EX

make your work
surroundings safer

REV.01.2026.EN

About us

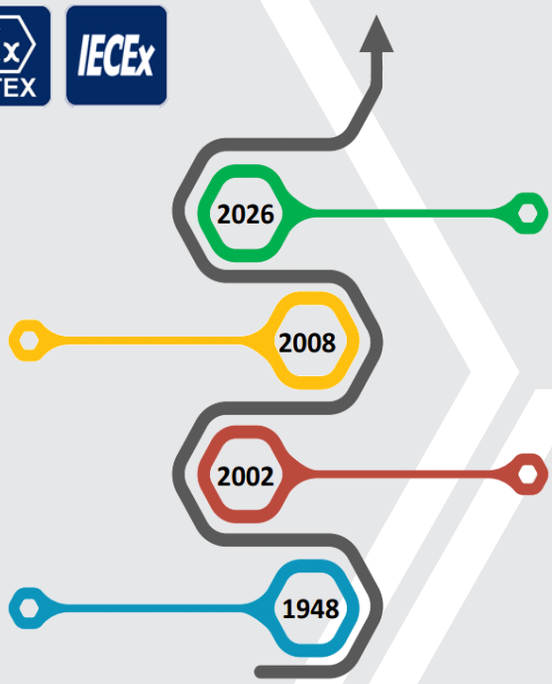
TEPEx stands as the regional frontrunner in the manufacture of explosion-protected electrical equipment. By fostering a culture of continuous innovation, exploring new markets, modernizing our technological capabilities, and investing in our workforce and organizational infrastructure, we proudly carry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

TEP Ex 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.

TEP History

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



TEP Ex 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).

TEP Ex The founding

In 2002, a private independent company, TEPEx, was established, and it continued with the production and development of Ex products. Initially, the market focus was on the former Yugoslav countries.

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.

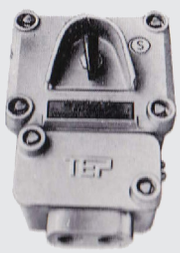
In observance of national regulations, all our products and quality assurance systems are accredited by an authorized certification body compliant with the **ATEX Directive 2014/34/EU**.

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.

Factory building

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

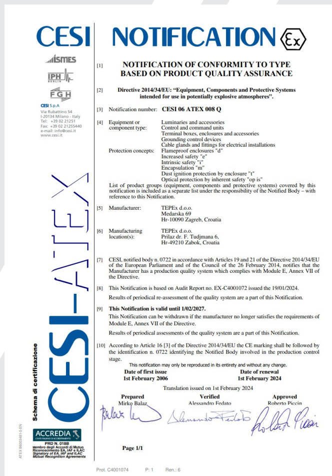
All our explosion protected products are certified in accordance with the European standard

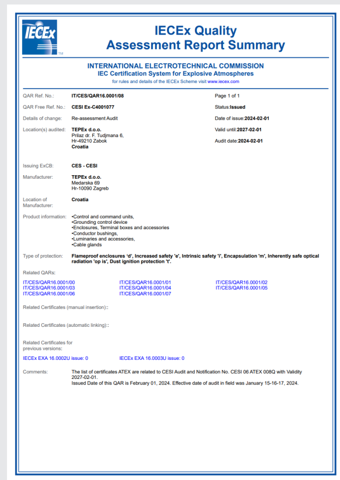
ATEX Directive 2014/34/EU + IECEx

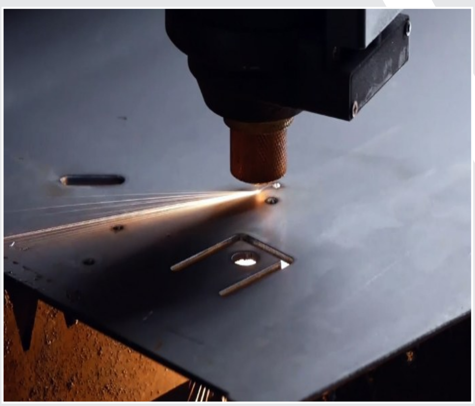
In the process of development and production TEP Ex's employees use modern production and development tools. Ongoing investment in project development ensures the availability of innovative high-performance products for installation in potentially explosive areas.

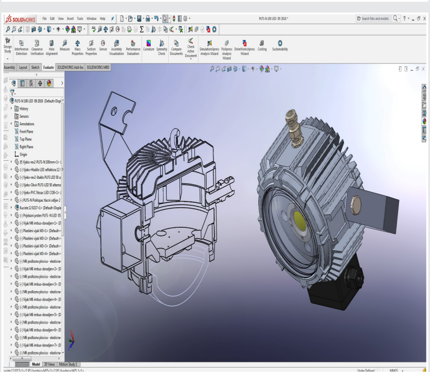

This is a translation of the certificate HR19/2250
SGS
TEP EX d.o.o.
ISO 9001:2015


This is a translation of the certificate HR19/2249
SGS
TEP EX d.o.o.
ISO 14001:2015


CESI NOTIFICATION
NOTIFICATION OF CONFORMITY TO TYPE BASED ON PRODUCT QUALITY ASSURANCE
CESI-ATEX


IECEx Quality Assessment Report Summary
INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres




Explosion protected LED light fittings

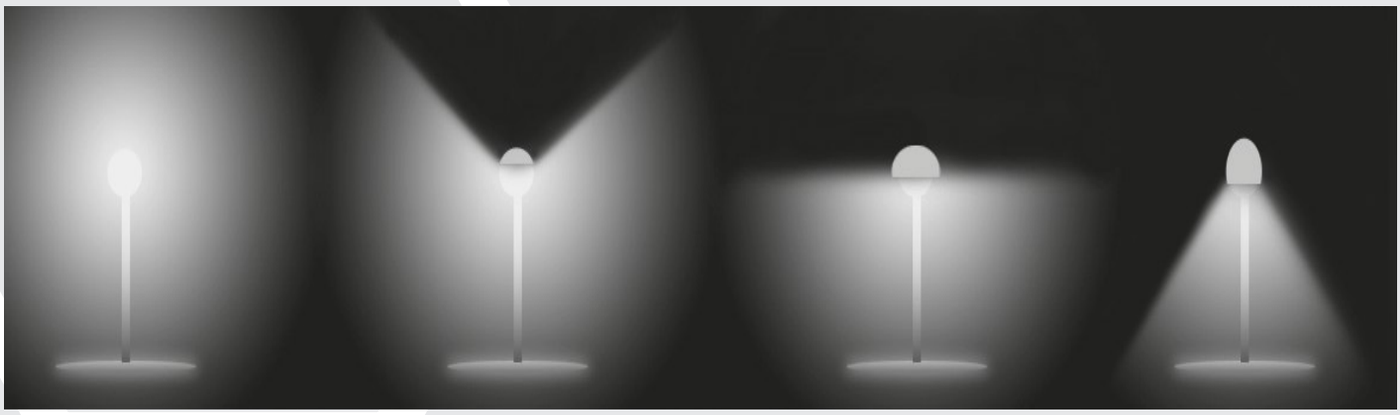
In response to emerging trends in explosion-protected lighting and the introduction of LED sources in hazardous areas, TEPEx took the initiative in 2013 to begin manufacturing Ex light fixtures equipped with LED light sources (FLXE 118 LED). Presently, we offer a variety of Ex-certified LED lamps, including LED floodlight with 320 W, a pendant light with a maximum capacity of 200W, and linear LED light fittings with a maximum capacity of 100W.

LOW MAINTENANCE

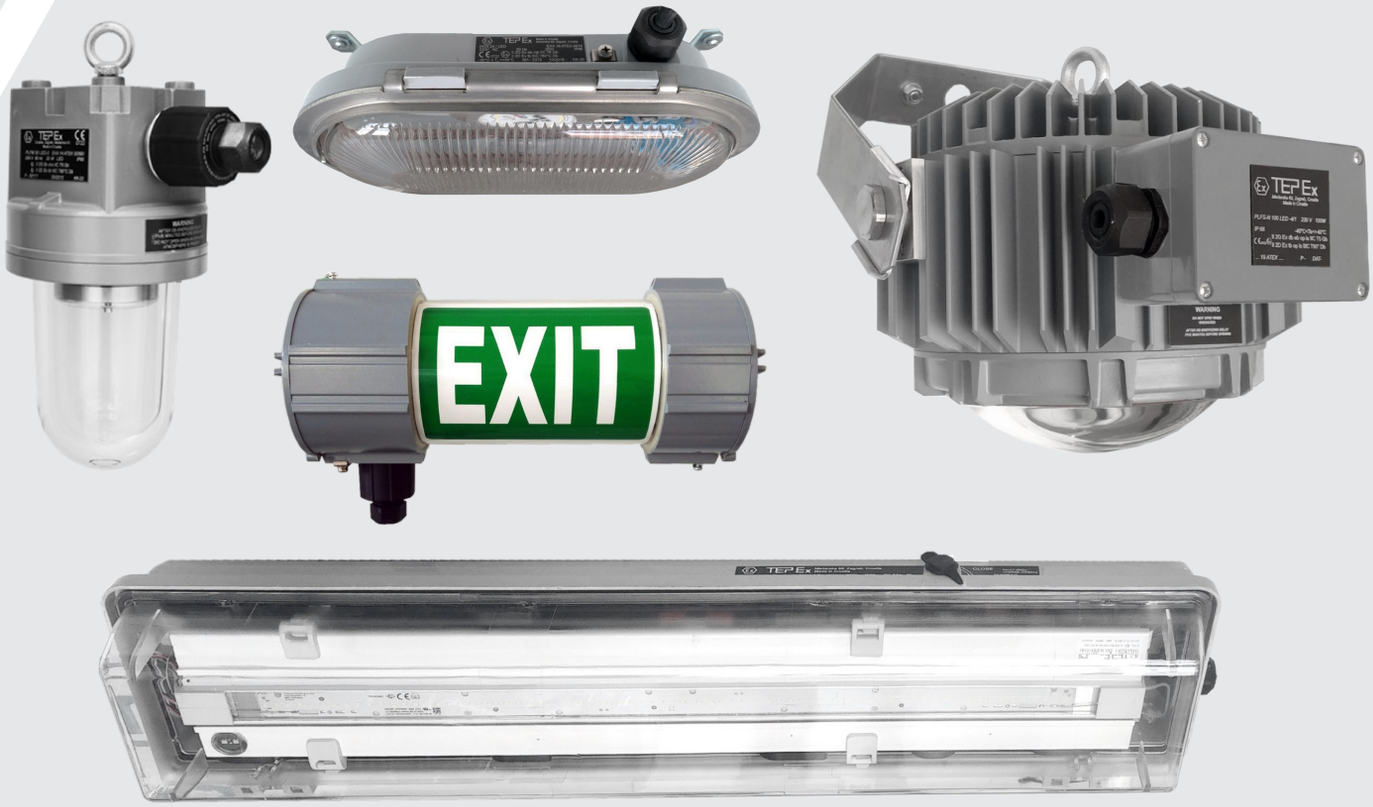
LONGER SERVICE LIFE

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.



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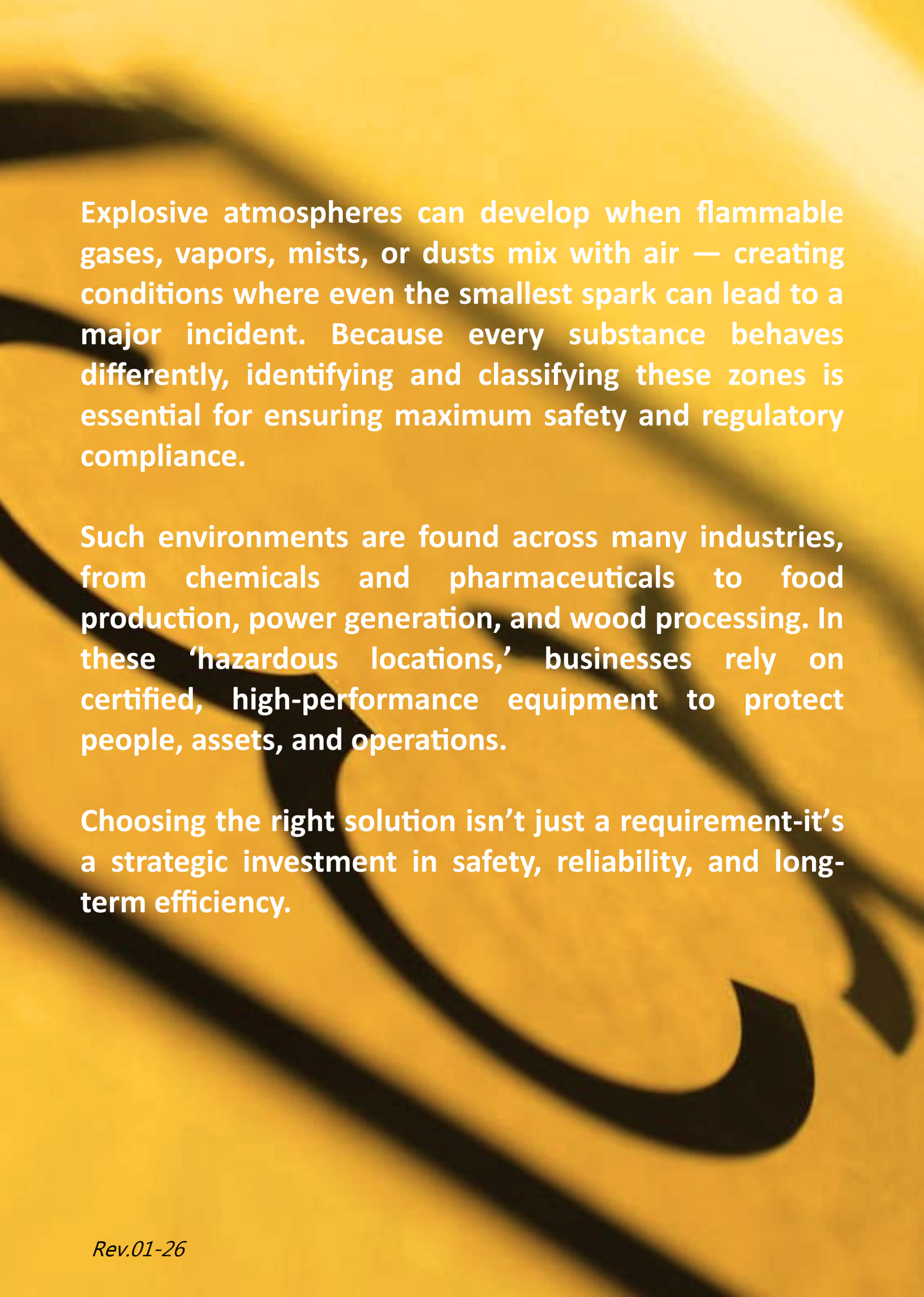


Explosive atmospheres can develop when flammable gases, vapors, mists, or dusts mix with air — creating conditions where even the smallest spark can lead to a major incident. Because every substance behaves differently, identifying and classifying these zones is essential for ensuring maximum safety and regulatory compliance.

Such environments are found across many industries, from chemicals and pharmaceuticals to food production, power generation, and wood processing. In these 'hazardous locations,' businesses rely on certified, high-performance equipment to protect people, assets, and operations.

Choosing the right solution isn't just a requirement-it's a strategic investment in safety, reliability, and long-term efficiency.

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.

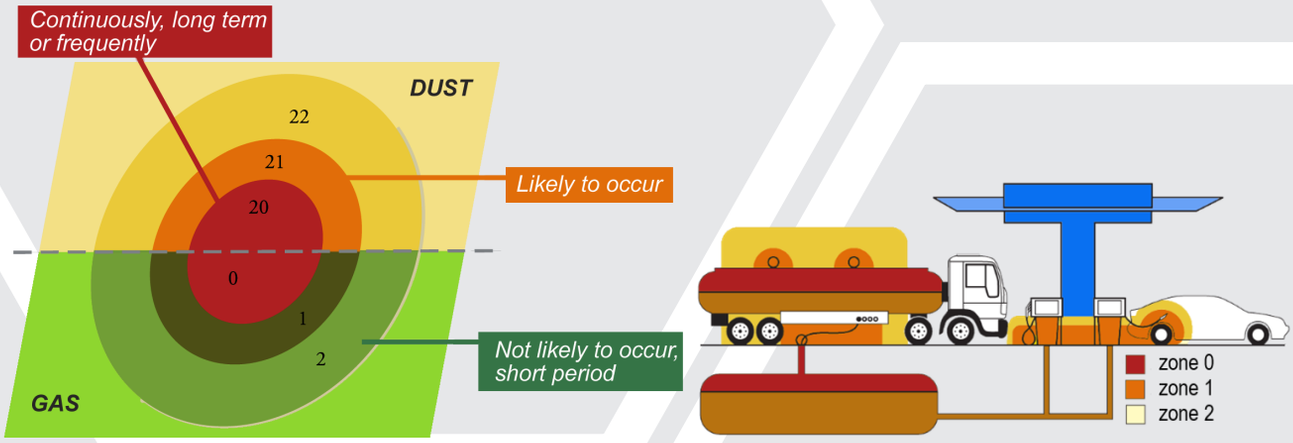
INTEGRATED EXPLOSION PROTECTION

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 60079-10-1:2020)



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

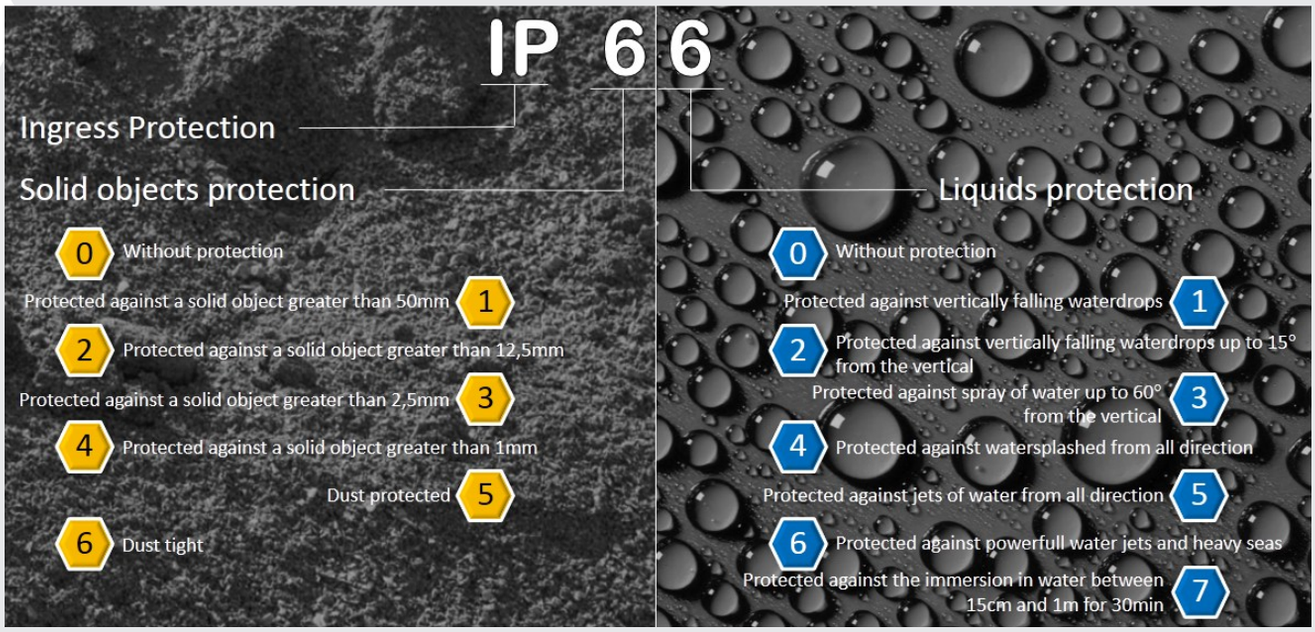
AREAS	CATEGORIES	EPL	ZONES	EXPLOSIVE ATMOSPHERE
Mining - I	M1	Ma	/	>1,5% CH4
	M2	Mb		<1,5% CH4
Other than mines - II	1G, 1D	Ga, Da	0, 20	Continuously, long term or frequently
	2G, 2D	Gb, Db	1, 21	Likely to occur
	3G, 3D	Gc, Dc	2, 22	Not likely to occur, short period

