



Ex

make your work
surroundings safer

TER Ex
2024 / 25

REV.01.2024.EN

About us

TEPEX stands as the regional frontrunner in the manufacture of explosion-protected electrical equipment. By fostering a culture of continuous innovation, exploring new markets, modernizing our technological capabilities, and investing in our workforce and organizational infrastructure, we proudly carry forward a legacy rooted in over 70 years of industry expertise.

TEPEX New factory

We have built a new factory with a total of 3000 sqm of space. Machine processing, assembly, and office spaces. The company employs approximately 40 employees.

TEPEX History

The tradition in the production of Ex products spans over 70 years. TEPEX was a company founded in 1948 and operated until the late 90s.

2024

2008

2002

1948

TEPEX Future

Currently, the company employs over 70 employees. In the meantime, a new hall has been built for logistics purposes (finished product warehouse), and there are plans to construct another production facility (all in the same location).

TEPEX The founding

In 2002, a private independent company, **TEPEX d.o.o.**, was established, and it continued with the production and development of new and modern Ex products.

Our product range is intended for use in potentially explosive environments encompassing gases, vapors, and dust. These encompass a wide spectrum of industries including refineries, offshore installations, petrochemical, chemical, pharmaceutical, food processing, shipbuilding, and mining.

In regions where the specter of explosion exists, the equipment in place must unequivocally guarantee public safety. This duty mandates procurement exclusively from companies equipped to furnish the requisite product certificates affirming conformity with international benchmarks.

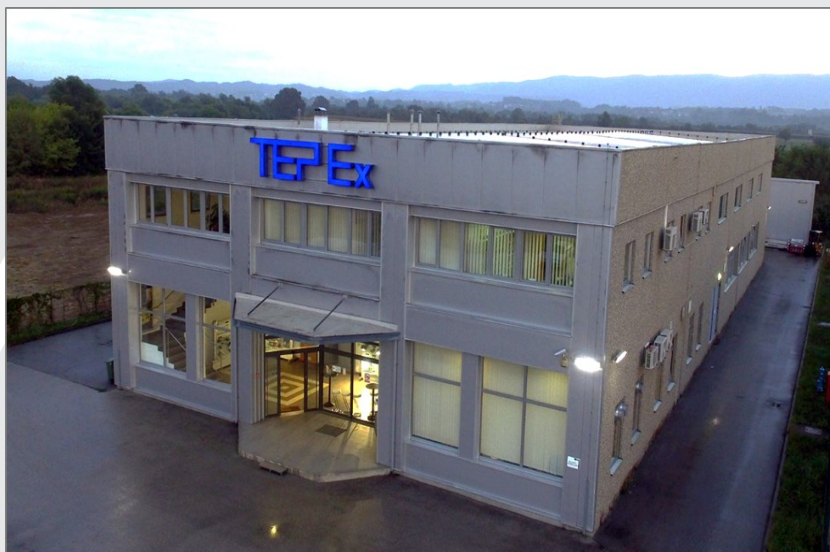
This certification, bestowed by accredited and government-sanctioned laboratories alongside rigorous test reports, substantiates the absolute safety and appropriateness of installation within the designated facility.

In observance of national regulations, all our products and quality assurance systems are accredited by an authorized certification body compliant with the ATEX Directive 2014/34/EU.

TEPEX's dedication extends to securing certificates for the Customs Union uniting the Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the Kyrgyz Republic, and the Russian Federation. The TR CU Certificate of Conformity (EAC Certificate) assumes mandatory status, a prerequisite for customs clearance within the Customs Union. Effective March 15th, 2015, all existing national certificates of conformity from Russia (GOST R), Belarus (STB), and Kazakhstan (GOST K) have been rendered null.

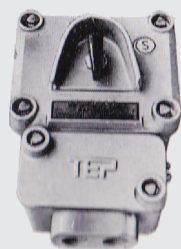
Our production process mirrors the exacting standards outlined in ISO 9001 (Quality Assurance System) and ISO 14001 (Environmental Management System), attesting to our unwavering commitment to delivering products of exceptional quality while vigilantly stewarding our environment.

Built upon an extensive heritage of crafting top-tier explosion-protected electrical equipment, we stand poised to cater to every demand and unique specification of our esteemed clientele. If you require additional insights regarding our products or company, our Communication team is primed to furnish you with professional responses to your inquiries.



Ex products from the middle of the last century

Examples of today's explosion protected products



Production

The electrical equipment installed in areas with risk of explosion must be designed and tested in such way that it does not cause arcing or high temperatures which would provide a source of ignition for such a mix. For this reason, these materials must be provided only by companies able to attach the relevant product certificate of compliance with international standards.

This certificate, issued by competent and government authorized laboratories along with a test report, proves that the product is totally safe and suitable for installation in the concerned plant.

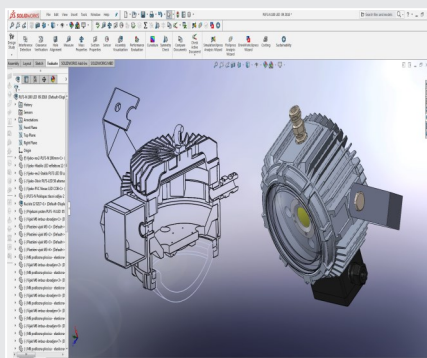
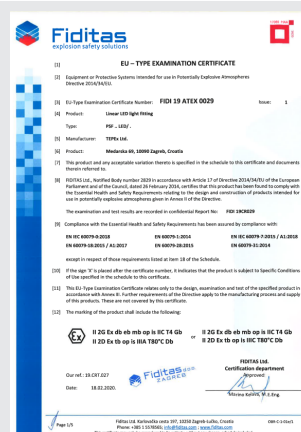
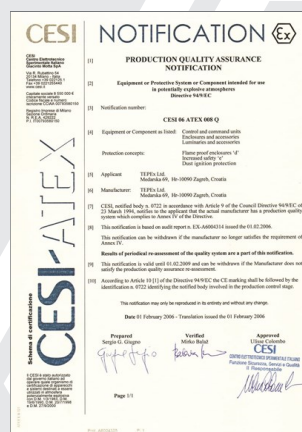
TEPEX Quality System conforms to the requirements:

ISO 9001:2015, ISO 14001:2015

All our explosion protected products are certified in accordance with the European standard

ATEX Directive 2014/34/EU

In the process of development and production TEP Ex's employees use modern production and development tools. Ongoing investment in project development ensures the availability of innovative high-performance products for installation in potentially explosive areas.



Explosion protected LED light fittings

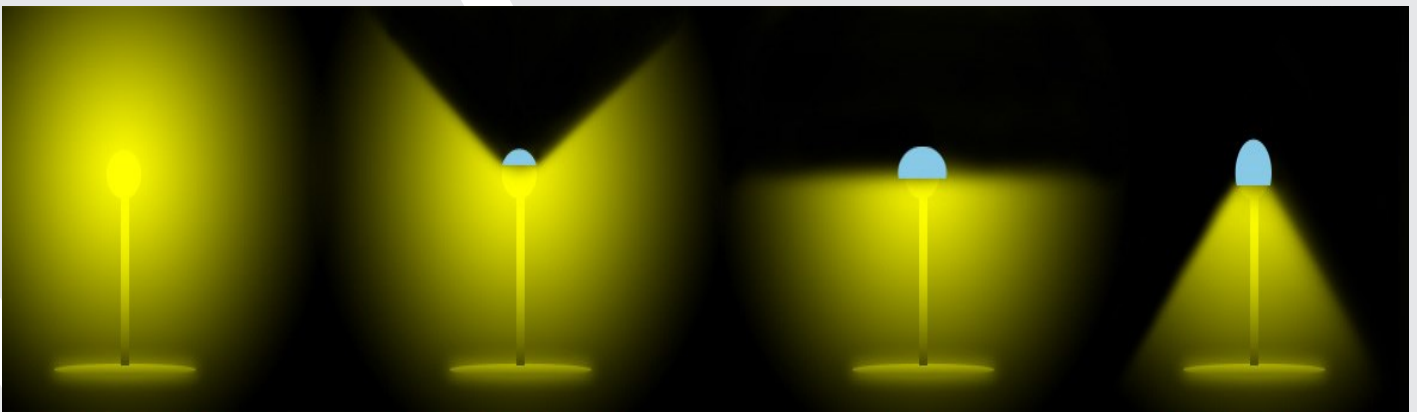
In response to emerging trends in explosion-protected lighting and the introduction of LED sources in hazardous areas, TEPEX took the initiative in 2013 to begin manufacturing Ex light fixtures equipped with LED light sources (FLXE 118 LED). Presently, we offer a variety of Ex-certified LED lamps, including LED floodlight with 320 W, a pendant light with a maximum capacity of 100W, and linear LED light fittings with a maximum capacity of 100W.

**LOW
MAINTENANCE**

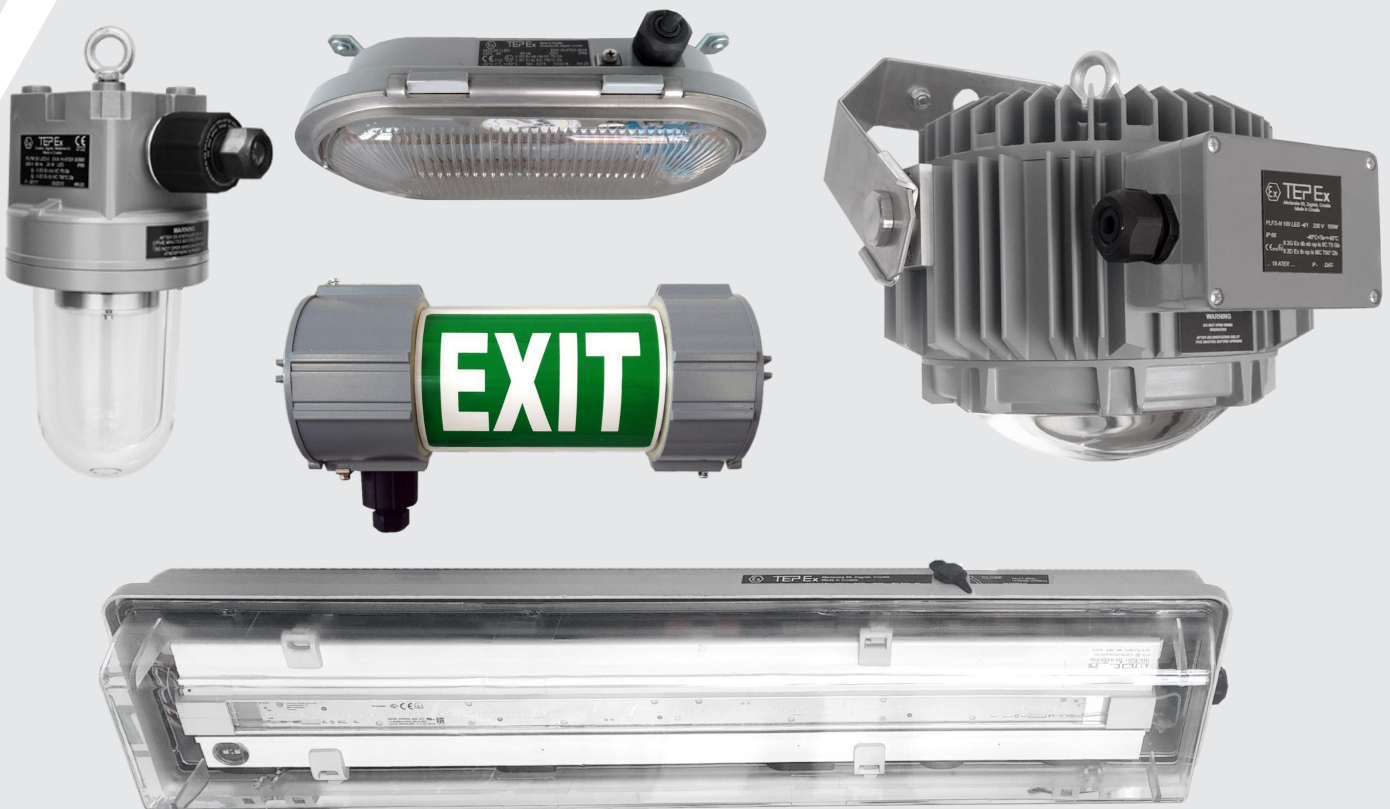
**LONGER
SERVICE LIFE**

**OPERATING
COST SAVING**

**LUMINOUS
EFFICACY**



When conducting light-technical calculations, it's important to consider that LED lighting, which emits directional light, plays a significant role in minimizing atmospheric light pollution and reducing losses caused by light scattering.



Ex BULKHEAD LIGHT FITTINGS, PENDANT LIGHT FITTINGS, FLOODLIGHTS

Bulkhead light fitting 0403.24 LED	13
Pendant light fitting PLFM 20 LED	15
Pendant light fitting PLFS 50 LED	17
Pendant/floodlight PLFS-N 100 LED	19
Floodlight RLF 320 LED	21
Pendant light fitting PLFM	23
Pendant light fitting PLFS-N	27

Ex LINEAR LIGHT FITTING

Linear LED light fitting PSF LED	29
Linear LED light fitting SIF 60 LED	33
Linear LED light fitting SIF LED	35
Linear LED light fitting FLXL LED	37
Fluorescent light fitting PSF	39
Fluorescent light fitting FLX	41
Fluorescent light fitting SIF	43

Ex EMERGENCY LIGHT FITTING

Emergency light fitting FLXE LED	45
Emergency light fitting PSF LED-E	47
Emergency light fitting SIF LED-E	49
Emergency light fitting SIF 60 LED	51

Ex INSTALLATION EQUIPMENT

Junction box RK 01	55
Junction box JBX	59
Installation switch SKX SW	61
Terminal box SKXE	63
Terminal box SKXE INOX (AISI 316L)	73
Busbar enclosure SKX	81
High voltage junction box	85

Ex CONTROL UNITS

BUILT-IN components and indicators	89
Control units SKX 12 SKX 15 / GRP	97
Control units SKX 17.... SKX 20 / GRP	107
Control units SKX 16I SKX 20I / AISI 316L	110
Safety switch R3003/100	111

Ex GROUNDING CONTROL DEVICE

Grounding device GGCD	115
-----------------------	-----

Ex DISTRIBUTION CABINETS

Distribution cabinets R3002....R3006	121
--------------------------------------	-----

Ex PORTABLE LIGHTING, MOTION DETECTOR SENSOR

Torchlights DF, headlamp DS, rechargeable DF	127
Portable floodlight PLFS 50 LED PR	131
Motion detector sensor MDS	133

Ex SIGNALLING DEVICES, PLUGS AND SOCKETS, ACCESSORIES

Signal tower FLXS	135
Plugs and sockets	137
Multicore bushing RSM	143
Cable glands, adapters, reducers, locknuts	145

Explosive atmospheres arise when combustible gases, mists, vapors, or dust particles are combined with air, resulting in a potential explosion hazard. The quantity of a substance required to form an explosive atmosphere varies according to the specific substance. The zones where this risk is present are classified as potentially explosive atmospheres.

These environments are prevalent across various industries, encompassing sectors such as chemicals, pharmaceuticals, food processing, power generation, and wood processing.

These regions are sometimes referred to as "*hazardous areas*" or "*hazardous locations*."

EXPLOSION PROTECTION OVERVIEW

Equipment and products operating in hazardous areas are required to meet stringent criteria. They must be “protected” to avoid the possibility of them becoming a source of ignition.

If the danger of explosion cannot be completely or only partly avoided by measures of preventing the formation of a hazardous explosive atmosphere, then measures must be taken that avoid the ignition of the explosive atmosphere.

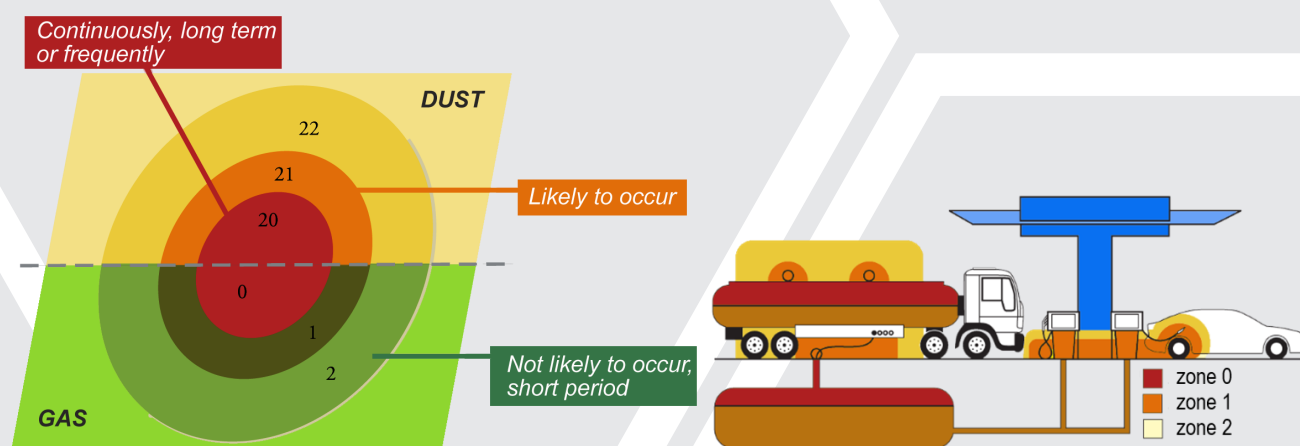
INTEGRATED EXPLOSION PROTECTION

PRIMARY
Preventing the formation of an explosive atmosphere

SECONDARY
Avoidance of the ignition of an explosive atmosphere

TERTIARY
Mitigation of the effects of an explosion to an acceptable extent

CLASSIFICATION OF HAZARDOUS AREAS (according to IEC/EN 60079-10)



ZONES

Zone 0

An area in which an explosive atmosphere consisting of a mixture of air with flammable substances in the form of gas, vapour or mist is present continuously or for long periods or frequently.

Zone 20

An area in which an explosive atmosphere in the form of a cloud of combustible dust in air is present continuously or for long periods or frequently.

Zone 1

An area in which an explosive atmosphere consisting of a mixture of air with flammable substances in the form of gas, vapour or mist is likely to occur in normal operation occasionally.

Zone 21

An area in which an explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur occasionally in normal operation.

Zone 2

An area in which an explosive atmosphere consisting of a mixture of air with flammable substances in the form of gas, vapour or mist is not likely to occur in normal operation, but if it does occur, will persist for a short period only.

Zone 22

An area in which an explosive atmosphere in the form of a cloud of combustible dust in air is not likely to occur in normal operation, but, if it does occur, will persist for a short period only.

Categories / Protection levels / Zones

AREAS	CATEGORIES	EPL	ZONES	EXPLOSIVE ATMOSPHERE
Mining - I	M1	Ma	/	>1,5% CH ₄
	M2	Mb		<1,5% CH ₄
Other than mines - II	1G, 1D	Ga, Da	0, 20	Continuously, long term or frequently
	2G, 2D	Gb, Db	1, 21	Likely to occur
	3G, 3D	Gc, Dc	2, 22	Not likely to occur, short period

Maximum Surface Temperature	450°C						
	300°C						
	200°C						
	135°C						
	100°C						
	85°C						
Temp. Class	T1	T2	T3	T4	T5	T6	
Gas Groups	I	methane					
	IIA	ammonium, ethane, propane, benzene, methanol	ethyl n-butanol, n-butyl alcohol	benzine, kerosene, n-hexane, diesel fuel	etileter, acetilaldehyd, benzaldehyde, dibutyleter, diheksileter	-	-
	IIB	LPG mix	ethylene	hydrogen sulphide	etileter, dietileter	-	-
	IIC	hydrogen	acetylene	-	-	-	carbon disulphide

Dust Groups	
IIIA	Combustible flyings
IIIB	Non-conductive dust
IIIC	Conductive dust

Dust	Flash point [°C]		Minimum ignition energy (cloud) [mJ]	Lower Explosion Limit (cloud) [g/m³]
	layer	cloud		
Cellulose	270	480	80	55
Sugar	400	370	30	45
Starch	380	400	25	25
Wheat	220	500	60	65
Sawdust	260	470	40	35
Aluminum powder	490-700	550-800	15-160	40-140
Zinc	540	690	960	460
Asphalt	550	510	40	35

Degrees of Protection Provided By Enclosure (according to EN 60529 and IEC 60529)

IP 6 6

Ingress Protection

Solid objects protection

- 0 Without protection
- Protected against a solid object greater than 50mm 1
- 2 Protected against a solid object greater than 12,5mm
- Protected against a solid object greater than 2,5mm 3
- 4 Protected against a solid object greater than 1mm
- Dust protected 5
- 6 Dust tight

Liquids protection

- 0 Without protection
- Protected against vertically falling waterdrops 1
- 2 Protected against vertically falling waterdrops up to 15° from the vertical
- Protected against spray of water up to 60° from the vertical 3
- 4 Protected against watersplashed from all direction
- Protected against jets of water from all direction 5
- 6 Protected against powerfull water jets and heavy seas
- Protected against the immersion in water between 15cm and 1m for 30min 7

EXPLOSION PROTECTION OVERVIEW

Types of protection for explosive atmosphere of flammable gases, vapors, mists or dusts EN/IEC 60079-0 - General Requirements					
Type of protection	Standard	Concept	Symbol	Category	EPL
Flameproof enclosure	EN/IEC 60079-1		da, db, dc	1G, 2G, 3G M2	Ga, Gb, Gc Mb
Increased safety	EN/IEC 60079-7		eb, ec	2G, 3G M2	Gb, Gc Mb
Pressurised enclosure	EN/IEC 60079-2		pxb, pyb, pzb	M2, 2G, 3G 2D, 3D	Mb, Gb, Gc Db, Dc
Intrinsic safety	EN/IEC 60079-11		ia, ib, ic	M1, M2, 1G, 2G, 3G 1D, 2D, 3D	Ma, Mb, Ga, Gb, Gc Da, Db, Dc
Type of protection "n"	EN/IEC 60079-15		nA nC nR	3G	Gc
Powder filling	EN/IEC 60079-5		q	M2, 2G, 3G	Mb, Gb, Gc
Liquid immersion	EN/IEC 60079-6		ob, oc	M2, 2G, 3G	Mb, Gb, Gc
Encapsulation	EN/IEC 60079-18		ma, mb, mc	M1, M2, 1G, 2G, 3G 1D, 2D, 3D	Ma, Mb, Ga, Gb, Gc Da, Db, Dc
Protection by enclosures	EN/IEC 60079-31		ta, tb, tc	1D, 2D, 3D	Da, Db, Dc
Optical radiation	EN/IEC 60079-28		op is op pr op sh	1G, 2G, 3G 1D, 2D, 3D	Ga, Gb, Gc, Da, Db, Dc
Type of protection for non-electrical equipment EN 13463-1 / IEC 80079-36					
Flow restricting	EN 13463-2		fr	3G, 3D	/
Flameproof	EN 13463-3		d	M2, 2G	/
Constructional safety	EN 13463-5 prIEC 80079-37		c	M2, 1G, 2G, 3G 1D, 2D, 3D	Mb, Ga, Gb, Gc Da, Db, Dc
Control of ignition sources	EN 13463-6 prIEC 80079-37		b	M2, 1G, 2G, 3G 1D, 2D, 3D	Mb, Ga, Gb, Gc Da, Db, Dc
Liquid immersion	EN 13463-8 prIEC 80079-37		k	M1, M2, 1G, 2G, 3G 1D, 2D, 3D	Ma, Mb, Ga, Gb, Gc Da, Db, Dc
Pressurized	EN/IEC 60079-2		p	M2, 2G, 2D 3G, 3D	/

EQUIPMENT PROTECTION LEVELS (EPL)

Group I (Mining)	Ma	An apparatus for installation in a coal mine with possible presence of firedamp, with a level of protection "very high", which ensures a sufficient safety on the fact that it is not able to become a source of ignition during normal operation, during planned or malfunctions when subject to rare malfunctions even in the case where it is left electrically powered in the presence of a gas leak.
	Mb	An apparatus for installation in a coal mine with possible presence of firedamp, with a security level "high", which ensures a sufficient safety on the fact that it is not able to become a source of ignition during normal operation or during malfunctions envisaged in connection with interval of time that elapses between when there is a release of gas and when the equipment is, as a result of this, interrupted the power supply.
Group II (Gas)	Ga	An apparatus for potentially explosive atmospheres for the presence of gas, with a level of protection "very high", which is not a source of ignition during normal operation, during expected malfunctions or when subject to rare malfunctions.
	Gb	An apparatus for potentially explosive atmospheres for the presence of gas, with a security level "high", which is not a source of ignition during normal operation or during malfunctions provided.
	Gc	An apparatus for potentially explosive atmospheres for the presence of gas, with a level of protection "increased", which is not a source of ignition during normal operation and which presents some additional protective measures to ensure that it remains a source of ignition is not activated in the event of expected events regularly (for example, to the failure of a lamp).
Group III (Dust)	Da	An apparatus for potentially explosive atmospheres for the presence of combustible dust, which presents a protection level "very high", which does not constitute a source of ignition in normal operation, during expected malfunction, or when subject to rare malfunctions.
	Db	An apparatus for potentially explosive atmospheres for the presence of combustible dust, which presents a security level "high", which does not constitute a source of ignition in normal operation or when subject to possible failures.
	Dc	An apparatus for potentially explosive atmospheres for the presence of dust, with a level of protection "increased", which does not constitute a source of ignition during normal operation and which may have additional protections to ensure that it remains a source of ignition inactive in the case of expected events regularly (for example the failure of a lamp).

Typical Electrical Equipment Marking According to 2014/34/EU

ATEX Marks

Marking according to standard

EPL (IEC)



Ex-symbol



II 2 G

Group

Category

Dust - Flammable - Gas

II 2 D

Ex db mb

Protection concept

Dust Group

Ex tb IIIC

IIB T5

Gas Group

Max. surface temperature

Temperature Class

T90 °C

Gb

Dust - Flammable - Gas

Db



TEP Ex ①

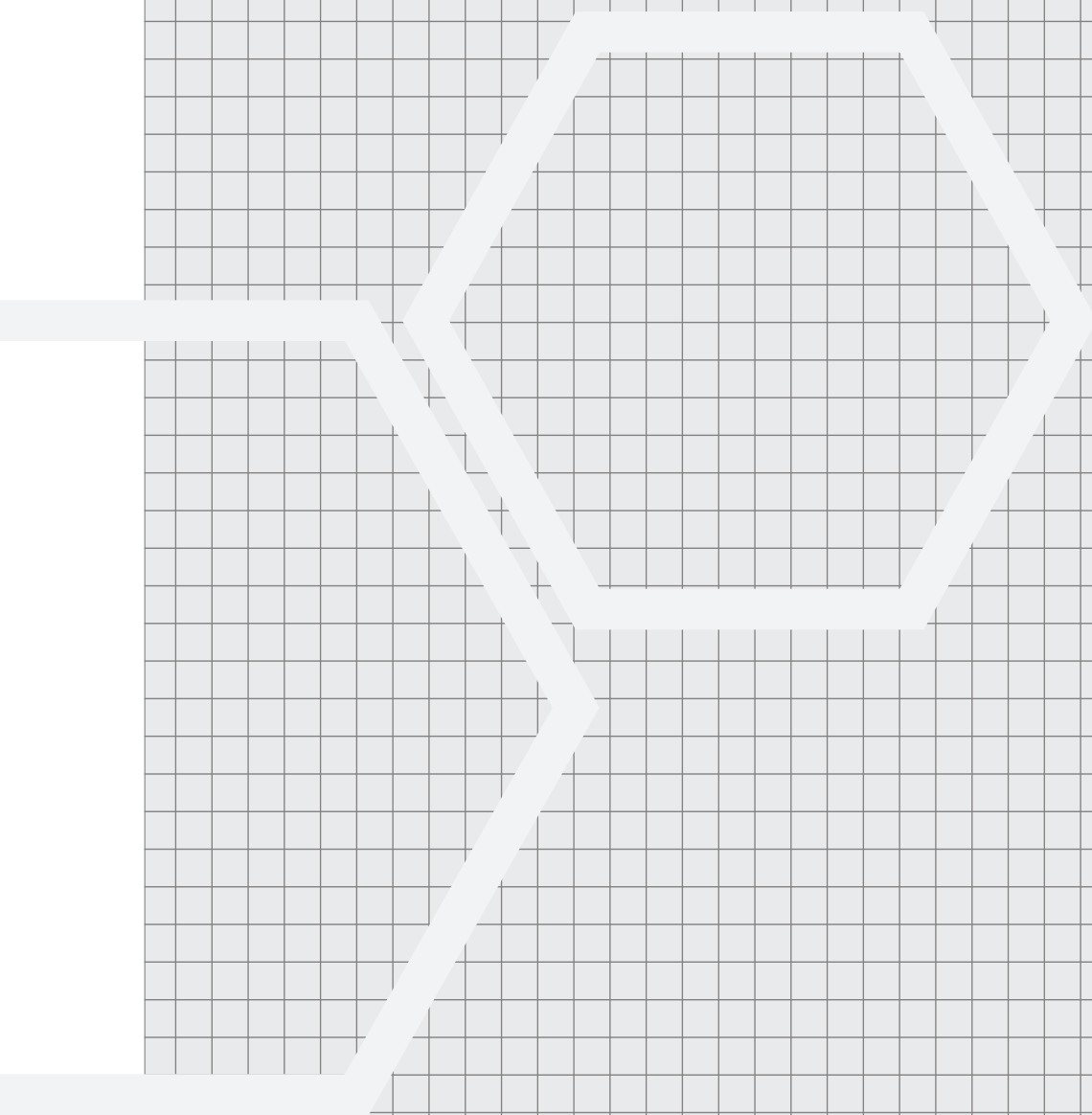
Croatia, Zagreb, Medarska 69
Made in Croatia

PSF 236 ② 230V AC 50Hz ③ 2 x 36W T8 G13 IP55 / IP66

⑥ CE ⑦ 0722 ⑧ Ex ④ II 2G Ex db eb mb IIC T4 Gb ⑤ -30°C ≤ T_a ≤ +50°C ⑧ II 2D Ex tb IIIA/IIIC T80°C Db ⑤ -30°C / -20°C ≤ T_a ≤ +50°C

FIDI 19 ATEX 0007 ⑨ MA - . . . DAT - . . .

No	Description
1	Manufacturer's name and address
2	Product identification
3	Technical data
4	Indication of the Equipment Category and Hazardous Atmosphere
5	Marking of explosion protection
6	Conformity symbol , EU symbol
7	Notified body
8	Standard ambient temperature (-20°C ÷ +40°C), unless otherwise stated on label
9	Certificate number and product number



Light fittings

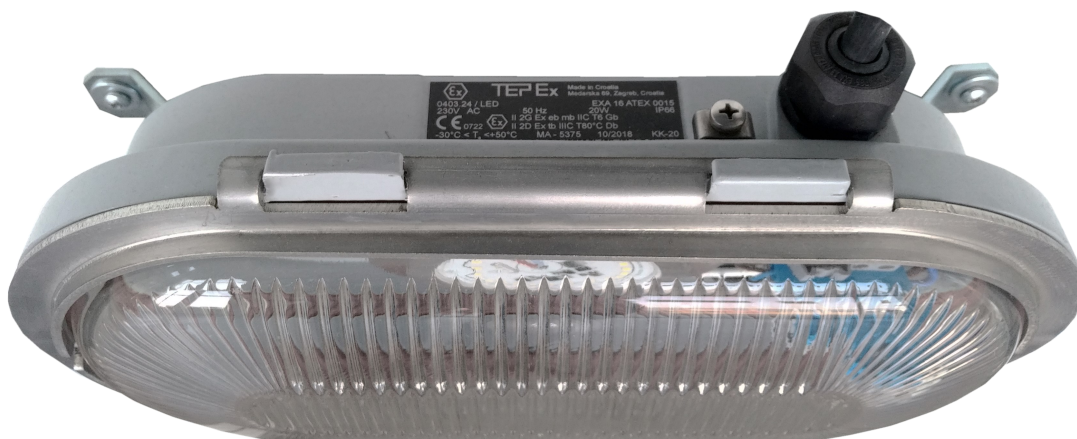


LED

IP 66



0403.24 LED



- Robust light alloy enclosure weighs only 4 kg
- Allowing the user to mount in areas where the available space is restricted
- Estimated service life 70 000 hours
- 6000K, CRI 80

CONSTRUCTION

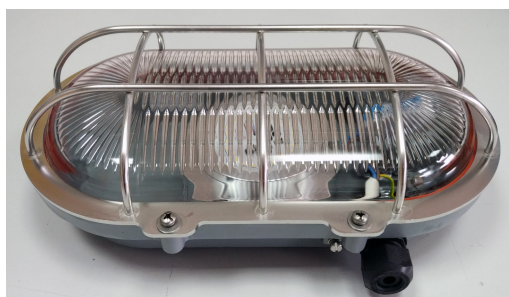
Enclosure: aluminum powder painted casting
 Diffuser: borosilicate glass, silicone gasket
 Protected grid: AISI 316
 Standard version without protective grid

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0059
Marking:	CE 0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex eb mb op is IIC T6 Gb Ex tb op is IIIC T80°C Db
Ambient temperature:	$-30^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$
Degree of protection:	IP 66 category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	24 VAC/DC, 48-96 VAC/DC, 110-240 VAC/DC
Frequency:	50/60 Hz
Rated power:	17 W
Connecting terminals:	terminals L+N+PE , 2 x 4 mm ²
Cable entry:	2x M25 (1x M25 Exe cable gland, 1x Exe M25 plug)
Weight:	4 kg
Packing:	The packing contains: 1 pcs 360x240x205 mm

MOUNTING

Two brackets with two screws M6



make your work surroundings safer

Bulkhead LED light fitting

MODEL CODE

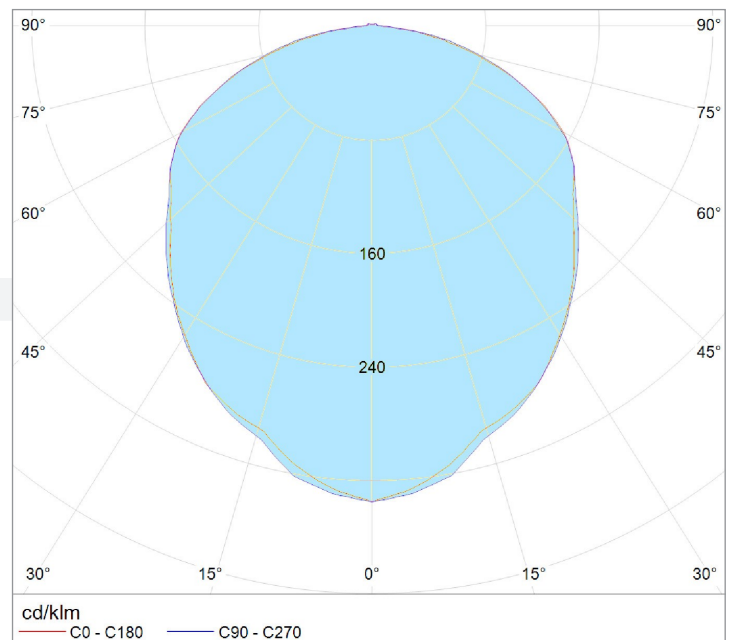
MODEL CODE / glass	Power consumption [W]	Light fitting Luminous flux [lm]	System efficacy [lm/W]
0403.24 LED . -1 / transparent	17 W	2450	122
0403.24 LED . -2 / green		1200	65
0403.24 LED . -3 / red			

MODEL CODE

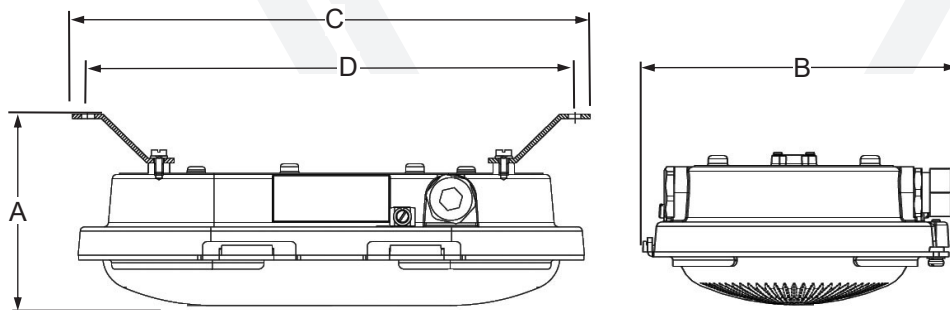
0403.24 LED

: - :
 Basic type code
 Rated voltage
 1 – 24 VAC/DC
 2 – 48-96 VAC/DC,
 3 – 110-240 VAC/DC
 Glass:
 1 – transparent
 2 – green
 3 – red

POLAR CURVE



DIMENSION DRAWING (all dimensions in mm)



A	B	C	D
125	192	350	319

SPARE PARTS AND ACCESSORIES

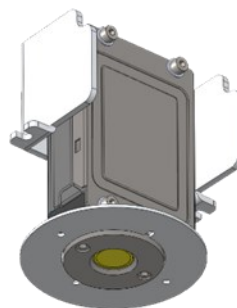
SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	LEDEX 01 17W modul	0403.24 LED 10-110		Ex e cable gland M25	SPU 25
	Gasket 0403.24 LED	0403.24 LED 10-120		Ex e plug M25	SPC 25
	Glass cover	0403.24 LED 10-130		Wall bracket	0403.24 LED 10-160
	Protective grid	0403.24 LED 20-120		Pipe bracket R2"	0403.24 LED 10-170

LED

IP 66



PLFM LED



- Robust light alloy enclosure weighs only 3,5 kg
- Fast and easy installation
- PLFM 100/3 with E27 lampholder for LED bulb
- Estimated service life for LED module 20W ~ 70 000 h
- 4000K , CRI 80

CONSTRUCTION

Enclosure: aluminum powder painted casting

Diffuser: borosilicate glass

Accessories: protective galvanized steel grid (INOX on request), assembly kit for wall, pipe and ceiling mounting

Standard version without protected grid

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0047X
Marking:	CE 0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex db eb op is IIC T6 Gb Ex tb op is IIIC T85°C Db
Ambient temperature:	-20°C ≤ T _a ≤ +40°C
Degree of protection:	IP 66 category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	230 V
Frequency:	50/60 Hz
Rated power:	13 W, 20 W
Connecting terminals:	connection on tree-pole plug inside housing for connection L + N + PE; 2,5mm ²
Cable entry:	1x M20 (1x M20 Ex de adapter ADP 23/1 for cable 7-15mm) Or connection box for through wiring
Weight:	3,5 kg
Packing:	The packing contains: 1 pcs 440x260x170mm

MOUNTING

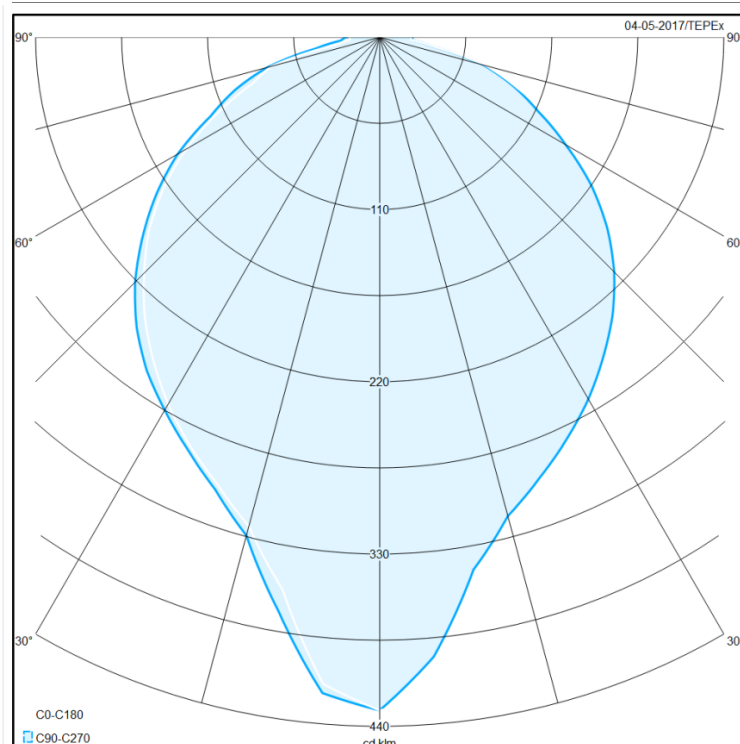
Pendant, on pipe, wall, ceiling

Pendant LED light fitting

MODEL CODE

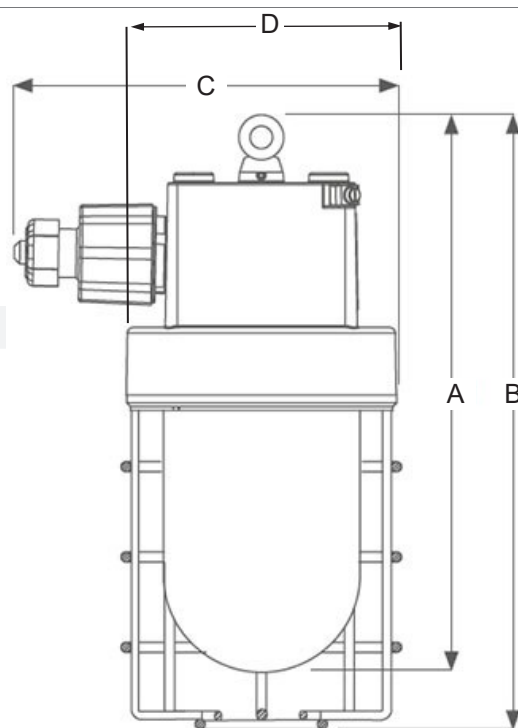
MODEL CODE	Power consumption [W]	Voltage [V]	Light fitting Luminous flux [lm]	System efficacy [lm/W]
PLFM 100/3-.	E27 / 12 W Osram E27 / 13 W Philips	230V	810 1055	70
PLFM 20 LED	18W		2600	120

POLAR CURVE



LED module 20W, 2000 lm

DIMENSION DRAWING (mm)



A	B	C	D
320	345	175	Ø140

SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Replacement glass PLFM	PLFM 10-120		Ex d metal plug M20	SPC 20
	Protective grid PLFM	PLFM 10-130		LED bulb E27	prema tablici izvedbi
	Gasket PLFM	PLFM 10-140		PLFM mounting bracket for pipe R2"	PLFM 20-120
	PLFM LED modul, set	PLFM 10-170		PLFM mounting bracket (ceiling)	PLFM 20-130
	Adapter ADP 23/1	PLFM 20-110		PLFM mounting bracket (wall)	PLFM 20-140

All technical data is relevant at the time of print.

LED

IP 66



IK08



-40 +55



PLFS 50 LED



- High color rendering index CRI 80
- Estimated service life 70 000 hours
- With OVP, OCP, OTP protection
- Autonomous reactivation after recovery
- CCT4000K / other CCT on request
- Frosted front glass on request

CONSTRUCTION

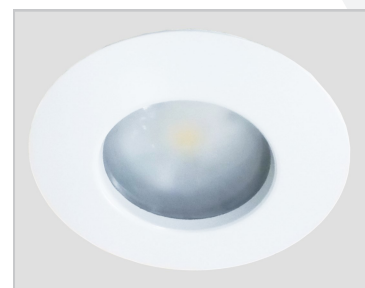
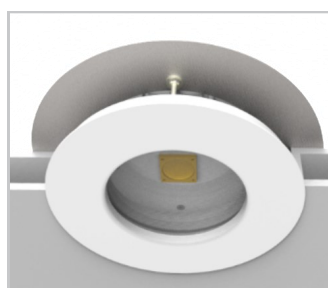
Enclosure: aluminum powder painted casting
 Diffuser: borosilicate glass,
 Accessories: protective galvanized steel gird, assembly kit for wall, pipe and ceiling mounting
 Gasket: silicon

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0030 , FIDI 19 ATEX 0070X
Marking:	CE 0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex db eb op is IIC T6 Gb Ex tb op is IIIC T80°C Db
Ambient temperature ATEX:	-40°C ≤ T _a ≤ +55 / +60°C
Degree of protection:	IP 66 category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	90 - 305 VAC 127 - 431 VDC
Frequency:	50/60 Hz
Rated power:	35 W, 50 W
Connecting terminals:	L1, L2, L3, N; max. 2 x 2,5 mm ²
Cable entry:	2x M25 (1x M25 Ex e cable gland for cable 7-15mm, 1x Exe M25 plug)
Weight:	7,5 kg
Packing:	The packing contains: 2 pcs 560 x 270 x 270 mm

MOUNTING

Pendant, on pipe, wall, ceiling,
 recessed
 (clean room LED light fitting)

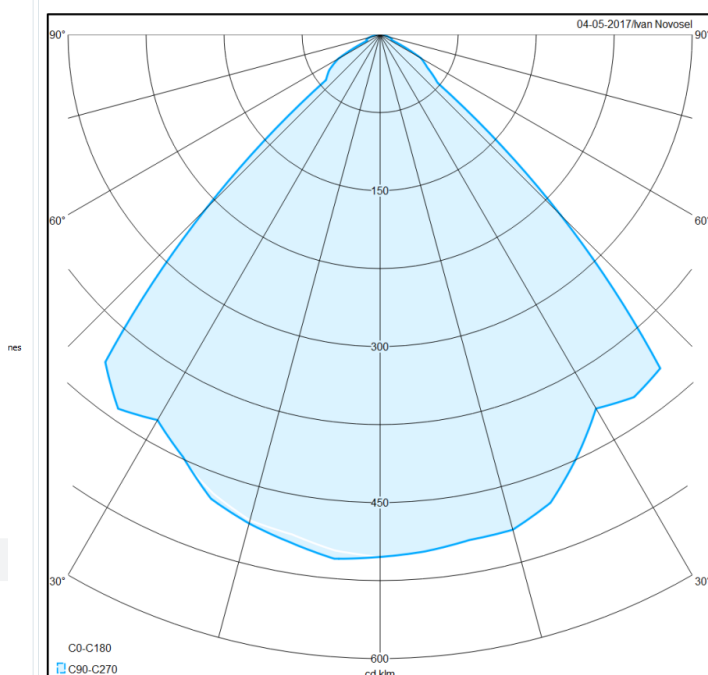


Pendant LED light fitting

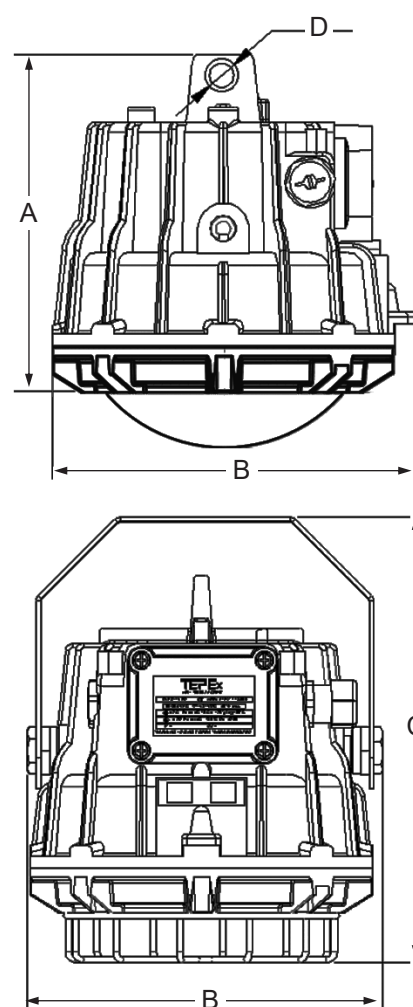
MODEL CODE

MODEL CODE	Power consumption [W]	Voltage [V]	Light fitting Luminous flux [lm]	System efficacy [lm/W]	AMBIENT TEMP.
PLFS 50 LED-1	35 W	90-305 V AC 127-431 V DC	4520	129	-40°C ÷ +60°C
PLFS 50 LED-2	50 W		6460		-40°C ÷ +55°C
PLFS 50 LED-3	60 W		7750		-40°C ÷ +50°C

POLAR CURVE



DIMENSION DRAWING (mm)



A	B	C	D
225	245	300	Ø16

SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Replacement glass PLFS LED	PLFS LED 10-110		PLFS-T fixing bracket for tube R 1 1/2"	PLFS 20-120
	Protective grid PLFS LED	PLFS LED 20-130		PLFS-T mounting bracket (ceiling and wall mounting)	PLFS 20-140
	LED driver	PLFS 50 LED 10-130		Cooler with LED source	PLFS 50 LED 10-150

All technical data is relevant at the time of print.

