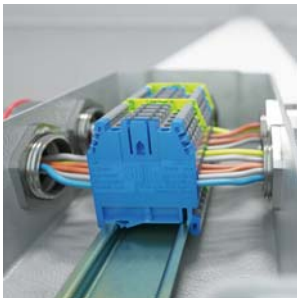




# Product catalog

## Explosion-proof electrical equipment



- Terminal boxes
- Control stations and cabinets
- Metal conduit system
- Cable glands
- Terminal clips

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## Products and services

DKC has issued a wide range of technical publications available both in printed and electronic form.

To order them in printed form, please contact any regional representative office of DKC. The list of representative offices can be found at the DKC website in the section "About company".

All the provided information can also be downloaded from the Company website: [www.dkc.ru](http://www.dkc.ru), section "Media".



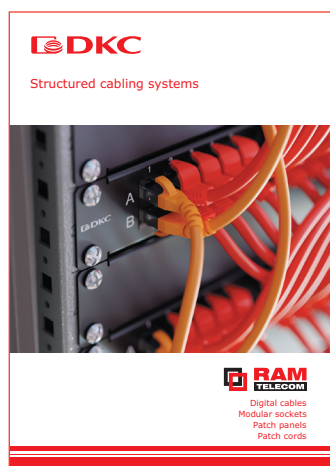
Catalog  
of cable support systems



Catalog  
of solutions for automation and IT



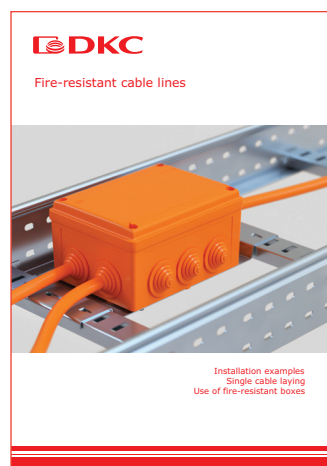
Catalog  
of solutions for power distribution systems



Structured cabling systems



Universal wiring devices "Avanti"



Fire-resistant  
cable lines



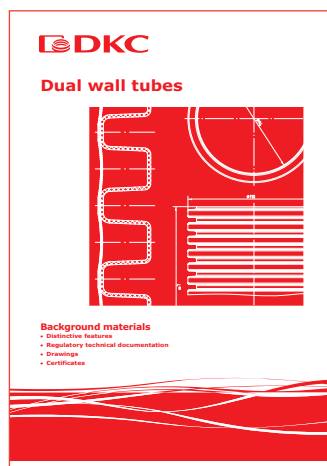
Collection of instructions for  
installation  
of cable ducts



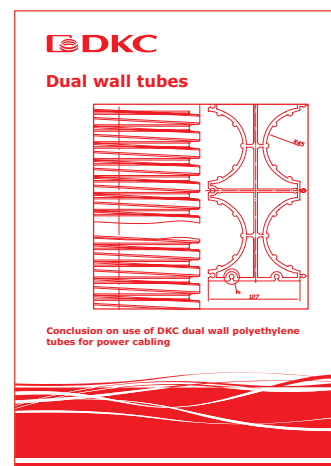
Zinc flake  
coating



Monolithic  
construction solutions

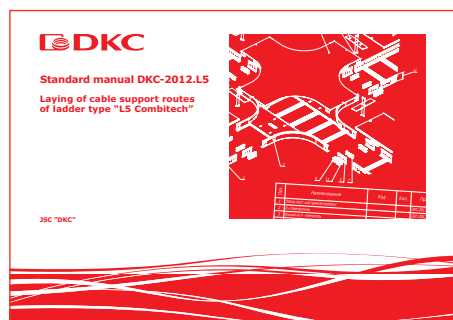


Dual wall tubes  
Background materials

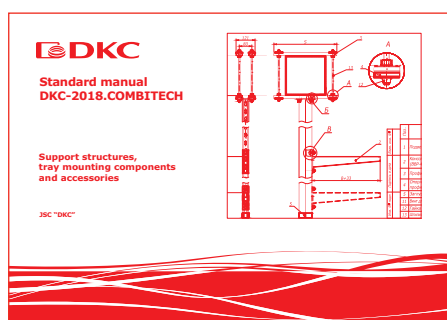


Conclusion  
on use of DKC dual wall  
polyethylene tubes for power  
cabling

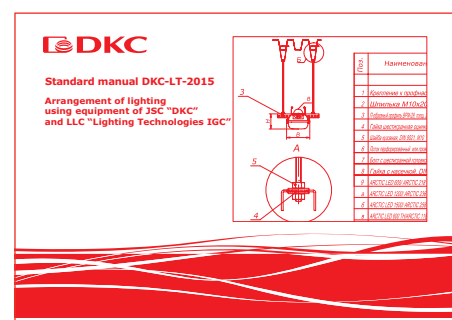
## Products and services



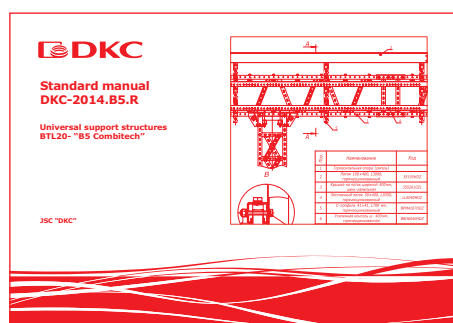
Standard manual DKC-2012.L5  
Laying of cable support routes  
of ladder type "L5 Combitech"



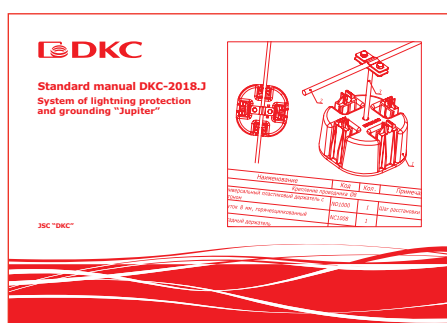
Standard manual DKC-2018.COMBITECH  
Support structures, tray mounting components  
and accessories



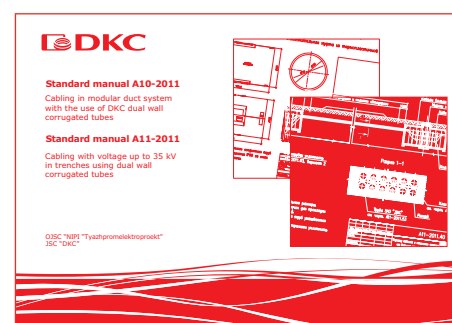
Standard manual DKC-LT-2015  
Arrangement of lighting  
using equipment of DKC and Lighting  
Technologies



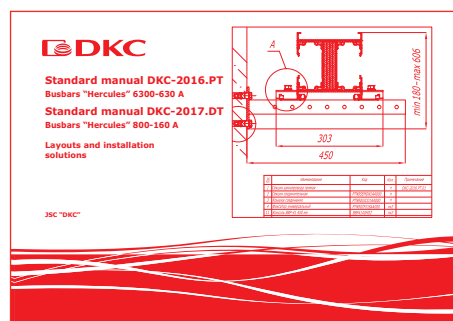
Standard manual DKC-2014.B5.R  
Universal support structures BTL-20 "B5  
Combitech"



Standard manual DKC-2018.J  
System of lightning protection  
and grounding "Jupiter"



Standard manual A10-2011  
Cabling in modular duct system with the use of  
DKC dual wall corrugated tubes  
Standard manual A11-2011  
Cabling with voltage up to 35 kV in  
trenches using dual wall corrugated tubes



Standard manual DKC-2016.PT  
Busbars "Hercules" 630-6300 A  
Standard manual DKC-2017.DT  
Busbars "Hercules" 160-800 A  
Layouts and installation  
solutions



Office solutions



Storage solutions



Supermarket solutions



Ground parking solutions



Industrial solutions

## About DKC



**DKC, an international company established in August 1998, has gained a strong leading position on the global electrotechnical market. Rapidly developing its production and introducing new high performance technologies, DKC today is among the largest manufacturers of cable support systems and low-voltage equipment in Russia and Europe.**

The aim of DKC is to provide the latest industry solutions and high-quality products to the global electrotechnical market. Over the past few years DKC has made great progress and is constantly striving for new achievements.

### Assortment

DKC product range involves more than 40,000 components and accessories combined into several basic groups: cable ducts, metal and plastic tubes, metal and plastic trays, low-voltage equipment, air conditioning systems, busbars, lightning protection and grounding. Due to active research works and development of new materials and products DKC has managed to collect an impressive list of its own patents that would enable the Company to maintain the status of an innovative manufacturer.

### Coverage

At the moment manufacturing and warehousing complexes of DKC are located in Russia, Ukraine, Italy, Hungary and Romania. Regional representative offices of the Company operate in Russia, CIS countries and abroad. Products are being delivered to Latin America, West and Central Africa.

### Sales strategy

DKC cooperates with an extensive network of distributors, thus not performing direct sales to end users. The balanced sales policy of the Company allows ensuring continuous presence of products on the market and adjusting the price level in a timely manner.

### Partner support

DKC Company carries out seminars and technical consultations for its distributors and their clients on a regular basis. Each partner is treated with an individual approach, and obtains marketing support from the Company.

### Quality

Certification of the quality management system (QMS) for conformity with the international standard ISO 9001 successfully held by DKC on a regular basis reflects commitment to the high standards and continuous improvement of management and production processes. DKC products are considered to be the baseline of quality for the whole industry.

### Social targeting

DKC is convinced that the key aspect of dynamic development of the Company is active involvement in life of its employees and electrotechnical industry at large. The Company launches new projects for higher education institutions, supports talented young specialists, and takes an active part in improvement of mounting education.

### Industry solutions

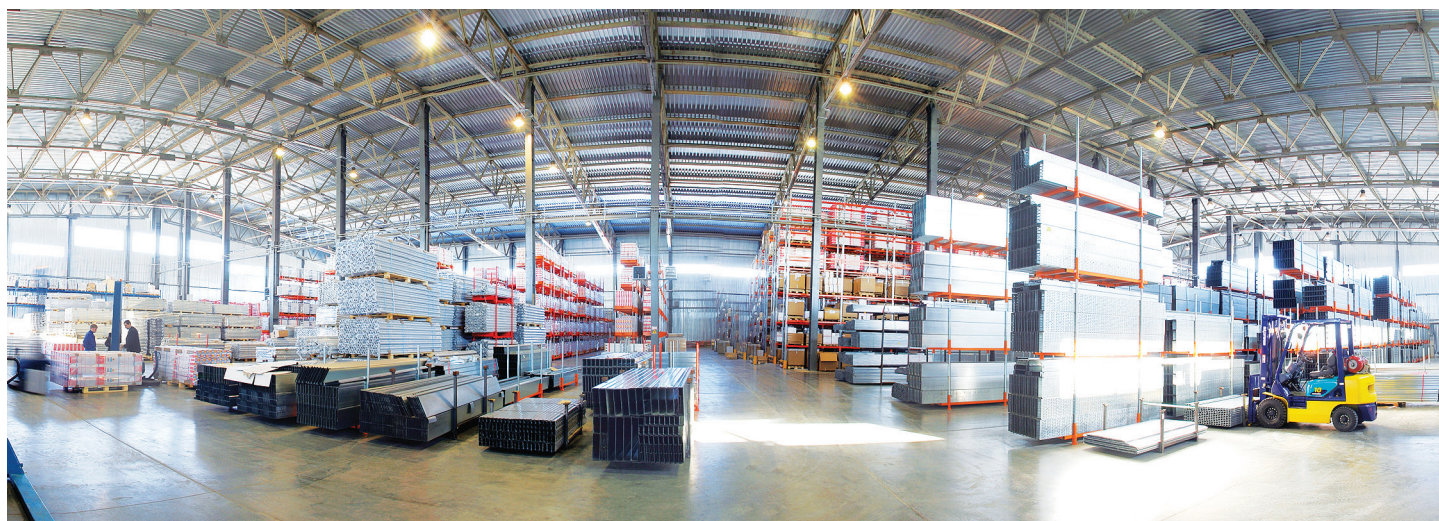
DKC employs its own engineering service which provides support to partners during preparation of complex projects on formation of cable routes inside and outside production, shopping and residential premises. Company specialists have gained considerable experience of industry solutions in the oil and gas sector, telecommunications, infrastructure projects, and many other areas. DKC has developed the special "Manual of standard solutions" for laying of cable support routes on the basis of domestically-made metal cable trays. Standard solutions provided in this Manual are more universal in terms of use, since there are applied in most projects of industrial, commercial and civil construction.

### Projects

DKC products were given preference in supplies to many important facilities, such as: Vostochny Cosmodrome, Kazachya Compressor Station of the South Stream Pipeline, Alabyano-Baltiysky Tunnel, Mikheevsky Mining and Processing Plant, Achinsk Refinery of Rosneft, Rocket Plant of Concern PVO "Almaz-Antey", Olympic facilities in Sochi, bridge to the Russky Island, Bushehr NPP, and Moscow Metro.



### Advantages of working with DKC



#### For distributors

##### Financial gains

High profit from sales of DKC products

High brand recognition

Absence of dumping due to strict control of DKC over compliance with the established discount range

Advantageous financial and credit conditions of a distributor contract

##### Logistics and warehousing

Information on warehouse state updated daily

Fast and free delivery of DKC products throughout the Russian Federation to any regional distributor's warehouse

Detailed planning of production and shipping schedule

##### Service

System of online orders of DKC products

Possibility to buy everything at once in one place. DKC is the only Russian manufacturer of the full range of cable support systems

Original marking of all products for automation of warehouse accounting

Publication of information on a distributor and all its retail outlets at the DKC website

##### Marketing

Financial support of regional marketing programs

Free provision of demonstration stands, specimens of finished products, printed catalogs and advertising materials

##### Support

Involvement of DKC specialists to carry out seminars and presentations for clients

Program of annual trainings throughout Russia

Provision of engineering support during design of complex facilities

Constantly updated regulatory technical documentation on all products

#### For designers

Systems of products which are complementary and compatible with each other

Annually updated and full product catalog with indication of technical data of products and accessories, as well as detail drawings of system components

Technical support in terms of the entire variety of products by phone or via DKC website

Free access to necessary 2D and 3D drawings of products compatible with the most common design programs

Regularly updated and full product catalog

Consultations and assistance in complex design solutions

#### For end users

High quality of products

Optimal delivery periods of ordered products

Availability of all necessary certificates and test reports

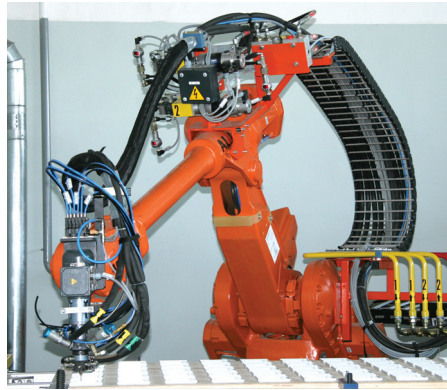
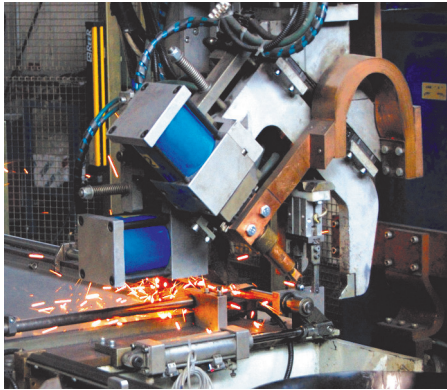
Detailed instructions for assembly and installation of products

Professional installation by trained specialists

Possibility to perform technical training on equipment installation and operation

## Comprehensive offer of equipment for assembly of fuse boxes

Over the past several years DKC proved to be the manufacturer of high-quality low-voltage equipment which has been installed and successfully operated not only in Russia and Europe, but also in countries of North Africa, Middle East and Latin America. Modern automated manufacturing, implementation of advanced technologies and own design bureau allow providing consumers with products of consistent high quality and make it possible for the Company to develop successfully on the market of electrotechnical equipment. DKC offers ample opportunities for furnishing of enclosures with high-quality components from one supplier to low-voltage equipment assemblers.



## Technical support

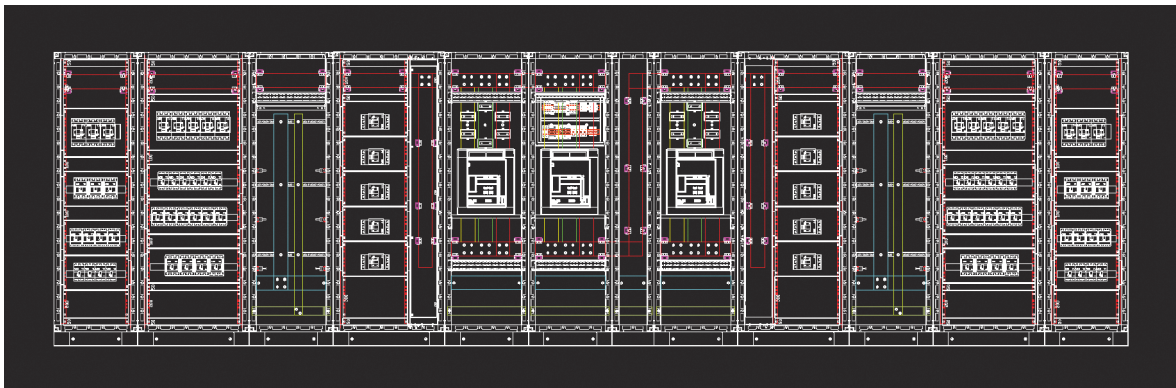
DKC pays great attention to technical support of its products.

Technical handbooks, drawings and software products are issued regularly for support of clients operating DKC low-voltage equipment.

The website **[www.dkc.ru](http://www.dkc.ru)** provides free access to all necessary 2D and 3D drawings in STEP and DWG formats which are compatible with the most common programs of two-dimensional and three-dimensional design. Dynamic blocks of 2D drawings of metal and heavy duty enclosures made of polycarbonate which allow simplifying design and avoiding errors when selecting accessories are also available.

High qualification of specialists of the Technical Support Department makes it possible to deal with projects of any complexity, render a full range of services on support of clients operating low-voltage equipment:

- design of fuse boxes on the basis of "RAM block" enclosure range and "Quadro" components according to single-line diagrams;
- development of solutions for special (non-standard) LVS;
- technical training on equipment installation and operation.



Example of appearance drawing of a low-voltage switchgear on the basis of "RAM block" enclosures



## Explosion-proof electrical equipment

### Description

Explosion-proof equipment is the equipment wherein special design features are provided for and certified component parts and materials are used, and also requirements to assembly speculated by the series of standards are given that are aimed at prevention or inhibition of environment ignition possibility in the course of operation of this equipment in hazardous areas.

Being one of the leaders in the field of production of power distribution equipment, DKC Company offers a wide range of explosion-proof products and accessories certified according to Russian and international standards for explosion-proof products and accessories. The explosion protection system includes explosion-proof enclosures, junction boxes, control stations, cable glands, terminal clips, control components, metal tubes, metal flexible conduits and a lot of accessories. Each system component is certified according to actual requirements of Russian standards and allows for formation of a reliable wiring system in hazardous areas.

### Application

Explosion-proof equipment is used in areas where possibility of hazardous environment exists – in chemical, petrochemical industries, in oil and gas transportation, mining industry and other fields. There are production, refining, transportation and storage processes in these industries in the result of which gases, vapors or mists of hazardous substances may get generated. Hazardous dusts in the form of a suspension or a layer may be generated in food industry and agriculture in the course of processing and transportation (grain milling, flour and sugar dust).

DKC explosion-proof equipment is suitable for application in hazardous areas of premises and outdoor plants, and it meets the requirements of the latest international (ATEX, IEC) and Russian codes and standards (requirements of TR CU 012, GOST and PUE).

Requirements of Russian and international standards get continuously updated to ensure the maximum level of safety for people and tangible assets.

The products are not applicable for installation in underground excavation facilities and superficial structures of mines.



#### Industrial facilities

Unique fast attachment accessories and cable glands with five thread types for connection of equipment, motors and organization of branching



#### Power plants

Universal cable glands with four certification types suitable for connection of any kind of process equipment



#### Petrochemical production facilities

Cable protection when connecting equipment in chemically aggressive environments owing to the system elements made of AISI 304 and AISI 316L stainless steel

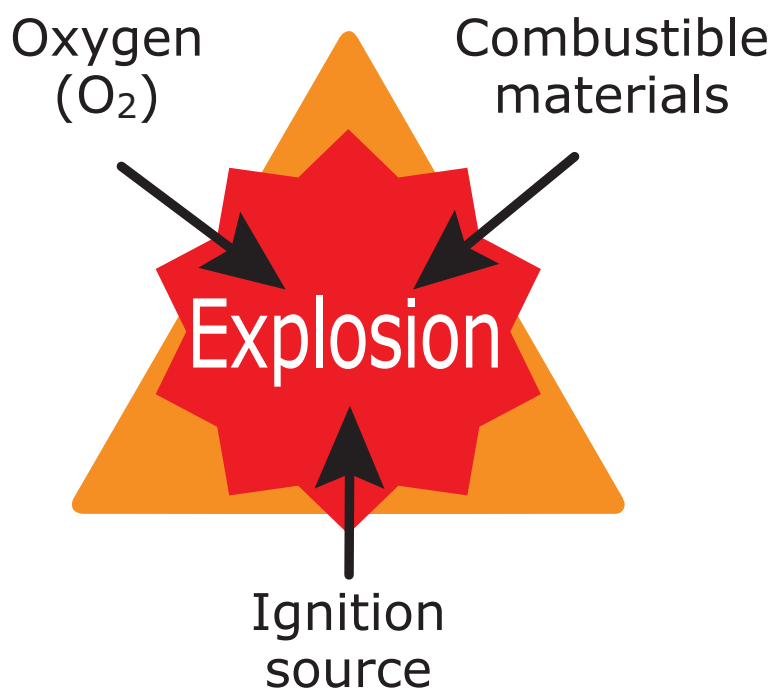
## Physical grounds of explosion

Explosion is a chemical reaction of a flammable substance with oxygen that results in release of an ample amount of energy, shocking and thermal impact.

Flammable substance may be in the form of vapor, gas, mist and dust.

All the 3 components are required for explosion to happen:

1. Flammable substance in certain concentration (explosive limits);
2. Oxygen content in the air;
3. Ignition source (spark, heated surface, radiation).










All the explosion protection types are aimed at exclusion of one or inhibition of the effects of several components. By exclusion of at least one of the 3 components explosion can be avoided!

## Complex explosion protection

Complex explosion protection is applied during design of hazardous areas and facilities, and it provides for several levels of protective measures:

### Measures aimed at prevention of hazardous environment formation

	Use of ventilation to prevent ignition
	Installation of gas detection systems
	Use of inert substances and oxygen
	Reduction of flammable substance content
	Removal of dust accumulation
	Observation of explosive limits (flammable substance concentration shall not cause an explosion)
	Adherence to safety and correct operation measures



## Measures aimed at prevention of hazardous environment ignition

In case formation of hazardous environment is unavoidable, the following measures shall be taken:

- division of potentially hazardous areas into zones;
- assessment of hazardous environment formation possibility;
- classification of hazardous areas;
- classification of materials;
- selection of explosion protection types according to classification.

## Measures aimed at mitigation of negative explosion effects to acceptable level

- construction and use of protective structures;
- improvement of physical resistance of facilities to the consequences;
- zoning of enterprise territories.

## Regulatory documents

Technical Regulation of the Customs Union TR CU 012-2011 "On safety of the equipment for operation in explosive atmospheres" specifies mandatory requirements to safety of equipment for operation in hazardous environments adherence to which ensures safety of operation thereof in these environments.

TR CU covers:

- electric equipment for operation in hazardous environments including Ex components;
- non-electric equipment for operation in hazardous environments;

Identification feature of equipment and Ex components for operation in hazardous environments is availability of measures for provision of explosion protection specified in technical documentation, and of explosion protection marking applied on the equipment.

## Quality

The foremost task of explosion-proof equipment is protection of personnel and real assets against possible consequences at enterprises with hazardous environment. That is why DKC Company pays careful attention to equipment safety – selection of materials, proper testing of materials and technologies, selection and calculation of thermal behavior, material compatibility, mechanical strength and product certification according to Russian and international standards.

Latest technologies and materials are used in production allowing for provision of high quality of DKC products. The main criterion for the Company is reliability and quality of produced products, so that is why incoming inspection of raws and materials, operational control, final inspection and testing are carried out on all production stages.

## System composition

### Explosion-proof enclosures and terminal boxes based thereon

- shock-resistant, anti-static glass-fiber reinforced polyester meets all the requirements of GOST and TR. Enclosure material is resistant to alkali and acids, as well as to UV radiation and can withstand an impact exceeding 7 J;
- enclosure made of corrosion-resistant aluminium alloy has been tested for resistance to salt fog, vapors of hydrogen sulfide and sulfuric acid;
- enclosure made of AISI 304 and AISI 316L corrosion-resistant steel has excellent resistance to high temperatures and corrosion.

Modular structure concept and range of explosion-proof Ex components of DKC Company allows for configuration of any terminal box comprising recommended and tested components according to customer's request.

### Explosion-proof terminal clips

- screw type terminal clips provide better mechanical attachment with other types of clips. Fastening and tightening process is easy and requires no special training, and special fastening mechanism provides protection against self-unscrewing;
- spring-type terminal clips are distinguished by high reliability and safety of connection due to tightening element with a lock;
- terminal clips are distinguished by electric conductivity and low transient resistance of the terminal clip contact parts which allow for conduction of higher rated current with reduced heating of the clip contact part;
- dielectric material of the clip differs in the value of comparative tracking index which is I according to IEC 60112 (equivalent of the value for glass and ceramics). This ensures higher safety and lower requirements to creepage distances and air gaps.

### Explosion-proof cable glands

Explosion-proof cable glands have four types of certification:

- flameproof sheath of d type;
- increased safety of e type;
- air circulation restriction of n type;
- dust ignition protection of t type.

They can be installed in any sheath with any type of protection, distinguished by a wide range of gland materials, types of threads and attached cable.

### Explosion-proof tubing

- patented fastening technology allows making a quick and effortless connection, at the same time ensuring a high degree of protection against dust and moisture;
- increased safety of quick-release connections of e type.

### Explosion-proof control stations and control elements

- control stations are designed based on enclosures made of aluminium, polyester and stainless steel;
- distinguished by increased service life of up to 1,000,000 pushes;
- resistant to mechanical damage and corrosion;
- low electrical resistance of a contact due to silver plating;
- modular system allows for quick and easy replacement of a control extension.

## Advantages

### Quality

DKC products meet international and Russian standards and requirements and have certificates of ATEX, IECEx and TR CU types. Products have passed laboratory tests during which the roughest operating conditions are simulated, and international certification validates compliance with the requirements of all the markets in the world.

### Ready solutions

Availability of more than two hundred solutions in the range allows for prompt provision of a customer with explosion-proof products.

### Customization

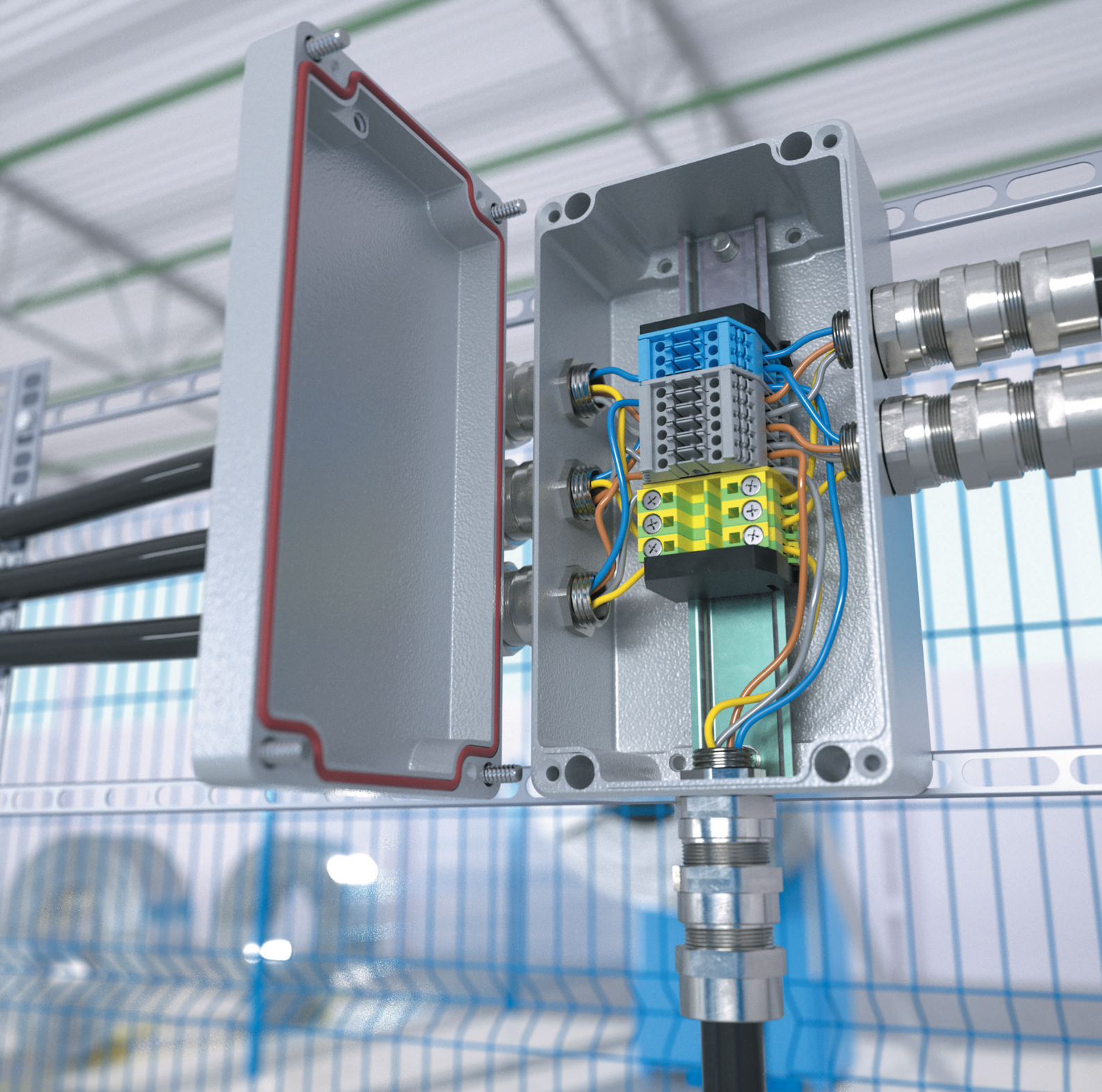
Depending on the customer's requirements, DKC Company offers the possibility of individual customization of explosion-proof electric equipment.

### Service

High qualification of specialists in production and operation of explosion-proof equipment not only allows offering ready solutions, but also selecting individual items on customer's request.

### Assortment

Continuous development and expansion of the range of explosion-proof equipment facilitates solution of a wide variety of tasks of the Company clients.



## Terminal boxes

Terminal boxes with advanced explosion-proof rating .....	12
Aluminium alloy terminal boxes .....	12
Standard sets of explosion-proof aluminium sheaths and cable glands .....	16
Glass-fiber reinforced polyester terminal boxes .....	18
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## Terminal boxes with advanced explosion-proof rating of Ex e, Ex ia, Ex tb

### Aluminium alloy terminal boxes of TBE-A and TBI-A series

#### Description

Explosion-proof terminal boxes of TBE-A and TBI-A series are made of aluminium alloy. Their purpose is to connect and fan-out cables of direct and alternating current electric and lighting circuits, data, signalling and control network cables.

Explosion-proof terminal boxes of TBI-A series can also be used for provision of connections and fan-outs of intrinsically safe circuits. They are used in instrumentation circuits with low voltage and current, in drives and measuring circuits.

Terminal boxes are also used for protection of connections from mechanical damage, moisture and dust when they are installed in hazardous gaseous or dusty environments.

#### Terminal boxes of TBE-A series:

- 1Ex e II T6...T4 Gb;
- Ex tb IIIC T80°C...T130°C Db.

#### Terminal boxes of TBI-A series:

- 0Ex ia IIC T6...T4 Ga;
- Ex tb IIIC T80°C...T130°C Db;
- Ex ia IIIC T80°C...T130°C Da.

#### Design

Box enclosure is made of cast aluminium alloy without traces of copper. Box includes an enclosure and a cover connected by means of captive bolts. Number of bolts depends on the box dimensions. Mounting panel, DIN rails with terminal clips, grounding busbars and other electrotechnical equipment. Sides of the box house explosion-proof cable glands for different cable types, couplings, plugs, valves, etc. All the fastening and mounting elements are made of corrosion-resistant steel.

Explosion-proof terminal boxes have three types of certification, meet all the requirements of TR CU standards and have versions with the explosion protection as follows:

- Ex e "Increased safety";
- Ex i "Intrinsically safe electric circuit";
- Ex t "Dust ignition protection".

#### Distinctive features

##### Captive silicone seal

- provides high degree of dust and moisture protection equal to IP66;
- does not fall out during installation ensuring the stated protection degree

##### Mounting holes

- allow for attachment of DIN rail and mounting plate inside the box

##### High wall thickness

- increased mechanical shock resistance

##### Stainless steel captive screws for cover attachment

- corrosion-resistant, preserve aesthetic appearance;
- cannot be lost during installation

##### Chemical and corrosion resistance

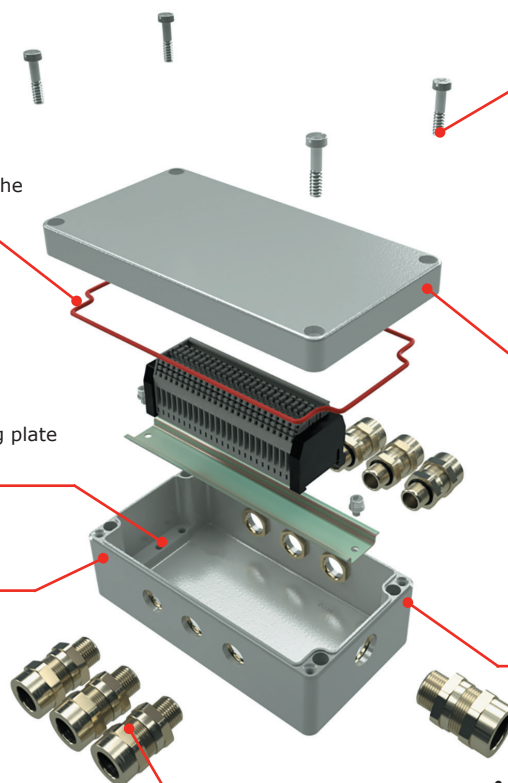
- aluminium alloy boxes are distinguished by high resistance to salt fog

##### 27 dimensions for a sheath

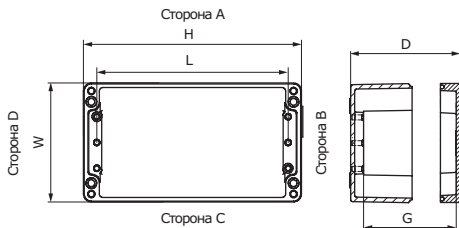
- selection of the most suitable dimension and customized set to solve any connection tasks

##### Cable glands

- various thread types (Metric, NPT, GAS and other);
- materials: nickel-plated brass, stainless steel, polyamide;
- cable dimension range within 5-78 mm;
- for non-armoured, armoured cables, non-armoured cables in a tube or a metal flexible conduit



Aluminium alloy terminal boxes of TBE-A and TBI-A series with Ex e, Ex ia and Ex tb protection types



- Purpose:**
- switching and branching of wires and cables in systems for power supply, switching and alarming in hazardous areas containing gas and dust.
- Material:**
- corrosion-resistant aluminium.
- Distinctive features:**
- high thermal conductivity;
  - high precision of inner and outer dimensions owing to casted production method;
  - maximum power dissipation among similar enclosures made of different materials;
  - resistant to impact of salt fog and other chemicals;
  - sealing system of labyrinth type.
- Protection:**
- assemblable: 1Ex e II T6...T4 Gb / 0Ex ia IIC T6...T4 Ga / Ex ia IIIC T80°C...T130°C Da / Ex tb IIIC T80°C...T130°C Db.

Characteristics

Technical specifications	TS-27.12.31-065-47022248-2018
Protection degree	IP66 according to GOST 14254-96
Environmental temperature, °C	From -60 to +65
Shock resistance at -60°C	7 J according to GOST 31610.0-2014 (IEC 60079-0:2011)
Climatic version	UKhL1, T1, OM1, V1, UKhL 5, T5, V5 according to GOST 15150
Cover seal	Silicone
Installation in gas-hazardous areas	Areas 0-1-2. Gas group II, gas subgroup IIA, IIB, IIC
Installation in dust-hazardous areas	Areas 20-21-22. Dust group III, dust subgroup IIIA, IIIB, IIIC
Marking and type of explosion protection of TBE-A series	1Ex e II T6...T4 Gb Ex tb IIIC T80°C...T130°C Db
Marking and type of explosion protection of TBI-A series	0Ex ia IIC T6...T4 Ga Ex tb IIIC T80°C...T130°C Db Ex ia IIIC T80°C...T130°C Da
Provision of explosion protection and conformity to standards	GOST 31610.0-2014 (IEC 60079-0:2011) GOST R IEC 60079-7-2012 GOST 31610.11-2014 (IEC 60079-11:2011) GOST IEC 60079-31-2013
Available accessories	Fastening elements Cable glands Screw type and spring type terminal clips End caps Mounting panel

## Dimensions of explosion-proof sheaths

Physical dimensions, mm			DIN rail type	L, mm	G, mm	Weight, kg	Dimension designation
H	W	D					
80	75	57	Omega2F	60	51	0.3	05
125	80	57	Omega2F	110	51	0.47	06
175	80	57	Omega2F	160	51	0.55	07
250	80	52	Omega2F	240	45	0.73	08
100	100	80	Omega3F	90	74	0.62	09
160	100	80	Omega3F	150	74	1	10
120	120	80	Omega3F	100	74	0.94	11
220	120	80	Omega3F	200	74	1.4	13
120	120	90	Omega3F	100	82	0.96	12
220	120	90	Omega3F	200	82	1.43	14
140	140	90	Omega3F	124	82	1.5	15
200	140	90	Omega3F	190	82	2.27	16
160	160	90	Omega3F	150	82	1.96	17
260	160	90	Omega3F	240	82	2.37	18
360	160	90	Omega3F	340	82	2.54	19
180	180	100	Omega3F	170	92	2.4	20
280	180	100	Omega3F	260	92	2.92	21
230	200	110	Omega3F	190	100	2.44	22
280	230	110	Omega3F	260	100	3	24
330	230	110	Omega3F	310	100	4.05	25
400	230	110	Omega3F	380	100	3.84	27
400	310	110	Omega3F	380	100	5.3	01
600	310	110	Omega3F	580	100	9.2	03
230	200	180	Omega3F	190	170	4	23
330	230	180	Omega3F	310	170	5.26	26
400	310	180	Omega3F	380	170	9	02
600	310	180	Omega3F	580	170	12	04

## Maximum number of cable glands installed on each box side

M16x1.5 A(C)/B(D)	M20x1.5 A(C)/B(D)	M25x1.5 A(C)/B(D)	M32x1.5 A(C)/B(D)	M40x1.5 A(C)/B(D)	M50x1.5 A(C)/B(D)	M63x1.5 A(C)/B(D)	M75x1.5 A(C)/B(D)	M90x2 A(C)/B(D)	Dimension designation
1/0	1/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	05
3/0	2/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	06
5/0	4/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	07
7/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	08
2/1	1/1	1/1	1/0	0/0	0/0	0/0	0/0	0/0	09
4/1	3/1	3/1	2/0	0/0	0/0	0/0	0/0	0/0	10
2/2	2/1	2/0	1/0	0/0	0/0	0/0	0/0	0/0	11
6/2	5/1	4/0	3/0	0/0	0/0	0/0	0/0	0/0	13
2/2	2/1	2/0	1/0	0/0	0/0	0/0	0/0	0/0	12
6/2	5/1	4/0	3/0	0/0	0/0	0/0	0/0	0/0	14
3/2	2/1	2/0	1/0	0/0	0/0	0/0	0/0	0/0	15
5/2	4/1	3/0	3/0	0/0	0/0	0/0	0/0	0/0	16
6/2	3/2	2/2	2/0	2/0	0/0	0/0	0/0	0/0	17
14/2	5/2	5/2	4/0	3/0	0/0	0/0	0/0	0/0	18
22/2	8/2	7/2	6/0	5/0	0/0	0/0	0/0	0/0	19
8/3	3/2	3/2	2/0	2/0	0/0	0/0	0/0	0/0	20
16/3	6/2	5/2	4/0	4/0	0/0	0/0	0/0	0/0	21
10/10	8/4	6/3	3/3	2/2	2/0	1/0	0/0	0/0	22
16/10	12/4	10/3	4/3	4/2	3/0	2/0	0/0	0/0	24
18/10	14/4	14/3	5/3	5/2	4/0	3/0	0/0	0/0	25
24/10	18/4	16/3	7/3	6/2	5/0	4/0	0/0	0/0	27
24/16	20/6	16/5	7/4	6/4	5/0	4/0	0/0	0/0	01
36/16	28/6	24/5	10/4	8/4	6/0	6/0	0/0	0/0	03
25/20	16/12	9/9	9/6	4/4	4/4	1/1	1/1	1/1	23
45/20	28/12	21/9	15/6	10/4	8/4	3/1	3/1	2/1	26
60/32	40/18	24/15	21/8	12/8	10/6	4/2	3/2	3/1	02
90/32	56/18	36/15	30/8	16/8	12/6	6/2	4/2	4/1	04

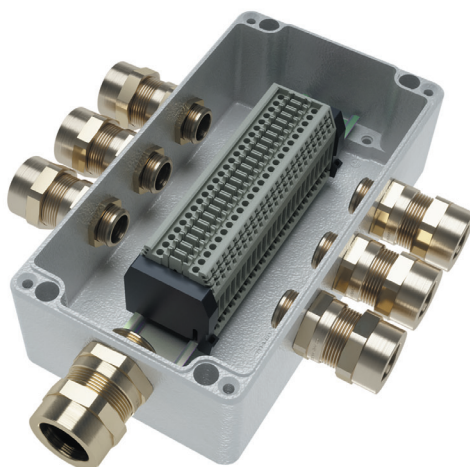
**Note:** see recommended number of terminal clips installed inside the sheath in the Annex (p. 129).

## Recommended maximum power dissipation values for explosion-proof sheaths made of corrosion-resistant aluminium

Dimensions			Power dissipation for temperature classes and environmental temperature, W							Dimension designation
H	W	D	T6 40°C T5 55°C	T6 55°C T5 70°C	T6 65°C T5 80°C	T6 50°C T5 65°C	T4 40°C	T4 55°C	T4 65°C	
80	75	57	5.91	3.49	2.01	4.27	15.70	12.48	10.47	05
125	80	57	8.57	5.07	2.93	6.20	22.70	18.07	15.16	06
175	80	57	11.02	6.53	3.78	7.98	29.07	23.15	19.45	07
250	80	52	13.93	8.27	4.79	10.10	36.52	29.14	24.51	08
100	100	80	10.11	5.98	3.45	7.31	26.83	21.34	17.9	09
160	100	80	13.99	8.29	4.79	10.13	36.95	29.42	24.71	10
120	120	80	13.19	7.81	4.51	9.55	34.95	27.81	23.34	11
220	120	80	20.13	11.95	6.92	14.59	52.92	42.19	35.47	13
120	120	90	13.92	8.24	4.76	10.07	36.88	29.34	24.63	12
220	120	90	21.07	12.51	7.24	15.27	55.39	44.16	37.12	14
140	140	90	17.43	10.32	5.96	12.62	46.10	36.70	30.81	15
200	140	90	22.22	13.18	7.62	16.10	58.49	46.62	39.18	16
160	160	90	21.24	12.58	7.27	15.38	56.09	44.67	37.51	17
260	160	90	29.55	17.56	10.17	21.43	77.43	61.79	51.97	18
360	160	90	36.70	21.86	12.69	26.66	95.47	76.33	64.29	19
180	180	100	26.38	15.64	9.04	19.11	69.55	55.41	46.55	20
280	180	100	35.39	21.04	12.19	25.68	92.60	73.92	62.19	21
230	200	110	35.04	20.80	12.04	25.40	92.04	73.40	61.71	22
280	230	110	44.64	26.54	15.38	32.39	116.81	93.25	78.46	24
330	230	110	49.58	29.51	17.12	36.01	129.27	103.29	86.96	25
400	230	110	55.90	33.33	19.36	40.64	145.01	116.03	97.78	27
400	310	110	71.81	42.82	24.87	52.21	186.29	149.06	125.61	01
600	310	110	90.65	54.30	31.64	66.11	232.13	186.40	157.48	03
230	200	180	43.44	25.79	14.93	31.49	114.10	90.99	76.5	23
330	230	180	59.71	35.54	20.62	43.36	155.68	124.40	104.74	26
400	310	180	84.11	50.16	29.13	61.15	218.21	174.60	147.14	02
600	310	180	104.30	62.49	36.41	76.07	267.11	214.48	181.2	04



## Standard sets based on aluminium explosion-proof sheaths and AAS series cable glands for an armoured cable



### Technical characteristics

Description	Standard sets based on aluminium explosion-proof sheaths and AAS series cable glands for an armoured cable
Series	TBE-A
Marking according to TR CU	1Ex e II T6 Gb / Ex tb IIIC T80°C Db;
Conformity to standards	GOST 31610.0-2014 / GOST R IEC 60079-7-2012 / GOST IEC 60079-31-2013
Areas of use	1, 2, 21, 22
Operating temperature, °C	From -60 to +40
Protection against external effects	IP66
Sheath material	Aluminium alloy
Cable gland series	AAS – single seal
Cable gland thread type	Metric
Cable gland material	Nickel-plated brass
Cable gland seal material	Silicone
Type of cable	Armoured cable of circular section
Drawings of standard sets	p. 144.

Physical dimensions, mm			Type of terminal (grounding terminal)	Number of terminals (grounding terminals)	Number of cable glands on sides (A/B/C/D) and diameters of embossed cable, mm				Drawing number	Code
H	W	D			A	B	C	D		
100	100	80	CBC2	6	1 Ø5.5-13	–	1 Ø5.5-13	–	TBE-A No. 091.00.001	1101.091.00.001
100	100	80	CBC2	6	1 Ø10.5-18	–	1 Ø10.5-18	–	TBE-A No. 091.00.002	1101.091.00.002
100	100	80	CBC2	6	1 Ø5.5-13	1 Ø10.5-18	1 Ø5.5-13	–	TBE-A No. 091.00.003	1101.091.00.003
100	100	80	CBC2	6	1 Ø10.5-18	1 Ø5.5-13	1 Ø10.5-18	1 Ø5.5-13	TBE-A No. 091.00.006	1101.091.00.006
160	100	80	CBC2	12	1 Ø5.5-13	1 Ø10.5-18	–	–	TBE-A No. 101.00.001	1101.101.00.001
160	100	80	CBC2	12	1 Ø5.5-13	–	1 Ø5.5-13	–	TBE-A No. 101.00.002	1101.101.00.002
160	100	80	CBC2	12	1 Ø10.5-18	–	1 Ø10.5-18	–	TBE-A No. 101.00.003	1101.101.00.003
160	100	80	CBC2	12	1 Ø5.5-13	1 Ø10.5-18	1 Ø5.5-13	–	TBE-A No. 101.00.004	1101.101.00.004
160	100	80	CBC2	12	2 Ø5.5-13	–	1 Ø5.5-13	–	TBE-A No. 101.00.005	1101.101.00.005
160	100	80	CBC2	12	2 Ø10.5-18	–	1 Ø10.5-18	–	TBE-A No. 101.00.006	1101.101.00.006
160	100	80	CBC2	12	1 Ø10.5-18	1 Ø5.5-13	1 Ø10.5-18	1 Ø5.5-13	TBE-A No. 101.00.007	1101.101.00.007
160	100	80	CBC2	12	2 Ø5.5-13	1 Ø10.5-18	1 Ø5.5-13	–	TBE-A No. 101.00.008	1101.101.00.008
160	100	80	CBC2	12	2 Ø5.5-13	–	2 Ø5.5-13	–	TBE-A No. 101.00.009	1101.101.00.009
160	100	80	CBC2	12	2 Ø10.5-18	–	2 Ø10.5-18	–	TBE-A No. 101.00.010	1101.101.00.010
160	100	80	CBC2	12	1 Ø15-24	1 Ø10.5-18	1 Ø15-24	1 Ø10.5-18	TBE-A No. 101.00.011	1101.101.00.011
160	100	80	CBC2	12	2 Ø15-24	–	2 Ø15-24	–	TBE-A No. 101.00.012	1101.101.00.012
160	100	80	CBC2(TEO2)	12(4)	3 Ø5.5-13	–	2 Ø5-10	–	TBE-A No. 101.00.014	1101.101.00.014
160	100	80	CBC2(TEO2)	12(3)	3 Ø5.5-13	1 Ø10.5-18	–	1 Ø10.5-18	TBE-A No. 101.00.015	1101.101.00.015
160	100	80	CBC2	12	3 Ø5.5-13	–	2 Ø5.5-13	–	TBE-A No. 101.00.016	1101.101.00.016

Physical dimensions, mm			Type of terminal (grounding terminal)	Number of terminals (grounding terminals)	Number of cable glands on sides (A/B/C/D) and diameters of embossed cable, mm				Drawing number	Code
H	W	D			A	B	C	D		
160	100	80	CBC2	12	2 Ø10.5-18	1 Ø5.5-13	2 Ø10.5-18	1 Ø5.5-13	TBE-A No. 101.00.017	1101.101.00.017
160	100	80	CBC2	12	3 Ø5.5-13	1 Ø10.5-18	2 Ø5.5-13	–	TBE-A No. 101.00.018	1101.101.00.018
160	100	80	CBC2(TEO2)	12(3)	3 Ø5.5-13	–	3 Ø5.5-13	–	TBE-A No. 101.00.019	1101.101.00.019
160	160	90	CBC2	12	2 Ø21-30	–	2 Ø21-30	–	TBE-A No. 171.00.001	1101.171.00.001
220	120	80	CBC2	24	1 Ø5.5-13	–	1 Ø5.5-13	–	TBE-A No. 131.00.001	1101.131.00.001
220	120	80	CBC2	24	1 Ø10.5-18	–	1 Ø10.5-18	–	TBE-A No. 131.00.002	1101.131.00.002
220	120	80	CBC2	24	2 Ø10.5-18	–	1 Ø10.5-18	–	TBE-A No. 131.00.005	1101.131.00.005
220	120	80	CBC2	24	1 Ø10.5-18	1 Ø5.5-13	1 Ø10.5-18	1 Ø5.5-13	TBE-A No. 131.00.006	1101.131.00.006
220	120	80	CBC2	24	2 Ø5.5-13	–	2 Ø5.5-13	–	TBE-A No. 131.00.007	1101.131.00.007
220	120	80	CBC2	24	2 Ø10.5-18	–	2 Ø10.5-18	–	TBE-A No. 131.00.010	1101.131.00.010
220	120	80	CBC2	24	3 Ø5.5-13	–	3 Ø5.5-13	–	TBE-A No. 131.00.014	1101.131.00.014
220	120	80	CBC2	24	3 Ø10.5-18	–	3 Ø10.5-18	–	TBE-A No. 131.00.016	1101.131.00.016
220	120	80	CBC2	24	4 Ø5.5-13	–	4 Ø5.5-13	–	TBE-A No. 131.00.020	1101.131.00.020
220	120	80	CBC2	24	5 Ø5.5-13	–	5 Ø5.5-13	–	TBE-A No. 131.00.021	1101.131.00.021
360	160	90	CBC2	48	2 Ø10.5-18	–	2 Ø10.5-18	–	TBE-A No. 191.00.001	1101.191.00.001
360	160	90	CBC2	48	3 Ø10.5-18	–	3 Ø10.5-18	–	TBE-A No. 191.00.004	1101.191.00.004
360	160	90	CBC2	48	6 Ø5.5-13	–	6 Ø5.5-13	–	TBE-A No. 191.00.005	1101.191.00.005
360	160	90	CBC2	48	4 Ø5.5-13	2 Ø10.5-18	4 Ø5.5-13	2 Ø10.5-18	TBE-A No. 191.00.006	1101.191.00.006
360	160	90	CBC2	48	4 Ø10.5-18	2 Ø5.5-13	4 Ø10.5-18	2 Ø5.5-13	TBE-A No. 191.00.007	1101.191.00.007
360	160	90	CBC2	48	6 Ø5.5-13	2 Ø10.5-18	6 Ø5.5-13	2 Ø10.5-18	TBE-A No. 191.00.009	1101.191.00.009
360	160	90	CBC2	48	8 Ø5.5-13	1 Ø10.5-18	8 Ø5.5-13	1 Ø10.5-18	TBE-A No. 191.00.011	1101.191.00.011
100	100	80	CBC4(TEO4)	4(1)	1 Ø5.5-13	1 Ø5.5-13	–	1 Ø5.5-13	TBE-A No. 091.00.010	1101.091.00.010
100	100	80	CBC4(TEO4)	4(1)	1 Ø10.5-18	1 Ø10.5-18	–	1 Ø10.5-18	TBE-A No. 091.00.011	1101.091.00.011
100	100	80	CBC4(TEO4)	4(1)	1 Ø15-24	1 Ø5.5-13	1 Ø15-24	–	TBE-A No. 091.00.012	1101.091.00.012
100	100	80	CBC4(TEO4)	4(1)	1 Ø5.5-13	1 Ø5.5-13	1 Ø5.5-13	1 Ø5.5-13	TBE-A No. 091.00.013	1101.091.00.013
100	100	80	CBC4(TEO4)	4(1)	1 Ø15-24	1 Ø5.5-13	1 Ø15-24	1 Ø5.5-13	TBE-A No. 091.00.014	1101.091.00.014
160	160	90	CBC16	6	2 Ø21-30	–	2 Ø21-30	–	TBE-A No. 171.00.005	1101.171.00.005
220	120	90	CBC16	6	2 Ø15-24	–	2 Ø15-24	–	TBE-A No. 141.00.001	1101.141.00.001
220	120	90	CBC16	10	2 Ø10.5-18	–	2 Ø10.5-18	–	TBE-A No. 141.00.002	1101.141.00.002
220	120	90	CBC16	10	3 Ø10.5-18	–	1 Ø10.5-18	–	TBE-A No. 141.00.004	1101.141.00.004
220	120	90	CBC16	10	3 Ø10.5-18	–	1 Ø15-24	–	TBE-A No. 141.00.005	1101.141.00.005
230	200	110	CBC16	10	2 Ø15-24	1 Ø24-36	2 Ø15-24	1 Ø24-36	TBE-A No. 221.00.001	1101.221.00.001
230	200	180	CBD70	5	2 Ø21-30	1 Ø24-36	2 Ø21-30	1 Ø24-36	TBE-A No. 231.00.001	1101.231.00.001
330	230	180	CBD70	10	2 Ø21-30	1 Ø24-36	2 Ø21-30	1 Ø24-36	TBE-A No. 261.00.001	1101.261.00.001

## Glass-fiber reinforced polyester terminal boxes of TBE-P and TBI-P series

### Description

Explosion-proof terminal boxes of TBE-P series are made of shock-resistant anti-static polyester reinforced with glass-fiber. Their purpose is to connect and fan-out cables of direct and alternating current electric and lighting circuits, data network cables, signalling and control cables.

Explosion-proof terminal boxes of TBI-P series can also be used for provision of connections and fan-outs of intrinsically safe circuits. They are used in instrumentation circuits with low voltage and current, in drives and measuring circuits.

Terminal boxes are also used for protection of connections from mechanical damage, moisture and dust when they are installed in hazardous gaseous or dusty environments.

#### Terminal boxes of TBE-P series:

- 1Ex e II T6...T4 Gb;
- Ex tb IIIC T80°C...T130°C Db.

#### Terminal boxes of TBI-P series:

- 0Ex ia IIC T6...T4 Ga;
- Ex tb IIIC T80°C...T130°C Db;
- Ex ia IIIC T80°C...T130°C Da.

### Design

Box enclosure is made of shock-resistant anti-static polyester reinforced with glass-fiber and addition of graphite. Box includes an enclosure and a cover connected by means of captive bolts. Mounting panel, DIN rails with terminal clips, grounding busbars and other electrotechnical equipment. Sides of the box house explosion-proof cable glands for different cable types, couplings, plugs, valves, etc. All the fastening and mounting elements are made of corrosion-resistant steel.

Explosion-proof terminal boxes have three types of certification, meet all the requirements of TR CU standards and have versions with the explosion protection as follows:

- Ex e "Increased safety";
- Ex i "Intrinsically safe electric circuit";
- Ex t "Dust ignition protection".

### Distinctive features

#### Stainless steel captive screws for cover attachment

- corrosion-resistant, preserve aesthetic appearance;
- cannot be lost during installation

#### Captive silicone seal

- provides high degree of dust and moisture protection equal to IP66;
- does not fall out during installation ensuring the stated protection degree

#### Mounting holes

- allow for attachment of DIN rail and mounting plate inside the box

#### Cable glands

- various thread types (Metric, NPT, GAS and other);
- materials: nickel-plated brass, stainless steel, polyamide;
- cable dimension range within 5-78 mm;
- for non-armoured, armoured cables, non-armoured cables in a tube or a metal flexible conduit

#### Wide range

- selection of the most suitable dimension and customized set to solve any connection tasks

#### Chemical resistance

- box material is not susceptible to corrosion propagation, is chemically resistant as related to service fluids and is resistant to UV radiation

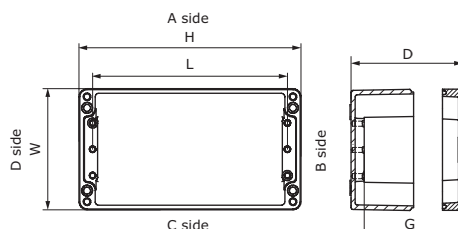
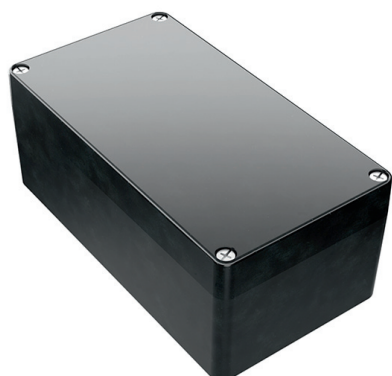
#### Availability of stainless steel external/internal grounding terminal on the box side

- allows connecting a grounding conductor up to 120 mm<sup>2</sup>

#### High wall thickness

- increased shock resistance

## Glass-fiber reinforced polyester terminal boxes of TBE-P and TBI-P series with Ex e, Ex ia and Ex tb protection types



### Purpose:

- switching and branching of wires and cables in systems for power supply, switching and alarming in hazardous areas containing gas and dust.

### Material:

- shock-resistant polyester reinforced with glass-fiber with addition of graphite.

### Distinctive features:

- box material is not susceptible to corrosion;
- chemically resistant to service fluids;
- resistant to UV radiation;
- sealing system of labyrinth type.

### Protection:

- assemblable: 1Ex e II T6...T4 Gb / 0Ex ia IIC T6...T4 Ga / Ex ia IIIC T80°C...T130°C Da / Ex tb IIIC T80°C...T130°C Db.

