cutter	100	286
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862 405 01	WKE 405 LSA Cable junction box	200	91	927 100 01	HW 050 DD-VD Sealing cap with ceiling hook	100	285
863 001 01	WKE BS F2A Spare fuses	200	97	928 001 01	HWK 1 Junction box	100	284
863 721 01	WKE 2 - 3/1 x 6² SB Cable junction box	200	95	928 002 01	HWK 2 Junction box	100	284
863 747 01	WKE 4 - 4/3 x 6² 2SB Cable junction box	200	95	928 003 01	HWK 3 Junction box	100	284
863 748 01	WKE 5 - 4/3 x 16² 2SB Cable junction box	200	96	929 935 01	HW LFR-35/SBL Saw blade	100	286
863 921 01	WKE 4 - 3/1 x 16² SB Cable junction box	200	96	929 968 01	HW LFR-68/SBL Saw blade	100	286
865 414 01	WKE AK 14 Small scale distributor	220	103	929 969 01	HW LFR-74/SBL Saw blade	100	286
865 428 01	WKE AK 28 Small scale distributor	220	103	970 160 01	U 71 BWD WAD-35 Reinforcement box	520	249
865 442 01	WKE AK 42 Small scale distributor	220	104	970 220 01	RVB 20 Conduit coupling	520	253
865 456 01	WKE AK 56 Small scale distributor	220	104	970 225 01	RVB 25 Conduit coupling	520	253
865 470 01	WKE AK 70 Small scale distributor	220	105	970 232 01	RVB 32 Conduit coupling	520	265
865 514 01	WKE AK 14 R Small scale distributor	220	103	970 240 01	RVB 40 Conduit coupling	520	265
865 528 01	WKE AK 28 R Small scale distributor	220	103	970 425 01	ROK 1 Conduit elbow	520	251
865 542 01	WKE AK 42 R Small scale distributor	220	104	970 430 01	ROK 2 Conduit elbow	520	251
865 556 01	WKE AK 56 R Small scale distributor	220	104	970 435 01	ROK 3 Conduit elbow	520	251
865 570 01	WKE AK 70 R Small scale distributor	220	105	970 500 01	BSK 1 Blank base	520	264
865 614 01	WKE AK 14/2 Small scale distributor	220	105	970 505 01	BSK 2 Blank base	520	264
865 628 01	WKE AK 28/2 Small scale distributor	220	106	970 518 01	ROP 18 Conduit ferrule	520	250
865 642 01	WKE AK 42/2 Small scale distributor	220	106	970 523 01	ROP 23 Conduit ferrule	520	250
865 656 01	WKE AK 56/2 Small scale distributor	220	107	970 530 01	ROP 30 Conduit ferrule	520	250
865 670 01	WKE AK 70/2 Small scale distributor	220	107	970 537 01	ROP 37 Conduit ferrule	520	250
865 714 01	WKE AK 14/2 R Small scale distributor	220	105	970 540 01	U 71 KUT Dome funnel	520	252
865 728 01	WKE AK 28/2 R Small scale distributor	220	106	970 550 01	KUK Dome box	520	252
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920 265 01	HW 065 H Receptacle	100	283	971 065 01	U 71 GVD-2 Branch socket	520	245
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General Terms and Conditions

1. **For all deliveries**
   – including deliveries from our agents' stocks – the following terms shall be applied:

   1.1 the "Warranty regulations of manufacturers of installation devices and installation systems"

   1.2 "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry for Commercial Transactions between Businesses" in the version as amended by Zentralverband der Elektrotechnik und Elektronikindustrie (ZVEI) e.V.", the German Electrical and Electronic Manufacturers' Association

   1.3 in addition, the following paragraphs 2 to 12. We will happily send you the above mentioned norms, delivery terms and clauses, if required. The documents can also be downloaded from our web site (www.spelsberg.de). We here-with reject the conditions of purchase of our customer unless they are explicitly acknowledged by us. Our terms will be acknowledged will be considered the sole binding legal foundation when delivery is taken of objects supplied by. Order confirmations will only be sent if requested expressly.

2. **Small orders**
   for less than 100 euro will not be granted any discount but invoiced gross for net.

3. **Sea- proof packing**
   Will be supplementary invoiced only in case of packing in containers.

4. **Delivery freight prepaid**
   (freight paid, packing included) will be carried out within the territory of Germany for a net order value of more than 1,000 euro. Haulage payable at destination shall be borne by the receiver of the goods.

5. **Dispatch**
   will always be carried out at receiver's risk, even in case of agreed delivery freight prepaid.

6. **Suitability and nature of goods**
   Any indication and information concerning suitability, nature and application our of goods shall not discharge our customer from their own controls and tests. The customer processing our goods shall be assume liability for dispositions prescribed by law, public agencies and electric supply companies.

7. **Claims**
   shall only be acknowledged within 8 days of the receipt of the consignment. On receipt of the goods, the person delivering the goods must confirm any visible damage to goods in transit on the relevant delivery notes.

8. **Return of goods**
   shall be rejected unless we have given our prior acceptance. In case of non-compliance the company /person returning the goods shall assume liability for any costs and disadvantages.

9. **Our payment terms**
   are within 10 days less 3 % cash discount or net within 30 days. If the customer is in arrears of payment, we are entitled to claim interest in the amount of the current base interest. Should the customer's solvency be doubted, in particular in case of payment in arrears, we are entitled, subject to all other claims, to demand payment in advance or guarantees or revoke already granted credit terms.

10. **Place of performance**
    for delivery, payment and other contractual performances of both parties is Schalksmühle. Place of jurisdiction is Lüdenscheid. German law governs the relationship between the contracting parties.

11. **Data protection**
    We are entitled to use data arising from the business relationship with our customers, regardless their origin, within the meaning of the BDSG (the German Federal Data rotection Act).

General Terms and Conditions

More information such as data sheets, the AK trailer, and the AK product manual, are available at:

www.spelsberg.com/ak

Your notice

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