LED

IP 66

IK08

T_a
-40 +50Ex
ATEX

EAC

- High color rendering index CRI 80
- Estimated service life 70 000 hours
- With OVP, OCP, OTP protection
- Autonomous reactivation after recovery
- CCT4000K / other CCT on request
- Frosted front glass on request

new
LED
more lm/W

PLFS-N 100 LED



CONSTRUCTION

Enclosure: aluminum powder painted casting
 Diffuser: borosilicate glass
 Accessories: protective galvanized steel grid, assembly kit for wall, pipe and ceiling mounting
 Gasket: silicon

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0031
Marking:	CE 0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex db eb op is IIC T6 Gb Ex db eb op is IIB+H ₂ T6 Gb (version with breathing plug) Ex tb op is IIIC T85°C Db
Ambient temperature ATEX:	-40°C / -20°C ≤ T _a ≤ +40 / +50°C
Degree of protection:	IP 66 category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	90 - 305 VAC 127 - 431 VDC
Frequency:	50 / 60 Hz
Rated power:	60 W, 80 W, 100 W
Connecting terminals:	L1, L2, L3, N; max. 2 x 2,5 mm ² PE terminal ; max 2x6mm ²
Cable entry:	Connection box [3L+N+Pe] and true wiring + ISO25metal plug 2x M25 (1x M25 Exd cable gland, 1x Exd M25 plug)
Weight:	9 kg
Packing:	The packing contains: 2 pcs 560 x 300 x 270 mm

MOUNTING

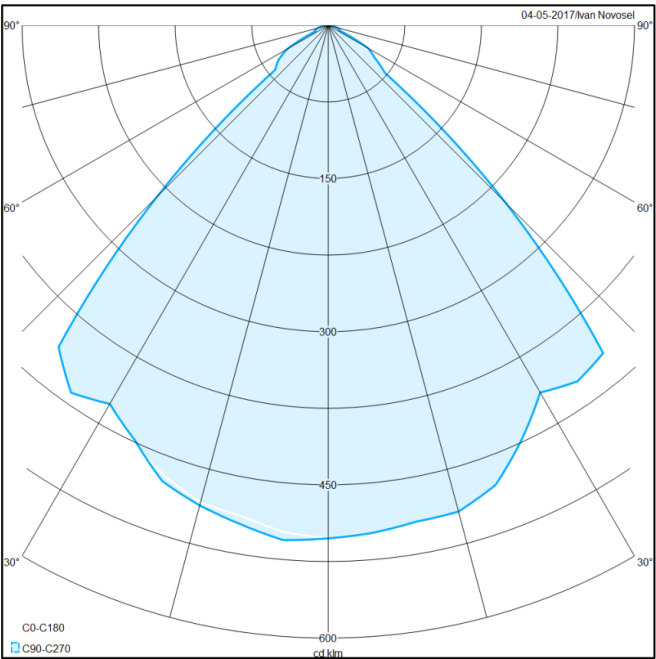
Pendant, on pipe, wall, ceiling

Floodlight LED light fitting

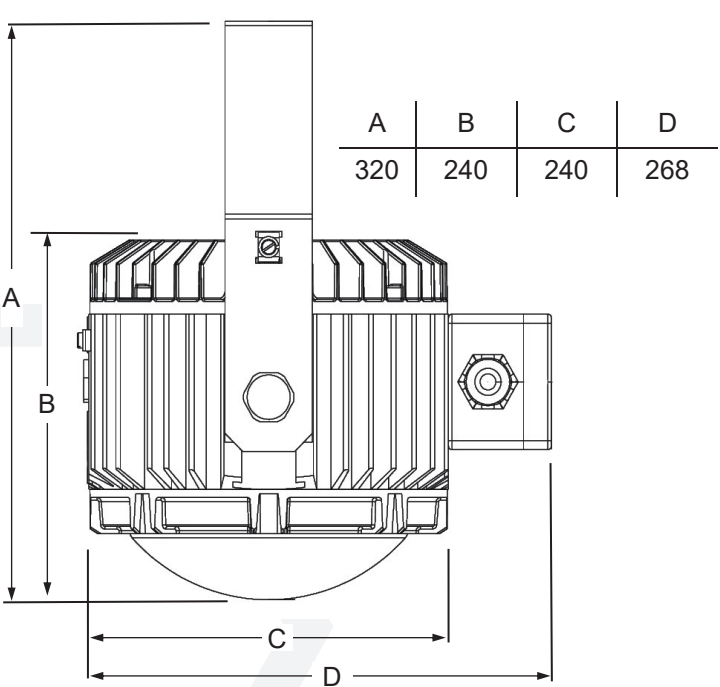
MODEL CODE

MODEL CODE	Power consumption [W]	Voltage [V]	Light fitting Luminous flux [lm]	System efficacy [lm/W]	AMBIENT TEMP.
PLFS-N 100 LED-2	60 W	90-305 V AC 127-431 V DC	7 620	127	-40°C ÷ +50°C
PLFS-N 100 LED-3	80 W		10 150		
PLFS-N 100 LED-4	100 W		12 690		-40°C ÷ +40°C

POLAR CURVE



DIMENSION DRAWING (mm)



MULTI FLOODLIGHTS SOLUTION

MODEL CODE	Power [W]	Light fitting Luminous flux [lm]	WEIGHT [kg]
PLFS-N 2100 LED	2x 80 W	20 300	32
PLFS-N 3100 LED	3x 80 W	30 450	39
PLFS-N 4100 LED	4x 80 W	40 600	48



SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Replacement glass PLFS-N LED	PLFS LED 10-110		PLFS-N fixing bracket for tube R 1 1/2"	PLFS 20-120
	LED Carrier assembly	PLFS LED 10-150		PLFS-N mounting bracket (ceiling and wall mounting)	PLFS 20-130
	Breathing plug	BP 01		LED Driver assembly	PLFS-N 100 LED 10-140

All technical data is relevant at the time of print.

LED

IP 66



IK08

T_a
-40 +50

- High color rendering index CRI 80
- Estimated service life 100000 hours
- With OVP, OCP, OTP protection
- Autonomous reactivation after recovery
- CCT4700K / other CCT on request

RLF 320 LED



CONSTRUCTION

Enclosure: aluminum powder painted casting
 Diffuser: borosilicate glass,
 Accessories: assembly kit for wall, pipe and ceiling mounting
 Gasket: silicon

TECHNICAL DATA

Certificate:	FIDI 23 ATEX 0004
Marking:	CE 0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex db eb op is IIC T4 Gb Ex tb op is IIIC T100°C Db
Ambient temperature ATEX:	-40°C ≤ T _a ≤ +40 / +50°C
Degree of protection:	IP 66 category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	110-240 V ±10%
Frequency:	50 / 60 Hz
Rated power:	250 W, 320 W
Connecting terminals:	L1, L2, L3, N; max. 2 x 2,5 mm ² PE terminal ; max 2x6mm ²
Cable entry:	Connection box [3L+N+Pe] and true wiring + ISO20 metal plug
Weight:	24 kg
Packing:	The packing contains: 1 pcs 650 x 300 x 450 mm

MOUNTING

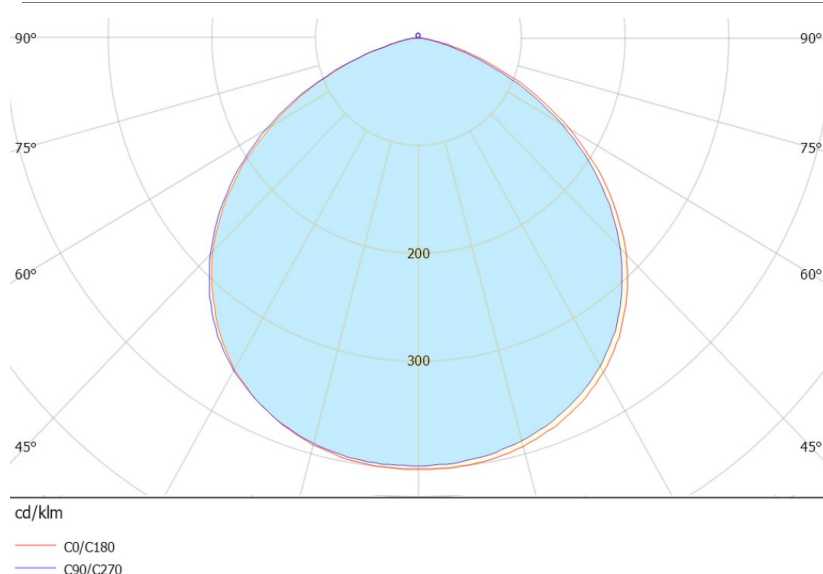
Wall, ceiling

LED Floodlight

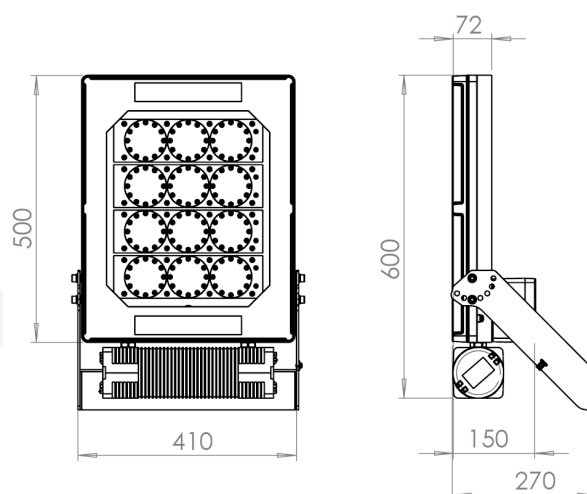
MODEL CODE

MODEL CODE	Power consumption [W]	Voltage [V]	Light fitting Luminous flux [lm]	System efficacy [lm/W]	AMBIENT TEMP.
RLF 320 LED-1	250 W	110-240V	27 000	110	-40°C ÷ +50°C
RLF 320 LED-2	320 W		34 500		-40°C ÷ +40°C

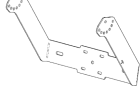
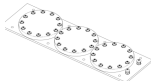
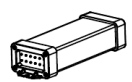
POLAR CURVE



DIMENSION DRAWING (mm)



SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Replacement glass	RLF LED 10-110		Wall/ ceiling mounting bracket	RLF LED 20-110
	LED module LEDEx 04	RLF LED 10-120		Pipe mounting set	RLF LED 20-120
	LED driver	RLF LED 10-130		Connection chamber, set	RLF 320 LED 10-140

All technical data is relevant at the time of print.

E27



IP 66



IK08



- Low weight/3,5 kg
- Up to 70W HSE (5900 lm)

PLFM



CONSTRUCTION

Enclosure: aluminum powder painted casting

Diffuser: borosilicate glass

Accessories: protective galvanized steel grid (INOX on request), assembly kit for wall, pipe and ceiling mounting

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0047
Marking:	CE 0722
Apparatus category:	II 2GD
Marking of explosion protection:	Ex Ex db eb IIC T6-T3 Gb Ex db IIC T6-T3 Gb Ex tb IIIC T85°C - T155°C Db
Ambient temperature:	$-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$ [ATEX]
Degree of protection:	IP 66, category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	230V AC PLFM FLASH - see model code table
Frequency:	50Hz (60Hz on request)
Rated power:	See model code table
Light output ratio:	$\eta=0,75\%$
Cable entry:	Direct entry; 2 x M20x1.5 Indirect entry ; ADP 23/1, Ex e junction box, Ex d metal cable gland M20
Connecting terminals:	L, N, PE; max. 2 x 2,5 mm ² solid, flexible terminal for external -PA connection; max 2x6 mm ²
Weight:	3,5 kg → PLFM 100/., PLFM FLASH-. 4,5 kg → PLFM 20 LED-. , PLFM 70 HSE-.
Packing:	The packing contains: 2 pcs 340x260x170 mm

MOUNTING

Pendant, on pipe, wall, ceiling

Pendant light fitting

PLFM - . /

Light source type:

F – flash,
S – steady

Nominal voltage:

1 – 24 VAC/VDC,
2 – 110 VAC,
3 – 230 VAC

Lens colour:

B – blue, G – green, O – orange/amber,
R – red, T – transparent, Y – yellow

Type of entries:

1 – indirect entry – type with Ex eb junction box,
2 – indirect entry – type with Ex eb/db adapter ADP 23/1,
3 – direct entry – type with M20 Ex db cable gland (standardly supplied with a cable gland type 4F 4114219 but other types are available as well)

Basic model code (according to the table below)

Only for
PLFM FLASH

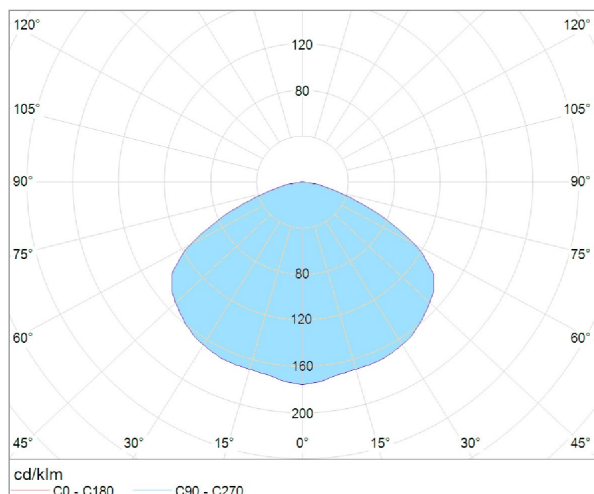
MODEL CODE

Model code	Max. wattage	Lamp type	Nominal voltage	Luminous flux	Lamp holder	Temp. class (gas)	T ₀ MAX (dust)
						T _a =40°C	T _a =40°C
PLFM 100 - .	100 W	A	230V	1340 lm	E27	T4	130°C
	116 W Osram 105 W Philips	A ECO	230 V	2135 lm Osram 1980 lm Philips	E27	T4	130°C
	100 W	QT	230 V	1800 lm Osram	E27	T4	130°C
PLFM 100/1 - .	100 W	LME	230 V, 50 Hz	1100 lm	E27	T3	155°C
PLFM 100/2 - .	22 W Osram 23 W Philips	TC-SB	230 V, 50 Hz	1440 lm	E27	T6	80°C
PLFM 100/3 - .	12 W Osram 13 W Philips	LED	230 V, 50 Hz	810 lm Osram 1055 lm Philips	E27	T6	80°C
PLFM FLASH - .	10 W	LED	24 V DC	~4,2 cd	-	T6	80°C
			110 V AC				
			230 V AC				
PLFM 50 HSE - .	50W	HSE	230 V, 50 Hz	3600 lm Osram 3500 lm Osram	E27	T4	130°C

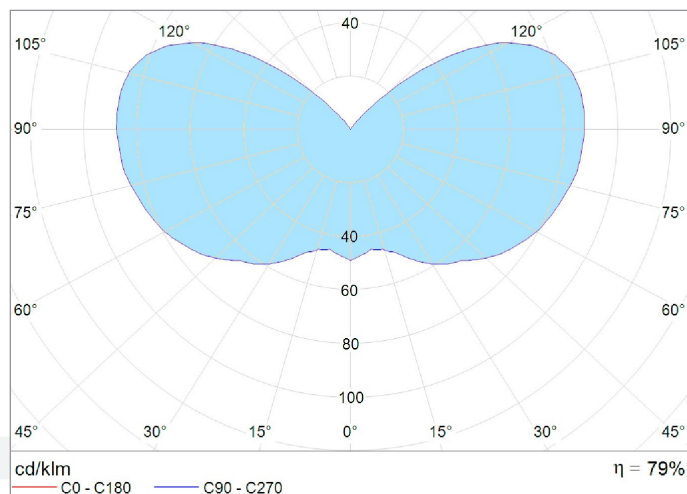


All technical data is relevant at the time of print.

POLAR CURVE

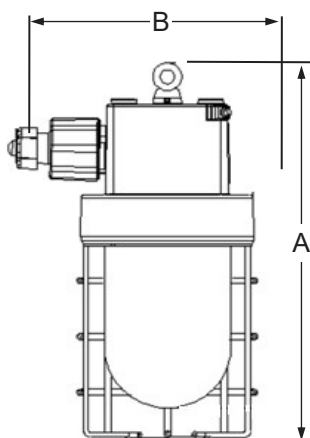
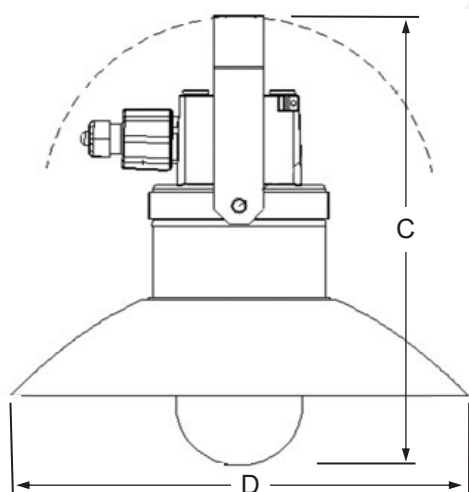


PLFM 100-., PLFM 50 HSE
With external reflector



PLFM 100-., PLFM 50 HSE
Without external reflector

DIMENSION DRAWING (all dimensions in mm)



A	B	C	D
340	175	380	Ø370

SPARE PARTS AND ACCESSORIES

Sketch	Description	Code	Sketch	Description	Code
	Replacement glass PLFM	PLFM 10-120		Ex e cable gland M25	SPU 25
	Protectivr grid PLFM	PLFM 10-130		Ex e plug M25,	SPC 25
	Gasket PLFM	PLFM 10-140		Light bulb	According to type table
	Lampholder with internal reflector	PLFM 10-150		PLFM fixing bracket for tube R 2"	PLFM 20-120
	Ballast set	PLFM 10-170		PLFM mounting bracket (ceiling mounting)	PLFM 20-130
	Adapter ADP 23	PLFM 20-110		PLFM mounting bracket (wall mounting)	PLFM 20-140



E27/E40

IP 66



IK08



ATEX



EAC

- Heavy duty construction, aluminium enclosure and borosilicate glass
- Up to:
- 150W HIE
12500 lm
- 150 HSE (E40)
17000 lm

PLFS-N



CONSTRUCTION

Enclosure: aluminum powder painted

Diffuser: borosilicate glass

Accessories: protective galvanized steel grid, assembly kit for wall, pipe and ceiling mounting

TECHNICAL DATA

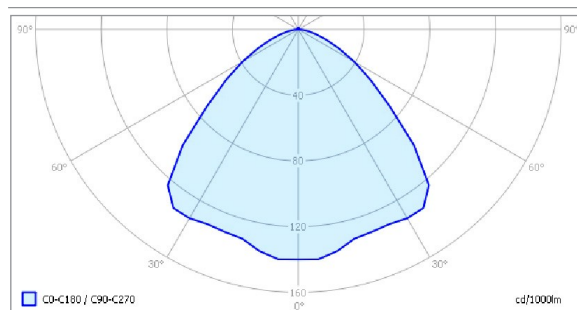
Certificate:	FIDI 19 ATEX 0036
Marking:	CE 0722
Apparatus category:	II 2GD
Marking of explosion protection:	 II 2G Ex db eb IIC T6-T3 Gb II 2G Ex db IIC T6-T3 Gb II 2D Ex tb IIIC T85°C – T195°C Db
Ambient temperature:	-40°C ≤ Ta ≤ +40°C / +50°C [ATEX]
Degree of protection:	IP 66/67, category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	230 V (other voltage on request)
Frequency:	50Hz (60Hz on request)
Rated power:	See model code table
Light output ratio:	η=0,66% - 0,75%
Cable entry:	Direct entry; 2 x M25x1.5 Indirect entry ; ADP 23/1, Ex e junction box, Ex d metal cable gland M25
Connecting terminals:	L + N + PE, 0,5- 4mm ²
Weight:	8,6 kg
Packing:	The packing contains: 1 pcs 500x300x500 mm

Pendant light fitting

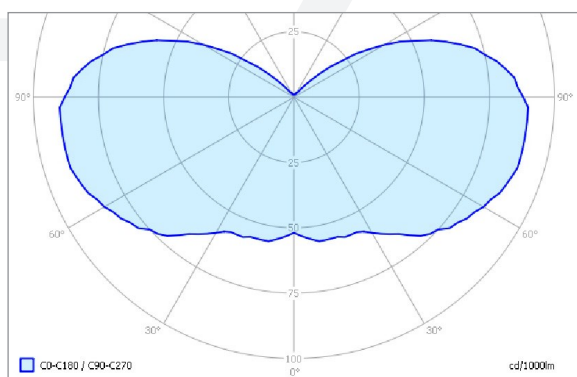
MODEL CODE

Model code	Max. wattage and LBS (ZVEI) type of lamps	Lamp holder	Temp. class (gas)		T ₀ MAX (dust)		Light bulb flux [lm]
			T _a =40°C	T _a =50°C	T _a =40°C	T _a =50°C	
PLFS-N./30 TC-SB	30W TC-SB	E27	T6	-	85°C	-	2000
PLFS-N./160 LME	160W LME		T5	T4	95°C	130°C	3100
PLFS-N./150 QT	150W QT		T4	T4	130°C	130°C	2870
PLFS-N./205 QT	205W QT		T3	-	195°C	-	4200
PLFS-N./70 HSE/I	70W HSE/I		T5	T4	95°C	130°C	5900
PLFS-N./125 HME	125W HME		T4	T4	130°C	130°C	6300
PLFS-N./110 HSE	110W HSE Plug-in		T5	T4	95°C	130°C	8000
PLFS-N./70 HIE,HSE	70W HIE 70W HSE		T5	T4	95°C	130°C	5900 6300
PLFS-N./100 HIE	100W HIE	E27	T5	T4	95°C	130°C	8075
PLFS-N./100 HIE,HSE	100W HIE	E40	T5	T4	95°C	130°C	-
	100W HSE						10400
PLFS-N./150 HIE	150W HIE	E27	T4	-	130°C	-	12100
PLFS-N./150 HIE,HSE	150W HIE	E40	T4	-	130°C	-	-
	150W HSE						17000

POLAR CURVE

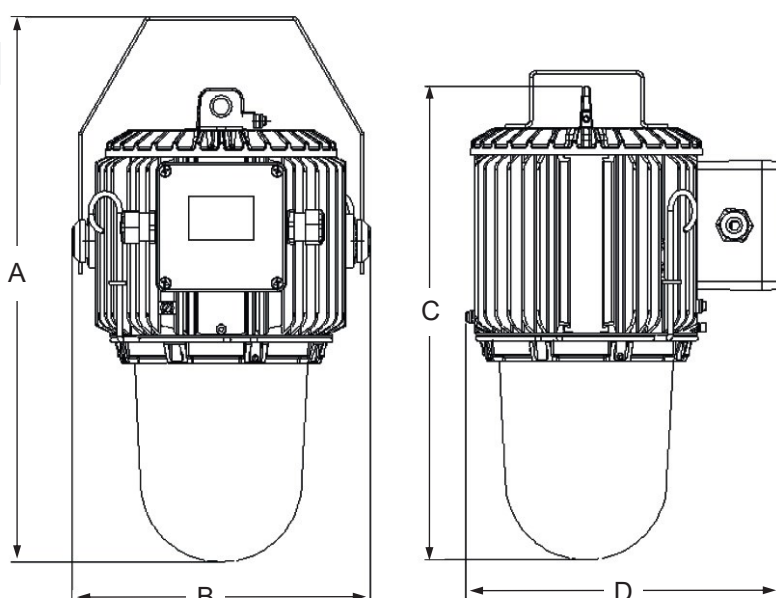


With external reflector



Without external reflector

DIMENSION DRAWING (all dimensions in mm)



A	B	C	D
500	275	440	290

SPARE PARTS AND ACCESSORIES

Sketch	Description	Code	Sketch	Description	Code
	Replacement glass PLFS-N	PLFS-N 10-110		PLFS-N external reflector, wide	PLFS-N 20-140
	Protective grid PLFS-N	PLFS-N 20-110		PLFS-N fixing bracket for tube R 1 1/2"	PLFS-N 20-130
	Base plate with lamp holder, ballast	PLFS-N 10-130		PLFS-N mounting bracket (ceiling and wall mounting)	PLFS-N 20-120

All technical data is relevant at the time of print.

LED

IP 66



PSF LED



CONSTRUCTION

Enclosure: SMC polyester plastic reinforced with glass fiber, color RAL 7038

Diffuser: PC polycarbonate plastic

Gasket: silicone

Central locking: can be opened/closed using a socket key SW8, hinged lamp cover

The light fitting is normally supplied with socket key, two Ex eb cable glands M25, two Ex eb plugs M25 and with mounting set PSF 30-110

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0029 EAC RU C-HR.HB07.B.00276/20
Marking:	CE 0722
Apparatus category:	II 2GD, I M2 (for PSF 28 LED-M)
Marking of explosion protection:	Ex db eb mb op is IIC T4 Gb Ex tb op is IIIA/IIIC T80°C Db Ex db eb mb I Mb
Ambient temperature:	-30°C ≤ T _a ≤ +55°C -30°C ≤ T _a ≤ +40°C
Degree of protection:	IP 66 category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	100-305 VAC / 142-431 VDC
Frequency:	50/60 Hz
Rated power:	See model code table
Estimated service life:	L70B10C10: T _{amb max} 35 000 h T _{amb max -10°C} 60 000 h T _{amb max -20°C} 70 000 h
Connecting terminals:	L1, L2, L3, N, PE - max. 2,5 mm ²
Cable entry:	Two entries Ex eb M25x1,5 for cable diameters Ø7-15 mm, and two Ex eb plugs
Packing:	The packing contains: 1 pcs PSF 70 LED: 1700 x 290 x 180 mm PSF 52 LED: 1450 x 290 x 150 mm PSF 28 LED: 800 x 290 x 150 mm

- Central locking with internal switch
- Through-wiring
- LED modules with innovative encapsulation
- Estimated service life up to 70 000 hours
- High color rendering index CRI 80
- With OVP, OCP, OTP protection
- Autonomous reactivation after recovery
- Color temperature: 4300K / other CCT on request (5000K, 6300K)
- DALI for controlling and monitoring the luminaire on request

Linear LED light fitting

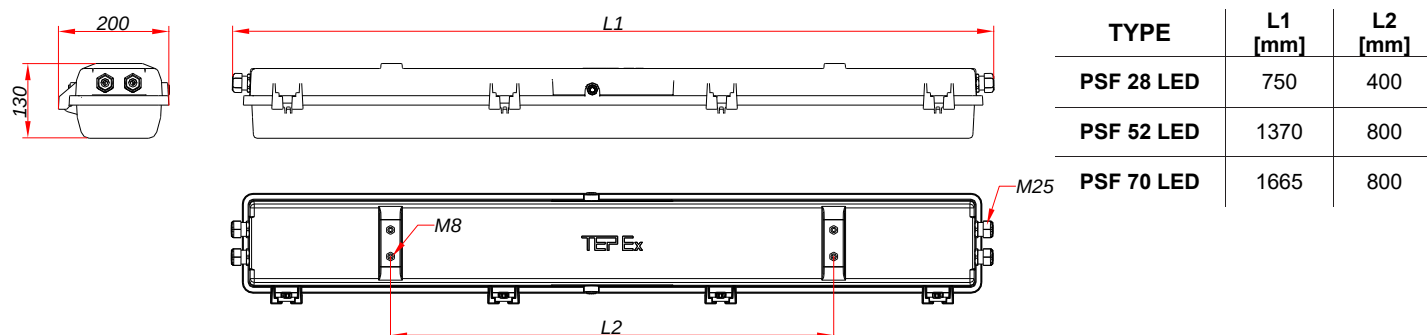
MODEL CODE

MODEL CODE	Power consumption [W]	Voltage [V]	Light fitting Luminous flux [lm]	System efficacy [lm/W]	AMBIENT TEMP.	WEIGHT [kg]
PSF 28 LED-2	37 W	100-305 VAC 142-431 VDC	4880 lm	132	$-30^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$	8,0
PSF 52 LED-2	70 W		9390 lm			12,0
PSF 70 LED-2	90 W		11 800 lm			14,0

Version for the ambient temperature $T_a \leq +55^{\circ}\text{C}$

PSF 28 LED-1	28 W	100-305 VAC 142-431 VDC	3820 lm	136	$-30^{\circ}\text{C} \leq T_a \leq +55^{\circ}\text{C}$	8,0
PSF 52 LED-1	52 W		7110 lm			12,0
PSF 70 LED-1	70 W		9400 lm			14,0

DIMENSION DRAWING (mm)

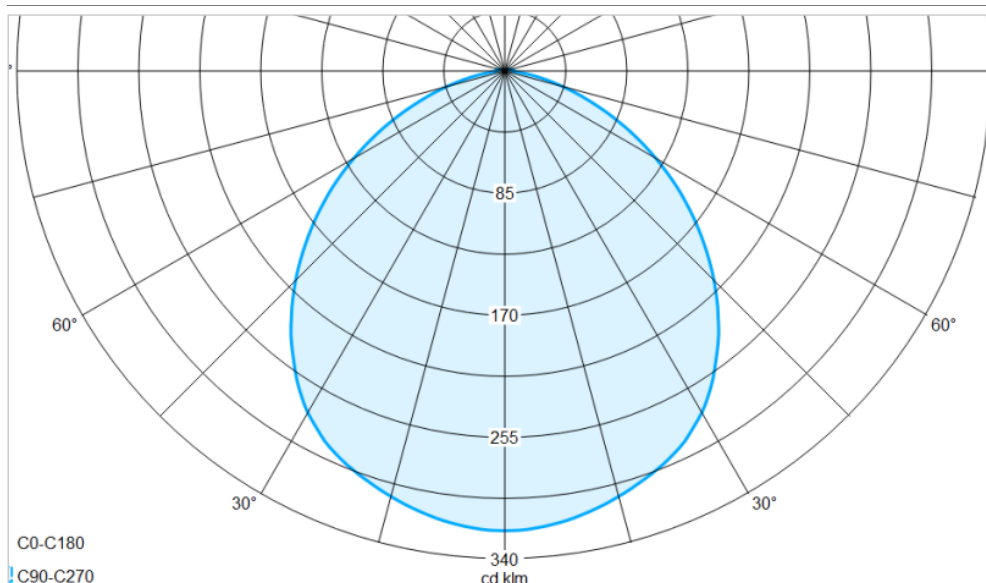


SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Diffuser PSF	PSF LED 28 10-120 PSF LED 52 20-120		PSF Wall / Ceiling mounting set	PSF 30-110
	Gasket PSF	PSF LED 28 10-130 PSF LED 52 20-130		PSF Pipe mounting set	PSF 30-120
	Internal reflector with LED module	LEDEx 03/28 LEDEx 03/52 LEDEx 03/70		PSF Wall / Ceiling mounting set	PSF 30-130
	LED driver	DRIVEx 01/28 DRIVEx 01/52		Pendant mounting set	PSF 30-150
	LED diffuser	PSF 52 LED 30-180 PSF 28 LED 30-185		Socket key SW8	PSF 20-160
	Flexible mounting kit for PSF LED	PSF 52 LED 30-190 PSF 28 LED 30-195 PSF 70 LED 30-200		Metal cable glands for armoured cable M25	PSF 30-160

All technical data is relevant at the time of print.

POLAR CURVE



MOUNTING

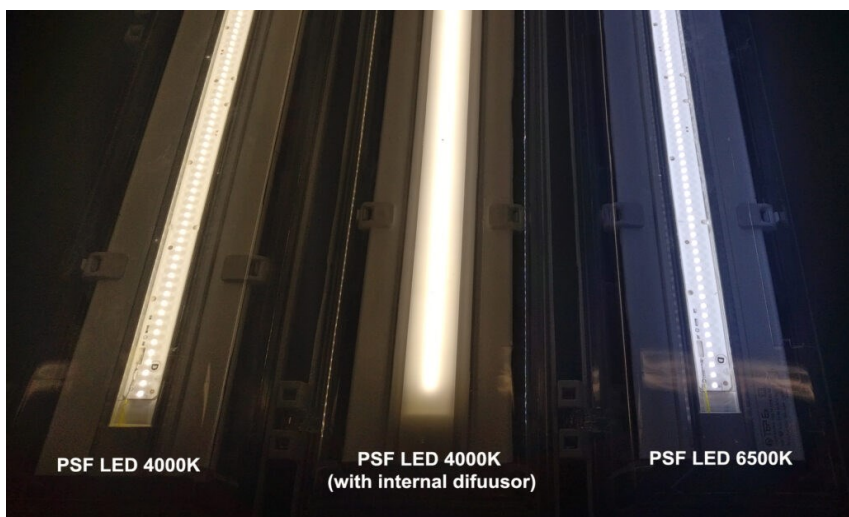
Pendant, on pipe, wall, ceiling

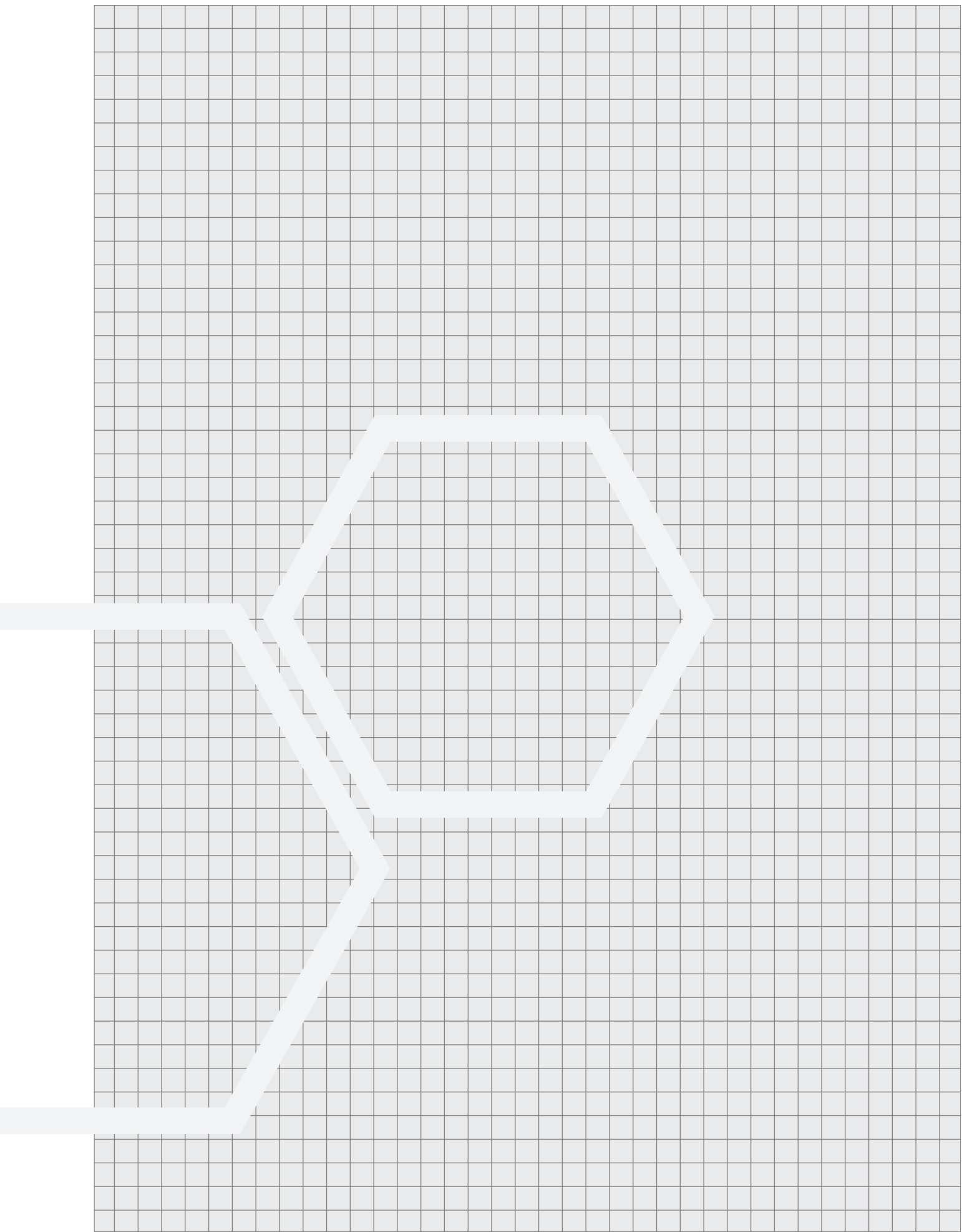


Flexible mounting kit for PSF LED



Linear LED without and with LED diffuser





All technical data is relevant at the time of print.

LED

IP 66



IK08



SIF 60 LED



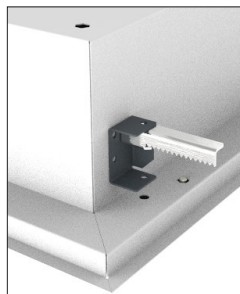
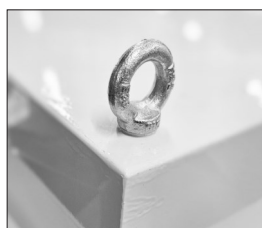
CONSTRUCTION

Enclosure: Epoxy/polyester powder-coated sheet steel
 Diffuser: flat borosilicate glass with a high thermal and mechanical stability
 Gasket: EPDM formed gasket
 The light fitting is normally supplied with two Ex eb cable glands M25, two Ex eb plug M25

TECHNICAL DATA

Certificate:	FIDI 23 ATEX xxxx						
Marking:	CE 0722						
Apparatus category:	II 2GD						
Marking of explosion protection:	Ex db eb mb IIC T5 Gb Ex tb IIIC T80°C Db						
Ambient temperature:	$-20^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$						
Degree of protection:	IP 66, category 1						
Resistance to shock:	IK 08						
Protection class :	I (protective earthing)						
Rated voltage:	110-240 VAC / 220-250 VDC						
Frequency:	50/60 Hz						
Estimated service life:	L70B10C10: <table> <tr> <td>$T_{\text{amb max}}$</td><td>35 000 h</td></tr> <tr> <td>$T_{\text{amb max } -10^{\circ}\text{C}}$</td><td>60 000 h</td></tr> <tr> <td>$T_{\text{amb max } -20^{\circ}\text{C}}$</td><td>70 000 h</td></tr> </table>	$T_{\text{amb max}}$	35 000 h	$T_{\text{amb max } -10^{\circ}\text{C}}$	60 000 h	$T_{\text{amb max } -20^{\circ}\text{C}}$	70 000 h
$T_{\text{amb max}}$	35 000 h						
$T_{\text{amb max } -10^{\circ}\text{C}}$	60 000 h						
$T_{\text{amb max } -20^{\circ}\text{C}}$	70 000 h						
Connecting terminals:	Terminal L1+L2+L3+ N + PE; max 2 x 4 mm ² , Terminal for protective earthing -PE; max 2 x 6 mm ²						
Cable entry:	Two entries Ex e M25x1,5 for cable diameters Ø7-15 mm, and two Ex eb plugs						

MOUNTING recessed / Ceiling cut-out 575x575 ±4 mm, pendant



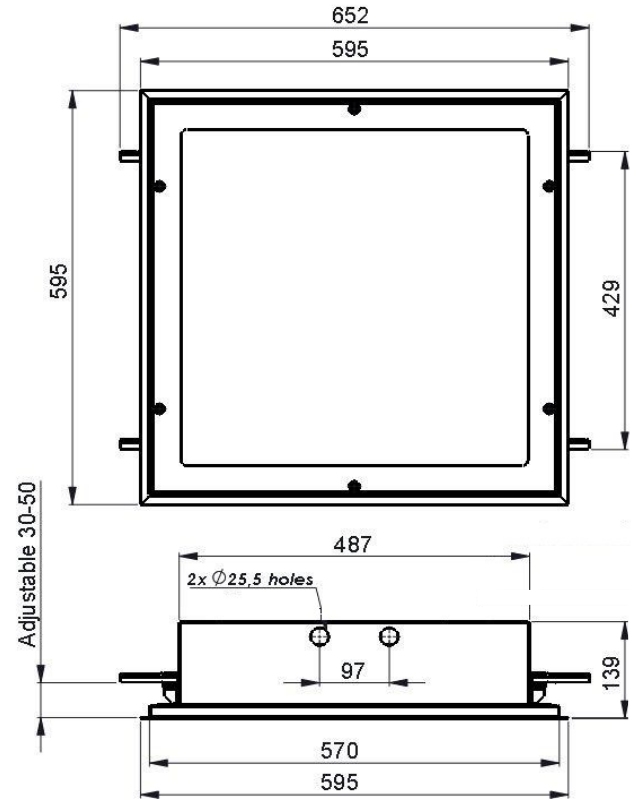
- Recessed mounting set for clear / clean rooms
- Through-wiring
- LED modules with innovative encapsulation
- Estimated service life up to 70 000 hours
- High color rendering index CRI 80
- With OVP, OCP, OTP protection
- Autonomous reactivation after recovery
- Color temperature: 4000K / other CCT on request

Recessed linear LED light fitting

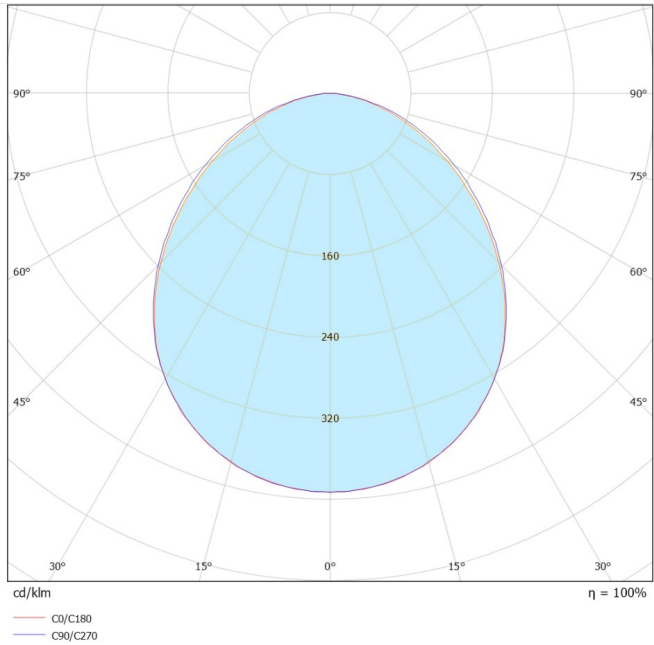
MODEL CODE

MODEL CODE	Power [W]	Voltage [V]	LED source Luminous flux [lm]	Light fitting Luminous flux [lm]	System efficacy [lm/W]	AMBIENT TEMP.	WEIGHT
SIF 60 LED	60 W	110-240 VAC 220-250 VDC	7500	5600 lm	93	-20°C ≤ T _a ≤ +50°C	18 kg

DIMENSION DRAWING (mm)

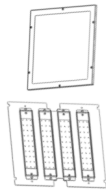


POLAR CURVE



SPARE PARTS AND ACCESSORIES

SKETCH



DESCRIPTION

Cover with glass
SIF 60 LED

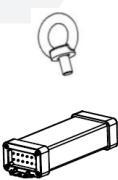
LED module

CODE

SIF 10-100

LEDEx 035

SKETCH



DESCRIPTION

Pendant mounting
set

LED driver

CODE

SIF 20-100

DRIVEx 01

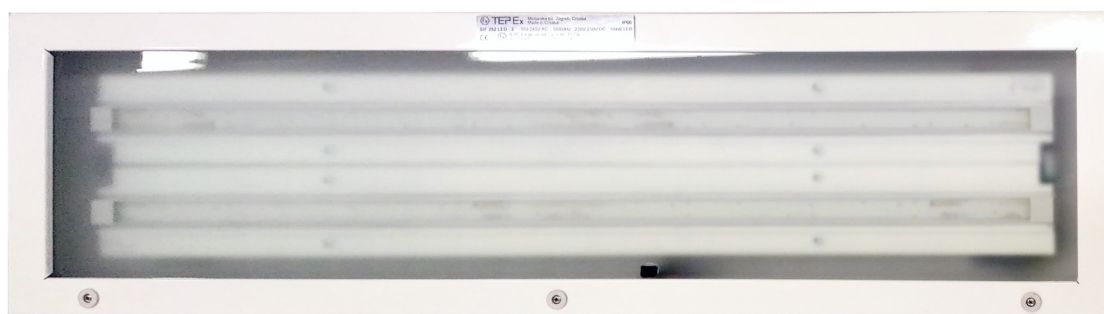
All technical data is relevant at the time of print.

LED

IP 66



SIF 52 LED



CONSTRUCTION

Enclosure: Epoxy/polyester powder-coated sheet steel

Diffuser: flat borosilicate glass with a high thermal and mechanical stability

Gasket: EPDM formed gasket

All-pole are disconnected via NO switch when glass cover is opened.

The light fitting is normally supplied with two Ex eb cable glands M25, two Ex eb plug M25 and with two ring screw M8 (pendant version).