## Characteristics

Technical specifications	TS-27.12.31-066-47022248-2018
Protection degree	IP66 according to GOST 14254-96
Environmental temperature, °C	From -60 to +65°C
Shock resistance at -60°C	7 J according to GOST 31610.0-2014 (IEC 60079-0:2011)
Climatic version	UKhL1, T1, OM1, V1, UKhL 5, T5, V5 according to GOST 15150
Cover seal	Silicone
Installation in gas-hazardous areas	Areas 0-1-2. Gas group II, gas subgroup IIA, IIB, IIC
Installation in dust-hazardous areas	Areas 20-21-22. Dust group III, dust subgroup IIIA, IIIB, IIIC
Marking and type of explosion protection of TBE-P series	1Ex e II T6...T4 Gb Ex tb IIIC T80°C...T130°C Db
Marking and type of explosion protection of TBI-P series	0Ex ia IIC T6...T4 Ga Ex tb IIIC T80°C...T130°C Db Ex ia IIIC T80°C...T130°C Da
Provision of explosion protection and conformity to standards	GOST 31610.0-2014 (IEC 60079-0:2011) GOST R IEC 60079-7-2012 GOST 31610.11-2014 (IEC 60079-11:2011) GOST IEC 60079-31-2013
Available accessories	Fastening elements Stainless steel grounding stud Cable glands Screw type and spring type terminal clips End caps Grounded rings for cable glands Mounting panel

## Dimensions of explosion-proof sheaths

Physical dimensions, mm			DIN rail type	L, mm	G, mm	Weight, kg	Dimension designation
H	W	D					
80	75	56	Omega 2F	60	46	0.28	01
110	75	56	Omega 2F	100	46	0.35	02
120	120	90	Omega 3F	110	80	0.78	03
220	120	90	Omega 3F	200	80	1.1	04
160	160	90	Omega 3F	145	80	1.3	05
260	160	90	Omega 3F	240	80	1.8	06
360	160	90	Omega 3F	340	80	2.27	07
250	250	120	Omega 3F	240	110	2.82	08
400	250	120	Omega 3F	380	110	3.74	09
400	400	120	Omega 3F	380	110	5.76	10

## Maximum number of cable glands installed on each box side

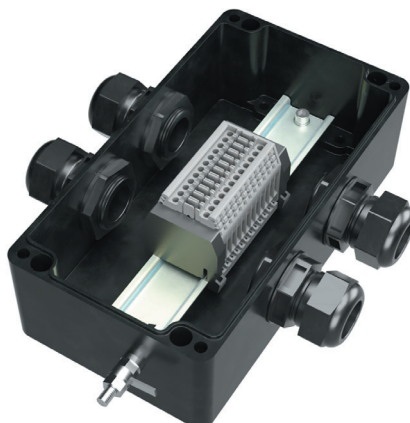
M16x1.5	M20x1.5	M25x1.5	M32x1.5	M40x1.5	M50x1.5	M63x1.5	M75x1.5	M90x2	Dimension designation
A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	
1/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	01
2/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	02
4/2	2/1	2/1	1/0	1/0	0/0	0/0	0/0	0/0	03
12/2	5/1	4/1	3/0	3/0	0/0	0/0	0/0	0/0	04
6/2	3/2	2/2	2/0	2/0	0/0	0/0	0/0	0/0	05
14/2	6/2	5/2	4/0	3/0	0/0	0/0	0/0	0/0	06
22/2	8/2	7/2	6/0	5/0	0/0	0/0	0/0	0/0	07
21/12	10/8	10/4	4/3	3/3	3/2	2/0	0/0	0/0	08
36/12	20/8	16/4	7/3	6/3	5/2	4/0	0/0	0/0	09
36/22	20/18	16/8	7/6	6/5	5/4	4/0	0/0	0/0	10

**Note:** see recommended number of terminal clips installed inside the sheath in the Annex (p. 125).

## Recommended maximum power dissipation values for explosion-proof sheaths made of glass-fiber reinforced polyester

Dimensions			Power dissipation for temperature classes and environmental temperature, W							Dimension designation
H	W	D	T6 40°C T5 55°C	T6 55°C T5 70°C	T6 65°C T5 80°C	T6 50°C T5 65°C	T4 40°C	T4 55°C	T4 65°C	
80	75	56	1.99	1.04	0.55	1.33	6.86	5.12	4.09	01
110	75	56	2.49	1.31	0.69	1.67	8.55	6.39	5.11	02
120	120	90	4.69	2.47	1.30	3.15	16.10	12.03	9.63	03
220	120	90	6.98	3.70	1.95	4.70	23.68	17.74	14.22	04
160	160	90	7.11	3.75	1.97	4.78	24.29	18.16	14.54	05
260	160	90	9.72	5.16	2.73	6.56	32.83	24.62	19.75	06
360	160	90	11.88	6.35	3.38	8.05	39.64	29.81	23.97	07
250	250	120	15.12	8.03	4.25	10.20	51.11	38.32	30.74	08
400	250	120	19.79	10.60	5.66	13.43	65.68	49.44	39.79	09
400	400	120	29.52	15.82	8.44	20.03	97.99	73.76	59.37	10

## Standard sets based on explosion-proof polyester sheaths and polyamide cable glands for a non-armoured cable



### Technical characteristics

Description	Standard sets based on explosion-proof GRP sheaths and polyamide cable glands for a non-armoured cable
Series	TBE-P
Marking according to TR CU	1Ex e II T6 Gb / Ex tb IIIC T80°C Db;
Conformity to standards	GOST 31610.0-2014 / GOST R IEC 60079-7-2012 / GOST IEC 60079-31-2013
Areas of use	1, 2, 21, 22
Operating temperature, °C	From -40 to +40
Protection against external effects	IP66
Sheath material	Glass-fiber reinforced polyester
Cable gland series	Polyamide cable gland – single seal
Cable gland thread type	Metric
Cable gland material	Polyamide
Cable gland seal material	Silicone
Type of cable	Non-armoured cable of circular section
Drawings of standard sets	p. 157.

Physical dimensions, mm			Type of terminal (grounding terminal)	Number of terminals (grounding terminals)	Number of cable glands on sides (A/B/C/D) and diameters of embossed cable, mm				Drawing number	Code
H	W	D			A	B	C	D		
80	75	56	RN2 (TR2)	5 (1)	1 Ø6-12	–	1 Ø6-12	–	TBE-P No. 011.00.001	1131.011.00.001
110	75	56	RN2 (TR2)	11 (1)	1 Ø6-12	–	1 Ø6-12	–	TBE-P No. 021.00.001	1131.021.00.001
110	75	56	RN2 (TR2)	11 (1)	2 Ø6-12	–	2 Ø6-12	–	TBE-P No. 021.00.002	1131.021.00.002
120	120	90	CBC2 (TE02)	4 (1)	2 Ø6-12	–	2 Ø6-12	–	TBE-P No. 031.00.007	1131.031.00.007
120	120	90	CBC2 (TE02)	5 (1)	2 Ø6-12	–	2 Ø6-12	–	TBE-P No. 031.00.001	1131.031.00.001
120	120	90	CBC2 (TE02)	8 (2)	2 Ø6-12	–	2 Ø6-12	–	TBE-P No. 031.00.002	1131.031.00.002
120	120	90	CBC2 (TE02)	11 (1)	2 Ø6-12	–	2 Ø6-12	–	TBE-P No. 031.00.003	1131.031.00.003
120	120	90	CBC2 (TE02)	11 (1)	2 Ø13-18	–	2 Ø13-18	–	TBE-P No. 031.00.004	1131.031.00.004
220	120	90	CBC2 (TE02)	11 (1)	2 Ø18-25	–	2 Ø18-25	–	TBE-P No. 041.00.001	1131.041.00.001
220	120	90	CBC2 (TE02)	11 (1)	2 Ø22-32	–	2 Ø22-32	–	TBE-P No. 041.00.002	1131.041.00.002
250	250	120	CBC2 (TE02)	46 (2)	4 Ø13-18	2 Ø6-12	4 Ø13-18	2 Ø6-12	TBE-P No. 081.00.002	1131.081.00.002
120	120	90	CBC4 (TE04)	8 (2)	1 Ø6-12	1 Ø6-12	–	1 Ø6-12	TBE-P No. 031.00.008	1131.031.00.008
120	120	90	CBC4 (TE04)	4 (1)	1 Ø6-12	1 Ø6-12	–	1 Ø6-12	TBE-P No. 031.00.009	1131.031.00.009

## **Stainless steel terminal boxes of TBE-S and TBI-S series**

### **Description**

Explosion-proof terminal boxes of TBE-S series are made of corrosion-resistant sheets of AISI 304 grade steel. Their purpose is to connect and fan-out cables of direct and alternating current electric and lighting circuits, data network cables, signalling and control cables.

Explosion-proof terminal boxes of TBE-S series can also be used for provision of connections and fan-outs of intrinsically safe circuits. They are used in instrumentation circuits with low voltage and current, in drives and measuring circuits.

Terminal boxes are also used for protection of connections from mechanical damage, moisture and dust when they are installed in hazardous gaseous or dusty environments.

#### **Terminal boxes of TBE-S series:**

- 1Ex e II T6...T4 Gb;
- Ex tb IIIC T80°C...T130°C Db.

#### **Terminal boxes of TBI-S series:**

- 0Ex ia IIC T6...T4 Ga;
- Ex tb IIIC T80°C...T130°C Db;
- Ex ia IIIC T80°C...T130°C Da.

### **Design**

Box enclosure is made of corrosion-resistant AISI 304 steel by forming. Box includes an enclosure and a cover connected by means of captive bolts. Mounting panel, DIN rails with terminal clips, grounding busbars and other electrotechnical equipment. Sides of the box house explosion-proof cable glands for different types of cables, couplings, end caps, valves, etc. On customer's request, removable panels can be installed allowing for variation of the number of cable glands and combinations of cables to be brought into the box without modification of the entire box enclosure. All the fastening and mounting elements are made of corrosion-resistant steel.

Explosion-proof terminal boxes have three types of certification, meet all the requirements of TR CU standards and have versions with the explosion protection as follows:

- Ex e "Increased safety";
- Ex i "Intrinsically safe electric circuit";
- Ex t "Dust ignition protection".



## Distinctive features

### Stainless steel captive screws for cover attachment

- corrosion-resistant, preserve aesthetic appearance;
- cannot be lost during installation

### Captive seal

- provides high degree of dust and moisture protection equal to IP66.
- Does not fall out during installation ensuring the stated protection degree

### Mounting rails

- allow for attachment of DIN rail and mounting plate inside the box

### Wide range

- selection of the most suitable dimension and customized set to solve any connection tasks

### Chemical resistance

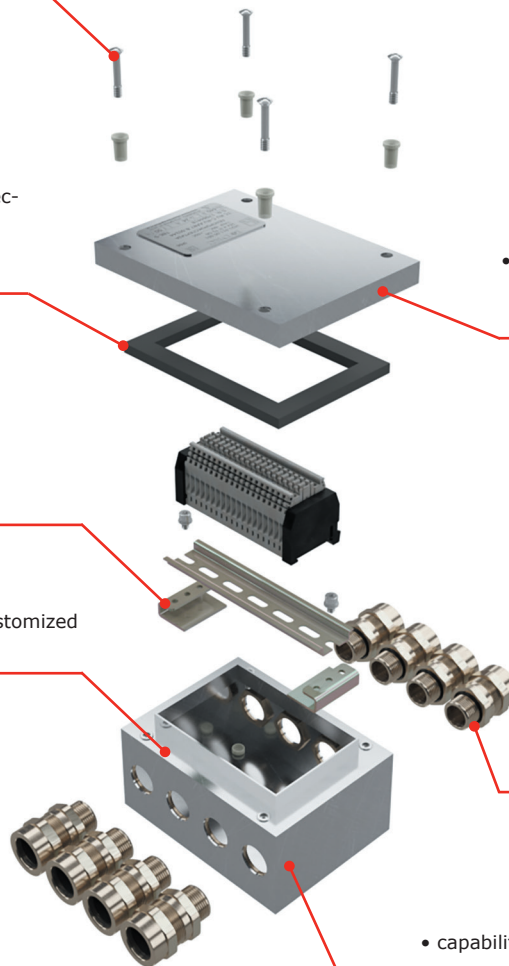
- box enclosure material is made of corrosion-resistant steel and can be used in aggressive environments

### Cable glands

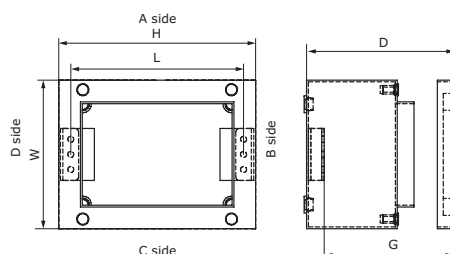
- various thread types (Metric, NPT, GAS and other);
- materials: nickel-plated brass, stainless steel, polyamide;
  - cable dimension range within 5-78 mm;
- for non-armoured, armoured cables, non-armoured cables in a tube or a metal flexible conduit

### High wall thickness

- increased mechanical shock resistance;
- capability to install removable panels for convenience of cable gland installation



## Stainless steel terminal boxes of TBE-S and TBI-S series with Ex e, Ex ia and Ex tb protection types



### Purpose:

- switching and branching of wires and cables in systems for power supply, switching and alarming in hazardous areas containing gas and dust.

### Material:

- corrosion-resistant sheet steel of AISI 304/ AISI 316L grade.

### Distinctive features:

- box material is not susceptible to corrosion propagation;
- resistance to aggressive environments, including alkali and drops of sulfuric and hydrochloric acids;
- capability to use removable panels when installing cable glands;
- availability of external and internal grounding terminals;
- increased mechanical shock and vibration resistance.

### Protection:

- assemblable: 1Ex e II T6...T4 Gb / 0Ex ia IIC T6...T4 Ga / Ex ia IIIC T80°C...T130°C Da / Ex tb IIIC T80°C...T130°C Db.

## Characteristics

Technical specifications	TS 27.12.31-064-47022248-2018
Protection degree	IP66 according to GOST 14254-96
Environmental temperature, °C	From -60 to +65°C
Shock resistance at -60°C	7 J according to GOST 31610.0-2014 (IEC 60079-0:2011)
Climatic version	UKhL1, T1, OM1, V1, UKhL 5, T5, V5 according to GOST 15150
Cover seal	Silicone
Installation in gas-hazardous areas	Areas 0-1-2. Gas group II, gas subgroup IIA, IIB, IIC
Installation in dust-hazardous areas	Areas 20-21-22. Dust group III, dust subgroup IIIA, IIIB, IIIC
Marking and type of explosion protection of TBE-S series	1Ex e II T6...T4 Gb Ex tb IIIC T80°C...130°C Db
Marking and type of explosion protection of TBI-S series	0Ex ia IIC T6...T4 Ga Ex tb IIIC T80°C...130°C Db Ex ia IIIC T80°C...130°C Da
Provision of explosion protection and conformity to standards	GOST 31610.0-2014 (IEC 60079-0:2011) GOST R IEC 60079-7-2012 GOST 31610.11-2014 (IEC 60079-11:2011) GOST IEC 60079-31-2013
Available accessories	Fastening elements Cable glands Screw type and spring type terminal clips End caps Mounting panel Mounting rail

## Dimensions of explosion-proof sheaths

Physical dimensions, mm			L, mm	Possibility of flange installation	Possibility of removable panel installation		G, mm	Weight, kg	Dimension designation
H	W	D			On short side	On long side			
160	120	90	145	No	–	–	75	1.3	011
240	120	90	180	No	–	–	75	1.7	021
250	150	90	180	No	–	–	75	2	031
300	200	90	230	No	–	–	75	2.8	041
370	250	90	300	No	–	–	75	3.8	051
370	370	90	300	No	–	–	75	5.2	061
300	200	160	230	No	–	–	140	3.5	071
370	250	160	300	Yes	200x120	320x120	140	4.8	081
370	370	160	300	Yes	320x120	320x120	140	6.1	091
510	370	160	300	Yes	320x120	460x120	140	8.1	101
750	370	160	300	Yes	320x120	700x120	140	11.1	111
750	370	200	300	Yes	320x190	700x190	180	12.1	121
370	370	230	300	Yes	320x190	320x190	210	7.5	131
510	370	230	300	Yes	320x190	460x190	210	9.5	141
750	370	230	300	Yes	320x190	700x190	210	13	151
370	370	280	300	Yes	320x190	320x190	260	8.3	161
510	370	280	440	Yes	320x190	460x190	260	10.5	171
750	370	280	300	Yes	320x190	700x190	260	14.2	181

## Maximum number of cable glands installed on each box side

M16x1.5	M20x1.5	M25x1.5	M32x1.5	M40x1.5	M50x1.5	M63x1.5	M75x1.5	M90x2	Dimension designation
A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	
Enclosures without removable panels									
5/4	4/3	4/0	0/0	0/0	0/0	0/0	0/0	0/0	011
8/4	6/3	6/0	0/0	0/0	0/0	0/0	0/0	0/0	021
8/5	7/4	6/0	0/0	0/0	0/0	0/0	0/0	0/0	031
10/7	8/5	7/0	0/0	0/0	0/0	0/0	0/0	0/0	041
13/8	10/7	9/0	0/0	0/0	0/0	0/0	0/0	0/0	051
13/13	10/10	9/0	0/0	0/0	0/0	0/0	0/0	0/0	061
30/21	24/10	14/10	12/8	5/3	4/2	3/2	3/2	0/0	071
39/24	30/14	18/12	14/10	6/4	5/3	4/3	4/2	0/0	081
39/39	30/20	18/18	14/14	6/6	5/5	4/4	4/4	0/0	091
54/39	42/20	26/18	20/14	9/6	7/5	6/4	5/4	0/0	101
78/39	63/20	38/18	30/14	13/6	11/5	9/4	8/4	0/0	111
130/65	84/40	57/27	45/14	26/12	22/10	9/4	8/4	6/3	121
78/78	50/50	36/36	21/21	18/18	10/10	8/8	8/4	3/3	131
108/78	70/40	52/36	30/21	27/18	14/10	12/8	5/4	4/3	141
156/78	105/40	76/36	45/21	39/18	22/10	18/8	8/4	6/3	151
104/91	60/60	45/45	28/28	24/24	15/15	8/8	8/8	3/3	161
144/91	84/60	65/45	40/28	36/24	21/15	12/8	10/8	4/3	171
208/91	126/60	95/45	60/28	52/24	33/15	18/8	16/8	6/3	181
Rust-proof enclosure with removable panels on side D									
39/4	30/7	18/6	14/0	6/0	5/0	4/0	4/0	0/0	083
39/8	30/10	18/9	14/0	6/0	5/0	4/0	4/0	0/0	093
54/8	42/10	26/9	20/0	9/0	7/0	6/0	5/0	0/0	103
78/8	63/10	38/9	30/0	13/0	11/0	9/0	8/0	0/0	113
130/24	84/30	57/18	45/14	26/12	22/5	9/4	8/4	6/0	123
78/24	50/30	36/18	21/14	18/12	10/5	8/4	8/4	3/0	133
108/24	70/30	52/18	30/14	27/12	14/5	12/4	5/4	4/0	143
156/24	105/30	76/18	45/14	39/12	22/5	18/4	8/4	6/0	153
104/24	60/30	45/18	28/14	24/12	15/5	8/4	8/4	3/0	163
144/24	84/30	65/18	40/14	36/12	21/5	12/4	10/4	4/0	173
208/24	126/30	95/18	60/14	52/12	33/5	18/4	16/4	6/0	183

M16x1.5	M20x1.5	M25x1.5	M32x1.5	M40x1.5	M50x1.5	M63x1.5	M75x1.5	M90x2	Dimension designation
A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	
<b>Rust-proof enclosure with removable panels on sides D and B</b>									
39/4	30/7	18/6	14/0	6/0	5/0	4/0	4/0	0/0	085
39/8	30/10	18/9	14/0	6/0	5/0	4/0	4/0	0/0	095
54/8	42/10	26/9	20/0	9/0	7/0	6/0	5/0	0/0	105
78/8	63/10	38/9	30/0	13/0	11/0	9/0	8/0	0/0	115
130/24	84/30	57/18	45/14	26/12	22/5	9/4	8/4	6/0	125
78/24	50/30	36/18	21/14	18/12	10/5	8/4	8/4	3/0	135
108/24	70/30	52/18	30/14	27/12	14/5	12/4	5/4	4/0	145
156/24	105/30	76/18	45/14	39/12	22/5	18/4	8/4	6/0	155
104/24	60/30	45/18	28/14	24/12	15/5	8/4	8/4	3/0	165
144/24	84/30	65/18	40/14	36/12	21/5	12/4	10/4	4/0	175
208/24	126/30	95/18	60/14	52/12	33/5	18/4	16/4	6/0	185
<b>Rust-proof enclosure with removable panels on sides D, A and C</b>									
8/4	10/7	9/6	0/0	0/0	0/0	0/0	0/0	0/0	087
8/8	10/10	9/9	0/0	0/0	0/0	0/0	0/0	0/0	097
13/8	14/10	13/9	0/0	0/0	0/0	0/0	0/0	0/0	107
22/8	21/10	19/9	0/0	0/0	0/0	0/0	0/0	0/0	117
66/24	63/30	38/18	30/14	26/12	11/5	9/4	8/4	0/0	127
24/24	30/30	18/18	14/14	12/12	5/5	4/4	4/4	0/0	137
39/24	42/30	26/18	20/14	18/12	7/5	6/4	5/4	0/0	147
66/24	63/30	38/18	30/14	26/12	11/5	9/4	8/4	0/0	157
24/24	30/30	18/18	14/14	12/12	5/5	4/4	4/4	0/0	167
39/24	42/30	26/18	20/14	18/12	7/5	6/4	5/4	0/0	177
66/24	63/30	38/18	30/14	26/12	11/5	9/4	8/4	0/0	187
<b>Rust-proof enclosure with removable panels on sides A, B, C, D</b>									
8/4	10/7	9/6	0/0	0/0	0/0	0/0	0/0	0/0	089
8/8	10/10	9/9	0/0	0/0	0/0	0/0	0/0	0/0	099
13/8	14/10	13/9	0/0	0/0	0/0	0/0	0/0	0/0	109
22/8	21/10	19/9	0/0	0/0	0/0	0/0	0/0	0/0	119
66/24	63/30	38/18	30/14	26/12	11/5	9/4	8/4	0/0	129
24/24	30/30	18/18	14/14	12/12	5/5	4/4	4/4	0/0	139
39/24	42/30	26/18	20/14	18/12	7/5	6/4	5/4	0/0	149
66/24	63/30	38/18	30/14	26/12	11/5	9/4	8/4	0/0	159
24/24	30/30	18/18	14/14	12/12	5/5	4/4	4/4	0/0	169
39/24	42/30	26/18	20/14	18/12	7/5	6/4	5/4	0/0	179
66/24	63/30	38/18	30/14	26/12	11/5	9/4	8/4	0/0	189

**Note:** see recommended number of terminal clips installed inside the sheath in the Annex (p. 138).

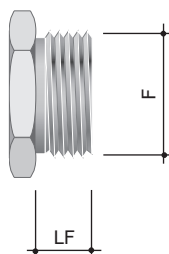
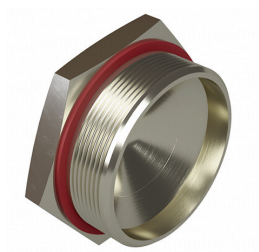
## Recommended maximum power dissipation values for explosion-proof sheaths made of stainless steel

Dimensions, mm			Power dissipation for temperature classes and environmental temperature, W							Dimension designation
H	W	D	T6 40°C T5 55°C	T6 55°C T5 70°C	T6 65°C T5 80°C	T6 50°C T5 65°C	T4 40°C	T4 55°C	T4 65°C	
Flange-less enclosures										
160	120	90	8.31	4.64	2.56	5.79	25.29	19.42	15.88	011
240	120	90	10.92	6.12	3.39	7.63	32.94	25.35	20.76	021
250	150	90	13.32	7.48	4.15	9.31	40.15	30.92	25.32	031
300	200	90	18.93	10.65	5.92	13.25	56.74	43.75	35.87	041
370	250	90	26.04	14.7	8.19	18.27	77.45	59.83	49.12	051
370	370	90	36.72	20.73	11.55	25.76	109.23	84.37	69.28	061
300	200	160	23.4	13.17	7.32	16.39	70.15	54.09	44.35	071
370	250	160	31.3	17.67	9.85	21.96	93.11	71.92	59.05	081
370	370	160	43.1	24.33	13.56	30.24	128.2	99.02	81.31	091
510	370	160	50.92	28.93	16.2	35.88	149.27	115.72	95.28	101
750	370	160	60.81	34.89	19.68	43.11	174.25	135.85	112.33	111
750	370	200	64.93	37.25	21.02	46.03	186.05	145.05	119.94	121
370	370	230	49.47	27.93	15.56	34.71	147.16	113.67	93.34	131
510	370	230	57.68	32.78	18.36	40.64	169.09	131.08	107.93	141
750	370	230	68.02	39.02	22.02	48.22	194.9	151.95	125.65	151
370	370	280	54.03	30.5	17	37.91	160.71	124.14	101.93	161
510	370	280	62.51	35.52	19.89	44.04	183.24	142.05	116.96	171
750	370	280	73.17	41.98	23.68	51.87	209.66	163.46	135.16	181

Dimensions, mm			Power dissipation for temperature classes and environmental temperature, W							Dimension designation
H	W	D	T6 40°C T5 55°C	T6 55°C T5 70°C	T6 65°C T5 80°C	T6 50°C T5 65°C	T4 40°C	T4 55°C	T4 65°C	
Enclosure with flange at bottom on side D										
370	250	160	31.3	17.67	9.85	21.96	93.11	71.92	59.05	083
370	370	160	43.1	24.33	13.56	30.24	128.2	99.02	81.31	093
510	370	160	50.92	28.93	16.2	35.88	149.27	115.72	95.28	103
750	370	160	60.81	34.89	19.68	43.11	174.25	135.85	112.33	113
750	370	200	64.93	37.25	21.02	46.03	186.05	145.05	119.94	123
370	370	230	49.47	27.93	15.56	34.71	147.16	113.67	93.34	133
510	370	230	57.68	32.78	18.36	40.64	169.09	131.08	107.93	143
750	370	230	68.02	39.02	22.02	48.22	194.9	151.95	125.65	153
370	370	280	54.03	30.5	17	37.91	160.71	124.14	101.93	163
510	370	280	62.51	35.52	19.89	44.04	183.24	142.05	116.96	173
750	370	280	73.17	41.98	23.68	51.87	209.66	163.46	135.16	183
Enclosure with flange at bottom on side D and at top on side B										
370	250	160	31.3	17.67	9.85	21.96	93.11	71.92	59.05	085
370	370	160	43.1	24.33	13.56	30.24	128.2	99.02	81.31	095
510	370	160	50.92	28.93	16.2	35.88	149.27	115.72	95.28	105
750	370	160	60.81	34.89	19.68	43.11	174.25	135.85	112.33	115
750	370	200	64.93	37.25	21.02	46.03	186.05	145.05	119.94	125
370	370	230	49.47	27.93	15.56	34.71	147.16	113.67	93.34	135
510	370	230	57.68	32.78	18.36	40.64	169.09	131.08	107.93	145
750	370	230	68.02	39.02	22.02	48.22	194.9	151.95	125.65	155
370	370	280	54.03	30.5	17	37.91	160.71	124.14	101.93	165
510	370	280	62.51	35.52	19.89	44.04	183.24	142.05	116.96	175
750	370	280	73.17	41.98	23.68	51.87	209.66	163.46	135.16	185
Enclosure with flange at bottom on side D, on the left on side A and on the right on side C										
370	250	160	31.3	17.67	9.85	21.96	93.11	71.92	59.05	087
370	370	160	43.1	24.33	13.56	30.24	128.2	99.02	81.31	097
510	370	160	50.92	28.93	16.2	35.88	149.27	115.72	95.28	107
750	370	160	60.81	34.89	19.68	43.11	174.25	135.85	112.33	117
750	370	200	64.93	37.25	21.02	46.03	186.05	145.05	119.94	127
370	370	230	49.47	27.93	15.56	34.71	147.16	113.67	93.34	137
510	370	230	57.68	32.78	18.36	40.64	169.09	131.08	107.93	147
750	370	230	68.02	39.02	22.02	48.22	194.9	151.95	125.65	157
370	370	280	54.03	30.5	17	37.91	160.71	124.14	101.93	167
510	370	280	62.51	35.52	19.89	44.04	183.24	142.05	116.96	177
750	370	280	73.17	41.98	23.68	51.87	209.66	163.46	135.16	187
Enclosure with flanges on all sides A, B, C, D										
370	250	160	31.3	17.67	9.85	21.96	93.11	71.92	59.05	089
370	370	160	43.1	24.33	13.56	30.24	128.2	99.02	81.31	099
510	370	160	50.92	28.93	16.2	35.88	149.27	115.72	95.28	109
750	370	160	60.81	34.89	19.68	43.11	174.25	135.85	112.33	119
750	370	200	64.93	37.25	21.02	46.03	186.05	145.05	119.94	129
370	370	230	49.47	27.93	15.56	34.71	147.16	113.67	93.34	139
510	370	230	57.68	32.78	18.36	40.64	169.09	131.08	107.93	149
750	370	230	68.02	39.02	22.02	48.22	194.9	151.95	125.65	159
370	370	280	54.03	30.5	17	37.91	160.71	124.14	101.93	169
510	370	280	62.51	35.52	19.89	44.04	183.24	142.05	116.96	179
750	370	280	73.17	41.98	23.68	51.87	209.66	163.46	135.16	189

## Accessories for terminal boxes

### End cap



#### Description:

- designed for closing of unused threaded metric holes.

#### End cap has triple certification:

- Ex d "Flameproof sheath";
- Ex e "Increased safety";
- Ex t "Dust ignition protection".

#### Complete set:

- end cap is fitted with a silicone seal on the external surface.

#### Standard sizes:

- metric, from M16 to M90;
- NPT from 3/8" to 3" (on request);
- GAS from 3/8" to 3" (on request);
- PG from 09 to 48 (on request);
- ISO 7/1 from 3/8" to 3" (on request).

#### Protection:

- Ex db IIC Gb U / Ex e IIC Gb U / Ex tb IIIC Db U.

#### Area:

- 1-2 – gas-hazardous;
- 21-22 – dust-hazardous.

#### Protection degree:

- IP66/67/68.

#### Material:

- nickel-plated brass (default);
- AISI 316L stainless steel (on request).

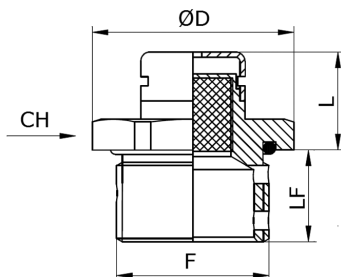
#### Environmental temperature:

- from -65 to +130°C.

Physical dimensions, mm		Code
F	LF	
M16x1.5	15	EXD6050-M16SB
M20x1.5	15	EXD6050-M20SB
M25x1.5	15	EXD6050-M25SB
M32x1.5	15	EXD6050-M32SB
M40x1.5	15	EXD6050-M40SB
M50x1.5	15	EXD6050-M50SB
M63x1.5	15	EXD6050-M63SB
M75x1.5	15	EXD6050-M75SB
M90x2	20	EXD6050-M90SB

**Note:** other kinds of materials and types of thread are provided on request.

## Drain valve


**Description:**

- designed for removal of condensate accumulated inside the equipment enclosure.

**Valve has double certification:**

- Ex e "Increased safety";
- Ex t "Dust ignition protection".

**Complete set:**

- valve is fitted with a silicone seal on the external surface of the thread.

**Standard sizes:**

- metric, from M20 to M25;
- NPT from 1/2" to 3/4" (on request).

**Area:**

- 1-2 – gas-hazardous;
- 21-22 – dust-hazardous.

**Protection:**

- 1Ex e IIC Gb U / Ex tb IIIC Db U.

**Protection degree:**

- IP66.

**Material:**

- nickel-plated brass (default);
- AISI 316L stainless steel (on request).

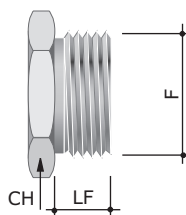
**Environmental temperature:**

- from -60 to +85 °C.

Physical dimensions, mm					Designation
F	LF	L	CH	ØD	
M20x1.5	15	16	25	27.5	DV-1
M25x1.5	15	16	30	33	DV-2

**Note:** other kinds of materials and types of thread are provided on request. Available in the set with explosion-proof terminal boxes and control stations only.

## Reinforced polyamide end caps


**Description:**

- shall be installed using a plain washer to ensure required level of tightness of unused holes. End caps shall have a blue-colored head to be used in intrinsically safe electric circuits.

**End cap has triple certification:**

- Ex e "Increased safety";
- Ex t "Dust ignition protection".

**Complete set:**

- end cap is fitted with a silicone seal on the external surface.

**Standard sizes:**

- metric, from M16 to M63;
- NPT from 3/8" to 2" (on request).

**Protection:**

- 1Ex e IIC Gb X / Ex tb IIIC Db X.

**Area:**

- 1-2 – gas-hazardous;
- 21-22 – dust-hazardous.

**Protection degree:**

- IP66/68.

**Material:**

- polyamide.

**Shock resistance:**

- at least 4 J.

**Environmental temperature:**

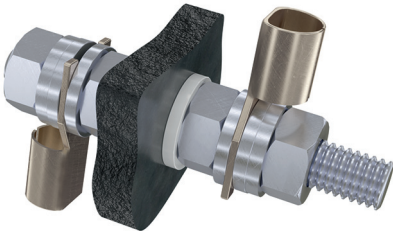
- from -40 to +80 °C.

Physical dimensions, mm			Designation
F	LF	CH	
M16x1.5	15	19	PP-01
M20x1.5	15	23	PP-1
M25x1.5	15	28	PP-2
M32x1.5	15	36	PP-3
M40x1.5	18	46	PP-4
M50x1.5	18	55	PP-5
M63x1.5	18	69	PP-6

**Note:** other types of threads and end caps for application in intrinsically safe circuits are available on request. Available in the set with explosion-proof terminal boxes and control stations only and is not shipped individually.



Grounding stud



- Description:**
- designed to provide single grounding loop in GRP sheaths.
- Complete set:**
- grounding terminal includes all the components required for installation in an item, except for cable lugs;
  - if necessary, cable lugs shall be ordered individually.
- Material:**
- AISI 304 stainless steel.
- Environmental temperature:**
- from -65 to +130°C.

Physical dimensions, mm		Code
F	L	
M6	60	1380.0.10.06



## Explosion-proof control stations and cabinets

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## **Control stations and cabinets with advanced explosion-proof rating of Ex e, Ex d e, Ex ia, Ex e m, Ex tb**

### **Application**

Explosion-proof control cabinets and stations are designed for control and signalling, monitoring of electric low-voltage circuits and mechanisms. They can be used in intrinsically safe control and process indication circuits when they are installed in hazardous gaseous or dusty environments.

### **System composition**

The following is used in production of the control cabinets and stations:

- GRP enclosures;
- corrosion-resistant aluminium enclosures;
- AISI 304 / AISI 316L stainless steel enclosures.

Explosion-proof control cabinets and stations have five types of certification, meet all the requirements of TR CU standards and have versions with the explosion protection as follows:

- Ex e "Increased safety" according to GOST R IEC 60079-7-2012;
- Ex i "Intrinsically safe electric circuit" according to GOST 31610.11-2014 (IEC 60079-11:2011);
- Ex d "Flameproof sheaths" according to GOST IEC 60079-1-2013;
- Ex m "Compound sealing" according to GOST R IEC 60079-18-2012;
- Ex t "Dust ignition protection in sheaths" according to GOST IEC 60079-31-2013.

Control cabinets and stations can include different control elements and terminal clips:

- locking, nonlocking buttons (red, green, yellow, white, black);
- double buttons;
- warning lamps (green, red);
- switches (2–4 positions).

All the components meet requirements of Russian and international standards, e.g. ATEX, IEC, EAC.

## Distinctive features

### Stainless steel captive screws for cover attachment

- corrosion resistant;
- preserve the aesthetic appearance;
- cannot be lost during installation

### Control elements

- they have high degree of protection against external effects – IP66;
- provide ease and high mounting speed without deterioration of protection degree;
  - service life of up to 1,000,000 pushes;
  - service life of LEDs under load equalling more than 100,000 hours;
- certified for application in gas-hazardous areas 0, 1, 2 and in dust-hazardous areas 21, 22

### Captive silicone seal

- provides high degree of dust and moisture protection equal to IP66;
- does not fall out during installation

### External stainless steel grounding terminal

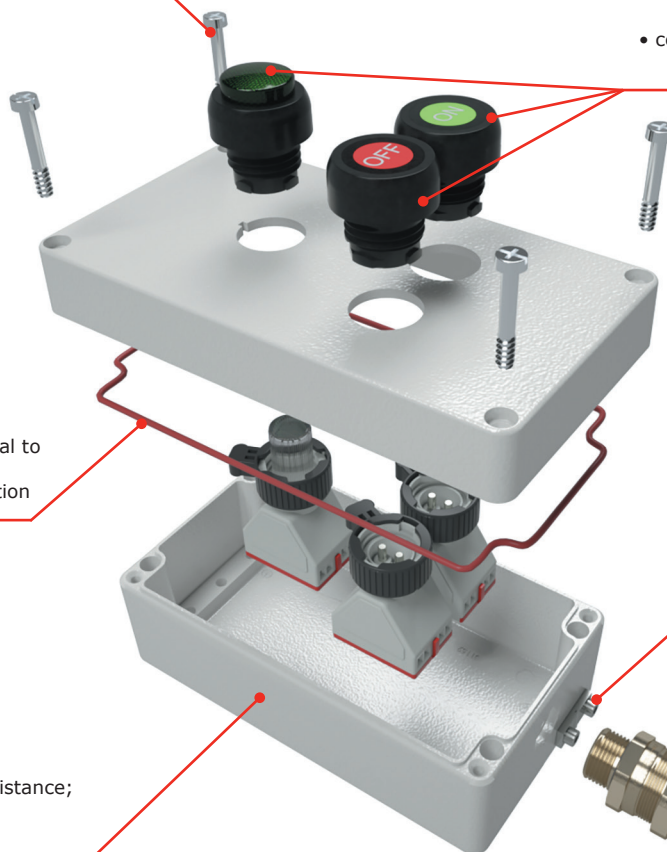
- convenience of grounding

### High wall thickness

- increased mechanical shock resistance;
- 3 materials for versions (aluminium, GRP, stainless steel)

### Cable glands

- various thread types (Metric, NPT, GAS, ISO 7/1, PG);
- materials: nickel-plated brass, stainless steel, polyamide;
- cable dimension range within 5-78 mm;
  - for armoured, non-armoured cables, non-armoured cables in a tube, metal flexible conduit



## Aluminium alloy control stations of CPE-A series

### Description

Explosion-proof aluminium alloy control stations of CPE-A series are designed for control and monitoring of direct and alternating current electric and lighting circuits as well as for protection of circuit connections against mechanical damage, dust and moisture when they are installed in hazardous gaseous or dusty environments (indoors or in case of outdoor installation in places where formation of explosive mixtures is possible).

Control stations of CPE-A series:

- 1Ex e II T6...T4 Gb;
- 1Ex d e IIC T6...T4 Gb;
- 0Ex ia IIC T6...T4 Ga;
- 1Ex e m II T6...T4 Gb;
- Ex tb IIIC Ta 80°C...T130°C Db.

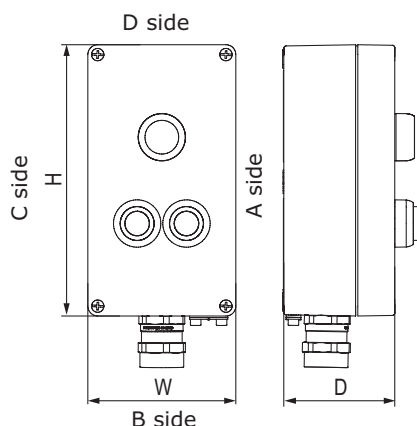
### Design

Control station enclosure is made of cast aluminium alloy without traces of copper. Control station includes an enclosure and a cover connected by means of captive bolts made of stainless steel. Control elements are installed on the enclosure cover, mounting panel, DIN rails with terminal clips, grounding busbars and other electrotechnical equipment can be installed inside the control station. Sides of the box house explosion-proof cable glands for different cable types and diameters. All the fastening and mounting elements are made of corrosion-resistant steel.

Explosion-proof control cabinets and stations have five types of certification, meet all the requirements of TR CU standards and have versions with the explosion protection as follows:

- Ex e "Increased safety" according to GOST R IEC 60079-7-2012;
- Ex i "Intrinsically safe electric circuit" according to GOST 31610.11-2014 (IEC 60079-11:2011);
- Ex d "Flameproof sheaths" according to GOST IEC 60079-1-2013;
- Ex m "Compound sealing" according to GOST R IEC 60079-18-2012;
- Ex t "Dust ignition protection in sheaths" according to GOST IEC 60079-31-2013.

## Control stations of CPE-A series with Ex e, Ex d e, Ex ia, Ex e m, Ex tb protection types



#### Purpose:

- control, monitoring and inspection of direct and alternating current electric circuits in hazardous areas containing gas and dust.

#### Material:

- corrosion-resistant aluminium.

#### Distinctive features:

- high thermal conductivity of material;
- maximum power dissipation among enclosures with similar dimensions made of different materials;
- resistant to impact of salt fog and chemicals;
- sealing system of labyrinth type.

#### Protection:

- 1Ex e II T6...T4 Gb / 1Ex d e IIC T6...T4 Gb / 0Ex ia IIC T6...T4 Ga / 1Ex e m II T6...T4 Gb / Ex tb IIIC Ta 80°C...T130°C Db.

### Characteristics

Technical specifications	TS 27.12.31-065-47022248-2018
Protection degree	IP66 according to GOST 14254-96
Environmental temperature, °C	from -55 to +65
Shock resistance at -60°C	7 J according to GOST 31610.0-2014 (IEC 60079-0:2011)
Climatic version	T1, OM1, UKhL 5, T5, V5 according to GOST 15150
Cover seal	silicone
Installation in gas-hazardous areas	Areas 0-1-2. Gas group II, gas subgroup IIA, IIB, IIC
Installation in dust-hazardous areas	Areas 21-22. Dust group III, dust subgroup IIIA, IIIB, IIIC
Marking and type of explosion protection of CPE-A series	1Ex e II T6...T4 Gb; 1Ex d e IIC T6...T4 Gb; 0Ex ia IIC T6...T4 Ga; 1Ex e m II T6...T4 Gb; Ex tb IIIC Ta 80°C...T130°C Db.
Provision of explosion protection and conformity to standards	GOST 31610.0-2014 (IEC 60079-0:2011) GOST R IEC 60079-7-2012 GOST IEC 60079-1-2013 GOST R IEC 60079-18-2012 GOST 31610.11-2014 (IEC 60079-11:2011) GOST IEC 60079-31-2013
Available accessories	control elements (buttons, switches) contact blocks (NO, NC) accessories fastening elements cable glands screw type and spring type terminal clips end caps mounting panel



## Maximum number of control elements installed in the enclosure cover made of aluminium

Enclosure dimensions, mm			Total number of control elements on the cover when installing contact block (along A or C side/along B or D side), pcs	Dimension designation
H	W	D		
120	120	90	2/2	12
220	120	90	4/4	14
140	140	90	2/2	15
200	140	90	4/4	16
160	160	90	3/3	17
260	160	90	9/5	18
360	160	90	12/8	19
180	180	100	3/3	20
280	180	100	9/6	21
400	310	110	8/10	22
600	310	110	15/12	24
230	200	110	20/14	25
280	230	110	25/18	27
330	230	110	35/27	01
400	230	110	49/42	03
400	310	180	8/10	23
600	310	180	20/14	26
230	200	180	35/27	02
330	230	180	49/42	04

## Maximum number of cable glands installed on each box side

M16x1.5 A(C)/B(D)	M20x1.5 A(C)/B(D)	M25x1.5 A(C)/B(D)	M32x1.5 A(C)/B(D)	M40x1.5 A(C)/B(D)	M50x1.5 A(C)/B(D)	M63x1.5 A(C)/B(D)	M75x1.5 A(C)/B(D)	M90x2 A(C)/B(D)	Dimension designation
2/2	2/1	2/0	1/0	0/0	0/0	0/0	0/0	0/0	12
6/2	5/1	4/0	3/0	0/0	0/0	0/0	0/0	0/0	14
3/2	2/1	2/0	1/0	0/0	0/0	0/0	0/0	0/0	15
5/2	4/1	3/0	3/0	0/0	0/0	0/0	0/0	0/0	16
6/2	3/2	2/2	2/0	2/0	0/0	0/0	0/0	0/0	17
14/2	5/2	5/2	4/0	3/0	0/0	0/0	0/0	0/0	18
22/2	8/2	7/2	6/0	5/0	0/0	0/0	0/0	0/0	19
8/3	3/2	3/2	2/0	2/0	0/0	0/0	0/0	0/0	20
16/3	6/2	5/2	4/0	4/0	0/0	0/0	0/0	0/0	21
10/10	8/4	6/3	3/3	2/2	2/0	1/0	0/0	0/0	22
16/10	12/4	10/3	4/3	4/2	3/0	2/0	0/0	0/0	24
18/10	14/4	14/3	5/3	5/2	4/0	3/0	0/0	0/0	25
24/10	18/4	16/3	7/3	6/2	5/0	4/0	0/0	0/0	27
24/16	20/6	16/5	7/4	6/4	5/0	4/0	0/0	0/0	01
36/16	28/6	24/5	10/4	8/4	6/0	6/0	0/0	0/0	03
25/20	16/12	9/9	9/6	4/4	4/4	1/1	1/1	1/1	23
45/20	28/12	21/9	15/6	10/4	8/4	3/1	3/1	2/1	26
60/32	40/18	24/15	21/8	12/8	10/6	4/2	3/2	3/1	02
90/32	56/18	36/15	30/8	16/8	12/6	6/2	4/2	4/1	04

## Glass-fiber reinforced polyester control stations of CPE-P series

### Description

Explosion-proof glass-fiber reinforced polyester control stations of CPE-P series are designed for control and monitoring of direct and alternating current electric and lighting circuits as well as for protection of circuit connections against mechanical damage, dust and moisture when they are installed in hazardous gaseous or dusty environments (indoors or in case of outdoor installation in places where formation of explosive mixtures is possible).

Control stations of CPE-P series:

- 1Ex e II T6...T4 Gb;
- 1Ex d e IIC T6...T4 Gb;
- 0Ex ia IIC T6...T4 Ga;
- 1Ex e m II T6...T4 Gb;
- Ex tb IIIC Ta 80°C...T130°C Db.

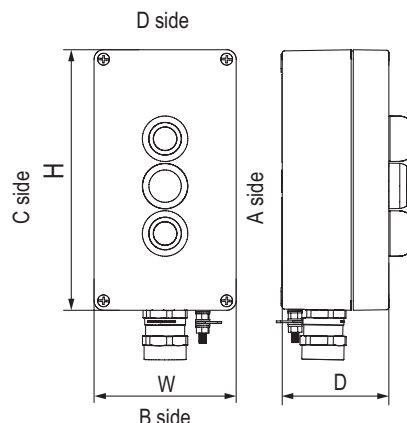
### Design

Control station enclosure is made of shock-resistant polyester reinforced with glass-fiber and addition of graphite. Control station includes an enclosure and a cover connected by means of captive bolts made of stainless steel. Control elements are installed on the enclosure cover, mounting panel, DIN rails with terminal clips, grounding busbars and other electrotechnical equipment can be installed inside the control station. Explosion-proof cable glands for different cable types can be installed on the sides of the box. All the fastening and mounting elements are made of corrosion-resistant steel.

Explosion-proof control cabinets and stations have five types of certification, meet all the requirements of TR CU standards and have versions with the explosion protection as follows:

- Ex e "Increased safety" according to GOST R IEC 60079-7-2012;
- Ex i "Intrinsically safe electric circuit" according to GOST 31610.11-2014 (IEC 60079-11:2011);
- Ex d "Flameproof sheaths" according to GOST IEC 60079-1-2013;
- Ex m "Compound sealing" according to GOST R IEC 60079-18-2012;
- Ex t "Dust ignition protection in sheaths" according to GOST IEC 60079-31-2013.

## Glass-fiber reinforced polyester control stations of CPE-P series with Ex e, Ex ia and Ex tb protection types



### Purpose:

- control and monitoring of direct and alternating current electric circuits in hazardous areas containing gas and dust.

### Material:

- shock-resistant polyester reinforced with glass-fiber with addition of graphite.

### Distinctive features:

- box material is not susceptible to corrosion propagation;
- has high chemical resistance;
- resistant to UV radiation;
- sealing system of labyrinth type.

### Protection:

- 1Ex e II T6...T4 Gb / 1Ex d e IIC T6...T4 Gb / 0Ex ia IIC T6...T4 Ga / 1Ex e m II T6...T4 Gb / Ex tb IIIC Ta 80°C...T130°C Db.

### Characteristics

Technical specifications	TS 27.12.31-066-47022248-2018
Protection degree	IP66 according to GOST 14254-96
Environmental temperature, °C	from -55 to +65
Shock resistance at -60°C	7 J according to GOST 31610.0-2014 (IEC 60079-0:2011)
Climatic version	T1, OM1, UKhL 5, T5, V5 according to GOST 15150
Cover seal	silicone
Installation in gas-hazardous areas	Areas 0-1-2. Gas group II, gas subgroup IIA, IIB, IIC
Installation in dust-hazardous areas	Areas 21-22. Dust group III, dust subgroup IIIA, IIIB, IIIC
Marking and type of explosion protection of CPE-P series (depending on the installed components)	1Ex e II T6...T4 Gb; 1Ex d e IIC T6...T4 Gb; 0Ex ia IIC T6...T4 Ga; 1Ex e m II T6...T4 Gb; Ex tb IIIC Ta 80°C...T130°C Db.
Provision of explosion protection and conformity to standards	GOST 31610.0-2014 (IEC 60079-0:2011) GOST R IEC 60079-7-2012 GOST IEC 60079-1-2013 GOST R IEC 60079-18-2012 GOST 31610.11-2014 (IEC 60079-11:2011) GOST IEC 60079-31-2013
Available accessories	control elements (buttons, switches) contact blocks (NO, NC) accessories fastening elements stainless steel grounding stud (on request) grounded rings for cable glands cable glands screw type and spring type terminal clips end caps mounting panel

**Maximum number of control elements installed in the enclosure cover made of glass-fiber reinforced polyester**

Enclosure dimensions, mm			Total number of control elements on the cover when installing contact block (along A or C side/along B or D side), pcs	Dimension designation
H	W	D		
120	120	90	2/2	03
220	120	90	4/4	04
160	160	90	3/3	05
260	160	90	9/5	06
360	160	90	12/8	07
250	250	120	10/10	08
400	250	120	25/18	09
400	400	120	45/45	10

**Maximum number of cable glands installed on each box side**

M16x1.5	M20x1.5	M25x1.5	M32x1.5	M40x1.5	M50x1.5	M63x1.5	M75x1.5	M90x2	Dimension designation
A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	
4/2	2/1	2/1	1/0	1/0	0/0	0/0	0/0	0/0	03
12/2	5/1	4/1	3/0	3/0	0/0	0/0	0/0	0/0	04
6/2	3/2	2/2	2/0	2/0	0/0	0/0	0/0	0/0	05
14/2	6/2	5/2	4/0	3/0	0/0	0/0	0/0	0/0	06
22/2	8/2	7/2	6/0	5/0	0/0	0/0	0/0	0/0	07
21/12	10/8	10/4	4/3	3/3	3/2	2/0	0/0	0/0	08
36/12	20/8	16/4	7/3	6/3	5/2	4/0	0/0	0/0	09
36/22	20/18	16/8	7/6	6/5	5/4	4/0	0/0	0/0	10



## Stainless steel control stations of CPE-S series

### Description

Explosion-proof control stations of CPE-S series are made of corrosion-resistant steel of AISI 304 grade. They are designed for control and monitoring of direct and alternating current electric and lighting circuits as well as for protection of circuit connections against mechanical damage, dust and moisture when they are installed in hazardous gaseous or dusty environments (indoors or in case of outdoor installation in places where formation of explosive mixtures is possible).

Control stations of CPE-S series:

- 1Ex e II T6...T4 Gb;
- 1Ex d e IIC T6...T4 Gb;
- 0Ex ia IIC T6...T4 Ga;
- 1Ex e m II T6...T4 Gb;
- Ex tb IIIC Ta 80°C...T130°C Db.

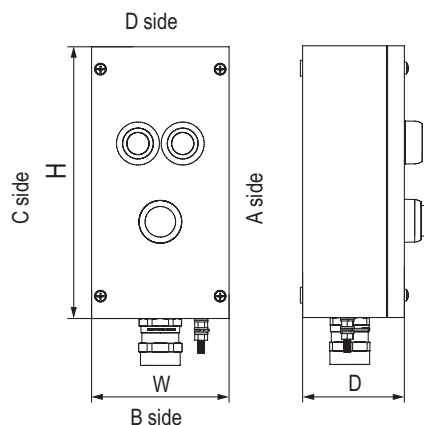
### Design

Control station enclosure is made of corrosion-resistant AISI 304 steel by forming. Control station includes an enclosure and a cover connected by means of captive bolts made of stainless steel. Control elements are installed on the enclosure cover, mounting panel, DIN rails with terminal clips, grounding busbars and other electrotechnical equipment can be installed inside the control station. Sides of the box house explosion-proof cable glands for different cable types. All the fastening and mounting elements are made of corrosion-resistant steel.

Explosion-proof control cabinets and stations have five types of certification, meet all the requirements of TR CU standards and have versions with the explosion protection as follows:

- Ex e "Increased safety" according to GOST R IEC 60079-7-2012;
- Ex i "Intrinsically safe electric circuit" according to GOST 31610.11-2014 (IEC 60079-11:2011);
- Ex d "Flameproof sheaths" according to GOST IEC 60079-1-2013;
- Ex m "Compound sealing" according to GOST R IEC 60079-18-2012;
- Ex t "Dust ignition protection in sheaths" according to GOST IEC 60079-31-2013.

## Stainless steel control stations of CPE-S series with Ex e, Ex d e, Ex ia, Ex e m, Ex tb protection types



### Purpose:

- control and monitoring of direct and alternating current electric and lighting circuits in hazardous areas containing gas and dust.

### Material:

- corrosion-resistant sheet steel of AISI 304/ AISI 3016L grade.

### Distinctive features:

- enclosure material has high corrosion resistance;
- capability to use removable panels when installing cable glands;
- availability of external and internal grounding terminals;
- increased mechanical shock and vibration resistance.

### Protection:

- 1Ex e II T6...T4 Gb / 1Ex d e IIC T6...T4 Gb / 0Ex ia IIC T6...T4 Ga / 1Ex e m II T6...T4 Gb / Ex tb IIIC Ta 80°C...T130°C Db.

## Characteristics

Technical specifications	TS 27.12.31-064-47022248-2018
Protection degree	IP66 according to GOST 14254-96
Environmental temperature, °C	from -55 to +65
Shock resistance at -60°C	7 J according to GOST 31610.0-2014 (IEC 60079-0:2011)
Climatic version	T1, OM1, UKhL 5, T5, V5 according to GOST 15150
Cover seal	silicone
Installation in gas-hazardous areas	Areas 0-1-2. Gas group II, gas subgroup IIA, IIB, IIC
Installation in dust-hazardous areas	Areas 21-22. Dust group III, dust subgroup IIIA, IIIB, IIIC
Marking and type of explosion protection of CPE-S series	1Ex e II T6...T4 Gb; 1Ex d e IIC T6...T4 Gb; 0Ex ia IIC T6...T4 Ga; 1Ex e m II T6...T4 Gb; Ex tb IIIC Ta 80°C...T130°C Db.
Provision of explosion protection and conformity to standards	GOST 31610.0-2014 (IEC 60079-0:2011) GOST R IEC 60079-7-2012 GOST IEC 60079-1-2013 GOST R IEC 60079-18-2012 GOST 31610.11-2014 (IEC 60079-11:2011) GOST IEC 60079-31-2013
Available accessories	control elements (buttons, switches) contact blocks (NO, NC) accessories fastening elements cable glands screw type and spring type terminal clips end caps mounting panel removable panels

### Maximum number of control elements installed in the enclosure cover made of corrosion-resistant stainless steel

Enclosure dimensions, mm			Total number of control elements on the cover when installing contact block (along A or C side/along B or D side), pcs	Dimension designation
H	W	D		
160	120	90	1/0	01
240	120	90	2/0	02
250	150	90	4/5	03
300	200	90	9/12	04
370	250	90	20/16	05
370	370	90	32/32	06
300	200	160	9/12	07
370	250	160	20/16	08
370	370	160	32/32	09
510	370	160	48/44	10
750	370	160	72/68	11
750	370	200	72/68	12
370	370	230	32/32	13
510	370	230	48/44	14
750	370	230	72/68	15
370	370	280	32/32	16
510	370	280	48/44	17
750	370	280	72/68	18

### Maximum number of cable glands installed on each box side

M16x1.5	M20x1.5	M25x1.5	M32x1.5	M40x1.5	M50x1.5	M63x1.5	M75x1.5	M90x2	Dimension designation
A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	A(C)/B(D)	
5/4	4/3	4/0	0/0	0/0	0/0	0/0	0/0	0/0	01
8/4	6/3	6/0	0/0	0/0	0/0	0/0	0/0	0/0	02
8/5	7/4	6/0	0/0	0/0	0/0	0/0	0/0	0/0	03
10/7	8/5	7/0	0/0	0/0	0/0	0/0	0/0	0/0	04
13/8	10/7	9/0	0/0	0/0	0/0	0/0	0/0	0/0	05
13/13	10/10	9/0	0/0	0/0	0/0	0/0	0/0	0/0	06
30/21	24/10	14/10	12/8	5/3	4/2	3/2	3/2	0/0	07
39/24	30/14	18/12	14/10	6/4	5/3	4/3	4/2	0/0	08
39/39	30/20	18/18	14/14	6/6	5/5	4/4	4/4	0/0	09
54/39	42/20	26/18	20/14	9/6	7/5	6/4	5/4	0/0	10
78/39	63/20	38/18	30/14	13/6	11/5	9/4	8/4	0/0	11
130/65	84/40	57/27	45/14	26/12	22/10	9/4	8/4	6/3	12
78/78	50/50	36/36	21/21	18/18	10/10	8/8	8/4	3/3	13
108/78	70/40	52/36	30/21	27/18	14/10	12/8	5/4	4/3	14
156/78	105/40	76/36	45/21	39/18	22/10	18/8	8/4	6/3	15
104/91	60/60	45/45	28/28	24/24	15/15	8/8	8/8	3/3	16
144/91	84/60	65/45	40/28	36/24	21/15	12/8	10/8	4/3	17
208/91	126/60	95/45	60/28	52/24	33/15	18/8	16/8	6/3	18

## Explosion-proof control elements

### Application

To control, monitor, activate and deactivate electric circuits and mechanisms, explosion-proof control stations shall be equipped with explosion-proof control elements. The following is used for this task:

- different buttons;
- warning lamps;
- switches.

Assortment of explosion-proof control elements includes more than fifty different options made of thermally-resistant, shock-resistant polyamide.

The number of control elements of the control stations is usually from 1 to 4 and is determined by the necessary functional purpose of the control and signalling station, for example:

- activation-deactivation of electric instruments and devices;
- manual deactivation of electrical equipment;
- emergency trip of electrical equipment;
- monitoring of equipment working states.

On customer's request, customized set of cabinets with control elements is possible.

### Advantages:

- ergonomic design;
- long service life of contact blocks of up to 1,000,000 pushes;
- service life of LEDs under load equalling more than 100,000 operating hours;
- marking applied on the surface of button does not erase in the process of operation;
- material of contacts is silver plated that ensures low electrical contact resistance;
- warning lamps are distinguished by high brightness and replaceable system of light filters;
- modular system of contact blocks (NO, NC) and control extensions.

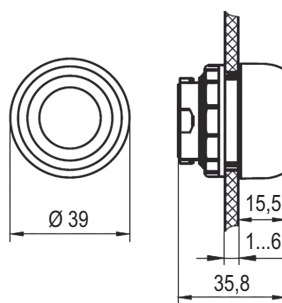


## Control extensions and elements

### Characteristics

Protection degree	IP66 according to GOST 14254-96
Environmental temperature, °C	from -55 to +65
Material of control element	polyamide
Sealing	silicone
Installation in gas-hazardous areas	Areas 1-2. Gas group II, gas subgroup IIA, IIB, IIC
Installation in dust-hazardous areas	Areas 21-22. Dust group III, dust subgroup IIIA, IIIB, IIIC
Marking and type of explosion protection of control elements	Ex e IIC Gb U;
	Ex tb IIIC Db U
Provision of explosion protection and conformity to standards	GOST 31610.0-2014 (IEC 60079-0:2011)
	GOST 31610.7-2012/IEC 60079-7:2006
	GOST IEC 60079-31-2013
Box wall thickness for installation of control extension	from 1 to 6 mm
Attachment of control extension	using nut
Tightening torque	from 2.8 to 3.4 Nm (M30x1.5)

### P1 single button. Nonlocking



#### Purpose:

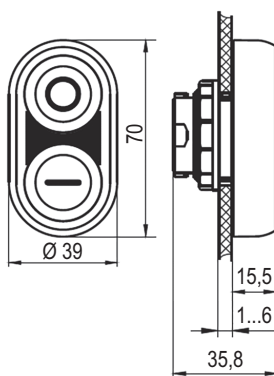
- control extension on the contact block for closing and opening of electric control circuits without position fixing;
- installed in the perforated hole and attached with a nut on the opposite side.

#### Complete set:

- completed with a nut for attachment on the box wall;
- completed with a colored cap with color according to the table;
- not completed with a contact block.

Cap color	Code
Green (without inscription)	2361.0100.615.00
Red (without inscription)	2361.0100.614.00
Other version	on request

## P2 double button. Nonlocking



### Purpose:

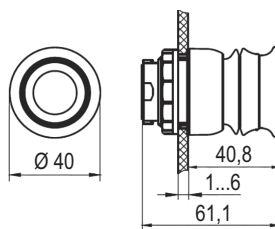
- control double extension on the contact block for closing and opening of electric control circuits without position fixing;
- installed in the perforated hole and attached with a nut on the opposite side.

