



# Connection and routing systems



# Building Connections

Digitalisation, the Energiewende (energy transition), mobility – the future is gathering speed. At OBO Bettermann, we're proud to be a driving force. And as a facilitator, we make connections. Today, we are already developing the innovative electrical infrastructure systems and solutions of tomorrow. Reliably, flexibly, sustainably.

Already today, OBO is one of the leading manufacturers of installation systems for the electrical infrastructure in buildings and plants. When it comes to the friction-free flow of power, energy and data, engineers and tradespeople worldwide rely on the comprehensive range from OBO.

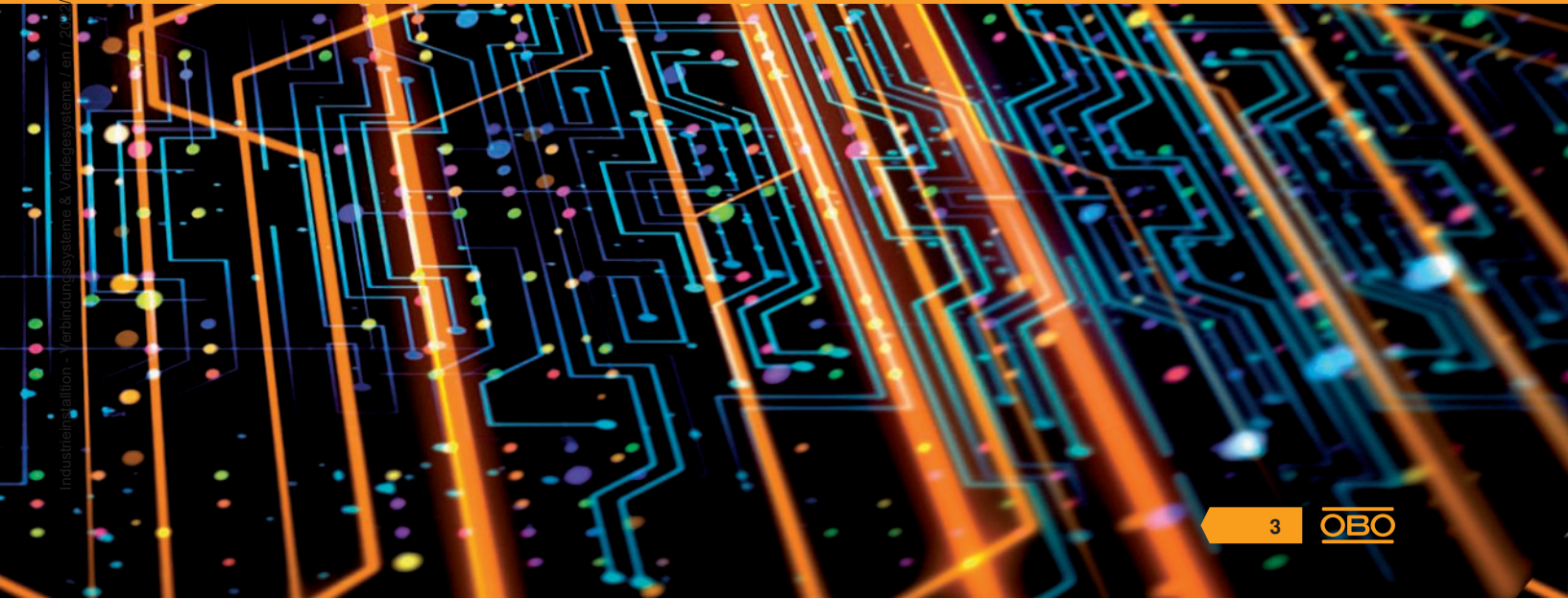




OBO applies its slogan "Building Connections" to around 30,000 high-quality branded electrical products and services, which are used in application solutions for projects in industry, business and infrastructure.

OBO operates a global network and employs more than 4,200 people in more than 60 countries. The headquarters of the family company, which was founded in 1911, is located in Menden, Germany. In addition, more than 40 subsidiaries are present in markets on all continents.

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Industriemaschinen - Verbindungssysteme & Verteilungssysteme / An 21



# Improved structure, sharpened profile



Each of our products carries a benefit which only the OBO brand can offer. Products are developed, manufactured and tested with a high level of competence – from the idea through to the final check. From flawless logistics through to practical information – we can provide support at every level. We can offer additional security through certificates on the conformity of our products with the most important standards and directives. In a nutshell – OBO helps you more. In every location and in every phase of a project.

To maintain this, we continually challenge ourselves. Not as an end in itself but for the better processing of each customer's requests – fast, reliably and future-oriented. That is the reason we have not only established our three central application areas, but also reworked our catalogue structure. In this way, we can display our service offers more clearly, highlight the product benefits more effectively and illustrate the respective application areas more tangibly.



# OBO Product Worlds



## Industrial installations

- Cable support systems
- Connection and routing systems
- Fastening material



## Building installations

- Cable routing systems
- Device installation ducts, trunking and poles
- Floor installation systems and underfloor applications
- Installation systems



## Safety and protection installations

- Surge protection
- External lightning protection
- Equipotential bonding and earthing
- Insulation and cable bandages
- Fire-tested support and routing systems
- Fire protection ducts



It's your choice – from now on there's a catalogue for each OBO product category. Simply select the catalogues and order together with a collection case.



# Always at your service

If you have questions about products, installation or planning – OBO staff offer exceptionally competent support at each and every phase of your project. So that you are always on the safe side.

- Product and system information, digitally or printed
- Selection and planning aids on the web, as a CAD application or in printed form, as well as in the myOBO app
- 2D and 3D product data for planning
- Field service and branch offices in 60 countries
- Engineering services for major projects

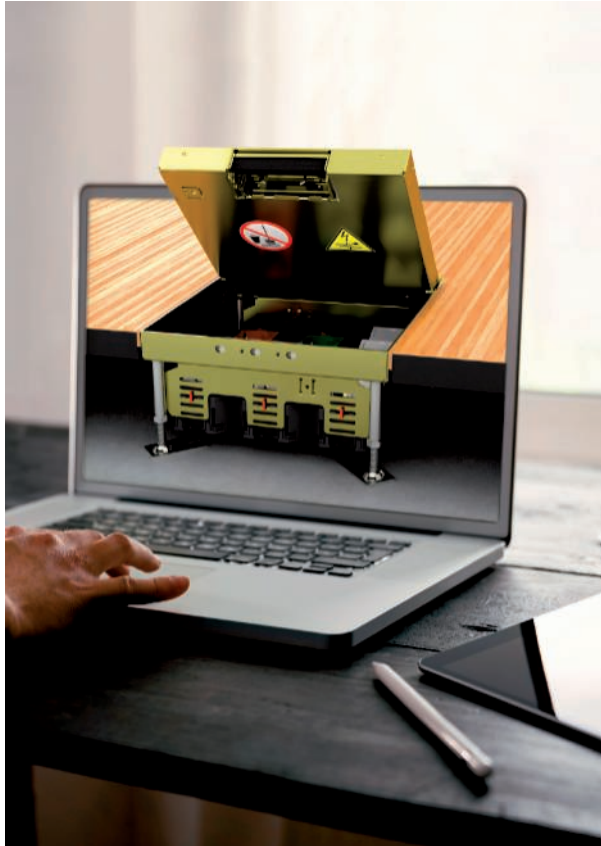
**Our Customer Service  
can be contacted on  
+49 23 73 89 - 17 00**

Monday–Thursday 07.30 - 17.00  
Friday 07.30 - 15.00

or via e-mail at [export@obo.de](mailto:export@obo.de)

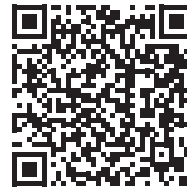






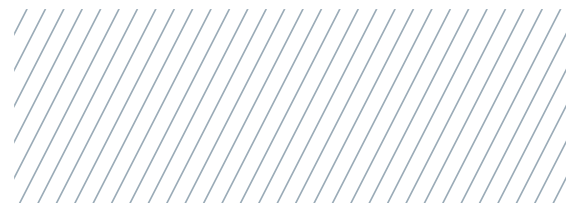
## OBO Construct: Planning has never been so easy!

OBO Construct is a collection of planning tools that were developed especially for electrical installation engineers and planners. This platform offers support in product configuration and a selection aid for the matching systems, and automatically generates a corresponding parts list. With OBO Construct, you can therefore access and edit projects at any time and at any location – via your smartphone, tablet or desktop PC. Versions of the app are available for iOS and Android.



## OBO Academy: From the basics to the concrete application

The OBO Academy has been offering an extensive further education programme for many years. This programme helps with first-hand information and expertise, giving you that essential head start in terms of in-depth knowledge. In our seminars, planner days or online seminars, we provide you with current developments, trends, norms and regulations – systematically, comprehensively and practically oriented.





## Planning virtually, implementing efficiently

When planning and implementing electrical technology, BIM (building information modelling) is becoming increasingly more important. We can now offer our partners the first solution to unlock the full potential of the BIM method for practical applications - giving you more planning efficiency, transparency and cost security with complex projects. Find out about the advantages of BIM@OBO now:

- Intelligent libraries structured according to individual systems
- Available for Revit, as a plug-in and directly via the OBO website
- Simple integration via drag & drop
- Practical display of material lists for ordering directly
- Intuitive user interface

You can find further information at [obo.de/BIM](http://obo.de/BIM).  
Welcome to the future!







## Clear delivery capability

With an approximate storage area of 38,000 m<sup>2</sup> and five strategically well-located sales warehouses, we ensure that our products arrive at the right place at the right time. Our logistics specialists work hard to ensure all our partners are supplied flexibly and as quickly as possible. This you can rely on!

- 1** Sales Warehouse North  
Bad Fallingbostal
- 2** Sales Warehouse West  
Iserlohn
- 3** Sales Warehouse East  
Delitzsch
- 4** Sales Warehouse South-West  
Groß-Rohrheim
- 5** Sales Warehouse South  
Dasing







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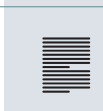
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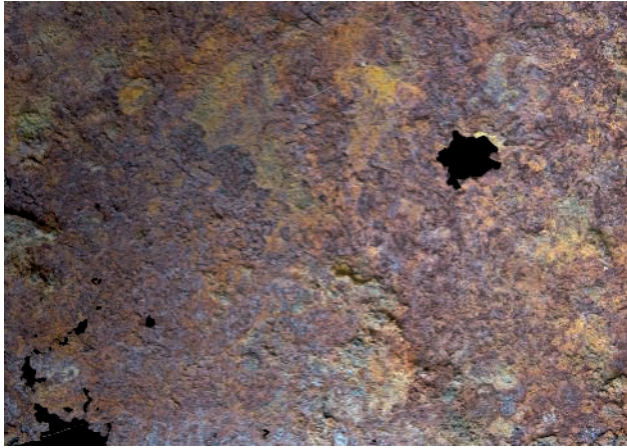


# Planning aids



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# Metal: corrosion and corrosion protection



## Corrosion

(from the Latin *corrodere*, “to eat or gnaw to pieces”) in a technical context is a reaction between a material (generally a metal) and its surroundings, leading to a measurable change in the material and potentially impairing the functionality of a component or system.

A large number of products used in industrial installations are made of metal. Metals are much tougher than many other materials and are less sensitive to mechanical loading. The OBO metal products are made of aluminium, die-cast zinc, stainless steel or steel.

Steel (St), the most commonly used material, is very strong and has good elasticity and chemical resistance. However, steel is susceptible to corrosion and must therefore be protected accordingly.

Stainless steels consist mainly of alloyed, very hard and rustproof steels. The stainless steels are divided into quality classes according to the percentage of alloys. These are indicated by the material number according to DIN EN 10027.

Aluminium (Al), as a light metal, has comparatively low strength but good electrical conductivity and high corrosion resistance.

Die-cast zinc components (Zn) are very strong and hard. The manufacturing process enables the production of very precise components with good corrosion resistance.

## Corrosion protection

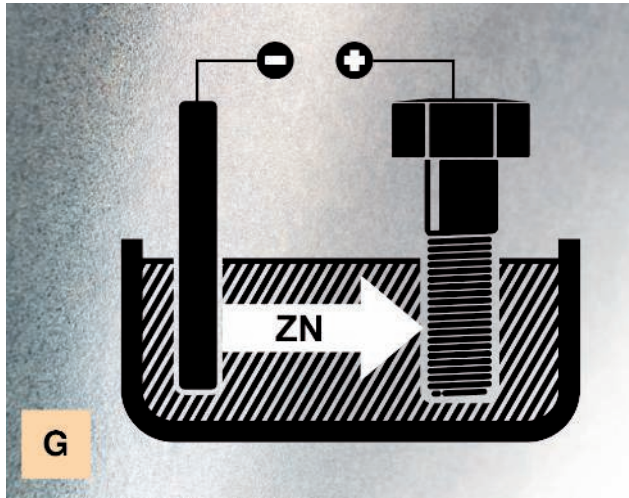
Corrosion protection means all steps taken to prevent corrosion damage to metallic components. It is impossible to prevent corrosion permanently, so corrosion protection measures generally aim to reduce the speed of corrosion so that the component is not damaged by corrosion for the duration of its service life. The term “passive corrosion protection” refers to all measures designed to shield products from corrosive media. Coatings are one way of achieving passive corrosion protection. At OBO, most steel products are protected from corrosion by a layer of zinc. Zinc coatings can be applied to components using a variety of methods.

## Zinc slat covering

Zinc slat coverings are coatings applied in a non-electrolytic manner. They offer cathodic protection and thus have excellent corrosion protection, while at the same time, there is no risk of hydrogen-induced breakage. Due to these properties, this coating type is used for connection components with a high strength classification or structural parts with high tensile strength. The low layer thickness of the zinc slat covering allows a thin, homogeneous coating, which is particularly important for maintaining the accuracy of screw threads. This coating achieves a resistance of 480 hours in the salt spray test for the connection elements.

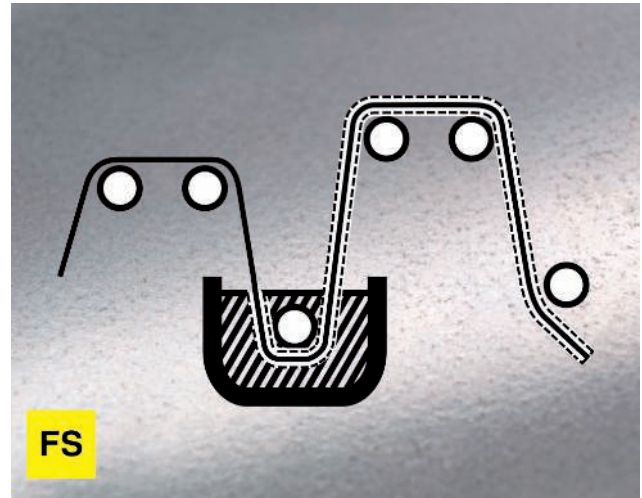


# Galvanisation types



## Electroplating – electrolytic galvanisation in accordance with DIN EN ISO 2081

In electroplating or electrolytic galvanisation, the component is coated by dipping it not in molten zinc, but in a zinc electrolyte, through which a direct electric current is passed.



## Strip galvanising – hot galvanised according to the strip-galvanising method in accordance with DIN EN 10346 (formerly DIN EN 10147 and DIN EN 10142)

Strip galvanisation or Sendzimir galvanisation is where a continuous ribbon of steel is galvanised in a continuous line.



## Hot-dip galvanisation – hot galvanisation using the dipping method according to DIN EN ISO 1461

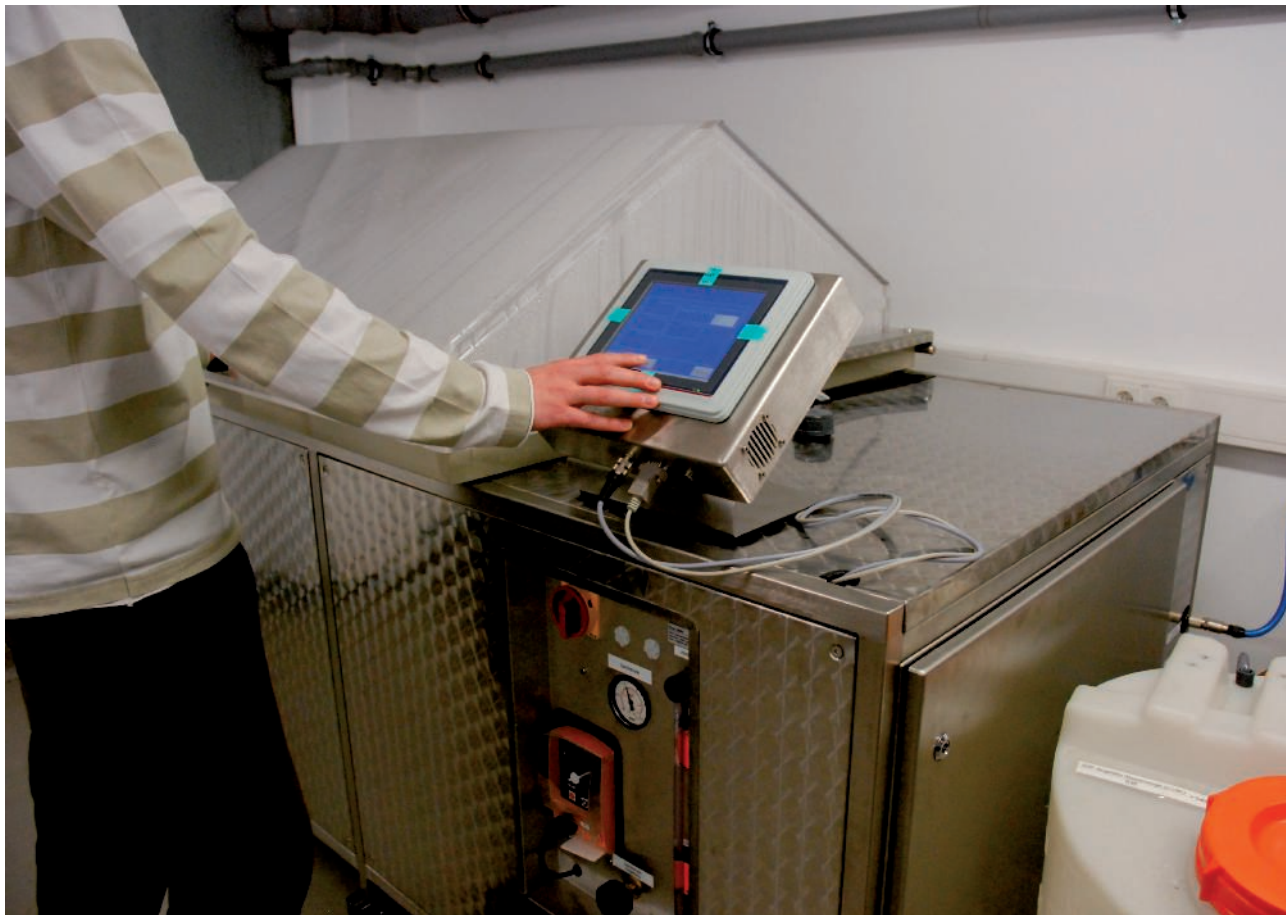
Batch galvanisation is mainly used for galvanising prefabricated steel parts, by dipping them in molten zinc at a temperature of around 450 °C.



## Hot-dip coating – zinc-aluminum coating in accordance with DIN EN 10346

In contrast to conventional coating systems, the material being galvanised in the double-dip process passes through two baths in succession: the first contains pure zinc, the second a zinc-aluminum alloy.

# Surface testing and corrosion categories



## Classification of corrosion resistance

All the system components must show sufficient resistance against corrosion in agreement with the standard DIN EN 61537. The minimum zinc layer thicknesses are determined through a measurement. The grouping into the appropriate class is detailed in the table "Classification of corrosion resistance". The table "Corrosion categories according to DIN EN ISO 12944" shows the area of application and the zinc loss to be expected.

## Classification of corrosion resistance

All components, depending on the environment, must show sufficient resistance against corrosion in agreement with the standard DIN EN 61537. This is how corrosion categories are determined, e.g. with a salt spray test. In this procedure, components are sprayed with salt for a certain time period. The resulting level of red rust is the basis for allocation to a corrosion category, i.e. in which environment the component is resistant to corrosion.





## Classification of corrosion resistance according to EN 61537

Class	Reference material and surface treatment
0*	None
1	Electroplated to a minimum thickness of 5 µm
2	Electroplated to a minimum thickness of 12 µm
3	Pre-galvanised to grade 275 to EN 10327 and EN 10326
4	Pre-galvanised to grade 350 to EN 10327 and EN 10326
5	Post-galvanised to a zinc mean coating thickness (minimum) of 45 µm according to ISO 1461
6	Post-galvanised to a zinc mean coating thickness (minimum) of 55 µm according to ISO 1461
7	Post-galvanised to a zinc mean coating thickness (minimum) of 70 µm according to ISO 1461
8	Post-galvanised to a zinc mean coating thickness (minimum) of 85 µm according to ISO 1461 (usually high-silicon steel)
9A	Stainless steel manufactured to ASTM: A 240/A 240M – 95a designation S30400 or EN 10088 grade 1-4301 without a post-treatment *
9B	Stainless steel manufactured to ASTM: A 240/A 240M – 95a designation S31603 or EN 10088 grade 1-4404 without a post-treatment *
9C	Stainless steel manufactured to ASTM: A 240/A 240M – 95a designation S30400 or EN 10088 grade 1-4301 with a post-treatment **
9D	Stainless steel manufactured to ASTM: A 240/A 240M – 95a designation S31603 or EN 10088 grade 1-4404 with a post-treatment **

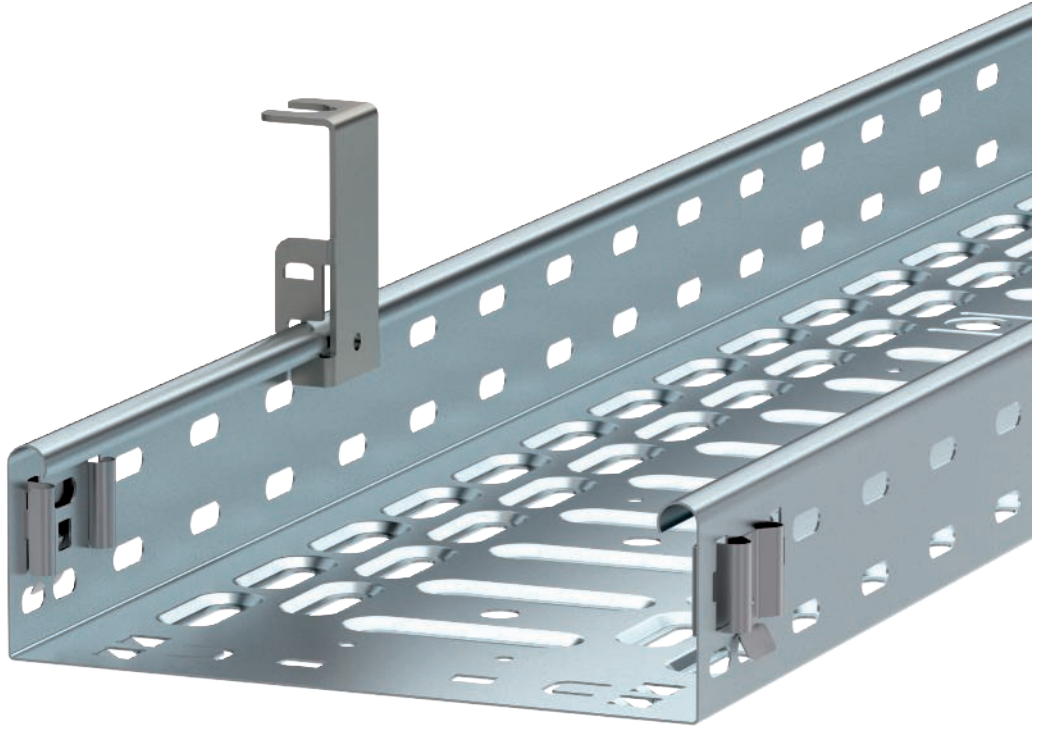
\* For materials which do not have a declared corrosion resistance classification

\*\* The end treatment process is used to improve the protection against crack corrosion and the contamination of other steels

## Corrosion categories to DIN EN ISO 12944

Corrosion category	Typical environment, inside	Typical environment, outside	Corrosion load	Average zinc removal
C 1	Heated buildings with neutral atmospheres, e.g. offices, shops, schools, hotels	-	Insignificant	<0.1 µm/a
C 2	Unheated buildings in which condensation can occur, e.g. warehouse, sports halls	Atmosphere with low level of impurities, often rural areas	Low	0.1 to 0.7 µm/a
C 3	Production facilities with a high level of humidity and some air impurities, e.g. plants for food production, laundries, breweries, dairies	City and industrial atmosphere, considerable impurities through sulphur dioxide, coastal areas with low salt load	Medium	0.7 to 2.1 µm/a
C 4	Chemical plants, swimming pools, boat sheds over seawater	Industrial areas and coastal areas with low salt load	Strong	2.1 to 4.2 µm/a
C 5-I	Buildings or areas with almost constant condensation and with high levels of impurities	Industrial areas with high levels of humidity and aggressive atmosphere	Very strong (industry)	4.2 to 8.4 µm/a
C 5-M	Buildings or areas with almost continuous condensation and with high levels of impurities	Coastal or offshore areas with salt load	Very strong (sea)	>4.2 to 8.4 µm/a

# Contact corrosion



If two different metals are conductively connected with each other, contact corrosion can occur. This poses a considerable risk to the load capacity and lifespan of the components used.

The level of contact corrosion is determined primarily by the level of the potential difference between the contact partners. Contact corrosion occurs at potential differences of 100 mV or greater and the anodic (electrically negative) partner is at risk of corrosion. Therefore, strongly non-precious metals should never be brought into contact with precious metals.

#### Additional contact corrosion criteria:

- Level of electrical resistance between the contact partners. The higher the resistance, the lower the contact corrosion. Positive on Al and Ti.
- Occurrence of an electrolyte. An electrolyte, such as perspiration or condensation, attacks the protective layers, increasing conductivity. Dirt increases this effect through released ions.
- Length of the impact of the electrolyte. The longer the electrolyte is active, the greater the corrosion will be.
- The surface ratios of the contact partners influence the current density. The best thing to have is a small surface ratio of the "precious" to the "less precious" contact partner.
- Different environments or atmospheres can increase or influence the risk of contact corrosion to varying degrees.






# Installation locations



Whether indoors or outdoors, in aggressive atmospheres or under special hygienic conditions, OBO can offer the perfect surface and materials for your installation, no matter what the requirements may be. OBO metal products are machined from high-quality sheet steel or

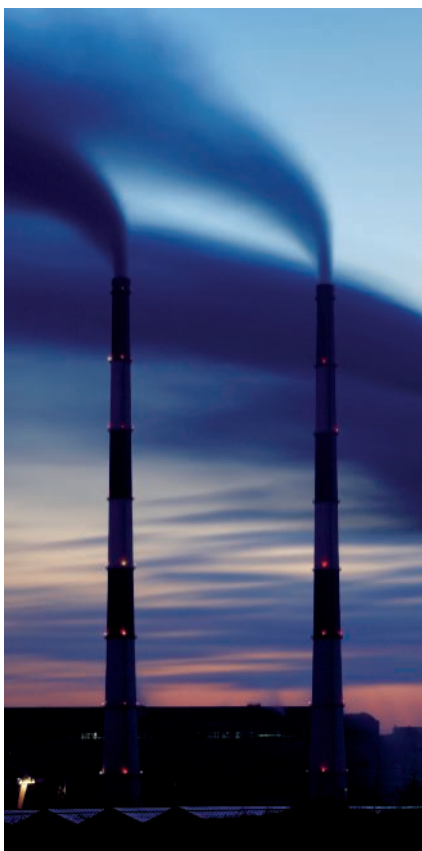
steel wire and are available with various surfaces. Different hardening and coating methods ensure tailor-made corrosion protection, specially tailored to the appropriate application:

Application	Material	Surface protection
<b>Indoors</b> 	<b>St</b> Steel	<b>L</b> Painted/powder-coated
	<b>St</b> Steel	<b>FS</b> Strip galvanised DIN EN 10346
	<b>St</b> Steel	<b>G</b> Electrogalvanised DIN EN ISO 2081
<b>Outdoors</b> 	<b>St</b> Steel	<b>FT</b> Hot galvanised DIN EN ISO 1461
	<b>St</b> Steel	<b>DD</b> Hot galvanised DIN EN ISO 1461
	<b>VA</b> Stainless steel A2	
	<b>VA</b> Stainless steel A4	
<b>Especially corrosive areas</b> 	<b>VA</b> Stainless steel A2	
	<b>VA</b> Stainless steel A4	

# Contact corrosion in different environments



Land climate



Industrial atmosphere



Sea climate

Small/large	Zn	FT	Al	Cu	VA	CuZn
Zn		✓	○	✗	✗	○
FT	✓		○	✗	✗	○
Al	✓	✓		✗	✗	○
Cu	✓	✓	✓		✓	✓
VA	✓	✓	✓	✓		✓
CuZn	✓	✓	✓	✓	✓	

✓ Little to no corrosion

○ Moderate corrosion

✗ Heavy corrosion

The precondition for corrosion is a conductive medium that connects the metal combination. The more damp and contaminated the atmosphere is, the more pronounced the contact corrosion.



# Surfaces for special visual requirements or special environmental loads



## Applications with specific optical requirements or special environmental conditions

Colour-coated products are becoming ever more popular. The coating may be required for optical reasons or for reasons of corrosion protection.

## Colour coatings for reasons of corrosion protection

- Products in FT (hot-dip galvanised version)
- All RAL colours available
- Coating of the visible surfaces or the complete system
- Suitable for the colour of the structure when routed openly
- Separation of different voltages/functions (e.g. blue 230/400 V power supply; red weak current such as telephone cables and IT)

Colour-coated systems are not specifically indicated in this Industrial installation product catalogue. You can obtain details of these systems by contacting our telephone hotline on +49 23 73 89 - 17 00.

# Plastic: materials and properties

Essentially plastics can be of one of three types: thermoplastics, elastomers and Duroplast.

## Thermoplastics

are plastics that can be shaped within a specific temperature range. This process is reversible, in other words, thermoplastics can theoretically be cooled and then melted down again any number of times. Another unique advantage of thermoplastics is that they can be welded.

## Elastomers

have a fixed shape, but can be elastically deformed. They can elastically deform under tensile and compressive stresses, but afterwards will return to their original shape. Elastomers are used for producing seals and membrane entries.

## Duroplast

or thermosetting polymers/plastics, are plastics that can no longer be deformed following curing. Duroplasts produce hard, glass-like (brittle) polymeric materials with a high thermo-mechanical strength.

## Properties

The area of application for which plastic OBO products are suitable depends mainly on the properties of the material being used. The most important material properties are:

- Temperature resistance
- Risk of stress cracks
- Chemical resistance
- Halogen freedom
- UV resistance
- Flame resistance

		Material	Max. temperature resistance Permanent	Max. temperature resistance Short-time	Min. temperature resistance Static
Thermoplast	ABS/ASA	Acrylonitrile butadiene styrene	70 °C	85 °C	-25 °C
	EVA	Ethylene vinyl acetate	55 °C	70 °C	-15 °C
	PA	Polyamide	120 °C	150 °C	-25 °C
	PA/GF	Polyamide, fibreglass reinforced	120 °C	160 °C	-25 °C
	PBPT	Polybutylene terephthalate	120 °C	140 °C	-25 °C
	PC	Polycarbonate	110 °C	125 °C	-25 °C
	PE	Polyethylene	70 °C	90 °C	-25 °C
	PP	Polypropylene	90 °C	110 °C	-25 °C
	PS	Polystyrene	70 °C	80 °C	-15 °C
	PVC	Polyvinyl chloride	65 °C	80 °C	-25 °C
Elastomers	NBR/SBR	Rubber mixture	100 °C	110 °C	-25 °C
	NBR	Nitrile rubber	100 °C	110 °C	-25 °C
Duroplast	UF	Duroplast, aminoplast, type 131.5	65 °C	90 °C	-25 °C
	MF	Duroplast, melamine resin, type 150	80 °C	110 °C	-25 °C



# Plastic: stress crack risk and chemical resistance

## Risk of stress cracks

Medium	ABS/ASA	UF	MF	EVA	NBR/SBR	NBR	PA	PA/GF	PBPT	PC	PE	PP	PS	PVC
Risk of stress cracks	✗	✓	✓	✓	✓	✓	✓	○	○	✓	!	✓	✗	○

Danger of tension cracks:      ✓ Virtually negligible      ○ Low      ! High      ✗ Very high

## Chemical resistance

Medium	ABS/ASA	UF	MF	EVA	NBR/SBR	NBR	PA	PA/GF	PBPT	PC	PE	PP	PS	PVC
Petroleum	✓	✓	✓	○	✓	○	✓	✓	✓		○	○	○	✓
Fat	✓	✓	✓	✓	✓	○	✓	✓	✓				○	✓
Benzole	!	✓	✓	○	✓	!	✓	✓	○	!	!	○	!	!
Solvents	!						✓	✓	○				!	!
Formic acid	✓	!									!	○		
Citric acid	✓	!		○							!			
Lactic acid	✓	!		○							!	○	!	!
Hydrochloric acid	○	!									✓			!
Sulphuric acid	○	!									✓			!
Acetone	!	✓					✓	✓	○	!	!	○	!	!
Petrol	!	✓	✓	○	○	!	✓	✓	✓	✓	!	○	!	✓
Butyric acid	!	!		○							!	○		!
Chlorine	!						!	!	!	!	!	!	!	
Acetic acid	!	!		○							!		!	
Nitric acid	!	!									✓		!	
Ester		✓	✓	○	!	!								
Alcohol		✓	✓	○			✓						✓	
Mild alkalis		✓	✓	✓	✓	✓	○	○	!		✓	✓		✓
Mild acids		○	○	✓	✓	✓	!	!	✓	✓	✓			✓
Ether		✓	✓	○									!	
Water		✓	✓	✓	✓	✓								
Strong acids		!	!	○					!	!	!			!
Strong alkalis		!	!	✓					!		✓	✓		✓
Hydrofluoric acid				○							✓			
Paraffin hydrocarbon				○								○		
Haloalkanes				!										
Ketones				!	!								!	
Aldehyde				✓										
Organic acids				○							!	○		
Seawater					✓	✓								
Diesel fuel							✓	✓	✓		○	○	!	
Ammoniac									○				!	

Resistance:      ✓ Resistant      ○ Limited resistance      ! Not resistant

# Plastic: material properties



## Halogen freedom

Estimates suggest that around 95% of fire victims die not due to the immediate effects of the fire, but of poisoning from the smoke. In addition, the corrosive fire gases created during fires cause immense damage to property and can permanently damage the structure of a building. Therefore, halogen-free installation systems must, or should, always be used in public areas (emergency routes, lifts, etc.). The chemical composition of these halogen-free systems is designed in such a way that, in the event of fire, they produce less hazardous

(toxic/corrosive) gases, which could combine with extinguishing agents to form hydrochloric acid. In the sense of the standard DIN VDE 0472, this means that materials are considered halogen-free when "the proportions of the halogens chlorine, bromine and iodine are  $\leq 0.2\%$  for chlorine and  $\leq 0.1\%$  for fluorine". OBO Bettermann offers a wide range of halogen-free products that reduce the risk of harm to people and property to a minimum in case of fire.



## UV resistance

Outdoor installations should always be viewed particularly critically with regard to the mounting locations and the selection of the installation materials.

UV radiation is damaging to many plastics, causing them to turn yellow and/or brittle or lose their elasticity. However, plastics can be protected against UV damage through the addition of UV stabilisers. Products made

from UV-resistant materials are specially marked. In general, besides UV radiation, installations outdoors must also take other environmental influences into account. Factors such as maximum temperatures, regularity of (extreme) temperature changes, humidity and the location of use/mounting (housing, industry, town, region, continent) all have an important role to play here.





### Flame resistance/fire resistance

Materials are described as flame-resistant if they prevent the spread of fire or are sufficiently fire-resistant. According to DIN EN 60695-2-11 (VDE 0471 Part 2-11), electrical connection materials must be subjected to a glow wire test in order to evaluate the fire risk of the end product. When the glow wire test is being carried out, a

glowing wire (for temperature see table below) is inserted into the component to be tested for a period of 30 seconds and then removed. After a further 30 seconds at the latest, the object, if it has caught light, must have extinguished again, in order to specify the flame resistance.



### Types of installation systems

Types of samples Test temperatures in °C	Surface-mounted	Flush-mounted	In-plaster	Cavity wal- l/furniture	Concrete structure	Installation duct
Connection sockets	650	650	750	850	650	750
Device sockets and device connection sockets	750	650	-	850	650	750
Ceiling lights, connection sockets	750	650	-	850	650	750
Wall luminaire connection boxes	750	650	-	850	650	750
Device connection sockets	750	650	-	850	650	750
Connection sleeves	750	-	-	-	-	750
Insulation sections, which support active parts	960	-	-	-	-	-
Lid for installation sockets	750	-	-	-	-	-

# Protection ratings



## IP protection rating

The IP protection rating specifies how far a component is protected against contact and foreign bodies and the ingress of water. The IP protection ratings are controlled by the standard DIN EN 60529 (VDE 0470 Part 1). The IP is always made up of two digits.

The first digit designates the contact and foreign body protection. On the one hand, it specifies how far a housing prevents access to dangerous parts, by preventing or limiting the ingress of body parts or objects held by a person. On the other hand, it specifies how far the housing protects the installed resources against the ingress of solid foreign bodies.

## Protection rating

First code digit	...against access to the hazardous parts	...against solid foreign bodies
0	Protected against access to hazardous parts with the back of the hand	Non-protected
1	Protected against access to hazardous parts with a finger	Protected against solid foreign bodies of 50 mm diameter and larger
2	Protected against access to hazardous parts with a tool	Protected against solid foreign bodies of 12.5 mm diameter and larger
3	Protected against access to hazardous parts with a wire	Protected against solid foreign bodies of 2.5 mm diameter and larger
4	Protected against access to hazardous parts with a wire	Protected against solid foreign bodies of 1.0 mm diameter and larger
5	Protected against access to hazardous parts with a wire	Dust-protected
6	Protected against access to hazardous parts with a wire	Dust-proof

The second digit specifies the protection against water. It specifies how far the resource is protected against incoming water and the resulting damage.

**Protection rating against the entry of water with a damaging impact**

Second code digit	Short description	Definition
0	Non-protected	-
1	Protected against water droplets	Droplets falling vertically must not have a damaging impact.
2	Protected against drip water when enclosure tilted up to 15°	Vertically falling drops must not have harmful effects when the enclosure is tilted at any angle up to 15° on either side of the vertical.
3	Protected against spray water	Water being sprayed at an angle of 60° on both sides of the vertical must not have any damaging impact.
4	Protected against spray water	Water spraying the housing from any direction must not have any damaging impact.
5	Protected against water jets	Jets of water pointing at the housing from any direction must not have any damaging impact.
6	Protected against strong water jets	Strong jets of water pointing at the housing from any direction must not have any damaging impact.
7	Protected against the effects of being temporarily immersed in water	If the housing is sometimes underwater under standard pressure and time conditions, then water may not enter in such volumes as would have a damaging impact.
8	Protected against the effects of being continuously immersed in water	Ingress of water in quantities causing harmful effects must not be possible when the housing is continuously immersed in water under conditions which shall be agreed between manufacturer and user. However, the conditions are more difficult to fulfil than for number 7.



**IK code**

The IK code to DIN EN 50102 indicates the protection rating of housings against external mechanical loads. It is made up of the code letters IK and a two-digit number from 00 to 10. Each group of numbers stands for a load energy value in joules (J). The IK code always applies to

the complete housing, which guarantees the protection of resources against the damaging effects of mechanical loads. The housings are tested by knocking them with different testing hammers.

IK code	00	01	02	03	04	05	06	07	08	09	10
Stress energy value [J]	-	0.15	0.20	0.35	0.50	0.70	1	2	5	10	20



# Nominal values of electrical equipment



When using junction boxes, connection sockets and connection terminals, the resources are assigned nominal values. In the designation, a distinction is made between the maximum approved voltage (nominal voltage), the

maximum approved current (nominal current) and the maximum approved cross-section (nominal cross-section of the cables to be connected).

**2,5  
mm<sup>2</sup>**

**Nominal cross-section**

Largest tested-approved cross-section of the cables to be connected.

**16  
A**

**Nominal current**

The nominal current is the highest permissible operating current that can be continuously passed through connections (e.g. terminals) marked with that value.

**660  
V**

**Nominal voltage**

Greatest approved voltage at the connection point.

In addition to the nominal values, the number of entries for junction boxes and the number of poles of clamp connectors are also possible labels.

**12**

**No. of poles**

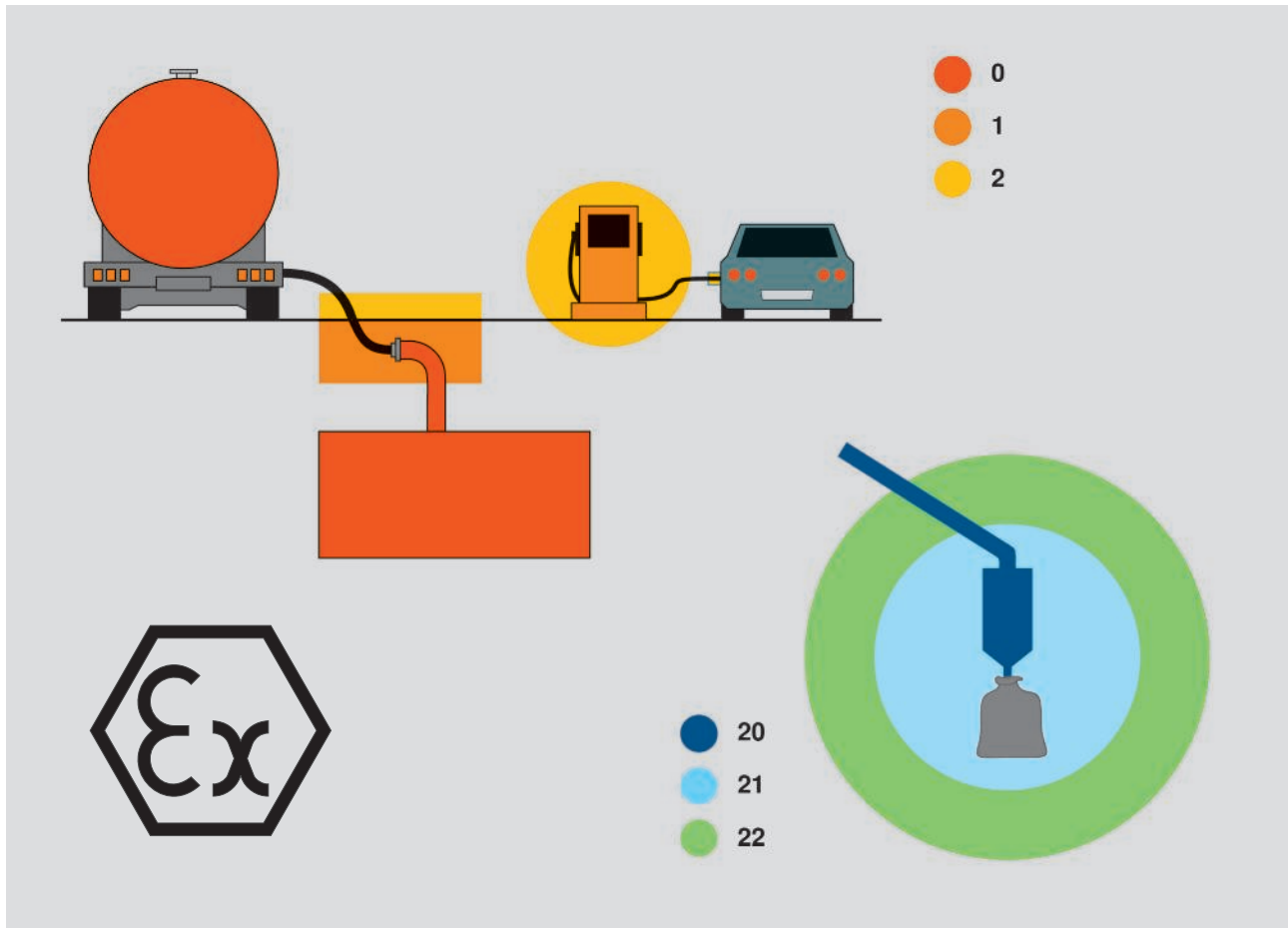
Number of connection points of the clamp connector.

**7**

**Number of entries**

Number of entries in an electrical connection box or connection socket.

# Zone division for explosive areas



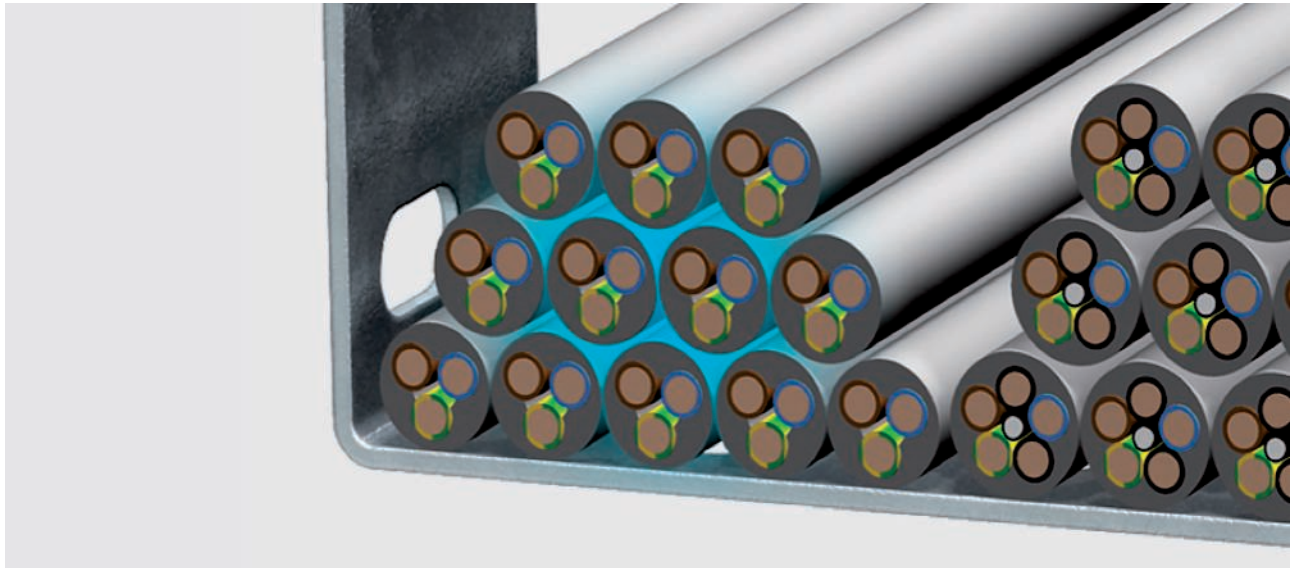
Products used in potentially explosive areas must comply with the ATEX directives. The ATEX workplace directive 1999/92/EC sets out the minimum requirements for improving the safety and health protection of workers at risk from potentially explosive atmospheres. The directive

divides areas with dangerous, potentially explosive atmospheres into zones. Ex-tested products may be used in the respective zones in accordance with their approval.

## Zone allocation of device group II (applied)

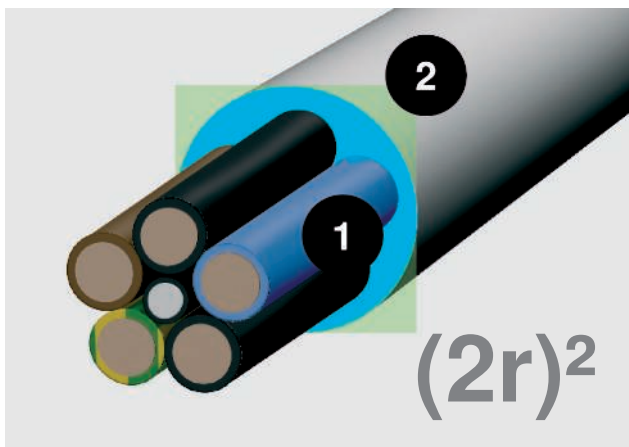
Gas	Dust
<b>Explosive gas atmosphere, zone division to DIN EN 60079-10</b>	<b>Explosive dust/air mixtures, zone division to DIN EN 61214-10</b>
Zone 0	Zone 20
An area in which it can be expected that, under normal conditions, an explosive atmosphere of gas occurs continuously or for long periods of time.	An area in which it can be expected that, under normal conditions, an explosive atmosphere of dust/air occurs continuously or for long periods of time.
Zone 1	Zone 21
An area in which it can be expected that, under normal conditions, an explosive atmosphere of gas occasionally occurs.	An area in which it can be expected that, under normal conditions, an explosive atmosphere of dust/air occasionally occurs.
Zone 2	Zone 22
Area, in which it can be expected that, under normal conditions, an explosive atmosphere of gas seldom or only briefly occurs.	Area, in which it can be expected that, under normal conditions, an explosive atmosphere of dust/air seldom or only briefly occurs.

# Cable sizes



The term “cable” means a jacketed electrical cable for the transmission of electrical energy and data. Cables are given according to their nominal cross-section. The external diameter and usable cross-section depend on their nominal cross-section and the number of individual wires contained in the cable. When fastening clips or

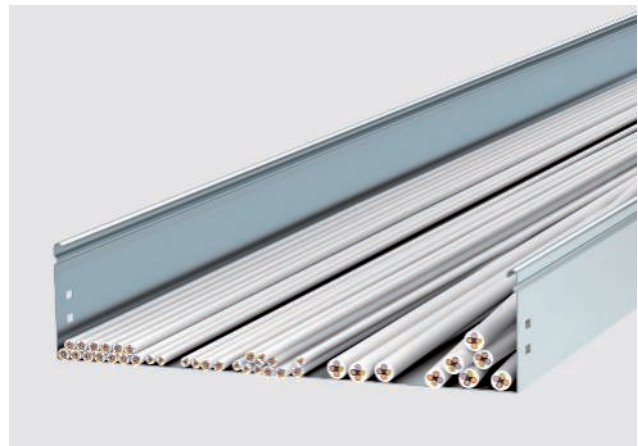
cable support systems are used, it is important to know the actual space requirements of the individual cables. It is not sufficient to take only the diameter as a basis for the calculation of the cable volume.



Circular area (1) and space required (2)

### Calculation with the formula $(2r)^2$

The diameter says little about the actual space required by a cable. Calculate:  $(2r)^2$ . This value reflects the realistic space requirements, including the compartments.



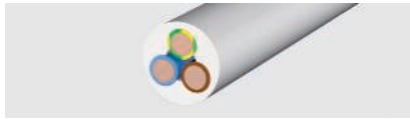
To save you work, we have listed the diameter and usable cross-section of the most important cable types below.

### Important:

These values are average values, which may vary from manufacturer to manufacturer. Please refer to the manufacturer's specifications for the exact values.

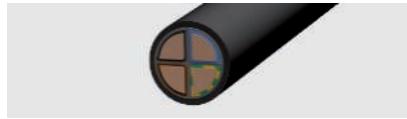


# Basic values for the calculation of the cable volume



## Insulated power cables

Type	Diameter mm	Usable cross-section cm <sup>2</sup>
1 x 4	6.5	0.42
1 x 6	7	0.49
1 x 10	8	0.64
1 x 16	9.5	0.9
1 x 25	12.5	1.56
3 x 1.5	8.5	0.72
3 x 2.5	9.5	0.9
3 x 4	11	1.21
4 x 1.5	9	0.81
4 x 2.5	10.5	1.1
4 x 4	12.5	1.56
4 x 6	13.5	1.82
4 x 10	16.5	2.72
4 x 16	19	3.61
4 x 25	23.5	5.52
4 x 35	26	6.76
5 x 1.5	9.5	0.9
5 x 2.5	11	1.21
5 x 4	13.5	1.82
5 x 6	14.5	2.1
5 x 10	18	3.24
5 x 16	21.5	4.62
5 x 25	26	6.76
7 x 1.5	10.5	1.1
7 x 2.5	13	1.69



## Insulated power cables

Type	Diameter mm	Usable cross-section cm <sup>2</sup>
1 x 10	10.5	1.1
1 x 16	11.5	1.32
1 x 25	12.5	1.56
1 x 35	13.5	1.82
1 x 50	15.5	2.4
1 x 70	16.5	2.72
1 x 95	18.5	3.42
1 x 120	20.5	4.2
1 x 150	22.5	5.06
1 x 185	25	6.25
1 x 240	28	7.84
1 x 300	30	9
3 x 1.5	11.5	1.32
3 x 2.5	12.5	1.56
3 x 10	17.5	3.06
3 x 16	19.5	3.8
3 x 50	26	6.76
3 x 70	30	9
3 x 120	36	12.96
4 x 1.5	12.5	1.56
4 x 2.5	13.5	1.82
4 x 6	16.5	2.72
4 x 10	18.5	3.42
4 x 16	21.5	4.62
4 x 25	25.5	6.5
4 x 35	28	7.84
4 x 50	30	9
4 x 70	34	11.56
4 x 95	39	15.21
4 x 120	42	17.64
4 x 150	47	22
4 x 185	52	27
4 x 240	58	33.6
5 x 1.5	13.5	1.82
5 x 2.5	14.5	2.1
5 x 6	18.5	3.42
5 x 10	20.5	4.2
5 x 16	22.5	5.06
5 x 25	27.5	7.56
5 x 35	34	11.56
5 x 50	40	16



## Telecommunications cables

Type	Diameter mm	Usable cross-section cm <sup>2</sup>
2 x 2 x 0.6	5	0.25
4 x 2 x 0.6	5.5	0.3
6 x 2 x 0.6	6.5	0.42
10 x 2 x 0.6	7.5	0.56
20 x 2 x 0.6	9	0.81
40 x 2 x 0.6	11	1.12
60 x 2 x 0.6	13	1.69
100 x 2 x 0.6	17	2.89
200 x 2 x 0.6	23	5.29
2 x 2 x 0.8	6	0.36
4 x 2 x 0.8	7	0.49
6 x 2 x 0.8	8.5	0.72
10 x 2 x 0.8	9.5	0.9
20 x 2 x 0.8	13	1.69
40 x 2 x 0.8	16.5	2.72
60 x 2 x 0.8	20	4
100 x 2 x 0.8	25.5	6.5
200 x 2 x 0.8	32	10.24



## IT cables type Cat...

Type	Diameter mm	Usable cross-section cm <sup>2</sup>
Cat. 5	8	0.64
Cat. 6	8	0.64



## Coax cable (Standard)

Type	Diameter mm	Usable cross-section cm <sup>2</sup>
SAT/BK cable	6.8	0.48

# Selection of the correct fastening clip



Fastening clips are given with their maximum span distance as a nominal size in mm. This makes it easy to determine the appropriate clip for the planned cable volume. If the necessary clamping range is between two nominal sizes, e.g. 16 mm, we recommend using the smaller nominal size.

If cables are not fastened directly in the clip, but routed through an installation pipe for example, the relationship between the external diameter and metric or PG sizes must be observed when selecting the correct fastening clip. You will find more information on this in the table below.

## Overview of external diameters, metric and PG sizes

External diameter in mm	Metric size	PG size
Up to 12	M12	PG 7
Up to 16	M16	PG 9/PG 11
Up to 20	M20	PG 13.5/PG 16
Up to 25	M25	PG 21
Up to 32	M32	PG 21
Up to 40	M40	PG 36
Up to 50	M50	PG 42/PG 48
Up to 63	M63	-

# Cable glands and the DIN EN 62444 standard

Cable glands are manufactured and tested according to DIN EN 62444. Amongst other things, this standard controls the retaining ability and strain relief of cables. The V-TEC cable glands from OBO Bettermann correspond to version "A". Table 2A indicates the extraction forces that these cable glands must withstand according to the standard. The V-TEC cable glands also fulfil the requirements of DIN EN 62444 with regard to the

twist protection of cables (see Table 3). To ensure the tested dust and moisture protection of the cable glands, continuous perforations should correspond to the mounting openings specified in the standard DIN EN 62444 according to Table 1. The on-site specialist must ensure that these parameters are complied with in order to hand over a functioning system.

**Table 1**

Size of the penetration hole	mm	6	8	10	12	16	20	25	32	40	50	63	75
Thread of the cable gland	M	M6	M8	M10	M12	M16	M20	M25	M32	M40	M50	M63	M75
Diameter of the mounting hole (+0.2/-0.4)	mm	6.5	8.5	10.5	12.5	16.5	20.5	25.5	32.5	40.5	50.5	63.5	75.5

**Table 2 A**

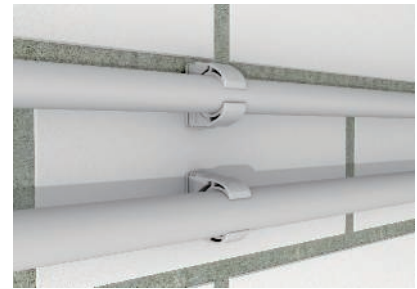
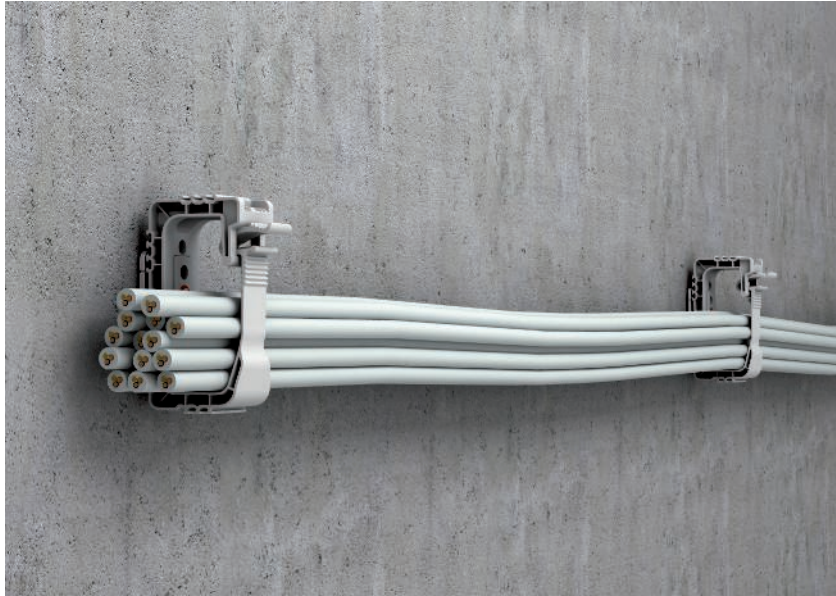
Cable diameter	Retaining capacity	Strain relief, version A
mm	N	N
to 4	5	–
>4 to 8	10	30
>8 to 11	15	42
>11 to 16	20	55
>16 to 23	25	70
>23 to 31	30	80
>31 to 43	45	90
>43 to 55	55	100
>55	70	115

**Table 3**

Cable diameter	Torque Version A and B
mm	Nm
>4 to 8	0.10
>8 to 11	0.15
>11 to 16	0.35
>16 to 23	0.60
>23 to 31	0.80
>31 to 43	0.90
>43 to 55	1.00
>55	1.20



# Information on cable fastenings



## Cable fastening

The standard DIN EN 61914 "Cable holders for electrical installations" specifies that cable holders "must be able to accept cables or cable bundles of the diameter specified by the manufacturer or responsible retailer, without tearing or breaking or shearing off the threads of bolts".

During the installation of cables, the current national and international standard must be taken into account, such as DIN VDE 0100 520. "Suitable tools and methods, which prevent damage or changes to the shape" must be used for fastening.

In addition, with masses of cables, DIN VDE 0298 requires the appropriate "load capacities of cables for fixed laying in and on buildings..." to be taken into account when selecting the fastening systems.

Besides these standardising aspects, the end customer's or client's particular laying specifications can/must be taken into account.

The fastening spacing for cables is given in DIN VDE 0100-520, June 2013. For example, cables laid horizontally require a spacing of 20x the cable diameter. However, a spacing of 80 cm should not be exceeded. With vertical routing, the clip spacings may be increased but should not exceed 1.5 m.

The table below shows the maximum fastening spacings for cables according to the cable diameter. The laying spacings given in the Industrial installation product catalogue, e.g. for bus holders or Quick clips, are guide values and can only be treated as such.

External diameter of the cables	Maximum spacing for horizontal fastening	Maximum spacing for vertical fastening
mm	mm	mm
$D \leq 9$	250	400
$9 < D \leq 15$	300	400
$15 < D \leq 20$	350	450
$20 < D \leq 40$	400	550

# IEC classification in accordance with DIN EN 61386-1

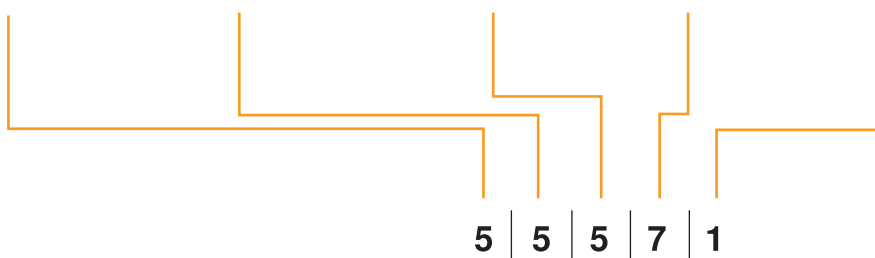


The OBO Bettermann pipe systems are machined and tested according to DIN EN 61386 (Electrical installation pipe systems for electrical energy and information) and DIN EN 60423 (External diameters of electrical installation pipes and thread for electrical installation pipes and their accessories).

### Numeric code

DIN EN 61386-1 classifies installation pipes using a 12-digit numeric code, which provides information on the pressure resistance, impact resistance or use temperatures. You can find the first five digits in the product descriptions of the pipe systems.

	First digit		Second digit		Third digit		Fourth digit		Fifth digit
	Pressure resistance		Impact resistance		Lower temperature range		Upper temperature range		Bending behaviour
1	Very light (125 N)	1	Very light (0.5 kg/100 mm)	1	+5 °C	1	+60 °C	1	Rigid
2	Light (320 N)	2	Light (1.0 kg/100 mm)	2	-5 °C	2	+90 °C	2	Bendable
3	Medium (750 N)	3	Medium (2.0 kg/100 mm)	3	-15 °C	3	+105 °C	3	Pliable, self-recovering
4	Heavy (1,250 N)	4	Heavy (2.0 kg/300 mm)	4	-25 °C	4	+120 °C	4	Flexible
5	Very heavy (4,000 N)	5	Very heavy (6.8 kg/300 mm)	5	-45 °C	5	+150 °C		
						6	+250 °C		
						7	+400 °C		





### Classification according to IEC EN 61386-1: Composition of the IP code

7th digit		8th digit	
	Ingress of solid bodies		Ingress of water
0		0	None declared
1		1	Protected against vertically falling water drops
2		2	Protected against vertically falling water drops, when the pipe system is tilted up to an angle of 15°
3	Protected against solid foreign objects of 2.5 mm Ø and greater	3	Protected against spraying water
4	Protected against solid foreign bodies of 1.0 mm Ø and larger	4	Protected against splashing water
5	Dust-protected	5	Protected against water jets
6	Dust-proof	6	Protection against powerful water jets
7		7	Protected against the effects of temporary immersion in water

### Classification according to IEC EN 61386-1: Corrosion protection

9th digit		
Resistance against corrosion		Suitable surfaces
1	Low protection, inside and outside	
2	Medium protection, inside and outside	<ul style="list-style-type: none"> <li>• Black coated (SW)</li> <li>• Electrogalvanised (G)</li> <li>• Strip galvanised (FS)</li> </ul>
3	Medium protection inside, high protection outside	
4	High protection inside and outside	<ul style="list-style-type: none"> <li>• Hot-dip galvanised (FT)</li> <li>• Stainless steel (V2A, V4A)</li> </ul>



#### Protection against mechanical loads

OBO metal pipes are particularly suited to use under tough industrial conditions. They provide reliable protection against very heavy mechanical loads during cable routing.

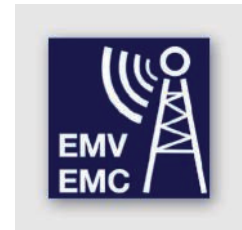
The different material and surface qualities, from galvanised to painted, allow perfect adaptation to the requirements of the appropriate environment.

#### Maintenance of electrical function to E30/E90

Our steel pipes guarantee the maintenance of electrical function to E30/E90. They are thus ideal for the connection of safety-relevant equipment, such as smoke extraction systems.



# Definition of electromagnetic compatibility (EMC)



Recent years have seen the use of electronic circuits increase continually. Whether in industrial systems, medicine, households, telecommunications systems or electrical building installations – we find powerful electrical equipment and systems everywhere, and these switch ever greater currents, achieve greater radio ranges and transport ever more power in smaller spaces.

However, the use of state-of-the-art technology means that the complexity of applications also increases. The consequence of this is that ever more opposing influences (electromagnetic interferences) can occur from system parts and cables, causing damage and economic losses.

**Here, we talk of electromagnetic compatibility:**

Electromagnetic compatibility (EMC) is the ability of an electrical unit to function satisfactorily in its electromagnetic environment, without inappropriately influencing this environment, to which other units also belong (VDE 0870-1). In terms of standardisation, electromagnetic compatibility is dealt with by the EMC Directive 2004/108/EC. This means that electrical resources emit electromagnetic interferences (emissions), which are picked up by other devices or units (immission) that act as receivers (interference sink). This in turn means that the function of an interference sink can be severely reduced and, in the worst-case scenario, result in total failure and economic losses. The interferences can then spread along cables or in the form of electromagnetic waves.

**Path of faults**

Fault source (transmitting emissions)	Coupling of interference variables (spreading of interference)	Fault sink (receiving emissions)
For example - Mobile telephones - Switching components - Ignition systems - Frequency converters - Lightning strike - Welding devices	- Galvanic - Inductive - Capacitive - Electromagnetic	- Process computer - Radio receiver systems - Controllers - Converters - Measuring units

# Guarantee of EMC



## Guaranteeing EMC

A systematic planning process is necessary to guarantee EMC. The interference sources must be identified and quantified. The coupling describes the spread of the interference from the interference source up to the device being influenced, the interference sink. The task of EMC planning is to ensure the compatibility at the source, coupling path and sink using suitable measures. During their daily work, planners and installation engineers are confronted with this subject on an increasingly regular basis. This means that EMC is a basic factor to be taken into consideration during the planning of installations and cabling systems.

Due to the high complexity of electromagnetic compatibility, the problems of EMC must be analysed and solved using simplifying hypotheses and models, as well as experiments and measurements.

### Cable support systems and their contribution to EMC

Cable support systems can make an important contribution to the improvement of EMC. They are passive and can thus make a safe, long-lasting

contribution to EMC through the fact that cables are run within cable support systems or are shielded by them. Routing cables inside cable support systems greatly reduces the galvanic decoupling and coupling due to electrical and magnetic fields in the cables. Thus, cable support systems can make a contribution to the reduction of coupling from the source to the sink. The shielding action of cable support systems can be quantified by the coupling resistance and the shield attenuation. This gives the planner important engineering parameters for cable support systems for EMC engineering.

### Lightning discharge

From the analysis of the effectiveness of EMC in buildings (EN 62305-4), we know that lightning discharge is one of the greatest sources of interference to be expected. This causes a direct current feed into the entire equipotential bonding system in the building and/or to magnetic decoupling of interference currents in electrical cables. With regard to these couplings, cable support systems can offer an effective contribution to the reduction of interference voltages.

# Standards, specifications and certifications



## Standards

OBO offers products for professionals, made by professionals. Our products are manufactured and tested according to the respective specifications of the standards. For example, DIN EN 61537 describes all the relevant parameters for cable support systems, such as the area of application, test conditions, corrosion resistance and temperature classification. As a highly competent manufacturer, OBO subjects itself to these requirements on a daily basis. Comprehensive test procedures guarantee that systems which conform to standards function safely.

## Specifications

All the OBO products and systems are CE-compliant according to the appropriate EC guidelines. This also applies to standard parts such as bolts, washers and nuts that are components of various product systems. The appropriate EC declaration of conformity certifies agreement with the named directives or standards, but does not guarantee properties. The safety instructions in the product information and the general safety regulations must be complied with during installation and use.

## Certifications

For OBO, product quality is closely connected to continuous testing and checking – which is why we manufacture almost all our products ourselves. This enormous depth of production is an expression of our demand for quality. From construction, and the materials used through production, right up to logistics, our employees personally guarantee the quality and availability of OBO products. The multitude of approvals emphasise our high demand for quality and product functionality. Our integrated quality management system forms the solid basis of our ISO 9001 certification, which we have held since 1994. The confirmation of suitability enables defined and workable processes in accordance with KTA 1401 and 10 CFR 50.

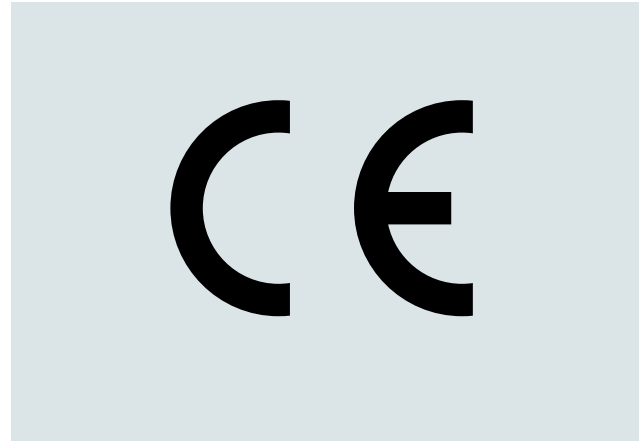


# Certificates and test marks



### VDE

VDE is the Association for Electrical, Electronic and Information Technologies, their study and the technologies and applications based upon them. The VDE mark on electrical equipment is proof that the equipment complies with VDE regulations and/or European or international harmonised standards, and meets the safety requirements of the applicable directives. The VDE mark indicates that a product is safe in relation to electrical, mechanical, thermal, toxic, radiological and other hazards.



### CE symbol

Technical resources included in a legal ordinance, i.e. electrical resources, machines and safety components, must have a CE symbol, with which the manufacturer confirms that the safety requirements of the ordinances are fulfilled. In addition, there must also be a declaration of conformity and technical documentation. The CE symbol is not a quality mark, but simply a declaration by the manufacturer that they have complied with the legal requirements and the codes of practice.



### UL

Underwriters Laboratories (UL) is an independent organisation that tests and certifies product safety. UL certification is generally required if a product is to be sold on the US market.

UL offers various certification options: The "UL Listed"



test mark indicates that UL has tested representative samples of a product and that it conforms to UL's safety requirements. The "UL Recognized" component test mark entitles a product to be used in a product or system bearing the "UL Listed" test mark.

# First-hand support and knowledge



## **OBO seminars: First-hand knowledge**

With a comprehensive programme of training courses and seminars, OBO supports its customers with first-hand specialist knowledge. Besides the theoretical principles, practical everyday implementation is also dealt with. Special calculation and application examples round off the comprehensive programme of knowledge transfer.

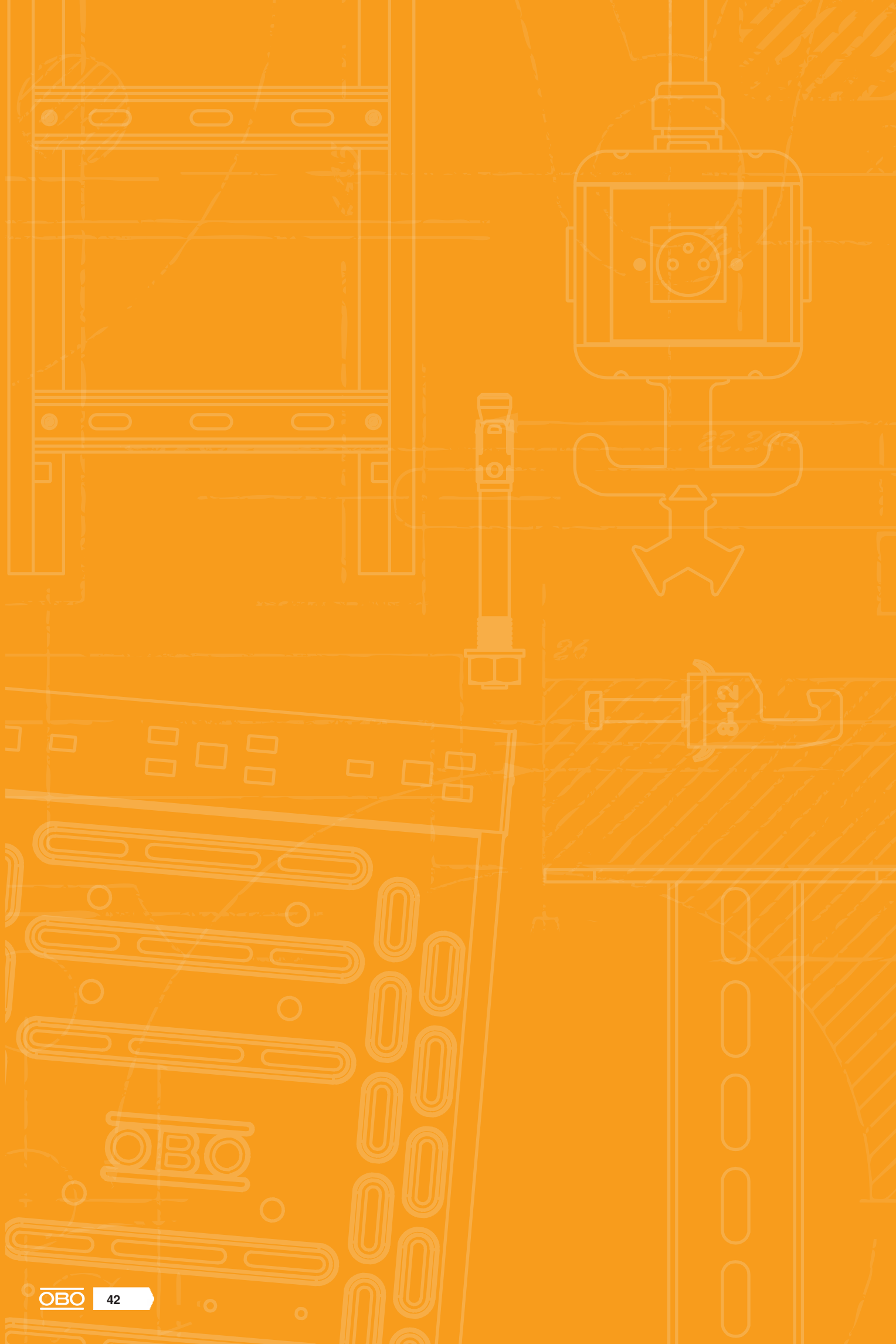
## **Invitations to tender, product information and data sheets**

We can make life easier for you, with our comprehensive selection of materials designed for practical applications, which provide you with effective support with the planning and calculation of a project. These include:

- Invitations to tender
- Product information
- Data sheets



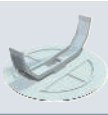
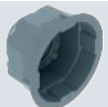
## **Invitations to tender on the Internet at [www.ausschreiben.de](http://www.ausschreiben.de)**

More than 10,000 entries from the different ranges can be called up free of charge. Regular updates and extensions mean that you always have a comprehensive overview of the OBO products. All the current file formats (PDF, DOC, GAEB, HTML, TEXT, XML, ÖNORM) are available. [www.ausschreiben.de](http://www.ausschreiben.de)



































# Flush-mounted systems

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	Accessories, general	58



# Selection aid, flush-mounted boxes

				Device boxes		Device connection boxes			
		Depth		46 mm		66 mm			
		Without device screws		x		x			
		With device screws			x		x		
Standard installation									
	Type		UG 46	UG 46-GS	UG 66	UG 66-GS			
	Item no.		2003700	2003701	2003702	2003703			
									
Airtight installation	Type		UG 46-NL		UG 66-NL				
	Item no.		2003714		2003716				
Airtight installation									
	Type		UG 46-L	UG 46-GS-L	UG 66-L	UG 66-GS-L			
	Item no.		2003706	2003707	2003708	2003709			
Accessories				Usable with:					
All installations	Quick Fix			ZU 60-QF	2003740	x	x	x	x
	Plaster compensation ring	12 mm		ZU 12-PR	2003742	x	x	x	x
		24 mm		ZU 24-PR	2003744	x	x	x	x
	Distance connector			ZU 20-AS	2003746	x	x	x	x
	Cover	Signal		ZU 60-SD	2003760	x	x	x	x
				ZU 60-SDD	2003762				
				ZU 30-SDW	2003768				
		Universal		ZA 60-D	2003748	x	x	x	x
		Sprung		ZA 60-FD	2003749	x	x	x	x
	Double		ZA 60-DV	2003823					
Airtight installations	Sealing insert			ZA 60-DE	2003719	x	x	x	x
	Sealing plug	M20		ZA 20-VS	2003737	x	x	x	x
		M25		ZA 25-VS	2003738	x	x	x	x

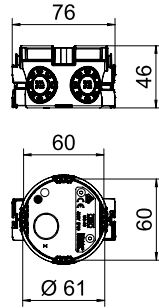
	Device connection boxes with side clamping space	Electronic boxes	Double boxes		Wall outlet boxes
	50 mm	66 mm	46 mm		35 mm
	X	X	X	X	X
					
	<b>UE 46</b> 2003725	<b>UE 66</b> 2003726	<b>UG 46-DV</b> 2003722	<b>UG 66-DV</b> 2003720	<b>UG 30-WA-D</b> 2003732
					
		<b>UE 66-L</b> 2003727		<b>UG 66-DV-L</b> 2003723	
	X	X			
	X	X			
	X	X	X	X	
	X	X			
			X	X	
	X	X			X
	X	X			
	X	X	X	X	
	X	X	X	X	X
	X	X	X	X	

Industriestallation - Verbindungssysteme & Verlegesysteme / en / 2022/09/15 08:33:32 (LLEExport\_03198) / 2022/09/15 08:33:56





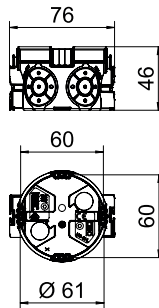
## UP Flush-mounted device box 46



Type	Height mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UG 46	46	7	20/25 mm	Jet black	25	1.930	2003700

- Flush-mounted device box, for use in masonry with an installation depth of at least 46 mm.
- 4 x 3 screw domes
  - Connector with bayonet lock, couplable on both sides
  - 6 combination pipe insertions of Ø 20 and 25 mm
  - 1 entry up to Ø 20 mm in the base

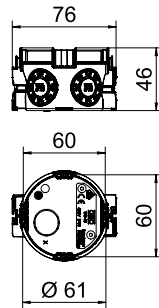
## UP Flush-mounted device box 46, airtight



Type	Height mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UG 46-L	46	8	20/25 mm	Jet black / blue-grey	25	2.040	2003706

- Flush-mounted device box, with airtight membrane entries, for use in masonry with an installation depth of at least 46 mm.
- 4 x 3 screw domes
  - Connector with bayonet lock, couplable on both sides
  - 4 combination pipe entries of Ø 20 and 25 mm
  - 2 entries up to Ø 20 mm in the connector
  - 2 entries up to Ø 12 mm in the base

## UP Flush-mounted device box 46, with device screws



Type	Height mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UG 46-GS	46	7	20/25 mm	Jet black	25	2.050	2003701

- Flush-mounted device box, for use in masonry with an installation depth of at least 46 mm.
- 4 x 3 screw domes
  - 2 pre-mounted device screws
  - Connector with bayonet lock, couplable on both sides
  - 6 combination pipe insertions of Ø 20 and 25 mm
  - 1 entry up to Ø 20 mm in the base

PP/TPPE

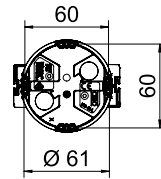
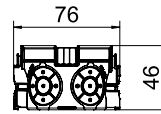


### UP Flush-mounted device box 46, with device screws, airtight

Type	Height of mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UG 46-GS-L	46	8	20/25 mm	Jet black / blue-grey	25	2.120	2003707

Flush-mounted device box, with airtight membrane entries, for use in masonry with an installation depth of at least 46 mm.

- 4 x 3 screw domes
- 2 pre-mounted device screws
- Connector with bayonet lock, couplable on both sides
- 4 combination pipe entries of Ø 20 and 25 mm
- 2 entries up to Ø 20 mm in the connector
- 2 entries up to Ø 20 mm in the base



PP

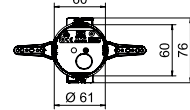
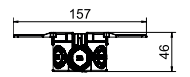


### UP Flush-mounted device box 46, with nail straps

Type	Height of mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UG 46-NL	46	7	20/25 mm	Jet black	25	2.200	2003714

Flush-mounted device box with nail straps, for use in masonry with an installation depth of at least 46 mm.

- 4 x 3 screw domes
- Connector with bayonet lock, couplable on both sides
- 6 combination pipe insertions of Ø 20 and 25 mm
- 1 entry up to Ø 20 mm in the base



PP

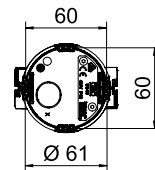
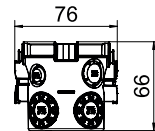


### UP Flush-mounted device connection box 66

Type	Height of mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UG 66	66	13	20/25 mm	Jet black	25	2.390	2003702

Flush-mounted device box, for use in masonry with an installation depth of at least 66 mm.

- 4 x 3 screw domes
- Connection nozzle with bayonet lock, couplable on both sides
- 6 combination pipe entries up to Ø 20 and 25 mm
- 4 entries up to Ø 20 mm
- 2 entries up to Ø 14 mm
- 1 entry up to Ø 20 mm in the base



PP/TPPE

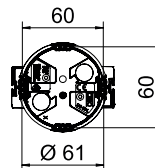
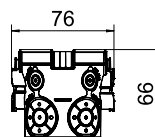


### UP Flush-mounted device connection box 66, airtight

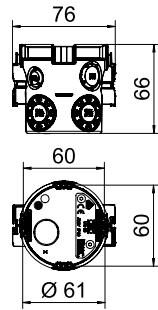
Type	Height of mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UG 66-L	66	14	20/25 mm	Jet black / blue-grey	25	2.510	2003708

Flush-mounted device box, with airtight membrane entries, for use in masonry with an installation depth of at least 66 mm.

- 4 x 3 screw domes
- Connector with bayonet lock, couplable on both sides
- 4 combination pipe entries of Ø 20 and 25 mm
- 2 entries up to Ø 20 mm
- 6 entries up to Ø 12 mm
- 2 entries up to Ø 12 mm in the base



## UP Flush-mounted device connection box, with device screws

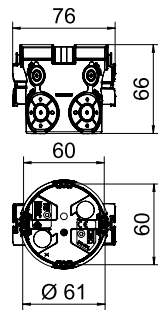


Type	Height mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UG 66-GS	66	13	20/25 mm	Jet black	25	2.510	2003703

Flush-mounted device box, for use in masonry with an installation depth of at least 66 mm.