TECHNICAL DATA

Certificate:	FIDI 20 ATEX 0023
Marking:	CE 0722
Apparatus category:	II 2GD
Marking of explosion protection:	Ex db eb mb op is IIC T5 Gb Ex tb op is IIIC T80°C Db
Ambient temperature:	$-20^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$
Degree of protection:	IP 66, category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	100-305 VAC / 142-431 VDC
Frequency:	50/60 Hz
Estimated service life:	L70B10C10: $T_{\text{amb max}}$ 35 000 h $T_{\text{amb max } -10^{\circ}\text{C}}$ 60 000 h $T_{\text{amb max } -20^{\circ}\text{C}}$ 70 000 h
Connecting terminals:	Terminal L1+L2+L3+ N + PE; max 3 x 4 mm ² , Terminal for protective earthing -PE; max 2 x 6 mm ²
Cable entry:	Two entries Ex e M25x1,5 for cable diameters Ø7-15 mm, and two Ex eb plugs
Through wiring:	5x terminals 4x4 mm ² , max. 16 A, or looping of the cables (entry and exit on one side)
Disconnection of the light:	Switch with safety lock; when opening the central lock, all poles of the voltage supply to the LED modules are disconnected
Packing:	The packing contains: 1 pcs 1420x415x140 mm

MOUNTING Pendant, wall/ceiling mounting, recessed



Linear LED without and with LED diffuser

- Switch with safety lock; when opening the central lock, all poles of the voltage supply to the LED driver/s immediately disconnect
- Recessed mounting set for clear / clean rooms
- Through-wiring
- LED modules with innovative encapsulation
- Estimated service life up to 70 000 hours
- High color rendering index CRI 80
- With OVP, OCP, OTP protection
- Autonomous reactivation after recovery
- Color temperature: 4000K / other CCT on request

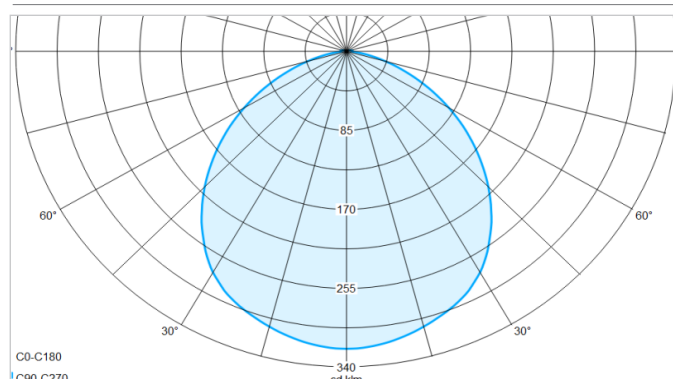
Linear LED light fitting

MODEL CODE

MODEL CODE	Power [W]	Voltage [V]	LED source Luminous flux [lm]	Light fitting Luminous flux [lm]	System efficacy [lm/W]	AMBIENT TEMP.	WEIGHT
SIF 152 LED	52 W	100-305 VAC 142-431 VDC	8460	5286 lm	~98-102	-20°C ≤ T _a ≤ +50°C	22 kg
SIF 252 LED	104 W		16 920	10 171 lm			26 kg

SIF .52 LED-1 surface mounted **SIF .52 LED-2** recessed mounted version

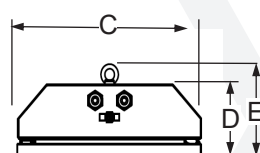
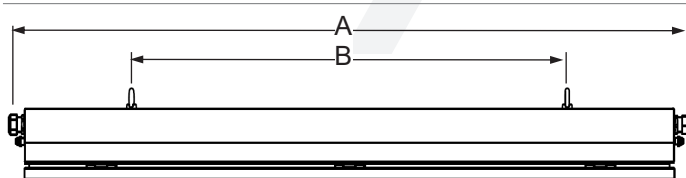
POLAR CURVE



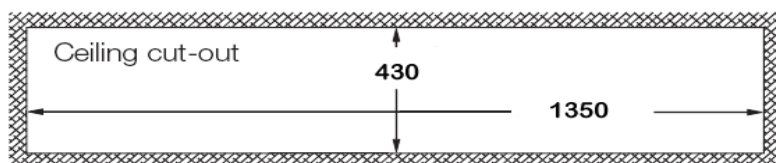
RECESSED LIGHT FITTING



DIMENSION DRAWING (mm)



A	B	C	D	E
1410	900	380	90	125



SPARE PARTS AND ACCESSORIES

Sketch	Description	Code	Sketch	Description	Code
	Gasket SIF	SIF 10-130		Glass cover SIF	SIF 10-140
	LED driver	DRIVEx 01/52-1		Angle mounting	SIF 20-180
	LED modules set	LEDEx 03/52-1		Recessed mounting set	SIF 20-150
	Wall mounting set	SIF 20-160		Ring bolt M8	SIF 20-130

All technical data is relevant at the time of print.

LED

IP 66



FLXL LED



CONSTRUCTION

Enclosure: aluminum painted casting + Al profile

Diffuser: borosilicate glass tube,

Gasket: silicon

The light fitting is normally supplied with LED linear sources, two entries M20 and wall/ceiling mounting set

TECHNICAL DATA

Certificate:	FIDI 23 ATEX 0047
Marking:	CE 0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex db eb op is IIC T6 Gb Ex tb op is IIIC T80°C Db
Ambient temperature:	$-20^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$
Degree of protection:	IP 66 category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	220-240 VAC
Frequency:	50 / 60 Hz
Rated power:	18 W, 36 W, 55 W
Connecting terminals:	L, N, PE, DALI / 4mm ² max. per terminal
Cable entry:	2 x M20
Packing:	The packing contains: 1 pcs

MOUNTING

Pendant, on pipe, wall, ceiling mounting . Operates in any position.



- High color rendering index CRI >80
- Estimated service life $\geq 50\,000$ working hours at $t_{amb} = 40^{\circ}\text{C}$
- LED strip with OVP, OCP, OTP protection
- Autonomous activation after recovery
- Suitable for linear lighting up to 20 modules
- Color temperature: 4000K

MODEL CODE

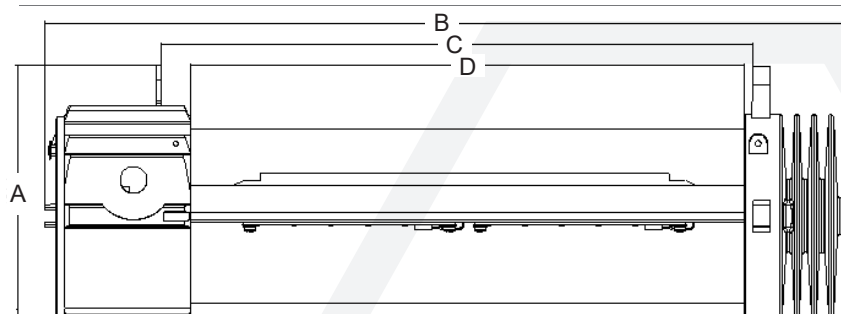
MODEL CODE	Power consumption [W]	Voltage [V]	Light fitting Luminous flux [lm]	System efficacy [lm/W]	Weight [kg]
FLXL 18 LED / .	18	220-240 VAC	2900	160	5
FLXL 36 LED / .	36		5980		7
FLXL 55 LED / .	55		9100		9

FLXL ... LED/ .

Cable entry designation:

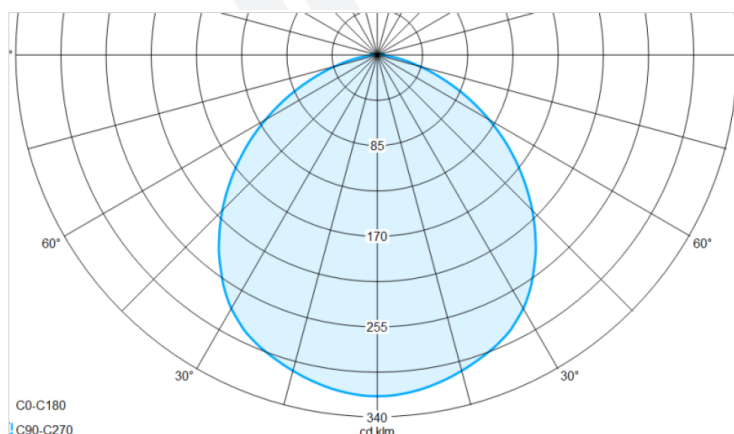
- 0 - Ex db cable entry 2 x M20
- 1 - Ex db cable entry 2 x 3/4"NPT
- 2 - 1x adapter type ADP 23/1 and one Ex db M20 plug
- 3 - 1x adapter type ADP 23/1 and 1x ADP 22/1 for DALI interface
- 4 - 2x adapter type ADP 23/1 for through-wiring

DIMENSION DRAWING (mm)



Type	A	B	C	D
FLXL 18	174	362	220	192
FLXL 36		552	408	382
FLXL 55		682	450	512

POLAR CURVE



SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Cover gasket FLX	FLX 10-120		External reflector FLX	FLX LED 20-150
	LED module FLXL LED	FLXL LED 10-130		FLX Wall / ceiling mounting set	FLX 20-170
	Protective grid FLX set	FLX LED 20-140		FLX Pipe mounting set	FLX 20-180

G13

IP 66



IK08



- T8 fluorescent lamps
- Central locking
- Switch with safety lock; when opening the central lock, all poles of the voltage supply to the ballast are disconnected
- In case of a lamp fault, the electronic ballast disconnects the defective lamp from the power supply
- PSF 218M- use in underground mines

PSF



CONSTRUCTION

Enclosure: SMC polyester plastic reinforced with glass fiber

Diffuser: PC polycarbonate plastic

Gasket: silicone

Central locking: can be opened/closed using a socket key SW8, hinged lamp cover

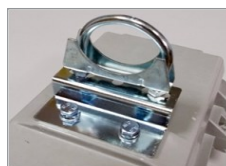
The light fitting is normally supplied without light sources, socket key screw, two Ex eb cable glands M25, two Ex eb plugs M25 and with four ring screw M8 (pendant version).

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0025, EAC RU C-HR.HB07.B.00276/20 FIDI 19 ATEX 0007X (type PSF 218)
Marking:	CE 0722
Apparatus category:	II 2GD I M2 (type PSF 218)
Marking of explosion protection:	Ex db eb mb IIC T4 Gb Ex tb IIIA/IIIC T80°C Db, Ex db eb mb I Mb
Ambient temperature:	-30°C ≤ Ta ≤ +50°C [ATEX]
Degree of protection:	IP 66, category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	220....240 V (±10%)
Frequency:	50/60 Hz
Power factor:	λ=0,95
Ballast lumen factor:	98%
Light output ratio:	η=0,78%
End of life switch:	The electronic ballast, type SMP fulfills the requirements according to EN 61349-2-3+A11:2017 ("end of life effect")
Estimated service life(for el.ballast) :	70 000 h at T _{amb} =40°C
Connecting terminals:	L1, L2, L3, N, PE - max. 2,5 mm ²
Cable entry:	Two entries Ex eb M25x1,5 for cable diameters Ø7-15 mm, and two Ex eb plugs
Through wiring:	5 x 1,5 mm ² , max. 16 A, or looping of the cables (entry and exit on one side)
Packing:	The packing contains: 1 pcs PSF 218 1380x250x180 mm PSF 236 800x250x180 mm PSF 258 1700x270x210 mm

MOUNTING

Pendant, on pipe, wall, ceiling

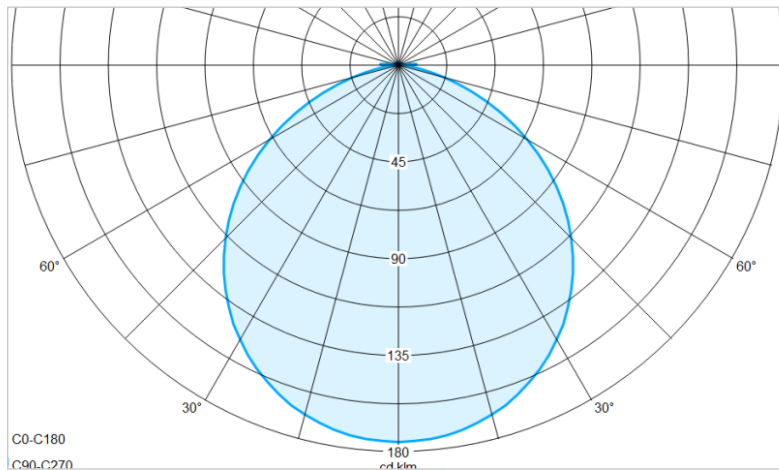


Fluorescent light fitting

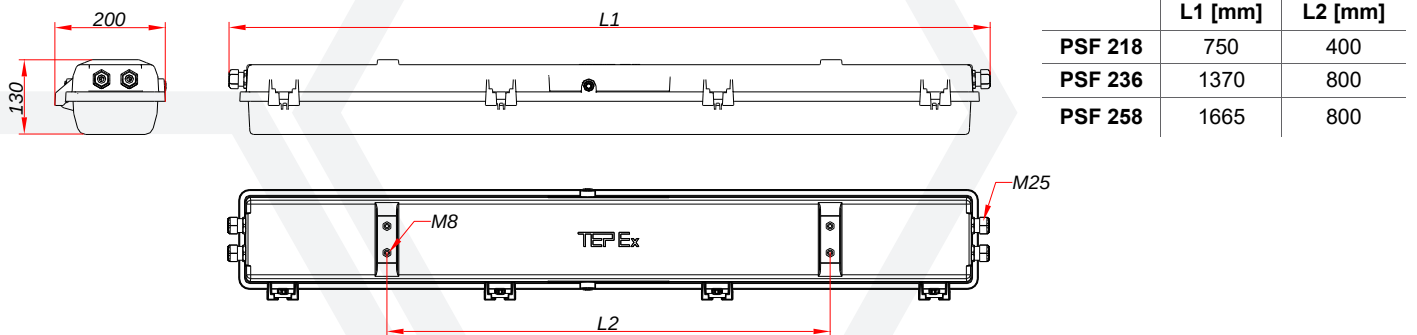
MODEL CODE

Model code	Max. Wattage	Lamp type	Nominal voltage	Luminous flux [lm]	Lamp holder	Nominal operational current	Weight
PSF 218	2x18 W	T8	230 V	2 x 1350	G13	0,17 A	7,5 kg
PSF 236	2x36 W			2 x 3350		0,33 A	10 kg
PSF 258	2x58W			2x 5200		0,5 A	12 kg

POLAR CURVE



DIMENSION DRAWING (mm)



SPARE PARTS AND ACCESSORIES

Sketch	Description	Code	Sketch	Description	Code
	Diffuser PSF	PSF218 10-120 PSF236 20-120		Metal cable gland for arm cable	PSF 30-160
	Gasket PSF	PSF218 10-130 PSF236 20-130		Ex e plug M25	SPC 25
	Internal reflector with lamp holder PSF	PSF218 10-140 PSF236 20-140		PSF Wall / Ceiling mounting set	PSF 30-110
	El. ballast SMP	SMP 08/11 (PSF 218, 236) SMP 08/12 (PSF 258)		PSF Pipe mounting set	PSF 30-120
	Terminals 5x2,5mm ²	PSF236 20-150		PSF Wall / Ceiling mounting set	PSF 30-130
	Socket key SW8	PSF236 20-160		Ring bolt M8	PSF 30-140

All technical data is relevant at the time of print.

2G11

IP 66



IK08



FLX



CONSTRUCTION

Enclosure: aluminum profile, corrosion resistant grey polyurethanes painted

Diffuser: borosilicate glass tube

Gasket: silicon

The light fitting is normally supplied with two light sources, two entries M20 and wall/sealing mounting set.

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0027
Marking:	CE 0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex db eb IIC T6 Gb / Ex db IIC T6 Gb Ex tb IIIC T80°C Db
Ambient temperature:	-20°C ≤ Ta ≤ +40°C [ATEX]
Degree of protection:	IP 66, category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	FLX 218: 220-240 V AC FLX 236 & 255: 100 V - 280 V AC/DC
Frequency:	FLX 218: 50/60 Hz FLX 236 & 255: 0-60 Hz
Rated power:	See model code table
Ballast lumen factor:	98%
Light output ratio:	η=0,73%
Connecting terminals:	L1, L2, L3, N, PE - max. 2,5 mm ² PE for outside earthing max. 2 x 6 mm ²
Cable entry:	2 x M20 2 x 3/4"NPT 2 x M20, with one Ex d plugs and one adapter type ADP 03/24, for cable φ7-15 mm
Through wiring:	With two Ex adapter type ADP 03/24 - 4 x 2,5 mm ² , max. 16 A,

MOUNTING

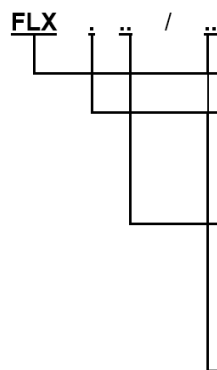
Pendant, on pipe, wall, ceiling mounting



- Robust light alloy enclosure
- Borosilicate tube glass
- TC-L fluorescent compact lamps
- 100÷280V AC/DC
- 0-60 Hz

Fluorescent light fitting

MODEL CODE



Basic marking code:

Number of fluorescent tubes:

- **1** – one tube
- **2** – two tubes

Power of fluorescent tubes :

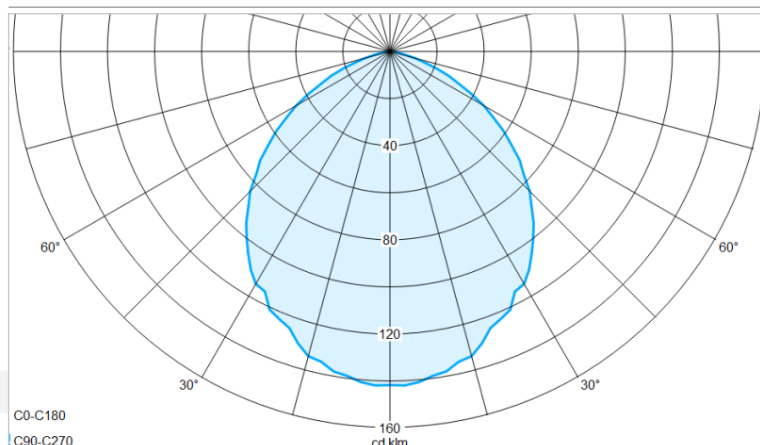
- **18** - 18 W TC-L
- **36** - 36 W TC-L
- **55** - 55 W TC-L

Cable entry designation:

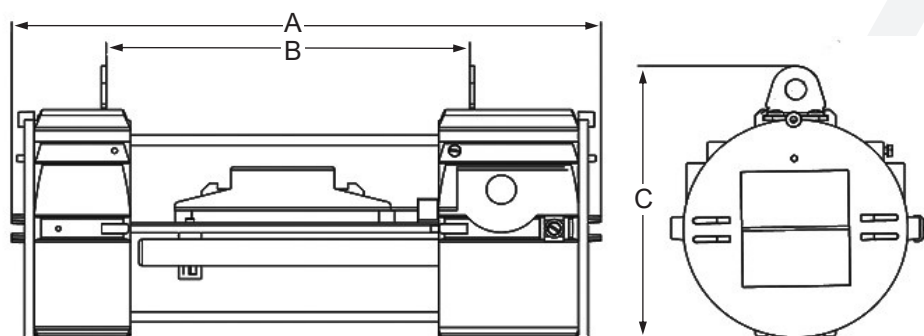
- **10** - Ex d cable entry 2 x M20
- **11** - Ex d cable entry 2 x 3/4"NPT
- **12** - Ex d cable entry 2 x M20 with one adapter type ADP 23/1 and one plug

Model code	Max. Wattage	Luminous flux [lm]	Weight
FLX 218	2x18 W	2 x 1200	5,6 kg
FLX 236	2x36 W	2 x 2900	6,5 kg
FLX 255	2x55 W	2 x 4700	8,0 kg

POLAR CURVE



DIMENSION DRAWING (mm)



	A	B	C
FLX 218	366	230	174
FLX 236	555	416	
FLX 255	680	542	

SPARE PARTS AND ACCESSORIES

Sketch	Description	Code	Sketch	Description	Code
	Cover gasket FLX	FLX 10-120		FLX Wall / ceiling mounting set	FLX 20-170
	Base plate FLX/...	FLX 10-130		FLX Pipe mounting set	FLX 20-180
	Protective grid FLX set	FLX 20-140		External reflector FLX	FLX 20-150

All technical data is relevant at the time of print.

G13

IP 66



IK08



SIF



CONSTRUCTION

Enclosure: Epoxy/polyester powder-coated sheet steel

Diffuser: flat borosilicate glass with a high thermal and mechanical stability

Gasket: EPDM formed gasket

All-pole are disconnected via NO switch when glass cover is opened.

The light fitting is normally supplied without light sources, two Ex e cable glands M25, one Ex e plug M25 and with two ring screw M8 (pendant version).

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0048
Marking:	CE 0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	 Ex db eb mb IIC T4 Gb Ex tb IIIC T80°C Db
Ambient temperature:	-20°C ≤ Ta ≤ +50°C
Degree of protection:	IP 66, category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	220-240 V
Frequency:	50/60 Hz
Power factor:	λ=0,95
Ballast lumen factor:	98%
Light output ratio:	η=0,72%
End of life switch:	The electronic ballast, type SMP 07/12 fulfills the requirements according to IEC 61347-2-3 (simulation of the "end of life effect" of fluorescent lamps)
Estimated service life:	70 000 h at T _{amb} =40°C
Connecting terminals:	Terminal L1+L2+L3+ N + PE; max 3 x 4 mm ² , Terminal for protective earthing -PE; max 2 x 6 mm ² Terminal for external grounding, equipotential bounding , max 2 x 6 mm ²
Cable entry:	Two entries Ex e M25x1,5 for cable diameters Ø6-15 mm, and two Ex e plugs
Through wiring:	5x terminals 4x4 mm ² , max. 16 A, or looping of the cables (entry and exit on one side)
Disconnection of the light:	Switch with safety lock; when opening the central lock, all poles of the voltage supply to the ballast are disconnected
Packing:	The packing contains: 1 pcs 142X415X140 mm

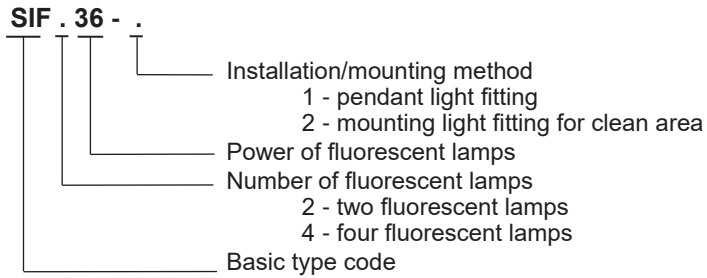
MOUNTING

Pendant, on pipe, wall, ceiling mounting

- T8 fluorescent lamps
- Switch with safety lock; when opening the central lock, all poles of the voltage supply to the ballast are disconnected
- In case of a lamp fault, the electronic ballast disconnects the defective lamp from the power supply
- Recessed mounting set for clear / clean rooms

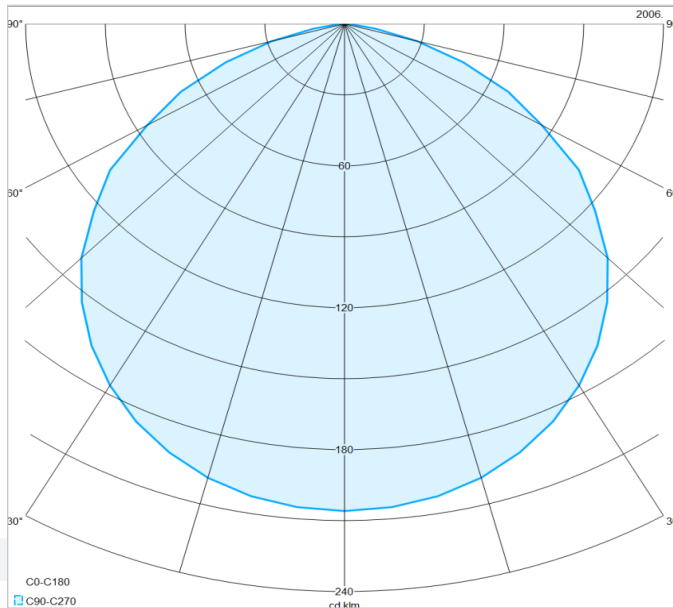
Fluorescent light fitting

MODEL CODE



Model code	Wattage	Luminous flux [lm]	Weight
SIF 236	2x36 W	2 x 3350	25 kg
SIF 436	4x36 W	4 x 3350	27 kg

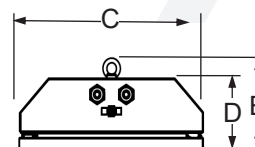
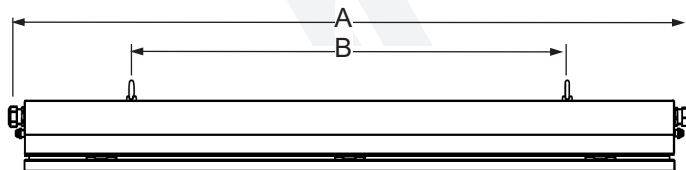
POLAR CURVE



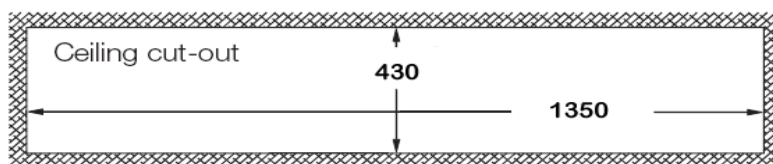
RECESSED LIGHT FITTING



DIMENSION DRAWING (mm)



A	B	C	D	E
1410	900	380	120	155



SPARE PARTS AND ACCESSORIES

Sketch	Description	Code	Sketch	Description	Code
	Gasket SIF	SIF 10-130		Glass cover SIF	SIF 10-140
	El. ballast SMP	SMP 08/11		Wall mounting set on 45°	SIF 20-140
	Ring bolt M8	-		Recessed mounting set	SIF 20-150

All technical data is relevant at the time of print.

LED

IP 66



- Used for marking escape routes and exits in potentially explosive atmospheres.
- Self-test, monitoring and diagnostics reduce costly maintenance checks.
- >3h autonomy
- Maintained / Non maintained operation
- DALI Digital Addressable Lighting Interface
- 3 lithium-ion secondary cells LiFePO4 3.2 V / 1.8 Ah , microprocessor-controlled charging, discharging, heating and monitoring
- **Maintained** (Dauerschaltung)
- **Non maintained** (Bereitschaftschaltung)

FLXE 118 LED-N



CONSTRUCTION

Enclosure: aluminum painted casting
 Diffuser: borosilicate glass tube,
 Gasket: silicon
 The light fitting is normally supplied with two entries M20 and wall/sealing mounting set

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0028
Marking:	CE 0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex db IIC T6 Gb or Ex db eb IIC T6 Gb (with adapter) Ex tb IIIC T80°C Db
Ambient temperature:	$-20^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$
Degree of protection:	IP 66
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	220-240 V Other voltage on request
Frequency:	50 / 60 Hz
Rated power:	LED strip SMD 1,4 W
Luminous flux:	250 lm
Connecting terminals:	L, L', N, PE, DALI 4mm ² max. per terminal External PA terminal -PA; max 2x6mm ²
Cable entries:	2 x M20 or 2 x 3/4"NPT or 2 x M20, with one Ex d plugs and one adapter type ADP 24 for cable $\phi 7-15$ mm
Weight:	4 kg

Light fitting FLXE 118 LED-N contains battery heaters that are used to maintain the temperature on batteries $> 5^{\circ}\text{C}$. In case the battery temperature is $< 5^{\circ}\text{C}$, the heaters are switched on and maintain battery temperatures $> 5^{\circ}\text{C}$.

Emergency LED light fitting

MODEL CODE

FLXE 118 LED-N / ..

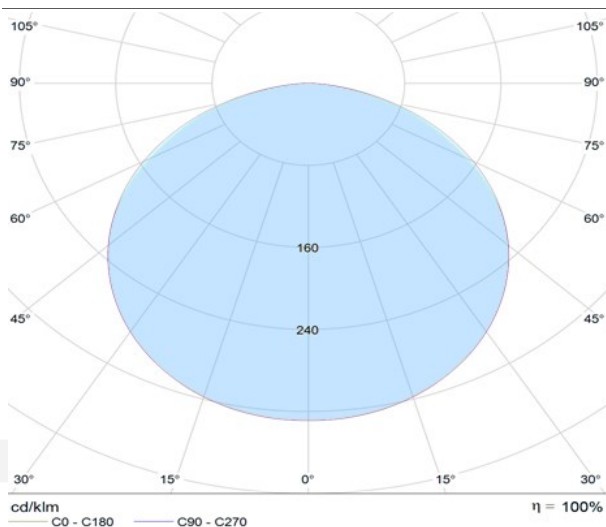
Cable entry:

- 0 - Ex db cable entry 2 x M20
- 1 - Ex db cable entry 2 x 3/4"NPT
- 2 - Ex db cable entry 2 x M20, ISO 965-1, with one installed Ex db eb adapter type ADP 24/1 and one Ex db plug
- 3 - Ex db cable entry 2 x M20, with one installed Ex db eb adapter type ADP 24/1 and one ADP 22/1 for DALI interface
- 4 - Ex db cable entry 2 x M20, with two installed Ex db eb adapter type ADP 24/1 for true wiring

Pictogram/ according to ISO 7010

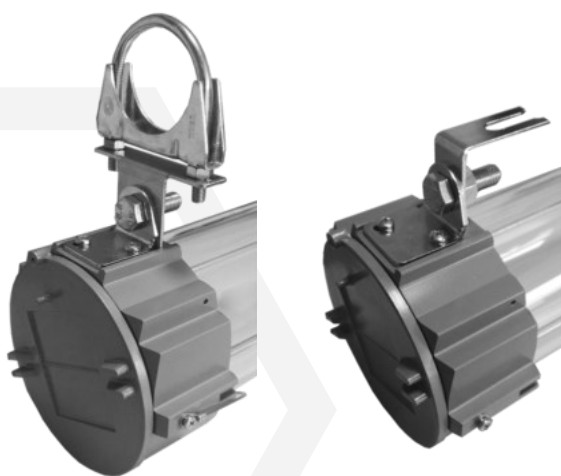
0	Without marking	5	
1		6	
2		7	
3		8	
4		9	

POLAR CURVE

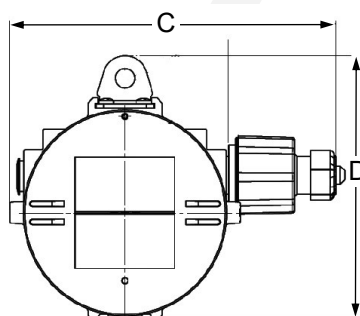
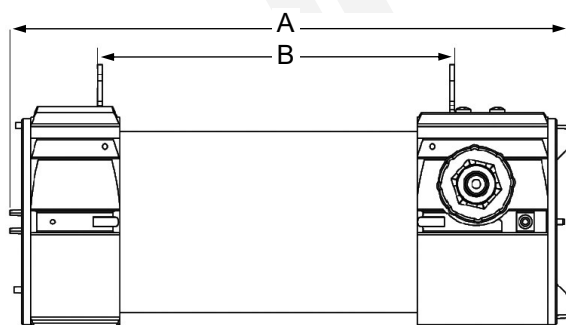


MOUNTING

Pendant, on pipe, wall, ceiling mounting



DIMENSION DRAWING (mm)



A	B	C	D
366	230	220	174

SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Housing cover With gasket	FLXE 10-110		External reflector FLX	FLX LED 20-150
	Base plate FLXE	FLXE 10-130		FLX Wall / ceiling mounting set	FLX 20-170
	Protective grid FLXE set	FLXE 20-140		FLX Pipe mounting set	FLX 20-180

All technical data is relevant at the time of print.

LED

IP 66



- Central locking with internal switch
- Through-wiring possible
- LED modules with innovative encapsulation
- Estimated service life up to 70 000 hours
- High color rendering index CRI 80
- With OVP, OCP, OTP protection
- Autonomous reactivation after recovery
- Color temperature 4300K (other CCTs on request)
- **Maintained** (Dauerschaltung)
- **Non maintained** (Bereitschaftschaltung)

PSF LED-E



CONSTRUCTION

Enclosure: SMC polyester plastic reinforced with glass fiber, color RAL 7038

Diffuser: PC polycarbonate plastic

Gasket: silicone

Central locking: can be opened/closed using a socket key SW8, hinged lamp cover

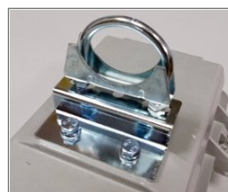
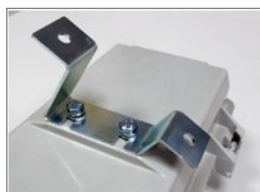
The light fitting is normally supplied with socket key, two Ex eb cable glands M25, two Ex eb plugs M25 and with mounting set PSF 30-110

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0029 EAC RU C-HR.HB07.B.00276/20
Marking:	CE 0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex db eb mb op is IIC T4 Gb Ex tb op is IIIC T80°C Db
Ambient temperature:	-20°C ≤ T _a ≤ +40°C
Degree of protection:	IP 66 category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Operating voltage:	220-240 VAC
Frequency:	50/60 Hz
Rated power:	See model code table
Estimated service life:	L70B10C10: T _{amb max} 35 000 h T _{amb max -10°C} 60 000 h T _{amb max -20°C} 70 000 h
Connecting terminals:	L1, L2, L3, N, PE - max. 2,5 mm ² , external PA terminal
Cable entry:	Two entries Ex eb M25 for cable diameters Ø7-15 mm, and two Ex eb plugs M25
Battery:	Ni-Mh, 6 V / 6Ah
Nominal autonomy:	3 h
Packing:	The packing contains: 1 pcs PSF 52 LED: 1450 x 290 x150 mm PSF 28 LED: 800 x 290x140 mm

MOUNTING

Pendant, on pipe, wall, ceiling



Flexible mounting kit for PSF LED-E



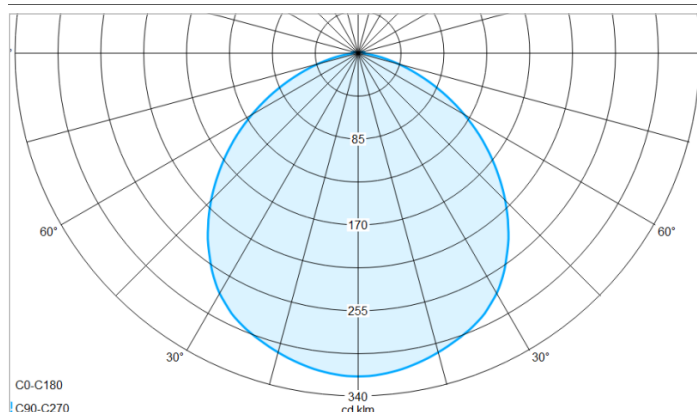
make your work surroundings safer

Emergency LED light fitting

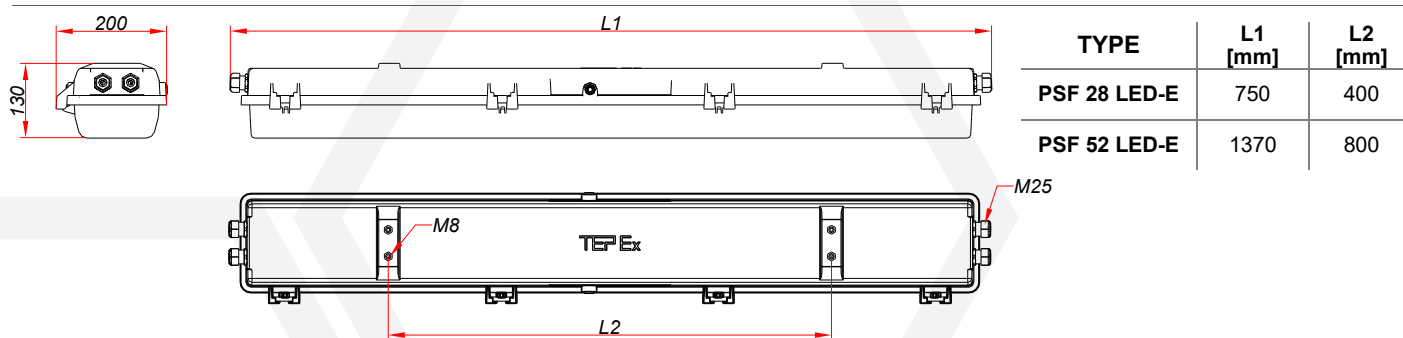
MODEL CODE

MODEL CODE	Power consumption [W]	Voltage [V]	Light fitting Luminous flux [lm]	System efficacy [lm/W]	3h autonomy Lum flux [lm]	Weight
PSF 28 LED-E	28 W	220-240 VAC	3820 lm	~136	1150 lm	8,0 kg
PSF 52 LED-E	56 W		7645 lm		1150 lm	12,0 kg

POLAR CURVE



DIMENSION DRAWING (mm)



SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Diffuser PSF	PSF LED 28 10-120 PSF LED 52 20-120		PSF Wall / Ceiling mounting set	PSF 30-110
	Gasket PSF	PSF LED 28 10-130 PSF LED 52 20-130		PSF Pipe mounting set	PSF 30-120
	Internal reflector with LED module	LEDEx 03/28 LEDEx 03/52		PSF Wall / Ceiling mounting set	PSF 30-130
	LED EM driver	DRIVEx 02		Pendant mounting set	PSF 30-150
	LED diffuser	PSF 52 LED 30-180 PSF 28 LED 30-185		Battery module	BATEx 02
	Flexible mounting kit for PSF LED	PSF 52 LED 30-190 PSF 28 LED 30-195		Metal cable glands for armored cable M25	PSF 30-160

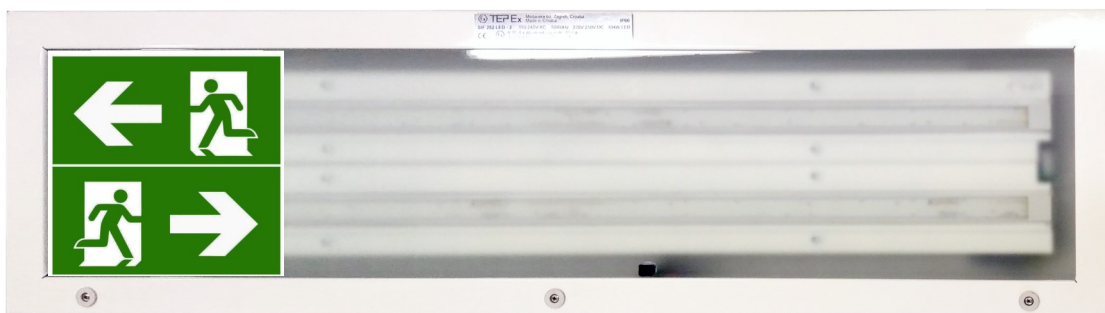
LED

IP 66



- Central locking with internal switch
- Through-wiring possible
- LED modules with innovative encapsulation
- Estimated service life up to 70 000 hours
- High color rendering index CRI 80
- With OVP, OCP, OTP protection
- Autonomous reactivation after recovery
- Color temperature 4300K (other on request)
- **Maintained** (Dauerschaltung)
- **Non maintained** (Bereitschafts-
schaltung)

SIF LED-E



CONSTRUCTION

Enclosure: Epoxy/polyester powder-coated sheet steel
 Diffuser: flat borosilicate glass with a high thermal and mechanical stability
 Gasket: EPDM formed gasket
 All-pole are disconnected via switch when glass cover is opened.
 The light fitting is normally supplied without light sources, two Ex eb cable glands M25, two Ex eb plug M25 and with two ring screw M8 (pendant version).

TECHNICAL DATA

Certificate:	FIDI 20 ATEX 0023
Marking:	CE 0722
Apparatus category:	II 2GD
Marking of explosion protection:	Ex db eb mb op is IIC T5 Gb Ex tb op is IIIC T80°C Db
Ambient temperature:	$-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$
Degree of protection:	IP 66 category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Operating voltage:	220-240V
Frequency:	50/60 Hz
Rated power:	See model code table
Estimated service life:	L70B10C10: $T_{amb \max}$ 35 000 h $T_{amb \max -10^{\circ}\text{C}}$ 60 000 h $T_{amb \max -20^{\circ}\text{C}}$ 70 000 h
Connecting terminals:	L1, L2, L3, N, PE - max. 2,5 mm ²
Cable entry:	Two entries Ex eb M25x1,5 for cable diameters Ø7-15 mm, and two Ex eb plugs
Battery:	NiMh, 6V/10 Ah
Nominal autonomy:	3 h
Packing:	The packing contains: 1 pcs 1420x415x140 mm

MOUNTING

Pendant, wall, ceiling, recessed

Linear LED without and with LED diffuser

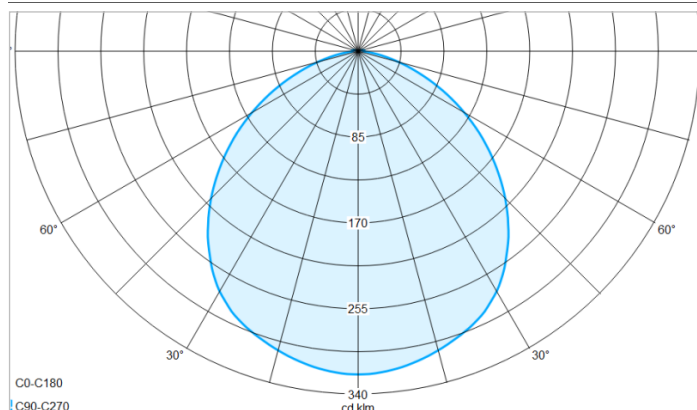


Emergency LED light fitting

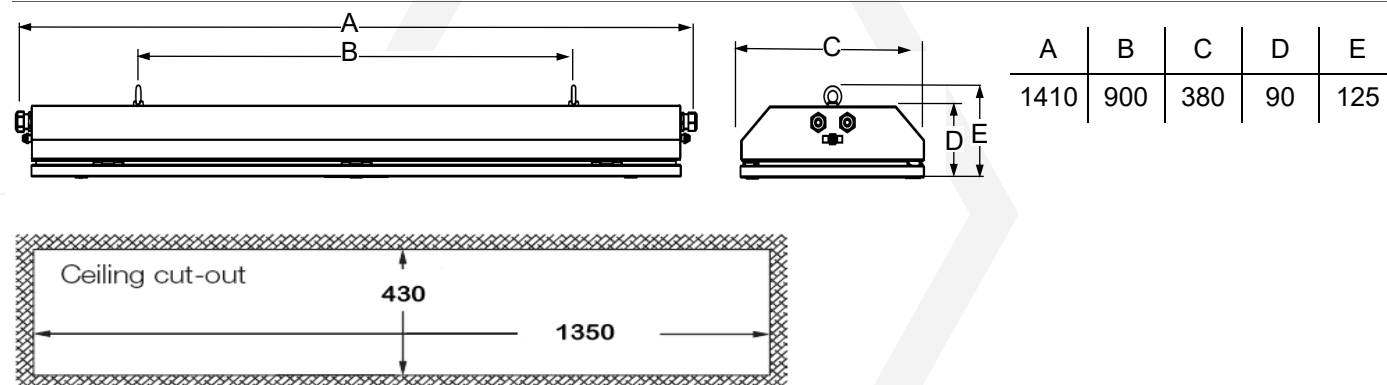
MODEL CODE

MODEL CODE	Power consumption [W]	Voltage [V]	Light fitting Luminous flux [lm]	System efficacy [lm/W]	3h autonomy Lum flux [lm]	WEIGHT
SIF 152 LED-E	56 W	220-240 VAC	7110 lm	~130	900 lm	22 kg
SIF 252 LED-E	108 W		14220 lm		900 lm	26 kg

POLAR CURVE



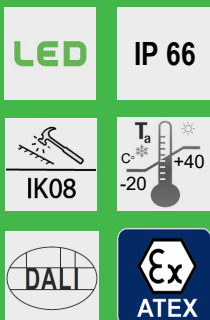
DIMENSION DRAWING (mm)



SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Glass cover SIF	SIF 10-140		Wall mounting set	SIF 20-160
	Gasket SIF	SIF 10-130		Recessed mounting set	SIF 20-150
	Internal reflector with LED module	SIF LED 52 20-140		Pipe mounting set	SIF 20-170
	LED EM driver	DRIVEx 02		Celing mounting set	SIF 20-140
	LED difuzor	SIF LED 30-180		Wall mounting set At the angle	SIF 20-180

SIF 60 LED-E



- Recessed mounting set for clear / clean rooms
- Through-wiring
- LED modules with innovative encapsulation
- Estimated service life up to 70 000 hours
- High color rendering index CRI 80
- With OVP, OCP, OTP protection
- Autonomous reactivation after recovery
- Color temperature: 4000K / other CCT on request

CONSTRUCTION

Enclosure: Epoxy/polyester powder-coated sheet steel
 Diffuser: flat borosilicate glass with a high thermal and mechanical stability
 Gasket: EPDM formed gasket
 The light fitting is normally supplied with two Ex eb cable glands M25, two Ex eb plug M25

TECHNICAL DATA

Certificate:	FIDI 23 ATEX xxxx						
Marking:	CE 0722						
Apparatus category:	II 2GD						
Marking of explosion protection:	Ex db eb mb IIC T5 Gb Ex tb IIIC T80°C Db						
Ambient temperature:	$-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$						
Degree of protection:	IP 66, category 1						
Resistance to shock:	IK 08						
Protection class :	I (protective earthing)						
Rated voltage:	220-240 VAC						
Frequency:	50/60 Hz						
Estimated service life:	L70B10C10: <table> <tr> <td>$T_{\text{amb max}}$</td><td>35 000 h</td></tr> <tr> <td>$T_{\text{amb max } -10^{\circ}\text{C}}$</td><td>60 000 h</td></tr> <tr> <td>$T_{\text{amb max } -20^{\circ}\text{C}}$</td><td>70 000 h</td></tr> </table>	$T_{\text{amb max}}$	35 000 h	$T_{\text{amb max } -10^{\circ}\text{C}}$	60 000 h	$T_{\text{amb max } -20^{\circ}\text{C}}$	70 000 h
$T_{\text{amb max}}$	35 000 h						
$T_{\text{amb max } -10^{\circ}\text{C}}$	60 000 h						
$T_{\text{amb max } -20^{\circ}\text{C}}$	70 000 h						
Connecting terminals:	Terminal L1+L2+L3+ N + PE; max 2 x 4 mm ² , Terminal for protective earthing -PE; max 2 x 6 mm ²						
Battery;	Ni-Mh, 6V/6Ah						
Nominal autonomy:	3 hours						
Cable entry:	Two entries Ex e M25x1,5 for cable diameters Ø7-15 mm, and two Ex eb plugs						

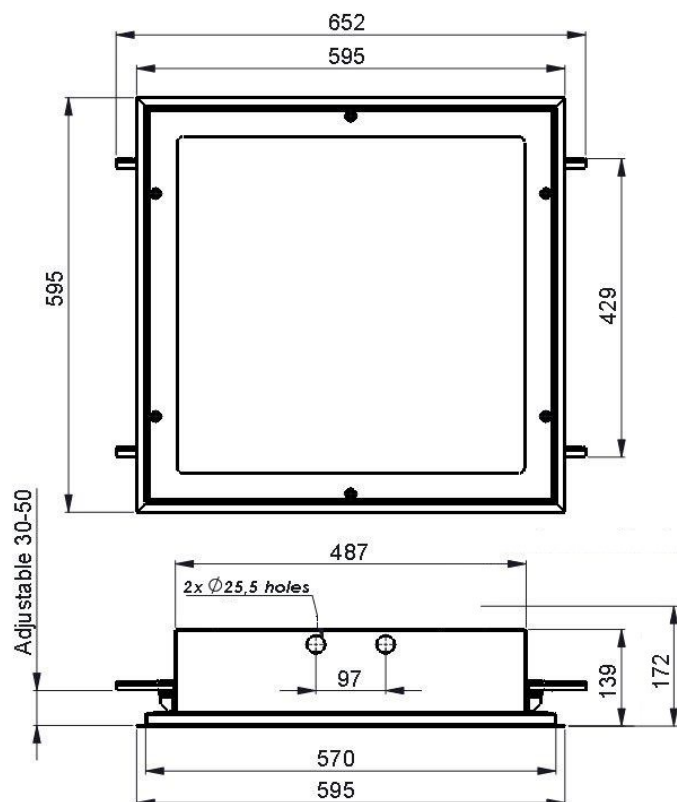
MOUNTING recessed / Ceiling cut-out 575x575 ±4 mm

Emergency fluorescent light fitting

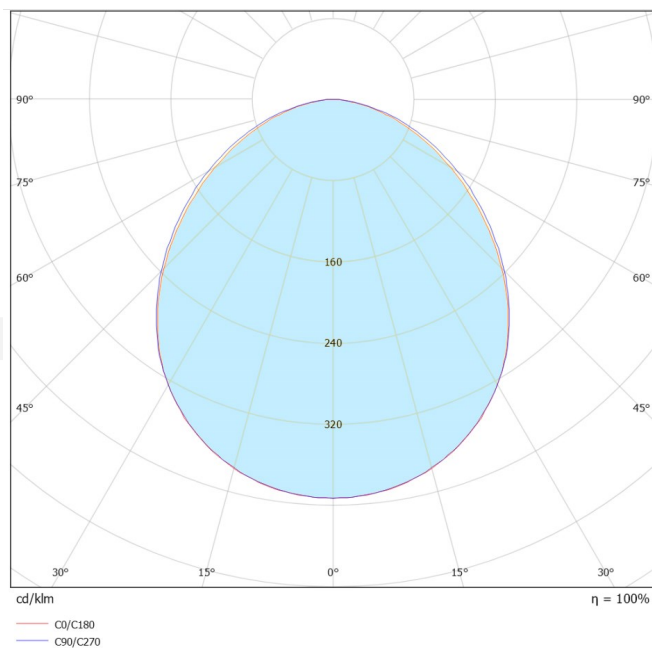
MODEL CODE

MODEL CODE	Power [W]	Voltage [V]	LED source Luminous flux [lm]	Light fitting Luminous flux [lm]	3h autonomy Lum flux [lm]	WEIGHT
SIF 60 LED-E	52 W	220-230 VAC	7020	4750	1150 lm	19 kg

DIMENSION DRAWING (mm)



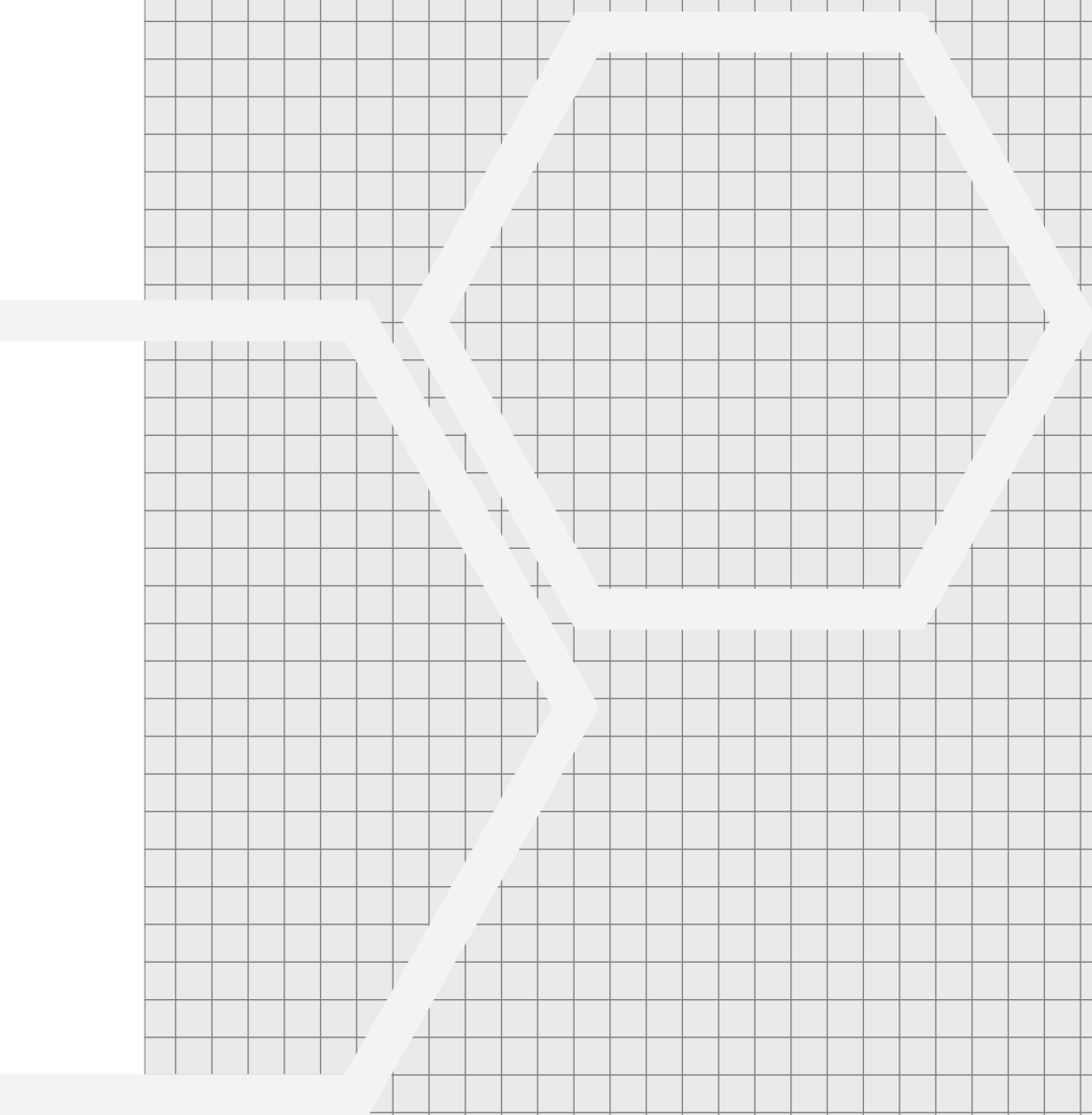
POLAR CURVE



SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Cover with glass SIF 60 LED	SIF 10-100		Pendant mounting set	SIF 20-100
	LED module	LEDEx 035		LED EM driver	DRIVEx 02
	Battery module	BATEx 02		LED indicator / EM state	LEDEx 02

All technical data is relevant at the time of print.