### Complete set:

- completed with a nut for attachment on the box wall;
- completed with colored caps with color according to the table;
- not completed with a contact block.

Cap color	Code
Green and red (without inscription)	2361.0100.610.00
Other version	on request

## P3E emergency, mushroom shaped button. Antirotating. Locking



### Purpose:

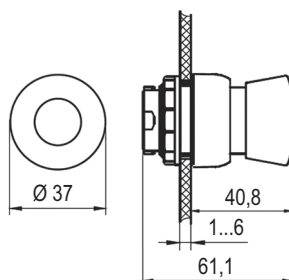
- control mushroom shaped trip extension on the contact block for closing and opening of electric control circuits with position fixing;
- installed in the perforated hole and attached with a nut on the opposite side.

### Complete set:

- completed with a nut for attachment on the box wall;
- not completed with a contact block.

Extension color	Code
Yellowish red	2361.0308.611.00

## P4 mushroom shaped button. Antirotating. Nonlocking



### Purpose:

- control mushroom shaped extension on the contact block for closing and opening of electric control circuits without position fixing;
- installed in the perforated hole and attached with a nut on the opposite side.

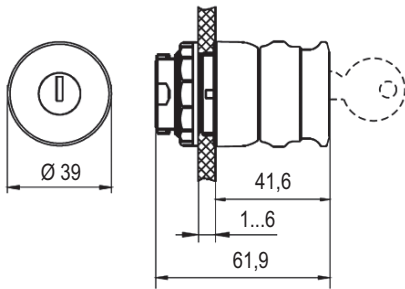
### Complete set:

- completed with a nut for attachment on the box wall;
- not completed with a contact block.

Extension color	Code
Green	2361.0400.615.00
Red	2361.0400.614.00
Other version	on request



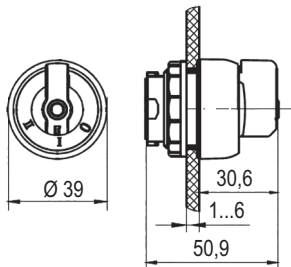
Y2E emergency, mushroom shaped button. Antirotating. Locking with wrench







- Purpose:**
- control mushroom shaped trip extension on the contact block for closing and opening of electric control circuits with position fixing with wrench;
  - installed in the perforated hole and attached with a nut on the opposite side.
- Complete set:**
- completed with a nut for attachment on the box wall;
  - completed with wrenches;
  - not completed with a contact block.

Extension color	Code
Yellowish red	2361.0901.611.00

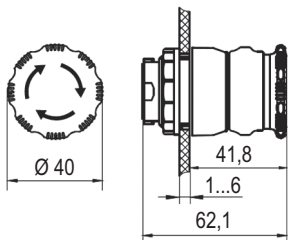
KB switch. Standard grip for switch



- Purpose:**
- control extension-switch on the contact block for closing and opening of electric control circuits;
  - installed in the perforated hole and attached with a nut on the opposite side.
- Complete set:**
- completed with a nut for attachment on the box wall;
  - not completed with a contact block.

Version	Direction of attachment groove	Code
 I-0-II	0°	2361.1804.622.04
	270°	2361.1804.612.04
 I-0-II	0°	2361.1806.622.04
	270°	2361.1806.612.04
 0-I	0°	2361.1805.622.01
	270°	2361.1805.612.01
 0-I	0°	2361.1807.622.05
	270°	2361.1807.612.05
Other version		on request

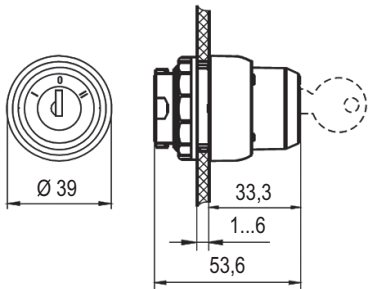
P6E emergency, mushroom shaped button. Rotating. Locking



- Purpose:**
- control mushroom shaped trip extension on the contact block for closing and opening of electric control circuits with position fixing;
  - installed in the perforated hole and attached with a nut on the opposite side.
- Complete set:**
- completed with a nut for attachment on the box wall;
  - not completed with a contact block.

Extension color	Code
Yellowish red	2361.0602.611.00

Y switch. Antirotating. Locking with wrench



- Purpose:**
- control extension-switch on the contact block for closing and opening of electric control circuits with position fixing;
  - installed in the perforated hole and attached with a nut on the opposite side.
- Complete set:**
- completed with a nut for attachment on the box wall;
  - not completed with a contact block;
  - completed with wrenches.

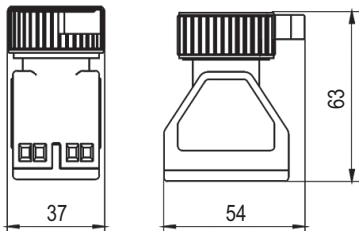
Version	Direction of attachment groove	Code
 0-•	0°	2361.0809.622.10
	270°	2361.0809.612.10
 0-I	0°	2361.0805.622.01
	270°	2361.0805.612.01
 I-0-II	0°	2361.0804.622.04
	270°	2361.0804.612.04
 I-0-II	0°	2361.0806.622.04
	270°	2361.0806.612.04
 0-•-I	0°	2361.0807.622.05
	270°	2361.0807.612.05

Contact blocks for control extensions and switches

Characteristics

Protection degree	IP20 according to GOST 14254-96
Environmental temperature, °C	from -60 to +60
Operating temperature, °C	from -60 to +90
Material of control element	polyamide
Installation in gas-hazardous areas	Areas 1-2. Gas group II, gas subgroup IIA, IIB, IIC
Marking and type of explosion protection of control elements	Ex d e IIC Gb U
Provision of explosion protection and conformity to standards	GOST 31610.0-2014 (IEC 60079-0:2011)
	GOST 31610.7-2012/IEC 60079-7:2006
Section of connected conductors	2x2.5 mm²
Mechanical service life	1,000,000 pushes

Bipolar contact blocks with screw type clip



**Purpose:**

- contact block for control extensions and switches for closing and opening of electric control circuits;
- installed on the cover of explosion-proof sheath.

**Electrical characteristics:**

- 400 V / 16 A (AC-12);
- 400 V / 10 A (AC-15);
- 110 V / 1 A (DC-13);
- 400 V / 16 A (AC-3);
- 400 V / 16 A (AC-23).

**Complete set:**

- not completed with extensions and switches.

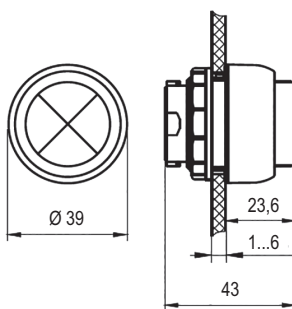
Scheme	Code
<p>1NC/1NO</p>	2366.017.000
<p>2NC</p>	2366.017.001
<p>2NO</p>	2366.017.002
Other version	on request

## Light filters

### Characteristics

Protection degree	IP66 according to GOST 14254-96
Environmental temperature, °C	from -55 to +65
Material of control element	polyamide
Sealing	silicone
Installation in gas-hazardous areas	Areas 1-2. Gas group II, gas subgroup IIA, IIB, IIC
Installation in dust-hazardous areas	Areas 21-22. Dust group III, dust subgroup IIIA, IIIB, IIIC
Marking and type of explosion protection of control elements	Ex e IIC Gb U;
	Ex tb IIIC Db U
Provision of explosion protection and conformity to standards	GOST 31610.0-2014 (IEC 60079-0:2011)
	GOST 31610.7-2012/IEC 60079-7:2006
	GOST IEC 60079-31-2013
Box wall thickness for installation of control extension	from 1 to 6 mm
Attachment of control extension	using nut
Tightening torque	from 2.8 to 3.4 Nm (M30x1.5)

### L light filter



#### Purpose:

- light filter on the contact block for indication of circuit operation;
- installed in the perforated hole and attached with a nut on the opposite side.

#### Complete set:

- completed with a nut for attachment on the box wall;
- not completed with a contact block.

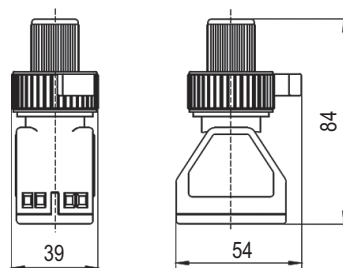
Light filter color	Code
Green	2361.1100.615.00
Red	2361.1100.614.00
Yellow	2361.1100.616.00
Other version	on request

## Annunciator lamp units

### Characteristics

Protection degree	IP20 according to GOST 14254-96
Environmental temperature, °C	from -55 to 55 (for Ex i)
	from -60 to +60
	from -60 to +50 (for 380V-400V AC)
Operating temperature, °C	from -60 to +90
Material of control element	polyamide
Installation in gas-hazardous areas	Areas 0-1-2. Gas group II, gas subgroup IIA, IIB, IIC
Marking and type of explosion protection of control elements	Ex d e IIC Gb U and Ex ia IIC Ga U (see table)
Provision of explosion protection and conformity to standards	GOST 31610.0-2014 (IEC 60079-0:2011)
	GOST 31610.7-2012/IEC 60079-7:2006
Section of connected conductors	2x2.5 mm <sup>2</sup>
Service life of LEDs	100,000 hours

### Contact blocks of annunciator lamp with screw type clip



#### Purpose:

- contact block for light filters for indication of circuit operation;
- installed in the perforated hole and attached with a nut on the opposite side.

#### Complete set:

- with LED;
- completed with a nut for attachment on the box wall;
- not completed with a contact block.

Characteristics	Type of explosion protection	Code
10V-28V AC/DC	Ex ia IIC Ga U	2362.027.003
10V-28V AC/DC	Ex d e IIC Gb	2366.027.003
20V-250V AC/DC	Ex d e IIC Gb	2366.027.001
50V-277 AC/DC	Ex d e IIC Gb	2366.027.004
380V-400V AC	Ex d e IIC Gb	2366.027.002

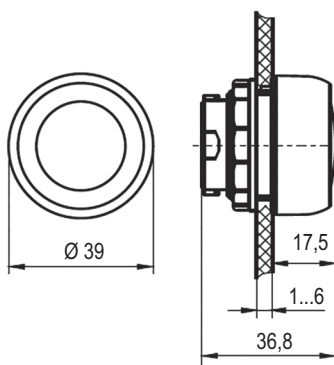


## Control extensions with backlight

### Characteristics

Protection degree	IP66 according to GOST 14254-96
Environmental temperature, °C,	from -55 to +65
Material of control element	polyamide
Sealing	silicone
Installation in gas-hazardous areas	Areas 1-2. Gas group II, gas subgroup IIA, IIB, IIC
Installation in dust-hazardous areas	Areas 21-22. Dust group III, dust subgroup IIIA, IIIB, IIIC
Marking and type of explosion protection of control elements	Ex e IIC Gb U;
	Ex tb IIIC Db U
Provision of explosion protection and conformity to standards	GOST 31610.0-2014 (IEC 60079-0:2011)
	GOST 31610.7-2012/IEC 60079-7:2006
	GOST IEC 60079-31-2013
Box wall thickness for installation of control extension	from 1 to 6 mm
Attachment of control extension	using nut
Tightening torque	from 2.8 to 3.4 Nm (M30x1.5)

### PR button with backlight



#### Purpose:

- control extension with backlight on the contact block for closing, opening and indication of electric control circuits without position fixing;
- installed in the perforated hole and attached with a nut on the opposite side.

#### Complete set:

- completed with a nut for attachment on the box wall;
- not completed with a contact block.

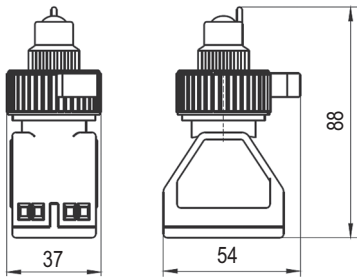
Light filter color	Code
Green	2361.1000.615.00
Red	2361.1000.614.00
Other version	on request

Contact blocks with annunciator lamp for buttons with backlight

Characteristics

Protection degree	IP20 according to GOST 14254-96
Environmental temperature, °C	from -55 to +55 (for Ex i)
	from -60 to +60
Operating temperature, °C	from -60 to +90
Material of control element	polyamide
Installation in gas-hazardous areas	Areas 0-1-2. Gas group II, gas subgroup IIA, IIB, IIC
Marking and type of explosion protection of control elements	Ex d e IIC Gb U Ex ia IIC Ga U (see table)
Provision of explosion protection and conformity to standards	GOST 31610.0-2014 (IEC 60079-0:2011)
	GOST 31610.7-2012/IEC 60079-7:2006
Section of connected conductors	2x2.5 mm²
Mechanical service life	300,000 pushes
Service life of LEDs	100,000 hours

Contact blocks with annunciator lamp for buttons with backlight



**Purpose:**


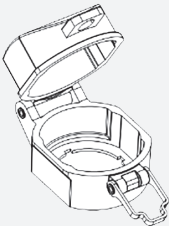

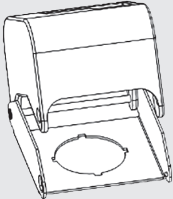

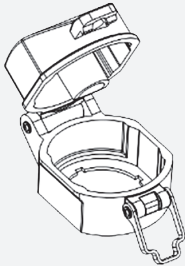

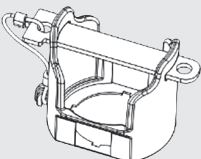

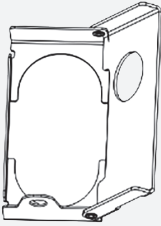

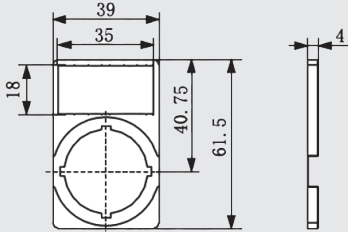

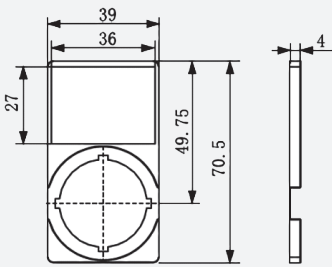
- contact block for button with backlight for light filters for closing, opening and indication of electric control circuits;
- installed in the perforated hole and attached with a nut on the opposite side.

**Complete set:**

- not completed with extension.

Scheme	Characteristics	Type of explosion protection	Code
 1NC	10V-28V AC/DC	Ex ia IIC Ga U	2362.127.300
	10V-28V AC/DC	Ex d e IIC Gb	2366.127.303
	20V-250V AC/DC	Ex d e IIC Gb	2366.127.301
	50V-277 AC/DC	Ex d e IIC Gb	2366.127.304
 1NO	10V-28V AC/DC	Ex ia IIC Ga U	2362.127.400
	10V-28V AC/DC	Ex d e IIC Gb	2366.127.403
	20V-250V AC/DC	Ex d e IIC Gb	2366.127.401
	50V-277 AC/DC	Ex d e IIC Gb	2366.127.404

## Assortment of accessories for buttons and switches



Figure	Drawing	Description	Code
		Edgewise canopy for button	2360.003-7
		Edgewise canopy for mushroom shaped button	2360.001-7
		Edgewise canopy with clamp for button	2360.004-7
		Edgewise canopy with clamp for mushroom shaped button	2360.002-7
		Edgewise canopy for double button	2360.005-7
		Marking plate. Designed for provision of additional information on light signalling hardware Marking in 1-2 lines	2360.001
		Marking plate. Designed for provision of additional information on light signalling hardware Marking in 2-3 lines	2360.006

## Standard sets based on polyester explosion-proof sheaths and AAS series cable glands for an armoured cable



### Technical characteristics

Description	standard sets based on polyester explosion-proof sheaths and AAS series cable glands for an armoured cable
Series	CPE-P
Marking according to TR CU	1Ex d e IIC T6 Gb / Ex tb IIIC T80°C Db
Conformity to standards	GOST 31610.0-2014 / GOST R IEC 60079-7-2012 / GOST IEC 60079-31-2013 / GOST IEC 60079-1-2013
Areas of use	1, 2, 21, 22
Operating temperature, °C	from -55 to +40
Protection against external effects	IP66
Sheath material	glass-fiber reinforced polyester
Cable gland series	AAS – single seal
Cable gland thread type	metric
Cable gland material	nickel-plated brass
Cable gland seal material	silicone
Type of cable	armoured cable of circular section
Drawings of standard sets	p. 167.

Physical dimensions, mm			Section of connected conductors, mm <sup>2</sup>	Side of installation and cable diameter	Element 1		Element 2		Element 3		Drawing number	Code
L	W	D			element	description	element	description	element	description		
120	120	90	2.5	1xC Ø5.5-13	P1 button of green color	1NO+1NC	-	-	-	-	CPE-P No. 031.00.001	2131.031.00.001
120	120	90	2.5	1xC Ø5.5-13	KB switch	 0-I	-	-	-	-	CPE-P No. 031.00.002	2131.031.00.002
120	120	90	2.5	1xC Ø5.5-13	KB switch	 I-0-II	-	-	-	-	CPE-P No. 031.00.003	2131.031.00.003
120	120	90	2.5	1xC Ø5.5-13	L indicator of green color	20-250V AC/DC	-	-	-	-	CPE-P No. 031.00.004	2131.031.00.004
120	120	90	2.5	1xC Ø5.5-13	L indicator of red color	20-250V AC/DC	-	-	-	-	CPE-P No. 031.00.005	2131.031.00.005
120	120	90	2.5	1xC Ø5.5-13	P2 button	1NO+1NC	-	-	-	-	CPE-P No. 031.00.006	2131.031.00.006
120	120	90	2.5	1xC Ø5.5-13	P1 button of green color	1NO+1NC	P1 button of red color	1NO+1NC	-	-	CPE-P No. 031.00.007	2131.031.00.007
120	120	90	2.5	1xC Ø5.5-13	L indicator of green color	20-250V AC/DC	P1 button of green color	1NO+1NC	-	-	CPE-P No. 031.00.008	2131.031.00.008
120	120	90	2.5	1xC Ø5.5-13	P1 button of green color	1NO+1NC	P3E button	1NO+1NC	-	-	CPE-P No. 031.00.009	2131.031.00.009
120	120	90	2.5	1xC Ø10.5-18	P1 button of green color	1NO+1NC	P3E button	1NO+1NC	-	-	CPE-P No. 031.00.010	2131.031.00.010
220	120	90	2.5	1xB Ø5.5-13	P1 button of green color	1NO+1NC	P1 button of green color	1NO+1NC	P1 button of red color	1NO+1NC	CPE-P No. 041.00.001	2131.041.00.001
220	120	90	2.5	1xB Ø5.5-13	L indicator of red color	20-250V AC/DC	P1 button of green color	1NO+1NC	P1 button of red color	1NO+1NC	CPE-P No. 041.00.002	2131.041.00.002




Standard sets based on aluminium explosion-proof sheaths and AAS series cable glands for an armoured cable



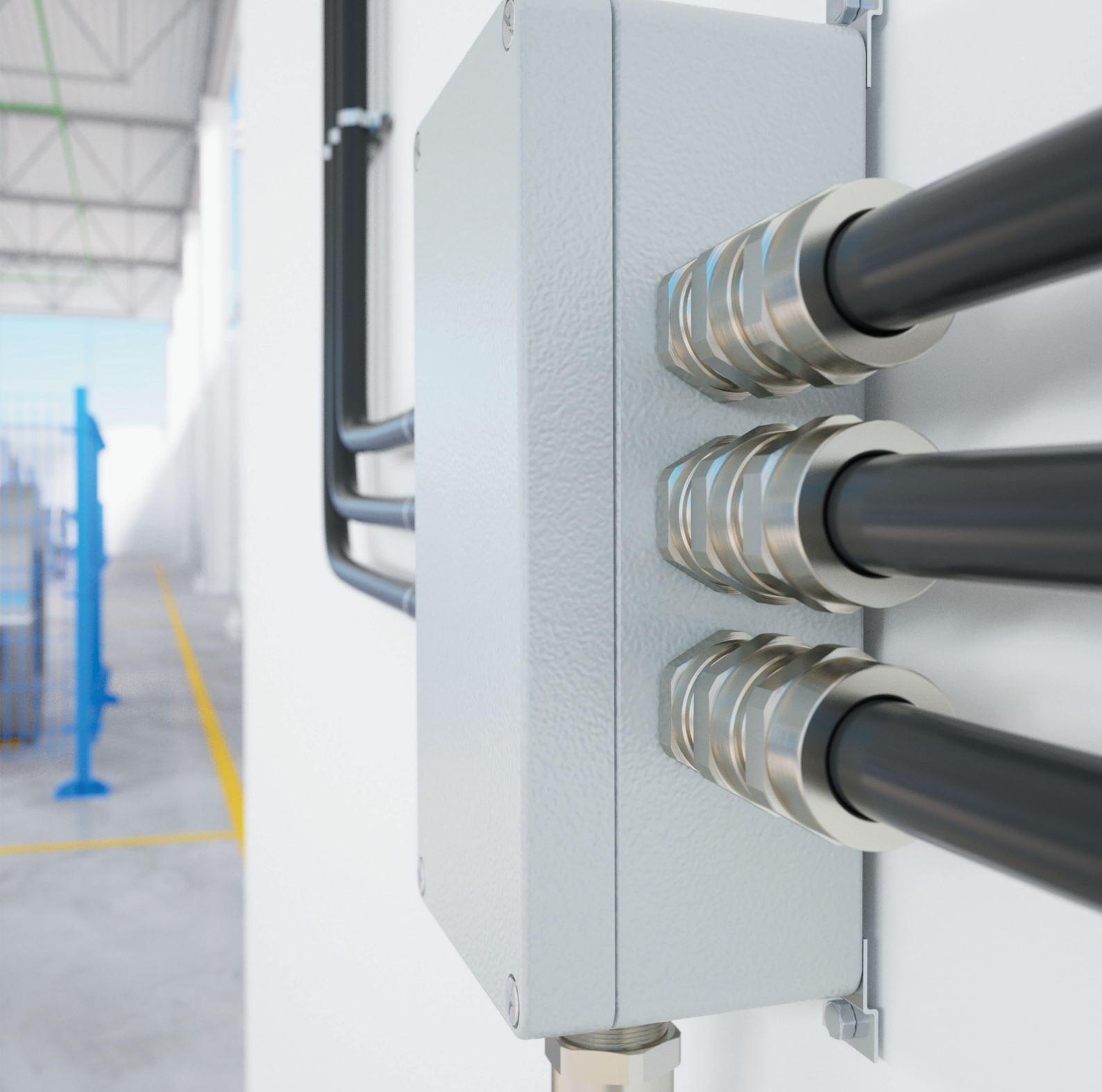
Technical characteristics

Description	standard sets based on polyester explosion-proof sheaths and AAS series cable glands for an armoured cable
Series	CPE-A
Marking according to TR CU	1Ex d e IIC T6 Gb / Ex tb IIIC T80°C Db
Conformity to standards	GOST 31610.0-2014 / GOST R IEC 60079-7-2012 / GOST IEC 60079-31-2013 / GOST IEC 60079-1-2013
Areas of use	1, 2, 21, 22
Operating temperature, °C	from -55 to +40
Protection against external effects	IP66
Sheath material	aluminium alloy
Cable gland series	AAS – single seal
Cable gland thread type	metric
Cable gland material	nickel-plated brass
Cable gland seal material	silicone
Type of cable	armoured cable of circular section
Drawings of standard sets	p. 162.



Physical dimensions, mm			Section of connected conductors, mm <sup>2</sup>	Side of installation and cable diameter	Element 1		Element 2		Element 3		Drawing number	Code
L	W	D			element	description	element	description	element	description		
120	120	90	2.5	1xC Ø5.5-13	P1 button of green color	1NO+1NC	-	-	-	-	CPE-A No. 121.00.001	2101.121.00.001
120	120	90	2.5	1xC Ø5.5-13	P3 button	1NO+1NC	-	-	-	-	CPE-A No. 121.00.002	2101.121.00.002
120	120	90	2.5	1xC Ø5.5-13	P2 button	1NO+1NC	-	-	-	-	CPE-A No. 121.00.003	2101.121.00.003
120	120	90	2.5	1xC Ø5.5-13	KB switch		-	-	-	-	CPE-A No. 121.00.004	2101.121.00.004
120	120	90	2.5	1xC Ø5.5-13	KB switch		-	-	-	-	CPE-A No. 121.00.005	2101.121.00.005
120	120	90	2.5	1xC Ø5.5-13	L indicator of green color	20-250V AC/DC	-	-	-	-	CPE-A No. 121.00.006	2101.121.00.006
120	120	90	2.5	1xC Ø5.5-13	L indicator of red color	20-250V AC/DC	-	-	-	-	CPE-A No. 121.00.007	2101.121.00.007
120	120	90	2.5	1xC Ø5.5-13	P1 button of green color	1NO+1NC	P3 button	1NO+1NC	-	-	CPE-A No. 121.00.008	2101.121.00.008
120	120	90	2.5	1xC Ø5.5-13	P1 button of green color	1NO+1NC	L indicator of green color	20-250V AC/DC	-	-	CPE-A No. 121.00.009	2101.121.00.009
120	120	90	2.5	1xC Ø10.5-18	P1 button of green color	1NO+1NC	-	-	-	-	CPE-A No. 121.00.010	2101.121.00.010
120	120	90	2.5	1xC Ø10.5-18	P3 button	1NO+1NC	-	-	-	-	CPE-A No. 121.00.011	2101.121.00.011
120	120	90	2.5	1 Ø10.5-18	P2 button	1NO+1NC	-	-	-	-	CPE-A No. 121.00.012	2101.121.00.012
120	120	90	2.5	1xC Ø10.5-18	KB switch		-	-	-	-	CPE-A No. 121.00.013	2101.121.00.013
120	120	90	2.5	1xC Ø10.5-18	KB switch		-	-	-	-	CPE-A No. 121.00.014	2101.121.00.014
120	120	90	2.5	1xC Ø10.5-18	L indicator of green color	20-250V AC/DC	-	-	-	-	CPE-A No. 121.00.015	2101.121.00.015
120	120	90	2.5	1xC Ø10.5-18	L indicator of red color	20-250V AC/DC	-	-	-	-	CPE-A No. 121.00.016	2101.121.00.016
120	120	90	2.5	1xC Ø10.5-18	P1 button of green color	1NO+1NC	P3 button	1NO+1NC	-	-	CPE-A No. 121.00.017	2101.121.00.017
120	120	90	2.5	1xC Ø10.5-18	P1 button of green color	1NO+1NC	L indicator of green color	20-250V AC/DC	-	-	CPE-A No. 121.00.018	2101.121.00.018
220	120	90	2.5	1xB Ø5.5-13	P1 button of green color	1NO+1NC	P1 button of red color	1NO+1NC	P3 button	1NO+1NC	CPE-A No. 141.00.001	2101.141.00.001
220	120	90	2.5	1xB Ø5.5-13	L indicator of red color	20-250V AC/DC	P1 button of green color	1NO+1NC	P1 button of red color	1NO+1NC	CPE-A No. 141.00.002	2101.141.00.002
220	120	90	2.5	1xB Ø5.5-13	L indicator of red color	20-250V AC/DC	L indicator of yellow color	light module	L indicator of green color	20-250V AC/DC	CPE-A No. 141.00.003	2101.141.00.003





## **Explosion-proof cable glands**

<b>Cable glands.....</b>	<b>56</b>
<b>Accessories for cable glands.....</b>	<b>71</b>

## Explosion-proof cable glands

### Description

Explosion-proof cable glands shall be used for cable laying directly into an enclosure of electrical equipment. The cable glands constitute mechanical devices for sealing of a cable at its entry into the electrical equipment enclosure.

They comply with all the requirements of standards, e.g. ATEX, IEC, EAC, and have versions with the following types of explosion protection:

- Ex d "Flameproof sheaths" according to GOST IEC 60079-1-2013;
- Ex e "Increased safety" according to GOST R IEC 60079-7-2012;
- Ex t "Dust ignition protection in sheaths" according to GOST IEC 60079-31-2013;
- Ex nR "Equipment having no igniting capability" according to GOST 31610.15-2014/IEC 60079-15:2010.

Four types of certification make the cable glands a flexible product. They can be applied in any conditions and are suitable for all types of an armoured and non-armoured cable. Regardless of an area of use, DKC cable glands provide claimed degree of IP66/68 and high tear-out load.

The following materials are used in production of the cable glands:

- nickel-plated brass;
- stainless steel AISI 316L;
- polyamide.

The cable glands are suitable for all the cable types:

- electric;
- measuring;
- data transferring.

### Advantages:

- all the cable glands are completed with seals for a respective range of cable diameters (KIT code). All the seals are marked taking into account a diameter of a cable being embossed;
- the material of the cable glands combines durability and resistance to the majority of chemical environments;
- a wide standard size range allows connecting almost any diameter of a cable outer sheath;
- the design of cable gland guarantees high sealing degree IP68 and high tear-out load;
- perfectly smooth surfaces of the cable gland exclude the possibility of damage to hands during installation;
- the cable glands are suitable for all types of a circular section cable, with filling of free spaces in the cable;
- wide range of operating temperatures: from -65 to +130 °C when using a silicone seal, from -40 to +80 °C when using an EPDM seal.

### KIT-sets

Normally, the cable glands are completed with a set of seals allowing providing safe embossing of a cable in the wide range of diameters.

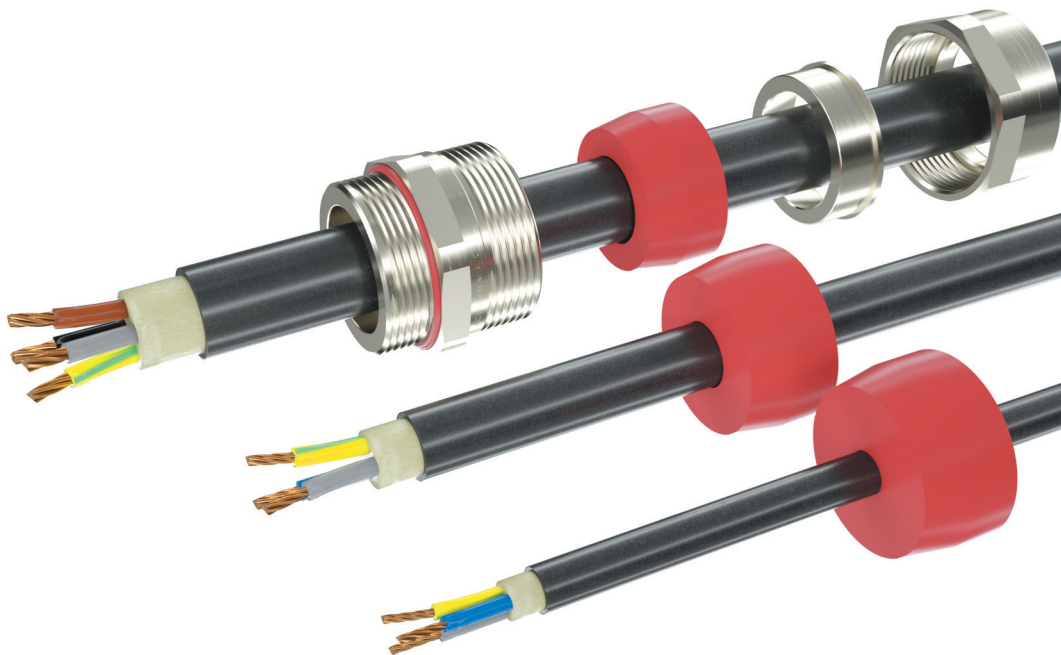
The KIT sets (KITs) constitute a package of seals made of silicone or EPDM material.

The set includes from two to four seals depending on a dimension of cable gland and is intended for sealing of a cable wide size range. For example, the dimensions of cable gland M20x1.5 may be used with a cable, the outer diameter of which is from 5.5 to 13 mm.

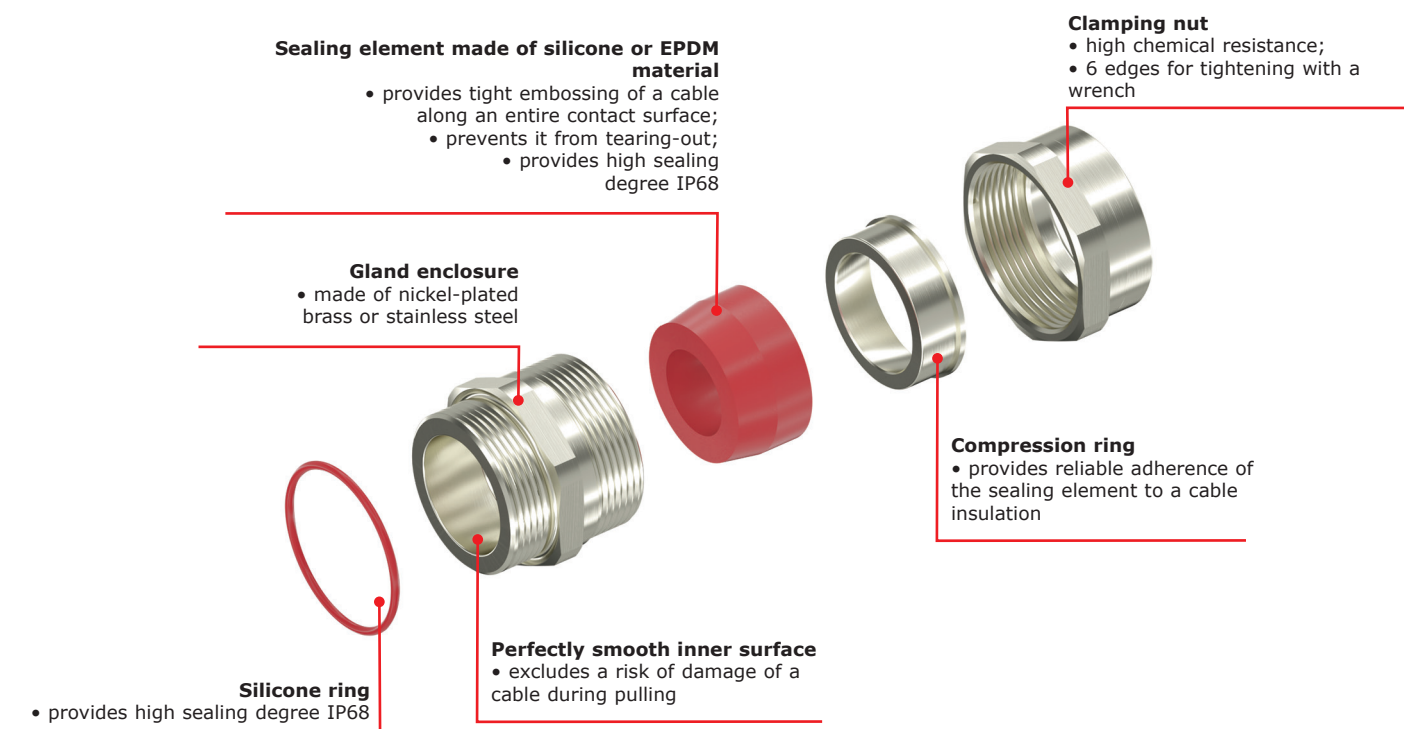
The KITs of cable gland M20x1.5 include 3 seals for the cable:

- from 5.5 to 8 mm;
- from 8 to 10.5 mm;
- from 10.5 to 13 mm.

All the seals are marked taking into account a diameter of a cable being embossed.



## Distinctive features of cable gland of ANS series



Standard complete set of cable gland of ANS series includes:

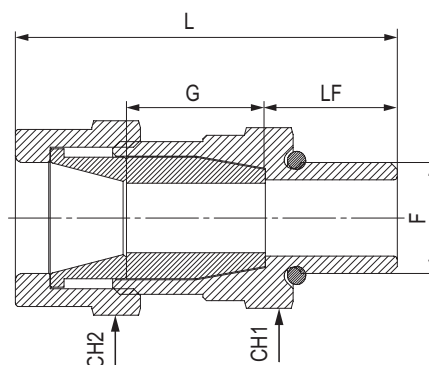
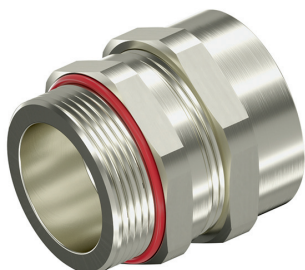
- KIT-sets;
- outer seal at entry of a cable gland into a sheath.

Standard version of the cable glands is nickel-plated brass with silicone sealing.

The cable gland may be produced in the "stainless steel" version with the sealing made of silicone or EPDM.



## Cable gland for non-armoured cable of ANS series



### Purpose:

- explosion-proof cable gland for non-armoured cable has four types of certification: flameproof sheath Exd, increased security Exe, limitation of air circulation of type ExnR, dust ignition protection Ext.

The cable gland is suitable for use in closed premises, as well as outdoors in hazardous areas 1, 2, 21, 22 with all the types of non-armoured cable of circular section. It provides explosion-proof sealing of the cable outer sheath and simultaneous protection against environmental exposure.

It can be used with any version approved for use in areas 1, 2, 21, 22 according to rules of selection and installation of equipment, according to GOST IEC 60079-14.

The cable glands are completed with the silicone seals (EPDM seal on request).

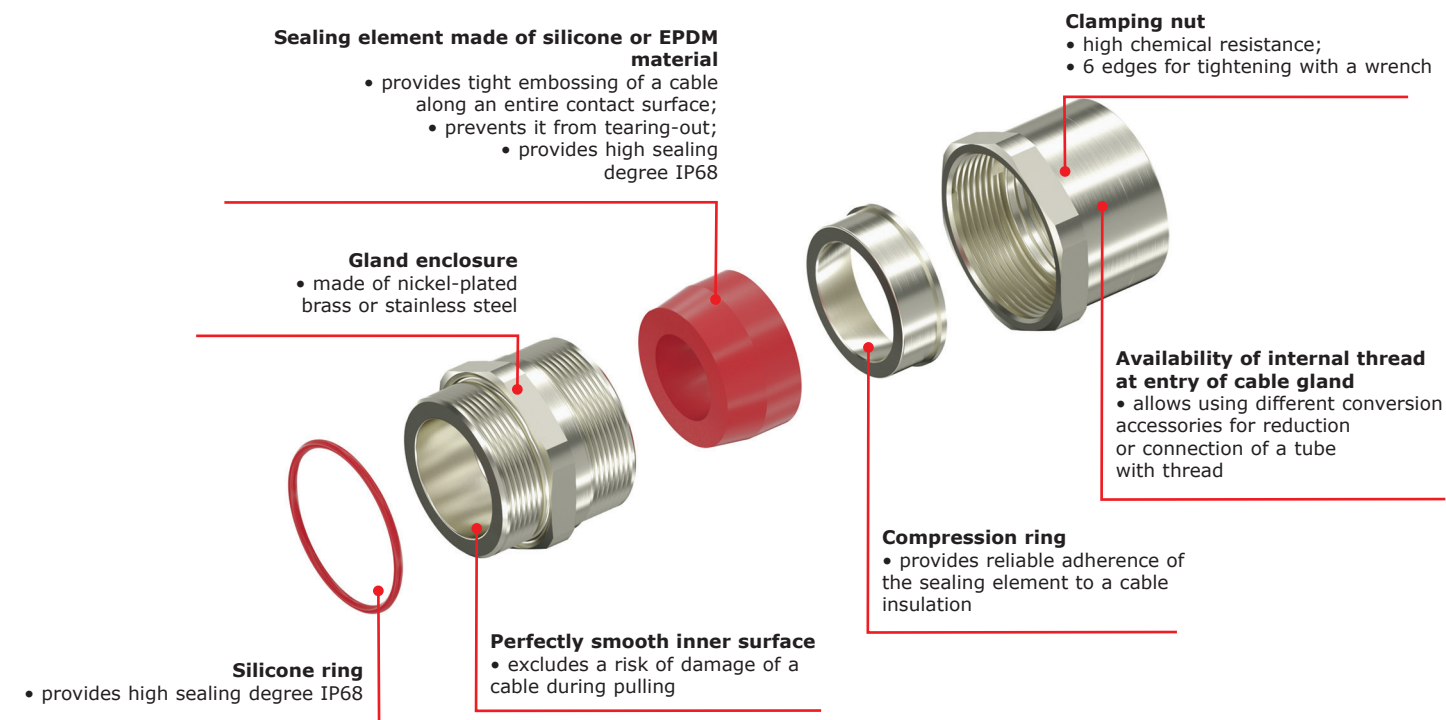
## Technical characteristics

Series	ANS
Marking according to ATEX	II 2G Ex db IIC Gb / II 2G Ex eb II Gb / II 2D Ex tb IIIC Db
Conformity to standards	EN 60079-0:2012 + A11:2013 / EN 60079-1:2014 / EN60079-7:2015 / EN 60079-31:2014
Marking according to IECEx	Ex db IIC Gb / Ex eb II Gb / Ex tb IIIC Db / Ex nR II Gc
Conformity to standards	IEC 60079-0:2011 / IEC 60079-1:2014-06 / IEC 60079-15:2010 / IEC 60079-31:2013 / IEC 60079-7:2015
Marking according to TR CU	1Ex db IIC Gb / 1Ex e IIC Gb / 2Ex nR IIC Gc / Ex tb IIIC Db
Conformity to standards	GOST 31610.0-2014 / GOST IEC 60079-1-2013 / GOST R IEC 60079-7-2012 / GOST IEC 60079-31-2013 / GOST 31610.15-2014/IEC 60079-15:2010
Areas of use	1, 2, 21, 22
Environmental temperature range during operation	from -65 to +130 °C (silicone seal); from -40 to +80 °C (EPDM seal);
Protection against external effects	IP66, IP68
Material of enclosure parts	nickel-plated brass (standard version); stainless steel AISI 316L
Material of sealing	silicone (standard version); EPDM
Type of cable	non-armoured cable of circular section, with filling of free spaces in the cable
Sealing method	sealing of bias along a cable outer sheath
Place of sealing	cable outer sheath
Standard sizes	metric, from M16 to M90
	NPT from 3/8" to 3" (on request)
	GAS from 3/8" to 3" (on request)
	PG from 09 to 48 (on request)
	ISO 7/1 from 3/8" to 3" (on request)
Diameter of cable outer sheath	From 5 to 68 mm
Complete set	set of silicone seals, O-ring. If necessary, it is completed with a nut
Accessories	reducing couplings, adapters, grounded rings, lock nuts, toothed locking washer

Physical dimensions, mm						Diameter of cable outer sheath, mm		Code
F	L	LF	G	CH1	CH2	from	to	
M16x1.5	55	15	20	24	26	5	10	6018ANSKGM1SB
M20x1.5	60	15	20	30	32	5.5	13	6018ANSBKGM2SB
M25x1.5	60	15	20	35	36	10.5	18	6018ANSCKGM3SB
M32x1.5	60	15	25	42	45	15	24	6018ANSDKGM4SB
M40x1.5	70	15	25	48	50	21	30	6018ANSEKGM5SB
M50x1.5	70	15	25	55	58	24	36	6018ANSFKGM6SB
M63x1.5	70	15	25	68	68	36	45	6018ANSKGGM7SB
M75x1.5	70	15	25	80	80	45	54	6018ANSHKGM8SB
M90x2	85	20	30	102	102	54	62	6018ANSIKGM9SB
M90x2	85	20	30	102	102	62	68	6018ANSCLKGM9SB

**Note:** other kinds of materials and types of thread are provided on request.

## Distinctive features of cable gland of ANF series



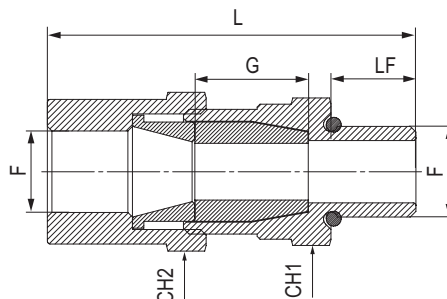
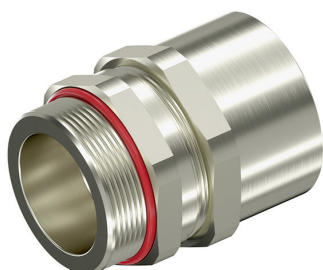
Standard complete set of cable gland of ANF series includes:

- KIT-sets;
- outer seal at entry of a cable gland into a sheath.

Standard version of the cable glands is nickel-plated brass with silicone sealing.

The cable gland may be produced in the "stainless steel" version with the sealing made of silicone or EPDM.

## Cable gland for non-armoured cable of ANF series

**Purpose:**

- explosion-proof cable gland with thread on inner surface.

It is suitable for connection of a non-armoured cable in a tube.

The explosion-proof cable gland has four types of certification: flameproof sheath Exd, increased security Exe, limitation of air circulation of type ExnR, dust ignition protection Ext.

The cable gland is suitable for use in closed premises, as well as outdoors in hazardous areas 1, 2, 21, 22 with all the types of non-armoured cable of circular section. It provides explosion-proof sealing of the cable outer sheath and simultaneous protection against environmental exposure.

It can be used with any version approved for use in areas 1, 2, 21, 22 according to rules of selection and installation of equipment, according to GOST IEC 60079-14.

The cable glands are completed with the silicone seals (EPDM seal on request).

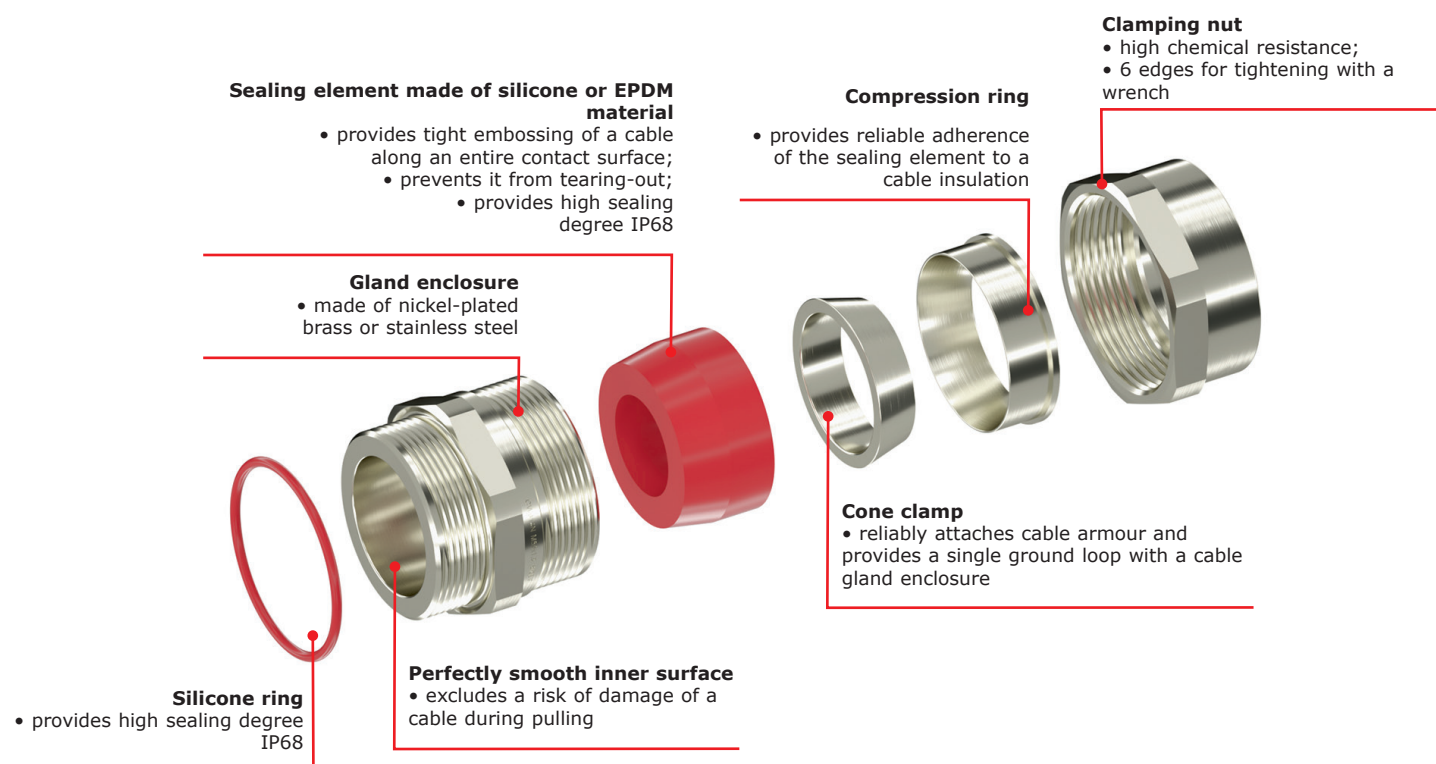
## Technical characteristics

Series	ANF
Marking according to ATEX	II 2G Ex db IIC Gb / II 2G Ex eb II Gb / II 2D Ex tb IIIC Db
Conformity to standards	EN 60079-0:2012 + A11:2013 / EN 60079-1:2014 / EN60079-7:2015 / EN 60079-31:2014
Marking according to IECEx	Ex db IIC Gb / Ex eb II Gb / Ex tb IIIC Db / Ex nR II Gc
Conformity to standards	IEC 60079-0:2011 / IEC 60079-1:2014-06 / IEC 60079-15:2010 / IEC 60079-31:2013 / IEC 60079-7:2015
Marking according to TR CU	1Ex db IIC Gb / 1Ex e IIC Gb / 2Ex nR IIC Gc / Ex tb IIIC Db
Conformity to standards	GOST 31610.0-2014 / GOST IEC 60079-1-2013 / GOST R IEC 60079-7-2012 / GOST IEC 60079-31-2013 / GOST 31610.15-2014/IEC 60079-15:2010
Areas of use	1, 2, 21, 22
Environmental temperature range during operation	from -65 to +130 °C (silicone seal); from -40 to +80 °C (EPDM seal);
Protection against external effects	IP66, IP68
Material of enclosure parts	nickel-plated brass (standard version); stainless steel AISI 316L
Material of sealing	silicone (standard version); EPDM
Type of cable	non-armoured cable of circular section, with filling of free spaces in the cable
Sealing method	sealing of bias along a cable outer sheath
Place of sealing	cable outer sheath
Standard sizes	metric, from M16 to M90
	NPT from 3/8" to 3" (on request)
	GAS from 3/8" to 3" (on request)
	PG from 09 to 48 (on request)
Diameter of cable outer sheath	ISO 7/1 from 3/8" to 3" (on request)
	from 5 to 68 mm
Complete set	set of silicone seals, O-ring. If necessary, it is completed with a nut
Accessories	reducing couplings, adapters, grounded rings, lock nuts, toothed locking washer

Physical dimensions, mm						Diameter of cable outer sheath, mm		Code
F	L	LF	G	CH1	CH2	from	to	
M16x1.5	70	15	20	24	26	5	10	6018ANFAKGM1SB
M20x1.5	70	15	20	30	32	5.5	13	6018ANFBKGM2SB
M25x1.5	70	15	20	35	36	10.5	18	6018ANFCKGM3SB
M32x1.5	75	15	25	42	45	15	24	6018ANFDKGM4SB
M40x1.5	80	15	25	48	50	21	30	6018ANFEKGM5SB
M50x1.5	85	15	25	55	58	24	36	6018ANFFKGM6SB
M63x1.5	85	15	25	68	68	36	45	6018ANFGKGM7SB
M75x1.5	85	15	25	80	80	45	54	6018ANFHKGM8SB
M90x2	100	20	30	102	102	54	62	6018ANFIKGM9SB
M90x2	100	20	30	102	102	62	68	6018ANFLKGM9SB

**Note:** other kinds of materials and types of thread are provided on request.

## Distinctive features of cable gland of AAS series



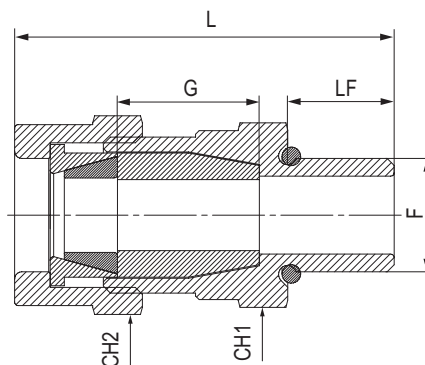
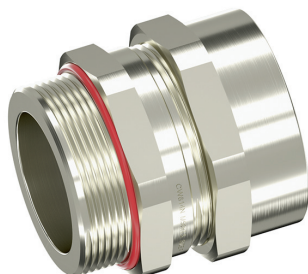
Standard complete set of cable gland of AAS series includes:

- KIT-sets;
- outer seal at entry of a cable gland into a sheath.

Standard version of the cable glands is nickel-plated brass with silicone sealing.

The cable gland may be produced in the "stainless steel" version with the sealing made of silicone or EPDM.

## Cable gland for armoured cable of AAS series

**Purpose:**

- explosion-proof cable gland for armoured cable has four types of certification: flameproof sheath Exd, increased security Exe, limitation of air circulation of type ExnR, dust ignition protection Ext.

The cable gland provides mechanical attachment of a cable and electric integrity of a ground circuit.

It is suitable for all types of armour.

The cable gland is suitable for use in closed premises, as well as outdoors in hazardous areas 1, 2, 21, 22 with all the types of armoured cable of circular section. It provides explosion-proof sealing of the cable inner sheath and simultaneous protection against environmental exposure.

It can be used with any version approved for use in areas 1, 2, 21, 22 according to rules of selection and installation of equipment, according to GOST IEC 60079-14.

The cable glands are completed with the silicone seals (EPDM seal on request).

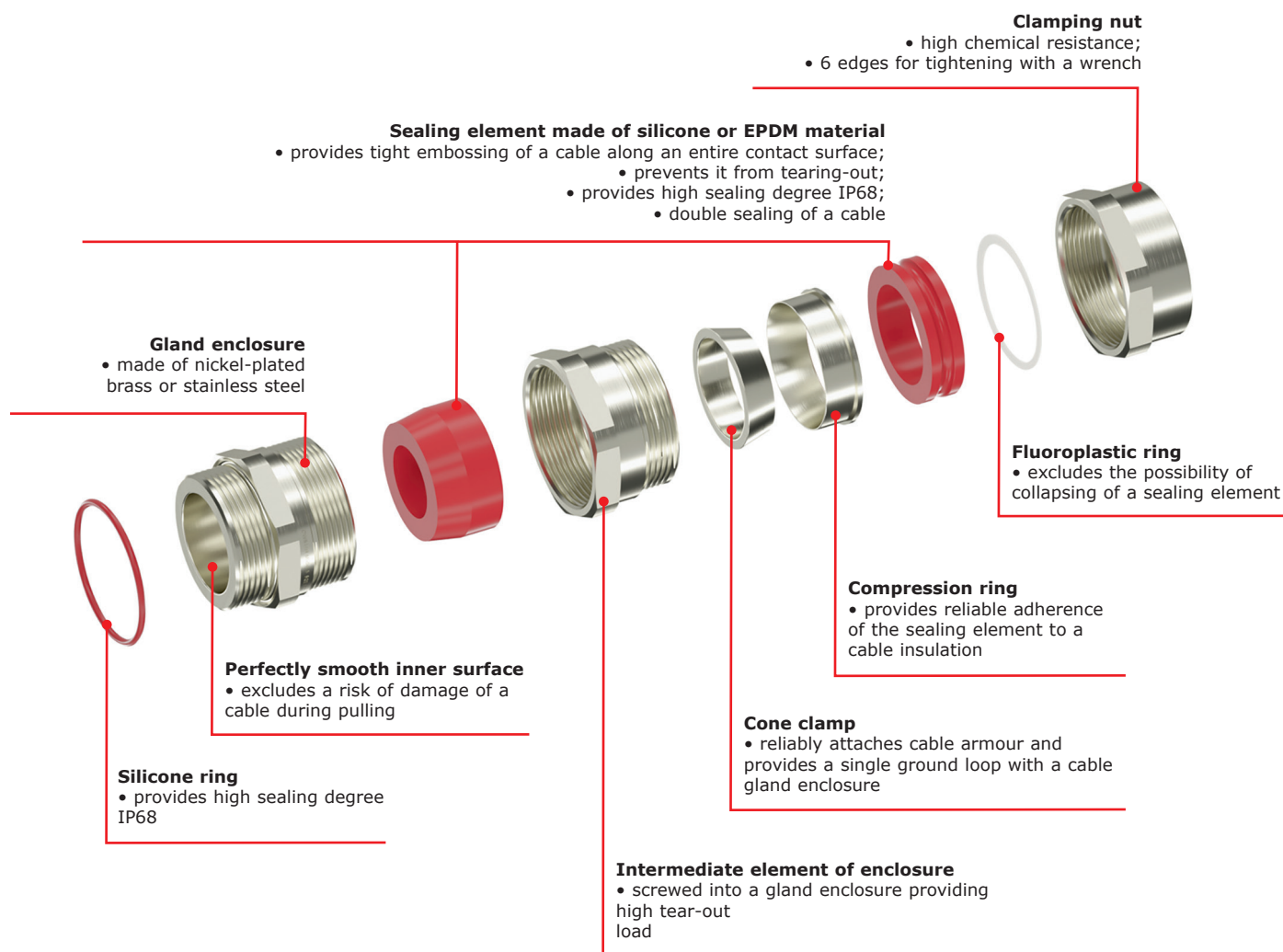
## Technical characteristics

Series	AAS
Marking according to ATEX	II 2G Ex db IIC Gb / II 2G Ex eb II Gb / II 2D Ex tb IIIC Db
Conformity to standards	EN 60079-0:2012 + A11:2013 / EN 60079-1:2014 / EN60079-7:2015 / EN 60079-31:2014
Marking according to IECEx	Ex db IIC Gb / Ex eb II Gb / Ex tb IIIC Db / Ex nR II Gc
Conformity to standards	IEC 60079-0:2011 / IEC 60079-1:2014-06 / IEC 60079-15:2010 / IEC 60079-31:2013 / IEC 60079-7:2015
Marking according to TR CU	1Ex db IIC Gb / 1Ex eb II Gb / 2Ex nR IIC Gc / Ex tb IIIC Db
Conformity to standards	GOST 31610.0-2014 / GOST IEC 60079-1-2013 / GOST R IEC 60079-7-2012 / GOST IEC 60079-31-2013 / GOST 31610.15-2014/IEC 60079-15:2010
Areas of use	1, 2, 21, 22
Environmental temperature range during operation, °C	from -65 to +130 (silicone seal); from -40 to +80 (EPDM seal)
Protection against external effects	IP66, IP68
Material of enclosure parts	nickel-plated brass (standard version); stainless steel AISI 316L
Material of sealing	silicone (standard version); EPDM
Type of cable	armoured cable of circular section, with filling of free spaces in the cable
Sealing method	sealing of bias along a cable inner sheath
Place of sealing	cable inner sheath
Sheath mounting method	cone bushing and clamping ring
Standard sizes	metric, from M16 to M90
	NPT from 3/8" to 3" (on request)
	GAS from 3/8" to 3" (on request)
	PG from 09 to 48 (on request)
Diameter of cable inner sheath	ISO 7/1 from 3/8" to 3" (on request)
	from 5 to 68 mm
Complete set	set of silicone seals, O-ring. If necessary, it is completed with a nut
Accessories	reducing couplings, adapters, grounded rings, lock nuts, O-rings, protection boxes, toothed locking washer

Physical dimensions, mm						Thickness of armour, mm		Diameter of cable outer sheath, mm		Code
F	L	LF	G	CH1	CH2	from	to	from	to	
M16x1.5	55	15	20	24	26	0	0.5	5	10	6018AASAKGM1SB
M20x1.5	60	15	20	30	32	0	0.5	5.5	13	6018AASBKGM2SB
M25x1.5	60	15	20	35	36	0	0.5	10.5	18	6018AASCKGM3SB
M32x1.5	70	15	25	42	45	0	1	15	24	6018AASDKGM4SB
M40x1.5	70	15	25	48	50	0	1	21	30	6018AASEKGM5SB
M50x1.5	70	15	25	55	58	0	1	24	36	6018AASFCKGM6SB
M63x1.5	70	15	25	68	68	0	1	36	45	6018AASGKGM7SB
M75x1.5	70	15	25	80	80	0	1	45	54	6018AASHKGM8SB
M90x2	68	20	30	102	102	0	2	54	62	6018AASIKGM9SB
M90x2	68	20	30	102	102	0	2	62	68	6018AASLKGM9SB

**Note:** other kinds of materials and types of thread are provided on request.

## Distinctive features of cable gland of ADS series



Standard complete set of cable gland of ADS series includes:

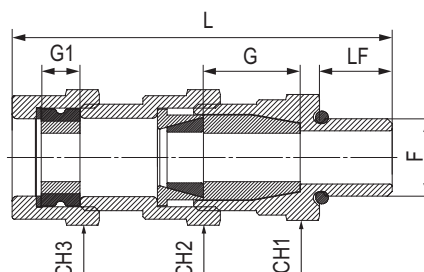
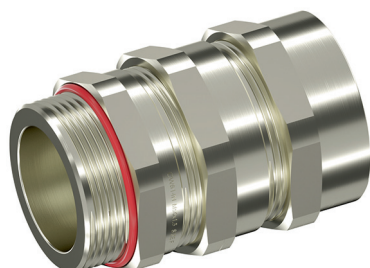
- KIT-sets;
- outer seal at entry of a cable gland into a sheath.