- 4 x 3 screw domes
- 2 pre-mounted device screws
- Connector with bayonet lock, couplable on both sides
- 6 combination pipe entries of Ø 20 and 25 mm
- 4 entries up to Ø 20 mm
- 2 entries up to Ø 14 mm
- 1 entry up to Ø 20 mm in the base

## UP Flush-mounted device connection box 66, with device screws, airtight

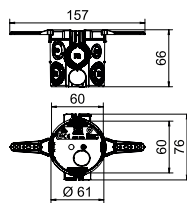


Type	Height mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UG 66-GS-L	66	14	20/25 mm	Jet black / blue-grey	25	2.630	2003709

Flush-mounted device box, with airtight membrane entries, for use in masonry with an installation depth of at least 66 mm.

- 4 x 3 screw domes
- 2 pre-mounted device screws
- Connector with bayonet lock, couplable on both sides
- 4 combination pipe entries of Ø 20 and 25 mm
- 2 entries up to Ø 20 mm
- 6 entries up to Ø 12 mm
- 2 entries up to Ø 12 mm in the base

## UP Flush-mounted device connection box 66, with nail straps



Type	Height mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UG 66-NL	66	13	20/25 mm	Jet black	25	2.650	2003716

Flush-mounted device box with nail straps, for use in masonry with an installation depth of at least 66 mm.

- 4 x 3 screw domes
- Connector with bayonet lock, couplable on both sides
- 6 combination pipe entries of Ø 20 and 25 mm
- 4 entries up to Ø 20 mm
- 2 entries up to Ø 14 mm
- 1 entry up to Ø 20 mm in the base



PP

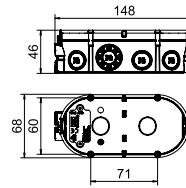


### Flush-mounted device connection socket 66, double version

Type	Height of mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UG 46-DV	46	12	20/25 mm	Jet black/ blue-grey	10	3.720	2003722

Double flush-mounted device box, for use in masonry with an installation depth of at least 46 mm.

- Connector with bayonet lock, couplable on both sides
- 4 combination pipe entries of Ø 20 and 25 mm
- 6 entries up to Ø 20 mm
- 2 entries up to Ø 20 mm in the base



PP

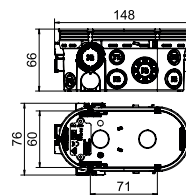


### Flush-mounted device connection socket 66, double version

Type	Height of mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UG 66-DV	66	22	20/25 mm	Jet black	10	5.610	2003720

Double flush-mounted device box, for use in masonry with an installation depth of at least 66 mm.

- With 4 connectors with bayonet lock, couplable on both sides
- 6 combination pipe entries of Ø 20 and 25 mm
- 8 entries up to Ø 20 mm
- 6 entries up to Ø 14 mm
- 2 entries up to Ø 20 mm in the base



PP/TPE

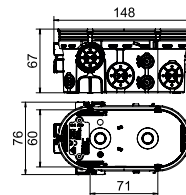


### Flush-mounted device connection socket 66, double version, airtight

Type	Height of mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UG 66-DV-L	67	24	20/25 mm	Jet black/ blue-grey	10	6.060	2003723

Double flush-mounted device box, with airtight membrane entries, for use in masonry with an installation depth of at least 67 mm.

- With 4 couplable connectors with bayonet lock
- 4 combination pipe entries of Ø 20 and 25 mm
- 4 entries up to Ø 20 mm
- 14 entries up to Ø 11 mm
- 2 entries up to Ø 20 mm in the base



## Electronics sockets

PP

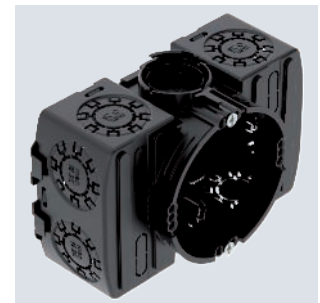
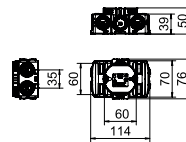


### Flush-mounted electronics box 46, rectangular, with clamping area to the side

Type	Height of mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UE 46	50	16	20/25 mm	Jet black	10	4.300	2003725

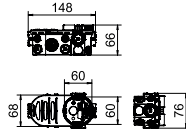
Flush-mounted electronic box, with side clamping space, rectangular shape, for use in masonry with an installation depth of at least 50 mm.

- Connector with bayonet lock, couplable on both sides
- 10 combination pipe entries of Ø 20 and 25 mm
- 2 entries up to Ø 20 mm in the base
- 4 entries for flat cables/ribbon cables
- 4 x 3 screw domes



## Electronics sockets

### UP Flush-mounted electronic box 66, additional clamping space

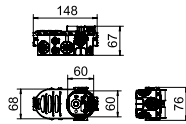


Type	Height mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UE 66	66	22	20/25 mm	Jet black	10	6.150	2003726

Flush-mounted electronic box, with additional terminal area, for use in masonry with an installation depth of at least 66 mm.

- With 4 couplable connectors with bayonet lock
- 6 combination pipe entries of Ø 20 and 25 mm
- 8 entries up to Ø 20 mm
- 6 entries up to Ø 14 mm
- 2 entries up to Ø 20 mm in the base
- Partition for different voltages, with break-out openings
- 4 x 3 screw domes

### UP Flush-mounted electronic box 66, airtight



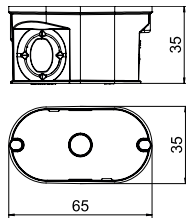
Type	Height mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UE 66-L	67	24	20/25 mm	Jet black / blue-grey	10	6.600	2003727

Flush-mounted electronic box, with additional clamping space and airtight membrane entries, for use in masonry with an installation depth of at least 67 mm.

- With 4 couplable connectors with bayonet lock
- 4 combination pipe entries of Ø 20 and 25 mm
- 4 entries up to Ø 20 mm
- 14 entries up to Ø 11 mm
- 2 entries up to Ø 20 mm in the base
- Partition for different voltages, with break-out openings
- 4 x 3 screw domes

## Wall luminaire connection sockets

### UP Flush-mounted outlet box



Type	Height mm	Number of entries	Pipe Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UG 30-WA-D	35	4	20 mm	Jet black	25	1.150	2003732

Flush-mounted outlet box for single cable routing. Oval shape, for use in masonry with an installation depth of at least 35 mm.

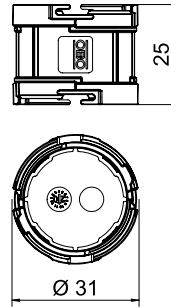
- 2 entries up to Ø 20 mm
- 1 combination entry of Ø 10 and 20 mm
- 1 entry up to Ø 20 mm in the base

PS



Type	Length mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZU 20-AS	25	Signal red	25	0.350	2003746

Distance connector with bayonet lock for the stable combination of multiple flush-mounted device boxes. To expand the standard centre spacing of 71 mm by 20 mm.



### UP Distance connector



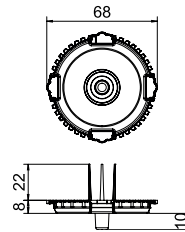
PE



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZU 60-SD	Signal red	50	0.380	2003760

Cover as protection of flush-mounted boxes during plastering. Red, with signal bristles for determining position, centring for drill bit, straps for pulling off.

### UP Signal cover flush-mounted boxes, single



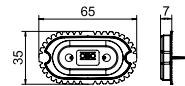
PE



Type	Dimension	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZU 30-SDW	65x35mm	Signal red	25	0.220	2003768

Cover for flush-mounted outlet box as protection during plastering. Red, with signal bristles for determining position.

### UP Signal cover, flush-mounted outlet box



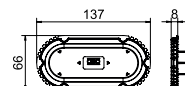
PE



Type	Dimension	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZU 60-SSD	2xØ60mm	Signal red	25	1.070	2003762

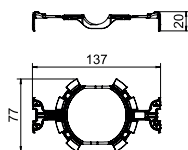
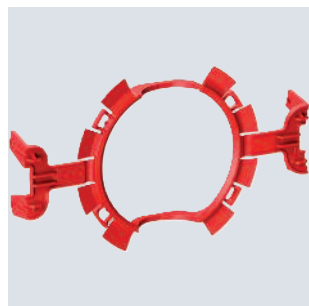
Cover as protection of double flush-mounted box during plastering. Red, with signal bristles for determining position.

### UP Signal cover for flush-mounted box, double





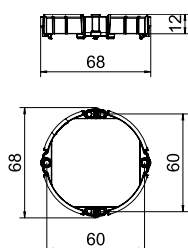
### UP Quick-Fix



Type	Dia- meter mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZU 60-QF	60	Signal red	25	0.570	2003740

Quick fixing through clamping of flush-mounted device boxes Ø 60 mm, instead of plastering or sticking.  
For openings with a diameter of 80 mm. Not suitable for the use with thin plaster.

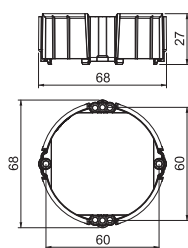
### UP Plaster compensation ring 12 mm, flush-mounted device box



Type	Dimension	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZU 12-PR	Ø60mm, H12mm	Signal red	25	0.650	2003742

Plaster compensation ring for Ø 60 mm flush-mounted box, to screw on.

### UP Plaster compensation ring 24 mm, flush-mounted device box



Type	Dimension	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZU 24-PR	Ø60mm, H24mm	Signal red	25	1.020	2003744

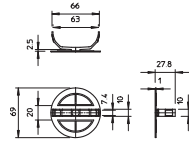
Plaster compensation ring for Ø 60 mm flush-mounted box, to screw on.

PS

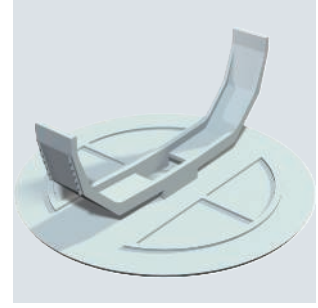


Type	Ø	Max.	Colour	Pack Piece	Weight kg/100 pc.	Item no.
<b>ZA 60-FD</b>	72		White	25	0.560	<b>2003749</b>

Sprung lid with centrally moulded, elastic spreading spring, for sockets with Ø 60 mm, lid edge is flush, surface is roughened.

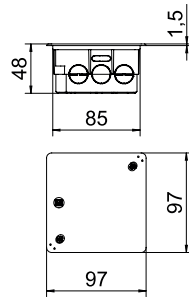


### Sprung cover, 60 mm



# Flush-mounted connection boxes

## Flush-mounted connection box

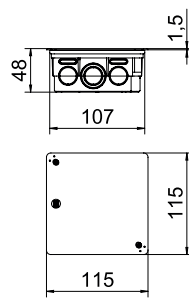


Type	Height mm	Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UV 80 K	45	18	Black	50	4.500	2003112

Flush-mounted connection box for clamping terminals, for use in masonry with an installation depth of at least 45 mm. With cover and cover screws (15 mm). Flat cover edge, roughened surface.

- 6 side entries of Ø 19 mm
- 4 side entries of Ø 21.5 mm
- 4 side entries for flat cables/ribbon cables
- 2 entries of Ø 21.5 mm in the base
- 2 entries for flat cables/ribbon cables at the base

## Flush-mounted connection box 100

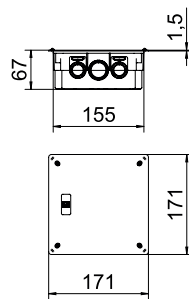


Type	Height mm	Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UV 100 K	45	32	Black	50	5.836	2003118

Flush-mounted connection box for clamping terminals, for use in masonry with an installation depth of at least 45 mm. With cover and cover screws (15 mm). Flat cover edge, roughened surface.

- 6 side entries of Ø 19 mm
- 4 side entries of Ø 21.5 mm
- 4 side entries for flat cables/ribbon cables
- 2 entries of Ø 21.5 mm in the base
- 2 entries for flat cables/ribbon cables at the base

## Flush-mounted connection box 150

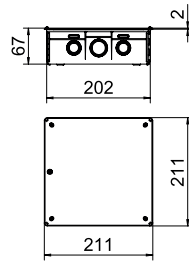


Type	Height mm	Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UV 150 K	65	24	Black	16	15.667	2003124

Flush-mounted connection box for clamping terminals, for use in masonry with an installation depth of at least 45 mm. With cover and cover screws (15 mm). Flat cover edge, roughened surface.

- 6 side entries of Ø 19 mm
- 4 side entries of Ø 21.5 mm
- 4 side entries for flat cables/ribbon cables
- 2 entries of Ø 21.5 mm in the base
- 2 entries for flat cables/ribbon cables at the base

## Flush-mounted connection box 200



Type	Height mm	Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UV 200 K	65	24	Black	10	35.714	2003130

Flush-mounted connection box for clamping terminals, for use in masonry with an installation depth of at least 45 mm. With cover and cover screws (15 mm). Flat cover edge, roughened surface.

- 6 side entries of Ø 19 mm
- 4 side entries of Ø 21.5 mm
- 4 side entries for flat cables/ribbon cables
- 2 entries of Ø 21.5 mm in the base
- 2 entries for flat cables/ribbon cables at the base

PS

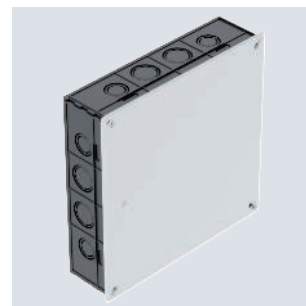
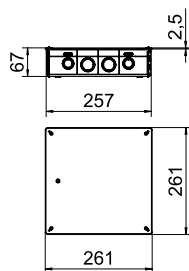


## Flush-mounted connection box 250

Type	Height mm	Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
UV 250 K	65	40	Black	10	52.000	2003136

Flush-mounted connection box for clamping terminals, for use in masonry with an installation depth of at least 45 mm. With cover and cover screws (15 mm). Flat cover edge, roughened surface.

- 6 side entries of Ø 19 mm
- 4 side entries of Ø 21.5 mm
- 4 side entries for flat cables/ribbon cables
- 2 entries of Ø 21.5 mm in the base
- 2 entries for flat cables/ribbon cables at the base

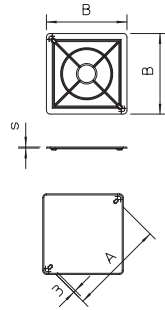




# Box lid

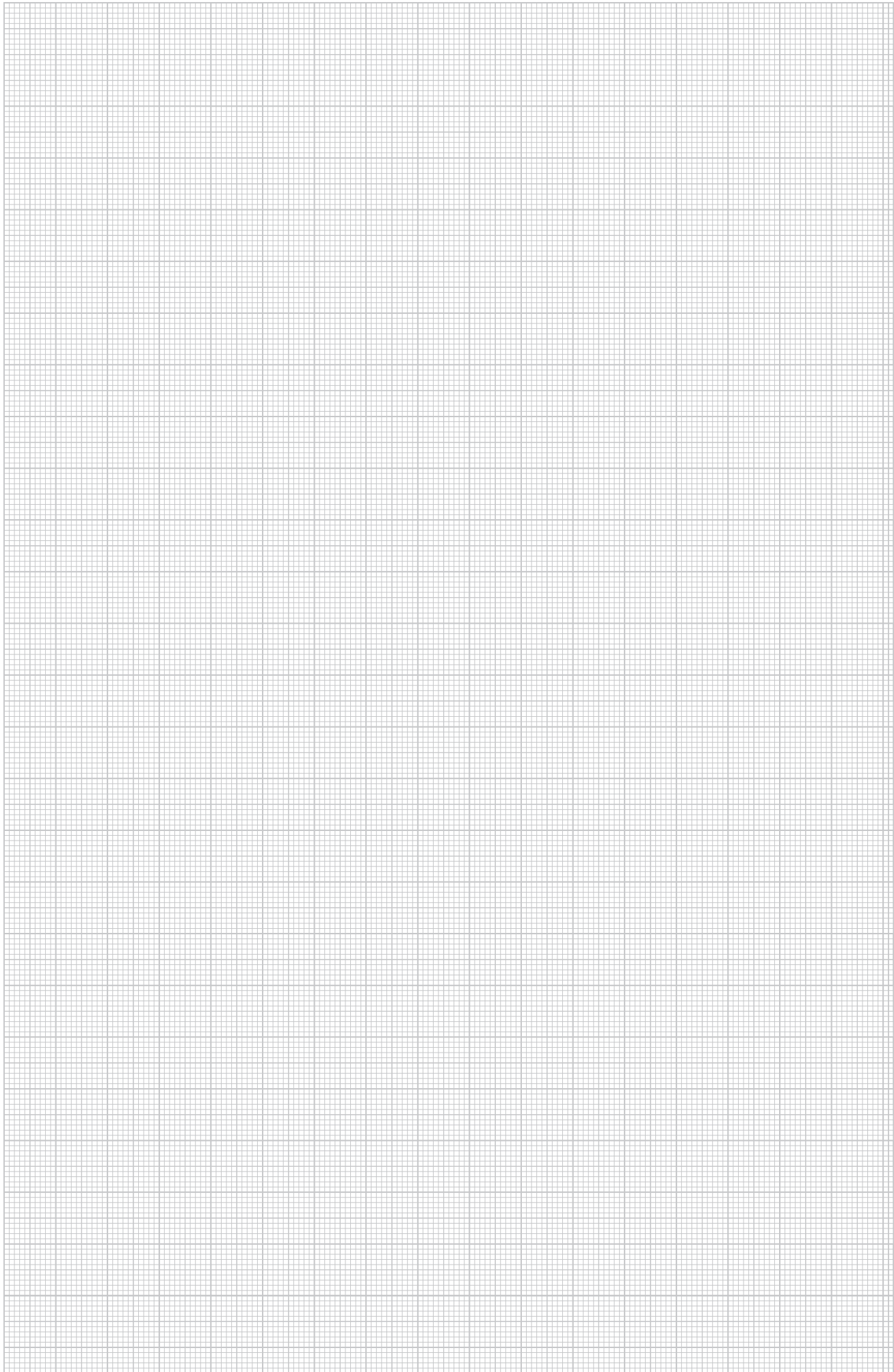
## Box lid

PS



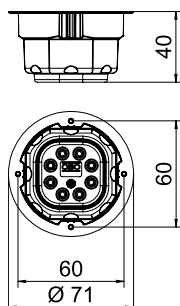
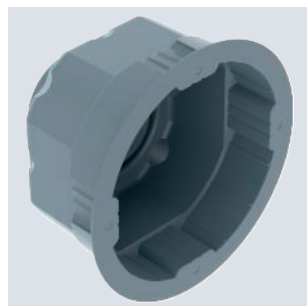
Type	Dim. A mm	Dim. B mm	Dim. s mm	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
<b>UV 80 D</b>	102	97	1.5	White	250	10	1.275	<b>2003240</b>
<b>UV 100 D</b>	130	114	1.5	White	240	10	2.004	<b>2003244</b>
<b>UV 150 D</b>	200	170	1.75	White	150	5	4.850	<b>2003248</b>
<b>UV 200 D</b>	260	210	2	White	50	5	9.500	<b>2003252</b>
<b>UV 250 D</b>	328	260	2.5	White	25	5	17.190	<b>2003256</b>

Box cover suitable for the connection sockets, type UV...K, cover edge is flush, surface is roughened, cover bolts can be lowered.



### Sealing insert for device box

TPE

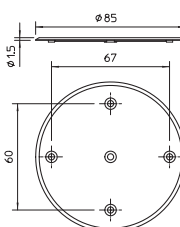


Type	Number of entries	Type of entry	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZA 60-DE	8	8 x Ø1mm to 4mm	Grey	10	1.200	2003719

Sealing insert for flush-mounted and cavity wall boxes, to seal against ingress of air.

### Universal cover

PC/ABS

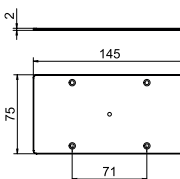


Type	Ø Max.	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZA 60-D	84	White	25	0.850	2003748

Universal cover for flush-mounted and cavity wall box. With drill holes, hole spacing 60 mm for all device boxes, retractable screws. Roughened surface.

### Cover, double, rectangular

PC/ABS



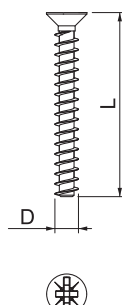
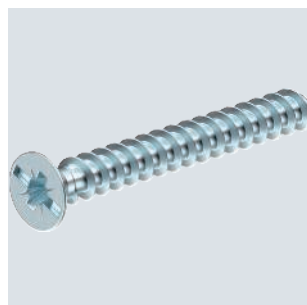
Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZA 60-DV	White	5	1.780	2003823

Rectangular cover for double flush-mounted and cavity wall box. With drill holes, retractable screws.

### Device screw for flush-mounted/cavity wall boxes

St

G



Type	Dimension	Pack Piece	Weight kg/100 pc.	Item no.
ZA 15-GS-S	Ø3,2mm,15mm	50	0.055	2003268
ZA 25-GS-S	Ø3,2mm,25mm	50	0.087	2003271
ZA 40-GS-S	Ø3,2mm,40mm	50	0.135	2003279

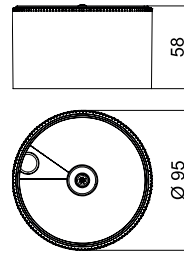
Device screw for mounting devices in flush-mounted or cavity wall device boxes.

St G

### Device screws, economy pack for flush-mounted/ cavity wall boxes

Type	Pack Piece	Weight kg/100 pc.	Item no.
ZA 100-GS-VB	1	37.100	2003280

Economy box with device screws Ø 3.2 mm in 15, 25 and 40 mm lengths, for mounting devices in flush-mounted or cavity wall device boxes.

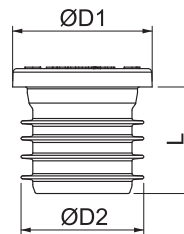


TPE



Type	Dim.			Colour	Pack Piece	Weight kg/100 pc.	Item no.
	D1 mm	D2 mm	L mm				
ZA 20-VS	19	15	17	Grey	25	0.170	2003737
ZA 25-VS	24	19	18	Grey	25	0.250	2003738

Sealing plug to close empty pipes.



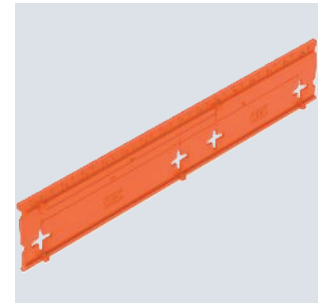
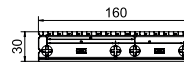
### Sealing plug

PP

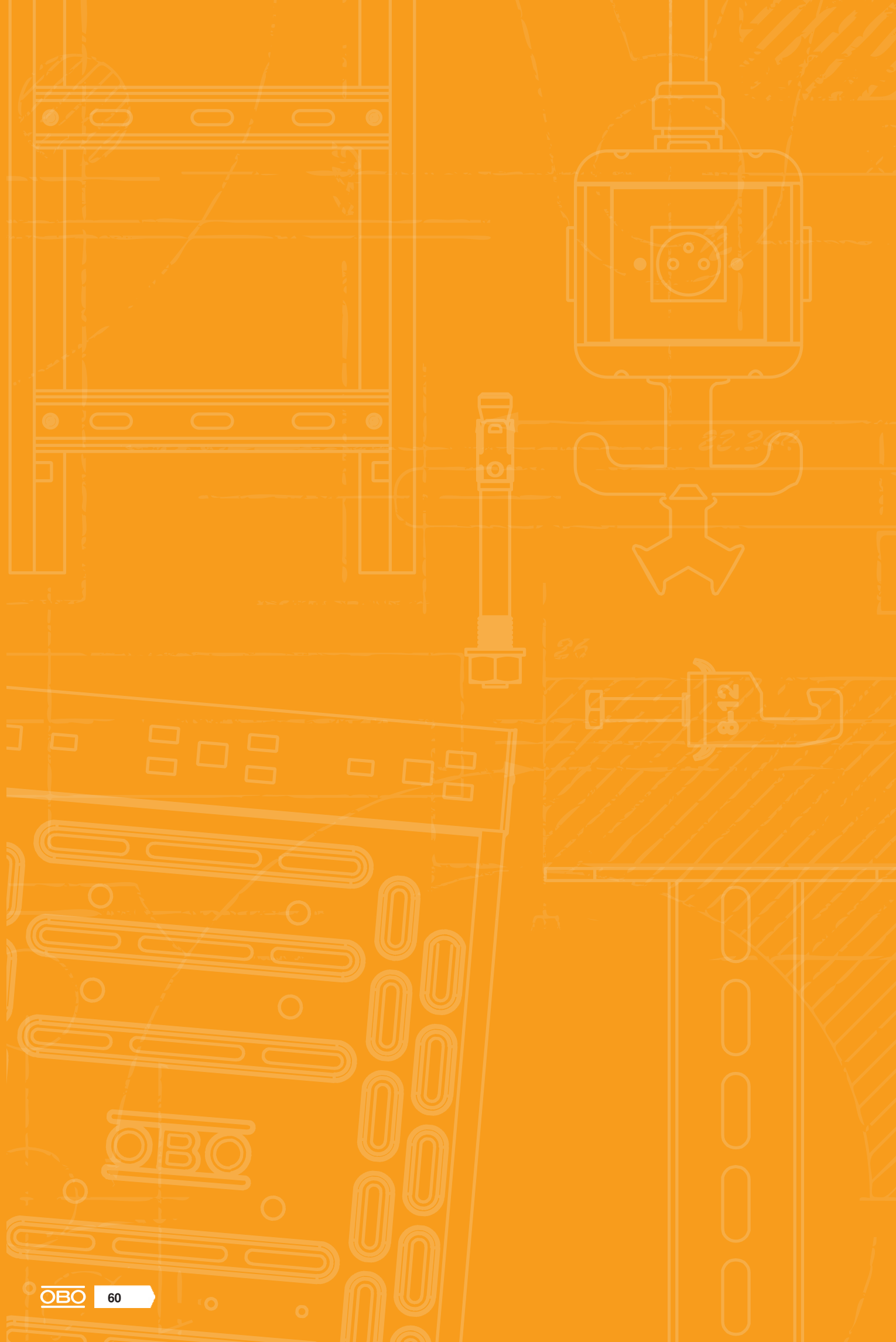
### Drilling template for flush-mounted and cavity wall boxes

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZA BS	Orange	10	0.900	2003890

Drilling template for flush-mounted and cavity wall boxes. To draw on the fastening spacings of 71 or 91 mm. With marking aids for centre-punching and notching for alignment, e.g. to chalk line markings.







# Cavity wall systems



Cavity wall

62



Cavity wall device boxes

70



# Selection aid, cavity wall boxes



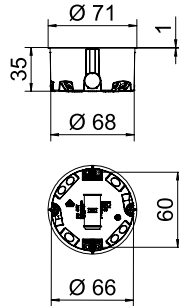
						Device boxes		Device connection boxes	
				Milling hole Ø		68 mm		68 mm	
				Depth		35 mm	47 mm	61 mm	
	Standard installation								
		Type		HG 35	HG 47	HG 61			
				Item no.		2003800	2003802	2003804	
	Airtight installation								
		Type			HG 47-L	HG 61-L			
				Item no.			2003806	2003808	
Accessories					Usable with:				
All installations	Fastening element			ZH 12-DB	2003854	x	x	x	
	Compensation ring			ZH 68-AR	2003840	x	x	x	
	Sealing foil			ZH 68-DF	2003850	x	x	x	
	Compensation ring	10 mm		ZH 10-AR	2003842	x	x	x	
		20 mm		ZH 20-AR	2003844	x	x	x	
	Connector			ZH 11-V	2003846	x	x	x	
	Cover	Internal		ZH 60-ID	2003848	x	x	x	
		Universal		ZA 60-D	2003748	x	x	x	
		Double		ZA 60-DV	2003823				
	Airtight installations	Sealing insert			ZA 60-DE	2003719		x	x
Sealing plug		M20		ZA 20-VS	2003737		x	x	
		M25		ZA 25-VS	2003738		x	x	

Electronic boxes		Double boxes		Wall outlet boxes		PERILEX 16 A	CEE 16 A	Connection boxes
68 mm	2 x 68 mm	2 x 68 mm		35 mm	2 x 35 mm	74 mm		
75 mm	61 mm	47 mm	61 mm	45 mm		61 mm		
								
		HG 47-DV 2003822				HG 61-AD 2003818	HG 61-AD-IP 2003819	HG 61-AD-D 2003820
								
HE 74-L 2003828	HE 61-DV-L 2003826		HE 61-DV-L 2003826	HG 45-WA-LD 2003832	HG 45-WAD-LD 2003834			
x	x	x	x		x	x	x	x
x								
x				x		x	x	x
x								
x	x	x	x					
x								
		x	x					
x	x	x	x		x	x	x	x
x	x	x	x		x	x	x	x





## Cavity wall device box 35

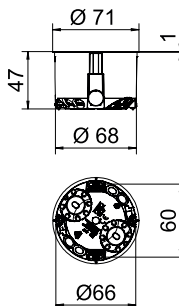


Type	Suitable for		Height of entries	Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
	Milling hole Ø mm	plate thickness mm						
<b>HG 35</b>	68	5-28	35	6	Orange	25	1.840	<b>2003800</b>

Cavity wall device box for use in cavity walls with an installation depth of at least 35 mm and a plate thickness of 5–28 mm.

- 2 x 3 screw domes
  - Device screws, clamping straps
  - 4 entries for NYM cables 3 x 1.5 mm
  - 2 entries for NYM cables 3 x 2.5 mm<sup>2</sup> or 5 x 1.5 mm<sup>2</sup>
  - Connection with other device boxes of type HG 35 via connector, type ZH 11-V
- Delivery accessories: 10 x connectors, type ZH 11-V

## Cavity wall device box 47

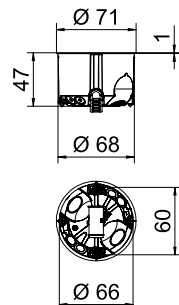


Type	Suitable for		Height of entries	Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
	Milling hole Ø mm	plate thickness mm						
<b>HG 47</b>	68	5-40	47	6	Orange	25	2.250	<b>2003802</b>

Cavity wall device box for use in cavity walls with an installation depth of at least 47 mm and a plate thickness of 5–40 mm.

- 2 x 3 screw domes
  - Device screws, clamping straps
  - 2 combination pipe entries of Ø 20 and 25 mm
  - 2 entries for NYM cables 3 x 1.5 mm
  - 2 entries for NYM cables 3 x 2.5 mm<sup>2</sup> or 5 x 1.5 mm<sup>2</sup>
  - Connection with other device boxes via connector, type ZH 11-V
- Delivery accessories: 10 x connectors, type ZH 11-V

## Cavity wall device box 47, airtight



Type	Suitable for		Height of entries	Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
	Milling hole Ø mm	plate thickness mm						
<b>HG 47-L</b>	68	5-40	47	6	Orange/grey	25	2.410	<b>2003806</b>

Cavity wall device box with airtight membrane entries for use in cavity walls with an installation depth of at least 47 mm and a plate thickness of 5–40 mm.

- 2 x 3 screw domes
  - Device screws, clamping straps
  - 2 combination pipe entries of Ø 20 and 25 mm
  - 2 entries for NYM cables 3 x 1.5 mm
  - 2 entries for NYM cables 3 x 2.5 mm<sup>2</sup> or 5 x 1.5 mm<sup>2</sup>
  - Airtight connection with other device boxes via connector, type ZH 11-V
- Delivery accessories: 10 x connectors, type ZH 11-V

PP

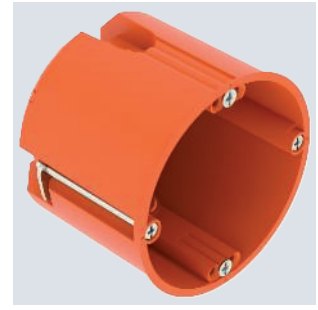
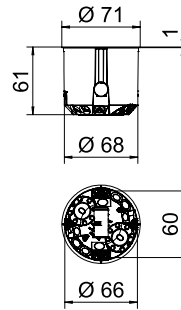


### Cavity wall device connection box 61

Type	Milling hole Ø mm	plate thickness mm	Height of mm	Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
HG 61	68	5-40	61	10	Orange	25	2.500	2003804

Suitable for  
Cavity wall device box for use in cavity walls with an installation depth of at least 61 mm and a plate thickness of 5-40 mm.

- 2 x 3 screw domes
  - Device screws, clamping straps
  - 2 combination pipe entries of Ø 20 and 25 mm
  - 4 entries for NYM cables 3 x 1.5 mm
  - 2 entries for NYM cables 3 x 2.5 mm<sup>2</sup> or 5 x 1.5 mm<sup>2</sup>
  - 2 entries for NYM cables 5 x 2.5 mm<sup>2</sup> or 7 x 1.5 mm<sup>2</sup>
  - Connection with other device boxes via connector, type ZH 11-V
- Delivery accessories: 10 x connectors, type ZH 11-V



PP/TPPE

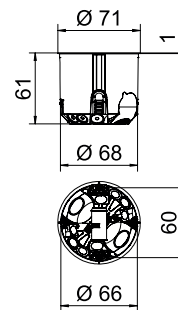


### HW Cavity wall device connection box 61, airtight

Type	Milling hole Ø mm	plate thickness mm	Height of mm	Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
HG 61-L	68	5-40	61	10	Orange/grey	25	2.750	2003808

Suitable for  
Cavity wall device box with airtight membrane entries for use in cavity walls with an installation depth of at least 61 mm and a plate thickness of 5-40 mm.

- 2 x 3 screw domes
  - Device screws, clamping straps
  - 2 combination pipe entries of Ø 20 and 25 mm
  - 4 entries for NYM cables 3 x 1.5 mm
  - 2 entries for NYM cables 3 x 2.5 mm<sup>2</sup> or 5 x 1.5 mm<sup>2</sup>
  - 2 entries for NYM cables 5 x 2.5 mm<sup>2</sup> or 7 x 1.5 mm<sup>2</sup>
  - Airtight connection with other accessory sockets via connector, type ZH 11-V
- Delivery accessories: 10 x connectors, type ZH 11-V



PP

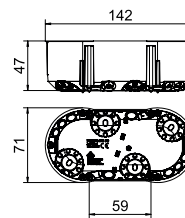


### HW Cavity wall device box 47, double

Type	Milling hole Ø mm	plate thickness mm	Height of mm	Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
HG 47-DV	68	5-40	47	12	Orange	10	4.230	2003822

Suitable for  
Double cavity wall device box for use in cavity walls with an installation depth of at least 47 mm and a plate thickness of 5-40 mm.

- 6 screw domes
- Device screws, clamping straps
- 4 combination pipe entries of Ø 20 and 25 mm
- 4 entries for NYM cables 3 x 1.5 mm
- 2 entries for NYM cables 3 x 2.5 mm<sup>2</sup> or 5 x 1.5 mm<sup>2</sup>
- 2 entries for NYM cables 5 x 2.5 mm<sup>2</sup> or 7 x 1.5 mm<sup>2</sup>
- Connection with other device boxes via connector, type ZH 11-V



PP

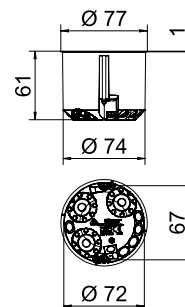


### HW Cavity wall device box 61, CEE/PERILEX

Type	Milling hole Ø mm	plate thickness mm	Height of mm	Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
HG 61-AD	74	5-40	61	9	Orange	10	2.130	2003818

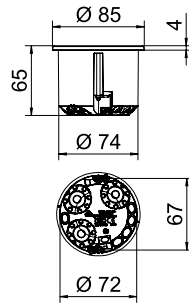
Suitable for  
CEE/PERILEX cavity wall device box for use in cavity walls with an installation depth of at least 61 mm and a plate thickness of 5-40 mm.

- 2 screw domes
- Device screws, clamping straps
- 3 combination pipe entries of Ø 20 and 25 mm
- 3 entries for NYM cables 3 x 2.5 mm<sup>2</sup> or 5 x 1.5 mm<sup>2</sup>
- 2 entries for NYM cables 5 x 2.5 mm<sup>2</sup> or 7 x 1.5 mm<sup>2</sup>
- 1 entry for NYM cables 3 x 1.5 mm<sup>2</sup>



## Accessory and connection sockets

### HW Cavity wall device box 61, CEE/PERILEX, with sealing ring

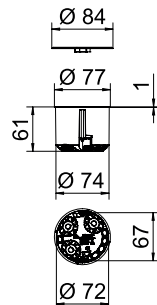


Type	Suitable for		Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
	Milling hole Ø mm	plate thickness mm					
HG 61-AD-IP	74	5-40	9	Orange	10	3.290	2003819

CEE/PERILEX cavity wall device box with sealing ring, for use in cavity walls with an installation depth of at least 61 mm and a plate thickness of 5–40 mm.

- 2 screw domes
- Device screws, clamping straps
- 3 combination pipe entries of Ø 20 and 25 mm
- 3 entries for NYM cables 3 x 2.5 mm<sup>2</sup> or 5 x 1.5 mm<sup>2</sup>
- 2 entries for NYM cables 5 x 2.5 mm<sup>2</sup> or 7 x 1.5 mm<sup>2</sup>
- 1 entry for NYM cables 3 x 1.5 mm<sup>2</sup>

### HW Cavity wall device box 61, CEE/PERILEX, with cover



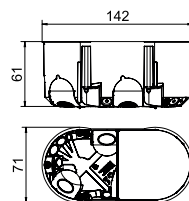
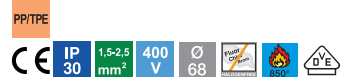
Type	Suitable for		Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
	Milling hole Ø mm	plate thickness mm					
HG 61-AD-D	74	5-40	9	Orange	10	2.980	2003820

CEE/PERILEX cavity wall device box with cover, for use in cavity walls with an installation depth of at least 61 mm and a plate thickness of 5–40 mm.

- 2 screw domes
- Device screws, clamping straps
- 3 combination pipe entries of Ø 20 and 25 mm
- 3 entries for NYM cables 3 x 2.5 mm<sup>2</sup> or 5 x 1.5 mm<sup>2</sup>
- 2 entries for NYM cables 5 x 2.5 mm<sup>2</sup> or 7 x 1.5 mm<sup>2</sup>
- 1 entry for NYM cables 3 x 1.5 mm<sup>2</sup>

## Electronics sockets

### HW Cavity wall electronic box 61, airtight



Type	Suitable for		Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
	Milling hole Ø mm	plate thickness mm					
HE 61-DV-L	68	5-40	14	Orange/grey	10	6.190	2003826

Cavity wall electronic box with membrane entries, cover and partition, for use in cavity walls with an installation depth of at least 61 mm and a plate thickness of 5–40 mm.

- 6 screw domes
- Device screws, clamping straps
- 4 combination pipe entries of Ø 20 and 25 mm
- 4 entries for NYM cables 3 x 1.5 mm<sup>2</sup>
- 2 entries for NYM cables 3 x 2.5 mm<sup>2</sup> or 5 x 1.5 mm<sup>2</sup>
- 2 entries for NYM cables 5 x 2.5 mm<sup>2</sup> or 7 x 1.5 mm<sup>2</sup>
- Airtight connection with other device boxes via connector, type ZH 11-V

PP/TPE

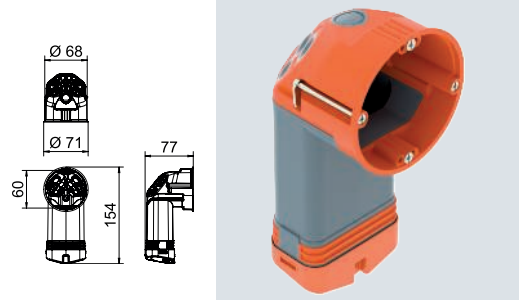


### HW Cavity wall electronic box 74, airtight, with elastomer sack

Type	Suitable for		Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
	Milling hole Ø mm	plate thickness mm					
HE 74-L	68	5-35	8	Orange / grey	10	4.446	2003828

Cavity wall electronic box with membrane entries for additional wiring space, for use in cavity walls with an installation depth of at least 75 mm and a plate thickness of 5 - 35 mm.

- 2 x 3 screw domes
- Device screws, clamping straps
- 2 entries for NYM cables 3 x 1.5 mm<sup>2</sup>
- 2 entries for NYM cables 3 x 2.5 mm<sup>2</sup> or 5 x 1.5 mm<sup>2</sup>
- 2 entries for NYM cables 5 x 2.5 mm<sup>2</sup> or 7 x 1.5 mm<sup>2</sup>
- 2 combination pipe entries Ø 20 and 25 mm in the bottom area of the wiring space



### Wall luminaire connection sockets

PP/TPE

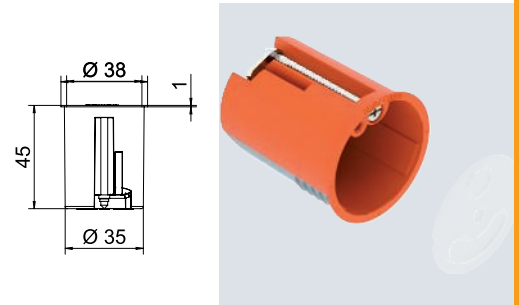


### HW Cavity wall outlet box, airtight

Type	Suitable for		Height of entries mm	Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
	Milling hole Ø mm	plate thickness mm						
HG 45-WA-LD	35	5-40	45	2	Orange / grey	25	0.990	2003832

Airtight cavity wall outlet box for cavity walls, for the mounting of wall luminaires or loud-speakers With cover.

- 1 entry for NYM cables 3 x 2.5 mm<sup>2</sup> or 5 x 1.5 mm<sup>2</sup>
- 1 entry for NYM cables 3 x 1.5 mm<sup>2</sup>



PP/TPE

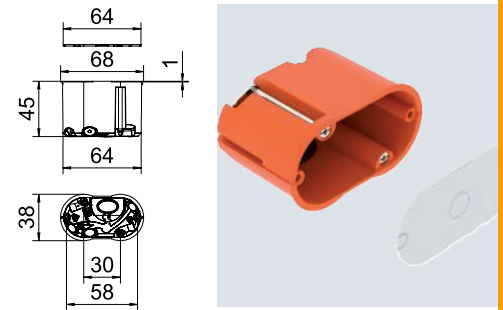


### HW Cavity wall outlet box, double, airtight

Type	Suitable for		Height of entries mm	Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
	Milling hole Ø mm	plate thickness mm						
HG 45-WAD-LD	35	5-40	45	4	Orange / grey	25	1.930	2003834

Airtight, double wall outlet box for cavity walls, for the mounting of wall luminaires or loud-speakers With cover.

- 1 entry for NYM cables 3 x 2.5 mm<sup>2</sup> or 5 x 1.5 mm<sup>2</sup>
- 2 entries for NYM cables 3 x 1.5 mm<sup>2</sup>
- 1 combination pipe entry for Ø 20 and 25 mm

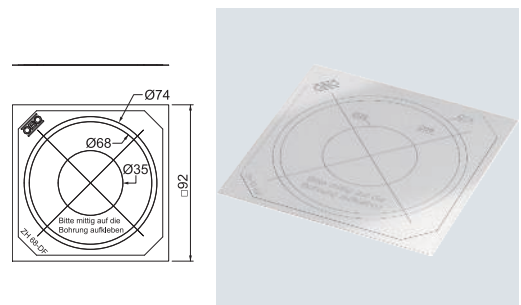


### Accessories, cavity wall

### Sealing foil, cavity wall device box

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZH 68-DF	Transparent	10	0.500	2003850

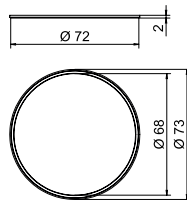
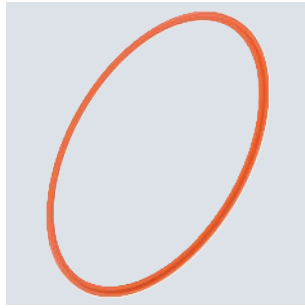
Foil for sealing of installation openings that are cut too large or broken out.





### HW Compensation ring

PP  
Ø 68

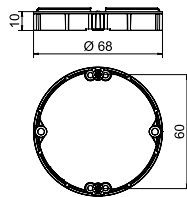


Type	Dimension	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZH 68-AR	Ø68mm	Orange	10	0.050	2003840

Compensation ring for cavity wall box Ø 68 mm, to compensate for large or unround drill holes.

### HW Compensation ring 10

PP  
Ø 68

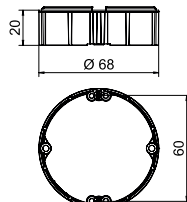


Type	Dimension	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZH 10-AR	Ø68mm, H10mm	Orange	25	0.360	2003842

Compensation ring for cavity wall device box Ø 68 mm, to screw on.

### HW Compensation ring 20

PP  
Ø 68

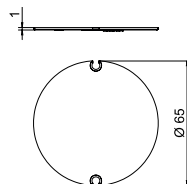
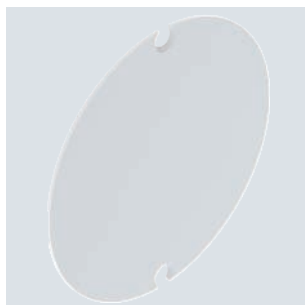


Type	Dimension	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZH 20-AR	Ø68mm, H20mm	Orange	25	0.580	2003844

Compensation ring for cavity wall device box Ø 68 mm, to screw on.

### Inner fitting, cover cavity wall device box

PC/ABS  
CE RoHS



Type	Ø Max.	Height mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZH 60-ID	65	1	White	25	1.130	2003848

Inner fitting cover for cavity wall device box, to screw on.

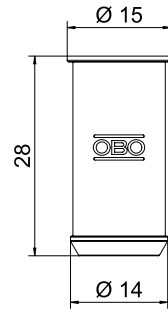
PP



### HW Connector for cavity wall boxes

Type	Dia- meter mm	Length mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZH 11V	14.5	28	Orange	10	0.098	2003846

Connector to connect cavity wall boxes and pass cable wires through. Airtight in conjunction with airtight cavity wall boxes.



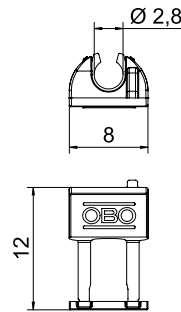
PP



### HW Fastening element, thin panelling

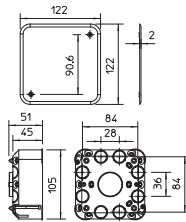
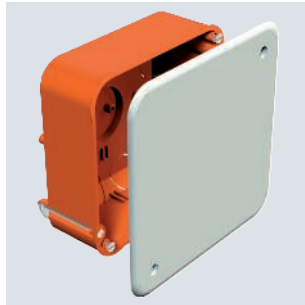
Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ZH 12-DB	Orange	50	0.012	2003854

Fastening element to extend the tensioning area for thin panelling, suitable for panelling thicknesses of up to 0.2 mm.



## Cavity wall connection box

PP

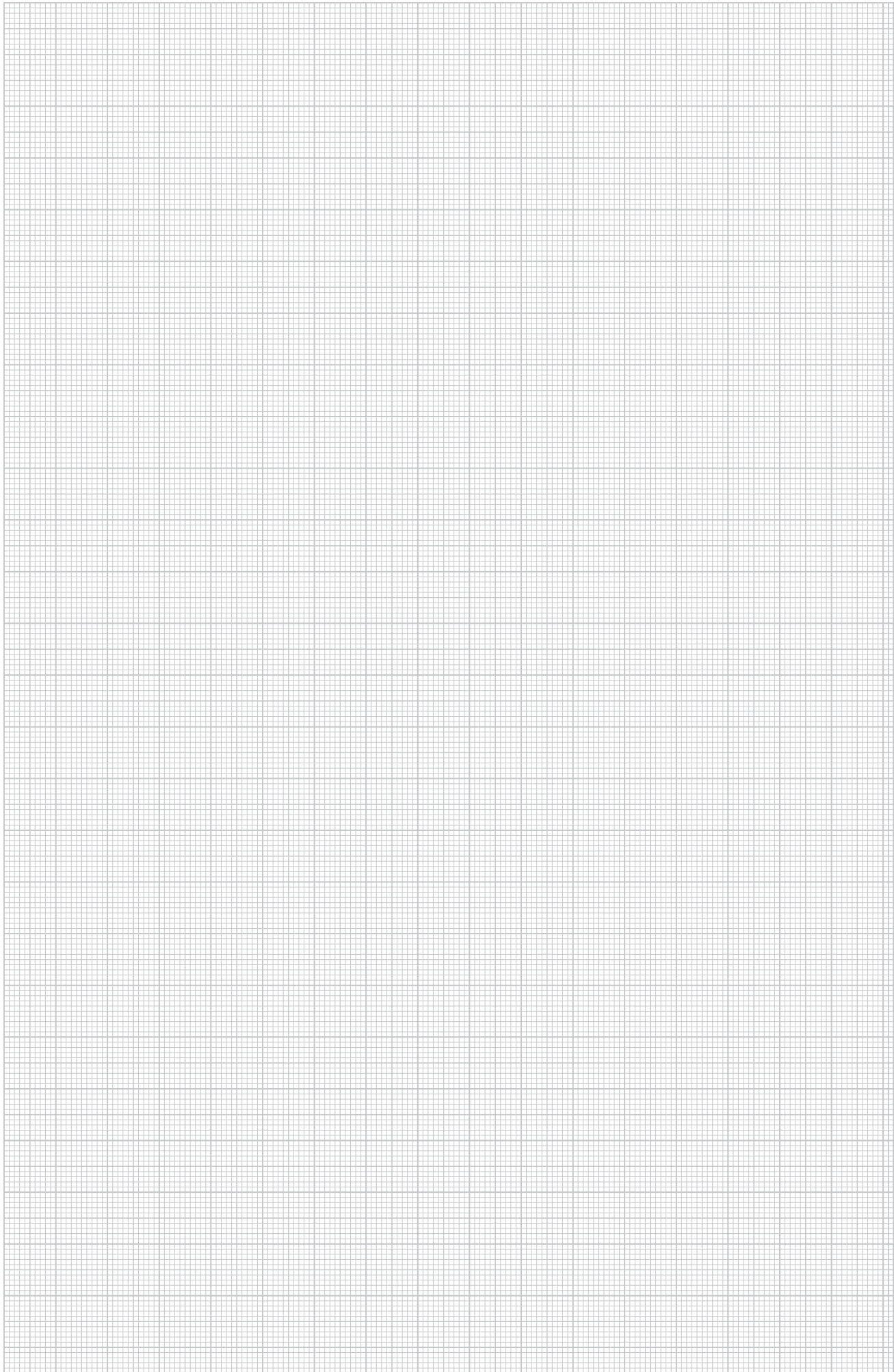


Type	Suitable for plate		Number of entries	Colour	Pack Piece	Weight kg/100 pc.	Item no.
	thickness mm	Height mm					
<b>HV 100 KD</b>	7-35	50	20	Orange	25	6.300	<b>2003449</b>

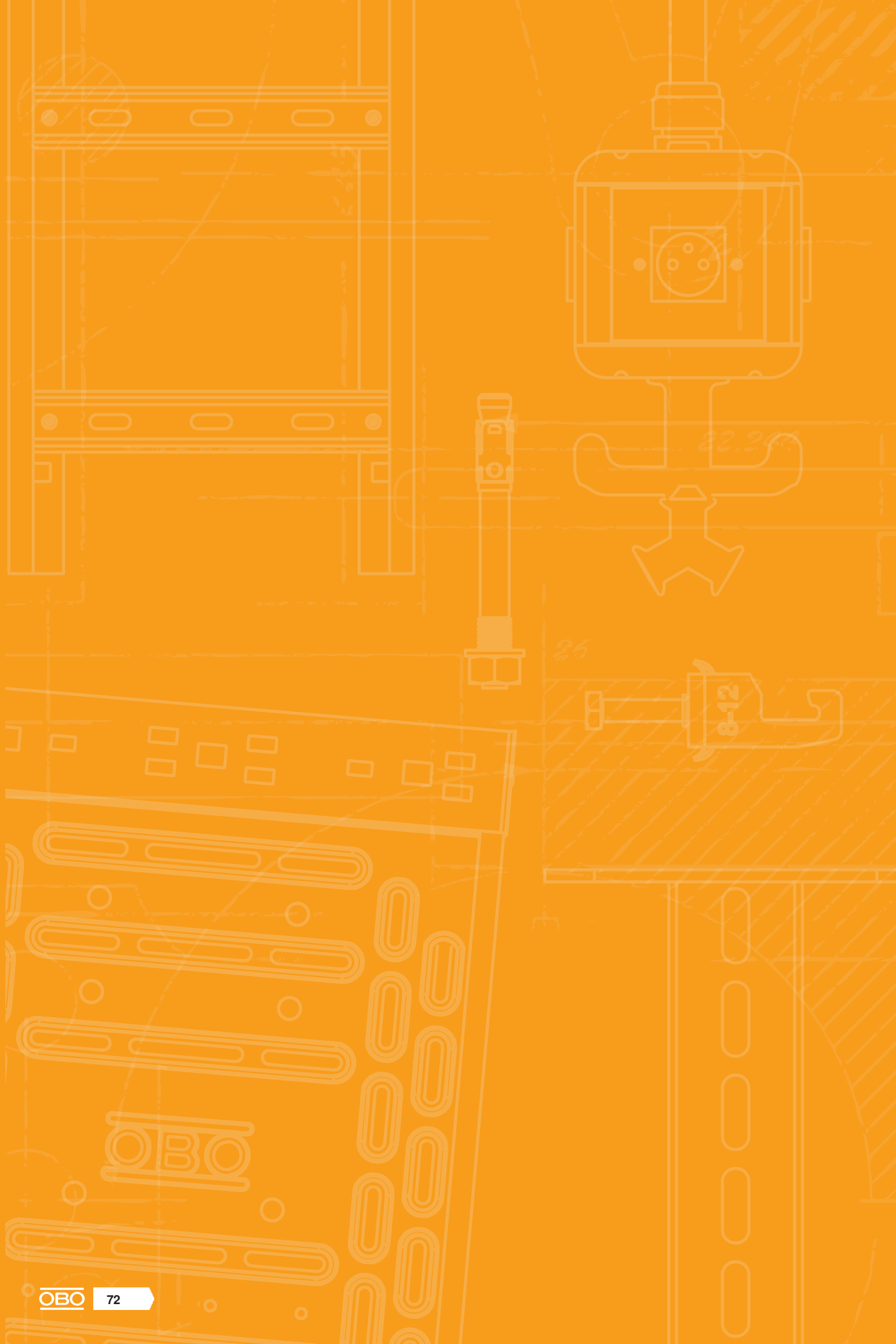
Cavity wall connection box for use in cavity walls with an installation depth of at least 50 mm and a plate thickness of 7-35 mm. With white cover and cover screws. Suitable for installation of standard rails (hat and support rails) for series terminals.

- 8 entries of Ø 20 mm
- 8 entries for NYM cables 3 x 1.5 mm<sup>2</sup>
- 4 entries for data cables (extra-low voltage)









# Surface-mounted systems



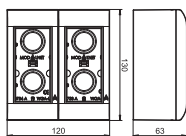
Surface-mounted sockets

74



## Surface-mounted housing, basic configuration, 2x double

PC

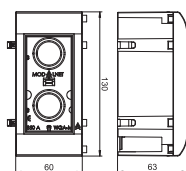


Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
WG-AK RW	Pure white	1	35.000	6109900

Basic configuration consisting of two housing bases (right and left side) with two cover frames to accept Modul 45 accessories of 2x module width = 90 mm.

## Surface-mounted housing, expansion module, double

PC

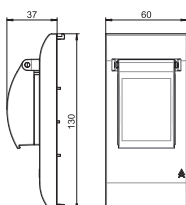


Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
WG-MK RW	Pure white	1	17.500	6109905

Extension module consisting of housing base and cover frame to accept Modul 45 accessories of 2x module width = 90 mm.

## Cover frame, double, for protective equipment installation

PC



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
WG-AF2TE RW	Pure white	1	7.500	6109932

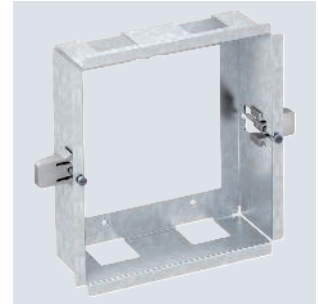
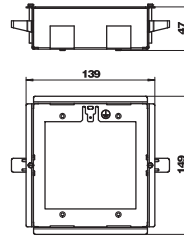
Construction set, protection unit installation consisting of cover with mounting support and transparent cover hood. Allows the installation of protective equipment (two units) such as miniature circuit-breakers or FI protection switches in the Modal net housing.

St FS

Support for cavity wall installation 2x double

Type	Pack Piece	Weight kg/100 pc.	Item no.
WG-UK2	1	31.000	6109950

Metal cavity wall support to accept the Modal net housing .

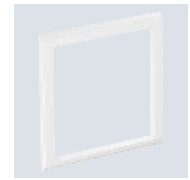
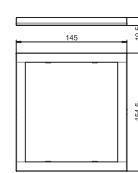


PC

Screen frame for cavity wall installation 3x double

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
WG-UBR2 RW	Pure white	1	4.400	6109934

Screen frame for placing on the cavity wall support .

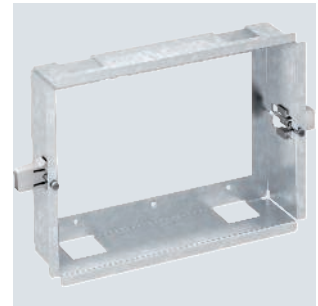
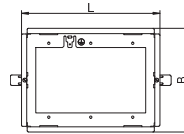


St FS

Support for cavity wall installation 3x double

Type	Pack Piece	Weight kg/100 pc.	Item no.
WG-UK3	1	35.000	6109952

Metal cavity wall support to accept the Modal net housing .

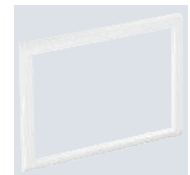
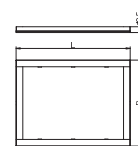


PC

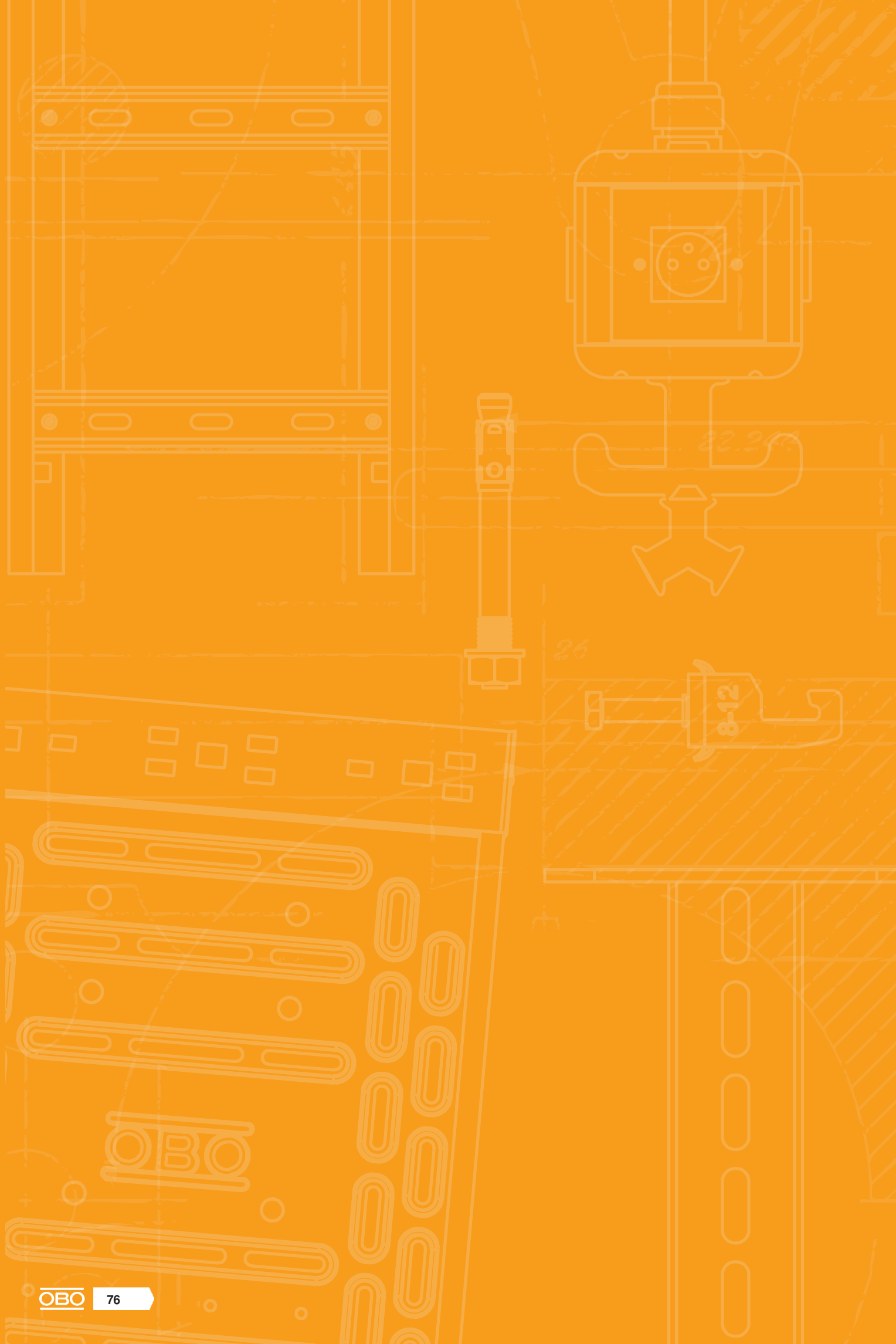
Screen frame for cavity wall installation 3x double

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
WG-UBR3 RW	Pure white	1	4.500	6109936






Screen frame for placing on the cavity wall support .



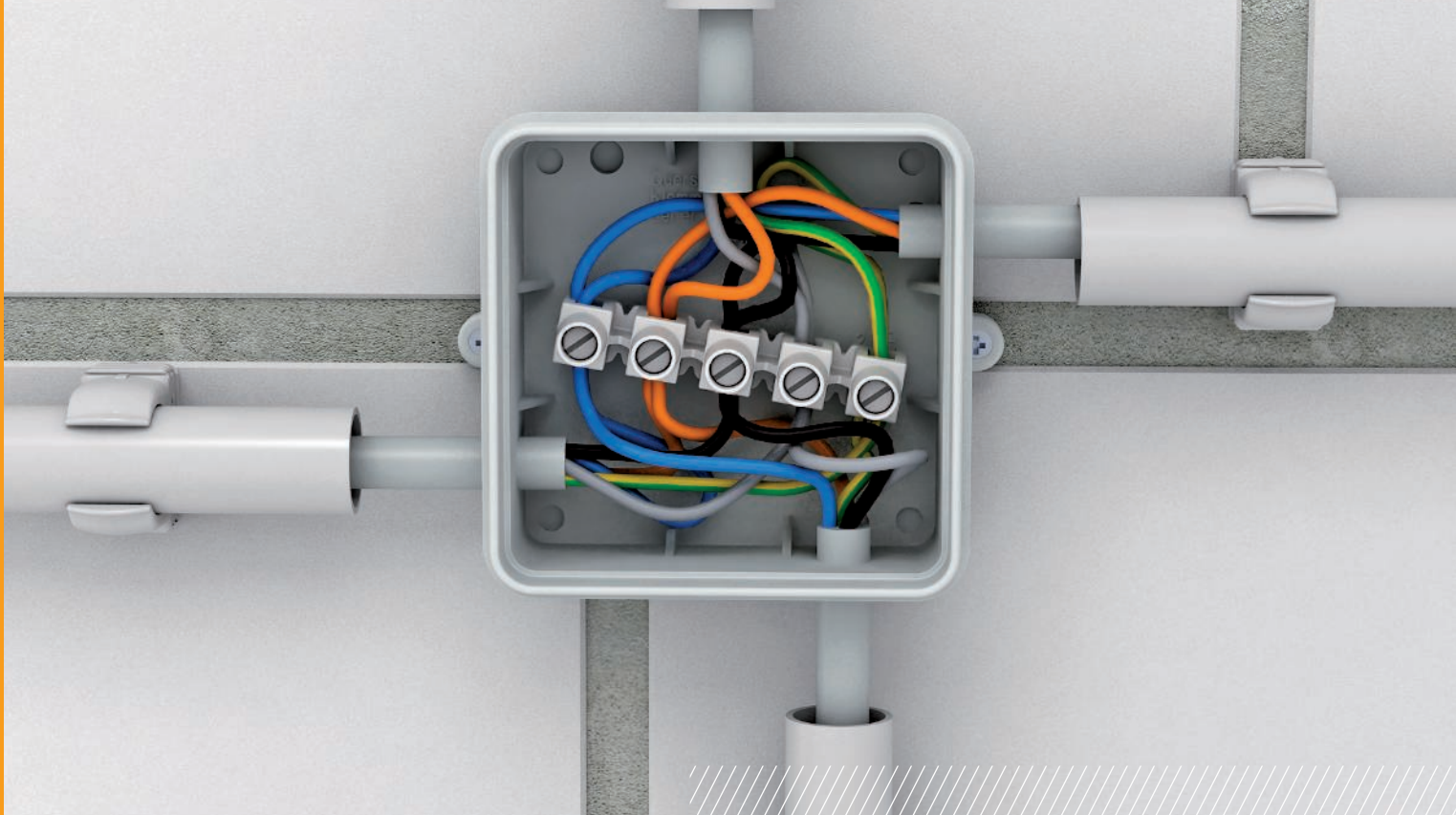




# Junction boxes

	A series	78
	T series	84
	X series	112
	Mx series	148
	Aquisit cold casting compound	152





## Junction boxes A series

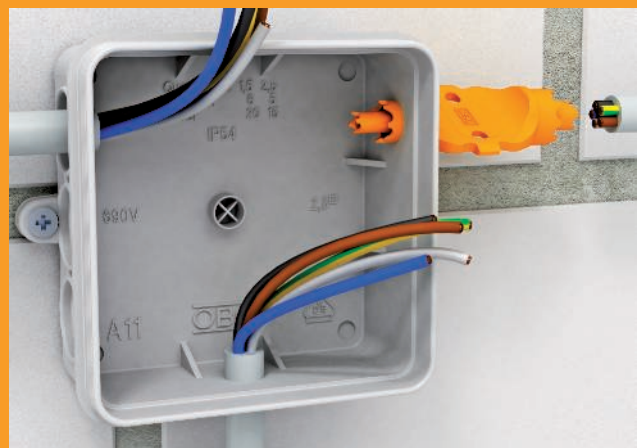
Classic and still youthful: The well-known junction boxes of the A series have had a makeover. Halogen-free thermoplastic is just as much of a hallmark of the A series as a tight-fitting clamshell and pre-marked cable entries. A protection rating of IP55 and practical external fastenings round off the profile of the classic item.



- Halogen-free thermoplastic
- Sturdy external fastenings
- Quick mounting with snug-fitting clamshell
- Suitable for wet rooms, IP55

### Pre-marked cable entry

The pre-marked cable entries can be opened with a knife or using the cut-out tool supplied.



Junction box A 6



Type	A 6	A 6 HF RW	A 6 HF RO
Colour	Light grey	Pure white	Red
Dimension LxWxH mm	80x43x36	80x43x36	80x43x36
Clear internal dimensions mm	69x32x30	69x32x30	69x32x30
Pack Piece	10	10	10
Weight kg/100 pc.	2.560	2.560	2.560
<b>Item no.</b>	<b>2000001</b>	<b>2000005</b>	<b>2000003</b>

PE Polyethylene

Protection rating IP55, rated voltage 400 V, nominal cross-section 2.5 ÷ mm<sup>2</sup>, 6 entries for cable diameter 5–14 mm  
4 entries for cable diameter 5–9 mm.  
Clamshell.  
Dimensions: 80 x 43 x 36 mm  
Clear internal dimensions: 69 x 32 x 30 mm  
1 cut-out tool for every 10 boxes

Junction box A 8



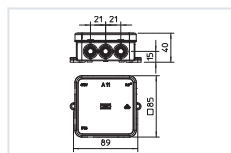
Type	A 8	A 8 HF RW	A 8 HF RO
Accessories	without terminal strip	without terminal strip	without terminal strip
Colour	Light grey	Pure white	Red
Dimension LxWxH mm	75x75x36,7	75x75x36,7	75x75x36,7
Clear internal dimensions mm	65x65x32	65x65x32	65x65x32
Pack Piece	10	10	10
Weight kg/100 pc.	3.649	5.140	5.140
<b>Item no.</b>	<b>2000016</b>	<b>2000075</b>	<b>2000059</b>

PE Polyethylene

Protection rating IP55, rated voltage 400 V, nominal cross-section 2.5 ÷ mm<sup>2</sup>, 7 entries for cable diameters of 5–14 mm.  
Clamshell.  
Dimensions: 75 x 75 x 36.2 mm  
Clear internal dimensions: 65 x 65 x 32 mm  
1 cut-out tool for every 10 boxes



## Junction box A 11

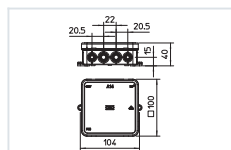


Type	A 11	A 11 HF RW	A 11 HF RO
Accessories	without terminal strip	without terminal strip	without terminal strip
Colour	Light grey	Pure white	Red
Dimension LxWxH mm	85x85x40	85x85x40	85x85x40
Clear internal dimensions mm	75x75x35	75x75x35	75x75x35
Pack Piece	10	10	10
Weight kg/100 pc.	6.200	6.200	4.530
<b>Item no.</b>	<b>2000342</b>	<b>2000180</b>	<b>2000164</b>

PE Polyethylene

Protection rating IP55, rated voltage 400 V, nominal cross-section 2.5 ÷ mm<sup>2</sup>, 12 entries for cable diameter 5–14 mm.  
Clamshell.  
Dimensions: 85 x 85 x 40 mm  
Clear internal dimensions: 75 x 75 x 35 mm  
1 cut-out tool for every 10 boxes

## Junction box A 14

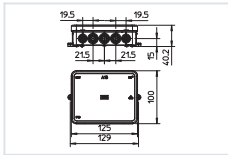


Type	A 14	A 14 HF RW	A 14 HF RO
Accessories	without terminal strip	without terminal strip	without terminal strip
Colour	Light grey	Pure white	Red
Dimension LxWxH mm	100x100x40	100x100x40	100x100x40
Clear internal dimensions mm	90x90x35	90x90x35	90x90x35
Pack Piece	10	10	10
Weight kg/100 pc.	5.855	5.855	5.855
<b>Item no.</b>	<b>2000378</b>	<b>2000390</b>	<b>2000386</b>

PE Polyethylene

Protection rating IP55, rated voltage 400 V, nominal cross-section 2.5 ÷ mm<sup>2</sup>, 8 entries for cable diameter 5–14 mm.  
8 entries for cable diameter 5–11 mm.  
Clamshell.  
Dimensions: 100 x 100 x 40 mm  
Clear internal dimensions: 90 x 90 x 35 mm  
1 cut-out tool for every 10 boxes

Junction box A 18



Type	A 18	A 18 HF RW	A 18 HF RO
Accessories	without terminal strip	without terminal strip	without terminal strip
Colour	Light grey	Pure white	Red
Dimension LxWxH mm	125x100x40	125x100x40	125x100x40
Clear internal dimensions mm	115x90x35	115x90x35	115x90x35
Pack Piece	10	10	10
Weight kg/100 pc.	6.957	6.957	6.957
<b>Item no.</b>	<b>2000410</b>	<b>2000422</b>	<b>2000418</b>

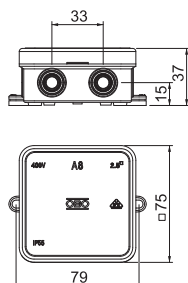
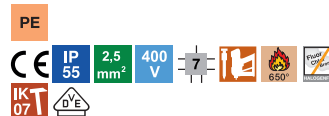
PE Polyethylene

Protection rating IP55, rated voltage 400 V, nominal cross-section 2.5 ÷ mm<sup>2</sup>, 10 entries for cable diameter 5–14 mm  
 8 entries for cable diameter 5–11 mm.  
 Clamshell.  
 Dimensions: 125 x 100 x 40 mm  
 Clear internal dimensions: 115 x 90 x 35 mm  
 1 cut-out tool for every 10 boxes



# Junction boxes, A series with terminal strip

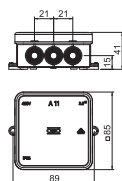
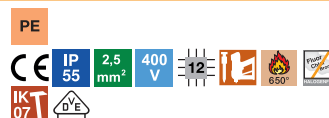
## Junction box A 8 with terminal strip



Type	Accessories	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
A 8 5	1 terminal strip	Light grey	75x75x36,7	65x65x32	10	6.500	2000024

Protection rating IP55, nominal voltage 690 V, nominal cross-section 2,5 mm<sup>2</sup>, 7 entries for cable diameter 5–14 mm.  
Clamshell.  
Dimensions: 75 x 75 x 36,2 mm  
Clear internal dimensions: 65x65x32 mm  
1 cut-out tool for every 10 boxes

## Junction box A 11 with terminal strip

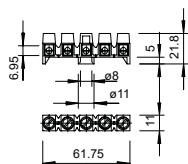


Type	Accessories	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
A 11 5	1 terminal strip	Light grey	85x85x40	75x75x35	10	7.640	2000326

Protection rating IP55, nominal voltage 690 V, nominal cross-section 2,5 mm<sup>2</sup>, 12 entries for cable diameter 5–14 mm.  
Clamshell.  
Dimensions: 85 x 85 x 40 mm  
Clear internal dimensions: 75x75x35 mm  
1 cut-out tool for every 10 boxes

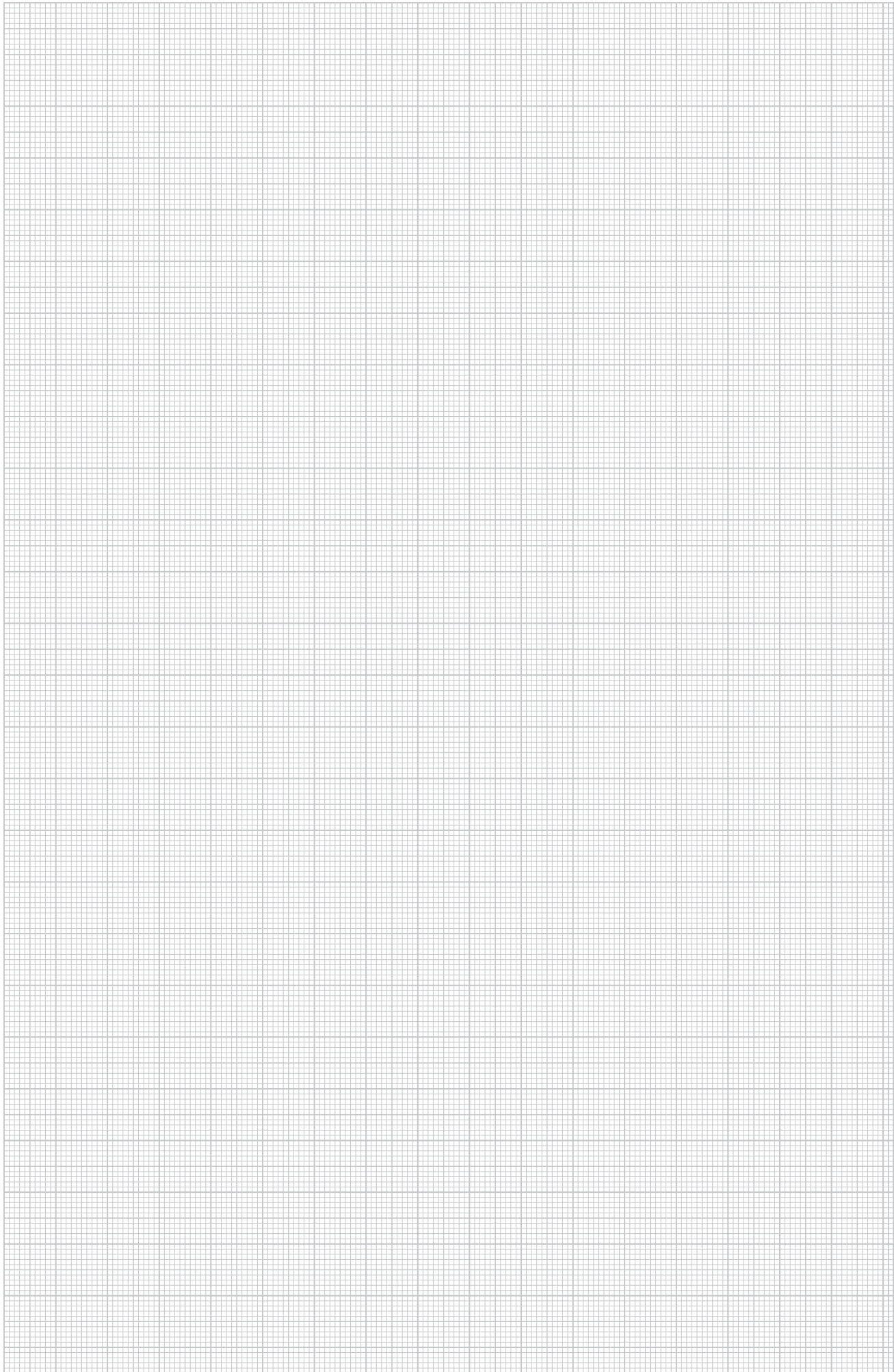
## Terminal strips

### Terminal strip 2.5 mm<sup>2</sup>

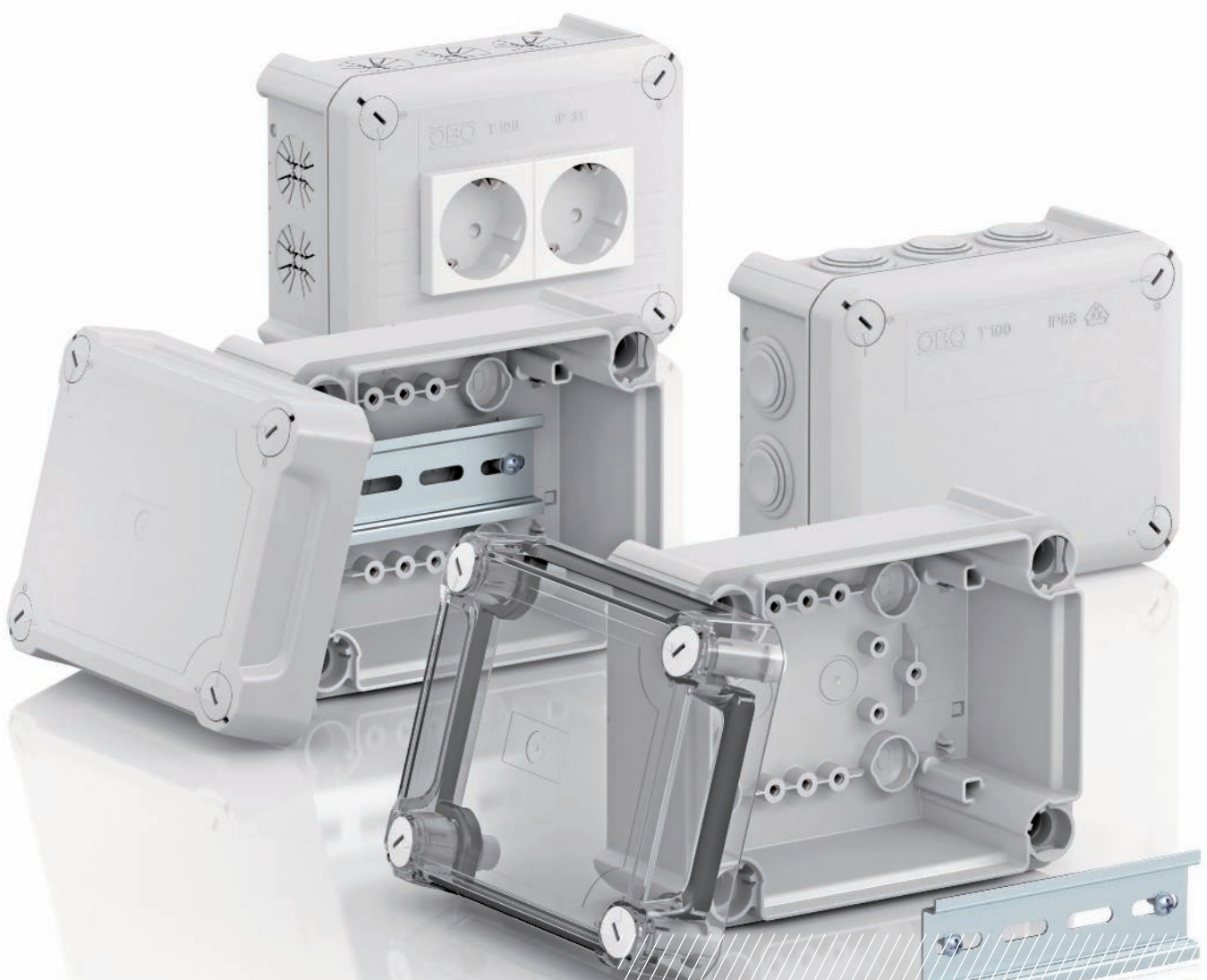


Type	Colour	No. of terminals	Nominal cross-section mm <sup>2</sup>	Nom. V	Pack Piece	Weight kg/100 pc.	Item no.
689	Natural	5	0.8-2.5	660	50	1.502	2017342

Brass terminal block, nickel plated, steel screws, electrogalvanised and transparently passivated, nominal cross section 0.8 ÷ 2.5 mm<sup>2</sup>, nominal voltage 660 V, 5-pin, with socket terminals, max. connectable cross sections per terminal: 4 x 2.5 mm<sup>2</sup>, 5 x 1.5 mm<sup>2</sup> or 6 x 1 mm<sup>2</sup>, unused pins can be disconnected and used as individual terminals.







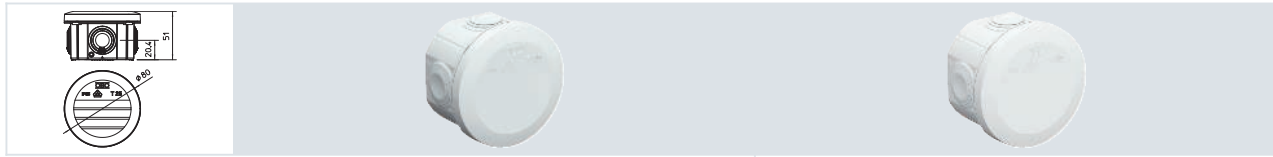
## Junction boxes T series

Intelligence is the natural characteristic of the T series: Our developers have used high-quality materials, sensible wall thicknesses and a stable construction to ensure that the T series can stand up to even the hardest conditions. All the boxes are made of halogen-free polypropylene and do not contain fluorine, chlorine or bromine.