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, acetilaldehid, benzaldehyde, dibutileter, diheksileter	-	-
	IIB	LPG mix	ethylene	hydrogen sulphide	etileter, dietileter	-	-
	IIC	hydrogen	acetylene	-	-	-	carbon disulphide

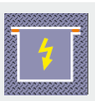
Dust Groups	
IIIA	Combustible flyings
IIIB	Non-conductive dust
IIIC	Conductive dust

Dust	Flash point [°C] *layer*	Flash point [°C] *cloud*	Minimum ignition energy *(cloud)* [mJ]	Lower Explosion Limit *(cloud)* [g/m^3]
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 IEC 60529 Ed. 2.1 b:2001)



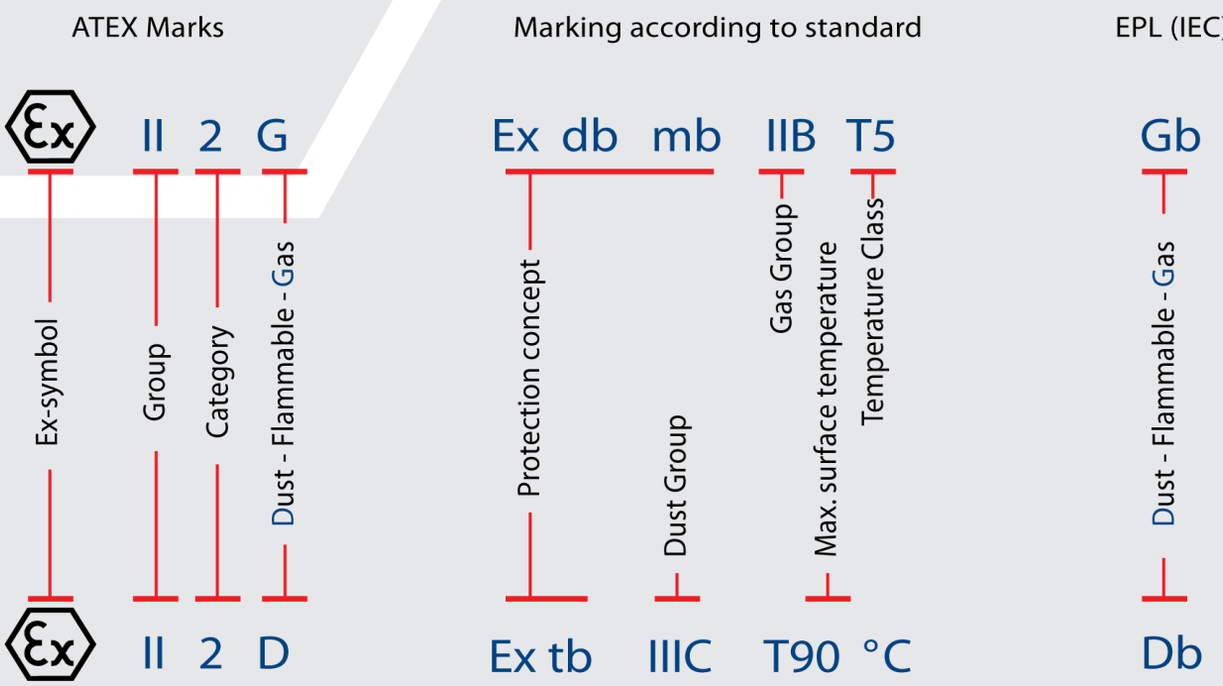
EXPLOSION PROTECTION OVERVIEW

Types of protection for explosive atmosphere of flammable gases, vapors, mists or dusts General Requirements EN IEC 60079-0:2018+AC:2020/A11:2024 IEC 60079-0:2017+ISH1:2019+ISH2:2019+Corr1:2020					
Type of protection	**Standard**	**Concept**	**Symbol**	**Category**	**EPL**
Flameproof enclosure	EN 600791:20141:2014/AC:2018, A11:2024 IEC 60079-1:2014+Corr1:2018+ISH1:2020		da, db, dc	1G, 2G, 3G M1, M2 1D, 2D, 3D	Ga, Gb, Gc Ma, Mb Da, Db, Dc
Increased safety	EN IEC 60079-7:2015/A1:2018/A11:2024 IEC 60079-7:2015+ISH1:2015+Amd1:2017		eb, ec	2G, 3G M2	Gb, Gc Mb
Pressurised enclosure	EN 60079-2:2014/AC:2015 IEC 60079-2:2014+Corr1:2015		pxb, pyb, pzb	M2, 2G, 3G 2D, 3D	Mb, Gb, Gc Db, Dc
Intrinsic safety	EN 60079-11:2012 IEC 60079-11:2011+Corr.2012+ISH1:2014 +ISH2:2016+ISH3:2016.ISH4:2019+ISH5:2 019+ISH6:2019		ia, ib, ic	M1, M2, 1G, 2G, 3G 1D, 2D, 3D	Ma, Mb, Ga, Gb, Gc Da, Db, Dc
Type of protection “n”	EN 60079-15:2010 IEC 60079-15:2010 (EN IEC 60079-15:2019/A11:2025 not EU harmonized)		nA nC nR	3G	Gc
Powder filling	EN 60079-5:2015 IEC 60079-5:2015/Amd1:2022		q	M2, 2G, 3G	Mb, Gb, Gc
Liquid immersion	EN 60079-6:2015 IEC 60079-6:2015+Amd:2020		ob, oc	M2, 2G, 3G	Mb, Gb, Gc
Encapsulation	EN 60079-18:2015/A1:2017 IEC 60079-18:2014+Cor1:2018		ma, mb, mc	M1, M2, 1G, 2G, 3G 1D, 2D, 3D	Ma, Mb, Ga, Gb,Gc Da, Db, Dc
Protection by enclosures	EN 60079-31:2014 IEC 60079-31:2013 (EN IEC 60079-31:2024 not EU harmonized)		ta, tb, tc	1D, 2D, 3D	Da, Db, Dc
Optical radiation	EN 60079-28:2015 IEC 60079-28:2015+ISH1:2019		op is op pr op sh	1G, 2G, 3G M1, M2 1D, 2D, 3D	Ga, Gb, Gc, Ma, Mb Da, Db, Dc
Type of protection for non-electrical equipment EN 13463-1:2009 / EN ISO 80079-36:2016/AC:2019 (formerly EN 13463-1:2009) ISO 80039-36:2016+Corr1:2019					
Flow restricting	(EN 13463-2:2024 not EU harmonized)		fr	/	/
Flameproof	EN 600791:20141:2014/AC:2018, A11:2024 IEC 60079-1:2014+Corr1:2018+ISH1:2020		h	1G, 2G, 3G M1, M2 1D, 2D, 3D	Ga, Gb, Gc Ma, Mb Da, Db, Dc
Constructional safety	EN ISO 80079-37:2016 ISO 80079-37:2016		h	1G, 2G, 3G M2 1D, 2D, 3D	Ga, Gb, Gc Mb Da, Db, Dc
Control of ignition sources	EN ISO 80079-37:2016 ISO 80079-37:2016		h	1G, 2G, 3G M2 1D, 2D, 3D	Ga, Gb, Gc Mb Da, Db, Dc
Liquid immersion	EN ISO 80079-37:2016 ISO 80079-37:2016		h	1G, 2G, 3G M2 1D, 2D, 3D	Ga, Gb, Gc Mb Da, Db, Dc
Pressurized	EN 60079-2:2014/AC:2015 IEC 60079-2:2014+Cor:2015		p	2G, 3G M2 2D, 3D	Gb, Gc Mb Db, Dc

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



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 0722 (7) Ex *II 2G Ex db eb mb IIC T4 Gb* (4) *-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 CE
7	Notified body
8	Standard ambient temperature (-20°C ÷ +40°C), unless otherwise stated on label
9	Certificate number and product number

NOTES

Light fittings

Zone

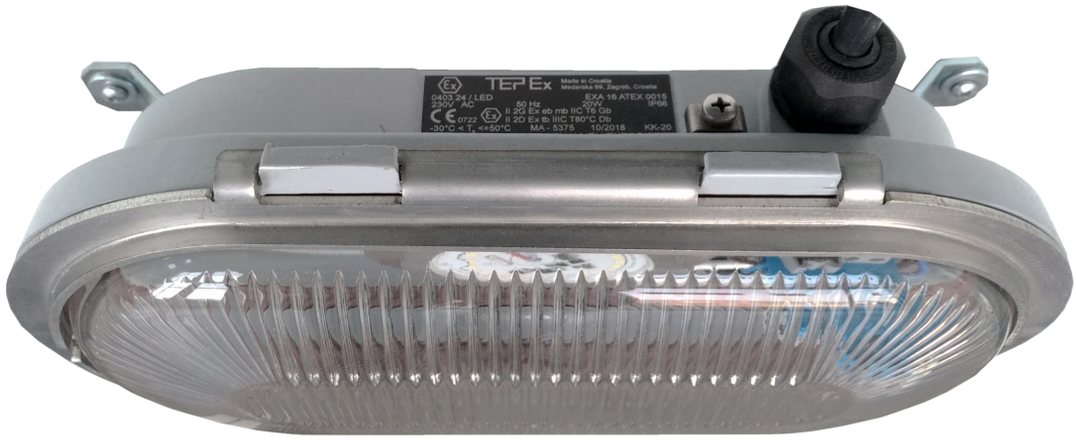
1 21 2 22

0403.24 LED

LED | IP 66

IK08 | T_a +50 -30

ATEX



- 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
- 6300K, CRI 80

CONSTRUCTION

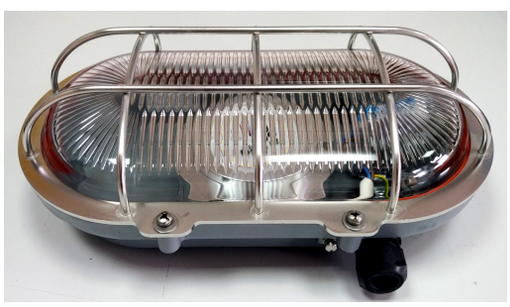
Enclosure: aluminum powder painted casting
Diffuser: borosilicate glass, silicone gasket
Protected grid: AISI 316
Standard version without protective grid

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:	-30ºC ≤ T_a ≤ +50ºC
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



MODEL CODE

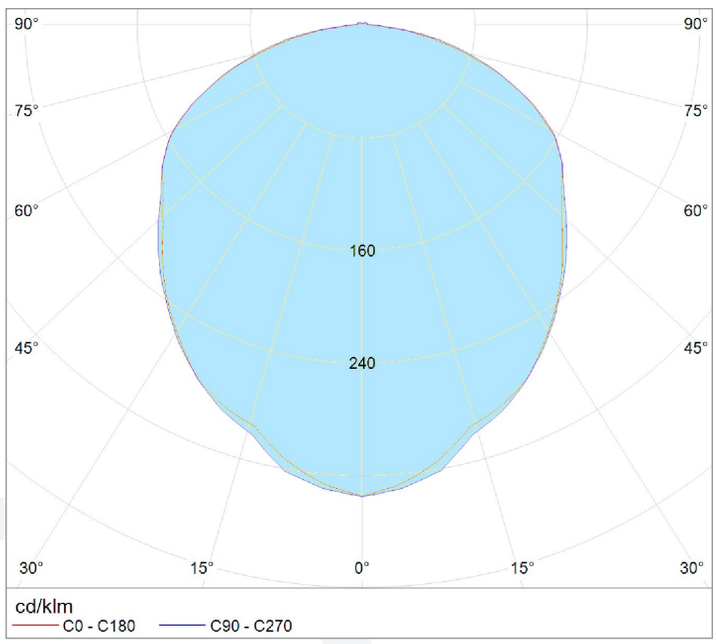
MODEL CODE / glass	Power consumption [W]	Light fitting Luminous flux [lm]	System efficacy [lm/W]
0403.24 LED . -1 / transparent	17 W	2450	122
0403.24 LED . -2 / green		1200	65
0403.24 LED . -3 / red			

MODEL CODE

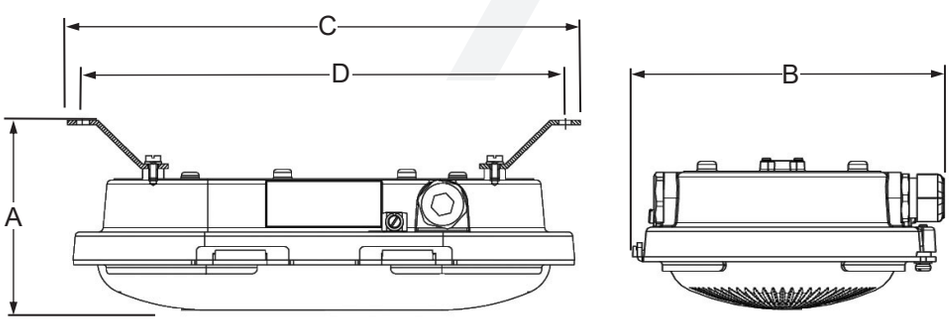
0403.24 LED . - .

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

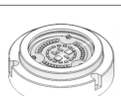
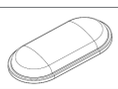
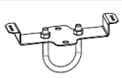


DIMENSION DRAWING (all dimensions in mm)



A	B	C	D
125	192	350	319

SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	LEDEx 01 17W modul	LEDEx 01		Ex e cable gland M25	SPU 25
	Gasket 0403.24 LED	0403.24 LED 10-140		Ex e plug M25	SPC 25
	Glass cover	0403.24 LED 10-110		Wall bracket	0403.24 LED 10-160
	Protective grid	0403.24 LED 20-120		Pole mounting set R2”	0403.24 LED 10-170

Zone

1 21 2 22

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 17W ~ 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, pole 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:	-20ºC ≤ T_a ≤ +40ºC
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

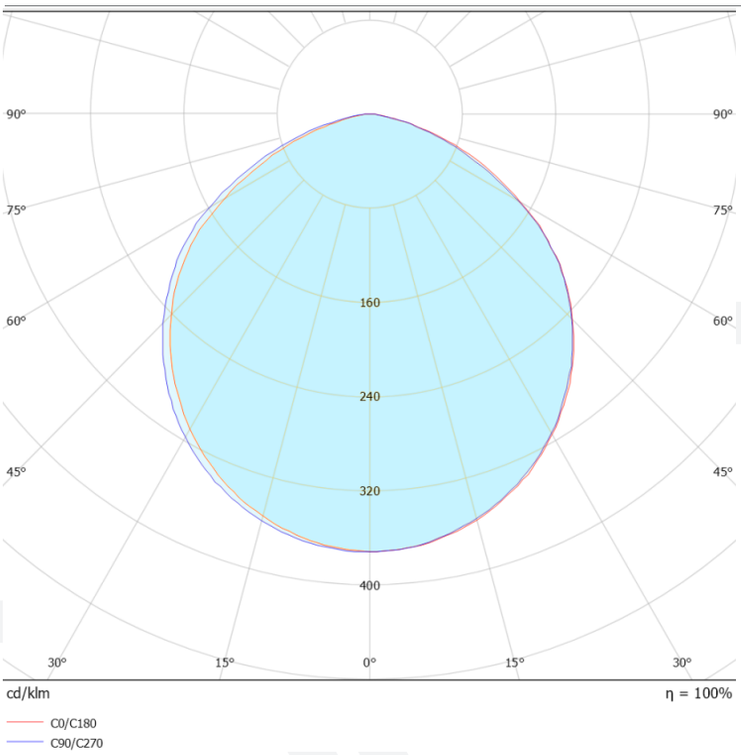
MOUNTING

Pendant, on pole, wall, ceiling

MODEL CODE

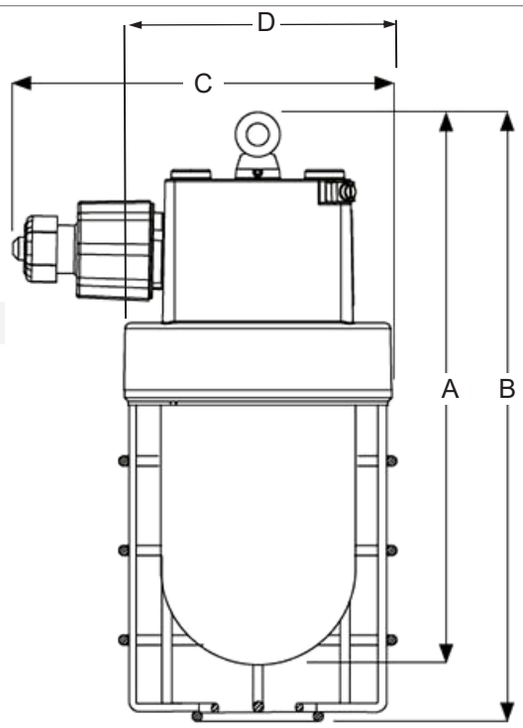
MODEL CODE	Power consumption [W]	Voltage [V]	Light fitting Luminous flux [lm]	System efficacy [lm/W]
PLFM 100/3-.	E27 / 12 W Osram E27 / 13 W Philips	230V	1060 1350	~100
PLFM 20 LED	18W		2600	120

POLAR CURVE



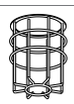
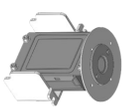
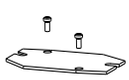
LED module 18W, 2600 lm

DIMENSION DRAWING (mm)



A	B	C	D
320	345	175	∅140

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 20-130		LED bulb E27	-
	Gasket PLFM	PLFM 10-140		Pole mounting set R2”	PLFM 20-120
	LED source LED driver	PLFM 10-130 PLFM 10-160		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.