Standard version of the cable glands is nickel-plated brass with silicone sealing.

The cable gland may be produced in the "stainless steel" version with the sealing made of silicone or EPDM.



## Cable gland for armoured cable of ADS series

**Purpose:**

- explosion-proof cable gland with double armour for armoured cable has four types of certification: flameproof sheath Exd, increased security Exe, limitation of air circulation of type ExnR, dust ignition protection Ext.

The cable gland provides mechanical attachment of a cable and electric integrity of a ground circuit.

It is suitable for all types of armour.

The cable gland is suitable for use in closed premises, as well as outdoors in hazardous areas 1, 2, 21, 22 with all the types of armoured cable of circular section. It provides explosion-proof sealing of the cable outer sheath and simultaneous protection against environmental exposure.

It can be used with any version approved for use in areas 1, 2, 21, 22 according to rules of selection and installation of equipment, according to GOST IEC 60079-14.

The cable glands are completed with the silicone seals (EPDM seal on request).

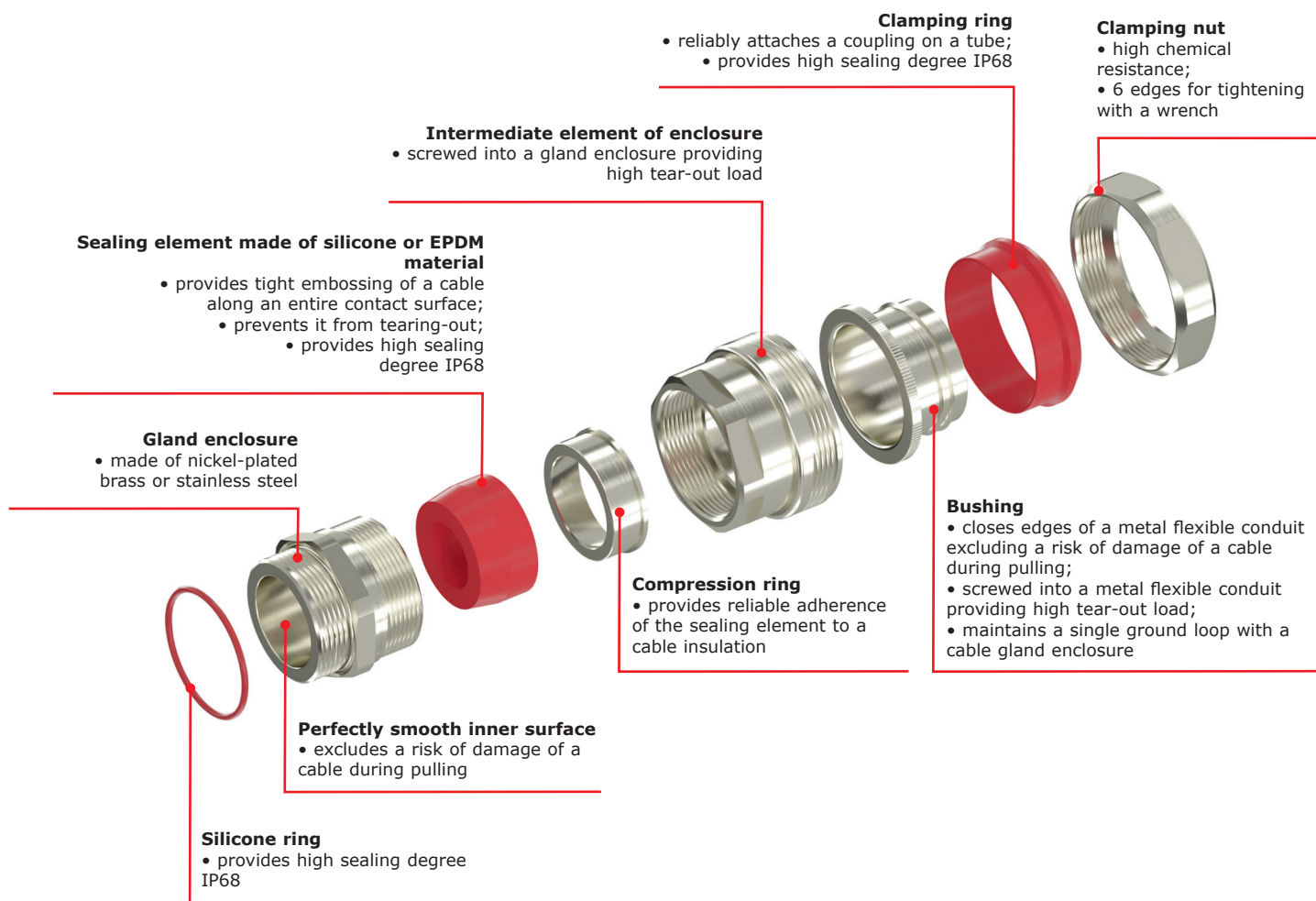
## Technical characteristics

Series	ADS
Marking according to ATEX	II 2G Ex db IIC Gb / II 2G Ex eb II Gb / II 2D Ex tb IIIC Db
Conformity to standards	EN 60079-0:2012 + A11:2013 / EN 60079-1:2014 / EN60079-7:2015 / EN 60079-31:2014
Marking according to IECEx	Ex db IIC Gb / Ex eb II Gb / Ex tb IIIC Db / Ex nR II Gc
Conformity to standards	IEC 60079-0:2011 / IEC 60079-1:2014-06 / IEC 60079-15:2010 / IEC 60079-31:2013 / IEC 60079-7:2015
Marking according to TR CU	1Ex db IIC Gb / 1Ex eb II Gb / 2Ex nR IIC Gc / Ex tb IIIC Db
Conformity to standards	GOST 31610.0-2014 / GOST IEC 60079-1-2013 / GOST E IEC 60079-7-2012 / GOST IEC 60079-31-2013
Areas of use	1, 2, 21, 22
Environmental temperature range during operation, °C	from -65 to +130 (silicone seal); from -40 to +80 (EPDM seal)
Protection against external effects	IP66, IP68
Material of enclosure parts	nickel-plated brass (standard version); stainless steel AISI 316L
Material of sealing	silicone (standard version); EPDM
Type of cable	armoured cable of circular section, with filling of free spaces in the cable
Sealing method	sealing of bias along cable inner and outer sheaths
Place of sealing	cable inner and outer sheath
Sheath mounting method	cone bushing and clamping ring
Standard sizes	metric, from M16 to M90
	NPT from 3/8" to 3" (on request)
	GAS from 3/8" to 3" (on request)
	PG from 09 to 48 (on request)
	ISO 7/1 from 3/8" to 3" (on request)
Diameter of cable outer sheath, mm	from 6 to 78
Diameter of cable inner sheath, mm	from 5 to 68
Complete set	set of silicone seals, O-ring. If necessary, it is completed with a nut
Accessories	reducing couplings, adapters, grounded rings, lock nuts, O-rings, protection boxes, toothed locking washer.

Physical dimensions, mm								Thickness of armour, mm		Diameter of cable inner sheath, mm		Diameter of cable outer sheath, mm		Code
F	L	LF	G	G1	CH1	CH2	CH3	from	to	from	to	from	to	
M16x1.5	80	15	20	8	24	26	26	0	0.5	5	10	6	15	6018ADSAKGM1SB
M20x1.5	80	15	20	10	30	32	32	0	0.5	5.5	13	10	19	6018ADSBKGM2SB
M25x1.5	80	15	20	10	35	36	36	0	0.5	10.5	18	15	24	6018ADSCKGM3SB
M32x1.5	100	15	25	13	42	45	45	0	1	15	24	20	31	6018ADSDKGM4SB
M40x1.5	100	15	25	13	48	50	50	0	1	21	30	26	37	6018ADSEKGM5SB
M50x1.5	100	15	25	13	55	58	58	0	1	24	36	31	43	6018ADSFKGM6SB
M63x1.5	100	15	25	13	68	68	68	0	1	36	45	42	53	6018ADSGKGM7SB
M75x1.5	105	15	25	13	80	80	80	0	1	45	54	52	64	6018ADSHKGM8SB
M90x2	125	20	30	22	102	102	102	0	2	54	62	64	72	6018ADSIKGM9SB
M90x2	125	20	30	22	102	102	102	0	2	62	68	70	78	6018ADSLKGM9SB

**Note:** other kinds of materials and types of thread are provided on request.

## Distinctive features of cable gland of ANP series



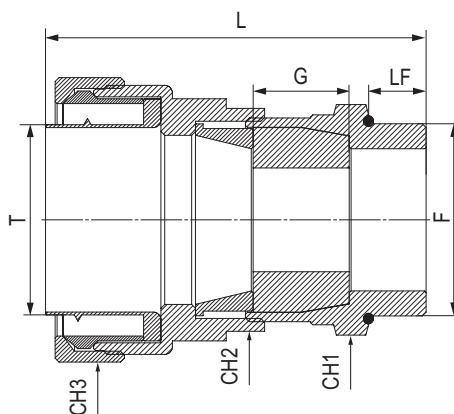
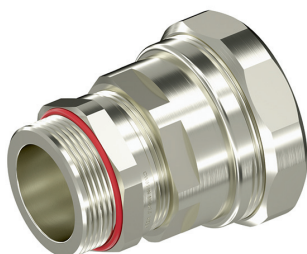
Standard complete set of cable gland of ANP series includes:

- KIT-sets;
- outer seal at entry of a cable gland into a sheath.

Standard version of the cable glands is nickel-plated brass with silicone sealing.

The cable gland may be produced in the "stainless steel" version with the sealing made of silicone or EPDM.

## Cable gland for connection of non-armoured cable in metal flexible conduit of ANP series



### Purpose:

- explosion-proof cable gland for connection of non-armoured cable in metal flexible conduit has four types of certification: flameproof sheath Exd, increased security Exe, limitation of air circulation of type ExnR, dust ignition protection Ext.

The cable gland is suitable for use in closed premises, as well as outdoors in hazardous areas 1, 2, 21, 22 with all the types of non-armoured cable of circular section in a flexible metal conduit. It provides explosion-proof sealing of the cable outer sheath and simultaneous protection against environmental exposure.

It can be used with any version approved for use in areas 1, 2, 21, 22 according to rules of selection and installation of equipment, according to GOST IEC 60079-14.

The cable glands are completed with the silicone seals (EPDM seal on request).

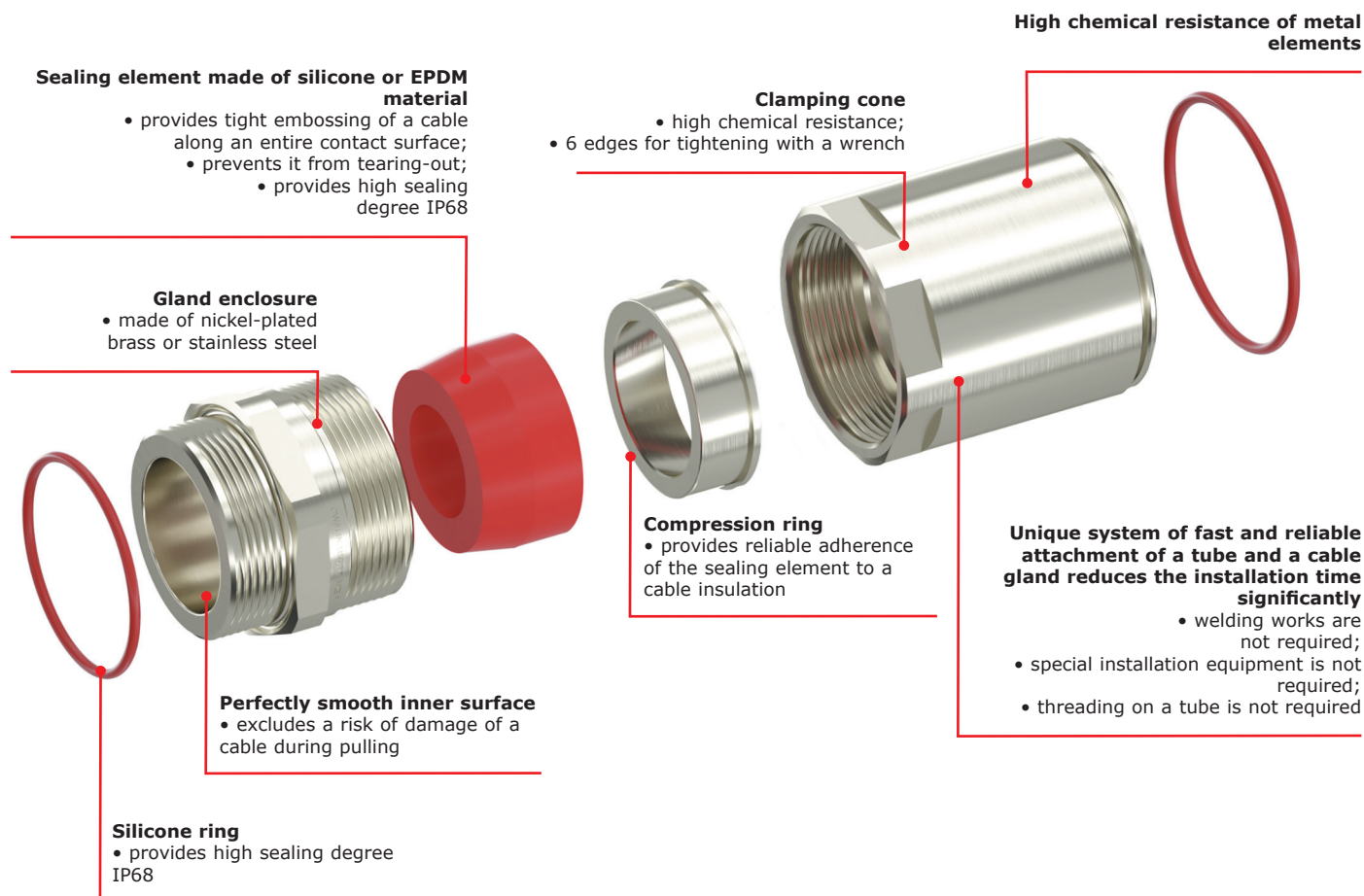
### Technical characteristics

Series	ANP
Marking according to ATEX	II 2G Ex db IIC Gb / II 2G Ex eb II Gb / II 2D Ex tb IIIC Db
Conformity to standards	EN 60079-0:2012 + A11:2013 / EN 60079-1:2014 / EN60079-7:2015 / EN 60079-31:2014
Marking according to IECEx	Ex db IIC Gb / Ex eb II Gb / Ex tb IIIC Db / Ex nR II Gc
Conformity to standards	IEC 60079-0:2011 / IEC 60079-1:2014-06 / IEC 60079-15:2010 / IEC 60079-31:2013 / IEC 60079-7:2015
Marking according to TR CU	1Ex db IIC Gb / 1Ex e IIC Gb / 2Ex nR IIC Gc / Ex tb IIIC Db
Conformity to standards	GOST 31610.0-2014 / GOST IEC 60079-1-2013 / GOST R IEC 60079-7-2012 / GOST IEC 60079-31-2013 / GOST 31610.15-2014/IEC 60079-15:2010
Areas of use	1, 2, 21, 22
Environmental temperature range during operation, °C	from -65 to +130 (silicone seal); from -40 to +80 (EPDM seal)
Protection against external effects	IP66, IP68
Material of enclosure parts	nickel-plated brass (standard version); stainless steel AISI 316L
Material of sealing	silicone (standard version); EPDM
Type of cable	for a non-armoured cable of circular section
Sealing method	sealing of bias along a cable outer sheath
Place of sealing	cable outer sheath
Standard sizes	metric, from M16 to M63
Diameter of cable outer sheath, mm	from 5 to 45
Complete set	set of silicone seals; O-ring. If necessary, it is completed with a nut
Accessories	reducing couplings, adapters, grounded rings, lock nuts, toothed locking washer

Physical dimensions, mm								Diameter of cable outer sheath, mm		Code
F	LF	G	L	CH1	CH2	CH3	rated diameter of metal flexible conduit T	from	to	
M16x1.5	15	20	71.5	24	26	24	10	5	7	6018ANP10AKM1SB
M16x1.5	15	20	72.5	24	26	26	12	5	10	6018ANP12AKM1SB
M16x1.5	15	20	73	24	26	30	15	5	10	6018ANP16AKM1SB
M20x1.5	15	20	75	30	32	30	15	5.5	13	6018ANP16BKM2SB
M20x1.5	15	20	78	30	32	37	20	8	13	6018ANP22BKM2SB
M25x1.5	15	20	78	35	36	37	20	10.5	18	6018ANP22CKM3SB
M25x1.5	15	20	80.5	35	36	45	26	10.5	18	6018ANP32CKM3SB
M32x1.5	15	25	90.5	42	45	45	26	15	24	6018ANP32DKM4SB
M40x1.5	15	25	94	48	50	52	35	21	30	6018ANP38EKM5SB
M40x1.5	15	25	94	48	50	61	40	21	30	6018ANP40EKM5SB
M50x1.5	15	25	94	55	58	61	40	24	33	6018ANP40FKM6SB
M50x1.5	15	25	98	55	58	74	50	27	36	6018ANP50FKM6SB
M63x1.5	15	25	98	68	68	74	50	36	45	6018ANP50GKM7SB

**Note:** other kinds of materials and types of thread are provided on request.

## Distinctive features of cable gland of ANR series



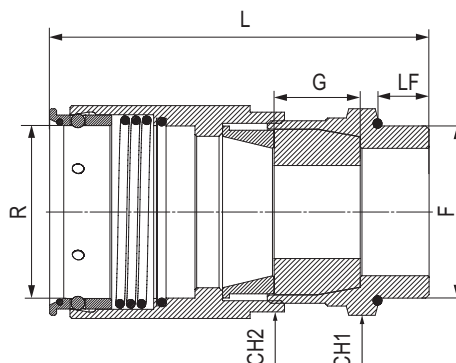
Standard complete set of cable gland of ANR series includes:

- KIT-sets;
- outer seal at entry of a cable gland into a sheath.

Standard version of the cable glands is nickel-plated brass with silicone sealing.

The cable gland may be produced in the "stainless steel" version with the sealing made of silicone or EPDM.

## Cable gland for connection of non-armoured cable of in tube of ANR series



### Purpose:

- explosion-proof cable gland for connection of non-armoured cable in tube has four types of certification: flameproof sheath Exd, increased security Exe, limitation of air circulation of type ExnR, dust ignition protection Ext.

The cable gland is suitable for use in closed premises, as well as outdoors in hazardous areas 1, 2, 21, 22 with all the types of non-armoured cable of circular section in a tube. It provides explosion-proof sealing of the cable outer sheath and simultaneous protection against environmental exposure.

It can be used with any version approved for use in areas 1, 2, 21, 22 according to rules of selection and installation of equipment, according to GOST IEC 60079-14.

The cable glands are completed with the silicone seals (EPDM seal on request).

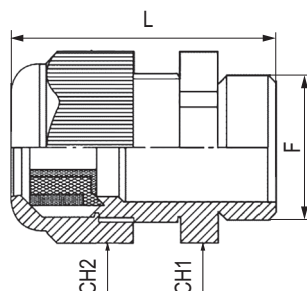
## Technical characteristics

Series	ANR
Marking according to ATEX	II 2G Ex db IIC Gb / II 2G Ex eb II Gb / II 2D Ex tb IIIC Db
Conformity to standards	EN 60079-0:2012 + A11:2013 / EN 60079-1:2014 / EN60079-7:2015 / EN 60079-31:2014
Marking according to IECEx	Ex db IIC Gb / Ex eb II Gb / Ex tb IIIC Db / Ex nR II Gc
Conformity to standards	IEC 60079-0:2011 / IEC 60079-1:2014-06 / IEC 60079-15:2010 / IEC 60079-31:2013 / IEC 60079-7:2015
Marking according to TR CU	1Ex db IIC Gb / 1Ex e IIC Gb / 2Ex nR IIC Gc / Ex tb IIIC Db
Conformity to standards	GOST 31610.0-2014 / GOST IEC 60079-1-2013 / GOST R IEC 60079-7-2012 / GOST IEC 60079-31-2013 / GOST 31610.15-2014/IEC 60079-15:2010
Areas of use	1, 2, 21, 22
Environmental temperature range during operation, °C	from -65 to +130 (silicone seal); from -40 to +80 (EPDM seal)
Protection against external effects	IP66, IP68
Material of enclosure parts	nickel-plated brass (standard version); stainless steel AISI 316L
Material of sealing	silicone (standard version); EPDM
Type of cable	non-armoured cable of circular section, with filling of free spaces in the cable
Sealing method	sealing of bias along a cable outer sheath
Place of sealing	cable outer sheath
Standard sizes	metric, from M16 to M63
Diameter of cable outer sheath, mm	from 5 to 45
Complete set	set of silicone seals, O-ring. If necessary, it is completed with a nut
Accessories	reducing couplings, adapters, grounded rings, lock nuts, toothed locking washer

Physical dimensions, mm							Diameter of cable outer sheath, mm		Code
F	max. diameter of tube R	L	LF	G	CH1	CH2	from	to	
M16x1.5	16	84	15	20	24	26	5	10	6018ANR16AKM1SB
M20x1.5	20	85	15	20	30	32	5.5	13	6018ANR20BKM2SB
M25x1.5	25	85	15	20	35	36	10.5	18	6018ANR25CKM3SB
M32x1.5	32	96	15	25	42	45	15	24	6018ANR32DKM4SB
M40x1.5	49	102	15	25	48	50	21	30	6018ANR40EKM5SB
M50x1.5	50	110	15	25	55	58	24	36	6018ANR50FKM6SB
M63x1.5	63	116	15	25	68	68	36	45	6018ANR63GKM7SB

**Note:** other kinds of materials and types of thread are provided on request.

## Polyamide cable gland for non-armoured cable



### Purpose:

- explosion-proof cable gland for connection of non-armoured cable has double certification: increased security Exe, dust ignition protection Ext.

The cable gland is suitable for use in closed premises, as well as outdoors in hazardous areas 0, 1, 2, 21, 22 with all the types of non-armoured cable. It provides explosion-proof sealing of the cable outer sheath and simultaneous protection against environmental exposure.

It can be used with any version approved for use in areas 0, 1, 2, 21, 22 according to rules of selection and installation of equipment, according to GOST IEC 60079-14.

## Technical characteristics

Marking according to ATEX	II 2 GD Ex e IIC Gb Ex tb IIIC Db
Conformity to standards	EN 60079-0:2012 / EN 60079-7:2007 / EN 60079-31:2014
Marking according to IECEx	Ex e IIC Gb Ex tb IIIC Db
Conformity to standards	IEC 60079-0:2011 / IEC 60079-31:2013 / IEC 60079-7:2006
Marking according to TR CU	1Ex e IIC Gb / Ex tb IIIC Db
Conformity to standards	GOST 31610.0-2014 / GOST 31610.7-2012/IEC 60079-7:2006 / GOST IEC 60079-31-2013
Areas of use	0, 1, 2, 21, 22
Environmental temperature range during operation, °C	from -40 to +80
Protection against external effects	IP66, IP68
Material of enclosure parts	PA6 polyamide
Material of sealing	silicone
Type of cable	non-armoured cable of circular section, with filling of free spaces
Sealing method	sealing of bias
Standard sizes	metric, from M20 to M63
	NPT from 1/2" to 1" (on request)
Diameter of cable outer sheath	from 6 to 44 mm
Complete set	O-ring. If necessary, it is completed with a nut

Physical dimensions, mm					Diameter of cable outer sheath, mm		Designation
F	L	LF	CH1	CH2	from	to	
M20x1.5	30	10	24	24	6	12	PCG-2
M25x1.5	35	10	33	33	13	18	PCG-5
M32x1.5	40.5	15	42	42	18	25	PCG-7
M40x1.5	50	18	53	53	22	32	PCG-8
M50x1.5	54	18	60	60	30	38	PCG-9
M63x1.5	54	18	65	65	34	44	PCG-10

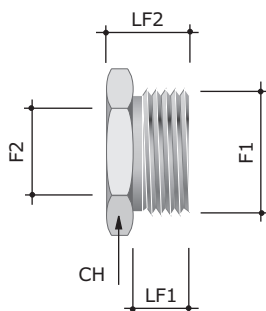
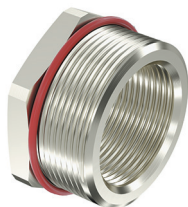
**Note:** other kinds of materials and types of thread are provided on request. It is available only for assembly of explosion-proof terminal boxes and control stations, but it is not supplied separately.



## Accessories for cable glands

### Adapter with metric thread

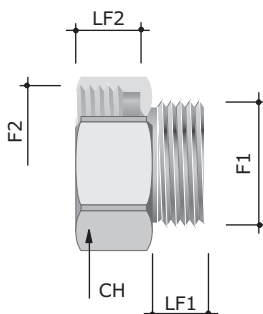
#### Type A



#### Purpose:

- they are intended for transfer to different standard sizes of screws.
- It has triple certification: flameproof sheath Exd, increased security Exe, dust ignition protection Ext.

#### B type



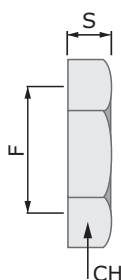
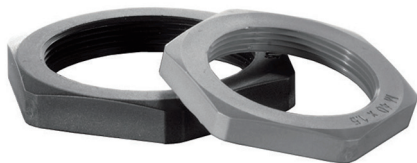
### Technical characteristics

Series	EXDR
Marking according to ATEX	II 2G Ex db IIC Gb / II 2G Ex eb II Gb / II 2D Ex tb IIIC Db
Conformity to standards	EN 60079-0:2012 + A11:2013 / EN 60079-1:2014 / EN60079-7:2015 / EN 60079-31:2014
Marking according to IECEx	Ex db IIC Gb / Ex eb II Gb / Ex tb IIIC Db / Ex nR II Gc
Conformity to standards	IEC 60079-0:2011 / IEC 60079-1:2014-06 / IEC 60079-15:2010 / IEC 60079-31:2013 / IEC 60079-7:2015
Marking according to TR CU	Ex db IIC Gb U/ Ex e IIC Gb U/ Ex tb IIIC Db U
Conformity to standards	GOST 31610.0-2014 / GOST IEC 60079-1-2013 / GOST 31610.7-2012/IEC 60079-7:2006 / GOST IEC 60079-31-2013 / GOST 31610.15-2014/IEC 60079-15:2010
Areas of use	1, 2, 21, 22
Environmental temperature range during operation, °C	from -65 to +130
Protection against external effects	IP66, IP68
Material of enclosure parts	nickel-plated brass (standard version); stainless steel AISI 316L
Standard sizes	metric, from M16 to M90
	NPT from 3/8" to 3" (on request)
	GAS from 3/8" to 3" (on request)
	PG from 09 to 48 (on request)
	ISO 7/1 from 3/8" to 3" (on request)
Complete set	O-rings. If necessary, it is completed with a nut

Physical dimensions, mm				Type	Code
F1	F2	LF1	LF2		
M16x1.5	M20x1.5	15	16	B	EXDR-M16M20SB
M16x1.5	M25x1.5	15	16	B	EXDR-M16M25SB
M16x1.5	M32x1.5	15	16	B	EXDR-M16M32SB
M16x1.5	M40x1.5	15	16	B	EXDR-M16M40SB
M16x1.5	M50x1.5	15	16	B	EXDR-M16M50SB
M20x1.5	M16x1.5	15	16	A	EXDR-M20M16SB
M20x1.5	M25x1.5	15	16	B	EXDR-M20M25SB
M20x1.5	M32x1.5	15	16	B	EXDR-M20M32SB
M20x1.5	M40x1.5	15	16	B	EXDR-M20M40SB
M20x1.5	M50x1.5	15	16	B	EXDR-M20M50SB
M20x1.5	M63x1.5	15	16	B	EXDR-M20M63SB
M25x1.5	M16x1.5	15	16	A	EXDR-M25M16SB
M25x1.5	M20x1.5	15	16	A	EXDR-M25M20SB
M25x1.5	M32x1.5	15	16	B	EXDR-M25M32SB
M25x1.5	M40x1.5	15	16	B	EXDR-M25M40SB
M25x1.5	M50x1.5	15	16	B	EXDR-M25M50SB
M25x1.5	M63x1.5	15	16	B	EXDR-M25M63SB
M25x1.5	M75x1.5	15	16	B	EXDR-M25M75SB
M32x1.5	M16x1.5	15	16	A	EXDR-M32M16SB
M32x1.5	M20x1.5	15	16	A	EXDR-M32M20SB
M32x1.5	M25x1.5	15	16	A	EXDR-M32M25SB
M32x1.5	M40x1.5	15	16	B	EXDR-M32M40SB
M32x1.5	M50x1.5	15	16	B	EXDR-M32M50SB
M32x1.5	M63x1.5	15	16	B	EXDR-M32M63SB
M32x1.5	M75x1.5	15	16	B	EXDR-M32M75SB
M40x1.5	M16x1.5	15	16	A	EXDR-M40M16SB
M40x1.5	M20x1.5	15	16	A	EXDR-M40M20SB
M40x1.5	M25x1.5	15	16	A	EXDR-M40M25SB
M40x1.5	M32x1.5	15	16	A	EXDR-M40M32SB
M40x1.5	M50x1.5	15	16	B	EXDR-M40M50SB
M40x1.5	M63x1.5	15	16	B	EXDR-M40M63SB
M40x1.5	M75x1.5	15	16	B	EXDR-M40M75SB
M40x1.5	M90x2	15	21	B	EXDR-M40M90SB
M50x1.5	M16x1.5	15	16	A	EXDR-M50M16SB
M50x1.5	M20x1.5	15	16	A	EXDR-M50M20SB
M50x1.5	M25x1.5	15	16	A	EXDR-M50M25SB
M50x1.5	M32x1.5	15	16	A	EXDR-M50M32SB
M50x1.5	M40x1.5	15	16	A	EXDR-M50M40SB
M50x1.5	M63x1.5	15	16	B	EXDR-M50M63SB
M50x1.5	M75x1.5	15	16	B	EXDR-M50M75SB
M50x1.5	M90x2	15	21	B	EXDR-M50M90SB
M63x1.5	M20x1.5	15	16	A	EXDR-M63M20SB
M63x1.5	M25x1.5	15	16	A	EXDR-M63M25SB
M63x1.5	M32x1.5	15	16	A	EXDR-M63M32SB
M63x1.5	M40x1.5	15	16	A	EXDR-M63M40SB
M63x1.5	M50x1.5	15	16	A	EXDR-M63M50SB
M63x1.5	M75x1.5	15	16	B	EXDR-M63M75SB
M63x1.5	M90x2	15	21	B	EXDR-M63M90SB
M75x1.5	M25x1.5	15	16	A	EXDR-M75M25SB
M75x1.5	M32x1.5	15	16	A	EXDR-M75M32SB
M75x1.5	M40x1.5	15	16	A	EXDR-M75M40SB
M75x1.5	M50x1.5	15	16	A	EXDR-M75M50SB
M75x1.5	M63x1.5	15	16	A	EXDR-M75M63SB
M75x1.5	M90x2	15	21	B	EXDR-M75M90SB
M90x2	M40x1.5	20	16	A	EXDR-M90M40SB
M90x2	M50x1.5	20	16	A	EXDR-M90M50SB
M90x2	M63x1.5	20	16	A	EXDR-M90M63SB
M90x2	M75x1.5	20	16	A	EXDR-M90M75SB

**Note:** other kinds of materials and types of thread are provided on request.

## Polyamide lock nuts

**Purpose:**

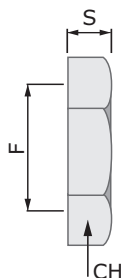
- they are intended for attachment of glands for cables and of a cable in a tube to enclosures of equipment, cabinets, boards, junction boxes.

**Technical characteristics:**

- environmental temperature range during operation: from -40 to +105°C;
- material of enclosure parts: polyamide;
- standard sizes: metric, from M16 to M63.

Physical dimensions, mm			Code
F	S	CH	
M16x1.5	5	22	PAGM16N
M20x1.5	6	26	PAGM20N
M25x1.5	6	32	PAGM25N
M32x1.5	7	42	PAGM32N
M40x1.5	7	52	PAGM40N
M50x1.5	9	62	PAGM50N
M63x1.5	9	78	PAGM63N

## Lock nut

**Purpose:**

- they are intended for attachment of glands for cables and of a cable in a tube to enclosures of equipment, cabinets, boards, junction boxes.

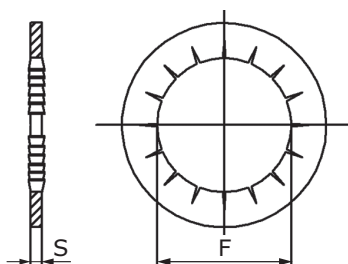
**Technical characteristics:**

- environmental temperature range during operation: from -60 to +150°C;
- material of enclosure parts: nickel-plated brass (standard version); stainless steel AISI 316L;
- standard sizes: metric, from M16 to M63.

Physical dimensions, mm			Code
F	S	CH	
M16x1.5	6	18	6006-16A
M20x1.5	6	22	6006-20
M25x1.5	6	29	6006-25
M32x1.5	8	38	6006-32A
M40x1.5	7	45	6006-40
M50x1.5	8	54	6006-50
M63x1.5	10	66	6006-63

**Note:** other kinds of materials are provided on request.

## Toothed lock rings



### Purpose:

- they are intended for installation between a cable gland and an explosion-proof sheath. The ring acts as an anti-vibration device and prevents slop in the process of operation.

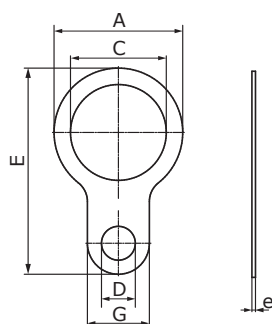
### Technical characteristics:

- environmental temperature range during operation: from -60 to +150°C;
- material of enclosure parts: nickel-plated brass (standard version); stainless steel AISI 316L;
- standard sizes: metric, from M16 to M63; NPT from 3/8" to 3" (on request).

Physical dimensions, mm		Code
F	S	
M16x1.5	1.5	6340.02.001601
M20x1.5	1.5	6340.02.002002
M25x1.5	1.5	6340.02.002503
M32x1.5	1.5	6340.02.003204
M40x1.5	1.5	6340.02.004005
M50x1.5	1.5	6340.02.005006
M63x1.5	1.5	6340.02.006307
M75x1.5	1.5	6340.02.007508
M90x1.5	1.5	6340.02.009009

**Note:** other kinds of materials and types of thread are provided on request.

## Grounded rings



### Purpose:

- they are intended for provision of grounding of a cable gland during its installation into an equipment enclosure. They shall be installed between a cable gland and an explosion-proof sheath. Grounded rings are also used for grounding of cable armour.

### Technical characteristics:

- environmental temperature range during operation: from -60 to +150°C;
- material of enclosure parts: nickel-plated brass;
- standard sizes: metric, from M16 to M90.

Physical dimensions, mm							Code
for thread	C	A	G	D	E	e	
M16x1.5	25	16.2	12.5	6.2	48.8	1.5	6340.01.001615
M20x1.5	28.6	20.2	12.5	6.2	53.6	1.5	6340.01.002015
M25x1.5	34	25.2	13	6.2	59.5	1.5	6340.01.002515
M32x1.5	42	32.2	22	12.2	73	1.5	6340.01.003215
M40x1.5	54	40.2	26	14.2	86.5	1.5	6340.01.004015
M50x1.5	67	50.2	29	14.2	111.5	1.5	6340.01.005015
M63x1.5	77	63.2	29	14.2	125.5	1.5	6340.01.006315
M75x1.5	89	75.2	32	14.2	137.5	1.5	6340.01.007515
M90x2	109.5	90.2	35.5	14.2	167	1.5	6340.01.009015



## Cable protection system for potentially hazardous environment

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## Cable protection system for potentially hazardous environment

### Description

Metal flexible conduits and rigid tubes are widely used in all industries for additional mechanical protection of cables, wires and flexible tubes. Assortment of metal flexible conduits and rigid tubes in different versions with use of accessories allows for formation of a reliable wiring system with high sealing and protection degree while ensuring flexibility of the route during connection to equipment.

DKC rigid steel tubes and metal flexible conduits are not subject to the requirements of technical regulations for equipment applied in hazardous areas, so they do not require certification for use at the places with potentially hazardous environment.

Unlike the tubes and metal flexible conduits, fittings and accessories used for connection thereof to boxes and equipment in hazardous environments shall be certified according to Russian TR CU requirements, European ATEX requirements and international IECEx requirements. Metal flexible conduits and rigid tubes are suitable for use in moderate and tropical climate with wide range of differential temperature.

Metal flexible conduits and rigid tubes are made of:

- hot dip galvanized tape by the Sendzimir method in accordance with the European standard EN 10346, with different types of coatings and materials.
- stainless steel AISI 304 and AISI 316L distinguished by excellent corrosion resistance.

DKC metal flexible conduits and rigid tubes have excellent resistance to the most kinds of damage:

- mechanical damage;
- contamination with dust and dirt;
- damage by rodents;
- ignition in case of short circuit and electromagnetic interference.

### Advantages:

- specially developed design of reinforced lock of metal flexible conduits ensuring high tear strength, excellent reliability under bending, high value of relative elongation in case of tear;
- metal flexible conduits are covered with firm thermoplastic coating preventing burning and propagation of toxic materials;
- high sealing degree is up to IP67;
- good mechanical resistance, more than 750 N;
- shock resistance at a temperature below freezing is at least 6 J;
- excellent corrosion resistance allows for use of DKC metal flexible conduit and tubes in the conditions of extremely aggressive media at food, chemical and pharmaceutical industries;
- wide mounting and operating temperature range: from -45 to +250 °C
- tubes are designed without burrs and internal welds.

### Distinctive features of metal flexible conduits

#### Zinc coating thickness

- metal flexible conduit is made of high-quality steel according to EN 10346 and galvanized by the Sendzimir method;
- service life of a galvanized metal flexible conduit within premises with the moderate climate comprises at least **15 years**

#### Non-combustible material

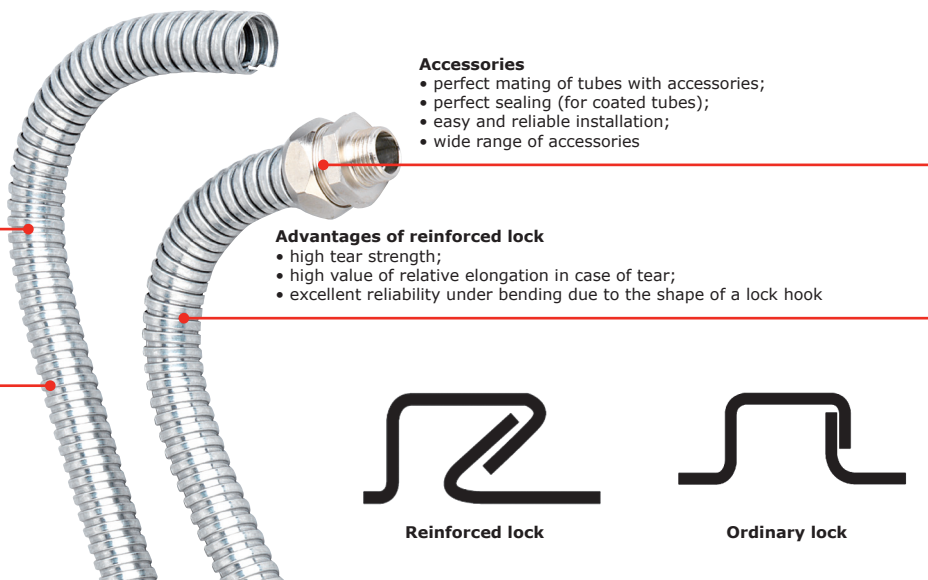
- mounting and operating temperature from -45 to +250°C

#### Accessories

- perfect mating of tubes with accessories;
- perfect sealing (for coated tubes);
- easy and reliable installation;
- wide range of accessories

#### Advantages of reinforced lock

- high tear strength;
- high value of relative elongation in case of tear;
- excellent reliability under bending due to the shape of a lock hook

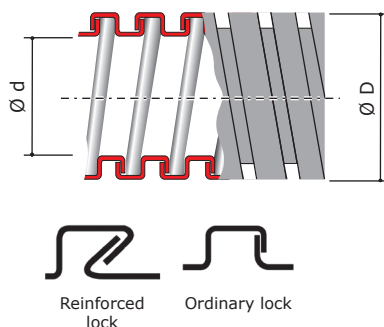
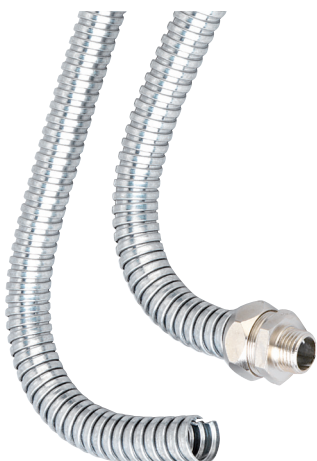


Reinforced lock

Ordinary lock



## Galvanized steel metal flexible conduits



### Purpose:

- laying of electric, telephone, computer, and television networks using insulated wires, cords or cables.

### Distinctive features:

- non-combustible material;
- wide range of mounting and operating temperatures;
- flexibility;
- unique lock design ensuring sleeve integrity under allowable bending;
- high mechanical indicators of tear and compression strength;
- high chemical resistance.

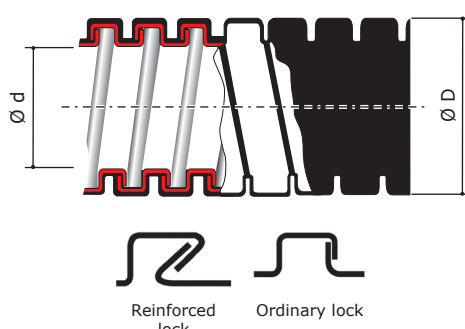
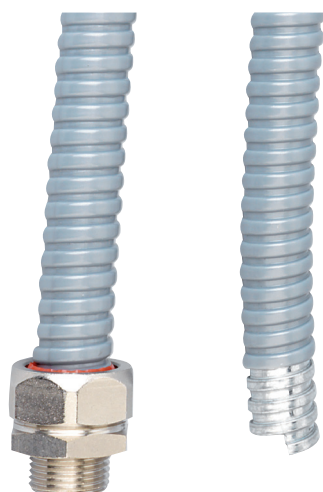
## Characteristics

Standard	manufactured according to CEI EN 61386-1 and 61386-23
Classification code according to EN 61386-1 and EN 61386-23	3356
Climatic version	U2, KhL2, UKhL2 according to GOST 15150-69
Protection degree	IP40 according to GOST 14254-96 (IEC 529-89)
Mounting and operating temperature, °C	from -45 to +250
Strength (compression resistance at 20°C)	over 750 N per 5 cm*
Tear strength	at least 500 N
Shock resistance at -45°C	more than 2 J

\* Deformation under the stated compressive force is not more than 25% ± 5% of the initial diameter

Rated diameter, mm	Inside diameter, mm	Outside diameter, mm	Minimum bend radius, mm	Q-ty in a coil, m	Lock type	Code
10	10.0	13.0	30	50	ordinary lock	667R1013
12	12.0	15.0	35	50	ordinary lock	667R1215
15	15.5	18.5	40	50	ordinary lock	667R1518
20	20.5	24.5	50	50	reinforced lock	667R2024
26	26.5	30.0	70	25	reinforced lock	667R2630
35	35.0	39.5	90	25	reinforced lock	667R3539
40	40.0	44.5	105	25	reinforced lock	667R4044
50	50.5	54.5	130	25	reinforced lock	667R5054

## Metal flexible conduits with vacuum PVC coating



### Purpose:

- laying of electric, telephone, computer, and television networks using insulated wires, cords or cables.

### Distinctive features:

- resistance to fire propagation;
- a fire safety certificate is available;
- flexibility;
- unique lock design ensuring sleeve integrity under allowable bending;
- high mechanical indicators of tear and compression strength;
- high chemical resistance to oils and greases;
- protection degree with connectors is up to IP67;
- leak tight installation in humid and dusty premises.

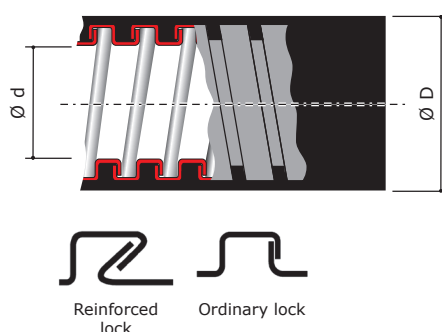
## Characteristics

Standard	manufactured according to CEI EN 61386-1 and 61386-23
Classification code according to EN 61386-1 and EN 61386-23	3431
Protection degree	IP44/IP66/IP67 according to GOST 14254-96 (IEC 529-89)
	IP44 without a sealing coupling
	IP66/IP67 with a 66BTP sealing coupling
Mounting and operating temperature, °C	from -15 to +70
Strength (compression resistance at 20°C)	over 1250 N per 5 cm* for tubes with rated diameter of less than 26 mm
	over 750 N per 5 cm* for tubes with rated diameter of more than 35 mm
Tear strength	at least 500 N for tubes with rated diameter of less than 15 mm
	at least 1000 N for tubes with rated diameter of over 20 mm
Shock resistance at -15°C	more than 2 J
Combustion category	PV-0 according to GOST 28779
Conformity to fire safety requirements	conform to GOST R 53313
Color	gray, black

\* Deformation under the stated compressive force is not more than 25% ± 5% of the initial diameter

Rated diameter, mm	Inside diameter, mm	Outside diameter, mm	Minimum bend radius, mm	Q-ty in a coil, m	Lock type	Code	
						gray	black
10	10.0	14.0	30	50	ordinary lock	6071R-010	6071R-010N
12	12.0	16.0	35	50	ordinary lock	6071R-012	6071R-012N
15	15.5	19.5	40	50	ordinary lock	6071R-015	6071R-015N
20	20.5	25.5	60	50	reinforced lock	6071R-020	6071R-020N
26	26.5	31.5	80	25	reinforced lock	6071R-027	6071R-027N
35	35.0	41.0	120	25	reinforced lock	6071-035	6071-035N
40	40.0	46.0	150	25	reinforced lock	6071-040	6071-040N
50	50.5	57.0	200	25	reinforced lock	6071-050	6071-050N

## Metal flexible conduits in smooth PVC coating



### Purpose:

- laying of electric, telephone, computer, and television networks using insulated wires, cords or cables;
- optimal solution for manufacturing enterprises.

### Distinctive features:

- resistance to fire propagation;
- a fire safety certificate is available;
- covered with firm smooth PVC coating;
- excellent mechanical indicators of tear and compression strength;
- high chemical resistance to oils and greases;
- leak tight installation in humid and dusty premises;
- flexibility;
- marking with indication of length in meters for ease of installation.

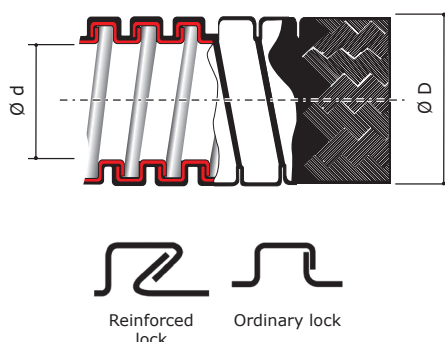
## Characteristics

Standard	manufactured according to CEI EN 61386-1 and 61386-23
Classification code according to EN 61386-1 and EN 61386-23	3431
Protection degree	IP66/IP67 according to GOST 14254-96 (IEC 529-89)
	IP66 under dynamic effects during laying
	IP67 during static laying
Mounting and operating temperature, °C	from -15 to +70
Strength (compression resistance at 20°C)	over 1250 N per 5 cm* for tubes with rated diameter of less than 26 mm
	over 750 N per 5 cm* for tubes with rated diameter of more than 35 mm
Tear strength	at least 500 N for tubes with rated diameter of less than 15 mm
	at least 1000 N for tubes with rated diameter of over 20 mm
Shock resistance at -15°C	more than 2 J
Combustion category	PV-0 according to GOST 28779
Conformity to fire safety requirements	conform to GOST R 53313
Color	gray, black

\* Deformation under the stated compressive force is not more than 25% ± 5% of the initial diameter

Rated diameter, mm	Inside diameter, mm	Outside diameter, mm	Minimum bend radius, mm	Q-ty in a coil, m	Lock type	Code	
						gray	black
10	10.0	15.0	50	50	ordinary lock	6070R-10	6070R-10N
12	12.0	18.0	60	50	ordinary lock	6070R-12	6070R-12N
15	15.5	21.0	70	50	ordinary lock	6070R-16	6070R-16N
20	20.5	27.0	90	50	reinforced lock	6070R-22	6070R-22N
26	26.5	34.0	120	25	reinforced lock	6070R-32	6070R-32N
35	35.0	43.0	150	25	reinforced lock	6070-38	6070-38N
40	40.0	48.0	200	25	reinforced lock	6070-40	6070-40N
50	50.5	58.5	250	25	reinforced lock	6070-50	6070-50N

## Metal flexible conduits with vacuum PVC coating and protected by galvanized steel braid



### Purpose:

- laying of electric, telephone, computer, and television networks using insulated wires, cords and cables;
- optimal solution for severe conditions of industrial enterprises and production shops.

### Distinctive features:

- resistance to fire propagation;
- a fire safety certificate is available;
- covered with vacuum PVC coating and protected by galvanized steel braid;
- high mechanical indicators of tear and compression strength;
- protection against mechanical effects, abrasion, vandalism, water and dust ingress, ultra-violet light and electromagnetic effect within a wide frequency band.

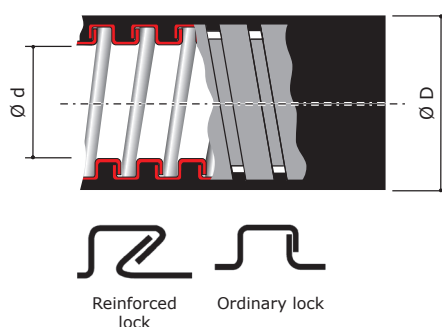
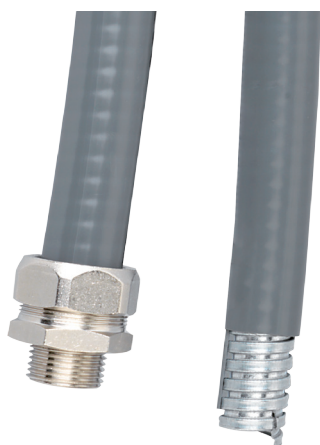
## Characteristics

Standard	manufactured according to CEI EN 61386-1 and 61386-23
Classification code according to EN 61386-1 and EN 61386-23	3431
Protection degree	IP44/IP66/IP67 according to GOST 14254-96 (IEC 529-89)
	IP44 without a sealing coupling
	IP66/IP67 with a 66BTP sealing coupling
Mounting and operating temperature, °C	from -15 to +70
Strength (compression resistance at 20°C)	over 1250 N per 5 cm* for tubes with rated diameter of less than 26 mm
	over 750 N per 5 cm* for tubes with rated diameter of more than 35 mm
Tear strength	at least 500 N for tubes with rated diameter of less than 15 mm
	at least 1000 N for tubes with rated diameter of over 20 mm
Shock resistance at -15°C	At least 6 J
Combustion category	PV-0 according to GOST 28779
Conformity to fire safety requirements	conform to GOST R 53313
EMC shielding	30-230 MHz, level 1 (min. attenuation 35 dB) according to IEC 61587

\* Deformation under the stated compressive force is not more than 25% ± 5% of the initial diameter

Rated diameter, mm	Inside diameter, mm	Outside diameter, mm	Minimum bend radius, mm	Q-ty in a coil, m	Lock type	Code
10	10.0	14.0	30	50	ordinary lock	6071T-010
12	12.0	16.0	35	50	ordinary lock	6071T-012
15	15.5	19.5	50	50	ordinary lock	6071T-016
20	20.5	25.5	65	50	reinforced lock	6071T-022
26	26.5	31.5	80	25	reinforced lock	6071T-032
35	35.0	41.0	120	25	reinforced lock	6071T-038
40	40.0	46.0	150	25	reinforced lock	6071T-040
50	50.5	57.0	220	25	reinforced lock	6071T-050

## Metal flexible conduits in smooth EVA coating



### Purpose:

- laying of electric, telephone, computer, and television networks using insulated wires, cords and cables;
- optimal solution for cable protection at places of mass gathering and railway transport facilities.

### Distinctive features:

- resistance to fire propagation;
- a fire safety certificate is available;
- covered with smooth EVA coating (ethylene vinyl acetate);
- high mechanical indicators of tear and compression strength;
- leak tight installation in humid and dusty premises;
- self-extinguishing coating material with low smoke emission and low toxicity of combustion products;
- high chemical resistance to oils and acids;
- halogen-free.

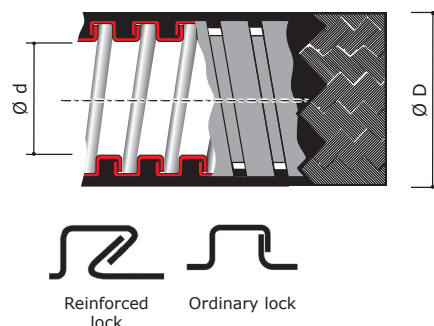
## Characteristics

Standard	manufactured according to CEI EN 61386-1, 61386-23, UNI CEI 11170-3:2005
Classification code according to EN 61386-1 and EN 61386-23	3441
Protection degree	IP66/IP67 according to GOST 14254-96 (IEC 529-89)
	IP66 under dynamic effects during laying
	IP67 during static laying
Mounting and operating temperature, °C	from -25 to +70
Strength (compression resistance at 20°C)	over 1250 N per 5 cm* for tubes with rated diameter of less than 26 mm
	over 750 N per 5 cm* for tubes with rated diameter of more than 35 mm
Tear strength	at least 500 N for tubes with rated diameter of less than 15 mm
	at least 1000 N for tubes with rated diameter of over 20 mm
Shock resistance at -15°C	At least 6 J
Combustion category	PV-0 according to GOST 28779
Conformity to fire safety requirements	conform to GOST R 53313
Halogen content	0 %
Color	gray

\* Deformation under the stated compressive force is not more than 25% ± 5% of the initial diameter

Rated diameter, mm	Inside diameter, mm	Outside diameter, mm	Minimum bend radius, mm	Q-ty in a coil, m	Lock type	Code
10	10.0	15.0	60	50	ordinary lock	607E010
12	12.0	18.0	70	50	ordinary lock	607E012
15	15.5	21.0	90	50	ordinary lock	607E016
20	20.5	27.0	120	50	reinforced lock	607E022
26	26.5	34.0	140	25	reinforced lock	607E032
35	35.0	43.0	190	25	reinforced lock	607E038
40	40.0	48.0	240	25	reinforced lock	607E040
50	50.5	58.5	300	25	reinforced lock	607E050

## Metal flexible conduits in smooth EVA coating and protected by stainless steel AISI braid 304



### Purpose:

- laying of electric, telephone, computer, and television networks using insulated wires, cords and cables;
- maximum cable protection at places of mass gathering and railway transport facilities.

### Distinctive features:

- resistance to fire propagation;
- a fire safety certificate is available;
- covered with smooth EVA coating (ethylene vinyl acetate) and protected by stainless steel braid;
- high mechanical indicators of tear and compression strength;
- self-extinguishing coating material with low smoke emission and low toxicity of combustion products;
- halogen-free;
- resistance to abrasion, wear, electric sparks, and protection against electromagnetic effect within a wide frequency band.

## Characteristics

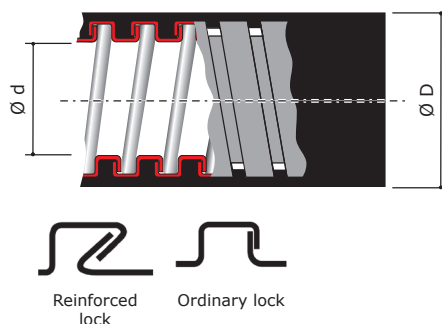
Standard	manufactured according to CEI EN 61386-1, 61386-23, UNI CEI 11170-3:2005
Classification code according to EN 61386-1 and EN 61386-23	3441
Protection degree	IP66/IP67 according to GOST 14254-96 (IEC 529-89)
	IP66 under dynamic effects during laying
	IP67 during static laying
Mounting and operating temperature, °C	from -25 to +70
Strength (compression resistance at 20°C)	over 1250 N per 5 cm* for tubes with rated diameter of less than 26 mm
	over 750 N per 5 cm* for tubes with rated diameter of more than 35 mm
Tear strength	at least 500 N for tubes with rated diameter of less than 15 mm
	at least 1000 N for tubes with rated diameter of over 20 mm
Shock resistance at -15°C	At least 6 J
Combustion category	PV-0 according to GOST 28779
Conformity to fire safety requirements	conform to GOST R 53313
Halogen content	0 %
EMC shielding	30-230 MHz, level 1 (min. attenuation 35 dB) according to IEC 61587

\* Deformation under the stated compressive force is not more than 25% ± 5% of the initial diameter

Rated diameter, mm	Inside diameter, mm	Outside diameter, mm	Minimum bend radius, mm	Q-ty in a coil, m	Lock type	Code
10	10.0	15.0	60	50	ordinary lock	607ETX010
12	12.0	18.0	70	50	ordinary lock	607ETX012
15	15.5	21.0	90	50	ordinary lock	607ETX016
20	20.5	27.0	120	50	reinforced lock	607ETX022
26	26.5	34.0	140	25	reinforced lock	607ETX032
35	35.0	43.0	190	25	reinforced lock	607ETX038
40	40.0	48.0	240	25	reinforced lock	607ETX040
50	50.5	58.5	300	25	reinforced lock	607ETX050



## Metal flexible conduit in smooth polyurethane insulation



### Purpose:

- laying of electric, telephone, computer, and television networks using insulated wires, cords or cables;
- solution for cable laying under extremely low-temperature conditions.

### Distinctive features:

- resistance to fire propagation;
- installation and operation in extreme areas with temperature of up to  $-60^{\circ}\text{C}$ ;
- resistance to solar radiation;
- a fire safety certificate is available;
- covered with smooth polyurethane coating;
- high mechanical indicators of tear and compression strength;
- leak tight installation in humid and dusty premises;
- self-extinguishing coating material with low smoke emission and low toxicity of combustion products;
- high chemical resistance to oils and acids;
- halogen-free tubes;
- reinforced double lock.