- Wide range: Seven sizes, six variants
- High impermeability of IP 66
- High impact resistance - IK 08
- White variants with UV protection for outdoor use
- Flame-resistant: Standard up to 650 °C, special models up to 960 °C
- Halogen-free: Without chlorine, fluorine or bromine



Junction box T 25, plug-in seal

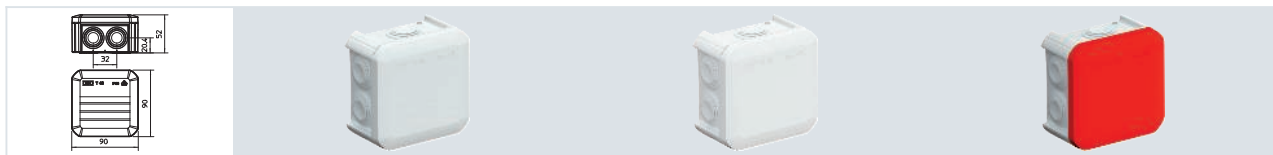


Type	T 25	T 25 RW
Colour	Light grey	Pure white
Entries	4 x M25	4 x M25
Dimension mm	Ø80x51	Ø80x51
Clear internal dimensions mm	Ø63x45	Ø63x45
Pack Piece	5	5
Weight kg/100 pc.	4.190	4.190
<b>Item no.</b>	<b>2007029</b>	<b>2007509</b>

PP Polypropylene

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Round design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option to fasten inside. With fixed clamping cover. Made from halogen-free and UV-stabilised materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.

Junction box T 40, plug-in seal



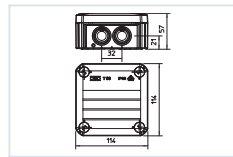
Type	T 40	T 40 RW	T 40 RO-LGR
Colour	Light grey	Pure white	Grey/red
Entries	7 x M25	7 x M25	7 x M25
Dimension LxWxH mm	90x90x52	90x90x52	90x90x52
Clear internal dimensions mm	77x77x46	77x77x46	77x77x46
Pack Piece	5	5	5
Weight kg/100 pc.	6.700	6.700	6.700
<b>Item no.</b>	<b>2007045</b>	<b>2007517</b>	<b>2007630</b>

PP Polypropylene

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Square design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside. With fixed clamping cover. Made from halogen-free and UV-stabilised materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.

## Junction boxes, T series with plug-in seal

### Junction box T 60, plug-in seal

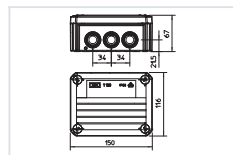


Type	T 60	T 60 RW	T 60 RO-LGR	T60 GR-LGR
Colour	Light grey	Pure white	Grey/red	Grey/green
Entries	7 x M25	7 x M25	7 x M25	7 x M25
Dimension LxWxH mm	114x114x57	114x114x57	114x114x57	114x114x57
Clear internal dimensions mm	100x100x48	100x100x48	100x100x48	100x100x48
Pack Piece	5	5	5	5
Weight kg/100 pc.	12.300	12.300	12.300	12.300
<b>Item no.</b>	<b>2007061</b>	<b>2007525</b>	<b>2007638</b>	<b>2007672</b>

PP Polypropylene

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Square design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilised materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.

### Junction box T 100, plug-in seal

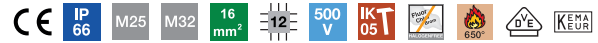


Type	T 100	T 100 RW	T 100 RO-LGR	T 100 M25-M32
Colour	Light grey	Pure white	Grey/red	Light grey
Entries	10 x M25	10 x M25	10 x M25	8 x M25 2 x M32
Dimension LxWxH mm	150x116x67	150x116x67	150x116x67	150x116x67
Clear internal dimensions mm	136x102x57	136x102x57	136x102x57	136x102x57
Pack Piece	1	1	1	1
Weight kg/100 pc.	16.270	16.270	16.270	16.300
<b>Item no.</b>	<b>2007077</b>	<b>2007533</b>	<b>2007644</b>	<b>2007081</b>

PP Polypropylene

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilised materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.

Junction box T 160, plug-in seal



Type	T 160	T 160 RW	T 160 RO-LGR
Colour	Light grey	Pure white	Grey/red
Entries	7 x M25 5 x M32	7 x M25 5 x M32	7 x M25 5 x M32
Dimension LxWxH mm	190x150x77	190x150x77	190x150x77
Clear internal dimensions mm	176x135x67	176x135x67	176x135x67
Pack Piece	1	1	1
Weight kg/100 pc.	30.000	30.000	30.000
<b>Item no.</b>	<b>2007093</b>	<b>2007541</b>	<b>2007649</b>

PP/GF Polypropylene, fibreglass reinforced

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilised materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.

Junction box T 160, with 10xM32 entries



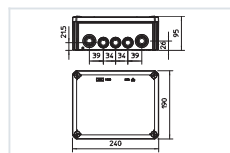
Type	T 160 M32
Colour	Light grey
Entries	10 x M32
Dimension LxWxH mm	190x150x77
Clear internal dimensions mm	176x135x67
Pack Piece	1
Weight kg/100 pc.	30.000
<b>Item no.</b>	<b>2007097</b>

PP/GF Polypropylene, fibreglass reinforced

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilised materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.

## Junction boxes, T series with plug-in seal

### Junction box T 250, plug-in seal

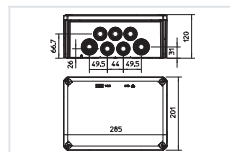


Type	T 250	T 250 RW	T 250 RO-LGR
Colour	Light grey	Pure white	Grey/red
Entries	9 x M25 7 x M32	9 x M25 7 x M32	9 x M25 7 x M32
Dimension LxWxH mm	240x190x95	240x190x95	240x190x95
Clear internal dimensions mm	225x173x86	225x173x86	225x173x86
Pack Piece	1	1	1
Weight kg/100 pc.	50.000	50.000	50.000
<b>Item no.</b>	<b>2007109</b>	<b>2007554</b>	<b>2007657</b>

PP/GF Polypropylene, fibreglass reinforced

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilised materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.

### Junction box T 350, plug-in seal



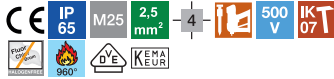
Type	T 350	T 350 RW
Colour	Light grey	Pure white
Entries	16 x M32 8 x M40	16 x M32 8 x M40
Dimension LxWxH mm	285x201x120	285x201x120
Clear internal dimensions mm	267x182x110	267x182x110
Pack Piece	1	1
Weight kg/100 pc.	63.000	63.000
<b>Item no.</b>	<b>2007125</b>	<b>2007568</b>

PP/GF Polypropylene, fibreglass reinforced

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilised materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.



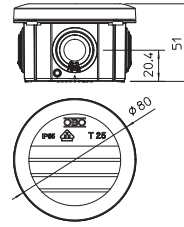
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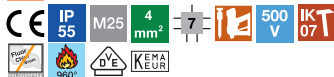
## Junction box T 25, plug-in seal, flame-resistant

Type	Colour	Entries	Dimension mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 25 F	Light grey	4xM25	Ø80x51	Ø63x45	5	4.190	2007312

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Round design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option to fasten inside. With fixed clamping cover. Made from halogen-free materials. Flame-resistant type made from special polypropylene. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695-2-11, test temperature 960 °C. Impact resistance IK07 according to DIN EN 50102.



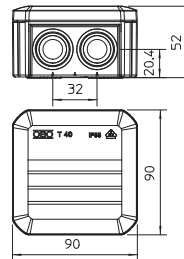
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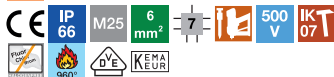
## Junction box T 40, plug-in seal, flame-resistant

Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 40 F	Light grey	7xM25	90x90x52	77x77x46	5	6.700	2007320

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Square design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside. With fixed clamping cover. Flame-resistant type made from special polypropylene. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695-2-11, test temperature 960 °C. Impact resistance IK07 according to DIN EN 50102.



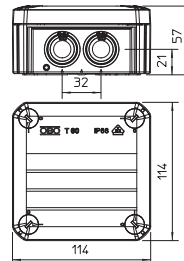
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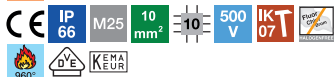
## Junction box T 60, plug-in seal, flame-resistant

Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 60 F	Light grey	7xM25	114x114x57	100x100x48	5	12.300	2007339

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Square design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free materials. Flame-resistant type made from special polypropylene. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695-2-11, test temperature 960 °C. Impact resistance IK07 according to DIN EN 50102.



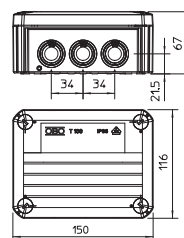
PP



## Junction box T 100, plug-in seal, flame-resistant

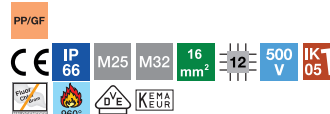
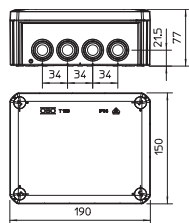
Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 100 F	Light grey	10xM25	150x116x67	136x102x57	1	16.270	2007347

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free materials. Flame-resistant type made from special polypropylene. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695-2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.



# Junction boxes, T series with plug-in seal, flame-resistant

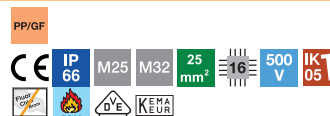
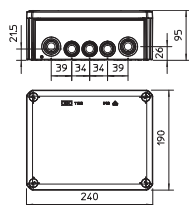
## Junction box T 160, plug-in seal, flame-resistant



Type	Colour	Entries	Dimension	Clear	Pack	Weight	Item no.
			LxWxH mm	internal dimensions mm			
T 160 F	Light grey	7 x M25 5 x M32	190x150x77	176x135x67	1	30.000	2007355

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Flame-resistant type made from special polypropylene. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695-2-11, test temperature 960 °C. Impact resistance IK05 according to DIN EN 50102.

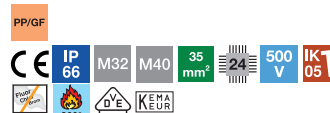
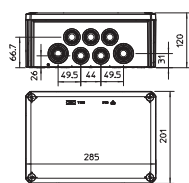
## Junction box T 250, plug-in seal, flame-resistant



Type	Colour	Entries	Dimension	Clear	Pack	Weight	Item no.
			LxWxH mm	internal dimensions mm			
T 250 F	Light grey	9 x M25 7 x M32	240x190x95	225x173x86	1	50.000	2007363

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free materials. Flame-resistant type made from special polypropylene. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695-2-11, test temperature 960 °C. Impact resistance IK05 according to DIN EN 50102.

## Junction box T 350, plug-in seal, flame-resistant



Type	Colour	Entries	Dimension	Clear	Pack	Weight	Item no.
			LxWxH mm	internal dimensions mm			
T 350 F	Light grey	16 x M32 8 x M40	285x201x120	267x182x110	1	63.000	2007371

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free materials. Flame-resistant type made from special polypropylene. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695-2-11, test temperature 960 °C. Impact resistance IK05 according to DIN EN 50102.

# Junction boxes, T series with plug-in seal and terminal strip

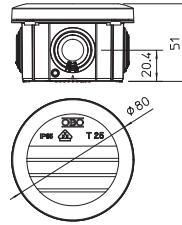
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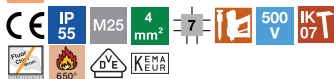
## Junction box T 25, plug-in seal, terminal strip

Type	Colour	Entries	Dimension mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 25 KL	Light grey	4xM25	Ø80x51	Ø63x45	5	6.400	2007430

Junction box with terminal strip for the connection of cables and lines indoors and in protected outdoor areas. Round design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option to fasten inside. With fixed clamping cover. Made from halogen-free and UV-stabilised materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.



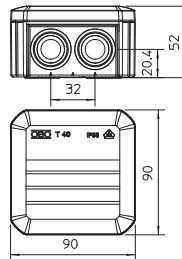
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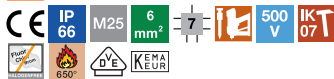
## Junction box T 40, plug-in seal, terminal strip

Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 40 KL	Light grey	7xM25	90x90x52	77x77x46	5	8.900	2007432

Junction box with terminal strip for the connection of cables and lines indoors and in protected outdoor areas. Square design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside. Made from halogen-free and UV-stabilised materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.



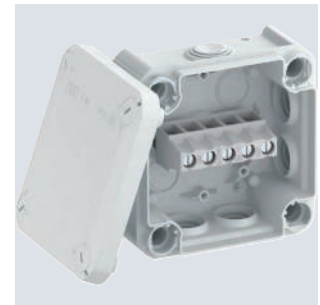
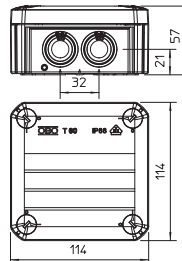
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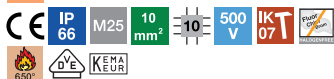
## Junction box T 60, plug-in seal, terminal strip

Type	Entries	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 60 KL	7xM25	Light grey	114x114x57	100x100x48	5	16.700	2007434

Junction box with terminal strip for the connection of cables and lines indoors and in protected outdoor areas. Square design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilised materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.



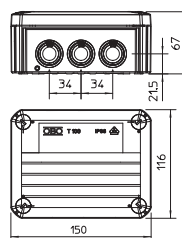
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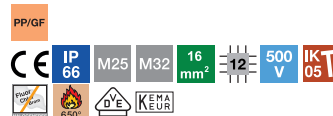
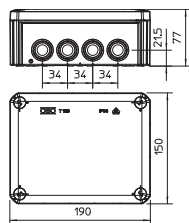
## Junction box T 100, plug-in seal, terminal strip

Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 100 KL	Light grey	10xM25	150x116x67	136x102x57	1	40.000	2007436

Junction box with terminal strip for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilised materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.



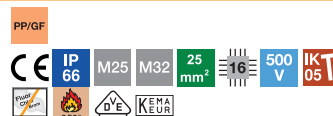
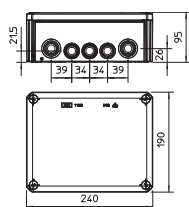
## Junction box T 160, plug-in seal



Type	Colour	Entries	Dimension	Clear	Pack	Weight	Item no.
			LxWxH mm	internal dimensions mm			
T 160 KL	Light grey	7 x M25 5 x M32	190x150x77	176x135x67	1	64.200	2007440

Junction box with terminal strip for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.

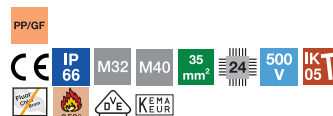
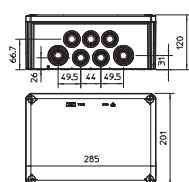
## Junction box T 250, plug-in seal, terminal strip



Type	Colour	Entries	Dimension	Clear	Pack	Weight	Item no.
			LxWxH mm	internal dimensions mm			
T 250 KL	Light grey	9 x M25 7 x M32	240x190x95	225x173x86	1	79.500	2007444

Junction box with terminal strip for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.

## Junction box T 350, plug-in seal, terminal strip



Type	Colour	Entries	Dimension	Clear	Pack	Weight	Item no.
			LxWxH mm	internal dimensions mm			
T 350 KL	Light grey	16 x M32 8 x M40	285x201x120	267x182x110	1	95.700	2007448

Junction box with terminal strip for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.

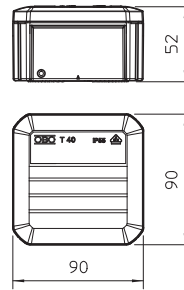
PP



Junction box T 40, closed

Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 40 OE	Light grey	90x90x52	77x77x46	5	6.300	2007223

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Square design without entries. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. With fixed clamping cover. Made from halogen-free and UV-stabilized materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.



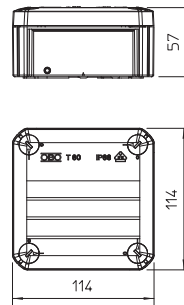
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Junction box T 60, closed

Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 60 OE	Light grey	114x114x57	100x100x46	5	12.000	2007239

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Square design without entries. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK08 according to DIN EN 50102.



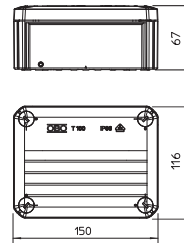
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Junction box T 100, closed

Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 100 OE	Light grey	150x116x67	136x102x57	1	16.200	2007255

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.



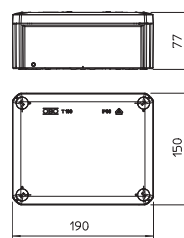
PP/GF



Junction box T 160, closed

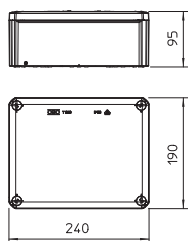
Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 160 OE	Light grey	190x150x77	176x135x67	1	30.000	2007271

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.





## Junction box T 250, closed



PP/GF



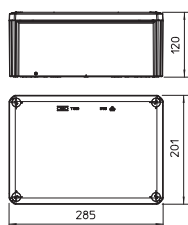
KEMA KEUR

Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 250 OE	Light grey	240x190x95	225x173x86	1	48.300	2007287

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.

## Junction box T 350, closed



PP/GF



KEMA KEUR

Type	Colour	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 350 OE	Light grey	285x201x120	267x182x110	1	58.800	2007303

Closed junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.

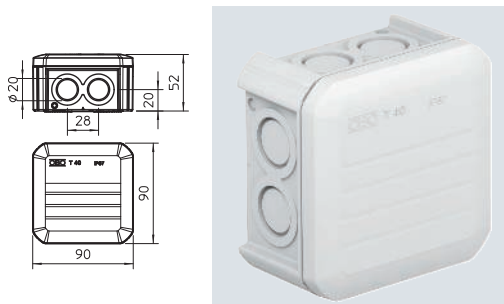
PP



### Junction box T40 with pre-marking, closed

Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 40 M20	Light grey	7 x Ø20	90x90x52	77x77x46	5	6.100	2007900

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Square design with knock-out entries to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. With fixed clamping cover. Made from halogen-free and UV-stabilized materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.



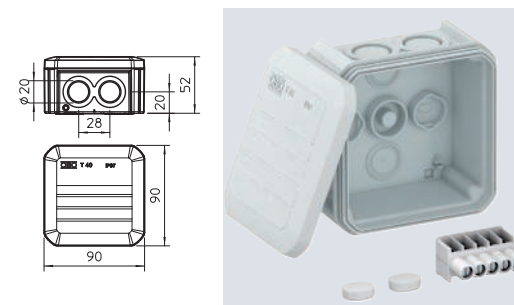
PP



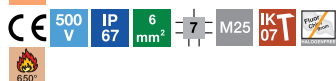
### Junction box T40, with knock-out entries, with terminal strip

Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 40 M20 KL	Light grey	7 x Ø20	90x90x52	77x77x46	5	8.200	2007904

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Square design with knock-out entries to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. With fixed clamping cover. Made from halogen-free and UV-stabilized materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.



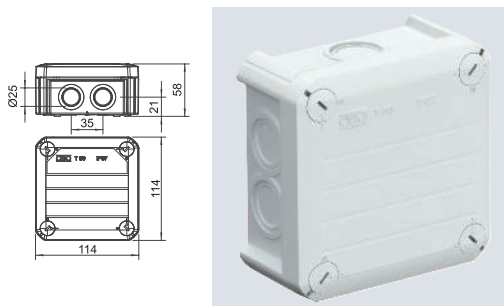
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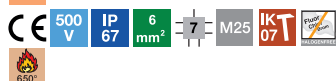
### Junction box T60, with knock-out entries

Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 60 M25	Light grey	7 x Ø25	114x114x57	100x100x48	5	12.300	2007926

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Square design with knock-out entries to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. With fixed clamping cover. Made from halogen-free and UV-stabilized materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.



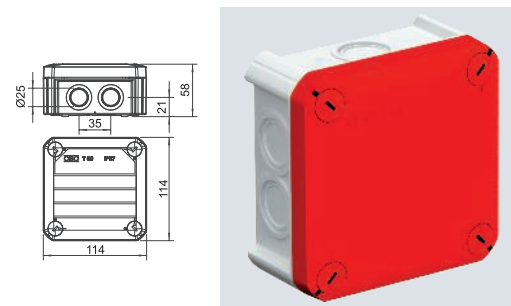
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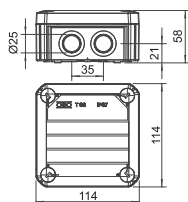
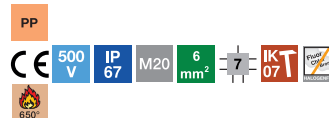
### Junction box T60, with knock-out entries

Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 60 M25 RO-LGR	Grey/red	7 x Ø25	114x114x57	100x100x48	5	12.300	2007927

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Square design with knock-out entries to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. With fixed clamping cover. Made from halogen-free and UV-stabilized materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.



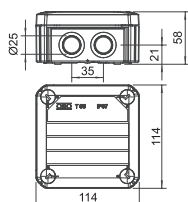
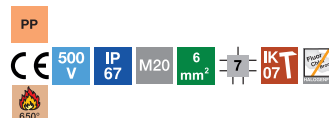
## Junction box T60, with knock-out entries



Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
<b>T 60 M20</b>	Light grey	7 x Ø20	114x114x57	100x100x48	5	12.100	<b>2007910</b>

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Square design with knock-out entries to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. With fixed clamping cover. Made from halogen-free and UV-stabilized materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.

## Junction box T60, with knock-out entries, with terminal strip



Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
<b>T 60 M20 KL</b>	Light grey	7 x Ø20	114x114x57	100x100x48	5	16.500	<b>2007914</b>

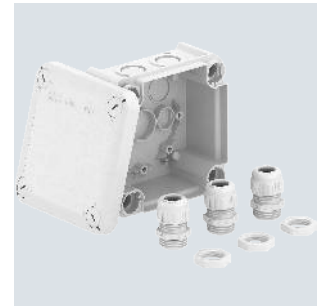
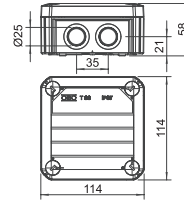
Junction box with terminal strip for the connection of cables and lines indoors and in protected outdoor areas. Square design with knock-out entries to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. With fixed clamping cover. Made from halogen-free and UV-stabilized materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.



## Junction box T60, with knock-out entries and 3 x V-TEC VM20 + locknuts

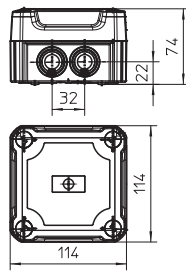
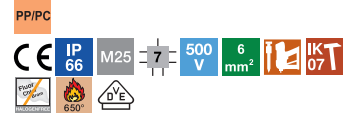
Type	Colour	Entries	Dimension		Pack Piece	Weight kg/100 pc.	Item no.
			LxWxH mm	Clear internal dimensions mm			
T 60 M20 NL	Light grey	7 x Ø20	114x114x57	100x100x48	5	15.100	2007918

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Square design with knock-out entries to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. Including 3 cable glands V-TEC M20 with locknuts. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.



# Junction boxes, T series with raised cover and plug-in seals

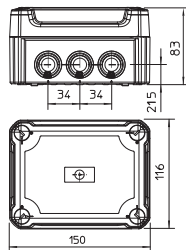
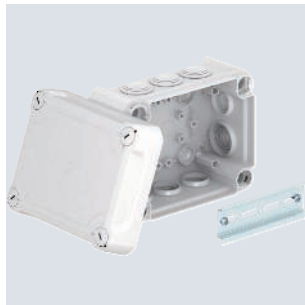
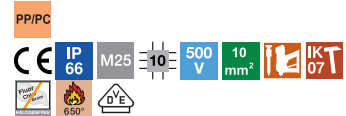
## Junction box T60, plug-in seal, elevated cover



Type	Entries	Dimension	Clear	Pack	Weight	Item no.
		LxWxH mm	internal dimensions mm			
T 60 HD LGR	7xM25	114x114x74	100x100x65	1	17.180	2007710

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Square design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. High cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials.  
With hat profile rail.  
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.

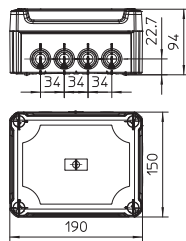
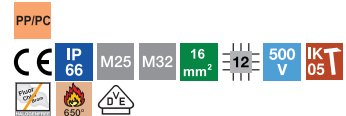
## Junction box T100, plug-in seal, elevated cover



Type	Entries	Dimension	Clear	Pack	Weight	Item no.
		LxWxH mm	internal dimensions mm			
T 100 HD LGR	10xM25	150x116x83	136x102x74	1	22.550	2007712

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials.  
With hat profile rail.  
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.

## Junction box T160, plug-in seal, elevated cover

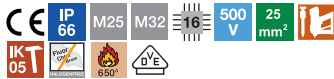


Type	Entries	Dimension	Clear	Pack	Weight	Item no.
		LxWxH mm	internal dimensions mm			
T 160 HD LGR	7xM25 5xM32	190x150x94	176x135x84	1	34.180	2007714

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials.  
With hat profile rail.  
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.



PP/PC

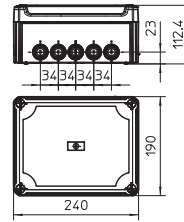


## Junction box T250, plug-in seal, elevated cover

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 250 HD LGR	9xM25 7xM32	240x190x112	225x173x103	1	52.010	2007716

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option to fasten inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. With hat profile rail.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.



PP/PC

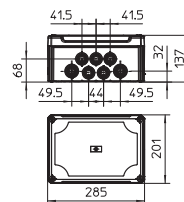


## Junction box T350, plug-in seal, elevated cover

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 350 HD LGR	16xM32 8xM40	285x201x137	267x182x127	1	72.760	2007718

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option to fasten inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. With hat profile rail.

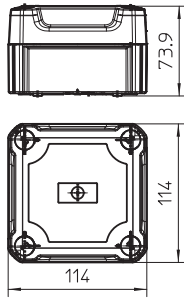
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.



# Junction boxes, T series with raised cover, closed

## Junction box T60, closed, elevated cover

PP/PC

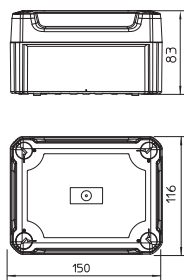


Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 60 OE HD LGR	None	114x114x74	100x100x63	1	16.600	2007730

Closed junction box for the connection of cables and lines indoors and in protected outdoor areas. Square design without entries. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. With hat profile rail.  
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.

## Junction box T100, closed, elevated cover

PP/PC

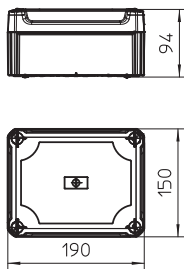


Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 100 OE HD LGR	None	150x116x83	136x102x74	1	23.650	2007732

Closed junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials.  
With hat profile rail.  
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.

## Junction box T160, closed, elevated cover

PP/PC

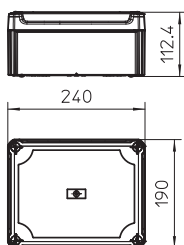


Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 160 OE HD LGR	None	190x150x94	176x135x84	1	33.920	2007734

Closed junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials.  
With hat profile rail.  
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK04 according to DIN EN 50102.

## Junction box T250, closed, elevated cover

PP/PC



Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 250 OE HD LGR	None	240x190x112	225x173x102	1	50.570	2007736

Closed junction box for the connection of cables in indoor and protected outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option of fastening inside and to mount via the corner domes. High cover with quick lock, sealable. Made from halogen-free, UV-stabilized materials.  
With hat profile rail.  
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.

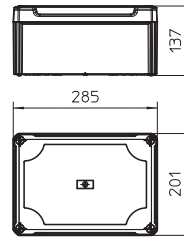
PP/PC



## Junction box T350, closed, elevated cover

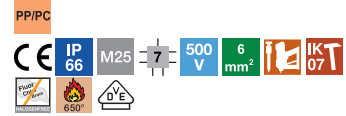
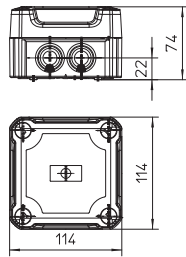
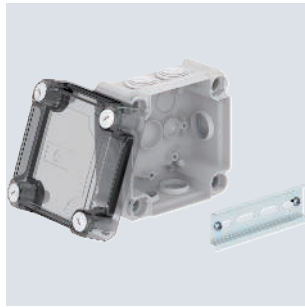
Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
<b>T 350 OE HD LGR</b>	None	285x201x137	267x182x127	1	68.660	<b>2007738</b>

Closed junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option to fasten inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. With hat profile rail. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.



# Junction boxes, T series with raised transparent cover and plug-in seal

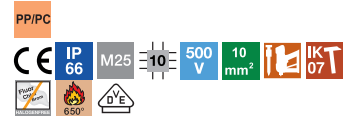
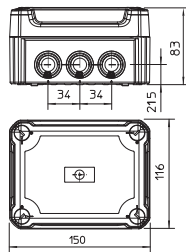
## Junction box T60, with plug-in seal, transparent elevated cover



Type	Entries	Dimension	Clear	Pack	Weight	Item no.
		LxWxH mm	internal dimensions mm			
T 60 HD TR	7xM25	114x114x74	100x100x65	1	17.180	2007750

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Square design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. High cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. With hat profile rail. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.

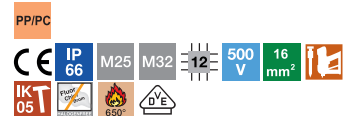
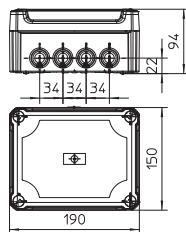
## Junction box T100, with plug-in seal, transparent elevated cover



Type	Entries	Dimension	Clear	Pack	Weight	Item no.
		LxWxH mm	internal dimensions mm			
T 100 HD TR	10xM25	150x116x83	136x102x74	1	22.550	2007752

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. With hat profile rail. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.

## Junction box T160, with plug-in seal, transparent elevated cover

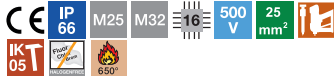


Type	Entries	Dimension	Clear	Pack	Weight	Item no.
		LxWxH mm	internal dimensions mm			
T 160 HD TR	7xM25 5xM32	190x150x94	176x135x84	1	34.180	2007754

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. With hat profile rail. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.

# Junction boxes, T series with raised transparent cover and plug-in seal

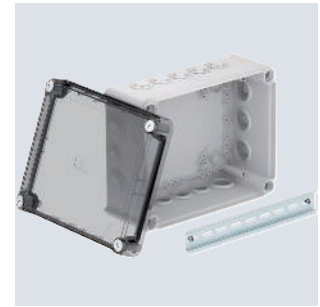
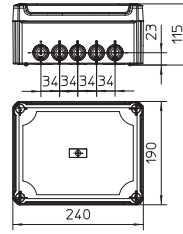
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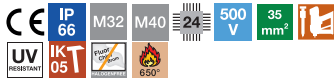
## Junction box T250, with plug-in seal, transparent elevated cover

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
<b>T 250 HD TR</b>	9xM25 7xM32	240x190x112	225x173x103	1	52.010	<b>2007756</b>

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option to fasten inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. With hat profile rail.  
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.



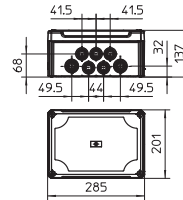
PP/PC



## Junction box T350, with plug-in seal, transparent elevated cover

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
<b>T 350 HD TR</b>	16xM32 8xM40	285x201x137	267x182x127	1	72.760	<b>2007758</b>

Junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design with plug-in seals. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option to fasten inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. With hat profile rail.  
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.

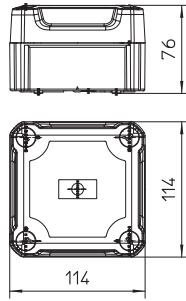
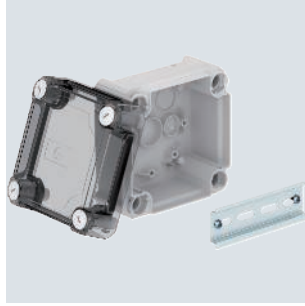




# Junction boxes, T series with raised transparent cover, closed

## Junction box T60, closed, transparent elevated cover

PP/PC

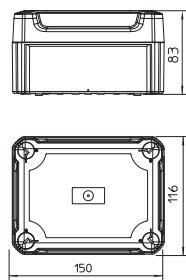


Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 60 OE HD TR	None	114x114x74	100x100x63	1	16.600	2007770

Closed junction box for the connection of cables and lines indoors and in protected outdoor areas. Square design without entries. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials. With hat profile rail.  
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.

## Junction box T100, closed, transparent elevated cover

PP/PC

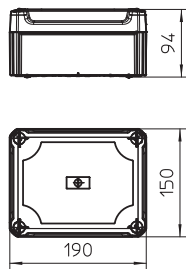
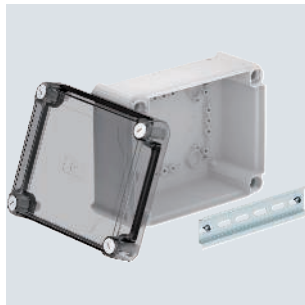


Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 100 OE HD TR	None	150x116x83	136x102x74	1	23.650	2007772

Closed junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials.  
With hat profile rail.  
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.

## Junction box T160, closed, transparent elevated cover

PP/PC

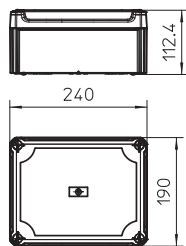


Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 160 OE HD TR	None	190x150x94	176x135x84	1	33.920	2007774

Closed junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials.  
With hat profile rail.  
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK04 according to DIN EN 50102.

## Junction box T250, closed, transparent elevated cover

PP/PC



Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 250 OE HD TR	None	240x190x112	225x173x102	1	50.570	2007776

Closed junction box for the connection of cables in indoor and protected outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option of fastening inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free, UV-stabilised materials.  
With hat profile rail.  
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.

PP/PC



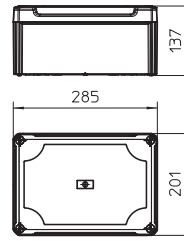
### Junction box T350, closed, transparent elevated cover

Type	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
<b>T 350 OE HD TR</b>	None	285x201x137	267x182x127	1	68.660	<b>2007778</b>

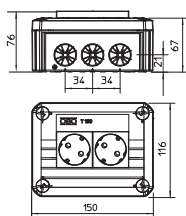
Closed junction box for the connection of cables and lines indoors and in protected outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting, on mounting panels and threads in the floor. With the option to fasten inside and to mount via the corner domes. High, transparent cover with quick lock, sealable. Made from halogen-free and UV-stabilized materials.

With hat profile rail.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK05 according to DIN EN 50102.



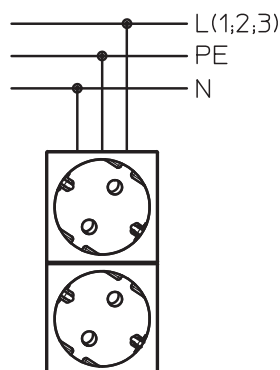
## Junction box T100, 2 Modul 45 sockets in cover, 1-pin



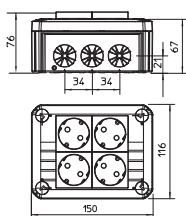
Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 100 2MSD WS	Light grey	10	150x116x67	136x102x57	1	25.850	2007821

Junction box for the connection of cables indoors and in protected outdoor areas. Rectangular design with knock-out entries to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option of fastening inside and to mount via the corner domes. Cover with quick lock, sealable with retainer and 2 Modul45 sockets. Made from halogen-free and UV-stabilized materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C.

### Connection options



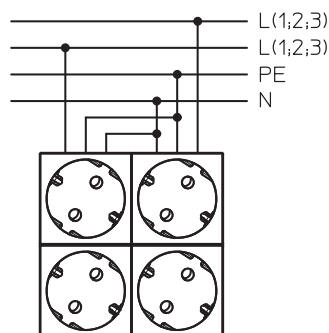
## T 100 junction box, 4 Modul 45 sockets in cover, 2-pole



Type	Colour	Entries	Dimension LxWxH mm	Clear internal dimensions mm	Pack Piece	Weight kg/100 pc.	Item no.
T 100 4MSD WS	Light grey	10	150x116x67	136x102x57	1	35.200	2007825

Junction box for the connection of cables indoors and in protected outdoor areas. Rectangular design with knock-out entries to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside and to mount via the corner domes. Cover with quick-lock, sealable with retainer and 4 Modul45 sockets. Made from halogen-free and UV-stabilized materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C.

### Connection options



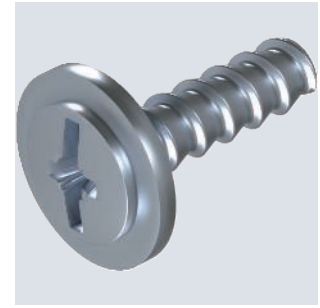
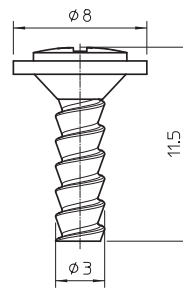
St G



Type	Pack Piece	Weight kg/100 pc.	Item no.
T-S MST	100	0.090	2007831

Metal fastening pin for fastening the T series onto mounting plates or other thin-walled supporting structures. Mounted by simply pressing the bolt into the fastening holes in the T series. Easy removal with a screw thread.

### Fastening pin for mounting plates



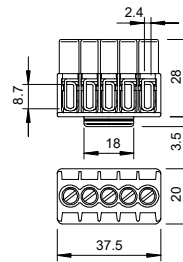
PA



Type	Colour	No. of terminals	Nominal cross-section mm <sup>2</sup>	Nom. V	Pack Piece	Weight kg/100 pc.	Item no.
KL-T 01-04	Light grey	5	1-4	400	10	2.100	2016180

Terminals and screws made of steel, galvanised and transparent-chromated, nominal cross-section 1 ÷ 4 mm<sup>2</sup>, rated voltage 400 V, five-pole, with socket terminals, max. connectable cross-sections per terminal: 4x2.5 mm<sup>2</sup>, 5x1.5 mm<sup>2</sup> or 6x1 mm<sup>2</sup>.

### Terminal strip 1–4 mm<sup>2</sup>, junction box, T series



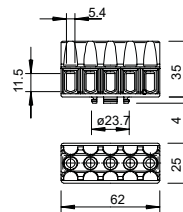
PA



Type	Colour	No. of terminals	Nominal cross-section mm <sup>2</sup>	Nom. V	Pack Piece	Weight kg/100 pc.	Item no.
KL-T 02-06	Light grey	5	1.5-6	400	10	4.380	2016185

Terminals and screws made of steel, galvanised and transparent-chromated, nominal cross-section 1.5 ÷ 6 mm<sup>2</sup>, rated voltage 400 V, five-pole, with socket terminals, max. connectable cross-sections per terminal: 3x6 mm<sup>2</sup>, 4x4 mm<sup>2</sup> or 6x2.5 mm<sup>2</sup>.

### Terminal strip 1.5–6 mm<sup>2</sup>, junction box, T series, X series



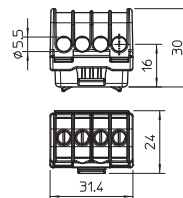
PA



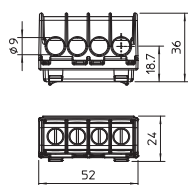
Type	Colour	No. of terminals	Nominal cross-section mm <sup>2</sup>	Nom. V	Pack Piece	Weight kg/100 pc.	Item no.
KL-T 06-16	Light grey	4	6-16	400	10	1.970	2016190

Brass terminals, steel screws, electrogalvanised and transparently passivated, nominal cross-section 6 ÷ 16 mm<sup>2</sup>, nominal voltage 400 V, 1-pin, with terminal sockets, max. connectable conductor per terminal 4 x 16 mm<sup>2</sup>, 4 x 10 mm<sup>2</sup>, 8 x 6 mm<sup>2</sup> or 12 x 4 mm<sup>2</sup>.

### Terminal strip 6–16 mm<sup>2</sup>, junction box, T series, X series



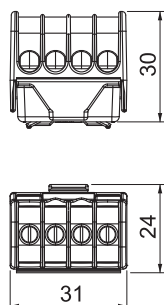
### Terminal strip 16–35 mm<sup>2</sup>, junction box, T series, X series



Type	Colour	No. of terminals	Nominal cross-section mm <sup>2</sup>	Nom. V	Pack Piece	Weight kg/100 pc.	Item no.
KL-T 16-35	Light grey	4	16-35	400	10	5.630	2016195

Brass terminals, steel screws, electrogalvanised and transparently passivated, nominal cross-section 16 ÷ 35 mm<sup>2</sup>, nominal voltage 400 V, 1-pin, with terminal sockets, max. connectable conductor per terminal 4 x 35 mm<sup>2</sup>, 4 x 25 mm<sup>2</sup>, 8 x 16 mm<sup>2</sup> or 12 x 10 mm<sup>2</sup>.

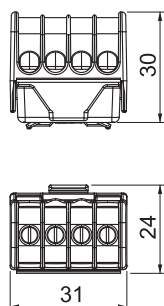
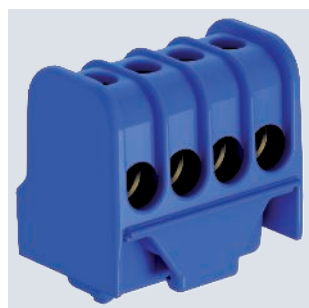
### Protective conductor terminal, with screw contacts, 4 terminals



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
KL-DBS4x16GN	Green	10	1.980	2016250

Protective conductor connection terminal strip, brass, steel screws, electrogalvanised and transparently passivated, nominal cross-section 6 ÷ 16 mm<sup>2</sup>, nominal voltage 400 V, 1-pole, with terminal sockets, max. connectable conductors per terminal 4 x 16 mm<sup>2</sup>, 4 x 10 mm<sup>2</sup>, 8 x 6 mm<sup>2</sup> or 12 x 4 mm<sup>2</sup>.

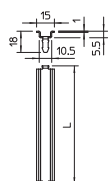
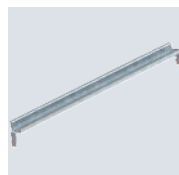
### Neutral conductor terminal, with screw contacts, 4 terminals



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
KL-DBN4x16BL	Blue	10	1.980	2016255

Neutral conductor connection terminal, brass, steel screws, electrogalvanised and transparently passivated, nominal cross-section 6 ÷ 16 mm<sup>2</sup>, nominal voltage 400 V, 1-pole, with terminal sockets, max. connectable conductors per terminal 4 x 16 mm<sup>2</sup>, 4 x 10 mm<sup>2</sup>, 8 x 6 mm<sup>2</sup> or 12 x 4 mm<sup>2</sup>.

### Hat profile rail 15 x 5 mm



Type	Version	Length mm	Pack Piece	Weight kg/100 pc.	Item no.
46277 T160 Q GTP	For T160 crosswise + T100 lengthwise	99	10	1.770	1115270
46277 T250 Q GTP	For T250 crosswise + T160 lengthwise	139	10	2.500	1115274
46277 T250 L GTP	For T 250 lengthwise	189	10	3.270	1115278
46277 T350 Q GTP	For T 350 crosswise	161	10	2.767	1115282
46277 T350 L GTP	For T 350 lengthwise	168	10	3.000	1115286

Hat profile rail 15 x 5 mm to DIN EN 60715 (formerly DIN EN 50045).

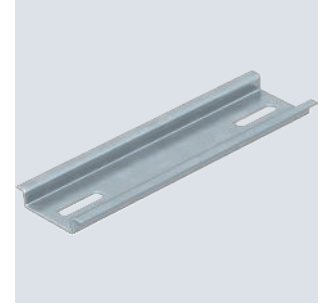
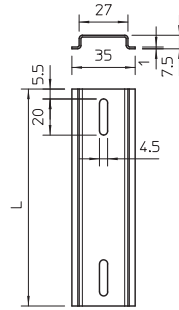




Hat profile rail 35 x 7.5 mm

Type	Version	Length mm	Pack Piece	Weight kg/100 pc.	Item no.
2069 T100 GTP	For T100 lengthwise + T160 crosswise	118	10	4.140	1115382
2069 T160 GTP	For T160 lengthwise + T250, T350 crosswise	157	10	5.520	1115384
2069 T250 GTP	For T250 lengthwise	206	10	7.107	1115386
2069 T350 GTP	For T350 lengthwise	245	10	8.450	1115388
2069 T60 GTP	For T60 lengthwise + T100 crosswise	89	10	3.070	1115380

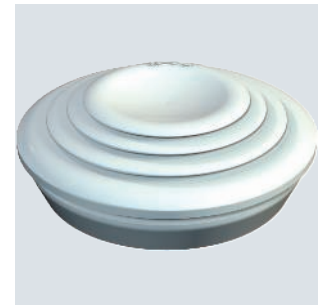
Hat profile rail 35 x 7.5 mm to DIN EN 60715 (formerly DIN EN 50022).



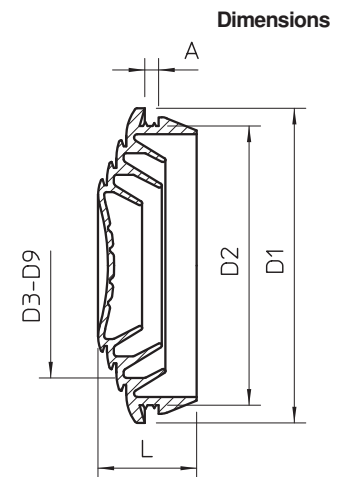
EDK plug-in seal

Type	For Ø Size mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
EDK 25 LGR	M25 0-22	Light grey	100	0.214	2011638
EDK 32 LGR	M32 0-27	Light grey	50	0.328	2011646
EDK 40 LGR	M40 0-34	Light grey	25	0.534	2011654
EDK 25 RW	M25 0-22	Pure white	100	0.214	2011689
EDK 32 RW	M32 0-27	Pure white	50	0.328	2011697
EDK 40 RW	M40 0-34	Pure white	25	0.534	2011700

The plug-in seal can be cut back to suit the relevant cable diameter.



Type	Dim. L mm	Dim. A mm	Dim. D1 mm	Dim. D2 mm	Dim. D3 mm	Dim. D4 mm	Dim. D5 mm	Dimension D6 mm	Dimension D7 mm	Dimension D8 mm	Dimension D9 mm
EDK 25 LGR	10.1	2.2	29.5	25.4	5	10	15	18	22	-	-
EDK 32 LGR	11.4	2.2	36.4	32.3	5	10	15	18	22	27	-
EDK 40 LGR	13.4	2.2	44.1	40.2	5	10	15	18	22	27	34
EDK 25 RW	10.1	2.2	29.5	25.4	5	10	15	18	22	-	-
EDK 32 RW	11.4	2.2	36.4	32.3	5	10	15	18	22	27	-
EDK 40 RW	13.4	2.2	44.1	40.2	5	10	15	18	22	27	34



Plug-in seal for pipes, T-series junction box, light grey

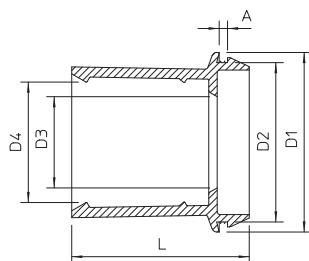
TPE  
IP 55 M25 M32 M40



Type	Size	Colour	Pack Piece	Weight kg/100 pc.	Item no.
EDR 25 16-20 LGR	M25	Light grey	50	0.520	2011506
EDR 25 20-25 LGR	M25	Light grey	50	0.680	2011514
EDR 32 25-32 LGR	M32	Light grey	50	1.170	2011530
EDR 40 32-40 LGR	M40	Light grey	25	2.200	2011546

Plug-in seal for junction boxes for direct insertion of metric pipes

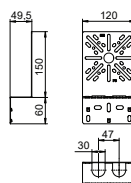
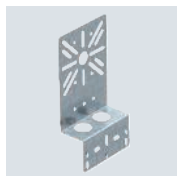
Dimensions



Type	Dim. L	Dim. A	Dim. D1	Dim. D2	Dim. D3	Dim. D4
	mm	mm	mm	mm	mm	mm
EDR 25 16-20 LGR	30	2.2	29.5	25.3	15	18.4
EDR 25 20-25 LGR	30	2.2	29.5	25.3	18.5	24.2
EDR 32 25-32 LGR	36	2.2	37	32.3	24	31.2
EDR 40 32-40 LGR	49	2.2	46	42.3	31	39.2

Mounting plate, angled

St FS DD

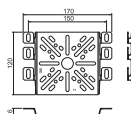


Type	Height mm	Width mm	Pack Piece	Weight kg/100 pc.	Item no.
MP WI KL. FS	210	120	1	20.200	7084765
MP WI KL. DD	210	120	1	20.200	7085111

Please order the truss-head bolt, type FRS B6 x 12, separately.  
Curved mounting plate, for fixing on the side rail of the cable tray.

Mounting plate

St FS



Type	Height mm	Width mm	Pack Piece	Weight kg/100 pc.	Item no.
MP UNI FS	120	170	1	13.300	7084773

Please order the truss-head bolt, type FRSB 6 x 12, separately.  
Mounting plate, for fastening on the side rail of cable support systems.



# X-TREME

The X series of the junction boxes

**Robust and impact-resistant**

**For outdoor applications and the toughest conditions**

**Simple and flexible installation**

**Tested according to DIN EN 60670 Part 1 and 22**

With the new X series, OBO Bettermann can offer a range of junction boxes and empty housings that can withstand even the toughest impacts. The use of special plastics based on high-quality polycarbonate allows the X series to meet the requirements for the highest level of impact resistance, achieving the protection rating of IK09.

**IK  
09**

## Junction box X 01



Type	X01 LGR	X01 LGR-TR	X01 SW	X01 SW-RO
Colour	Light grey	Grey/transparent	Graphite black	Black/red
Entries	7 x Ø20	7 x Ø20	7 x Ø20	7 x Ø20
Dimension LxWxH mm	95x95x60	95x95x60	95x95x60	95x95x60
Clear internal dimensions mm	85x85x45	85x85x45	85x85x45	85x85x45
Pack Piece	1	1	1	1
Weight kg/100 pc.	16.000	16.000	16.000	16.000
<b>Item no.</b>	<b>2005000</b>	<b>2005050</b>	<b>2005110</b>	<b>2005140</b>

PC Polycarbonate

Junction box for the connection of cables and lines indoors and in outdoor areas. Square design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

## Junction box X 02



Type	X02 LGR	X02 LGR-TR	X02 SW	X02 SW-RO
Colour	Light grey	Grey/transparent	Graphite black	Black/red
Entries	7 x Ø20	7 x Ø20	7 x Ø20	7 x Ø20
Dimension LxWxH mm	95x95x72	95x95x72	95x95x72	95x95x72
Clear internal dimensions mm	85x85x57	85x85x57	85x85x57	85x85x57
Pack Piece	1	1	1	1
Weight kg/100 pc.	17.800	17.800	17.800	17.800
<b>Item no.</b>	<b>2005004</b>	<b>2005054</b>	<b>2005114</b>	<b>2005144</b>

PC Polycarbonate

Junction box for the connection of cables and lines indoors and in outdoor areas. Square design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.



# Junction boxes, X series with knock-out entries and plug-in seals

## Junction box X 04



Type	X04 LGR	X04 LGR-TR	X04 SW	X04 SW-RO
Colour	Light grey	Grey/transparent	Graphite black	Black/red
Entries	7 x Ø20/25	7 x Ø20/25	7 x Ø20/25	7 x Ø20/25
Dimension LxWxH mm	114x114x78	114x114x78	114x114x78	114x114x78
Clear internal dimensions mm	102x102x60	102x102x60	102x102x60	102x102x60
Pack Piece	1	1	1	1
Weight kg/100 pc.	26.600	26.600	26.600	26.600
<b>Item no.</b>	<b>2005008</b>	<b>2005058</b>	<b>2005118</b>	<b>2005148</b>

PC Polycarbonate

Junction box for the connection of cables and lines indoors and in outdoor areas. Square design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

## Junction box X 06



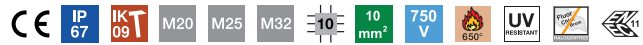
Type	X06 LGR	X06 LGR-TR	X06 SW	X06 SW-RO
Colour	Light grey	Grey/transparent	Graphite black	Black/red
Entries	4 x Ø20/25, 4 x Ø20/25/32	4 x Ø20/25, 4 x Ø20/25/32	4 x Ø20/25, 4 x Ø20/25/32	4 x Ø20/25, 4 x Ø20/25/32
Dimension LxWxH mm	151x117x87	151x117x87	151x117x87	151x117x87
Clear internal dimensions mm	137x105x68	137x105x68	137x105x68	137x105x68
Pack Piece	1	1	1	1
Weight kg/100 pc.	33.500	33.500	33.500	33.500
<b>Item no.</b>	<b>2005012</b>	<b>2005062</b>	<b>2005122</b>	<b>2005152</b>

PC Polycarbonate

Junction box for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

## Junction box X 10



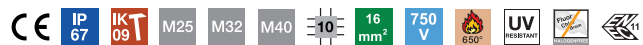
Type	X10 LGR	X10 LGR-TR	X10 SW	X10 SW-RO
Colour	Light grey	Grey/transparent	Graphite black	Black/red
Entries	10 x Ø20/25/32	10 x Ø20/25/32	10 x Ø20/25/32	10 x Ø20/25/32
Dimension LxWxH mm	191x151x126	191x151x126	191x151x126	191x151x126
Clear internal dimensions mm	177x137x110	177x137x110	177x137x110	177x137x110
Pack Piece	1	1	1	1
Weight kg/100 pc.	59.200	59.200	59.200	59.200
<b>Item no.</b>	<b>2005016</b>	<b>2005066</b>	<b>2005126</b>	<b>2005156</b>

PC Polycarbonate

Junction box for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

## Junction box X 16



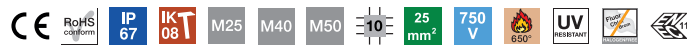
Type	X16 LGR	X16 LGR-TR	X16 SW	X16 SW-RO
Colour	Light grey	Grey/transparent	Graphite black	Black/red
Entries	10 x Ø25/32/40	10 x Ø25/32/40	10 x Ø25/32/40	10 x Ø25/32/40
Dimension LxWxH mm	241x191x126	241x191x126	241x191x126	241x191x126
Clear internal dimensions mm	227x177x110	227x177x110	227x177x110	227x177x110
Pack Piece	1	1	1	1
Weight kg/100 pc.	79.300	79.300	79.300	79.300
<b>Item no.</b>	<b>2005020</b>	<b>2005070</b>	<b>2005130</b>	<b>2005160</b>

PC Polycarbonate

Junction box for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

# Junction boxes, X series with knock-out entries and plug-in seals

## Junction box X 25



Type	X25 LGR	X25 LGR-TR	X25 SW	X25 SW-RO
Colour	Light grey	Grey/transparent	Graphite black	Black/red
Entries	10 x Ø25/40/50	10 x Ø25/40/50	10 x Ø25/40/50	10 x Ø25/40/50
Dimension LxWxH mm	286x202x126	286x202x126	286x202x126	286x202x126
Clear internal dimensions mm	271x187x110	271x187x110	271x187x110	271x187x110
Pack Piece	1	1	1	1
Weight kg/100 pc.	96.500	96.500	96.500	96.500
<b>Item no.</b>	<b>2005024</b>	<b>2005074</b>	<b>2005134</b>	<b>2005164</b>

PC Polycarbonate

Junction box for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK08. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.  
 Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK08 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

# Junction boxes, X series with knock-out entries and main cable junction terminal

PC



## Junction box X 06 with main terminal block

Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X06 H25 GP4 LGR	Light grey	4 x Ø20/25, 4 x Ø20/25/32	1	56.800	2005304

Junction box with terminal for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

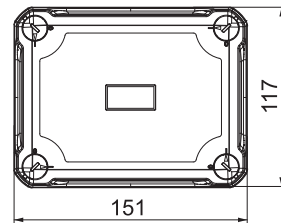
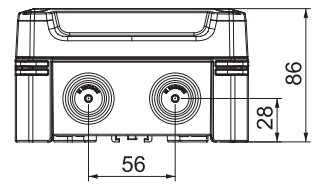
Including 4-pole main terminal block with 2 x 35 mm<sup>2</sup> + 2 x 16 mm<sup>2</sup> cable connection cross-sections per pole. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

In addition, a 4-pin main terminal block with 2 x 25 mm<sup>2</sup> + 2 x 16 mm<sup>2</sup> conductor connection cross-sections per pin is included.



Type	Dimension LxWxH mm	Clear internal dimensions mm
X06 H25 GP4 LGR	151x117x87	137x105x68

### Dimensions



# Junction boxes, X series with knock-out entries and main cable junction terminal

## Junction box X 10 with main terminal block

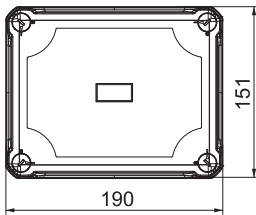
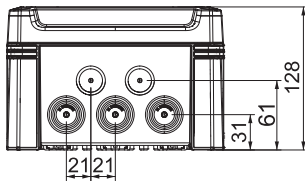


Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X10 H25 GNP5 LGR	Light grey	10 x Ø20/25/32	1	104.000	2005308

Junction box for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials. Including 5-pole main terminal block with 2 x 25 mm<sup>2</sup> + 2 x 16 mm<sup>2</sup> cable connection cross-sections per pole. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

In addition, a 5-pin main conductor branch terminal with 2 x 25 mm<sup>2</sup> + 2 x 16 mm<sup>2</sup> conductor connection cross-sections per pin is included.

### Dimensions



Type	Dimension LxWxH mm	Clear internal dimensions mm
X10 H25 GNP5 LGR	191x151x126	177x137x110



# Junction boxes, X series with knock-out entries and main cable junction terminal

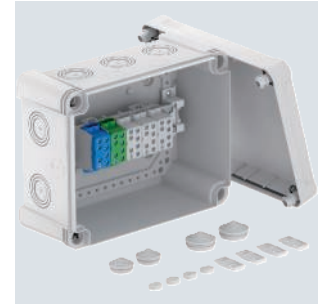
PC



## Junction box X 16 with main terminal block

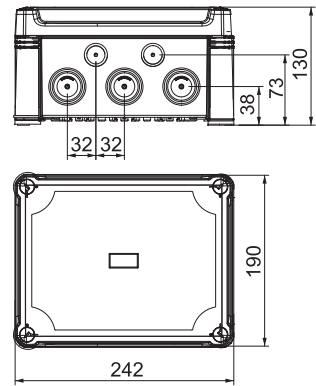
Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X16 H25 GNP5 LGR	Light grey	10 x Ø25/32/40	1	111.000	2005312
X16 H35 GNP5 LGR	Light grey	10 x Ø25/32/40	1	125.000	2005316

Junction box for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials. Including 5-pole main terminal block with 2 x 25 mm<sup>2</sup> + 2 x 16 mm<sup>2</sup> cable connection cross-sections per pole. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.



Type	Dimension LxWxH mm	Clear internal dimensions mm
X16 H25 GNP5 LGR	241x191x126	227x177x110
X16 H35 GNP5 LGR	241x191x126	227x177x110

### Dimensions



PC



## Junction box X 25 with main terminal block

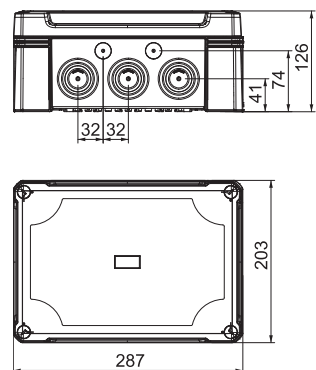
Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X25 H35 GNP5 LGR	Light grey	10 x Ø25/40/50	1	145.000	2005320
X25 H50 GNP5 LGR	Light grey	10 x Ø25/40/50	1	165.000	2005324

Junction box for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK08. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials. Including 7-pole main terminal block with 2 x 35 mm<sup>2</sup> + 2 x 25 mm<sup>2</sup> cable connection cross-sections per pole. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK08 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.



Type	Dimension LxWxH mm	Clear internal dimensions mm
X25 H35 GNP5 LGR	286x202x126	271x187x110
X25 H50 GNP5 LGR	286x202x126	271x187x110

### Dimensions



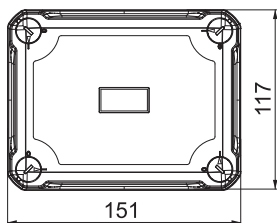
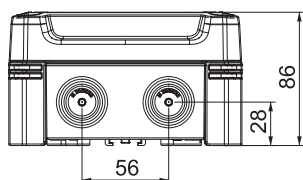
## Junction box X 06 with hat profile rail



Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X06 R LGR-TR	Grey/transparent	4 x Ø20/25, 4 x Ø20/25/32	1	37.600	2005092

Junction box with hat profile rail for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Transparent cover with quick lock, sealable. Made from halogen-free and UV-resistant materials. With hat profile rail type 2069. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

### Dimensions



Type	Dimension LxWxH mm	Clear internal dimensions mm
X06 R LGR-TR	151x117x87	137x105x68

PC



## Junction box X 10 with hat profile rail

Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X10 R LGR-TR	Grey/transparent	10 x Ø20/25/32	1	65.600	2005096

Junction box with hat profile rail for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Transparent cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

With hat profile rail type 2069.

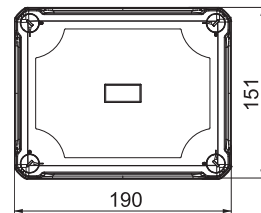
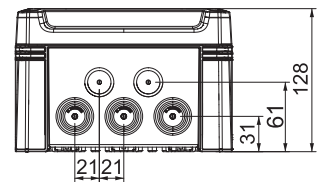
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

With transparent cover and hat profile rail, type 2069, with fastening set.



Type	Dimension LxWxH mm	Clear internal dimensions mm
X10 R LGR-TR	191x151x126	177x137x110

### Dimensions



PC



## Junction box X 16 with hat profile rail

Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X16 R LGR-TR	Grey/transparent	10 x Ø25/32/40	1	87.300	2005100

Junction box with hat profile rail for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Transparent cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

With hat profile rail type 2069.

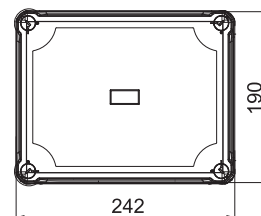
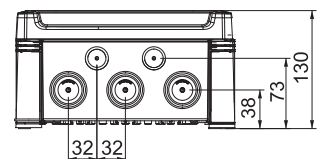
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

With transparent cover and hat profile rail, type 2069, with fastening set.



Type	Dimension LxWxH mm	Clear internal dimensions mm
X16 R LGR-TR	241x191x126	227x177x110

### Dimensions



## Junction box X 25 with hat profile rail



Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X25 R LGR-TR	Grey/transparent	10 x Ø25/40/50	1	107.000	2005104

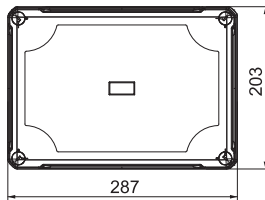
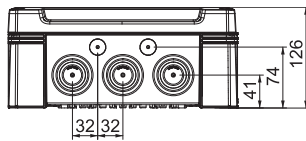
Junction box with hat profile rail for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK08. Transparent cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

With hat profile rail type 2069.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK08 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

With transparent cover and hat profile rail, type 2069, with fastening set.

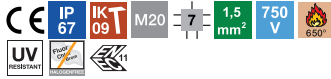
### Dimensions



Type	Dimension LxWxH mm	Clear internal dimensions mm
X25 R LGR-TR	286x202x126	271x187x110

# Junction boxes, X series with knock-out entries and cable glands

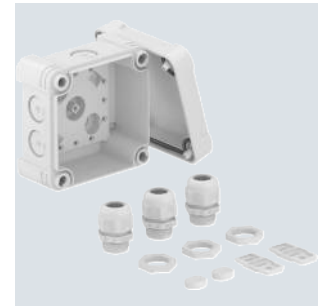
PC



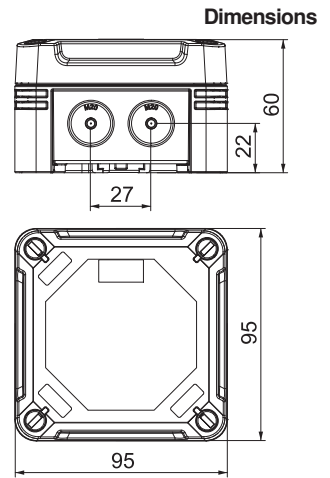
## Junction box X 01 with cable gland

Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X01 G M20 LGR	Light grey	7 x Ø20	1	19.000	2005030

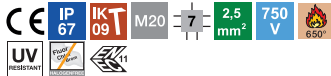
Junction box for the connection of cables and lines indoors and in outdoor areas. Square design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials. Including 3 cable glands V-TEC M20 and 3 locknuts. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.



Type	Dimension LxWxH mm	Clear internal dimensions mm
X01 G M20 LGR	95x95x60	85x85x45



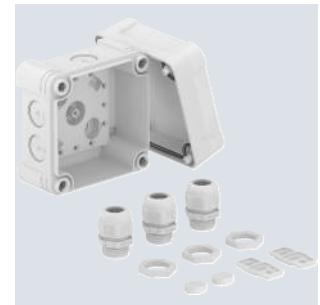
PC



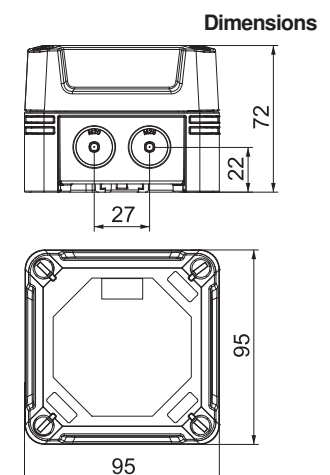
## Junction box X 02 with cable gland

Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X02 G M20 LGR	Light grey	7 x Ø20	1	21.500	2005032

Junction box for the connection of cables and lines indoors and in outdoor areas. Square design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials. Including 3 cable glands V-TEC M20 and 3 locknuts. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.



Type	Dimension LxWxH mm	Clear internal dimensions mm
X02 G M20 LGR	95x95x72	85x85x57





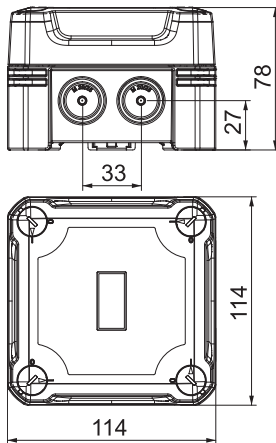
## Junction box X 04 with cable gland



Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X04 G M20 LGR	Light grey	7 x Ø20/25	1	31.400	2005034

Junction box for the connection of cables and lines indoors and in outdoor areas. Square design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials. Including 3 cable glands V-TEC M20 and 3 locknuts. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

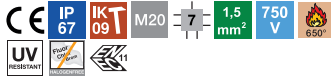
### Dimensions



Type	Dimension LxWxH mm	Clear internal dimensions mm
X04 G M20 LGR	114x114x78	102x102x60

# Junction boxes, X series with knock-out entries and terminal strip

PC



## Junction box X 01 with terminal strip

Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X01 T LGR	Light grey	7 x Ø20	1	17.500	2005190

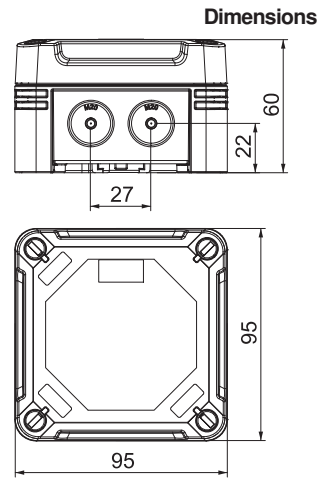
Junction box with terminal strip for the connection of cables and lines indoors and in outdoor areas. Square design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

Including terminal strip, 5-pole.

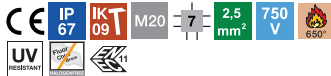
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.



Type	Dimension LxWxH mm	Clear internal dimensions mm
X01 T LGR	95x95x60	85x85x45



PC



## Junction box X 02 with terminal strip

Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X02 T LGR	Light grey	7 x Ø20	1	19.300	2005194

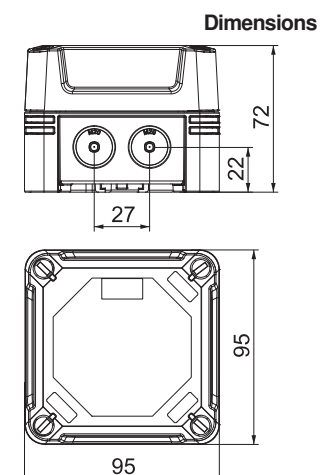
Junction box with terminal strip for the connection of cables and lines indoors and in outdoor areas. Square design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

Including terminal strip, 5-pole.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.



Type	Dimension LxWxH mm	Clear internal dimensions mm
X02 T LGR	95x95x72	85x85x57



## Junction box X 04 with terminal strip



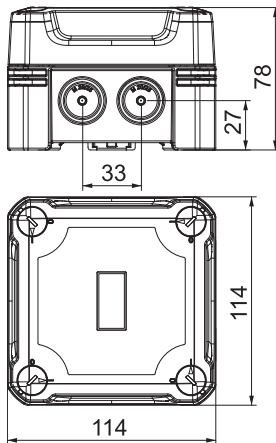
Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X04 T LGR	Light grey	7 x Ø20/25	1	31.600	2005198

Junction box with terminal strip for the connection of cables and lines indoors and in outdoor areas. Square design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

Including terminal strip, 5-pole.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

### Dimensions



Type	Dimension LxWxH mm	Clear internal dimensions mm
X04 T LGR	114x114x78	102x102x60

# Junction boxes, X series with knock-out entries and terminal strip

PC



## Junction box X 06 with terminal strip

Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X06 T LGR	Light grey	4 x Ø20/25, 4 x Ø20/25/32	1	38.000	2005202

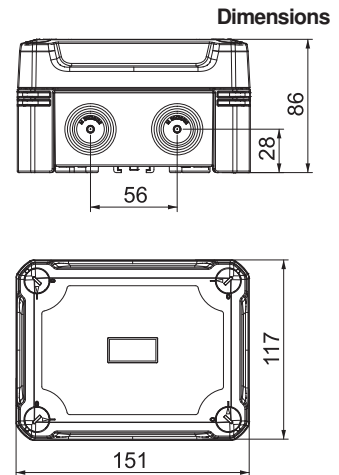
Junction box with terminal strip for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

Including terminal strip, 5-pole.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.



Type	Dimension LxWxH mm	Clear internal dimensions mm
X06 T LGR	151x117x87	137x105x68



PC



## Junction box X 10 with terminal strip

Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X10 T LGR	Light grey	10 x Ø20/25/32	1	72.000	2005206

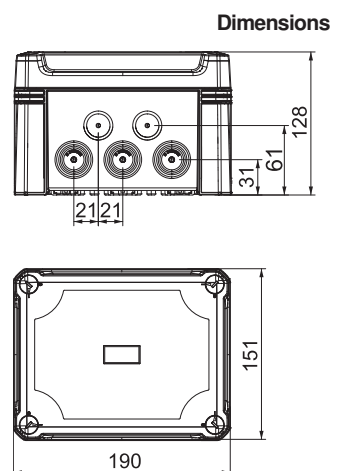
Junction box with terminal strip for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

With 5 terminal strips of 4 terminals each.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.



Type	Dimension LxWxH mm	Clear internal dimensions mm
X10 T LGR	191x151x126	177x137x110



## Junction box X 16 with terminal strip



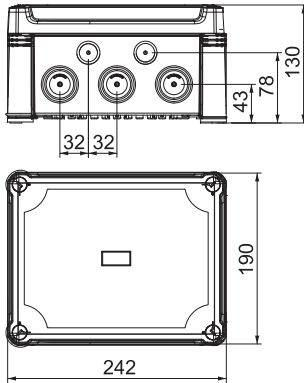
Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X16 T LGR	Light grey	10 x Ø25/32/40	1	97.500	2005210

Junction box with terminal strip for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials. With terminal.

With 5 terminal strips of 4 terminals each.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

### Dimensions



Type	Dimension LxWxH mm	Clear internal dimensions mm
X16 T LGR	241x191x126	227x177x110



# Junction boxes, X series with knock-out entries and terminal strip

PC



## Junction box X 25 with terminal strip

Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X25 T LGR	Light grey	10 x Ø25/40/50	1	130.000	2005214

Junction box with terminal strip for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK08. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

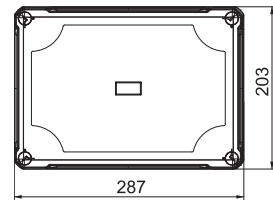
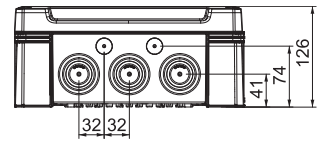
With 5 terminal strips of 4 terminals each.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK08 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.



Type	Dimension LxWxH mm	Clear internal dimensions mm
X25 T LGR	286x202x126	271x187x110

### Dimensions



# Junction boxes, X series with knock-out entries, cable glands and terminal strip

## Junction box X 01 with cable gland and terminal strip



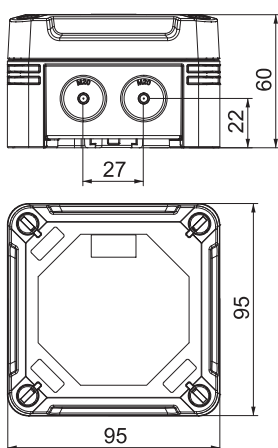
Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X01 T G M20 LGR	Light grey	7 x Ø20	1	20.500	2005220

Junction box with terminal strip for the connection of cables and lines indoors and in outdoor areas. Square design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

Including terminal strip, 3 cable glands V-TEC M20 and 3 locknuts.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

### Dimensions



Type	Dimension LxWxH mm	Clear internal dimensions mm
X01 T G M20 LGR	95x95x60	85x85x45

# Junction boxes, X series with knock-out entries, cable glands and terminal strip



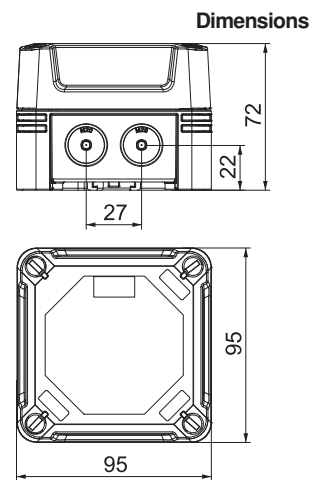
## Junction box X 02 with cable gland and terminal strip

Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X02 T G M20 LGR	Light grey	7 x Ø20	1	23.000	2005222

Junction box with terminal strip for the connection of cables and lines indoors and in outdoor areas. Square design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.  
Including terminal strip, 3 cable glands V-TEC M20 and 3 locknuts.  
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.



Type	Dimension LxWxH mm	Clear internal dimensions mm
X02 T G M20 LGR	95x95x72	85x85x57



# Junction boxes, X series with knock-out entries, cable glands and terminal strip

## Junction box X 04 with cable glands and terminal strip



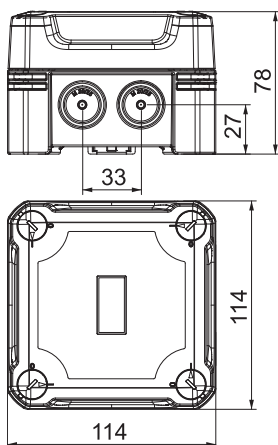
Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X04 T G M25 LGR	Light grey	7 x Ø20/25	1	36.700	2005224

Junction box with terminal strip for the connection of cables and lines indoors and in outdoor areas. Square design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

Including terminal strip, 3 cable glands V-TEC M20 and 3 locknuts.

Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

### Dimensions



Type	Dimension LxWxH mm	Clear internal dimensions mm	
		mm	mm
X04 T G M25 LGR	114x114x78	102	102x60

# Junction boxes, X series with knock-out entries, cable glands and terminal strip



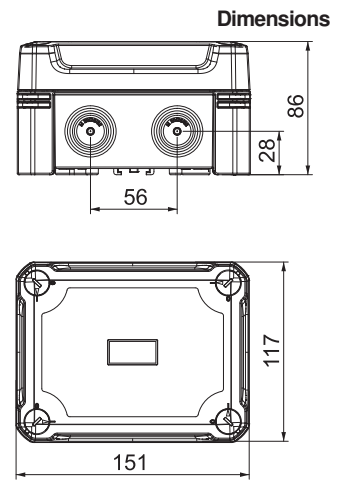
## Junction box X 06 with cable glands and terminal strip

Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X06 T G M25 LGR	Light grey	4 x Ø20/25, 4 x Ø20/25/32	1	38.000	2005226

Junction box with terminal for the connection of cables and lines indoors and in outdoor areas. Rectangular design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.  
Including terminal strip, 3 cable glands V-TEC M25 and 3 locknuts.  
Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.



Type	Dimension LxWxH mm	Clear internal dimensions mm
X06 T G M25 LGR	151x117x87	137x105x68





# Junction boxes, X series with knock-out entries, cable glands and screwless terminals

## Junction box X 01 with cable gland and plug-in terminals

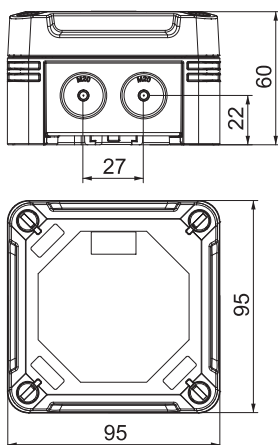


Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X01 UT G LGR	Light grey	7 x Ø20	1	20.000	2005240

Junction box with terminal for the connection of cables and lines indoors and in outdoor areas. Square design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

With 3 universal screwless terminals (5-pole), 3 cable glands V-TEC M20 and 3 locknuts. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

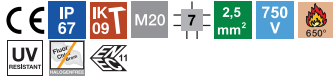
### Dimensions



Type	Dimension LxWxH mm	Clear internal dimensions mm
X01 UT G LGR	95x95x60	85x85x45

# Junction boxes, X series with knock-out entries, cable glands and screwless terminals

PC



## Junction box X 02 with cable gland and plug-in terminals

Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X02 UT G LGR	Light grey	7 x Ø20	1	23.000	2005244

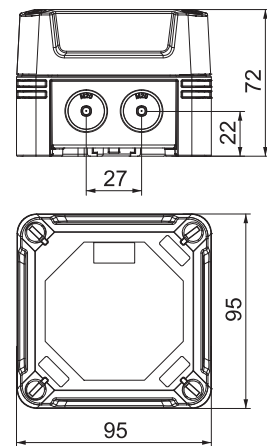
Junction box with terminal for the connection of cables and lines indoors and in outdoor areas. Square design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

With 3 universal screwless terminals (5-pole), 3 cable glands V-TEC M20 and 3 locknuts. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.



Type	Dimension LxWxH mm	Clear internal dimensions mm
X02 UT G LGR	95x95x72	85x85x57

Dimensions



# Junction boxes, X series with knock-out entries, cable glands and screwless terminals

## Junction box X 04 with cable glands and plug-in terminals

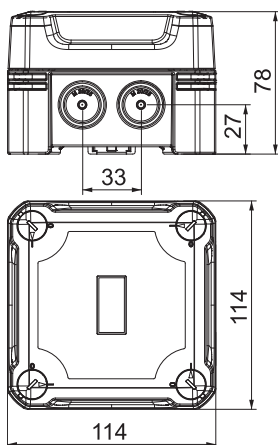


Type	Colour	Entries	Pack Piece	Weight kg/100 pc.	Item no.
X04 UT G LGR	Light grey	7 x Ø20/25	1	33.500	2005248

Junction box with terminal for the connection of cables and lines indoors and in outdoor areas. Square design with knock-out entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

With 3 universal screwless terminals (5-pole), 3 cable glands V-TEC M20 and 3 locknuts. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

### Dimensions



Type	Dimension LxWxH mm	Clear internal dimensions mm
X04 UT G LGR	114x114x78	102x102x60

Empty housing X 01



Type	X01C LGR	X01C LGR-TR	X01C SW
Colour	Light grey	Grey/transparent	Graphite black
Dimension LxWxH mm	95x95x60	95x95x60	95x95x60
Clear internal dimensions mm	85x85x45	85x85x45	85x85x45
Pack Piece	1	1	1
Weight kg/100 pc.	15.600	15.600	15.600
<b>Item no.</b>	<b>2005450</b>	<b>2005520</b>	<b>2005590</b>

PC Polycarbonate

Junction box for the connection of cables and lines indoors and in outdoor areas. Square design without entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK08. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

Junction box according to DIN EN 60670. Impact resistance IK08 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

Empty housing X 02



Type	X02C LGR	X02C LGR-TR	X02C SW
Colour	Light grey	Grey/transparent	Graphite black
Dimension LxWxH mm	95x95x72	95x95x72	95x95x72
Clear internal dimensions mm	85x85x57	85x85x57	85x85x57
Pack Piece	1	1	1
Weight kg/100 pc.	17.500	17.500	17.500
<b>Item no.</b>	<b>2005454</b>	<b>2005524</b>	<b>2005594</b>

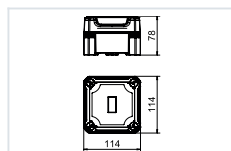
PC Polycarbonate

Junction box for the connection of cables and lines indoors and in outdoor areas. Square design without entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK08. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

Junction box according to DIN EN 60670. Impact resistance IK08 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

## Empty housing, X series without entries

### Empty housing X 04



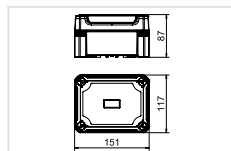
Type	X04C LGR	X04C LGR-TR	X04C SW
Colour	Light grey	Grey/transparent	Graphite black
Dimension LxWxH mm	114x114x78	114x114x78	114x114x78
Clear internal dimensions mm	102x102x60	102x102x60	102x102x60
Pack Piece	1	1	1
Weight kg/100 pc.	26.300	26.300	26.300
<b>Item no.</b>	<b>2005458</b>	<b>2005528</b>	<b>2005598</b>

PC Polycarbonate

Junction box for the connection of cables and lines indoors and in outdoor areas. Square design without entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK08. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

Junction box according to DIN EN 60670. Impact resistance IK08 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

### Empty housing X 06



Type	X06C LGR	X06C LGR-TR	X06C SW
Colour	Light grey	Grey/transparent	Graphite black
Dimension LxWxH mm	151x117x87	151x117x87	151x117x87
Clear internal dimensions mm	137x105x68	137x105x68	137x105x68
Pack Piece	1	1	1
Weight kg/100 pc.	33.100	33.100	33.500
<b>Item no.</b>	<b>2005462</b>	<b>2005532</b>	<b>2005602</b>

PC Polycarbonate

Junction box for the connection of cables and lines indoors and in outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK08. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

Junction box according to DIN EN 60670. Impact resistance IK08 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.