Zone

1 21 2 22

PLFS 50 LED

LED

IP 66

IK08

T_a -40 +55

ATEX

- 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

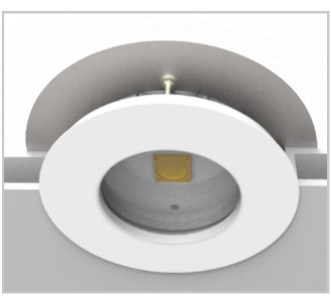
Enclosure: aluminum powder painted casting
Diffuser: borosilicate glass,
Accessories: protective galvanized steel gird, assembly kit for wall, pole and ceiling mounting
Gasket: silicon

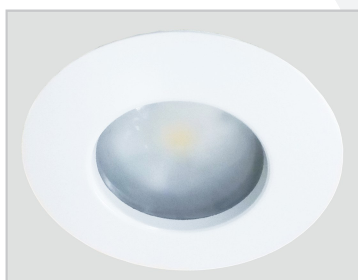
TECHNICAL DATA

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:	-40ºC ≤ T_a ≤ +55 / +60ºC
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 pole, wall, ceiling, recessed
(clean room LED light fitting)

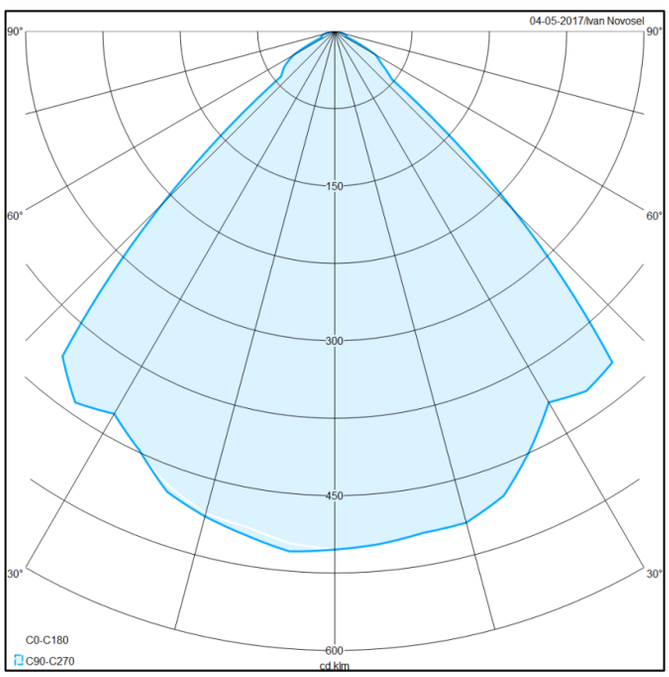




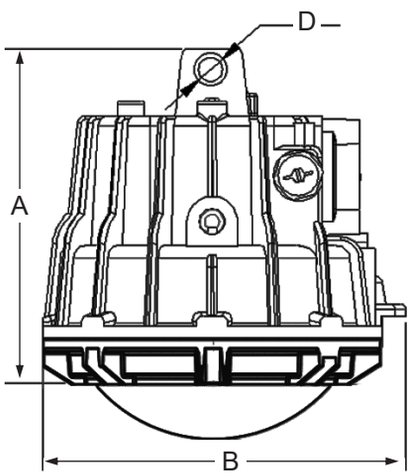
MODEL CODE

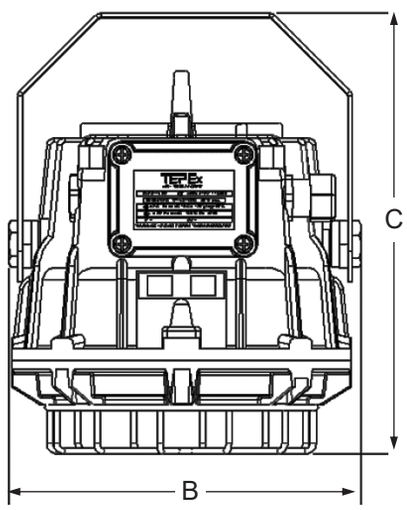
MODEL CODE	Power consumption [W]	Voltage [V]	Light fitting Luminous flux [lm]	System efficacy [lm/W]	AMBIENT TEMP.
PLFS 50 LED-1	35 W	90-305 V AC 127-431 V DC	4520	129	-40°C ÷ +60°C
PLFS 50 LED-2	50 W		6460		-40°C ÷ +55°C
PLFS 50 LED-3	60 W		7750		-40°C ÷ +50°C

POLAR CURVE



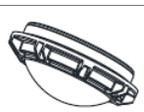
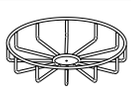
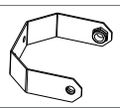
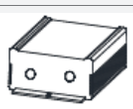
DIMENSION DRAWING (mm)





A	B	C	D
225	245	300	∅16

SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Replacement glass PLFS LED	PLFS LED 10-110		Pole mounting set 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 dtiver	PLFS 50 LED 10-130		Cooler with LED source	PLFS 50 LED 10-150

All technical data is relevant at the time of print.

Zone

1 21 2 22

PLFS-N 100 LED

LED | IP 66

IK08 | T_a -40 +50

ATEX

- 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 grid, assembly kit for wall, pole 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:	-40ºC / -20ºC ≤ T_a ≤ +40 / +50ºC
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 mm2 PE terminal ; max 2x6mm2
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

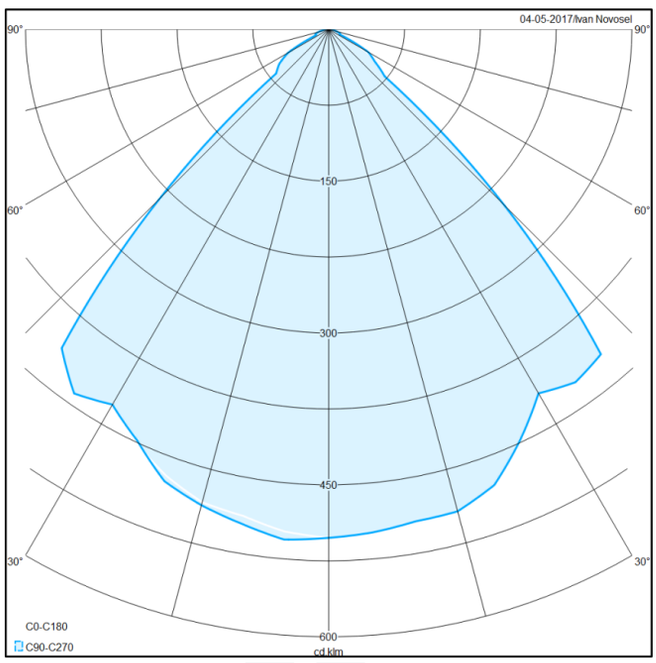
MOUNTING

Pendant, on pole, wall, ceiling

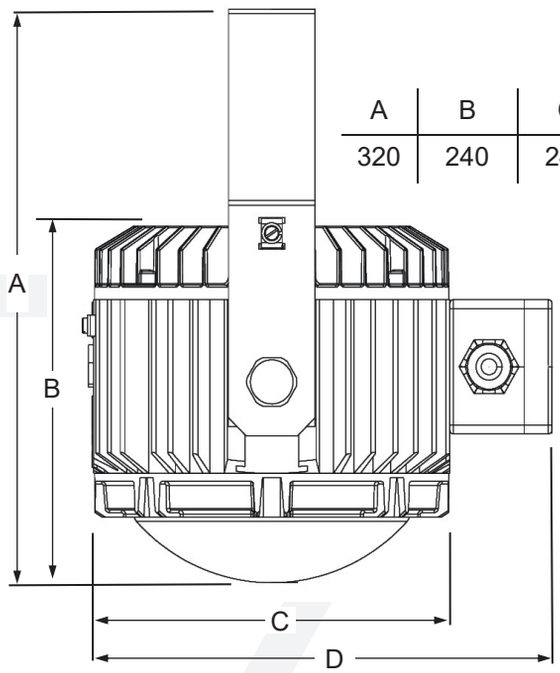
MODEL CODE

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		

POLAR CURVE

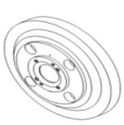
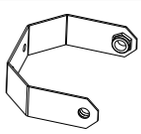
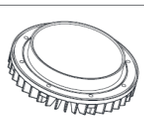
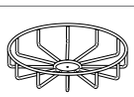


DIMENSION DRAWING (mm)



A	B	C	D
320	240	240	268

SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Replacement glass PLFS-N LED	PLFS LED 10-110		Pole mounting set R 1 1/2“	PLFS 20-130
	LED Carrier assembly	PLFS LED 10-150		PLFS-N mounting bracket	PLFS 20-120
	Breathing plug	BP 01		LED Driver assembly	PLFS-N 100 LED 10-140
	Protective grid PLFS LED	PLFS LED 20-130		Gasket PLFS-N	PLFS-N 100 LED 10-120

All technical data is relevant at the time of print.

Zone

1 21 2 22

PLFS-N 200 LED

LED | IP 66

IK08 | T_a -40 +50

ATEX | IECEx

- High color rendering index CRI 80
- Estimated service life 100 000 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

CONSTRUCTION

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

TECHNICAL DATA

Certificate:	FIDI 26 ATEX IECEx FIDI
Marking:	CE 0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex db eb op is IIC T5 Gb Ex tb op is IIIC T80/90°C Db
Ambient temperature ATEX:	-40ºC / -30ºC ≤ T_a ≤ +50
Degree of protection:	IP 66 category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	110-240 VAC , 220 VDC
Frequency:	50 / 60 Hz
Rated power:	140 W, 160 W, 200 W
Lifetime L80F10:	>100 000 h, at T_a = 20°C >40 000 h, at $T_{a\ max}$= 50°C
Connecting terminals:	L1, L2, L3, N, PE 5 x (2 x 2,5mm^2, 1x 4 mm^2,1 x 6 mm^2 solid) through-wiring possible
Cable entry:	Two ISO 25 entries in accordance with EN 60423
Weight:	12kg
Packing:	The packing contains: 1 pcs 400x400x200mm

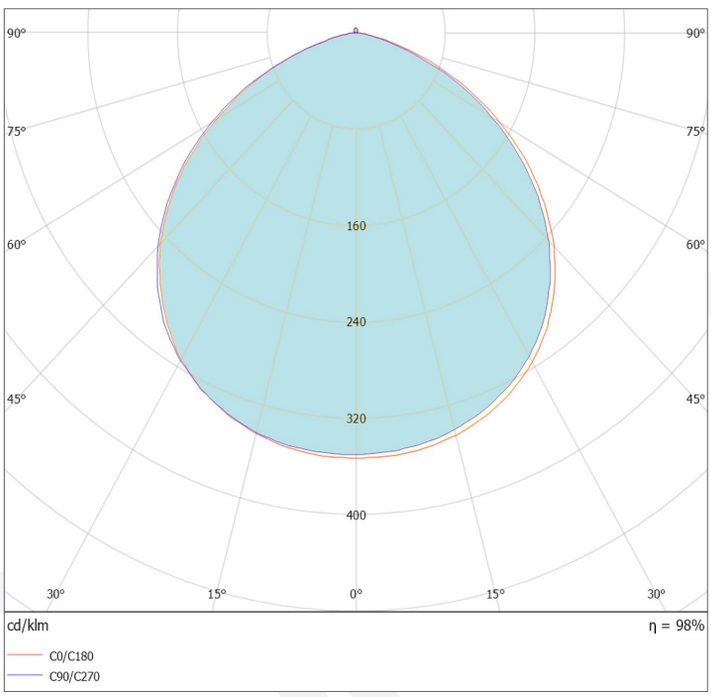
MOUNTING

Pendant, on pole, wall, ceiling

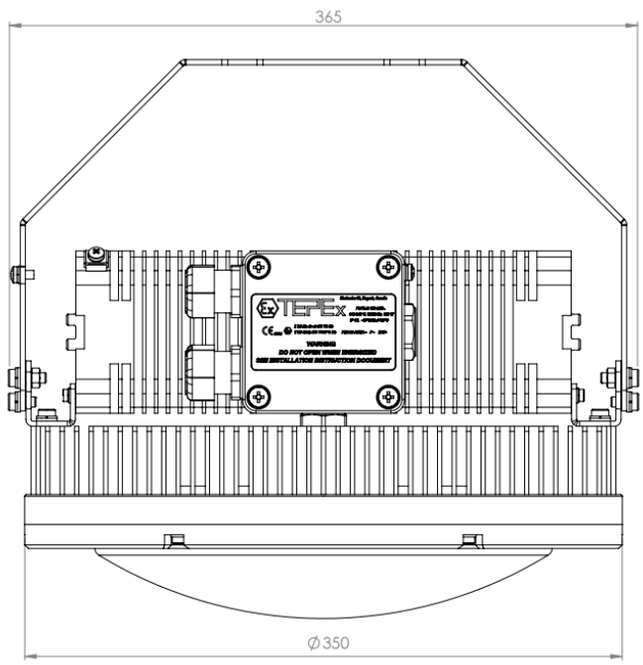
MODEL CODE

MODEL CODE	Power consumption [W]	Voltage [V]	Light fitting Luminous flux [lm]	System efficacy [lm/W]	AMBIENT TEMP.
PLFS-N 200 LED-1	140 W	110-240 V	17 500	125	-40/-30°C ÷ +50°C
PLFS-N 200 LED-2	160 W		20 000		
PLFS-N 200 LED-3	200 W		25 000		

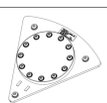
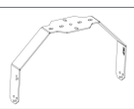
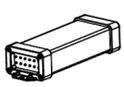
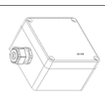
POLAR CURVE

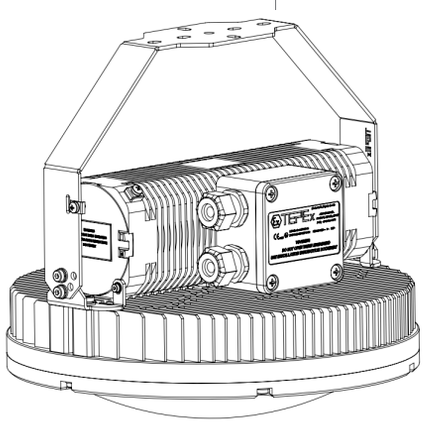


DIMENSION DRAWING (mm)



SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Glass PLFS 200 LED	PLFS 200 LED 10-110		Pole mounting set R 1 1/2“	PLFS 20-110
	LED module LEDEx 06	PLFS 200 LED 10-120		PLFS 200 LED mounting bracket	PLFS 10-160
	LED Driver assembly	PLFS 200 LED 10-130		Connection box set	PLFS 200 LED 10-140



All technical data is relevant at the time of print.

Zone

1 21 2 22

RLF 320 LED

LED | IP 66 | IK08 | T_a -40 +50 | ATEX | IECEx

- 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

CONSTRUCTION

Enclosure: aluminum powder painted casting
Diffuser: tempered glass,
Accessories: assembly kit for wall, pole 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:	-40ºC ≤ T_a ≤ +40 / +50ºC
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, PE; max. 4 mm^2 PE terminal ; max 2x6mm2
Cable entry:	Connection box [3L+N+PE] and true wiring / ISO25 entries
Weight:	24 kg
Packing:	The packing contains: 1 pcs 620 x 200 x 420 mm

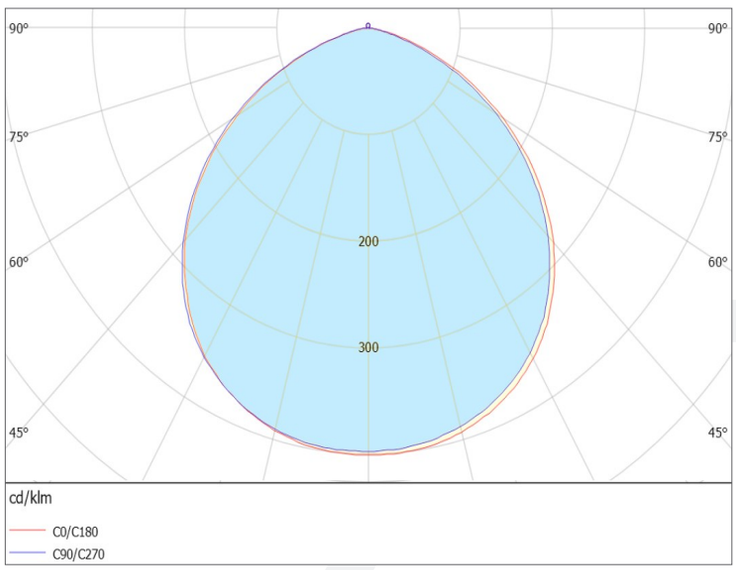
MOUNTING

Wall, ceiling

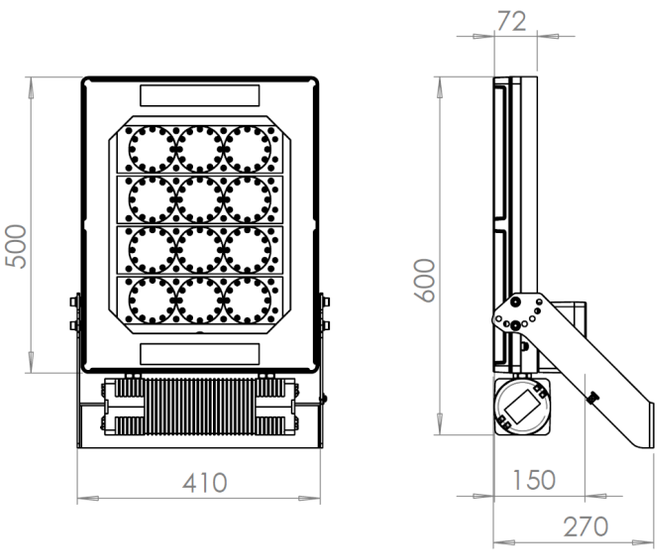
MODEL CODE

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

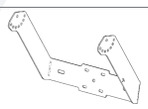
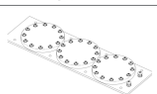
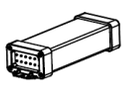
POLAR CURVE



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	Pole 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.