Installation equipment



IP 66



- Enclosures made of PA glass fiber reinforced polyamide
- The cover screws and all other external metal parts are made of stainless steel (AISI 316L)
- Equipped with terminals up to 6mm²
- Pillar (mantle) terminals



CONSTRUCTION

Enclosure: PA glass fiber reinforced polyamide, color - black

Cover: PA glass fiber reinforced polyamide with integrated thermoplastic elastomer gasket, closes with four M5 stainless steel screws.

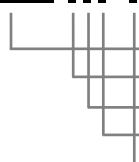
TECHNICAL DATA

Certificate:	 FIDI 19 ATEX 0002X EAC RU C-HR.HB07.B.00280/20		
Marking:	CE 0722		
Apparatus category:	II 2GD II 1G		
Marking of explosion protection:	Ex eb IIC T6 Gb Ex ia/ib IIC T6 Gb Ex ia IIC T6 Ga Ex tb IIIC T80°C Db		
Ambient temperature:	-30°C ≤ Ta ≤ +55°C -30°C ≤ Ta ≤ +70°C, for Ex i Ta ≥ -40°C – on request with specially designed cable glands		
Degree of protection:	IP 66		
Resistance to shock:	IK 08		
Protection class :	I (protective earthing)		
Rated voltage:	630 V		
Maximum voltage for Ex i:	60 V		
Maximum current of terminals :	22 A	T _a ≤40°C	RK 01/744,
	18 A	T _a ≤50°C	RK 01/544
	14 A	T _a ≤55°C	RK 01/544-E
			RK 01/744-E
	20 A	T _a ≤40°C	RK 01/514
	16 A	T _a ≤50°C	RK 01/514-2
	13 A	T _a ≤55°C	
	25 A	T _a ≤40°C	
	20 A	T _a ≤50°C	RK 01/516
	16 A	T _a ≤55°C	
	10A	T _a ≤55°C	RK 01/1014
PE terminals (inside of the enclosure):	max. 2x4 mm ² +2x2,5 mm ² , 3x4 mm ² , 2x6 mm ²		
Weight:	0,55 kg		
Packing:	The packing contains: 14 pcs 435x260x220 mm		

MOUNTING

With two screws through the housing holes φ6 mm at the peaks the rectangle: 100 x 75 mm

RK 01 /



- Basic type code
- Number of connecting terminals
- Maximum number of cables with nominal cross section per connection point
- Nominal cable cross section
- Additional type code:
 - Ex i – intrinsic safety version
 - E – type with internal metal plate for armoured cable earthing
 - 2 – multiple connection terminal block with 3 connection points

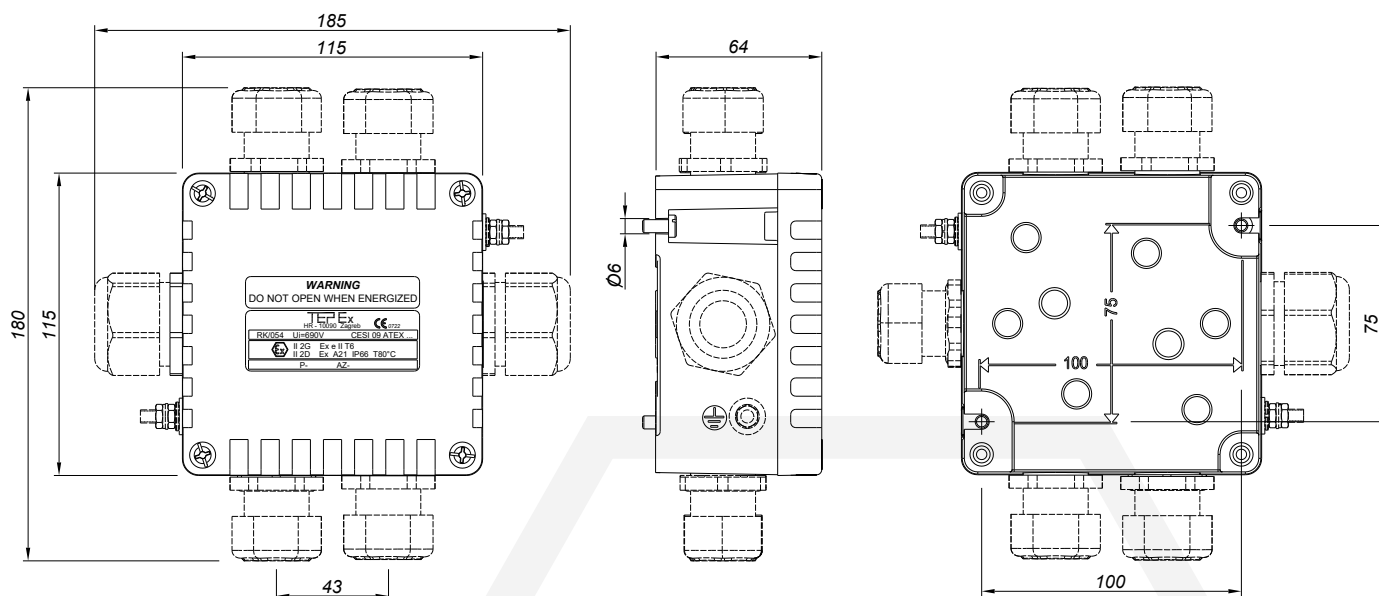
MODEL CODE

Other configuration available on request

TYPE	VERSION	CABLE GLANDS AND PLUGS	NUMBER OF TERMINALS AND TERMINAL CROSS SECTION	MAX. POSSIBLE CONNECTION BY TERMINAL solid, stranded, flexible
RK 01/514			5 - 1x 4mm ²	1 x 0,5....4mm ² 2 x 0,5....2,5mm ²
RK 01/514-2		4 x SPU 25 cable glands for cable Ø _v 7-15 mm	5 - 1x 4mm ² Three-point terminals	1 x 0,5....4mm ² 2 x 0,5....2,5mm ²
RK 01/514-Ex i		or 4 x cable gland for armoured for cable Ø _v 13-21 mm	5 - 1x 4mm ²	1 x 0,5....4mm ² 2 x 0,5....2,5mm ²
RK 01/516		or 4 x cable glands for cable Ø _v 10-14 mm	5 - 1x 6mm ²	1 x 0,5....6mm ² 2 x 0,5....4mm ²
RK 01/1014		or 4 x cable glands for cable Ø _v 13-18 mm	10 - 1x 4mm ²	1 x 0,5....4mm ² 2 x 0,5....2,5mm ²
RK 01/1014-Ex i		+	10 - 1x 4mm ²	1 x 0,5....4mm ² 2 x 0,5....2,5mm ²
RK 01/544			5 - 4x 4mm ²	
RK 01/744		6 x SPU 25 cable glands for cable Ø _v 7-15 mm and T _a ≥-30°C or 6 x cable glands for cable Ø _v 10-14 mm and T _a ≥-40°C or 6 x cable glands for cable Ø _v 13-18 mm and T _a ≥-40°C	7 - 4x 4mm ²	4 x 4mm ² 6 x 2,5mm ² 1 x 4mm ² + 2 x 2,5mm ² + 3 x 1,5mm ²
RK 01/544-E		4 x cable gland for armoured cable for cable Ø _v 13-21 mm and T _a ≥-40°C	5 - 4x 4mm ²	1 x 4mm ² + 5 x 1,5mm ² 2 x 4mm ² + 3 x 2,5 mm ²
RK 01/744-E		+	7 - 4x 4mm ²	
		2 x SPC 25 plugs for T _a ≥-40°C		

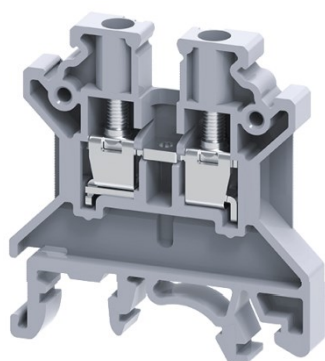
All technical data is relevant at the time of print.

DIMENSION DRAWING (mm)

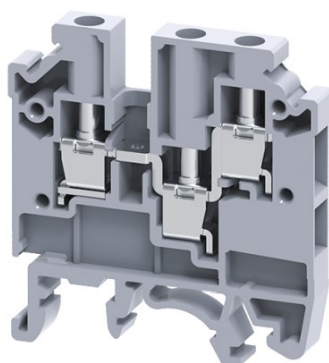


RK 01/744-E (internal metal plate)

Standard terminal block



Terminal with three connection points (type RK 01/514-2)





IP 66



IK08



- Ex db enclosure made of saltwater-resistant, copper-free aluminium cast alloy
- In terminal box versions standard cable glands without compound can be used

**CONSTRUCTION**

Enclosure: corrosion resistant grey polyurethanes painted aluminium color RAL 7000
Gasket: Silicon

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0033
Marking:	0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex db IIC T6 Gb Ex tb IIIC T80°C Db
Ambient temperature:	$-40^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$
Degree of protection:	IP 66
Rated voltage:	630 V
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Max. current for nominal croesection:	1,5 mm ² - 10 A 2,5 mm ² - 16 A 4 mm ² - 20 A
External earthing terminal:	max. 2 x 6mm ²
Weight:	0,95 kg

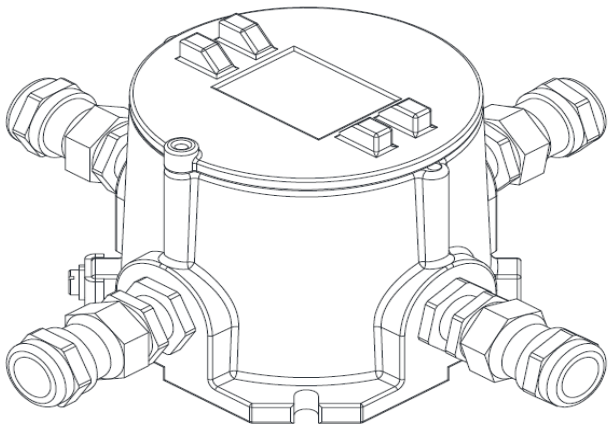
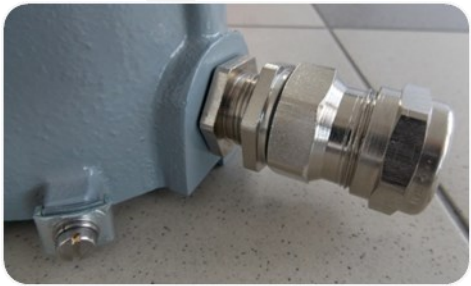
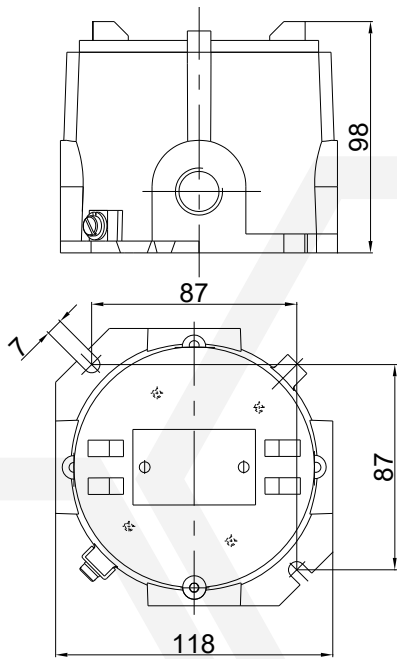
MOUNTING

With two screws M6 x 20 mm on distance 123 mm

MODEL CODE

TYPE	No. of entries/side	Entries	Number of terminals and terminal cross selection
JBX 04/21	2 / A-C	M20x1,5	5x1x4 mm ²
JBX 04/31	3 / B-C-D		
JBX 04/41	4 / A-B-C-D		
JBX 04/22	2 / A-C	1/2" NPT	
JBX 04/32	3 / B-C-D		
JBX 04/42	4 / A-B-C-D		

DIMENSION



IP 66



IK08



- Enclosure made of glass-fibre reinforced polyester resin
- 2 pole OFF switch or changeover switch

SKX SW



CONSTRUCTION

Enclosure: polyester plastic reinforced with glass fiber, color - black
Cover: with integrated thermoplastic elastomer gasket, closes with four M5 stainless steel screws.

TECHNICAL DATA

Certificate:	Ex FIDI 19 ATEX 0022X
Marking:	CE 0722
Apparatus category:	II 2GD
Marking of explosion protection:	Ex db eb IIC T6 Gb Ex tb IIIC T80°C
Ambient temperature ATEX:	-20°C ≤ T _a ≤ +40/+50°C
Degree of protection:	IP 66
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated isolating voltage:	690 V
Thermal current I_{the} :	16 A for -20°C ≤ T _a ≤ +40°C 15 A for -20°C ≤ T _a ≤ +50°C
PE terminals (inside of the enclosure):	max. 2x4 mm ² +2x2,5 mm ² , 3x4 mm ² , 2x6 mm ²
Weight:	App. 0,6kg

MODEL CODE

Installation switches SKX - SW / .

basic type code

type of switches

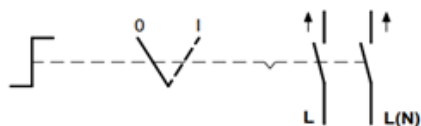
2 - on-off switch 2 pole

6 - changeover switch

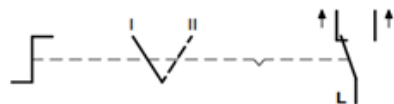
Switching capacity	Rated operating voltage Ue	Rated operating current Ie
AC 5a	230 V	16 A for $-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$ 15 A for $-20^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$
AC 5b	230 V	16 A for $-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$ 15 A for $-20^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$
AC 1	500 V	16 A for $-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$ 15 A for $-20^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$
AC 15	250 V 500 V	6 A for $-20^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$ 4 A for $-20^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$
DC 13	24 V 60 V 110 V	6 A for $-20^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$ 0,8 A for $-20^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$ 0,5 A for $-20^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$

WIRING DIAGRAM

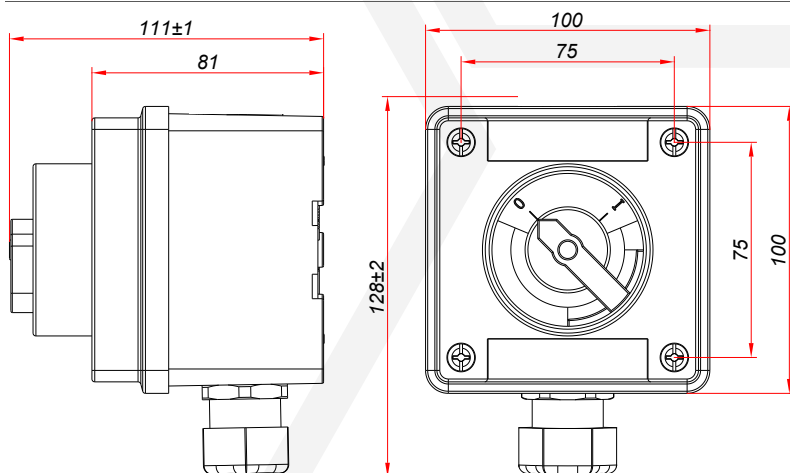
ON-OFF switch 2 pole



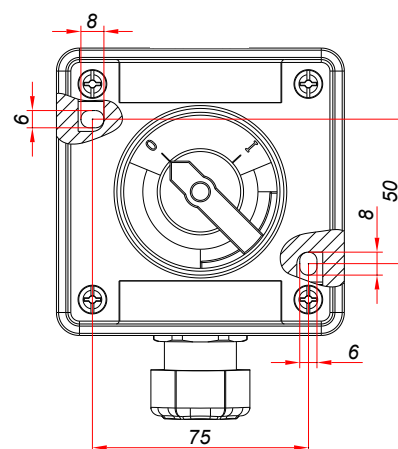
Changeover switch



DIMENSION



MOUNTING



All technical data is relevant at the time of print.

IP 66



- Enclosures in shock-resistant glass fiber reinforced polyester resin
- 7 basic enclosure sizes
- Fitted according to the customer's requirements
- Version with or without hinged door upon customer's demands



CONSTRUCTION

Enclosure: SMC glass fiber reinforced polyamide, color - black / blue
Cover: SMC glass fiber reinforced polyamide with integrated thermoplastic elastomer gasket, closes with four M5/M6 stainless steel screws.

TECHNICAL DATA

Certificate:	Ex FIDI 19 ATEX 0056 , FIDI 19 ATEX 0057 EAC RU C-HR.HB07.B.00280/20
Marking:	CE 0722
Apparatus category:	II 2GD
Marking of explosion protection:	Ex eb IIC T6 Gb Ex ia/ib IIC T6 Gb Ex eb ia/ib IIC T6 Gb Ex tb IIIC T80° Db
Ambient temperature:	-20°C / -40°C ≤ T _a ≤ +40°C/+50°C/+55°C [ATEX] -40°C / -20°C ≤ T _a ≤ +50°C / +55°C /+70°C [EAC]
Degree of protection:	IP 66
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	630 V
Nominal current:	Up to 125 A (depend on size and number of terminals)
Maximum safe voltage U_m for intrinsically safe circuits Exi:	60 V
PE terminals (inside of the enclosure):	max. 2x4 mm ² +2x2,5 mm ² , 3x4 mm ² , 2x6 mm ²
N/PE rails inside the enclosure:	2 pcs, 11 terminals 2x4mm ² max.
Weight (without cable glands):	SKX 12/E 0.5 kg SKX 13/E 0,7 kg SKX 14/E 1.0 kg SKX 15/E 1.0 - 1,5 kg SKX 17/E3,8 kg SKX 18/E 4,5 kg SKX 20/E 7,0 kg

MOUNTING

With two/four screws through the housing holes $\phi 6$ mm at the peaks the rectangle:

SKX 12: 75 x 50 mm
SKX 13: 75 x 100 mm
SKX 14: 75 x 150 mm
SKX 15: 125 x 150 mm

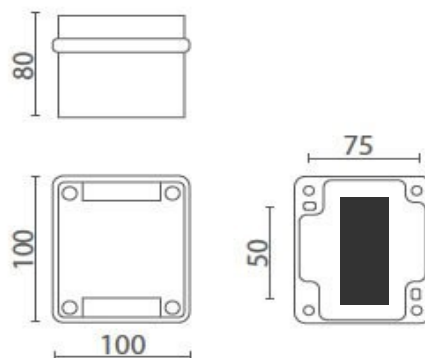
SKX 17: 285 x 200 mm
SKX 18: 380 x 200 mm
SKX 20: 580 x 200 mm

Terminal box SKX 12/E

Nominal cross-section of conductor / terminal [mm ²]	Max. number of terminals	Max.ambient temp Ta °C	I _{max} [A]
4/4	5	40	20
		50	18
		55	17

Max. number of cable entries (for plastic cable glands):

Cable gland Side	M16	M20	M25
A-C	2	1	1
B-D	2	2	1

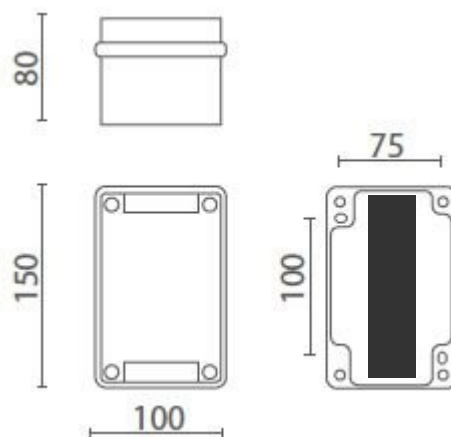


Terminal box SKX 13/E

Nominal cross-section of conductor / terminal [mm ²]	Max. number of terminals	Max.ambient temp Ta °C	I _{max} [A]
4/4	8	40	19
		50	17
		55	16
6/6	8	40	25
		50	22
		55	19

Max. number of cable entries (for plastic cable glands):

Cable gland Side	M16	M20	M25
A-C	2	2	1
B-D	4	3	2

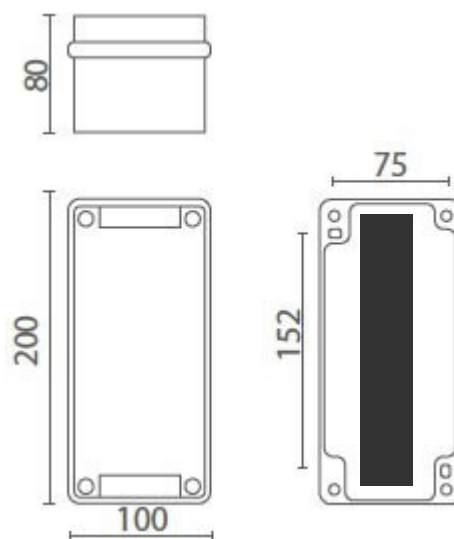


Terminal box SKX 14/E

Nominal cross-section of conductor / terminal [mm ²]	Max. number of terminals	Max.ambient temp Ta °C	I _{max} [A]
4/4	16	40	20
		50	18
		55	16
6/6	16	40	25
		50	22
		55	19

Max. number of cable entries (for plastic cable glands):

Cable gland Side	M16	M20	M25	M32
A-C	2	2	1	1
B-D	6	4	3	2



Terminal box SKX 15/E

Table of allowed number of terminals

Nominal cross-section of conductors / terminals [mm ²]	Maximum number of terminals	Ambient temperature Ta[°C]	I _{max} [A]
2,5/2,5	2	-40°C ÷ +40 °C	18
2,5/2,5	4		16
2,5/2,5	24		13
2,5/2,5	28		12
2,5/2,5	2	-40°C ÷ +50 °C	16
2,5/2,5	4		14
2,5/2,5	24		11
2,5/2,5	28		10
2,5/2,5	2	-40°C ÷ +55 °C	15
2,5/2,5	4		13
2,5/2,5	24		10
2,5/2,5	28		9
4/4	4	-40°C ÷ +40 °C	21
4/4	8		18
4/4	24		16
4/4	4	-40°C ÷ +50 °C	18
4/4	8		16
4/4	24		14
4/4	4	-40°C ÷ +55 °C	17
4/4	8		15
4/4	24		12
6/6	2	-40°C ÷ +40 °C	36
6/6	4		32
6/6	8		22
6/6	16		20
6/6	2	-40°C ÷ +50 °C	30
6/6	4		26
6/6	8		19
6/6	16		17
6/6	2	-40°C ÷ +55 °C	26
6/6	4		23
6/6	8		16
6/6	16		14
10/10	2	-40°C ÷ +40 °C	50
10/10	4		45
10/10	8		37
10/10	12		33
10/10	2	-40°C ÷ +50 °C	42
10/10	4		37
10/10	8		30
10/10	12		26
10/10	2	-40°C ÷ +55 °C	38
10/10	4		34
10/10	8		27
10/10	12		23
16/16	2	-40°C ÷ +40 °C	66
16/16	4		58
16/16	8		55
16/16	12		50
16/16	2	-40°C ÷ +50 °C	58
16/16	4		50
16/16	8		45
16/16	12		40
16/16	2	-40°C ÷ +55 °C	52
16/16	4		45
16/16	8		40
16/16	12		35

Table of allowed number of terminals

Nominal cross-section of conductors / terminals [mm ²]	Maximum number of terminals	Ambient temperature Ta[°C]	I _{max} [A]
25/25	2	-40°C ÷ +40 °C	80
25/25	4		70
25/25	8		60
25/25	2	-40°C ÷ +50 °C	70
25/25	4		60
25/25	8		50
25/25	2	-40°C ÷ +55 °C	60
25/25	4		50
25/25	8		40
35/35	2	-40°C ÷ +40 °C	109
35/35	4		80
35/35	2	-40°C ÷ +50 °C	95
35/35	4		70
35/35	2	-40°C ÷ +55 °C	85
35/35	4		60

Nominal cross-section of conductor / terminal [mm ²]	2,5/2,5	4/4	6/6	10/10	16/16	25/25	35/35
The maximum number of terminals	28 + busbar 22PE	24	16	14	12	8	4
Width of terminal [mm]	5	6	7	10	12	12	15
Allowed number of conductors per terminal	1x2.5-1.5 mm ²	1 x4-1.5 mm ²	1 x6-1.5 mm ²	1 x10-2.5 mm ²	1 x16-2.5 mm ²	1 x 25-6 mm ²	1 x 35-6 mm ²
Width of PE terminal [mm]	6	6	8	10	12	16	16
Width of final terminal [mm]	9						
Space for a terminal on DIN rail without end terminals	max. 140 mm						

- 1) Two conductors are connected on one terminal
- 2) PE conductors and jumpers are not taken in the calculation

It is possible to connect on one terminal smaller nominal cross-section conductors, but the maximum number of conductors and maximum current for the nominal wire size must be respected according to "Table of permitted installation". Combination of many different nominal cross-section terminals and conductors in one terminal box is allowed. Possible combinations are calculated on the basis of the "Table of permitted installation" so that the total maximum losses and the possibility of a physical installation is possible.

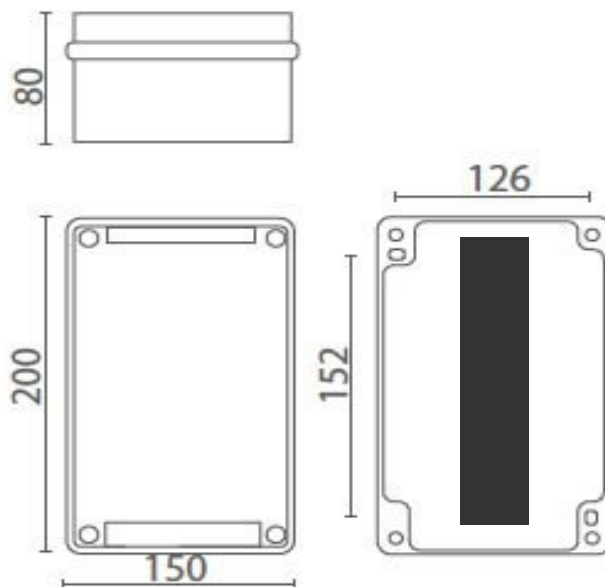
Max. number of cable entries (for plastic cable glands):

DIMENSIONS [mm]

Side	Cable gland	M16	M20	M25	M32
A-C		4	3	2	1
B-D		6	4	3	2

Side	Cable gland	M16	M20	M25	M32
A-C		4	3	2	1
B-D		5	3	3	0

*with N/PE rails



All technical data is relevant at the time of print.

Terminal box SKX 17/E

Table of allowed number of terminals

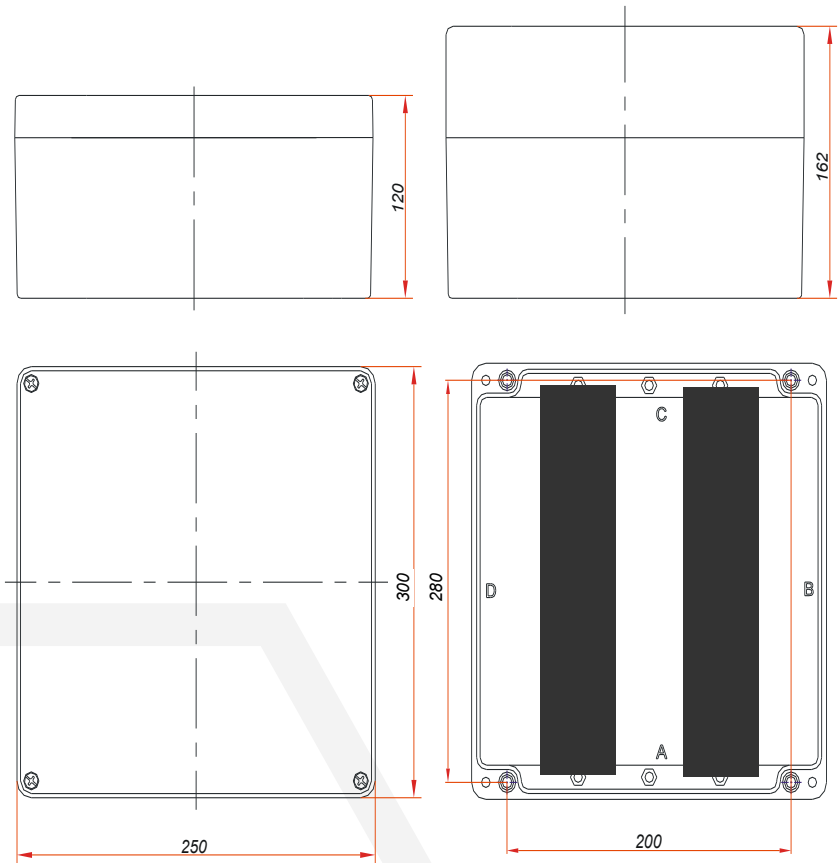
Nominal cross section of conductors / terminals (mm ²)	Maximum number of terminals	Ambient temperature Ta[°C]	I _{max} [A]
2,5 / 2,5	70	-20°C ÷ +40 °C	9
2,5 / 2,5	36		13
2,5 / 2,5	4		18
2,5 / 2,5	70	-20°C ÷ +50 °C	8
2,5 / 2,5	36		11
2,5 / 2,5	4		16
4 / 4	61	-20°C ÷ +40 °C	13
4 / 4	30		18
4 / 4	4		26
4 / 4	61	-20°C ÷ +50 °C	11
4 / 4	30		16
4 / 4	4		22
6 / 6	40	-20°C ÷ +40 °C	18
6 / 6	22		26
6 / 6	4		35
6 / 6	40	-20°C ÷ +50 °C	16
6 / 6	22		22
6 / 6	4		31
10 / 10	37	-20°C ÷ +40 °C	26
10 / 10	17		40
10 / 10	4		48
10 / 10	37	-20°C ÷ +50 °C	22
10 / 10	17		34
10 / 10	4		40
16 / 16	27	-20°C ÷ +40 °C	38
16 / 16	15		52
16 / 16	4		65
16 / 16	27	-20°C ÷ +50 °C	32
16 / 16	15		45
16 / 16	4		56
25 / 25	24	-20°C ÷ +40 °C	52
25 / 25	15		65
25 / 25	4		86
25 / 25	24	-20°C ÷ +50 °C	45
25 / 25	15		56
25 / 25	4		74
35 / 35	16	-20°C ÷ +40 °C	65
35 / 35	10		90
35 / 35	4		105
35 / 35	16	-20°C ÷ +50 °C	56
35 / 35	10		80
35 / 35	4		90
50 / 50	14	-20°C ÷ +40 °C	90
50 / 50	4		120
50 / 50	11	-20°C ÷ +50 °C	80
50 / 50	4		105

Terminal box

Max. number of cable entries:

DIMENSIONS [mm]

Side	Cable gland	M20	M25	M32	M40	M50	M63
B-D		11	9	5	4	3	2
A-C		9	7	3	3	2	2



All technical data is relevant at the time of print.

Terminal box SKX 18/E

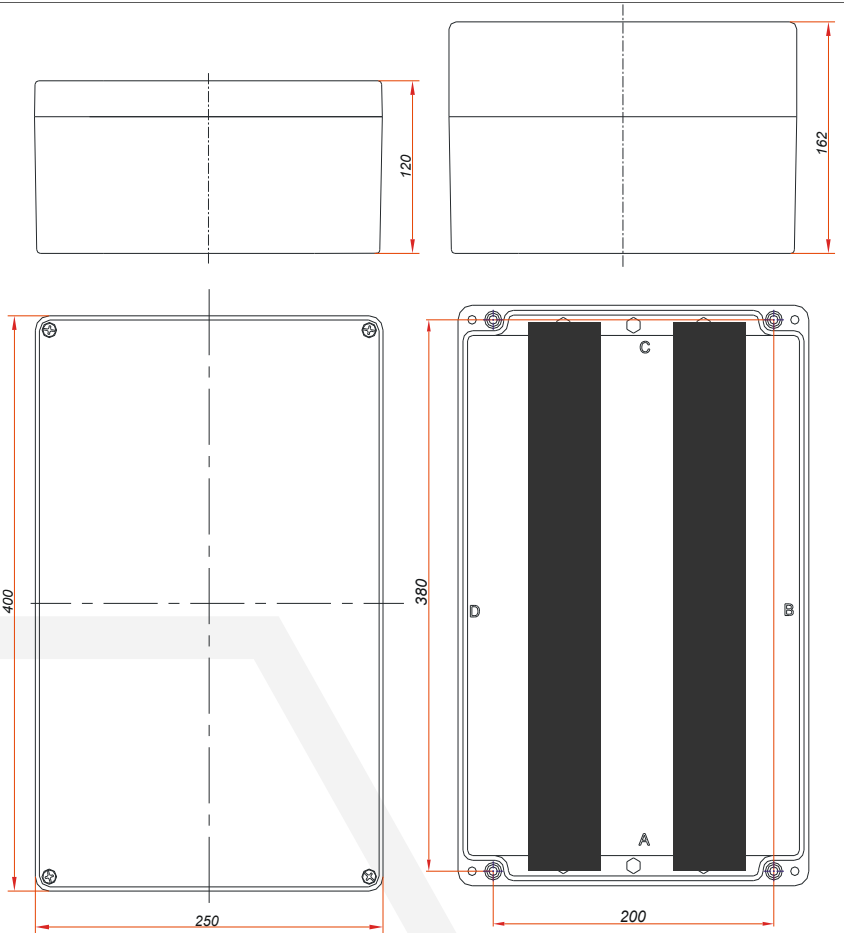
Table of allowed number of terminals

Nominal cross section of conductors / terminals (mm ²)	Maximum number of terminals	Ambient temperature Ta[°C]	I _{max} [A]
2,5 / 2,5	180	-20°C ÷ +40 °C	9
2,5 / 2,5	64		12
2,5 / 2,5	4		16
2,5 / 2,5	108	-20°C ÷ +50 °C	8
2,5 / 2,5	64		10
2,5 / 2,5	4		14
4 / 4	103	-20°C ÷ +40 °C	12
4 / 4	54		16
4 / 4	4		23
4 / 4	103	-20°C ÷ +50 °C	10
4 / 4	54		14
4 / 4	4		20
6 / 6	83	-20°C ÷ +40 °C	16
6 / 6	40		23
6 / 6	4		34
6 / 6	83	-20°C ÷ +50 °C	14
6 / 6	40		20
6 / 6	4		30
10 / 10	68	-20°C ÷ +40 °C	23
10 / 10	32		34
10 / 10	4		48
10 / 10	68	-20°C ÷ +50 °C	20
10 / 10	32		30
10 / 10	4		42
16 / 16	48	-20°C ÷ +40 °C	34
16 / 16	26		48
16 / 16	4		60
16 / 16	48	-20°C ÷ +50 °C	30
16 / 16	26		42
16 / 16	4		50
25 / 25	40	-20°C ÷ +40 °C	48
25 / 25	26		60
25 / 25	4		80
25 / 25	40	-20°C ÷ +50 °C	42
25 / 25	26		50
25 / 25	4		70
35 / 35	36	-20°C ÷ +40 °C	60
35 / 35	20		80
35 / 35	4		105
35 / 35	36	-20°C ÷ +50 °C	50
35 / 35	20		70
35 / 35	4		90
50 / 50	26	-20°C ÷ +40 °C	80
50 / 50	16		110
50 / 50	4		125
50 / 50	26	-20°C ÷ +50 °C	70
50 / 50	16		95
50 / 50	4		100

Max. number of cable entries:

DIMENSIONS [mm]

Side	Cable gland	M20	M25	M32	M40	M50	M63
B-D		17	15	9	6	5	4
A-C		9	7	3	3	2	2



Terminal box SKX 20/E

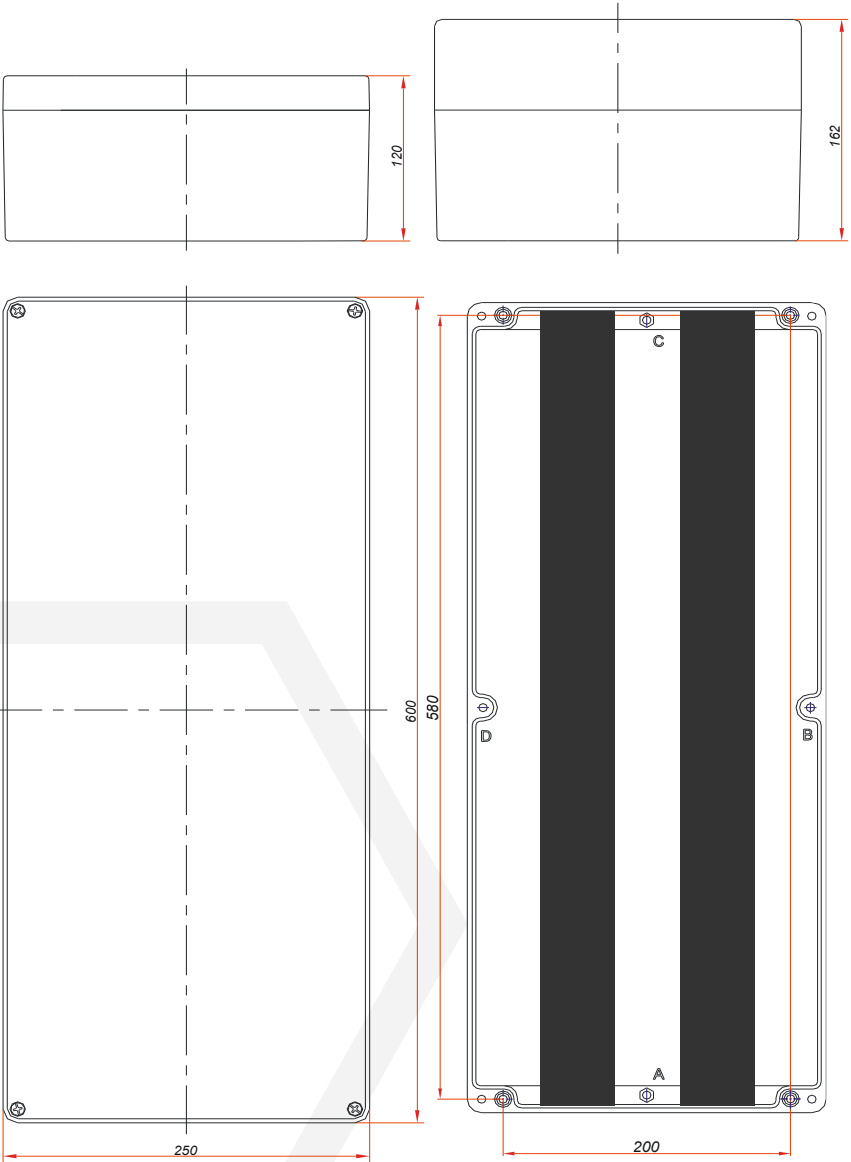
Table of allowed number of terminals

Nominal cross section of conductors / terminals (mm ²)	Maximum number of terminals	Ambient temperature Ta[°C]	I _{max} [A]
2,5 / 2,5	200	-20°C ÷ +40 °C	6
2,5 / 2,5	126		9
2,5 / 2,5	78		12
2,5 / 2,5	4		16
2,5 / 2,5	126	-20°C ÷ +50 °C	8
2,5 / 2,5	78		10
2,5 / 2,5	4		14
4 / 4	180	-20°C ÷ +40 °C	9
4 / 4	122		12
4 / 4	66		16
4 / 4	4		23
4 / 4	122	-20°C ÷ +50 °C	10
4 / 4	66		14
4 / 4	4		20
6 / 6	98	-20°C ÷ +40 °C	16
6 / 6	48		23
6 / 6	4		34
6 / 6	98	-20°C ÷ +50 °C	14
6 / 6	48		20
6 / 6	4		30
10 / 10	80	-20°C ÷ +40 °C	23
10 / 10	36		34
10 / 10	4		48
10 / 10	80	-20°C ÷ +50 °C	20
10 / 10	36		30
10 / 10	4		42
16 / 16	58	-20°C ÷ +40 °C	34
16 / 16	29		48
16 / 16	4		60
16 / 16	58	-20°C ÷ +50 °C	30
16 / 16	29		42
16 / 16	4		50
25 / 25	46	-20°C ÷ +40 °C	48
25 / 25	30		60
25 / 25	4		80
25 / 25	46	-20°C ÷ +50 °C	42
25 / 25	30		50
25 / 25	4		70
35 / 35	41	-20°C ÷ +40 °C	60
35 / 35	23		80
35 / 35	4		105
35 / 35	41	-20°C ÷ +50 °C	50
35 / 35	23		70
35 / 35	4		90
50 / 50	33	-20°C ÷ +40 °C	80
50 / 50	18		110
50 / 50	4		125
50 / 50	33	-20°C ÷ +50 °C	70
50 / 50	18		95
50 / 50	4		100

Max. number of cable entries:

DIMENSIONS [mm]

Side	Cable gland	M20	M25	M32	M40	M50	M63
B-D		24	22	12	8	6	6
A-C		9	7	3	3	2	2



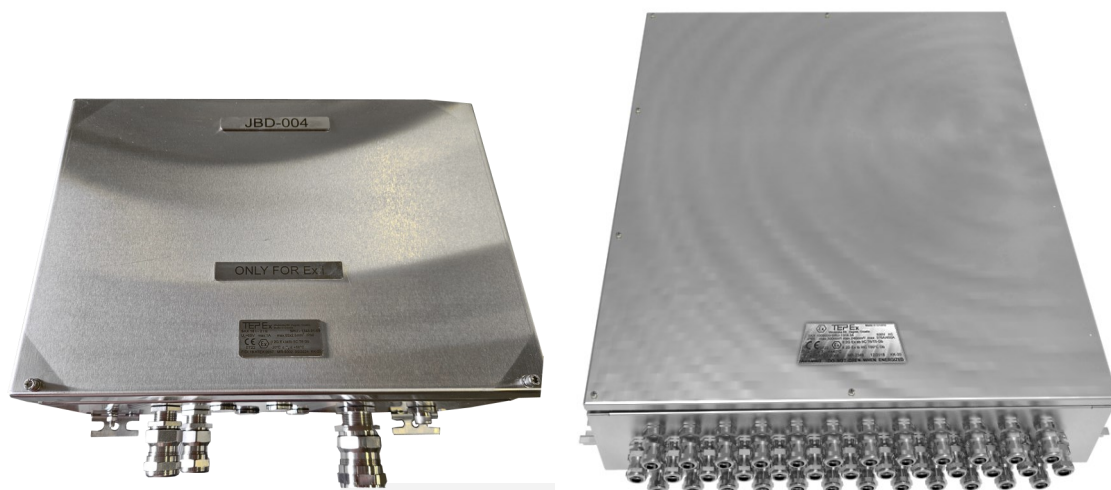
IP 66



IK 09



- Enclosures in stainless steel AISI 316L
- 4 basic enclosure sizes
- Fitted according to the customer's requirements
- Hinged door



CONSTRUCTION

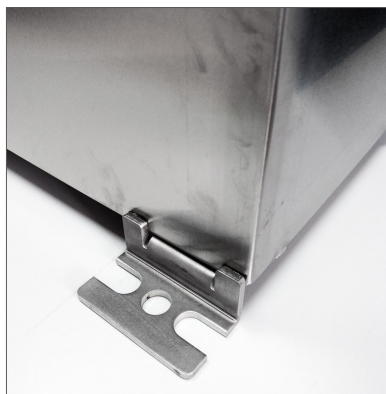
Enclosure: Stainless steel AISI 316L, brush finished, thickness 1.5 mm
Cover: with integrated thermoplastic elastomer gasket, closes with four M6 stainless steel screws.