Empty housing X 10



Type	X10C LGR	X10C LGR-TR	X10C SW
Colour	Light grey	Grey/transparent	Graphite black
Dimension LxWxH mm	191x151x126	191x151x126	191x151x126
Clear internal dimensions mm	177x137x110	177x137x110	177x137x110
Pack Piece	1	1	1
Weight kg/100 pc.	58.500	85.500	58.500
<b>Item no.</b>	<b>2005466</b>	<b>2005536</b>	<b>2005606</b>

PC Polycarbonate

Junction box for the connection of cables and lines indoors and in outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.  
Junction box according to DIN EN 60670. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

Empty housing X 16



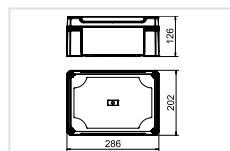
Type	X16C LGR	X16C LGR-TR	X16C SW
Colour	Light grey	Grey/transparent	Graphite black
Dimension LxWxH mm	241x191x126	241x191x126	241x191x126
Clear internal dimensions mm	227x177x110	227x177x110	227x177x110
Pack Piece	1	1	1
Weight kg/100 pc.	78.400	78.400	78.400
<b>Item no.</b>	<b>2005470</b>	<b>2005540</b>	<b>2005610</b>

PC Polycarbonate

Junction box for the connection of cables and lines indoors and in outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.  
Junction box according to DIN EN 60670. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

## Empty housing, X series without entries

### Empty housing X 25



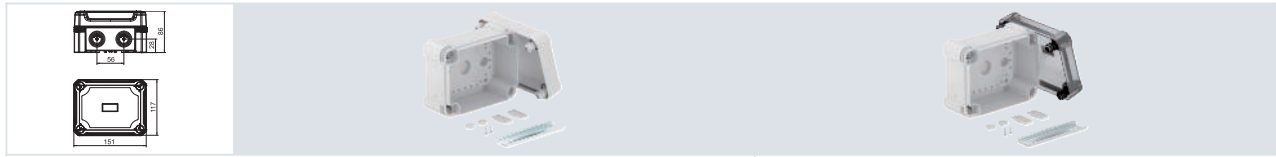
Type	X25C LGR	X25C LGR-TR	X25C SW
Colour	Light grey	Grey/transparent	Graphite black
Dimension LxWxH mm	286x202x126	286x202x126	286x202x126
Clear internal dimensions mm	271x187x110	271x187x110	271x187x110
Pack Piece	1	1	1
Weight kg/100 pc.	95.000	95.000	95.000
<b>Item no.</b>	<b>2005474</b>	<b>2005544</b>	<b>2005614</b>

PC Polycarbonate

Junction box for the connection of cables and lines indoors and in outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK08. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

Junction box according to DIN EN 60670. Impact resistance IK08 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

Empty housing X 06 with hat profile rail



Type	X06C R LGR	X06C R LGR-TR
Colour	Light grey	Grey/transparent
Dimension LxWxH mm	151x117x87	151x117x87
Clear internal dimensions mm	137x105x68	137x105x68
Pack Piece	1	1
Weight kg/100 pc.	37.600	37.600
<b>Item no.</b>	<b>2005490</b>	<b>2005560</b>

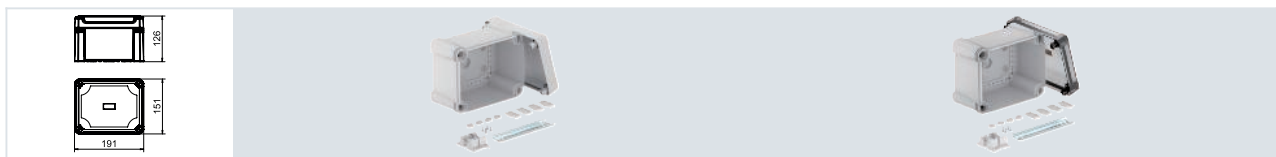
PC Polycarbonate

Junction box with hat profile rail for the connection of cables and lines indoors and in outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK08. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

With hat profile rail, type 2069, and fastening set.

Junction box according to DIN EN 60670. Impact resistance IK08 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

Empty housing X 10 with hat profile rail



Type	X10C R LGR	X10C R LGR-TR
Colour	Light grey	Grey/transparent
Dimension LxWxH mm	191x151x126	191x151x126
Clear internal dimensions mm	177x137x110	177x137x110
Pack Piece	1	1
Weight kg/100 pc.	65.600	65.600
<b>Item no.</b>	<b>2005494</b>	<b>2005564</b>

PC Polycarbonate

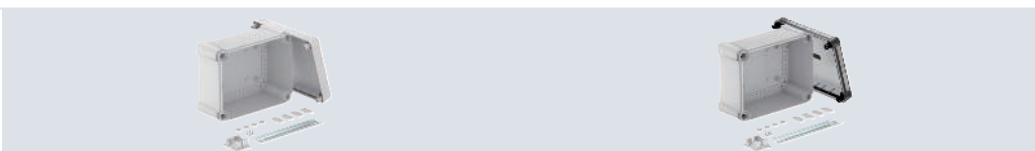
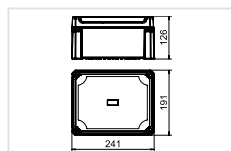
Junction box with hat profile rail for the connection of cables and lines indoors and in outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

With hat profile rail, type 2069, and fastening set.

Junction box according to DIN EN 60670. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

## Empty housing, X series without entries with hat profile rail

### Empty housing X 16 with hat profile rail



Type	X16C R LGR	X16C R LGR-TR
Colour	Light grey	Grey/transparent
Dimension LxWxH mm	241x191x126	241x191x126
Clear internal dimensions mm	227x177x110	227x177x110
Pack Piece	1	1
Weight kg/100 pc.	87.300	87.300
<b>Item no.</b>	<b>2005498</b>	<b>2005568</b>

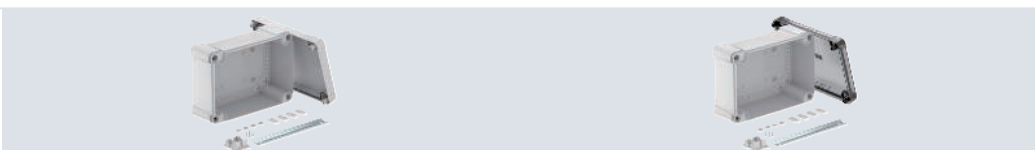
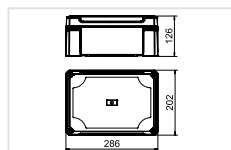
PC Polycarbonate

Junction box with hat profile rail for the connection of cables and lines indoors and in outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK09. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

With hat profile rail 2069 and fastening set.

Junction box according to DIN EN 60670. Impact resistance IK09 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

### Empty housing X 25 with hat profile rail



Type	X25C R LGR	X25C R LGR-TR
Colour	Light grey	Grey/transparent
Dimension LxWxH mm	286x202x126	286x202x126
Clear internal dimensions mm	271x187x110	271x187x110
Pack Piece	1	1
Weight kg/100 pc.	107.000	107.000
<b>Item no.</b>	<b>2005502</b>	<b>2005572</b>

PC Polycarbonate

Junction box with hat profile rail for the connection of cables and lines indoors and in outdoor areas. Rectangular design without entries. Suitable for wall and ceiling mounting with the option to fasten outside, inside or to mount via the corner domes. Particularly impact resistant with IK08. Cover with quick lock, sealable. Made from halogen-free and UV-resistant materials.

With hat profile rail, type 2069, and fastening set.

Junction box according to DIN EN 60670. Impact resistance IK08 according to DIN EN 50102. Protection rating IP67 according to DIN EN 60529.

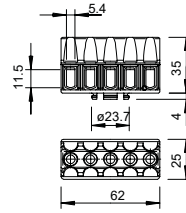
PA

### Terminal strip 1.5–6 mm<sup>2</sup>, junction box, T series, X series



Type	Colour	No. of terminals	Nominal cross-section mm <sup>2</sup>	Nom. V	Pack Piece	Weight kg/100 pc.	Item no.
KL-T 02-06	Light grey	5	1.5-6	400	10	4.380	2016185

Terminals and screws made of steel, galvanised and transparent-chromated, nominal cross-section 1.5 ÷ 6 mm<sup>2</sup>, rated voltage 400 V, five-pole, with socket terminals, max. connectable cross-sections per terminal: 3x6 mm<sup>2</sup>, 4x4 mm<sup>2</sup> or 6x2.5 mm<sup>2</sup>.



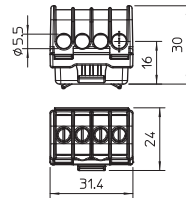
PA

### Terminal strip 6–16 mm<sup>2</sup>, junction box, T series, X series



Type	Colour	No. of terminals	Nominal cross-section mm <sup>2</sup>	Nom. V	Pack Piece	Weight kg/100 pc.	Item no.
KL-T 06-16	Light grey	4	6-16	400	10	1.970	2016190

Brass terminals, steel screws, electrogalvanised and transparently passivated, nominal cross-section 6 ÷ 16 mm<sup>2</sup>, nominal voltage 400 V, 1-pin, with terminal sockets, max. connectable conductor per terminal 4 x 16 mm<sup>2</sup>, 4 x 10 mm<sup>2</sup>, 8 x 6 mm<sup>2</sup> or 12 x 4 mm<sup>2</sup>.



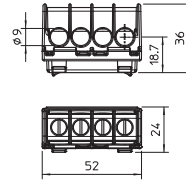
PA

### Terminal strip 16–35 mm<sup>2</sup>, junction box, T series, X series



Type	Colour	No. of terminals	Nominal cross-section mm <sup>2</sup>	Nom. V	Pack Piece	Weight kg/100 pc.	Item no.
KL-T 16-35	Light grey	4	16-35	400	10	5.630	2016195

Brass terminals, steel screws, electrogalvanised and transparently passivated, nominal cross-section 16 ÷ 35 mm<sup>2</sup>, nominal voltage 400 V, 1-pin, with terminal sockets, max. connectable conductor per terminal 4 x 35 mm<sup>2</sup>, 4 x 25 mm<sup>2</sup>, 8 x 16 mm<sup>2</sup> or 12 x 10 mm<sup>2</sup>.

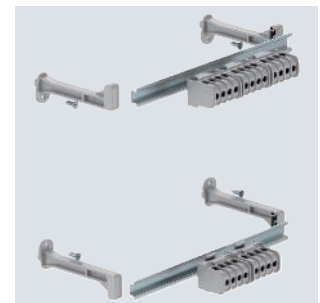
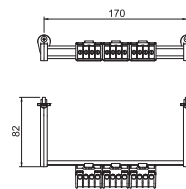


CE

### Terminal strip set for X series

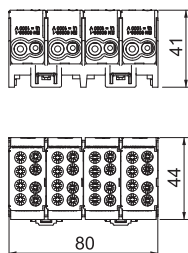
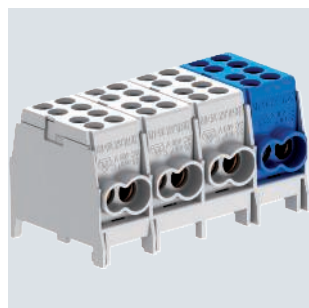
Type	Nominal cross-section mm <sup>2</sup>	Pole number	Number of screwless terminals per pole	Pack Piece	Weight kg/100 pc.	Item no.
KL-X10 06-16	6-16	5	4	1	17.600	2008931
KL-X16 06-16	6-16	5	4	1	14.500	2008935
KL-X25 16-35	16-35	5	4	1	37.500	2008939

Terminal strip set for the distribution boxes of the SDB series. The sets can be used to expand and equip empty distribution boxes of the SDB series.





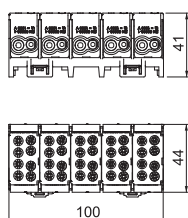
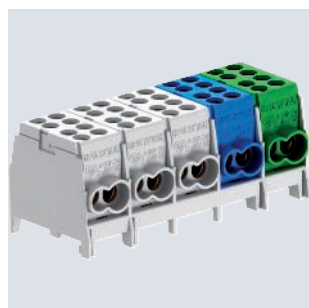
### Main branch terminal, 4-pole



Type	Max. conductor cross-section mm <sup>2</sup>	Number of screwless terminals per pole	Pole number	Pack Piece	Weight kg/100 pc.	Item no.
HLAK 4-8x16	25	4	4	1	19.200	2009032

4-pin main terminal block, 2 x 16 mm<sup>2</sup> + 2 x 25 mm<sup>2</sup> conductor connection cross-sections per pin. With 2 screws per terminal for secure contact pressure. High-resistance quick-action fastening made of galvanised sheet steel for simple mounting on support rails. Terminal covers are available in the standard conductor colours.

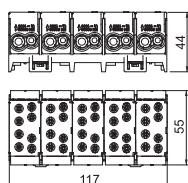
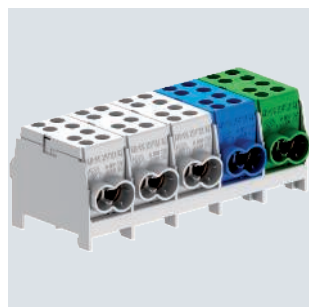
### Main branch terminal, 5-pole



Type	Max. conductor cross-section mm <sup>2</sup>	Number of screwless terminals per pole	Pole number	Pack Piece	Weight kg/100 pc.	Item no.
HLAK 5-10x16	25	4	5	1	23.100	2009036

5-pin main terminal block, 2 x 16 mm<sup>2</sup> + 2 x 25 mm<sup>2</sup> conductor connection cross-sections per pin. With 2 screws per terminal for secure contact pressure. High-resistance quick-action fastening made of galvanised sheet steel for simple mounting on support rails. Terminal covers are available in the standard conductor colours.

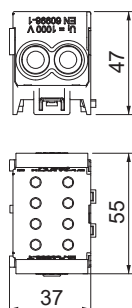
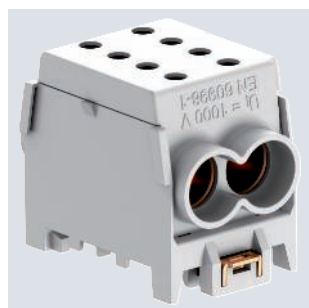
### Main branch terminal, 5-pole



Type	Max. conductor cross-section mm <sup>2</sup>	Number of screwless terminals per pole	Pole number	Pack Piece	Weight kg/100 pc.	Item no.
HLAK 5-10x25	35	4	5	1	38.100	2009038

5-pin main terminal block, 2 x 35 mm<sup>2</sup> + 2 x 25 mm<sup>2</sup> conductor connection cross-sections per pin. With 2 screws per terminal for secure contact pressure. High-resistance quick-action fastening made of galvanised sheet steel for simple mounting on support rails. Terminal covers are available in the standard conductor colours.

### Main branch terminal, 1-pole



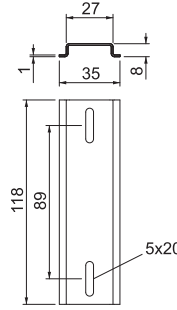
Type	Max. conductor cross-section mm <sup>2</sup>	Number of screwless terminals per pole	Pole number	Pack Piece	Weight kg/100 pc.	Item no.
HLAK 1-2x35 GR	50	4	1	1	11.600	2009042
HLAK 1-2x35 GRGN	50	4	1	1	11.600	2009044
HLAK 1-2x35 GRBL	50	4	1	1	11.600	2009046

1-pin main terminal block, 4 x 50 mm<sup>2</sup> conductor connection cross-sections per pin. With 2 screws per terminal for secure contact pressure. High-resistance quick-action fastening made of galvanised sheet steel for simple mounting on support rails. Terminal covers are available in the standard conductor colours.

Hat profile rail set

Type	Length mm	Width mm	Height mm	Pack Piece	Weight kg/100 pc.	Item no.
2069 X06 FS	118	35	8	1	4.300	1115876
2069 X10 FS	161	62	23	1	7.400	1115879
2069 X16 FS	211	62	23	1	9.200	1115882
2069 X25 FS	252	62	23	1	10.700	1115887

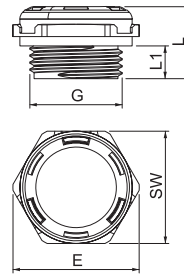
Hat profile rail 35 x 7.5 mm to DIN EN 60715 (formerly DIN EN 50022).



Pressure compensation element

Type	Thread	Protection rating	Colour	Pack Piece	Weight kg/100 pc.	Item no.
109 M20 LGR	M20x1,5	IP68	Light grey	1	0.538	2034680

The pressure compensation element, type 109 M20 LGR compensates for pressure differences in junction boxes, small distributors and connection sockets with an M20 opening and avoids the formation of condensation water in sealed housings. The polyamide pressure compensation element has an IP68/IP69 protection rating. This remains intact, even after the installation of the pressure compensation element. The pressure compensation element is suitable for use in industrial environments and in exterior areas.



TPE



EDS plug-in seal, light grey, X series

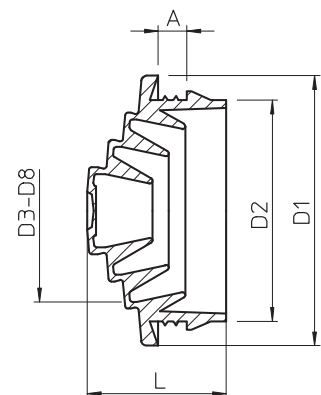
Type	Size	For Ø mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
EDS M20 LGR	M20	0-17	Light grey	100	0.125	2012350
EDS M25 LGR	M25	0-22	Light grey	100	0.185	2012354
EDS M32 LGR	M32	0-28	Light grey	50	0.295	2012358

The push-in nipple can be cut back to suit the relevant cable diameter.



Type	Dim.							Dimension D6 mm	Dimension D7 mm	Dimension D8 mm
	L mm	A mm	D1 mm	D2 mm	D3 mm	D4 mm	D5 mm			
EDS M20 LGR	12.8	3.1	24.8	20.3	6	10	15	17	-	-
EDS M25 LGR	14.5	3.1	29.5	25.3	6	10	15	20	22	-
EDS M32 LGR	17.8	3.1	36.3	32.3	6	10	15	20	25	28

Dimensions



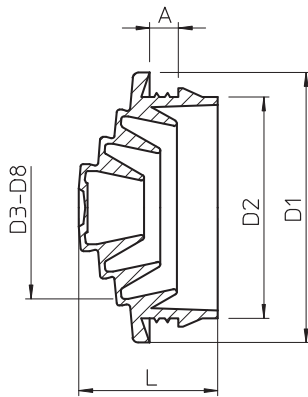
EDS plug-in seal



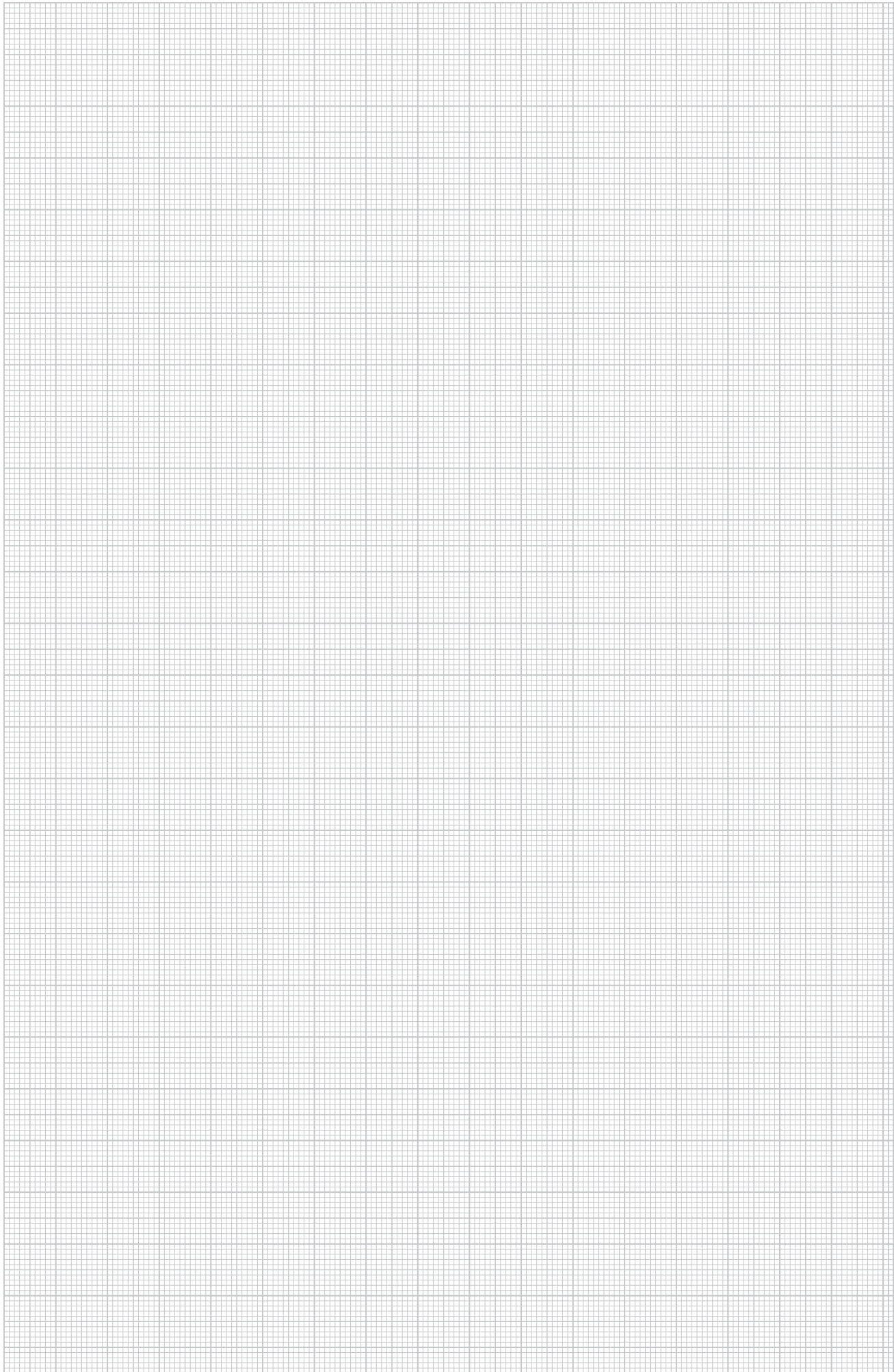
Type	For Ø		Colour	Pack Piece	Weight kg/100 pc.	Item no.
	Size	mm				
EDS M20 SW	M20	0-17	Black	100	0.125	2012340
EDS M25 SW	M25	0-22	Black	100	0.193	2012342
EDS M32 SW	M32	0-28	Black	50	0.254	2012344

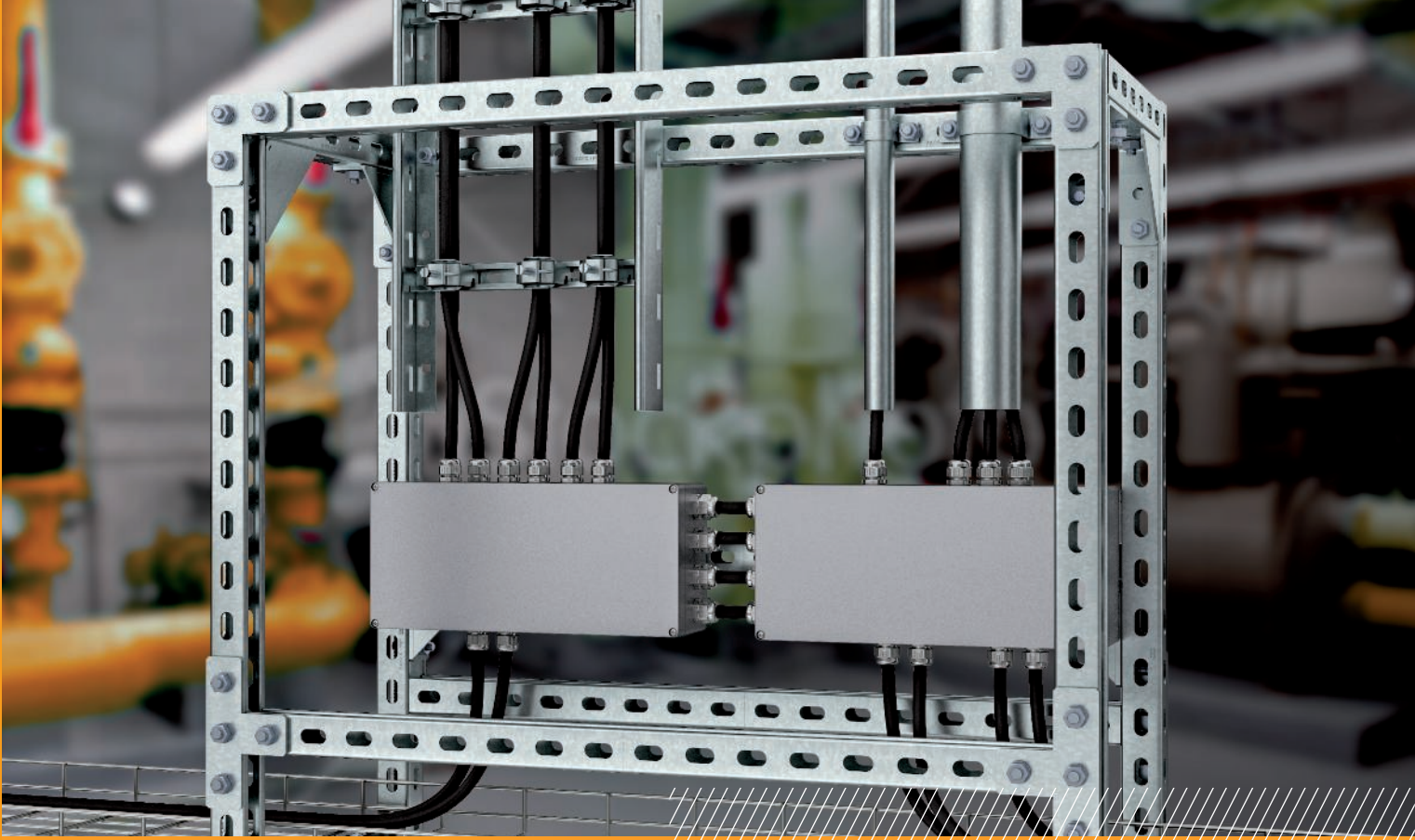
The push-in nipple can be cut back to suit the relevant cable diameter.

Dimensions



Type	Dim.	Dim.	Dim.	Dim.	Dim.	Dim.	Dim.	Dimension D6	Dimension D7	Dimension D8
	L	A	D1	D2	D3	D4	D5	mm	mm	mm
EDS M20 SW	12.8	3.1	24.8	20.3	6	10	15	17	—	—
EDS M25 SW	14.5	3.1	29.5	25.3	6	10	15	20	22	—
EDS M32 SW	17.8	3.1	36.3	32.3	6	10	15	20	25	28

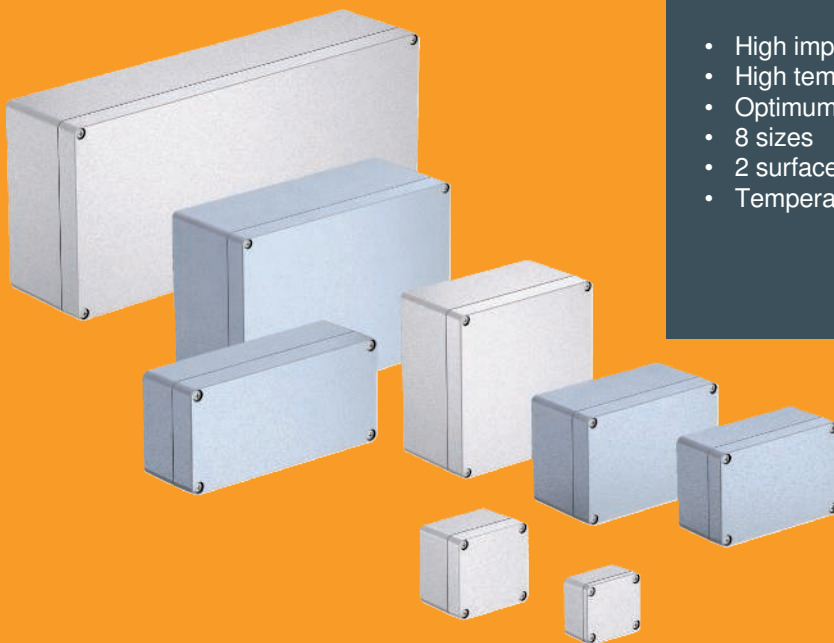




## Junction boxes Mx series

Our aluminium empty housings were designed for use under the toughest conditions and provide optimum protection of the installation. The metal housing of the Mx series withstands extremely high and low temperatures, as well as large temperature differences. High impact loads in an industrial

surrounding, vandalism or rock falls are not able to harm the housing. Furthermore, the Mx series offers perfect EMC protection and is ideally secured against the entry of dust and water in line with protection rating IP66.



- High impact resistance
- High temperature resistance
- Optimum EMC protection
- 8 sizes
- 2 surface variants
- Temperature range:  $-40$  to  $125$  °C



### Aluminium empty housing Mx06, paintable



<b>Type</b>	<b>Mx 060503 CR3</b>	<b>Mx 080705 CR3</b>	<b>Mx 090603 CR3</b>	<b>Mx 120805 CR3</b>
Version	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws
Dimension LxWxH mm	64x58x34	80x75x57	98x64x34	125x80x57
Clear internal dimensions mm	56,5x50,5x31,5	71x65,5x52,5	91x54x29	115,5x70,5x51
Pack Piece	1	1	1	1
Weight kg/100 pc.	19.200	36.400	25.000	50.000
<b>Item no.</b>	<b>2011378</b>	<b>2011381</b>	<b>2011384</b>	<b>2011386</b>
	<b>AlG</b> Die-cast aluminium			
	<b>Cr3</b> Chrome III coating			

Robust aluminium empty housing for mechanical engineering and automation technology. The OBO Mx series' excellent features make it most suitable for extreme demands in all different areas. It is therefore also best suited for applications in industry, ports and shipbuilding, as well as in the agricultural sector. The series' properties protect the electrical installation when under extreme strain. The products withstand both great cold and heat as well as impacts or kicks on roads, railways or in tunnels. With a protection class of up to IP66, they are optimally protected against the intrusion of water. The aluminium is of course UV-resistant and halogen-free. The cover seal is made from polyurethane. The aluminium housings are chrome 3-coated and are delivered with a cover including stainless steel screws, a seal and 2 or 4 earthing screws. The chrome 3 surface provides a good contact when using metal fittings and can easily be painted or powder-coated.

Temperature: -40°C to +125°C

### Aluminium empty housing Mx16, paintable

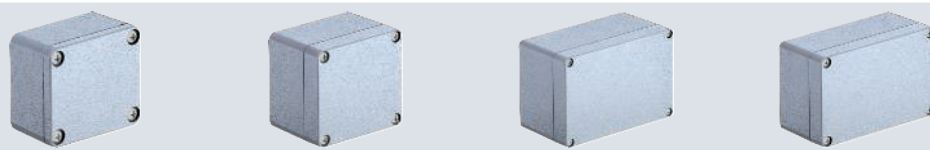
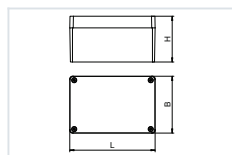


<b>Type</b>	<b>Mx 161008 CR3</b>	<b>Mx 161609 CR3</b>	<b>Mx 221209 CR3</b>	<b>Mx 261609 CR3</b>	<b>Mx 361609 CR3</b>
Version	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws
Dimension LxWxH mm	160x100x81	150x100x91	220x120x90	260x160x90	360x160x91
Clear internal dimensions mm	140,5x90x74,5	140,5x90x74,5	210x109x81	249x149x82	317,5x149x82
Pack Piece	1	1	1	1	1
Weight kg/100 pc.	90.000	170.000	168.000	230.000	320.000
<b>Item no.</b>	<b>2011389</b>	<b>2011392</b>	<b>2011394</b>	<b>2011396</b>	<b>2011398</b>
	<b>AlG</b> Die-cast aluminium				
	<b>Cr3</b> Chrome III coating				

Robust aluminium empty housing for mechanical engineering and automation technology. The OBO Mx series' excellent features make it most suitable for extreme demands in all different areas. It is therefore also best suited for applications in industry, ports and shipbuilding, as well as in the agricultural sector. The series' properties protect the electrical installation when under extreme strain. The products withstand both great cold and heat as well as impacts or kicks on roads, railways or in tunnels. With a protection class of up to IP66, they are optimally protected against the intrusion of water. The aluminium is of course UV-resistant and halogen-free. The cover seal is made from polyurethane. The aluminium housings are chrome 3-coated and are delivered with a cover including stainless steel screws, a seal and 2 or 4 earthing screws. The chrome 3 surface provides a good contact when using metal fittings and can easily be painted or powder-coated.

Temperature: -40°C to +125°C

## Aluminium empty housing Mx06, powder coated



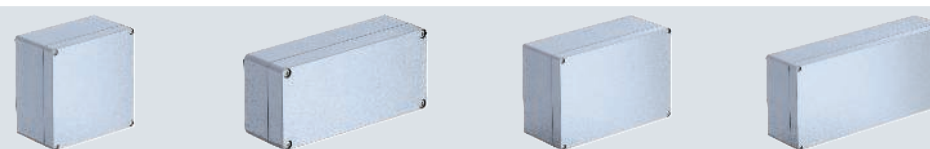
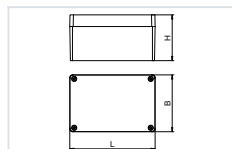
Type	Mx 060503 SGR	Mx 080705 SGR	Mx 120805 SGR	Mx 161008 SGR
Version	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws
Colour	Silver grey	Silver grey	Silver grey	Silver grey
Dimension LxWxH mm	64x58x34	80x75x57	125x80x57	160x100x81
Clear internal dimensions mm	56.5x50.5x31.5	71x65.6x52.5	115.5x70.5x51	117x90x74.5
Pack Piece	1	1	1	1
Weight kg/100 pc.	19.200	36.400	50.000	90.000
<b>Item no.</b>	<b>2011304</b>	<b>2011308</b>	<b>2011312</b>	<b>2011316</b>

**AIG** Die-cast aluminium  
**P** Powder-coated

Robust aluminium empty housing for mechanical engineering and automation technology. The OBO Mx series' excellent mechanical and thermal features make it most suitable for extreme demands in many different areas. It is therefore also best suited for applications in industry, ports and shipbuilding, as well as in the agricultural sector. The products protect the electrical installation against high-grade strains. They withstand both extreme cold and heat as well as vandalism and impact on roads, railways or in tunnels. With an IP66 protection class, they are optimally protected against the intrusion of dust and water. The aluminium housings are powder-coated (RAL 7001) and are delivered with a cover including stainless steel screws, a seal and two or four earthing screws.

Temperature: -40°C to +125°C

## Aluminium empty housing Mx16, powder coated



Type	Mx 161609 SGR	Mx 170805 SGR	Mx 261609 SGR	Mx 361609 SGR
Version	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws	Closed with 4 stainless steel lid screws
Colour	Silver grey	Silver grey	Silver grey	Silver grey
Dimension LxWxH mm	160x160x90	175x80x57	260x160x90	360x160x91
Clear internal dimensions mm	149x149x84.5	165x70x51	229.5x149x94.5	317.5x149x92
Pack Piece	1	1	1	1
Weight kg/100 pc.	170.000	66.000	230.000	320.000
<b>Item no.</b>	<b>2011320</b>	<b>2011324</b>	<b>2011328</b>	<b>2011332</b>

**AIG** Die-cast aluminium  
**P** Powder-coated

Robust aluminium empty housing for mechanical engineering and automation technology. The OBO Mx series' excellent mechanical and thermal features make it most suitable for extreme demands in many different areas. It is therefore also best suited for applications in industry, ports and shipbuilding, as well as in the agricultural sector. The products protect the electrical installation against high-grade strains. They withstand both extreme cold and heat as well as vandalism and impact on roads, railways or in tunnels. With an IP66 protection class, they are optimally protected against the intrusion of dust and water. The aluminium housings are powder-coated (RAL 7001) and are delivered with a cover including stainless steel screws, a seal and two or four earthing screws.

Temperature: -40°C to +125°C



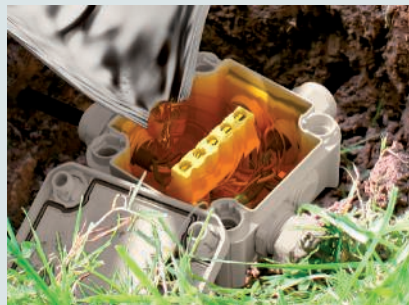
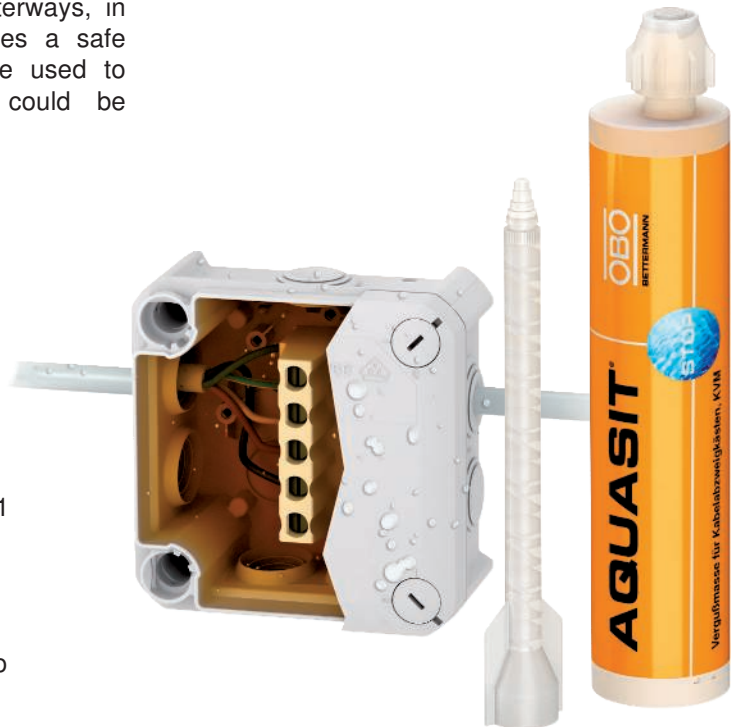
# Aquasit cold casting compound

provides flexible and simple protection of electrical installations against moisture

OBO Aquasit cold casting compound is the ideal solution for electrical installations in particularly damp environments. Whether for connections in the garden, by waterways, in laundries or in a pump well – Aquasit ensures a safe electrical installation anywhere. Aquasit can be used to protect those electrical installations, which could be damaged by extreme or continuous moisture.

## Overview of product description

- Protection rating: IP68 at 1.8 bar/1000 h
- Rated voltage: 400 V
- Penetration resistance: >20 kv/mm to VDE 0291 Part 2
- Operating temperature: --40 to +90 °C
- Processing temperature: 0 to +40 °C
- Halogen-free, silicon-free, isocyanite-free
- Environmentally friendly and without the need to be labelled



The application is simple: For smaller junction boxes, Aquasit is cast tidily using a standard cartridge pistol, whilst Aquasit for larger boxes can be processed in appropriate, practical mixing bags.

The transparent, amber-coloured cold casting compound, based on hydrocarbon resins, hardens to a soft elastic state, so that a voltage test with test pins is then possible. As Aquasit is "self-healing", i.e. the resulting test tunnel closes itself again fully, the protection rating of IP68 remains intact. Aquasit can also be removed easily, meaning that reinstallation and regular testing of the installation are child's play.





**Protects electrical installations against extreme or persistent moisture**



**Whether a laundry or a garden pond – Aquasit keeps things shut and provides protection.**

## Aquasit material consumption

Junction box filling

T Series	ml per unit*	PU*		T Series	ml per unit*	PU*	
T25	80 ml	1		T160	1540 ml	1	
T40	250 ml	1		T160 HD	1930 ml	2	
T60	410 ml	1		T250	3170 ml	2	
T60 HD	590 ml	1		T250 HD	3310 ml	2	
T 100	720 ml	1		T350	5200 ml	4	
T 100 HD	770 ml	1		T350 HD	6830 ml	5	

\*Gross box volume without equipment  
Smallest possible packaging unit for complete filling of the complete junction box.  
Please refer to the product brochure for the technical dimensions.

250 ml   400 ml   800 ml   1.600 ml



**Aquasit cold casting compound, cartridge**  
250 ml | Art. no. 2363010



**Aquasit cold casting compound, mixing bag**  
400 ml | M | Art. no. 2363008  
800 ml | L | Art. no. 2363006  
1600 ml | XL | Art. no. 2363002



**Junction box set**  
T 40 KVM  
Art. no. 2363012



**AQUASIT mixer pipe**  
10 mixer pipes in the set  
Art. no. 2363015



**AQUASIT cartridge pistol**  
Art. no. 2363019



# Aquasit cold casting compound

## Aquasit cold casting compound, cartridge



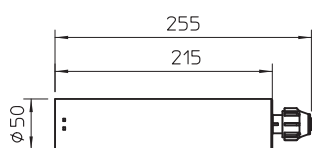
Type	Contents ml	Pack Piece	Weight kg/100 pc.	Item no.
KVM 250	250	1	42.000	2363010

Aquasit is a two-component casting compound for junction boxes in areas with continuous and extremely high levels of moisture. It can also be used against mechanical shock and vibrations.

The cartridge is suitable for use in standard cartridge pistols. At room temperature, the unopened aluminium packaging can be stored for up to 18 months. When the cartridge is opened, the material should be used within 24 hours. Practical experience, tests and approvals only apply in conjunction with OBO junction boxes.

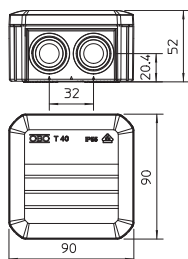
**Aquasit properties:**  
 Protection rating with appropriate junction box: IP68 at 1.8 bar/1,000 hrs  
 Rated voltage: 400 V  
 Penetration resistance: >20 kV/mm to VDE 0291 Part 2  
 Operating temperature: -40 to +90 °C  
 Processing temperature: 0 to +40 °C  
 Halogen-free, silicon-free, isocyanate-free  
 Environmentally friendly and without the need to be labelled

### Dimensions



Type	A6	A8	A11	A14	A18	T25	T40	T60	T100	B9/T
Number of cartridges per junction box	0.3	2.4	1.3	1.5	1.4	0.7	1.0	1.7	2.9	1.6

## Aquasit cold casting compound with T40 junction box



Type	Version	Entries	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
T 40 KVM	With terminal strip	7 x M25	1	1	48.700	2363012

Junction box set with terminal strip for the connection of cables and lines indoors and in protected outdoor areas. Including Aquasit cold casting compound, IP68 protection rating. Square design with plug-in seals to the sides and knock-out entries in the bottom. Suitable for wall and ceiling mounting and on mounting panels. With the option to fasten inside. With fixed clamping cover. Made from halogen-free materials. Junction box according to DIN EN 60670. Flame-resistant to DIN EN 60695/2/11, test temperature 650 °C. Impact resistance IK07 according to DIN EN 50102.



## Aquasit cold casting compound, mixing bag

Type	Contents ml	Pack Piece	Weight kg/100 pc.	Item no.
KVMM 400	400	1	49.800	2363008
KVMM 800	800	1	92.000	2363006
KVMM 1600	1600	1	175.000	2363002

Aquasit is a two-component casting compound for junction boxes in areas with continuous and extremely high levels of moisture. It can also be used against mechanical shock and vibrations.

At room temperature and when stored properly, the unopened aluminium bag can be used for up to 18 months. When the bags are mixed, the material should be used within 20 minutes. Practical experience, tests and approvals only apply in conjunction with OBO junction boxes.

Aquasit properties:

Protection rating with appropriate junction box: IP68 at 1.8 bar/1,000 hrs

Rated voltage: 400 V

Penetration resistance: >20 kv/mm to VDE 0291 Part 2

Operating temperature: -40 to +90 °C

Processing temperature: 0 to +40 °C

Halogen-free, silicon-free, isocyanate-free

Environmentally friendly and without the need to be labelled

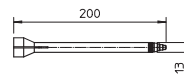


## AQUASIT mixer pipe

Type	Pack PU	Weight kg/100 PUs	Item no.
KVM-M	1	17.000	2363015

10 mixer pipes in the set.

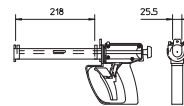
Simple, automatic mixing of OBO AQUASIT when pressing out the compound from the cartridge.



## Aquasit cartridge pistol

Type	Pack Piece	Weight kg/100 pc.	Item no.
KVM-P	1	100.000	2363019

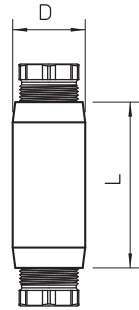
High-quality one-component cartridge pistol for use with the AQUASIT cold casting compound. The cartridge pistol can also be used with normal 300 ml cartridges.



# Cable connection sleeve

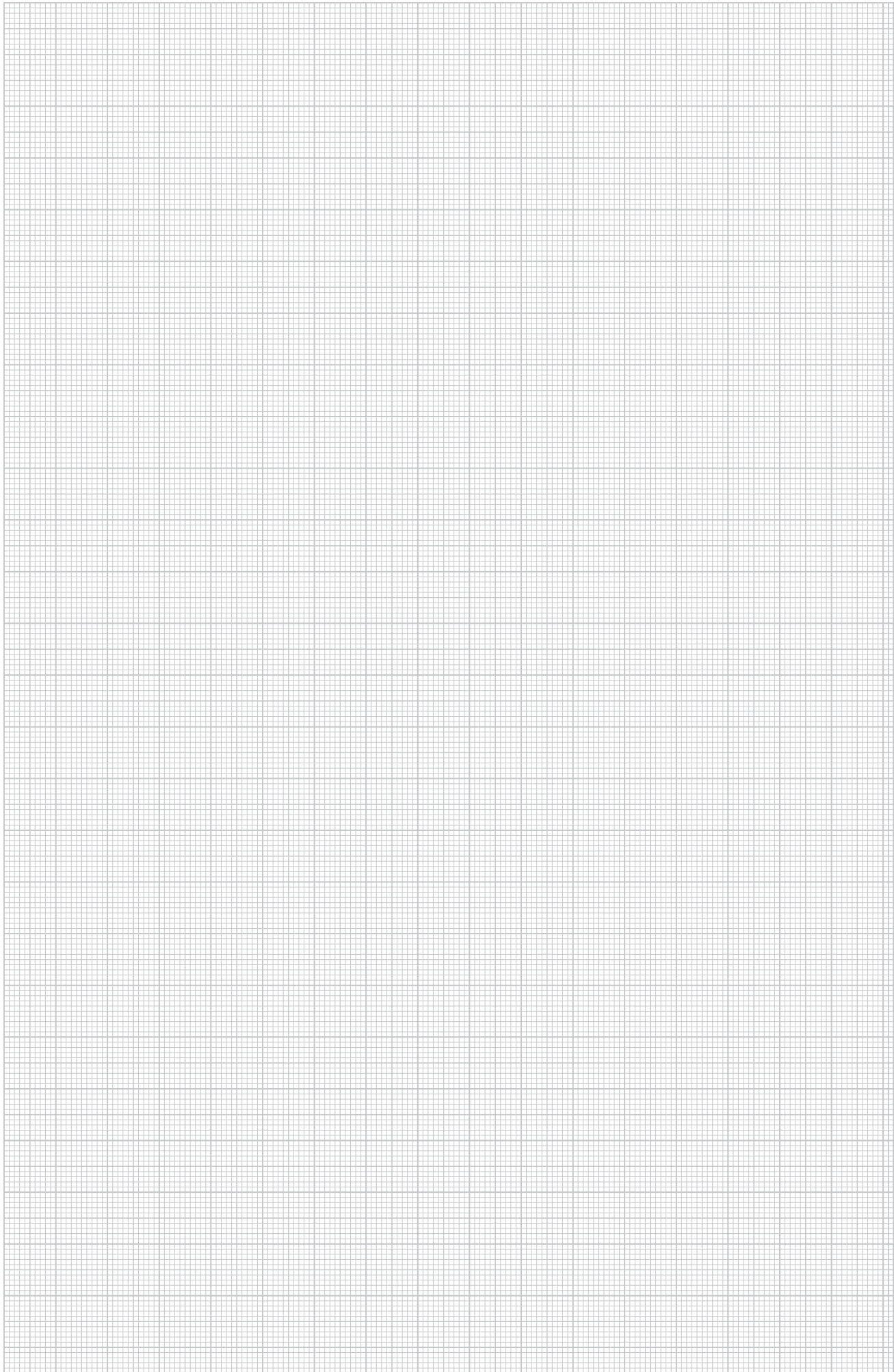
## Cable connection sleeve

PS  
 IP 54 2,5 mm<sup>2</sup> 6 mm<sup>2</sup> Pg 660 V 5



Type	Entries	Dim.		Colour	Pack Piece	Weight kg/100 pc.	Item no.
		D mm	L mm				
117 5x2.5	Pg 16	28	64	Light grey	10	4.891	2022028
117 5x6	Pg 21	33.5	82	Light grey	5	8.306	2022060






Protection rating IP54, nominal voltage 660 V. VDE specifications state that connection sleeves are only intended for local routing.







# Power supply units

	VH – prewired power supply units IP20	160
	VH – empty housing and installation accessories IP20, pure white	168
	Accessories IP 20 VH4/VH8	170
	Accessories IP 20 and IP 44	172
	VHF – empty housing and installation accessories IP44	174



# HoverCube VH/VHF

Suspended energy distributor for workplaces and machinery in industry, the trades and in training areas. The HoverCubes can be placed freely in the room. They are supplied from the ceiling. Depending on the protection rating, they can be equipped flexibly to supply power, data and media technology through to work media such as compressed air.

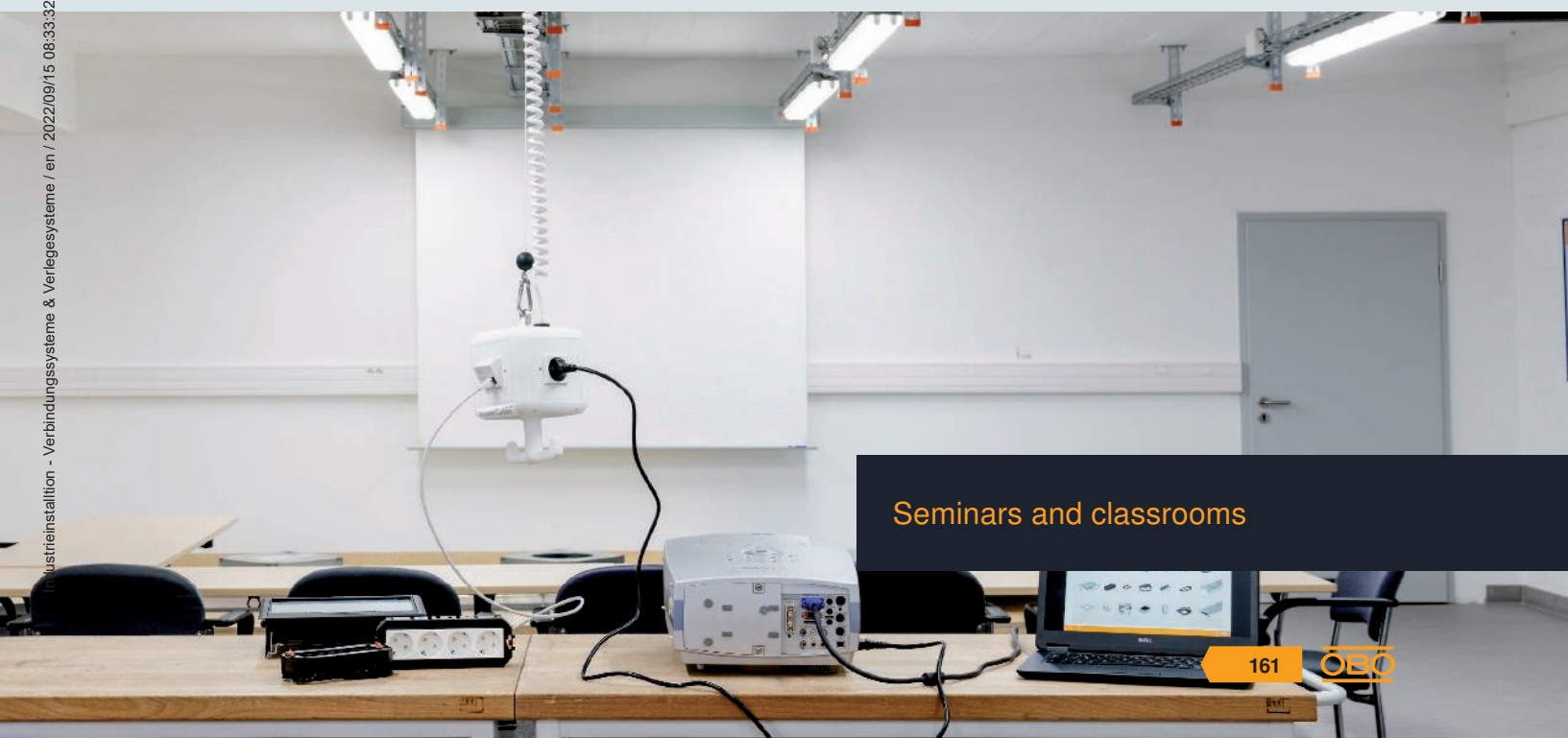




Workshops and work areas



Industrial and assembly workplaces

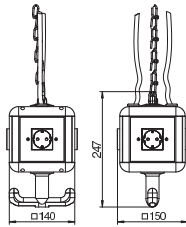


Seminars and classrooms



## HoverCube VH-4, 4x protective contact socket

PA



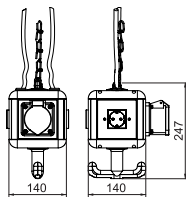
Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-4 4SD	Graphite black	1	95.000	6109802

Housing equipped and pre-wired with suspension lug, grip hook and four cover plates.

Equipped as follows: 4x single protective contact sockets 16 A/250 V with increased touch protection, pre-wired for two AC currents, connection via 2x 3-pin terminals, 1x CEE socket 16 A/415 V, with partition for circuit separation.

## HoverCube VH-4, 3x protective contact socket, 1x CEE 16 A

PA



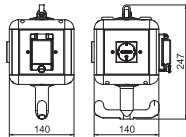
Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-4 3SD1C16	Graphite black	1	115.700	6109804

Housing equipped and pre-wired with suspension lug, grip hook and four cover plates.

Equipped as follows: 3x single protective contact sockets 16 A/250 V with increased touch protection, pre-wired for an AC current, connection via 1x 3-pin terminal, 1x CEE socket 16 A/415 V, with partition for circuit separation.

## HoverCube VH-4, with FI/LS, 2x protective contact sockets

PA



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-4 2SD FILS	Graphite black	1	98.000	6109780

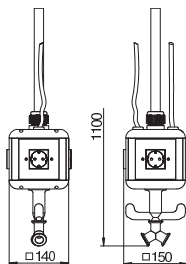
In the case of an overcurrent/error current (16 A/30 mA), the VH-4 HoverCube with decentralised protection triggers the FI/LS directly. Switching back on can take place directly on the power supply unit.

Equipped as follows: 2x single sockets with earthing pin 16 A/250 V with increased touch protection, pre-wired for an AC current, connection via 1x 3-pin terminal, with partition for circuit separation and an FI/LS switch.

One unequipped side with a free panel for individual, construction-side equipment (e.g. blanking plate, cover plate for devices/Modul 45 devices).

## HoverCube VH-4, 4x protective contact socket, with compressed air connection

PA



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-4L 4SD	Graphite black	1	428.600	6109812

Housing equipped and pre-wired, with 1 m pipe 1/2" and connection for compressed air hose 13 x 3.5 mm and 2-way distributor 1/2", with suspension lug, grip hook and four cover plates.

Equipped as follows: 4x single protective contact sockets 16 A/250 V with increased touch protection, pre-wired for two AC currents, connection via 2x 3-pin terminals, 1x CEE socket 16 A/415 V, with partition for circuit separation.



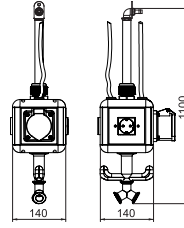
PA

## HoverCube VH-4, 3x protective contact socket, 1x CEE 16 A, with compressed air connection

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-4L 3SD1C16	Graphite black	1	380.000	6109814

Housing equipped and pre-wired, with 1 m pipe 1/2" and connection for compressed air hose 13 x 3.5 mm and 2-way distributor 1/2", with suspension lug, grip hook and four cover plates.

Equipped as follows: 3x single protective contact sockets 16 A/250 V with increased touch protection, pre-wired for an AC current, connection via 1x 3-pin terminal, 1x CEE socket 16 A/415 V, with partition for circuit separation.



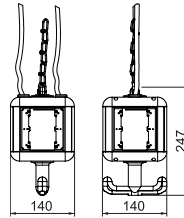
## VH - Empty housing and installation accessories IP20

PA

### HoverCube VH-4, empty housing

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-4 LG	Graphite black	1	62.000	6109800

Empty housing with suspension lug and grip hook, for the installation of four electrical resources, with included partition. Without cover plates.

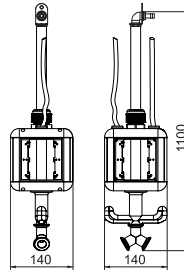


PA

### HoverCube VH-4, empty housing, with compressed air connection

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-4L LG	Graphite black	1	343.800	6109810

Empty housing with 1 m pipe 1/2" and connection for compressed air hose 13 x 3.5 mm and 2-way distributor 1/2". With suspension lug and grip hook, for the installation of four electrical resources, with included partition. Without cover plates.

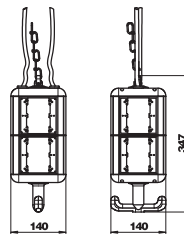


PA

### HoverCube VH-8, empty housing

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-8 LG	Graphite black	1	88.200	6109821

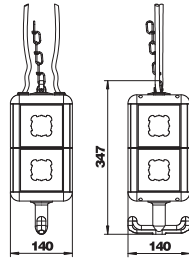
Empty housing with suspension lug and grip hook, for the installation of eight electrical resources, with included partition. Without cover plates.





## HoverCube VH-8, empty housing, with cover plates

PA

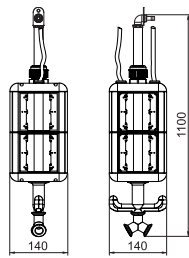


Type	Colour	Pack	Weight	Item no.
		Piece	kg/100 pc.	
VH-8 LG8P2	Graphite black	1	123.400	6109820

Empty housing with suspension lug and grip hook, for the installation of eight electrical resources, with included partition. With eight cover plates for accessories with concealed support ring or support bracket.

## HoverCube VH-8, empty housing, with compressed air connection

PA

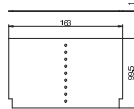
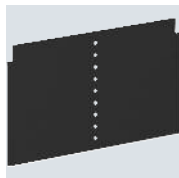


Type	Colour	Pack	Weight	Item no.
		Piece	kg/100 pc.	
VH-8L LG	Graphite black	1	300.000	6109825

Empty housing with 1 m pipe 1/2" and connection for compressed air hose 13 x 3.5 mm and 2-way distributor 1/2". With suspension lug and grip hook, for the installation of electrical resources, with included partition. Without cover plates.

## Partition VH-4

PVC

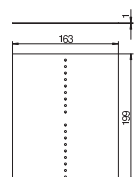
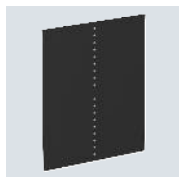


Type	Colour	Pack	Weight	Item no.
		Piece	kg/100 pc.	
VH-4 TW	Graphite black	1	2.350	6109832

Additional partition wall for reciprocal insulation of three different power circuits and types. Version for VH-4.

## Partition VH-8

PVC



Type	Colour	Pack	Weight	Item no.
		Piece	kg/100 pc.	
VH-8 TW	Graphite black	1	4.890	6109862

Additional partition wall for reciprocal insulation of three different power circuits and types. Version for VH-8.



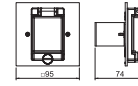
PA

### Mounting set VH4

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH MS FILS	Yellow	1	10.500	6109788

Mounting kit for the installation of series-mounted devices up to 2 part units, e.g. of an FI/LS switch in the freely terminable HoverCube VH4/VH8.

Mounting of the FI/LS switch is possible at a later time, irrespective of the system.

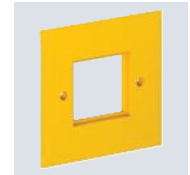
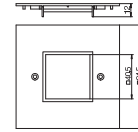


PA

### VH cover plate, for Modul 45 devices, single

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-P4	Rape yellow	1	2.030	6109840

Cover plate to install a single Modul 45 socket.

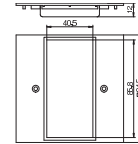


PA

### VH cover plate, for Modul 45 devices, double

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-P5	Rape yellow	1	1.749	6109836

Cover plate to install a double Modul 45 socket.

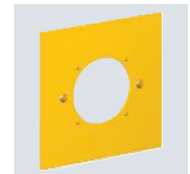
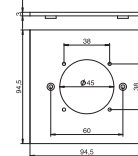


PA

### VH cover plate, for 1x extension socket, type ASD

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-P7	Rape yellow	1	1.890	6109839

Cover plate with opening for the installation of a socket with 38 x 38 mm fastening system.



PA

### Cover plate VH, for CEE connection unit

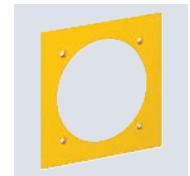
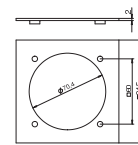
Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-P3	Rape yellow	1	1.830	6109838

Cover plate with a Ø 70 mm opening for the installation of a CEE socket 16/32 A with 60 mm fastening track, including four fastening screws.

Information on equipment:

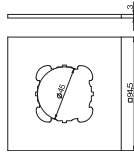
Max. 2 CEE sockets 16/32 A in a power supply unit VH-4

Max. 4 CEE sockets 16/32 A in a power supply unit VH-8



**Cover plate VH, for EK and EKR devices**

PA

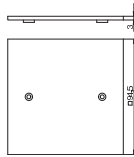


Colour		Pack	Weight	Item no.
Type	Piece	kg/100 pc.		
VH-P2	Rape yellow	1	2.300	6109834

Cover plate with opening Ø 45 mm for the installation of a device with concealed support ring or support clamp.

**VH cover plate as blanking cover**

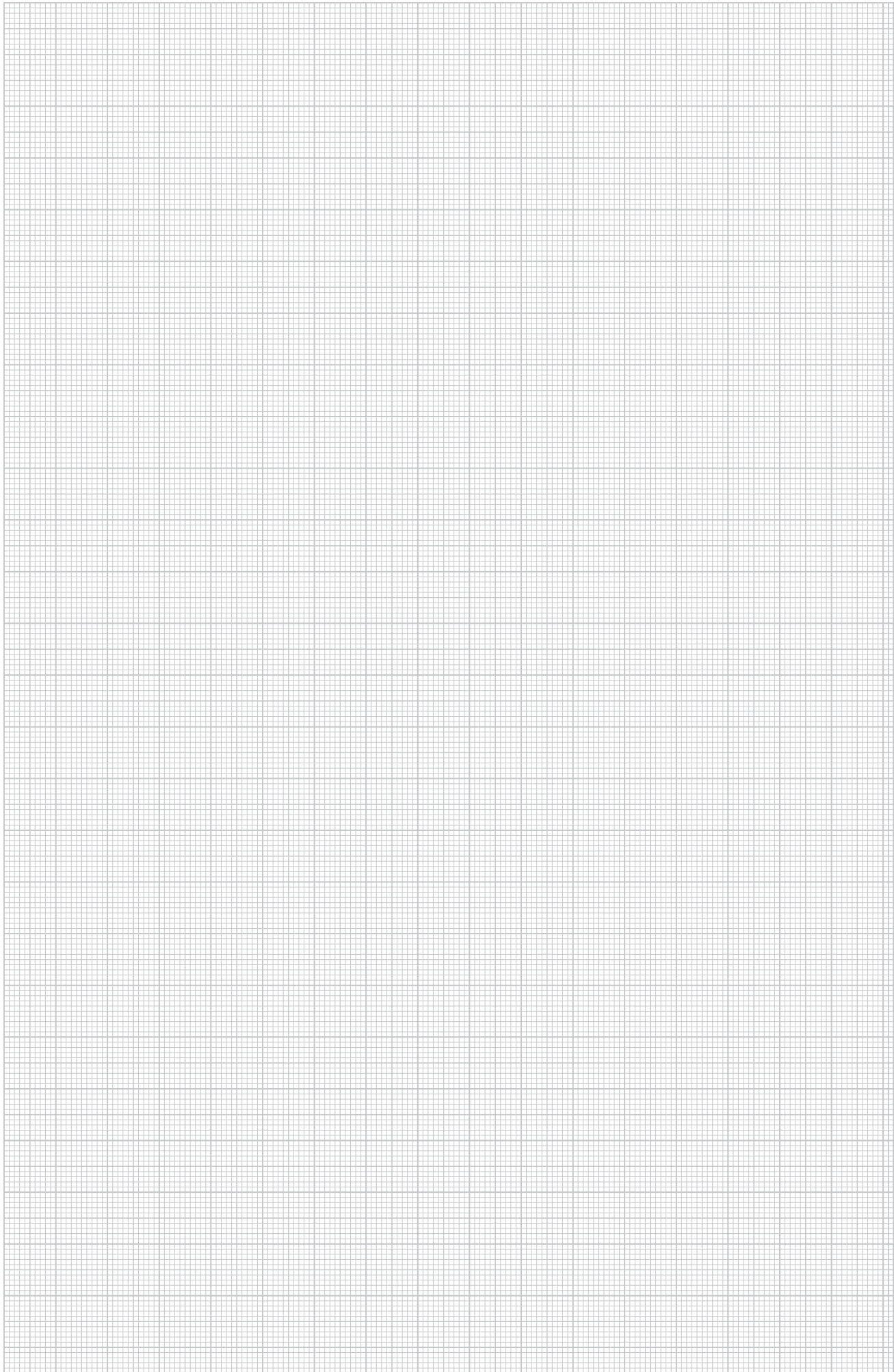
PA



Colour		Pack	Weight	Item no.
Type	Piece	kg/100 pc.		
VH-P1	Rape yellow	1	2.930	6109842

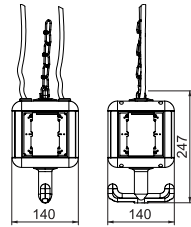
Cover plate as blanking cover.





## HoverCube VH-4, empty housing

PA



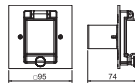
Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-4 LG RW	Pure white	1	72.000	6109801

Empty housing with suspension lug and grip hook, for the installation of four electrical resources, with included partition. Without cover plates.

## Accessories IP 20, pure white

### Mounting set VH4

PA



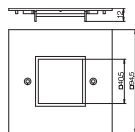
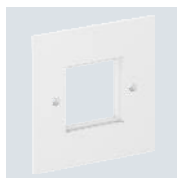
Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH MS FILS RW	Pure white	1	10.500	6109789

Mounting kit for the installation of series-mounted devices up to 2 part units, e.g. of an FI/LS switch in the freely terminable HoverCube VH4/VH8.

Mounting of the FI/LS switch is possible at a later time, irrespective of the system.

### VH cover plate, for Modul 45 devices, single

PA

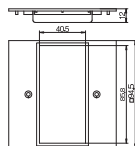


Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-P4 RW	Pure white	1	2.009	6109841

Cover plate to install a single Modul 45 socket.

### VH cover plate, for Modul 45 devices, double

PA

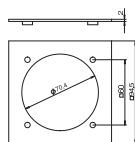
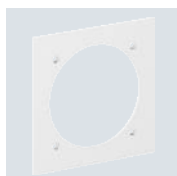


Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-P5 RW	Pure white	1	1.728	6109835

Cover plate to install a double Modul 45 socket.

### Cover plate VH, for CEE connection unit

PA



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-P3 RW	Pure white	1	1.830	6109837

Cover plate with a  $\varnothing 70$  mm opening for the installation of a CEE socket 16/32 A with 60 mm fastening track, including four fastening screws.

Information on equipment:

Max. 2 CEE sockets 16/32 A in a power supply unit VH-4

Max. 4 CEE sockets 16/32 A in a power supply unit VH-8

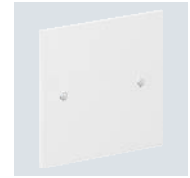
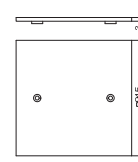


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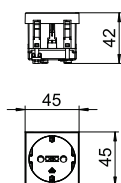
VH cover plate as blanking cover

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-P1 RW	Pure white	1	3.000	6109843

Cover plate as blanking cover.



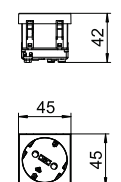
### 0° socket, protective contact, single



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
STD-D0 RW1	Pure white	1	4.200	6120008
STD-D0 ROR1	Pure orange	1	4.200	6120010
STD-D0 MZGN1	Signal green	1	4.200	6120012
STD-D0 SRO1	Signal red	1	4.200	6120014
STD-D0 SWGR1	Black-grey	1	4.200	6120016

Power socket, single 0°, with increased touch protection with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1.

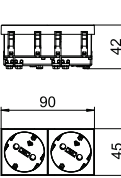
### 33° socket, protective contact, single



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
STD-D3S RW1	Pure white	1	4.000	6120073
STD-D3S ROR1	Pure orange	1	4.000	6120075
STD-D3S MZGN1	Signal green	1	4.000	6120077
STD-D3S SRO1	Signal red	1	4.000	6120079
STD-D3S SWGR1	Black-grey	1	4.000	6120081

Protective contact socket, single 33°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1.

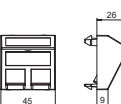
### 33° socket, protective contact, double



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
STD-D3S RW2	Pure white	1	7.700	6120103
STD-D3S ROR2	Pure orange	1	7.700	6120105
STD-D3S MZGN2	Signal green	1	7.700	6120107
STD-D3S SRO2	Signal red	1	7.700	6120109
STD-D3S SWGR2	Black-grey	1	7.700	6120111

Protective contact socket, double 33°, with increased touch protection, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1.

### Data technology support, 1 module, slanting outlet, type C

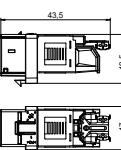


Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
DTS-2C RW1	Pure white	1	1.500	6119250
DTS-2C SWGR1	Black-grey	1	1.500	6119252

The type C data technology support is suitable for accepting the following data connection modules: BTR (Keystone design): Cat. 6A module and UAE module; Corning: modules with Keystone seat; CobiNet: CobiDat KS module; Dätwyler: KS-T, KS-TS, MS-K and KU-T; EKV: E-Stone; Harting: Prelink Keystone Cat. 6A; Fixlink Keystone Cat. 6A; Komos: KDM 500 module; Leoni Kerpen: MegaLine-Connect45 Keystone socket modules; OBO: Type ASM-C6A and ASM-C6A G; R&M: Cat. 6A with Keystone fastening; Rutenbeck: UM and UMflex; SETEC: UKJ and XKJ; Telegärtner: AMJ and UMJ.

Data technology support with slanting outlet and locking slider to accept two data technology connection modules with RJ45 socket. The locking fastening is suitable for horizontal and vertical installation in the system environment. Type C has a mounting opening of 19.30 x 14.80 mm and is designed for direct fastening of the data connection modules in the mounting opening.

### Connection module Cat. 6A, unshielded, keystone



Type	Pack Piece	Weight kg/100 pc.	Item no.
ASM-C6A	1	1.050	6117348

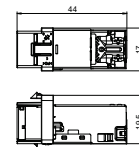
Connection module Cat. 6A (ISO) unshielded, with an RJ45 slot. Including a dust cover, a cable tie, a Keystone fastening frame and mounting instructions. Suitable for installation in the data technology supports of type DTG-2C and DTS-2C, support plate of type MTM 2C and MTM 3C, mounting plate of type MPR2 2C, mounting supports of type MTGE2 2C, MTGE2 15 2C and MTGE2 F 2C.



### Connection module Cat. 6A, shielded, keystone

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ASM-C6A G		1	1.630	6117346

Connection module Cat. 6A (ISO) shielded, with an RJ45 slot. Including an EMC screen hood, a dust cover, a cable tie, a Keystone fastening frame and mounting instructions. Suitable for installation in the data technology supports of type DTG-2C and DTS-2C, support plate of type MTM 2C and MTM 3C, mounting plate of type MPR2 2C, mounting supports of type MTGE2 2C, MTGE2 15 2C and MTGE2 F 2C.

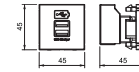


PC

### USB charging device

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
MTG-2UC2.1 RW1	Pure white	1	6.162	6105300
MTG-2UC2.1 SWGR1	Black-grey	1	5.500	6105302

USB charging device with two USB type A sockets, for charging 1–2 mobile devices, maximum charging current 1x 2,100 mA or 2x 1,050 mA.

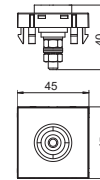


PC

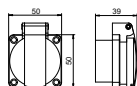
### Equipotential bonding socket, 1 module, straight outlet

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
PAD-ID6 RW1	Pure white	1	5.000	6120003
PAD-ID6 SWGR1	Black-grey	1	5.000	6120001

Equipotential bonding socket to DIN 42801, socket in black with green-yellow colour ring, cable connection to rear with M6 screw bolt, including two nuts, washers and a serrated washer.



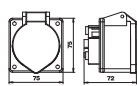
## Surface-mounted socket 0° with hinged cover, protective contact, single



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ASD-D0 SW	Black	1	4.804	6109873

Protective contact extension socket 0° with hinged cover, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1. Protection rating: IP44.

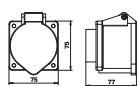
## CEE connection unit, 16 A



Type	Pack Piece	Weight kg/100 pc.	Item no.
CEE-16A	1	19.100	6109874

CEE socket with 60 mm fastening track, 3-pin + N + PE, 400 V, 16 A, 6 h.

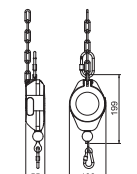
## CEE connection unit, 32 A



Type	Pack Piece	Weight kg/100 pc.	Item no.
CEE-32A	1	20.400	6109876

CEE socket with 60 mm fastening track, 3-pin + N + PE, 400 V, 32 A, 6 h.

## Positioner for VH power supply units

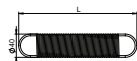


Type	Designation	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-POS	Up to 6 kg load capacity	Orange	1	80.000	6109887

Positioner for variable height adjustment of a VH power supply unit, support load between 0.5 and 6.0 kg, maximum cable draw-out 1.5 m.

## VH/VHF tension spring

VA 2B



Type	Pack Piece	Weight kg/100 pc.	Item no.
VH-F100VA	1	31.350	6109829

Tension spring for VH/VHF power supply units, with German eyelet.

Fmax = 100 N  
 L0 = 200 mm  
 Ln = 500 mm (for Fmax.)  
 Material: VA  $\varnothing$  3.0 mm



St

### Knotted chain

Designation		Pack	Weight	Item no.
Type		m	kg/100 m	
VH-K800	Sold by the metre	1	20.000	6109870

Knotted chain made of pre-copper-plated steel, nickel-plated, according to DIN 5686.  
Max. tensile force: 800 N.  
Note: Specify the required chain length during ordering.



St G

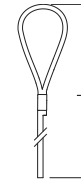
### Support cable with loop

Type	Cable diameter mm	Operating load kg	Dim.		Pack Piece	Weight kg/100 pc.	Item no.
			L	L1			
QWT S 3 3M G	3	90	3000		1	19.640	1450133
QWT S 3 5M G	3	90	5000		1	25.580	1450134

Support cable with loop for the suspension of different loads. Suitable for indoor use.

The loop permits simple wall and ceiling mounting, e.g. on ceiling hooks, ring eyelets or steel girders. With cable gripper for infinite, tool-free adjustment.

The operating load is stated with a safety factor of 5:1. The break load is 5x greater than the operating load. In combination with the universal bracket for mesh cable trays (QW GRH) or for cable trays (QW KRH), the safety factor is 1.7 according to IEC 61537 – Guide systems for cables.



St G

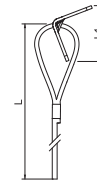
### Support cable with universal bracket

Type	Cable diameter mm	Operating load kg	Dim.		Pack Piece	Weight kg/100 pc.	Item no.
			L	L1			
QWT UW 3 3M G	3	90	3000	21.5	1	8.765	1450432
QWT UW 3 5M G	3	90	5000	21.5	1	15.700	1450433

Support cable with universal bracket for the suspension of different loads. Suitable for indoor use.

Universal bracket for simple wall and ceiling mounting. One bracket side with fastening hole, e.g. for a nail tie, second side with marking for a nail setting device. With cable gripper for infinite, tool-free adjustment.

The operating load is stated with a safety factor of 5:1. The break load is 5x greater than the operating load. In combination with the universal bracket for mesh cable trays (QW GRH) or for cable trays (QW KRH), the safety factor is 1.7 according to IEC 61537 – Guide systems for cables.



St G

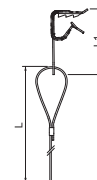
### Support cable with support clamp

Type	Cable diameter mm	Operating load kg	Dim.		Pack Piece	Weight kg/100 pc.	Item no.
			L	L1			
QWT TK 3 3M G	2	45	3000	41	1	8.520	1450627
QWT TK 3 5M G	2	45	5000	41	1	11.830	1450628

Support cable with support clamp for the suspension of different loads. Suitable for indoor use.

With support clamp for knocking into steel girders of flange thickness 8–14 mm. With cable gripper for infinite, tool-free adjustment.

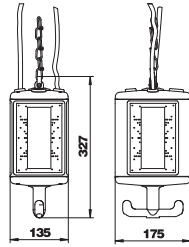
The operating load is stated with a safety factor of 5:1. The break load is 5x greater than the operating load. In combination with the universal bracket for mesh cable trays (QW GRH) or for cable trays (QW KRH), the safety factor is 1.7 according to IEC 61537 – Guide systems for cables.





## HoverCube VHF-8, empty housing

PA

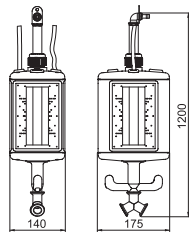


Type	Colour	Pack	Weight	Item no.
		Piece	kg/100 pc.	
VHF-8 LG	Graphite black	1	105.000	6109822

Empty housing with suspension lug and grip hook, for the installation of electrical resources, with included partition. Without cover plates to supply workplaces in wet areas. Protection rating: IP44.

## HoverCube VHF-8, empty housing, with compressed air connection

PA



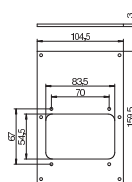
Type	Colour	Pack	Weight	Item no.
		Piece	kg/100 pc.	
VHF-8L LG	Graphite black	1	400.000	6109827

Empty housing with 1 m pipe 1/2" and connection for compressed air hose 13 x 3.5 mm and 2-way distributor 1/2". With suspension lug and grip hook, for the installation of electrical resources, with included partition. Without cover plates to supply workplaces in wet areas. Protection rating: IP44.

## Accessories IP 44

### Cover plate VHF for protective equipment installation

PVC

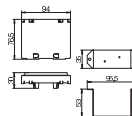
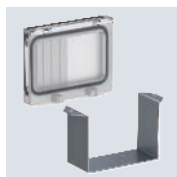


Type	Colour	Pack	Weight	Item no.
		Piece	kg/100 pc.	
VHF-P6	Rape yellow	1	4.700	6109867

Cover plate with cut out for the installation of a cover above protection unit (type VHF-AE4TE). Maximum equipment corresponds to four units.

Cover plate for the VHF power supply units for the installation of a cover above protection unit (type VHF-AE4TE). Maximum equipment corresponds to four units.

### VHF protective unit construction, cover and support clamp



Type	Colour	Pack	Weight	Item no.
		Piece	kg/100 pc.	
VHF-AE4TE		1	12.800	6109850

Cover and support clamp for the installation of protective equipment such as miniature circuit breakers or FI protection switches to max. four units.

Note: Use only in conjunction with the supports VHF-T1 or VHF-T2.

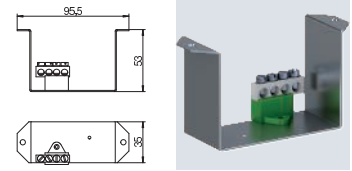


St

### VHF protective unit construction, support with PE terminal strip

Type	Pack Piece	Weight kg/100 pc.	Item no.
VHF-T1	1	6.730	6109852

Support with PE terminal strip for installation of FI protection switches, consisting of:  
 - Base element with hat rail 35 mm and PE terminal strip 4 x 10 mm<sup>2</sup>  
 - Fastening material

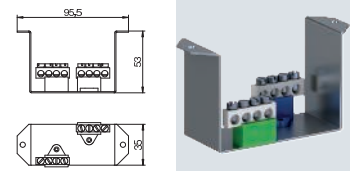


St

### VHF protective unit construction, support with N + PE terminal strip

Type	Pack Piece	Weight kg/100 pc.	Item no.
VHF-T2	1	8.380	6109854

Support with N and PE terminal strip for installation of miniature circuit-breakers, consisting of:  
 - Base element with hat rail 35 mm, N terminal strip 4 x 10 mm<sup>2</sup> and PE terminal strip 4 x 10 mm<sup>2</sup>  
 - Fastening material

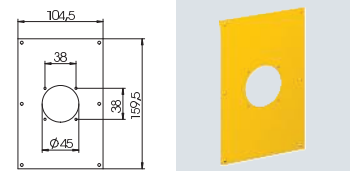


PVC

### VHF cover plate, with fastening system

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VHF-P7	Rape yellow	1	6.600	6109878

Cover plate with opening for the installation of a socket with 38 x 38 mm fastening system.