Zone

1 21 2 22

PLFM

E27

IP 66

IK08

T_a -20 +40

ATEX

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

CONSTRUCTION

Enclosure: aluminum powder painted casting
Diffuser: borosilicate glass
Accessories: protective galvanized steel grid (INOX on request), assembly kit for wall, pole and ceiling mounting

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0047
Marking:	CE 0722
Apparatus category:	II 2GD
Marking of explosion protection:	Ex db eb IIC T6-T3 Gb Ex db IIC T6-T3 Gb Ex tb IIIC T85ºC - T155ºC Db
Ambient temperature:	-20ºC ≤ T_a ≤ +40ºC [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:	η=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 pole, wall, ceiling

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

Only for PLFM FLASH

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)

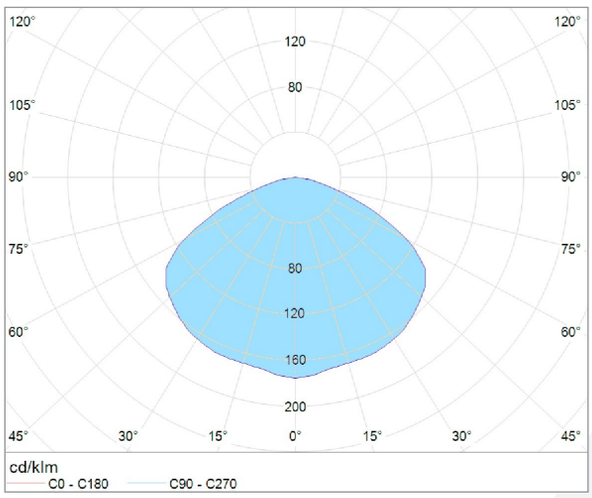
MODEL CODE

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 110 V AC 230 V AC	~4,2 cd	-	T6	80°C
PLFM 50 HSE - .	50W	HSE	230 V, 50 Hz	3600 lm Osram 3500 lm Osram	E27	T4	130°C

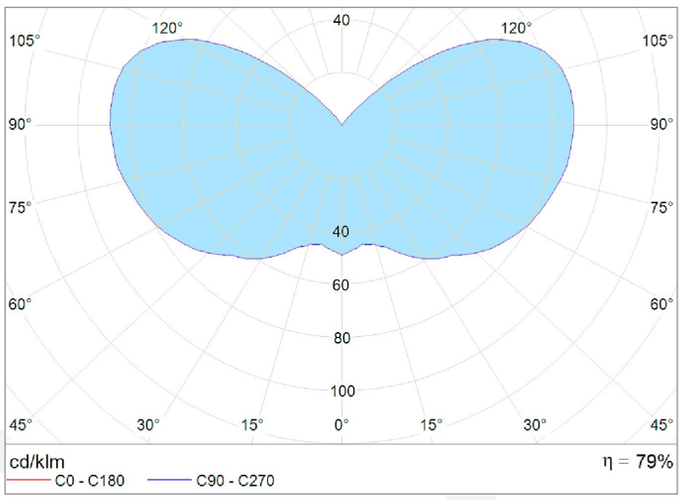
All technical data is relevant at the time of print.

PLFM

POLAR CURVE

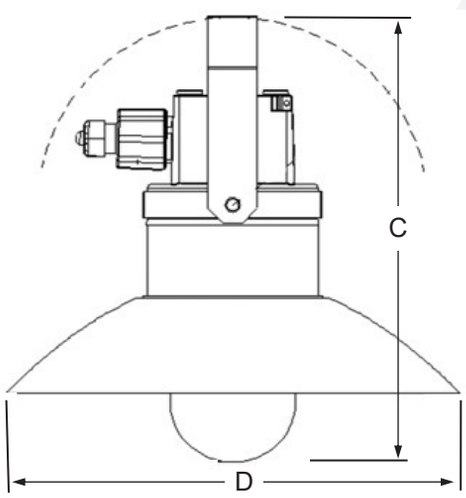


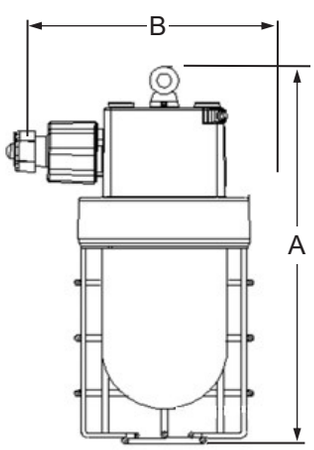
PLFM 100-., PLFM 50 HSE
With external reflector



PLFM 100-., PLFM 50 HSE
Without external reflector

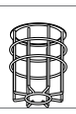
DIMENSION DRAWING (all dimensions in mm)





A	B	C	D
340	175	380	∅370

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

Zone

1 21 2 22

PLFS-N

E27/E40

IP 66

IK08

-40 +50

ATEX

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

CONSTRUCTION

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

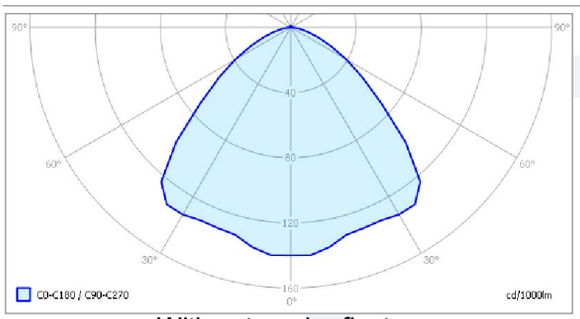
TECHNICAL DATA

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:	-40ºC ≤ Ta ≤ +40ºC / +50ºC
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

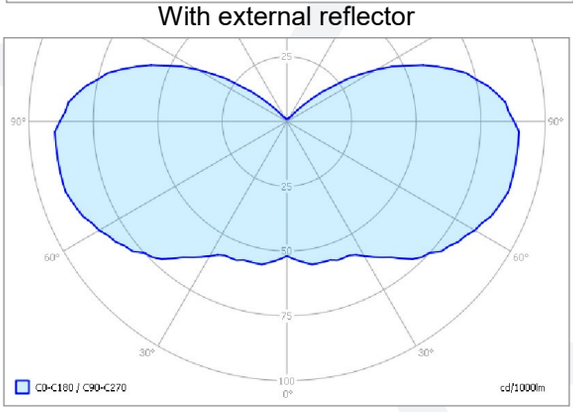
MODEL CODE

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		T5	T4	95°C	130°C	5900
	70W HSE						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

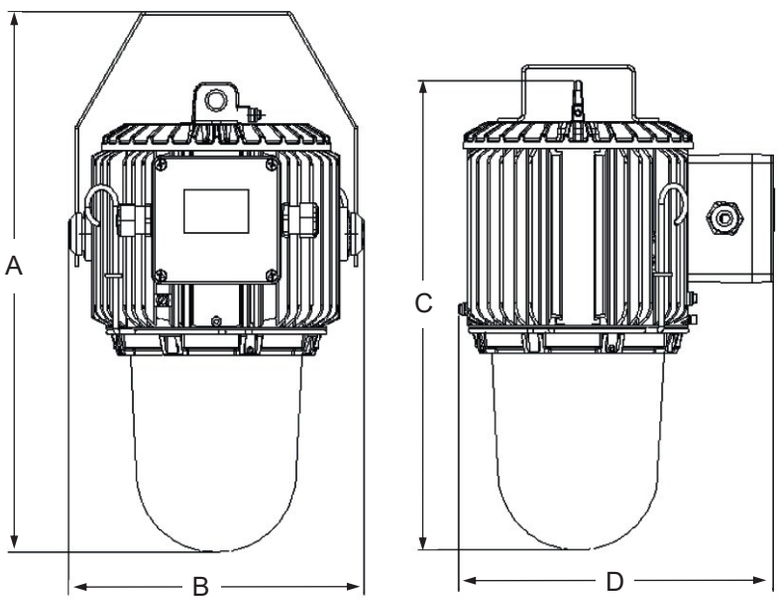


With external reflector



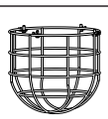
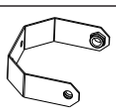
Without external reflector

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.

Zone

1 21 2 22

PSF LED

- 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
- DALI for controlling and monitoring the luminaire on request

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

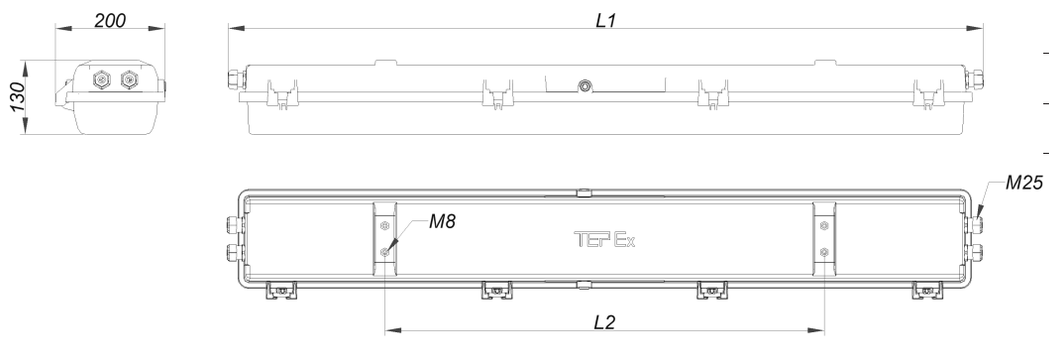
TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0029 FIDI 19 ATEX 0029/1
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 (*for PSF 28 LED*)
Ambient temperature:	-30ºC (-20ºC) ≤ T_a ≤ +55ºC -30ºC (-20ºC) ≤ T_a ≤ +40ºC
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
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 mm2
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 x150 mm PSF 28 LED: 800 x 290x150 mm

MODEL CODE

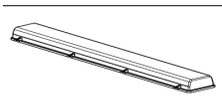
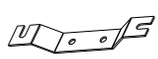
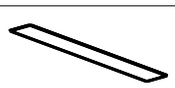
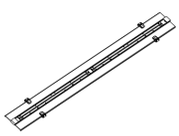
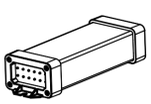
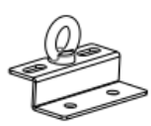
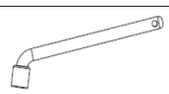
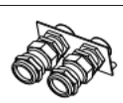
MODEL CODE	Power consumption [W]	Voltage [V]	Light fitting Luminous flux [lm]	System efficacy [lm/W]	AMBIENT TEMP.	WEIGHT [kg]
PSF 28 LED-2	37 W	100-305 VAC 142-431 VDC	4200 lm	109-113	-30ºC ≤ T_a ≤ +40ºC	8,0
PSF 52 LED-2	70 W		7710 lm			12,0
PSF 70 LED-2	90 W		9030 lm		-20ºC ≤ T_a ≤ +40ºC	14,0
Version for the ambient temperature Ta ≤ +55ºC						
PSF 28 LED-1	28 W	100-305 VAC 142-431 VDC	3183 lm	109-113	-30ºC ≤ T_a ≤ +55ºC	8,0
PSF 52 LED-1	52 W		5706 lm			12,0
PSF 70 LED-1	70 W		7710 lm		-20ºC ≤ T_a ≤ +55ºC	14,0

DIMENSION DRAWING (mm)



TYPE	L1 [mm]	L2 [mm]
PSF 28 LED	750	400
PSF 52 LED	1370	800
PSF 70 LED	1665	800

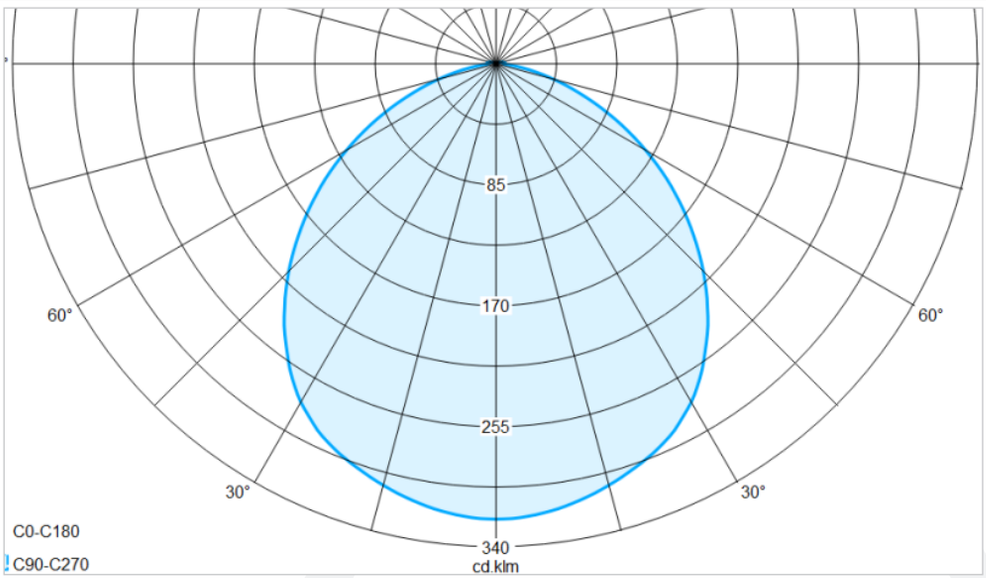
SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Diffuser PSF	PSF 218 10-110 PSF 236 20-110 PSF 258 30-110		PSF Wall / Ceiling mounting set	PSF 30-110
	Gasket PSF	PSF 218 10-120 PSF 236 20-120 PSF 258 30-120		PSF Pole mounting set	PSF 30-120
	Internal reflector with LED module	LEDEx 03/28-1 LEDEx 03/28-2 LEDEx 03/52-1 LEDEx 03/52-2 LEDEx 03/70-1 LEDEx 03/70-2		PSF Wall / Ceiling mounting set	PSF 30-130
	LED driver	DRIVEx 01/28-1 DRIVEx 01/28-2 DRIVEx 01/52-1 DRIVEx 01/52-2 DRIVEx 01/70-1 DRIVEx 01/70-2		Pendant mounting set	PSF 30-150
	LED diffuser	PSF 28 LED 30-180 PSF 50 LED 30-181 PSF 70 LED 30-182		Socket key SW8	PSF 20-160
	Flexible mounting kit for PSF LED	PSF 52 LED 30-190 PSF 28 LED 30-191 PSF 70 LED 30-192		Metal cable glands for armoured cable M25	PSF 30-160

All technical data is relevant at the time of print.

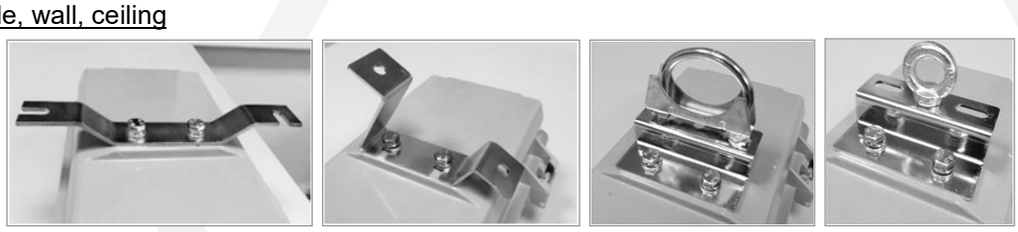
PSF LED

POLAR CURVE



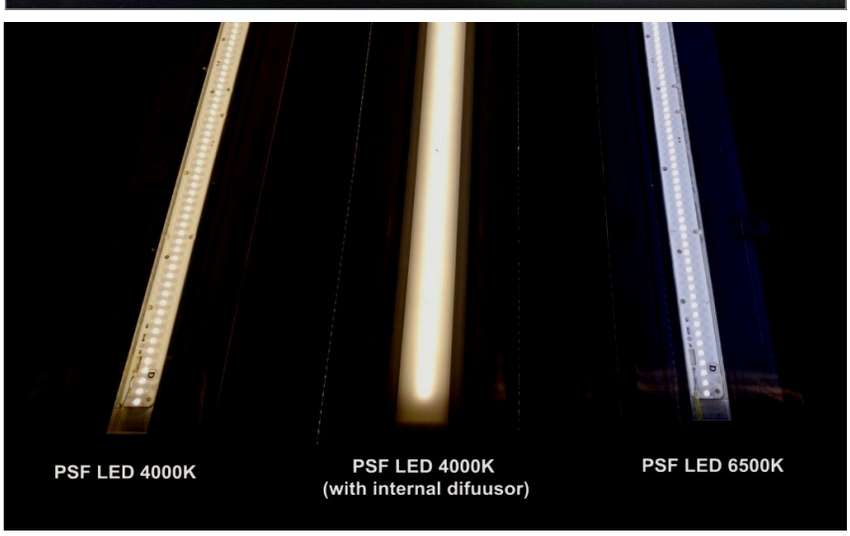
MOUNTING

Pendant, on pole, wall, ceiling



Flexible mounting kit for PSF LED

Linear LED without and with LED diffuser



Zone

1 21 2 22

SIF 60 LED

LED IP 66 IK08 -20 +40 DALI ATEX

- Recessed mounting set for clear / clean rooms
- Clear tempered safety glass + opal plexiglass
- 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
- DALI for controlling and monitoring the luminaire on request

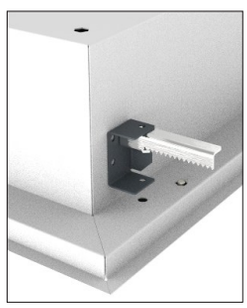
CONSTRUCTION

Enclosure: Epoxy/polyester powder-coated sheet steel
Diffuser: clear tempered safety glass + opal plexiglass
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 0013
Marking:	CE 0722
Apparatus category:	II 2GD
Marking of explosion protection:	Ex db eb mb IIC T6 Gb Ex tb IIIC T80°C Db
Ambient temperature:	-20ºC ≤ Ta ≤ +40ºC
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: $T_{amb\ max}$ 35 000 h $T_{amb\ max\ -10°C}$ 60 000 h $T_{amb\ max\ -20°C}$ 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

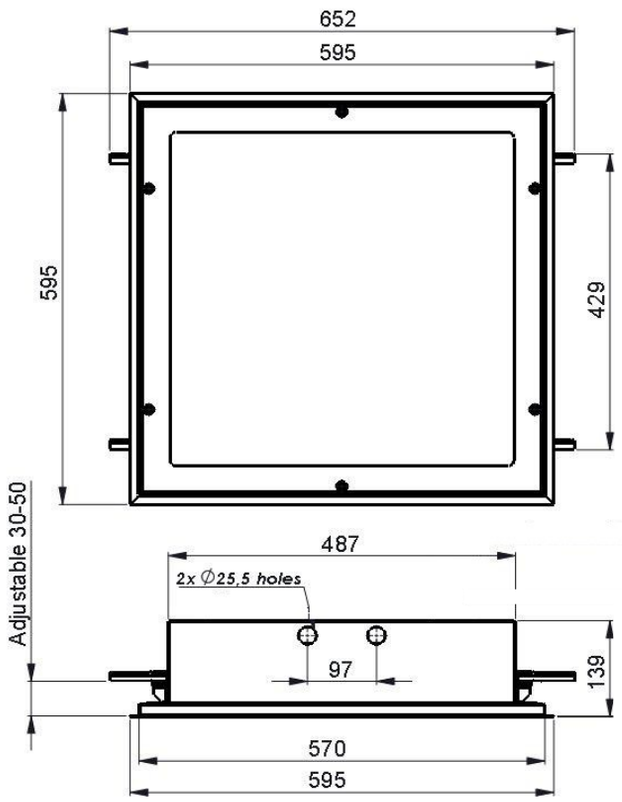


MODEL CODE

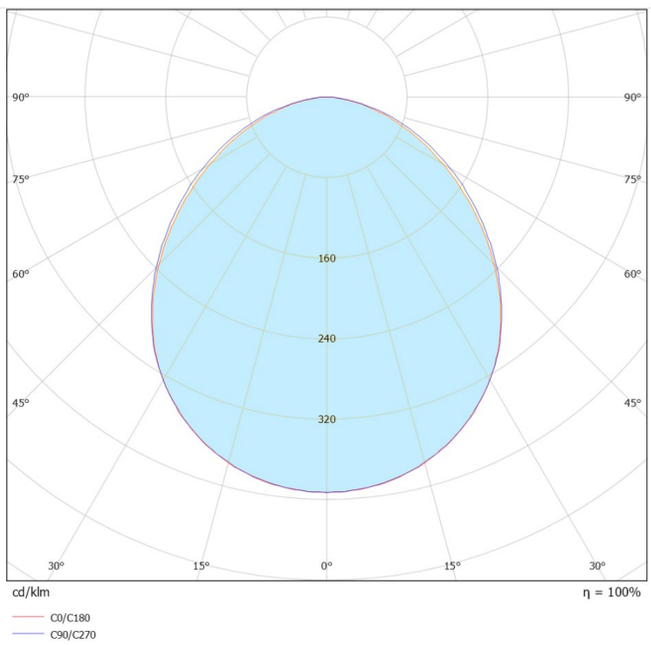
MODEL CODE	Power [W]	Voltage [V]	Light fitting Luminous flux [lm]	System efficacy [lm/W]	AMBIENT TEMP.	WEIGHT
SIF 60 LED-1	52 W	110-240 VAC	4220	81	-20ºC ≤ T_a ≤ +40ºC	18 kg
SIF 60 LED-2	70 W		5680			

** Light fitting luminous flux with clear flat glass only is 35% higher than with opal plexiglass*

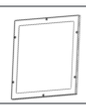
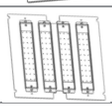
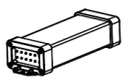
DIMENSION DRAWING (mm)



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 driver	DRIVEx 01
	Bracket for built-in mounting	SIF 20-140		Bracket for built-in mounting	SIF 20-150

All technical data is relevant at the time of print.