## Characteristics

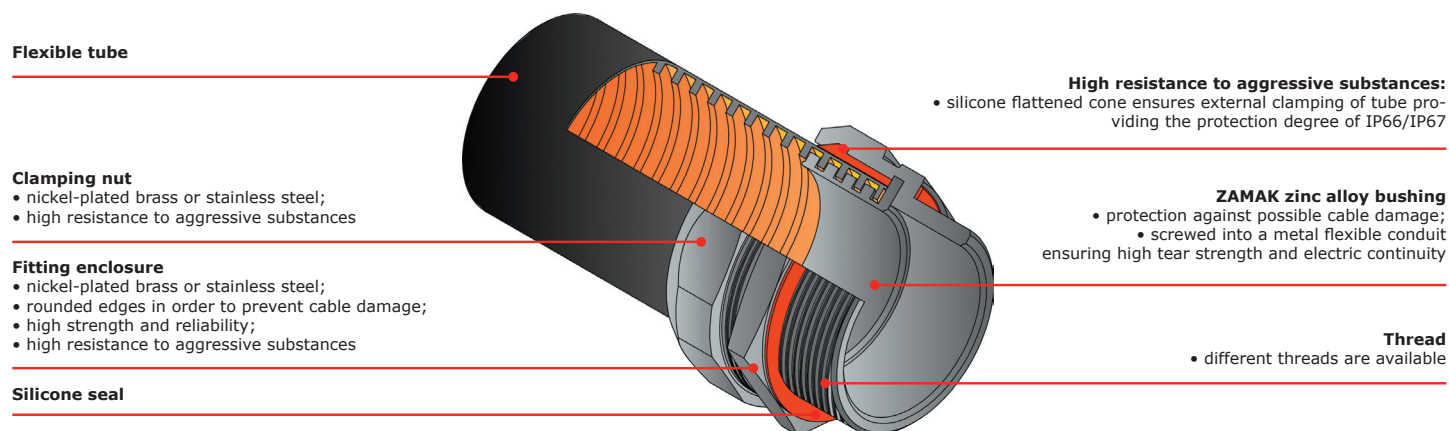
Standard	manufactured according to CEI EN 61386-1, 61386-23, UNI CEI 11170-3:2005
Classification code according to EN 61386-1 and EN 61386-23	4453
Protection degree	IP66/IP67 according to GOST 14254-96 (IEC 529-89)
	IP66 under dynamic effects during laying
	IP67 during static laying
Mounting and operating temperature, $^{\circ}\text{C}$	from $-60$ to $+105$
Strength (compression resistance at $20^{\circ}\text{C}$ )	over 1250 N per 5 cm*
Tear strength	at least 1000 N
Shock resistance at $-15^{\circ}\text{C}$	At least 6 J
Combustion category	PV-0 according to GOST 28779
Conformity to fire safety requirements	conform to GOST R 53313
Halogen content	0 %
Color	black

\* Deformation under the stated compressive force is not more than  $25\% \pm 5\%$  of the initial diameter

Rated diameter, mm	Inside diameter, mm	Outside diameter, mm	Minimum bend radius, mm	Q-ty in a coil, m	Lock type	Code
10	10	15	60	50	ordinary lock	607PU10N
12	12	18	70	50	ordinary lock	607PU12N
15	15.5	21	90	50	ordinary lock	607PU16N
20	20.5	27	120	50	reinforced lock	607PU22N
26	26.5	34	140	25	reinforced lock	607PU32N
35	35	43	190	25	reinforced lock	607PU38N
40	40	48	240	25	reinforced lock	607PU40N
50	50.5	58.5	300	25	reinforced lock	607PU50N

## Explosion-proof couplings for metal flexible conduit

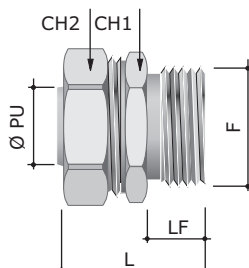
### Distinctive design features of accessories for metal flexible conduits



### Technical characteristics

Type	explosion-proof accessories for metal flexible conduit
Explosion protection marking according to ATEX	II 2G Ex e IIC Gb / II 2D Ex tb IIIC Db
Conformity to standards	EN 60079-0:2012 / EN 60079-7:2007 / EN 60079-31:2014
Explosion protection marking according to IECEx	Ex e IIC Gb / Ex tb IIIC Db
Conformity to standards	IEC 60079-0:2011 / IEC 60079-7:2006 / IEC 60079-31:2013
Explosion protection marking according to TR CU	Ex e IIC Gb U/ Ex tb IIIC Db U
Conformity to standards	GOST 31610.0-2014 / GOST R IEC 60079-7-2012 / GOST IEC 60079-31-2010
Operating temperature, °C	From -45 to +85
Protection against external effects	IP66/IP67
Material of enclosure parts	nickel-plated brass, stainless steel AISI 316L
Material of sealing	silicone

## Metal flexible conduit-box coupling with outside thread



### Purpose:

- designed for leak tight entry of metal flexible conduit into an equipment, cabinet, box, terminal box, and control station enclosure;
- explosion-proof coupling has double certification: increased security Exe, dust ignition protection Ext.

### Complete set:

- coupling is complete with silicone seal with outside thread;
- if necessary, it can be completed with a nut.

### Standard sizes:

- metric, from M16 to M63;
- NPT from 1/2" to 2" (on request);
- GAS from 1/4" to 2" (on request);
- PG from 07 to 48 (on request);
- ISO 7/1 from 1/2" to 2" (on request).

### Protection degree:

- IP66/67

### Material:

- enclosure and nut: nickel-plated brass;
- seal: silicone.

### Explosion protection marking:

- Ex e IIC Gb U/ Ex tb IIIC Db U.

### Area:

- 1, 2, 21, 22.

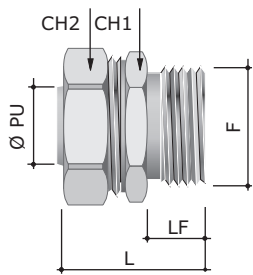
### Environmental temperature:

- from -45 to +85 °C.

Rated diameter of metal flexible conduit, mm	Physical dimensions, mm					Code
	F	LF	ØPU	CH1	CH2	
10	M16x1.5	10	8.5	22	24	EX6014-1016
12	M16x1.5	10	10	24	26	EX6014-16A
15	M16x1.5	10	12	28	30	EX6014-1616
15	M20x1.5	10	13.8	28	30	EX6014-20A
20	M20x1.5	10	16	35	37	EX6014-2020
20	M25x1.5	12	18	35	37	EX6014-25A
26	M25x1.5	12	20	42	45	EX6014-2527
26	M32x1.5	13	24	42	45	EX6014-32A
35	M40x1.5	10	32	50	52	EX6014-4035
40	M40x1.5	18	34	58	61	EX6014-40A
40	M50x1.5	18	38	60	61	EX6014-5040
50	M50x1.5	18	44	70	74	EX6014-50A
50	M63x1.5	18	48	70	74	EX6014-6350

**Note:** other types of thread are provided on request.

Metal flexible conduit-box coupling with outside thread

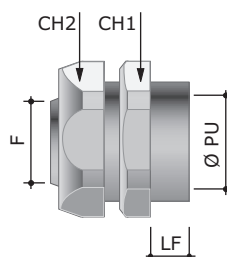


- Description:**
- explosion-proof coupling has double certification: increased security Exe, dust ignition protection Ext.
  - Explosion proof coupling is designed for leak tight entry of metal flexible conduit into an equipment, cabinet, box, terminal box, and control station enclosure.
- Complete set:**
- coupling is complete with silicone seal on an outside thread.
- Standard sizes:**
- metric, from M16 to M50.
- Protection degree:**
- IP66/67.
- Material:**
- enclosure and nut: stainless steel AISI 316L;
  - seal: silicone.
- Protection:**
- Ex e IIC Gb U/ Ex tb IIIC Db U.
- Area:**
- 1, 2, 21, 22.
- Environmental temperature:**
- from -45 to +85 °C.

Rated diameter of metal flexible conduit, mm	Physical dimensions, mm					Code
	F	LF	ØPU	CH1	CH2	
12	M16x1.5	9	10	27	27	EX6014XX16A
15	M16x1.5	10	12	30	30	EX6014XX1616
15	M20x1.5	10	13.8	30	30	EX6014XX20A
20	M20x1.5	10	16	36	36	EX6014XX2020
20	M25x1.5	12	18	36	36	EX6014XX25A
26	M32x1.5	13	24	46	46	EX6014XX32A
35	M40x1.5	14	32	50	55	EX6014XX4035
40	M50x1.5	18	38	60	60	EX6014XX5040

**Note:** other types of thread are provided on request.

## Metal flexible conduit-box coupling with inside thread


**Description:**

- explosion-proof coupling has double certification: increased security Exe, dust ignition protection Ext.
- Explosion proof coupling is designed for leak tight entry of metal flexible conduit into an equipment, cabinet, box, terminal box, and control station enclosure

**Complete set:**

- coupling is complete with silicone seal on an outside thread.

**Standard sizes:**

- metric, from M16 to M63;
- GAS from 3/8" to 2" (on request).

**Protection degree:**

- IP66/67.

**Material:**

- enclosure and nut: nickel-plated brass;
- seal: silicone.

**Protection:**

- Ex e IIC Gb U/ Ex tb IIIC Db U.

**Area:**

- 1, 2, 21, 22.

**Environmental temperature:**

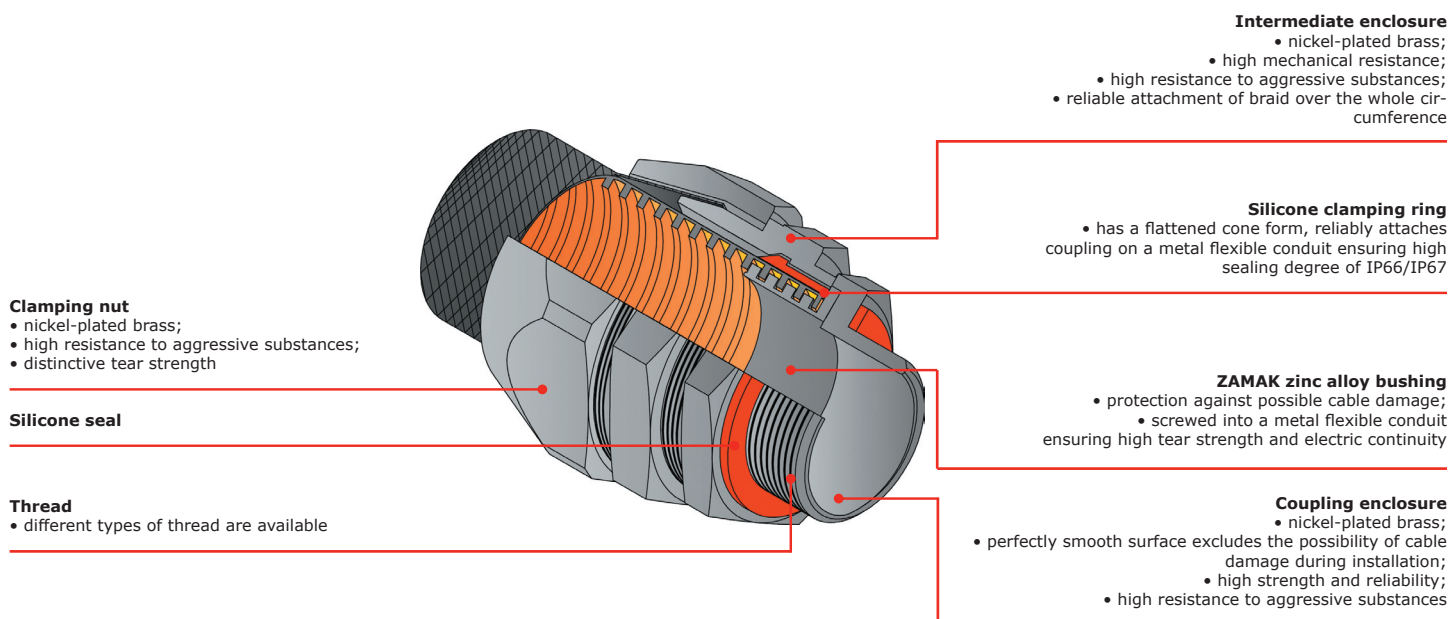
- from -45 to +85 °C.

Rated diameter of metal flexible conduit, mm	Physical dimensions, mm					Code
	F	LF	ØPU	CH1	CH2	
10	M16x1.5	12	8.5	22	24	EX6015-10A
12	M16x1.5	13	10	24	26	EX6015-12A
15	M16x1.5	14.5	13.8	28	30	EX6015-16A
15	M20x1.5	14.5	13.8	28	30	EX6015-20
20	M20x1.5	14	18	35	37	EX6015-2020
20	M25x1.5	16	18	35	37	EX6015-25
26	M25x1.5	16	23	42	45	EX6015-2527
26	M32x1.5	16	24	42	45	EX6015-32A
35	M32 x1.5	17	30	50	52	EX6015-3235
35	M40 x1.5	17	32	50	52	EX6015-4035
40	M40 x1.5	20	38	58	61	EX6015-40
40	M50 x1.5	23	38	58	61	EX6015-5040
50	M50 x1.5	20.5	48	70	74	EX6015-50
50	M63 x1.5	45	48	70	74	EX6015-6350

**Note:** other types of thread are provided on request.

## Explosion-proof couplings for metal flexible conduit in steel braid

### Distinctive design features of accessories for metal flexible conduits in steel braid

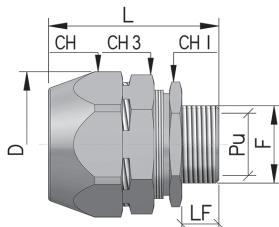


### Technical characteristics

Type	explosion-proof accessories for metal flexible conduit in steel braid
Protection category according to ATEX	II 2G Ex e IIC Gb / II 2D Ex tb IIIC Db
Conformity to standards	EN 60079-0:2012 / EN 60079-7:2007 / EN 60079-31:2014
Security category according to IECEx	Ex e IIC Gb / Ex tb IIIC Db
Conformity to standards	IEC 60079-0:2011 / IEC 60079-7:2006 / IEC 60079-31:2013
Security category according to TR CU	Ex e IIC Gb U / Ex tb IIIC Db U
Conformity to standards	GOST 31610.0-2014 / GOST R IEC 60079-7-2012 / GOST IEC 60079-31-2010
Operating temperature, °C	from -45 to +85
Protection against external effects	IP66/IP67
Material of enclosure parts	nickel-plated brass; stainless steel AISI 316L
Material of sealing	silicone



## Double-attached coupling for a metal flexible conduit in steel braid and entry into a box



### Description:

- explosion-proof coupling has double certification: increased security Exe, dust ignition protection Ext.
- Explosion proof coupling is designed for leak tight entry of metal flexible conduit in steel braid into an equipment, cabinet, box, terminal box, and control station enclosure.

### Complete set:

- coupling is complete with silicone seal on an outside thread.

### Standard sizes:

- metric, from M16 to M63.

### Protection degree:

- IP66/67.

### Material:

- enclosure and nut: nickel-plated brass;
- seal: silicone.

### Protection:

- Ex e IIC Gb U/ Ex tb IIIC Db U.

### Area:

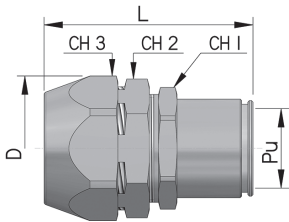
- 1, 2, 21, 22.

### Environmental temperature:

- from -45 to +85 °C.

Rated diameter of metal flexible conduit, mm	Physical dimensions, mm						Code
	F	LF	ØPU	CH1	CH2	CH3	
10	M16x1.5	9	8.5	22	26	28	EXT06014-1016
12	M16x1.5	9	10	24	28	30	EXT06014-16A
15	M20x1.5	10	13.8	28	30	35	EXT06014-20A
20	M20x1.5	10	16	35	39	42	EXT06014-2020
20	M25x1.5	12	18	36	39	42	EXT06014-25A
26	M32x1.5	12	24	42	50	50	EXT06014-32A
35	M40x1.5	14	32	50	55	60	EXT06014-4035
40	M40x1.5	14	34	58	60	65	EXT06014-40A
40	M50x1.5	18	38	60	60	65	EXT06014-5040
50	M50x1.5	18	44	70	80	80	EXT06014-50A
50	M63x1.5	18	48	70	80	80	EXT06014-6350

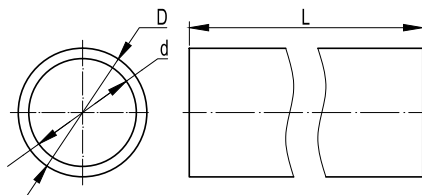
Double-attached coupling for connection of a metal flexible tube in steel braid with a smooth steel tube



- Description:**
- explosion-proof coupling has double certification: increased security Exe, dust ignition protection Ext.
  - Explosion proof coupling is designed for leak tight entry of metal flexible conduit in steel braid into an equipment, cabinet, box, terminal box, and control station enclosure.
- Complete set:**
- coupling is complete with silicone seal on an outside thread.
- Standard sizes:**
- Ø from 16 to 50 mm.
- Protection degree:**
- IP66/67.
- Material:**
- enclosure and nut: nickel-plated brass;
  - seal: silicone.
- Protection:**
- Ex e IIC Gb U/ Ex tb IIIC Db U.
- Area:**
- 1, 2, 21, 22.
- Environmental temperature:**
- from -45 to +85 °C.

Rated diameter of metal flexible conduit, mm	Physical dimensions, mm					Code
	diameter of a smooth steel tube, D	Connection diameter, ØPU	wrench CH1	wrench CH2	wrench CH3	
10	16	8.5	24	26	28	EXT06117-10N
12	16	10	24	28	30	EXT06117-12N
15	16	13.8	28	30	35	EXT06117-16N
20	20	18	35	39	42	EXT06117-2020
20	25	18	35	39	42	EXT06117-25N
26	32	24	42	50	50	EXT06117-32N
35	32	32	50	55	60	EXT06117-3235
35	40	32	50	55	60	EXT06117-4035
40	40	38	60	60	65	EXT06117-40
40	50	38	58	60	65	EXT06117-5040
50	50	48	70	80	80	EXT06117-50

## Rigid steel tubes



### Purpose:

- protection of wires and cables against mechanical damage, laying of electric, computer, and television networks using insulated wires, cords and cables;
- protection against mechanical damage and aggressive environment.

### Characteristics:

- version 1 is steel galvanized by the Sendzimir method;
- version 2 is stainless steel AISI 304;
- version 3 is stainless steel AISI 316L.

### Installation conditions:

- open laying on materials of any flammability (NG-G4 as per GOST 30244) and combustibility (V1-V3 as per GOST 30402) classes.
- buried laying in cavities of trunking walls, access floors, suspended ceilings in materials of flammability classes NG-G3 as per GOST 30244.

### Distinctive features:

- galvanized steel tubes have a uniform internal weld without sharp edges that allows reducing the probability of damage to cable sheath when pulling it in a tube;
- as for stainless steel tubes, an internal weld is dressed in the process of manufacturing, thus providing perfect smoothness of the internal tube surface and excluding the bare possibility of cable damage, simplifying mounting works.

## Characteristics

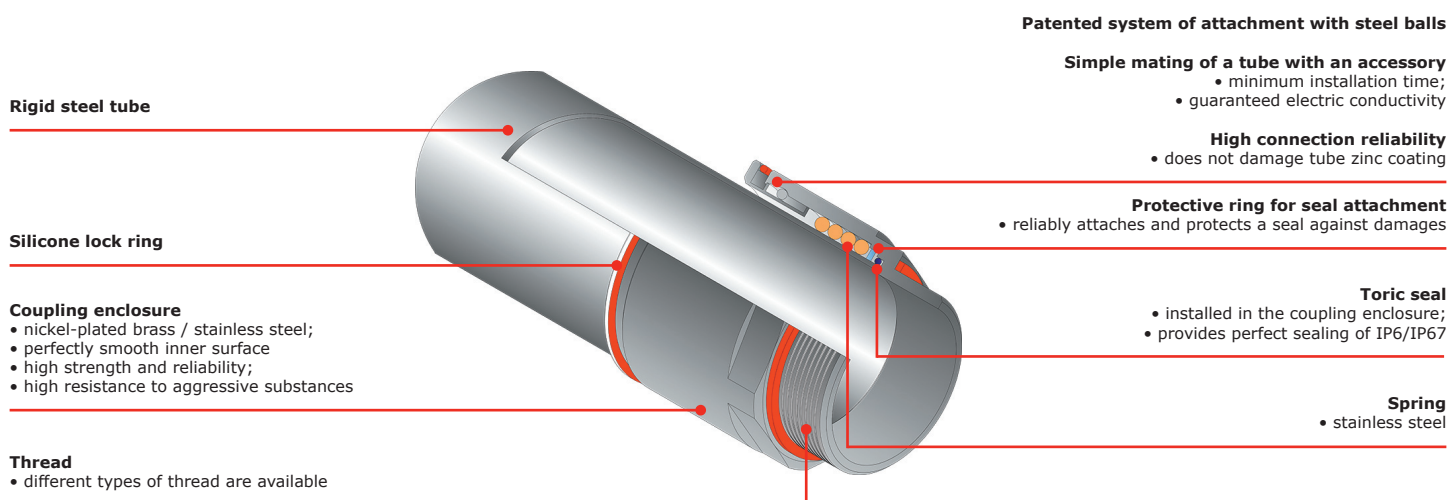
Standard	manufactured according to CEI EN 61386-1, EN 61386-23, EN 60423
Classification code according to EN 61386-1 and EN 61386-23	5545
Coating materials and types	steel hot dip galvanized on a conveyor by the Sendzimir method AISI 304 grade stainless steel AISI 316L grade stainless steel
Climatic version according to GOST 15150-69	version 1 is U2, KhL2, UKhL2 versions 2 and 3 are U1, KhL1, UKhL1, UKhL5
Protection degree	IP66/IP67 according to GOST 14254-96 (IEC 529-89) IP66 under dynamic effects IP67 during static laying
Mounting and operating temperature, °C	from -60 to +150
Strength (compression resistance at 20°C)	over 4000 N per 5 cm*
Tear strength	at least 1000 N
Shock resistance at -25°C	at least 20 J
EMC shielding	30-230 MHz, level 2 (min. attenuation 50 dB) according to IEC 61587

\* Deformation under the stated compressive force is not more than 25% ± 5% of the initial diameter

Outside diameter, mm	Inside diameter, mm	Wall thickness, mm	Version 1 (Sendzimir method)		Version 2 (AISI 304)		Version 3 (AISI 316L)	
			3 m tube sections		3 m tube sections		3 m tube sections	
			Package, m	Code	Package, m	Code	Package, m	Code
16	14	1	45	6008-16L3	45	6700-16L3	45	6700A-16L3
20	18	1	45	6008-20L3	45	6700-20L3	45	6700A-20L3
25	22.6	1.2	30	6008-25L3	30	6700-25L3	30	6700A-25L3
32	29.6	1.2	24	6008-32L3	24	6700-32L3	24	6700A-32L3
40	37.6	1.2	15	6008-40L3	15	6700-40L3	15	6700A-40L3
50	47.6	1.2	15	6008-50L3	15	6700-50L3	15	6700A-50L3
63	60	1.5	9	6008-63L3	–	–	–	–

## Explosion-proof couplings for rigid steel tubes

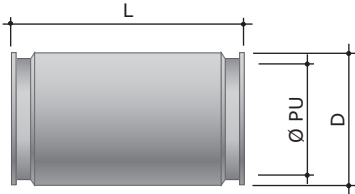
### Distinctive design features of accessories for rigid steel tubes



### Technical characteristics

Type	explosion-proof accessories for rigid tube
Protection category according to ATEX	II 2G Ex e IIC Gb / II 2D Ex tb IIIC Db
Conformity to standards	EN 60079-0:2012 / EN 60079-7:2007 / EN 60079-31:2014
Security category according to IECEx	Ex e IIC Gb / Ex tb IIIC Db
Conformity to standards	IEC 60079-0:2011 / IEC 60079-7:2006 / IEC 60079-31:2013
Security category according to TR CU	Ex e IIC Gb U / Ex tb IIIC Db U
Conformity to standards	GOST 31610.0-2014 / GOST R IEC 60079-7-2012 / GOST IEC 60079-31-2010
Operating temperature, °C	from -45 to +85
Protection against external effects	IP66/IP67
Material of enclosure parts	nickel-plated brass; stainless steel AISI 316L
Material of sealing	silicone

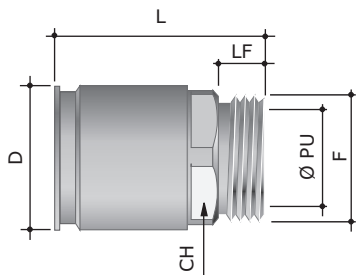
Tube-tube connecting coupling



- Description:**
- explosion-proof coupling has double certification: increased security Exe, dust ignition protection Ext.
  - Explosion proof coupling is designed for leak tight entry of metal flexible conduit in steel braid into an equipment, cabinet, box, terminal box, and control station enclosure.
- Complete set:**
- coupling is complete with silicone seal on an outside thread.
- Standard sizes:**
- Ø from 16 to 50 mm.
- Protection degree:**
- IP66/67.
- Material:**
- enclosure and nut: nickel-plated brass;
  - seal: silicone.
- Protection:**
- Ex e IIC Gb U/ Ex tb IIIC Db U.
- Area:**
- 1, 2, 21, 22.
- Environmental temperature:**
- from -45 to +85 °C.

Rated diameter of tube, mm	Physical dimensions, mm			Code
	ØPU	L	D	
16	15	64	23	EX6110-16N
20	19	64	27	EX6110-20N
25	24	64	32	EX6110-25N
32	31	66	39	EX6110-32N
40	38	83	50	EX6110-40
50	48	83	60	EX6110-50
63	61	89	75	EX6110-63N

Tube-box



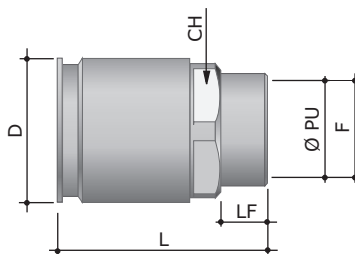
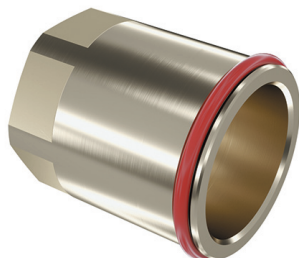
- Description:**
- explosion-proof coupling has double certification: increased security Exe, dust ignition protection Ext.
  - Explosion proof coupling is designed for leak tight entry of steel tube into an equipment, cabinet, box, terminal box, and control station enclosure
- Complete set:**
- coupling is complete with silicone seal on the external surface.
- Standard sizes:**
- metric, from M16 to M63;
  - GAS from 3/8" to 1 1/2" (on request).
- Protection degree:**
- IP66/67.
- Material:**
- enclosure: nickel-plated brass;
  - sealing: silicone.
- Protection:**
- Ex e IIC Gb U/ Ex tb IIIC Db U.
- Area:**
- 1, 2, 21, 22.
- Environmental temperature:**
- from -45 to +85 °C.

Rated diameter of tube, mm	Physical dimensions, mm					Code
	F	LF	ØPU	ØD	CH	
16	M16x1.5	10	12.7	23	21	EX6111-A16N
20	M20x1.5	10	16	27	25	EX6111-A20N
25	M25x1.5	10	21	32	30	EX6111-A25N
32	M32x1.5	12	27.5	39	37	EX6111-A32N
40	M40x1.5	14	35	50	47	EX6111-A40
50	M50x1.5	14	45	60	56	EX6111-A50
63	M63x1.5	14	55	75	75	EX6111-A63N

**Note:** other types of thread are provided on request.



## Tube-box coupling with inside thread

**Description:**

- explosion-proof coupling has double certification: increased security Exe, dust ignition protection Ext.

Explosion proof coupling is designed for leak tight entry of steel tube into an equipment, cabinet, box, terminal box, and control station enclosure

**Complete set:**

- coupling is complete with silicone seal on the external surface.

**Standard sizes:**

- metric, from M16 to M63;
- GAS from 3/8" to 1 1/2" (on request).

**Protection degree:**

- IP66/67.

**Material:**

- enclosure: nickel-plated brass;
- sealing: silicone.

**Protection:**

- Ex e IIC Gb U/ Ex tb IIIC Db U.

**Area:**

- 1, 2, 21, 22.

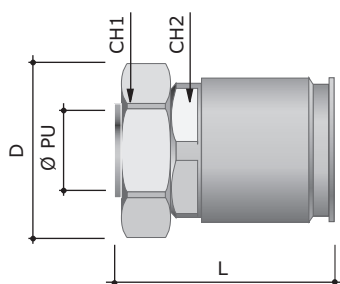
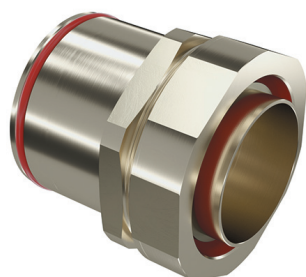
**Environmental temperature:**

- from -45 to +85 °C.

Rated diameter of tube, mm	Physical dimensions, mm					Code
	F	LF	ØPU	ØD	CH	
16	M16x1.5	10	14.5	23	21	EX6112-A16
20	M20x1.5	10	18.5	27	25	EX6112-A20
25	M25x1.5	10	23.5	32	30	EX6112-A25
32	M32x1.5	12	30.5	39	37	EX6112-A32
40	M40x1.5	15	38.5	50	47	EX6112-A40
50	M50x1.5	15	48.5	60	56	EX6112-A50
63	M63x1.5	21.5	57	75	67	EX6112-A63N

**Note:** other types of thread are provided on request.

## Rigid coupling, smooth tube-metal flexible conduit



### Description:

- explosion-proof coupling has double certification: increased security Exe, dust ignition protection Ext.

Explosion proof coupling is designed for leak tight connection of rigid steel tubes with metal flexible conduits, for junction between a rigid tube and a metal flexible conduit, if a flexible route bend is required.

### Complete set:

- coupling is complete with silicone seal on the external surface.

### Standard sizes:

- from 16 to 63 mm.

### Protection degree:

- IP66/67.

### Material:

- enclosure: nickel-plated brass;
- sealing: silicone.

### Protection:

- Ex e IIC Gb U/ Ex tb IIIC Db U.

### Area:

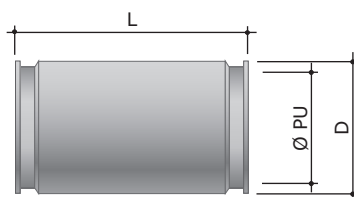
- 1, 2, 21, 22.

### Environmental temperature:

- from -45 to +85 °C.

Rated diameter of tube, mm	Rated diameter of metal flexible conduit, mm	Physical dimensions, mm			Code
		Ø PU	CH1	CH2	
16	10	8.5	24	24	EX6117-10N
16	12	10	26	24	EX6117-12N
16	15	13.8	30	28	EX6117-16N
20	15	13.8	30	28	EX6117-20N
20	20	18	37	35	EX6117-2020
25	20	18	37	35	EX6117-25N
25	26	23	45	42	EX6117-2527
32	26	24	45	42	EX6117-32N
32	35	30	52	50	EX6117-3235
40	35	32	52	58	EX6117-4035
40	40	38	61	58	EX6117-40
50	40	38	61	58	EX6117-5040
50	50	48	74	70	EX6117-50
63	50	48	74	75	EX6117-63N

## Tube-tube connecting coupling


**Description:**

- explosion-proof coupling has double certification: increased security Exe, dust ignition protection Ext.

Explosion-proof coupling is designed for connection of rigid steel tubes of the same diameter.

**Complete set:**

- coupling is complete with silicone seal on the external surface.

**Standard sizes:**

- from 16 to 63 mm.

**Protection degree:**

- IP66/67.

**Material:**

- enclosure: stainless steel AISI 316L;
- sealing: silicone.

**Protection:**

- Ex e IIC Gb U/ Ex tb IIIC Db U.

**Area:**

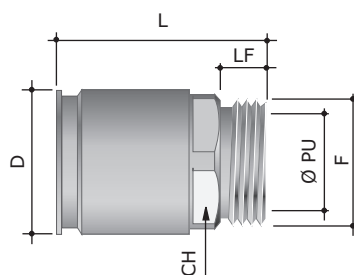
- 1, 2, 21, 22.

**Environmental temperature:**

- from -45 to +85 °C.

Rated diameter of tube, mm	Physical dimensions, mm			Code
	ØPU	L	D	
16	15	64	23	EX6110-16XX
20	19	64	27	EX6110-20XX
25	24	64	32	EX6110-25XX
32	31	66	39	EX6110-32XX
40	38	83	50	EX6110-40XX
50	48	83	60	EX6110-50XX
63	61	89	75	EX6110-63XX

## Tube-box


**Description:**

- explosion-proof coupling has double certification: increased security Exe, dust ignition protection Ext.

Explosion proof coupling is designed for leak tight entry of steel tube into an equipment, cabinet, box, terminal box, and control station enclosure

**Complete set:**

- coupling is complete with silicone seal on the external surface.

**Standard sizes:**

- metric, from M16 to M63.

**Protection degree:**

- IP66/67.

**Material:**

- enclosure: stainless steel AISI 316L;
- sealing: silicone.

**Protection:**

- Ex e IIC Gb U/ Ex tb IIIC Db U.

**Area:**

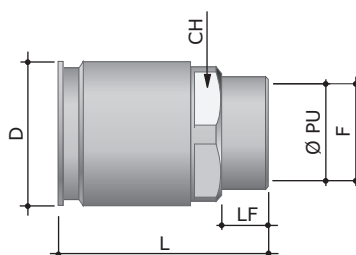
- 1, 2, 21, 22.

**Environmental temperature:**

- from -45 to +85 °C.

Rated diameter of tube, mm	Physical dimensions, mm					Code
	F	LF	ØPU	ØD	CH	
16	M16x1.5	10	12.7	23	21	EX6111-16XX
20	M20x1.5	10	16	27	25	EX6111-20XX
25	M25x1.5	10	21	32	30	EX6111-25XX
32	M32x1.5	12	27.5	39	37	EX6111-32XX
40	M40x1.5	14	35	50	47	EX6111-40XX
50	M50x1.5	14	45	60	56	EX6111-50XX
63	M63x1.5	14	55	75	75	EX6111-63XX

## Tube-box coupling with inside thread


**Description:**

- explosion-proof coupling has double certification: increased security Exe, dust ignition protection Ext.
- Explosion proof coupling is designed for leak tight entry of steel tube into an equipment, cabinet, box, terminal box, and control station enclosure

**Complete set:**

- coupling is complete with silicone seal on the external surface.

**Standard sizes:**

- metric, from M16 to M63.

**Protection degree:**

- IP66/67.

**Material:**

- enclosure: stainless steel AISI 316L;
- sealing: silicone.

**Protection:**

- Ex e IIC Gb U/ Ex tb IIIC Db U.

**Area:**

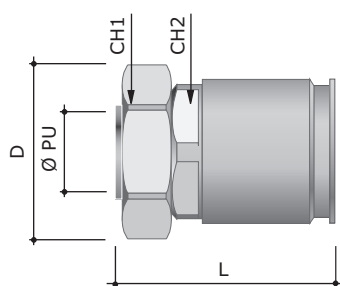
- 1, 2, 21, 22.

**Environmental temperature:**

- from -45 to +85 °C.

Rated diameter of tube, mm	Physical dimensions, mm					Code
	F	LF	ØPU	ØD	CH	
16	M16x1.5	10	14.5	23	21	EX6112-16XX
20	M20x1.5	10	18.5	27	25	EX6112-20XX
25	M25x1.5	10	23.5	32	30	EX6112-25XX
32	M32x1.5	12	30.5	39	37	EX6112-32XX
40	M40x1.5	15	38.5	50	47	EX6112-40XX
50	M50x1.5	15	48.5	60	56	EX6112-50XX
63	M63x1.5	21.5	60	74.5	67	EX6112-63XX

## Rigid coupling, smooth tube-metal flexible conduit


**Description:**

- explosion-proof coupling has double certification: increased security Exe, dust ignition protection Ext.
- Explosion proof coupling is designed for leak tight connection of rigid steel tubes with metal flexible conduits, for junction between a rigid tube and a metal flexible conduit, if a flexible route bend is required.

**Complete set:**

- coupling is complete with silicone seal on the external surface.

**Standard sizes:**

- from 16 to 63 mm.

**Protection degree:**

- IP66/67.

**Material:**

- enclosure: stainless steel AISI 316L;
- sealing: silicone.

**Protection:**

- Ex e IIC Gb U/ Ex tb IIIC Db U.

**Area:**

- 1, 2, 21, 22.

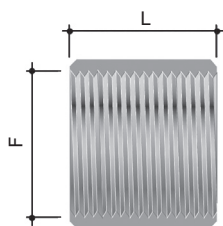
**Environmental temperature:**

- from -45 to +85 °C.

Rated diameter of tube, mm	Rated diameter of metal flexible conduit, mm	Physical dimensions, mm			Code
		ØPU	CH1	CH2	
20	15	13.8	30	30	EX6117XX20N
25	20	18	36	36	EX6117XX25N
32	26	24	46	46	EX6117XX32N
40	35	32	55	50	EX6117XX4035
50	40	38	60	60	EX6117XX5040
63	50	48	74	75	EX6117XX63N

## Accessories for cable protection system

## Explosion-proof connecting coupling

**Description:**

- explosion-proof coupling has double certification: increased security Exe, dust ignition protection Ext.

Explosion-proof coupling is designed for connection of rigid steel tubes of the same diameter with outside thread.

**Standard sizes:**

- from 16 to 63 mm.

**Protection degree:**

- IP66/67.

**Material:**

- enclosure: stainless steel AISI 316L;
- sealing: silicone.

**Protection:**

- Ex e IIC Gb U/ Ex tb IIIC Db U.

**Area:**

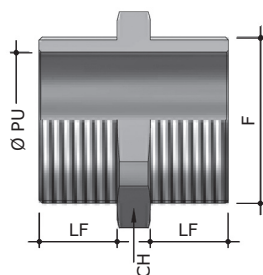
- 1, 2, 21, 22.

**Environmental temperature:**

- from -45 to +85 °C.

Rated diameter of tube, mm	Physical dimensions, mm		Code
	F	L	
16	M16x1.5	27	EX6003-16A
20	M20x1.5	30	EX6003-20
25	M25x1.5	36	EX6003-25
32	M32x1.5	40	EX6003-32A
40	M40x1.5	40	EX6003-40
50	M50x1.5	50	EX6003-50
63	M63x1.5	63	EX6003-63

## Explosion-proof connecting coupling

**Description:**

- explosion-proof coupling has double certification: increased security Exe, dust ignition protection Ext.

Explosion-proof coupling is designed for connection of two couplings with metric thread of one standard size with inside thread.

**Complete set:**

- coupling is complete with silicone seal on the external surface.

**Standard sizes:**

- metric, from M16 to M50.

**Protection degree:**

- IP66/67.

**Material:**

- nickel-plated brass.

**Protection:**

- Ex e IIC Gb U/ Ex tb IIIC Db U.

**Area:**

- 1, 2, 21, 22.

**Environmental temperature:**

- from -45 to +85 °C.

Physical dimensions, mm				Code
F	LF	CH	ØPU	
M16x1.5	8	24	12	EX6051-16A
M20x1.5	9.5	28	15	EX6051-20
M25x1.5	10	35	20	EX6051-25
M32x1.5	13.5	42	26	EX6051-32A
M40x1.5	16.5	50	35	EX6051-40
M50x1.5	23.5	60	41	EX6051-50

**Compatibility table of explosion-proof accessories for metal flexible conduit**


Rated diameter of metal flexible conduit, mm	Metal flexible conduit made of galvanized steel, IP40	Metal flexible conduit with vacuum PVC insulation	Metal flexible conduit in smooth PVC insulation	Metal flexible conduit in PVC insulation, and protected by galvanized steel braid	Metal flexible conduit in smooth EVA insulation	Metal flexible conduit in smooth EVA insulation and protected by stainless steel braid	Metal flexible conduit in smooth polyurethane insulation
10	667R1013	6071R-010	6070R-10	6071T-010	607E010	607ETX010	607PU10N
12	667R1215	6071R-012	6070R-12	6071T-012	607E012	607ETX012	607PU12N
15	667R1518	6071R-015	6070R-16	6071T-016	607E016	607ETX016	607PU16N
15	667R1518	6071R-015	6070R-16	6071T-016	607E016	607ETX016	607PU16N
20	667R2024	6071R-020	6070R-22	6071T-022	607E022	607ETX022	607PU22N
20	667R2024	6071R-020	6070R-22	6071T-022	607E022	607ETX022	607PU22N
26	667R2630	6071R-027	6070R-32	6071T-032	607E032	607ETX032	607PU32N
26	667R2630	6071R-027	6070R-32	6071T-032	607E032	607ETX032	607PU32N
35	667R3539	6071R-035	6070R-38	6071T-038	607E038	607ETX038	607PU38N
35	667R3539	6071R-035	6070R-38	6071T-038	607E038	607ETX038	607PU38N
40	667R4044	6071R-040	6070R-40	6071T-040	607E040	607ETX040	607PU40N
40	667R4044	6071R-040	6070R-40	6071T-040	607E040	607ETX040	607PU40N
50	667R5054	6071R-050	6070R-50	6071T-050	607E050	607ETX050	607PU50N
50	667R5054	6071R-050	6070R-50	6071T-050	607E050	607ETX050	607PU50N

**Compatibility table of explosion-proof accessory for rigid steel tubes**

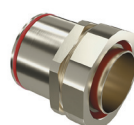

Diameter of a steel tube	Rigid steel tube (Sendzimir method)	Tube-tube connecting coupling	Tube-box coupling with outside thread	Tube-box coupling with inside thread	Tube-tube connecting coupling	Tube-box coupling with outside thread	Tube-box coupling with inside thread
16	6008-16L3	EX6110-16N	EX6111-A16N	EX6112-A16	EX6110-16XX	EX6111-16XX	EX6112-16XX
20	6008-20L3	EX6110-20N	EX6111-A20N	EX6112-A20	EX6110-20XX	EX6111-20XX	EX6112-20XX
25	6008-25L3	EX6110-25N	EX6111-A25N	EX6112-A25	EX6110-25XX	EX6111-25XX	EX6112-25XX
32	6008-32L3	EX6110-32N	EX6111-A32N	EX6112-A32	EX6110-32XX	EX6111-32XX	EX6112-32XX
40	6008-40L3	EX6110-40	EX6111-A40	EX6112-A40	EX6110-40XX	EX6111-40XX	EX6112-40XX
50	6008-50L3	EX6110-50	EX6111-A50	EX6112-A50	EX6110-50XX	EX6111-50XX	EX6112-50XX
63	6008-63L3	EX6110-63N	EX6111-A63N	EX6112-A63N	EX6110-63XX	EX6111-63XX	EX6112-63XX





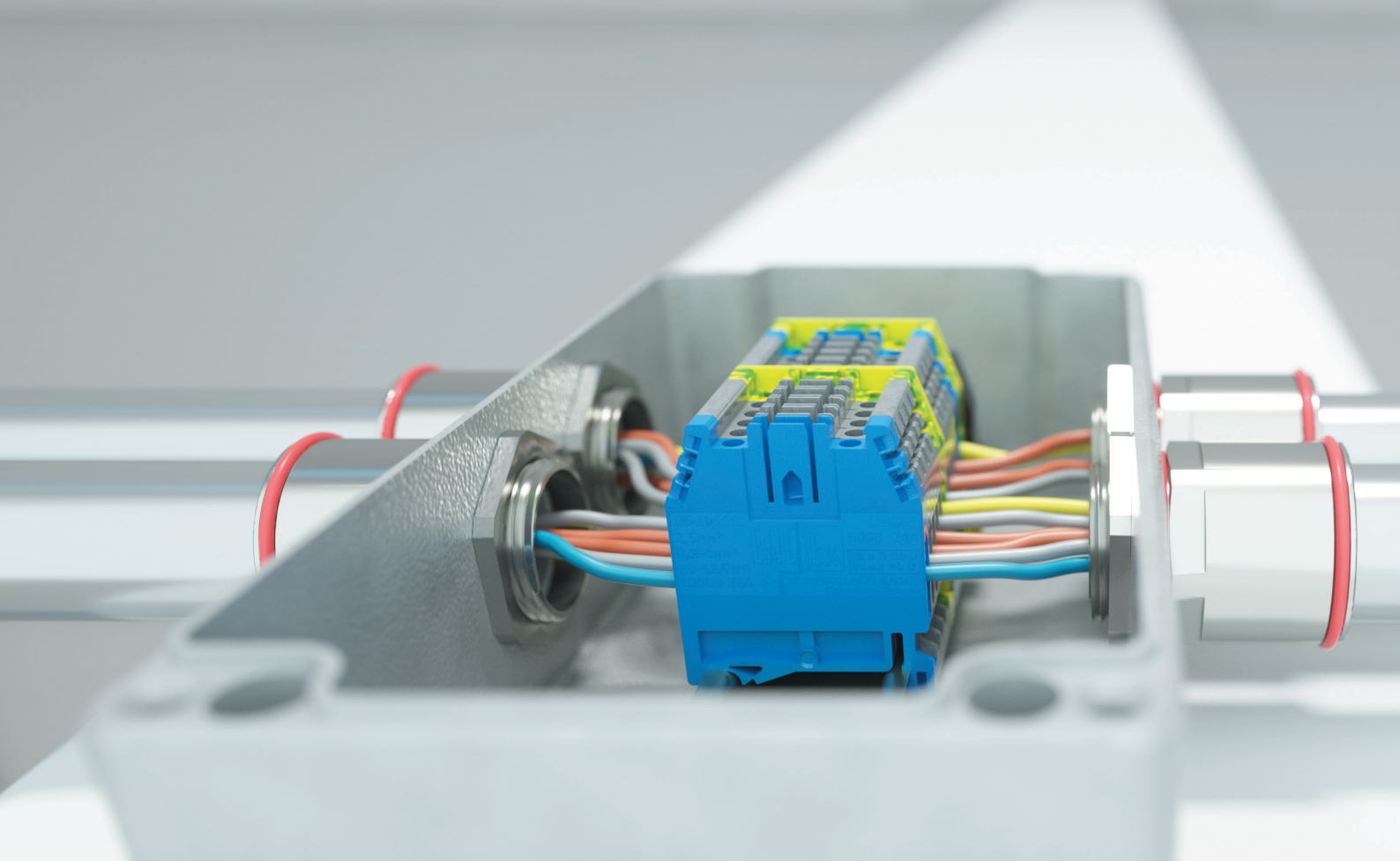
Rated diameter of metal flexible conduit, mm	Metal flexible conduit-box coupling with outside thread	Double-attached metal flexible conduit-box coupling	Metal flexible conduit-box coupling with inside thread	Metal flexible conduit-box coupling with outside thread	Double-attached metal flexible conduit-tube coupling
10	EX6014-1016	EXT06014-1016	EX6015-10A	–	EXT06117-10N
12	EX6014-16A	EXT06014-16A	EX6015-12A	EX6014XX16A	EXT06117-12N
15	EX6014-1616	–	EX6015-16A	EX6014XX1616	EXT06117-16N
15	EX6014-20A	EXT06014-20A	EX6015-20	EX6014XX20A	–
20	EX6014-2020	EXT06014-2020	EX6015-2020	EX6014XX2020	EXT06117-2020
20	EX6014-25A	EXT06014-25A	EX6015-25	EX6014XX25A	EXT06117-25N
26	EX6014-2527	–	EX6015-2527	–	–
26	EX6014-32A	EXT06014-32A	EX6015-32A	EX6014XX32A	EXT06117-32N
35	EX6014-4035	EXT06014-4035	EX6015-3235	EX6014XX4035	EXT06117-3235
35	–	–	EX6015-4035	–	EXT06117-4035
40	EX6014-40A	EXT06014-40A	EX6015-40	–	EXT06117-40
40	EX6014-5040	EXT06014-5040	EX6015-5040	EX6014XX5040	EXT06117-5040
50	EX6014-50A	EXT06014-50A	EX6015-50	–	EXT06117-50
50	EX6014-6350	EXT06014-6350	EX6015-6350	–	–

### Compatibility table of explosion-proof adapters from metal conduit to rigid steel tube



Rated diameter of metal flexible conduit	Diameter of a steel tube	Rigid coupling, tube-metal flexible conduit	Rigid coupling, tube-metal flexible conduit
10	16	EX6117-10N	–
12	16	EX6117-12N	–
15	16	EX6117-16N	–
15	20	EX6117-20N	EX6117XX20N
20	20	EX6117-2020	–
20	25	EX6117-25N	EX6117XX25N
26	25	EX6117-2527	–
26	32	EX6117-32N	EX6117XX32N
35	32	EX6117-3235	–
35	40	EX6117-4035	–
40	40	EX6117-40	EX6117XX4035
40	50	EX6117-5040	–
50	50	EX6117-50	EX6117XX5040
50	63	EX6117-63N	EX6117XX63N





## Explosion-proof terminal clips

Screw type terminal clips .....	106
Spring type terminal clips .....	115

## Explosion-proof terminal clips

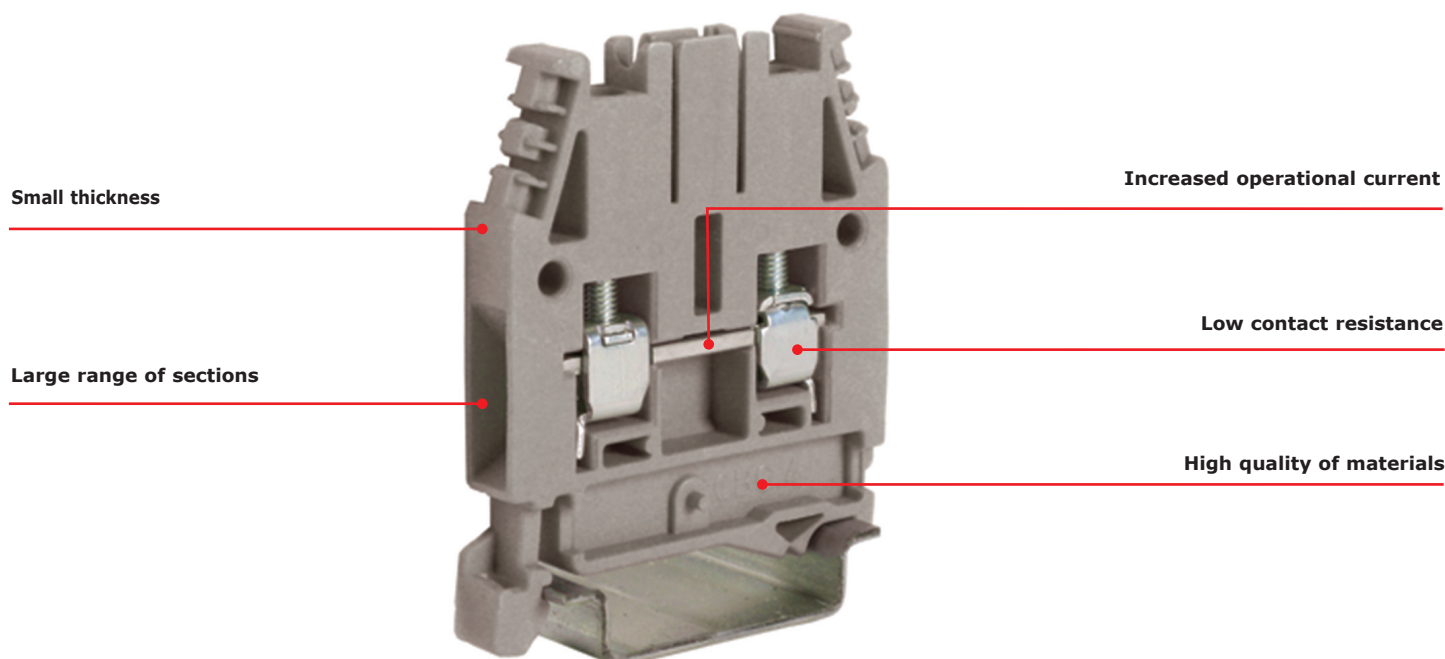
### Assortment

DKC terminal clips are intended for connection and branching of single-core and multi-core conductors for switching of alternating current 1,000 V signal and power circuits in extremely aggressive media at chemical, oil refining, food, transport and marine industries.

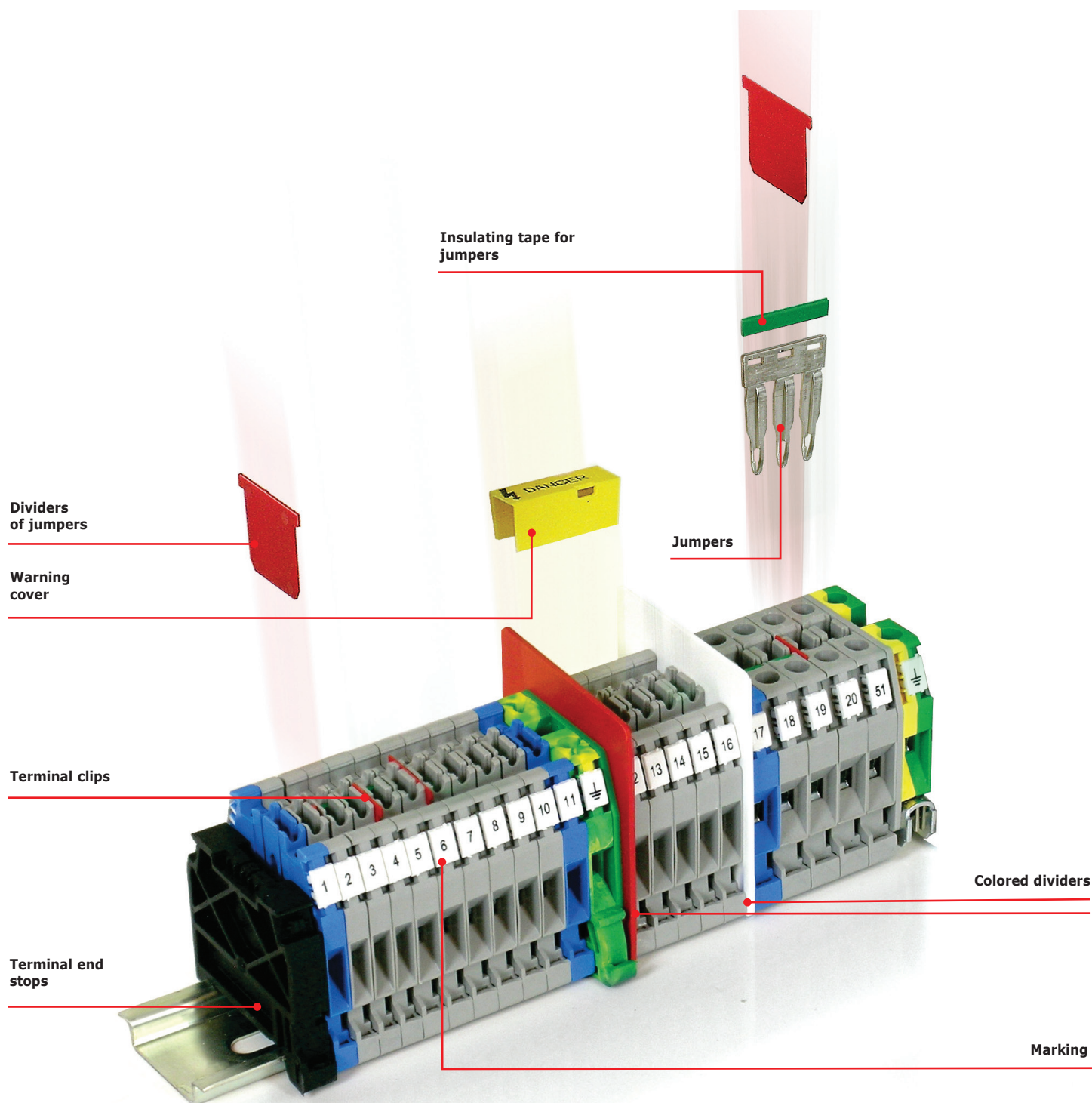
In cases when explosion-proof terminals are a part of electrical equipment, they should be considered as Ex components.

The terminal enclosure has Ex marking indicative of the possibility of application of the terminals in electric equipment groups I and II according to applicable standards ATEX, IEC, EAC.

### Distinctive features



## System composition



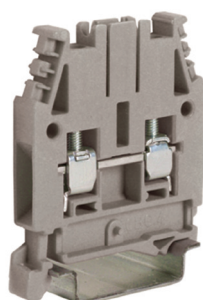
## Advantages:

- high electric conductivity and low transient resistance of contact materials of the terminals;
- perfect resistance to corrosion, marine air, industrial gases increases the life cycle;
- material of the terminals does not propagate fire;
- inclined surface of the groove and rounded shape of the terminal plate providing easy installation;
- comparative tracking index I according to IEC 60112.

## Explosion-proof terminal clips

### Feed-through terminal of CBC series

#### New design universal terminal



#### Purpose:

- switching of conductors with section of 0.2 to 50 mm<sup>2</sup>.

#### Distinctive features:

- rated current value is up to 125 A;
- installation on OMEGA 3F DIN rail;
- the system of plug-in jumpers provides the possibility of double bringing of clips.

#### Marking:

- Ex e I Mb U / Ex e IIC Gb U.

#### Colors:

- gray;
- blue (Ex i).

**Note:** see current and voltage values for a version with jumpers on page 123.

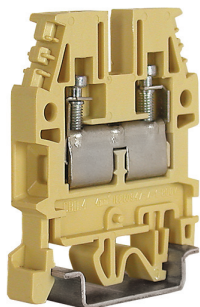
Characteristics	Values
Rated impulse voltage Uimp, kV	12
Flammability classification	V0
Enclosure material	polyamide
Material of current-carrying elements	nickel-plated brass

Nominal section, mm <sup>2</sup>		2.5	4	6	10	16	35
Type of clip		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35
Code of clip	gray	ZCBC02GR	ZCBC04GR	ZCBC06GR	ZCBC10GR	ZCBC16GR	ZCBC35GR
	blue	ZCBI02	ZCBI04	ZCBI06	ZCBI10	ZCBI16	ZCBI35
Section range, mm <sup>2</sup>		0.2-4	0.2-6	0.5-10	1.5-16	1.5-25	2.5-50
Rated current*, A		24	32	41	57	76	125
Rated voltage*, V		500	500	500	400	500	630
Rated jumper current for general purpose industrial grade application, A		32	41	57	76	101	150
Voltage for general purpose industrial grade application, V		1000	1000	1000	1000	1000	1000
Dimensions after installation on DIN rail, mm height x length x thickness		52x44x5	52x44x6	52x44x8	52x44x10	56x47x12	63x56x16
Accessories							
Omega 3F fastener		02140	02140	02140	02140	02140	02140
End insulator	gray	ZCB061GR	ZCB061GR	ZCB061GR	ZCB061GR	ZCB161GR	ZCB351GR
	blue	ZCBI061	ZCBI061	ZCBI061	ZCBI061	ZCBI161	ZCBI351
Non-insulated jumpers	2 poles	ZPTC0202	ZPTC0402	ZPTC0602	ZPTC1002	ZPOF53	ZPOF06
	3 poles	ZPTC0203	ZPTC0403	ZPTC0603	ZPTC1003	–	–
	5 poles	ZPTC0205	ZPTC0405	ZPTC0605	ZPTC1005	–	–
	10 poles	ZPTC0210	ZPTC0410	ZPTC0610	ZPTC1010	–	–
	X poles	ZPTC0200 (50 poles)	ZPTC0400 (42 poles)	ZPTC0600 (31 poles)	ZPTC1000 (25 poles)	ZPMP05 – jumper for 21 poles ZCPM53 – screw	ZPMP06 – jumper for 16 poles ZCPM06 – screw
Jumper marking		ZPTC0990	ZPTC0990	ZPTC0990	ZPTC0990	–	–
Insulated jumpers (red)	2 poles	ZPTP0202R	ZPTP0402R	–	–	–	–
	3 poles	ZPTP0203R	ZPTP0403R	–	–	–	–
	5 poles	ZPTP0205R	ZPTP0405R	–	–	–	–
	10 poles	ZPTP0210R	ZPTP0410R	–	–	–	–
	30 poles	ZPTP0230R	ZPTP0430R	–	–	–	–
Insulating dividers for jumpers	for insulation of 1 jumper	ZDF800	ZDF800	ZDF800	ZDF800	–	–
	for insulation of 2 jumpers	ZDF900	ZDF900	ZDF900	ZDF900	ZDF700	ZDF700
Terminal end stop		ZBT005	ZBT005	ZBT005	ZBT005	ZBT005	ZBT005
Marking of terminals		ZNU008	ZNU0861	ZNU0861	ZNU0861	ZNU0861	ZNU0861
Screwdriver		ZCCH02	ZCCH02	ZCCH02	ZCCH02	–	–

\* Current and voltage values are specified in accordance with TR CU 012 for application in sheaths with Ex e and Ex i explosion protection types and differ from the values for the general purpose industrial grade application.

## Feed-through terminal of CBD series

### Old design universal terminal


**Purpose:**

- switching of conductors with section of 0.5 to 95 mm<sup>2</sup>.

**Distinctive features:**

- rated current value is up to 173 A;
- universal attachment on OMEGA 3F DIN rail;

**Marking:**

- Ex e I Mb U / Ex e IIC Gb U.

**Colors:**

- beige;
- blue (Ex i).