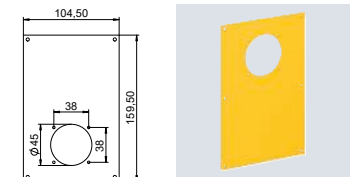


PVC

### VHF cover plate, for 1x surface-mounted socket, type ASD

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VHF-P12	Rape yellow	1	7.400	6109856

Cover plate with a Ø 45 mm opening for the installation of an extension socket (type ASD-...) with 38 mm fastening track, including 4 screws for fastening the device.

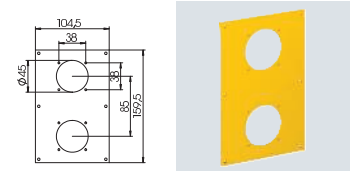


PVC

### VHF cover plate, for 2x surface-mounted socket, type ASD

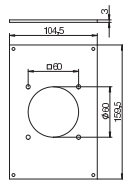
Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VHF-P8	Rape yellow	1	5.900	6109879

Cover plate with two Ø 45 mm openings for the installation of two extension sockets (type ASD-...) with 38 mm fastening track, including 8 screws for fastening the device.



### Cover plate VHF, for CEE connection unit

PVC

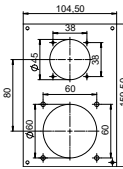
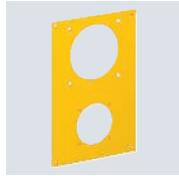


Colour		Pack	Weight	Item no.
Type	Piece	Piece	kg/100 pc.	
VHF-P3	Rape yellow	1	7.000	6109865

Cover plate with a  $\varnothing 70$  mm opening for the installation of 1x CEE socket 16/32 A with 60 mm fastening track, including 4 screws for fastening the device.

### Cover plate VHF, for 1x surface-mounted socket, type ASD and 1x CEE connection unit

PVC

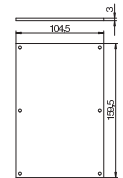


Colour		Pack	Weight	Item no.
Type	Piece	Piece	kg/100 pc.	
VHF-P13	Rape yellow	1	7.400	6109858

Cover plate with a  $\varnothing 45$  mm opening for the installation of one extension socket (type ASD-...) with 38 mm fastening track and a  $\varnothing 60$  mm opening for the installation of one CEE socket 16/32 A with 60 mm fastening track, including 8 screws for fastening the device.

### Cover plate VHF as blanking cover

PVC

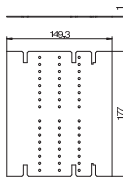
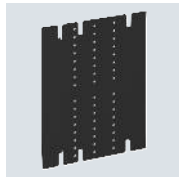


Colour		Pack	Weight	Item no.
Type	Piece	Piece	kg/100 pc.	
VHF-P1	Rape yellow	1	7.000	6109868

Cover plate as blanking cover.

### Partition VHF, with compressed air connection

PVC

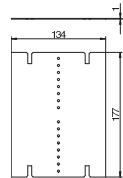
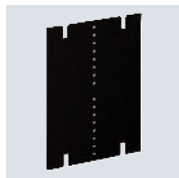


Colour		Pack	Weight	Item no.
Type	Piece	Piece	kg/100 pc.	
VHF-TW L	Graphite black	1	3.900	6109861

Additional partition wall for reciprocal insulation of three different power circuits and types.

### Partition VHF, without compressed air connection

PVC



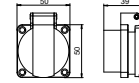
Colour		Pack	Weight	Item no.
Type	Piece	Piece	kg/100 pc.	
VHF-TW	Graphite black	1	3.520	6109860

Additional partition wall for reciprocal insulation of three different power circuits and types.

### Surface-mounted socket 0° with hinged cover, protective contact, single

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
ASD-D0 SW	Black	1	4.804	6109873

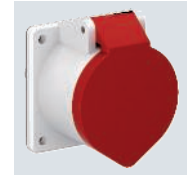
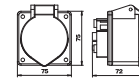
Protective contact extension socket 0° with hinged cover, with screwless terminals, 2-pin, 16 A, 250 V~, with connection terminals to IEC 60884-1. Protection rating: IP44.



### CEE connection unit, 16 A

Type	Pack Piece	Weight kg/100 pc.	Item no.
CEE-16A	1	19.100	6109874

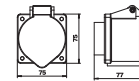
CEE socket with 60 mm fastening track, 3-pin + N + PE, 400 V, 16 A, 6 h.



### CEE connection unit, 32 A

Type	Pack Piece	Weight kg/100 pc.	Item no.
CEE-32A	1	20.400	6109876

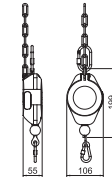
CEE socket with 60 mm fastening track, 3-pin + N + PE, 400 V, 32 A, 6 h.



### Positioner for VH power supply units

Type	Designation	Colour	Pack Piece	Weight kg/100 pc.	Item no.
VH-POS	Up to 6 kg load capacity	Orange	1	80.000	6109887

Positioner for variable height adjustment of a VH power supply unit, support load between 0.5 and 6.0 kg, maximum cable draw-out 1.5 m.



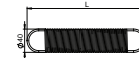
VA 2B

### VH/VHF tension spring

Type	Pack Piece	Weight kg/100 pc.	Item no.
VH-F100VA	1	31.350	6109829

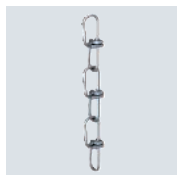
Tension spring for VH/VHF power supply units, with German eyelet.

Fmax = 100 N  
 L0 = 200 mm  
 Ln = 500 mm (for Fmax.)  
 Material: VA ø 3.0 mm



### Knotted chain

St

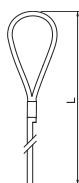


Type	Designation	Pack m	Weight kg/100 m	Item no.
VH-K800	Sold by the metre	1	20.000	6109870

Knotted chain made of pre-copper-plated steel, nickel-plated, according to DIN 5686.  
 Max. tensile force: 800 N.  
 Note: Specify the required chain length during ordering.

### Support cable with loop

St G



Type	Cable dia-meter mm	Operating load kg	Dim.		Pack Piece	Weight kg/100 pc.	Item no.
			L mm				
QWT S 3 3M G	3	90	3000		1	19.640	1450133
QWT S 3 5M G	3	90	5000		1	25.580	1450134

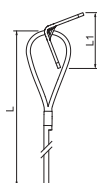
Support cable with loop for the suspension of different loads. Suitable for indoor use.

The loop permits simple wall and ceiling mounting, e.g. on ceiling hooks, ring eyelets or steel girders. With cable gripper for infinite, tool-free adjustment.

The operating load is stated with a safety factor of 5:1. The break load is 5x greater than the operating load. In combination with the universal bracket for mesh cable trays (QW GRH) or for cable trays (QW KRH), the safety factor is 1.7 according to IEC 61537 – Guide systems for cables.

### Support cable with universal bracket

St G



Type	Cable dia-meter mm	Operating load kg	Dim.		Pack Piece	Weight kg/100 pc.	Item no.
			L mm	L1 mm			
QWT UW 3 3M G	3	90	3000	21.5	1	8.765	1450432
QWT UW 3 5M G	3	90	5000	21.5	1	15.700	1450433

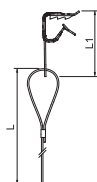
Support cable with universal bracket for the suspension of different loads. Suitable for indoor use.

Universal bracket for simple wall and ceiling mounting. One bracket side with fastening hole, e.g. for a nail tie, second side with marking for a nail setting device. With cable gripper for infinite, tool-free adjustment.

The operating load is stated with a safety factor of 5:1. The break load is 5x greater than the operating load. In combination with the universal bracket for mesh cable trays (QW GRH) or for cable trays (QW KRH), the safety factor is 1.7 according to IEC 61537 – Guide systems for cables.

### Support cable with support clamp

St G



Type	Cable dia-meter mm	Operating load kg	Dim.		Pack Piece	Weight kg/100 pc.	Item no.
			L mm	L1 mm			
QWT TK 2 3M G	2	45	3000	41	1	8.520	1450627
QWT TK 2 5M G	2	45	5000	41	1	11.830	1450628

Support cable with support clamp for the suspension of different loads. Suitable for indoor use.

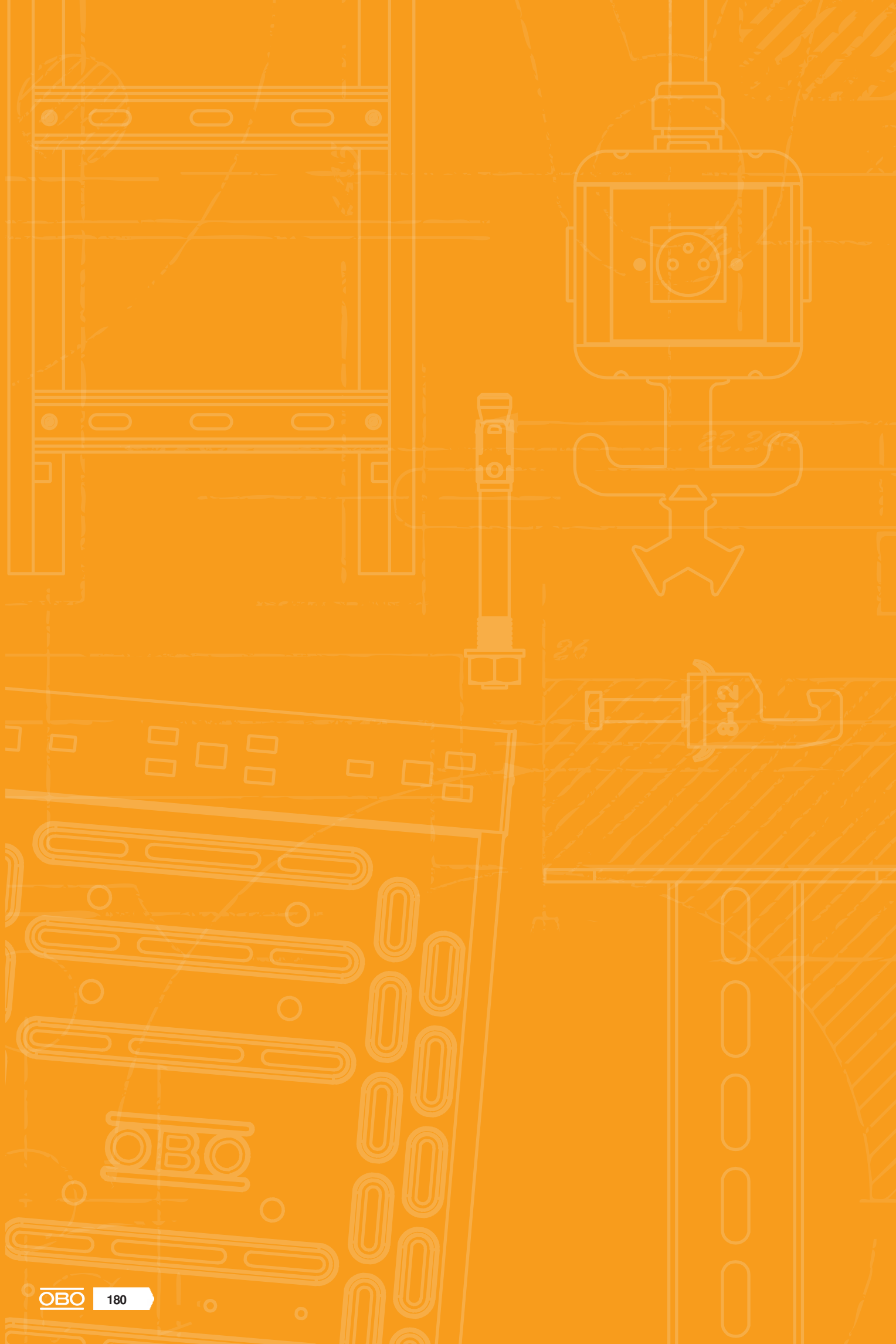
With support clamp for knocking into steel girders of flange thickness 8–14 mm. With cable gripper for infinite, tool-free adjustment.

The operating load is stated with a safety factor of 5:1. The break load is 5x greater than the operating load. In combination with the universal bracket for mesh cable trays (QW GRH) or for cable trays (QW KRH), the safety factor is 1.7 according to IEC 61537 – Guide systems for cables.









# Distributors



Distribution boxes

182



Accessories, distribution boxes

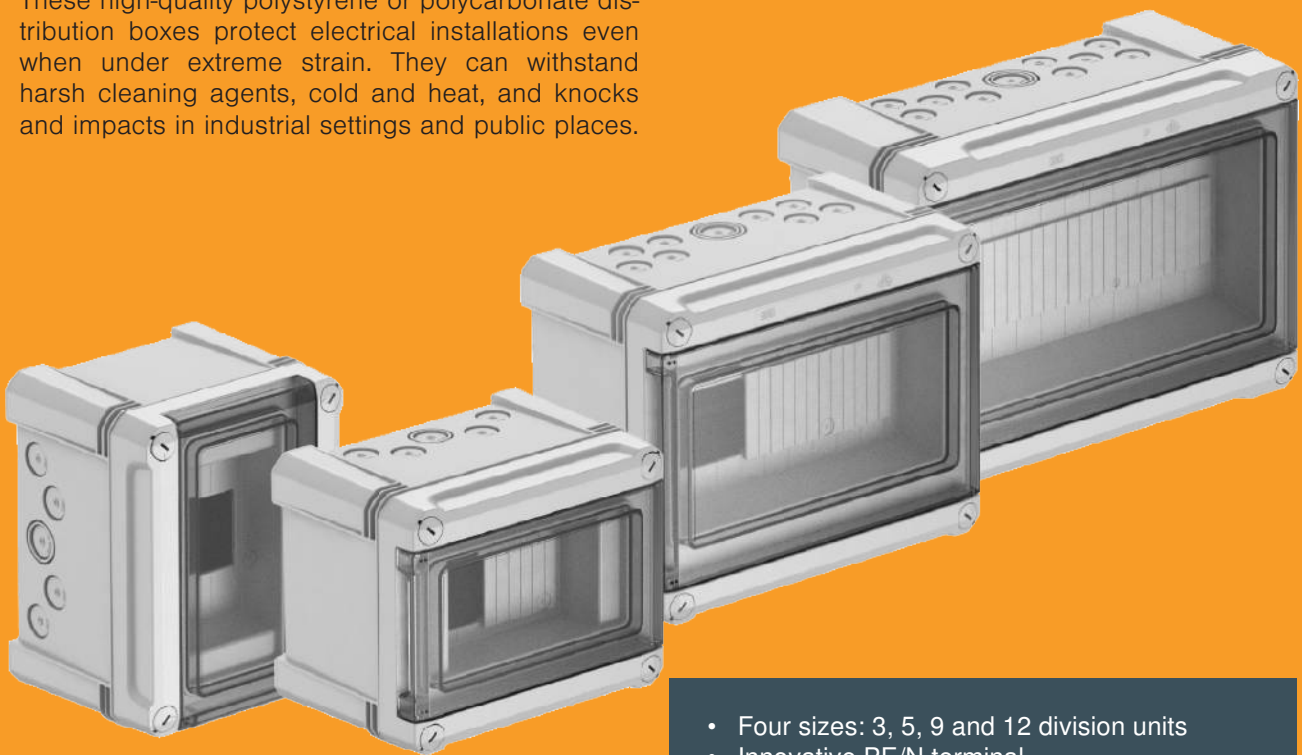
188





## SDB distribution box series

These high-quality polystyrene or polycarbonate distribution boxes protect electrical installations even when under extreme strain. They can withstand harsh cleaning agents, cold and heat, and knocks and impacts in industrial settings and public places.



- Four sizes: 3, 5, 9 and 12 division units
- Innovative PE/N terminal
- Flexible fastening
- Adhesive labelling sheets



PC



### Distribution box, 3 division units, with screwless terminal

Type	Terminals	Colour	Dimension LxWxH mm	Pack Piece	Weight kg/100 pc.	Item no.
SDB 03 PC	Connector	Light grey	150x190x125	1	75.540	2008840

Surface-mounted distribution box, with protective insulation for max. 3 division units. There are 3 break-out openings (2x Ø20 and 1x Ø20/25) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

Suitable for mounting in indoor and outdoor areas;  
VDE-tested according to DIN EN 61439;

Accessories:

- Terminal strip set consisting of: One each of PE/N terminal (1x25 mm<sup>2</sup> and 1x16 mm<sup>2</sup> screw-in terminals, 2x4 mm<sup>2</sup> and 12x2.5 mm<sup>2</sup> screwless terminals), mini hat profile rail, mounting instructions and fastening set
- Self-adhesive pictograms to label the installation
- Two elastic cable entries of Ø20 mm for cable diameters of 0–17 mm
- One elastic cable entry of Ø25 mm for cable diameters of 0–22 mm
- Two stainless steel external fastenings
- Cover strip to close off unused separation units



PS



### Distribution box, 3 division units, with screw terminal

Type	Terminals	Colour	Dimension LxWxH mm	Pack Piece	Weight kg/100 pc.	Item no.
SDB 03 PS	Connector	Light grey	150x190x125	1	81.000	2008800

Surface-mounted distribution box, with protective insulation for max. 3 division units. There are 3 break-out openings (2x Ø20 and 1x Ø20/25) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

Suitable for interior and protected exterior mounting

Accessories:

- Terminal strip set consisting of: One PE/N terminal with 4x 16 mm<sup>2</sup> screw terminal points, mini hat profile rail, mounting instructions and fastening set
- Self-adhesive pictograms for installation labelling and labelling of the connected consumers
- Two elastic cable entries Ø20 mm for cable diameters 0–17 mm
- One elastic cable entry Ø25 mm for cable diameter 0–22 mm



PS

PC



### Distribution box, 3 division units, empty

Type	Colour	Dimension LxWxH mm	Pack Piece	Weight kg/100 pc.	Item no.
SDB 03L PC	Light grey	150x190x125	1	78.000	2008860
SDB 03L PS	Light grey	150x190x125	1	69.000	2008820

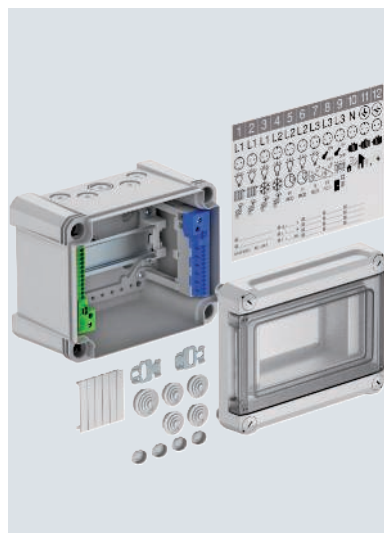
Surface-mounted distribution box, with protective insulation for max. 3 division units. There are 3 break-out openings (2x Ø20 and 1x Ø20/25) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

The PC small distributors are suitable for mounting for interior and exterior use.





Distribution box, 5 division units, with screwless terminal



Type	Terminals	Colour	Dimension	Pack	Weight	Item no.
			LxWxH mm			
SDB 05 PC	Connector	Light grey	190x150x125	1	76.040	2008844

Surface-mounted distribution box, with protective insulation for max. 5 division units. There are 5 break-out openings (4x Ø20 and 1x Ø20/25) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

Suitable for mounting in indoor and outdoor areas; VDE-tested according to DIN EN 61439;

Accessories:

- Terminal strip set consisting of: One each of PE/N terminal (1x25 mm<sup>2</sup> and 1x16 mm<sup>2</sup> screw-in terminals, 2x4 mm<sup>2</sup> and 12x2.5 mm<sup>2</sup> screwless terminals), mini hat profile rail, mounting instructions and fastening set
- Self-adhesive pictograms to label the installation;
- Four elastic cable entries of Ø20 mm for cable diameters of 0–17 mm
- One elastic cable entry of Ø25 mm for cable diameters of 0–22 mm
- Two stainless steel external fastenings
- Cover strip to close off unused separation units

Distribution box, 5 division units, with screw terminal



Type	Terminals	Colour	Dimension	Pack	Weight	Item no.
			LxWxH mm			
SDB 05 PS	Connector	Light grey	190x150x125	1	81.500	2008804

Surface-mounted distribution box, with protective insulation for max. 5 division units. There are 5 break-out openings (4x Ø20 and 1x Ø20/25) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

Suitable for interior and protected exterior mounting

Accessories:

- Terminal strip set consisting of: One PE/N terminal with 4x 16 mm<sup>2</sup> screw terminal points, mini hat profile rail, mounting instructions and fastening set
- Self-adhesive pictograms for installation labelling and labelling of the connected consumers
- Four elastic cable entries Ø20 mm for cable diameters 0–17 mm
- One elastic cable entry Ø25 mm for cable diameter 0–22 mm

Distribution box, 5 division units, empty



Type	Colour	Dimension	Pack	Weight	Item no.
		LxWxH mm			
SDB 05L PS	Light grey	190x150x125	1	69.500	2008824
SDB 05L PC	Light grey	190x150x125	1	78.500	2008864

Surface-mounted distribution box, with protective insulation for max. 5 division units. There are 5 break-out openings (4x Ø20 and 1x Ø20/25) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

The PC small distributors are suitable for mounting for interior and exterior use.



PC



### Distribution box, 9 division units, with screwless terminal

Type	Terminals	Colour	Dimension		Pack Piece	Weight kg/100 pc.	Item no.
			LxWxH mm	mm			
SDB 09 PC	Connector	Light grey	240x191x125	mm	1	103.840	2008848

Surface-mounted distribution box, with protective insulation for max. 9 division units. There are 9 break-out openings (8x Ø20 and 1x Ø20/25/32) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

Suitable for mounting in indoor and outdoor areas;  
VDE-tested according to DIN EN 61439;

Accessories:

- Terminal strip set consisting of: One each of PE/N terminal (1x25 mm<sup>2</sup> and 1x16 mm<sup>2</sup> screw-in terminals, 2x4 mm<sup>2</sup> and 12x2.5 mm<sup>2</sup> screwless terminals), mini hat profile rail, mounting instructions and fastening set
- Self-adhesive pictograms to label the installation
- Six elastic cable entries of Ø20 mm for cable diameters of 0–17 mm
- One elastic cable entry of Ø25 mm for cable diameters of 0–22 mm
- One elastic cable entry of Ø32 mm for cable diameters of 0–28 mm
- Two stainless steel external fastenings
- Cover strip to close off unused separation units



PS



### Distribution box, 9 division units, with screw terminal

Type	Terminals	Colour	Dimension		Pack Piece	Weight kg/100 pc.	Item no.
			LxWxH mm	mm			
SDB 09 PS	Connector	Light grey	240x191x125	mm	1	110.000	2008808

Surface-mounted distribution box, with protective insulation for max. 9 division units. There are 9 break-out openings (8x Ø20 and 1x Ø20/25/32) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

Suitable for interior and protected exterior mounting

Accessories:

- Terminal strip set consisting of: Two PE/N terminals each with 4x 16 mm<sup>2</sup> screw terminal points, mini hat profile rail, mounting instructions and fastening set
- Self-adhesive pictograms for installation labelling and labelling of the connected consumers
- Six elastic cable entries Ø20 mm for cable diameters 0–17 mm
- One elastic cable entry Ø25 mm for cable diameter 0–22 mm
- One elastic cable entry Ø32 mm for cable diameter 0–28 mm



PS PC

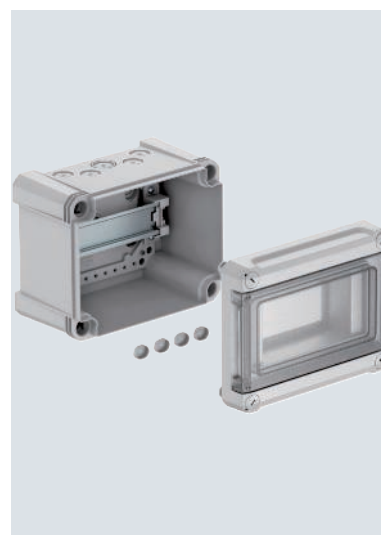


### Distribution box, 9 division units, empty

Type	Colour	Dimension		Pack Piece	Weight kg/100 pc.	Item no.
		LxWxH mm	mm			
SDB 09L PS	Light grey	240x191x125	mm	1	96.000	2008828
SDB 09L PC	Light grey	240x191x125	mm	1	108.000	2008868

Surface-mounted distribution box, with protective insulation for max. 9 division units. There are 9 break-out openings (8x Ø20 and 1x Ø20/25/32) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

The PC small distributors are suitable for mounting for interior and exterior use.



Distribution box, 12 division units, with screw terminal



PS

CE IP 66 IK 07 M20 M25 M32 M 400 V

650°

Type	Terminals	Colour	Dimension LxWxH mm	Pack Piece	Weight kg/100 pc.	Item no.
SDB 12 PS	Connector	Light grey	286x202x125	1	141.000	2008812
SDB 12L PS	Light grey	286x202x125		1	120.000	2008832

Surface-mounted distribution box, with protective insulation for max. 12 division units. There are 11 break-out openings (10x Ø20 and 1x Ø20/25/32) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

Suitable for interior and protected exterior mounting

Accessories:

- Terminal strip set consisting of: Three PE/N terminals each with 4x 16 mm<sup>2</sup> screw terminal points, mini hat profile rail, mounting instructions and fastening set
- Self-adhesive pictograms for installation labelling and labelling of the connected consumers
- Eight elastic cable entries Ø20 mm for cable diameters 0–17 mm
- One elastic cable entry Ø25 mm for cable diameter 0–22 mm
- One elastic cable entry Ø32 mm for cable diameter 0–28 mm

Distribution box, 12 division units, empty



PC

CE IP 66 IK 07 M20 M25 M32 M 400 V

UV RESISTANT

650°

Type	Colour	Dimension LxWxH mm	Pack Piece	Weight kg/100 pc.	Item no.
SDB 12L PC	Light grey	286x202x125	1	134.000	2008872

Surface-mounted distribution box, with protective insulation for max. 12 division units. There are 11 break-out openings (10x Ø20 and 1x Ø20/25/32) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

The PC small distributors are suitable for mounting for interior and exterior use.



PC



## Distribution box, 12 division units, with screwless terminal

Type	Terminals	Colour	Dimension LxWxH mm	Pack Piece	Weight kg/100 pc.	Item no.
SDB 12 PC	Connector	Light grey	286x202x125	1	150.000	2008852

Surface-mounted distribution box, with protective insulation for max. 12 division units. There are 11 break-out openings (10x Ø20 and 1x Ø20/25/32) on both the upper and lower sides incl. pre-mounted 35 mm hat profile support rail. The four screw cover caps supplied prevent unwanted "voltage carry over".

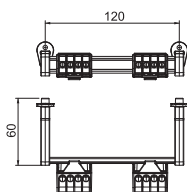
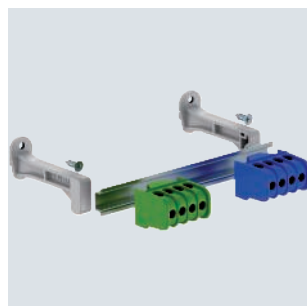
Suitable for mounting in indoor and outdoor areas;  
VDE-tested according to DIN EN 61439;

Accessories:

- Terminal strip set consisting of: One each of PE/N terminal (1x25 mm<sup>2</sup> and 1x16 mm<sup>2</sup> screw-in terminals, 2x4 mm<sup>2</sup> and 12x2.5 mm<sup>2</sup> screwless terminals), mini hat profile rail, mounting instructions and fastening set
- Self-adhesive pictograms to label the installation;
- Eight elastic cable entries of Ø20 mm for cable diameters of 0–17 mm
- One elastic cable entry of Ø25 mm for cable diameters of 0–22 mm
- One elastic cable entry of Ø32 mm for cable diameters of 0–28 mm
- Two stainless steel external fastenings
- Cover strip to close off unused separation units



### Terminal strip set with screw terminals for SDB 03



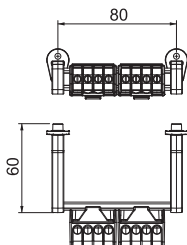
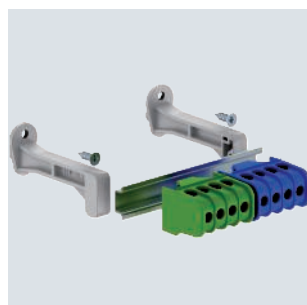
Type	Number of screwless terminals per pole	Pack	Weight	Item no.
		Piece	kg/100 pc.	
KLS-SDB 03	4	1	7.990	2008880

Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip empty small distributors of the SDB 03... type series.

The terminal strip set with screw terminals contains:

Mounting instructions; hat rail with corresponding support and fastening material; 16 mm<sup>2</sup> protective conductor terminal; 16 mm<sup>2</sup> neutral conductor terminal

### Terminal strip set with screw terminals for SDB 05



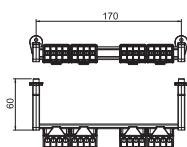
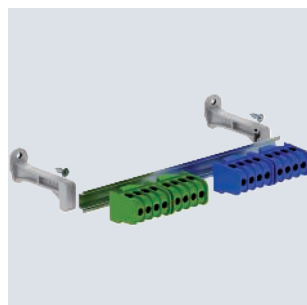
Type	Number of screwless terminals per pole	Pack	Weight	Item no.
		Piece	kg/100 pc.	
KLS-SDB 05	4	1	7.290	2008884

Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip empty small distributors of the SDB 05... type series.

The terminal strip set with screw terminals contains:

Mounting instructions; hat rail with corresponding support and fastening material; 16 mm<sup>2</sup> protective conductor terminal; 16 mm<sup>2</sup> neutral conductor terminal

### Terminal strip set with screw terminals for SDB 09



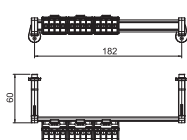
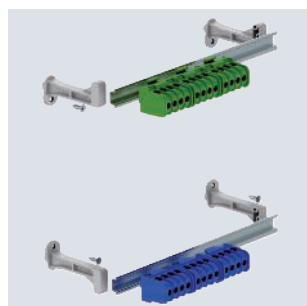
Type	Number of screwless terminals per pole	Pack	Weight	Item no.
		Piece	kg/100 pc.	
KLS-SDB 09	8	1	8.890	2008888

Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip empty small distributors of the SDB 09... type series.

The terminal strip set with screw terminals contains:

Mounting instructions; hat rail with corresponding support and fastening material; 16 mm<sup>2</sup> protective conductor terminal; 16 mm<sup>2</sup> neutral conductor terminal

### Terminal strip set with screw terminals for SDB 12



Type	Number of screwless terminals per pole	Pack	Weight	Item no.
		Piece	kg/100 pc.	
KLS-SDB 12	12	1	9.090	2008892

Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip empty small distributors of the SDB 12... type series.

The terminal strip set with screw terminals contains:

Mounting instructions; hat rail with corresponding support and fastening material; 16 mm<sup>2</sup> protective conductor terminal; 16 mm<sup>2</sup> neutral conductor terminal



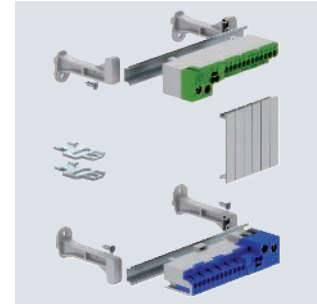
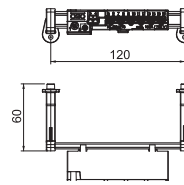
**Terminal strip set with screwless terminals for SDB 03**

Type	Pack Piece	Weight kg/100 pc.	Item no.
KLS-SDB 03S	1	13.830	2008910

Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip the empty small distributors of the SDB 03... type series.

The terminal strip set with screwless terminals contains:

Mounting instructions; cover strip; hat rail with corresponding support and fastening material; one protective conductor terminal and one neutral conductor terminal each with two 16/25 mm<sup>2</sup> screw terminals and 2x 4 mm<sup>2</sup> and 12x 2.5 mm<sup>2</sup> screwless terminals

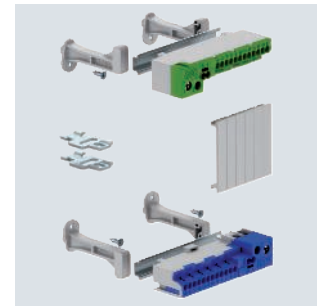
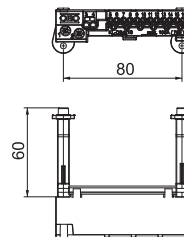
**Terminal strip set with screwless terminals for SDB 05**

Type	Pack Piece	Weight kg/100 pc.	Item no.
KLS-SDB 05S	1	13.130	2008914

Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip the empty small distributors of the SDB 05... type series.

The terminal strip set with screwless terminals contains:

Mounting instructions; cover strip; hat rail with corresponding support and fastening material; one protective conductor terminal and one neutral conductor terminal each with two 16/25 mm<sup>2</sup> screw terminals and 2x 4 mm<sup>2</sup> and 12x 2.5 mm<sup>2</sup> screwless terminals

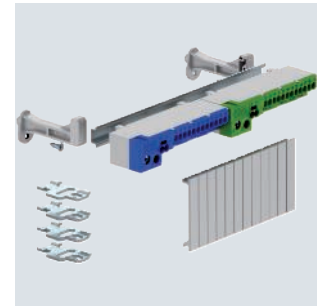
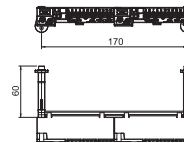
**Terminal strip set with screwless terminals for SDB 09**

Type	Pack Piece	Weight kg/100 pc.	Item no.
KLS-SDB 09S	1	14.730	2008918

Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip the empty small distributors of the SDB 09... type series.

The terminal strip set with screwless terminals contains:

Mounting instructions; cover strip; hat rail with corresponding support and fastening material; one protective conductor terminal and one neutral conductor terminal each with two 16/25 mm<sup>2</sup> screw terminals and 2x 4 mm<sup>2</sup> and 12x 2.5 mm<sup>2</sup> screwless terminals

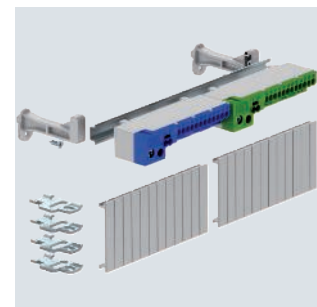
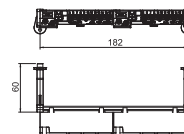
**Terminal strip set with screwless terminals for SDB 12**

Type	Pack Piece	Weight kg/100 pc.	Item no.
KLS-SDB 12S	1	14.180	2008922

Terminal strip set for the small distributors of the SDB series. The sets can be used to expand and equip the empty small distributors of the SDB 12... type series.

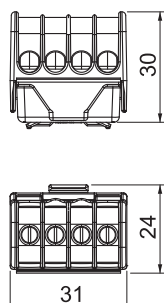
The terminal strip set with screwless terminals contains:

Mounting instructions; cover strip; hat rail with corresponding support and fastening material; one protective conductor terminal and one neutral conductor terminal each with two 16/25 mm<sup>2</sup> screw terminals and 2x 4 mm<sup>2</sup> and 12x 2.5 mm<sup>2</sup> screwless terminals



## Protective conductor terminals

### Protective conductor terminal, with screw contacts, 4 terminals

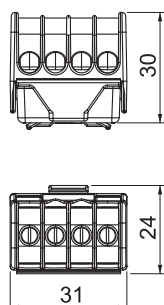


Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
KL-DBS4x16GN	Green	10	1.980	2016250

Protective conductor connection terminal strip, brass, steel screws, electrogalvanised and transparently passivated, nominal cross-section 6 ÷ 16 mm<sup>2</sup>, nominal voltage 400 V, 1-pole, with terminal sockets, max. connectable conductors per terminal 4 x 16 mm<sup>2</sup>, 4 x 10 mm<sup>2</sup>, 8 x 6 mm<sup>2</sup> or 12 x 4 mm<sup>2</sup>.

## Neutral conductor terminals

### Neutral conductor terminal, with screw contacts, 4 terminals



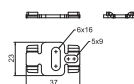
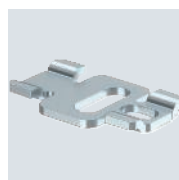
Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
KL-DBN4x16BL	Blue	10	1.980	2016255

Neutral conductor connection terminal, brass, steel screws, electrogalvanised and transparently passivated, nominal cross-section 6 ÷ 16 mm<sup>2</sup>, nominal voltage 400 V, 1-pole, with terminal sockets, max. connectable conductors per terminal 4 x 16 mm<sup>2</sup>, 4 x 10 mm<sup>2</sup>, 8 x 6 mm<sup>2</sup> or 12 x 4 mm<sup>2</sup>.

## External fastening

### External fastening or connection

A2 2B



Type	Pack Piece	Weight kg/100 pc.	Item no.
AV-S	20	0.900	2007990

The convenient external fastening/connection means the cable boxes and distribution boxes of the S and SDB series can be fastened easily to a wall. Because they fasten outside the cable box, the possibility of voltage carry over is ruled out. These metal connectors can also be used for lining up several boxes together.



TPE



### EDS plug-in seal, light grey, X series

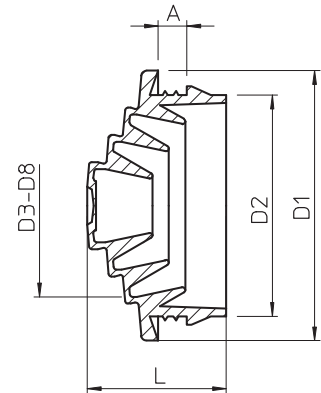
Type	Size	For Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
EDS M20 LGR	M20	0-17	Light grey	100	0.125	2012350
EDS M25 LGR	M25	0-22	Light grey	100	0.185	2012354
EDS M32 LGR	M32	0-28	Light grey	50	0.295	2012358

The push-in nipple can be cut back to suit the relevant cable diameter.

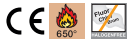


Type	Dim. L	Dim. A	Dim. D1	Dim. D2	Dim. D3	Dim. D4	Dim. D5	Dimension D6	Dimension D7	Dimension D8
Type	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
EDS M20 LGR	12.8	3.1	24.8	20.3	6	10	15	17	-	-
EDS M25 LGR	14.5	3.1	29.5	25.3	6	10	15	20	22	-
EDS M32 LGR	17.8	3.1	36.3	32.3	6	10	15	20	25	28

Dimensions



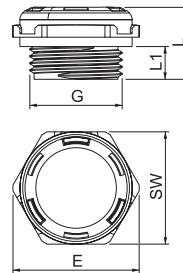
### Pressure compensation element



Type	Thread	Protection rating	Colour	Pack Piece	Weight kg/100 pc.	Item no.
109 M20 LGR	M20x1,5	IP68	Light grey	1	0.538	2034680

The pressure compensation element, type 109 M20 LGR compensates for pressure differences in junction boxes, small distributors and connection sockets with an M20 opening and avoids the formation of condensation water in sealed housings. The polyamide pressure compensation element has an IP68/IP69 protection rating. This remains intact, even after the installation of the pressure compensation element. The pressure compensation element is suitable for use in industrial environments and in exterior areas.

### Pressure compensation element





# Terminals



Screwless terminals

192



Screw terminals

196



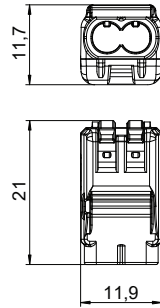
Phase terminals

202



## Universal plug-in terminal, 2-pole

PC

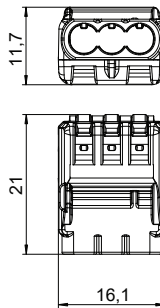


Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
61 225 FL	Transparent	100	0.200	2054450

Tested according to EN 60998.  
Screwless terminal to connect electrical conductors. The type of conductor can either be flexible, multi-wire or rigid.  
If rigid conductors are used, an opening of the release lever is not necessary. The conductor can be plugged into the terminal directly.  
To extract the conductors, simply open the release lever. The strand can then be easily pulled-out.  
Nominal cross-section:  
2 x 0.2 - 2.5 mm<sup>2</sup> multi-wire cables / single-wire conductors  
Rated voltage 450 V.  
Rated current 24 A.  
Stripping length: 9 mm (+1 mm).  
Inspection opening: Phase tester and testing pin (max. Ø 2 mm), very easily accessible on the top side of the terminal  
Max. approved ambient temperature according to EN 60998: -5 to +85 °C.

## Universal plug-in terminal, 3-pole

PC

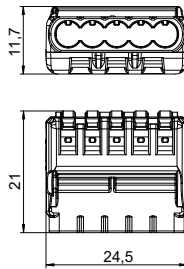


Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
61 325 FL	Transparent	75	0.270	2054454

Tested according to EN 60998.  
Screwless terminal to connect electrical conductors. The type of conductor can either be flexible, multi-wire or rigid.  
If rigid conductors are used, an opening of the release lever is not necessary. The conductor can be plugged into the terminal directly.  
To extract the conductors, simply open the release lever. The strand can then be easily pulled-out.  
Nominal cross-section:  
3 x 0.2 - 2.5 mm<sup>2</sup> multi-wire cables / single-wire conductors  
Rated voltage 450 V.  
Rated current 24 A.  
Stripping length: 9 mm (+1 mm).  
Inspection opening: Phase tester and testing pin (max. Ø 2 mm), very easily accessible on the top side of the terminal  
Max. approved ambient temperature according to EN 60998: 85 °C.

## Universal plug-in terminal, 5-pole

PC



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
61 525 FL	Transparent	50	0.410	2054458

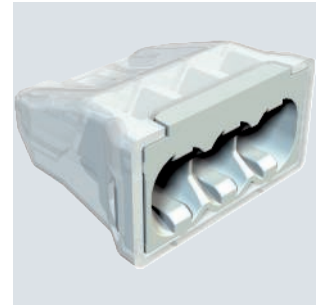
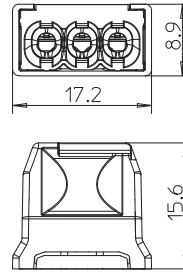
Tested according to EN 60998.  
Screwless terminal to connect electrical conductors. The type of conductor can either be flexible, multi-wire or rigid.  
If rigid conductors are used, an opening of the release lever is not necessary. The conductor can be plugged into the terminal directly.  
To extract the conductors, simply open the release lever. The strand can then be easily pulled-out.  
Nominal cross-section:  
5 x 0.2 - 2.5 mm<sup>2</sup> multi-wire cables / single-wire conductors  
Rated voltage 450 V.  
Rated current 24 A.  
Stripping length: 9 mm (+1 mm).  
Inspection opening: Phase tester and testing pin (max. Ø 2 mm), very easily accessible on the top side of the terminal  
Max. approved ambient temperature according to EN 60998: 85 °C.

PA



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
61 325 LGR	Light grey	100	0.135	2054485

Tested according to EN 60998  
 Screwless terminal to connect single-strand cables.  
 Nominal cross-section:  
 3 x 0.5 mm<sup>2</sup> to 2.5 mm<sup>2</sup> single-wire conductors  
 3 x 1.5 mm<sup>2</sup> to 2.5 mm<sup>2</sup> rigid, multi-wire conductors  
 Rated voltage 450 V  
 Rated current 24 A  
 Stripping length: 8-9 mm  
 Test opening: Phase tester and testing pin (max. Ø 2 mm)  
 Max. approved ambient temperature according to EN 60998: -5 to +90 °C.



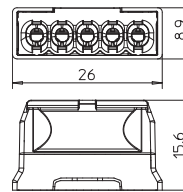
### Screwless terminal, 3-pin

PA



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
61 525 LGR	Light grey	100	0.300	2054507

Screwless terminal to connect single-strand cables.  
 Nominal cross-section:  
 5 x 0.5 mm<sup>2</sup> to 2.5 mm<sup>2</sup> single-wire cable  
 5 x 1.5 mm<sup>2</sup> to 2.5 mm<sup>2</sup> rigid, multi-wire cable  
 Rated voltage 450 V.  
 Rated current 24 A.  
 Stripping length: 8-9 mm.  
 Inspection opening: phase tester and testing pin (max. Ø 2 mm).



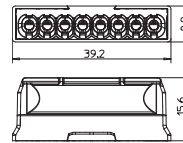
### Screwless terminal, 5-pin

PA



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
61 825 LGR	Light grey	50	0.490	2054523

Screwless terminal to connect single-strand cables.  
 Nominal cross-section:  
 8 x 0.5 mm<sup>2</sup> to 2.5 mm<sup>2</sup> single-wire cables  
 8 x 1.5 mm<sup>2</sup> to 2.5 mm<sup>2</sup> rigid, multi-wire cables  
 Rated voltage 450 V.  
 Rated current 24 A.  
 Stripping length: 8-9 mm.  
 Inspection opening: phase tester and testing pin (max. Ø 2 mm).



### Screwless terminal, 8-pin



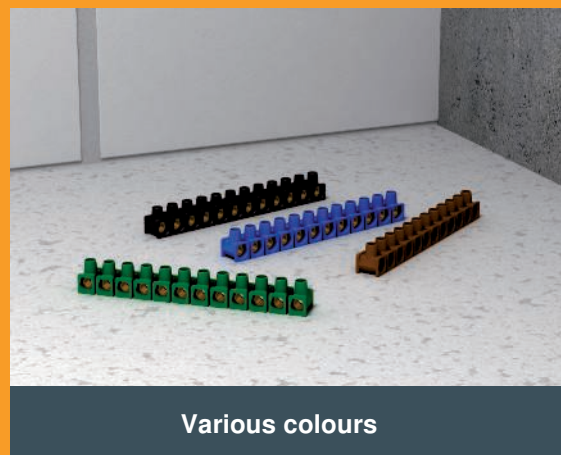


## Dolü branch terminal

The branch terminal/terminal strip consists of an insulating plastic housing that serves as electric shock protection for the steel/brass terminal insert. Thus no voltage-carrying parts can be touched if the component is used correctly. The ends of the wire strands must be inserted using ferrules. These ensure no mechanical damage can occur and rule out the risk of damage to individual strands from the clamping screw as it turns. When using terminal strips, it must be ensured in each individual case that the installation conforms to the applicable VDE standards.



12-pin, individual terminals detachable



Various colours



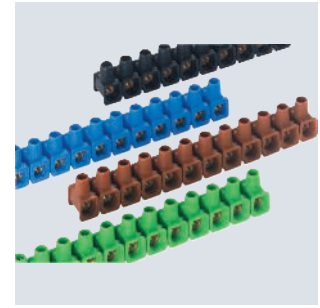
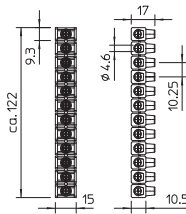
PA



### Dolü branch terminals, open on both sides, 12-pin

Type	Colour	Piece	Shipping box	Pack Piece	Weight kg/100 pc.	Item no.
70 VDE	Sorted	400		10	2.500	2055023

Sorted in colours black, brown, blue and yellow-green.  
 Terminals made of brass, screws of steel, galvanised and transparently passivated, 12-pole, strip separable into individual terminals, open on both sides.  
 Captive upwards screw.  
 Nominal cross-section 2,5 mm<sup>2</sup>.  
 Nominal voltage 380 V.  
 Nominal current 16 A.  
 Max. connectable cross-sections per terminal: 4 x 2,5 mm<sup>2</sup>, 5 x 1,5 mm<sup>2</sup> or 6 x 1 mm<sup>2</sup>.



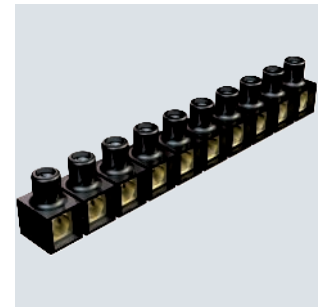
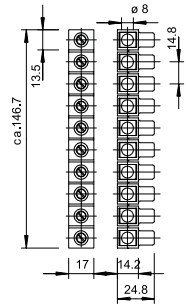
PP



### Dolü branch terminals, open on both sides, 10-pin

Type	Colour	Piece	Shipping box	Pack Piece	Weight kg/100 pc.	Item no.
71	Black	120		10	7.030	2055503

Terminals made of brass, screws of steel, galvanised and transparently passivated, 10-pole, strip separable into individual terminals, open on both sides.  
 Captive upwards screw.  
 Nominal cross-section 10 mm<sup>2</sup>.  
 Nominal voltage 380 V.  
 Max. connectable cross-sections per terminal: 3 x 10 mm<sup>2</sup>, 4 x 6 mm<sup>2</sup>.



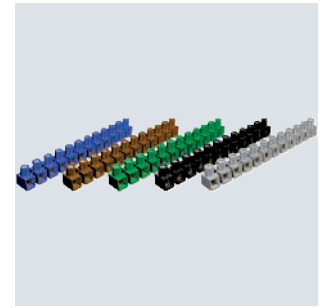
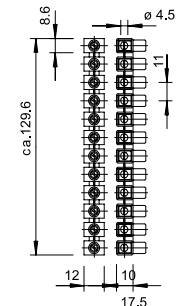
PA



### Dolü branch terminals, open on one side

Type	Colour	Piece	Shipping box	Pack Piece	Weight kg/100 pc.	Item no.
70 S	Sorted	180		10	2.852	2055201

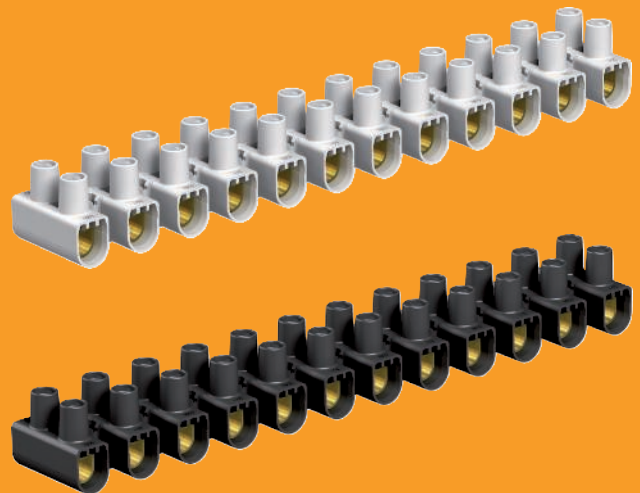
Terminals made of brass, screws of steel, galvanised and transparently passivated, 12-pole, strip separable into individual terminals, only open on one side.  
 Closed on one side, captive upwards screw.  
 Nominal cross-section 2,5 mm<sup>2</sup>.  
 Nominal voltage 250 V.  
 Nominal current 24 A.  
 Max. connectable cross-sections per terminal: 4 x 2,5 mm<sup>2</sup>, 5 x 1,5 mm<sup>2</sup> or 6 x 1 mm<sup>2</sup>.  
 Delivery sorted by colour: 3 black, 2 blue, 3 yellow-green, 1 brown and 1 grey strip in each packaging unit.





## Terminal strips

The branch terminal/terminal strip consists of an insulating plastic housing that serves as electric shock protection for the steel/brass terminal insert. Thus no voltage-carrying parts can be touched if the component is used correctly. The ends of wire strands must be inserted with wire end sleeves to ensure no mechanical damage can occur and rule out the risk of damage to individual strands from the clamping screw as it turns.



- Tested to EN 60998
- Brass terminals, bolts made of electrogalvanised steel
- 12-pin strips, separable into individual terminals through "twist'n'pull"
- Captive upwards screw
- Max. approved ambient temperature to EN 60998: -5 to +80 °C
- Nominal cross-section 4–35 mm<sup>2</sup>

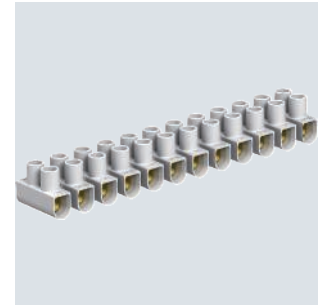
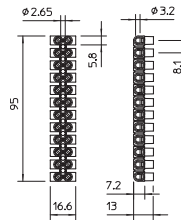
PP



### 4 mm<sup>2</sup> series connectors, polypropylene

Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
72 CE WS/EKL 0 S	White	500	10	1.800	2056070
72 CE SW/EKL 0 S	Black	500	10	1.800	2056089

Tested according to EN 60998.  
 Steel terminals, steel screws, electrogalvanised, 12-pin, individual terminals detachable from strips using "twist'n'pull".  
 Captive upwards screw.  
 Max. approved ambient temperature to EN 60998: -5 to +80 °C.  
 Nominal cross-section 4 mm<sup>2</sup>.  
 Nominal voltage 450 V.  
 Nominal current 32 A.  
 Max. attachment each side: 4 mm<sup>2</sup> single-wire or 2.5 mm<sup>2</sup> multi-wire/flexible.



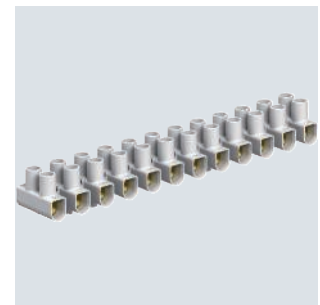
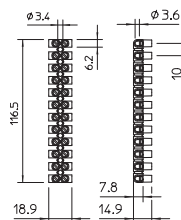
PP



### 6 mm<sup>2</sup> series connectors, polypropylene

Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
74 CE WS/EKL 1 S	White	200	10	2.600	2056224
74 CE SW/EKL 1 S	Black	200	10	2.600	2056232

Tested according to EN 60998.  
 Steel terminals, steel screws, electrogalvanised, 12-pin, individual terminals detachable from strips using "twist'n'pull".  
 Captive upwards screw.  
 Max. approved ambient temperature to EN 60998: -5 to +80 °C.  
 Nominal cross-section 6 mm<sup>2</sup>.  
 Nominal voltage 450 V.  
 Nominal current 41 A.  
 Max. connections on each side: 6 mm<sup>2</sup> single-wire or 4 mm<sup>2</sup> fine-wire.



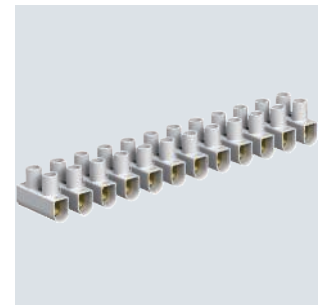
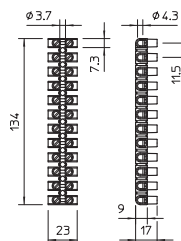
PP



### 10 mm<sup>2</sup> series connectors, polypropylene

Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
76 CE WS/EKL 2 S	White	100	10	4.300	2056372
76 CE SW/EKL 2 S	Black	100	10	4.300	2056380

Tested to EN 60998.  
 Steel terminals, steel screws, electrogalvanised, 12-pole, individual terminals detachable from strips using "twist'n'pull".  
 Captive upwards screw.  
 Max. approved ambient temperature to EN 60998: -5 to +80 °C.  
 Nominal cross-section 10 mm<sup>2</sup>.  
 Nominal voltage 450 V.  
 Nominal current 57 A.  
 Max. attachment each side: 10 mm<sup>2</sup> single-wire or 6 mm<sup>2</sup> multi-wire/flexible.



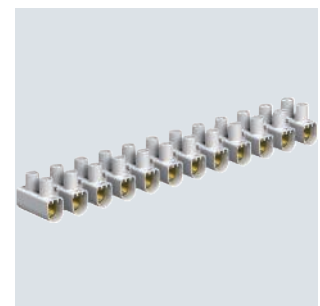
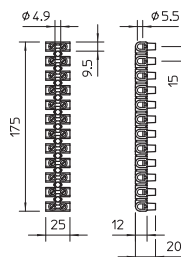
PP



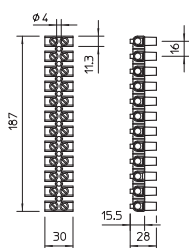
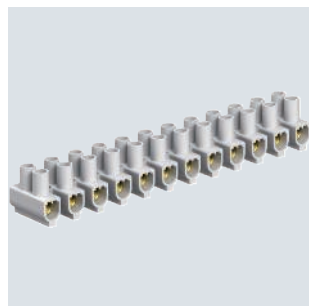
### 16 mm<sup>2</sup> series connectors, polypropylene

Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
78 CE WS/EKL 3 S	White	100	10	7.500	2056550
78 CE SW/EKL 3 S	Black	100	10	7.500	2056569

Tested to EN 60998.  
 Steel terminals, steel screws, electrogalvanised, 12-pole, individual terminals detachable from strips using "twist'n'pull".  
 Captive upwards screw.  
 Max. approved ambient temperature to EN 60998: -5 to +80 °C.  
 Nominal cross-section 16 mm<sup>2</sup>.  
 Nominal voltage 450 V.  
 Nominal current 76 A.  
 Max. attachment each side: 16 mm<sup>2</sup> single-wire or 10 mm<sup>2</sup> multi-wire or 6 mm<sup>2</sup> flexible.



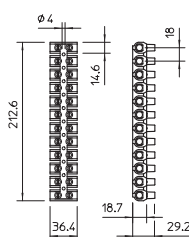
## 25 mm<sup>2</sup> series connectors, polypropylene



Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
79 CE WS/EKL 4BE	White	50	10	11.200	2056577
79 CE SW/EKL 4BE	Black	50	10	11.200	2056585

Tested to EN 60998.  
 Brass terminals, steel screws, electrogalvanised and transparently passivated, 12-pole, individual terminals detachable from strips.  
 Captive upwards screw.  
 Max. approved ambient temperature to EN 60998: -5 to +80 °C.  
 Nominal cross-section 25 mm<sup>2</sup>.  
 Nominal voltage 750 V.  
 Nominal current 101 A.  
 Max. attachment each side: 25 mm<sup>2</sup> multi-wire or 16 mm<sup>2</sup> fine-wire.

## 35 mm<sup>2</sup> series connectors, polypropylene



Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
80 CE WS/EKL 5E	White	50	10	17.400	2056590
80 CE SW/EKL 5E	Black	50	10	17.400	2056593

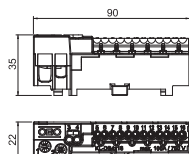
Tested to EN 60998.  
 Brass terminals, steel screws, electrogalvanised, 12-pole, individual terminals detachable from strips.  
 Captive upwards screw.  
 Max. approved ambient temperature to EN 60998: -5 to +80 °C.  
 Nominal cross-section 35 mm<sup>2</sup>.  
 Nominal voltage 750 V.  
 Nominal current 125 A.  
 Max. attachment each side: 35 mm<sup>2</sup> multi-wire or 25 mm<sup>2</sup> fine-wire.





## Phase terminal

### Phase terminal, with screwless contacts, 12 terminals

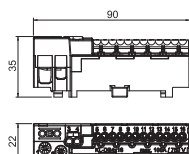
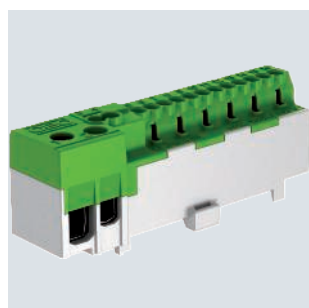


Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
KL-DBP12x02GR	Grey	10	4.500	2016270

Phase connection terminal with 12 2.5 mm<sup>2</sup> screwless terminal points; two 4 mm<sup>2</sup> screwless terminal points and two 16/25 mm<sup>2</sup> screw connection terminal points. For snapping onto 15 mm hat rails to DIN EN 50022.

### Protective conductor terminals

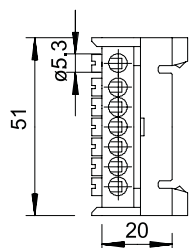
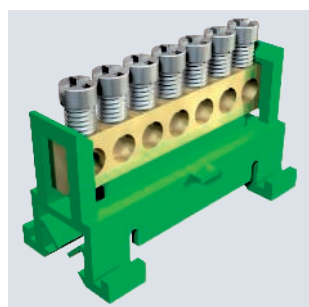
#### Protective conductor terminal, with screwless contacts, 12 terminals



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
KL-DBS12x02GRGN	Grey/green	10	4.500	2016260

Neutral conductor connection terminal with 12 plug-in terminals, 2.5 mm<sup>2</sup> or 1.5 mm<sup>2</sup>, flexible with wire end sleeve; two plug-in terminals, 4 mm<sup>2</sup> and 2.5 mm<sup>2</sup>, flexible with wire end sleeve and two screw connection terminals up to 25 mm<sup>2</sup> or 16 mm<sup>2</sup>, flexible, 3 Nm. For snapping onto 15 mm hat rails according to DIN EN 60715 (formerly DIN EN 50022).

#### Protection conductor terminals, with screw contacts, 7 terminals



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
60 S 7x16 GN	Green	10	2.900	2054019

Protective conductor connection terminal with 7 terminals up to 16 mm<sup>2</sup>. Clamping rail, brass, steel screws, electrogalvanised and transparently passivated, for snapping onto 35 x 7.5 mm hat profile rails to DIN EN 60715 (previously DIN EN 50022) (transverse) or flat rails 10 x 2–2.5 mm (lengthwise).



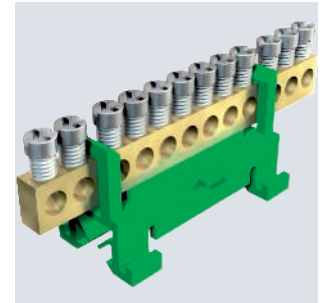
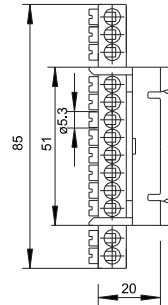
PA



### Protection conductor terminals, with screw contacts, 12 terminals

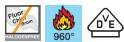
Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
60 S 12x16 GN	Green	10	4.200	2054094

Protective conductor connection terminal with 7 terminals up to 16 mm<sup>2</sup>. Clamping rail, brass, steel screws, electrogalvanised and transparently passivated, for snapping onto 35 x 7.5 mm hat profile rails to DIN EN 60715 (previously DIN EN 50022) (transverse) or flat rails 10 x 2-2.5 mm (lengthwise).



### Neutral conductor terminals

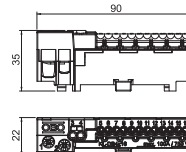
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### Neutral conductor terminal, with screwless contacts, 12 terminals

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
KL-DBN12x02GRBL	Grey/blue	10	4.500	2016265

Neutral conductor connection terminal with 12 plug-in terminals, 2.5 mm<sup>2</sup> or 1.5 mm<sup>2</sup>, flexible with wire end sleeve; two plug-in terminals, 4 mm<sup>2</sup> and 2.5 mm<sup>2</sup>, flexible with wire end sleeve and two screw connection terminals up to 25 mm<sup>2</sup> or 16 mm<sup>2</sup>, flexible, 3 Nm. For snapping onto 15 mm hat rails according to DIN EN 60715 (formerly DIN EN 50022).



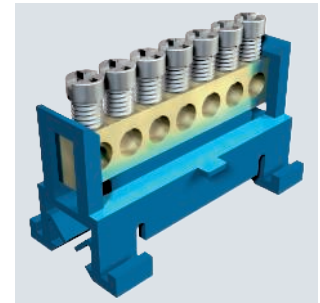
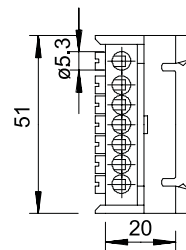
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### Neutral conductor terminals, with screw contacts, 7 terminals

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
60 N 7x16 BL	Blue	10	2.900	2054000

Neutral conductor connection terminal with 7 terminals up to 16 mm<sup>2</sup>. Clamping rail, brass, steel screws, electrogalvanised and transparently passivated, for snapping onto 35 mm hat rails to DIN EN 60715 - previously DIN EN 50022 - (transverse) or flat rails 10 x 2-2.5 mm (lengthwise).



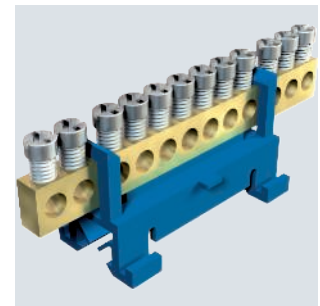
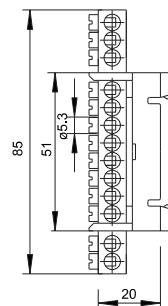
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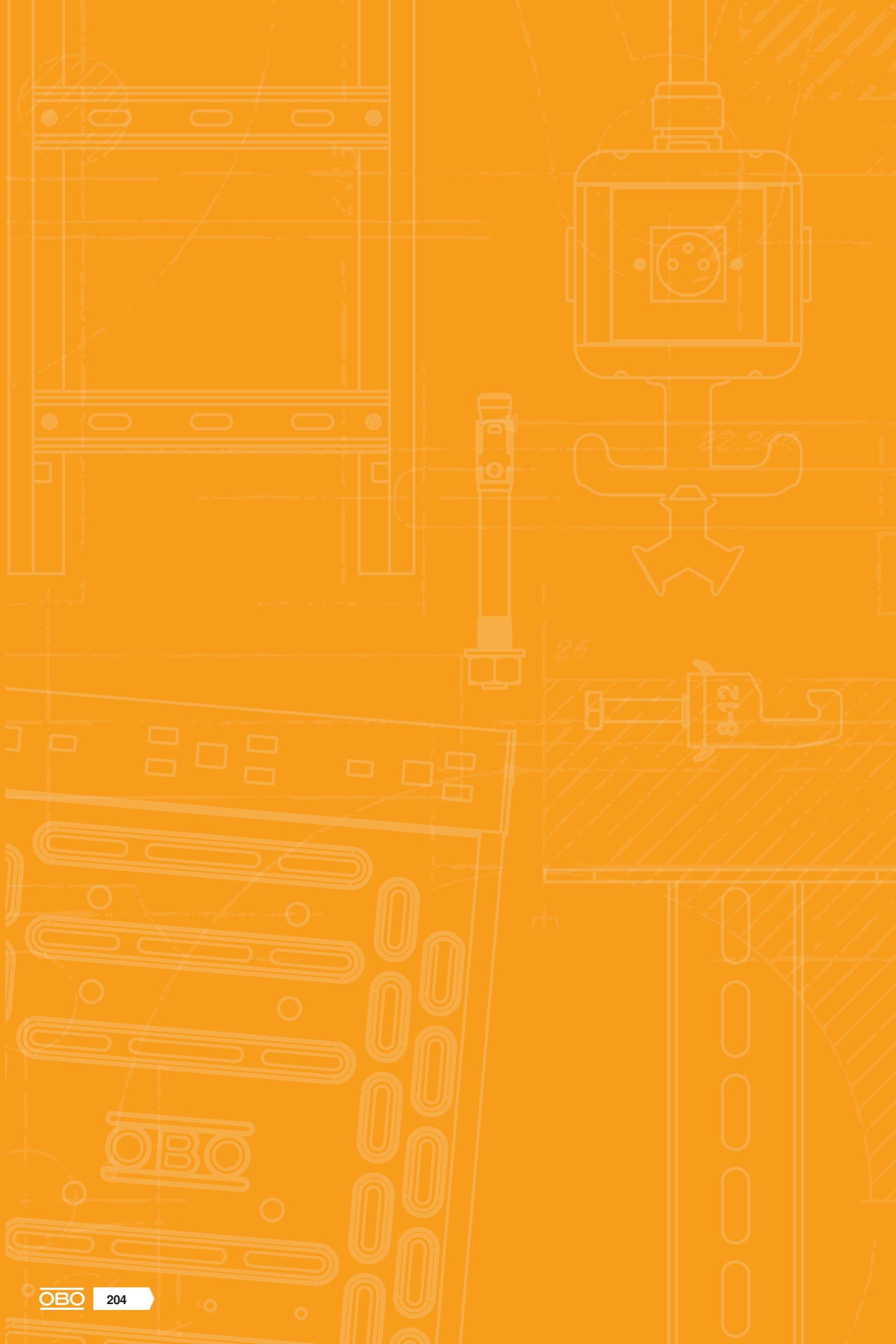


### Neutral conductor terminals, with screw contacts, 12 terminals





Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
60 N 12x16 BL	Blue	10	4.200	2054086

Neutral conductor connection terminal with 12 terminals up to 16 mm<sup>2</sup>. Clamping rail, brass, steel screws, electrogalvanised and transparently passivated, for snapping onto 35 mm hat rails to DIN EN 60715 - previously DIN EN 50022 - (transverse) or flat rails 10 x 2-2.5 mm (lengthwise).





# Cable glands

	Plastic	206
	Accessories, glands, plastic	232
	Metal	244
	Accessories, glands, metal	258



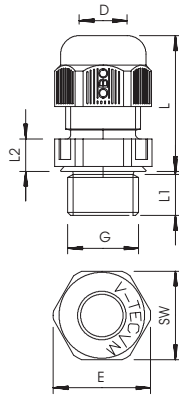


## Cable glands V-TEC VM and V-TEC VM L

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO.

- Fast and convenient means of cable entry for junction boxes and housings
- With the integrated sealing lip and the special OBO lamella technology, protection class IP68 is achieved
- Strain relief and tightness have been tested to DIN EN 62444
- The connecting threads are metric and are therefore suitable for universal use
- Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet
- Temperature range:  $-20\text{ }^{\circ}\text{C}$  to  $+65\text{ }^{\circ}\text{C}$

# V-TEC VM



- Fast, convenient means of cable entry for junction boxes and housings
- With the integrated sealing lip and the special OBO lamella technology, protection class IP68 is achieved
- Strain relief and tightness have been tested to DIN EN 62444
- The connecting threads are metric and are therefore suitable for universal use
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- Temperature range:  $-20\text{ }^{\circ}\text{C}$  to  $+65\text{ }^{\circ}\text{C}$

G	D	SW	E	L min.	L max.	L1	L2
	mm	mm	mm	mm	mm	mm	mm
M12 x 1.5	3.5–7	15	16.5	18.5	23.5	8	5
M16 x 1.5	4.5–10	20	22	21.5	29	8	5
M20 x 1.5	6–13	24	27	23.5	30.5	10	6
M25 x 1.5	9–17	29	32	26	35	10	6
M32 x 1.5	15–21	36	41	29	40	11	6
M40 x 1.5	16–28	44	50	36	46	11	7
M50 x 1.5	23–35	54	60	43	52	12	8
M63 x 1.5	36–48	67	75	48	60	12	9

## Cap nut cable gland, plastic metric

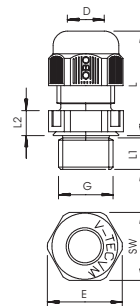
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### Cap nut cable gland, metric thread, light grey

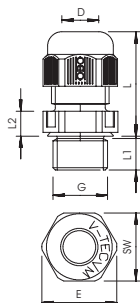
Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC VM12 LGR	Light grey	500	50	0.318	2022862
V-TEC VM16 LGR	Light grey	500	50	0.638	2022864
V-TEC VM20 LGR	Light grey	600	50	0.856	2022866
V-TEC VM25 LGR	Light grey	300	25	1.360	2022868
V-TEC VM32 LGR	Light grey	240	20	2.235	2022870
V-TEC VM40 LGR	Light grey	120	10	3.467	2022872
V-TEC VM50 LGR	Light grey	60	5	5.466	2022874
V-TEC VM63 LGR	Light grey	60	5	8.306	2022876

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. A protection rating of IP68 is achieved through the integrated sealing lip and the special OBO slat technology. Strain relief and tightness have been tested to DIN EN 62444. The connecting threads of the cable glands are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking. Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet. Temperature range:  $-20\text{ }^{\circ}\text{C}$  to  $+65\text{ }^{\circ}\text{C}$ .



# Cap nut cable gland, plastic metric

## Cap nut cable gland, metric thread, silver grey



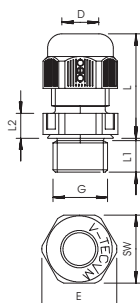
Type	Thread	Colour	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC VM12 SGR	M12 x 1,5	Silver grey	50	0.318	2022843
V-TEC VM16 SGR	M16 x 1,5	Silver grey	50	0.638	2022845
V-TEC VM20 SGR	M20 x 1,5	Silver grey	50	0.856	2022847
V-TEC VM25 SGR	M25 x 1,5	Silver grey	25	1.360	2022849
V-TEC VM32 SGR	M32 x 1,5	Silver grey	20	2.230	2022851
V-TEC VM40 SGR	M40 x 1,5	Silver grey	10	3.467	2022853
V-TEC VM50 SGR	M50 x 1,5	Silver grey	5	5.466	2022855
V-TEC VM63 SGR	M63 x 1,5	Silver grey	5	8.306	2022857

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. With the integrated sealing lip and the special OBO lamella technology, protection class IP68 is achieved. Strain relief and tightness have been tested to DIN EN 62444. The connecting threads of the cable glands are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.

Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.

Temperature range: -20 °C to +65 °C.

## Cap nut cable gland, metric thread, black



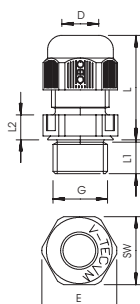
Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC VM12 SW	Black	500	50	0.318	2022883
V-TEC VM16 SW	Black	500	50	0.638	2022885
V-TEC VM20 SW	Black	600	50	0.856	2022887
V-TEC VM25 SW	Black	300	25	1.360	2022889
V-TEC VM32 SW	Black	240	20	2.230	2022891
V-TEC VM40 SW	Black	120	10	3.467	2022893
V-TEC VM50 SW	Black	60	5	5.466	2022895
V-TEC VM63 SW	Black	60	5	8.306	2022897

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. A protection rating of IP68 is achieved through the integrated sealing lip and the special OBO slot technology. Strain relief and tightness have been tested to DIN EN 62444. The connecting threads of the cable glands are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.

Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.

Temperature range: -20 °C to +65 °C.

## Cap nut cable gland, metric thread, UV-resistant, light grey



Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC VM12UV LGR	Light grey	500	50	0.319	2022900
V-TEC VM16UV LGR	Light grey	500	50	0.590	2022901
V-TEC VM20UV LGR	Light grey	600	50	0.590	2022902
V-TEC VM25UV LGR	Light grey	300	25	1.360	2022903
V-TEC VM32UV LGR	Light grey	240	20	2.235	2022904
V-TEC VM40UV LGR	Light grey	120	10	3.496	2022905
V-TEC VM50UV LGR	Light grey	60	5	5.480	2022906
V-TEC VM63UV LGR	Light grey	60	5	8.328	2022907

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. A protection rating of IP68 is achieved through the integrated sealing lip and the special OBO slot technology. Strain relief and tightness have been tested to DIN EN 62444. The connection threads are metric. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.

Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.

Temperature range: -20 °C to +65 °C.

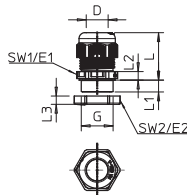


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### Cap nut cable gland, metric thread, set with lock nut, light grey

Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC VM12+ LGR	Light grey	600	50	0.337	2022762
V-TEC VM16+ LGR	Light grey	500	50	0.795	2022764
V-TEC VM20+ LGR	Light grey	600	50	1.106	2022766
V-TEC VM25+ LGR	Light grey	300	25	1.710	2022768
V-TEC VM32+ LGR	Light grey	240	20	2.840	2022770
V-TEC VM40+ LGR	Light grey	120	10	5.150	2022772
V-TEC VM50+ LGR	Light grey	60	5	6.356	2022774
V-TEC VM63+ LGR	Light grey	60	5	10.136	2022776



The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. A protection rating of IP68 is achieved through the integrated sealing lip and the special OBO slat technology. Strain relief and tightness have been tested to DIN EN 62444. The connection threads are metric. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.

Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.

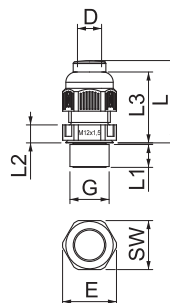
Temperature range: -20 °C to +65 °C.

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### Cap nut cable gland, metric thread with screw plug, light grey

Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC VM12VS LGR	Light grey	500	50	0.360	2023040
V-TEC VM16VS LGR	Light grey	500	50	0.730	2023042
V-TEC VM20VS LGR	Light grey	600	50	0.990	2023044
V-TEC VM25VS LGR	Light grey	300	25	1.550	2023046
V-TEC VM32VS LGR	Light grey	240	20	2.480	2023048



The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. A protection rating of IP68 is achieved through the integrated sealing lip and the special OBO slat technology. Strain relief and tightness have been tested to DIN EN 62444. The connection threads are metric. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.

Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.

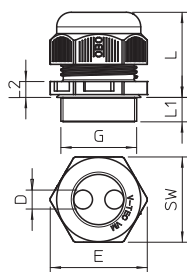
Temperature range: -20 °C to +65 °C.

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### Cap nut cable gland, metric thread with multi-way seal insert, light grey

Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC VM20 2x4	Light grey	600	50	0.860	2022110
V-TEC VM20 4x5	Light grey	600	50	0.860	2022112
V-TEC VM20 2x6	Light grey	600	50	0.860	2022114
V-TEC VM25 5x4	Light grey	300	25	1.360	2022120
V-TEC VM25 3x6	Light grey	300	25	1.360	2022122
V-TEC VM25 2x6	Light grey	300	25	1.360	2022124
V-TEC VM25 3x7	Light grey	300	25	1.360	2022126
V-TEC VM25 2x8	Light grey	300	25	1.360	2022128
V-TEC VM32 2x8	Light grey	240	20	2.240	2022136
V-TEC VM32 4x8	Light grey	240	20	2.240	2022138



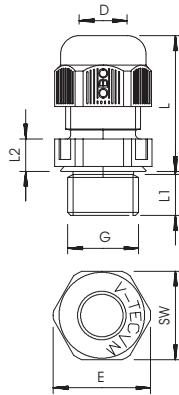
The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. A protection rating of IP68 is achieved through the integrated sealing lip and the special OBO slat technology. Strain relief and tightness have been tested to DIN EN 62444. The connection threads are metric. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.

Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.

Temperature range: -20 °C to +65 °C.



# V-TEC VM L

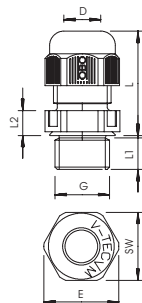


- Long connection thread (up to 33 mm) for thick-walled housing penetrations
- With the integrated sealing lip and the special OBO lamella technology, protection class IP68 is achieved
- Strain relief and tightness have been tested to DIN EN 62444
- The connecting threads are metric and are therefore suitable for universal use
- Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet
- Temperature range:  $-20\text{ }^{\circ}\text{C}$  to  $+65\text{ }^{\circ}\text{C}$

G	D	SW	E	L min.	L max.	L1	L2
	mm	mm	mm	mm	mm	mm	mm
M12 x 1.5	3.5–7	15	16.5	17.5	24	15	12
M16 x 1.5	4.5–10	20	22	20.5	29.5	15	15.5
M20 x 1.5	6–13	24	27	22.5	32.5	15	17.5
M25 x 1.5	9–17	29	32	25.5	36	15	19.5
M32 x 1.5	15–21	36	41	28	40	15	22
M40 x 1.5	16–28	44	50	32	46	18	25
M50 x 1.5	23–35	54	60	37.5	54.3	18	29.5
M63 x 1.5	36–48	68	75	41.5	60.3	18	32.5

## Cap nut cable gland, plastic metric

### Cap nut cable gland, metric thread, long, light grey



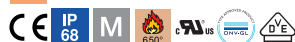
Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC VM L12 LGR	Light grey	500	50	0.392	2022943
V-TEC VM L16 LGR	Light grey	500	50	0.727	2022945
V-TEC VM L20 LGR	Light grey	600	50	0.883	2022947
V-TEC VM L25 LGR	Light grey	300	25	1.597	2022949
V-TEC VM L32 LGR	Light grey	240	20	2.047	2022951
V-TEC VM L40 LGR	Light grey	120	10	3.168	2022953
V-TEC VM L50 LGR	Light grey	60	5	5.010	2022955
V-TEC VM L63 LGR	Light grey	60	5	7.390	2022957

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. A protection rating of IP68 is achieved through the integrated sealing lip and the special OBO slat technology. Strain relief and tightness have been tested to DIN EN 62444. The connection threads are metric. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.

Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.

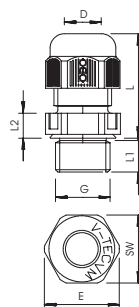
Temperature range:  $-20\text{ }^{\circ}\text{C}$  to  $+65\text{ }^{\circ}\text{C}$ .

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### Cap nut cable gland, metric thread, long, silver grey

Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC VM L12 SGR	Silver grey	500	50	0.392	2022921
V-TEC VM L16 SGR	Silver grey	500	50	0.727	2022924
V-TEC VM L20 SGR	Silver grey	600	50	0.883	2022926
V-TEC VM L25 SGR	Silver grey	300	25	1.597	2022928
V-TEC VM L32 SGR	Silver grey	240	20	2.047	2022930
V-TEC VM L40 SGR	Silver grey	120	10	3.168	2022933
V-TEC VM L50 SGR	Silver grey	60	5	5.010	2022935
V-TEC VM L63 SGR	Silver grey	60	5	7.390	2022937



The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. A protection rating of IP68 is achieved through the integrated sealing lip and the special OBO slat technology. Strain relief and tightness have been tested to DIN EN 62444. The connection threads are metric. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.

Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.

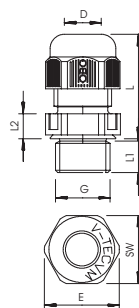
Temperature range: -20 °C to +65 °C.

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### Cap nut cable gland, metric thread, long, black

Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC VM L12 SW	Black	500	50	0.392	2022964
V-TEC VM L16 SW	Black	500	50	0.727	2022966
V-TEC VM L20 SW	Black	600	50	0.883	2022968
V-TEC VM L25 SW	Black	300	25	1.597	2022970
V-TEC VM L32 SW	Black	240	20	2.047	2022972
V-TEC VM L40 SW	Black	120	10	3.168	2022974
V-TEC VM L50 SW	Black	60	5	5.010	2022976
V-TEC VM L63 SW	Black	60	5	7.390	2022978



The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. A protection rating of IP68 is achieved through the integrated sealing lip and the special OBO slat technology. Strain relief and tightness have been tested to DIN EN 62444. The connection threads are metric. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.

Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.

Temperature range: -20 °C to +65 °C.



# Cap nut cable gland, plastic metric

## Cap nut cable gland, metric thread, extra long, black

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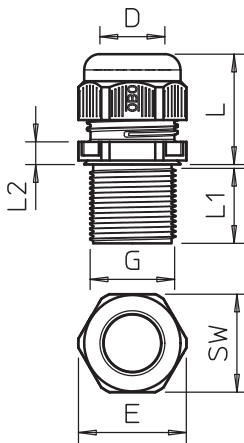
Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC VM LL16 SW	Black	500	50	0.800	2022985
V-TEC VM LL20 SW	Black	600	50	1.000	2022987
V-TEC VM LL25 SW	Black	300	25	1.700	2022989
V-TEC VM LL32 SW	Black	240	20	2.200	2022991
V-TEC VM LL40 SW	Black	120	10	2.200	2022993
V-TEC VM LL50 SW	Black	60	5	5.500	2022995
V-TEC VM LL63 SW	Black	60	5	7.500	2022997

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. A protection rating of IP68 is achieved through the integrated sealing lip and the special OBO slot technology. Strain relief and tightness have been tested to DIN EN 62444. The connection threads are metric. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.

Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.