Zone

1 21 2 22

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:	-20ºC ≤ Ta ≤ +50ºC
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: $T_{amb\ max}$ 35 000 h $T_{amb\ max\ -10°C}$ 60 000 h $T_{amb\ max\ -20°C}$ 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

- 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: 4300K / other CCT on request

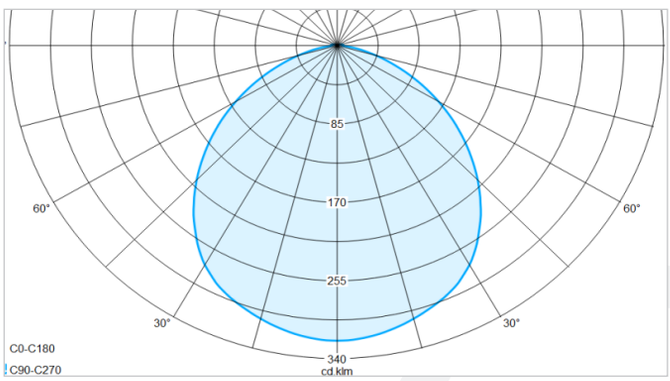
Linear LED without and with LED diffuser

MODEL CODE

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

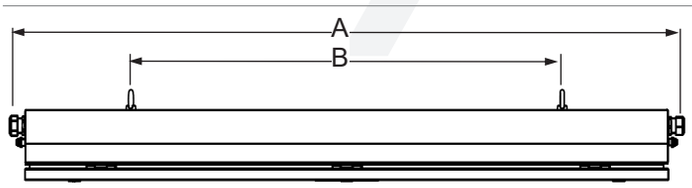
SIF .52 LED-1 *surface mounted* ***SIF .52 LED-2*** *recessed mounted version*

POLAR CURVE

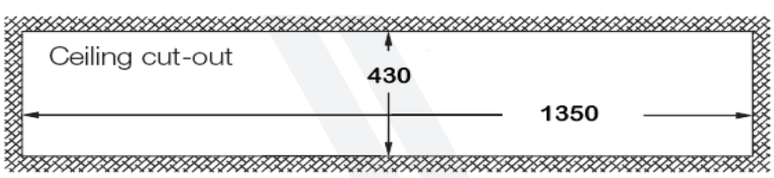


RECESSED LIGHT FITTING

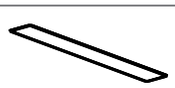
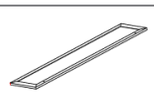
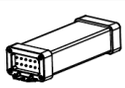
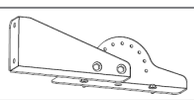
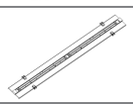
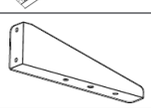
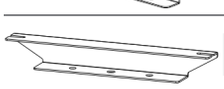
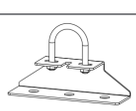
DIMENSION DRAWING (mm)



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
	Celing mounting carrier	SIF 20-140		Pole mounting set Ø40-Ø65mm	SIF 20-170

All technical data is relevant at the time of print.

Zone

1 21 2 22

FLXL LED

CONSTRUCTION

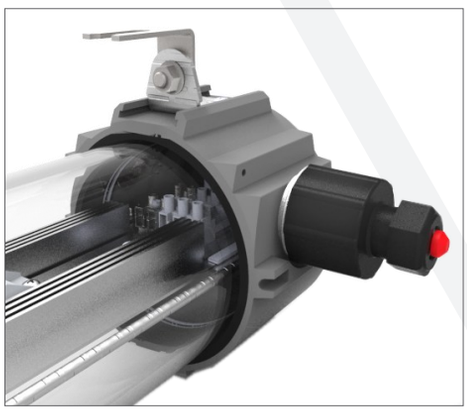
Enclosure: aluminum painted casting + Al profile
Diffuser: borosilicate glass tube,
Gasket: silicon
The light fitting is normally supplied with LED linear sources, two entries M20 and wall/ ceiling mounting set

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:	-20ºC ≤ T_a ≤ +50ºC
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 pole, wall, ceiling mounting . Operates in any position.



- High color rendering index CRI >80
- Estimated service life ≥50 000 working hours at t_{amb} = 40°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

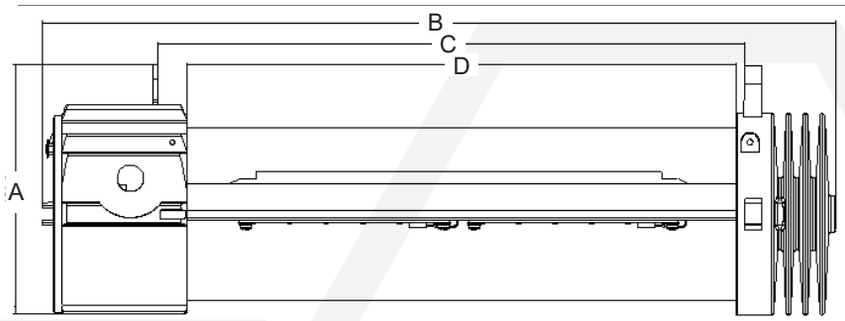
MODEL CODE	Power consumption [W]	Voltage [V]	Light fitting Luminous flux [lm]	System efficacy [lm/W]	Weight [kg]
FLXL 18 LED / .	18	220-240 VAC	2900	160	5
FLXL 36 LED / .	36		5980		7
FLXL 55 LED / .	55		9100		9

FLXL ... LED/ .

Cable entry designation:

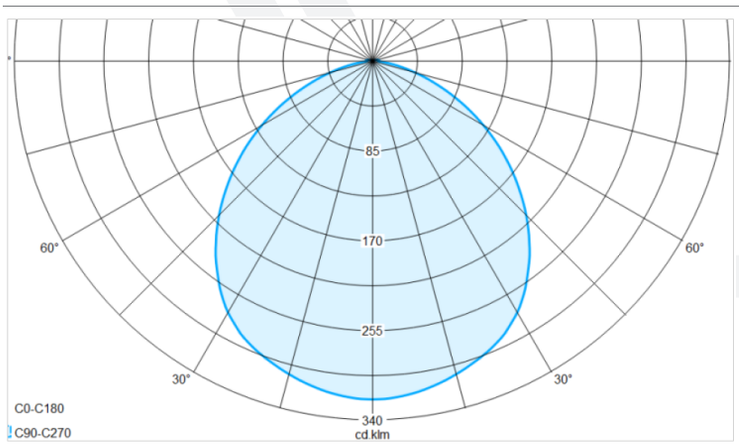
- **0** - Ex db cable entry 2 x M20
- **1** - Ex db cable entry 2 x 3/4"NPT
- **2** - 1x adapter type ADP 23/1 and one Ex db M20 plug
- **3** - 1x adapter type ADP 23/1 and 1x ADP 22/1 for DALI interface
- **4** - 2x adapter type ADP 23/1 for through-wiring

DIMENSION DRAWING (mm)

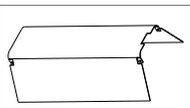
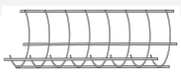


Type	A	B	C	D
FLXL 18	174	362	220	192
FLXL 36		552	408	382
FLXL 55		682	450	512

POLAR CURVE



SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Cover gasket FLX	FLX 10-120		External reflector	FLXL LED 20-120-18 FLXL LED 20-120-36 FLXL LED 20-120-55
	LED module FLXL LED	FLXL LED 10-130-18 FLXL LED 10-130-36 FLXL LED 10-130-55		Wall / ceiling mounting set	FLX 20-180
	Protective grid FLX set	FLX LED 20-110-18 FLX LED 20-110-36 FLX LED 20-110-55		Pole mounting set	FLX 20-190

All technical data is relevant at the time of print.

Zone

1 21 2 22

PSF

G13 | IP 66

IK08 | T_a -30 +50

ATEX | IM2

- 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

CONSTRUCTION

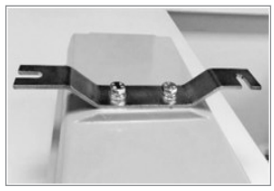
Enclosure: SMC polyester plastic reinforced with glass fiber
Diffuser: PC polycarbonate plastic
Gasket: silicone
Central locking: can be opened/closed using a socket key SW8, hinged lamp cover
The light fitting is normally supplied without light sources, socket key screw, two Ex eb cable glands M25, two Ex eb plugs M25 and with four ring screw M8 (pendant version).

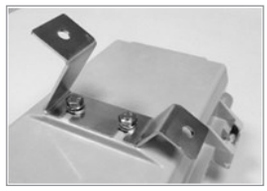
TECHNICAL DATA

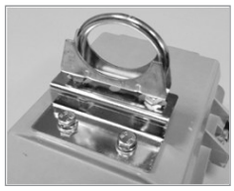
Certificate:	FIDI 19 ATEX 0025, FIDI 19 ATEX 0007X (type PSF 218)
Marking:	CE 0722
Apparatus category:	II 2GD I M2 (type PSF 218)
Marking of explosion protection:	Ex db eb mb IIC T4 Gb Ex tb IIIA/IIIC T80°C Db, Ex db eb mb I Mb
Ambient temperature:	-30ºC ≤ Ta ≤ +50ºC [ATEX]
Degree of protection:	IP 66, 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 mm2
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 pole, wall, ceiling



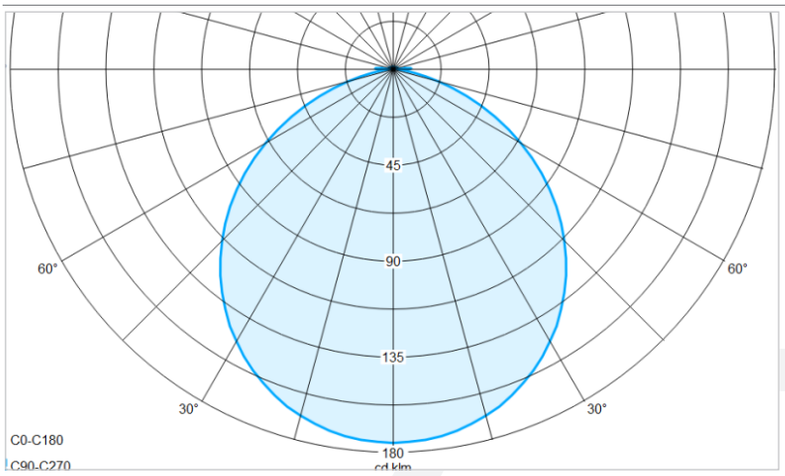




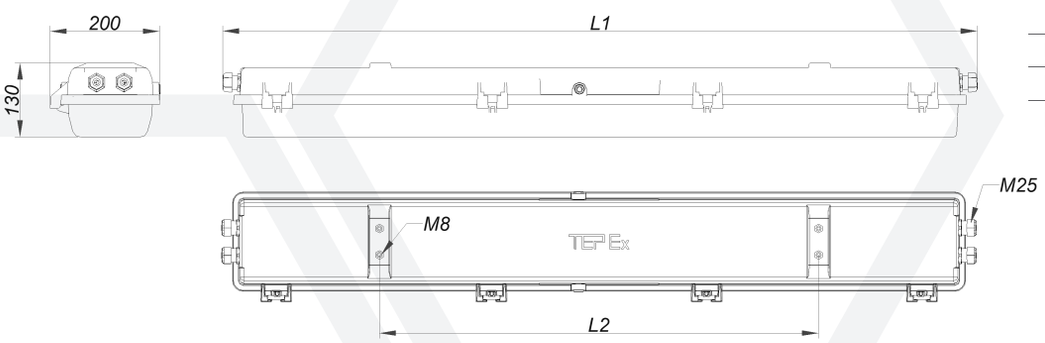
MODEL CODE

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

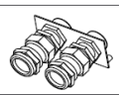
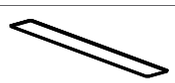
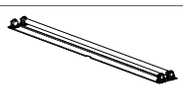
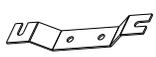
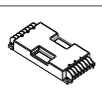


DIMENSION DRAWING (mm)



	L1 [mm]	L2 [mm]
PSF 218	750	400
PSF 236	1370	800
PSF 258	1665	800

SPARE PARTS AND ACCESSORIES

Sketch	Description	Code	Sketch	Description	Code
	Diffuser PSF	PSF 218 10-110 PSF 236 20-110 PSF 258 30-110		Metal cable gland for arm cable	PSF 30-160
	Gasket PSF	PSF 218 10-120 PSF 236 20-120 PSF 258 30-120		Ex e plug M25	SPC 25
	Internal reflector with lamp holder PSF	PSF218 10-140 PSF236 10-141 PSF 258 10-142		PSF Wall / Ceiling mounting set	PSF 30-110
	El. ballast SMP	SMP 07 SMP 08		PSF Pole mounting set	PSF 30-120
	Terminals 5x2,5mm^2	PSF 10-130		PSF Wall / Ceiling mounting set	PSF 30-130
	Socket key SW8	PSF 20-160		Ring bolt M8	PSF 30-140

All technical data is relevant at the time of print.

Zone

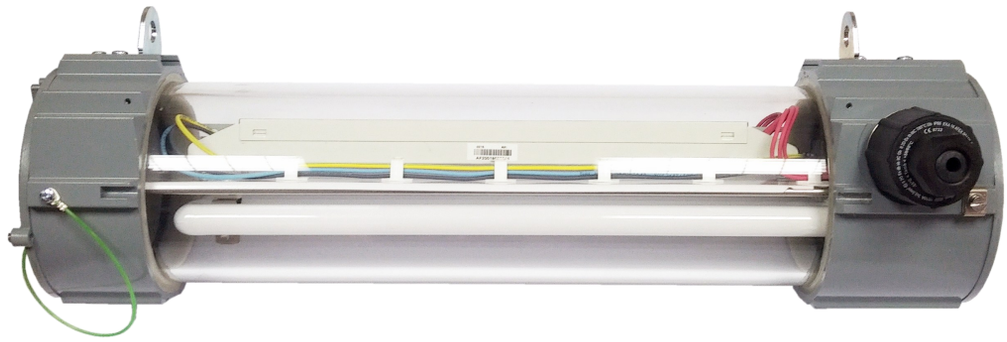
1 21 2 22

FLX

2G11 | IP 66

IK08 | -20 +40

ATEX



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

CONSTRUCTION

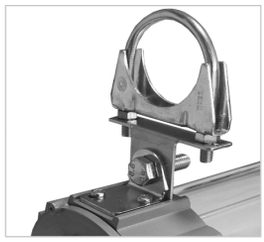
Enclosure: aluminum profile, corrosion resistant grey polyurethanes painted
Diffuser: borosilicate glass tube
Gasket: silicon
The light fitting is normally supplied with two light sources, two entries M20 and wall/sealing mounting set.