TECHNICAL DATA

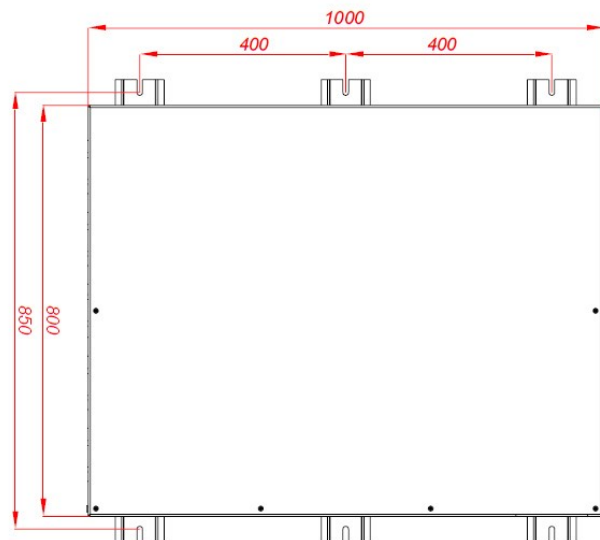
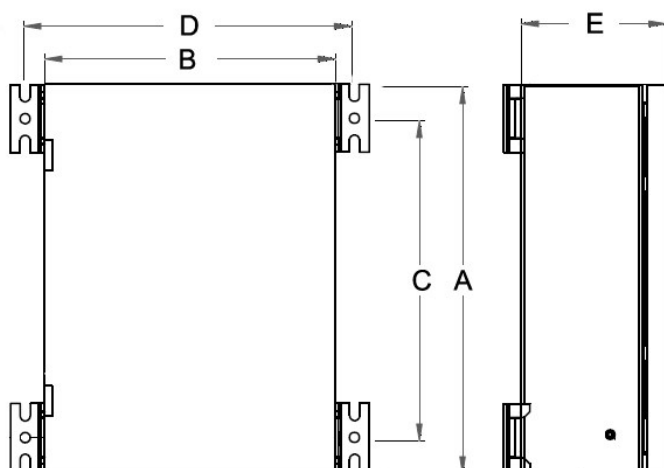
Certificate:	FIDI 19 ATEX 0057 EAC RU C-HR.HB07.B.00280/20
Marking:	0722
Apparatus category:	II 2GD
Marking of explosion protection:	Ex eb IIC T6 Gb Ex ia/ib IIC T6 Gb Ex eb ia/ib IIC T6 Gb Ex tb IIIC T80°C Db
Ambient temperature:	-20°C ≤ T _a ≤ +50°C [ATEX] -40°C ≤ T _a ≤ +50°C / +70°C [EAC]
Degree of protection:	IP 66
Resistance to shock:	IK 09
Protection class :	I (protective earthing)
Rated voltage:	630 V
Nominal current:	Up to 125 A (depend on size and number of terminals)
Maximum safe voltage U_m for intrinsically safe circuits Exi:	60 V
PE terminals (inside of the enclosure):	max. 2x4 mm ² + 2x2,5 mm ² , 3x4 mm ² , 2x6 mm ²
N/PE rails inside the enclosure:	2 pcs, 11 terminals 2x4 mm ² max.
Weight (without cable glands):	SKX 16I/E.....5,2 kg SKX 18I-2/E..... 6,4 kg SKX 20I/E.....12,0 kg

MOUNTING

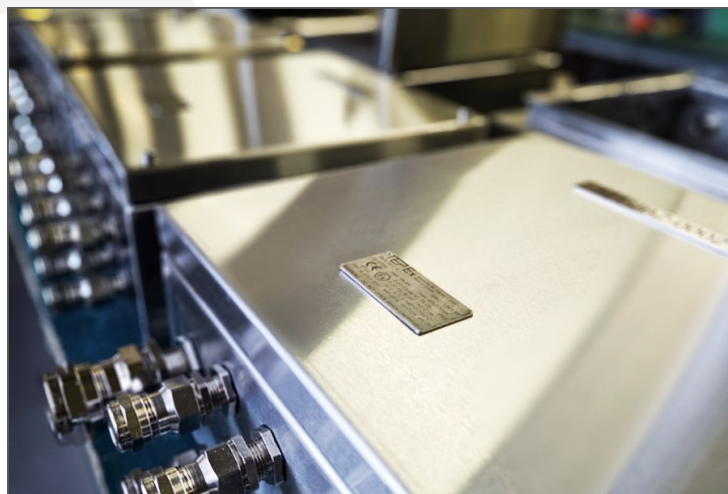
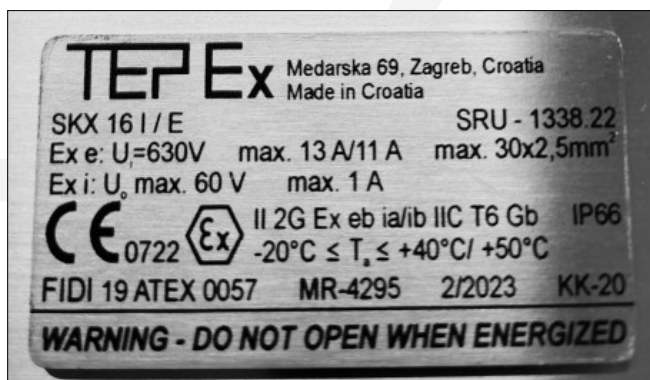
With four screws through the housing holes $\phi 10$ mm at the peaks the rectangle:



Stainless steel terminal box SKX 16I/E, SKX 18I-2/E, SKX 20I/E, SKX 1008020

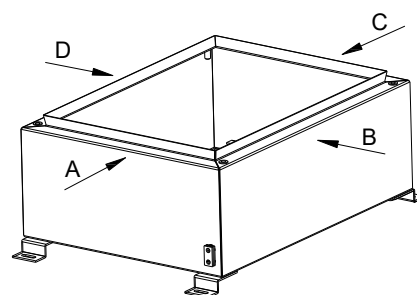


Type	A[mm]	B[mm]	C[mm]	D[mm]	E[mm]
SKX 16I/E	300	300	245	330	150
SKX 18I-2/E	400	300	325	330	
SKX 20I/E	600	400	530	440	200
SKX 1008020	1000	800	800	850	



Max. number of mounted cable entries:

TYPE Dimension	SKX 16I/E 300x300x150		SKX 18I-2/E 400x300x150		SKX 20I/E 600x400x200		SKX 1008020 1000x800x200	
Cable gland	A-C	B-D	A-C	B-D	A-C	B-D	A-C	B-D
M20x1.5	11	11	11	17	17	30	48	60
M25x1.5	9	9	9	15	15	26	36	48
M32x1.5	5	5	5	9	9	14	20	28
M40x1.5	3	3	3	6	6	12	14	22
M50x1.5	3	3	3	5	5	6	8	10
M63x1.5	2	2	2	4	4	6	6	8



All technical data is relevant at the time of print.

Terminal box SKX 16I/E (300x300x150 mm)

Table of allowed number of terminals

Nominal cross section of conductors / terminals (mm ²)	Maximum number of terminals	Ambient temperature Ta[°C]	I _{max} [A]
2,5 / 2,5	60	-20°C ÷ +40 °C	9
2,5 / 2,5	30		13
2,5 / 2,5	4		18
2,5 / 2,5	60	-20°C ÷ +50 °C	8
2,5 / 2,5	30		11
2,5 / 2,5	4		16
4 / 4	48	-20°C ÷ +40 °C	13
4 / 4	24		18
4 / 4	4		26
4 / 4	48	-20°C ÷ +50 °C	11
4 / 4	24		16
4 / 4	4		22
6 / 6	36	-20°C ÷ +40 °C	18
6 / 6	18		26
6 / 6	4		35
6 / 6	36	-20°C ÷ +50 °C	16
6 / 6	18		22
6 / 6	4		31
10 / 10	30	-20°C ÷ +40 °C	26
10 / 10	14		40
10 / 10	4		48
10 / 10	30	-20°C ÷ +50 °C	22
10 / 10	14		34
10 / 10	4		40
16 / 16	22	-20°C ÷ +40 °C	38
16 / 16	11		52
16 / 16	4		63
16 / 16	22	-20°C ÷ +50 °C	32
16 / 16	11		45
16 / 16	4		54
25 / 25	18	-20°C ÷ +40 °C	52
25 / 25	11		65
25 / 25	4		80
25 / 25	18	-20°C ÷ +50 °C	45
25 / 25	11		56
25 / 25	4		69
35 / 35	14	-20°C ÷ +40 °C	65
35 / 35	8		90
35 / 35	4		94
35 / 35	14	-20°C ÷ +50 °C	56
35 / 35	8		80
35 / 35	4		82
50 / 50	10	-20°C ÷ +40 °C	90
50 / 50	3		12
50 / 50	10	-20°C ÷ +50 °C	80
50 / 50	3		105

Maximum possible number of terminals definite by enclosure dimensions

Maximum possible number of terminals definite by enclosure dimensions	36	30	22	18	15	15	10	8
Width of single terminal [mm]	5	6	7	10	12	12	15	18,5
Allowed cross-section of conductor for single terminal	1x2.5-1.5 mm ²	1 x4-1.5 mm ²	1 x6-1.5 mm ²	1 x10-2.5 mm ²	1 x16-2.5 mm ²	1 x 25-6 mm ²	1 x 35-6 mm ²	1 x 50-10 mm ²
Width of PE terminal [mm]	5	6	7	10	12	12	15	18.5
Width of end holder	9							
Space for terminals on DIN rail without end holders	max. 214 mm							



Terminal box SKX 18I-2/E (400x300x150 mm)

Table of allowed number of terminals

Nominal cross section of conductors / terminals (mm ²)	Maximum number of terminals	Ambient temperature Ta[°C]	I _{max} [A]
2,5 / 2,5	95	-20°C ÷ +40 °C	9
2,5 / 2,5	55		12
2,5 / 2,5	4		16
2,5 / 2,5	95	-20°C ÷ +50 °C	8
2,5 / 2,5	55		10
2,5 / 2,5	4		14
4 / 4	88	-20°C ÷ +40 °C	12
4 / 4	50		16
4 / 4	4		23
4 / 4	88	-20°C ÷ +50 °C	10
4 / 4	50		14
4 / 4	4		20
6 / 6	75	-20°C ÷ +40 °C	16
6 / 6	36		23
6 / 6	4		34
6 / 6	75	-20°C ÷ +50 °C	14
6 / 6	36		20
6 / 6	4		30
10 / 10	60	-20°C ÷ +40 °C	23
10 / 10	27		34
10 / 10	4		48
10 / 10	60	-20°C ÷ +50 °C	20
10 / 10	27		30
10 / 10	4		42
16 / 16	44	-20°C ÷ +40 °C	34
16 / 16	22		48
16 / 16	4		60
16 / 16	44	-20°C ÷ +50 °C	30
16 / 16	22		42
16 / 16	4		50
25 / 25	34	-20°C ÷ +40 °C	48
25 / 25	21		60
25 / 25	4		80
25 / 25	34	-20°C ÷ +50 °C	42
25 / 25	21		50
25 / 25	4		70
35 / 35	31	-20°C ÷ +40 °C	60
35 / 35	17		80
35 / 35	4		105
35 / 35	31	-20°C ÷ +50 °C	50
35 / 35	17		70
35 / 35	4		90
50 / 50	25	-20°C ÷ +40 °C	80
50 / 50	13		110
50 / 50	4		125
50 / 50	25	-20°C ÷ +40 °C	70
50 / 50	13		95
50 / 50	4		100

Maximum possible number of terminals definite by enclosure dimensions

Maximum possible number of terminals definite by enclosure dimensions	64	54	40	32	26	26	20	16
Width of single terminal [mm]	5	6	7	10	12	12	15	18,5
Allowed cross-section of conductor for single terminal	1x2.5-1.5 mm ²	1 x4-1.5 mm ²	1 x6-1.5 mm ²	1 x10-2.5 mm ²	1 x16-2.5 mm ²	1 x 25-6 mm ²	1 x 35-6 mm ²	1 x 50-10 mm ²
Width of PE terminal [mm]	5	6	7	10	12	12	15	18.5
Width of end holder	9							
Space for terminals on DIN rail without end holders	max. 300 mm							



Terminal box SKX 20I/E (600x400x200 mm)

Table of allowed number of terminals

Nominal cross section of conductors / terminals (mm ²)	Maximum number of terminals	Ambient temperature Ta[°C]	I _{max} [A]
2,5 / 2,5	200	-20°C ÷ +40 °C	6
2,5 / 2,5	102		9
2,5 / 2,5	60		12
2,5 / 2,5	4	-20°C ÷ +40 °C	16
2,5 / 2,5	102		8
2,5 / 2,5	60		10
2,5 / 2,5	4	-20°C ÷ +50 °C	14
4 / 4	180		9
4 / 4	96		12
4 / 4	53	-20°C ÷ +40 °C	16
4 / 4	4		23
4 / 4	96		10
4 / 4	53	-20°C ÷ +50 °C	14
4 / 4	4		20
6 / 6	80		16
6 / 6	38	-20°C ÷ +40 °C	23
6 / 6	4		34
6 / 6	80		14
6 / 6	38	-20°C ÷ +50 °C	20
6 / 6	4		30
10 / 10	65		23
10 / 10	29	-20°C ÷ +40 °C	34
10 / 10	4		48
10 / 10	65		20
10 / 10	29	-20°C ÷ +50 °C	30
10 / 10	4		42
16 / 16	47		34
16 / 16	24	-20°C ÷ +40 °C	48
16 / 16	4		60
16 / 16	47		30
16 / 16	24	-20°C ÷ +50 °C	42
16 / 16	4		50
25 / 25	37		48
25 / 25	23	-20°C ÷ +40 °C	60
25 / 25	4		80
25 / 25	37		42
25 / 25	23	-20°C ÷ +50 °C	50
25 / 25	4		70
35 / 35	33		60
35 / 35	18	-20°C ÷ +40 °C	80
35 / 35	4		105
35 / 35	33		50
35 / 35	15	-20°C ÷ +50 °C	70
35 / 35	4		90
50 / 50	26		80
50 / 50	14	-20°C ÷ +40 °C	110
50 / 50	4		125
50 / 50	26		70
50 / 50	14		95
50 / 50	4		100

Maximum possible number of terminals definite by enclosure dimensions

Maximum possible number of terminals definite by enclosure dimensions	100	86	66	50	40	40	30	26
Width of single terminal [mm]	5	6	7	10	12	12	15	18,5
Allowed cross-section of conductor for single terminal	1x2.5-1.5 mm ²	1 x4-1.5 mm ²	1 x6-1.5 mm ²	1 x10-2.5 mm ²	1 x16-2.5 mm ²	1 x 25-6 mm ²	1 x 35-6 mm ²	1 x 50-10 mm ²
Width of PE terminal [mm]	5	6	7	10	12	12	15	18,5
Width of end holder	9							
Space for terminals on DIN rail without end holders	max. 500 mm							

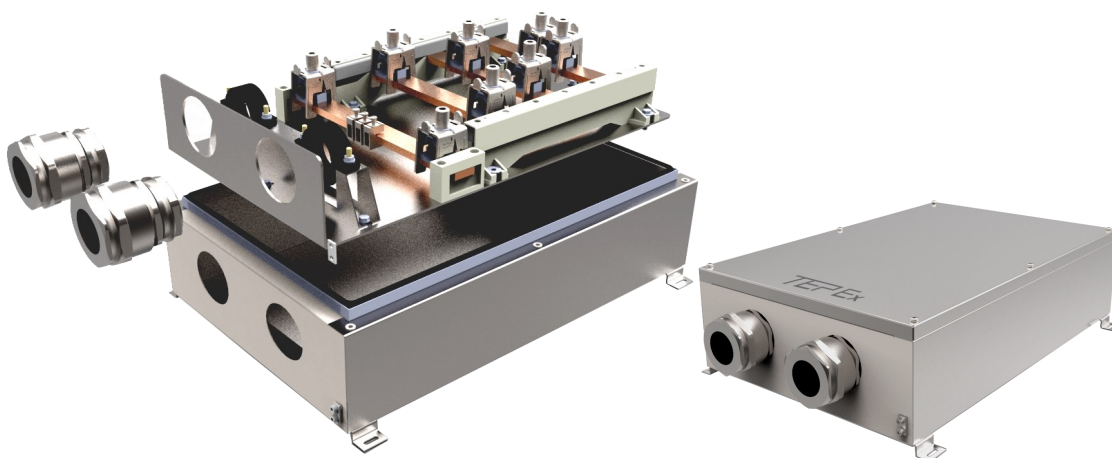


IP 66



- For terminals from 50... 300 mm²
- Rated operational current up to max. 450 A depending on enclosure version and size
- Hinged door

SKX busbar AISI



CONSTRUCTION

Enclosure: Stainless steel AISI 316L, 1.5mm
Gasket: EPDM formed gasket

TECHNICAL DATA

Certificate:	Ex FIDI 19 ATEX 0054, FIDI 19 ATEX 0055
Marking:	CE 0722
Apparatus category:	II 2GD
Marking of explosion protection:	Ex eb IIC T6/T5 Gb Ex tb IIIC T80°C/T95°C Db
Ambient temperature ATEX:	-40°C ≤ T _a ≤ +50°C
Degree of protection:	IP 66
Resistance to shock:	IK 09
Protection class :	I (protective earthing)
Nominal voltage U_n:	630 V ±10%

Table of maximum currents for SKX 1008020:

Terminal	Cross section	t _a -40°C do +40°C	t _a -40°C do +50°C
300 mm ²	240 mm ²	450 A	425 A
	185 mm ²	440 A	390 A
	150 mm ²	400 A	350 A
	120 mm ²	350 A	300 A
120 mm ²	95 mm ²	300 A	250 A
	70 mm ²	220 A	185 A
	50 mm ²	160 A	130 A
	35 mm ²	100 A	80 A

Table of maximum currents for SKX 604016:

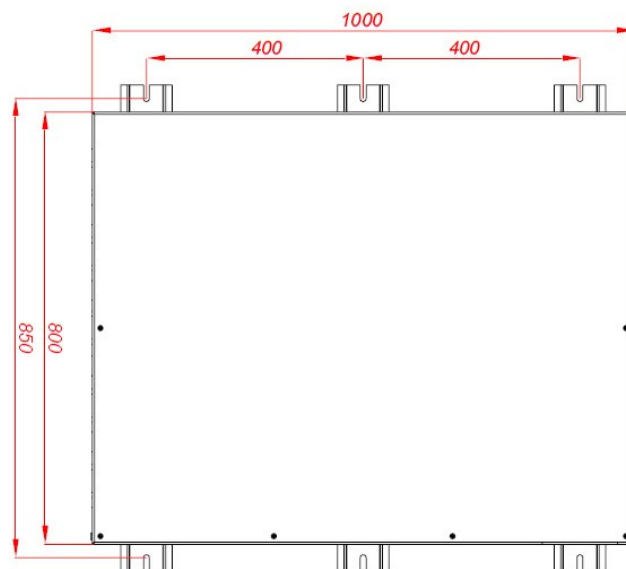
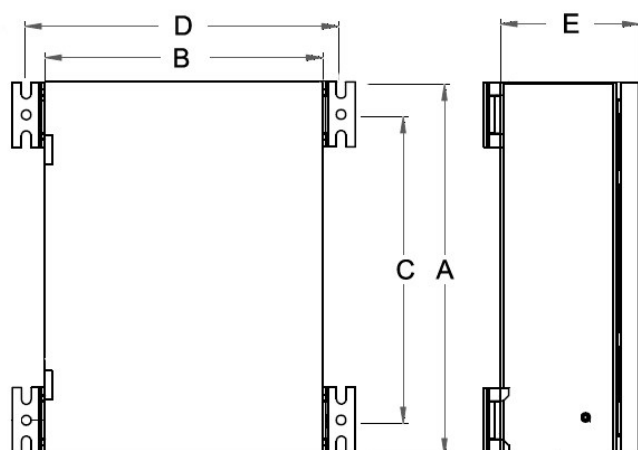
Terminal	Cross section	t _{amb} -20°C do +40°C	t _{amb} -20°C do +50°C
185 mm ²	150 mm ²	300 A	250 A
	120 mm ²	250 A	200 A
120 mm ²	95 mm ²	200 A	160 A
	70 mm ²	150 A	125 A
	50 mm ²	125 A	100 A
	35 mm ²	100 A	80 A

MODEL CODE

SKX xxxxxxxx- . / ...

- number of cable entries
- number and size of terminals
- type and design of enclosure
SKX 604016 (600x400x200 mm)
SKX 1008020 (1000x800x200 mm)

DIMENSION DRAWING (mm)



Type	A[mm]	B[mm]	C[mm]	D[mm]	E[mm]
SKX 604016	600	400	530	440	200
SKX 1008020	1000	800	800	850	

SPARE PARTS AND ACCESSORIES

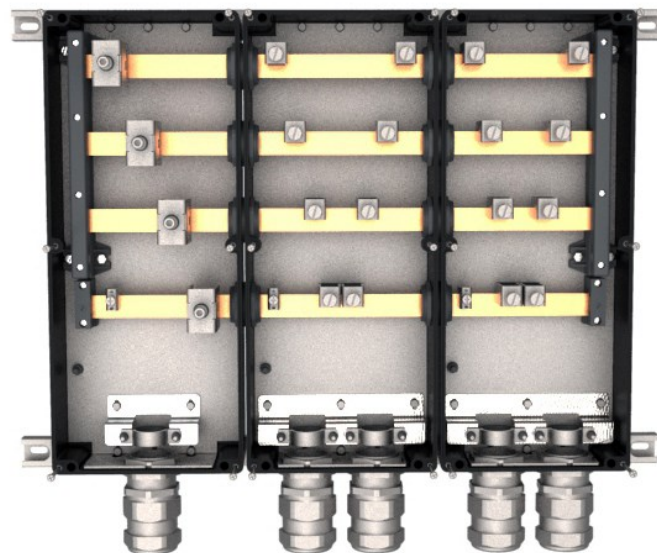
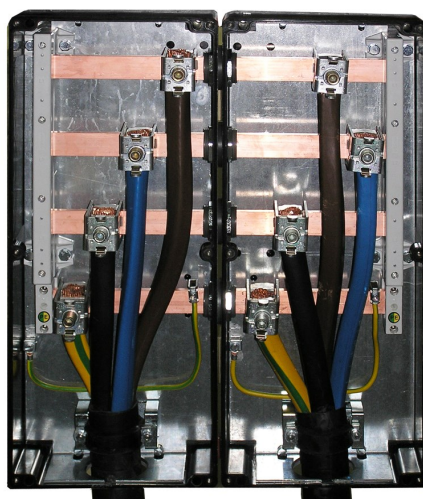
SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Cover	SKX 604016/ 10-100		Terminal 35 mm ²	SKX 604016/ 10-170
	Gasket	SKX 604016/ 10-110		Terminal 120 mm ²	SKX 604016/ 10-180
	Cover screw M5x25	SKX 604016/ 10-120		Terminal 300 mm ²	SKX 604016/ 10-190
	Mounting set	SKX 604016/ 10-130		Strain relief set 3/4"	SKX 604016/ 10-200
	Busbar holder PE	SKX 604016/ 10-140		Strain relief set 1"	SKX 604016/ 10-210
	Busbar holder	SKX 604016/ 10-150		Strain relief set 5/4"	SKX 604016/ 10-220
	Busbar Cu 30x10	SKX 604016/ 10-160		Strain relief set 6/4"	SKX 604016/ 10-230

IP 66



- For terminals from 50... 300 mm²
- Rated operational current up to max. 430 A depending on enclosure version and size

SKX busbar GRP



CONSTRUCTION

Enclosure: GRP
Gasket: EPDM formed gasket

TECHNICAL DATA

Certificate:	Ex FIDI 19 ATEX 0008
Marking:	CE 0722
Apparatus category:	II 2GD
Marking of explosion protection:	Ex eb IIC T6/T5 Gb Ex tb IIIC T80°C/T95°C Db
Ambient temperature ATEX:	-20°C ≤ T _a ≤ +50°C
Degree of protection:	IP 66
Resistance to shock:	IK 09
Protection class :	I (protective earthing)
Nominal voltage U_n:	630 V ±10%

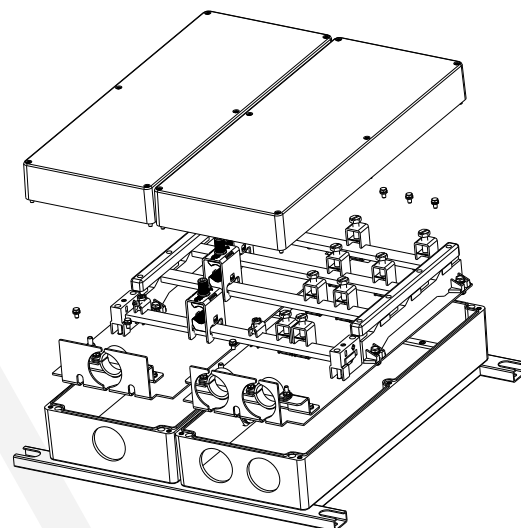
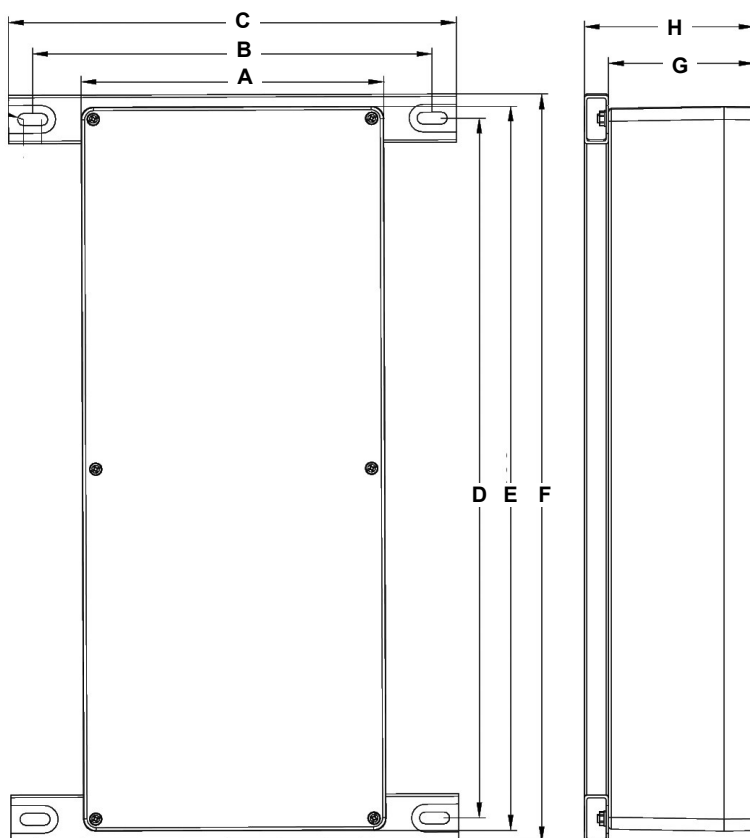
Table of maximum currents:

Terminal	Conductor cross section [mm ²]	Maximum thermal current of terminals / cable [A]			
		T _{amax} = +40°C		T _{amax} = +50°C	
		Cable temperature stability ≥ 70°C II 2G - T6 II 2D - T80°C	Cable temperature stability ≥ 90°C II 2G - T5 II 2D - T80°C	Cable temperature stability ≥ 70°C II 2G - T6 II 2D - T80°C	Cable temperature stability ≥ 90°C II 2G - T5 II 2D - T80°C
300mm ²	185	330	430	280	370
	150	270	350	230	300
185mm ²	120	200	280	160	240
120mm ²	95	160	215	130	185
	70	120	160	95	140
	50	85	115	65	100

MODEL CODE

TYPE	Cu busbar dim.	No. of SKX 20 enclosure	Conductor cross-section
SKX 20/1-120	3L+N+PE (20x10 mm)	1	120 mm ²
SKX 20/2-185	3L+PE (30x10 mm)	2	185 mm ²
SKX 20/3-185	3L+PE (30x10 mm)	3	

DIMENSION DRAWING (mm)



Type	A	B	C	D	E	F	H	G
SKX 20/1	250	330	370	580	600	620	140	120
SKX 20/2	504	583	623				180	162
SKX 20/3	758	836	876					

SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Cover	SKX 20/10-110		Terminal 35 mm ²	SKX 604016/10-170
	Gasket	SKX 20/10-130		Terminal 120 mm ²	SKX 604016/10-180
	Busbar holder	SKX 20/10-160		Terminal 300 mm ²	SKX 604016/10-190
	Busbar Cu 30x10	SKX 20/10-210		Strain relief set	SKX 20/10-220
	Busbar holder PE	SKX 20 / 10-150			

IP 66



- Nominal voltage
6,3 kV
- Max. current
420 A / 185 mm²



CONSTRUCTION

Enclosure: sheet steel 3mm
Gasket: EPDM formed gasket

TECHNICAL DATA

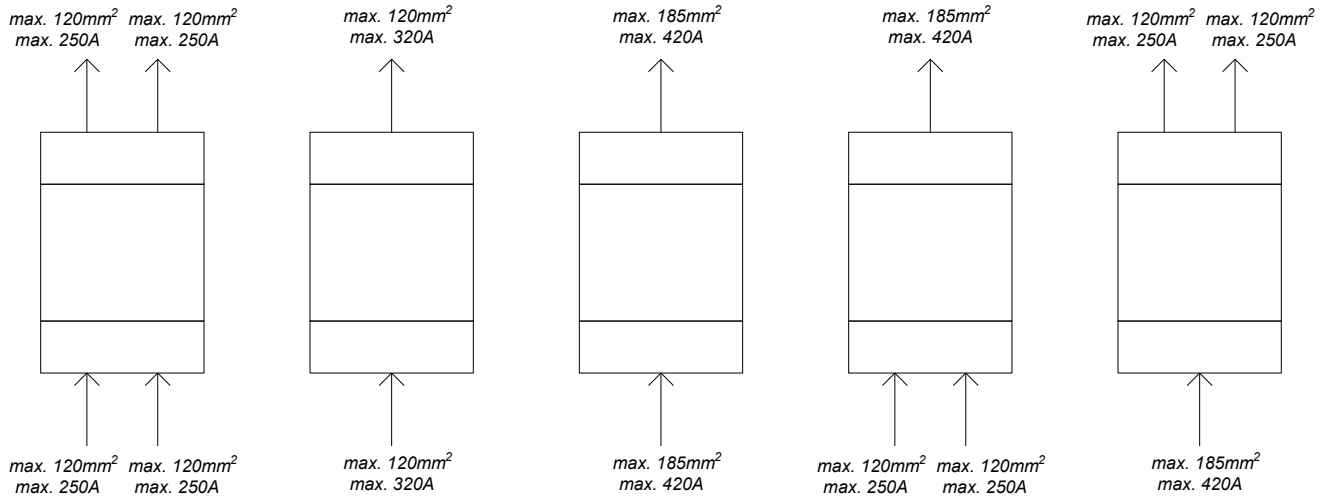
Certificate:	Ex FIDI 20 ATEX 0019
Marking:	CE 0722
Apparatus category:	I M2 II 2GD
Marking of explosion protection:	Ex eb I Mb Ex eb IIC T6-T4 Gb Ex tb IIIC T80°C Db
Ambient temperature ATEX:	-20°C ≤ T _a ≤ +40°C
Degree of protection:	IP 66
Resistance to shock:	IK 09
Protection class :	I (protective earthing)
Nominal voltage U _n :	6,3 kV ±10%AC
Max. current I _{max} :	420 A / 185 mm ² 320 A / 120 mm ²
Incoming and outgoing cable connection terminals:	Terminal 120 mm ² for cable 16 mm ² up to 120 mm ² Terminal 185 mm ² for cable 16 mm ² up to 185 mm ²

Max. currents table:

Conductor cross section	16 mm ²	25 mm ²	35 mm ²	50 mm ²	70 mm ²	95 mm ²	120 mm ²	Marking
Terminals	120 mm ² / 185 mm ²							I M2 Ex eb I Mb II 2G Ex eb IIC T4 Gb II 2D Ex tb IIIC T80°C Db
Max.current temperature cable resistance 110°C	30 A	50 A	70 A	105 A	150 A	200 A	250 A	
Max.current temperature cable resistance 90°C	25 A	40 A	60 A	85 A	120 A	160 A	200 A	
Max.current temperature cable resistance 70°C	20 A	30 A	45 A	65 A	90 A	120 A	150 A	
Terminals number per "C" busbar	2 + 2 (total 4 terminals and 4 cables)							II 2G Ex eb IIC T6 Gb II 2D Ex tb IIIC T80°C Db

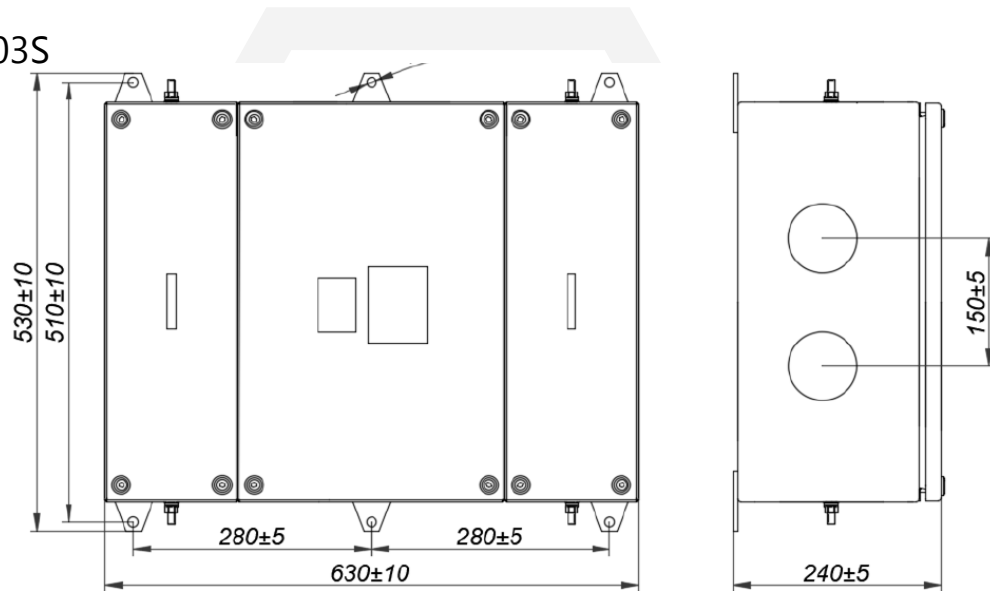
High voltage junction box

Cable possible connection (temperature cable resistance 110°C)

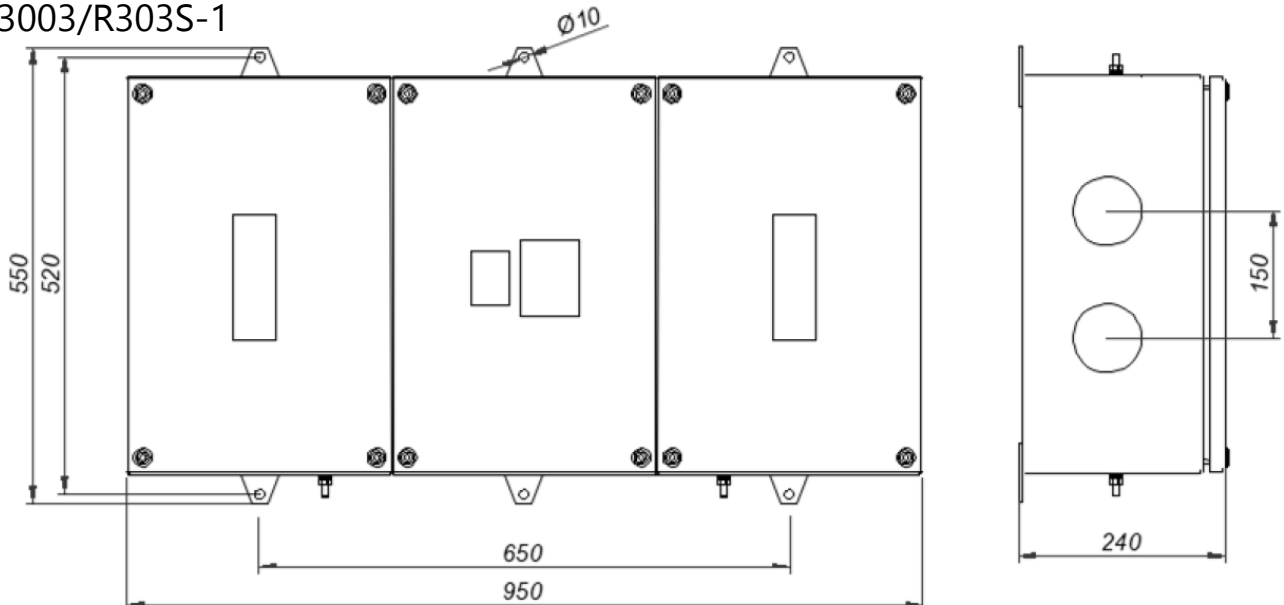


DIMENSION (mm)

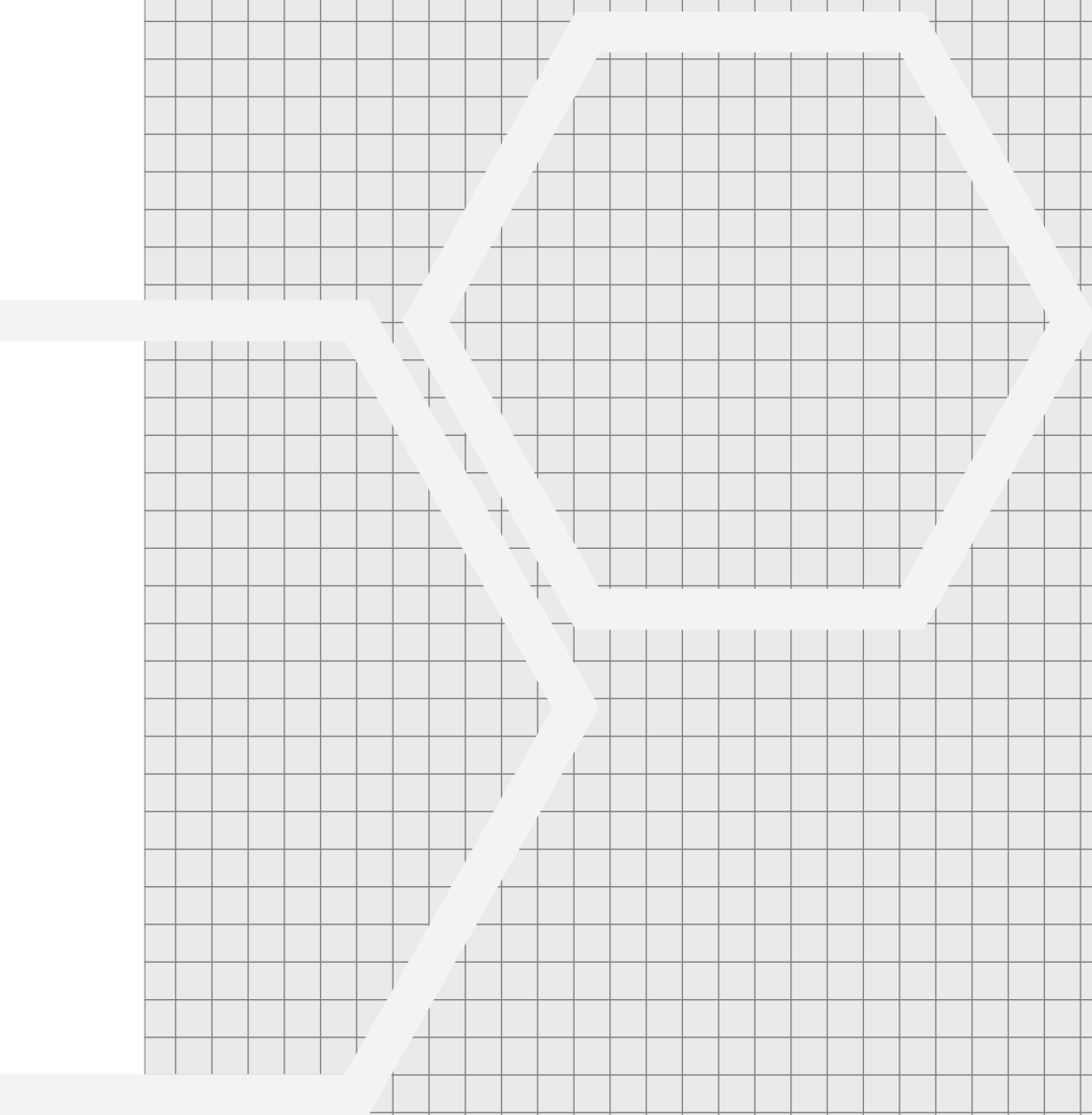
R3003/R303S



R3003/R303S-1



All technical data is relevant at the time of print.