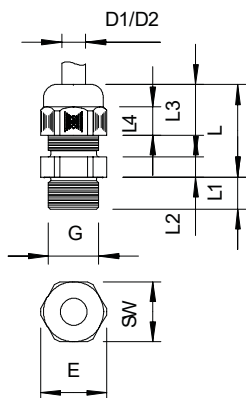
Temperature range: -20 °C to +65 °C.

### Dimensions



Type	Thread	Sealing range D mm	SW mm	Dim. E mm	Dim. L mm		Dim. L1 mm	Dim. L2 mm	In-stal-lation torque Nm
					min.	max.			
V-TEC VM LL16 SW	M16x1,5	4.5-10	20	22	20.5	29.5	24	5	2.5
V-TEC VM LL20 SW	M20x1,5	6-13	24	27	22.5	32.5	24	5	3.75
V-TEC VM LL25 SW	M25x1,5	9-17	29	32	25.5	36	24	6	5
V-TEC VM LL32 SW	M32x1,5	15-21	36	41	28	40	24	6	7.5
V-TEC VM LL40 SW	M40x1,5	16-28	44	50	36	46	24	7	10
V-TEC VM LL50 SW	M50x1,5	23-35	54	60	37.5	54.3	24	8	12
V-TEC VM LL63 SW	M63x1,5	36-48	68	75	41.5	60.3	24	9	12

# Cable gland, PG thread



- PG connection thread
- With the integrated sealing lip, protection class IP68 is achieved
- Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet
- Temperature range: -20 °C to +65 °C

G	D1	D2	SW	E	L min.	L max.	L1	L2	L3
	mm	mm	mm	mm	mm	mm	mm	mm	mm
Pg 7	2.5-6.5	3-6.5	15	16.5	18	23	8	5	12.6
Pg 9	2.5-8	3.5-8	19	21	21	27	8	5	15.5
PG 11	3.5-10	4.5-10	22	25	22	29	8	5	17
Pg 13.5	5-12	6-12	24	27	23	30	9	5	18
Pg 16	7-14	7-14	27	30	25	33	10	6	19
Pg 21	9-18	12-18	33	37.5	28	38	11	6	22
Pg 29	14-25	17-25	42	47.5	32	43	11	7	24.5
Pg 36	18-32	20-32	53	60	39	54	13	8	31
Pg 42	24-38	26-38	60	68.5	42	57	13	9	32.5
Pg 48	30-44	30-44	65	74	42	58	14	9	33

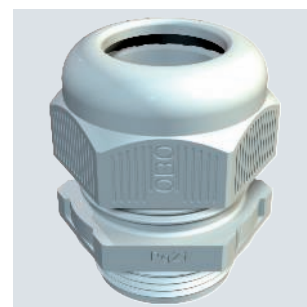
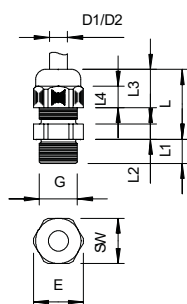
## Cap nut cable gland, plastic PG thread

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### Cap nut cable gland, PG thread, silver grey

Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC PG7 SGR	Silver grey	500	50	0.410	2022605
V-TEC PG9 SGR	Silver grey	500	50	0.630	2022613
V-TEC PG11 SGR	Silver grey	500	50	0.890	2022621
V-TEC PG13.5 SGR	Silver grey	400	50	1.020	2022648
V-TEC PG16 SGR	Silver grey	250	25	1.380	2022656
V-TEC PG21 SGR	Silver grey	300	25	2.290	2022664
V-TEC PG29 SGR	Silver grey	240	20	4.020	2022672
V-TEC PG36 SGR	Silver grey	120	10	6.040	2022680
V-TEC PG42 SGR	Silver grey	60	5	7.650	2022699
V-TEC PG48 SGR	Silver grey	60	5	9.460	2022702



The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. A protection rating of IP68 is achieved through the integrated sealing lip and the special OBO slat technology. Strain relief and tightness have been tested to DIN EN 62444. The connection thread is a PG thread. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.

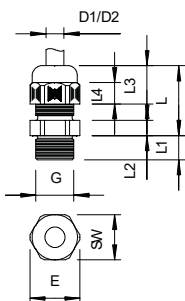
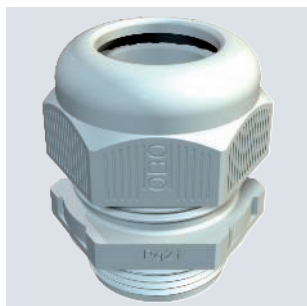
Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.

Temperature range: -20 °C to +65 °C.



# Cap nut cable gland, plastic PG thread

## Cap nut cable gland, PG thread, light grey



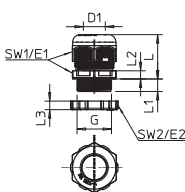
Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC PG7 LGR	Light grey	500	50	0.410	2024705
V-TEC PG9 LGR	Light grey	500	50	0.630	2024713
V-TEC PG11 LGR	Light grey	500	50	0.890	2024721
V-TEC PG13 LGR	Light grey	400	50	1.020	2024748
V-TEC PG16 LGR	Light grey	250	25	1.380	2024756
V-TEC PG21 LGR	Light grey	300	25	2.290	2024764
V-TEC PG29 LGR	Light grey	240	20	4.020	2024772
V-TEC PG36 LGR	Light grey	120	10	6.030	2024780
V-TEC PG42 LGR	Light grey	60	5	7.650	2024799
V-TEC PG48 LGR	Light grey	60	5	9.460	2024802

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. A protection rating of IP68 is achieved through the integrated sealing lip and the special OBO slat technology. Strain relief and tightness have been tested to DIN EN 62444. The connection thread is a PG thread. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.

Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.

Temperature range: -20 °C to +65 °C.

## Cap nut cable gland, PG thread, set with lock nut, light grey



Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC PG7+ LGR	Light grey	600	50	0.503	2024655
V-TEC PG9+ LGR	Light grey	500	50	0.799	2024657
V-TEC PG11+ LGR	Light grey	500	50	1.074	2024659
V-TEC PG13,5+LGR	Light grey	400	50	1.276	2024661
V-TEC PG16+ LGR	Light grey	250	25	1.705	2024663
V-TEC PG21+ LGR	Light grey	300	25	2.756	2024665
V-TEC PG29+ LGR	Light grey	240	20	5.120	2024667
V-TEC PG36+ LGR	Light grey	120	10	7.713	2024669
V-TEC PG42+ LGR	Light grey	60	5	9.406	2024671
V-TEC PG48+ LGR	Light grey	60	5	11.290	2024673

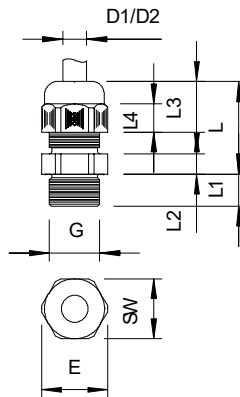
The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. A protection rating of IP68 is achieved through the integrated sealing lip and the special OBO slat technology. Strain relief and tightness have been tested to DIN EN 62444. The connection thread is a PG thread. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.

Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.

Temperature range: -20 °C to +65 °C.



# Cable gland, long thread



- Long PG connection thread – 15–18 mm
- With the integrated sealing lip, protection class IP68 is achieved
- Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet
- Temperature range: -20 °C to +65 °C

G	D1	D2	SW	E	L min.	L max.	L1	L2	L3
	mm	mm	mm	mm	mm	mm	mm	mm	mm
Pg 7	2.5–6.5	3–6.5	15		18	23	15	5	12.6
Pg 9	2.5–8	3.5–8	19	21	21	27	15	5	15.5
PG 11	3.5–10	4.5–10	22	25	22	29	15	5	17
Pg 13.5	5–12	6–12	24	27	23	30	15	5	18
Pg 16	7–14	7–14	27	30	25	33	15	6	19
Pg 21	9–18	12–18	33	37.5	28	38	15	6	22
Pg 29	14–25	17–25	42	47.5	32	43	15	7	24.5
Pg 36	18–32	20–32	53	60	39	54	18	8	31
Pg 42	24–38	26–38	60		42	57	18	9	32.5

## Cap nut cable gland, plastic PG thread

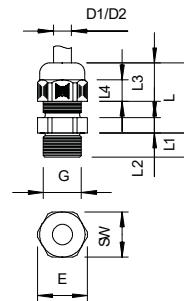
PA



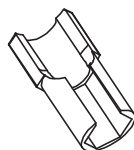
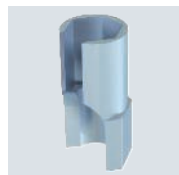
### Cap nut cable gland, PG thread, long, silver grey

Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC L PG9 SGR	Silver grey	500	50	0.670	2024187
V-TEC L PG11 SGR	Silver grey	500	50	0.930	2024195
V-TEC L PG13 SGR	Silver grey	600	50	1.090	2024209
V-TEC L PG16 SGR	Silver grey	250	25	1.490	2024217
V-TEC L PG21 SGR	Silver grey	300	25	2.330	2024225
V-TEC L PG29 SGR	Silver grey	240	20	3.860	2024233
V-TEC L PG36 SGR	Silver grey	120	10	7.750	2024241

The quickest and most convenient way of providing strain relief and tightness with cable glands on junction boxes and housings is with the tried-and-trusted V-TEC VM cable glands from OBO. A protection rating of IP68 is achieved through the integrated sealing lip and the special OBO slat technology. Strain relief and tightness have been tested to DIN EN 62444. The connection thread is a PG thread. Once screwed in place, the installation is there forever, as the optimum thread adjustment with the right pitch ensures permanent resistance to shaking.  
Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.  
Temperature range: -20 °C to +65 °C.



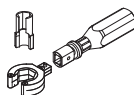
## Socket spanner attachment



Type	SW		Pack Piece	Weight kg/100 pc.	Item no.
	Size	mm			
V-TEC ST15	M12	15	1	3.500	3010236
V-TEC ST20	M16	20	1	3.700	3010244
V-TEC ST29	M25	29	1	8.500	3010260

Socket spanner attachment opened at the side with side for ground ratchet, V-TEC GR.

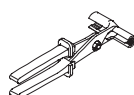
## Ratchet set



Type	Accessories		Pack Piece	Weight kg/100 pc.	Item no.
V-TEC RA SET	1 ground ratchet		1	71.600	3010275
	1 grip for ground ratchet				
	4 socket spanner attachments				

Set consisting of a ground ratchet, type V-TEC RA, a grip for ground ratchet, type V-TEC GR, and four socket spanner attachments in sizes WAF 15, WAF 20, WAF 24 and WAF 29.

## Special tongs for cable glands



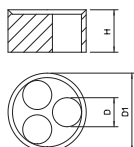
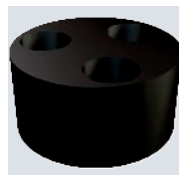
Type	Pack Piece	Weight kg/100 pc.	Item no.
186	1	47.000	3010104

Universal tool for easy tightening of all glands up to size PG 21 or M25 x 1.5, also usable with glands very close to one another.  
Small opening PG 7–PG 11.  
Large opening PG 13.5–PG 21.

## Multi-way seal insert, metric

NBR  
SBR

M



Type	Size	Dim. D mm	Dim. H mm	Dim. D1 mm	Number of drill holes	Pack Piece	Weight kg/100 pc.	Item no.
107 C VM 20 2x4	M20	4	8.1	15.1	2	50	0.130	2029672
107 C VM 20 4x5	M20	5	8.1	15.1	4	50	0.080	2029675
107 C VM 20 2x6	M20	6	8.1	15.1	2	50	0.100	2029677
107 C VM 25 5x4	M25	4	10	19.8	5	50	0.180	2029679
107 C VM 25 3x6	M25	6	10	19.8	3	50	0.210	2029682
107 C VM 25 2x6	M25	6	10	19.8	2	50	0.260	2029685
107 C VM 25 3x7	M25	7	10	19.8	3	50	0.180	2029688
107 C VM 25 2x8	M25	8	10	19.8	2	50	0.200	2029690
107 C VM 32 2x8	M32	8	13.4	25.1	2	25	0.530	2029693
107 C VM 32 4x8	M32	8	13.4	25.1	4	25	0.400	2029696

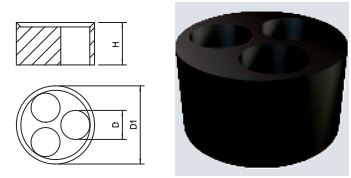
Use to insert multiple thin cables in the V-TEC VM cable glands, is replaced with the simple sealing ring of the cable gland.

NBR

Pg

Multi-way seal insert, PG

Type	Size mm	Dim. D mm	Dim. H mm	Dim. D1 mm	Dim. of drill holes mm	Pack Piece	Weight kg/100 pc.	Item no.
107 C V 16 5x4	Pg 16	4	9.5	17.5	5	50	0.205	2029618
107 C V 16 3x5	Pg 16	5	9.5	17.5	3	50	0.210	2029626
107 C V 16 2x6	Pg 16	6	9.5	17.5	2	50	0.210	2029634
107 C V 16 3x6	Pg 16	6.5	9.5	17.5	3	50	0.155	2029642
107 C V 21 3x7	Pg 21	7	12	23	3	25	0.450	2029650
107 C V 21 2x8	Pg 21	8	12	23	2	25	0.340	2029669



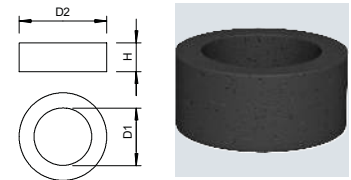
Use to insert multiple thin cables in the V-TEC cable glands, is replaced with the simple sealing ring of the cable gland.

CR

M

Reducing sealing insert, metric

Type	Sealing range Size mm	Dim. D mm	Dim. D1 mm	Dim. D2 mm	Dim. H mm	Pack Piece	Weight kg/100 pc.	Item no.
107CR VM 12	M12	2-5	5	8.9	7.2	50	0.050	2029560
107CR VM 16	M16	2.5-7	7	12.7	8.1	50	0.115	2029563
107CR VM 20	M20	4-9	9	16	9.3	50	0.205	2029566
107CR VM 25	M25	6-13	13	20.7	10.5	50	0.340	2029569
107CR VM 32	M32	11-16	16	25.7	12.3	25	0.625	2029572
107CR VM 40	M40	12-23	23	33.7	15	25	1.140	2029575
107CR VM 50	M50	18-29	29	41.7	18.5	25	2.080	2029578
107CR VM 63	M63	29-40	40	54.8	20.2	25	3.560	2029581



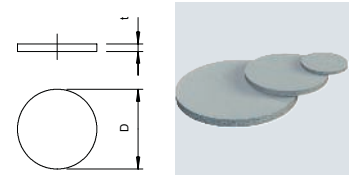
Reduces the sealing area D of the cable gland V-TEC VM and V-TEC VM L.

ZELL

M

Dust protection plate, metric

Type	Size mm	Dim. D mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
107 S VTEC M12	M12	12	1.5	100	0.001	2028870
107 S VTEC M16	M16	16	1.5	100	0.002	2028873
107 S VTEC M20	M20	20	1.5	100	0.010	2028875
107 S VTEC M25	M25	25	1.5	100	0.008	2028877
107 S VTEC M32	M32	32	1.5	100	0.012	2028880
107 S VTEC M40	M40	40	1.5	100	0.022	2028883
107 S VTEC M50	M50	50	1.5	100	0.040	2028885

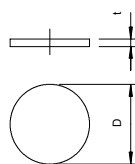
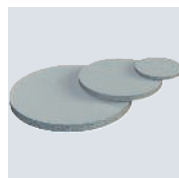


Cellular polyethylene.  
 Small protective disc to protect the V-TEC VM and V-TEC VM MS cable glands against dust before the cable is installed.  
 Application: the discs are pre-mounted between the cap nut and the seal. They do not need to be removed when the cable is installed, but are simply passed through to the interior with the cable.  
 Note: the discs do not provide any mechanical protection.



## Dust protection plate, PG

ZELL  
PE  
Pg



Type	Size mm	Dim. D mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
107 S VTEC PG7	Pg 7	11	2	100	0.001	2028891
107 S VTEC PG9	Pg 9	14	2	100	0.010	2028905
107 S VTEC PG11	Pg 11	16.5	2	100	0.003	2028913
107 S VTEC PG13	Pg 13,5	18.5	2	100	0.010	2028921
107 S VTEC PG16	Pg 16	21	2	100	0.006	2028948
107 S VTEC PG21	Pg 21	26.5	2	100	0.010	2028956
107 S VTEC PG29	Pg 29	34.5	2	100	0.015	2028964
107 S VTEC PG36	Pg 36	44	3	100	0.035	2028972
107 S VTEC PG42	Pg 42	50	3	100	0.050	2028980
107 S VTEC PG48	Pg 48	56	3	100	0.060	2028999

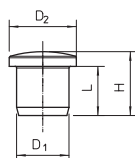
Cellular polyethylene.

Small protective disc to protect the V-TEC and V-TEC MS cable glands against dust before the cable is installed. Application: the discs are pre-mounted between the cap nut and the seal. They do not need to be removed when the cable is installed, but are simply passed through to the interior with the cable.

Note: the discs do not provide any mechanical protection.

## Screw plug, metric and PG

PA



Type	Size	Dim. D1 mm	Dim. L mm	Dim. D2 mm	Dim. H mm	Pack Piece	Weight kg/100 pc.	Item no.
107VS VM 5 PA	M12/Pg9	5.5	9	10	12.5	50	0.047	2029511
107VS VM 9 PA	M16/Pg13,5	9.5	12	13.5	16	50	0.090	2029514
107VS VM 12 PA	M20/Pg16	12	12	16.5	16.5	50	0.130	2029517
107VS VM 16 PA	M25/Pg21	16	15	20.5	19.5	50	0.190	2029520
107VS VM 20 PA	M32/Pg29	20	17	24.5	21.5	25	0.250	2029523
107VS VM 27 PA	M40/Pg36	27	20	32	24	10	0.353	2029529
107VS VM 35 PA	M50/Pg42	35	25	39	29	5	0.500	2029533

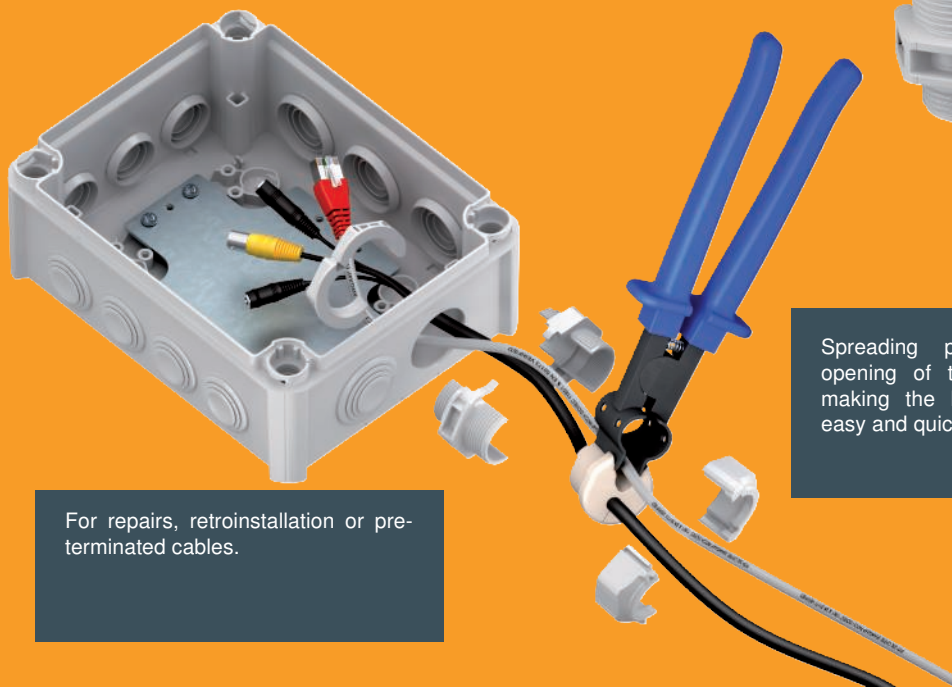
Screw plug in for dust-proof and waterproof closure of installed but (as yet) unfilled V-TEC... cable glands.





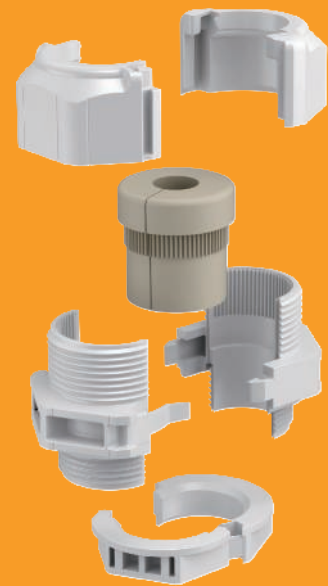
## Separable cable glands

The separable cable gland allows easy and quick installation, for example, of pre-terminated cables with connectors. In an existing installation, a missing or defective cable gland can be replaced or supplemented without dismantling and interruption.



For repairs, reinstallation or pre-terminated cables.

Spreading pliers for the best opening of the sealing inserts – making the laying of each cable easy and quick.



- M20
- M25
- M30
- IP 67

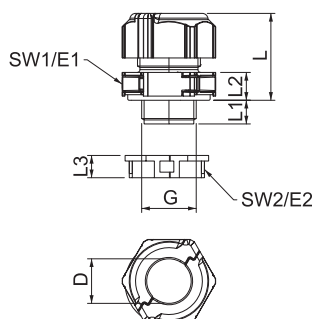
## Divisible cable gland, seal insert enclosed, light grey



Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC TB20	Light grey	50	5	2.236	2024940

The splittable cable gland V-TEC TB.. ensures - like all V-TEC glands - a secure sealing of the cable. The installation of pre-terminated cables or function cables, for example, is easy and quick, thanks to the splitting of the cable gland. The V-TEC TB is also unbeatable when refitting an existing installation and as a "repair gland". There is no need to disassemble pre-mounted cables, it can be installed without interrupting the production process.

### Dimensions



Type	SW mm	Dim. L mm		Dim. L1 L2 mm	
		min.	max.	L1	L2
V-TEC TB20	30	24.5	30.5	10	8.5

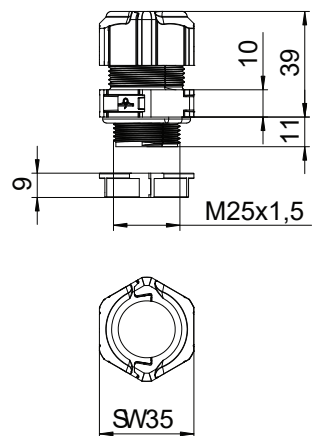
## Divisible cable gland, seal insert enclosed, light grey



Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC TB25	Light grey	50	5	3.440	2024910

The splittable cable gland V-TEC TB.. ensures - like all V-TEC glands - a secure sealing of the cable. The installation of pre-terminated cables or function cables, for example, is easy and quick, thanks to the splitting of the cable gland. The V-TEC TB is also unbeatable when refitting an existing installation and as a "repair gland". There is no need to disassemble pre-mounted cables, it can be installed without interrupting the production process.

### Dimensions



Type	SW mm	E mm	Dim. L mm		Dim. L1 L2 mm	
			min.	max.	L1	L2
V-TEC TB25	35	39	31.5	40	11	10



PC



### Divisible cable gland, seal insert enclosed, light grey

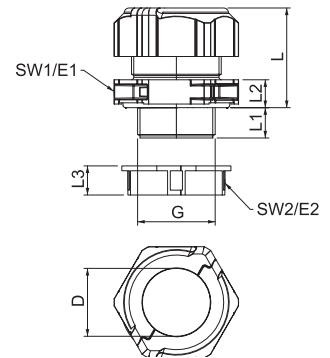
Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC TB32	Light grey	60	5	7.756	2024970

The splittable cable gland V-TEC TB.. ensures - like all V-TEC glands - a secure sealing of the cable. The installation of pre-terminated cables or function cables, for example, is easy and quick, thanks to the splitting of the cable gland.  
The V-TEC TB is also unbeatable when refitting an existing installation and as a "repair gland". There is no need to disassemble pre-mounted cables, it can be installed without interrupting the production process.



Type	SW	E	Dim.		L1	L2
			L	L		
V-TEC TB32	46	51.5	32	41	14	10

#### Dimensions



PC



### Divisible cable gland, seal insert, 1 cable, light grey

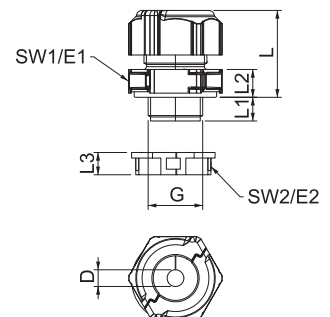
Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC TB20 06-08	Light grey	50	5	2.133	2024942
V-TEC TB20 08-10	Light grey	50	5	2.063	2024944
V-TEC TB20 09-13	Light grey	50	5	1.973	2024946
V-TEC TB20 11-14	Light grey	50	5	1.853	2024948

The splittable cable gland V-TEC TB.. ensures - like all V-TEC glands - a secure sealing of the cable. The installation of pre-terminated cables or function cables, for example, is easy and quick, thanks to the splitting of the cable gland.  
The V-TEC TB is also unbeatable when refitting an existing installation and as a "repair gland". There is no need to disassemble pre-mounted cables, it can be installed without interrupting the production process.



Type	Sealing range D	SW 1	SW 2	Dim.		
				L1	L2	L
V-TEC TB20 06-08	6-8	30	27	10	8.5	30
V-TEC TB20 08-10	8-10.5	30	27	10	8.5	30
V-TEC TB20 09-13	9-13	30	27	10	8.5	30
V-TEC TB20 11-14	11.5-14.5	30	27	10	8.5	30

#### Dimensions



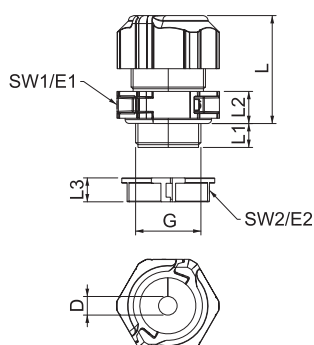
## Divisible cable gland, seal insert, 1 cable, light grey



Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC TB25 06-09	Light grey	50	5	2.900	2024912
V-TEC TB25 09-11	Light grey	50	5	2.900	2024913
V-TEC TB25 11-13	Light grey	50	5	3.110	2024916
V-TEC TB25 12-15	Light grey	50	5	2.980	2024919
V-TEC TB25 14-18	Light grey	50	5	2.510	2024922
V-TEC TB25 18-20	Light grey	50	5	2.290	2024925

The splittable cable gland V-TEC TB.. ensures - like all V-TEC glands - a secure sealing of the cable. The installation of pre-terminated cables or function cables, for example, is easy and quick, thanks to the splitting of the cable gland.  
The V-TEC TB is also unbeatable when refitting an existing installation and as a "repair gland". There is no need to disassemble pre-mounted cables, it can be installed without interrupting the production process.

### Dimensions



Type	Sealing range		Dim.			
	D	SW	L1	L2	L	
	mm	mm	mm	mm	mm	
V-TEC TB25 06-09	6-7.5	35	31	11	10	41
V-TEC TB25 09-11	9-11	35	31	11	10	41
V-TEC TB25 11-13	11-13	35	31	11	10	41
V-TEC TB25 12-15	12-15	35	31	11	10	41
V-TEC TB25 14-18	14-18	35	31	11	10	41
V-TEC TB25 18-20	18-20	35	31	11	10	41

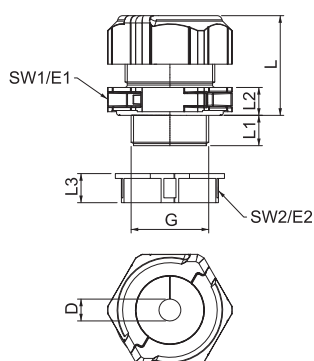
## Divisible cable gland, seal insert, 1 cable, light grey



Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC TB32 09-13	Light grey	60	5	7.416	2024972
V-TEC TB32 11-15	Light grey	60	5	7.246	2024974
V-TEC TB32 14-18	Light grey	60	5	7.069	2024976
V-TEC TB32 17-20	Light grey	60	5	7.156	2024978
V-TEC TB32 20-25	Light grey	60	5	6.396	2024980
V-TEC TB32 24-26	Light grey	60	5	6.026	2024982

The splittable cable gland V-TEC TB.. ensures - like all V-TEC glands - a secure sealing of the cable. The installation of pre-terminated cables or function cables, for example, is easy and quick, thanks to the splitting of the cable gland.  
The V-TEC TB is also unbeatable when refitting an existing installation and as a "repair gland". There is no need to disassemble pre-mounted cables, it can be installed without interrupting the production process.

### Dimensions



Type	Sealing range		Dim.			
	D	SW	L1	L2	L	
	mm	mm	mm	mm	mm	
V-TEC TB32 09-13	9-13	46	40	14	10	41
V-TEC TB32 11-15	11.5-15.5	46	40	14	10	41
V-TEC TB32 14-18	14-18	46	40	14	10	41
V-TEC TB32 17-20	17-20.5	46	40	14	10	41
V-TEC TB32 20-25	20-25	46	40	14	10	41
V-TEC TB32 24-26	24-26.5	46	40	14	10	41

PC



Separable cable gland, sealing insert, multiple, light grey

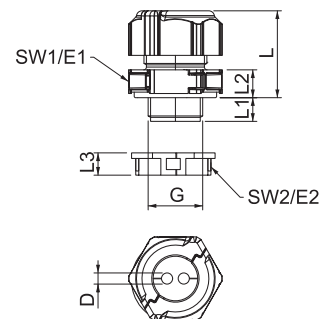
Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC TB20 2x4	Light grey	50	5	2.187	2024950
V-TEC TB20 2x5	Light grey	50	5	2.153	2024952
V-TEC TB20 2x6	Light grey	50	5	2.113	2024954
V-TEC TB20 4x4	Light grey	50	5	2.123	2024956
V-TEC TB20 6x4	Light grey	50	5	2.083	2024958



The splittable cable gland V-TEC TB.. ensures - like all V-TEC glands - a secure sealing of the cable. The installation of pre-terminated cables or function cables, for example, is easy and quick, thanks to the splitting of the cable gland.  
The V-TEC TB is also unbeatable when refitting an existing installation and as a "repair gland". There is no need to disassemble pre-mounted cables, it can be installed without interrupting the production process.

Type	Number of drill holes	Dim. D mm	Dim. L min. mm	Dim. L max. mm	Dim. L1 mm	Dim. L2 mm	Dim. E1 mm	Dim. SW 1 mm
V-TEC TB20 2x4	2	4	24.5	30.5	10	8.5	33.5	30
V-TEC TB20 2x5	2	5	24.5	30.5	10	8.5	33.5	30
V-TEC TB20 2x6	2	6	24.5	30.5	10	8.5	33.5	30
V-TEC TB20 4x4	4	4	24.5	30.5	10	8.5	33.5	30
V-TEC TB20 6x4	6	4	24.5	30.5	10	8.5	33.5	30

Dimensions



PC



Separable cable gland, sealing insert, multiple, light grey

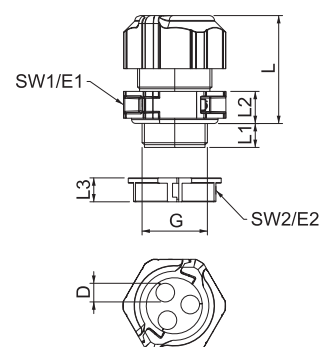
Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC TB25 3x7	Light grey	50	5	2.449	2024927
V-TEC TB25 3x9	Light grey	50	5	2.640	2024928
V-TEC TB25 4x5	Light grey	50	5	2.539	2024929
V-TEC TB25 4x6	Light grey	50	5	2.439	2024930
V-TEC TB25 4x8	Light grey	50	5	2.950	2024931



The splittable cable gland V-TEC TB.. ensures - like all V-TEC glands - a secure sealing of the cable. The installation of pre-terminated cables or function cables, for example, is easy and quick, thanks to the splitting of the cable gland.  
The V-TEC TB is also unbeatable when refitting an existing installation and as a "repair gland". There is no need to disassemble pre-mounted cables, it can be installed without interrupting the production process.

Type	Number of drill holes	Dim. D mm	Dim. L min. mm	Dim. L max. mm	Dim. L1 mm	Dim. L2 mm	Dim. E1 mm	Dim. SW 1 mm
V-TEC TB25 3x7	3	7	31.5	40	11	10	39	35
V-TEC TB25 3x9	3	9	31.5	40	11	10	39	35
V-TEC TB25 4x5	4	5	31.5	40	11	10	39	35
V-TEC TB25 4x6	4	6	31.5	40	11	10	39	35
V-TEC TB25 4x8	4	8	31.5	40	11	10	39	35

Dimensions



# Separable cable gland, plastic

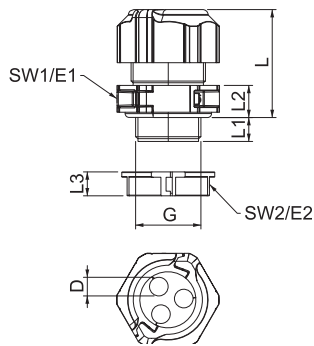
## Separable cable gland, sealing insert, multiple, light grey



Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC TB32 2x11	Light grey	60	5	7.196	2024984
V-TEC TB32 3x9	Light grey	60	5	7.196	2024986
V-TEC TB32 3x11	Light grey	60	5	7.196	2024988
V-TEC TB32 4x8	Light grey	60	5	7.211	2024990
V-TEC TB32 6x6	Light grey	60	5	7.284	2024992

The splittable cable gland V-TEC TB.. ensures - like all V-TEC glands - a secure sealing of the cable. The installation of pre-terminated cables or function cables, for example, is easy and quick, thanks to the splitting of the cable gland.  
The V-TEC TB is also unbeatable when refitting an existing installation and as a "repair gland". There is no need to disassemble pre-mounted cables, it can be installed without interrupting the production process.

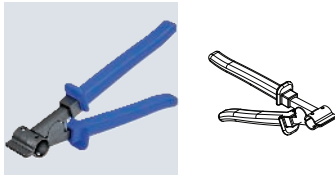
### Dimensions



Type	Number of drill holes	Dim. Dim.							
		Dim. D	L min.	L max.	Dim. L1	Dim. L2	SW 1	Dim. E1	
V-TEC TB32 2x11	2	11	32	41	14	10	46	51.5	
V-TEC TB32 3x9	3	9	32	41	14	10	46	51.5	
V-TEC TB32 3x11	3	11	32	41	14	10	46	51.5	
V-TEC TB32 4x8	4	8	32	41	14	10	46	51.5	
V-TEC TB32 6x6	6	6	32	41	14	10	46	51.5	

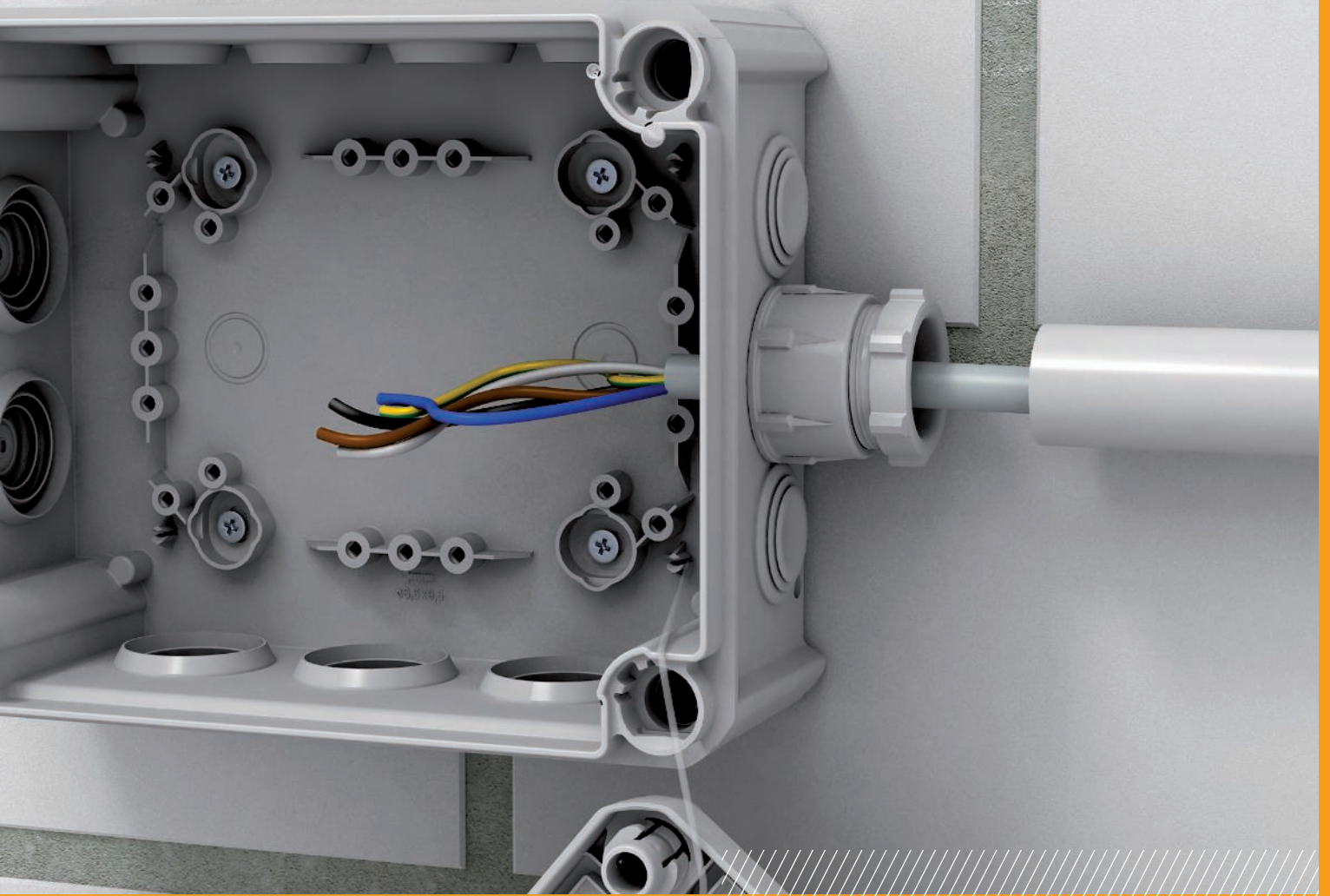
## Spreading pliers for sealing insert, splittable cable gland

M25



Type	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC TBZ	1	26.000	2024900

The ideal aiding tool is the pair of spreading pliers which can be used to open the sealing insert. With this tool, inserting the individual cables is quick and easy.  
Place the cable in the spreading pliers, insert the spreading pliers into the sealing separation and then open them.  
Now the cable can easily be placed into the seal.



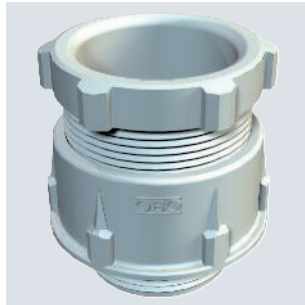
## Cone cable glands

- Standard cable gland
- Shape A in accordance with DIN 46320 with simple NR/SBR sealing ring
- Metric connecting thread to IEC 423
- Protection rating: with connection thread sealing ring IP65, without connection thread sealing ring IP54
- With PG thread
- With metric thread
- Strain relief





## Cone cable gland, metric thread, light grey



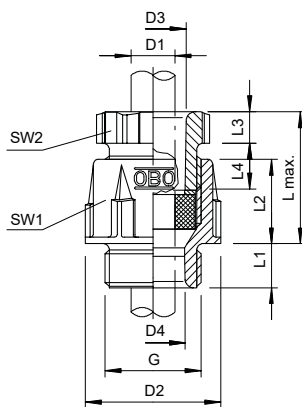
Type	Thread	Colour	Pack Piece	Weight kg/100 pc.	Item no.
106 M12 PS	M12 x 1,5	Light grey	50	0.400	2035316
106 M16 PS	M16 x 1,5	Light grey	50	0.560	2035324
106 M 20 PS	M20 x 1,5	Light grey	50	0.753	2035332
106 M 25 PS	M25 x 1,5	Light grey	50	1.018	2035340
106 M 32 PS	M32 x 1,5	Light grey	10	2.891	2035359
106 M 40 PS	M40 x 1,5	Light grey	10	4.973	2035367
106 M 50 PS	M50 x 1,5	Light grey	5	6.594	2035375
106 M 63 PS	M63 x 1,5	Light grey	5	9.630	2035383

Standard cable gland, shape A, to DIN 46320 with simple NR/SBR sealing ring with metric connection thread to IEC 423.

Protection rating: with connection thread sealing ring IP65, without connection thread sealing ring IP54.

Note: Only tighten polystyrene cable glands lightly due to the risk of stress crack formation.

### Dimensions



Type	Thread	Sealing range		Dim. D	Dim. D2	Dim. D3	Dim. D4	SW 1	SW 2	Dim.				
		D	D2							L max.	L1	L2	L3	Dimension L4
106 M12 PS	M12 x 1,5	3,5-6,5	16,5	7	7	15	13	23	8	13	5	8,5		
106 M16 PS	M16 x 1,5	4,5-7	21,5	10,2	10	19	16	25	8	14	5	9		
106 M 20 PS	M20 x 1,5	9-13	27	13,4	13,5	24	21	28	9	16	5	10,8		
106 M 25 PS	M25 x 1,5	10-14	30	15,8	16	27	23	30	10	16,5	6	12		
106 M 32 PS	M32 x 1,5	18-25	47,5	30,3	26	42	40	42	11	20,5	8	18		
106 M 40 PS	M40 x 1,5	25-33	58	38,4	33	53	50	43	12	24	8	17		
106 M 50 PS	M50 x 1,5	30-38	65	44,5	40,5	60	55	48	13	27	9	18,5		
106 M 63 PS	M63 x 1,5	37-44	70	50	45,5	65	60	48	14	27	9	18,5		



Cone cable gland, PG thread, light grey



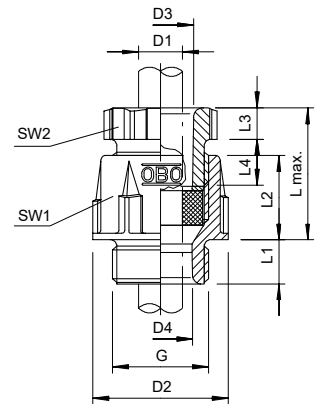
Type	Thread	Colour	Pack Piece	Weight kg/100 pc.	Item no.
106 PG7	Pg 7	Light grey	50	0.325	2036061
106 PG9	Pg 9	Light grey	50	0.560	2036096
106 PG11	Pg 11	Light grey	50	0.800	2036118
106 PG13.5	Pg 13,5	Light grey	50	0.794	2036134
106 PG16	Pg 16	Light grey	50	1.003	2036169
106 PG21	Pg 21	Light grey	50	1.760	2036215
106 PG29	Pg 29	Light grey	10	3.004	2036290
106 PG36	Pg 36	Light grey	10	6.240	2036363
106 PG42	Pg 42	Light grey	5	6.698	2036428
106 PG48	Pg 48	Light grey	5	7.336	2036487



Standard cable gland, shape A, to DIN 46320 with simple NR/SBR sealing ring.  
 PG connection thread in accordance with DIN 40430.  
 Protection rating: with connection thread sealing ring IP65, without connection thread sealing ring IP54.  
 Note: Only tighten polystyrene cable glands lightly due to the risk of stress crack formation.

Type	Thread	Sealing range D mm	Dim. D2 mm	Dim. D3 mm	Dim. D4 mm	SW 1 mm	SW 2 mm	Dim. L max. mm	Dim. L1 mm	Dim. L2 mm	Dim. L3 mm	Dimension L4 mm
106 PG9	Pg 9	4,5-7	21,5	10,2	10,2	19	16	25	8	14	5	9
106 PG11	Pg 11	5,5-10	25	11,3	11,5	22	19	27	8	15	5	10
106 PG13.5	Pg 13,5	9-13	27	13,4	13,5	24	21	28	9	16	5	10,8
106 PG16	Pg 16	10-14	30	15,8	16,5	27	23	30	10	16,5	6	12
106 PG21	Pg 21	14-18	37,5	21,2	21	33	30	38	11	19	7	17
106 PG29	Pg 29	18-25	47,5	30	27,5	42	40	42	11	20,5	8	18
106 PG36	Pg 36	25-33	58	38	34,5	53	50	43	12	24	8	17
106 PG42	Pg 42	30-38	65	44,5	40,5	60	55	48	13	27	9	18,5
106 PG48	Pg 48	37-44	70	50	45,5	65	60	48	14	27	9	18,5

Dimensions



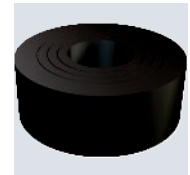
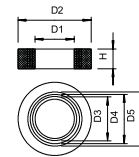
Accessories cone cable gland



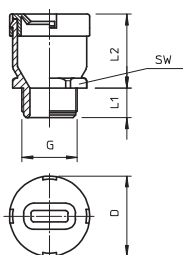
Type	Size mm	Dim. D1 mm	Dim. D2 mm	Dim. D3 mm	Dim. D4 mm	Dim. D5 mm	Dim. H mm	Pack Piece	Weight kg/100 pc.	Item no.
107 B PG9	Pg 9	5	13,3	7,5	10	0	5,5	100	0.090	2029103
107 B PG11	Pg 11	7,5	16,5	10	12,5	0	6	100	0.132	2029111
107 B PG13.5	Pg 13,5	7,5	18,3	10	12,5	0	6	100	0.172	2029138
107 B PG16	Pg 16	7,5	20,4	10	12,5	15	7	100	0.265	2029162
107 B PG21	Pg 21	10	25,9	13	16	19	8	100	0.490	2029219
107 B PG29	Pg 29	18	34,7	21	24	27	9,5	100	0.803	2029294
107 B PG36	Pg 36	24	44,7	27	30	33	12	50	1.733	2029367
107 B PG42	Pg 42	30	51,7	33	36	39	14	50	2.345	2029421
107 B PG48	Pg 48	36	56,9	39	42	45	14	50	2.615	2029480

Rubber cutting ring (cuttable sealing ring) to DIN 46320 for cone cable gland.

Cutting ring



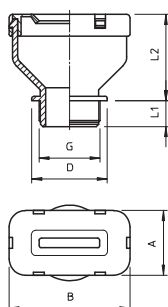
## Flat cable threaded connection, metric thread M20, stone grey



Type	Thread	Flat cables/ thickness mm	Flat cables/ width mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
106 FL M20 8 19	M20	6-8	17-19	Stone grey	50	0.909	2013002

Flat-cable entry, choke-nipple design with metric connecting thread to IEC 432, protection rating IP31, with pre-mounted support sealing ring 107/F.

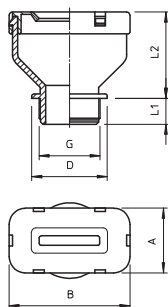
## Flat cable threaded connection, metric thread M25, stone grey



Type	Thread	Flat cables/ thickness mm	Flat cables/ width mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
106 FL M25 6 30	M25	4-6	27-30	Stone grey	25	2.630	2013006
106 FL M25 8 33	M25	6-8	30-33	Stone grey	25	2.630	2013007
106 FL M25 9 22	M25	7-9	19-22	Stone grey	25	2.630	2013008
106 FL M25 9 39	M25	7-9	36-39	Stone grey	25	1.816	2013009
106 FL M25 10 29	M25	8-10	26-29	Stone grey	25	2.630	2013010
106 FL M25 10 31	M25	8.5-10.5	28.5-31.5	Stone grey	25	2.630	2013011
106 FL M25 12 35	M25	9-12	31-35	Stone grey	25	2.630	2013012
106 FL M25 14 40	M25	11-14	37-40	Stone grey	25	2.680	2013013

Flat-cable entry, choke-nipple design with metric connecting thread to IEC 432, protection rating IP31, with pre-mounted support sealing ring 107/F.

## Flat cable threaded connection, metric thread M32, stone grey



Type	Thread	Flat cables/ thickness mm	Flat cables/ width mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
106 FL M32 6 30	M32	4-6	27-30	Stone grey	15	3.450	2013015
106 FL M32 8 33	M32	6-8	30-33	Stone grey	15	3.450	2013016
106 FL M32 9 22	M32	7-9	19-22	Stone grey	15	3.450	2013017
106 FL M32 9 39	M32	7-9	36-39	Stone grey	15	3.450	2013018
106 FL M32 10 29	M32	8-10	26-29	Stone grey	15	3.450	2013019
106 FL M32 10 31	M32	8.5-10.5	28.5-31.5	Stone grey	15	3.450	2013020
106 FL M32 12 35	M32	9-12	31-35	Stone grey	15	3.450	2013021
106 FL M32 14 40	M32	11-14	37-40	Stone grey	15	3.500	2013022

Flat-cable entry, choke-nipple design with metric connecting thread to IEC 432, protection rating IP31, with pre-mounted support sealing ring 107/F.

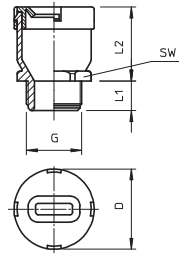
PE



### Flat cable threaded connection, PG thread Pg 16, stone grey

Type	Thread	Flat cables/ thickness mm	Flat cables/ width mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
<b>106 FL 16 8 19</b>	Pg 16	6-8	17-19	Stone grey	50	1.006	<b>2012758</b>

Flat-cable entry, choke-nipple design with PG connecting thread to DIN 40430, protection rating IP31, with pre-mounted support sealing ring 107/F.



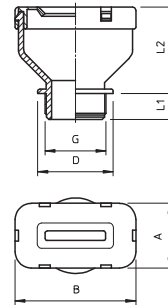
PE



### Flat cable threaded connection, PG thread rectangular version, stone grey

Type	Thread	Flat cables/ thickness mm	Flat cables/ width mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
<b>106 FL 21 6 30</b>	Pg 21	4-6	27-30	Stone grey	25	1.905	<b>2012855</b>
<b>106 FL 21 8 33</b>	Pg 21	6-8	30-33	Stone grey	25	1.977	<b>2012782</b>
<b>106 FL 21 9 22</b>	Pg 21	7-9	19-22	Stone grey	25	1.996	<b>2012820</b>
<b>106 FL 21 9 39</b>	Pg 21	7-9	36-39	Stone grey	25	1.975	<b>2012804</b>
<b>106 FL 21 10 29</b>	Pg 21	8-10	26-29	Stone grey	25	1.989	<b>2012839</b>
<b>106 FL 21 10 31</b>	Pg 21	8.5-10.5	28.5-31.5	Stone grey	25	1.999	<b>2012871</b>
<b>106 FL 21 12 35</b>	Pg 21	9-12	31-35	Stone grey	25	1.965	<b>2012847</b>
<b>106 FL 21 14 40</b>	Pg 21	11-14	37-40	Stone grey	25	2.015	<b>2012928</b>
<b>106 FL 29 14 40</b>	Pg 29	11-14	37-40	Stone grey	15	3.500	<b>2012774</b>

Flat-cable entry, choke-nipple design with PG connecting thread to DIN 40430, protection rating IP31, with pre-mounted support sealing ring 107/F.

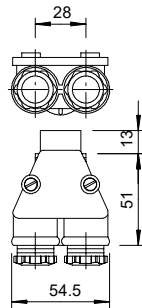


## Twin cable gland

### Twin cable gland, PG thread, light grey

UF

IP 54 Pg



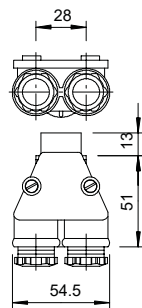
Type	Thread	Colour	Pack Piece	Weight kg/100 pc.	Item no.
113 PG13.5 LGR	Pg 13,5	Light grey	5	3.752	2024136
113 PG16 LGR	Pg 16	Light grey	5	4.360	2024160

With removable polystyrene lid, as well as two connection thread sealing rings made of polyethylene.

### Twin cable gland, metric thread, light grey

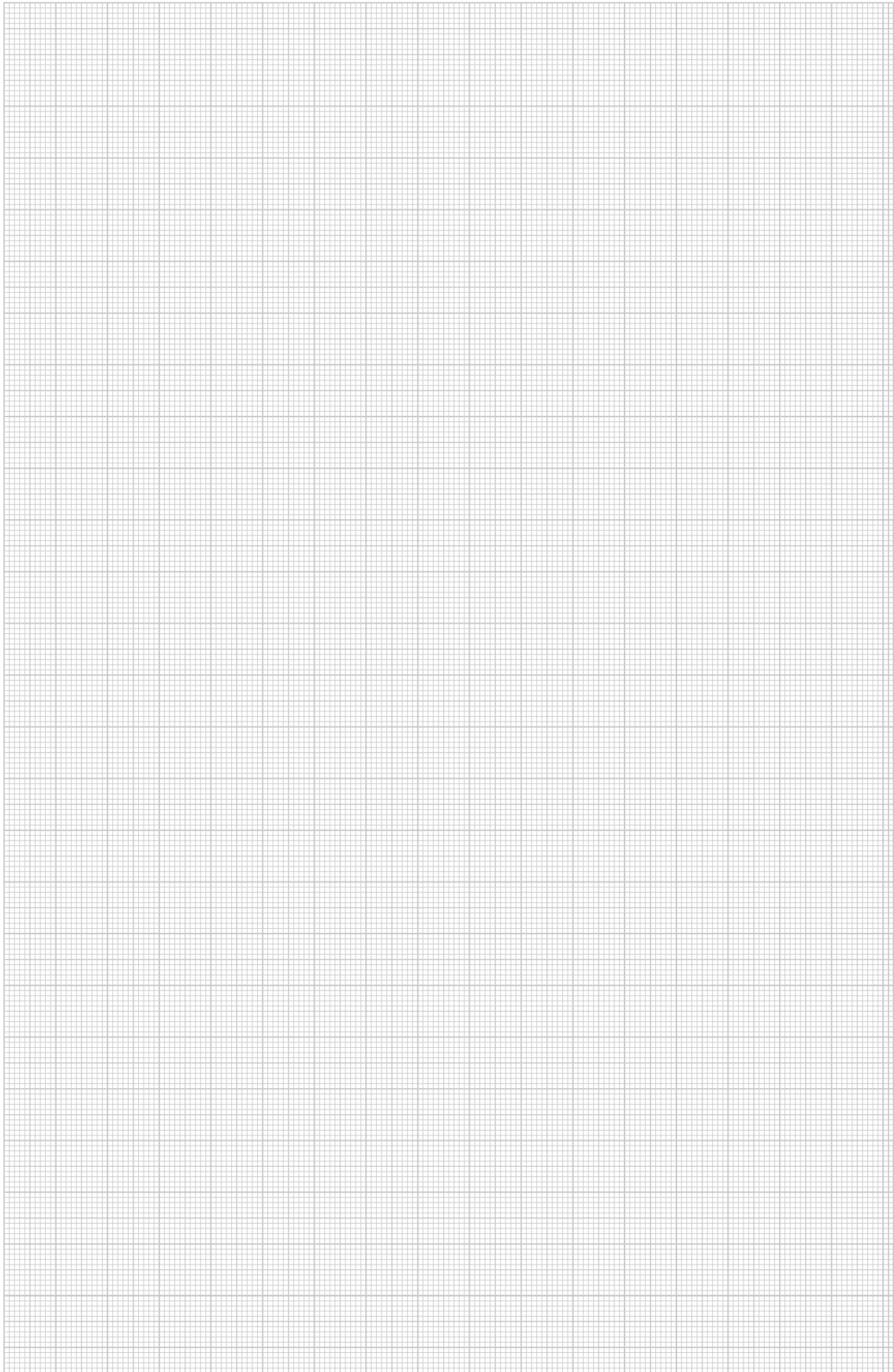
UF

IP 54 M

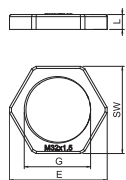


Type	Thread	Colour	Pack Piece	Weight kg/100 pc.	Item no.
113 M20 LGR	M20 x 1,5	Light grey	5	3.701	2024063

IP54 protection rating, with removable polystyrene lid, as well as two connection thread sealing rings made of polyethylene.  
With connection thread M20 x 1.5, 2 half glands PG 13.5 for cable diameter 6.5–10.5 mm.



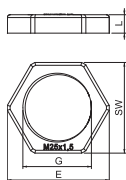
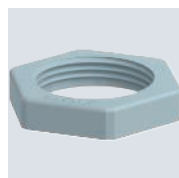
## Locknut, metric thread



Type	Thread	Colour	SW mm	Dim. E mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
116 M12 LGR PA	M12x1,5	Light grey	17	19	5	100	0.100	2048906
116 M16 LGR PA	M16x1,5	Light grey	22	25	5	100	0.160	2048914
116 M20 LGR PA	M20x1,5	Light grey	26	29	6	100	0.173	2048922
116 M25 LGR PA	M25x1,5	Light grey	32	36	6.5	100	0.297	2048930
116 M32 LGR PA	M32x1,5	Light grey	41	46	7	50	0.610	2048949
116 M40 LGR PA	M40x1,5	Light grey	50	56	7	25	1.683	2048957
116 M50 LGR PA	M50x1,5	Light grey	60	68	8	25	0.890	2048965
116 M63 LGR PA	M63x1,5	Light grey	75	83	8	25	1.467	2048973

Locknut DIN 46319, with metric thread IEC 423.

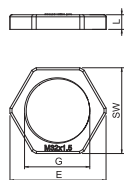
## Cable outlet, plastic locknut



Type	Thread	Colour	SW mm	Dim. E mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
116 M12 SGR PA	M12x1,5	Silver grey	17	19	5	100	0.078	2048752
116 M16 SGR PA	M16x1,5	Silver grey	22	25	5	100	0.125	2048760
116 M20 SGR PA	M20x1,5	Silver grey	26	29	6	100	0.177	2048779
116 M25 SGR PA	M25x1,5	Silver grey	32	36	6.5	100	0.266	2048787
116 M32 SGR PA	M32x1,5	Silver grey	41	46	7	50	0.503	2048795
116 M40 SGR PA	M40x1,5	Silver grey	50	56	7	25	0.602	2048809
116 M50 SGR PA	M50x1,5	Silver grey	60	68	8	25	0.903	2048817
116 M63 SGR PA	M63x1,5	Silver grey	75	83	8	25	1.300	2048825

Locknut to DIN 46319, with metric thread IEC 423.

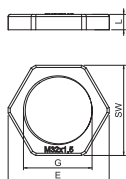
## Locknut, metric thread



Type	Thread	Colour	SW mm	Dim. E mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
116 M12 SW PA	M12x1,5	Black	17	19	5	100	0.079	2049066
116 M16 SW PA	M16x1,5	Black	22	25	5	100	0.118	2049074
116 M20 SW PA	M20x1,5	Black	26	29	6	100	0.170	2049082
116 M25 SW PA	M25x1,5	Black	32	36	6.5	100	0.266	2049090
116 M32 SW PA	M32x1,5	Black	41	46	7	50	0.610	2049104
116 M40 SW PA	M40x1,5	Black	50	56	7	25	0.602	2049112
116 M50 SW PA	M50x1,5	Black	60	68	8	25	0.896	2049120
116 M63 SW PA	M63x1,5	Black	75	83	8	25	1.259	2049139

Locknut DIN 46319, with metric thread IEC 423.

## Locknut, metric thread



Type	Thread	Colour	SW mm	Dim. E mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
116 M12 LGR PS	M12 x 1,5	Light grey	17	19	5	100	0.075	2049503
116 M16 LGR PS	M16 x 1,5	Light grey	22	25	5	100	0.120	2049511
116 M20 LGR PS	M20 x 1,5	Light grey	26	29	6	100	0.167	2049538
116 M25 LGR PS	M25 x 1,5	Light grey	32	36	6.5	100	0.260	2049546
116 M32 LGR PS	M32 x 1,5	Light grey	41	46	7	50	0.484	2049554
116 M40 LGR PS	M40 x 1,5	Light grey	50	56	7	25	0.491	2049562
116 M50 LGR PS	M50 x 1,5	Light grey	60	68	8	25	0.732	2049570
116 M63 LGR PS	M63 x 1,5	Light grey	75	83	8	25	1.029	2049589

Locknut to DIN 46319, with metric thread IEC 423.

Note: Only tighten polystyrene cable glands lightly due to the risk of stress crack formation.

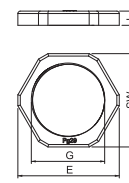


PA



Locknut, PG thread

Type	Thread	Colour	SW mm	Dim.		Pack Piece	Weight kg/100 pc.	Item no.
				E mm	L mm			
116 VDE PG7 PA	Pg 7	Light grey	19	21	5	100	0.093	2048078
116 VDE PG9 PA	Pg 9	Light grey	22	24	5	100	0.169	2048094
116 VDE PG11 PA	Pg 11	Light grey	24	26	5	100	0.184	2048116
116 VDE PG13.5PA	Pg 13.5	Light grey	27	29	6	100	0.256	2048132
116 VDE PG16 PA	Pg 16	Light grey	30	33	6	100	0.325	2048167
116 VDE PG21 PA	Pg 21	Light grey	36	39	7	100	0.466	2048221
116 VDE PG29 PA	Pg 29	Light grey	46	50	7	50	1.100	2048299
116 VDE PG36 PA	Pg 36	Light grey	60	66	8	25	1.683	2048361
116 VDE PG42 PA	Pg 42	Light grey	65	73	8	25	1.756	2048426
116 VDE PG48 PA	Pg 48	Light grey	70	78	8	25	1.830	2048485



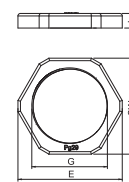
Locknut DIN 46320, with PG thread DIN 40430.

PS



Locknut, PG thread

Type	Thread	Colour	SW mm	Dim.		Pack Piece	Weight kg/100 pc.	Item no.
				E mm	L mm			
116 PG 7	Pg 7	Light grey	19	21	5	100	0.099	2043076
116 PG 9	Pg 9	Light grey	22	24	5	100	0.118	2043092
116 PG11	Pg 11	Light grey	24	26	5	100	0.113	2043114
116 PG13.5	Pg 13.5	Light grey	27	29	6	100	0.178	2043130
116 PG16	Pg 16	Light grey	30	33	6	100	0.226	2043165
116 PG21	Pg 21	Light grey	36	39	7	100	0.346	2043211
116 PG29	Pg 29	Light grey	46	50	7	50	0.573	2043297
116 PG36	Pg 36	Light grey	60	66	8	25	1.184	2043351
116 PG42	Pg 42	Light grey	65	73	8	25	1.089	2043424
116 PG48	Pg 48	Light grey	70	78	8	25	1.175	2043483



Locknut DIN 46320, with PG thread DIN 40430.

Note: Only tighten polystyrene cable glands lightly due to the risk of stress crack formation.

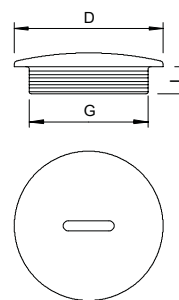
Screw plugs

PS



Screw plug, metric thread

Type	Thread	Dim. D mm	Dim. L mm	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
108 M12 PS	M12 x 1,5	15	6	Light grey	3000	100	0.047	2033003
108 M16 PS	M16 x 1,5	20	6	Light grey	1800	100	0.085	2033007
108 M20 PS	M20 x 1,5	24	6	Light grey	1200	100	0.128	2033011
108 M25 PS	M25 x 1,5	30	8	Light grey	1000	100	0.210	2033016
108 M32 PS	M32 x 1,5	37	8	Light grey	500	50	0.339	2033021
108 M40 PS	M40 x 1,5	46	8	Light grey	300	25	0.564	2033026
108 M50 PS	M50 x 1,5	56	10	Light grey	300	25	0.939	2033032
108 M63 PS	M63 x 1,5	70	12	Light grey	300	25	1.492	2033038

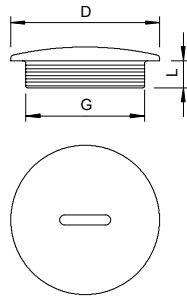


Screw plug in accordance with DIN 46320, with metric thread to IEC 423.



# Screw plugs

## Screw plug, PG thread

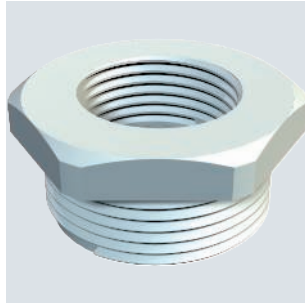


Type	Thread	Dim. D mm	Dim. L mm	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
108 PG 7	Pg 7	14	6	Light grey	2400	100	0.056	2033070
108 PG 9	Pg 9	19	6	Light grey	1800	100	0.096	2033097
108 PG 11	Pg 11	22	6	Light grey	2000	100	0.128	2033119
108 PG13.5	Pg 13.5	25	6.5	Light grey	1200	100	0.164	2033135
108 PG16	Pg 16	27	6.5	Light grey	1000	100	0.184	2033151
108 PG21	Pg 21	34	8	Light grey	1200	100	0.345	2033216
108 PG29	Pg 29	44	8	Light grey	600	50	0.646	2033291
108 PG36	Pg 36	58	10	Light grey	200	25	1.057	2033364
108 PG42	Pg 42	67	10	Light grey	300	25	1.479	2033429
108 PG48	Pg 48	73	12	Light grey	300	25	1.832	2033488

Screw plug in accordance with DIN 46320, with PG thread to DIN 40430.

## Reductions

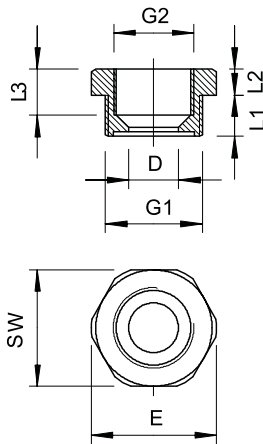
### Reduction, metric thread



Type	External thread	Internal thread	Colour	SW mm	Pack Piece	Weight kg/100 pc.	Item no.
107 R M20-12 PA	M20	M12	Light grey	24	100	0.500	2030616
107 R M20-16 PA	M20	M16	Light grey	24	100	0.700	2030619
107 R M25-12 PA	M25	M12	Light grey	29	100	0.850	2030624
107 R M25-16 PA	M25	M16	Light grey	29	100	0.850	2030626
107 R M25-20 PA	M25	M20	Light grey	29	100	0.650	2030628
107 R M32-12 PA	M32	M12	Light grey	36	50	1.200	2030632
107 R M32-16 PA	M32	M16	Light grey	36	50	1.100	2030634
107 R M32-20 PA	M32	M20	Light grey	36	50	1.050	2030637
107 R M32-25 PA	M32	M25	Light grey	36	50	0.783	2030640
107 R M40-16 PA	M40	M16	Light grey	46	50	2.000	2030643
107 R M40-20 PA	M40	M20	Light grey	46	50	1.850	2030646
107 R M40-25 PA	M40	M25	Light grey	46	50	1.950	2030649
107 R M40-32 PA	M40	M32	Light grey	46	50	1.400	2030652
107 R M50-20 PA	M50	M20	Light grey	55	25	2.300	2030655
107 R M50-25 PA	M50	M25	Light grey	55	25	2.250	2030659
107 R M50-32 PA	M50	M32	Light grey	55	25	2.200	2030661
107 R M50-40 PA	M50	M40	Light grey	55	25	2.050	2030664
107 R M63-25 PA	M63	M25	Light grey	68	25	3.050	2030667
107 R M63-32 PA	M63	M32	Light grey	68	25	3.070	2030670
107 R M63-40 PA	M63	M40	Light grey	68	25	3.100	2030673
107 R M63-50 PA	M63	M50	Light grey	68	25	3.000	2030675

Reduction, with metric internal and external thread.

### Dimensions



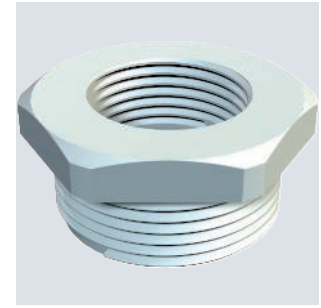
Type	SW mm	Dim. E mm	Dim. L mm	Dim. L1 mm	Dim. L2 mm	Dim. L3 mm
107 R M20-12 PA	24	26.5	12	8	4	12
107 R M20-16 PA	24	26.5	12	8	4	12
107 R M25-12 PA	29	32	14	8	6	14
107 R M25-16 PA	29	32	14	8	6	14
107 R M25-20 PA	29	32	14	8	6	14
107 R M32-12 PA	36	40	16	10	6	16
107 R M32-16 PA	36	40	16	10	6	16
107 R M32-20 PA	36	40	16	10	6	16
107 R M32-25 PA	36	40	16	10	6	16
107 R M40-16 PA	46	50.5	16	10	6	16
107 R M40-20 PA	46	50.5	16	10	6	16
107 R M40-25 PA	46	50.5	16	10	6	16
107 R M40-32 PA	46	50.5	16	10	6	16
107 R M50-20 PA	55	60	18	12	6	18
107 R M50-25 PA	55	60	18	12	6	18
107 R M50-32 PA	55	60	18	12	6	18
107 R M50-40 PA	55	60	18	12	6	18
107 R M63-25 PA	68	75	18	12	6	18
107 R M63-32 PA	68	75	18	12	6	18
107 R M63-40 PA	68	75	18	12	6	18
107 R M63-50 PA	68	75	18	12	6	18

Reduction, PG thread

PA



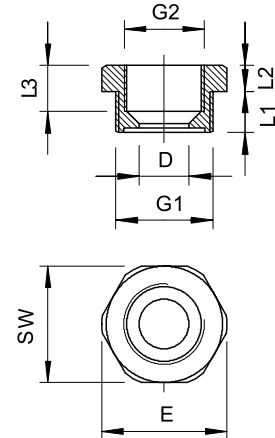
Type	External thread	Internal thread	Colour	Pack Piece	Weight kg/100 pc.	Item no.
107 R PG11- 7 PA	Pg 11	Pg 7	Light grey	50	0.400	2030705
107 R PG13- 9 PA	Pg 13,5	Pg 9	Light grey	50	0.450	2030713
107 R PG16- 9 PA	Pg 16	Pg 9	Light grey	50	0.600	2030748
107 R PG16-11 PA	Pg 16	Pg 11	Light grey	50	0.480	2030756
107 R PG21-11 PA	Pg 21	Pg 11	Light grey	50	0.910	2030764
107 R PG21-13 PA	Pg 21	Pg 13,5	Light grey	50	0.800	2030772
107 R PG21-16 PA	Pg 21	Pg 16	Light grey	50	0.650	2030780
107 R PG29-16 PA	Pg 29	Pg 16	Light grey	50	1.460	2030799
107 R PG29-21 PA	Pg 29	Pg 21	Light grey	25	1.500	2030802
107 R PG36-21 PA	Pg 36	Pg 21	Light grey	25	2.350	2030829
107 R PG36-29 PA	Pg 36	Pg 29	Light grey	25	2.200	2030810
107 R PG42-29 PA	Pg 42	Pg 29	Light grey	25	2.350	2030837



Reduction, Pg internal and external thread to DIN 40430.

Type	SW	Dim. D	Dim. E	Dim. L1	Dim. L2	Dim. L3
107 R PG11- 7 PA	22	7.5	24	8	6	9.5
107 R PG13- 9 PA	24	9.5	26	8.5	6	9.5
107 R PG16- 9 PA	27	9.5	29	9.5	6	11.5
107 R PG16-11 PA	27	11.5	29	9.5	6	11
107 R PG21-11 PA	32	11.5	35.5	10.5	5	11
107 R PG21-13 PA	32	13.5	35.5	10.5	5	11
107 R PG21-16 PA	32	16.5	35.5	10.5	5	11
107 R PG29-16 PA	40	16.5	40	12	6	12.5
107 R PG29-21 PA	39	21.5	40	12.5	6	13.5
107 R PG36-21 PA	50	21	54	13	6	13.5
107 R PG36-29 PA	50	28.5	54	18	6	18
107 R PG42-29 PA	55	27.5	59	16	6	17

Dimensions



Expansion pieces

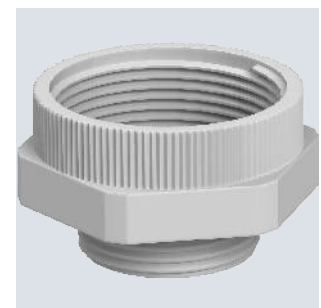
Intermediate expansion connector, metric thread

PA



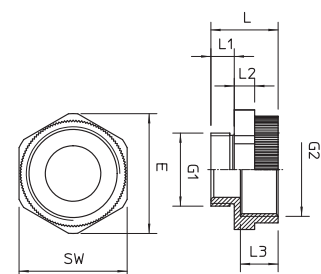
Type	External thread	Internal thread	Colour	Pack Piece	Weight kg/100 pc.	Item no.
107 E M 12-16 PA	M12	M16	Light grey	50	0.300	2031450
107 E M 16-20 PA	M16	M20	Light grey	50	0.380	2031451
107 E M 20-25 PA	M20	M25	Light grey	50	0.630	2031452
107 E M 25-32 PA	M25	M32	Light grey	50	0.970	2031453
107 E M 32-40 PA	M32	M40	Light grey	25	1.300	2031454

Intermediate expansion connector, metric internal and external thread.

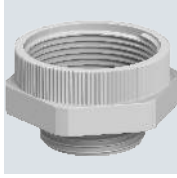


Type	Dim. L	Dim. L1	Dim. L2	Dim. L3	Dim. SW	Dim. E
107 E M 12-16 PA	20.5	8	5	10.5	20	22
107 E M 16-20 PA	20.5	8	5	10.5	24	26.5
107 E M 20-25 PA	21	8	6	10.5	30	33
107 E M 25-32 PA	23	8	7	12.5	37	41
107 E M 32-40 PA	25	10	7	12.5	45	49.5

Dimensions



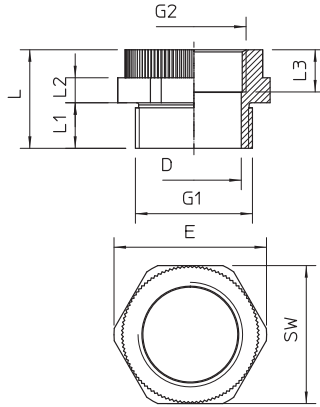
## Adapter PG-M



Type	External thread	Internal thread	Colour	Pack Piece	Weight kg/100 pc.	Item no.
107 ADA PG7-M12	PG7	M12	Light grey	20	0.194	2031465
107 ADA PG9-M12	PG9	M12	Light grey	20	0.370	2031466
107 ADA PG11-M16	PG11	M16	Light grey	20	0.410	2031467
107 ADA PG13-M20	PG13,5	M20	Light grey	20	0.416	2031468
107 ADA PG16-M20	PG16	M20	Light grey	20	0.630	2031469
107 ADA PG21-M25	PG21	M25	Light grey	10	0.940	2031470
107 ADA PG29-M32	PG29	M32	Light grey	10	1.610	2031471

Adapter for converting a Pg threaded drill hole to a metric threaded drill hole.

### Dimensions



Type	External thread	Internal thread	SW mm	Dim. E mm	Dim. L mm	Dim. L1 mm	Dim. L2 mm	Dim. L3 mm	Dim. D mm
107 ADA PG7-M12	PG7	M12	15	16.5	20.3	7.9	5	10.4	7.7
107 ADA PG9-M12	PG9	M12	19	21	20	7.9	5	10	10.5
107 ADA PG11-M16	PG11	M16	22	24.5	20.3	8	5	10	13.6
107 ADA PG13-M20	PG13,5	M20	24	26.7	21.3	9.1	5	10	15.2
107 ADA PG16-M20	PG16	M20	27	30	22	10	6	10	17.6
107 ADA PG21-M25	PG21	M25	33	33	23.6	10.9	6	10	22.7
107 ADA PG29-M32	PG29	M32	42	42	25.5	11.2	7	10.4	30.8

## Elbow socket

### 90° elbow socket, PG thread

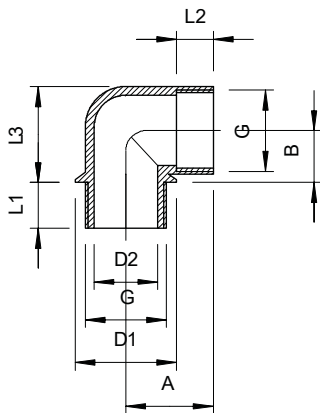


Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
107 W PG 9 PA	Light grey	10	0.390	2029901
107 W PG11 PA	Light grey	10	0.620	2029928
107 W PG13.5 PA	Light grey	10	0.750	2029936
107 W PG16 PA	Light grey	10	0.950	2029944
107 W PG21 PA	Light grey	10	1.470	2029952

Elbow socket with PG internal and external thread to DIN 40430.

The elbow socket can be turned into an angular gland with two steel pressure rings 107/D, a sealing ring 107/A or 107/B and a pressure screw 107/E.

### Dimensions

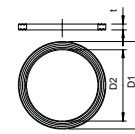


PE



### Connection thread sealing ring, metric

Type	Size mm	Dim.			Pack Piece	Weight kg/100 pc.	Item no.
		D1 mm	D2 mm	t mm			
107 F M12 PE	M12	16.3	12	1	100	0.017	2030004
107 F M16 PE	M16	20.9	16	1.1	100	0.015	2030008
107 F M20 PE	M20	25.1	20	1.1	100	0.030	2030012
107 F M25 PE	M25	31.3	25	1.4	100	0.038	2030016
107 F M32 PE	M32	37.6	32	1.7	100	0.105	2030020
107 F M40 PE	M40	49.1	40	1.7	100	0.200	2030024
107 F M50 PE	M50	60.1	50	2	100	0.250	2030028
107 F M63 PE	M63	73.8	63	2	100	0.290	2030032



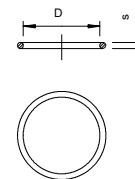
Connection thread sealing ring, suitable for all plastic cable glands, with metric thread according to DIN EN 60423 or ISO 68. The internal diameters of the sealing rings are designed in such a way that they can be pre-mounted in a captive manner.

NBR



### O sealing ring for metric connection thread

Type	Size mm	Dim.		Pack Piece	Weight kg/100 pc.	Item no.
		D mm	S mm			
171 M12	M12	10	1.5	100	0.007	2088703
171 M16	M16	13	1.5	100	0.008	2088711
171 M20	M20	18	1.5	100	0.011	2088738
171 M25	M25	22	1.5	100	0.012	2088746
171 M32	M32	29	2	100	0.035	2088754
171 M40	M40	36	2	50	0.045	2088762
171 M50	M50	46	2	50	0.052	2088770
171 M63	M63	59	2	25	0.056	2088789



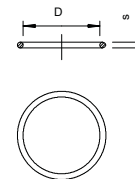
O sealing rings, suitable as connection thread sealing rings for all plastic and brass cable glands with metric connection thread to DIN EN 60423 or ISO 68. The rings can be captively pre-mounted.

NBR



### O sealing ring for PG connection thread

Type	Size mm	Dim.		Pack Piece	Weight kg/100 pc.	Item no.
		D mm	S mm			
171 PG 9	Pg 9	13	1.5	100	0.008	2088819
171 PG11	Pg 11	16	1.5	100	0.010	2088827
171 PG13.5	Pg 13.5	18	1.5	100	0.011	2088835
171 PG16	Pg 16	20	1.5	100	0.012	2088843
171 PG21	Pg 21	25	2	100	0.027	2088851
171 PG29	Pg 29	33	2	100	0.035	2088878
171 PG36	Pg 36	43	2	50	0.045	2088886
171 PG42	Pg 42	50	2	50	0.052	2088894



O sealing rings, suitable as connection thread sealing rings for all plastic and brass cable glands with Pg connection thread to DIN EN 60423 or ISO 68. The rings can be captively pre-mounted.



## Electrical insulating and sealing compound



Type	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
115 GR-GN	Natural	90	10	11.020	2340038

In rods.

Permanently elastic, fibre-free sealing kit on a polymer and a mineral basis to fill cavities in installations, e.g. cable glands or similar components, to prevent the entry of dirt and water.

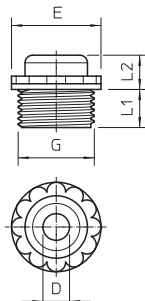
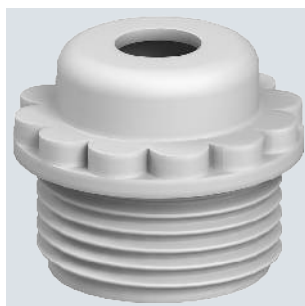
Colour: Natural

Characteristics of the sealing kit:

- Halogen-, acid- and silicone-free
- Can also be processed at low temperatures
- Permanent heat resistance to +80 °C
- Corrosion-resistant
- Low water consumption
- Good insulation properties
- Puncture strength 16 kV/mm to VDE 0291 Part 2
- Can be stored almost indefinitely

## Nipple

### Screw-in nipple, metric thread, with opening



Type	Thread	Colour	SW mm	Pack Piece	Weight kg/100 pc.	Item no.
90 M12 OF	M12 x 1,5	Light grey	13	100	0.170	2032007
90 M16 OF	M16 x 1,5	Light grey	16	100	0.192	2032011
90 M20 OF	M20 x 1,5	Light grey	21	100	0.268	2032015
90 M25 OF	M25 x 1,5	Light grey	30	50	0.513	2032019
90 M32 OF	M32 x 1,5	Light grey	34	25	0.694	2032023
90 M40 OF	M40 x 1,5	Light grey	44	10	0.875	2032031

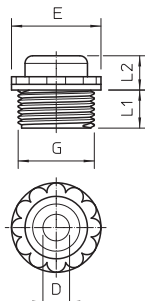
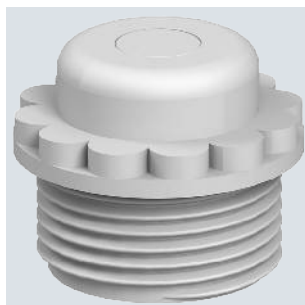
With open cable entry.

Grip seal to screw into metric thread end to IEC 423.

With self-sealing cone at the end of the thread, therefore no connection thread sealing ring required.

Protection rating achievable with careful mounting: IP54.

### Screw-in nipple, metric thread, with perforation membrane



Type	Thread	Colour	SW mm	Pack Piece	Weight kg/100 pc.	Item no.
90 M12 GE	M12 x 1,5	Light grey	13	100	0.170	2032378
90 M16 GE	M16 x 1,5	Light grey	16	100	0.192	2032380
90 M20 GE	M20 x 1,5	Light grey	21	100	0.268	2032382
90 M25 GE	M25 x 1,5	Light grey	30	50	0.513	2032384
90 M32 GE	M32 x 1,5	Light grey	34	25	0.694	2032386
90 M40 GE	M40 x 1,5	Light grey	44	10	0.875	2032388

With perforation membranes, the opening D is pre-marked, but closed.

Grip seal to screw into metric thread to IEC 423.

With self-sealing cone at the end of the thread, therefore no connection thread sealing ring required.