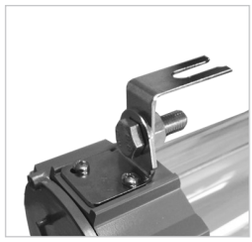
TECHNICAL DATA

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:	-20ºC ≤ Ta ≤ +40ºC [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,

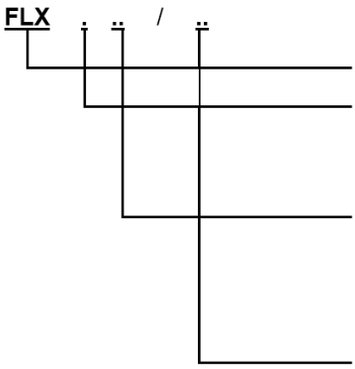
MOUNTING

Pendant, on pole, wall, ceiling mounting





MODEL CODE



Basic marking code:

Number of fluorescent tubes:

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

Power of fluorescent tubes :

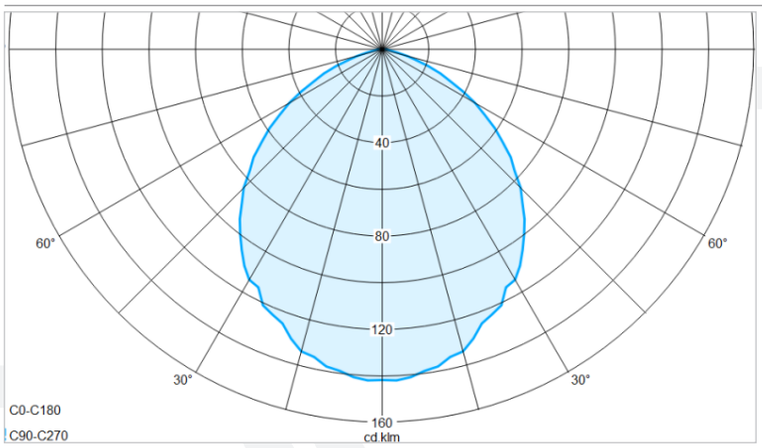
- **18** - 18 W TC-L
- **36** - 36 W TC-L
- **55** - 55 W TC-L

Cable entry designation:

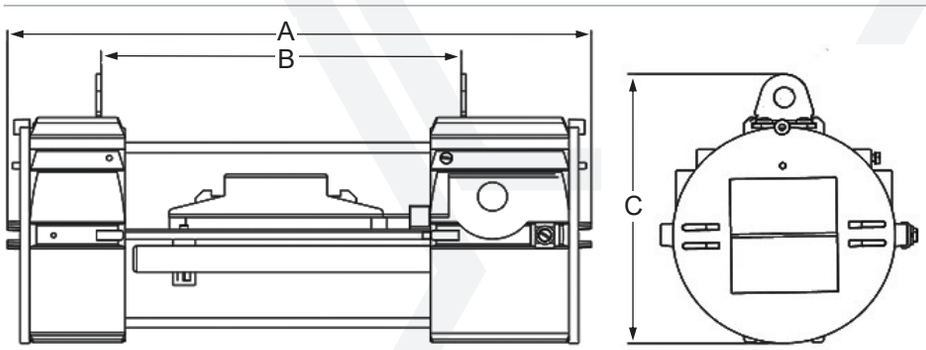
- **10** - Ex d cable entry 2 x M20
- **11** - Ex d cable entry 2 x 3/4"NPT
- **12** - Ex d cable entry 2 x M20 with one adapter type ADP 23/1 and one plug

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

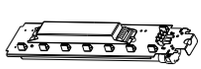
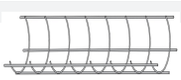
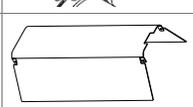


DIMENSION DRAWING (mm)



	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 218 10-130 FLX 236 10-130 FLX 255 10-130		FLX Pole mounting set	FLX 20-180
	Protective grid FLX set	FLX LED 20-110-18 FLX LED 20-110-36 FLX LED 20-110-55		External reflector FLX	FLXL LED 20-120-18 FLXL LED 20-120-36 FLXL LED 20-120-55

All technical data is relevant at the time of print.

Zone

1 21 2 22

SIF

G13 | IP 66

IK08 | Ta -20 +50

ATEX

- 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

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:	-20ºC ≤ Ta ≤ +50ºC
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 pole, wall, ceiling mounting

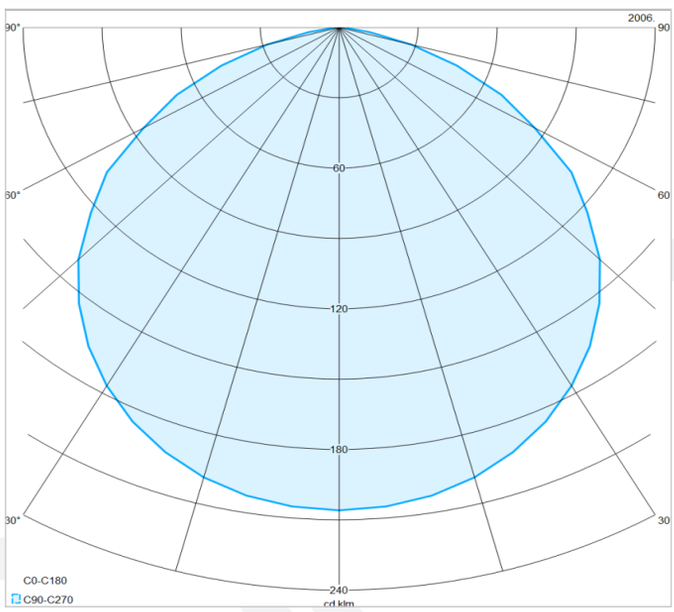
MODEL CODE

SIF . 36 - .

- Installation/mounting method
  - 1 - pendant light fitting
  - 2 - mounting light fitting for clean area
- Power of fluorescent lamps
- Number of fluorescent lamps
  - 2 - two fluorescent lamps
  - 4 - four fluorescent lamps
- Basic type code

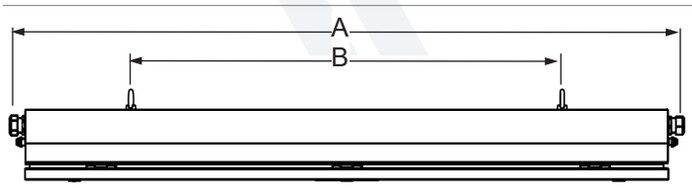
Model code	Wattage	Luminous flux [lm]	Weight
SIF 236	2x36 W	2 x 3350	25 kg
SIF 436	4x36 W	4 x 3350	27 kg

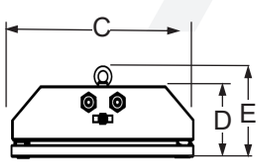
POLAR CURVE



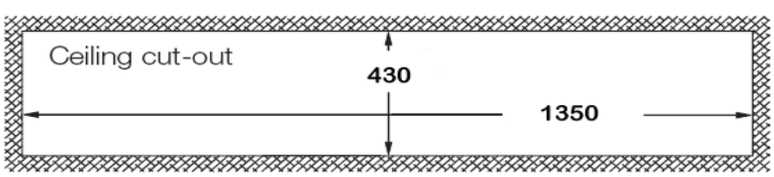
RECESSED LIGHT FITTING

DIMENSION DRAWING (mm)

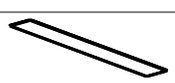
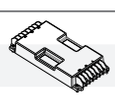
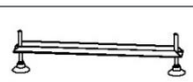




A	B	C	D	E
1410	900	380	120	155



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.

Zone

1 21 2 22

FLXE 118 LED-N

- 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)

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:	-20ºC ≤ T_a ≤ +50ºC
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 / CCT 4000K
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 ϕ7-15 mm
Weight:	4 kg

Light fitting FLXE 118 LED-N contains battery heaters that are used to maintain the temperature on batteries > 5 ° C. In case the battery temperature is <5°C, the heaters are switched on and maintain battery temperatures >5 °C.

MODEL CODE

FLXE 118 LED-N . / .

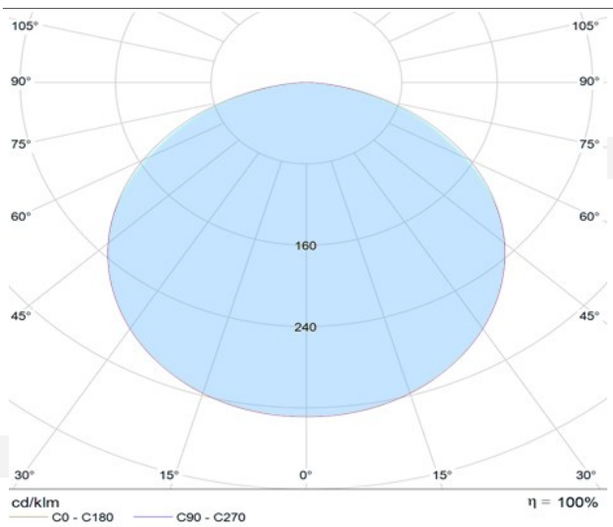
Cable entry:

- **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

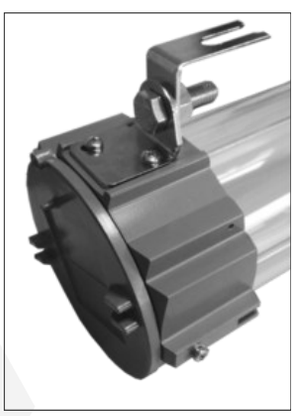
0	Without marking	5	
1		6	
2		7	
3		8	
4		9	

POLAR CURVE

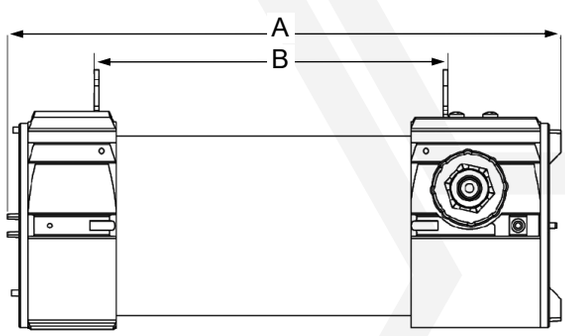


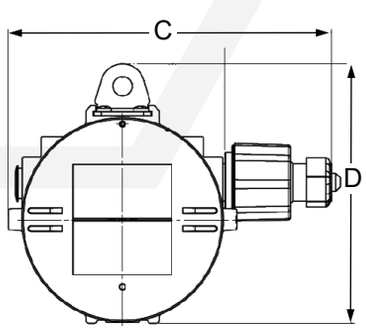
MOUNTING

Pendant, on pole, wall, ceiling mounting



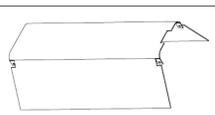
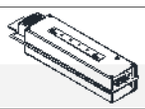
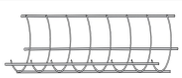
DIMENSION DRAWING (mm)





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 Pole mounting set	FLX 20-180

All technical data is relevant at the time of print.

Zone

1 21 2 22

PSF LED-E

LED IP 66 IK08 T_a -20 +40 EM 3h ATEX IECEx

- 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)

CONSTRUCTION

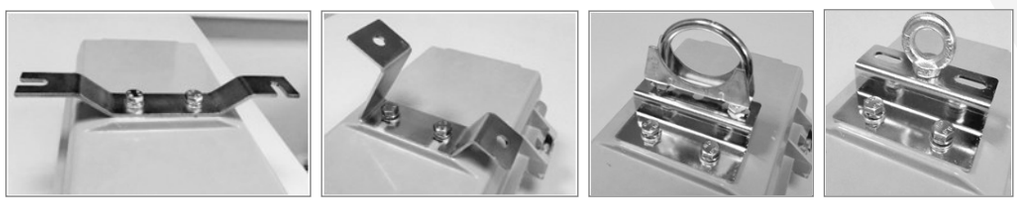
Enclosure: SMC polyester plastic reinforced with glass fiber, color RAL 7038
Diffuser: PC polycarbonate plastic
Gasket: silicone
Central locking: can be opened/closed using a socket key SW8, hinged lamp cover
The light fitting is normally supplied with socket key, two Ex eb cable glands M25, two Ex eb plugs M25 and with mounting set PSF 30-110

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0029
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:	-20ºC ≤ T_a ≤ +40ºC
Degree of protection:	IP 66 category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Operating voltage:	110-240 VAC, 220-250 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, 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 pole, wall, ceiling

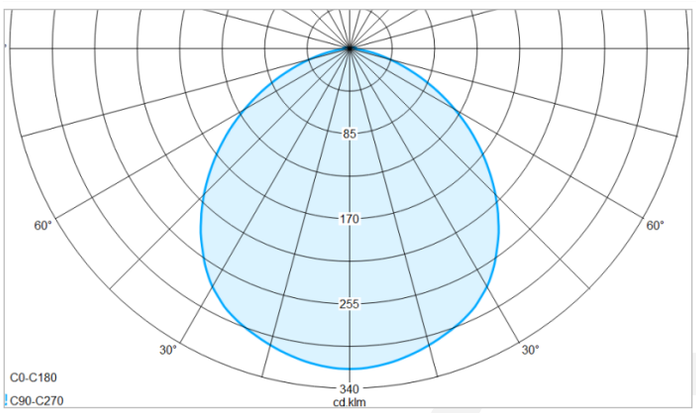


Flexible mounting kit for PSF LED

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	110-240 VAC 220-250 VDC	3175 lm	~125	1150 lm	8,0 kg
PSF 52 LED-E	56 W		6110 lm		1150 lm	12,0 kg

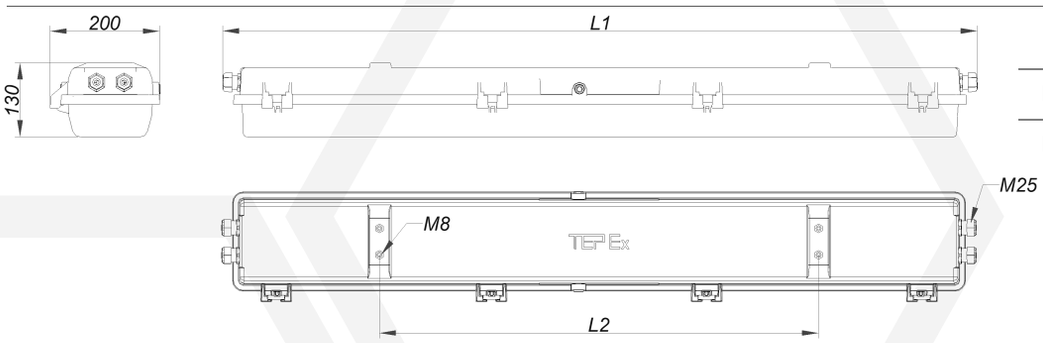
POLAR CURVE



Pictogram/ according to ISO 7010

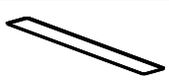
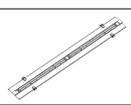
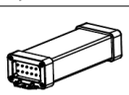
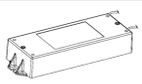
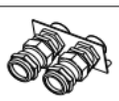
0	Without marking	5	
1	IZLAZ	6	
2	EXIT	7	
3		8	
4		9	

DIMENSION DRAWING (mm)



TYPE	L1 [mm]	L2 [mm]
PSF 28 LED	750	400
PSF 52 LED	1370	800

SPARE PARTS AND ACCESSORIES

SKETCH	DESCRIPTION	CODE	SKETCH	DESCRIPTION	CODE
	Diffuser PSF	PSF 218 10-110 PSF 236 20-110		PSF Wall / Ceiling mounting set	PSF 30-110
	Gasket PSF	PSF 218 10-120 PSF 236 20-120		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 armoured cable M25	PSF 30-160

All technical data is relevant at the time of print.

Zone

1 21 2 22

SIF LED-E

LED | IP 66 | IK08 | T_a +40 -20 | EM 3h | Ex ATEX

- 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** (Bereitschaftschaltung)

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:	-20ºC ≤ T_a ≤ +40ºC
Degree of protection:	IP 66 category 1
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Operating voltage:	110-240 VAC, 220-250 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
Battery:	NiMh, 6V/10 Ah
Nominal autonomy:	3 h
Packing:	The packing contains: 1 pcs PSF 52 LED: 1420x270x210 mm PSF 28 LED: 825x270x210 mm

MOUNTING

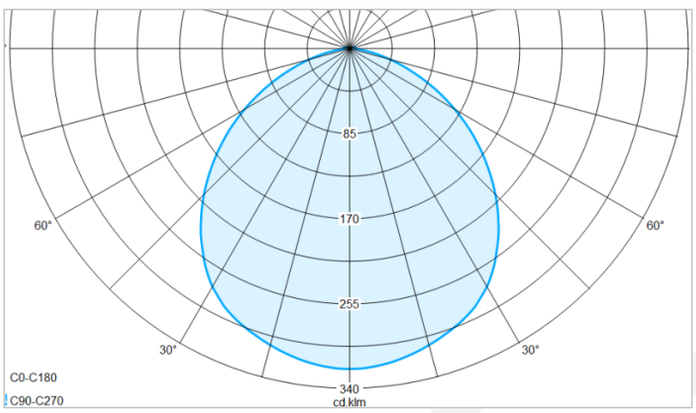
Pendant, wall, ceiling, recessed

Linear LED without and with LED diffuser

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	5660 lm	~110	900 lm	22 kg
SIF 252 LED-E	108 W		10530 lm		900 lm	26 kg

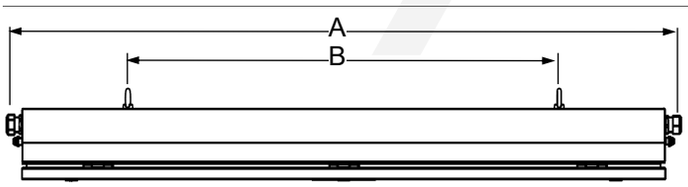
POLAR CURVE

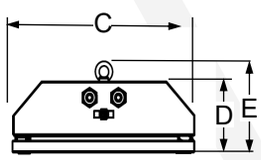


Pictogram/ according to ISO 7010

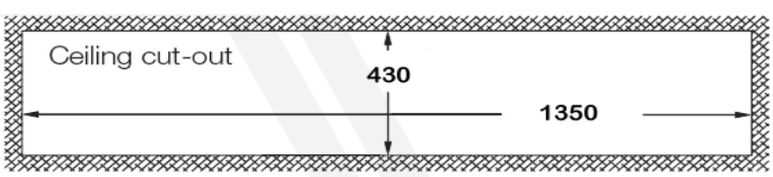
0	Without marking	5	
1		6	
2		7	
3		8	
4		9	

DIMENSION DRAWING (mm)

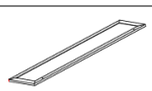
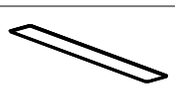
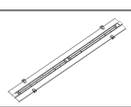
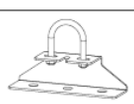
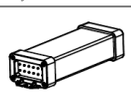
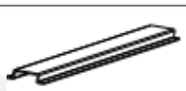
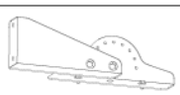




A	B	C	D	E
1410	900	380	90	125



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		Pole 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

All technical data is relevant at the time of print.