Control units

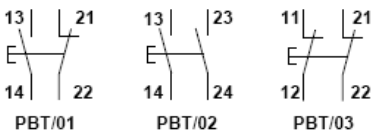
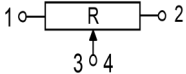
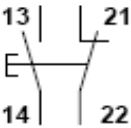
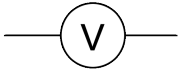


SKX 12 SKX 20

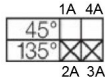
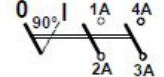
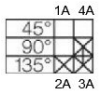
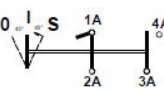
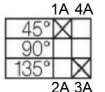
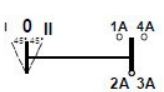
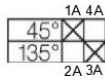
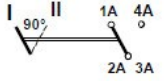
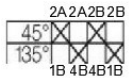
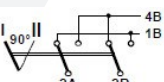
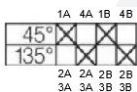
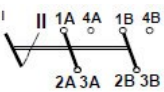
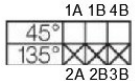
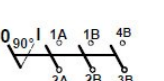
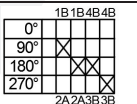
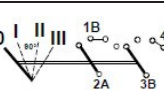
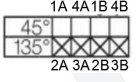
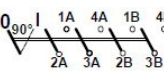
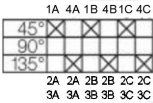
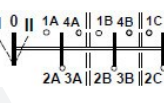
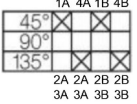
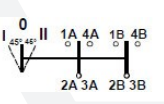
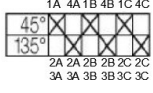
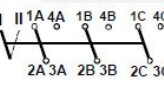
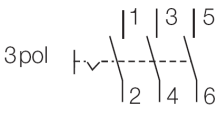
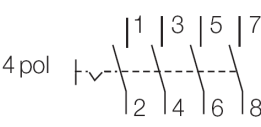
BUILT-IN COMPONENTS ACTUATORS AND INDICATORS



BUILT-IN COMPONENTS

Description, type	Scheme	Overview
Pushbutton PBT/. - Isulation voltage U_i: 690V AC - Rated thermal current I_{th}: 16 A - Terminals: 2,5 mm²		
Signal lamp SLP - Rated voltage: 12-250 V / 230-400 V AC/DC - Max. current: 20-8 mA - Terminals: 2,5 mm²		
Potentiometer - Rated voltage: 315 V AC/DC - Rated power: 1 W - Characteristic: linear - Terminals: 2,5 mm²	 Resistance R: 1,0 kΩ 5,0 kΩ 10 kΩ	
Double Pushbutton - Rated voltage: 630 V AC - Rated current: 16 A - Terminals: 2,5 mm²		
Measuring instrument ammeter AM 72 - instrument with moving-coil - Measuring range: 0 - 20 mA, 4 - 20 mA , n/1A, n/5A - Scale is created according to customer's request - Measuring accuracy: class 1,5 - Overloading area: 1 : 1,2 - Terminals: 2 x 1,5 - 4 mm²		
Measuring instrument voltmeter VM 72 - instrument with moving iron - Measuring range : 6 - 660 V - Scale is created according to customer's request - Measuring accuracy: class 1,5 - Overload range: 1 : 1,5 - Terminals: 2 x 1,5 - 4 mm²		

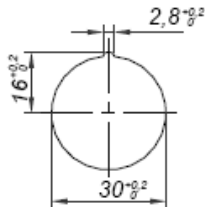
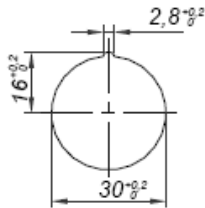
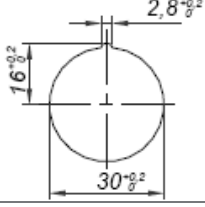
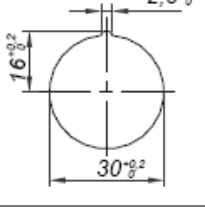
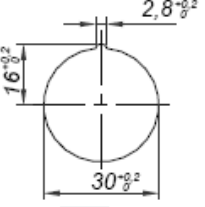
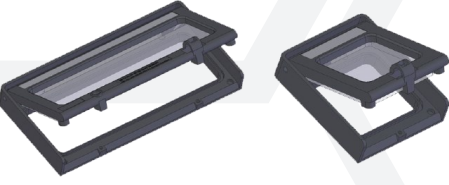
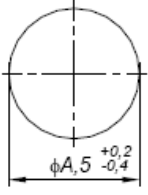
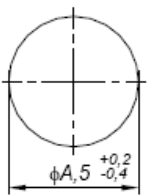
BUILT-IN COMPONENTS

Description, type	Scheme / types	Overview
Control switch SMS 03/. •Rated voltage: 690 V AC •Rated current: 16 A •Terminals: 2,5 mm ²	  SMS 03/1	
	  SMS 03/2	
	  SMS 03/3	
	  SMS 03/4	
	  SMS 03/5	
	  SMS 03/6	
	  SMS 03/7	
	  SMS 03/8	
	  SMS 03/9	
	  SMS 03/10	
	  SMS 03/11	
	  SMS 03/12	
Main control switch Rated voltage: 690 V AC Rated current : 20– 100 A Terminals: 16 - 25 mm ²	 	

ACTUATORS AND INDICATORS

Description, type	Mounting	Overview																										
Switch actuator SMO 17/.																												
Switch actuator																												
Front element of measuring instruments (ammeter or voltmeter) SAM 72																												
Pushbutton actuator SPO 01/.		<table><tr><th colspan="2">Type SPO 01/.</th></tr><tr><td>SPO 01/01</td><td>0</td></tr><tr><td>SPO 01/02</td><td>I</td></tr><tr><td>SPO 01/03</td><td>II</td></tr><tr><td>SPO 01/04</td><td>RED</td></tr><tr><td>SPO 01/05</td><td>GREEN</td></tr><tr><td>SPO 01/06</td><td>WHITE</td></tr><tr><td>SPO 01/07</td><td>START</td></tr><tr><td>SPO 01/08</td><td>STOP</td></tr><tr><td>SPO 01/09</td><td>ON</td></tr><tr><td>SPO 01/10</td><td>OFF</td></tr><tr><td>SPO 01/11</td><td>BLACK</td></tr><tr><td>SPO 01/12</td><td>BLUE</td></tr></table>	Type SPO 01/.		SPO 01/01	0	SPO 01/02	I	SPO 01/03	II	SPO 01/04	RED	SPO 01/05	GREEN	SPO 01/06	WHITE	SPO 01/07	START	SPO 01/08	STOP	SPO 01/09	ON	SPO 01/10	OFF	SPO 01/11	BLACK	SPO 01/12	BLUE
Type SPO 01/.																												
SPO 01/01	0																											
SPO 01/02	I																											
SPO 01/03	II																											
SPO 01/04	RED																											
SPO 01/05	GREEN																											
SPO 01/06	WHITE																											
SPO 01/07	START																											
SPO 01/08	STOP																											
SPO 01/09	ON																											
SPO 01/10	OFF																											
SPO 01/11	BLACK																											
SPO 01/12	BLUE																											
Front element of signal lamp SPO 02/.		<table><tr><th colspan="2">Type SPO 02/.</th></tr><tr><td>SPO 02/01</td><td>RED</td></tr><tr><td>SPO 02/02</td><td>GREEN</td></tr><tr><td>SPO 02/03</td><td>AMBER</td></tr><tr><td>SPO 02/04</td><td>TRANSPARENT</td></tr></table>	Type SPO 02/.		SPO 02/01	RED	SPO 02/02	GREEN	SPO 02/03	AMBER	SPO 02/04	TRANSPARENT																
Type SPO 02/.																												
SPO 02/01	RED																											
SPO 02/02	GREEN																											
SPO 02/03	AMBER																											
SPO 02/04	TRANSPARENT																											
Key-operated pushbutton actuator																												

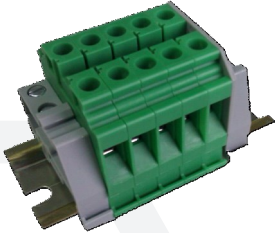
BUILT-IN COMPONENTS

Description, type	Mounting	Overview
Mushroom-head pushbutton actuator (EMERGENCY-STOP)		
Key-operated mushroom-head pushbutton actuator (EMERGENCY-STOP)		
Potentiometer actuator		
Double pushbutton actuator		
Pushbutton rotate actuator		
Inspection Ex eb window 120x140 mm 280x140 mm	-	
Cable gland plastic Exe/Exi ISO 16 - ISO 75		
Cable gland for armoured non-armoured cable metal Exd/Exe ISO 16 - ISO 75		

BUILT-IN COMPONENTS

Description, type	Scheme	Overview
Mantle terminals SL5 / SL8 - Rated voltage: 400 V - Rated current: 10/16 A - Connection terminals: 3 x 4 mm², 2 x 4 mm² + 2 x 2,5 mm²	-	
MCB - Miniature circuit breaker 1p/2p/3p/4p,B/C, 0,5-63A,6/10 kA	-	
Built-in Ex d socket 16 A (3p/5p) 32 A (4p)	-	
Residual current circuit breaker Ex d 2p/4p 25/40/63 A, 30 mA, 10 kA - with or without auxiliary contact	-	
MCB - Miniature circuit breaker Tex MCB 1 pole - Rated current In: 1 A, 2 A50 A ,63 A - Tripping charact.: B, C, D, K, Z	-	
Miniature fuse type PBT-F - Rated current In: 50 mA 10A - Burnout characteristic: - F (Fast-Acting) - T (Time-Lag)	-	

BUILT-IN COMPONENTS

Description, type	Mounting	Overview
Digital indicator Ex eb • measured value indication • 4 - 20 mA • HART sensors on customer's request	-	
Terminals TH 35-7.5 • 5 terminals 4 mm² • 2 terminals 16 mm² • Rated voltage: 690 V AC • Rated current: 10/16 A	-	
N/PE busbar (only for SKX 15, 17, 18 & 20) • 11 x max. 2x4 mm²	-	
HRC Fuse Ex d, 3p	-	
Transformer Ex eb • Factory protected against overload	-	



IP 66



- Enclosures made of glass-fibre reinforced polyester resin
- 4 basic enclosure sizes
- Version with or without hinged door upon customer's requirements
- Alone or in various combinations of merged set
- Equipped with built-in devices:
 - ⇒ Control devices
 - ⇒ Indicating lamps
 - ⇒ Pushbuttons
 - ⇒ Control switches
 - ⇒ Ammeters



CONSTRUCTION

Enclosure: polyester plastic reinforced with glass fiber, color - black
Cover: with integrated thermoplastic elastomer gasket, closes with four M5/M6 stainless steel screws.

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0051X EAC RU C-HR.HB07.B.00269/20
Marking:	0722
Apparatus category:	II 2GD I M2
Marking of explosion protection:	Ex db eb ia/ib mb IIC T6 Gb Ex db eb ia/ib mb I Mb Ex tb IIIC T80°C Db
Ambient temperature:	-20°C ≤ T _a ≤ +40°C / +50°C / +55°C [ATEX] -50°C / -40°C / -20°C ≤ T _a ≤ +40°C / +50°C / +55°C [EAC]
Degree of protection:	IP 66 category 1 for II 2GD IP 64 category 1 for I M2
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	630 V AC (with mantle terminals block SL5, SL8 Ui = 400 VAC)
Thermal current I_{the} :	16 A max. at T _a -20°C ÷ +40°C 10 A max. at T _a -20°C ÷ +50°C 7 A max. at T _a -20°C ÷ +55°C
PE terminals (inside of the enclosure):	max. 2x4 mm ² + 2x2,5 mm ² , 3x4 mm ² , 2x6 mm ²
Weight (only GRP boxes):	SKX 12 0.5 kg SKX 13 0,7 kg SKX 14 1.0 kg SKX 15 1.0 kg

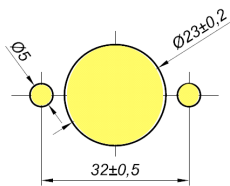
MOUNTING

With screw kit through the housing holes $\phi 6$ mm at the peaks the rectangle:

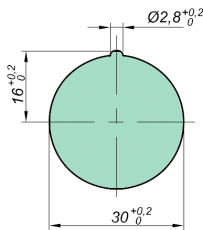
SKX 12: 75 x 50 mm
SKX 13: 75 x 100 mm
SKX 14: 75 x 150 mm
SKX 15/15H: 125 x 150 mm

Possible combinations and layout of indicators and actuators components

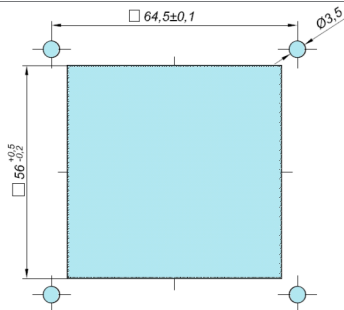
* mounting proposals and dimensions



Switch actuator SMO 17/.
Switch mounting

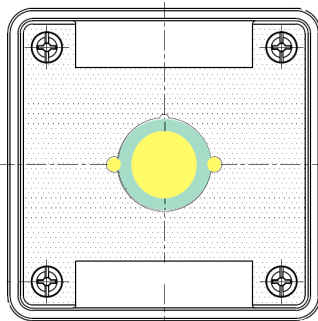
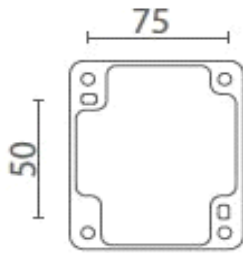
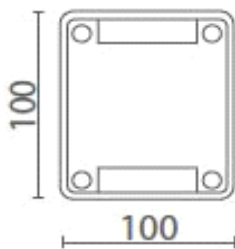


Pushbutton actuator SPO 01/.
Front element of signal lamp SPO 02/.
Pushbutton, signal lamp and potentiometer mounting



Front element of measuring instrument
(AM, VM) SAM 72
Measuring instrument mounting AM, VM

Enclosure type SKX 12



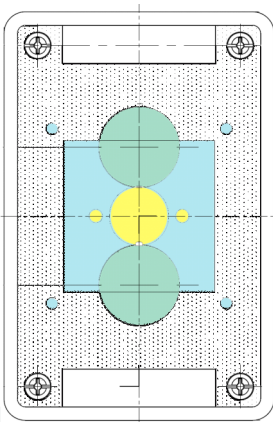
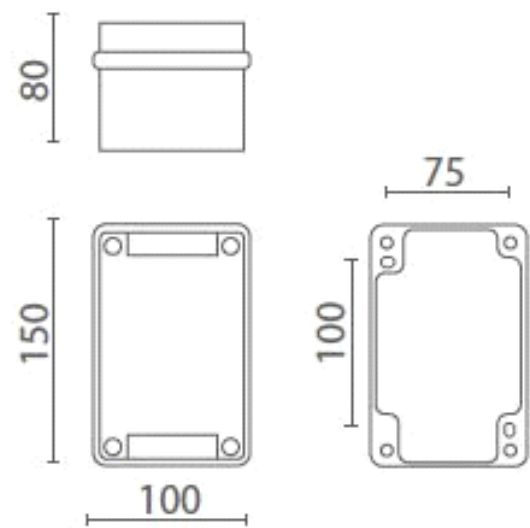
Max. No. of cable glands (for plastic cable glands)			
cable gland side	M16	M20	M25
A-C	2	2	1
B-D	2	2	1



All technical data is relevant at the time of print.

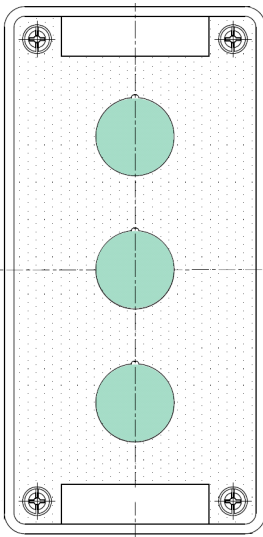
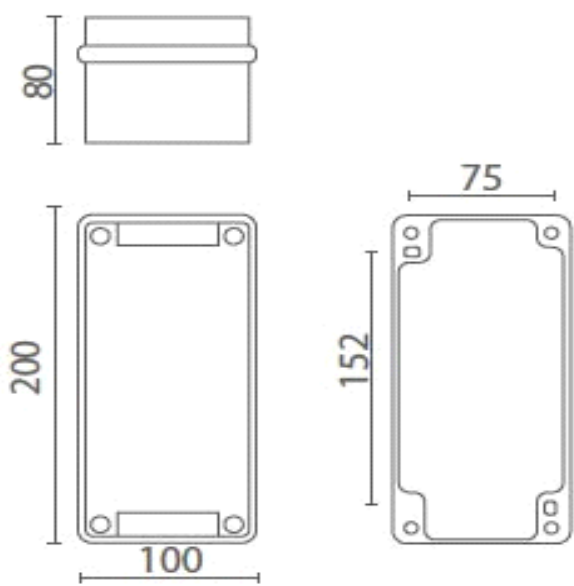
SKX 12 ... SKX 15

Enclosure type SKX 13



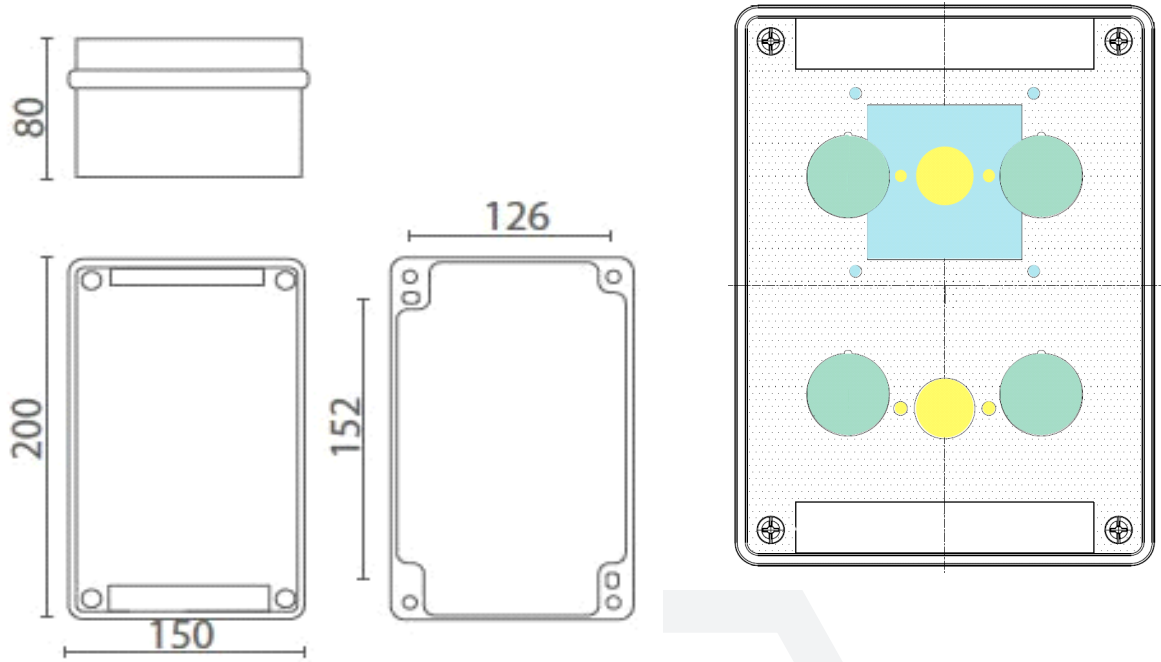
Max. No. of cable glands (for plastic cable glands)			
cable gland side	M16	M20	M25
A-C	2	2	1
B-D	4	3	2

Enclosure type SKX 14



Max. No. of cable glands (for plastic cable glands)				
cable gland side	M16	M20	M25	M32
A-C	2	2	1	1
B-D	6	4	3	2

Enclosure type SKX 15

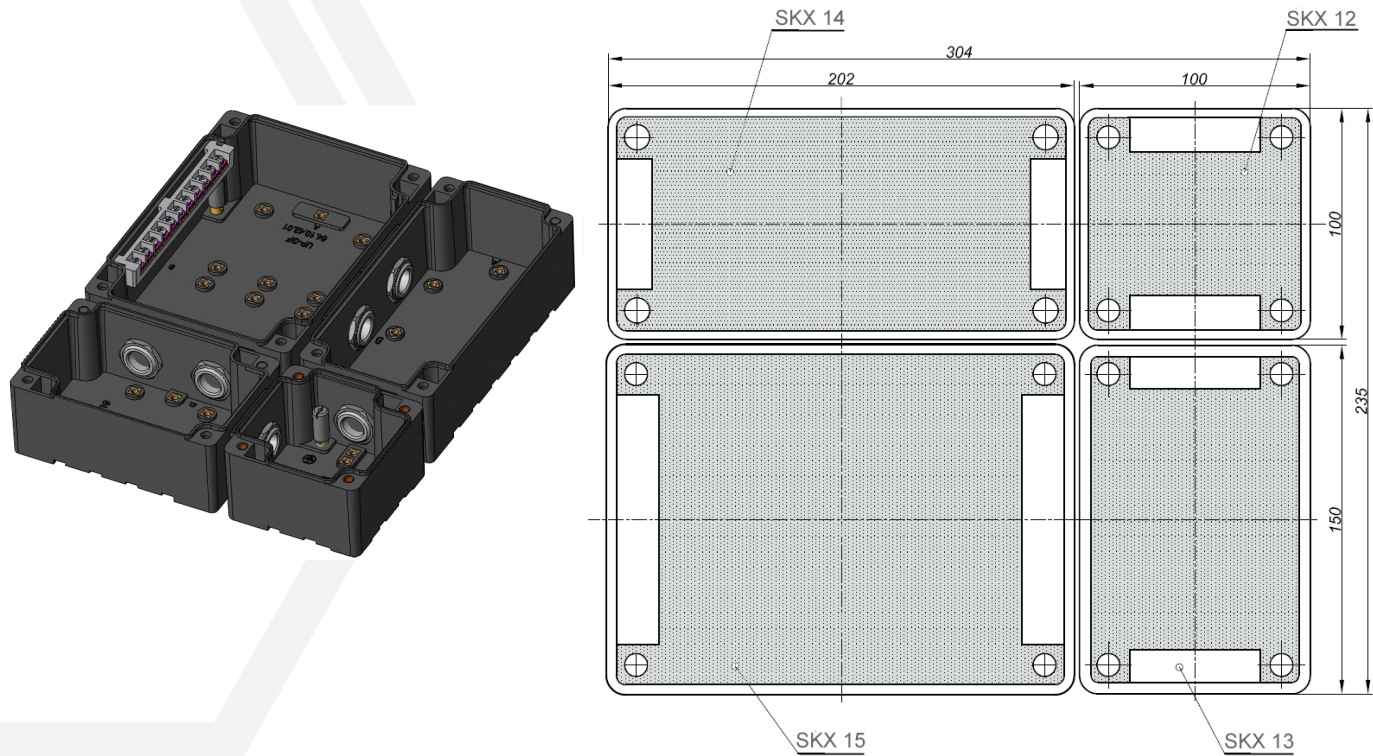


Max. No. of cable glands (for plastic cable glands)				
cable gland side	M16	M20	M25	M32
A-C	4	3	2	1
B-D	6	4	3	2

* with built-in N/PE busbar

cable gland side	M16	M20	M25	M32
A-C	4	3	2	1
B-D	5	3	3	-

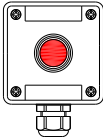
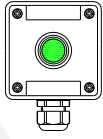
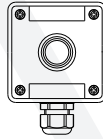
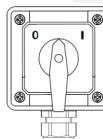
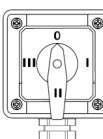
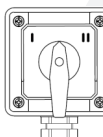
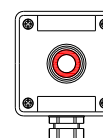
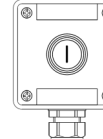
Various combinations of merged set (combination) of SKX enclosures

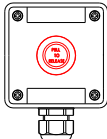
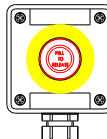
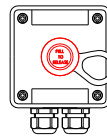
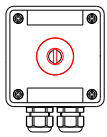
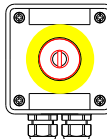
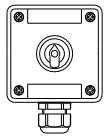
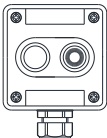
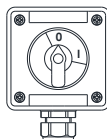
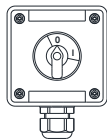


MODEL CODE

The program consists of serial control units and control units tailored to customer's request.

SKX 12/..

Type	Built-in components and actuator / indicator	Overview
SKX 12/1	Signal lamp SLP - red SPO 02/1 - cable gland SPU 25	
SKX 12/2	Signal lamp SLP - green SPO 02/2 - cable gland SPU 25	
SKX 12/3	Signal lamp SLP - white SPO 02/4 - cable gland SPU 25	
SKX 12/21	Control switch SMS 03/1 - switch actuator SMO 17/1 - cable gland SPU 25	
SKX 12/22	Serial switch SMS 03/8 - switch actuator SMO 17/5 - cable gland SPU 25	
SKX 12/23	Control switch SMS 03/4 - switch actuator SMO 17/2 - cable gland SPU 25	
SKX 12/31	Pushbutton PBT 01 (1NO+1NC) - Key-operated mushroom head pushbutton actuator - cable gland SPU 25	
SKX 12/31-1	Pushbutton PBT 01 (1NO+1NC) - Key-operated mushroom head pushbutton actuator with accidental contact protection - cable gland SPU 25	
SKX 12/32	Pushbutton PBT 01 (1NO+1NC) - pushbutton actuator SPO 01/1 - cable gland SPU 25	
SKX 12/33	Pushbutton PBT 01 (1NO+1NC) - pushbutton actuator SPO 01/2 - cable gland SPU 25	

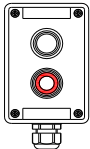
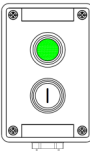
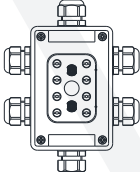
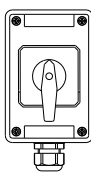
Type	Built-in components and actuator / indicator	Overview
SKX 12/34	Pushbutton PBT 01 (1NO+1NC) - Mushroom-head pushbutton actuator - cable gland SPU 25	
SKX 12/34-1	Pushbutton PBT 01 (1NO+1NC) - Mushroom-head pushbutton actuator with accidental contact protection - cable gland SPU 25	
SKX 12/35	Pushbutton PBT 01 (1NO+1NC) - Mushroom-head pushbutton actuator with protector - 2x cable gland M20	
SKX 12/36	Pushbutton PBT 01 (1NO+1NC) - Key-operated pushbutton - 2x cable gland M20	
SKX 12/36-1	Pushbutton PBT 01 (1NO+1NC) - Key-operated pushbutton with accidental contact protection - 2x cable gland M20	
SKX 12/37	Potentiometer - cable gland SPU 25	
SKX 12/40	Control switch - pushbutton actuator with two axes 1NO / 1NC - cable gland SPU 25	
SKX 12/41	Control switch - pushbutton rotational actuator (large) - cable gland SPU 25	
SKX 12/42	Control switch - pushbutton rotational actuator (small) - cable gland SPU 25	

SKX 12 ... SKX 15

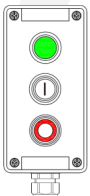
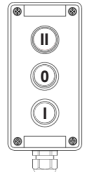
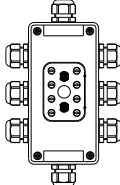
MODEL CODE

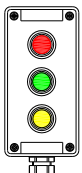
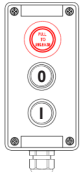
The program consists of serial control units and control units tailored to customer's request.

SKX 13/..

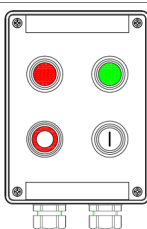
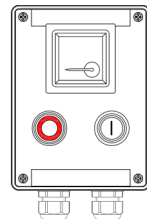
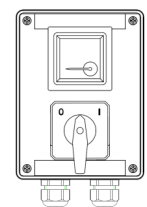
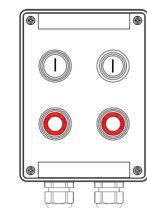
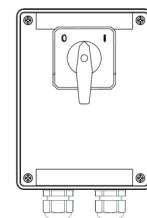
Type	Built-in components and actuator / indicator	Overview
SKX 13/1	2x pushbutton PBT 01 (1NO+1NC) - SPO 01/1 - SPO 01/2 - cable gland SPU 25	
SKX 13/11	Pushbutton PBT 01 (1NO+1NC) - SPO 01/2 - Signal lamp SLP - Front element of signal lamp SPO 02/2 - cable gland SPU 25	
SKX 13/21	Mantle terminals SL 8 - 6x cable gland SPU 25	
SKX 13/10	Switch SMS 03/1 - switch actuator SMO 17/1 - cable gland SPU 25	
SKX 13/20	SMS 03/4 - SMO 17/2 - SPU 25	
SKX 13/30	SMS 03/5 - SMO 17/2 - SPU 25	
SKX 13/40	SMS 03/6 - SMO 17/2 - SPU 25	
SKX 13/60	SMS 03/3 - SMO 17/3 - SPU 25	
SKX 13/70	SMS 03/2 - SMO 17/1 - SPU 25	
SKX 13/80	SMS 03/7 - SMO 17/1 - SPU 25	
SKX 13/100	SMS 03/8 - SMO 17/5 - SPU 25	
SKX 13/110	SMS 03/9 - SMO 17/1 - SPU 25	
SKX 13/120	SMS 03/11 - SMO 17/3 - SPU 25	

SKX 14/..

Type	Built-in components and actuator / indicator	Overview
SKX 14/1	2x pushbutton PBT 01 (1NO+1NC) - SPO 01/1 - SPO 01/2 - Signal lamp SLP - SPO 02/2 - cable gland SPU 25	
SKX 14/11	3x pushbutton PBT 01 (1NO+1 NC) - pushbutton actuator SPO 01/1 - SPO 01/2 - SPO 01/3 • cable gland SPU 25 I - 0 - II	
SKX 14/21	Mantle terminals SL 8 - 8x cable gland SPU 25	

Type	Built-in components and actuator / indicator	Overview
SKX 14/22	3x signal lamp SLP front element of signal lamp SPO 02/1 - SPO 02/2 - SPO 02/3 - cable gland SPU 25	
SKX 14/31	3x pushbutton PBT 01 (1NO+1NC) - pushbutton actuator SPO 01/1 - SPO 01/2 Mushroom-head pushbutton actuator - cable gland SPU 25 I - 0 - EM	

SKX 15/..

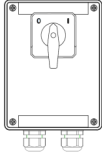
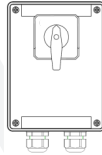
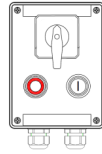
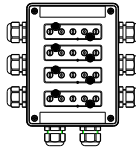
Type	Built-in components and actuator / indicator	Overview
SKX 15/1	2x pushbutton PBT 01 (1NO+1NC) - SPO 01/1 - SPO 01/2 - 2x signal lamp SLP - 02/1 - SPO 02/2 - 2x cable gland SPU 25	
SKX 15/11	2x pushbutton PBT 01 (1NO+1NC) - pushbutton actuator SPO 01/1 - SPO 01/2 - ammeter AM 72 with scale created according to customer's request - 2x cable gland SPU 25	
SKX 15/21	- switch SMS 03/2 - switch actuator SMO 17/1 - ammeter AM 72 with scale created according to customer's request - 2x cable gland SPU 25	
SKX 15/34	4x pushbutton PBT 01 (1NO+1NC) - 2xSPO 01/1 - 2xSPO 01/2 - 2x cable gland SPU 25	
SKX 15/41	- switch SMS 03/7 - switch actuator SMO 17/1 - 2x max. 16 mm ² feed through terminal blocks - 2x cable gland SPU 25	

SKX 12 ... SKX 15

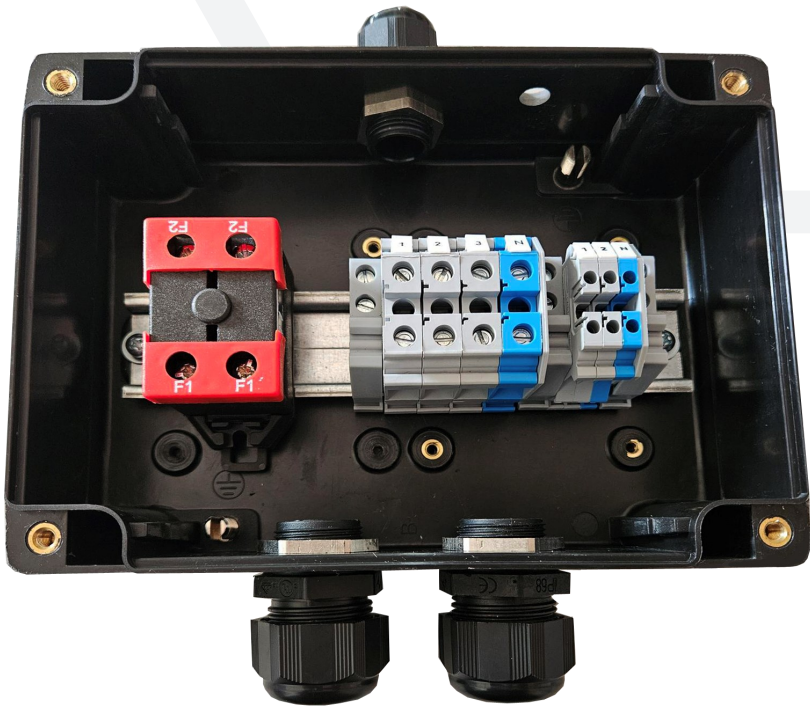
MODEL CODE

The program consists of serial control units and control units tailored to customer's request.

SKX 15/..

Type	Built-in components and actuator / indicator	Overview
SKX 15/50	Switch SMS 03/12 - SMO 17/2 - 2x cable gland SPU 25	
SKX 15/90	Switch SMS 03/10 - SMO 17/3 I-O-II - 2x cable gland SPU 25	
SKX 15/51	Switch SMS 03/11 - SMO 17/3 I-O-II - 2x pushbutton PBT/01 (1NO+1NC) - SPO 01/1 - SPO 01/2 2x cable gland SPU 25	
SKX 15/65	4x mantle terminals SL5 (max. 4x4 mm2 per terminal) - 8x cable gland SPU 25	

Example: **Ex control units SKX 15/MSRU** (with PBT-F fuse)





IP 66



- Enclosures made of glass-fibre reinforced polyester resin **GRP**
- Stainless steel **AISI 316L**
- 3 basic enclosure sizes in GRP
- 3 basic enclosure sizes in stainless steel
- Alone or in various combinations of merged set
 - ⇒ Control devices
 - ⇒ Indicating lamps
 - ⇒ Pushbuttons
 - ⇒ Switches
 - ⇒ Ammeters
- Version with or without hinged door upon customer's requirements



CONSTRUCTION

Enclosure: polyester plastic reinforced with glass fiber, color - black

Stainless steel AISI 316L, brush finished, thickness 1.5 mm

Cover: with integrated thermoplastic elastomer gasket, closes with four/six M5/M6 stainless steel screws.

TECHNICAL DATA

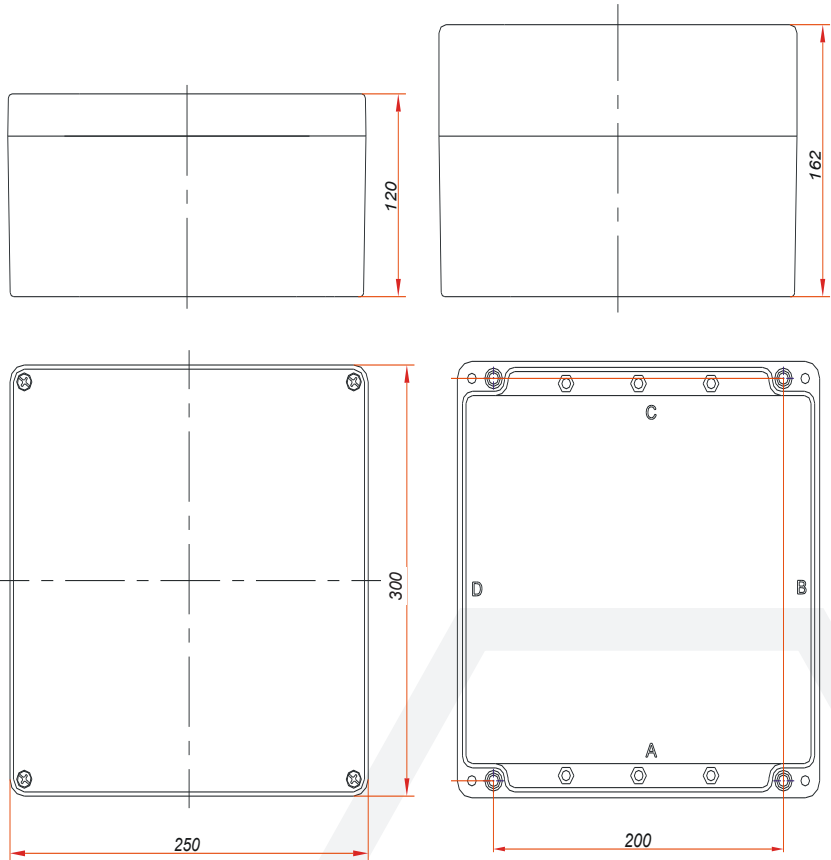
Certificate:	FIDI 19 ATEX 0052X, FIDI 19 ATEX 0053 RU C-HR.HB07.B.00269/20
Marking:	0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex db eb mb ia/ib IIC T4-T6 Gb Ex tb IIIC T80°C Db
Ambient temperature:	-20°C ≤ T _a ≤ +40°C / +50°C [ATEX] -50°C / -40°C / -20°C ≤ T _a ≤ +40°C / +50°C / +55°C [EAC]
Degree of protection:	IP 66 category 1
Resistance to shock:	IK 08 (GRP enclosures) IK 09 (stainless steel enclosures)
Protection class :	I (protective earthing)
Rated voltage:	690 V AC (with mantle terminal blocks SL5, SL8; U _i = 400 VAC)
Nominal current:	Up to 80 A
PE terminals (inside of the enclosure):	max. 2x4 mm ² + 2x2,5 mm ² , 3x4 mm ² , 2x6 mm ²
Connection:	Depends on order requirements at the built-in components or at the terminal blocks. The rated operational voltage, the rated operational current and the rated cross-section depend on the terminal type used and the explosion protected components.

Control units SKX 16, SKX 18, SKX 20 are Ex combinations configured according to customer's demand. Type designation consists of a basic type designation - SKX 16, SKX 18, SKX 20, "I" for enclosure made of SS AISI 316L and SRU number that represents the number of production and assigns to the increment.

Example: SKX 18 I / SRU -1280

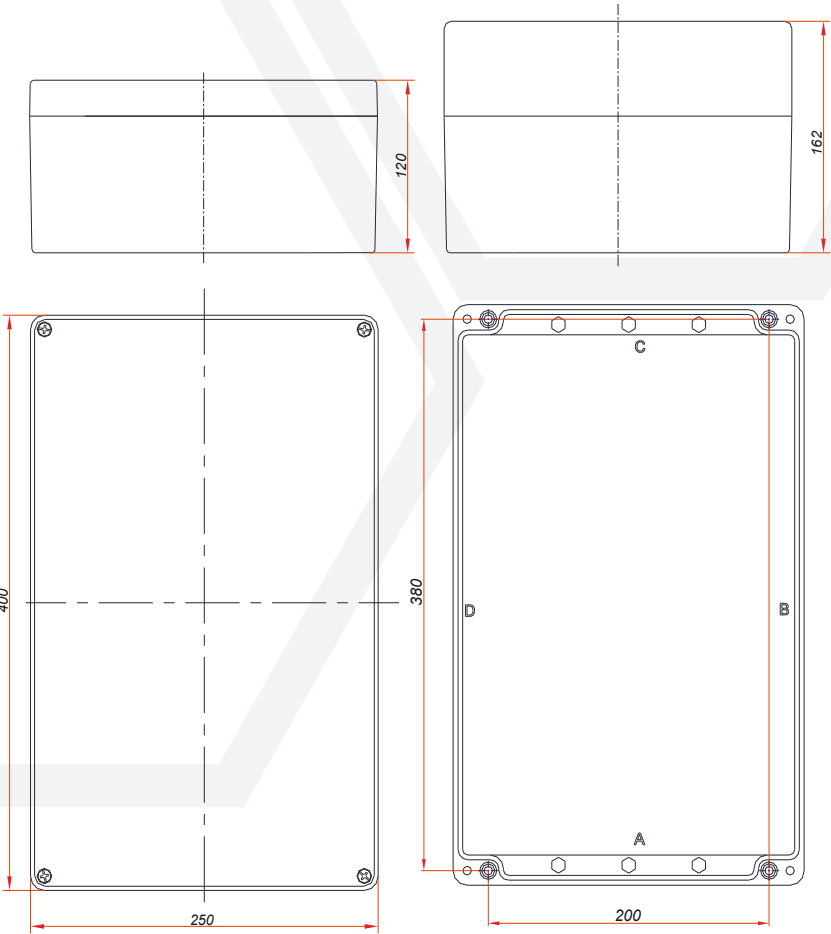
- ⇒ managing the combination of the housing **MMK 403016**
- ⇒ I - stainless steel enclosure AISI 316L
- ⇒ performed by production number **1280**

GRP enclosure SKX 17



Side	Cable gland	M20	M25	M32	M40	M50	M63
B-D		9	9	5	3	3	2
A-C		7	5	3	3	1	1

GRP enclosure SKX 18

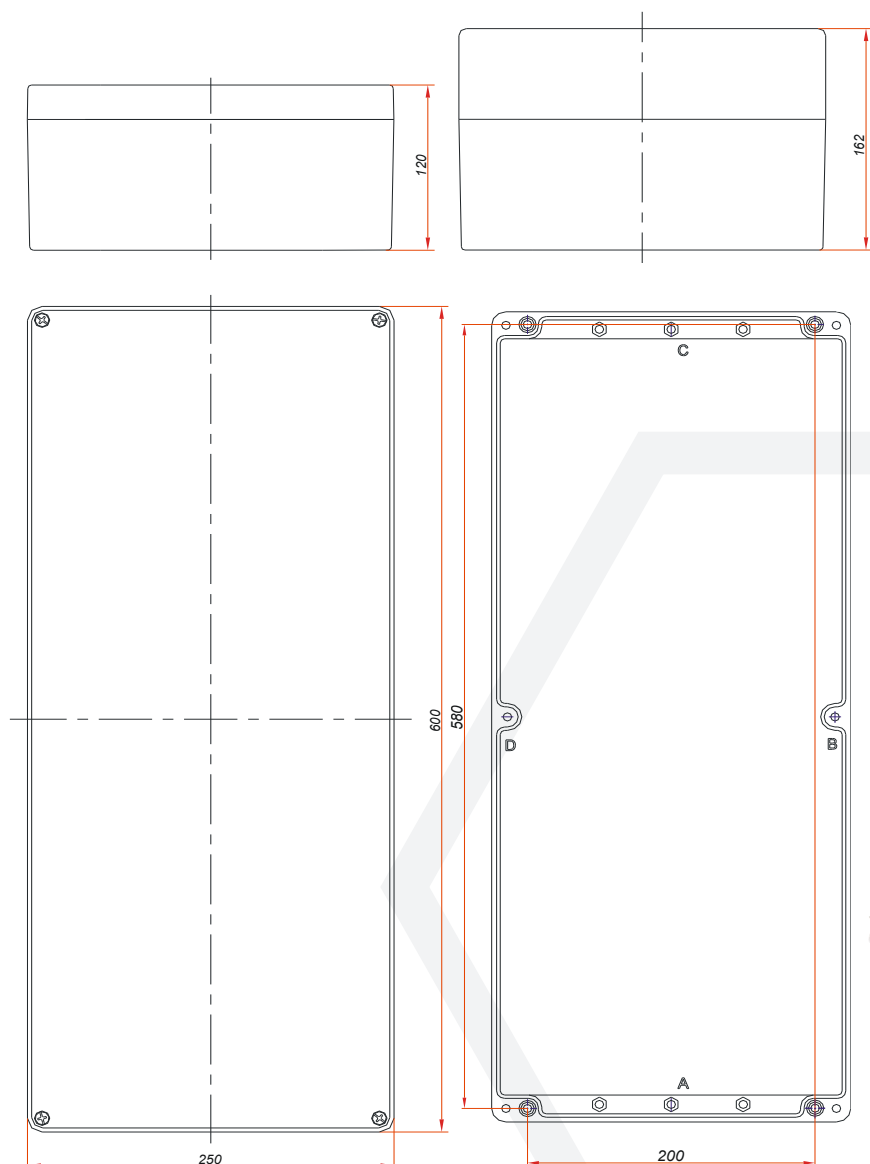


Side	Cable gland	M20	M25	M32	M40	M50	M63
B-D		17	15	9	6	5	4
A-C		9	7	3	3	2	2

All technical data is relevant at the time of print.

SKX 16 SKX 20

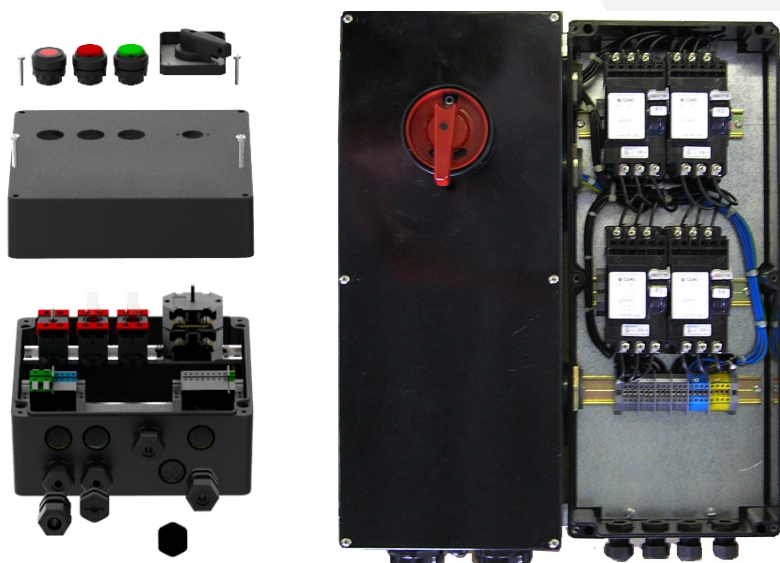
GRP enclosure SKX 20



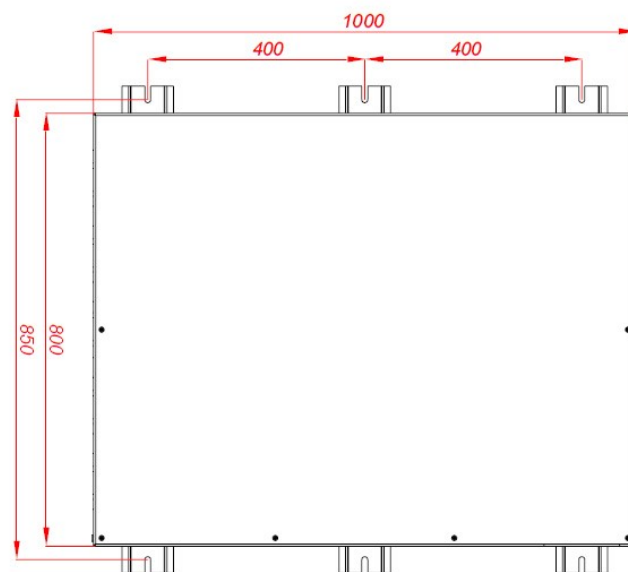
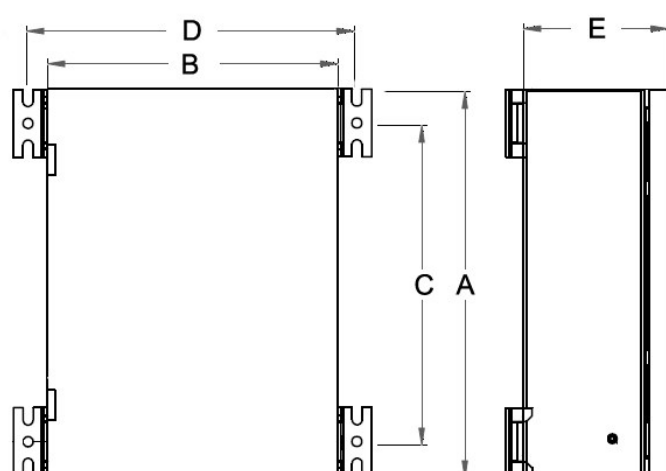
Side	Cable gland	M20	M25	M32	M40	M50	M63
B-D		24	22	12	8	6	6
A-C		9	7	3	3	2	2



Example: Ex control units with GRP enclosures



Stainless steel AISI 316L enclosure SKX 16 I, SKX 18 I, SKX 20 I



Type	A[mm]	B[mm]	C[mm]	D[mm]	E[mm]
SKX 16I/SRU	300	300	245	330	150
SKX 18I/SRU	400	300	325	330	
SKX 20I-1/SRU	600	400	530	440	200
SKX 20I-2/SRU	1000	800	800	850	



TYPE Dimension	SKX 16I/SRU 300x300x150		SKX 18I/SRU 400x300x150		SKX 20I-1/SRU 600x400x200		SKX 20I-2/SRU 1000x800x200	
Cable gland	A-C	B-D	A-C	B-D	A-C	B-D	A-C	B-D
M20x1.5	11	11	17	11	30	17	60	48
M25x1.5	9	9	15	9	26	15	48	36
M32x1.5	5	5	9	5	14	9	28	20
M40x1.5	3	3	6	3	12	6	22	14
M50x1.5	3	3	5	3	6	5	10	8
M63x1.5	2	2	4	2	6	4	8	6

Example: Ex control units with stainless steel AISI 316L enclosures



IP 66



IK 09



- Robust Ex e sheet steel enclosure
- Built in 100 A Ex d, 4 pole safety switch
- Up to 12 pieces of 50 mm² terminal blocks
- Non-armoured and armoured metal cable glands according to customer's demands



CONSTRUCTION

Enclosure: sheet steel, thickness 3mm
Cover: EPDM formed gasket

TECHNICAL DATA

Certificate:	FIDI 22 ATEX 0066
Marking:	CE 0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex db eb IIC T6 Gb Ex tb IIIC T80°C Db
Ambient temperature:	-20°C ≤ T _a ≤ +40°C
Degree of protection:	IP 66, category 1
Resistance to shock:	IK 09
Protection class :	I (protective earthing)
Rated voltage:	690 V AC
Rated current:	100 A
Frequency:	50 / 60 Hz
Safety switch parameters:	Rated current: 125 A, 4 poles Connection points: min. 25 mm ² , max. 50 mm ²
Cable entry:	Determined by the customer
Weight:	25 kg
Color:	Yellow, RAL 1016, double layered with corrosion protection (other colors are available on customer's request)

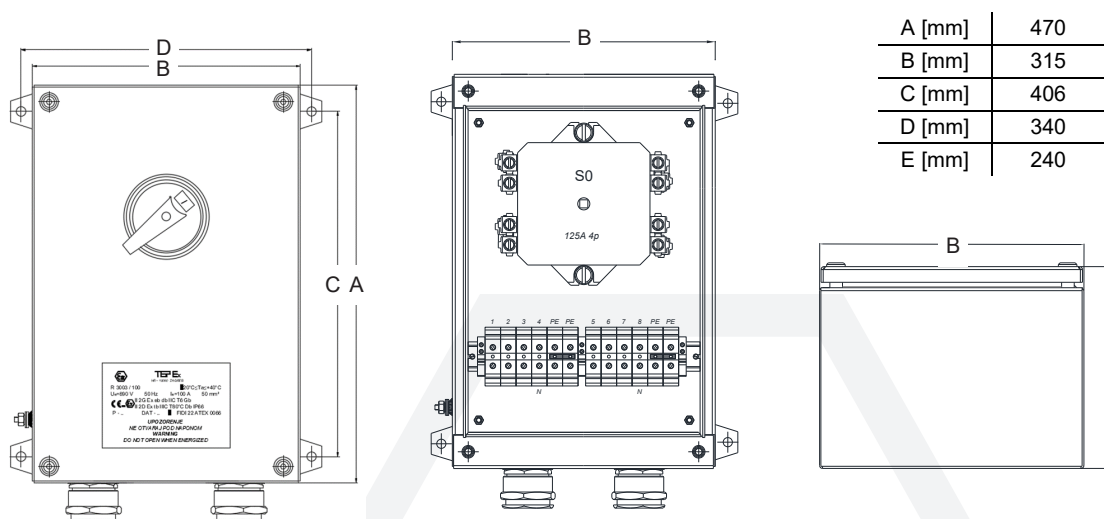
MOUNTING

Wall mounting or as a free-standing box with a metal protection canopy.