Protection rating achievable with careful mounting: IP54.



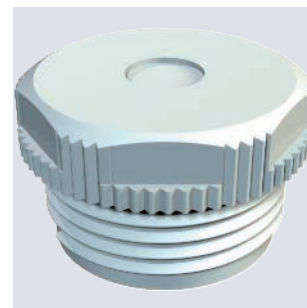
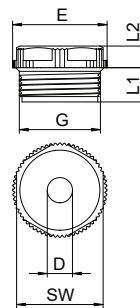
PE

IP 54 Pg

## Screw-in nipple, PG thread, with perforation membrane

Type	Thread	SW mm	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
90 PG 9 DSMB	Pg 9	17	Light grey	2400	100	0.156	2032503
90 PG11 DSMB	Pg 11	19	Light grey	1200	100	0.156	2032511
90 PG13.5 DSMB	Pg 13,5	22	Light grey	1000	100	0.216	2032538
90 PG16 DSMB	Pg 16	24	Light grey	1000	100	0.249	2032546
90 PG21 DSMB	Pg 21	30	Light grey	500	50	0.422	2032554
90 PG29 DSMB	Pg 29	37	Light grey	300	25	0.563	2032562

With perforation membrane, the opening D is pre-marked, but closed.  
Grip seal to screw into PG thread to DIN 40430.  
With self-sealing cone at the end of the thread, therefore no connection thread sealing ring required. Protection rating achievable with careful mounting: IP54.

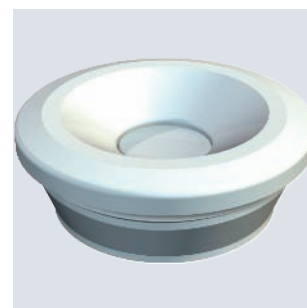
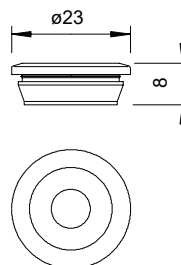


TPE

IP 54

Type	Size	For Ø mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
89	PG 11	7-13	Light grey	100	0.111	2012030
89 RW	PG 11	7-13	Pure white	100	0.113	2012103
89 SW	PG 11	7-13	Black	100	0.112	2012146
89 LoG	PG 11	7-13	Light grey	5000	0.111	2012065
89 3MM NUT	PG 11	7-13	Light grey	2000	0.106	2012081

Closed entry nipple with perforation membrane for cable diameters 7–13 mm. Ideal for simple cable routing in housings or through thin sheet metal.  
Required hole diameter 18.5–19 mm, wall thickness max. 1.8 mm.

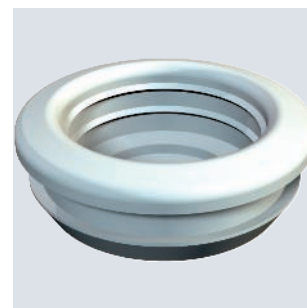
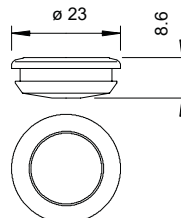


TPE

IP 54

Type	Size	For Ø mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
89 ROE 12-16	PG 13,5	12-16	Light grey	100	0.102	2012049

Closed entry nipple with perforation membrane for cable diameters 12–16 mm. Ideal for simple cable routing in housings or through thin sheet metal.  
Required hole diameter 18.5–19 mm, wall thickness max. 3 mm.

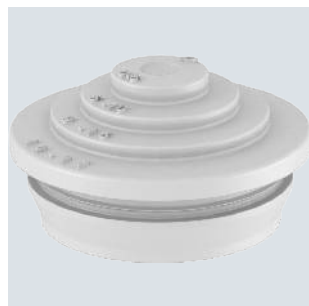


## Nipple 89

## Nipple 89/RK



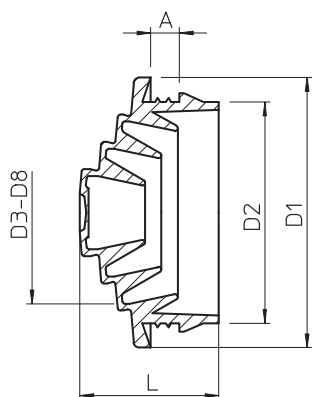
EDVS plug-in seal, B series/VBX series



Type	Size	For Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
EDVS M20 LGR	M20	0-17	Light grey	100	0.117	2012375
EDVS M25 LGR	M25	0-22	Light grey	100	0.179	2012383
EDVS M32 LGR	M32	0-28	Light grey	50	0.295	2012391

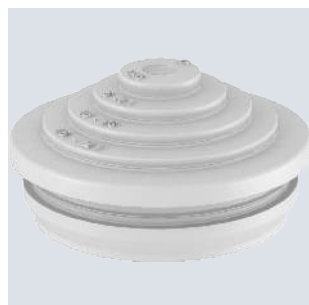
The push-in nipple can be cut back to suit the relevant cable diameter.

Dimensions



Type	Dim. L	Dim. A	Dim. D1	Dim. D2	Dim. D3	Dim. D4	Dim. D5	Dimension D6	Dimension D7	Dimension D8
EDVS M20 LGR	12.8	3.4	24.8	20.3	6	10	15	17	—	—
EDVS M25 LGR	14.5	4.3	29.5	25.3	6	10	15	20	22	—
EDVS M32 LGR	17.8	4.4	36.3	32.3	6	10	15	20	25	28

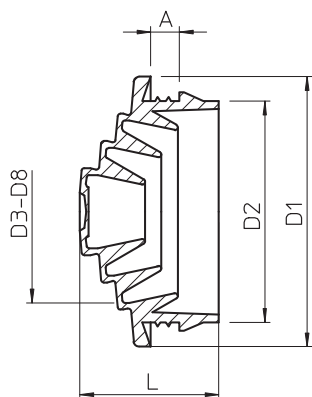
EDS plug-in seal, light grey, X series



Type	Size	For Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
EDS M20 LGR	M20	0-17	Light grey	100	0.125	2012350
EDS M25 LGR	M25	0-22	Light grey	100	0.185	2012354
EDS M32 LGR	M32	0-28	Light grey	50	0.295	2012358
EDS M20 SW	M20	0-17	Black	100	0.125	2012340
EDS M25 SW	M25	0-22	Black	100	0.193	2012342
EDS M32 SW	M32	0-28	Black	50	0.254	2012344

The push-in nipple can be cut back to suit the relevant cable diameter.

Dimensions



Type	Dim. L	Dim. A	Dim. D1	Dim. D2	Dim. D3	Dim. D4	Dim. D5	Dimension D6	Dimension D7	Dimension D8
EDS M20 LGR	12.8	3.1	24.8	20.3	6	10	15	17	—	—
EDS M25 LGR	14.5	3.1	29.5	25.3	6	10	15	20	22	—
EDS M32 LGR	17.8	3.1	36.3	32.3	6	10	15	20	25	28
EDS M20 SW	12.8	3.1	24.8	20.3	6	10	15	17	—	—
EDS M25 SW	14.5	3.1	29.5	25.3	6	10	15	20	22	—
EDS M32 SW	17.8	3.1	36.3	32.3	6	10	15	20	25	28

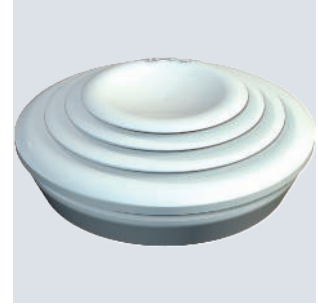
TPE

M25 M32 M40 IP 66

Type	Size	For Ø	Colour	Pack Piece	Weight kg/100 pc.	Item no.
EDK 25 LGR	M25	0-22	Light grey	100	0.214	2011638
EDK 32 LGR	M32	0-27	Light grey	50	0.328	2011646
EDK 40 LGR	M40	0-34	Light grey	25	0.534	2011654
EDK 25 RW	M25	0-22	Pure white	100	0.214	2011689
EDK 32 RW	M32	0-27	Pure white	50	0.328	2011697
EDK 40 RW	M40	0-34	Pure white	25	0.534	2011700

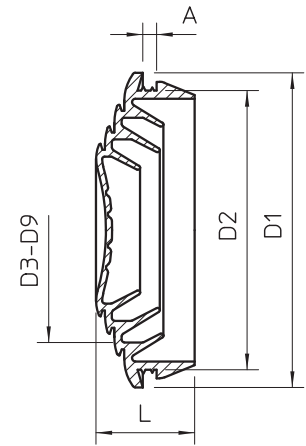
The plug-in seal can be cut back to suit the relevant cable diameter.

### EDK plug-in seal



Type	Dim. L	Dim. A	Dim. D1	Dim. D2	Dim. D3	Dim. D4	Dim. D5	Dimension D6	Dimension D7	Dimension D8	Dimension D9
EDK 25 LGR	10.1	2.2	29.5	25.4	5	10	15	18	22	-	-
EDK 32 LGR	11.4	2.2	36.4	32.3	5	10	15	18	22	27	-
EDK 40 LGR	13.4	2.2	44.1	40.2	5	10	15	18	22	27	34
EDK 25 RW	10.1	2.2	29.5	25.4	5	10	15	18	22	-	-
EDK 32 RW	11.4	2.2	36.4	32.3	5	10	15	18	22	27	-
EDK 40 RW	13.4	2.2	44.1	40.2	5	10	15	18	22	27	34

#### Dimensions



TPE

IP 55 M25 M32 M40

### Plug-in seal for pipes, T-series junction box, light grey

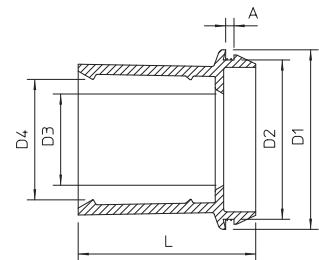
Type	Size	Colour	Pack Piece	Weight kg/100 pc.	Item no.
EDR 25 16-20 LGR	M25	Light grey	50	0.520	2011506
EDR 25 20-25 LGR	M25	Light grey	50	0.680	2011514
EDR 32 25-32 LGR	M32	Light grey	50	1.170	2011530
EDR 40 32-40 LGR	M40	Light grey	25	2.200	2011546

Plug-in seal for junction boxes for direct insertion of metric pipes



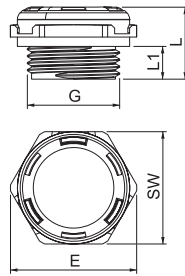
Type	Dim. L	Dim. A	Dim. D1	Dim. D2	Dim. D3	Dim. D4
EDR 25 16-20 LGR	30	2.2	29.5	25.3	15	18.4
EDR 25 20-25 LGR	30	2.2	29.5	25.3	18.5	24.2
EDR 32 25-32 LGR	36	2.2	37	32.3	24	31.2
EDR 40 32-40 LGR	49	2.2	46	42.3	31	39.2

#### Dimensions



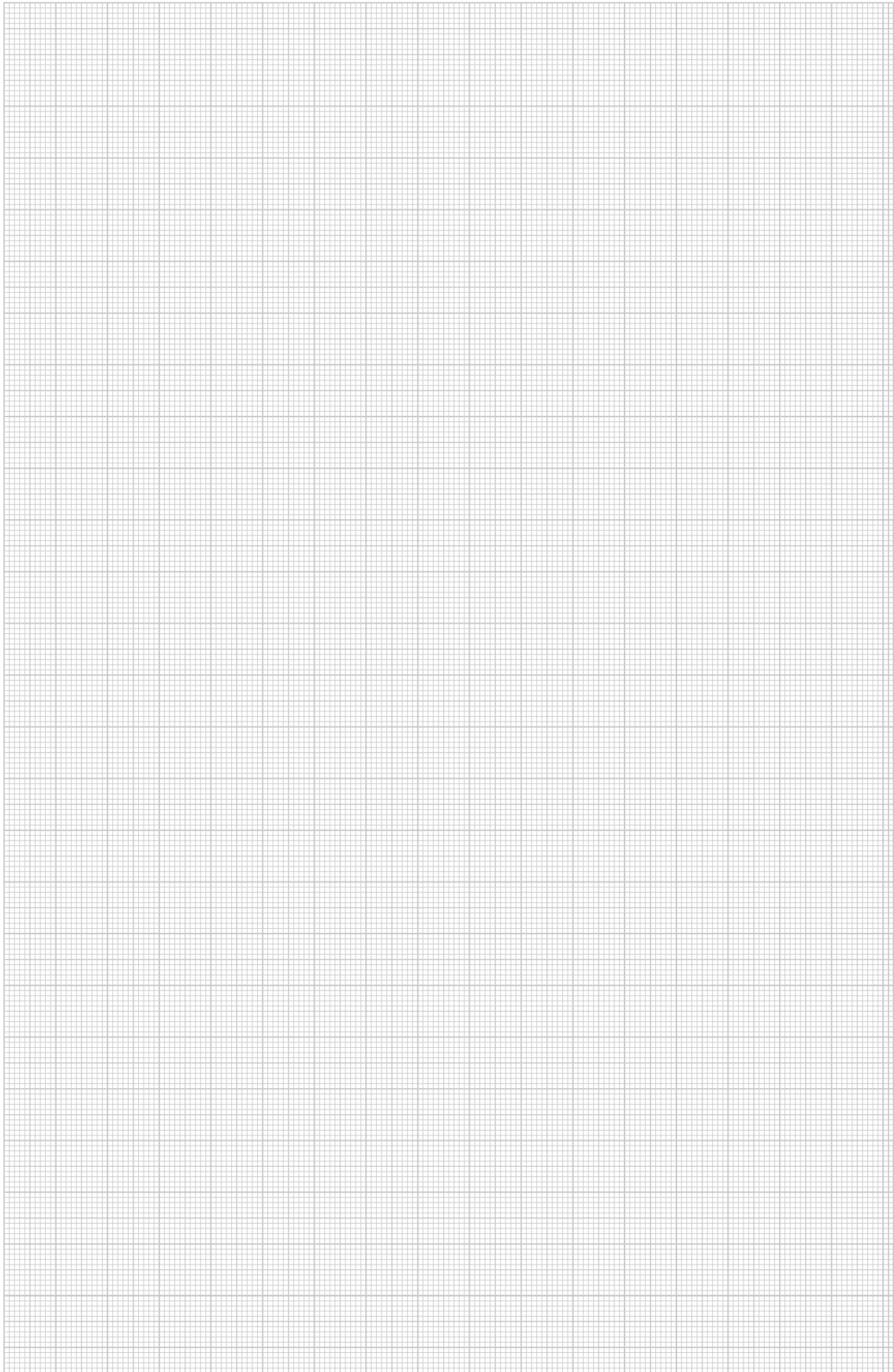


## Pressure compensation element



Type	Thread	Protection rating	Colour	Pack Piece	Weight kg/100 pc.	Item no.
109 M20 LGR	M20x1,5	IP68	Light grey	1	0.538	2034680

The pressure compensation element, type 109 M20 LGR compensates for pressure differences in junction boxes, small distributors and connection sockets with an M20 opening and avoids the formation of condensation water in sealed housings. The polyamide pressure compensation element has an IP68/IP69 protection rating. This remains intact, even after the installation of the pressure compensation element. The pressure compensation element is suitable for use in industrial environments and in exterior areas.





**Robust**

**With long and short connection**

**Excellent protection**

**VDE-tested**

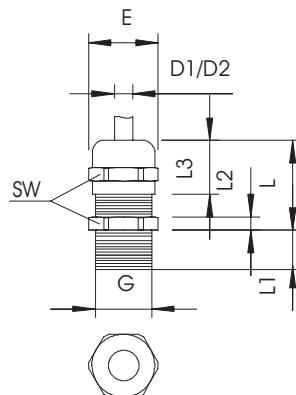
## Cap nut cable gland V-TEC VM MS

Tough conditions are no problem for the brass V-TEC VM. Here too, the well-known V-TEC cap nut design of the cable glands ensures a secure hold of the cables. The protection class IP68 is achieved using separate sealing rings and their special OBO slat technology. Strain relief and tightness have been tested to DIN EN 62444. The connecting threads are metric or PG and are therefore suitable for universal use. Once screwed in place, the installation will stay secure for a long time to come. The optimum thread adjustment with the right pitch ensures permanent resistance to shaking. Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet.





# Cap nut cable gland



- Sturdy cable gland to withstand mechanical loads
- The proven V-TEC cap nut design ensures a secure hold of the cables
- The protection class IP68 is achieved using separate sealing rings and their special OBO slat technology
- With metric connecting thread to IEC 423
- Neoprene/NBR sealing ring, polyamide terminal insert
- With pre-mounted sealing ring on the connection thread
- Optimum thread adjustment with the right pitch ensures lasting resistance to shaking
- Applications: From private housing with junction boxes up to industrial applications in the distributor cabinet
- Temperature range: -20 °C to +100 °C
- \* Prices according to DEL notation

G	D1	SW	E	L max.
	mm	mm	mm	mm
M12 x 1.5	3-6	14	15.5	20
M16 x 1.5	5-9	17	19	24
M20 x 1.5	9-13	22	24	27
M25 x 1.5	11-16	27	30	29.5
M32 x 1.5	14-21	34	36	30
M40 x 1.5	19-27	43	46	33
M50 x 1.5	24-35	55	60	38.5
M63 x 1.5	32-42	65	70	44.5



## Cap nut cable gland, metric thread, silver grey, nickel-plated

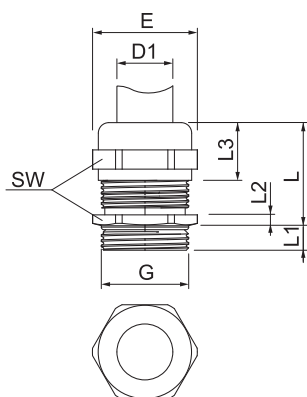


Type	Thread	Material	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC VM12 MS	M12x1,5	Brass	50	1.305	2086018
V-TEC VM16 MS	M16x1,5	Brass	50	1.640	2086024
V-TEC VM20 MS	M20x1,5	Brass	25	3.140	2086030
V-TEC VM25 MS	M25x1,5	Brass	25	4.260	2086036
V-TEC VM32 MS	M32x1,5	Brass	20	8.457	2086042
V-TEC VM40 MS	M40x1,5	Brass	5	12.240	2086048
V-TEC VM50 MS	M50x1,5	Brass	5	22.700	2086054
V-TEC VM63 MS	M63 x 1,5	Brass	5	30.300	2086060

With metric connecting thread to IEC 423, robust cap-nut cable gland with large sealing area. Strain relief, wringing protection and tightness over the whole clamping area. Neoprene sealing ring. Polyamide terminal insert. With pre-mounted O sealing ring on connection thread, VDE-tested to DIN EN 50262, protection rating IP68 at 5 bar for 1 hr, max. permitted ambient temperature -20 to +100°C.

\* Prices according to DEL notation.

### Dimensions



Type	Sealing range D mm	SW mm	E mm	Dim.			
				Dim. L mm	Dim. L1 mm	Dim. L2 mm	Dim. L3 mm
V-TEC VM12 MS	3-6	14	15,5	20	5	3	11,5
V-TEC VM16 MS	5-9	17	19	24	5	3	15
V-TEC VM20 MS	9-13	22	24	27	6	3,5	16,5
V-TEC VM25 MS	11-16	27	30	29,5	7	4	17
V-TEC VM32 MS	14-21	34	36	30	8	4,5	18,5
V-TEC VM40 MS	19-27	43	46	33	8	4,5	21
V-TEC VM50 MS	24-35	55	60	38,5	9	4,5	25
V-TEC VM63 MS	32-42	65	70	44,5	10	5	31



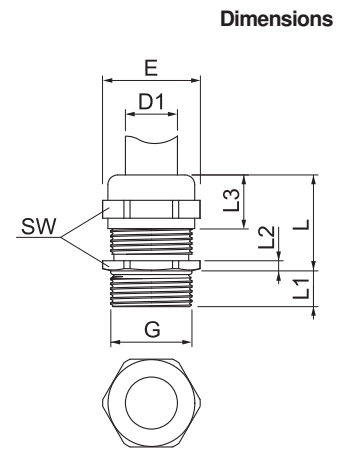
## Cap nut cable gland, metric thread, silver grey, long, nickel-plated

Type	Material	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC VM LM12 MS	Brass	50	1.300	2086111
V-TEC VM LM16 MS	Brass	50	2.059	2086117
V-TEC VM LM20 MS	Brass	25	3.360	2086123
V-TEC VM LM25 MS	Brass	25	4.800	2086129
V-TEC VM LM32 MS	Brass	10	9.150	2086135
V-TEC VM LM40 MS	Brass	5	13.400	2086141
V-TEC VM LM50 MS	Brass	5	24.000	2086147
V-TEC VM LM63 MS	Brass	5	32.100	2086153
V-TEC VM LM75MS1	Brass	3	112.300	2086156
V-TEC VM LM75MS2	Brass	3	98.200	2086159



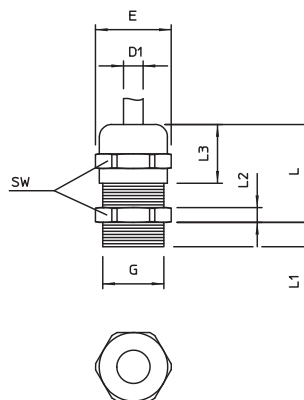
With metric connecting thread to IEC 423, robust cap-nut cable gland with large sealing area. Strain relief, wringing protection and tightness over the whole clamping area. For thicker housing wall thicknesses in conjunction with locknuts. Neoprene sealing ring. Polyamide terminal insert. With pre-mounted sealing ring on connection thread, VDE-tested to DIN EN 50262, protection rating IP 68 at 5 bar for 1 hr. With long connection thread.  
\* Prices according to DEL notation.

Type	Sealing range		Dim.				
	D	SW	Dim. E	Dim. L max.	Dim. L1	Dim. L2	Dim. L3
	mm	mm	mm	mm	mm	mm	mm
V-TEC VM LM12 MS	3-6	14	15.5	20	10	3	11.5
V-TEC VM LM16 MS	5-9	17	19	24	10	3	15
V-TEC VM LM20 MS	9-13	22	24	27	10	3.5	16.5
V-TEC VM LM25 MS	11-16	27	30	29.5	11	4	17
V-TEC VM LM32 MS	14-21	34	36	30	13	4.5	18.5
V-TEC VM LM40 MS	19-27	43	46	33	13	4.5	21
V-TEC VM LM50 MS	24-35	55	60	38.5	14	4.5	25
V-TEC VM LM63 MS	32-42	65	65	44.5	14	5	31
V-TEC VM LM75MS1	48-55	90	97	42	18	7	25
V-TEC VM LM75MS2	53-60	90	97	42	18	7	25



# Cable gland, PG thread

IP 68 M



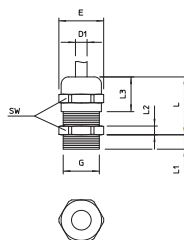
- Even tough conditions are no problem
- With PG connection thread
- Once screwed in place, the installation will stay secure for a long time to come
- Temperature range: -20 °C to +100 °C
- \*Prices according to DEL notation

G	D1	D2	SW	E	L max.	L2	L3
	mm	mm	mm	mm	mm	mm	mm
Pg 7	2.5-6.5	3-6.5	14	15.5	20	3	12
Pg 9	2.5-8	3.5-8	17	18.9	22	3	14
PG 11	3.5-10	4.5-10	20	22.2	24	3	15
Pg 13.5	5-12	6-12	22	24.4	25	3.5	15
Pg 16	7-14	7-14	24	26.7	27	4	17
Pg 21	9-18	12-18	30	33.5	33	4.5	20
Pg 29	14-25	17-25	40	43.5	39	5	23.5
Pg 36	18-32	20-32	50	54	49	5.5	29
Pg 42	24-38	26-38	57	61	52	6	31
Pg 48	30-44	30-44	64	69	52.5	6.5	31

## Cap nut cable gland, brass

### Cap nut cable gland, PG thread, nickel-plated

CuZn 37 N  
IP 68 Pg



Type	Material	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC PG7 MS	Brass	50	1.044	2085607
V-TEC PG9 MS	Brass	50	1.600	2085615
V-TEC PG11 MS	Brass	50	2.300	2085623
V-TEC PG13 MS	Brass	50	2.800	2085631
V-TEC PG16 MS	Brass	25	3.400	2085658
V-TEC PG21 MS	Brass	25	6.000	2085666
V-TEC PG29 MS	Brass	20	13.000	2085674
V-TEC PG36 MS	Brass	10	21.195	2085682
V-TEC PG42 MS	Brass	5	23.500	2085690
V-TEC PG48 MS	Brass	5	31.500	2085704

Cable gland of cap-nut design with large sealing area, and strain relief and torsion protection for high sealing demands with Pg connection thread to DIN 40430, polyamide terminal insert, sealing ring of chloroprene/nitrile rubber, with pre-mounted O ring on the connection thread.

Protection rating IP 68 at 5 bar: 1 hr, tested to VDE 0619.

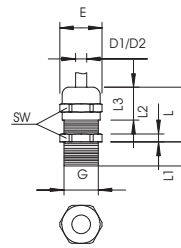
"Normal" connection thread length, according to DIN 46320.

\* Prices according to DEL notation.

CuZn  
37 N  
IP  
68 Pg

Cap nut cable gland, PG thread, long, nickel-plated

Type	Material	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC L PG9 MS	Brass	50	1.795	2085739
V-TEC L PG11 MS	Brass	50	2.550	2085747
V-TEC L PG13 MS	Brass	50	3.030	2085755
V-TEC L PG16 MS	Brass	25	3.660	2085763
V-TEC L PG21 MS	Brass	25	6.580	2085771
V-TEC L PG29 MS	Brass	10	12.792	2085798
V-TEC L PG48 MS	Brass	5	37.900	2085836



Cable gland of cap-nut design with large sealing area, and strain relief and torsion protection for high sealing demands with long Pg connection thread to DIN 40430, for thicker housing wall thicknesses in connection with locknut.

Polyamide terminal insert.

Sealing ring of chloroprene/nitrile rubber.

O ring pre-mounted on connection thread.

Protection rating IP 68 at 5 bar: 1 hr.

Tested to VDE 0619.

With long connection thread.

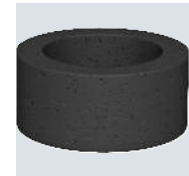
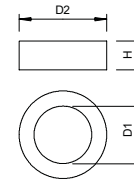
\* Prices according to DEL notation.

CR  
NBR

M

Reducing sealing insert, metric

Type	Size	Sealing range			Pack Piece	Weight kg/100 pc.	Item no.
		Dim. D	Dim. D1	Dim. D2			
107CR VM 12	M12	2-5	5	8.9	50	0.050	2029560
107CR VM 16	M16	2.5-7	7	12.7	50	0.115	2029563
107CR VM 20	M20	4-9	9	16	50	0.205	2029566
107CR VM 25	M25	6-13	13	20.7	50	0.340	2029569
107CR VM 32	M32	11-16	16	25.7	25	0.625	2029572
107CR VM 40	M40	12-23	23	33.7	25	1.140	2029575
107CR VM 50	M50	18-29	29	41.7	25	2.080	2029578
107CR VM 63	M63	29-40	40	54.8	25	3.560	2029581



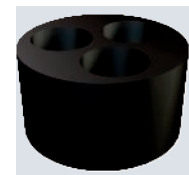
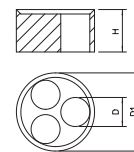
Reduces the sealing area D of the cable gland V-TEC VM and V-TEC VM L.

NBR  
SBR

Pg

Multi-way seal insert, PG

Type	Size	Dim. D	Dim. H	Dim. D1	Number of drill holes	Pack Piece	Weight kg/100 pc.	Item no.
107 C V 16 3x5	Pg 16	5	9.5	17.5	3	50	0.210	2029626
107 C V 16 2x6	Pg 16	6	9.5	17.5	2	50	0.210	2029634
107 C V 16 3x6	Pg 16	6.5	9.5	17.5	3	50	0.155	2029642
107 C V 21 3x7	Pg 21	7	12	23	3	25	0.450	2029650
107 C V 21 2x8	Pg 21	8	12	23	2	25	0.340	2029669



Use to insert multiple thin cables in the V-TEC cable glands, is replaced with the simple sealing ring of the cable gland.

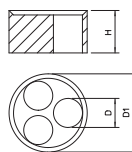
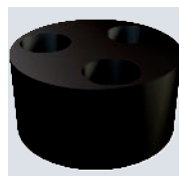


## Multi-way seal insert, metric

NBR

SBR

M



Type	Size	Dim. D mm	Dim. H mm	Dim. D1 mm	Number of drill holes	Pack Piece	Weight kg/100 pc.	Item no.
107 C VM 20 2x4	M20	4	8.1	15.1	2	50	0.130	2029672
107 C VM 20 4x5	M20	5	8.1	15.1	4	50	0.080	2029675
107 C VM 20 2x6	M20	6	8.1	15.1	2	50	0.100	2029677
107 C VM 25 5x4	M25	4	10	19.8	5	50	0.180	2029679
107 C VM 25 3x6	M25	6	10	19.8	3	50	0.210	2029682
107 C VM 25 2x6	M25	6	10	19.8	2	50	0.260	2029685
107 C VM 25 3x7	M25	7	10	19.8	3	50	0.180	2029688
107 C VM 25 2x8	M25	8	10	19.8	2	50	0.200	2029690
107 C VM 32 2x8	M32	8	13.4	25.1	2	25	0.530	2029693
107 C VM 32 4x8	M32	8	13.4	25.1	4	25	0.400	2029696

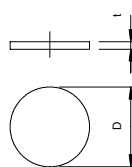
Use to insert multiple thin cables in the V-TEC VM cable glands, is replaced with the simple sealing ring of the cable gland.

## Dust protection plate, metric

ZELL

PE

M



Type	Size	Dim. D mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
107 S VTEC M12	M12	12	1.5	100	0.001	2028870
107 S VTEC M16	M16	16	1.5	100	0.002	2028873
107 S VTEC M20	M20	20	1.5	100	0.010	2028875
107 S VTEC M25	M25	25	1.5	100	0.008	2028877
107 S VTEC M32	M32	32	1.5	100	0.012	2028880
107 S VTEC M40	M40	40	1.5	100	0.022	2028883
107 S VTEC M50	M50	50	1.5	100	0.040	2028885

Cellular polyethylene.

Small protective disc to protect the V-TEC VM and V-TEC VM MS cable glands against dust before the cable is installed.

Application: the discs are pre-mounted between the cap nut and the seal. They do not need to be removed when the cable is installed, but are simply passed through to the interior with the cable.

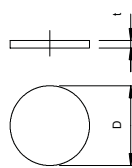
Note: the discs do not provide any mechanical protection.

## Dust protection plate, PG

ZELL

PE

Pg



Type	Size	Dim. D mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
107 S VTEC PG7	Pg 7	11	2	100	0.001	2028891
107 S VTEC PG9	Pg 9	14	2	100	0.010	2028905
107 S VTEC PG11	Pg 11	16.5	2	100	0.003	2028913
107 S VTEC PG13	Pg 13.5	18.5	2	100	0.010	2028921
107 S VTEC PG16	Pg 16	21	2	100	0.006	2028948
107 S VTEC PG21	Pg 21	26.5	2	100	0.010	2028956
107 S VTEC PG29	Pg 29	34.5	2	100	0.015	2028964
107 S VTEC PG36	Pg 36	44	3	100	0.035	2028972
107 S VTEC PG42	Pg 42	50	3	100	0.050	2028980
107 S VTEC PG48	Pg 48	56	3	100	0.060	2028999

Cellular polyethylene.

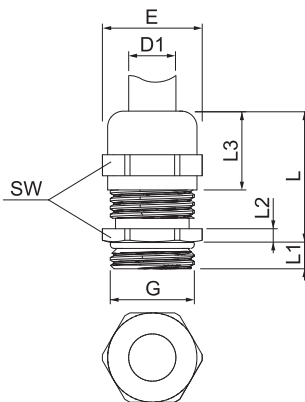
Small protective disc to protect the V-TEC and V-TEC MS cable glands against dust before the cable is installed.

Application: the discs are pre-mounted between the cap nut and the seal. They do not need to be removed when the cable is installed, but are simply passed through to the interior with the cable.

Note: the discs do not provide any mechanical protection.



# Cable gland, EMC



- Robust EMC cap-nut cable gland
- With metric connecting thread to IEC 423
- Satisfies high tightness requirements: protection rating IP68 at 5 bar/1 hr
- Neoprene/natural rubber sealing ring, polyamide terminal insert
- With pre-mounted O sealing ring on the connection thread
- \* Prices according to DEL notation

G	D1	SW	E	L max.	L1
	mm	mm	mm	mm	mm
M12 x 1.5	3-6	14	15.5	25	5
M16 x 1.5	5-9	17	19	30	5
M20 x 1.5	9-13	22	24	33.5	6
M25 x 1.5	11-16	27	30	36.5	7
M32 x 1.5	14-21	34	36	38	8
M40 x 1.5	19-27	43	46	49.5	8
M50 x 1.5	24-35	55	60	49.5	9
M63 x 1.5	32-42	65	70	52.5	10



# Cap nut cable gland, brass

## Cap nut cable gland, EMC, metric thread, nickel-plated

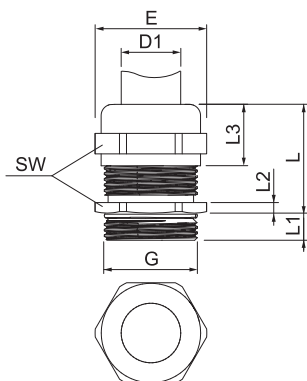


Type	Material	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC VM12 EMV	Brass	50	1.362	2086203
V-TEC VM16 EMV	Brass	50	1.837	2086207
V-TEC VM20 EMV	Brass	25	3.473	2086211
V-TEC VM25 EMV	Brass	25	5.280	2086215
V-TEC VM32 EMV	Brass	20	7.662	2086219
V-TEC VM40 EMV	Brass	5	12.880	2086223
V-TEC VM50 EMV	Brass	5	26.165	2086227
V-TEC VM63 EMV	Brass	5	33.990	2086231

With metric connecting thread to IEC 423, robust EMV cap-nut cable gland with large sealing area. Strain relief, wringing protection and tightness over the whole clamping area. Neoprene sealing ring. Polyamide terminal insert. With pre-mounted O sealing ring on connection thread, VDE-tested to DIN EN 50262, protection rating IP 68 at 5 bar for 1 hr.

\* Prices according to DEL notation.

### Dimensions



Type	Sealing range D mm	SW mm	Dim.				
			Dim. E mm	Dim. L max. mm	Dim. L1 mm	Dim. L2 mm	Dim. L3 mm
V-TEC VM12 EMV	3-6	14	15.5	25	5	3	11.5
V-TEC VM16 EMV	5-9	17	19	30	5	3	15
V-TEC VM20 EMV	9-13	22	24	33.5	6	3.5	16.5
V-TEC VM25 EMV	11-16	27	30	36.5	7	3.5	16.5
V-TEC VM32 EMV	14-21	34	38	42	8	4.5	18.5
V-TEC VM40 EMV	19-27	43	46	49.5	8	4.5	21
V-TEC VM50 EMV	24-35	55	60	49.5	9	4.5	25
V-TEC VM63 EMV	32-42	65	70	52.5	10	6.5	26

## Cap nut cable gland, EMC spring contact, metric thread, nickel-plated

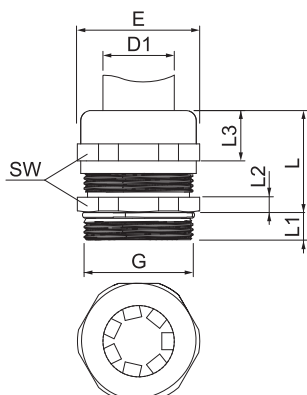


Type	Material	Pack Piece	Weight kg/100 pc.	Item no.
V-TEC VM16 EMV-K	Brass	50	2.010	2086165
V-TEC VM20 EMV-K	Brass	25	3.564	2086169
V-TEC VM25 EMV-K	Brass	25	5.693	2086173
V-TEC VM32 EMV-K	Brass	20	9.880	2086177
V-TEC VM40 EMV-K	Brass	5	17.200	2086181
V-TEC VM50 EMV-K	Brass	5	13.735	2086185
V-TEC VM63 EMV-K	Brass	5	16.780	2086189

With metric connecting thread to IEC 423, robust EMV cap-nut cable gland with large sealing area. The contact between the gland and braided shield is made using a contact spring. Strain relief, wringing protection and tightness over the whole clamping area. Neoprene sealing ring. Polyamide terminal insert. With pre-mounted O sealing ring on connection thread, VDE-tested to DIN EN 50262, protection rating IP 68 at 5 bar for 1 hr.

\* Prices according to DEL notation.

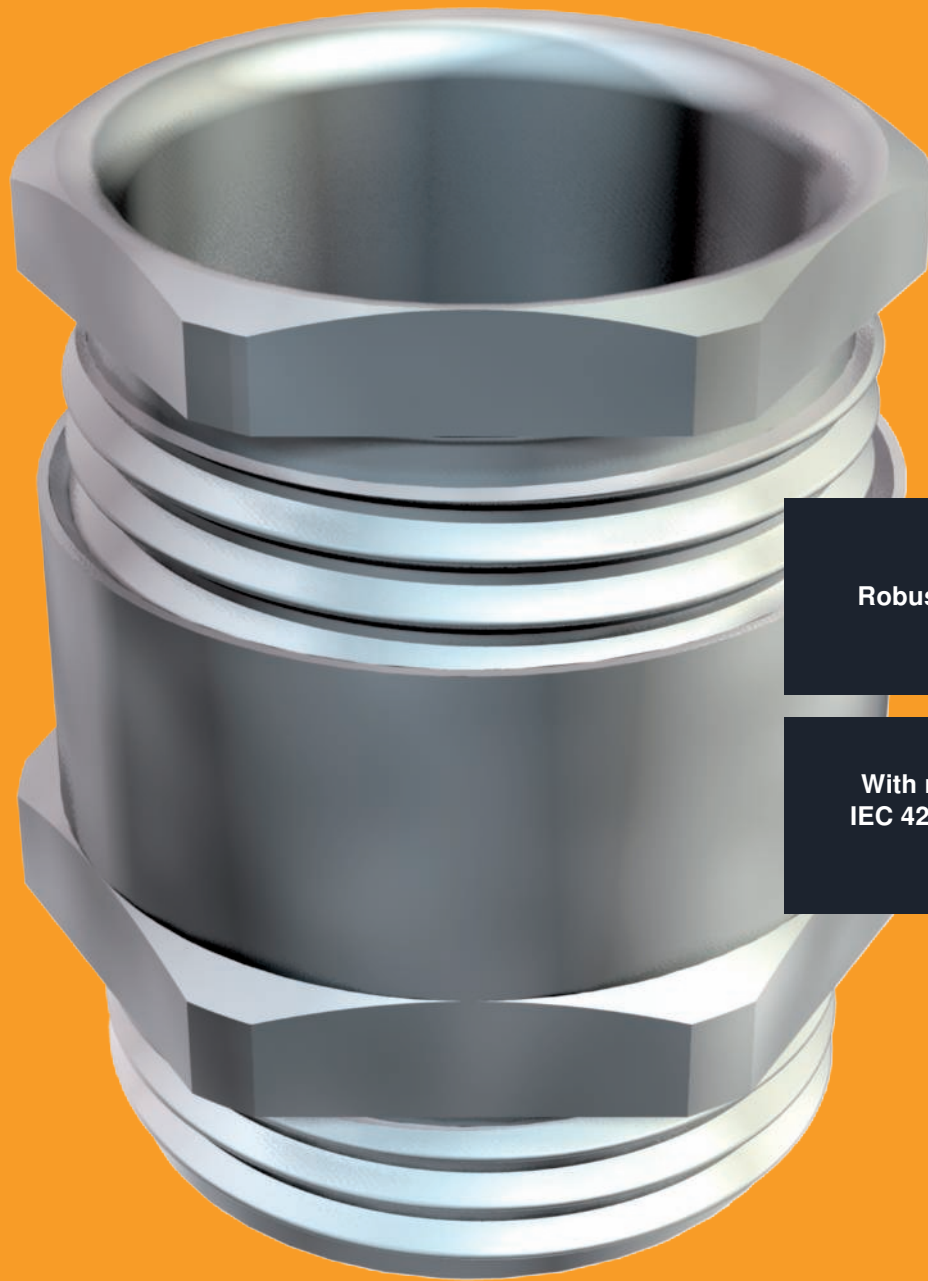
### Dimensions



Type	Sealing range D mm	SW mm	Dim.		
			Dim. E mm	Dim. L max. mm	Dim. L1 mm
V-TEC VM16 EMV-K	5-9	17	19	25	5
V-TEC VM20 EMV-K	9-13	22	24	27.5	6
V-TEC VM25 EMV-K	11-16	27	30	29	7
V-TEC VM32 EMV-K	14-21	34	36	30	8
V-TEC VM40 EMV-K	19-27	43	46	31	8
V-TEC VM50 EMV-K	24-35	55	60	40.5	9
V-TEC VM63 EMV-K	38-48	65	65	42.5	10

# Cone cable glands, brass

Cable gland with hexagonal intermediate connector, shape C4, to DIN 46320 with metric connection thread to DIN EN 60423 and ISO 68.



**Robust EMC cap-nut cable gland**

**With metric connecting thread to IEC 423 for meeting high tightness requirements**



# Cone cable gland

**IP 54** **IP 65**



- Robust EMC cap-nut cable gland
- With metric connection thread to IEC 423 for meeting high tightness requirements

## Conical cable gland, brass

### Cone cable gland, metric thread, cutting ring, nickel-plated

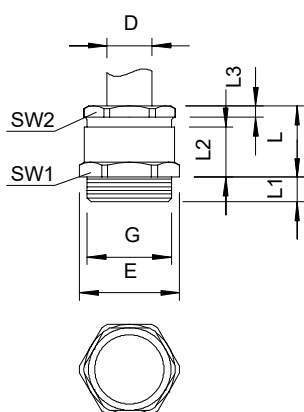
CuZn 37 N  
IP 54 IP 65 M



Type	Material	Pack Piece	Weight kg/100 pc.	Item no.
162 MS M12	Brass	50	1.200	2083706
162 MS M16	Brass	50	1.814	2083712
162 MS M20	Brass	25	2.294	2083716
162 MS M25	Brass	25	3.388	2083720
162 MS M32	Brass	10	5.004	2083724
162 MS M40	Brass	10	14.881	2083728
162 MS M50	Brass	5	15.800	2083732
162 MS M63	Brass	5	21.600	2083736

Cable gland with hexagonal intermediate connector, shape C4, to DIN 46320 with metric connection thread to DIN EN 60423 and ISO 68. Pressure rings made of electrogalvanised and transparently passivated steel. NR/SBR sealing ring.  
Protection rating: with connection thread sealing ring IP 65, without connection thread sealing ring IP 54.  
With cutting ring.  
\* Prices according to DEL notation.

### Dimensions

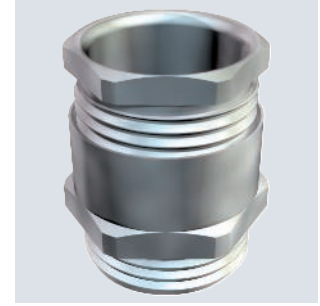


Type	Sealing range D mm	SW 1 mm	SW 2 mm	Dim. E mm	Dim. L mm	Dim. L1 mm	Dim. L2 mm	Dim. L3 mm
162 MS M12	5-7	14	13	15.5	15	7	16	2.5
162 MS M16	5-8	18	15	20.2	16	7	16	3
162 MS M20	7.5-13.5	22	20	24.4	18	7	18	3
162 MS M25	10-20.5	32	28	35.5	22	8	22	2.5
162 MS M32	18-29	40	37	43.5	24	8.5	24	3.5
162 MS M40	24-31	50	47	54	29	8.5	29	3.5
162 MS M50	30-42	57	54	61	33	9.5	33	4
162 MS M63	36-47	65	60	69	35	10	10	4

CuZn 37	N
IP 54	IP 65 Pg

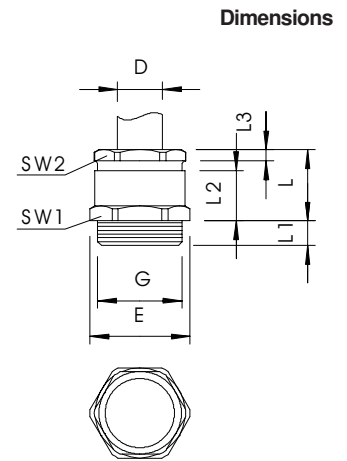
Cone cable gland, PG thread, cutting ring, nickel-plated

Type	Material	Pack Piece	Weight kg/100 pc.	Item no.
162 MS PG 7	Brass	50	1.000	2082620
162 MS PG 9	Brass	50	1.232	2082519
162 MS PG11	Brass	50	1.960	2082500
162 MS PG13.5	Brass	50	2.630	2082527
162 MS PG16	Brass	25	3.190	2082543
162 MS PG21	Brass	25	5.240	2082578
162 MS PG29	Brass	10	9.260	2082594
162 MS PG36	Brass	10	13.156	2082616
162 MS PG42	Brass	5	25.000	2082624
162 MS PG48	Brass	5	33.100	2082632



Cable gland with hexagonal intermediate connector, shape C4, to DIN 46320 with Pg connection thread to DIN 40430.  
 Pressure rings made of electrogalvanised and transparently passivated steel.  
 NR/SBR sealing ring.  
 Protection rating: with connection thread sealing ring IP 65, without connection thread sealing ring IP 54.  
 With cutting ring.  
 \* Prices according to DEL notation.

Type	Sealing range	Dim.				
		D	E	L	L1	L2
mm						
162 MS PG 7	3.5-8	15.5	15	5	9	2
162 MS PG 9	5-9.5	18.9	16	6	10.5	2.5
162 MS PG11	7.5-11.5	22.2	17	6	11	3
162 MS PG13.5	7.5-13.5	24.4	18	6.5	12.5	3
162 MS PG16	7.5-15.5	26.7	19	6.5	13.5	3
162 MS PG21	10-20.5	33.5	22	7	15	3.5
162 MS PG29	18-29	43.5	24	8	16.5	4
162 MS PG36	24-37	54	29	9	19.5	4.5
162 MS PG42	30-42	61	33	10	22	6
162 MS PG48	36-47	69	44	10	23	6



## Cone cable gland, PG thread, strain relief, nickel-plated

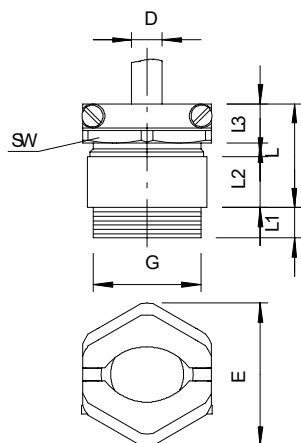
CuZn 37	N
IP 54	IP 65 Pg



Type	Material	Surface	Pack Piece	Weight kg/100 pc.	Item no.
159 MS PG 7	Brass	Nickel-plated	50	1.960	2046075
159 MS PG 9	Brass	Nickel-plated	50	2.460	2046091
159 MS PG11	Brass	Nickel-plated	50	3.993	2046113
159 MS PG13.5	Brass	Nickel-plated	50	3.830	2046121
159 MS PG16	Brass	Nickel-plated	25	5.700	2046164
159 MS PG21	Brass	Nickel-plated	25	7.590	2046210
159 MS PG29	Brass	Nickel-plated	10	14.970	2046296
159 MS PG36	Brass	Nickel-plated	5	22.030	2046369
159 MS PG42	Brass	Nickel-plated	5	41.070	2046423
159 MS PG48	Brass	Nickel-plated	4	46.250	2046482

Cable gland with centrally acting transverse clip strain relief in the pressure screw, bend protection of movable cables through strongly rounded pressure screw.  
 With Pg connection thread to DIN 40430.  
 Pressure rings made of electrogalvanised and transparently passivated steel.  
 NR/SBR sealing ring.  
 Protection rating: with connection thread sealing ring IP 65, without connection thread sealing ring IP 54.  
 With hexagonal intermediate support (similar to shape C 4 to DIN 46320).  
 \* Prices according to DEL notation.

### Dimensions



Type	Sealing range D mm	Dim. E	Dim. L	Dim. L1	Dim. L2	Dim. L3
		mm	mm	mm	mm	mm
159 MS PG 7	5-7	17.5	—	5	10	9.3
159 MS PG 9	6-8	20.5	—	6	10.5	10.6
159 MS PG11	8-10	24.5	—	6	11	11.3
159 MS PG13.5	8-10	27	—	6.5	12.5	11.3
159 MS PG16	8-10	29	—	6.5	13.5	11.8
159 MS PG21	17-19	37	—	7	15	13.3
159 MS PG29	24-26	46.5	34	8	16.5	13.8
159 MS PG36	31-33	57	—	9	19.5	15.8
159 MS PG42	37-39	65	—	10	22	16.3
159 MS PG48	43-45	70	—	10	23	16.3

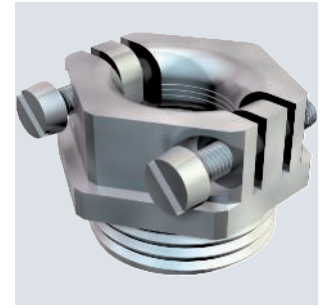


CuZn  
37 N

Pg

Pressure screw, PG strain relief

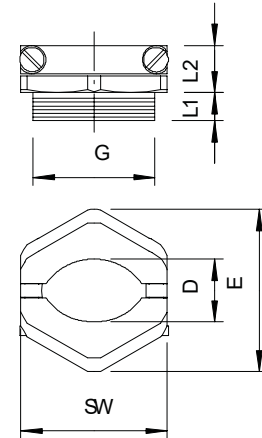
Type	Thread	Pack Piece	Weight kg/100 pc.	Item no.
157 MS PG 7	Pg 7	100	1.224	2013061
157 MS PG 9	Pg 9	100	1.500	2013096
157 MS PG11	Pg 11	100	2.100	2013118
157 MS PG13.5	Pg 13,5	100	2.200	2013134
157 MS PG16	Pg 16	50	3.400	2013169
157 MS PG21	Pg 21	50	4.500	2013215
157 MS PG29	Pg 29	25	9.156	2013290



Pressure screw with centrally acting transverse clip strain relief, rust-proof stainless steel screws.  
With bend protection and strain relief.  
\* Prices according to DEL notation.

Type	Dim. D mm	Dim. SW mm	Dim. E mm	Dim. L1 mm	Dim. L2 mm
157 MS PG 7	—	16	—	5.5	9.3
157 MS PG 9	—	19	—	6	10.6
157 MS PG11	—	22	—	6	11.3
157 MS PG13.5	—	24	—	6.5	11.3
157 MS PG16	—	26	—	6.5	11.8
157 MS PG21	—	33	—	7.5	13.3
157 MS PG29	—	42	—	8	13.8

Dimensions

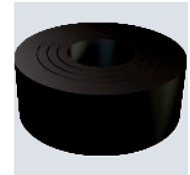
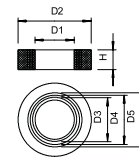


NBR  
SBR

Pg

Cutting ring

Type	Size mm	Dim. D1 mm	Dim. D2 mm	Dim. D3 mm	Dim. D4 mm	Dim. D5 mm	Dim. H mm	Pack Piece	Weight kg/100 pc.	Item no.
107 B PG9	Pg 9	5	13.3	7.5	10	0	5.5	100	0.090	2029103
107 B PG11	Pg 11	7.5	16.5	10	12.5	0	6	100	0.132	2029111
107 B PG13.5	Pg 13,5	7.5	18.3	10	12.5	0	6	100	0.172	2029138
107 B PG16	Pg 16	7.5	20.4	10	12.5	15	7	100	0.265	2029162
107 B PG21	Pg 21	10	25.9	13	16	19	8	100	0.490	2029219
107 B PG29	Pg 29	18	34.7	21	24	27	9.5	100	0.803	2029294
107 B PG36	Pg 36	24	44.7	27	30	33	12	50	1.733	2029367
107 B PG42	Pg 42	30	51.7	33	36	39	14	50	2.345	2029421
107 B PG48	Pg 48	36	56.9	39	42	45	14	50	2.615	2029480



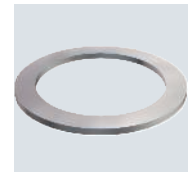
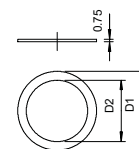
Rubber cutting ring (cuttable sealing ring) to DIN 46320 for cone cable gland.

St GTP

Pg

Pressure ring, PG thread

Type	Size mm	Dim. D1 mm	Dim. D2 mm	Pack Piece	Weight kg/100 pc.	Item no.
107 D PG7 GTP	Pg 7	11	8	100	0.025	2027070
107 D PG9 GTP	Pg 9	13.5	10	100	0.032	2027097
107 D PG11 GTP	Pg 11	16.5	12	100	0.052	2027119
107 D PG13.5 GTP	Pg 13,5	18.5	14	100	0.063	2027135
107 D PG16 GTP	Pg 16	20.5	16	100	0.076	2027151
107 D PG21 GTP	Pg 21	26	21	50	0.097	2027216

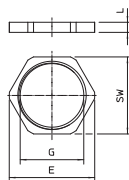


Pressure ring, Part 7, to DIN 46320, suitable for plastic and brass glands to DIN 46320.



## Locknut, metric thread

CuZn  
37 N  
M

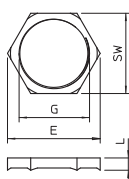
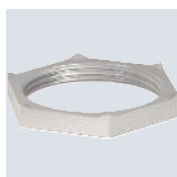


Type	Thread	SW mm	Dim. E mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
169 MS M12	M12x1,5	15	16,6	3	100	0,220	2091607
169 MS M16	M16x1,5	20	22,1	2,8	100	0,310	2091615
169 MS M20	M20x1,5	24	25,6	3	100	0,580	2091623
169 MS M25	M25x1,5	30	33,2	3,5	100	0,880	2091631
169 MS M32	M32x1,5	35	38,7	4	100	1,016	2091658
169 MS M40	M40x1,5	45	49,8	4,5	50	1,920	2091666
169 MS M50	M50x1,5	55	60,4	5,5	50	3,070	2091674
169 MS M63	M63x1,5	70	77,6	6	25	5,628	2091682
169 MS M75	M75x1,5	90	100	8	3	16,800	2091685

Locknut to DIN 46319 with metric thread IEC 423.  
\* Prices according to DEL notation.

## Locknut, metric thread with cutting teeth

CuZn  
37 N  
M

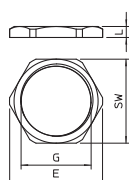
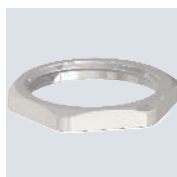


Type	Thread	SW mm	Dim. E mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
169 MSS M12	M12x1,5	15	17,3	4,5	50	0,355	2091705
169 MSS M16	M16x1,5	19	21,9	4,5	50	0,490	2091709
169 MSS M20	M20x1,5	24	27,7	4,5	50	0,760	2091713
169 MSS M25	M25x1,5	30	34,6	4,5	50	1,190	2091717
169 MSS M32	M32x1,5	36	41,5	4,5	50	1,230	2091721
169 MSS M40	M40x1,5	46	53,1	5	25	2,590	2091725
169 MSS M50	M50x1,5	60	69,2	5	25	5,070	2091729
169 MSS M63	M63x1,5	70	80,8	6	25	5,859	2091733

Locknuts DIN 46319 with metric thread IEC 423.  
\* Prices according to DEL notation.

## Locknut, PG thread

CuZn  
37 N  
Pg



Type	Thread	SW mm	Dim. E mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
169 MS PG 7	Pg 7	15	16,6	2,8	100	0,180	2091070
169 MS PG 9	Pg 9	18	20	2,8	100	0,260	2091097
169 MS PG11	Pg 11	21	23,5	3	100	0,290	2091119
169 MS PG13.5	Pg 13,5	23	25,5	3	100	0,364	2091135
169 MS PG16	Pg 16	26	29	3	100	0,460	2091151
169 MS PG21	Pg 21	32	35,5	3,5	100	0,720	2091216
169 MS PG29	Pg 29	41	45	4	100	1,320	2091291
169 MS PG36	Pg 36	51	56	5	50	2,100	2091364
169 MS PG42	Pg 42	60	65	5	50	3,266	2091429
169 MS PG48	Pg 48	64	69	5,5	25	3,270	2091488

Locknuts, part M to DIN 46320 with Pg thread to DIN 40430. \* Price according to DEL notation.

CuZn  
37

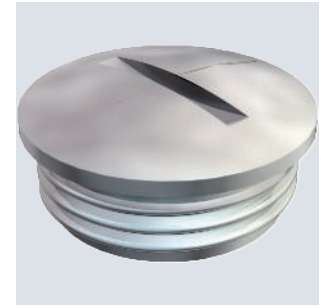
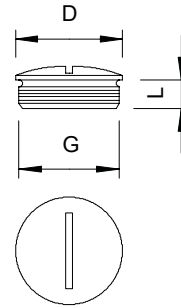
N

M

## Screw plug, metric thread

Type	Thread	Dim. D mm	Dim. L mm	Material	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
168 MS M12	M12x1,5	16	5	Brass	3000	100	0.390	2090511
168 MS M16	M16x1,5	20	6	Brass	2000	100	0.640	2090538
168 MS M20	M20x1,5	22	6,5	Brass	1000	100	0.930	2090546
168 MS M25	M25x1,5	28	7	Brass	500	50	1.850	2090554
168 MS M32	M32x1,5	35	8	Brass	200	50	2.810	2090562
168 MS M40	M40x1,5	45	8	Brass	100	50	5.290	2090570
168 MS M50	M50x1,5	55	9	Brass	100	25	6.310	2090589
168 MS M63	M63x1,5	68	10	Brass	50	25	12.570	2090597

Screw plug N in accordance with DIN 46320, with metric thread to DIN EN 60423 or ISO 68.  
In conjunction with sealing ring, types 107, 170 or 171, protection rating IP68 (5 bar/1 hr).  
Sealing ring not contained in the scope of delivery.  
\* Prices according to DEL notation.

CuZn  
37

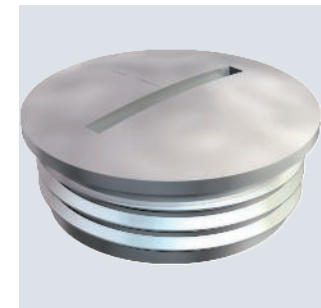
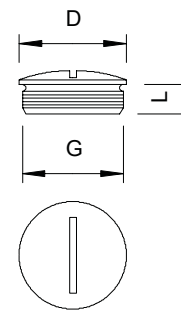
N

Pg

## Screw plug, PG thread

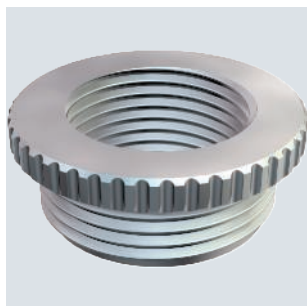
Type	Thread	Dim. D mm	Dim. L mm	Material	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
168 MS PG 7	Pg 7	14	5	Brass	3000	100	0.410	2090074
168 MS PG 9	Pg 9	17	6	Brass	2000	100	0.530	2090090
168 MS PG11	Pg 11	20	6	Brass	1000	100	0.840	2090112
168 MS PG13	Pg 13,5	22	6,5	Brass	1000	100	0.930	2090139
168 MS PG16	Pg 16	24	6,5	Brass	1000	100	1.300	2090163
168 MS PG21	Pg 21	30	7	Brass	500	50	2.420	2090201
168 MS PG29	Pg 29	39	8	Brass	200	50	4.310	2090295
168 MS PG36	Pg 36	50	9	Brass	100	50	7.800	2090368
168 MS PG42	Pg 42	57	10	Brass	100	25	11.710	2090422
168 MS PG48	Pg 48	64	10	Brass	50	25	15.260	2090481

Screw plug N in accordance with DIN 46320, with PG thread to DIN 40430.  
In conjunction with sealing ring, types 107, 170 or 171, protection rating IP68 (5 bar/1 hr).  
Sealing ring not contained in the scope of delivery.  
\* Prices according to DEL notation.



## Reduction, metric thread

CuZn  
37 N  
M

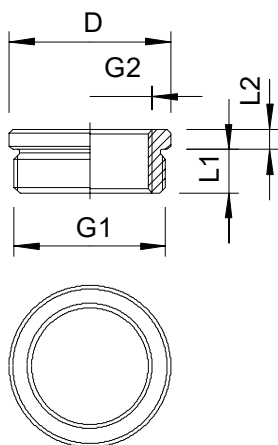


Type	External thread	Internal thread	Dim. D mm	Thread length mm	Dim. L2 mm	Dim. D mm	Pack Piece	Weight kg/100 pc.	Item no.
167 R MS M16-12	M16	M12	20	6	2.5	20	50	0.880	2089505
167 R MS M20-12	M20	M12	24	6.5	3.5	24	50	1.340	2089513
167 R MS M20-16	M20	M16	24	6.5	3.5	24	50	1.134	2089521
167 R MS M25-16	M25	M16	30	7	3	30	50	3.220	2089548
167 R MS M25-20	M25	M20	30	7	3	30	50	2.102	2089556
167 R MS M32-20	M32	M20	39	8	3.5	39	50	6.120	2089564
167 R MS M32-25	M32	M25	39	8	3.5	39	50	4.500	2089572
167 R MS M40-25	M40	M25	50	6	3.5	50	25	9.960	2089580
167 R MS M40-32	M40	M32	50	9	3.5	50	25	6.840	2089599
167 R MS M50-32	M50	M32	57	10	4	57	25	16.300	2089602
167 R MS M50-40	M50	M40	57	10	4	57	25	10.250	2089610
167 R MS M63-40	M63	M40	64	10	4	64	10	30.080	2089629
167 R MS M63-50	M63	M50	64	10	4	64	10	10.090	2089637

Reduction (Part H) in accordance with DIN 46320, with metric thread to DIN EN 60423 or ISO 68.

\* Prices according to DEL notation.

### Dimensions



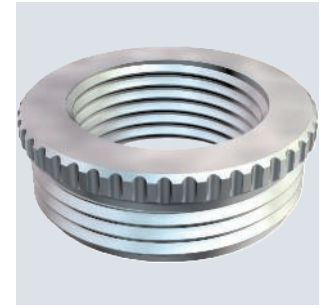
Type	Dim. L1 mm	Dim. L2 mm	Dim. D mm
167 R MS M16-12	6	2.5	20
167 R MS M20-12	6.5	3.5	24
167 R MS M20-16	6.5	3.5	24
167 R MS M25-16	7	3	30
167 R MS M25-20	7	3	30
167 R MS M32-20	8	3.5	39
167 R MS M32-25	8	3.5	39
167 R MS M40-25	9	3.5	50
167 R MS M40-32	9	3.5	50
167 R MS M50-32	10	4	57
167 R MS M50-40	10	4	57
167 R MS M63-40	10	4	64
167 R MS M63-50	10	4	64

CuZn  
37 N

Pg

Reduction, PG thread

Type	Thread length mm	Pack Piece	Weight kg/100 pc.	Item no.
167 R MS PG9-7	6	50	0.430	2089025
167 R MS PG11-7	6	50	1.030	2089041
167 R MS PG11-9	6	50	0.650	2089076
167 R MS PG13-7	6.5	50	1.520	2089092
167 R MS PG13-9	6.5	50	1.120	2089114
167 R MS PG13-11	6.5	50	0.470	2089130
167 R MS PG16-9	6.5	50	1.730	2089157
167 R MS PG16-11	6.5	50	1.050	2089173
167 R MS PG16-13	6.5	50	0.656	2089203
167 R MS PG21-11	7	50	2.960	2089238
167 R MS PG21-13	7	50	2.520	2089254
167 R MS PG21-16	7	50	1.964	2089270
167 R MS PG29-16	8	50	6.560	2089297
167 R MS PG29-21	8	50	4.273	2089319
167 R MS PG36-21	9	25	11.660	2089335
167 R MS PG36-29	9	25	6.980	2089351
167 R MS PG42-36	10	25	6.750	2089408
167 R MS PG48-36	10	25	12.840	2089424
167 R MS PG48-42	10	25	6.230	2089440

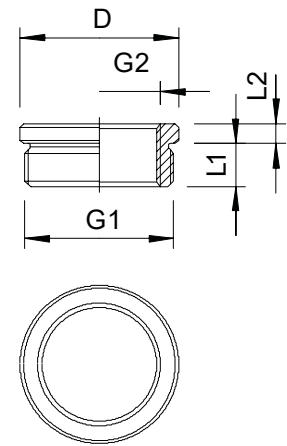


Reduction (Part H) to DIN 46320, with Pg thread to DIN 40430, as a transition from a PG thread hole to a smaller cable gland.

\* Prices according to DEL notation.

Type	External thread	Internal thread	Dim. L1 mm	Dim. L2 mm	Dim. D mm
167 R MS PG9-7	Pg 9	Pg 7	6	2.5	17
167 R MS PG11-7	Pg 11	Pg 7	6	2.5	20
167 R MS PG11-9	Pg 11	Pg 9	6	2.5	20
167 R MS PG13-7	Pg 13,5	Pg 7	6.5	2.5	22
167 R MS PG13-9	Pg 13,5	Pg 9	6.5	2.5	22
167 R MS PG13-11	Pg 13,5	Pg 11	6.5	2.5	22
167 R MS PG16-9	Pg 16	Pg 9	6.5	3	24
167 R MS PG16-11	Pg 16	Pg 11	6.5	3	24
167 R MS PG16-13	Pg 16	Pg 13,5	6.5	3	24
167 R MS PG21-11	Pg 21	Pg 11	7	3	30
167 R MS PG21-13	Pg 21	Pg 13,5	7	3	30
167 R MS PG21-16	Pg 21	Pg 16	7	3	30
167 R MS PG29-16	Pg 29	Pg 16	8	3.5	39
167 R MS PG29-21	Pg 29	Pg 21	8	3.5	39
167 R MS PG36-21	Pg 36	Pg 21	9	3.5	50
167 R MS PG36-29	Pg 36	Pg 29	9	3.5	50
167 R MS PG42-36	Pg 42	Pg 36	10	4	57
167 R MS PG48-36	Pg 48	Pg 36	10	4	64
167 R MS PG48-42	Pg 48	Pg 42	10	4	64

Dimensions



## Expansion piece, metric thread

CuZn  
37 N  
M

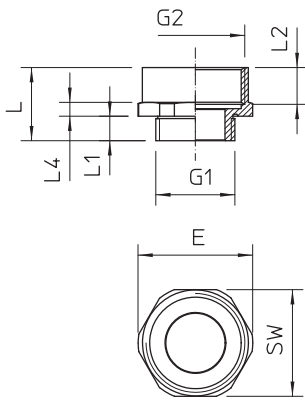


Type	External thread	Internal thread	Pack Piece	Weight kg/100 pc.	Item no.
165 ADA M12-16	M12	M16	50	1.030	2088280
165 ADA M16-20	M16	M20	50	1.430	2088281
165 ADA M20-25	M20	M25	50	2.090	2088282
165 ADA M25-32	M25	M32	50	2.710	2088283
165 ADA M32-40	M32	M40	25	5.180	2088284
165 ADA M40-50	M40	M50	10	10.150	2088285
165 ADA M 50-63	M50	M63	5	13.060	2088286

The areas of application for brass cable glands range from junction boxes as a distribution/-connection box up to large industrial applications for safe floor routing to switchgear cabinets with a control and distribution function. For high mechanical requirements, OBO can offer the entire family of extensions (Part K) to DIN 46320.

\* Prices according to DEL notation.

### Dimensions



Type	Dim.					
	SW	E	L	L1	L2	D
	mm	mm	mm	mm	mm	mm
165 ADA M12-16	18	20	16	5	7	8
165 ADA M16-20	22	24.5	16.7	5	8	12
165 ADA M20-25	27	29	18.5	6.4	9	15
165 ADA M25-32	34	35.8	20.7	7.4	8	20.8
165 ADA M32-40	42	45.5	23.8	8	10	26
165 ADA M40-50	52	58	30.5	8.2	12.5	33.8
165 ADA M 50-63	65	69.9	33	9.2	16	43.4



### Adapter expansion M - PG

CuZn 37	N
M	Pg

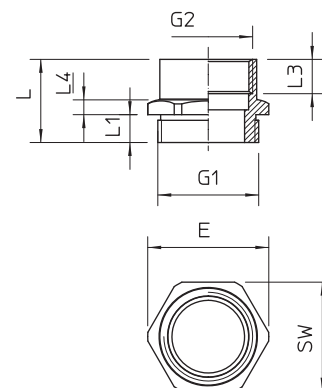
Type	External thread	Internal thread	Pack Piece	Weight kg/100 pc.	Item no.
165 ADA M12-PG7	M12	PG7	20	0.590	2088301
165 ADA M16-PG9	M16	PG9	20	9.110	2088312
165 ADA M16-PG11	M16	PG11	20	2.220	2088302
165 ADA M20-PG11	M20	PG11	20	1.760	2088316
165 ADA M20-PG13	M20	PG13,5	20	1.320	2088303
165 ADA M20-PG16	M20	PG16	20	1.650	2088318
165 ADA M25-PG16	M25	PG16	20	2.540	2088304
165 ADA M25-PG21	M25	PG21	20	2.330	2088324
165 ADA M32-PG29	M32	PG29	10	4.850	2088330
165 ADA M40-PG29	M40	PG29	10	7.150	2088306
165 ADA M50-PG42	M50	PG42	10	10.110	2088307
165 ADA M63-PG48	M63	PG48	4	20.750	2088348



Adapter for converting a metric threaded drill hole to a Pg threaded drill hole.

Type	External thread	Internal thread	SW mm	Dim. E mm	Dim. L mm	Dim. L1 mm	Dim. L3 mm	Dim. D mm
165 ADA M12-PG7	M12	PG7	14	15.5	16	6	9	8
165 ADA M16-PG9	M16	PG9	17	19	16.5	5	7	12
165 ADA M16-PG11	M16	PG11	22	24.5	16	6	7.9	12.5
165 ADA M20-PG11	M20	PG11	22	24.5	17.6	6.5	10.2	15
165 ADA M20-PG13	M20	PG13,5	22	24.5	19	6.5	11.5	16
165 ADA M20-PG16	M20	PG16	—	23.9	19.6	6	9	11.5
165 ADA M25-PG16	M25	PG16	27	30	20.5	7	12.5	18.3
165 ADA M25-PG21	M25	PG21	30	33.5	22.2	7	13.5	20.5
165 ADA M32-PG29	M32	PG29	40	44	24.4	8	15	27.5
165 ADA M40-PG29	M40	PG29	43	46.2	24.4	8	15	31.8
165 ADA M50-PG42	M50	PG42	57	60.8	31	9	20	44
165 ADA M63-PG48	M63	PG48	65	69.8	33	10	21	52.2

#### Dimensions



CuZn 37	N
M	Pg

### Adapter expansion PG - M

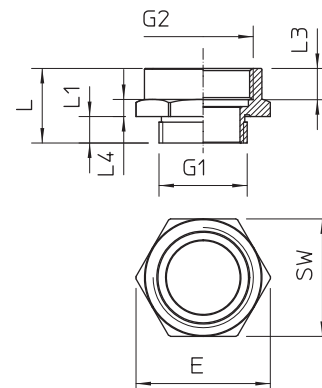
Type	External thread	Internal thread	Pack Piece	Weight kg/100 pc.	Item no.
165 ADA PG9-M16	PG9	M16	20	1.160	2088291
165 ADA PG11-M16	PG11	M16	20	2.237	2088292
165 ADA PG13-M20	PG13,5	M20	20	2.040	2088293
165 ADA PG16-M20	PG16	M20	20	3.080	2088294
165 ADA PG16-M25	PG16	M25	20	3.320	2088295
165 ADA PG21-M25	PG21	M25	10	4.490	2088296
165 ADA PG21-M32	PG21	M32	10	4.310	2088297
165 ADA PG29-M40	PG29	M40	10	4.830	2088298
165 ADA PG36-M50	PG36	M50	5	9.250	2088299



Adapter for converting a Pg threaded drill hole to a larger metric threaded drill hole.

Type	External thread	Internal thread	SW mm	Dim. E mm	Dim. L mm	Dim. L1 mm	Dim. L3 mm	Dim. D mm
165 ADA PG9-M16	PG9	M16	19	21	16	6	7.5	12.5
165 ADA PG11-M16	PG11	M16	22	24.5	16	6	7.5	13
165 ADA PG13-M20	PG13,5	M20	24	26	17.5	6.5	8.5	16
165 ADA PG16-M20	PG16	M20	27	29	17.5	6.5	8.5	18.5
165 ADA PG16-M25	PG16	M25	30	33.5	18.5	6.6	9.5	18.5
165 ADA PG21-M25	PG21	M25	32	33.5	19	7	9.5	23
165 ADA PG21-M32	PG21	M32	36	39	20	7	10.5	23
165 ADA PG29-M40	PG29	M40	43	46	21	8	10.5	32
165 ADA PG36-M50	PG36	M50	55	60	23	9	11	42

#### Dimensions



## Adapter reduction M - PG

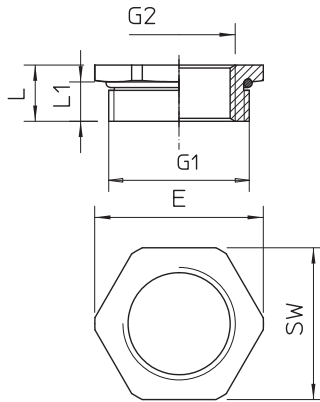
CuZn  
37 N  
M Pg



Type	External thread	Internal thread	Pack Piece	Weight kg/100 pc.	Item no.
165 ADA M16-PG7	M16	PG7	20	5.130	2088310
165 ADA M20-PG9	M20	PG9	20	1.100	2088314
165 ADA M25-PG11	M25	PG11	20	1.940	2088320
165 ADA M25-PG13	M25	PG13,5	20	1.610	2088322
165 ADA M32-PG16	M32	PG16	10	3.790	2088328
165 ADA M32-PG21	M32	PG21	10	1.730	2088305
165 ADA M40-PG21	M40	PG21	10	6.980	2088334
165 ADA M50-PG29	M50	PG29	5	11.220	2088340
165 ADA M63-PG36	M63	PG36	5	16.950	2088344
165 ADA M63-PG42	M63	PG42	5	10.460	2088346

Adapter for reducing a metric threaded drill hole to a smaller Pg threaded drill hole.

### Dimensions



Type	External thread	Internal thread	Dim. SW mm	Dim. E mm	Dim. L mm	Dim. L1 mm
165 ADA M16-PG7	M16	PG7	17	19	8	5
165 ADA M20-PG9	M20	PG9	22	24.5	9	6
165 ADA M25-PG11	M25	PG11	27	30	10	7
165 ADA M25-PG13	M25	PG13,5	27	30	10	7
165 ADA M32-PG16	M32	PG16	34	36	11	8
165 ADA M32-PG21	M32	PG21	34	36	11	8
165 ADA M40-PG21	M40	PG21	43	46	12	8
165 ADA M50-PG29	M50	PG29	55	60	13	9
165 ADA M63-PG36	M63	PG36	65	69	14.2	10
165 ADA M63-PG42	M63	PG42	65	70	14.2	10

## Adapter reduction PG - M

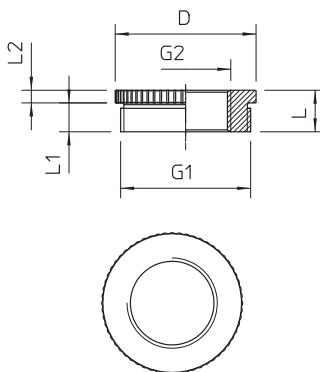
CuZn  
37 N  
M Pg



Type	External thread	Internal thread	Pack Piece	Weight kg/100 pc.	Item no.
165 ADA PG29-M25	PG29	M25	20	5.730	2088289

Adapter for converting a Pg threaded drill hole to a metric threaded drill hole.

### Dimensions



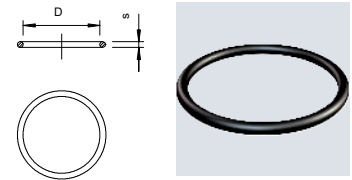
Type	External thread	Internal thread	Dim. D mm	Dim. L mm	Dim. L1 mm
165 ADA PG29-M25	PG29	M25	39	11.5	8

NBR

Pg

## O sealing ring for PG connection thread

Type	Size mm	Dim.		Pack Piece	Weight kg/100 pc.	Item no.
		D mm	S mm			
171 PG 9	Pg 9	13	1.5	100	0.008	2088819
171 PG11	Pg 11	16	1.5	100	0.010	2088827
171 PG13.5	Pg 13,5	18	1.5	100	0.011	2088835
171 PG16	Pg 16	20	1.5	100	0.012	2088843
171 PG21	Pg 21	25	2	100	0.027	2088851
171 PG29	Pg 29	33	2	100	0.035	2088878
171 PG36	Pg 36	43	2	50	0.045	2088886
171 PG42	Pg 42	50	2	50	0.052	2088894



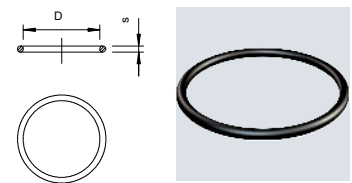
O sealing rings, suitable as connection thread sealing rings for all plastic and brass cable glands with Pg connection thread to DIN EN 60423 or ISO 68. The rings can be captively pre-mounted.

NBR

M

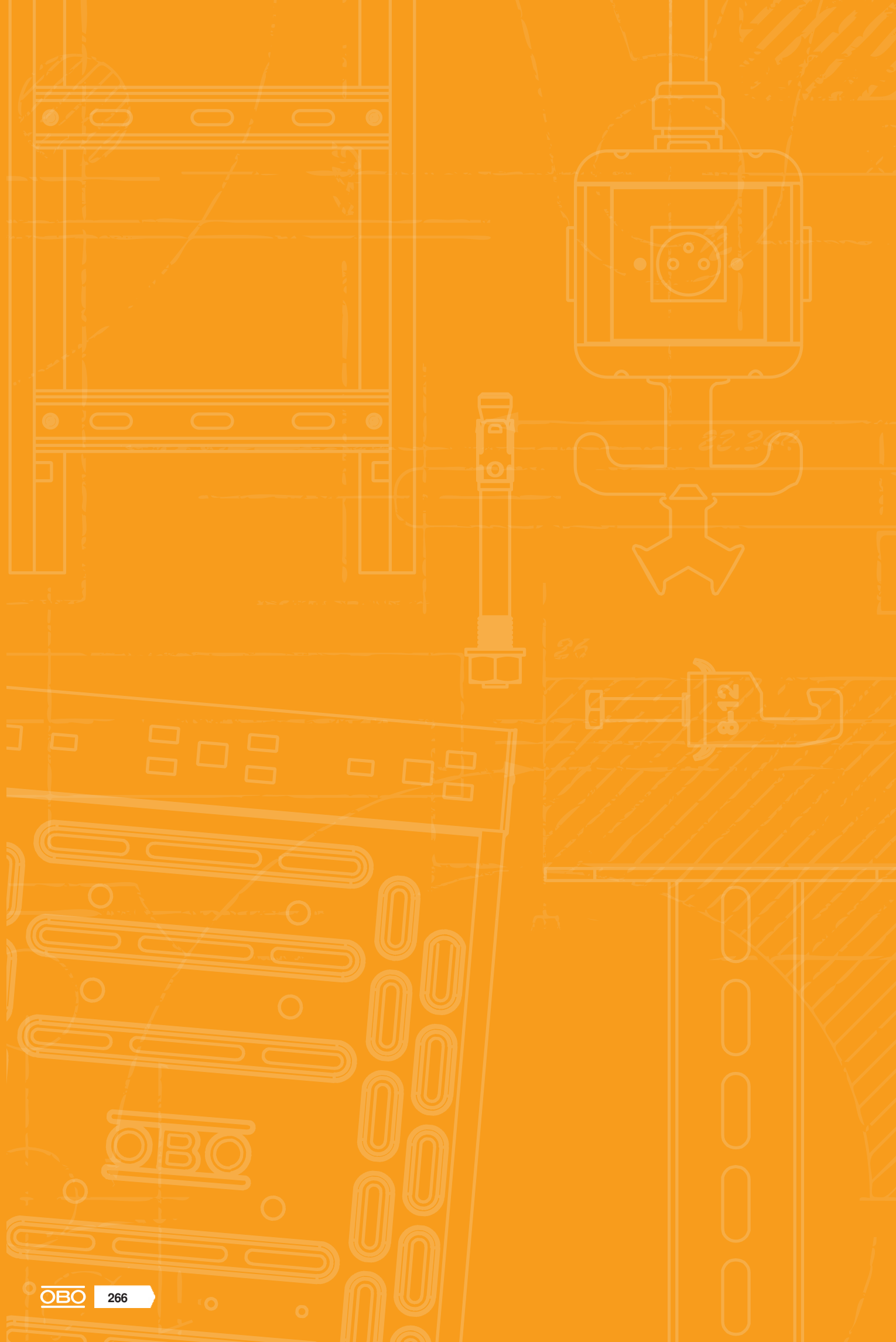
## O sealing ring for metric connection thread

Type	Size mm	Dim.		Pack Piece	Weight kg/100 pc.	Item no.
		D mm	S mm			
171 M12	M12	10	1.5	100	0.007	2088703
171 M16	M16	13	1.5	100	0.008	2088711
171 M20	M20	18	1.5	100	0.011	2088738
171 M25	M25	22	1.5	100	0.012	2088746
171 M32	M32	29	2	100	0.035	2088754
171 M40	M40	36	2	50	0.045	2088762
171 M50	M50	46	2	50	0.052	2088770
171 M63	M63	59	2	25	0.056	2088789



O sealing rings, suitable as connection thread sealing rings for all plastic and brass cable glands with metric connection thread to DIN EN 60423 or ISO 68. The rings can be captively pre-mounted.





# Pipe systems



Pipe systems, metal

268



Pipe systems, plastic

282



Plastic end caps

288





## Metal pipe systems

### Protection against mechanical loads

OBO metal pipes are particularly suited to use under tough industrial conditions. They provide reliable protection against very heavy mechanical loads during cable routing.

The different material and surface qualities, from galvanised to painted, allow perfect adaptation to the requirements of the appropriate environment.

### Maintenance of electrical function to E30/E90

Our steel pipes guarantee the maintenance of electrical function to E30/E90. They are thus ideal for the connection of safety-relevant equipment, such as smoke extraction systems.