Zone

1 21 2 22

SIF 60 LED-E

LED | IP 66 | IK08 | Ta C° -20 +40 | DALI | Ex ATEX

- Recessed mounting set for clear / clean rooms
- Clear tempered safety glass + opal plexiglass
- 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

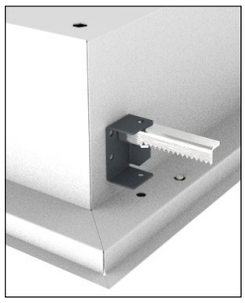
CONSTRUCTION

Enclosure: Epoxy/polyester powder-coated sheet steel
Diffuser: Clear tempered safety glass + opal plexiglass
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 0013
Marking:	CE 0722
Apparatus category:	II 2GD
Marking of explosion protection:	Ex db eb mb IIC T6 Gb Ex tb IIIC T80°C Db
Ambient temperature:	-20ºC ≤ Ta ≤ +40ºC
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: $T_{amb\ max}$ 35 000 h $T_{amb\ max\ -10°C}$ 60 000 h $T_{amb\ max\ -20°C}$ 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



Pictogram/ according to ISO 7010

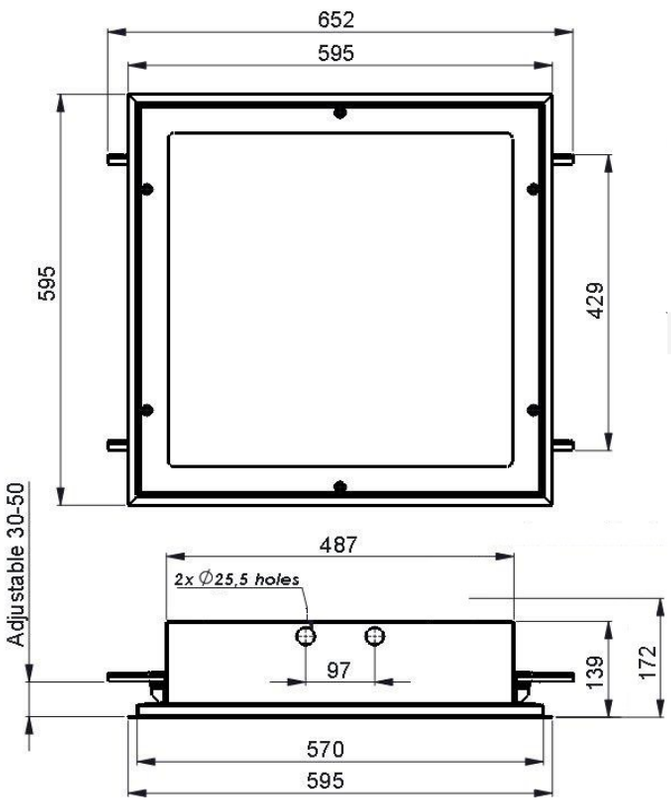
0	Without marking	5	
1	IZLAZ	6	
2	EXIT	7	
3		8	
4		9	H

MODEL CODE

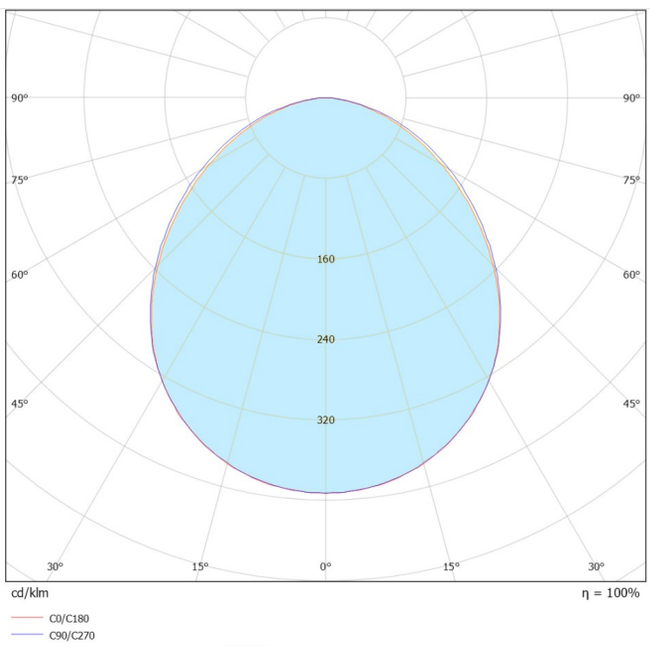
MODEL CODE	Power [W]	Voltage [V]	Light fitting Luminous flux [lm]	3h autonomy Lum flux [lm]	WEIGHT
SIF 60 LED-E	56W	110-240 VAC 220-250 VDC	4600	800 lm	19 kg

** Light fitting luminous flux with clear flat glass only is 35% higher than with opal plexiglass*

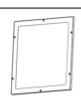
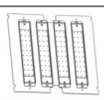
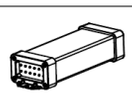
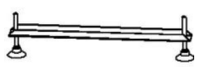
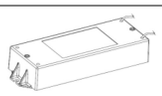
DIMENSION DRAWING (mm)



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 driver	DRIVEx 01
	Bracket for built-in mounting	SIF 20-140		Bracket for built-in mounting	SIF 20-150
	Battery module	BATEx 02		LED indicator / EM state	LEDEx 02

NOTES

Installation equipment

Zone

1 21 2 22

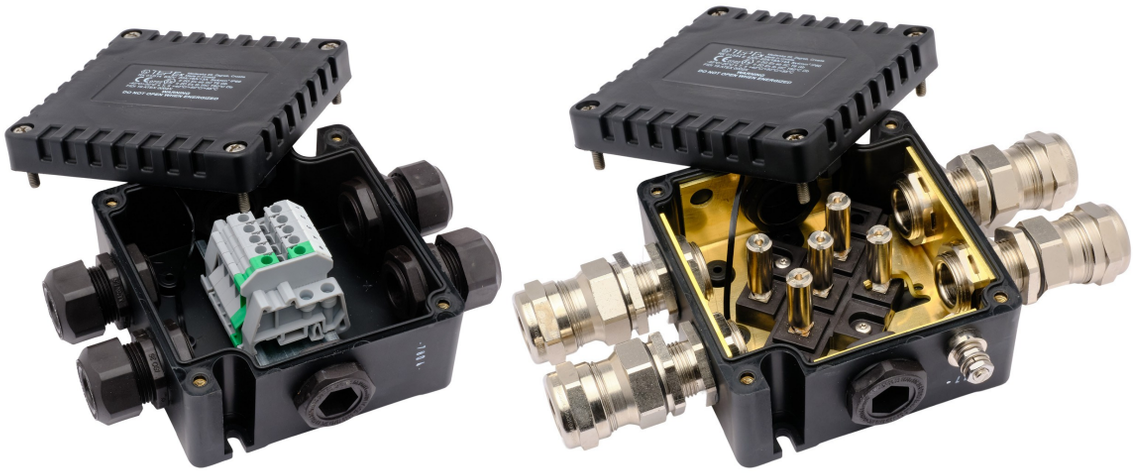
RK 01

IP 66

IK08

-40 +50

ATEX



- 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 6mm^2
- 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:	Ex FIDI 19 ATEX 0002X
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 / 18 A / 14 A — T_a≤40°C / T_a≤50°C / T_a≤55°C — RK 01/744, RK 01/544, RK 01/544-E, RK 01/744-E 20 A / 16 A / 13 A — T_a≤40°C / T_a≤50°C / T_a≤55°C — RK 01/514, RK 01/514-2 25 A / 20 A / 16 A — T_a≤40°C / T_a≤50°C / T_a≤55°C — RK 01/516 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

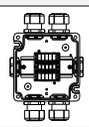
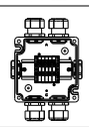
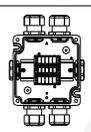
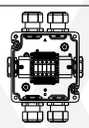
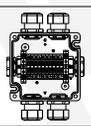
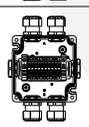
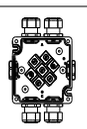
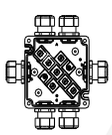
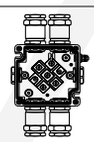
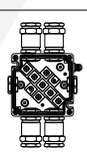
With two screws through the housing holes ϕ6 mm at the peaks the rectangle: 100 x 75 mm

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

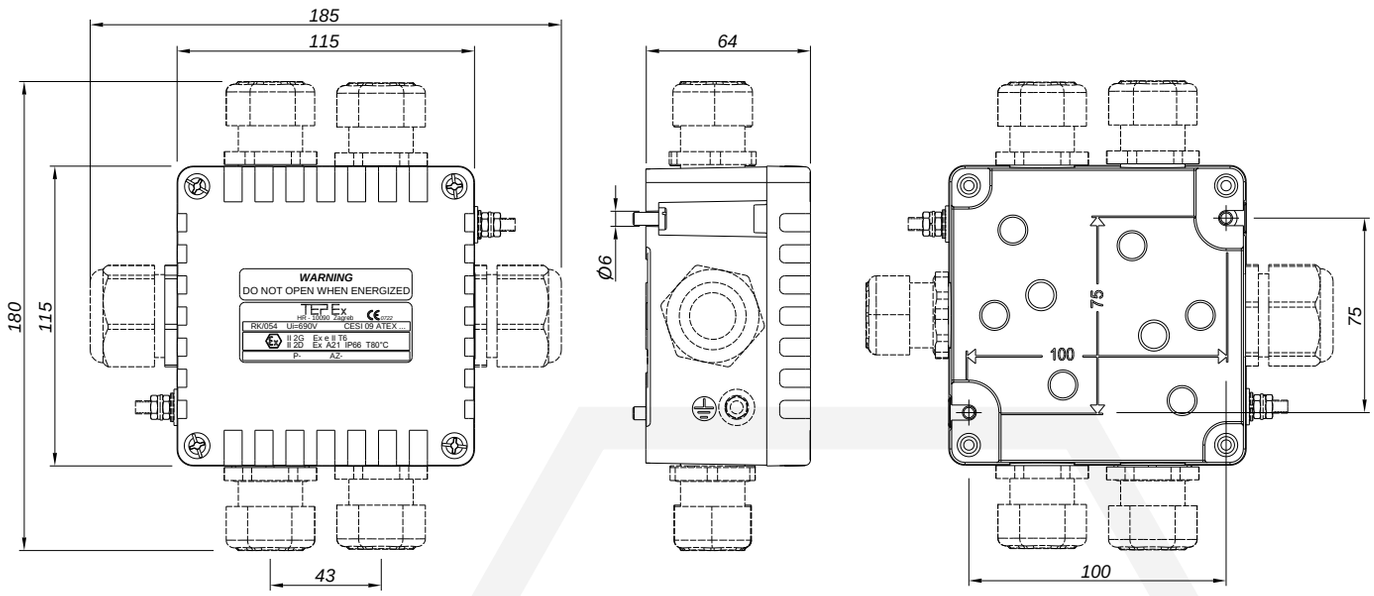
Other configuration available on request

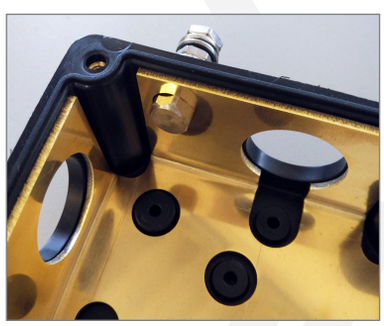
TYPE	VERSION	CABLE GLANDS AND PLUGS	NUMBER OF TERMINALS AND TERMINAL CROSS SECTION	MAX. POSSIBLE CONNECTION BY TERMINAL solid, stranded, flexible
RK 01/514		4 x SPU 25 cable glands for cable $Ø_v$ 7-15 mm or 4 x cable gland for armoured for cable $Ø_v$ 13-21 mm or 4 x cable glands for cable $Ø_v$ 10-14 mm or 4 x cable glands for cable $Ø_v$ 13-18 mm + 2 x SPC 25 plugs	5 - 1x 4mm^2	1 x 0,5….4mm^2 2 x 0,5….2,5mm^2
RK 01/514-2			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			5 - 1x 4mm2	1 x 0,5….4mm^2 2 x 0,5….2,5mm^2
RK 01/516			5 - 1x 6mm2	1 x 0,5….6mm^2 2 x 0,5….4mm^2
RK 01/1014			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	4 x 4mm^2 6 x 2,5mm^2 1 x 4mm^2 + 2 x 2,5mm^2 + 3 x 1,5mm^2 1 x 4mm^2 + 5 x 1,5mm^2 2 x 4mm^2 + 3 x 2,5 mm^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	
RK 01/544-E		4 x cable gland for armoured cable for cable $Ø_v$ 13-21 mm and T_a≥-40°C + 2 x SPC 25 plugs for T_a≥-40°C	5 - 4x 4mm^2	
RK 01/744-E			7 - 4x 4mm^2	

All technical data is relevant at the time of print.

RK 01

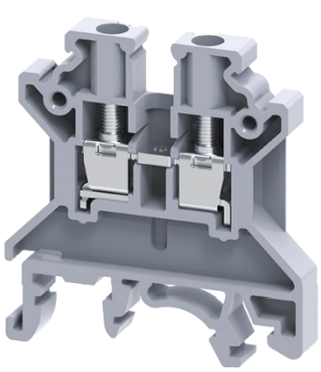
DIMENSION DRAWING (mm)



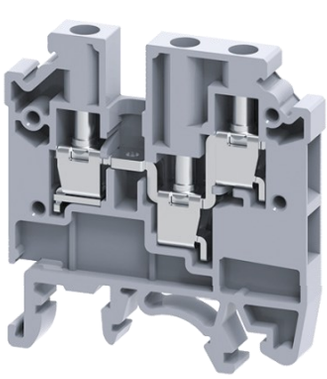


RK 01/744-E (internal metal plate)

Standard terminal block



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



Zone

1 21 2 22

JBX 04

IP 66

IK08

T_a -40 +50

ATEX

- 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:	CE 0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex db IIC T6 Gb Ex tb IIIC T80ºC Db
Ambient temperature:	-40ºC ≤ T_a ≤ +50ºC
Degree of protection:	IP 66
Rated voltage:	630 V
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Max. current for nominal croeesection:	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

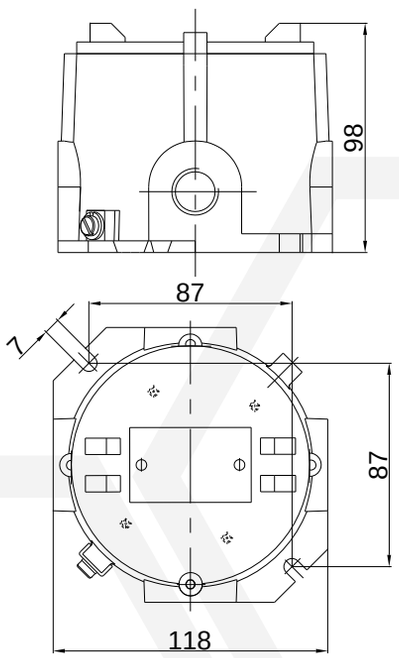
MOUNTING

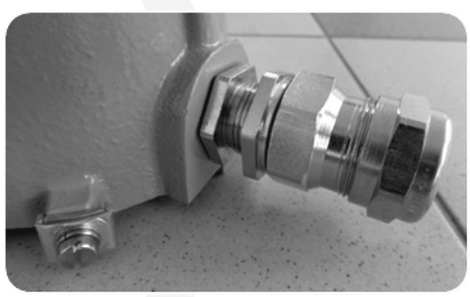
With two screws M6 x 20 mm on distance 123 mm

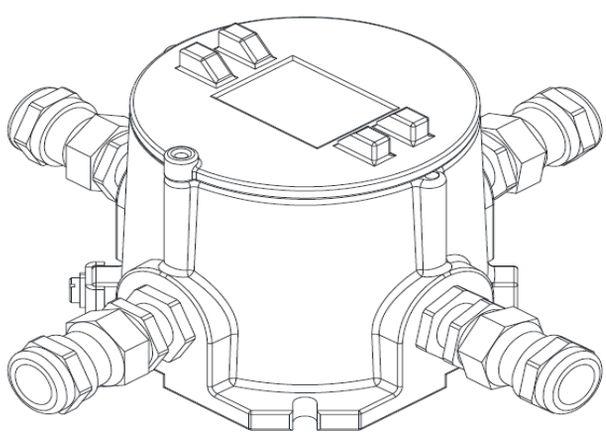
MODEL CODE

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







All technical data is relevant at the time of print.

Zone

1 2

SKX SW

IP 66

IK08

T_a -20 +50

ATEX

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

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:	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:	-20ºC ≤ T_a ≤ +40/+50ºC
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 ≤ Ta ≤ +40°C 15 A for -20°C ≤ Ta ≤ +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

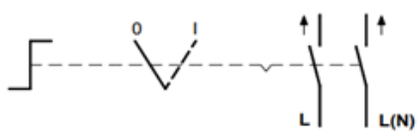
Installation switches SKX - SW / .

- basic type code
- type of switches
  - 2 - on-off switch 2 pole
  - 6 - changeover switch

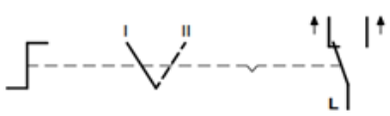
Switching capacity	Rated operating voltage Ue	Rated operating current Ie
AC 5a	230 V	16 A for -20°C ≤ Ta ≤ +40°C 15 A for -20°C ≤ Ta ≤ +50°C
AC 5b	230 V	16 A for -20°C ≤ Ta ≤ +40°C 15 A for -20°C ≤ Ta ≤ +50°C
AC 1	500 V	16 A for -20°C ≤ Ta ≤ +40°C 15 A for -20°C ≤ Ta ≤ +50°C
AC 15	250 V 500 V	6 A for -20°C ≤ Ta ≤ +50°C 4 A for -20°C ≤ Ta ≤ +50°C
DC 13	24 V 60 V 110 V	6 A for -20°C ≤ Ta ≤ +50°C 0,8 A for -20°C ≤ Ta ≤ +50°C 0,5 A for -20°C ≤ Ta ≤ +50°C

WIRING DIAGRAM

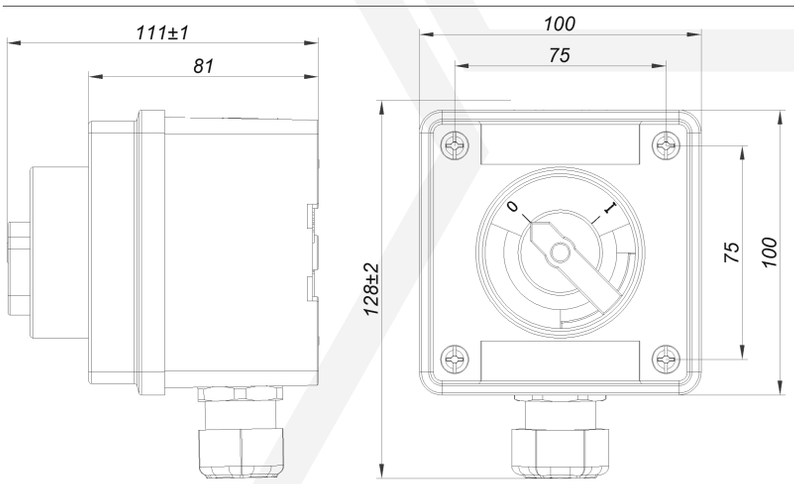
ON-OFF switch 2 pole



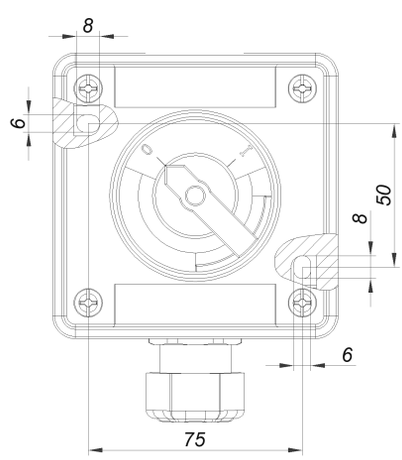
Changeover switch



DIMENSION



MOUNTING



All technical data is relevant at the time of print.