**Note:** see current and voltage values for a version with jumpers on page 123.

Characteristics	Values
Rated impulse voltage U <sub>imp</sub> , kV	8
Flammability classification	V0
Enclosure material	polyamide
Material of current-carrying elements	nickel-plated brass

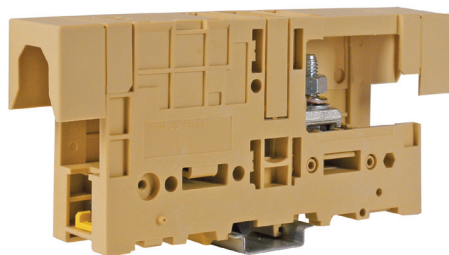
Nominal section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Type of clip		CBD.2	CBD.4	CBD.6	CBD.10	CBD.16	CBD.35	CBD.50	CBD.70
Code of clip	beige	ZCB110	ZCB240	ZCB340	ZCB440	ZCB510	ZCB610	ZCB710	ZCB810
	blue	ZCBX12	ZCBX24	ZCBX34	ZCBX45	ZCBX52	ZCBX62	ZCBX72	ZCBX82
Section range, mm <sup>2</sup>		0.5-4	0.5-6	0.5-10	0.5-16	0.5-25	0.5-50	1.5-70	1.5-95
Rated current*, A		24	32	41	57	76	125	150	173
Rated voltage*, V		400	500	500	630	630	630	630	630
Rated jumper current for general purpose industrial grade application, A		24	32	41	57	76	125	150	192
Voltage for general purpose industrial grade application, V		800	800	800	800	800	800	800	800
Dimensions after installation on DIN rail, mm height x length x thickness		47x40.5x5.5	52x44x6.5	52x44x8	52x44x10	57x47x12	60x52x16	62x57x18	71x62x20.5
Accessories									
Omega 3F fastener		02140	02140	02140	02140	02140	02140	02140	02140
End insulator	beige	ZCB111	ZCB241	ZCB241	ZCB431	ZCB511	ZCB611	ZCB711	ZCB811
	blue	ZCBX13	ZCBX25	ZCBX25	ZCBX44	ZCBX53	ZCBX63	ZCBX73	ZCBX83
Protective cover for jumpers		ZPRP06	ZPRP06	ZPRP07	ZPRP07	ZPRP07	ZPRP08	ZPRP08	ZPRP08
Insulating divider for jumpers		ZDF600	ZDF600	ZDF600	ZDF700	ZDF700	ZDF700	ZDF700	ZDF700
Screwdriver		ZCCH02	ZCCH02	ZCCH02	ZCCH02	–	–	–	–
Terminal end stop		ZBT005	ZBT005	ZBT005	ZBT005	ZBT005	ZBT005	ZBT005	ZBT005
Marking of terminals		ZNU0861	ZNU0861	ZNU0861	ZNU0861	ZNU0861	ZNU0861	ZNU0861	ZNU0861

\* Current and voltage values are specified in accordance with TR CU 012 for application in sheaths with Ex e and Ex i explosion protection types and differ from the values for the general purpose industrial grade application.



## Power terminal of GPM series

Feed-through terminal for power mains, with possibility of connection of busbar and cable with bolt lug



**Purpose:**

- switching of conductors with section of 35 to 240 mm<sup>2</sup>.

**Distinctive features:**

- rated current value is up to 415 A;
- universal attachment on OMEGA 3FA, G1 DIN rail or on a mounting plate;
- the system of plug-in jumpers provides the possibility of double bringing of clips;
- installation of an end insulator is not required.

**Marking:**

- Ex e I Mb U / Ex e IIC Gb U.

**Colors:**

- beige.

Characteristics	Values
Rated impulse voltage Uimp, kV	12
Flammability classification	V0
Enclosure material	polyamide
Material of current-carrying elements	nickel-plated brass

Nominal section, mm <sup>2</sup>	95		150		240	
Type of clip	GPM.95/CC	GPM.95/CC/FIX	GPM.150/CC	GPM.150/CC/FIX	GPM.240/CC	GPM.240/CC/FIX
Code of clip	ZGP300	ZGP310	ZGP600	ZGP610	ZGP900	ZGP910
Section range, mm <sup>2</sup>	35-95		50-150		95-240	
Rated current*, A	232		309		415	
Rated voltage*, V	630		1000**		1000	
Rated jumper current for general purpose industrial grade application, A	269		353		452	
Voltage for general purpose industrial grade application, V	1000		1000		1000	
Dimensions after installation, mm height x length x thickness	113x140x32	108x173x32	134x140x42	129x173x42	150x154x52	144x187x52

**Accessories**

Omega 3F fastener	02140	–	02140	–	02140	–
Attachment on mounting plate	–	mounting plate	–	mounting plate	–	mounting plate
Screwdriver	–	–	–	–	–	–
Terminal end stop	ZBT005	ZBT005	ZBT005	ZBT005	ZBT005	ZBT005
Marking of terminals	ZNU008	ZNU008	ZNU008	ZNU008	ZNU008	ZNU008

\* Current and voltage values are specified in accordance with TR CU 012 for application in sheaths with Ex e and Ex i explosion protection types and differ from the values for the general purpose industrial grade application.

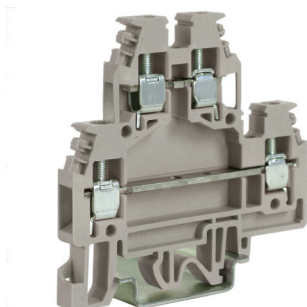
\*\* – with application of DFU/4 barrier.

**Note:**

- terminal with "For a bolt" clip is provided on request;
- terminal with "Liner – bolt" combined clip is provided on request;

## Two-level terminal of DAS series

## Multi-level terminal for switching of low current circuits

**Purpose:**

- switching of conductors with section of 0.2 to 6 mm<sup>2</sup>.

**Distinctive features:**

- rated current value is up to 24 A;
- universal attachment on OMEGA 3F or G1 DIN rail;
- the system of screw type jumpers provides the possibility of double bringing of clips;
- bridging between levels is possible.

**Marking:**

- Ex e I Mb U / Ex e IIC Gb U.

**Colors:**

- gray;
- blue (Ex i).

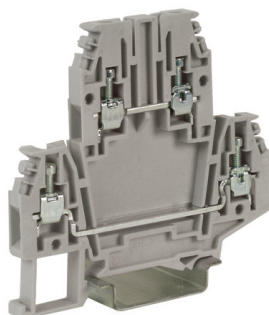
Characteristics	Values
Rated impulse voltage U <sub>imp</sub> , kV	8
Flammability classification	V0
Enclosure material	polyamide
Material of current-carrying elements	nickel-plated brass

Nominal section, mm <sup>2</sup>		4
Type of clip		DAS.4
Code of clip	gray	ZDS100GR
	blue	ZDS200
Section range, mm <sup>2</sup>		0.2-6
Rated current*, A		24
Rated voltage*, V		400
Rated jumper current for general purpose industrial grade application, A		32
Voltage for general purpose industrial grade application, V		630
Dimensions after installation on DIN rail, mm height x length x thickness		62x64x6
Accessories		
Omega 3F fastener		02140
End insulator	gray	ZDS101GR
	blue	ZDS201
Protective cover for jumpers		ZPRP05
Terminal end stop		ZBT005
Marking of terminals		ZNU008
Screwdriver		ZCCH02

\* Current and voltage values are specified in accordance with TR CU 012 for application in sheaths with Ex e and Ex i explosion protection types and differ from the values for the general purpose industrial grade application.

## Two-level terminal of DBC series

### Multi-level terminal for switching of low current circuits



**Purpose:**

- switching of conductors with section of 0.2 to 4 mm<sup>2</sup>.

**Distinctive features:**

- rated current value is up to 24 A;
- attachment on OMEGA 3F DIN rail;
- the system of plug-in jumpers provides the possibility of double bringing of clips.

**Marking:**

- Ex e I Mb U / Ex e IIC Gb U.

**Colors:**

- gray;
- blue (Ex i).

**Note:** see current and voltage values for a version with jumpers on page 123.

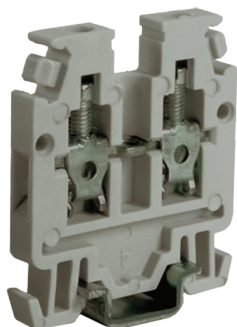
Characteristics	Values
Rated impulse voltage Uimp, kV	8
Flammability classification	V0
Enclosure material	polyamide
Material of current-carrying elements	nickel-plated brass

Nominal section, mm <sup>2</sup>		2.5
Type of clip		DBC.2
Code of clip	gray	ZDB100GR
	blue	ZDB200
Section range, mm <sup>2</sup>		0.2-4
Rated current*, A		24
Rated voltage*, V		400
Rated jumper current for general purpose industrial grade application, A		24
Voltage for general purpose industrial grade application, V		630
Dimensions after installation on DIN rail, mm height x length x thickness		66x70x5

Accessories		
Omega 3F fastener		02140
End insulator	gray	ZDB101GR
	blue	ZDB201
Non-insulated jumpers	2 poles	ZPTC0202
	3 poles	ZPTC0203
	5 poles	ZPTC0205
	10 poles	ZPTC0210
	X poles	ZPTC0200 (50 poles)
Jumper marking		ZPTC0990
Insulating dividers for upper level jumpers	for insulation of 1 jumper	ZDF800
	for insulation of 2 jumpers	ZDF900
Insulating divider for lower level jumpers		ZDF500
Terminal end stop		ZBT005
Marking of terminals		ZNU008

\* Current and voltage values are specified in accordance with TR CU 012 for application in sheaths with Ex e and Ex i explosion protection types and differ from the values for the general purpose industrial grade application.

## Miniclips of RN series

**Purpose:**

- for installation in places where it is impossible to install universal terminal clips for reasons of design;
- switching of conductors with section of 0.2 to 4 mm<sup>2</sup>.

**Distinctive features:**

- rated current value is up to 24 A;
- attachment on OMEGA 2F DIN rail;
- small sizes.

**Marking:**

- Ex e I Mb U / Ex e IIC Gb U.

**Colors:**

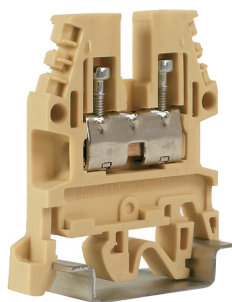
- gray;
- blue (Ex i).

Characteristics	Values
Rated impulse voltage Uimp, kV	6
Flammability classification	V0
Enclosure material	polyamide
Material of current-carrying elements	nickel-plated brass

Nominal section, mm <sup>2</sup>		2.5	4
Type of clip		RN.2	RP.4
Code of clip	gray	ZRN500GR	ZRP300GR
	blue	ZRN510	ZRP400
Section range, mm <sup>2</sup>		0.2-4	0.2-6
Rated current*, A		24	32
Rated voltage*, V		320	320
Rated jumper current for general purpose industrial grade application, A		24	32
Voltage for general purpose industrial grade application, V		500	500
Dimensions after installation on DIN rail, mm height x length x thickness		32x27x5	35x31x6
Accessories			
Omega 2F fastener		02130	02130
End insulator	gray	ZRF101GR	ZRP301GR
	blue	ZRF201	ZRP401
Terminal end stop		ZBT006	ZBT006
Marking of terminals		ZSN008	ZSN008
Screwdriver		ZCCH02	ZCCH02

\* Current and voltage values are specified in accordance with TR CU 012 for application in sheaths with Ex e and Ex i explosion protection types and differ from the values for the general purpose industrial grade application.

## Terminal clip for connection of thermal elements in measuring circuits of TC/PO series


**Purpose:**

- switching of conductors with section of 2x0.8 to 1.3 mm<sup>2</sup>.

**Distinctive features**

- rated current value is up to <1 A;
- attachment on OMEGA 3F and G1 DIN rail;
- conductors shall be stripped for length of 20 mm;
- installed conductors are overlapped within the terminal and contact directly with each other owing to increased stripping length and absence of an inner partition wall;
- two clamp screws and direct contact between conductors allow reducing probability of occurrence of interferences.

**Marking:**

- Ex e I Mb U / Ex e IIC Gb U.

**Colors:**

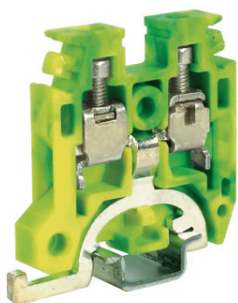
- beige;
- blue (Ex i).

Characteristics	Values
Rated impulse voltage U <sub>imp</sub> , kV	8
Flammability classification	V0
Enclosure material	polyamide
Material of current-carrying elements	nickel-plated brass

Nominal section, mm <sup>2</sup>		1
Type of clip		TC/PO
Code of clip	beige	ZTC500
	blue	ZTC510
Section range, mm <sup>2</sup>		0.8-1.3
Rated current*, A		<1
Rated voltage*, V		400
Rated jumper current for general purpose industrial grade application, A		<1
Voltage for general purpose industrial grade application, V		630
Dimensions after installation on DIN rail, mm height x length x thickness		47x40.5x5.5
Accessories		
Omega 3F fastener		02140
End insulator	beige	ZCB111
	blue	ZCBX13
Terminal end stop		ZBT005
Marking of terminals		ZNU008
Screwdriver		ZCCH02

\* Current and voltage values are specified in accordance with TR CU 012 for application in sheaths with Ex e and Ex i explosion protection types and differ from the values for the general purpose industrial grade application.

## Miniclips for grounding of TR series



### Purpose:

- connection of a ground loop with a conductor with section of 0.2 to 6 mm<sup>2</sup>.

### Distinctive features:

- attachment on OMEGA 2F DIN rail;
- small sizes.

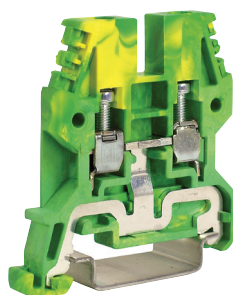
### Marking:

- Ex e I Mb U / Ex e IIC Gb U.

Characteristics	Values
Rated impulse voltage Uimp, kV	6
Flammability classification	V0
Enclosure material	polyamide
Material of current-carrying elements	nickel-plated brass

Nominal section, mm <sup>2</sup>	2.5	4
Type of clip	TR.2	TR.4
Code of clip	ZTR110	ZTR200
Section range, mm <sup>2</sup>	0.2-4	0.2-6
Dimensions after installation on DIN rail, mm height x length x thickness	32x27x5	35x35x7.3
Accessories		
Omega 2F fastener	02130	02130
End insulator	ZTR111	–
Terminal end stop	ZBT006	ZBT006
Marking of terminals	ZSN008	ZSN008
Screwdriver	ZCCH02	ZCCH02

## Terminal clips for grounding of TEO, TEC series


**Purpose:**

- connection of a ground loop with a conductor with section of 0.2 to 6 mm<sup>2</sup>.

**Distinctive features**

- attachment on OMEGA DIN rail;

**Marking:**

- Ex e I Mb U / Ex e IIC Gb U.

Characteristics	Values
Rated impulse voltage Uimp, kV	12
Flammability classification	V0
Enclosure material	polyamide
Material of current-carrying elements	nickel-plated brass

Nominal section, mm <sup>2</sup>	2.5	4
Type of clip	TEO.2	TEO.4
Code of clip	ZT0910	ZT0430
Section range, mm <sup>2</sup>	0.2-4	0.2-6
Dimensions after installation on DIN rail, mm height x length x thickness	47x50x5.5	52x50x6.5
Accessories		
Omega 3F fastener	02140	02140
End insulator	ZT0911	ZT0431
Terminal end stop	ZBT005	ZBT005
Marking of terminals	ZNU008	ZNU008
Screwdriver	ZCCH02	ZCCH02



## Spring type terminal clips

The spring type terminal clips are applied mainly for laying of a large number of cables at low current. The spring type connection is characterized by high reliability and safety owing to the design of the tightening element with lock preventing the spring from violating the limits of its own elasticity. Such a clipping mechanism allows saving time and efforts spent for mounting.

## Feed-through terminal of HMM series

### Universal terminal


**Purpose:**

- switching of conductors with section of 0.2 to 50 mm<sup>2</sup>.

**Distinctive features:**

- rated current value is up to 76 A;
- installation on OMEGA 3F DIN rail;
- the system of plug-in jumpers provides the possibility of double bringing of clips.
- 1 input 1 output;
- 1 input 2 outputs;
- 2 inputs 2 outputs.

**Marking:**

- Ex e I Mb U / Ex e IIC Gb U.

**Colors:**

- gray;
- blue (Ex i).

**Note:** see current and voltage values for a version with jumpers on page 123.

Characteristics	Values
Rated impulse voltage Uimp, kV	8
Flammability classification	V0
Enclosure material	polyamide
Material of current-carrying elements	nickel-plated brass

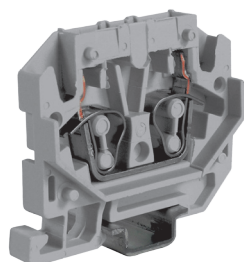
Nominal section, mm <sup>2</sup>		1.5	2.5	4	6	10	16
Type of clip		HMM.1	HMM.2	HMM.4	HMM.6	HMM.10	HMM.16
Code of clip	gray	ZHM400GR	ZHM500GR	ZHM250GR	ZHM320GR	ZHM330GR	ZHM340GR
	blue	ZHI400	ZHI500	ZHI250	ZHI320	ZHI330	ZHI340
Section range, mm <sup>2</sup>		0.2-2.5	0.2-4	0.2-6	0.2-10	1.5-16	1.5-25
Rated current*, A		17.5	24	32	41	57	76
Rated voltage*, V		400	500	500	500	500	630
Rated jumper current for general purpose industrial grade application, A		17.5	24	32	41	57	76
Voltage for general purpose industrial grade application, V		500	800	800	800	800	800
Dimensions after installation on DIN rail, mm height x length x thickness		43x45x4.2	41x50x5.2	45x58x6.2	44x62x8.2	53x71x10	56x80x12

Accessories							
Omega 3F fastener		02140	02140	02140	02140	02140	02140
End insulator	gray	ZHM401GR	ZHM501GR	ZHM251GR	ZHM321GR	ZHM331GR	ZHM341GR
	blue	ZHI401	ZHI501	ZHI251	ZHI321	ZHI331	ZHI341
Non-insulated jumpers	2 poles	ZPTC0102	ZPTC0302	ZPTC0502	ZPTC0802	ZPTC1102	ZPTC1602
	3 poles	ZPTC0103	ZPTC0303	ZPTC0503	ZPTC0803	ZPTC1103	ZPTC1603
	5 poles	ZPTC0105	ZPTC0305	ZPTC0505	ZPTC0805	ZPTC1105	ZPTC1605
	10 poles	ZPTC0110	ZPTC0310	ZPTC0510	ZPTC0810	ZPTC1110	ZPTC1610
	X poles	ZPTC0100 (50 poles)	ZPTC0300 (47 poles)	ZPTC0500 (40 poles)	ZPTC0800 (30 poles)	ZPTC1100 (25 poles)	ZPTC1600 (20 poles)
Jumper marking		ZPTC0990	ZPTC0990	ZPTC0990	ZPTC0990	ZPTC0990	ZPTC0990
Insulated jumpers (red)	2 poles	–	ZPTP0302R	ZPTP0502R	–	–	–
	3 poles	–	ZPTP0303R	ZPTP0503R	–	–	–
	5 poles	–	ZPTP0305R	ZPTP0505R	–	–	–
	10 poles	–	ZPTP0310R	ZPTP0510R	–	–	–
	30 poles	–	ZPTP0330R	ZPTP0530R	–	–	–
Insulating dividers for jumpers for separation of 2 jumpers		ZDF500	–	–	–	–	–
Terminal end stop		ZBT005	ZBT005	ZBT005	ZBT005	ZBT005	ZBT005
Marking of terminals		–	ZNU008	ZNU008	ZNU008	ZNU008	ZNU008
Screwdriver		ZCCH02	ZCCH02	ZCCH02	ZCCH02	ZCCH02	–

\* Current and voltage values are specified in accordance with TR CU 012 for application in sheaths with Ex e and Ex i explosion protection types and differ from the values for the general purpose industrial grade application.

**Note:** modification of a number of inputs and outputs is performed on request.

## Miniclip of HP series



### Purpose:

- for installation in places where it is impossible to install universal terminal clips for reasons of design;
- switching of conductors with section of 0.2 to 4 mm<sup>2</sup>.

### Distinctive features:

- rated current value is up to 24 A;
- attachment on OMEGA 2F DIN rail, on adjacent clip, on 3.5 mm hole;
- small sizes.

### Marking:

- Ex e I Mb U / Ex e IIC Gb U.

### Colors:

- gray;
- blue (Ex i).

**Note:** see current and voltage values for a version with jumpers on page 123.

Characteristics	Values
Rated impulse voltage Uimp, kV	8
Flammability classification	V0
Enclosure material	polyamide
Material of current-carrying elements	nickel-plated brass

Nominal section, mm <sup>2</sup>		2.5	2.5	2.5
Type of clip		HPP.2	HP.2	HPC.2
Code of clip	gray	ZHP170GR	ZHP150GR	ZHP160GR
	blue	ZHI132	ZHI130	ZHI131
Section range, mm <sup>2</sup>		0.2-4	0.2-4	0.2-4
Rated current*, A		24	24	24
Rated voltage*, V		630	630	630
Rated jumper current for general purpose industrial grade application, A		24	24	24
Voltage for general purpose industrial grade application, V		800	800	800
Dimensions after installation on a DIN rail, mm height x length x thickness		35x36x5.2	30x36x5.2	30x36x5.2

Accessories				
Omega 3F fastener		02130	-	-
Attachment on adjacent clip		-	attachment on adjacent clip	-
Attachment on Ø3.5 mm hole		-	-	attachment on Ø3.5 mm hole
End insulator	gray	ZHP101GR	ZHV111GR	ZHV111GR
	blue	ZHP201	-	-
Non-insulated jumpers	2 poles	ZPTC0302	ZPTC0302	ZPTC0302
	3 poles	ZPTC0303	ZPTC0303	ZPTC0303
	5 poles	ZPTC0305	ZPTC0305	ZPTC0305
	10 poles	ZPTC0310	ZPTC0310	ZPTC0310
	X poles	ZPTC0300 (47 poles)	ZPTC0300 (47 poles)	ZPTC0300 (47 poles)
Jumper marking		ZPTC0990	ZPTC0990	ZPTC0990
Terminal end stop		ZBT006	ZBT006	ZBT006
Marking of terminals		ZSN008	ZSN008	ZSN008
Screwdriver		ZCCH02	ZCCH02	ZCCH02

\* Current and voltage values are specified in accordance with TR CU 012 for application in sheaths with Ex e and Ex i explosion protection types and differ from the values for the general purpose industrial grade application.

## Terminal clips for grounding of HTE series

**Purpose:**

- connection of a ground loop with a conductor with section of 0.2 to 25 mm<sup>2</sup>.

**Distinctive features:**

- attachment on OMEGA 3F DIN rail;
- 1 input 1 output;
- 1 input 2 outputs;
- 2 inputs 2 outputs.

**Marking:**

- Ex e I Mb U / Ex e IIC Gb U.

**Note:** see current and voltage values for a version with jumpers on page 123.

Characteristics	Values
Rated impulse voltage Uimp, kV	8
Flammability classification	V0
Enclosure material	polyamide
Material of current-carrying elements	nickel-plated brass

Nominal section, mm <sup>2</sup>	1.5	2.5	4	6	10	16
Type of clip	HTE.1	HTE.2	HTE.4	HTE.6	HTE.10	HTE.16
Code of clip	ZHT400	ZHT500	ZHT250	ZHT320	ZHT330	ZHT340
Section range, mm <sup>2</sup>	0.2-2.5	0.2-4	0.2-6	0.2-10	1.5-16	1.5-25
Jumper current*, A	17.5	24	32	41	57	76
Rated voltage*, V	400	500	500	500	500	630
Dimensions after installation on DIN rail, mm height x length x thickness	43x50x4.2	41x54x5.2	45x58x6.2	44x62x8.2	53x71x10	56x80x12

Accessories						
Omega 3F fastener	02140	02140	02140	02140	02140	02140
End insulator	ZHM401GR	ZHM501GR	ZHM251GR	ZHM321GR	ZHM331GR	ZHM341GR
Terminal end stop	ZBT005	ZBT005	ZBT005	ZBT005	ZBT005	ZBT005
Marking of terminals	–	ZNU008	ZNU008	ZNU008	ZNU008	ZNU008
Screwdriver	ZCCH02	ZCCH02	ZCCH02	ZCCH02	ZCCH02	–

\* Current and voltage values are specified in accordance with TR CU 012 for application in sheaths with Ex e and Ex i explosion protection types and differ from the values for the general purpose industrial grade application.

**Note:** modification of a number of inputs and outputs is performed on request.

## Two-level terminal of H series


**Purpose:**

- switching of conductors with section of 0.2 to 2.5 mm<sup>2</sup>.

**Distinctive features:**

- rated current value is up to 24 A;
- installation on OMEGA 3F DIN rail.

**Marking:**

- Ex e I Mb U / Ex e IIC Gb U.

**Colors:**

- gray;
- blue (Ex i).

**Note:** see current and voltage values for a version with jumpers on page 123.

Characteristics	Values
Rated impulse voltage Uimp, kV	8
Flammability classification	V0
Enclosure material	polyamide
Material of current-carrying elements	nickel-plated brass

Nominal section, mm <sup>2</sup>		1.5	2.5
Type of clip		HMD.1	HMD.2N
Code of clip	gray	ZHD200GR	ZHD400GR
	blue	ZHD300	ZHD410
Section range, mm <sup>2</sup>		0.2-2.5	0.2-2.5
Rated current*, A		24	24
Rated voltage*, V		400	400
Rated jumper current for general purpose industrial grade application, A		17.5	24
Voltage for general purpose industrial grade application, V		500	630
Dimensions after installation on DIN rail, mm height x length x thickness		59x73x4.2	59x73x5.2

Accessories			
Omega 3F fastener		02140	02140
End insulator	gray	ZHD201GR	ZHD201GR
	blue	ZHD301	ZHD301
Non-insulated jumpers	2 poles	ZPTC0102	ZPTC0302
	3 poles	ZPTC0103	ZPTC0303
	5 poles	ZPTC0105	ZPTC0305
	10 poles	ZPTC0110	ZPTC0310
	X poles	ZPTC0100 (50 poles)	ZPTC0300 (47 poles)
Jumper marking		ZPTC0990	ZPTC0990
Insulated jumpers (red)	2 poles	–	ZPTP0302R
	3 poles	–	ZPTP0303R
	5 poles	–	ZPTP0305R
	10 poles	–	ZPTP0310R
	30 poles	–	ZPTP0330R
Insulating dividers for jumpers	for insulation of 2 jumpers	ZDF500	ZDF500
Terminal end stop		ZBT005	ZBT005
Marking of terminals		ZNU008	ZNU008
Screwdriver		ZCCH02	ZCCH02

\* Current and voltage values are specified in accordance with TR CU 012 for application in sheaths with Ex e and Ex i explosion protection types and differ from the values for the general purpose industrial grade application.

## Three-level terminal of H series

**Purpose:**

- switching of conductors with section of 0.2 to 2.5 mm<sup>2</sup>.

**Distinctive features:**

- rated current value is up to 24 A;
- installation on OMEGA 3F DIN rail.

**Marking:**

- Ex e I Mb U / Ex e IIC Gb U.

**Colors:**

- gray.

**Note:** see current and voltage values for a version with jumpers on page 123.

Characteristics		Values
Rated impulse voltage U <sub>imp</sub> , kV		8
Flammability classification		V0
Enclosure material		polyamide
Material of current-carrying elements		nickel-plated brass

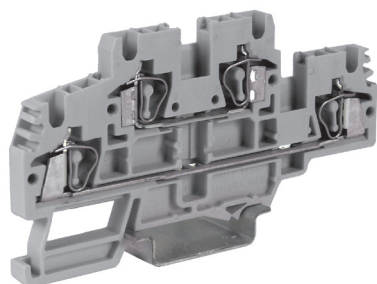
Nominal section, mm <sup>2</sup>		2.5
Type of clip		HLD.2
Code of clip		ZHL200GR
Section range, mm <sup>2</sup>		0.2-2.5
Rated current*, A		24
Rated voltage*, V		400
Rated jumper current for general purpose industrial grade application, A		24
Voltage for general purpose industrial grade application, V		500
Dimensions after installation on DIN rail, mm height x length x thickness		75x95x5.2

Accessories		
Omega 3F fastener		02140
End insulator		ZHL201GR
Non-insulated jumpers	2 poles	ZPTC0302
	3 poles	ZPTC0303
	5 poles	ZPTC0305
	10 poles	ZPTC0310
	X poles	ZPTC0300 (47 poles)
Jumper marking		ZPTC0990
Insulated jumpers (red)	2 poles	ZPTP0302R
	3 poles	ZPTP0303R
	5 poles	ZPTP0305R
	10 poles	ZPTP0310R
	30 poles	ZPTP0330R
Insulating dividers for jumpers	for insulation of 2 jumpers	ZDF500
Terminal end stop		ZBT005
Marking of terminals		ZNU008
Screwdriver		ZCCH02

\* Current and voltage values are specified in accordance with TR CU 012 for application in sheaths with Ex e and Ex i explosion protection types and differ from the values for the general purpose industrial grade application.

## Two-level terminal of H series


**Purpose:**

- switching of conductors with section of 0.2 to 2.5 mm<sup>2</sup>.

**Distinctive features:**

- rated current value is up to 24 A;
- installation on OMEGA 3F DIN rail;
- it is possible to bridge levels promptly.

**Marking:**

- Ex e I Mb U / Ex e IIC Gb U.

**Colors:**

- gray.

**Note:** see current and voltage values for a version with jumpers on page 123.

Characteristics	Values
Rated impulse voltage U <sub>imp</sub> , kV	8
Flammability classification	V0
Enclosure material	polyamide
Material of current-carrying elements	nickel-plated brass

Nominal section, mm <sup>2</sup>	2.5
Type of clip	HMD.2
Code of clip	ZHD100GR
Section range, mm <sup>2</sup>	0.2-4
Rated current*, A	24
Rated voltage*, V	400
Rated jumper current for general purpose industrial grade application, A	24
Voltage for general purpose industrial grade application, V	800
Dimensions after installation on DIN rail, mm height x length x thickness	49x91x5.2

Accessories		
Omega 3F fastener		02140
End insulator		ZHD101GR
Non-insulated jumpers	2 poles	ZPH100
Interlevel jumper		ZPHD02
Terminal end stop		ZBT005
Marking of terminals		ZNU008
Screwdriver		ZCCH02

\* Current and voltage values are specified in accordance with TR CU 012 for application in sheaths with Ex e and Ex i explosion protection types and differ from the values for the general purpose industrial grade application.

## Two-level terminal of H series with level bridging

**Purpose:**

- switching of conductors with section of 0.2 to 2.5 mm<sup>2</sup>;

**Distinctive features:**

- rated current value is up to 24 A;
- installation on OMEGA 3F DIN rail;
- it is possible to bridge levels promptly.

**Marking:**

- Ex e I Mb U / Ex e IIC Gb U.

**Colors:**

- gray.

**Note:** see current and voltage values for a version with jumpers on page 123.

Characteristics	Values
Rated impulse voltage Uimp, kV	8
Flammability classification	V0
Enclosure material	polyamide
Material of current-carrying elements	nickel-plated brass

Nominal section, mm <sup>2</sup>	1.5	2.5
Type of clip	HMD.1/CI/GR	HMD.2N/CI/GR
Code of clip	ZHD120GR	ZHD450GR
Section range, mm <sup>2</sup>	0.2-2.5	0.2-2.5
Rated current*, A	24	24
Rated voltage*, V	400	400
Rated jumper current for general purpose industrial grade application, A	17.5	24
Voltage for general purpose industrial grade application, V	500	630
Dimensions after installation on DIN rail, mm height x length x thickness	59x73x4.2	59x73x5.2

Accessories		
Omega 3F fastener		02140
End insulator		ZHD201GR
Non-insulated jumpers	2 poles	ZPTC0102
	3 poles	ZPTC0103
	5 poles	ZPTC0105
	10 poles	ZPTC0110
	X poles	ZPTC0100 (50 poles)
Jumper marking		ZPTC0990
Insulated jumpers (red)	2 poles	–
	3 poles	–
	5 poles	–
	10 poles	–
	30 poles	–
Insulating dividers for jumpers	for insulation of 2 jumpers	ZDF500
Terminal end stop		ZBT005
Marking of terminals		ZNU008
Screwdriver		ZCCH02

\* Current and voltage values are specified in accordance with TR CU 012 for application in sheaths with Ex e and Ex i explosion protection types and differ from the values for the general purpose industrial grade application.



## Three-level terminal of H series with grounding


**Purpose:**

- switching of conductors with section of 0.2 to 2.5 mm<sup>2</sup>.

**Distinctive features:**

- rated current value is up to 24 A;
- installation on OMEGA 3F DIN rail;
- grounding at the lower level.

**Marking:**

- Ex e I Mb U / Ex e IIC Gb U.

**Colors:**

- gray.

**Note:** see current and voltage values for a version with jumpers on page 123.

Characteristics	Values
Rated impulse voltage Uimp, kV	8
Flammability classification	V0
Enclosure material	polyamide
Material of current-carrying elements	nickel-plated brass

Nominal section, mm <sup>2</sup>	2.5
Type of clip	HDE.2
Code of clip	ZHL500GR
Section range, mm <sup>2</sup>	0.2-2.5
Rated current*, A	24
Rated voltage*, V	400
Rated jumper current for general purpose industrial grade application, A	24
Voltage for general purpose industrial grade application, V	500
Dimensions after installation on DIN rail, mm height x length x thickness	75x95x5.2

Accessories		
Omega 3F fastener		02140
End insulator		ZHL201GR
Non-insulated jumpers	2 poles	ZPTC0302
	3 poles	ZPTC0303
	5 poles	ZPTC0305
	10 poles	ZPTC0310
	X poles	ZPTC0300 (47 poles)
Jumper marking		ZPTC0990
Insulated jumpers (red)	2 poles	ZPTP0302R
	3 poles	ZPTP0303R
	5 poles	ZPTP0305R
	10 poles	ZPTP0310R
	30 poles	ZPTP0330R
Insulating dividers for jumpers	for insulation of 2 jumpers	ZDF500
Terminal end stop		ZBT005
Marking of terminals		ZNU008
Screwdriver		ZCCH02

\* Current and voltage values are specified in accordance with TR CU 012 for application in sheaths with Ex e and Ex i explosion protection types and differ from the values for the general purpose industrial grade application.

## Plug-in jumpers. Switching diagrams

Type of clip	Rated current, A	Single or parallel extension	Omission of pole	Next to color partition	Gradual installation	Omission of parallel pole
		Rated voltage, V				
Feed-through terminals						
CBC.2	21/24*	400	400	400	320	320
CBC.4	25/32*	320	320	320	320	320
CBC.6	35/41*	320	320	320	250	250
CBC.10	47/57*	250	250	250	250	250
CBC.16	76	320	320	500	–	–
CBC.35	125	250	–	630	–	–
HPP.2	24	250	250	500	250	250
HP.2	24	250	250	500	250	250
HPC.2	24	250	250	500	250	250
HLD.2	24	320	320	200	400	320
HLD.2/CI	24	320	320	200	400	320
HDE.2	24	320	320	200	400	320
HTTE.2	24	320	320	200	400	320
HMD.1	24	250	250	250	400	250
HMD.1/CI	24	250	250	320	320	320
HMD.2	24	320	320	200	320	320
HMD.2N	24	320	320	200	320	320
HMD.2N.CI	24	320	320	200	320	320
HMM.1/.../	17.5	500	400	500	400	400
HTE.1/.../	17.5	500	400	500	400	400
HMM.2/.../PTC	24	400	320	500	630	500
HTE.2/.../PTC	24	400	320	500	630	500
HMM.2/.../PTP	24	400	320	400	630	500
HTE.2/.../PTP	24	400	320	400	630	500
HMM.4/.../PTC	32	400	320	–	630	630
HTE.4/.../PTC	32	400	320	–	630	630
HMM.4/.../PTP	32	400	320	–	630	630
HTE.4/.../PTP	32	400	320	–	630	630
HMM.6/.../	41	630	320	–	630	630
HTE.6/.../	41	630	320	–	630	630
HMM.10/.../	57	800	630	–	800	800
HTE.10/.../	57	800	630	–	800	800
HMM.16/.../	76	800	500	–	800	800
HTE.16/.../	76	800	500	–	800	800
DBC.2/upper/PTC/2/..	21	250	250	250	250	250
DBC.2/lower/PTC/2/..	24	250	250	250	250	250

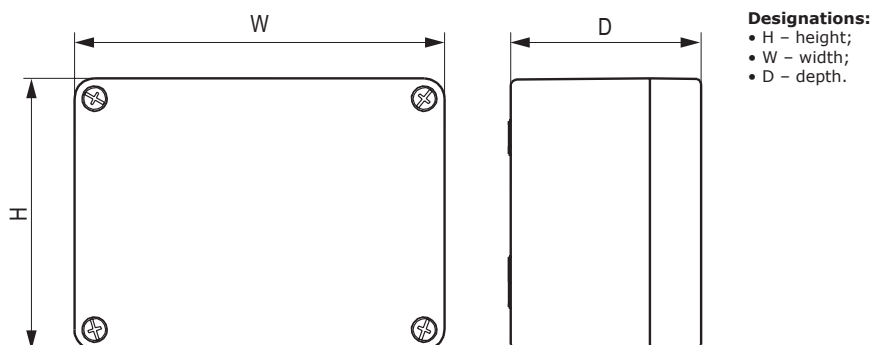
The specified current rated value and rated section of conductors are defined for the environmental temperature range from –60 to 40 °C and for temperature class T6.

\* Higher current rated value, is specified for installation of two jumpers for each pole connected together.



## Annex No. 1

### Number of terminal clips installed for polyester boxes



#### Terminal box, 80x75x56 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Screw type miniterminal	
Terminal type		RN.2	RP.4
Terminal rated section, mm <sup>2</sup>		2.5	4
Terminal rated current, A		24	32
Maximum number of terminals, pcs		6	5
DIN rail type		OMEGA 2F DIN 50021SS	
Current strength, A	6	6	5
	10	6	5
	16	6	5
	24	2	2
	32	-	1

#### Terminal box, 110x75x56 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Screw type miniterminal	
Terminal type		RN.2	RP.4
Terminal rated section, mm <sup>2</sup>		2.5	4
Terminal rated current, A		24	32
Maximum number of terminals, pcs		12	10
DIN rail type		OMEGA 2F DIN 50021SS	
Current strength, A	6	12	10
	10	12	10
	16	7	6
	24	3	2
	32	-	1

#### Terminal box, 120x120x90 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals						
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50
Terminal rated current, A		24	32	41	57	76	125	150
Maximum number of terminals, pcs		11	10	8	6	5	4	3
DIN rail type		OMEGA 3F DIN 50021SS						
Current strength, A	6	11	10	8	6	5	4	3
	10	11	10	8	6	5	4	3
	16	8	10	8	6	5	4	3
	24	3	5	8	6	5	4	3
	32	-	3	5	6	5	4	3
	41	-	-	3	5	5	4	3
	57	-	-	-	3	4	4	3
	76	-	-	-	-	2	4	3
	125	-	-	-	-	-	1	1
	150	-	-	-	-	-	-	1

## Terminal box, 220x120x90 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals						
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50
Terminal rated current, A		24	32	41	57	76	125	150
Maximum number of terminals, pcs		29	25	20	16	13	10	9
DIN rail type		OMEGA 3F DIN 50021SS						
Current strength, A	6	29	25	20	16	13	10	9
	10	25	25	20	16	13	10	9
	16	9	14	20	16	13	10	9
	24	4	6	11	16	13	10	9
	32	-	3	6	11	13	10	9
	41	-	-	4	6	10	10	9
	57	-	-	-	3	5	10	9
	76	-	-	-	-	3	6	6
	125	-	-	-	-	-	2	2
	150	-	-	-	-	-	-	1

## Terminal box, 160x160x90 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals						
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50
Terminal rated current, A		24	32	41	57	76	125	150
Maximum number of terminals, pcs		18	15	12	10	8	6	5
DIN rail type		OMEGA 3F DIN 50021SS						
Current strength, A	6	18	15	12	10	8	6	5
	10	18	15	12	10	8	6	5
	16	10	15	12	10	8	6	5
	24	4	7	12	10	8	6	5
	32	-	4	7	10	8	6	5
	41	-	-	4	7	8	6	5
	57	-	-	-	3	5	6	5
	76	-	-	-	-	3	6	5
	125	-	-	-	-	-	2	2
	150	-	-	-	-	-	-	1

## Terminal box, 260x160x90 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals						
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50
Terminal rated current, A		24	32	41	57	76	125	150
Maximum number of terminals, pcs		36	31	25	20	16	12	11
DIN rail type		OMEGA 3F DIN 50021SS						
Current strength, A	6	36	31	25	20	16	12	11
	10	30	31	25	20	16	12	11
	16	12	18	25	20	16	12	11
	24	5	8	14	20	16	12	11
	32	-	4	7	13	16	12	11
	41	-	-	4	8	12	12	11
	57	-	-	-	4	6	12	11
	76	-	-	-	-	3	7	7
	125	-	-	-	-	-	2	2
	150	-	-	-	-	-	-	2

### Terminal box, 360x160x90 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals						
Current strength, A	Terminal type	CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50
	Terminal rated section, mm <sup>2</sup>	2.5	4	6	10	16	35	50
	Terminal rated current, A	24	32	41	57	76	125	150
	Maximum number of terminals, pcs	55	46	37	30	25	18	16
	DIN rail type	OMEGA 3F DIN 50021SS						
	6	55	46	37	30	25	18	16
	10	30	46	37	30	25	18	16
	16	12	18	31	30	25	18	16
	24	5	8	13	23	25	18	16
	32	-	4	7	13	20	18	16
	41	-	-	4	7	12	18	16
	57	-	-	-	4	6	13	14
	76	-	-	-	-	3	7	8
	125	-	-	-	-	-	2	3
	150	-	-	-	-	-	-	2

### Terminal box, 250x250x120 mm

- number of DIN rails: 2 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Current strength, A	Terminal type	CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
	Terminal rated section, mm <sup>2</sup>	2.5	4	6	10	16	35	50	70
	Terminal rated current, A	24	32	41	57	76	125	150	173
	Maximum number of terminals, pcs	70	60	48	38	32	24	20	18
	DIN rail type	OMEGA 3F DIN 50021SS							
	6	70	60	48	38	32	24	20	18
	10	41	60	48	38	32	24	20	18
	16	16	24	42	38	32	24	20	18
	24	7	11	18	31	32	24	20	18
	32	-	6	10	17	27	24	20	18
	41	-	-	6	10	16	24	20	18
	57	-	-	-	5	8	18	19	18
	76	-	-	-	-	4	10	11	12
	125	-	-	-	-	-	3	4	4
	150	-	-	-	-	-	-	2	3
	173	-	-	-	-	-	-	-	2

### Terminal box, 400x250x120 mm

- number of DIN rails: 2 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Current strength, A	Terminal type	CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
	Terminal rated section, mm <sup>2</sup>	2.5	4	6	10	16	35	50	70
	Terminal rated current, A	24	32	41	57	76	125	150	173
	Maximum number of terminals, pcs	124	104	84	68	56	42	38	32
	DIN rail type	OMEGA 3F DIN 50021SS							
	6	121	104	84	68	56	42	38	32
	10	43	67	84	68	56	42	38	32
	16	17	26	43	68	56	42	38	32
	24	7	11	19	32	50	42	38	32
	32	-	6	10	18	28	42	38	32
	41	-	-	6	11	17	37	38	32
	57	-	-	-	5	9	19	21	25
	76	-	-	-	-	5	10	12	14
	125	-	-	-	-	-	4	4	5
	150	-	-	-	-	-	-	3	3
	173	-	-	-	-	-	-	-	2

## Terminal box, 400x400x120 mm

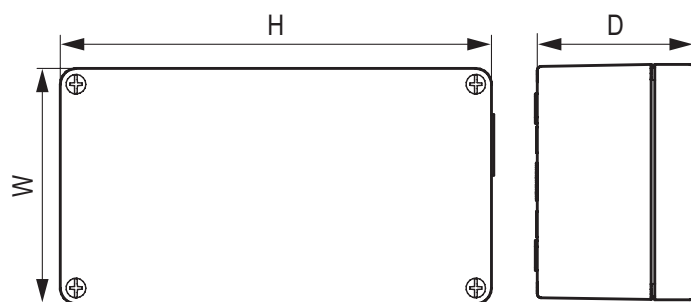
- number of DIN rails: 2 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		124	104	84	68	56	42	38	32
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	124	104	84	68	56	42	38	32
	10	55	86	84	68	56	42	38	32
	16	21	33	55	68	56	42	38	32
	24	9	15	24	41	56	42	38	32
	32	-	8	13	23	36	42	38	32
	41	-	-	8	14	22	42	38	32
	57	-	-	-	7	11	24	28	32
	76	-	-	-	-	6	13	16	19
	125	-	-	-	-	-	5	5	7
	150	-	-	-	-	-	-	4	5
	173	-	-	-	-	-	-	-	3



## Annex No. 2

### Number of terminal clips installed for aluminium boxes


**Designations:**

- H – height;
- W – width;
- D – depth.

#### Terminal box, 80x75x57 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Screw type miniterminal	
Current strength, A	Terminal type	RN.2	RP.4
	Terminal rated section, mm <sup>2</sup>	2.5	4
	Terminal rated current, A	24	32
	Maximum number of terminals, pcs	5	4
	DIN rail type	OMEGA 2F DIN 50021SS	
	6	5	4
	10	5	4
	16	5	4
	24	5	4
	32	-	4

#### Terminal box, 125x80x57 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Screw type miniterminal	
Current strength, A	Terminal type	RN.2	RP.4
	Terminal rated section, mm <sup>2</sup>	2.5	4
	Terminal rated current, A	24	32
	Maximum number of terminals, pcs	15	13
	DIN rail type	OMEGA 2F DIN 50021SS	
	6	15	13
	10	15	13
	16	15	13
	24	9	9
	32	-	5

#### Terminal box, 175x80x57 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Screw type miniterminal	
Current strength, A	Terminal type	RN.2	RP.4
	Terminal rated section, mm <sup>2</sup>	2.5	4
	Terminal rated current, A	24	32
	Maximum number of terminals, pcs	25	21
	DIN rail type	OMEGA 2F DIN 50021SS	
	6	25	21
	10	25	21
	16	23	21
	24	10	11
	32	-	6

## Terminal box, 250x80x52 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Current strength, A	Parameters	Screw type miniterminal	
	Terminal type	RN.2	RP.4
	Terminal rated section, mm <sup>2</sup>	2.5	4
	Terminal rated current, A	24	32
	Maximum number of terminals, pcs	40	33
	DIN rail type	OMEGA 2F DIN 50021SS	
	6	40	33
	10	40	33
	16	22	26
	24	10	11
	32	-	6

## Terminal box, 100x100x80 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Current strength, A	Parameters	Through screw type terminals				
	Terminal type	CBC.2	CBC.4	CBC.6	CBC.10	CBC.16
	Terminal rated section, mm <sup>2</sup>	2.5	4	6	10	16
	Terminal rated current, A	24	32	41	57	76
	Maximum number of terminals, pcs	9	7	6	5	4
	DIN rail type	OMEGA 3F DIN 50021SS				
	6	9	7	6	5	4
	10	9	7	6	5	4
	16	9	7	6	5	4
	24	9	7	6	5	4
	32	-	7	6	5	4
	41	-	-	6	5	4
	57	-	-	-	5	4
	76	-	-	-	-	4

## Terminal box, 160x100x80 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Current strength, A	Parameters	Through screw type terminals				
	Terminal type	CBC.2	CBC.4	CBC.6	CBC.10	CBC.16
	Terminal rated section, mm <sup>2</sup>	2.5	4	6	10	16
	Terminal rated current, A	24	32	41	57	76
	Maximum number of terminals, pcs	20	17	13	11	9
	DIN rail type	OMEGA 3F DIN 50021SS				
	6	20	17	13	11	9
	10	20	17	13	11	9
	16	20	17	13	11	9
	24	10	16	13	11	9
	32	-	9	13	11	9
	41	-	-	10	11	9
	57	-	-	-	8	9
	76	-	-	-	-	7

## Terminal box, 120x120x80 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Current strength, A	Parameters	Through screw type terminals						
	Terminal type	CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50
	Terminal rated section, mm <sup>2</sup>	2.5	4	6	10	16	35	50
	Terminal rated current, A	24	32	41	57	76	125	150
	Maximum number of terminals, pcs	11	10	8	6	5	4	3
	DIN rail type	OMEGA 3F DIN 50021SS						
	6	11	10	8	6	5	4	3
	10	11	10	8	6	5	4	3
	16	11	10	8	6	5	4	3
	24	10	10	8	6	5	4	3
	32	-	9	8	6	5	4	3
	41	-	-	8	6	5	4	3
	57	-	-	-	6	5	4	3
	76	-	-	-	-	5	4	3
	125	-	-	-	-	-	4	3
	150	-	-	-	-	-	-	3

### Terminal box, 220x120x80 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals						
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50
Terminal rated current, A		24	32	41	57	76	125	150
Maximum number of terminals, pcs		29	25	20	16	13	10	9
DIN rail type		OMEGA 3F DIN 50021SS						
Current strength, A	6	29	25	20	16	13	10	9
	10	29	25	20	16	13	10	9
	16	29	25	20	16	13	10	9
	24	12	19	20	16	13	10	9
	32	-	10	19	16	13	10	9
	41	-	-	11	16	13	10	9
	57	-	-	-	10	13	10	9
	76	-	-	-	-	8	10	9
	125	-	-	-	-	-	6	6
	150	-	-	-	-	-	-	4

### Terminal box, 120x120x90 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		11	10	8	6	5	4	3	3
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	11	10	8	6	5	4	3	3
	10	11	10	8	6	5	4	3	3
	16	11	10	8	6	5	4	3	3
	24	11	10	8	6	5	4	3	3
	32	-	9	8	6	5	4	3	3
	41	-	-	8	6	5	4	3	3
	57	-	-	-	6	5	4	3	3
	76	-	-	-	-	5	4	3	3
	125	-	-	-	-	-	4	3	3
	150	-	-	-	-	-	-	3	3
	173	-	-	-	-	-	-	-	3

### Terminal box, 220x120x90 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		29	25	20	16	13	10	9	7
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	29	25	20	16	13	10	9	7
	10	29	25	20	16	13	10	9	7
	16	29	25	20	16	13	10	9	7
	24	13	20	20	16	13	10	9	7
	32	-	11	20	16	13	10	9	7
	41	-	-	12	16	13	10	9	7
	57	-	-	-	10	13	10	9	7
	76	-	-	-	-	9	10	9	7
	125	-	-	-	-	-	7	6	7
	150	-	-	-	-	-	-	4	5
	173	-	-	-	-	-	-	-	4

## Terminal box, 140x140x90 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		14	12	10	8	6	5	4	3
DIN rail type		OMEGA 3F DIN 50021SS							
6		14	12	10	8	6	5	4	3
10		14	12	10	8	6	5	4	3
16		14	12	10	8	6	5	4	3
24		12	12	10	8	6	5	4	3
32		-	10	10	8	6	5	4	3
41		-	-	10	8	6	5	4	3
57		-	-	-	8	6	5	4	3
76		-	-	-	-	6	5	4	3
125		-	-	-	-	-	5	4	3
150		-	-	-	-	-	-	4	3
173		-	-	-	-	-	-	-	3

## Terminal box, 200x140x90 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		25	21	17	14	11	8	7	6
DIN rail type		OMEGA 3F DIN 50021SS							
6		25	21	17	14	11	8	7	6
10		25	21	17	14	11	8	7	6
16		25	21	17	14	11	8	7	6
24		14	21	17	14	11	8	7	6
32		-	12	17	14	11	8	7	6
41		-	-	13	14	11	8	7	6
57		-	-	-	11	11	8	7	6
76		-	-	-	-	9	8	7	6
125		-	-	-	-	-	7	7	6
150		-	-	-	-	-	-	5	5
173		-	-	-	-	-	-	-	4

## Terminal box, 160x160x90 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		18	15	12	10	8	6	5	4
DIN rail type		OMEGA 3F DIN 50021SS							
6		18	15	12	10	8	6	5	4
10		18	15	12	10	8	6	5	4
16		18	15	12	10	8	6	5	4
24		14	15	12	10	8	6	5	4
32		-	12	12	10	8	6	5	4
41		-	-	12	10	8	6	5	4
57		-	-	-	10	8	6	5	4
76		-	-	-	-	8	6	5	4
125		-	-	-	-	-	6	5	4
150		-	-	-	-	-	-	5	4
173		-	-	-	-	-	-	-	4

## Terminal box, 260x160x90 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		36	30	25	20	16	12	11	9
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	36	30	25	20	16	12	11	9
	10	36	30	25	20	16	12	11	9
	16	36	30	25	20	16	12	11	9
	24	16	24	25	20	16	12	11	9
	32	-	13	24	20	16	12	11	9
	41	-	-	14	20	16	12	11	9
	57	-	-	-	12	16	12	11	9
	76	-	-	-	-	11	12	11	9
	125	-	-	-	-	-	8	8	9
	150	-	-	-	-	-	-	6	6
	173	-	-	-	-	-	-	-	5

## Terminal box, 360x160x90 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		54	46	37	30	25	18	16	14
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	54	46	37	30	25	18	16	14
	10	54	46	37	30	25	18	16	14
	16	37	46	37	30	25	18	16	14
	24	16	25	37	30	25	18	16	14
	32	-	14	24	30	25	18	16	14
	41	-	-	14	24	25	18	16	14
	57	-	-	-	12	19	18	16	14
	76	-	-	-	-	11	18	16	14
	125	-	-	-	-	-	8	9	11
	150	-	-	-	-	-	-	6	7
	173	-	-	-	-	-	-	-	5

## Terminal box, 180x180x100 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		21	18	15	12	10	7	6	5
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	21	18	15	12	10	7	6	5
	10	21	18	15	12	10	7	6	5
	16	21	18	15	12	10	7	6	5
	24	16	18	15	12	10	7	6	5
	32	-	13	15	12	10	7	6	5
	41	-	-	14	12	10	7	6	5
	57	-	-	-	12	10	7	6	5
	76	-	-	-	-	10	7	6	5
	125	-	-	-	-	-	7	6	5
	150	-	-	-	-	-	-	5	5
	173	-	-	-	-	-	-	-	5

## Terminal box, 280x180x100 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		40	33	27	22	18	13	12	10
DIN rail type		OMEGA 3F DIN 50021SS							
6		40	33	27	22	18	13	12	10
10		40	33	27	22	18	13	12	10
16		40	33	27	22	18	13	12	10
24		18	27	27	22	18	13	12	10
32		-	15	26	22	18	13	12	10
41		-	-	16	22	18	13	12	10
57		-	-	-	14	18	13	12	10
76		-	-	-	-	12	13	12	10
125		-	-	-	-	-	9	9	10
150		-	-	-	-	-	-	6	8
173		-	-	-	-	-	-	-	6

## Terminal box, 230x200x110 mm

- number of DIN rails: 2 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		50	42	34	28	22	16	14	12
DIN rail type		OMEGA 3F DIN 50021SS							
6		50	42	34	28	22	16	14	12
10		50	42	34	28	22	16	14	12
16		42	42	34	28	22	16	14	12
24		18	28	34	28	22	16	14	12
32		-	16	28	28	22	16	14	12
41		-	-	17	28	22	16	14	12
57		-	-	-	14	22	16	14	12
76		-	-	-	-	12	16	14	12
125		-	-	-	-	-	9	10	11
150		-	-	-	-	-	-	7	8
173		-	-	-	-	-	-	-	6

## Terminal box, 280x230x110 mm

- number of DIN rails: 2 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		80	66	54	44	36	26	24	20
DIN rail type		OMEGA 3F DIN 50021SS							
6		80	66	54	44	36	26	24	20
10		80	66	54	44	36	26	24	20
16		47	66	54	44	36	26	24	20
24		21	32	54	44	36	26	24	20
32		-	18	31	44	36	26	24	20
41		-	-	18	31	36	26	24	20
57		-	-	-	16	25	26	24	20
76		-	-	-	-	14	26	24	20
125		-	-	-	-	-	11	11	13
150		-	-	-	-	-	-	8	9
173		-	-	-	-	-	-	-	7

**Terminal box, 330x230x110 mm**

- number of DIN rails: 2 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		98	82	66	54	44	32	30	26
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	98	82	66	54	44	32	30	26
	10	98	82	66	54	44	32	30	26
	16	48	74	66	54	44	32	30	26
	24	21	33	56	54	44	32	30	26
	32	-	18	31	53	44	32	30	26
	41	-	-	19	32	44	32	30	26
	57	-	-	-	16	25	32	30	26
	76	-	-	-	-	14	30	30	26
	125	-	-	-	-	-	11	12	14
	150	-	-	-	-	-	-	8	10
	173	-	-	-	-	-	-	-	7

**Terminal box, 400x230x110 mm**

- number of DIN rails: 2 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		122	104	84	68	56	42	36	32
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	122	104	84	68	56	42	36	32
	10	122	104	84	68	56	42	36	32
	16	49	75	84	68	56	42	36	32
	24	21	33	56	68	56	42	36	32
	32	-	18	31	53	56	42	36	32
	41	-	-	19	32	50	42	36	32
	57	-	-	-	16	26	42	36	32
	76	-	-	-	-	14	31	34	32
	125	-	-	-	-	-	11	12	15
	150	-	-	-	-	-	-	8	10
	173	-	-	-	-	-	-	-	8

**Terminal box, 400x310x110 mm**

- number of DIN rails: 3 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		183	156	126	102	84	63	54	48
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	183	156	126	102	84	63	54	48
	10	149	156	126	102	84	63	54	48
	16	58	90	126	102	84	63	54	48
	24	25	40	66	102	84	63	54	48
	32	-	22	37	63	84	63	54	48
	41	-	-	22	38	59	63	54	48
	57	-	-	-	19	31	63	54	48
	76	-	-	-	-	17	37	42	48
	125	-	-	-	-	-	13	15	18
	150	-	-	-	-	-	-	10	13
	173	-	-	-	-	-	-	-	9



## Terminal box, 600x310x110 mm

- number of DIN rails: 3 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		294	249	201	162	135	99	90	78
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	294	249	201	162	135	99	90	78
	10	147	229	201	162	135	99	90	78
	16	57	89	145	162	135	99	90	78
	24	25	39	64	109	135	99	90	78
	32	-	22	36	61	96	99	90	78
	41	-	-	22	37	58	99	90	78
	57	-	-	-	19	30	65	77	78
	76	-	-	-	-	17	36	43	54
	125	-	-	-	-	-	13	16	20
	150	-	-	-	-	-	-	11	13
	173	-	-	-	-	-	-	-	10

## Terminal box, 230x200x180 mm

- number of DIN rails: 2 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		98	82	66	54	44	32	30	26
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	98	82	66	54	44	32	30	26
	10	98	82	66	54	44	32	30	26
	16	56	82	66	54	44	32	30	26
	24	24	38	64	54	44	32	30	26
	32	-	21	36	54	44	32	30	26
	41	-	-	22	37	44	32	30	26
	57	-	-	-	19	29	32	30	26
	76	-	-	-	-	16	32	30	26
	125	-	-	-	-	-	13	14	17
	150	-	-	-	-	-	-	10	11
	173	-	-	-	-	-	-	-	8

## Terminal box, 330x230x180 mm

- number of DIN rails: 2 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		98	82	66	54	44	32	30	26
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	98	82	66	54	44	32	30	26
	10	98	82	66	54	44	32	30	26
	16	56	82	66	54	44	32	30	26
	24	24	38	64	54	44	32	30	26
	32	-	21	36	54	44	32	30	26
	41	-	-	22	37	44	32	30	26
	57	-	-	-	19	29	32	30	26
	76	-	-	-	-	16	32	30	26
	125	-	-	-	-	-	13	14	17
	150	-	-	-	-	-	-	10	11
	173	-	-	-	-	-	-	-	8

**Terminal box, 400x310x180 mm**

- number of DIN rails: 3 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Current strength, A	Terminal type	CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
	Terminal rated section, mm <sup>2</sup>	2.5	4	6	10	16	35	50	70
	Terminal rated current, A	24	32	41	57	76	125	150	173
	Maximum number of terminals, pcs	183	156	126	102	84	63	54	48
	DIN rail type	OMEGA 3F DIN 50021SS							
	6	183	156	126	102	84	63	54	48
	10	169	156	126	102	84	63	54	48
	16	66	102	126	102	84	63	54	48
	24	29	45	75	102	84	63	54	48
	32	-	25	42	71	84	63	54	48
	41	-	-	25	43	67	63	54	48
	57	-	-	-	22	35	63	54	48
	76	-	-	-	-	19	42	48	48
	125	-	-	-	-	-	15	17	21
	150	-	-	-	-	-	-	12	15
	173	-	-	-	-	-	-	-	11

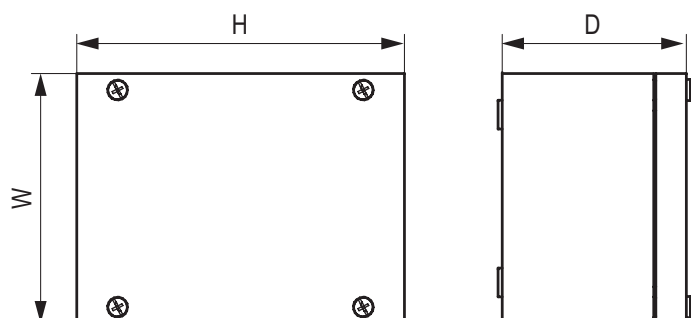
**Terminal box, 600x310x180 mm**

- number of DIN rails: 3 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Current strength, A	Terminal type	CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
	Terminal rated section, mm <sup>2</sup>	2.5	4	6	10	16	35	50	70
	Terminal rated current, A	24	32	41	57	76	125	150	173
	Maximum number of terminals, pcs	294	249	201	162	135	99	90	78
	DIN rail type	OMEGA 3F DIN 50021SS							
	6	294	249	201	162	135	99	90	78
	10	166	249	201	162	135	99	90	78
	16	64	101	163	162	135	99	90	78
	24	28	45	72	123	135	99	90	78
	32	-	25	40	69	108	99	90	78
	41	-	-	24	42	66	99	90	78
	57	-	-	-	21	34	73	87	78
	76	-	-	-	-	19	41	49	61
	125	-	-	-	-	-	15	18	22
	150	-	-	-	-	-	-	12	15
	173	-	-	-	-	-	-	-	11

## Annex No. 3

### Number of terminal clips installed for stainless steel boxes



#### Designations:

- H – height;
- W – width;
- D – depth.