Electrogalvanised steel pipe, with thread

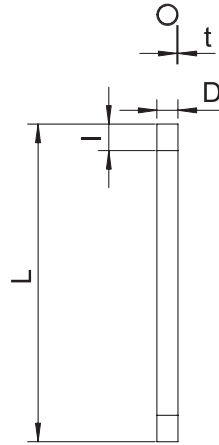


Type	Thread	Dim. D mm	Dim. L mm	Dim. I mm	Dim. t mm	Pack m	Weight kg/100 m	Item no.
SM16W G	M16x1,5	16	3000	13	1.3	30	50.390	2046861
SM20W G	M20x1,5	20	3000	13	1.5	30	66.667	2046862
SM25W G	M25x1,5	25	3000	18	1.5	30	92.290	2046863
SM32W G	M32x1,5	32	3000	18	1.5	21	120.000	2046864
SM40W G	M40x1,5	40	3000	20,5	1.5	15	151.450	2046865
SM50W G	M50x1,5	50	3000	25	1.5	15	190.000	2046866
SM63W G	M63x1,5	63	3000	25	1.7	9	287.700	2046867



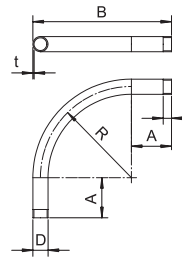
5 | 5 | 5 | 7 | 1

Electrical installation pipe according to EN 61386-1 with threaded ends to EN 60423 for mechanical protection of cables. With burr-free inner wall. One coupling is already screwed onto each pipe.



Electrogalvanised steel bend, with thread

Type	Thread	Dim. A mm	Dim. B mm	Dim. D mm	Dim. I mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SBNM16 G	M16x1,5	45	103	16	13	50	1.4	15	10.400	2046778
SBNM20 G	M20x1,5	55	155	20	13	90	1.6	25	21.000	2046779
SBNM25 G	M25x1,5	68	190	25	18	110	1.6	25	33.000	2046780
SBNM32 G	M32x1,5	88	254	32	18	150	1.6	20	56.600	2046781
SBNM40 G	M40x1,5	89	279	40	20,5	170	1.6	15	77.600	2046782
SBNM50 G	M50x1,5	133	358	50	25	200	1.6	5	125.800	2046783
SBNM63 G	M63x1,5	165	446	63	25	250	1.8	3	227.000	2046784

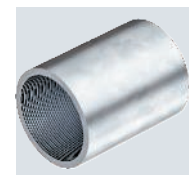
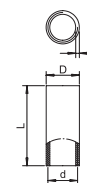


90° bend for electrical installation pipes according to EN 61386-1 with threaded ends to DIN EN 60423. With burr-free inner wall. One connection sleeve is already screwed onto each pipe bend.



Electrogalvanised steel sleeve, with thread

Type	Thread	Dim. D mm	Dim. d mm	Dim. L mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SVM16W G	M16x1,5	18,5	16	26	2	25	2.110	2046875
SVM20W G	M20x1,5	22,5	20	30	2	50	3.000	2046876
SVM25W G	M25x1,5	27,5	25	40	2	50	5.030	2046877
SVM32W G	M32x1,5	35,5	32	40	2,5	50	8.800	2046878
SVM40W G	M40x1,5	43,5	40	45	2,5	25	11.370	2046879
SVM50W G	M50x1,5	53,5	50	54	2,5	10	16.970	2046880
SVM63W G	M63x1,5	68	63	60	3,2	5	30.670	2046881



Accessory part: coupling with thread according to EN 60423 to connect electrical installation pipes and 90° bends.

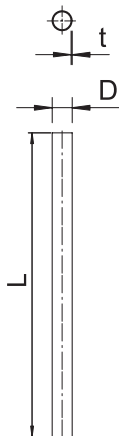
## Armoured steel pipe without thread, electrogalvanised



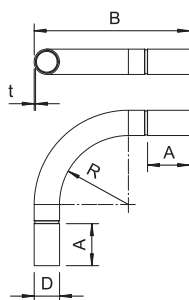
4 | 4 | 5 | 7 | 1

Electrical installation pipe without threaded ends according to EN 61386-1 for mechanical protection of cables. With burr-free inner wall.

Type	Dim. D mm	Dim. L mm	Dim. t mm	Pack m	Weight kg/100 m	Item no.
S16W G	16	3000	1	30	37.000	2046840
S20W G	20	3000	1	30	44.700	2046841
S25W G	25	3000	1.2	30	70.400	2046842
S32W G	32	3000	1.2	21	91.200	2046843
S40W G	40	3000	1.2	15	139.700	2046844
S50W G	50	3000	1.2	15	176.000	2046845
S63W G	63	3000	1.2	9	223.000	2046846



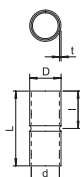
## Electrogalvanised steel bend, without thread



Type	Dim. A mm	Dim. B mm	Dim. D mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SBN16 G	43.7	103	18.6	50	1	15	7.200	2046808
SBN20 G	53.7	155	22.6	90	1	25	13.300	2046809
SBN25 G	66.5	190	28	110	1.2	25	24.400	2046810
SBN32 G	86.5	254	35.1	150	1.2	20	41.000	2046811
SBN40 G	87.2	279	43.7	170	1.5	15	70.200	2046812
SBN50 G	131	358	54	200	1.5	5	111.800	2046813
SBN63 G	163	446	67	250	1.5	3	174.200	2046814

90° bend with moulded sleeves, for electrical installation pipes according to EN 61386-1. With burr-free inner wall.

## Armoured steel pipe connection sleeve without thread, electrogalvanised



Type	Dim. D mm	Dim. d mm	Dim. L mm	Dim. l mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SV16W G	18.6	16.6	50	25	1	25	2.100	2046854
SV20W G	23.1	20.7	60	30	1.2	50	2.800	2046855
SV25W G	28.1	25.7	60	30	1.2	50	4.800	2046856
SV32W G	35.2	32.8	70	35	1.2	50	7.200	2046857
SV40W G	43.8	43.8	80	40	1.5	25	13.200	2046858
SV50W G	54	51	100	50	1.5	10	20.000	2046859
SV63W G	67	64	100	50	1.5	5	28.000	2046860

Accessory part: plug-in sleeve for the connections between electrical installation pipes. With burr-free inner wall.

Armoured steel pipe with thread, black

St

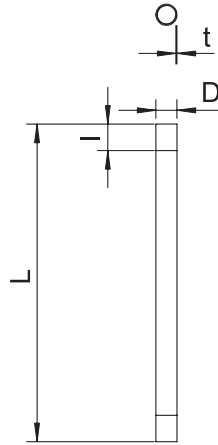
M E30 E90 

Type	Thread	Dim. D mm	Dim. L mm	Dim. l mm	Dim. t mm	Colour	Pack m	Weight kg/100 m	Item no.
SM16W SW	M16x1,5	16	3000	13	1.3	Jet black	30	50.000	2046500
SM20W SW	M20x1,5	20	3000	13	1.5	Jet black	30	73.000	2046501
SM25W SW	M25x1,5	25	3000	18	1.5	Jet black	30	92.000	2046502
SM32W SW	M32x1,5	32	3000	18	1.5	Jet black	21	120.000	2046503
SM40W SW	M40x1,5	40	3000	20,5	1.5	Jet black	15	152.000	2046505
SM50W SW	M50x1,5	50	3000	25	1.5	Jet black	15	190.700	2046506
SM63W SW	M63x1,5	63	3000	25	1.7	Jet black	9	287.700	2046507



5 | 5 | 5 | 6 | 1

Electrical installation pipe according to EN 61386-1 with threaded ends to EN 60423 for mechanical protection of cables. With burr-free inner wall. One coupling is already screwed onto each pipe.

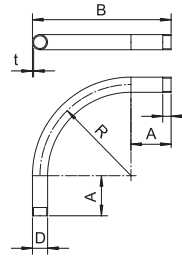


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M E30 E90 

Black powder-coated steel bend, with thread

Type	Thread	Dim. A mm	Dim. B mm	Dim. D mm	Dim. l mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SBNM16 SW	M16x1,5	45	103	16	13	50	1.4	15	10.400	2046793
SBNM20 SW	M20x1,5	55	155	20	13	90	1.6	25	21.000	2046794
SBNM25 SW	M25x1,5	68	190	25	18	110	1.6	25	33.000	2046795
SBNM32 SW	M32x1,5	88	254	32	18	150	1.6	20	56.600	2046796
SBNM40 SW	M40x1,5	89	279	40	20,5	170	1.6	15	77.600	2046797
SBNM50 SW	M50x1,5	133	358	50	25	200	1.6	5	125.800	2046798
SBNM63 SW	M63x1,5	165	446	63	25	250	1.8	3	227.000	2046799



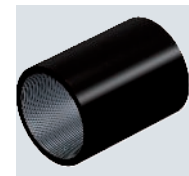
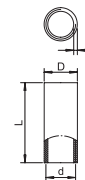
90° bend for electrical installation pipes according to EN 61386-1 with threaded ends to DIN EN 60423. With burr-free inner wall. One connection sleeve is already screwed onto each pipe bend.

St

M E30 E90 

Black powder-coated steel sleeve, with thread

Type	Thread	Dim. D mm	Dim. d mm	Dim. L mm	Dim. t mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
SVM16W SW	M16x1,5	18,5	16	26	2	Jet black	25	2.100	2046522
SVM20W SW	M20x1,5	22,5	20	30	2	Jet black	50	3.400	2046523
SVM25W SW	M25x1,5	27,5	25	40	2	Jet black	50	5.000	2046524
SVM32W SW	M32x1,5	35,5	32	40	2,5	Jet black	50	8.800	2046525
SVM40W SW	M40x1,5	43,5	40	45	2,5	Jet black	25	11.400	2046526
SVM50W SW	M50x1,5	53,5	50	54	2,5	Jet black	10	17.000	2046527
SVM63W SW	M63x1,5	68	63	60	3,2	Jet black	5	30.700	2046528



Accessory part: coupling with thread according to EN 60423 to connect electrical installation pipes and 90° bends.

Armoured steel pipe without thread, black

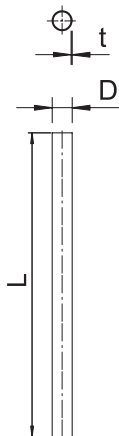
St  
E30 E90



4 | 4 | 5 | 6 | 1

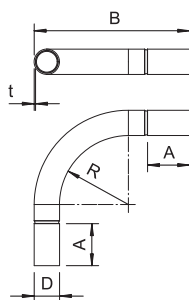
Electrical installation pipe without threaded ends according to EN 61386-1 for mechanical protection of cables. With burr-free inner wall.

Type	Dim. D mm	Dim. L mm	Dim. t mm	Colour	Pack m	Weight kg/100 m	Item no.
S16W SW	16	3000	1	Jet black	30	37.000	2046565
S20W SW	20	3000	1	Jet black	30	44.700	2046566
S25W SW	25	3000	1.2	Jet black	30	70.400	2046567
S32W SW	32	3000	1.2	Jet black	21	91.200	2046568
S40W SW	40	3000	1.2	Jet black	15	139.700	2046569
S50W SW	50	3000	1.2	Jet black	15	176.000	2046570
S63W SW	63	3000	1.2	Jet black	9	223.000	2046571



Black powder-coated steel bend, without thread

St  
E30 E90

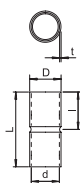
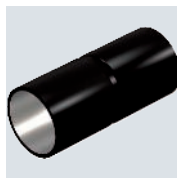


Type	Colour	Dim. A mm	Dim. B mm	Dim. D mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SBN16 SW	Jet black	43.7	103	16.6	50	1	15	7.200	2046824
SBN20 SW	Jet black	53.7	155	20.6	90	1	25	13.300	2046825
SBN25 SW	Jet black	66.5	190	25.6	110	1.2	25	24.400	2046826
SBN32 SW	Jet black	86.5	254	32.7	150	1.2	20	41.000	2046827
SBN40 SW	Jet black	87.2	279	40.7	170	1.5	15	68.900	2046828
SBN50 SW	Jet black	131	358	51	200	1.5	5	111.800	2046829
SBN63 SW	Jet black	163	446	64	250	1.5	3	174.200	2046830

90° bend with moulded sleeves, for electrical installation pipes according to EN 61386-1. With burr-free inner wall.

Armoured steel pipe connection sleeve without thread, black

St  
E30 E90



Type	Dim. D mm	Dim. d mm	Dim. L mm	Dim. l mm	Dim. t mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
SV16W SW	18.6	16.6	50	25	1	Jet black	25	2.400	2046582
SV20W SW	23.1	20.7	60	30	1.2	Jet black	50	3.200	2046583
SV25W SW	28.1	25.7	60	30	1.2	Jet black	50	5.500	2046584
SV32W SW	35.2	32.8	70	35	1.2	Jet black	50	7.900	2046585
SV40W SW	43.8	40.8	80	40	1.5	Jet black	25	13.200	2046586
SV50W SW	54	51	100	50	1.5	Jet black	10	20.000	2046587
SV63W SW	67	64	100	50	1.5	Jet black	5	28.000	2046588

Accessory part: plug-in sleeve for the connections between electrical installation pipes. With burr-free inner wall.

Hot-dip galvanised steel pipe, with thread

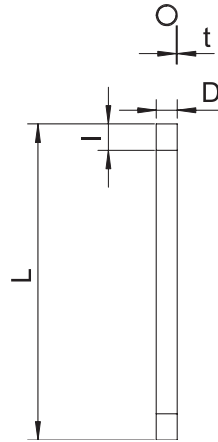


Type	Thread	Dim. D mm	Dim. L mm	Dim. I mm	Dim. t mm	Pack m	Weight kg/100 m	Item no.
SM16W FT	M16x1,5	16	3000	13	1.3	30	54.000	2046533
SM20W FT	M20x1,5	20	3000	13	1.5	30	79.000	2046534
SM25W FT	M25x1,5	25	3000	18	1.5	30	99.000	2046535
SM32W FT	M32x1,5	32	3000	18	1.5	21	130.000	2046536
SM40W FT	M40x1,5	40	3000	20.5	1.5	15	164.000	2046537
SM50W FT	M50x1,5	50	3000	25	1.5	15	206.000	2046538
SM63W FT	M63x1,5	63	3000	26	1.8	9	324.700	2046540



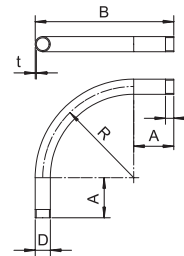
5 | 5 | 5 | 7 | 1

Electrical installation pipe according to EN 61386-1 with threaded ends to EN 60423 for mechanical protection of cables. With burr-free inner wall. Corrosion protection class 4 (high). One coupling is already screwed onto each pipe.



Hot-dip galvanised steel bend, with thread

Type	Thread	Dim. A mm	Dim. B mm	Dim. D mm	Dim. I mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SBNM16 FT	M16x1,5	45	103	16	13	50	1.4	15	10.400	2046786
SBNM20 FT	M20x1,5	55	155	20	13	90	1.6	25	21.000	2046787
SBNM25 FT	M25x1,5	68	190	25	18	110	1.6	25	33.000	2046788
SBNM32 FT	M32x1,5	88	254	32	18	150	1.6	20	56.600	2046789
SBNM40 FT	M40x1,5	89	279	40	20.5	170	1.6	15	77.600	2046790
SBNM50 FT	M50x1,5	133	358	50	25	200	1.6	5	125.800	2046791
SBNM63 FT	M63x1,5	165	446	63	25	250	1.8	3	227.000	2046792

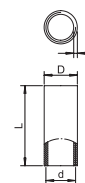


90° bend for electrical installation pipes according to EN 61386-1 with threaded ends to DIN EN 60423. With burr-free inner wall. One connection sleeve is already screwed onto each pipe bend.



Zinc-nickel coated steel sleeve, with thread

Type	Thread	Dim. D mm	Dim. d mm	Dim. L mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SVM16W DN	M16x1,5	18.5	16	26	2	25	2.100	2046553
SVM20W DN	M20x1,5	22.5	20	30	2	50	3.000	2046554
SVM25W DN	M25x1,5	27.5	25	40	2	50	3.986	2046556
SVM32W DN	M32x1,5	35.5	32	40	2.5	50	8.800	2046557
SVM40W DN	M40x1,5	43.5	40	45	2.5	25	11.400	2046558
SVM50W DN	M50x1,5	53.5	50	54	2.5	10	17.000	2046559
SVM63W DN	M63x1,5	68	63	60	3.2	5	30.700	2046560



Accessory part: coupling with thread according to EN 60423 to connect electrical installation pipes and 90° bends.

## Hot-dip galvanised steel pipe, without thread

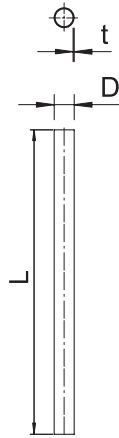
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E30 E90



4 | 4 | 5 | 7 | 1

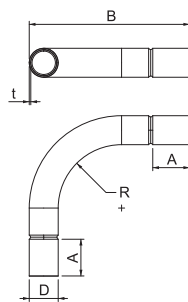
Electrical installation pipe without threaded ends according to EN 61386-1 for mechanical protection of cables. With burr-free inner wall. Corrosion protection class 4 (high).

Type	Dim. D mm	Dim. L mm	Dim. t mm	Pack m	Weight kg/100 m	Item no.
S16W FT	16	3000	1	30	37.000	2046593
S20W FT	20	3000	1	30	44.700	2046594
S25W FT	25	3000	1.2	30	70.400	2046595
S32W FT	32	3000	1.2	21	91.200	2046596
S40W FT	40	3000	1.2	15	139.700	2046597
S50W FT	50	3000	1.2	15	176.000	2046598
S63W FT	63	3000	1.2	9	223.000	2046599



## Hot-dip galvanised steel bend, without thread

St FT  
E30 E90

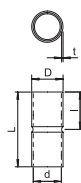


Type	Dim. A mm	Dim. B mm	Dim. D mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SBN16 FT	43.7	103	16.6	50	1	15	7.200	2046816
SBN20 FT	53.7	155	20.6	90	1	25	13.300	2046817
SBN25 FT	66.5	190	25.6	110	1.2	25	24.400	2046818
SBN32 FT	86.5	254	32.7	150	1.2	20	41.000	2046819
SBN40 FT	87.2	279	40.7	170	1.5	15	68.900	2046820
SBN50 FT	131	358	51	200	1.5	5	111.800	2046821
SBN63 FT	163	446	64	250	1.5	3	174.200	2046822

90° bend with moulded sleeves, for electrical installation pipes according to EN 61386-1. With burr-free inner wall.

## Hot-dip galvanised steel sleeve, without thread

St FT  
E30 E90



Type	Dim. D mm	Dim. d mm	Dim. L mm	Dim. l mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SV16W FT	18.6	16.6	50	25	1	25	2.200	2046620
SV20W FT	23.1	20.7	60	30	1.2	50	3.200	2046621
SV25W FT	28.1	25.7	60	30	1.2	50	5.100	2046622
SV32W FT	35.2	32.8	70	35	1.2	50	7.500	2046623
SV40W FT	43.8	40.8	80	40	1.5	25	14.400	2046624
SV50W FT	54	51	100	50	1.5	10	22.000	2046625
SV63W FT	67	63	100	50	1.5	5	22.000	2046626

Accessory part: plug-in sleeve for the connections between electrical installation pipes. With burr-free inner wall.



Stainless steel pipe, V2A

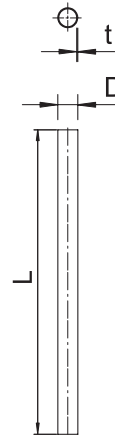
VA	2B
E30	E90

Type	Dim. D mm	Dim. L mm	Dim. t mm	Pack m	Weight kg/100 m	Item no.
S16W A2	16	3000	1	30	37.000	2046720
S20W A2	20	3000	1	30	46.900	2046721
S25W A2	25	3000	1	30	59.200	2046722
S32W A2	32	3000	1.2	21	91.200	2046723
S40W A2	40	3000	1.2	15	114.800	2046724
S50W A2	50	3000	1.5	15	179.400	2046725
S63W A2	63	3000	1.5	9	227.500	2046726



5 | 5 | 5 | 7 | 1

Electrical installation pipe without threaded ends to EN 61386-1 for mechanical protection of cables. With burr-free inner wall. Corrosion protection class 4 (high). Classification according to DIN EN 61386-1: 555711404010



VA	2B
E30	E90

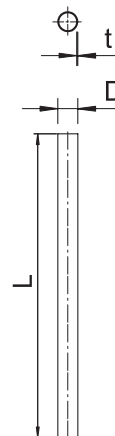
Type	Dim. D mm	Dim. L mm	Dim. t mm	Pack m	Weight kg/100 m	Item no.
S16W A4	16	3000	1	15	37.000	2046750
S20W A4	20	3000	1	15	46.900	2046751
S25W A4	25	3000	1	15	59.200	2046752
S32W A4	32	3000	1.2	15	91.200	2046753
S40W A4	40	3000	1.2	9	114.800	2046754
S50W A4	50	3000	1.5	9	179.400	2046755
S63W A4	63	3000	1.5	9	227.500	2046756

Stainless steel pipe, V4A



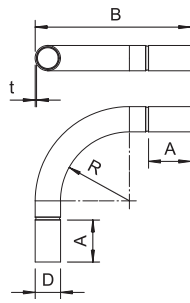
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Electrical installation pipe without threaded ends to EN 61386-1 for mechanical protection of cables. With burr-free inner wall. Corrosion protection class 4 (high).



## Stainless steel pipe bend, V4A

VA 2B  
E30 E90

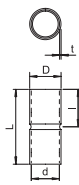
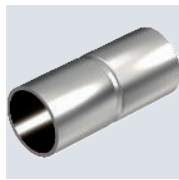


Type	Dim. A mm	Dim. B mm	Dim. D mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
<b>SB16W A4</b>	54	104	18.2	50	1	5	7.200	<b>2046760</b>
<b>SB20W A4</b>	66	156	22.2	90	1	10	13.300	<b>2046761</b>
<b>SB25W A4</b>	81.5	194	27.2	112.5	1	10	20.400	<b>2046762</b>
<b>SB32W A4</b>	104	250	34.7	146	1.25	10	42.000	<b>2046763</b>
<b>SB40W A4</b>	129	294	42.7	165	1.25	5	61.200	<b>2046764</b>
<b>SB50W A4</b>	158	408	52.7	250	1.25	5	79.500	<b>2046765</b>
<b>SB63W A4</b>	198	448	65.7	250	1.25	3	144.600	<b>2046766</b>

90° bend with moulded sleeves, for electrical installation pipes according to EN 61386-1. With burr-free inner wall.

## Stainless steel sleeve V4A

VA 2B  
E30 E90



Type	Dim. D mm	Dim. d mm	Dim. L mm	Dim. l mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
<b>SV16W A4</b>	18.2	16.2	50	25	1	10	2.100	<b>2046770</b>
<b>SV20W A4</b>	22.2	20.2	60	30	1	15	3.200	<b>2046771</b>
<b>SV25W A4</b>	27.2	25.2	60	30	1	15	3.900	<b>2046772</b>
<b>SV32W A4</b>	34.7	32.2	70	35	1.25	15	7.300	<b>2046773</b>
<b>SV40W A4</b>	42.7	40.2	80	40	1.25	10	10.300	<b>2046774</b>
<b>SV50W A4</b>	52.8	50.2	100	50	1.3	5	16.700	<b>2046775</b>
<b>SV63W A4</b>	65.8	63.2	100	50	1.3	3	20.900	<b>2046776</b>

Accessory part: plug-in sleeve for the connections between electrical installation pipes. With burr-free inner wall.



## Aluminium pipes

Small weight – high protection.

Simple installation in any environment, both inside and outdoors.

- Less weight
- High resistance against compression and impact
- Corrosion resistant
- M16–M63
- Accessories: Bends and couplings
- Plug-in or threaded system

## Aluminium pipe, with thread

Alu

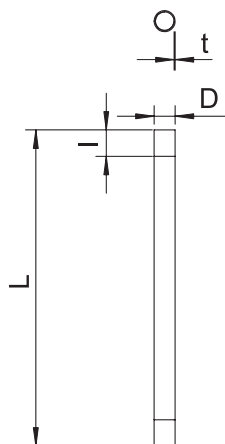
M



5 | 5 | 5 | 6 | 1

Electrical installation pipe to EN 61386-1 with threaded ends to DIN EN 60423 for mechanical protection of cables. With burr-free inner wall. One connection sleeve is already screwed onto each pipe.

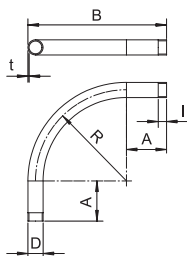
Type	Thread	Dim. D mm	Dim. L mm	Dim. I mm	Dim. t mm	Pack m	Weight kg/100 m	Item no.
SM16W ALU	M16x1,5	16	3000	15	1.6	30	19.543	2046032
SM20W ALU	M20x1,5	20	3000	15	1.9	30	29.170	2046033
SM25W ALU	M25x1,5	25	3000	20	1.9	30	37.230	2046034
SM32W ALU	M32x1,5	32	3000	20	1.9	30	48.510	2046035
SM40W ALU	M40x1,5	40	3000	20	1.9	15	61.403	2046036
SM50W ALU	M50x1,5	50	3000	25	2.1	15	85.323	2046037
SM63W ALU	M63x1,5	63	3000	25	2.1	15	108.480	2046038



## Aluminium pipe bend, with thread

Alu

M



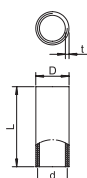
Type	Thread	Dim. A mm	Dim. B mm	Dim. D mm	Dim. I mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SBM16W ALU	M16x1,5	78	150	16	15	64	1.6	15	3.300	2046042
SBM20W ALU	M20x1,5	80	170	20	15	80	1.9	25	7.300	2046043
SBM25W ALU	M25x1,5	93	208	25	20	102.5	1.9	25	11.500	2046044
SBM32W ALU	M32x1,5	105	252	32	20	131	1.9	20	20.000	2046045
SBM40W ALU	M40x1,5	115	300	40	20	165	1.9	15	27.300	2046046
SBM50W ALU	M50x1,5	128	358	50	25	205	2.1	5	49.500	2046047
SBM63W ALU	M63x1,5	135	423	63	25	256.5	2.1	3	78.400	2046048

90° bend for electrical installation pipes according to EN 61386-1 with threaded ends to DIN EN 60423. With burr-free inner wall. One connection sleeve is already screwed onto each pipe bend.

## Aluminium sleeve, with thread

Alu

M



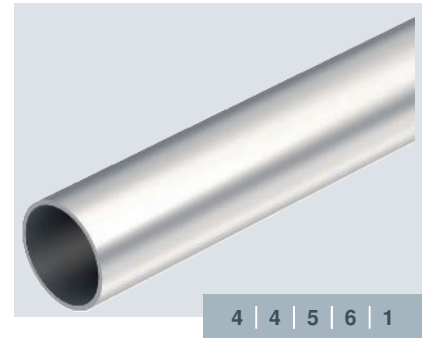
Type	Thread	Dim. D mm	Dim. d mm	Dim. L mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SVM16W ALU	M16x1,5	18.5	16	35	2.25	50	1.080	2046052
SVM20W ALU	M20x1,5	22.5	20	35	2.25	50	1.100	2046053
SVM25W ALU	M25x1,5	28	25	45	2.5	50	2.430	2046054
SVM32W ALU	M32x1,5	35	32	45	2.5	50	3.100	2046055
SVM40W ALU	M40x1,5	43.5	40	45	2.75	20	4.270	2046056
SVM50W ALU	M50x1,5	53.5	50	55	2.75	20	6.510	2046057
SVM63W ALU	M63x1,5	66.5	63	55	2.8	20	8.320	2046058

Accessory part: coupling with thread according to EN 60423 to connect electrical installation pipes and 90° bends.

Alu

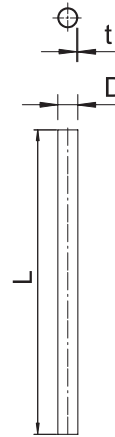
Aluminium pipe, without thread

Type	Dim. D mm	Dim. L mm	Dim. t mm	Pack m	Weight kg/100 m	Item no.
S16W ALU	16	3000	1.2	30	15.065	2046002
S20W ALU	20	3000	1.2	30	19.134	2046003
S25W ALU	25	3000	1.3	30	26.134	2046004
S32W ALU	32	3000	1.3	30	33.853	2046005
S40W ALU	40	3000	1.4	15	45.839	2046006
S50W ALU	50	3000	1.4	15	57.714	2046007
S63W ALU	63	3000	1.7	15	88.394	2046008



4 | 4 | 5 | 6 | 1

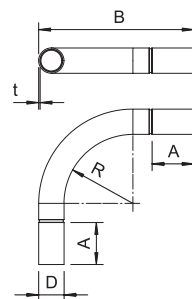
Electrical installation pipe without threaded ends to EN 61386-1 for mechanical protection of cables. With burr-free inner wall.



Alu

Aluminium pipe bend, without thread

Type	Dim. A mm	Dim. B mm	Dim. D mm	Dim. R mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SB16W ALU	78	151	16	64	1.2	15	2.350	2046012
SB20W ALU	80	171	20	80	1.2	25	5.500	2046013
SB25W ALU	93	209	25	102.5	1.3	25	9.000	2046014
SB32W ALU	105	253	32	131	1.3	20	14.100	2046015
SB40W ALU	115	302	40	165	1.4	15	22.400	2046016
SB50W ALU	128	360	50	205	1.4	5	35.400	2046017
SB63W ALU	135	425	63	256.5	1.7	3	59.500	2046018

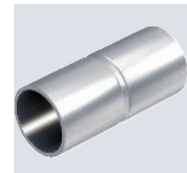
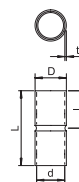


90° bend with moulded sleeves, for electrical installation pipes according to EN 61386-1. With burr-free inner wall.

Alu

Aluminium sleeve, without thread

Type	Dim. D mm	Dim. d mm	Dim. L mm	Dim. l mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SV16W ALU	18.6	16.2	40	20	1.2	50	0.700	2046022
SV20W ALU	22.6	20.2	50	25	1.2	50	1.300	2046023
SV25W ALU	27.6	25.2	60	30	1.2	50	1.900	2046024
SV32W ALU	34.6	32.2	70	35	1.2	50	2.400	2046025
SV40W ALU	43	40.2	70	35	1.4	20	4.000	2046026
SV50W ALU	53	50.2	90	45	1.4	20	6.100	2046027
SV63W ALU	66.2	63.2	110	55	1.5	20	9.000	2046028

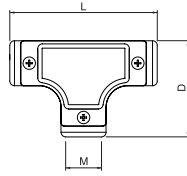
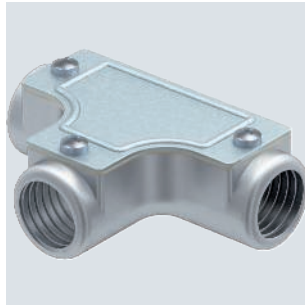


Accessory part: plug-in sleeve for the connections between electrical installation pipes. With burr-free inner wall.

## Control T piece with thread

AIG

M IP 54



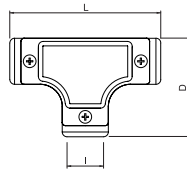
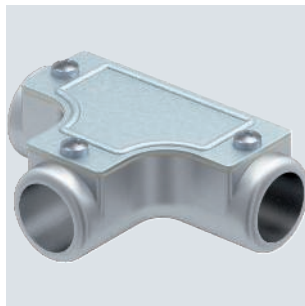
Type	Size	Dim. D mm	Dim. L mm	Dim. Dimension M	Pack Piece	Weight kg/100 pc.	Item no.
SKTM16W ALU	16	47.5	72	M16x1,5	5	7.200	2047604
SKTM20W ALU	20	65	102	M20x1,5	5	13.500	2047605
SKTM25W ALU	25	75	115	M25x1,5	5	22.000	2047606
SKTM32W ALU	32	96	156	M32x1,5	4	46.600	2047607
SKTM40W ALU	40	96	156	M40x1,5	4	34.000	2047608
SKTM50W ALU	50	124.5	194	M50x1,5	2	56.300	2047609

Die-cast aluminium T piece, with internal thread, for mounting in pipe sections as a junction. Removable cover for easier cable routing and later checking.

## Control T piece without thread

AIG

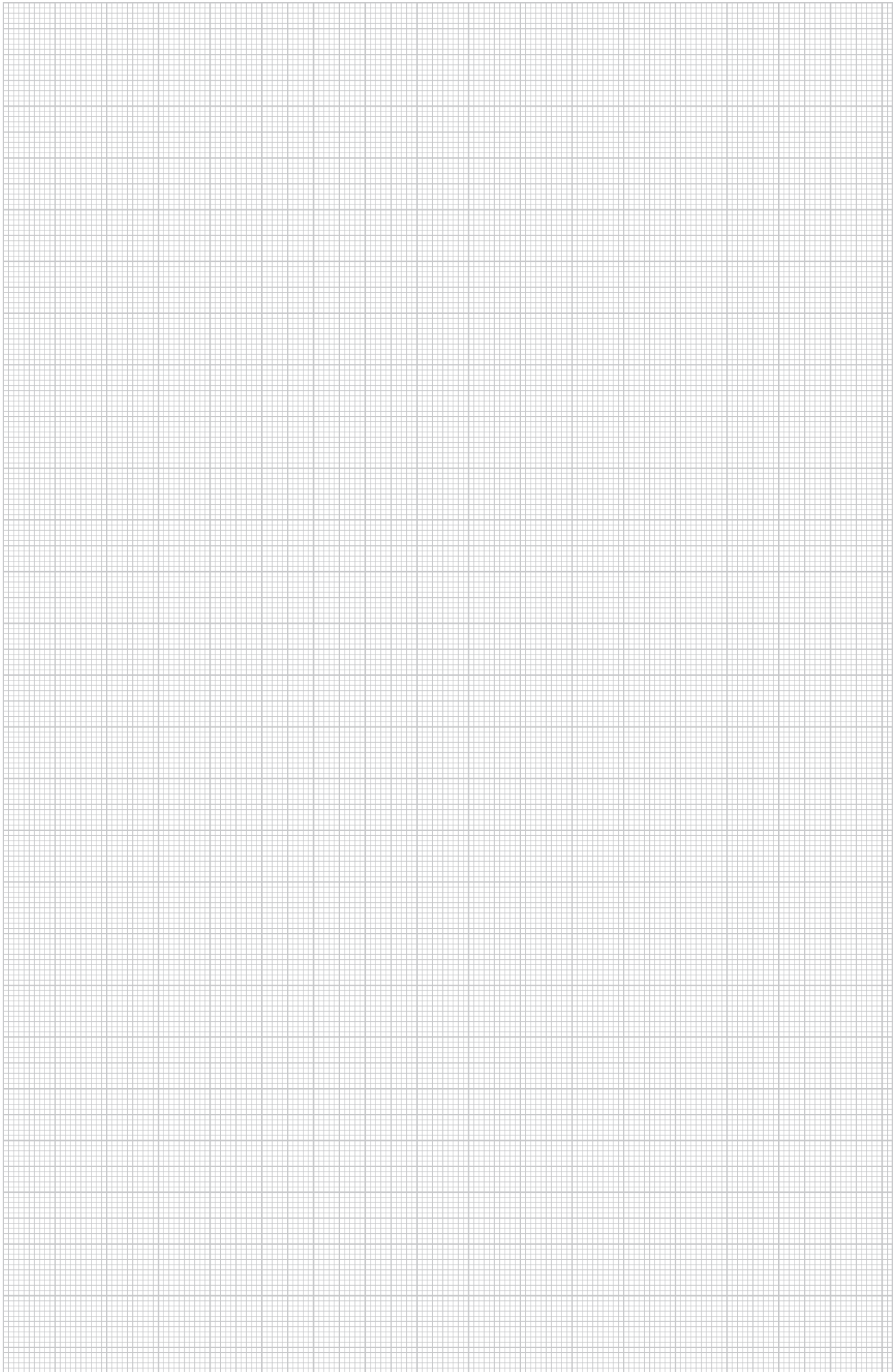
IP 54



Type	Size	Dim. D mm	Dim. L mm	Dim. I mm	Pack Piece	Weight kg/100 pc.	Item no.
SKT16W ALU	16	47.5	72	16	5	6.900	2047588
SKT20W ALU	20	65	102	20	5	12.900	2047589
SKT25W ALU	25	75	115	25	5	21.500	2047590
SKT32W ALU	32	96	156	32	4	45.300	2047591
SKT40W ALU	40	96	156	40	4	32.800	2047592
SKT50W ALU	50	124.5	194	50	2	53.100	2047593

Die-cast aluminium T piece, for mounting in pipe sections as a junction. Removable cover for easier cable routing and later checking.







## Quick pipe

The Quick pipe system combines the benefits of cable ducts and conventional electrical installation pipes to produce a single, intelligent system for surface-mounted installations.



- 4 sizes – M16-M32
- Two colours: White and grey
- Simple installation
- Retroinstallation possible
- VDE-approved



Cables are inserted in the open Quick pipe electrical installation pipes in the same way as with open cable ducting.



After the cable has been laid the Quick pipe is turned in the Quick clip, and thereby closed tightly.



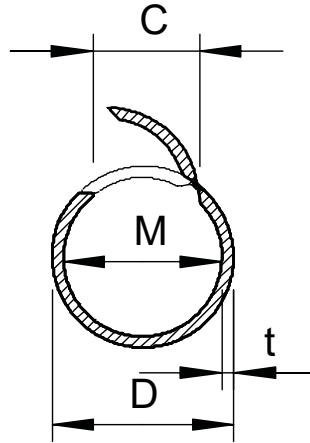
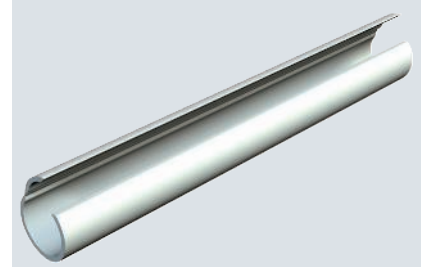
Retro-fittings are also possible because the Quick pipe can be opened easily by turning it.

PVC



Quick pipe

Type	Size	Colour	Length mm	Dim. t mm	Dim. C mm	Dim. D mm	Dim. Dimension M	Pack m	Weight kg/100 m	Item no.
2953 M16 LGR	M16	Light grey	2000	1.2	8.2	15.6	13.2	50	7.000	2153904
2953 M20 LGR	M20	Light grey	2000	1.5	10	20	17	40	11.500	2153912
2953 M25 LGR	M25	Light grey	2000	1.6	13.6	25	21.8	30	16.000	2153920
2953 M32 LGR	M32	Light grey	2000	1.7	17	32	28.6	20	21.500	2153939



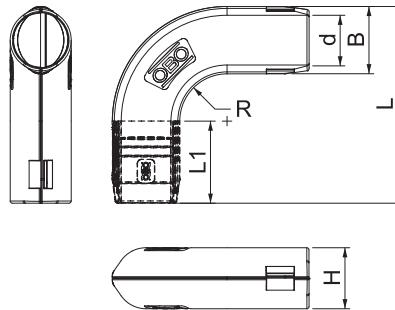
Open plastic Quick pipe pipe for surface-mounted routing of cables in interiors and protected outdoor areas. Mounting on wall and ceiling with Quick clip, starQuick clip and Multi-Quick clip. Toolless closing and opening through turning in the clip. Can be used in a temperature range of -25 to +60 °C.

PP



90° Quick pipe bend

Type	Size	Colour	Dim. B mm	Dim. L mm	Dim. L1 mm	Dim. R mm	Height mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
3000 BMS M16 LGR	M16	Light grey	21.4	69	28	20	18	15.6	10	0.592	2154052
3000 BMS M20 LGR	M20	Light grey	26.3	83.2	35	22	23	20	5	1.103	2154054
3000 BMS M25 LGR	M25	Light grey	31.2	91	38	22	28	25	5	1.514	2154056
3000 BMS M32 LGR	M32	Light grey	38.8	103	42	22	35	32.6	5	2.035	2154058



Fitting for plastic electrical installation pipes to create 90° bends. Suitable for Quick pipe pipes or corrugated pipes. Toolless closing and opening. Can be used in a temperature range of -25 to +60 °C.

# Quick pipe system

## Quick pipe T piece

PP

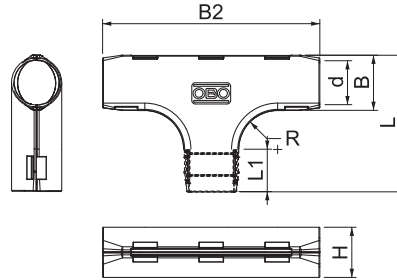
IP 44

M



Fitting for plastic electrical installation pipes to create T branches. Suitable for Quick pipe pipes or corrugated pipes. Toolless closing and opening. Can be used in a temperature range of -25 to +60 °C.

Type	Size	Colour	Dim. L mm	Dim. B mm	Dim. B2 mm	Dim. L1 mm	Dim. d mm	Height mm	Dim. R mm	Pack Piece	Weight kg/100 pc.	Item no.
3000 TMS M16 LGR	M16	Light grey	58	21	94	17	16	18	20	10	0.798	2153839
3000 TMS M20 LGR	M20	Light grey	69	26	110	20	20	23	22	5	1.401	2153841
3000 TMS M25 LGR	M25	Light grey	77	31	123	24	25	28	22	5	1.977	2153843
3000 TMS M32 LGR	M32	Light grey	87	39	135	26	32.6	35	22	5	2.511	2153845



## Quick pipe connection sleeve

PP

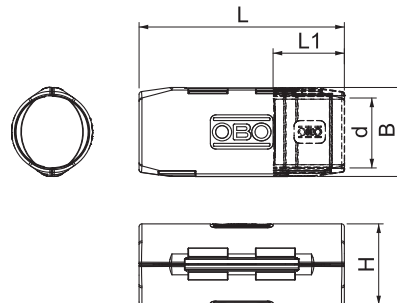
IP 44

M



Connection sleeve for plastic electrical installation pipes to create straight connections. Suitable for Quick pipe pipes or corrugated pipes. Toolless closing and opening. Can be used in a temperature range of -25 to +60 °C.

Type	Size	Colour	Dim. L mm	Dim. B mm	Dim. L1 mm	Height mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
3000 MMS M16 LGR	M16	Light grey	52	21	18	18	15.6	10	0.299	2154081
3000 MMS M20 LGR	M20	Light grey	65	26	23	23	20	10	0.581	2154083
3000 MMS M25 LGR	M25	Light grey	72	31	25	28	25	10	0.823	2154085
3000 MMS M32 LGR	M32	Light grey	80	39	28	35	32.6	10	1.095	2154087

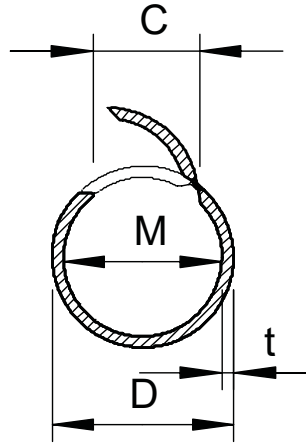
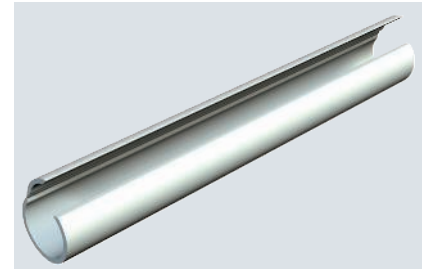


PVC

IP 44 M

Quick pipe

Type	Size	Colour	Length mm	Dim. t mm	Dim. C mm	Dim. D mm	Dim. Dimension M mm	Pack m	Weight kg/100 m	Item no.
2953 M16 RW	M16	Pure white	2000	1.2	8.2	15.6	13.2	50	7.700	2153960
2953 M20 RW	M20	Pure white	2000	1.5	10	20	17	40	11.500	2153963
2953 M25 RW	M25	Pure white	2000	1.6	13.6	25	21,8	30	16.000	2153966
2953 M32 RW	M32	Pure white	2000	1.7	17	32	28,6	20	21.500	2153969



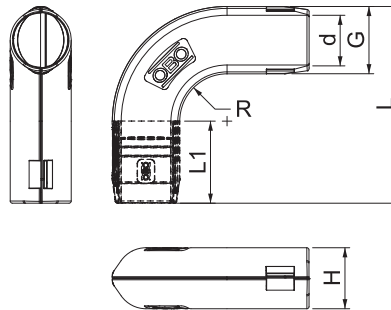
Open plastic Quick pipe pipe for surface-mounted routing of cables in interiors and protected outdoor areas. Mounting on wall and ceiling with Quick clip, starQuick clip and Multi-Quick clip. Toolless closing and opening through turning in the clip. Can be used in a temperature range of -25 to +60 °C.

PP

IP 44 M

90° Quick pipe bend

Type	Size	Colour	Dim. B mm	Dim. L mm	Dim. L1 mm	Dim. R mm	Height mm	Dim. d mm	Pack Piece	Weight kg/100 pc.	Item no.
3000 BMS M16 RW	M16	Pure white	21.4	69	28	20	18	15.6	10	0.592	2154062
3000 BMS M20 RW	M20	Pure white	26.3	83.2	35	22	23	20	5	1.103	2154064
3000 BMS M25 RW	M25	Pure white	31.2	91	38	22	28	25	5	1.514	2154066
3000 BMS M32 RW	M32	Pure white	38.8	103	42	22	35	32.6	5	2.035	2154068



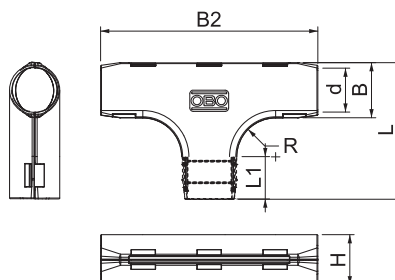
Fitting for plastic electrical installation pipes to create 90° bends. Suitable for Quick pipe pipes or corrugated pipes. Toolless closing and opening. Can be used in a temperature range of -25 to +60 °C.

## Quick pipe T piece



Fitting for plastic electrical installation pipes to create T branches. Suitable for Quick pipe pipes or corrugated pipes. Toolless closing and opening. Can be used in a temperature range of -25 to +60 °C.

Type	Size	Colour	Dim.	Dim.	Dim.	Dim.	Dim.	Dim.	Dim.	Pack Piece	Weight kg/100 pc.	Item no.
			L mm	B mm	B2 mm	L1 mm	d mm	Height mm	R mm			
3000 TMS M20 RW	M20	Pure white	69	26	110	20	20	23	22	5	1.401	2153953
3000 TMS M25 RW	M25	Pure white	77	31	123	24	25	28	22	5	1.978	2153955
3000 TMS M32 RW	M32	Pure white	87	39	135	26	32.6	35	22	5	2.511	2153957

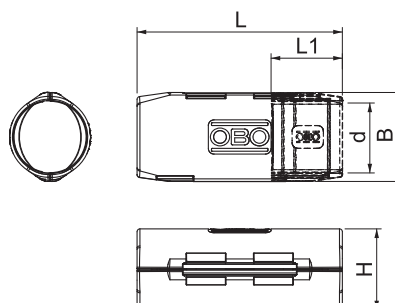


## Quick pipe connection sleeve



Connection sleeve for plastic electrical installation pipes to create straight connections. Suitable for Quick pipe pipes or corrugated pipes. Toolless closing and opening. Can be used in a temperature range of -25 to +60 °C.

Type	Size	Colour	Dim.	Dim.	Dim.	Dim.	Dim.	Pack Piece	Weight kg/100 pc.	Item no.
			L mm	B mm	L1 mm	Height mm	d mm			
3000 MMS M16 RW	M16	Pure white	52	21	18	18	15.6	10	0.299	2154091
3000 MMS M20 RW	M20	Pure white	65	26	23	23	20	10	0.581	2154093
3000 MMS M25 RW	M25	Pure white	72	31	25	28	25	10	0.823	2154095
3000 MMS M32 RW	M32	Pure white	80	39	28	35	32.6	10	1.095	2154097



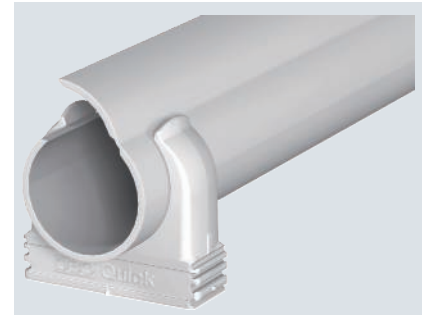


PVC

IP 44 M

### Set of Quick clips and Quick pipe pipes

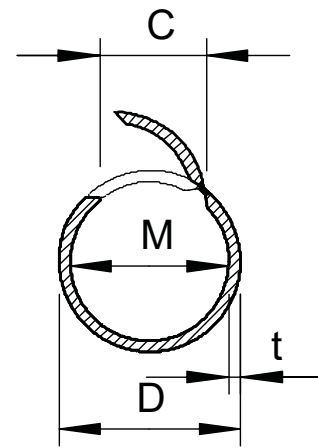
Type	Size	Colour	Set consisting of	Pack Piece	Weight kg/100 pc.	Item no.
2954 M16 LGR	M16	Light grey	50 m Quick pipe and 156x OBO Quick clip	1	444.000	2154501
2954 M20 LGR	M20	Light grey	40 m Quick pipe and 120x OBO Quick clip	1	508.000	2154528
2954 M25 LGR	M25	Light grey	30 m Quick pipe and 96x OBO Quick clip	1	517.000	2154536
2954 M32 LGR	M32	Light grey	20 m Quick pipe and 60x OBO Quick clip	1	479.000	2154544



Set consisting of Quick pipe electrical installation pipes and Quick clip surface-mounted clips. For surface-mounted routing of cables in interiors and protected outdoor areas. Universal fastening on wall and ceiling. Comprises up to 50 m of pipe each of 2 metres in length and up to 156 Quick clips. Can be used in a temperature range of -25 to +60 °C.

Type	Dimension M	Dim. t mm	Dim. C mm	Dim. D mm
2954 M16 LGR	13,2	1,2	8,2	15,6
2954 M20 LGR	17	1,5	10	20
2954 M25 LGR	21,8	1,6	13,6	25
2954 M32 LGR	28,6	1,7	17	32

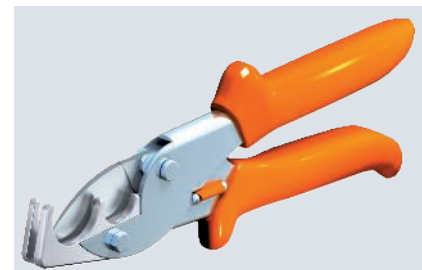
Dimensions



IP 44 M

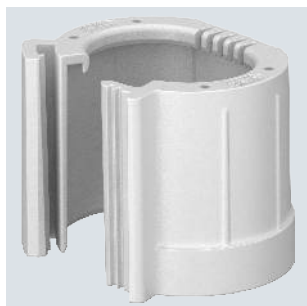
Type	Cutting area mm	Pack Piece	Weight kg/100 pc.	Item no.
SQ 1632	16-32	1	40.000	2153572

### Quick pipe shears



Shears for burr-free cutting of Quick Pipe electrical installation pipe Ø 16–32 mm.

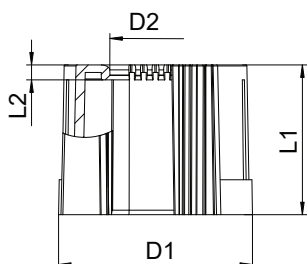
Pipe end cap, splittable, metric, light grey



Type	Size	Colour	Pack Piece	Weight kg/100 pc.	Item no.
129 TB M16	M16	Light grey	50	0.400	2047812
129 TB M20	M20	Light grey	50	0.440	2047831
129 TB M25	M25	Light grey	50	0.500	2047839
129 TB M32	M32	Light grey	50	0.656	2047855
129 TB M40	M40	Light grey	30	0.790	2047863
129 TB M50	M50	Light grey	30	0.935	2047890
129 TB M63	M63	Light grey	20	1.140	2047898

Separable pipe end cap to slot onto metric electrical installation pipes. The separable pipe end cap can be used for repairs on existing installations according to regulations. It is not necessary to disconnect the cables, allowing quick mounting.

Dimensions



Type	Dim. D1 mm	Dim. D2 mm	Dim. L1 mm	Dim. L2 mm
129 TB M16	20	10	30	3
129 TB M20	24	13.4	30	3
129 TB M25	30	18.4	30	3
129 TB M32	36	25.4	30	3
129 TB M40	44	33.4	30	3
129 TB M50	53	43	30	3
129 TB M63	67	56	30	3

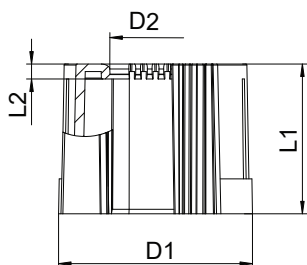
Pipe end cap, splittable, metric, black



Type	Size	Colour	Pack Piece	Weight kg/100 pc.	Item no.
129 TB M16 SW	M16	Black	50	0.400	2047936
129 TB M20 SW	M20	Black	50	0.440	2047944
129 TB M25 SW	M25	Black	50	0.500	2047952
129 TB M32 SW	M32	Black	50	0.656	2047971
129 TB M40 SW	M40	Black	30	0.790	2047979
129 TB M50 SW	M50	Black	30	0.935	2047987
129 TB M63 SW	M63	Black	20	1.140	2047995

Separable pipe end cap to slot onto metric electrical installation pipes. The separable pipe end cap can be used for repairs on existing installations according to regulations. It is not necessary to disconnect the cables, allowing quick mounting.

Dimensions



Type	Dim. D1 mm	Dim. D2 mm	Dim. L1 mm	Dim. L2 mm
129 TB M16 SW	20	10	30	3
129 TB M20 SW	24	13.4	30	3
129 TB M25 SW	30	18.4	30	3
129 TB M32 SW	36	25.4	30	3
129 TB M40 SW	44	33.4	30	3
129 TB M50 SW	53	43	30	3
129 TB M63 SW	67	56	30	3

PE



## Pipe end cap, splittable, PG, light grey

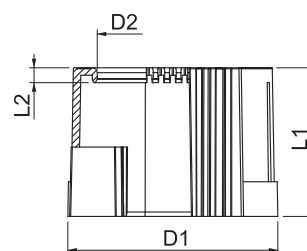
Type	Size	Colour	Pack Piece	Weight kg/100 pc.	Item no.
129 TB PG9	PG9	Light grey	50	0.400	2044509
129 TB PG11	PG11	Light grey	50	0.430	2044511
129 TB PG13,5	PG13,5	Light grey	50	0.460	2044513
129 TB PG16	PG16	Light grey	50	0.500	2044516
129 TB PG21	PG21	Light grey	50	0.590	2044521
129 TB PG29	PG29	Light grey	50	0.700	2044529
129 TB PG36	PG36	Light grey	30	0.870	2044536
129 TB PG42	PG42	Light grey	30	0.980	2044542
129 TB PG48	PG48	Light grey	20	1.060	2044548

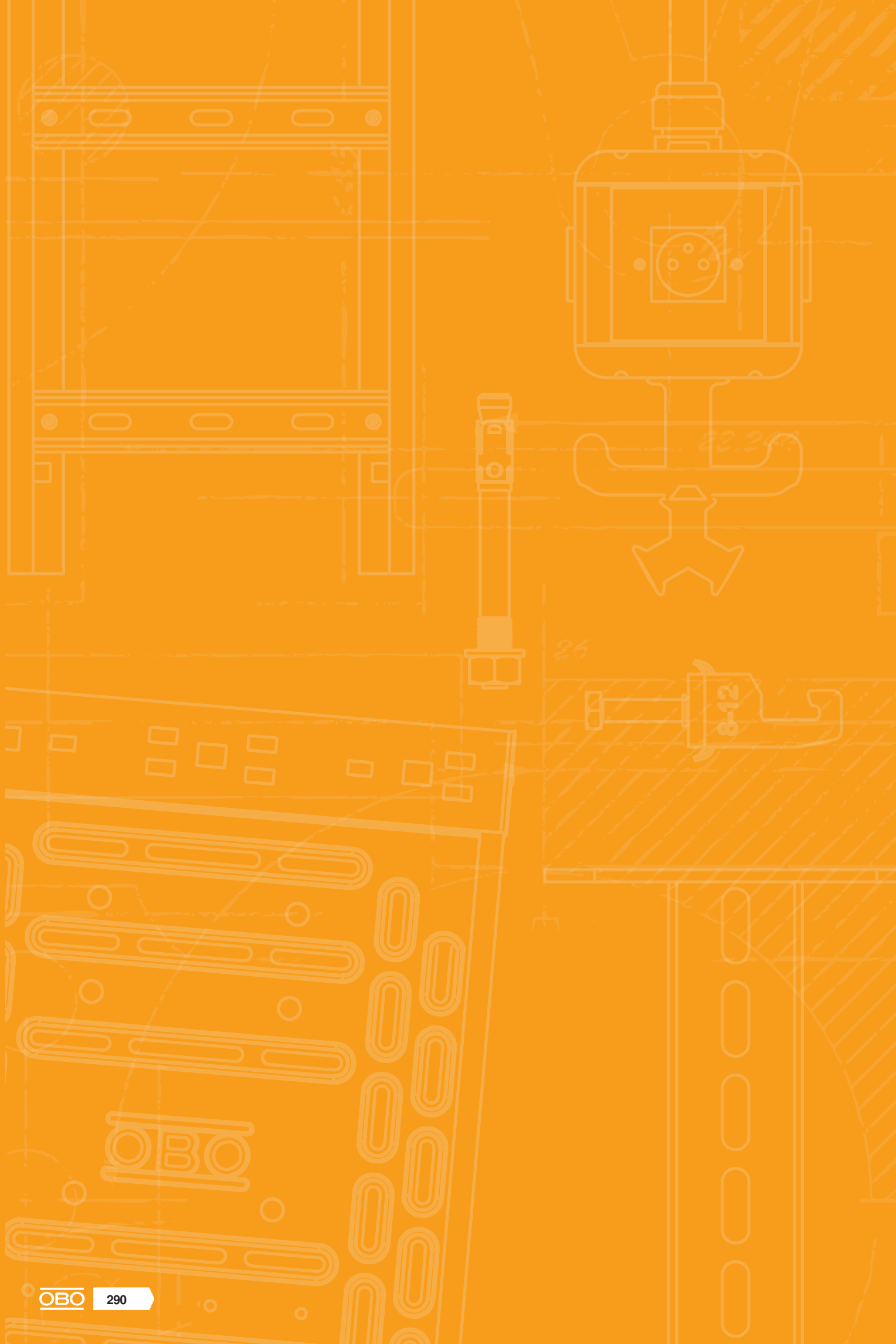


Separable pipe end cap to slot onto PG electrical installation pipes.  
The separable pipe end cap can be used for repairs on existing installations according to regulations. It is not necessary to disconnect the cables, allowing quick mounting.







Type	Dim.			
	D1 mm	D2 mm	L1 mm	L2 mm
129 TB PG9	20	10	30	3
129 TB PG11	24	12.5	30	3
129 TB PG13,5	26	15	30	3
129 TB PG16	28	16	30	3
129 TB PG21	34	21.5	30	3
129 TB PG29	38	30	30	3
129 TB PG36	48	40.5	30	3
129 TB PG42	60	47.5	30	3
129 TB PG48	66	52	30	3

Dimensions























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	For the latest general conditions of sale and delivery please see <a href="http://obo.de/vlb">obo.de/vlb</a> .	



## Test marks

	American Bureau of Shipping, USA		Underwriters Laboratories Inc., USA + CSA, Canada
	AENOR, Producto Certificado, Spain		Österreichischer Verband für Elektrotechnik, Austria
	STOWARZYSZENIE ELEKTRYKÓW POLSKICH, Poland		ISTITUTO ITALIANO DEL MARCHO DI QUALITÀ, Italy
	Lightning current-tested		RINA 1861, Ship Classification, Certification and Services
	Lightning current-tested, Class H (100 kA)		Underwriters Laboratories Inc., USA
	CEBEC, Belgium		SEMKO An Inchcape Testing Services Company, Sweden
	Canadian Standards Association, Canada		Eidgenössisches Starkstrominspektorat, Switzerland
	DEMKO, Danmarks Elektriske Materielkontrol, Denmark		South African Bureau of Standards
	Deutsches Institut für Bautechnik Berlin, Germany		Shock-tested, Bundesamt für Zivilschutz, Germany
	Det Norske Veritas		Sähköarkastuskeskus Elinspektionscentralen Electrical Inspectorate, Finland
	ENEC Austria		Underwriters Laboratories Inc., USA
	ATEX certificate for explosive areas		Underwriters Laboratories Inc., USA
	ELEKTROTECHNICKÝ ZKUŠEBNÍ ÚSTAV, Czech Republic		Verband der Elektrotechnik, Elektronik, Informationstechnik e.V., Germany
	FIMKO, Finland		German Association of Electricians, tested safety
	Forschungs- und Materialprüfungsanstalt, Germany		5-year warranty
	Russia, GOST The State Committee for Standards		
	Test marks for technical resources, VDE Prüf- und Zertifizierungsinstitut Offenbach, Germany		
	Halogen-free; without chlorine, fluorine and bromine		
	INMETRO, Brazil		
	KEMA-KEUR, Netherlands		
	Indication of metric products		
	MAGYAR ELEKTROTECHNIKAI ELLENŐRZŐ INTÉZET Budapest, Hungary		
	NEMKO, Norway		
	AFNOR Quality symbol of the French standardisation institute		
































# Pictogram explanation






## Surfaces

	Strip galvanised
	Strip galvanised/plastic-coated
	Strip galvanised zinc/aluminium, double dip
	Bright
	Bright, reworked
	Anodised
	Hot-dip galvanised
	Electrogalvanised
	Electrogalvanised/plastic-coated
	Electrogalvanised, yellow-chromatised
	Electrogalvanised, yellow passivated
	Electrogalvanised, transparently passivated
	Primed
	Painted
	Welding primed
	Hot-dip galvanised
	Hot-dip galvanised 85 µm
	Copper-plated
	Nickel-plated
	Galvanised, Deltatone 500
	Galvanised, MAGNI 565
	Zinc-aluminium coated, Galfan
	Zinc scale






## Conformity symbol

	Communautés Européennes, EC declaration of conformity according to EC directives
	RoHS-conformant



















## Quality marks

	Halogen-free; without chlorine, fluorine and bromine
	Flame resistant 650 °C
	Flame resistant 750 °C
	Flame resistant 960 °C
	UV-resistant




## Specific product symbols

	Diameter 60 mm
	Diameter 68 mm
	Protection device to DIN EN 61643-11 or IEC 61643-11
	Transition from LPZ 2 to LPZ 3
	Acoustic signalling



## Applications

	Remote signalling
	Acoustic signalling
	Integrated Service Digital Network, ISDN applications
	Digital Subscriber Line, DSL applications
	Analogue telecommunication
	Category 5 TwisterPair
	Channel Performance to American EIA/TIA standard
	Measuring, controlling and regulating systems
	TV applications
	SAT-TV applications
	MultiBase base
	LifeControl
	Intrinsically safe protection device for potentially explosive areas
	Channel Performance to ISO/IEC 11801
	Power over Ethernet
	230/400 V system
	Protection rating IP 54
	Protection rating IP 65







## Lightning protection classes

	Protection device to DIN EN 61643-11 or IEC 61643-11
	Combination protection device made of type 1 and type 2
	Protection device to DIN EN 61643-11 or IEC 61643-11






## Lightning protection classes

	Protection device to DIN EN 61643-11 or IEC 61643-11
	Protection device to DIN EN 61643-11 or IEC 61643-11



## Lightning protection zone

	Transition from LPZ 0 to LPZ 1
	Transition from LPZ 0 to LPZ 2
	Transition from LPZ 0 to LPZ 3
	Transition from LPZ 1 to LPZ 2
	Transition from LPZ 1 to LPZ 3
	Transition from LPZ 2 to LPZ 3



## BSS maintenance of electrical function installation

	Fire-tested systems
	Escape route ceiling mounting with pressure clip
	OBO Grip, wall routing type
	OBO Grip, ceiling routing type
	Pressure clip for maintenance of electrical function, ceiling mounting




## BSS anchor

	Fire protection anchor
	Fire protection bolt tie

## BSS test marks/material class

	Maintenance of electrical function class E30
	Maintenance of electrical function class E90














## Clamp clip base shapes

	Clamp clip for C profile rail, slot width 11–12 mm
	Clamp clip for C profile rail, slot width 16–17 mm
	Clamp clip for C profile rail, slot width 18–22 mm



## Diameter

	Diameter 60 mm
	Diameter 68 mm
	Diameter 70 mm
	Diameter 74 mm





## Entries

	4 cable entries
	6 cable entries
	7 cable entries
	8 cable entries
	9 cable entries
	10 cable entries
	12 cable entries
	10 cable entries ECO
	12 cable entries ECO
	14 cable entries ECO
	16 cable entries
	18 cable entries ECO
	24 cable entries






## Gland thread

	Thread metric
	Thread Pg





## Entry size

	M20 entry
	M25 entry
	M32 entry
	M40 entry

## KTS side heights

	Cable tray, side height 35 mm
	Cable tray, side height 60 mm
	Cable tray, side height 85 mm
	Mesh cable tray, side height 35 mm
	Mesh cable tray, side height 55 mm










## Materials

	Flat steel
	Angular steel
	U steel
	Round material






# Pictogram explanation






## Nominal cross-section

	Nominal cross-section 1.5 mm <sup>2</sup>
	Nominal cross-section 1.5–2.5 mm <sup>2</sup>
	Nominal cross-section 2.5 mm <sup>2</sup>
	Nominal cross-section 2.5–4 mm <sup>2</sup>
	Nominal cross-section 4 mm <sup>2</sup>
	Nominal cross-section 4–6 mm <sup>2</sup>
	Nominal cross-section 6 mm <sup>2</sup>
	Nominal cross-section 10 mm <sup>2</sup>
	Nominal cross-section 16 mm <sup>2</sup>












## Nominal voltage

	Nominal voltage 400 V
	Nominal voltage 500 V
	Nominal voltage 660 V





## Polarity

	3-pole
	5-pole
	7-pole
	8-pole
	10-pole
	12-pole


## Slot widths

	Slot width 7.5 mm
	Slot width 11 mm
	Slot width 11–12 mm
	Slot width 12 mm
	Slot width 15 mm
	Slot width 16 mm
	Slot width 16.5 mm
	Slot width 16–17 mm
	Slot width 17 mm
	Slot width 18 mm
	Slot width 22 mm
	Slot width 35 mm











## Screw heads

	Philips screw
	Torx screw
	Phillips screw
	Pozidriv




## Firing devices

	Bolt-firing tool
	Nail device





## Protection rating

	Protection rating IP 20
	Protection rating IP 30
	Protection rating IP 31
	Protection rating IP 44
	Protection rating IP 54
	Protection rating IP 55
	Protection rating IP 65
	Protection rating IP 66
	Protection rating IP 67
	Protection rating IP 68
















## Metals

	Aluminium
	Aluminium/steel
	Stainless steel, rustproof
	Stainless steel, rustproof
	Stainless steel, rustproof
	Copper
	Brass
	Steel
	Malleable iron
	Die-cast zinc

## Plastics

	Acrylonitrile butadiene styrene
	Duroplast, Aminoplast, type 131.5
	Duroplast, melamine resin, type 150
	Ethylene vinyl acetate

## Plastics

 FA	Fibre-proof material DIN 28091
 GFK	Fibreglass-reinforced plastic
 NBR SBR	Rubber mixture
 NBR	Nitrile rubber
 PETR	Petrolatum
 PA	Polyamide
 PA/ GF	Polyamide, fibreglass reinforced
 PBPT	Polybutylene terephthalate
 PC	Polycarbonate
 PE	Polyethylene
 PP	Polypropylene
 PP/ GF	Polypropylene, fibreglass reinforced
 PS	Polystyrene
 PVC	Polyvinylchloride
 ZELL PE	Cellular polyethylene



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5860969	<b>2022770</b>	209	5843313	<b>2024241</b>	215				5824411	<b>2030799</b>	235	5178996	<b>2043130</b>	233
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5182290	<b>2046423</b>	256	5924104	<b>2046761</b>	276	5925026	<b>2046878</b>	269	5879916	<b>2054485</b>	195	5655558	<b>2086189</b>	252
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5781868	<b>2046588</b>	272	6388073	<b>2046825</b>	272	5088936	<b>2048825</b>	232	5448815	<b>2085690</b>	248	5470953	<b>2088703</b>	237
	price/100		6388080	<b>2046826</b>	272	5874157	<b>2048906</b>	232	5448877	<b>2085704</b>	248	5471011	<b>2088711</b>	237
5782148	<b>2046593</b>	274	6388127	<b>2046827</b>	272	5874218	<b>2048914</b>	232	5448794	<b>2085739</b>	249	5471257	<b>2088738</b>	237
5782155	<b>2046594</b>	274	6388134	<b>2046828</b>	272	5944539	<b>2048922</b>	232	5840855	<b>2085747</b>	249	5471318	<b>2088746</b>	237
5782162	<b>2046595</b>	274	6388141	<b>2046829</b>	272	5944591	<b>2048930</b>	232	5840916	<b>2085755</b>	249	5471370	<b>2088754</b>	237
5782209	<b>2046596</b>	274	6388158	<b>2046830</b>	272	5944652	<b>2048949</b>	232	5840978	<b>2085763</b>	249	5471554	<b>2088762</b>	237
5782216	<b>2046597</b>	274				5088998	<b>2048957</b>	232	5841036	<b>2085771</b>	249	5471615	<b>2088770</b>	237
5782223	<b>2046598</b>	274	5924647	<b>2046840</b>	270	5089056	<b>2048965</b>	232	5841098	<b>2085798</b>	249	5471677	<b>2088789</b>	237
5782261	<b>2046599</b>	274	5924654	<b>2046841</b>	270	5089117	<b>2048973</b>	232	5841210	<b>2085836</b>	249	5192190	<b>2088819</b>	237
	/100 pc.		5924661	<b>2046842</b>	270							5192251	<b>2088827</b>	237
5782384	<b>2046620</b>	274	5924678	<b>2046843</b>	270	5089179	<b>2049066</b>	232	5808992	<b>2086018</b>	246	5192312	<b>2088835</b>	237
5782391	<b>2046621</b>	274	5924685	<b>2046844</b>	270	5095354	<b>2049074</b>	232	5809234	<b>2086024</b>	246	5192374	<b>2088843</b>	237
5782407	<b>2046622</b>	274	5924692	<b>2046845</b>	270	5095415	<b>2049082</b>	232	5809418	<b>2086030</b>	246			



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5193876	<b>2089440</b>	261	6869756	<b>2154054</b>	283			
5475392	<b>2089505</b>	260	6869794	<b>2154056</b>	283	6169351	<b>6109873</b>	172
5475453	<b>2089513</b>	260	6869800	<b>2154058</b>	283		/pc.	
5475514	<b>2089521</b>	260	6869817	<b>2154062</b>	285	5125594	<b>6109874</b>	172
5475576	<b>2089548</b>	260	6869824	<b>2154064</b>	285	5125600	<b>6109876</b>	172
5475637	<b>2089556</b>	260	6869855	<b>2154066</b>	285	5477440	<b>6109878</b>	175
5475699	<b>2089564</b>	260	6869862	<b>2154068</b>	285	5477457	<b>6109879</b>	175
5475750	<b>2089572</b>	260	6870066	<b>2154081</b>	284	6486021	<b>6109887</b>	172
5475811	<b>2089580</b>	260	6870080	<b>2154083</b>	284	5125730	<b>6109900</b>	74
5475873	<b>2089599</b>	260	6870097	<b>2154085</b>	284	5125747	<b>6109905</b>	74
5476412	<b>2089602</b>	260	6870103	<b>2154087</b>	284	5125815	<b>6109932</b>	74
5476474	<b>2089610</b>	260	6870110	<b>2154091</b>	286	5125822	<b>6109934</b>	75
5476535	<b>2089629</b>	260	6870127	<b>2154093</b>	286	5125860	<b>6109936</b>	75
5476597	<b>2089637</b>	260	6870158	<b>2154095</b>	286	5125938	<b>6109950</b>	75
			6870165	<b>2154097</b>	286	5125945	<b>6109952</b>	75
				/pc.				
5193937	<b>2090074</b>	259	5482895	<b>2154501</b>	287	5887515	<b>6117346</b>	171
5193999	<b>2090090</b>	259	5483014	<b>2154528</b>	287	5887522	<b>6117348</b>	170
5194057	<b>2090112</b>	259	5483076	<b>2154536</b>	287			
5194118	<b>2090139</b>	259	5483137	<b>2154544</b>	287	5697251	<b>6119250</b>	170
5194170	<b>2090163</b>	259				5697268	<b>6119252</b>	170
5194231	<b>2090201</b>	259		/100 pc.				
5194293	<b>2090295</b>	259	5228011	<b>2340038</b>	238	6049134	<b>6120001</b>	171
5194354	<b>2090368</b>	259				6049127	<b>6120003</b>	171
5194415	<b>2090422</b>	259	6657766	<b>2363002</b>	155	6046966	<b>6120008</b>	170
5194477	<b>2090481</b>	259	6657759	<b>2363006</b>	155	6046973	<b>6120010</b>	170
5471738	<b>2090511</b>	259	6657728	<b>2363008</b>	155	6047024	<b>6120012</b>	170
5471790	<b>2090538</b>	259		/pc.		6047031	<b>6120014</b>	170
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5472933	<b>2090554</b>	259	6440085	<b>2363012</b>	154	7255572	<b>6120073</b>	170
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5473411	<b>2090570</b>	259	5686354	<b>2363015</b>	155	7255589	<b>6120077</b>	170
5474012	<b>2090589</b>	259		/pc.		7255633	<b>6120079</b>	170
5474074	<b>2090597</b>	259	5687771	<b>2363019</b>	155	7255688	<b>6120081</b>	170
						7255787	<b>6120103</b>	170
5194538	<b>2091070</b>	258	5864974	<b>3010104</b>	216	7255879	<b>6120105</b>	170
5194590	<b>2091097</b>	258	5034032	<b>3010236</b>	216	7255923	<b>6120107</b>	170
5194651	<b>2091119</b>	258	5034094	<b>3010244</b>	216	7256005	<b>6120109</b>	170
5194712	<b>2091135</b>	258	5034216	<b>3010260</b>	216	7256050	<b>6120111</b>	170
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5194835	<b>2091216</b>	258					/pc.	
5194897	<b>2091291</b>	258	6594603	<b>6105300</b>	171	6146833	<b>7084765</b>	110
5194958	<b>2091364</b>	258	6594641	<b>6105302</b>	171	6146895	<b>7084773</b>	110
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5195078	<b>2091488</b>	258	6776214	<b>6109780</b>	162	5163305	<b>7085111</b>	110
5474135	<b>2091607</b>	258	6776238	<b>6109788</b>	165			
5931690	<b>2091615</b>	258	6776252	<b>6109789</b>	168			
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5931812	<b>2091631</b>	258	5125037	<b>6109800</b>	163			
5931874	<b>2091658</b>	258	6101511	<b>6109801</b>	168			
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5474852	<b>2091682</b>	258	5125105	<b>6109810</b>	163			
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106 FL 21 8 31	5157335	2012871	229	107 C VM 20 2x6	5035954	2029677	216
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107 C V 16 3x6	5824770	2029642	249	107 S VTEC M20	5035411	2028875	217
107 C V 16 5x4	5824596	2029618	217	107 S VTEC M20	5035411	2028875	250
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107 C V 21 2x8	5824893	2029669	249	107 S VTEC M32	5035534	2028880	217
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107 S VTEC M50	5035718	2028885	250	116 M12 SGR PA	5446477	2048752	232
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107 S VTEC PG11	5843672	2028913	250	116 M16 LGR PA	5874218	2048914	232
107 S VTEC PG13	5843733	2028921	218	116 M16 LGR PS	5139331	2049511	232
107 S VTEC PG13	5843733	2028921	250	116 M16 SGR PA	5446538	2048760	232
107 S VTEC PG16	5843795	2028948	218	116 M16 SW PA	5095354	2049074	232
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107 S VTEC PG21	5843856	2028956	218	116 M20 LGR PS	5153313	2049538	232
107 S VTEC PG21	5843856	2028956	250	116 M20 SGR PA	5446590	2048779	232
107 S VTEC PG29	5843917	2028964	218	116 M20 SW PA	5095415	2049082	232
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107 S VTEC PG36	5843979	2028972	218	116 M25 LGR PS	5155478	2049546	232
107 S VTEC PG36	5843979	2028972	250	116 M25 SGR PA	5446651	2048787	232
107 S VTEC PG42	5844037	2028980	218	116 M25 SW PA	5095538	2049090	232
107 S VTEC PG42	5844037	2028980	250	116 M32 LGR PA	5944652	2048949	232
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107 S VTEC PG48	5844099	2028999	250	116 M32 SGR PA	5446712	2048795	232
107 S VTEC PG7	5843559	2028891	218	116 M32 SW PA	5095651	2049104	232
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107 S VTEC PG9	5843610	2028905	218	116 M40 LGR PS	5228615	2049562	232
107 S VTEC PG9	5843610	2028905	250	116 M40 SGR PA	5088752	2048809	232
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107 W PG11 PA	5445456	2029928	236	116 M50 LGR PA	5089056	2048965	232
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EDS M25 LGR	6478071	2012354	191	KVM-P	5687771	/pc. 2363019	155
EDS M25 LGR	6478071	2012354	240	MP UNI FS	6146895	7084773	110
EDS M25 SW	6619610	2012342	146	MP WI KL. DD	5163305	7085111	110
EDS M25 SW	6619610	2012342	240	MP WI KL. FS	6146833	7084765	110
EDS M32 LGR	6478088	2012358	145	MTG-2UC2.1 RW1	6594603	6105300	171
EDS M32 LGR	6478088	2012358	191	MTG-2UC2.1 SWGR1	6594641	6105302	171
EDS M32 LGR	6478088	2012358	240	Mx 060503 CR3	6622603	/100 pc. 2011378	149
EDS M32 SW	6619627	2012344	146	Mx 060503 SGR	6030774	2011304	150
EDS M32 SW	6619627	2012344	240	Mx 080705 CR3	6622610	2011381	149
EDVS M20 LGR	5105251	2012375	240	Mx 080705 SGR	6030781	2011308	150
EDVS M25 LGR	5105190	2012383	240	Mx 090603 CR3	6622627	2011384	149
EDVS M32 LGR	5105138	2012391	240	Mx 120805 CR3	6622658	2011386	149
HE 61-DV-L	6865499	2003826	66	Mx 120805 SGR	6030811	2011312	150
HE 74-L	7276676	2003828	67	Mx 161008 CR3	6622665	2011389	149
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Mx 170805 SGR	6030873	2011324	150	SB25W ALU	5925903	2046014	279
Mx 221209 CR3	6622689	2011394	149	SB32W A4	5924173	2046763	276
Mx 261609 CR3	6622696	2011396	149	SB32W ALU	5925910	2046015	279
Mx 261609 SGR	6030880	2011328	150	SB40W A4	5924180	2046764	276
Mx 361609 CR3	6622702	2011398	149	SB40W ALU	5925927	2046016	279
Mx 361609 SGR	6030897	2011332	150	SB50W A4	5924197	2046765	276
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PAD-ID6 SWGR1	6049134	6120001	171	SB63W A4	5924203	2046766	276
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QWT S 3 3M G	7003920	1450133	178	SBM16W ALU	5926184	2046042	278
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QWT S 3 5M G	7003937	1450134	178	SBM25W ALU	5926207	2046044	278
QWT TK 2 3M G	7004125	1450627	173	SBM32W ALU	5926214	2046045	278
QWT TK 2 3M G	7004125	1450627	178	SBM40W ALU	5926221	2046046	278
QWT TK 2 5M G	7004132	1450628	173	SBM50W ALU	5926238	2046047	278
QWT TK 2 5M G	7004132	1450628	178	SBM63W ALU	5926245	2046048	278
QWT UW 3 3M G	7003128	1450432	173	SBN16 FT	6387953	2046816	274
QWT UW 3 3M G	7003128	1450432	178	SBN16 G	6387816	2046808	270
QWT UW 3 5M G	7003135	1450433	173	SBN16 SW	6388066	2046824	272
QWT UW 3 5M G	7003135	1450433	178	SBN20 FT	6387960	2046817	274
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S16W A4	5923886	2046750	275	SBN20 SW	6388073	2046825	272
S16W ALU	5925743	2046002	279	SBN25 FT	6387991	2046818	274
S16W FT	5782148	2046593	274	SBN25 G	6387830	2046810	270
S16W G	5924647	2046840	270	SBN25 SW	6388080	2046826	272
S16W SW	5782032	2046565	272	SBN32 FT	6388004	2046819	274
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S20W ALU	5925774	2046003	279	SBN40 FT	6388011	2046820	274
S20W FT	5782155	2046594	274	SBN40 G	6387878	2046812	270
S20W G	5924654	2046841	270	SBN40 SW	6388134	2046828	272
S20W SW	5782049	2046566	272	SBN50 FT	6388028	2046821	274
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S25W ALU	5925781	2046004	279	SBN63 FT	6388059	2046822	274
S25W FT	5782162	2046595	274	SBN63 G	6387892	2046814	270
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S32W A4	5923978	2046753	275	SBNM16 SW	6387700	2046793	271
S32W ALU	5925804	2046005	279	SBNM20 FT	6387595	2046787	273
S32W FT	5782209	2046596	274	SBNM20 G	6388172	2046779	269
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S32W SW	5782087	2046568	272	SBNM25 FT	6387601	2046788	273
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S40W ALU	5925835	2046006	279	SBNM32 FT	6387632	2046789	273
S40W FT	5782216	2046597	274	SBNM32 G	6387526	2046781	269
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S40W SW	5782094	2046569	272	SBNM40 FT	6387649	2046790	273
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S50W A4	5923992	2046755	275	SBNM40 SW	6387762	2046797	271
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S50W SW	5782100	2046570	272	SBNM63 FT	6387663	2046792	273
S63W A2	5923701	2046726	275	SBNM63 G	6387571	2046784	269
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V-TEC L PG9 SGR	5840794	2085739	249		/100 pc.		
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V-TEC PG11 MS	5190035	2085623	248	V-TEC VM L12 SW	5004363	2022964	211
V-TEC PG11 SGR	5160816	2022621	213	V-TEC VM L16 LGR	5004141	2022945	210
V-TEC PG11+ LGR	5861058	2024659	214	V-TEC VM L16 SGR	5003823	2022924	211
V-TEC PG13 LGR	5446958	2024748	214	V-TEC VM L16 SW	5004370	2022966	211
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V-TEC PG16 SGR	5160939	2022656	213	V-TEC VM L25 SW	5004424	2022970	211
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V-TEC PG21 LGR	5447078	2024764	214	V-TEC VM L32 SGR	5003946	2022930	211
V-TEC PG21 MS	5448631	2085666	248	V-TEC VM L32 SW	5004486	2022972	211
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