TABLE OF ALLOWED NUMBER OF TERMINALS (includes PE terminal blocks)

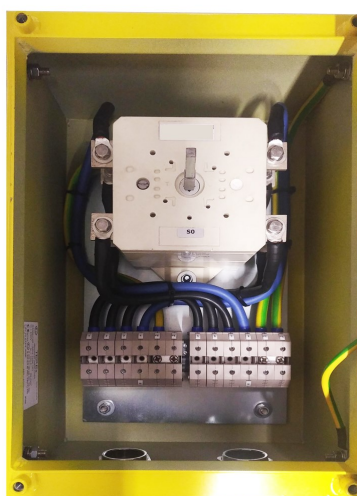
Nominal cross section of conductors / terminals (mm ²)	Maximum number of terminals	Ambient temperature Ta[°C]	I _{max} [A]
35/35	14	-20°C ÷ +40 °C	100 A
50/50	12		

DIMENSION DRAWING (mm)



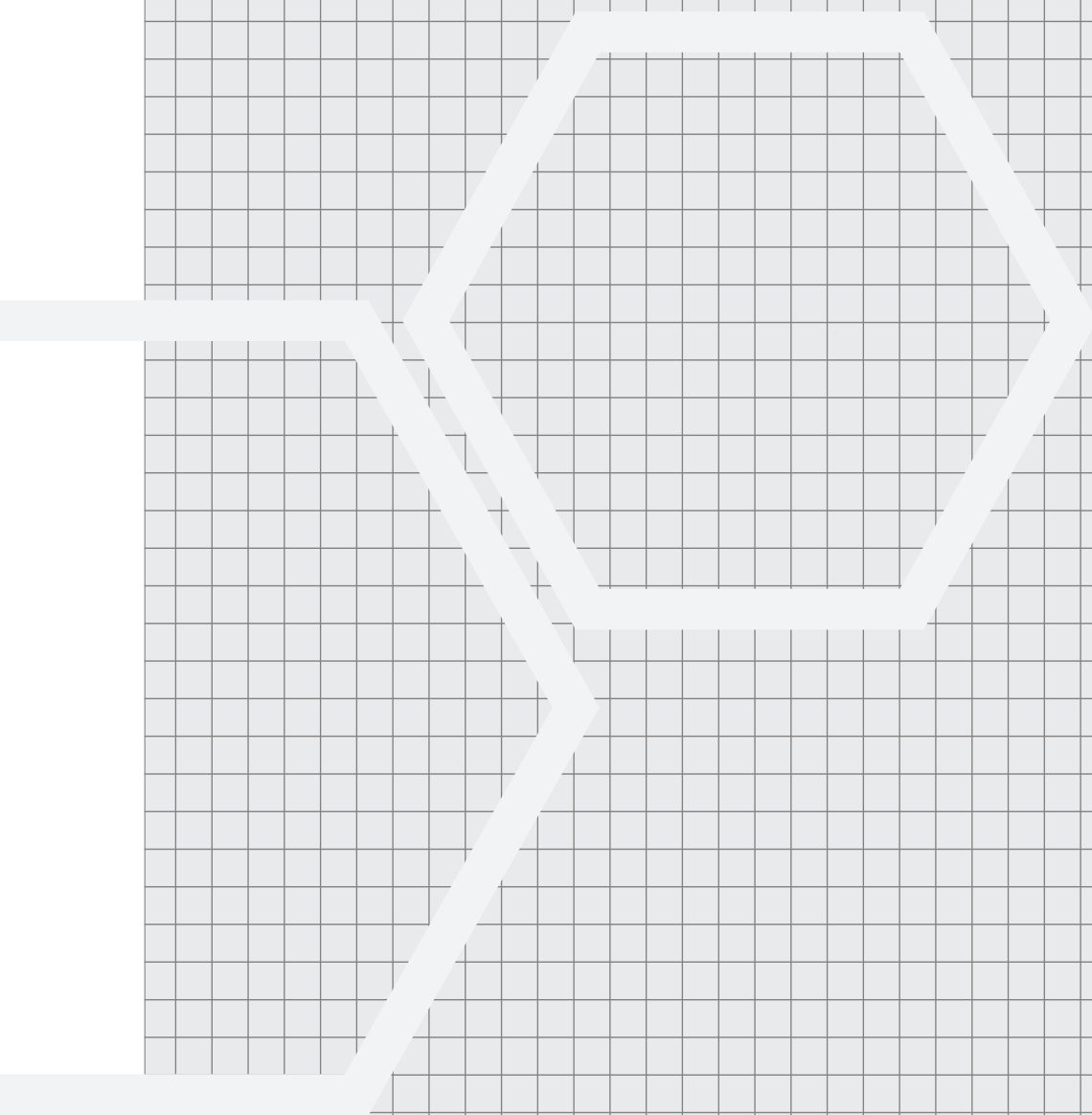
SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Ex db control switch, 100 A, 4p	R3003/100 10-100		Cable glands	R3003/100 10-130
	Terminals 50 mm ²	R3003/100 10-110		Cover	R3003/100 10-140
	Control switch actuator	R3003/100 10-120		Cover gasket	R3003/100 10-150



Built-in components

All technical data is relevant at the time of print.



Grounding control device



IP 66



- Active grounding system for static grounding and permanent monitoring
- Permanent removal of electrostatic charge during filling or emptying tanks (road tanks, railcar tanks, barrels)
- Two output contacts (1 NO & 1 NC)



CONSTRUCTION

Enclosure: polyester plastic reinforced with glass fiber, color - black
Cover: with integrated thermoplastic elastomer gasket, closes with four M6 stainless steel screws.

TECHNICAL DATA

Certificate:	Ex FIDI 19 ATEX 0050
Marking:	CE 0722
Apparatus category:	II 2GD
Marking of explosion protection:	Ex eb db [ib] mb IIC T5 Gb Ex tb [ib] IIIC T80C° Db
Ambient temperature:	-20°C ≤ T _a ≤ +50°C
Degree of protection:	IP 66
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	230 V ± 10% (other voltage on request)
Rated current:	50 mA
Frequency:	50 Hz
Output circuit:	2 NO/NC Un=250 VAC, In=8 A / 230 V, 4 A at cosφ=0.4
Cable entry:	3 x M25 - power supply, two output circuit 4 x M25 - 2x connection clamp , 2x wire to equipotential busbar or grounding
Weight:	6 kg (without clamp and cable) weight of clamps with 10 m cable ca. 2,5 kg
Packing:	The packing contains: 1 pcs 430x350x230 mm

Grounding and grounding control device

MODEL CODE

DIMENSION DRAWING (mm)

GGCD 01 / .. - ..

Basic product code

Product version:

K1 - type with one clamp K1, with 10 m cable*

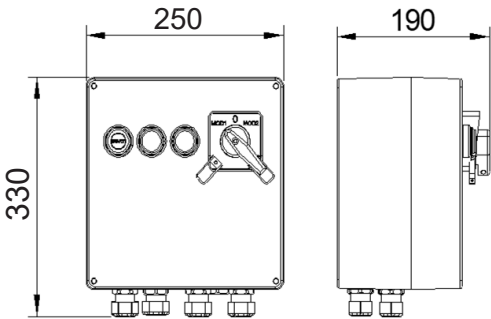
K2 - type with two clamps K2, with 2x10 m cable*

*cables up to 50 m are available on customer's request

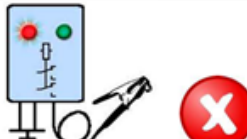
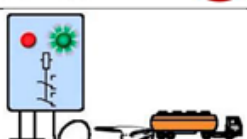
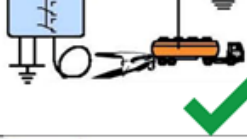
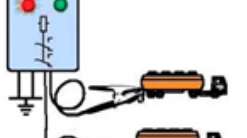
Nominal voltage:

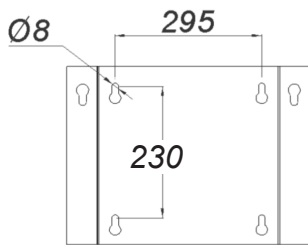
1 - 24 V $\pm$ 10 % DC

2 - 230 V $\pm$ 10 % AC



Principle of work for GGCD-01/..

State of earthing process	Reaction of the earthing monitoring device
	GGCD 01/K1 is not correct connected and turned ON. Clamp is not connected, grounding equipment not in use Earthing incorrect • Red indicating lamp ON • Green indicating lamp OFF • Contact OPEN
	GGCD 01/K1 is correct connected and turned ON, but clamp is directly grounded, e.g. via the loading platform Earthing incorrect (only MOD 2) • Red indicating lamp ON • Green indicating lamp OFF • Contacts OPEN
	GGCD 01/K1 is correct connected and turned ON. Clamp connected to tank vehicle. Earthing OK • Red indicating lamp OFF • Green indicating lamp ON • Contacts CLOSED
	GGCD 01/K1 is correct connected and turned ON, but cable to the grounding is disconnected. Earthing incorrect • Red indicating lamp ON • Green indicating lamp OFF • Contacts OPEN
	GGCD 01/K1 is correct connected and turned ON. Clamp connected to tank vehicle. Tank vehicle is grounded subsequently (e.g. via the loading arm). Earthing OK • Red indicating lamp OFF • Green indicating lamp ON • Contacts CLOSED
	GGCD 01/K2 is correct connected and turned ON. Two clamps are connected on two separate object grounding. Earthing incorrect • Red indicating lamp ON • Green indicating lamp OFF • Contacts OPEN
	GGCD 01/K2 is correct connected and turned ON. Two clamps are connected on one object grounding. Earthing OK • Red indicating lamp OFF • Green indicating lamp ON • Contacts CLOSED



All technical data is relevant at the time of print.

OPERATING PRINCIPLE

Each version of GGCD device has two operating modes (which can be selected with control switch):

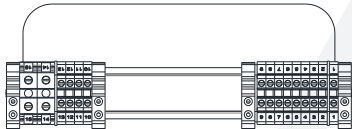
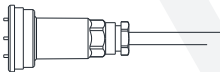
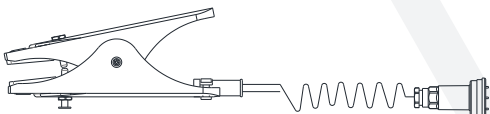
MOD 1 - in the presence of main supply at the time of connection of the clamps to the earthing object, the device recognizes total earthing resistance, for instance is the resistance between the earthing object and the grounding less than 10 Ω . The total ground resistance of RZuk is the replacement resistance of the combination RZ + RC1 + RC2 + RPAL1 + RPAL2. If RZuk < 10 Ω object is considered to be electrostatically grounded.

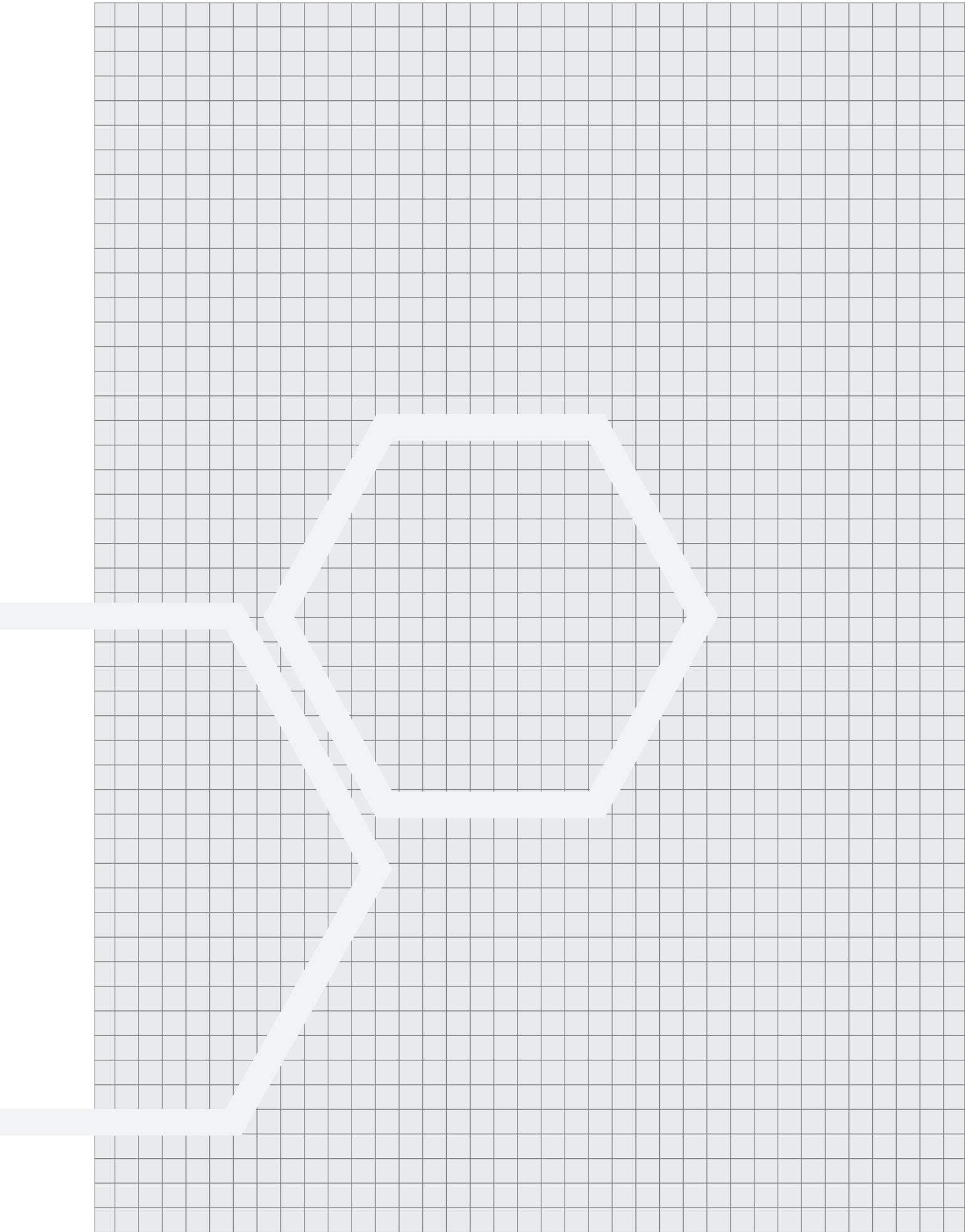
It is used when the earthing object cannot be isolated from the ground in a controlled manner (e.g. rail vehicles, underground reservoirs, etc.).

MOD 2 - in the presence of main supply within the control time of approx. 10 s after activating the START button, the device recognizes whether the earthing object is already earthed in another uncontrolled manner with RZ < 5 Ω and device recognizes total earthing resistance, for instance is the resistance between the earthing object and the grounding less than 10 Ω . The total earthing resistance of RZuk is the replacement resistance of the combination RZ + RC1 + RC2 + RPAL1 + RPAL2. If RZ UK < 10 Ω object is considered to be electrostatically grounded.

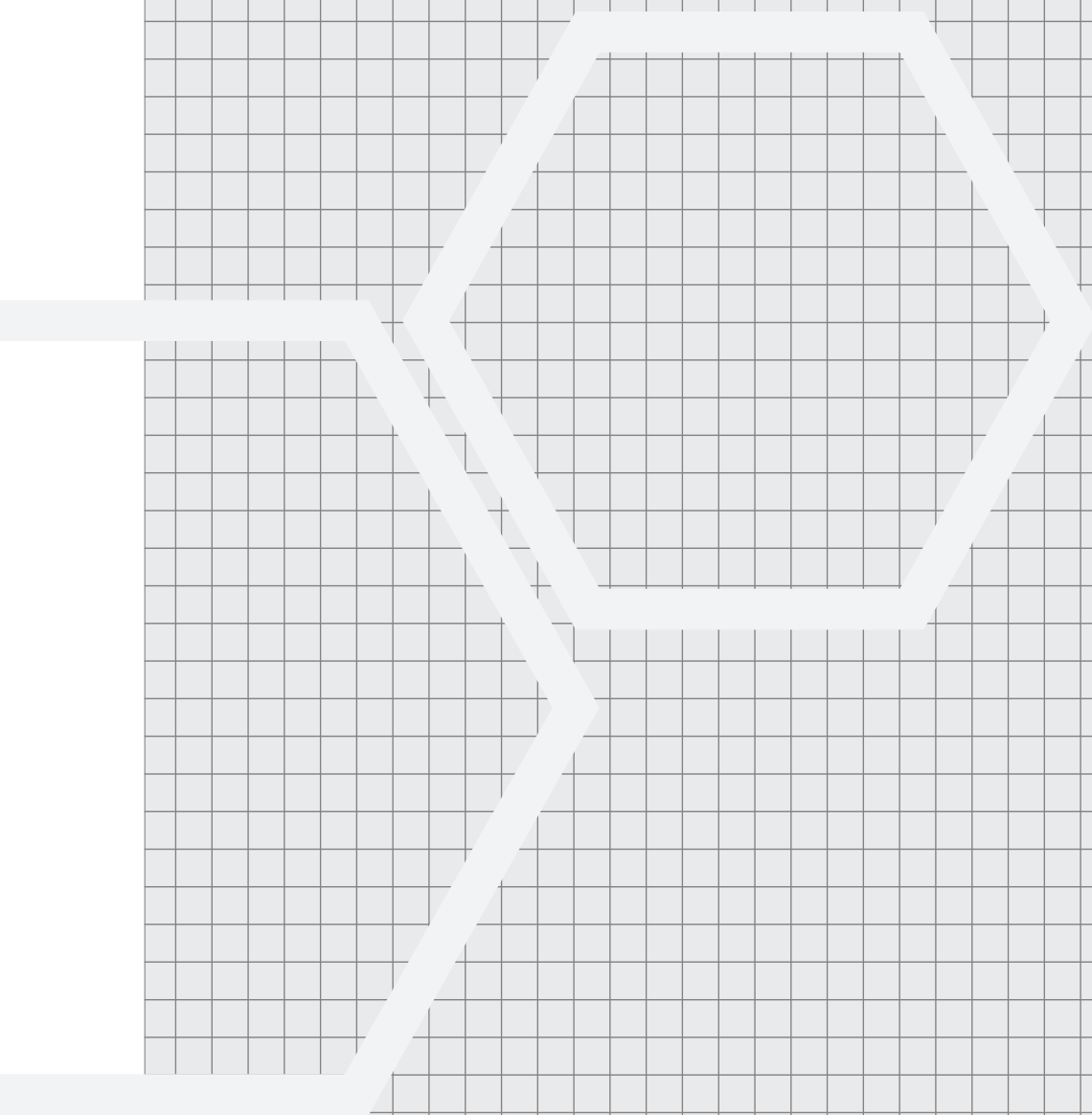
It is used when the earthing object is insulated from the ground in a controlled way (e.g. tank trucks, etc.).

SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE
	Control module GGCD 01	GGCD 01 10-110
	Connecting cable 0,5m with a coupler (for GGCD 01/K1 - _ model only)	GGCD 01 10-120
	Connecting cable 0,5m with a coupler (for GGCD 01/K2 - _ model only)	GGCD 01 10-130
	Clamp K1 with a 10m cable and plug (for GGCD 01/K1 - _ model only)	GGCD 01 10-140
	Clamp K2 with a 10m cable and plug (for GGCD 01/K2 - _ model only)	GGCD 01 10-150
Tailored to customer's needs	Cable storage box	GGCD 01 10-160



All technical data is relevant at the time of print.



An aerial photograph of a large offshore oil platform in the middle of a deep blue ocean. The platform is a complex of white metal structures, including a helipad on the left, various storage tanks, and a network of pipes and walkways. A yellow crane is visible on the upper deck. The platform is supported by a large, white, lattice-like structure that extends into the water. A semi-transparent blue rectangular box is overlaid on the upper right portion of the image, containing white text.

Distribution cabinets Busbar enclosures

IP 66



IK 09



- Enclosure in sheet steel
- 6 basic enclosure sizes
- Enclosures can be combined (modular system)
- Available as empty enclosures or as completely fitted and wired control and distribution units
- For use in underground mines
- Cable entries available:

Direct : Ex db cable glands

Indirect : via Ex eb enclosure multiwire bushing, conductor insulator



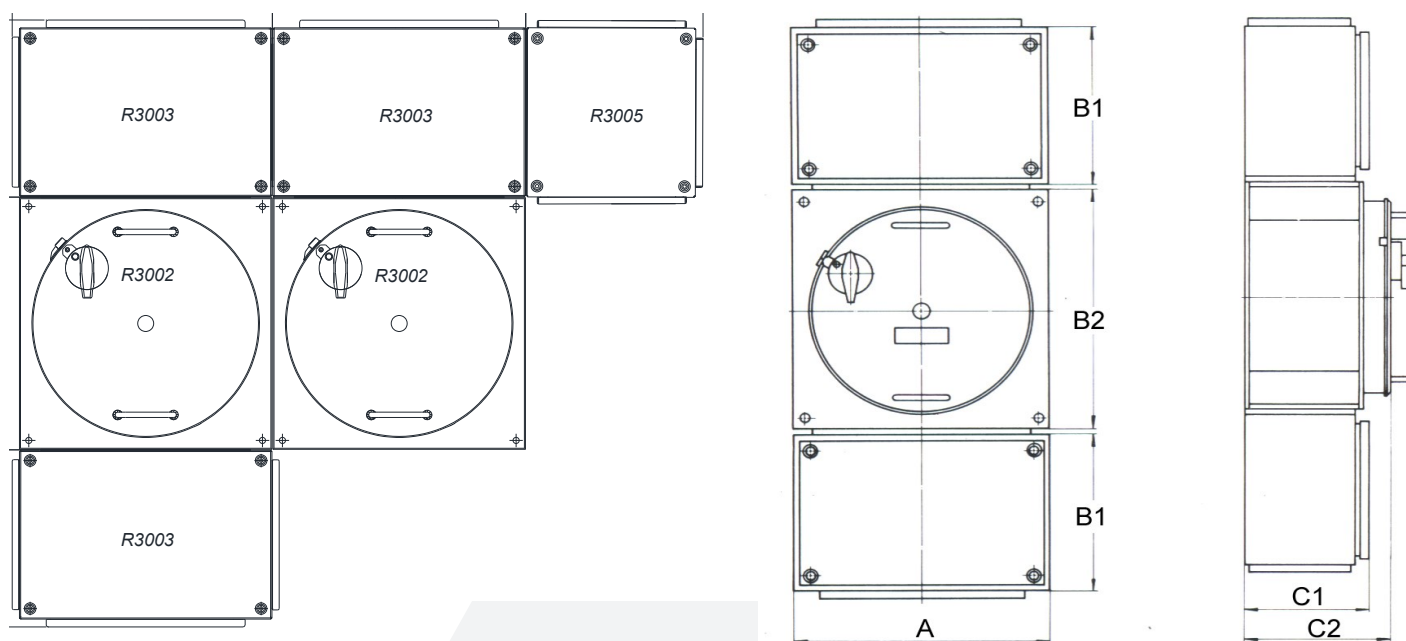
CONSTRUCTION

Enclosure: sheet steel (Ex db enclosure 12 mm thickness, Ex eb enclosure 3 mm thickness)
Gasket: EPDM, neoprene, silicone

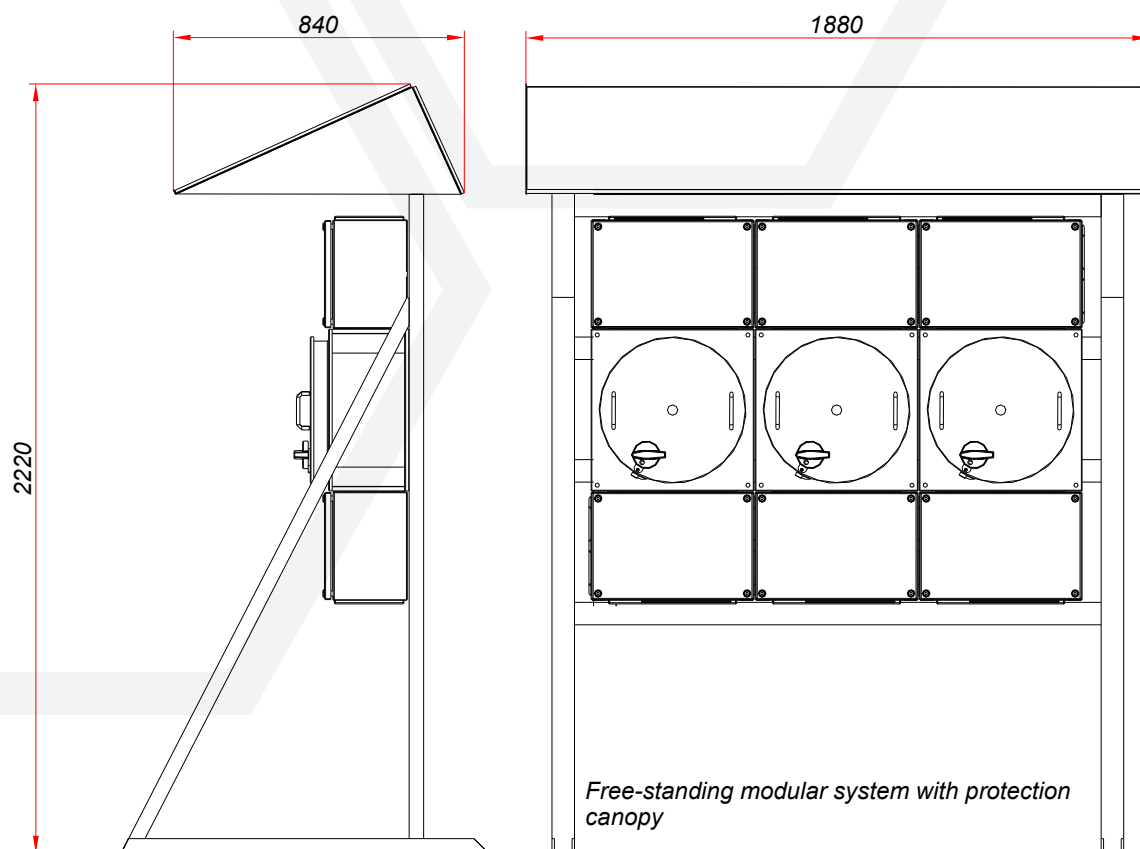
TECHNICAL DATA

Certificate:	Ex FIDI 19 ATEX 0058X , RU C-HR.HB07.B.00272/20
Marking:	CE 0722
Apparatus category:	II 2(1)GD I M2 (M1)
Marking of explosion protection:	Ex db eb [ib] [ja Ga] ia/ib IIC T6 Gb Ex tb IIIC T80°C Db Ex db eb [ib] [ja Ma] ia/ib I Mb
Ambient temperature:	-20°C ≤ T _a ≤ +40°C [ATEX] -50°C ≤ T _a ≤ +50°C [EAC]
Degree of protection:	IP 66
Resistance to shock:	IK 09
Protection class :	I (protective earthing)
Rated voltage:	Up to 690 V AC
Rated current:	Up to 500 A (depends upon built-in device)
Terminal cross-section:	Up to 300 mm ²
Weight (empty enclosure):	
- Enclosure R3002	76,0 kg
- Enclosure R3002-1	95,1 kg
- Enclosure R3003	14,0 kg
- Enclosure R3003-1	14,3 kg
- Enclosure R3004	42,2 kg
- Enclosure R3005	12,0 kg
- Enclosure R3006	7,0 kg
Color:	Yellow, RAL1016 (other colors on request)
Mounting types:	temporary wall-mounted free-standing (with or without protection canopy)

DIMENSION DRAWING (mm)



Type	A[mm]	B2[mm]	C2[mm]	Ex type
R3002	470	470	330	Ex db
R3002-1	470	470	480	
R3004	315	315	330	
	A[mm]	B1[mm]	C1[mm]	
R3003	470	315	240	Ex eb
R3003-1	470	315	390	
R3005	315	315	240	
R3006	315	240	200	



All technical data is relevant at the time of print.

Distribution cabinets types R3002 and R3004 are made of high quality steel in Ex d flameproof protection type. Closing of the cabinets is of threaded type and is protected against opening by lock switch, so that it can be opened only when it is not energized. Corrosion protection is ensured with special paint which is applied both inside and outside of an enclosure. Ex d steel enclosures (type R3002 and R3004) and Ex e sheet steel enclosures (type R3003, R3005, R3006) can stand alone or can be interconnected in various combinations.

The dimensions of the enclosures have been created in the way that they match. Thus, a large number of combinations between enclosures can be made upon customer's request. A broad range of components, such as contactors, switches, instruments and PLCs can be built into these enclosures. Nevertheless, customer-supplied equipment can also be incorporated into the layout. The equipment layout is designed by us according to customer's requirements. Cable entry is either direct (cable glands or conduit entries) or indirect via Ex e enclosures type R3003, R3005, R3006.

The "flameproof" type protection 'Ex d' is based on the following principle. Electrical components that might cause sparks or arcing in normal operation (switches, contactors etc.) are mounted in an flameproof enclosure. If the concentration of explosive gas, vapour, mist or dust is high enough to trigger the explosion, the Ex d enclosure will not permit ignition of the surrounding explosive atmosphere. Therefore, the explosion would be suppressed and people and assets will not be jeopardized. Further, the temperature of the outside surface of the enclosure must not exceed the prescribed temperature limit for the appropriate temperature class. That means, the heat loss from the components fitted must not exceed a specified value.

Data required for the layout of control and distribution boards

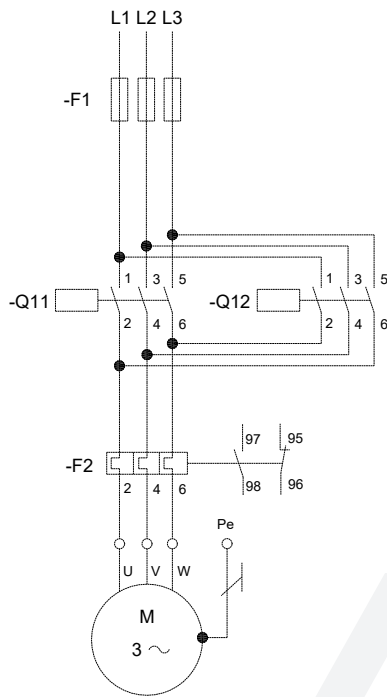
We produce distribution cabinets according to customer's requirements and basis to the project data:

- the required minimum type of protection
- as appropriate, details of the hazardous atmosphere for which the equipment must be suitable
- single line or wiring diagram
- schematic for control systems
- operating, auxiliary and control voltages
- frequency
- power and current ratings of connected loads
- quantities and types of components required, e.g. contactors, switches, circuit-breakers, fuses, thermal relays, instruments, terminals etc.
- quantity and types of cables
- number and size of conductors
- quantity and location of entries (from top, bottom, side, center)
- environmental conditions
- method of installation

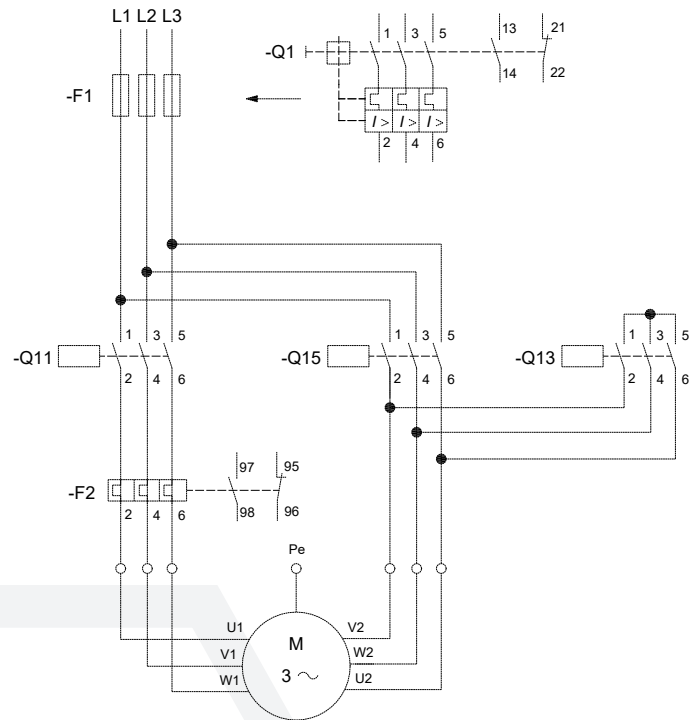
Examples of Ex distribution cabinets



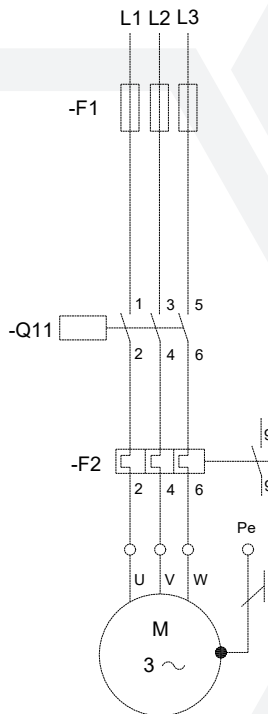
Examples of wiring diagram for distribution cabinets



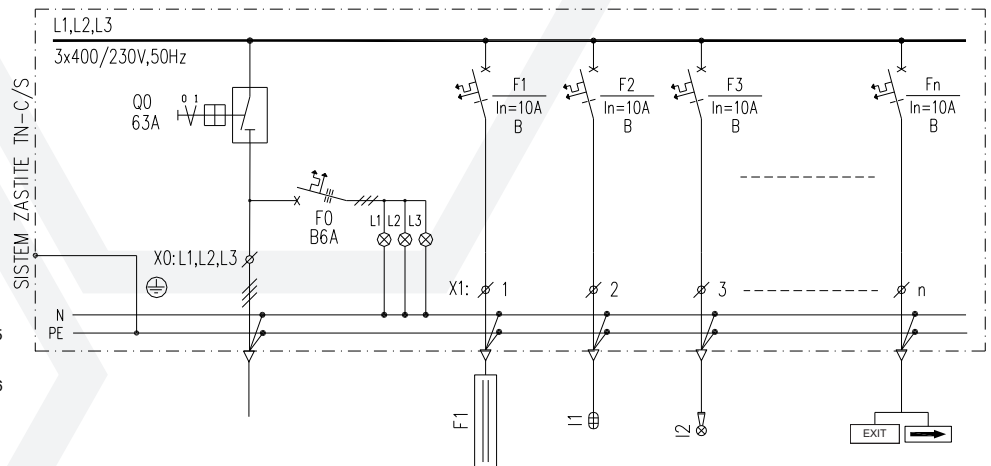
A) Direct on line start of three phase motor;
two directions of rotation



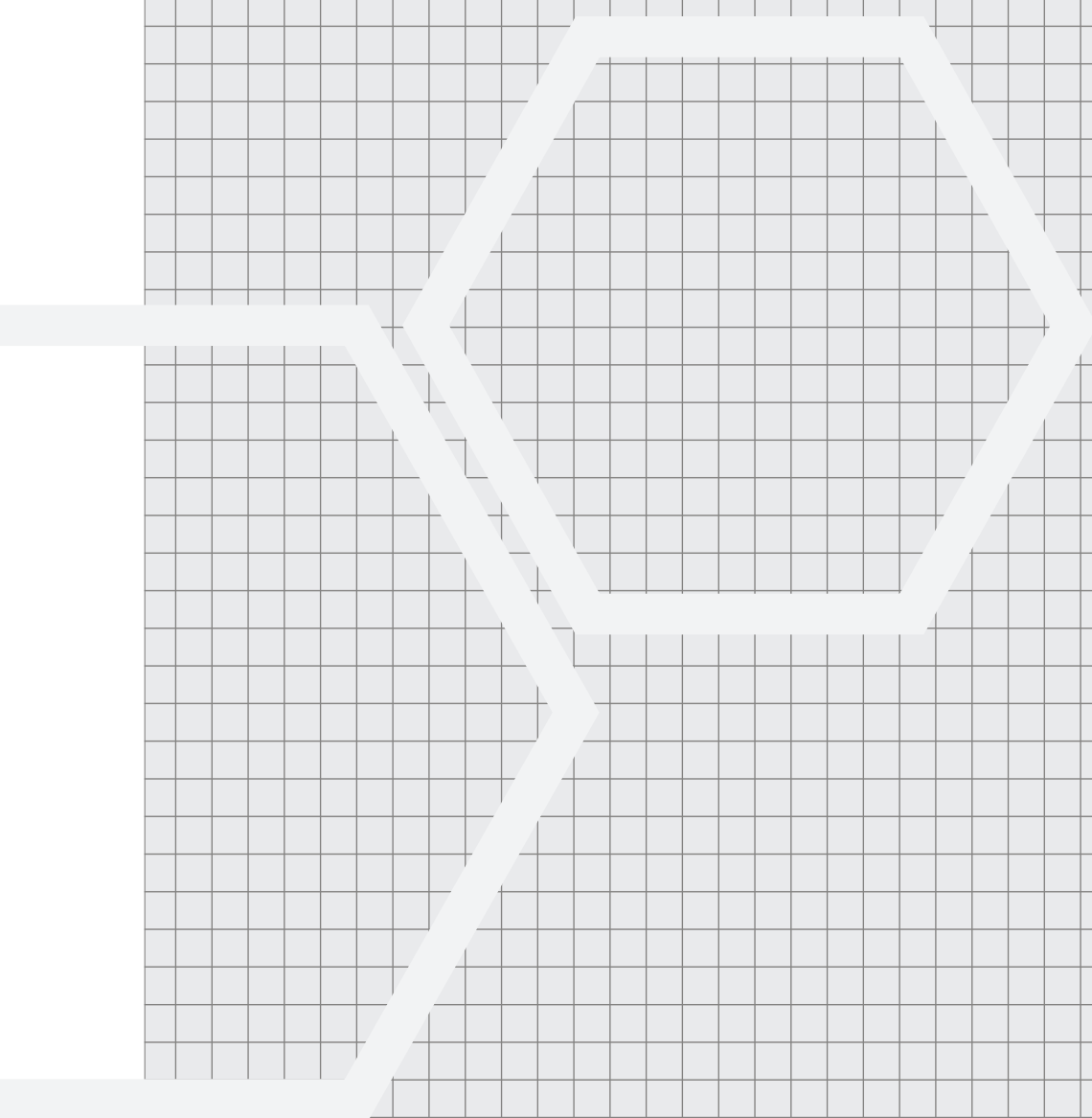
B) STAR-DELTA switching of three phase motor



C) Direct on line start of three phase motor



D) Light fittings control panel



A low-angle photograph of a large industrial refinery. The image shows several tall, silver-colored distillation columns rising into a clear blue sky. A complex network of silver pipes, some with yellow safety railings, winds around the columns and across the foreground. In the lower left, there are large, horizontal cylindrical vessels. The overall scene is one of a large-scale industrial facility.

Signalling devices Plugs and sockets Accessories

Zone



LED

IP 68



DF1013 / DF104 / DS-14



TECHNICAL DATA type DF1013

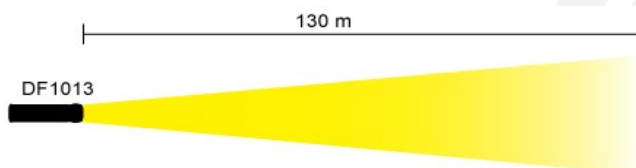
Apparatus category:	II 1G
Marking of explosion protection:	Ex ia IIC T4 Ga
Ambient temperature:	-20 °C ≤ T _a ≤ +40°C
Degree of protection:	IP 68
Luminous flux:	60 lm
Length of light beam:	130 m
Battery:	4x AA type
Autonomy:	app. 14 hours
Weight:	100 g (without battery)
Dimension:	175x45x45 mm



Push Button



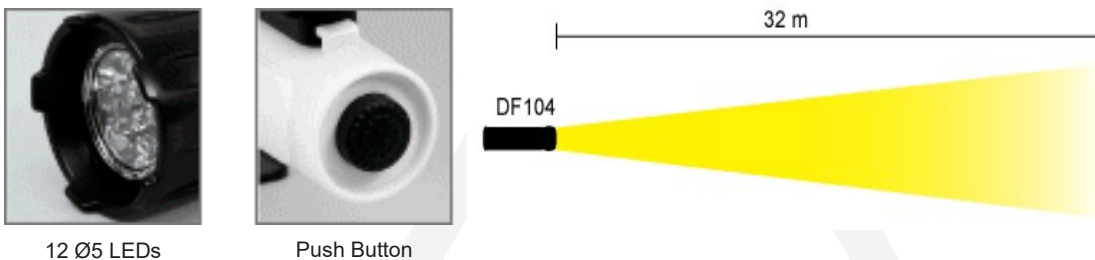
LED



- For inspection and maintenance work

TECHNICAL DATA type DF104

Apparatus category:	II 1G
Marking of explosion protection:	 Ex ia IIC T4 Ga
Ambient temperature:	-20 °C ≤ T _a ≤ +40°C
Degree of protection:	IP 68
Luminous flux:	43 lm
Length of light beam:	32 m
Battery:	3x C type
Autonomy:	app. 70 hours
Weight:	190 g (without battery)
Dimension:	220x60x85 mm



TECHNICAL DATA type DS-14 (headlamp)

Apparatus category:	II 1G
Marking of explosion protection:	 Ex ia IIC T4 Ga
Ambient temperature:	-20 °C ≤ T _a ≤ +40°C
Degree of protection:	IP 67
Luminous flux:	75 lm / low mode , 150 lm / High mode
Length of light beam:	75 m / 100 m
Battery:	3x AAA type
Autonomy:	app. 4 hours
Weight:	145 g (without battery)
Dimension:	80x50x45 mm



HELMET MOUNTABLE



RUBBERISED BUTTON



SMOOTH REFLECTION



LOCKING BATTERY COMPARTMENT

Zone



LED

IP 54



- For inspection and maintenance work
- DF 2001 is a rechargeable flashlight which designed with ergonomics pistol grip for comfortable hold and lithium ion battery allows the flashlight to run for 9 hours of continuous use on high mode.

DF2001 / SF-14



CONSTRUCTION

Aluminum heat sink to enhance LED efficiency.
Designed reflector for long distance lighting.
Tough and durable casing.
High impact lens.
Ergonomics handle design.

TECHNICAL DATA type DF2001

Apparatus category:	II 1G I M1
Marking of explosion protection:	Ex ia op is IIC T4 Ga I M1 Ex ia op is I Ma
Ambient temperature:	-20 °C ≤ T _a ≤ +40°C
Degree of protection:	IP 54
Mode:	High/ Middle/ Low/Off
Light Output :	(H)222 lm / (M)69 lm / (L)11 lm
Lenght of light beam:	(H)270 m / (M)240 m / (L)110 m
Battery:	2*2200 mAh 18650 Li-Batteries
Autonomy:	H:4 hrs15 min / M:14 hrs / L: 82 hrs
Weight:	1,2 kg
Dimension:	256x136x170 mm



Rechargeable flashlight/ torchlight

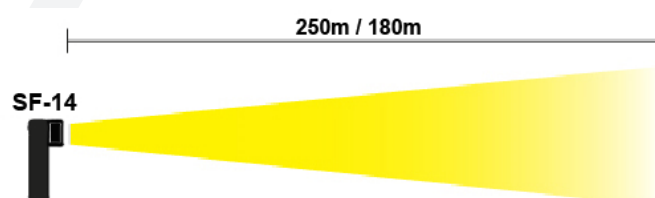


CONSTRUCTION

Air free heat shrink design to enhance LED heat dissipation
With stainless belt/ pocket clip
Valve design to help hydrogen gas released

TECHNICAL DATA type SF-14

Apparatus category:	II 1G I M1
Marking of explosion protection:	 Ex ia IIC T4 Ga Ex ia I Ma
Ambient temperature:	-20 °C ≤ T _a ≤ +40°C
Degree of protection:	IP 54
Mode:	High/Low/ Off
Light Output :	(H)323 lm / (L) 140 lm
Lenght of light beam:	(H)250 m / (L)180 m
Battery:	2*AA
Autonomy:	H:6 hrs 30 min / L: 13 hrs
Weight:	250 g
Dimension:	183x69x63 mm



All technical data is relevant at the time of print.