#### Terminal box, 160x120x90 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals						
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50
Terminal rated current, A		24	32	41	57	76	125	150
Maximum number of terminals, pcs		13	10	8	6	5	4	3
DIN rail type		OMEGA 3F DIN 50021SS						
6		13	10	8	6	5	4	3
10		13	10	8	6	5	4	3
16		13	10	8	6	5	4	3
24		6	9	8	6	5	4	3
32		-	5	8	6	5	4	3
41		-	-	5	6	5	4	3
57		-	-	-	4	5	4	3
76		-	-	-	-	4	4	3
125		-	-	-	-	-	3	3
150		-	-	-	-	-	-	2

#### Terminal box, 240x120x90 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals						
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50
Terminal rated current, A		24	32	41	57	76	125	150
Maximum number of terminals, pcs		28	21	17	14	11	8	7
DIN rail type		OMEGA 3F DIN 50021SS						
6		28	21	17	14	11	8	7
10		28	21	17	14	11	8	7
16		14	21	17	14	11	8	7
24		6	9	17	14	11	8	7
32		-	5	9	14	11	8	7
41		-	-	6	9	11	8	7
57		-	-	-	5	7	8	7
76		-	-	-	-	4	8	7
125		-	-	-	-	-	3	3
150		-	-	-	-	-	-	2

#### Terminal box, 250x150x90 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals						
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50
Terminal rated current, A		24	32	41	57	76	125	150
Maximum number of terminals, pcs		28	21	17	14	11	8	7
DIN rail type		OMEGA 3F DIN 50021SS						
6		28	21	17	14	11	8	7
10		28	21	17	14	11	8	7
16		17	21	17	14	11	8	7
24		7	11	17	14	11	8	7
32		-	6	11	14	11	8	7
41		-	-	6	11	11	8	7
57		-	-	-	5	9	8	7
76		-	-	-	-	5	8	7
125		-	-	-	-	-	3	4
150		-	-	-	-	-	-	2

### Terminal box, 300x200x90 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals						
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50
Terminal rated current, A		24	32	41	57	76	125	150
Maximum number of terminals, pcs		38	29	23	19	15	11	10
DIN rail type		OMEGA 3F DIN 50021SS						
Current strength, A	6	38	29	23	19	15	11	10
	10	38	29	23	19	15	11	10
	16	20	29	23	19	15	11	10
	24	9	13	23	19	15	11	10
	32	-	7	13	19	15	11	10
	41	-	-	8	13	15	11	10
	57	-	-	-	7	10	11	10
	76	-	-	-	-	6	11	10
	125	-	-	-	-	-	4	5
	150	-	-	-	-	-	-	3

### Terminal box, 370x250x90 mm

- number of DIN rails: 2 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals						
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50
Terminal rated current, A		24	32	41	57	76	125	150
Maximum number of terminals, pcs		104	80	64	52	42	32	28
DIN rail type		OMEGA 3F DIN 50021SS						
Current strength, A	6	104	80	64	52	42	32	28
	10	60	80	64	52	42	32	28
	16	23	36	61	52	42	32	28
	24	10	16	27	45	42	32	28
	32	-	9	15	25	40	32	28
	41	-	-	9	15	24	32	28
	57	-	-	-	8	12	26	28
	76	-	-	-	-	7	15	16
	125	-	-	-	-	-	5	6
	150	-	-	-	-	-	-	4

### Terminal box, 370x370x90 mm

- number of DIN rails: 3 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals						
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50
Terminal rated current, A		24	32	41	57	76	125	150
Maximum number of terminals, pcs		156	120	96	78	63	48	42
DIN rail type		OMEGA 3F DIN 50021SS						
Current strength, A	6	156	120	96	78	63	48	42
	10	74	115	96	78	63	48	42
	16	29	45	74	78	63	48	42
	24	13	20	33	56	63	48	42
	32	-	11	18	31	49	48	42
	41	-	-	11	19	29	48	42
	57	-	-	-	9	15	33	37
	76	-	-	-	-	8	18	21
	125	-	-	-	-	-	6	7
	150	-	-	-	-	-	-	5

## Terminal box, 300x200x160 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		38	29	23	19	15	11	10	9
DIN rail type		OMEGA 3F DIN 50021SS							
6		38	29	23	19	15	11	10	9
10		38	29	23	19	15	11	10	9
16		24	29	23	19	15	11	10	9
24		10	16	23	19	15	11	10	9
32		-	9	15	19	15	11	10	9
41		-	-	9	16	15	11	10	9
57		-	-	-	8	12	11	10	9
76		-	-	-	-	7	11	10	9
125		-	-	-	-	-	5	6	7
150		-	-	-	-	-	-	4	4
173		-	-	-	-	-	-	-	3

## Terminal box, 370x250x160 mm

- number of DIN rails: 1 pce;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		104	80	64	52	42	32	28	24
DIN rail type		OMEGA 3F DIN 50021SS							
6		104	80	64	52	42	32	28	24
10		70	80	64	52	42	32	28	24
16		27	42	64	52	42	32	28	24
24		12	18	31	52	42	32	28	24
32		-	10	17	29	42	32	28	24
41		-	-	10	18	28	32	28	24
57		-	-	-	9	14	31	28	24
76		-	-	-	-	8	17	19	23
125		-	-	-	-	-	6	7	8
150		-	-	-	-	-	-	5	6
173		-	-	-	-	-	-	-	4

## Terminal box, 370x370x160 mm

- number of DIN rails: 3 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		156	120	96	78	63	48	42	36
DIN rail type		OMEGA 3F DIN 50021SS							
6		156	120	96	78	63	48	42	36
10		85	120	96	78	63	48	42	36
16		33	51	85	78	63	48	42	36
24		14	23	37	64	63	48	42	36
32		-	12	21	36	56	48	42	36
41		-	-	12	22	34	48	42	36
57		-	-	-	11	17	37	42	36
76		-	-	-	-	9	21	24	29
125		-	-	-	-	-	7	9	10
150		-	-	-	-	-	-	6	7
173		-	-	-	-	-	-	-	5

**Terminal box, 510x370x160 mm**

- number of DIN rails: 2 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		160	122	100	80	66	50	44	38
DIN rail type		OMEGA 3F DIN 50021SS							
6		160	122	100	80	66	50	44	38
10		86	122	100	80	66	50	44	38
16		33	52	85	80	66	50	44	38
24		15	23	38	64	66	50	44	38
32		-	13	21	36	56	50	44	38
41		-	-	13	22	34	50	44	38
57		-	-	-	11	17	38	44	38
76		-	-	-	-	10	21	25	31
125		-	-	-	-	-	7	9	11
150		-	-	-	-	-	-	6	8
173		-	-	-	-	-	-	-	6

**Terminal box, 750x370x160 mm**

- number of DIN rails: 2 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		208	160	128	104	84	64	56	48
DIN rail type		OMEGA 3F DIN 50021SS							
6		208	160	128	104	84	64	56	48
10		80	126	128	104	84	64	56	48
16		31	49	79	104	84	64	56	48
24		14	22	35	60	84	64	56	48
32		-	12	19	33	52	64	56	48
41		-	-	12	20	32	64	56	48
57		-	-	-	10	16	35	44	48
76		-	-	-	-	9	20	24	31
125		-	-	-	-	-	7	9	11
150		-	-	-	-	-	-	6	8
173		-	-	-	-	-	-	-	6

**Terminal box, 750x370x200 mm**

- number of DIN rails: 4 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		208	160	128	104	84	64	56	48
DIN rail type		OMEGA 3F DIN 50021SS							
6		208	160	128	104	84	64	56	48
10		85	134	128	104	84	64	56	48
16		33	52	83	104	84	64	56	48
24		14	23	37	63	84	64	56	48
32		-	13	20	35	55	64	56	48
41		-	-	12	21	33	64	56	48
57		-	-	-	11	17	37	46	48
76		-	-	-	-	9	21	26	33
125		-	-	-	-	-	7	9	12
150		-	-	-	-	-	-	6	8
173		-	-	-	-	-	-	-	6

## Terminal box, 370x370x230 mm

- number of DIN rails: 3 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		156	120	96	78	63	48	42	36
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	156	120	96	78	63	48	42	36
	10	94	120	96	78	63	48	42	36
	16	36	57	93	78	63	48	42	36
	24	16	25	41	70	63	48	42	36
	32	-	14	23	39	62	48	42	36
	41	-	-	14	24	37	48	42	36
	57	-	-	-	12	19	41	42	36
	76	-	-	-	-	10	23	27	33
	125	-	-	-	-	-	8	10	12
	150	-	-	-	-	-	-	6	8
	173	-	-	-	-	-	-	-	6

## Terminal box, 510x370x230 mm

- number of DIN rails: 2 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		160	122	100	80	66	50	44	38
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	160	122	100	80	66	50	44	38
	10	95	122	100	80	66	50	44	38
	16	37	58	94	80	66	50	44	38
	24	16	25	41	71	66	50	44	38
	32	-	14	23	40	62	50	44	38
	41	-	-	14	24	38	50	44	38
	57	-	-	-	12	19	42	44	38
	76	-	-	-	-	11	23	28	34
	125	-	-	-	-	-	8	10	12
	150	-	-	-	-	-	-	7	8
	173	-	-	-	-	-	-	-	6

## Terminal box, 750x370x230 mm

- number of DIN rails: 4 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		208	160	128	104	84	64	56	48
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	208	160	128	104	84	64	56	48
	10	88	139	128	104	84	64	56	48
	16	34	54	86	104	84	64	56	48
	24	15	24	38	65	84	64	56	48
	32	-	13	21	37	57	64	56	48
	41	-	-	13	22	35	64	56	48
	57	-	-	-	11	18	39	48	48
	76	-	-	-	-	10	22	27	34
	125	-	-	-	-	-	8	10	12
	150	-	-	-	-	-	-	7	8
	173	-	-	-	-	-	-	-	6



### Terminal box, 370x370x280 mm

- number of DIN rails: 3 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		156	120	96	78	63	48	42	36
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	156	120	96	78	63	48	42	36
	10	99	120	96	78	63	48	42	36
	16	38	60	96	78	63	48	42	36
	24	17	26	44	74	63	48	42	36
	32	-	15	24	42	63	48	42	36
	41	-	-	15	25	39	48	42	36
	57	-	-	-	13	20	44	42	36
	76	-	-	-	-	11	24	28	35
	125	-	-	-	-	-	9	10	13
	150	-	-	-	-	-	-	7	9
	173	-	-	-	-	-	-	-	6

### Terminal box, 510x370x280 mm

- number of DIN rails: 3 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		160	122	100	80	66	50	44	38
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	160	122	100	80	66	50	44	38
	10	100	122	100	80	66	50	44	38
	16	39	61	99	80	66	50	44	38
	24	17	27	44	75	66	50	44	38
	32	-	15	24	42	65	50	44	38
	41	-	-	15	25	40	50	44	38
	57	-	-	-	13	20	44	44	38
	76	-	-	-	-	11	25	29	37
	125	-	-	-	-	-	9	11	13
	150	-	-	-	-	-	-	7	9
	173	-	-	-	-	-	-	-	7

### Terminal box, 750x370x280 mm

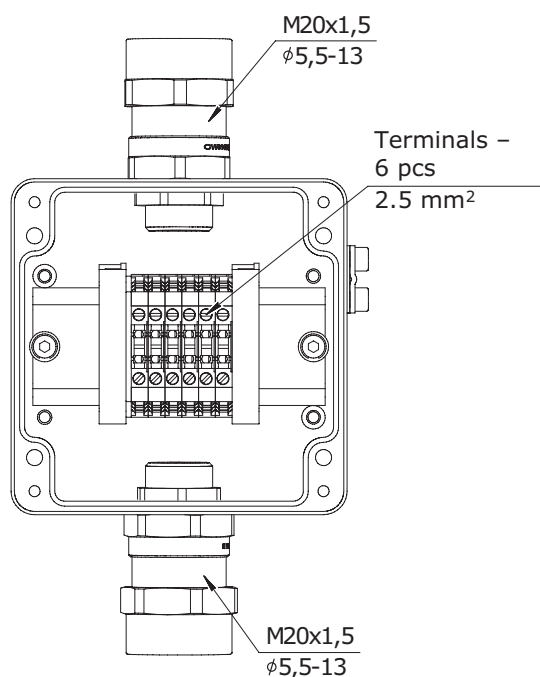
- number of DIN rails: 4 pcs;
- temperature characteristics: T6 40°C and T5 55°C.

Parameters		Through screw type terminals							
Terminal type		CBC.2	CBC.4	CBC.6	CBC.10	CBC.16	CBC.35	CBD.50	CBD.70
Terminal rated section, mm <sup>2</sup>		2.5	4	6	10	16	35	50	70
Terminal rated current, A		24	32	41	57	76	125	150	173
Maximum number of terminals, pcs		208	160	128	104	84	64	56	48
DIN rail type		OMEGA 3F DIN 50021SS							
Current strength, A	6	208	160	128	104	84	64	56	48
	10	93	147	128	104	84	64	56	48
	16	36	57	91	104	84	64	56	48
	24	16	25	40	69	84	64	56	48
	32	-	14	22	39	61	64	56	48
	41	-	-	13	23	37	64	56	48
	57	-	-	-	12	19	41	51	48
	76	-	-	-	-	10	23	28	36
	125	-	-	-	-	-	8	10	13
	150	-	-	-	-	-	-	7	9
	173	-	-	-	-	-	-	-	7

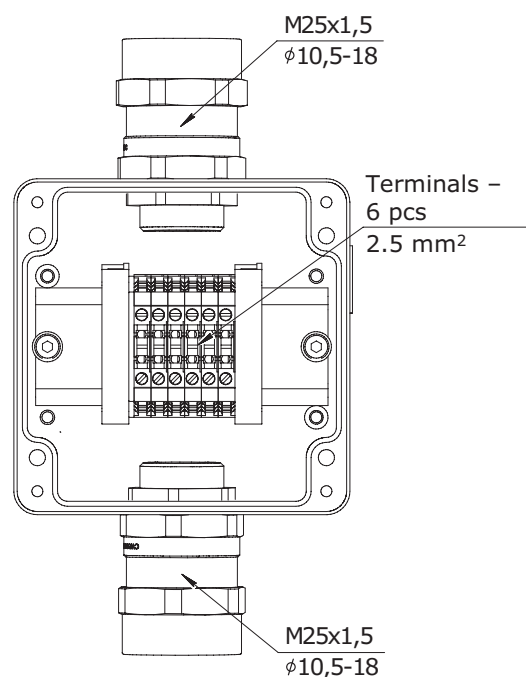
# Annex No. 4

Drawings of standard sets of terminal boxes based on explosion-proof sheaths made of aluminium alloy and cable glands of AAS series for armoured cable

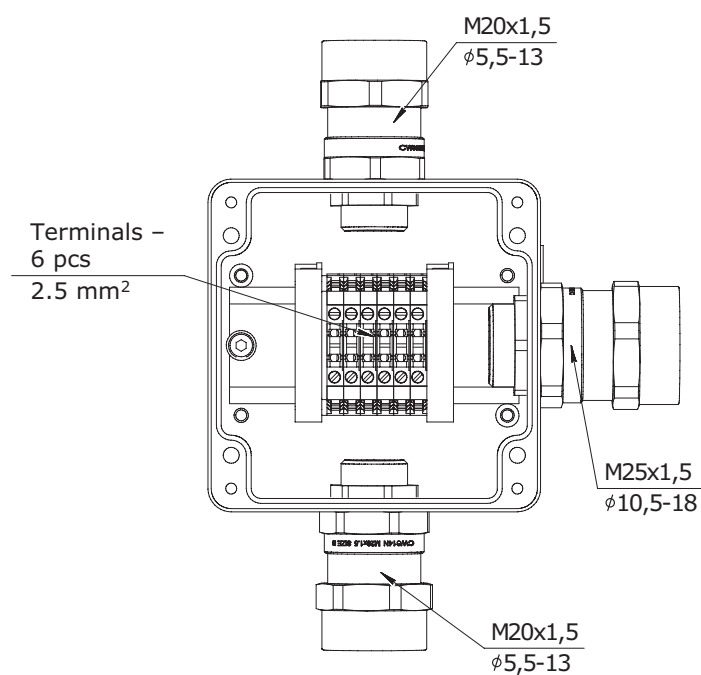
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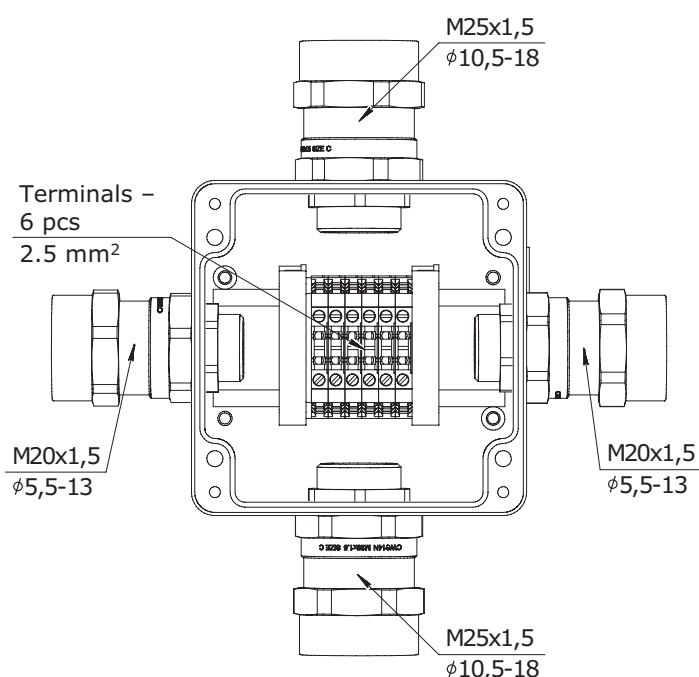
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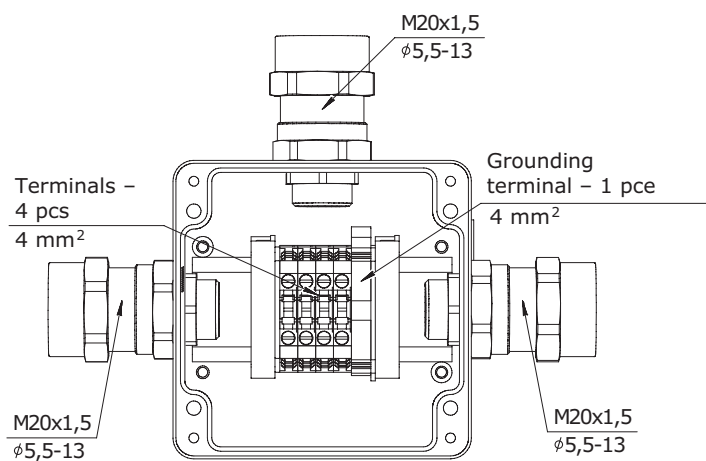
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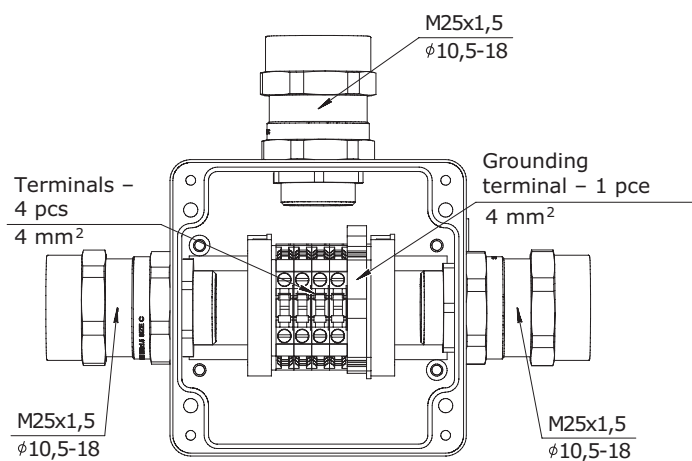
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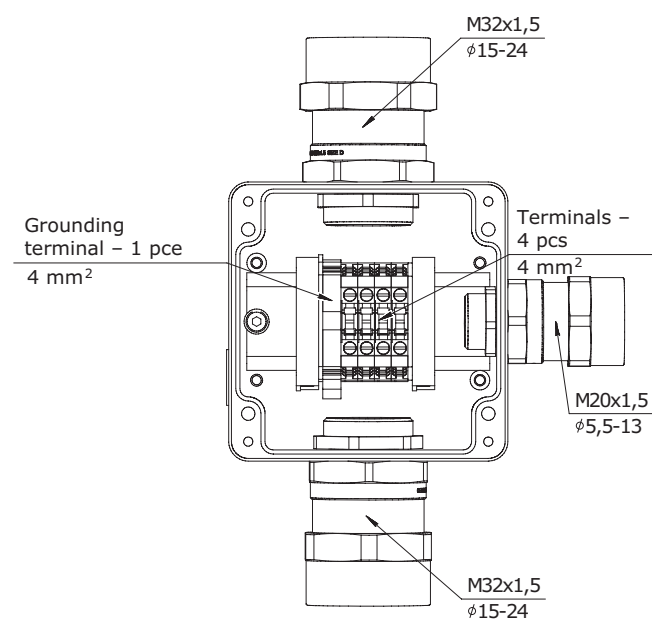
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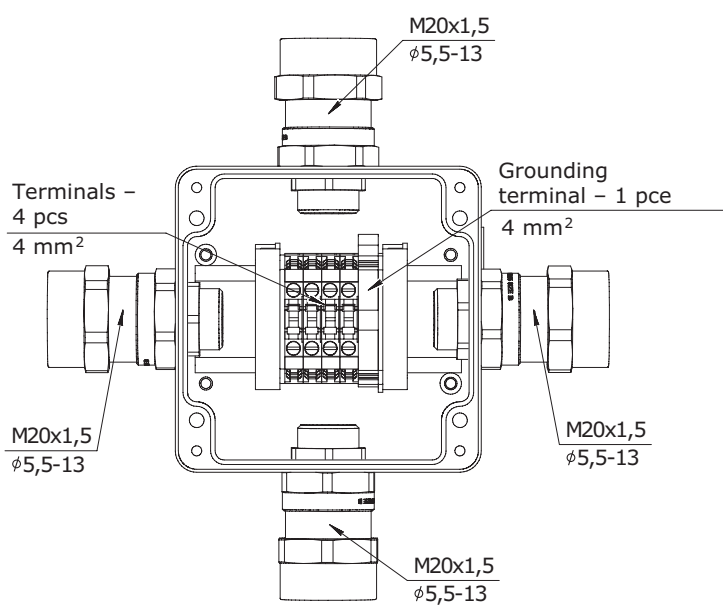
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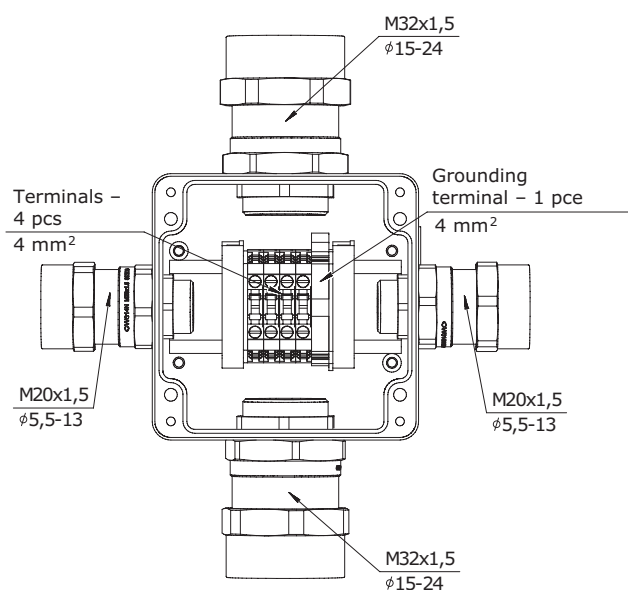
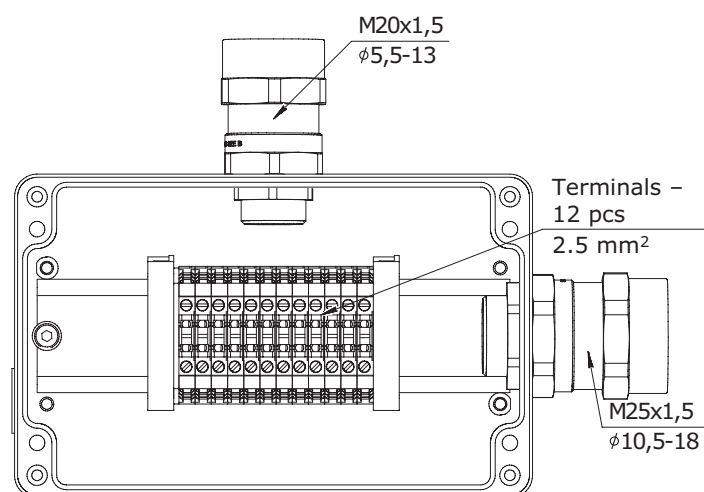
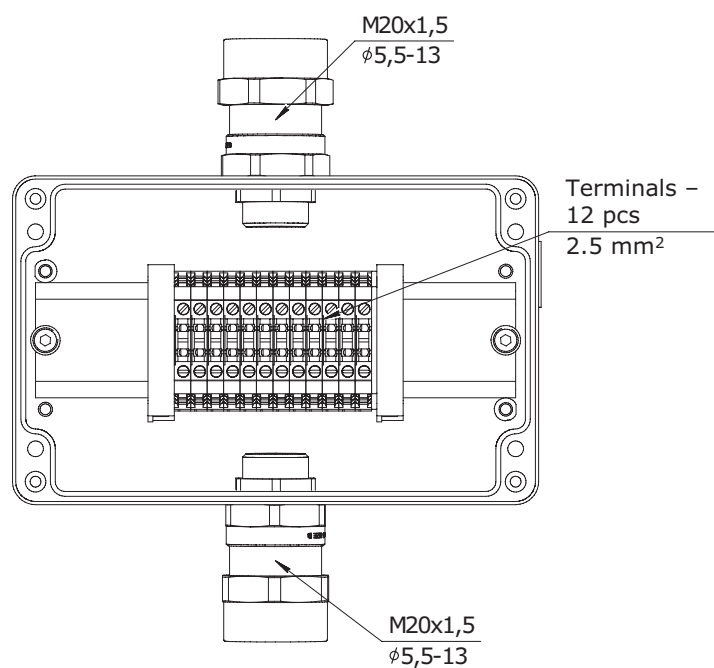
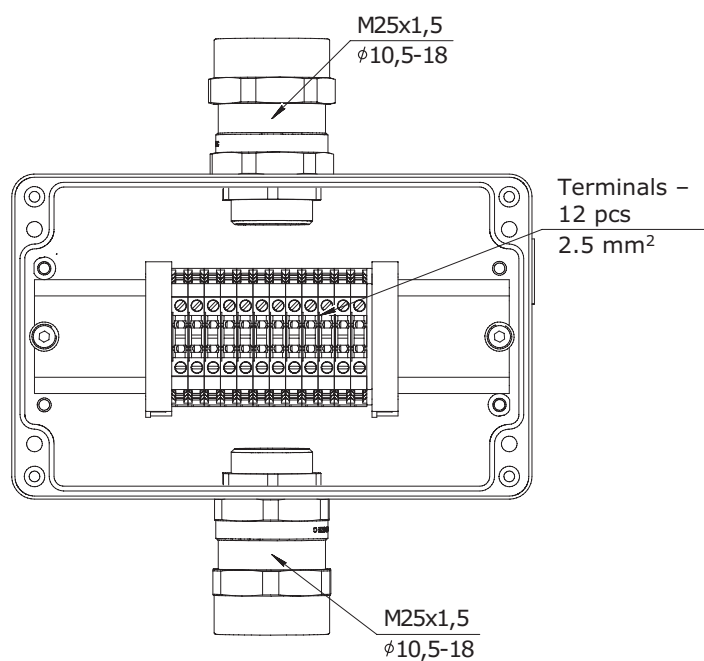


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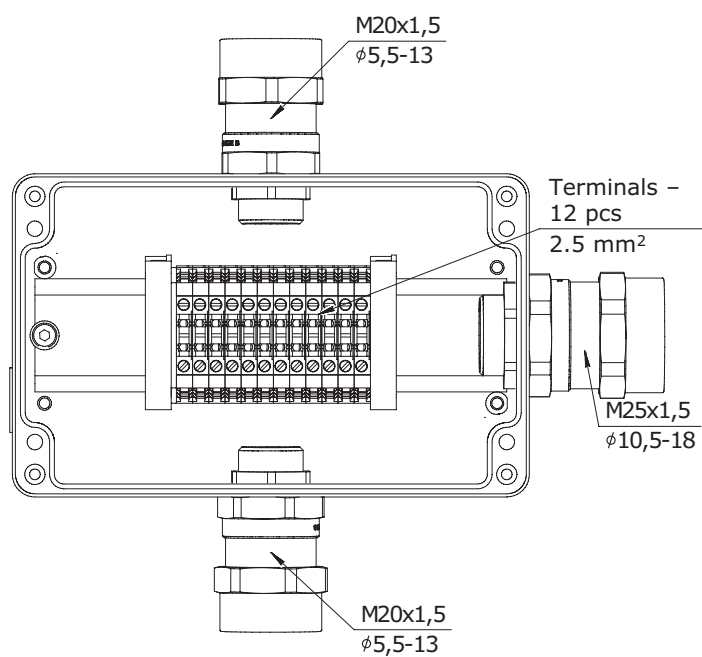


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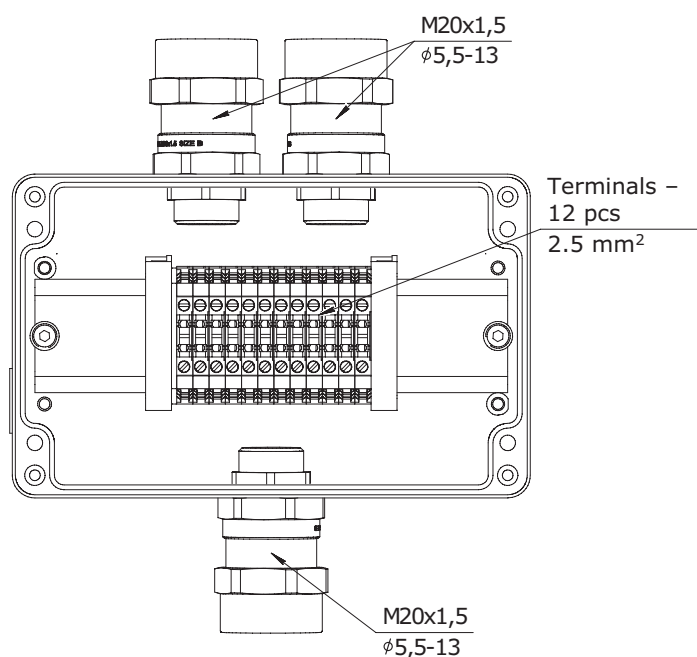


**TBE-A No. 091.00.014**

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**TBE-A No. 101.00.002**

**TBE-A No. 101.00.003**


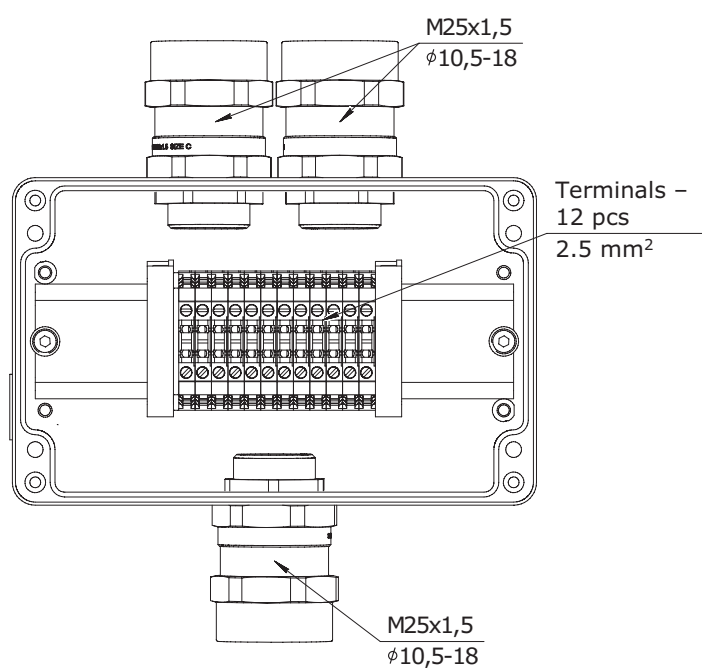
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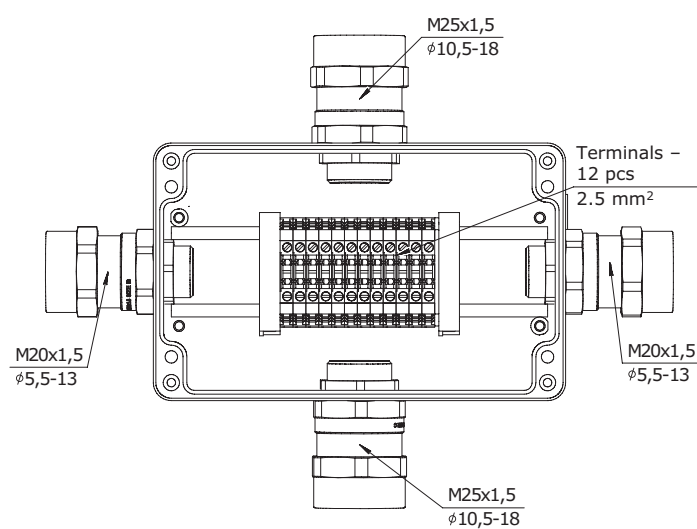
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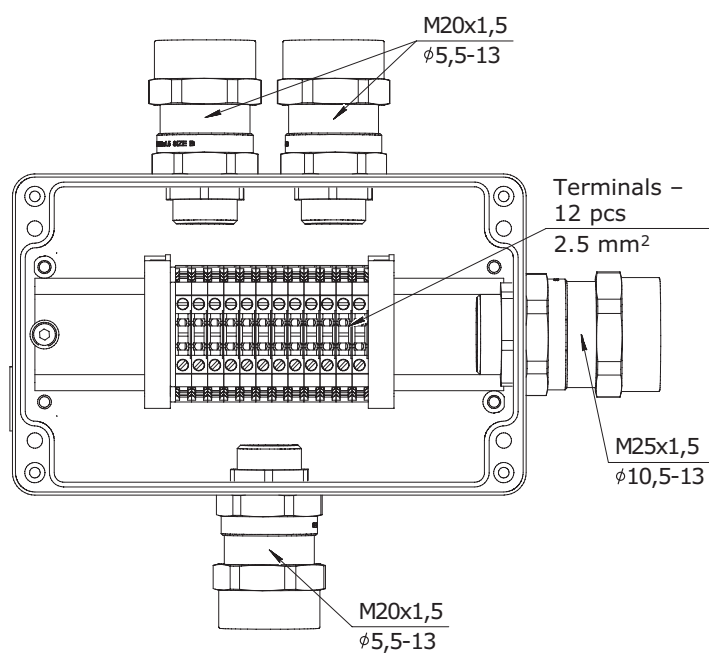
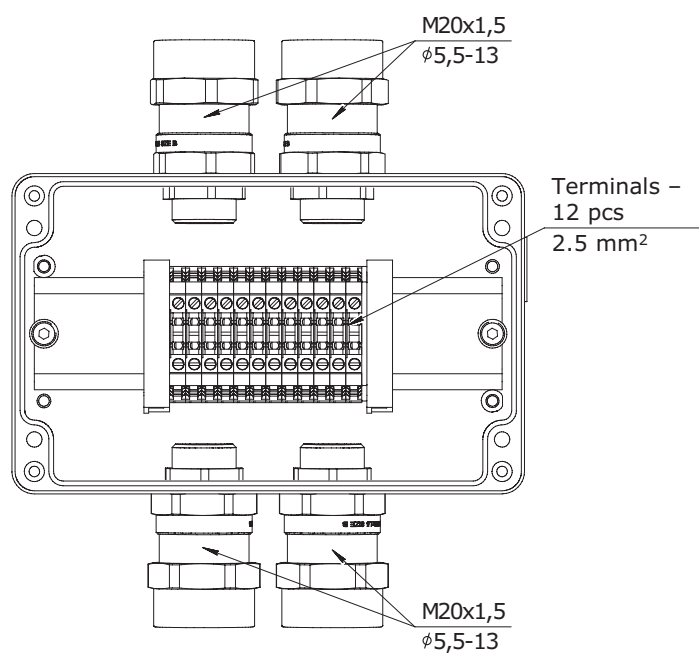
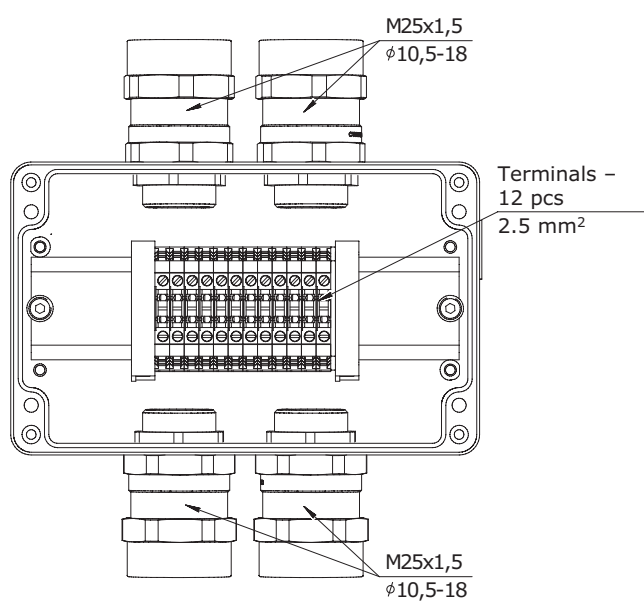
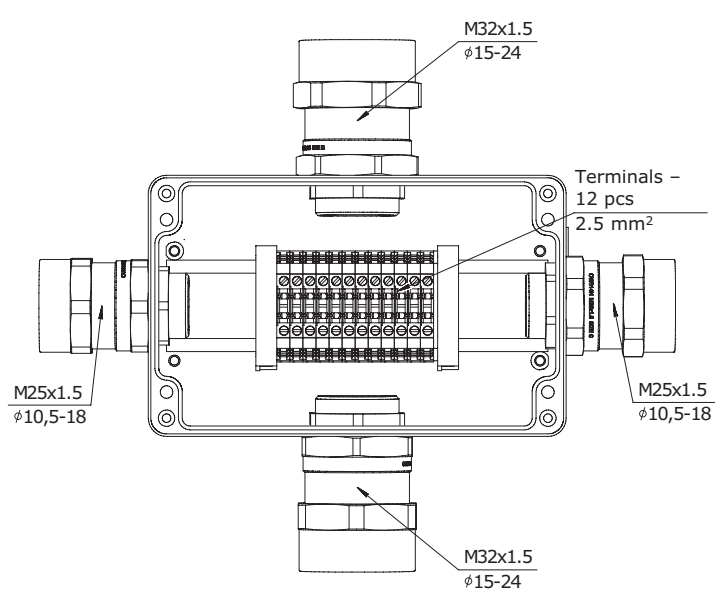


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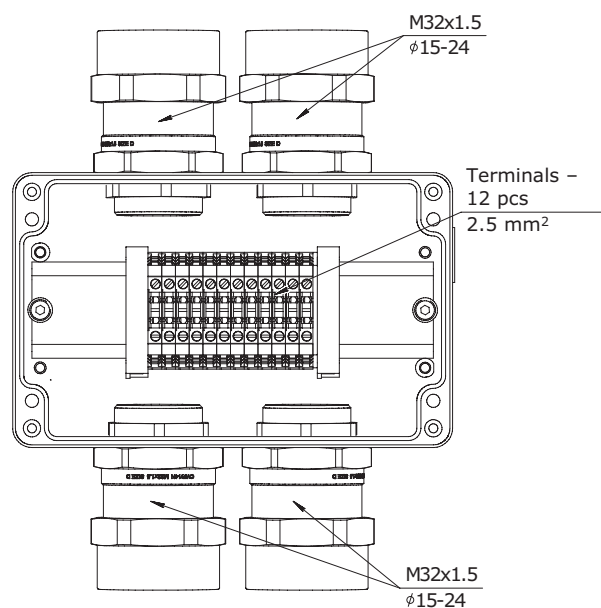


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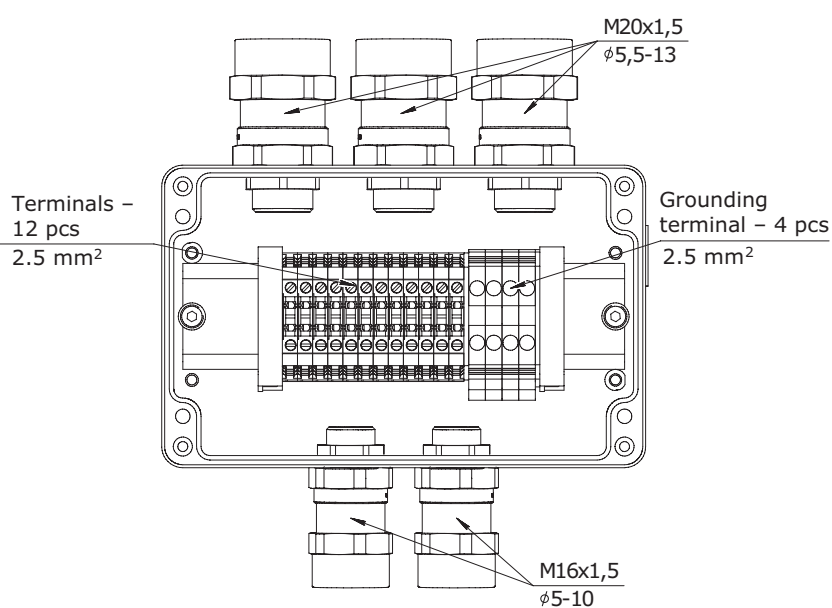


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**TBE-A No. 101.00.011**


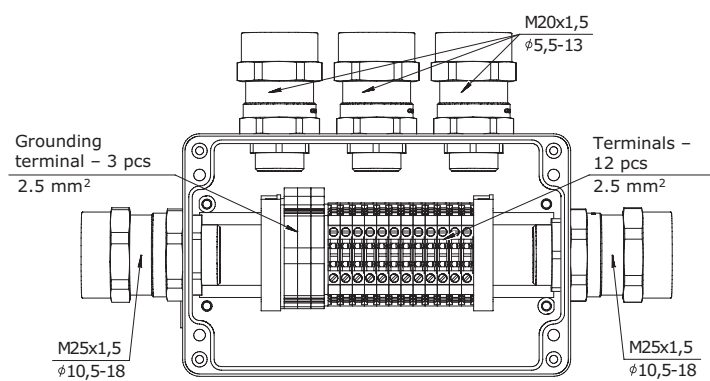
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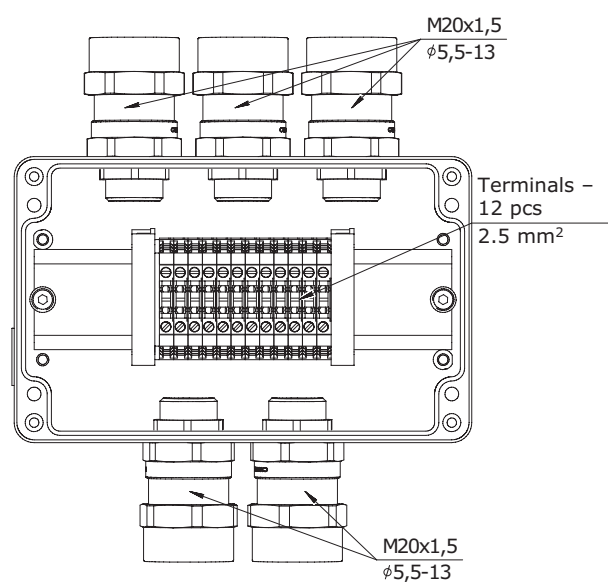
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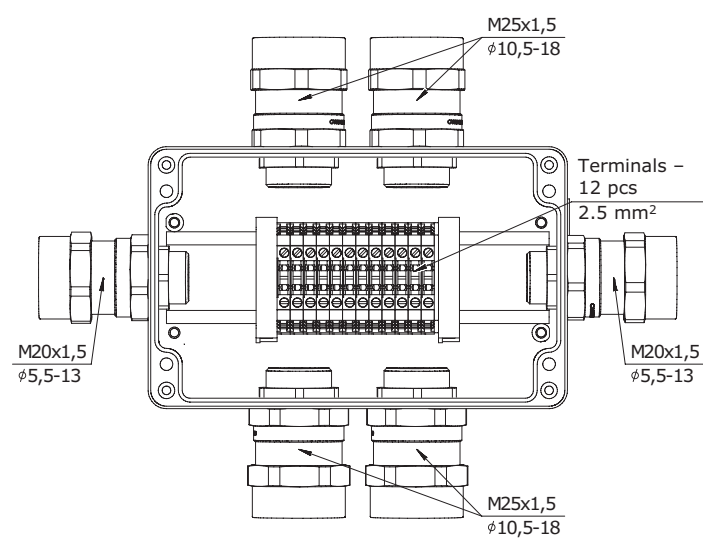
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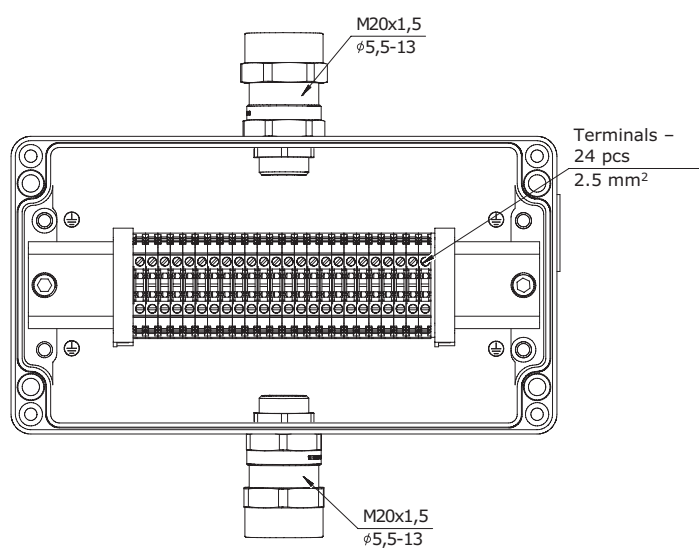
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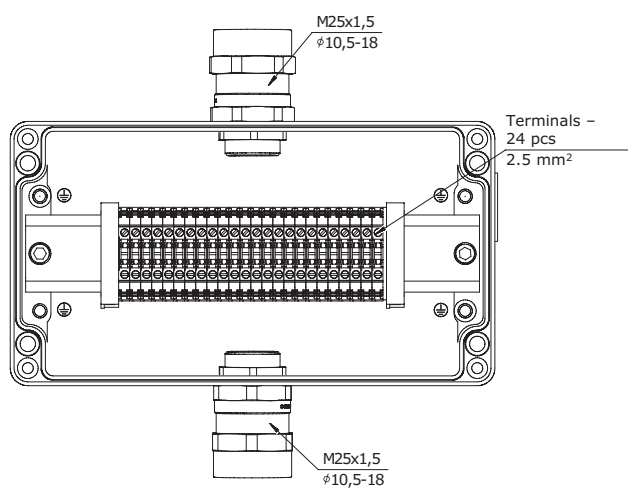
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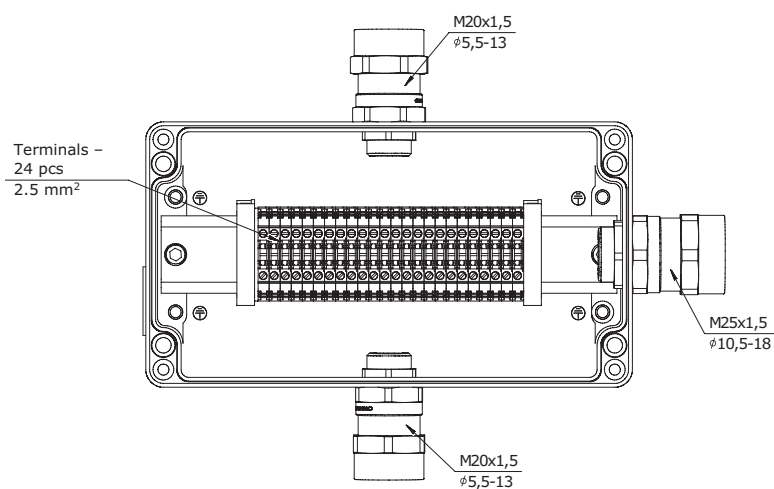
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**TBE-A No. 131.00.002**

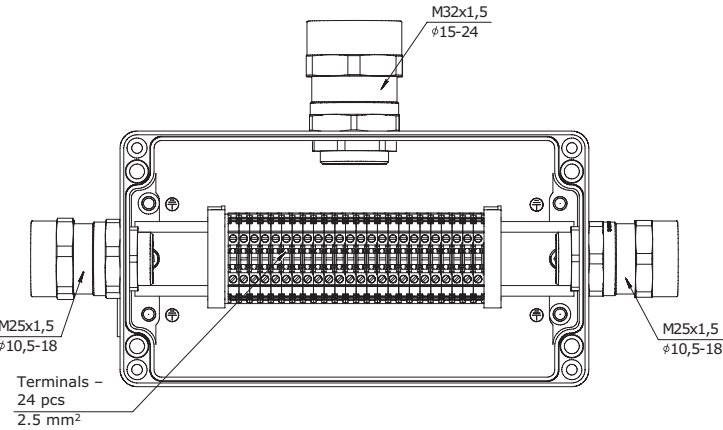


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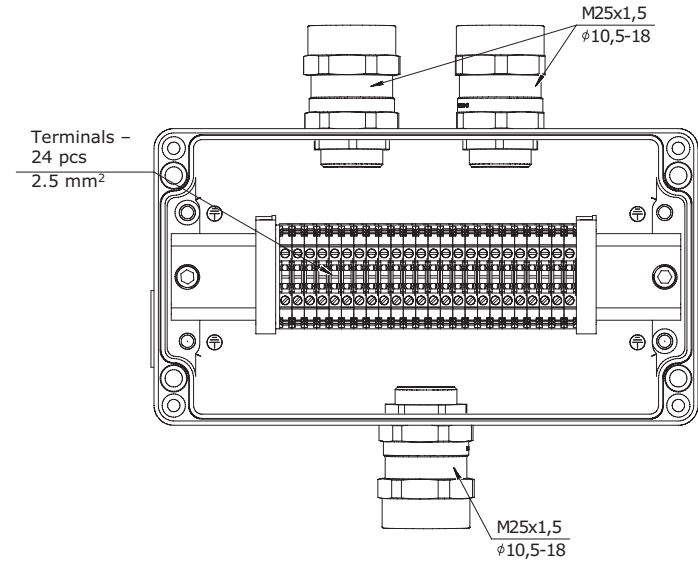




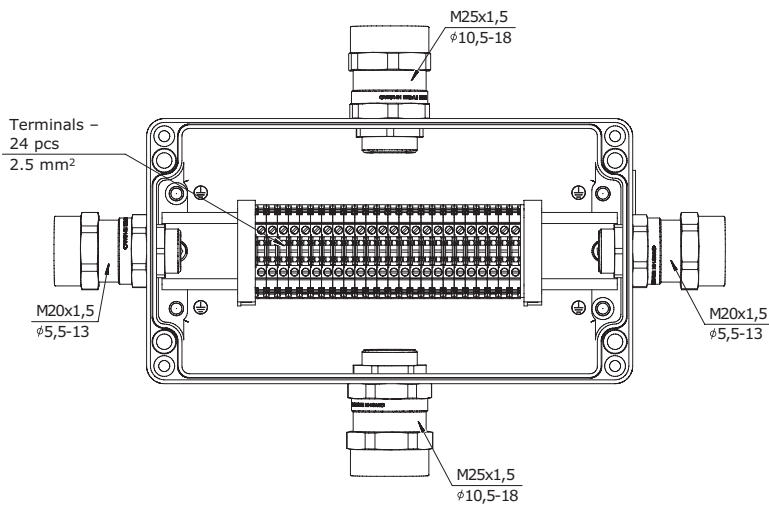
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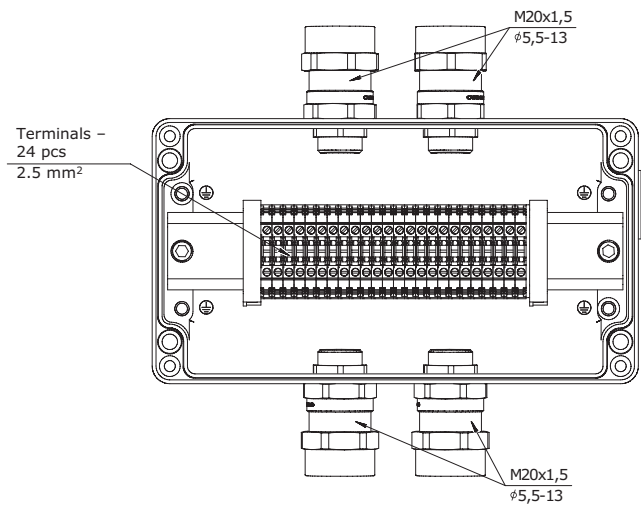
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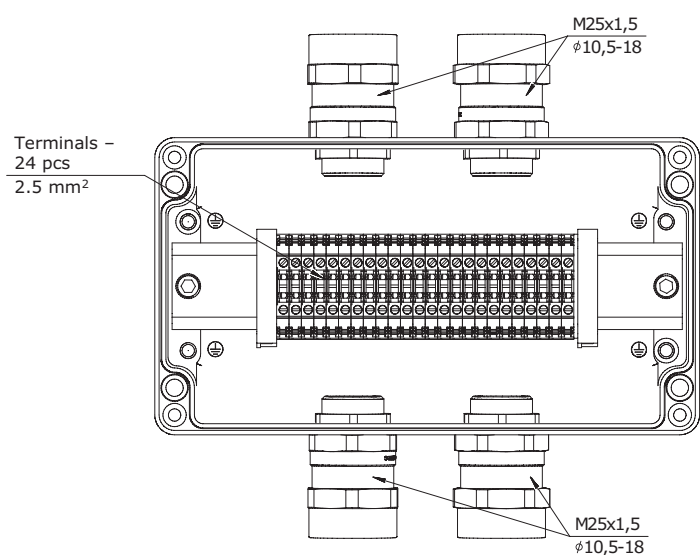
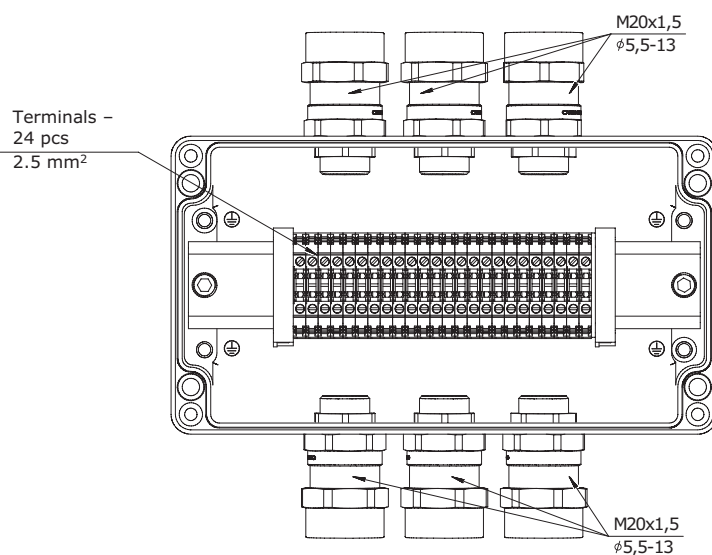
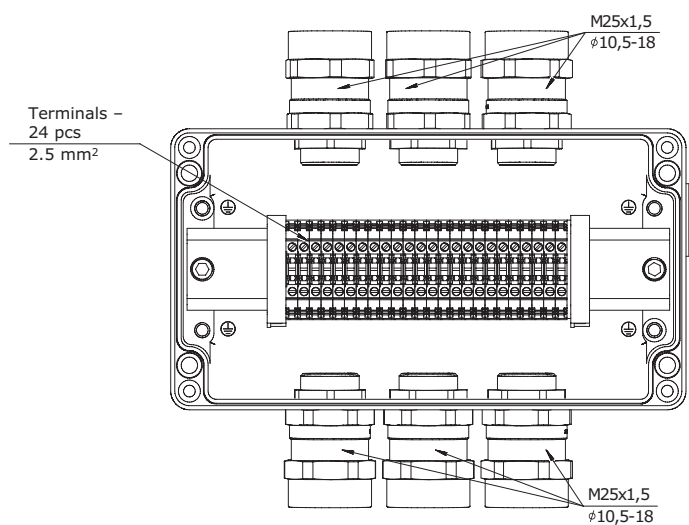
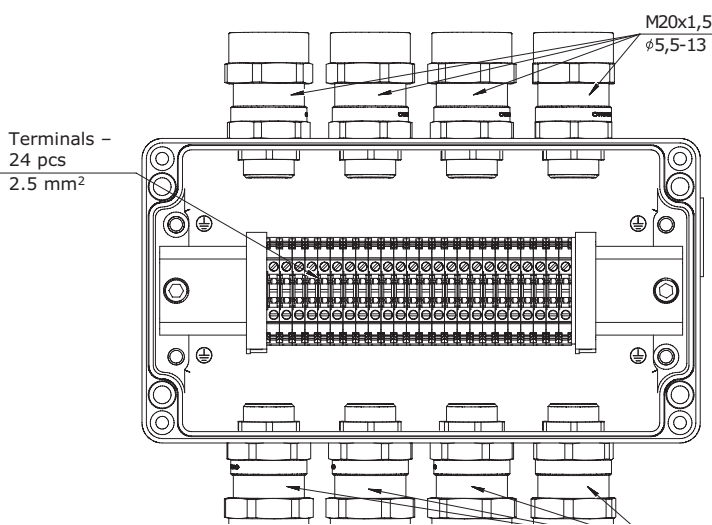


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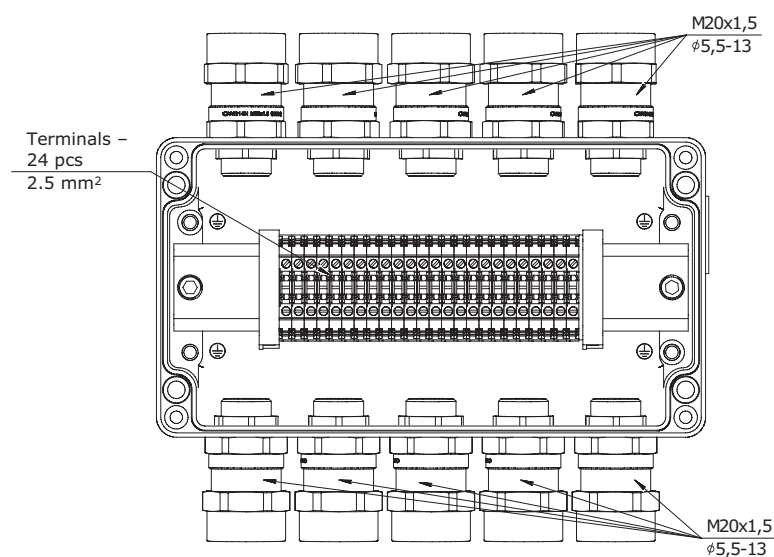


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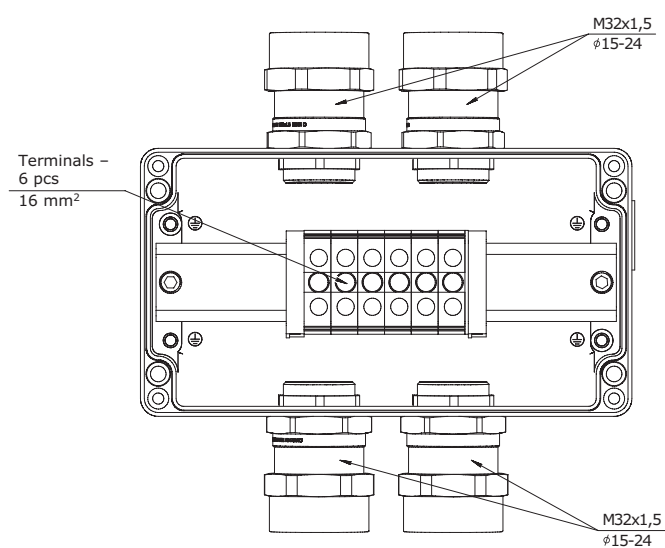


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**TBE-A No. 131.00.014**

**TBE-A No. 131.00.016**

**TBE-A No. 131.00.020**


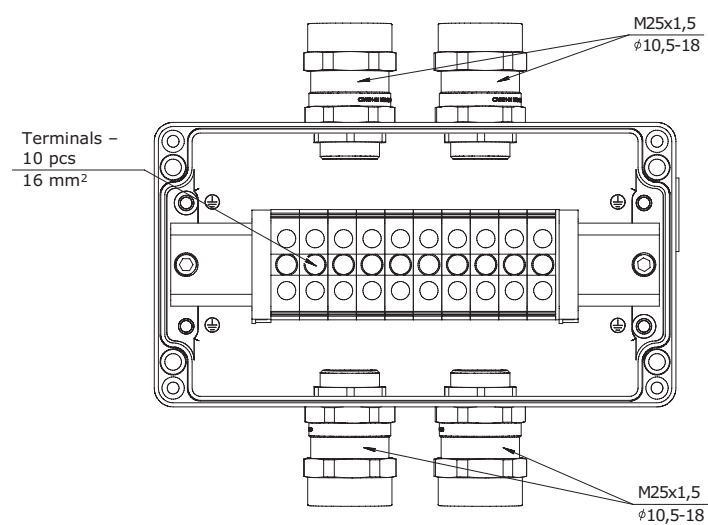
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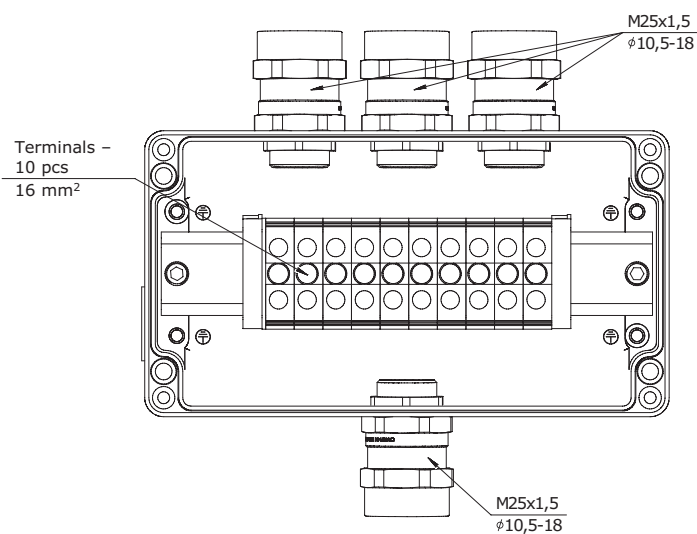
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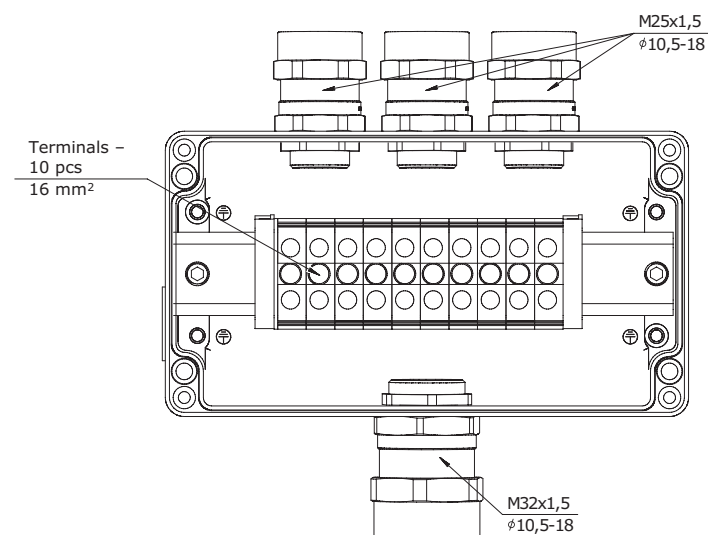
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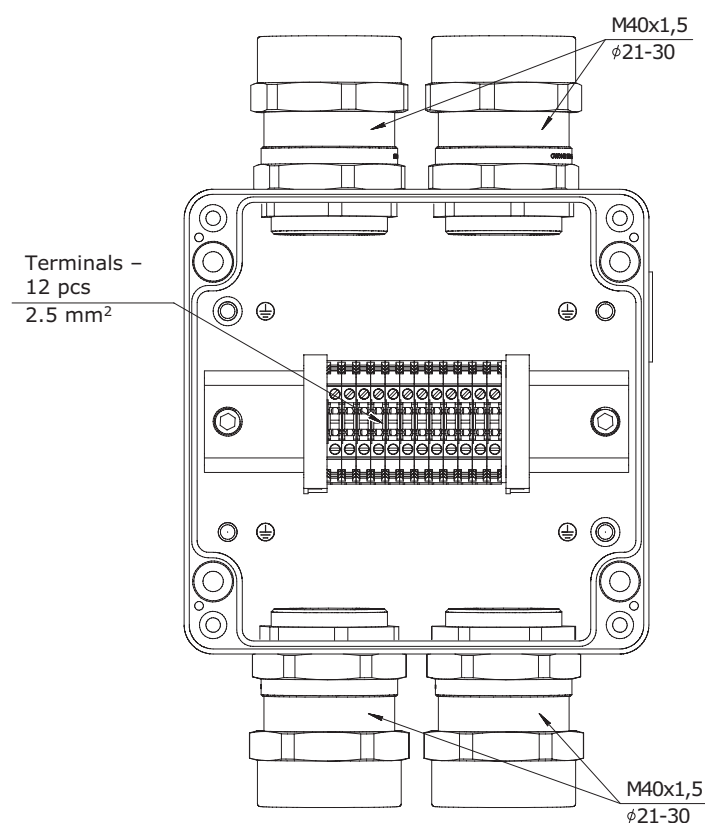
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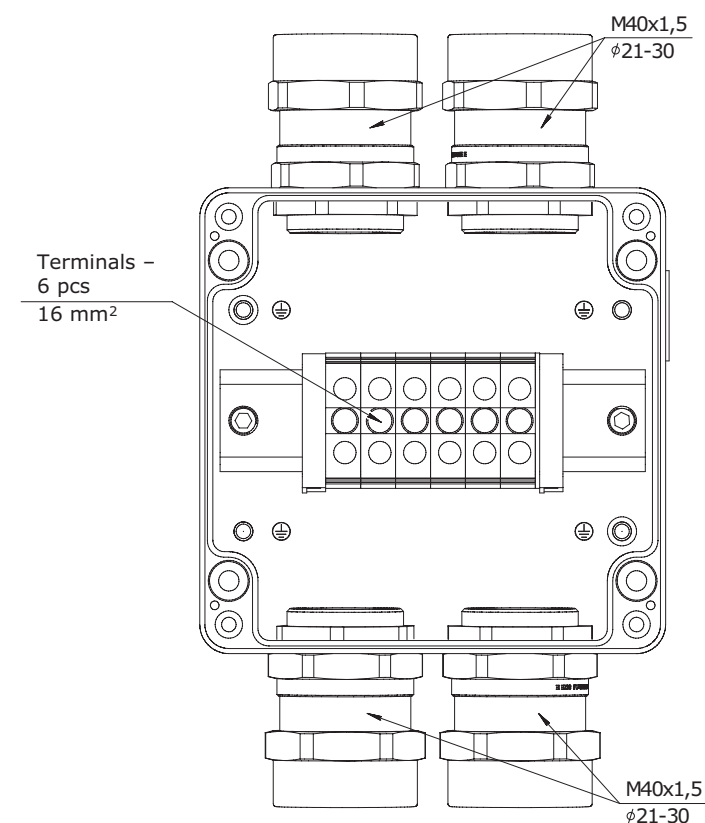
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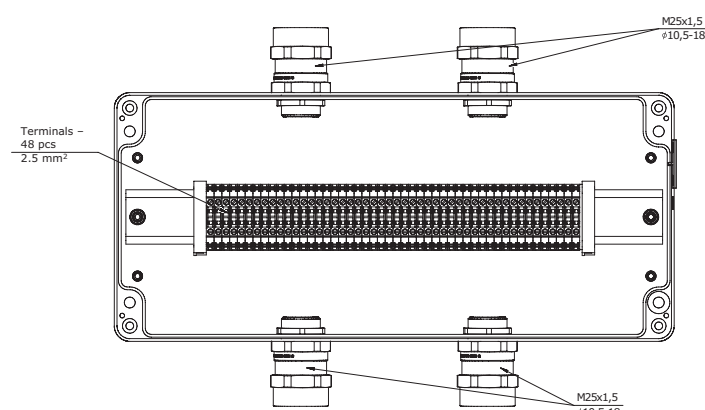
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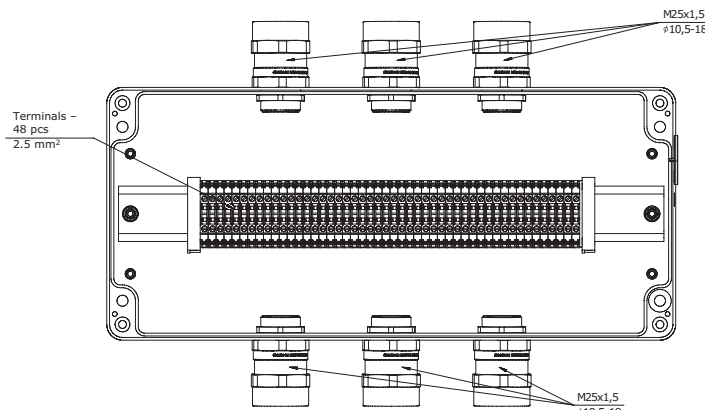
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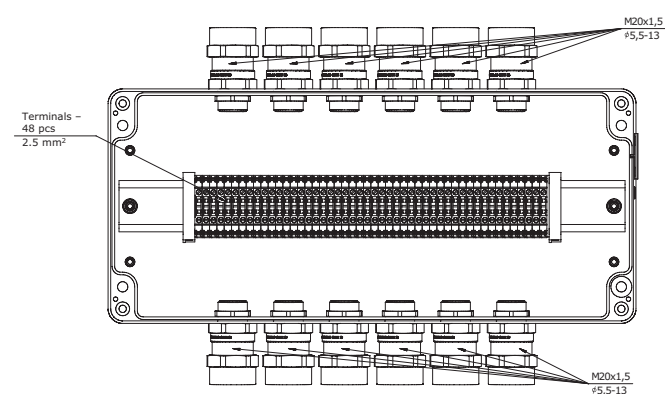
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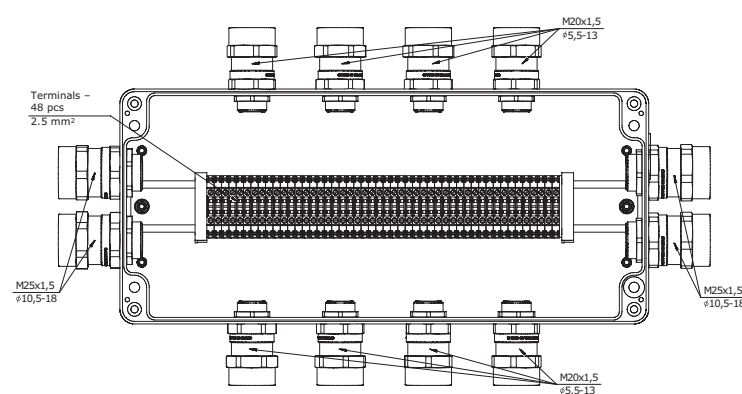
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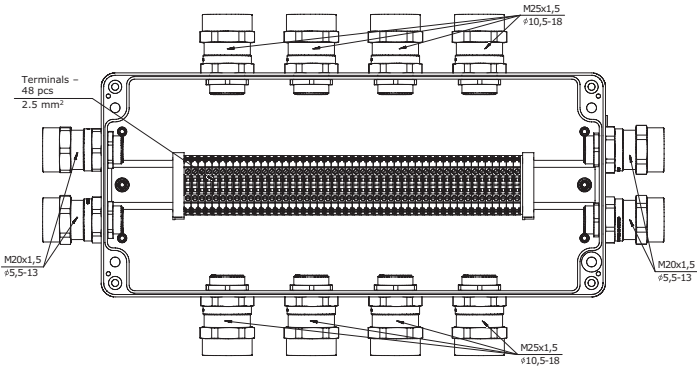
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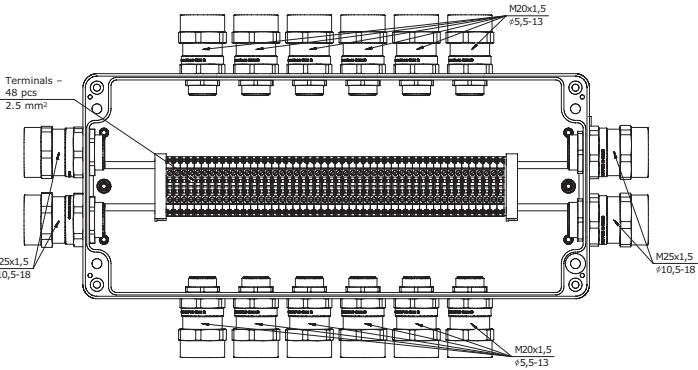
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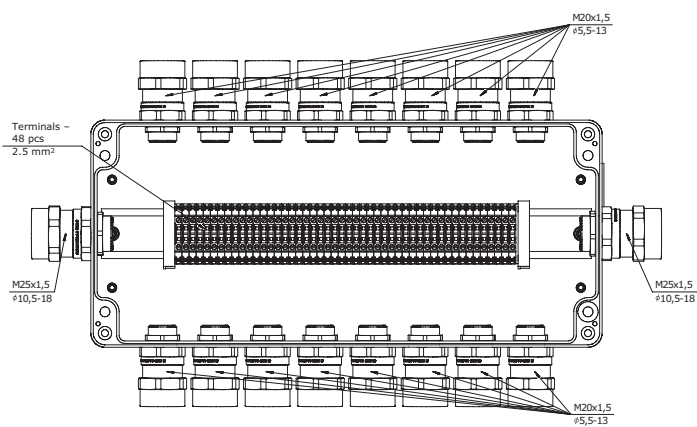
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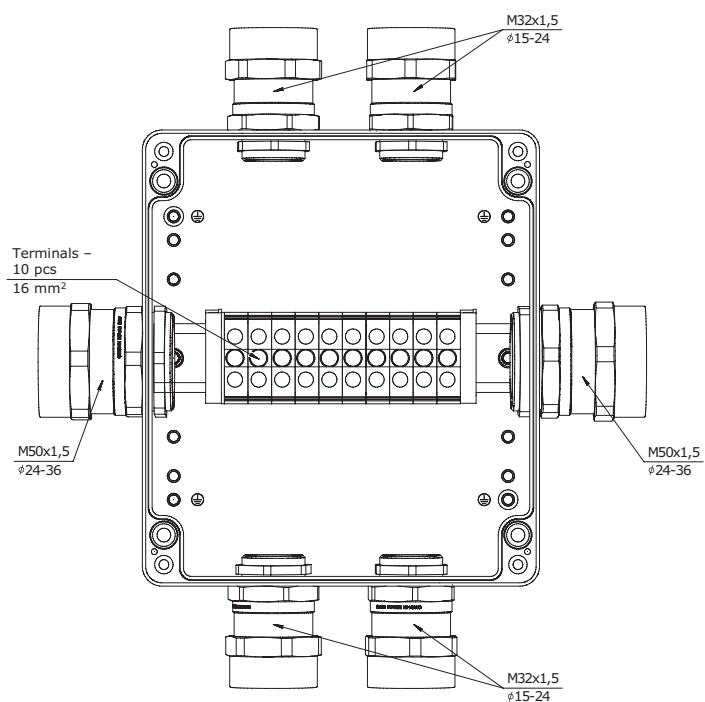
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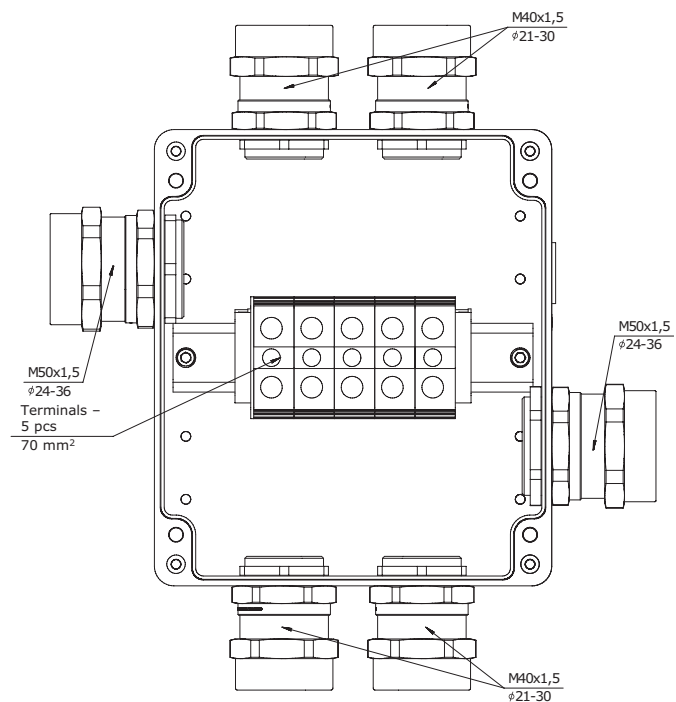
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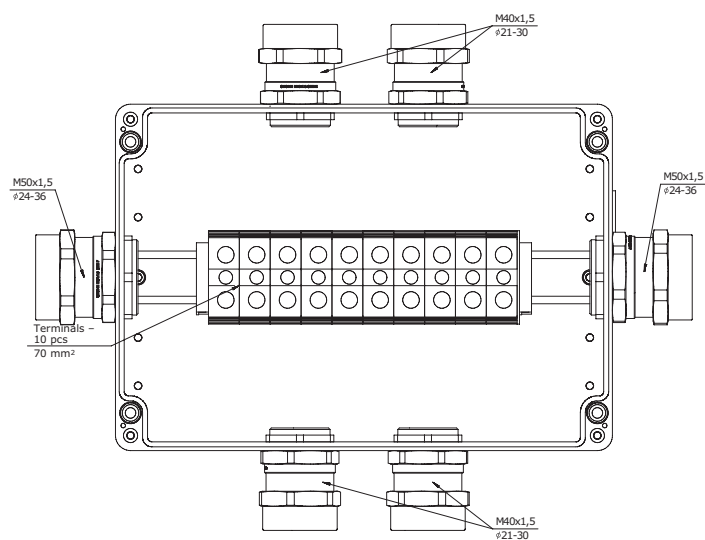
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**TBE-A No. 231.00.001**

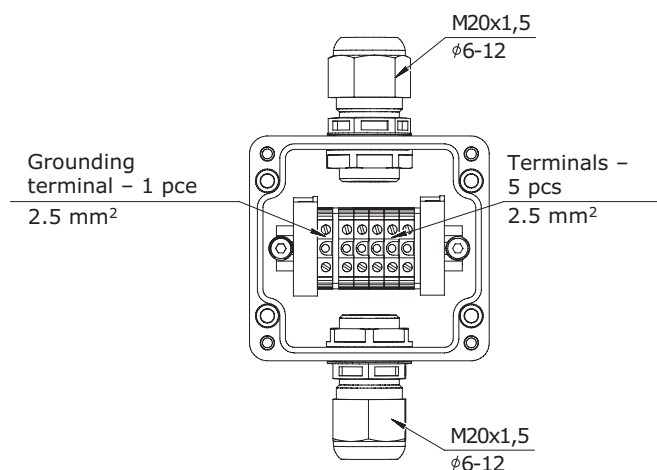
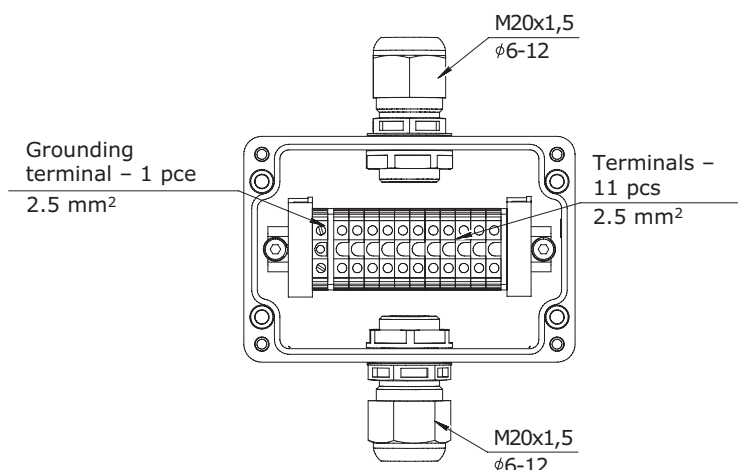
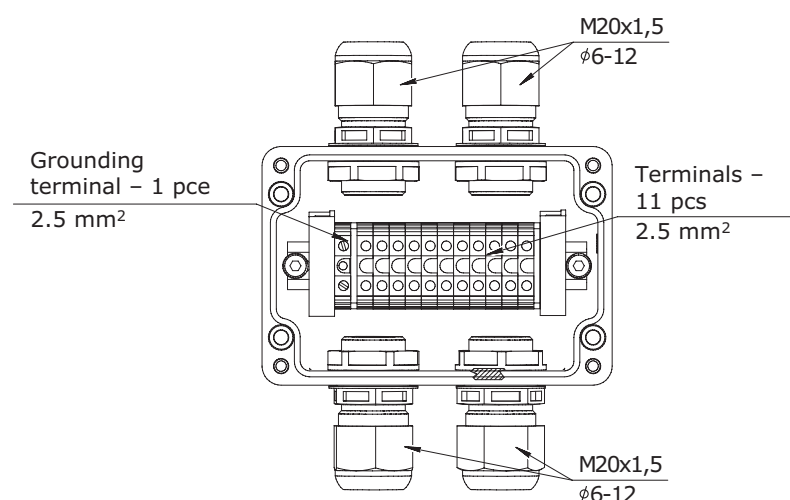
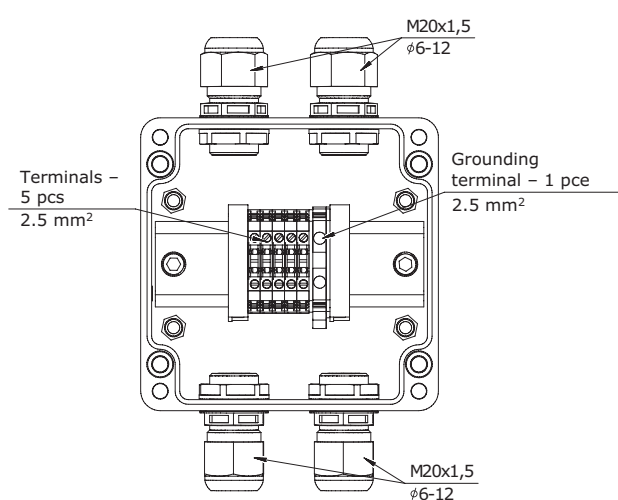


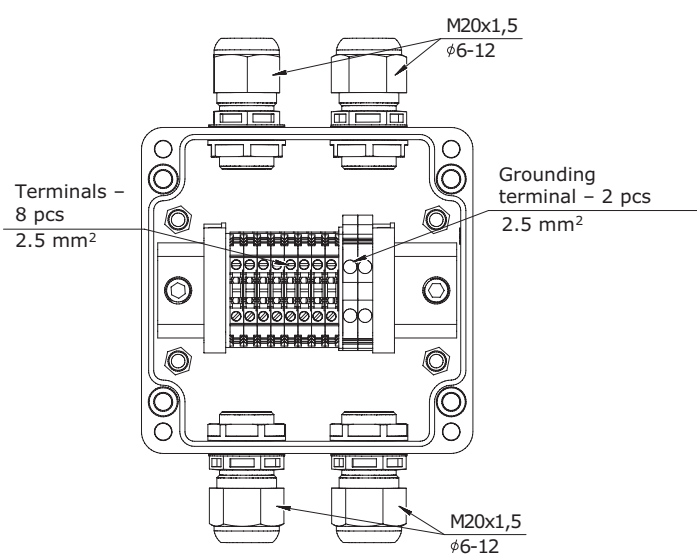
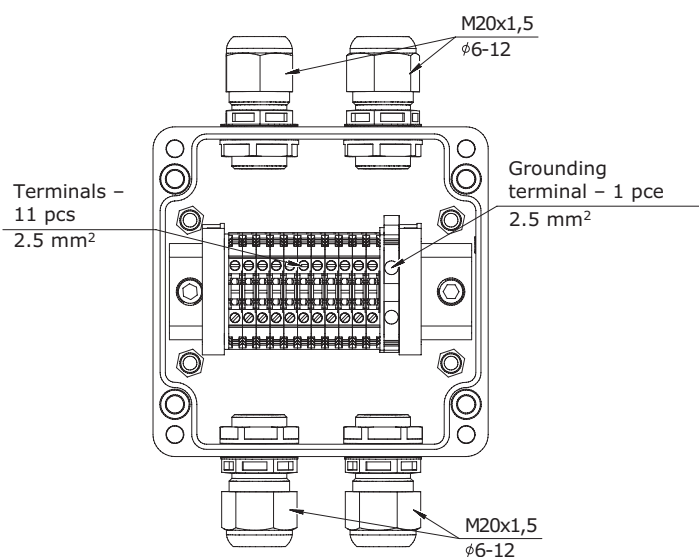
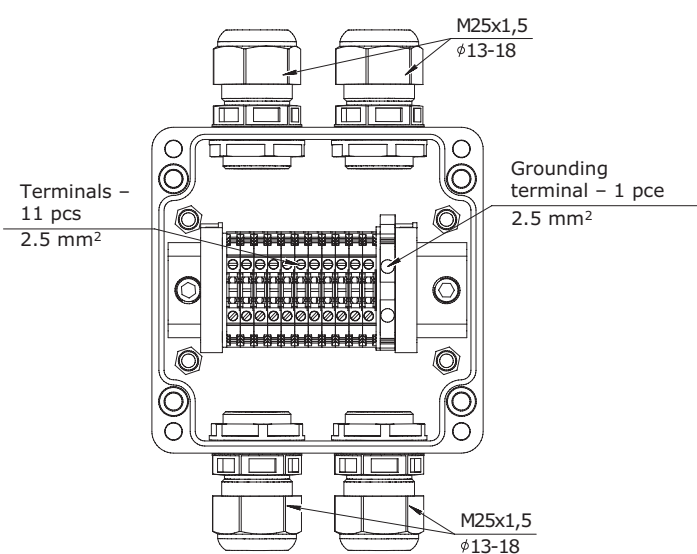
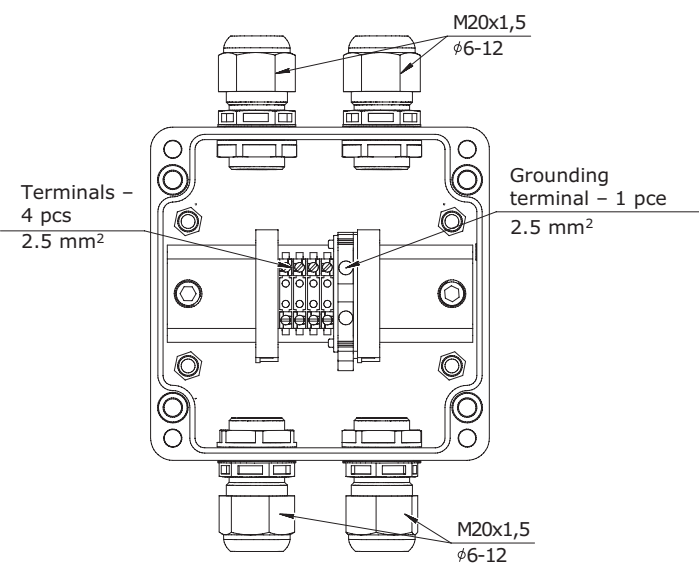
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**Annex No. 5**

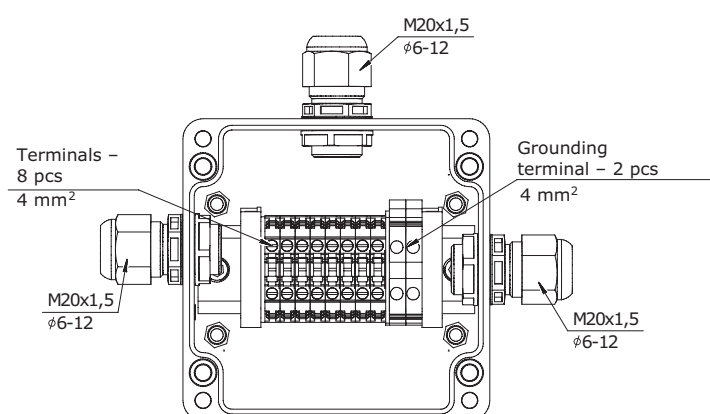
**Drawings of standard sets of terminal boxes based on explosion-proof sheaths made of glass-fiber reinforced polyester and of polyamide cable glands for non-armoured cable**

**TBE-P No. 011.00.001****TBE-P No. 021.00.001****TBE-P No. 021.00.002****TBE-P No. 031.00.001**

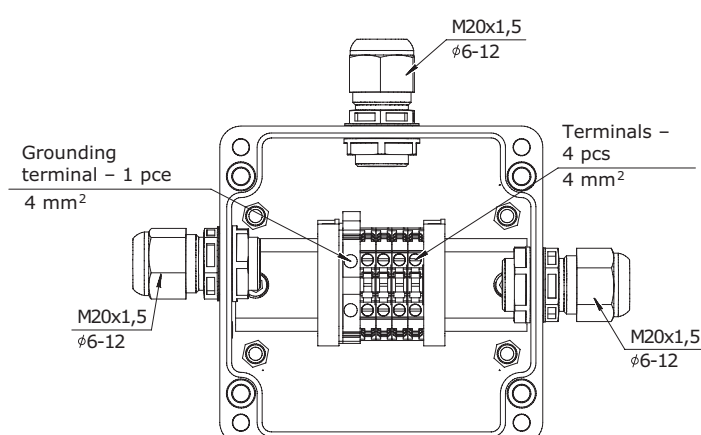
**TBE-P No. 031.00.002**

**TBE-P No. 031.00.003**

**TBE-P No. 031.00.004**

**TBE-P No. 031.00.007**




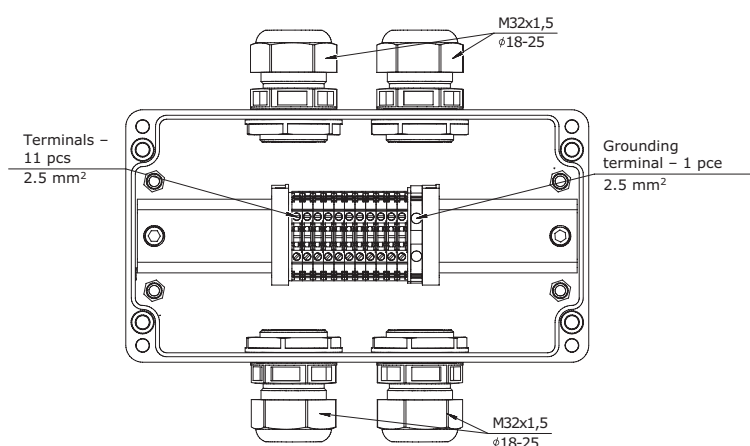
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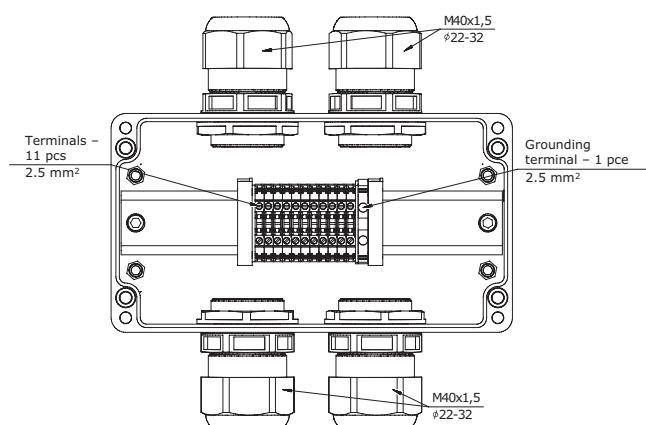
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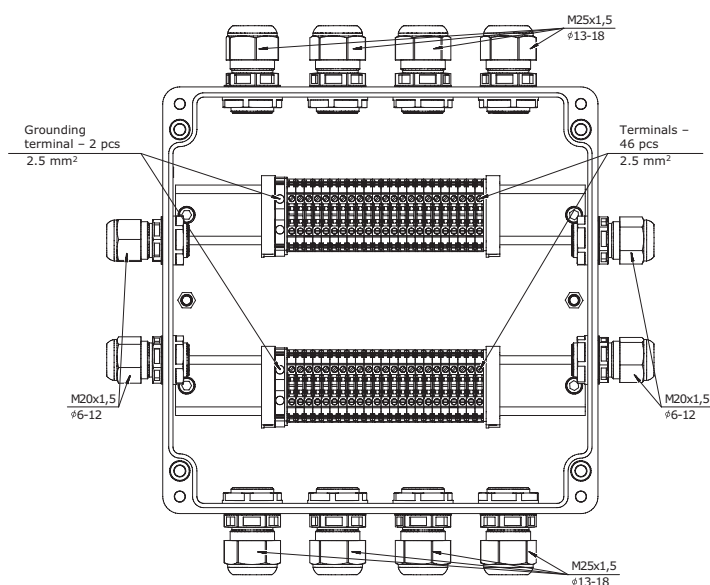
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TBE-P No. 041.00.002



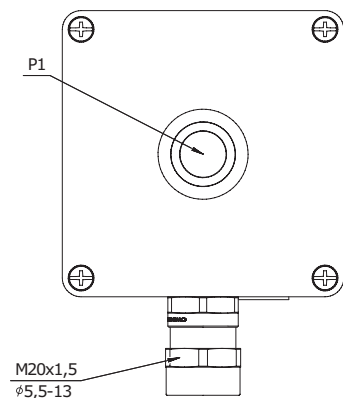
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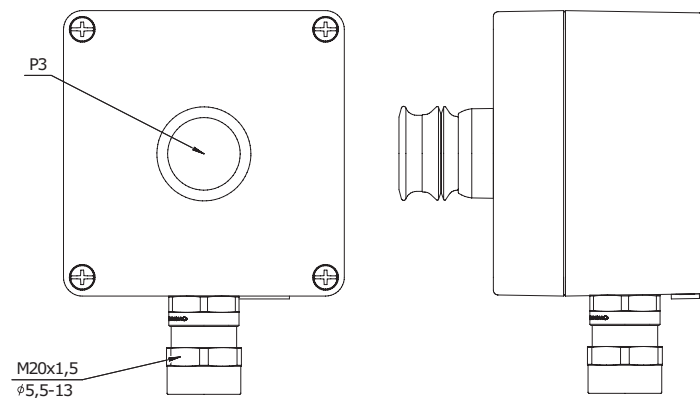
## Annex No. 6

Drawings of standard sets based on explosion-proof sheaths made of aluminium and of AAS series cable glands for an armoured cable

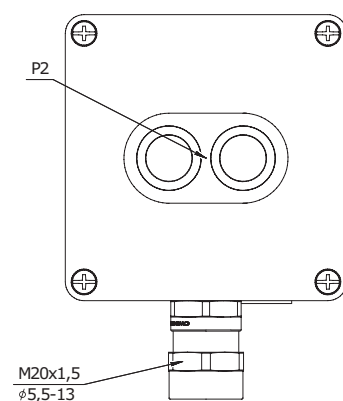
**CPE-A No. 121.00.001**



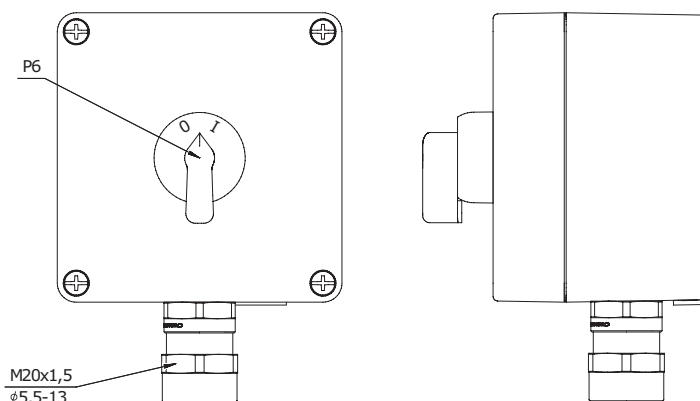
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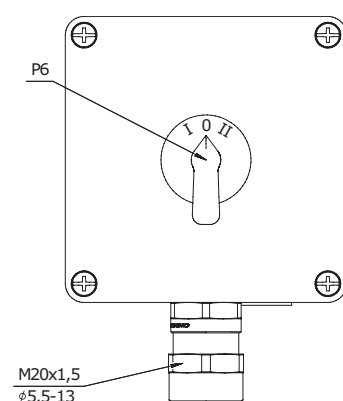
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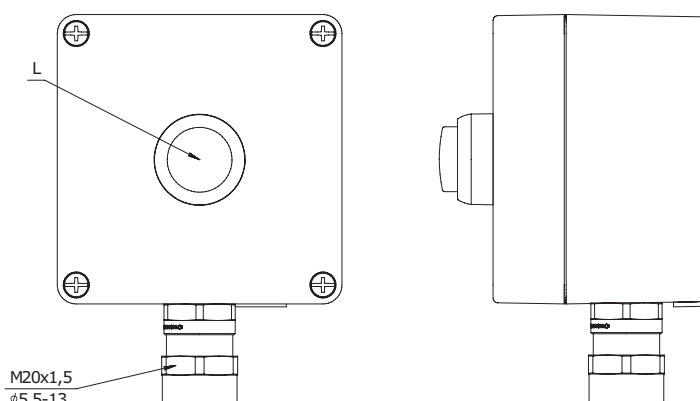
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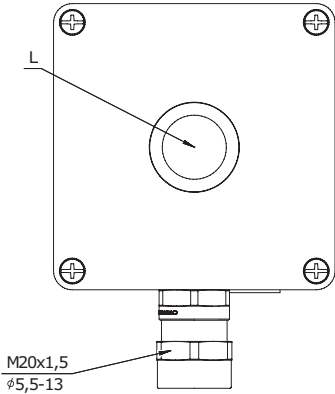
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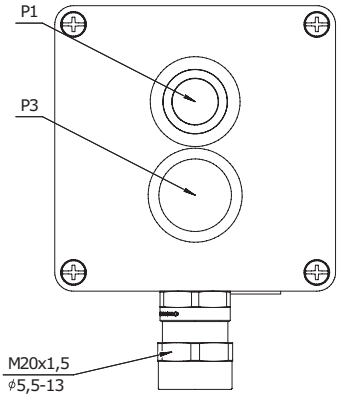
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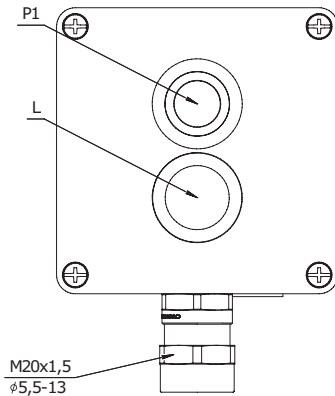
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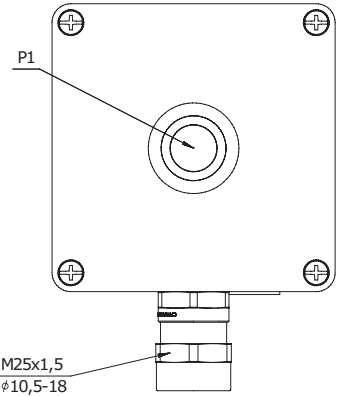
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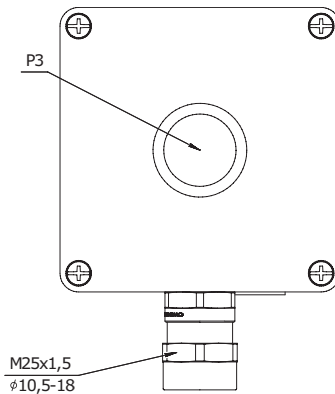
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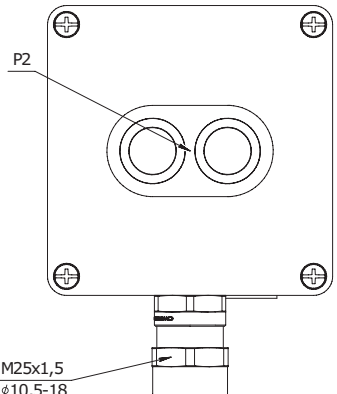
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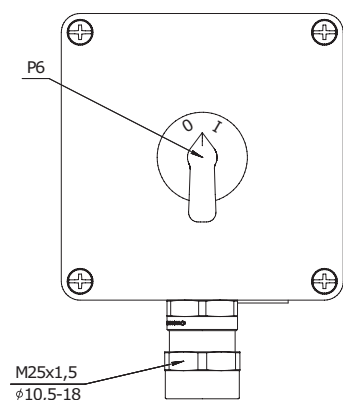
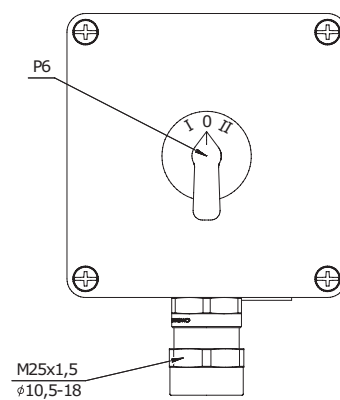
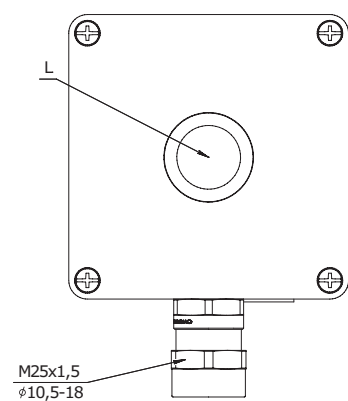
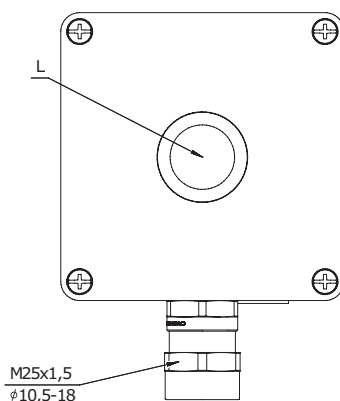
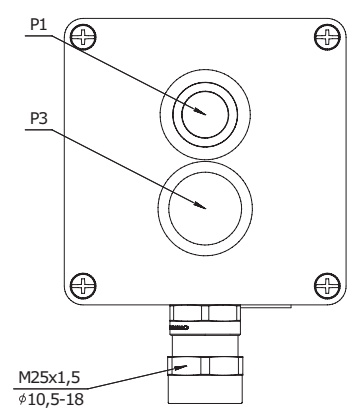
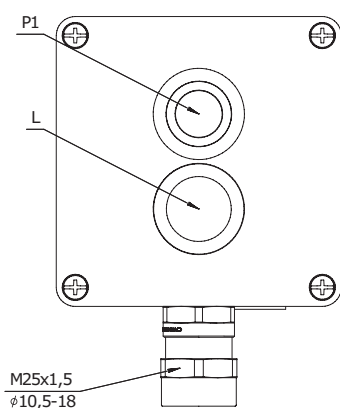


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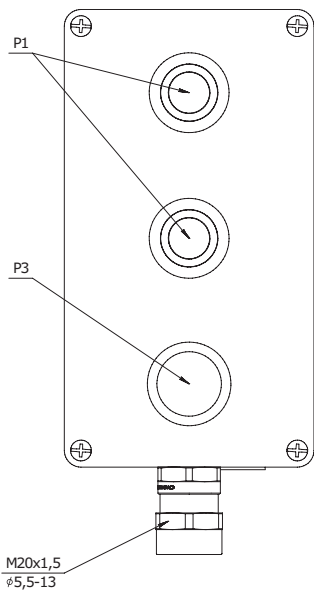


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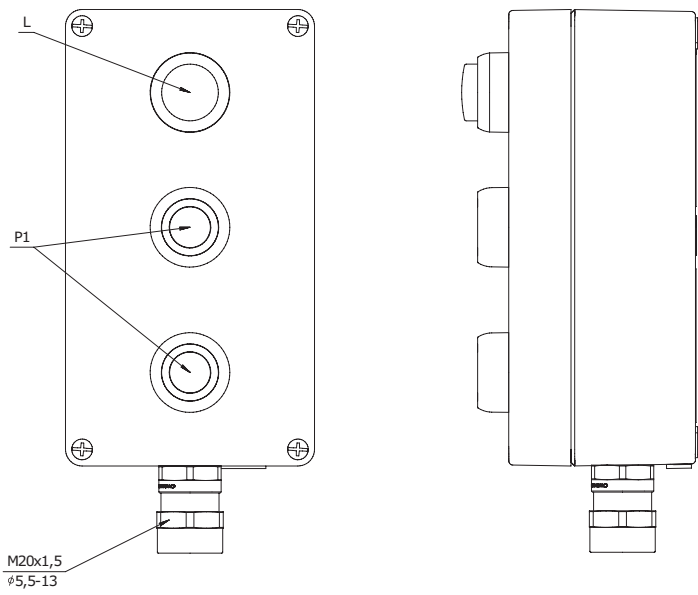


**CPE-A No. 121.00.013**

**CPE-A No. 121.00.014**

**CPE-A No. 121.00.015**

**CPE-A No. 121.00.016**

**CPE-A No. 121.00.017**

**CPE-A No. 121.00.018**


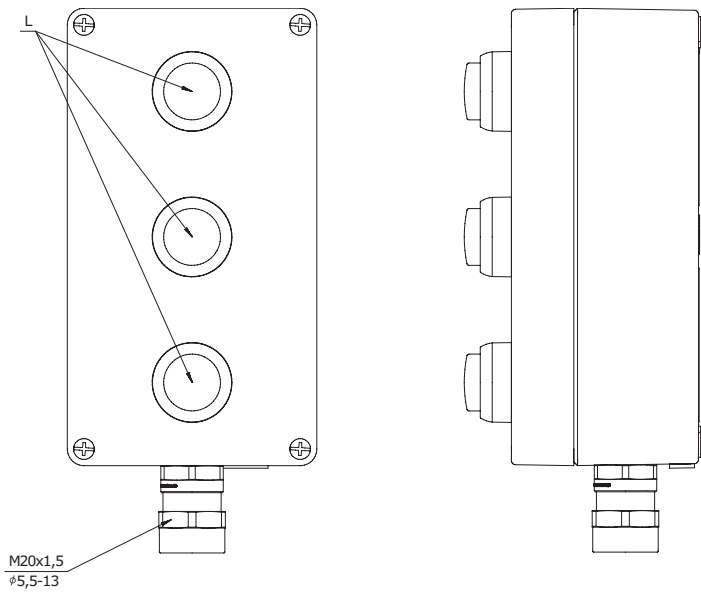
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CPE-A No. 141.00.002



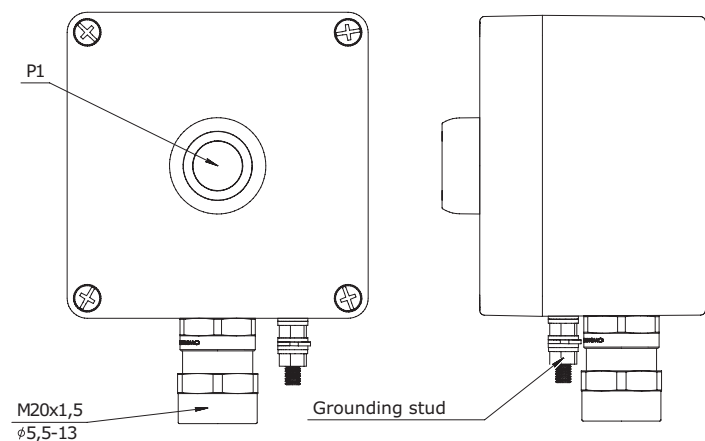
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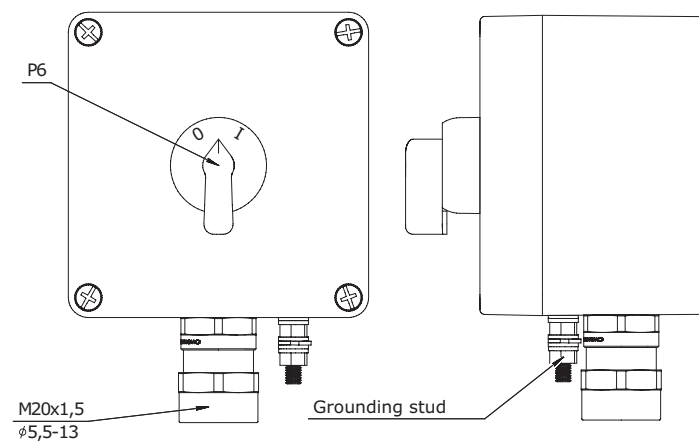
## Annex No. 7

### Drawings of standard sets based on explosion-proof sheaths made of polyester and of AAS series cable glands for an armoured cable

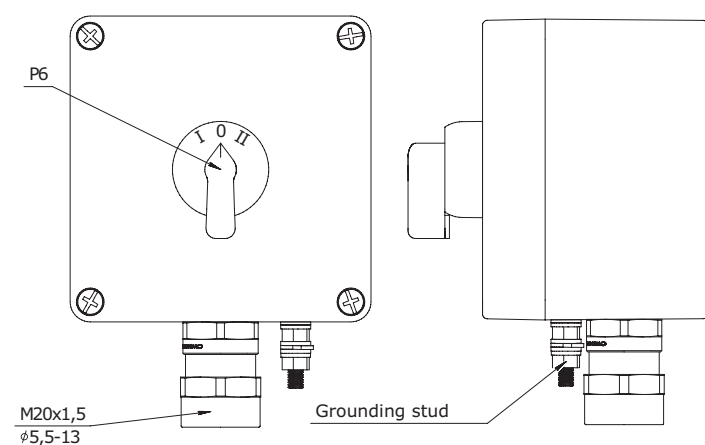
**CPE-P No. 031.00.001**



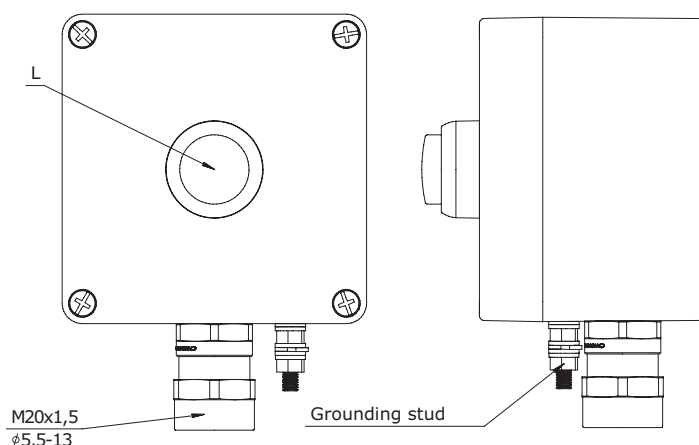
**CPE-P No. 031.00.002**



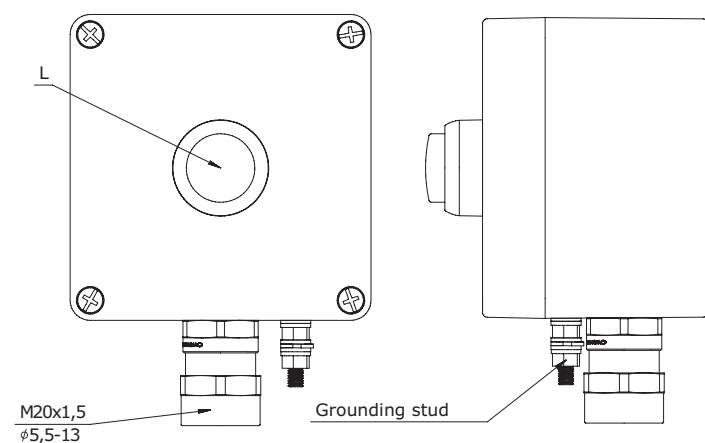
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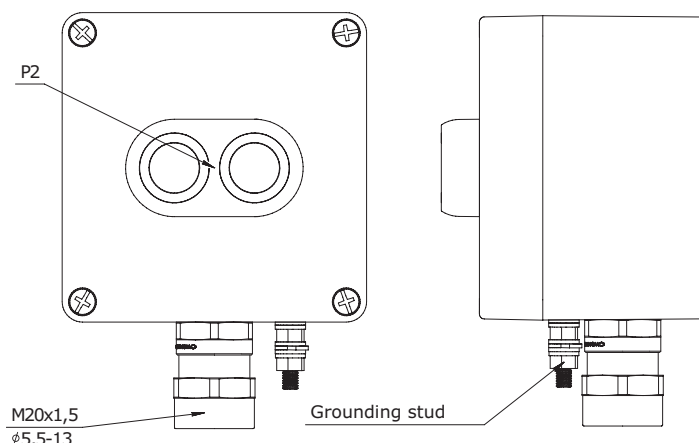
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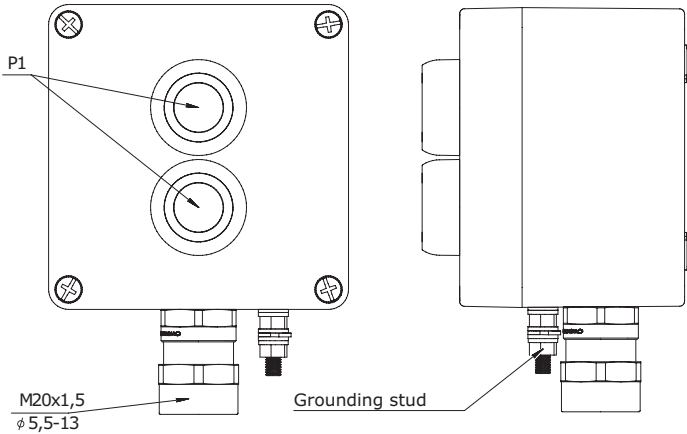
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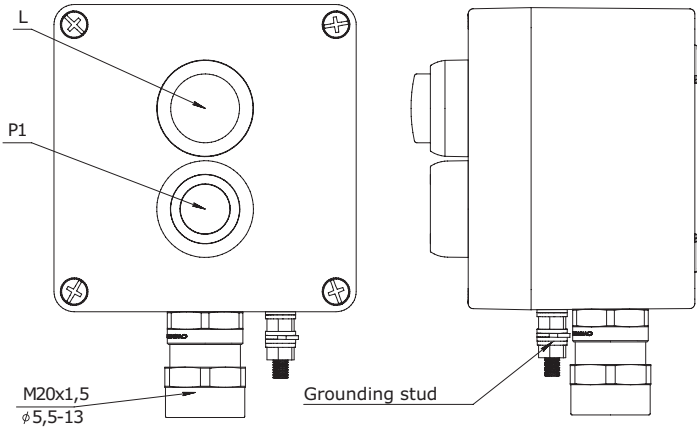
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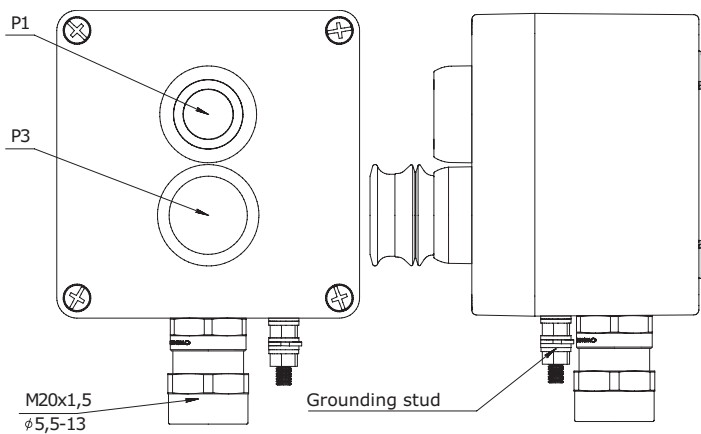
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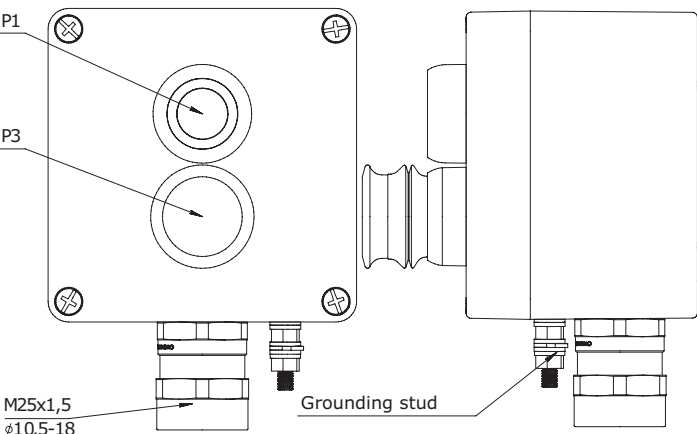
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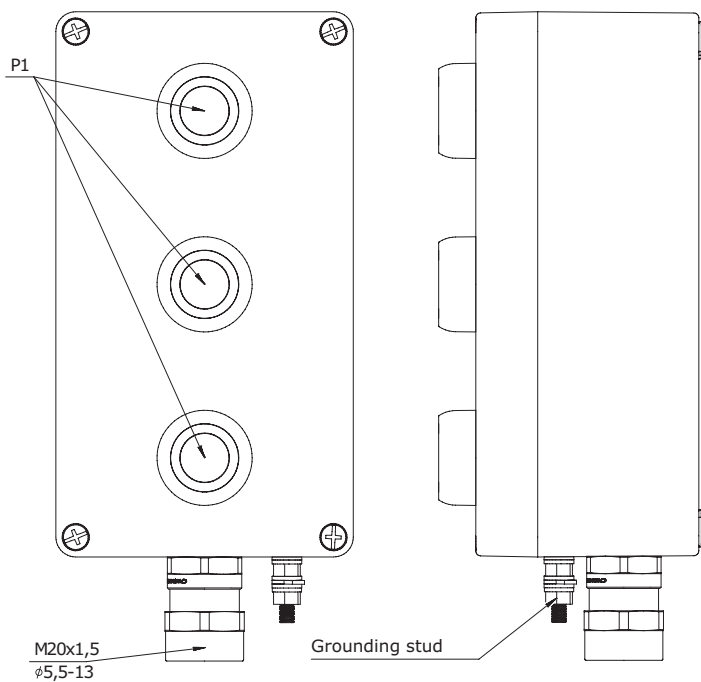
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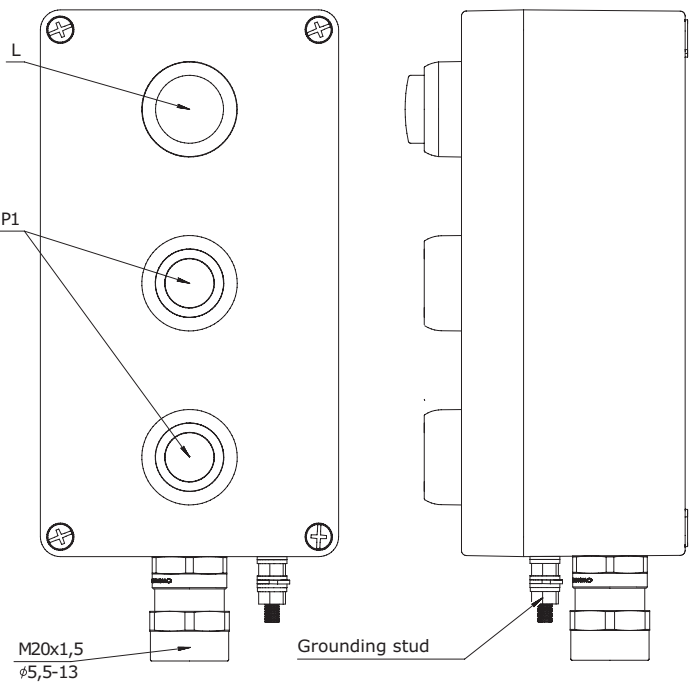
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CPE-P No. 041.00.001



CPE-P No. 041.00.002





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