LED

IP 66



PLFS 50 LED PR



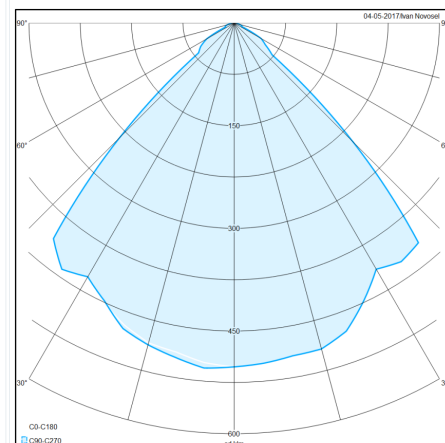
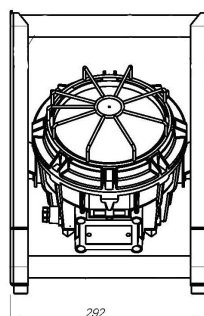
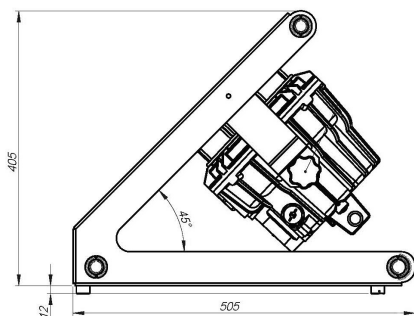
- High color rendering index CRI 80
- Estimated service life 50 000 hours
- With OVP, OCP, OTP protection
- Autonomous reactivation after recovery
- Junction box, connection cable (20 m, 50 m), Ex socket/plug (on request)

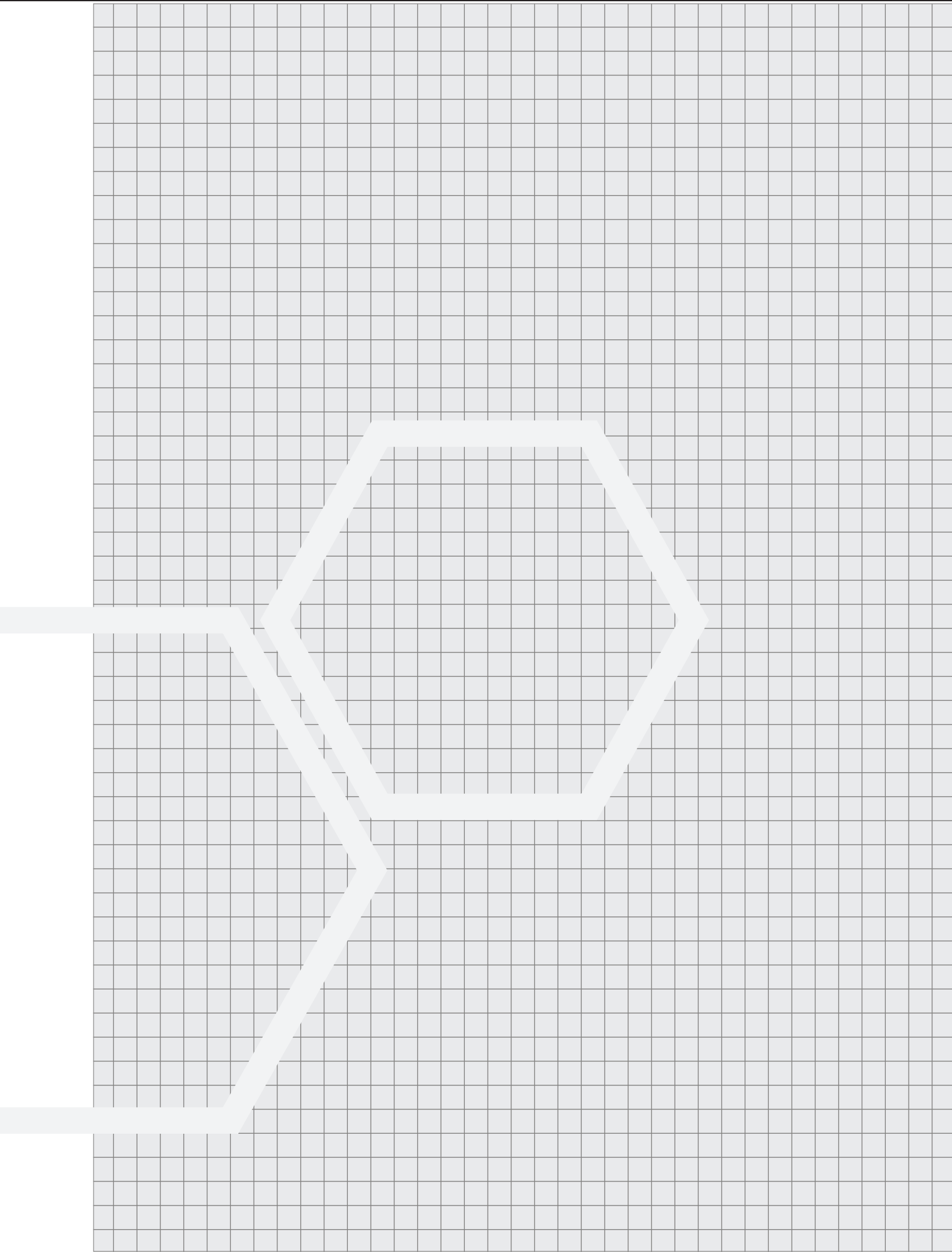
CONSTRUCTION

Enclosure: aluminium painted casting
Diffuser: borosilicate glass,
Accessories: protected galvanized steel grid
Gasket: silicon

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0030
Marking:	CE 0722
Apparatus category:	II 2GD
Marking of explosion protection:	Ex db eb op is IIC T6/T5 Gb Ex tb op is IIIC T80°C/T85°C Db
Ambient temperature:	$-40^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$
Degree of protection:	IP 66 category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	90 - 305 VAC 127 - 431 VDC
Frequency:	50 / 60 Hz
Rated power:	60 W
Luminous flux:	7 600 lm
Weight:	8,5 kg





IP 66



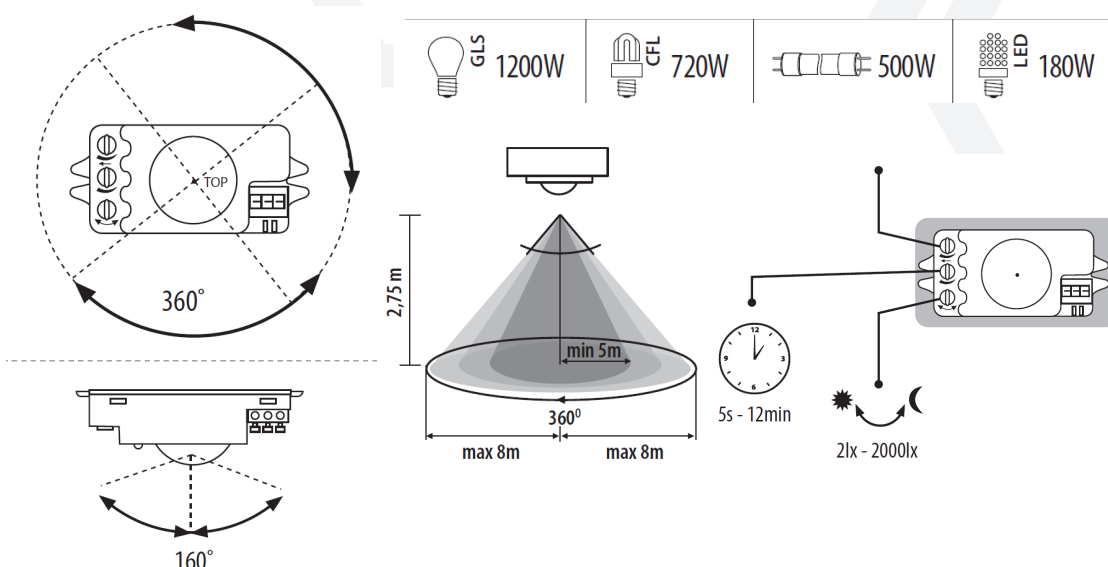
- Controlling lighting installations
- High frequency motion sensor
- Adjustable on- off time
- The motion sensor, which features an 8 m beam width, a total switching load of 1200 W
- Maximum horizontal angle of operation of the motion sensor – 360°
- Capability to set the light intensity of the environment in which the device works Sensitivity adjustment in the range of 2...2000lx
- Motion detection 0.3...3m/s (1... 10km/h)

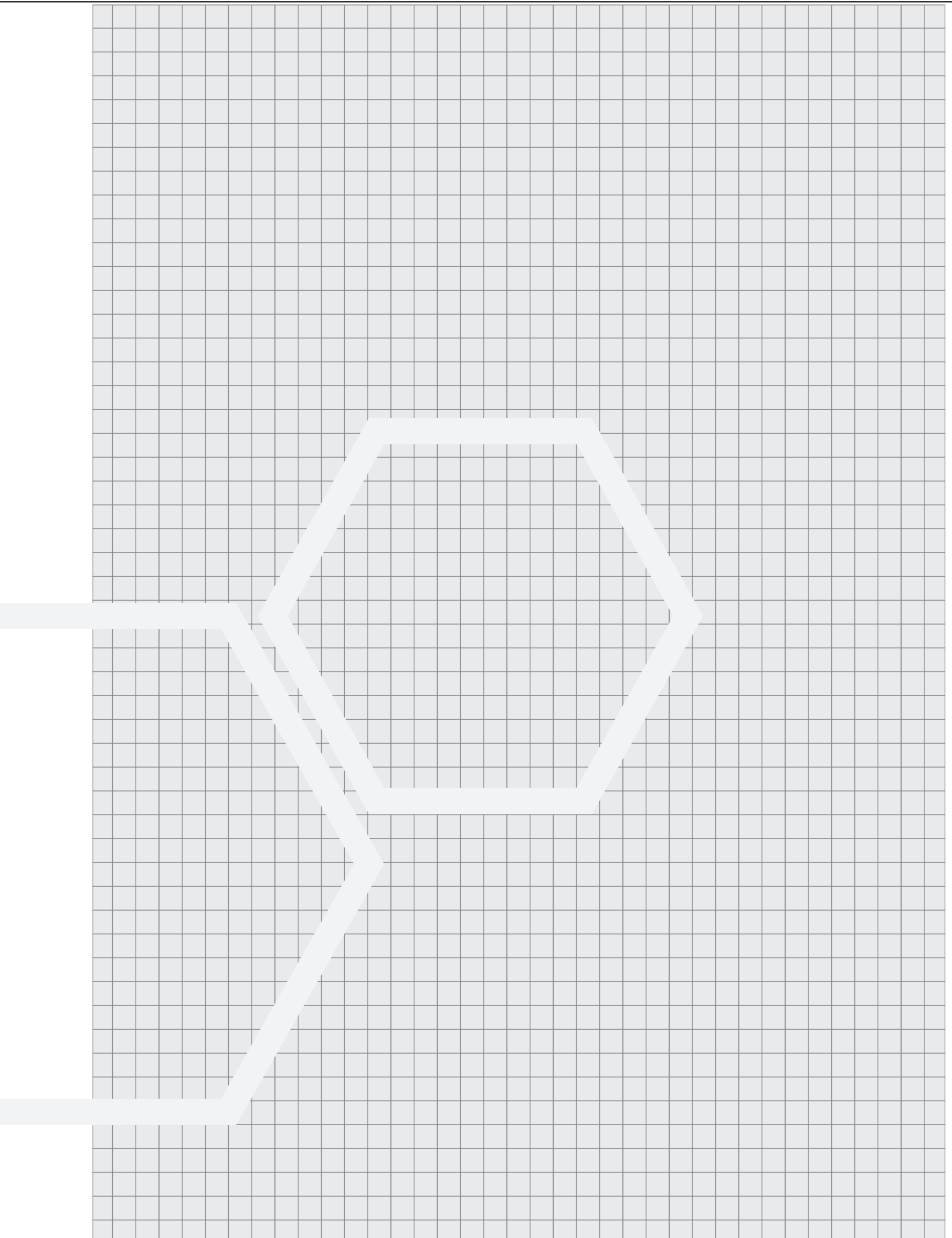
CONSTRUCTION

Enclosure: aluminium painted casting
Diffuser: borosilicate glass,
Gasket: silicon

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0032
Marking:	CE 0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex db eb IIC T6 Gb Ex tb IIIC T80°C Db
Ambient temperature:	$-40^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$
Degree of protection:	IP 66
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	220-240 VAC
Frequency:	50 / 60 Hz





LED

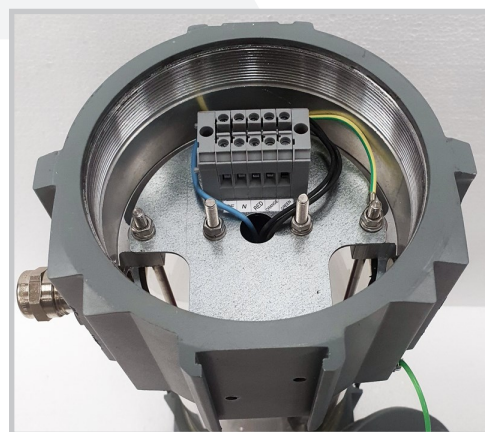
IP 66

IK08

T_a
-20 +50Ex
ATEX

- Life time up to 100000 h
- Steady / flashing functions
- Resistant to vibrations
- Long service life

FLXS 118 LED



CONSTRUCTION

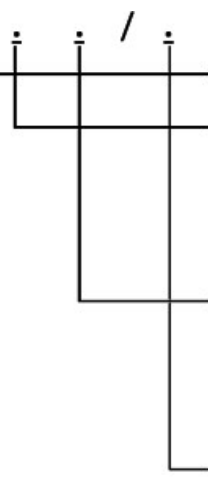
Enclosure: aluminium powder painted casting
Diffuser: borosilicate glass tube,
Gasket: silicon

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0028/2
Marking:	CE 0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex db IIC T6 Gb Ex tb IIIC T80°C Db
Ambient temperature:	-20°C ≤ T _a ≤ +50°C
Degree of protection:	IP 66
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	24 VAC/DC 110-120 VAC 230-240 VAC
Frequency:	50 / 60 Hz
Rated power:	Up to 6 W / LED module
Connecting terminals:	Screw terminals PE, N, RED, ORANGE, GREEN max. 4mm ² per terminal
Cable entry:	2 x M20 Ex db/tb, 1x Ex db/tb cable gland M20, 1x M20 plug
Weight:	4 kg

MODEL CODE

FLXS 118 LED



Basic marking code:

Rated voltage:

- 1 – 24 V AC/DC
- 2 - 110-120 V AC
- 3 - 230-240 V AC

LED modules 1-3

- R - red LED module
- O - orange LED module
- G - green LED module

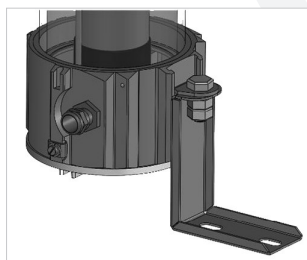
Light type

- S - steady light
- F - flashlight

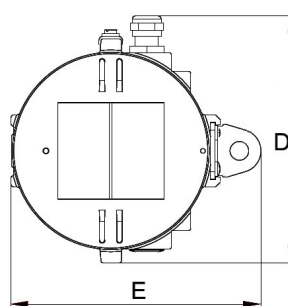
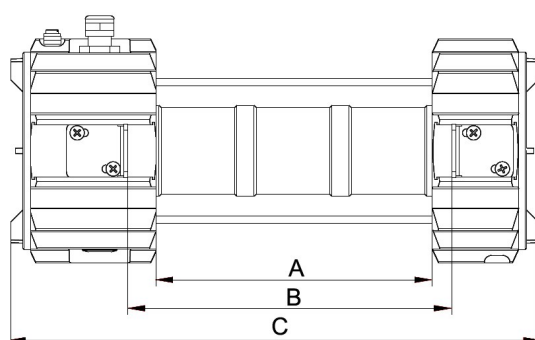


MOUNTING

Pendant, on pipe, wall, ceiling mounting . Operates in any position.



DIMENSION DRAWING (mm)



A	B	C	D	E
192	225	366	170	175

SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Cover gasket FLX	FLX 10-120		Flat surface mounting set	FLXS LED 20-160
	Signal tower set	FLXS 10-130		Wall / ceiling mounting set	FLXS 20-140
	Protective grid FLXE set	FLXS 20-110		Pipe mounting set	FLXS 20-150

All technical data is relevant at the time of print.

IP 66



T0251 / T0252



CONSTRUCTION

Material: polycarbonate / polyamide

The exclusive interlock device is equipped with the plug and socket device. The switch is not turned on if it is not rotated and the plug can not be pulled out when the switch is turned on after the plug is inserted into the socket, which the non-live action is realized.

The protective covers are equipped on both plug and socket, which ensure the reliability of the protective degree.

Therefore, the plug and socket device can be used under the extreme conditions.

TECHNICAL DATA

Certificate:	FIDI 21 ATEX 0052U, FIDI 21 ATEX 0049X, FIDI 21 ATEX 0050X, FIDI 21 ATEX 0051U
Marking:	0722
Apparatus category:	II 2GD
Marking of explosion protection:	 Ex tb IIIC T80°C... T95°C Db Ex tb IIIC Db
Ambient temperature:	$-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +45^{\circ}\text{C}/+55^{\circ}\text{C}$
Degree of protection:	IP 66
Impact resistance:	IK10
Cable entries:	Wall type socket: 1xM25 cable gland (cable diameter 8-17 mm) Coupler type socket: cable diameter 8-18.5 mm Plug: cable diameter 8-18.5 mm



Wall socket



Coupler socket



Panel socket



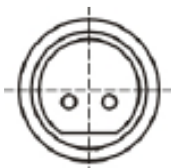
Plug



Plug with protective cover

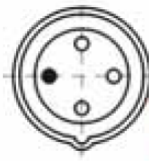
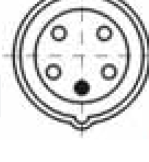
- 16 A to 32 A
- 50V - 690 V
- All sockets incorporate switching technology that prevents removal of the plug under electrical load and does not disturb the potentially explosive atmospheres
- Small force of inserting and pulling

MODEL CODE T0251 16 A 2P/3P/4P/5P

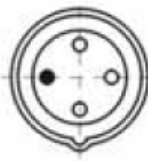
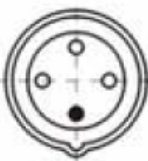
DESCRIPTION	PIN configuration	ORDER CODE
20-25 VAC 16 A 2P [min order qty is 20pcs]		
Wall socket		R-2P-16A-25VAC
Panel socket		F-2P-16A-25VAC
Coupler socket		C-2P-16A-25VAC
Plug		P-2P-16A-25VAC
Plug with cap		P-C-2P-16A-25VAC
40-50 VAC 16 A 2P [min order qty is 20pcs]		
Wall socket		R-2P-16A-50VAC
Panel socket		F-2P-16A-50VAC
Coupler socket		C-2P-16A-50VAC
Plug		P-2P-16A-50VAC
Plug with cap		P-C-2P-16A-50VAC
20-50 VDC 16 A 2P [min order qty is 20pcs]		
Wall socket		R-2P-16A-50VDC
Panel socket		F-2P-16A-50VDC
Coupler socket		C-2P-16A-50VDC
Plug		P-2P-16A-50VDC
Plug with cap		P-C-2P-16A-50VDC
110-130 V 16 A 3P [min order qty is 20pcs]		
Wall socket		R-3P-16A-130V
Panel socket		F-3P-16A-130V
Coupler socket		C-3P-16A-130V
Plug		P-3P-16A-130V
Plug with cap		P-C-3P-16A-130V
200-250 V 16 A 3P		
Wall socket		R-3P-16A-250V
Panel socket		F-3P-16A-250V
Coupler socket		C-3P-16A-250V
Plug		P-3P-16A-250V
Plug with cap		P-C-3P-16A-250V

T0251 / T0252

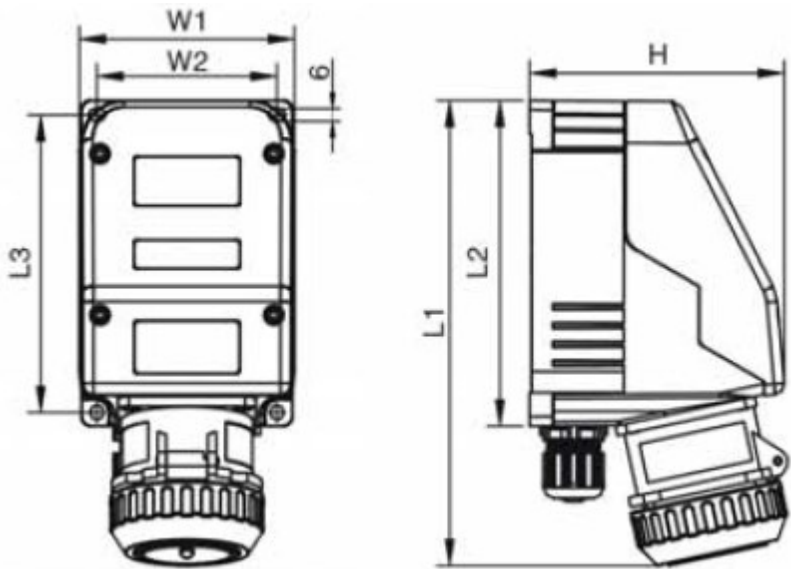
MODEL CODE T0251 16 A 2P/3P/4P/5P

DESCRIPTION	PIN configuration	ORDER CODE
200-250 V 16 A 4P [min order qty is 20pcs]		
Wall socket		R-4P-16A-250V
Panel socket		F-4P-16A-250V
Coupler socket		C-4P-16A-250V
Plug		P-4P-16A-250V
Plug with cap		P-C-4P-16A-250V
380-415 V 16 A 4P [min order qty is 20pcs]		
Wall socket		R-4P-16A-415V
Panel socket		F-4P-16A-415V
Coupler socket		C-4P-16A-415V
Plug		P-4P-16A-415V
Plug with cap		P-C-4P-16A-415V
480-500 V 16 A 4P [min order qty is 20pcs]		
Wall socket		R-4P-16A-500V
Panel socket		F-4P-16A-500V
Coupler socket		C-4P-16A-500V
Plug		P-4P-16A-500V
Plug with cap		P-C-4P-16A-500V
600-690 V 16 A 4P [min order qty is 20pcs]		
Wall socket		R-4P-16A-690V
Panel socket		F-4P-16A-690V
Coupler socket		C-4P-16A-690V
Plug		P-4P-16A-690V
Plug with cap		P-C-4P-16A-690V
200-250 V 380-415 V 16 A 5P		
Wall socket		R-5P-16A-415V
Panel socket		F-5P-16A-415V
Coupler socket		C-5P-16A-415V
Plug		P-5P-16A-415V
Plug with cap		P-C-5P-16A-415V

Plugs and sockets

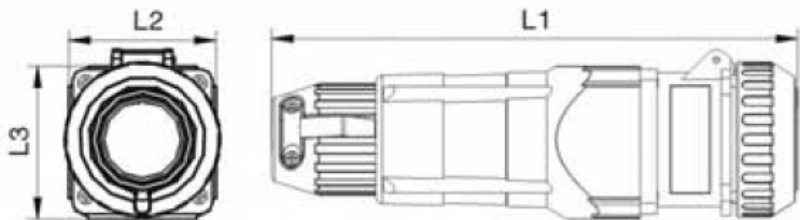
DESCRIPTION	PIN configuration	ORDER CODE
200-250 V 32 A 4P [min order qty is 20pcs]		
Wall socket		R-4P-32A-250V
Panel socket		F-4P-32A-250V
Coupler socket		C-4P-32A-250V
Plug		P-4P-32A-250V
Plug with cap		P-C-4P-32A-250V
380-415 V 32A 4P [min order qty is 20pcs]		
Wall socket		R-4P-32A-415V
Panel socket		F-4P-32A-415V
Coupler socket		C-4P-32A-415V
Plug		P-4P-32A-415V
Plug with cap		P-C-4P-32A-415V
480-500 V 32 A 4P [min order qty is 20pcs]		
Wall socket		R-4P-32A-500V
Panel socket		F-4P-32A-500V
Coupler socket		C-4P-32A-500V
Plug		P-4P-32A-500V
Plug with cap		P-C-4P-32A-500V
600-690 V 32 A 4P [min order qty is 20pcs]		
Wall socket		R-4P-32A-690V
Panel socket		F-4P-32A-690V
Coupler socket		C-4P-32A-690V
Plug		P-4P-32A-690V
Plug with cap		P-C-4P-32A-690V
200-250 V 380-415 V 32 A 5P		
Wall socket		R-5P-32A-415V
Panel socket		F-5P-32A-415V
Coupler socket		C-5P-32A-415V
Plug		P-5P-32A-415V
Plug with cap		P-C-5P-32A-415V

DIMENSION type T0251 / 16 A



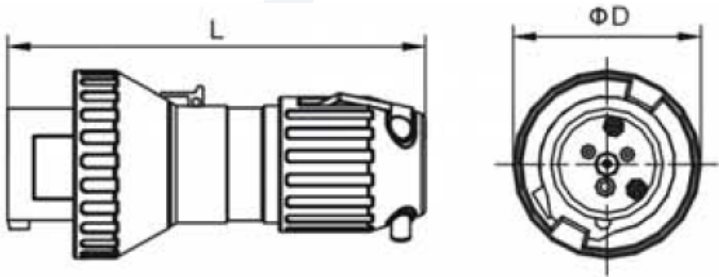
WALL SOCKET (all dimension in mm)

Poles	W1	W2	L1	L2	L3	H
2P/3P	103	86	223	156	142	122
4P/5P	123	106	241	176	163	147



COUPLER SOCKET (all dimension in mm)

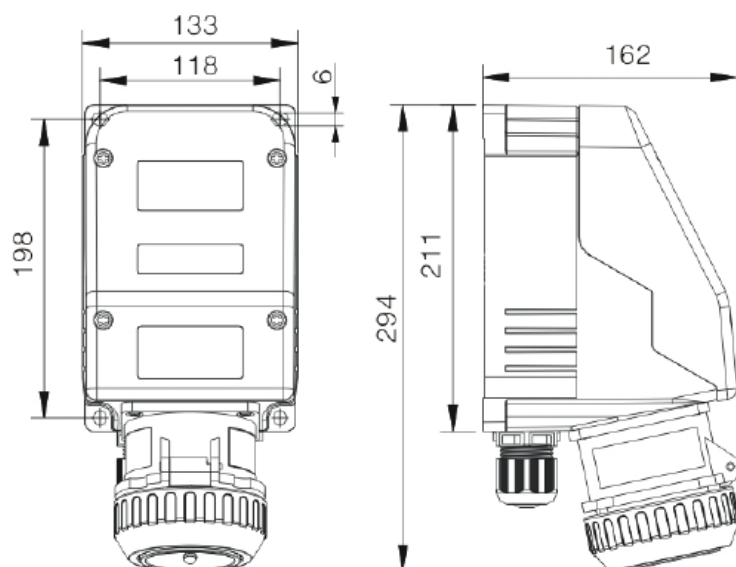
Poles	L1	L2	L3
2P/3P	247	69	72
4P/5P	279	90	93



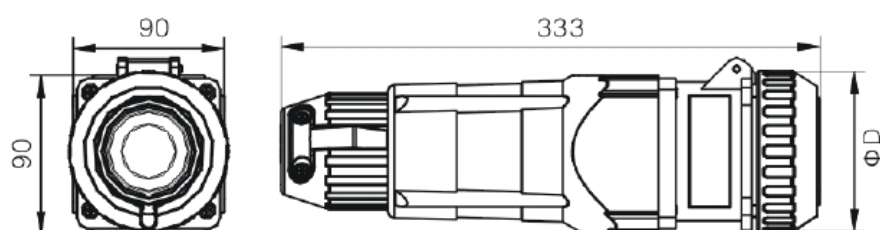
PLUG (all dimension in mm)

Poles	ΦD	L
2P/3P	73	163
4P	77	187
5P	84	187

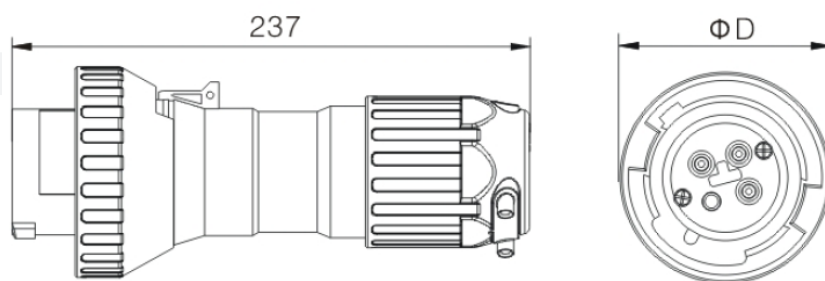
DIMENSION type T0252 / 32 A



WALL SOCKET (all dimension in mm)



COUPLER SOCKET (all dimension in mm)



PLUG (all dimension in mm)

D 4P - $\phi 96$ mm
D 5P - $\phi 101$ mm



- For electrical connection between flameproof enclosures or between flameproof enclosure and enclosure with another type of protection

RSM



CONSTRUCTION

Brass body (SS AISI 316 on special request)

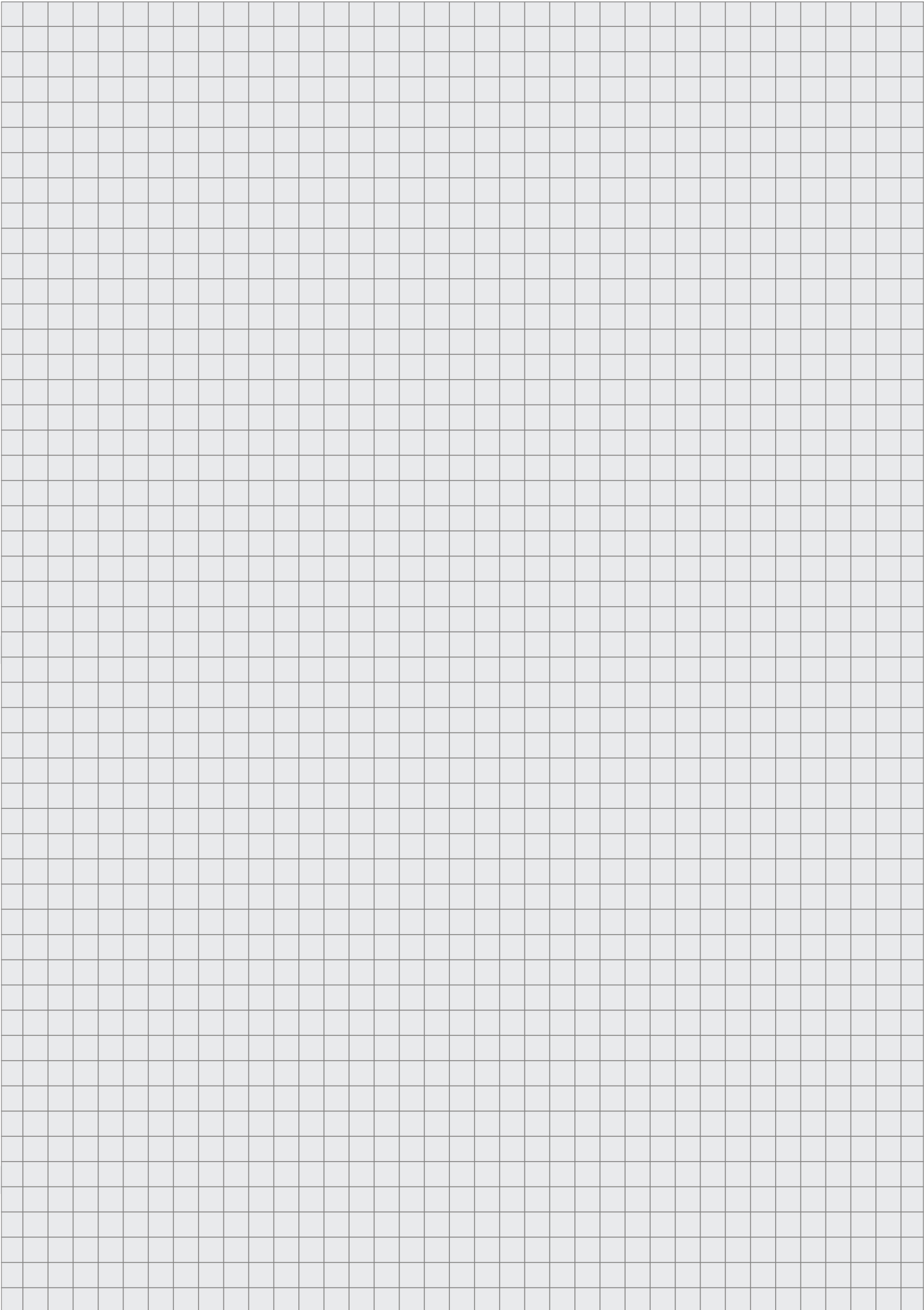
TECHNICAL DATA

Certificate:	Ex FIDI 19 ATEX 0013U , IECEx EXA 16.0003U
Marking:	CE 0722
Apparatus category:	II 2G I M2
Marking of explosion protection:	Ex db IIC Gb Ex db I Mb
Service temperature:	-50°C ≤ T _{service} ≤ +120°C
Rated voltage U₀ / U: :	400/1000 VAC
Rated current I_b:	Determined by technical data of device
Wire:	- rated cross-section 1,5 - 50 mm ² - type RADOX 155 or BETAtherm 155 IEC 60228 class 5

MODEL CODE

TYPE	NUMBER AND CROSS-SECTION OF WIRES	SIZE OF THREAD/ THREAD LENGTH (mm)	KEY SIZE AF/ BUSHING LENGTH (mm)	WIRE LENGTH (THREAD SIDE) (mm)	TOTAL WIRE LENGTH (mm)
RSM 21	4 x 1,5 mm ²	M25x1,5-6g/18	OK 30 / 30	150	330
RSM 23	6 x 1,5 mm ²				
RSM 25	8 x 1,5 mm ²				
RSM 30	10 x 1,5 mm ²	M33x1,5-6g/18	OK 36 / 30	150	3x440 + 3x310
RSM 31	12 x 1,5 mm ²				
RSM 33	6 x 2,5 mm ²				
RSM 35	6 x 4 mm ²				
RSM 37	6 x 6 mm ²				
RSM 41	6 x 10 mm ²	M36x1,5-6g/18	OK 41 / 30	110	
RSM 51	6 x 16 mm ²	M42x1,5-6g/18	OK 46 / 30		
RSM 53	3 x 25 mm ²				
RSM 55	3 x 35 mm ²				
RSM 61	6 x 25 mm ²	M50x1,5-6g/18	OK 55 / 30	150	480
RSM 63	6 x 35 mm ²				
RSM 65	3 x 50 mm ²				
RSM 91	12 x 1,5 mm ²	2 x M32x1,5-6g/18	OK 41 / 54	500	1030

Other configurations available on request



IP 68



Cable glands



PLASTIC CABLE GLANDS Exe

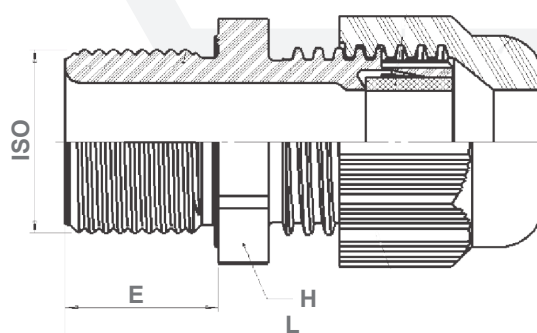
Polyamide body / neoprene gasket

TECHNICAL DATA

Apparatus category:	II 2GD
Marking of explosion protection:	Ex eb, Ex i
Ambient temperature:	$-35\text{ °C} \leq T_{\text{amb}} \leq +95\text{ °C}$
Degree of protection:	IP 68

MODEL CODE

THREADS	CLAMPING RANGE	H (mm)	E (mm)	L (mm)	RAL 5012	RAL 9005
M12	4,0 - 6,5	15	15	39	F7431200E	F8031200E
M16	5,0 - 10,0	22	15	44	F7431600E	F8031600E
M20	7,0 - 12,0	24	15	45	F7432050E	F8032050E
M25	12,0 - 18,0	33	15	53	F7432500E	F8032500E
M25	7,00 - 15,0	33	15	53	SPU 25 B	SPU 25
M32	16,0 - 25,0	42	15	57	F7433200E	F8033200E
M40	22,0 - 32,0	53	16	68	F7434000E	F8034000E
M50	28,0 - 38,5	50	16	71	F7435000E	F8035000E
M63	40,0 - 48,0	70	16	72	F7436300E	F8036300E



- Ex e plastic cable glands
- Ex d metal cable glands for armored cable

Plugs, adapters, reducers, locknuts



METAL Ex d/e CABLE GLANDS

(double sealing, for armoured cable) type 4F / type 1F for non-armoured cable

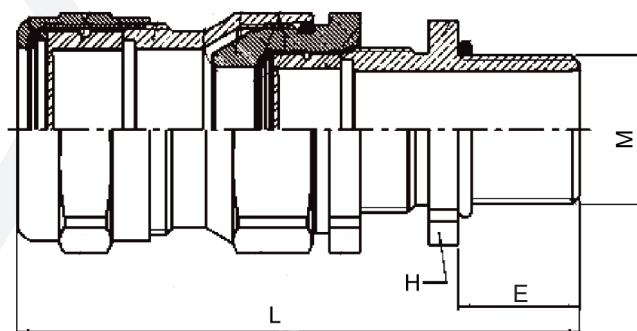
Brass nickel plated (AISI 316 on special request)

TECHNICAL DATA

Apparatus category:	II 2GD
Marking of explosion protection:	 Ex db/eb
Ambient temperature:	$-40\text{ }^{\circ}\text{C} \leq T_{\text{amb}} \leq +95\text{ }^{\circ}\text{C}$
Degree of protection:	IP 68

MODEL CODE

THREADS	CLAMPING RANGE	H (mm)	E (mm)	CODE
M16	7,0 - 12,0	20	16	4114169
M20	9,0 - 16,0	24	16	4114219
M20	13,0 - 21,0	28	16	4114229
M25	13,0 - 21,0	30	16	4114269
M25	17,0 - 27,5	36	16	4114279
M32	22,0 - 34,0	44	16	4114339
M40	28,0 - 41,0	50	16	4114419
M50	34,0 - 48,0	64	16	4114519
M63	39,0 - 54,0	70	16	4114639
M63	48,0 - 65,0	80	16	4114649
M75	55,0 - 74,0	90	18	4114769

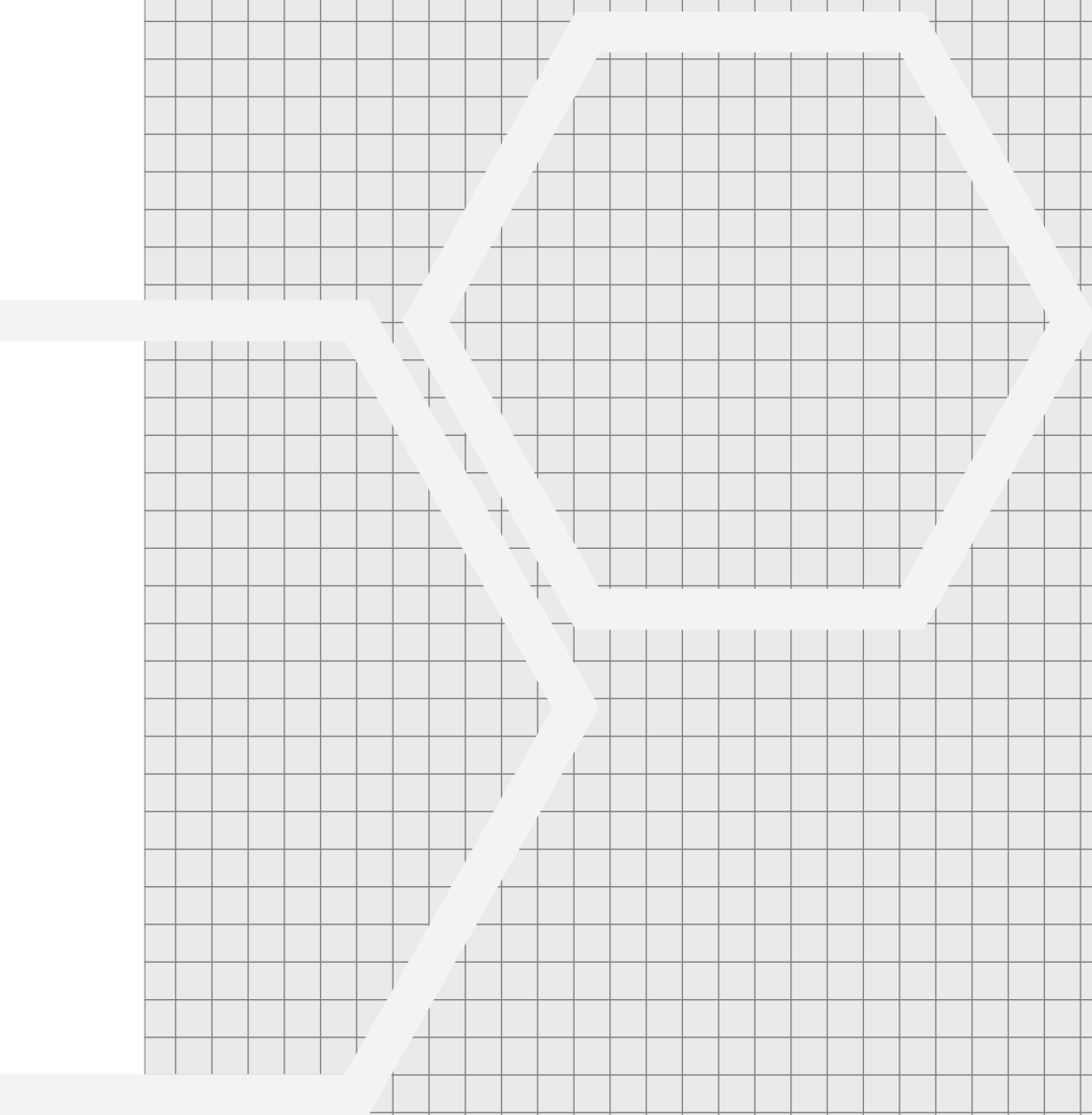


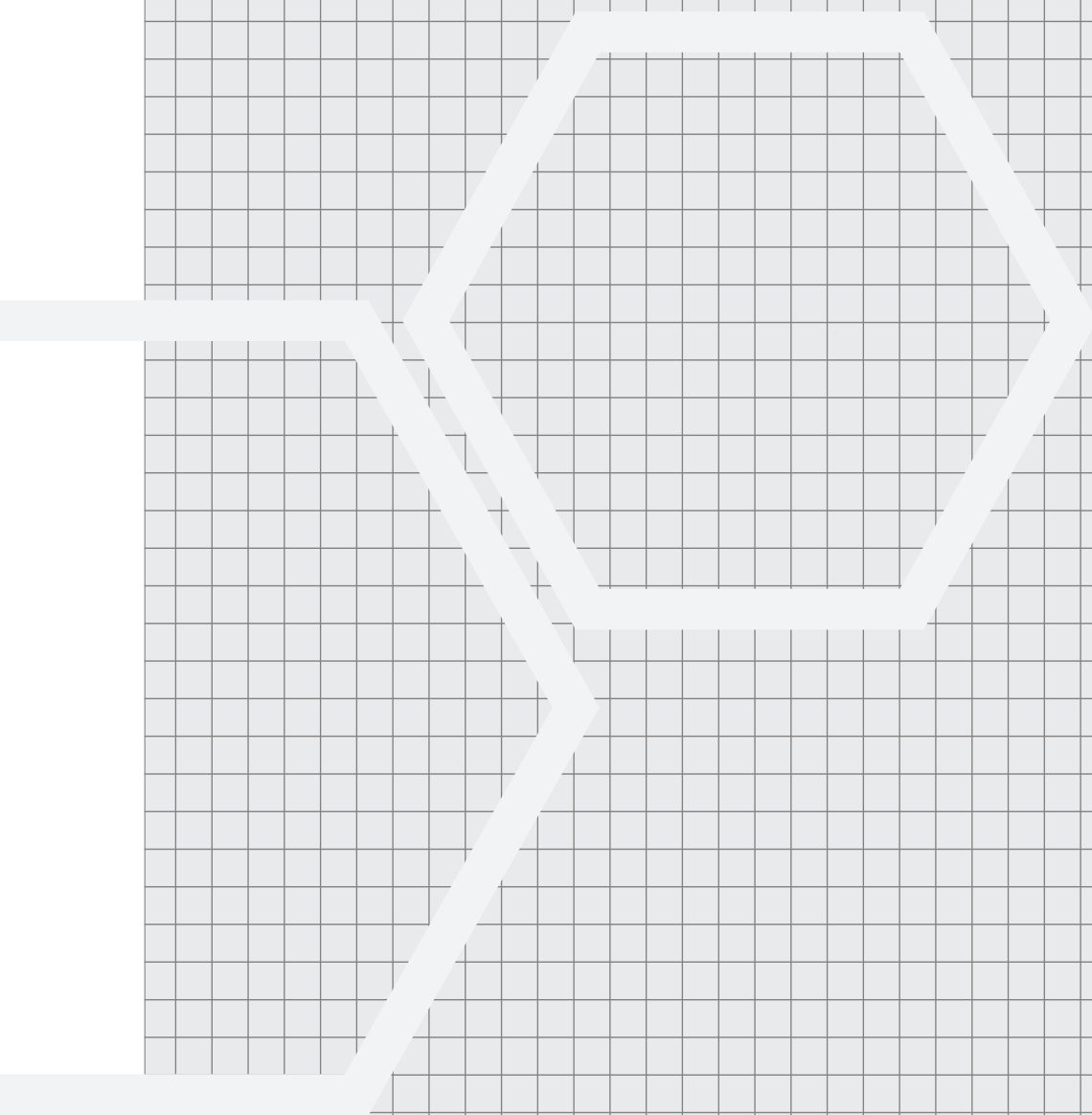
OTHER ACCESSORIES



Other accessories (Exd metal plugs, Exe plastic plugs, adapters, reducers, locknuts, earth tags) are available according to customer request.

All technical data is relevant at the time of print.

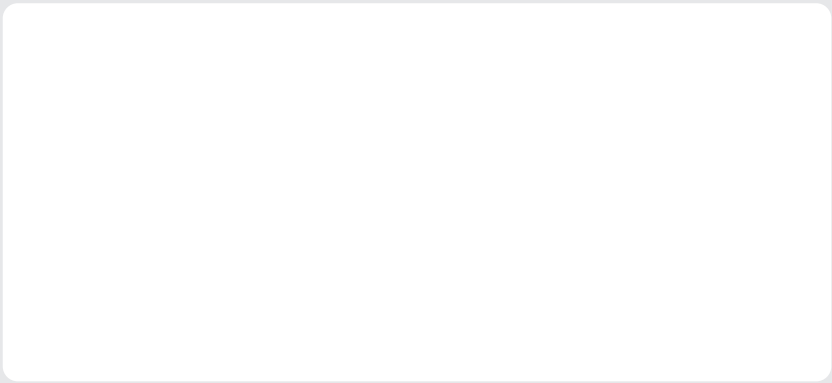




Availability, design and specifications are subject to change without notice.

All rights reserved.

Printed in the Republic of Croatia, July 2024, TEPEX d.o.o.

The logo for TEP Ex, with 'TEP' in a stylized blue font and 'Ex' in a standard blue font.

TEP Ex

Prilaz dr.F.Tuđmana 6, 49210 ZABOK, CROATIA

Tel: +385 49 222 900, +385 49 426 451

Fax: +385 49 426 450

@: tepex@tepex.hr prodaja@tepex.hr

Web: www.tepex.hr