Zone

1 21 2 22

SKX ../E

IP 66

IK08

T_a -20 +50

ATEX

- 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
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]
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/E ……3,8 kg SKX 18/E ..... 4,5 kg SKX 20/E ..... 7,0 kg

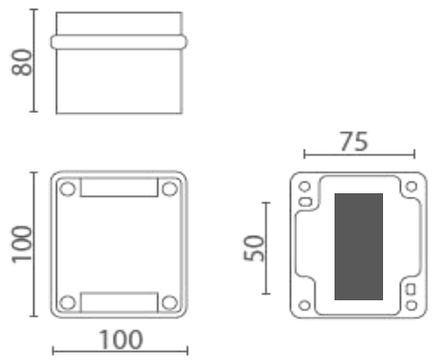
MOUNTING

With two/four screws through the housing holes ϕ6 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	Imax [A]
4/4	5	40	20
		50	18
		55	17

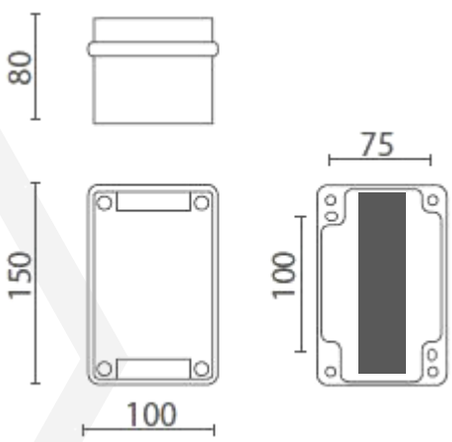


Max. number of cable entries (for plastic cable glands):

Cable gland / Side	M16	M20	M25
A-C	2	2	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	Imax [A]
4/4	8	40	19
		50	17
		55	16
6/6	8	40	25
		50	22
		55	19

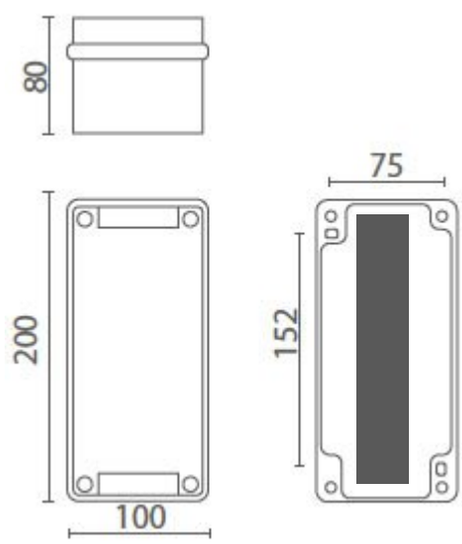


Max. number of cable entries (for plastic cable glands):

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	Imax [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

All technical data is relevant at the time of print.

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]	Imax [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]	Imax [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.

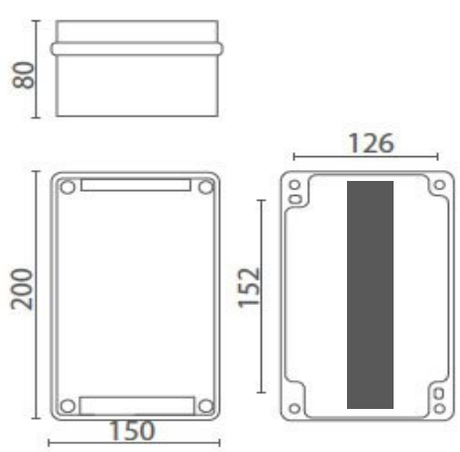
Max. number of cable entries (for plastic cable glands):

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	5	3	0

*with N/PE rails

DIMENSIONS [mm]



Terminal box SKX 17/E

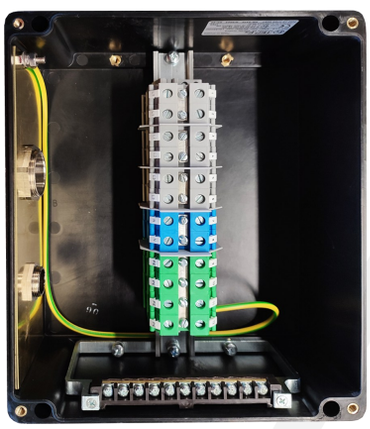
Table of allowed number of terminals

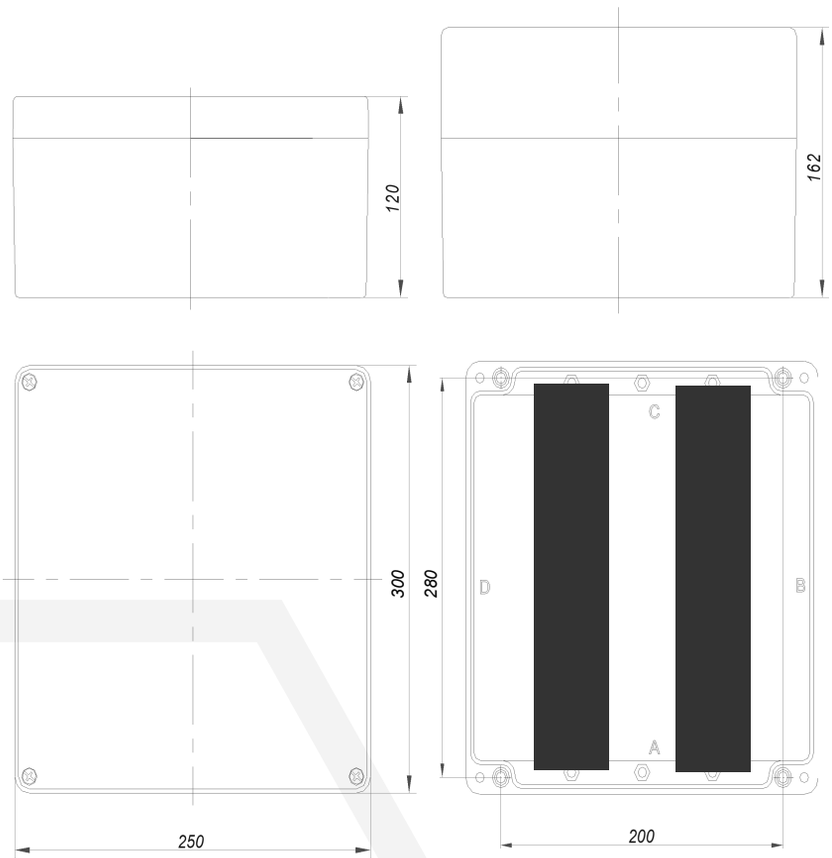
Nominal cross section of conductors / terminals (mm^2)	Maximum number of terminals	Ambient temperature Ta[°C]	Imax [A]
2,5 / 2,5	70	-20°C ÷ +40 °C	9
2,5 / 2,5	36		13
2,5 / 2,5	4		18
2,5 / 2,5	70	-20°C ÷ +50 °C	8
2,5 / 2,5	36		11
2,5 / 2,5	4		16
4 /4	61	-20°C ÷ +40 °C	13
4 /4	30		18
4 /4	4		26
4 /4	61	-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

Max. number of cable entries:

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

DIMENSIONS [mm]





All technical data is relevant at the time of print.

Terminal box SKX 18/E

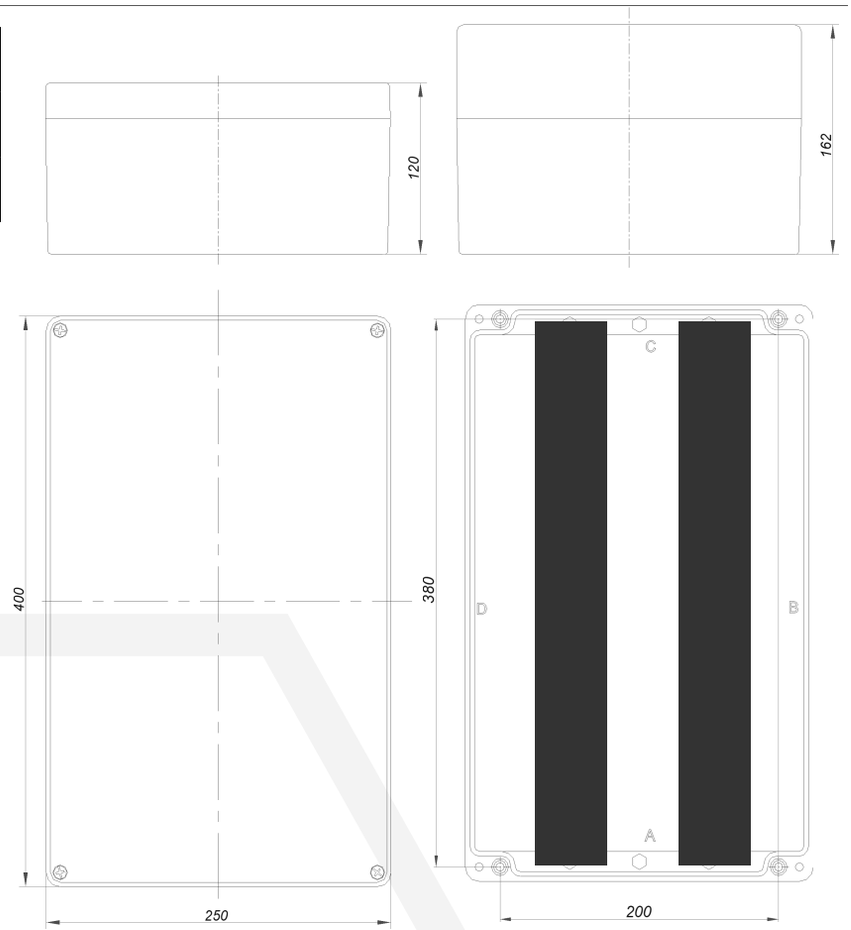
Table of allowed number of terminals

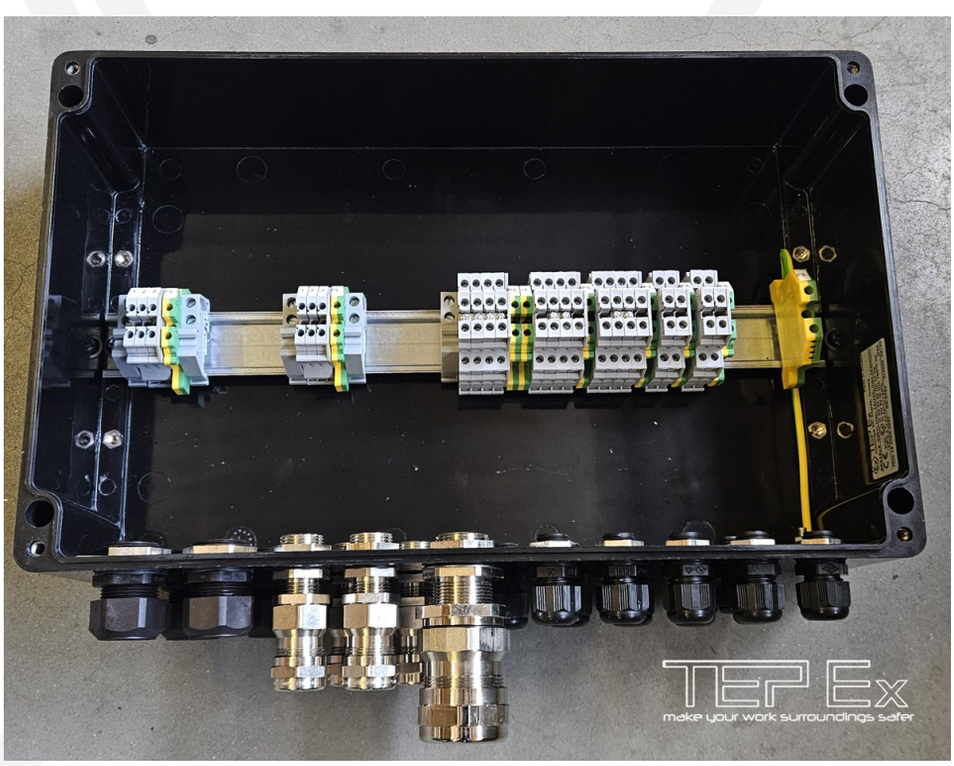
Nominal cross section of conductors / terminals (mm^2)	Maximum number of terminals	Ambient temperature Ta[°C]	Imax [A]
2,5 / 2,5	140	-20°C ÷ +40 °C	9
2,5 / 2,5	64		12
2,5 / 2,5	4		16
2,5 / 2,5	108	-20°C ÷ +50 °C	8
2,5 / 2,5	64		10
2,5 / 2,5	4		14
4 /4	103	-20°C ÷ +40 °C	12
4 /4	54		16
4 /4	4		23
4 /4	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:

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

DIMENSIONS [mm]





All technical data is relevant at the time of print.

Terminal box SKX 20/E

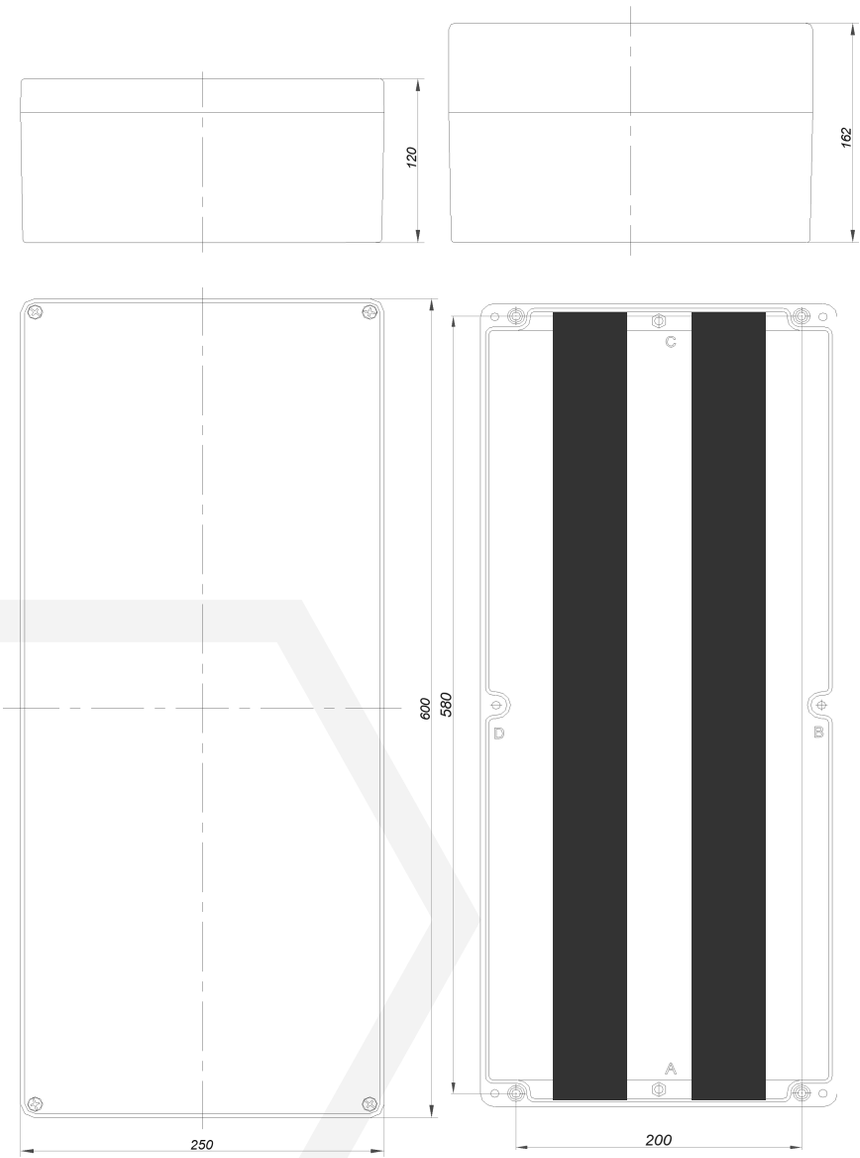
Table of allowed number of terminals

Nominal cross section of conductors / terminals (mm^2)	Maximum number of terminals	Ambient temperature Ta[°C]	Imax [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:

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

DIMENSIONS [mm]



All technical data is relevant at the time of print.

Zone

1 21 2 22

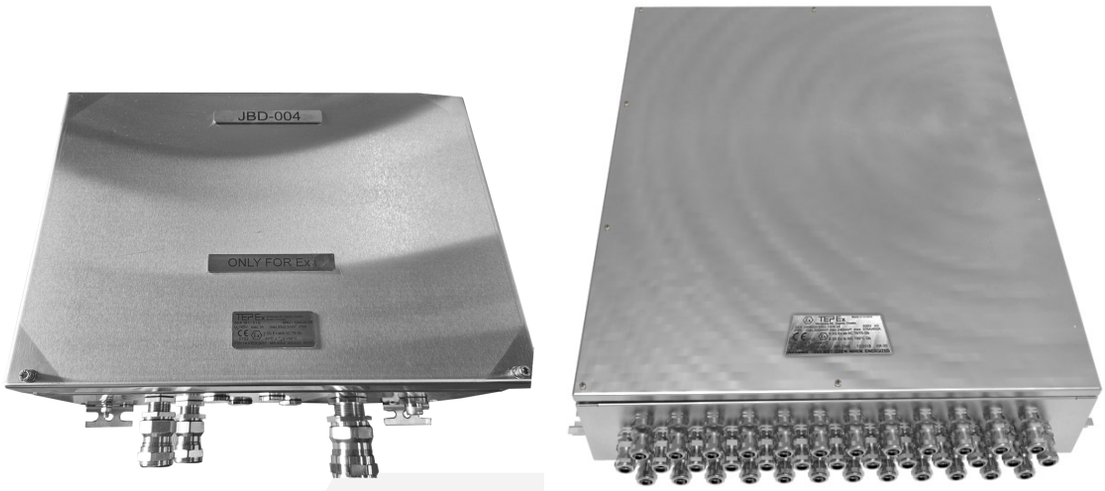
SKX ..I/E

IP 66

IK 09

T_a -20 +50

ATEX



- Enclosures in stainless steel AISI 316L
- 5 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

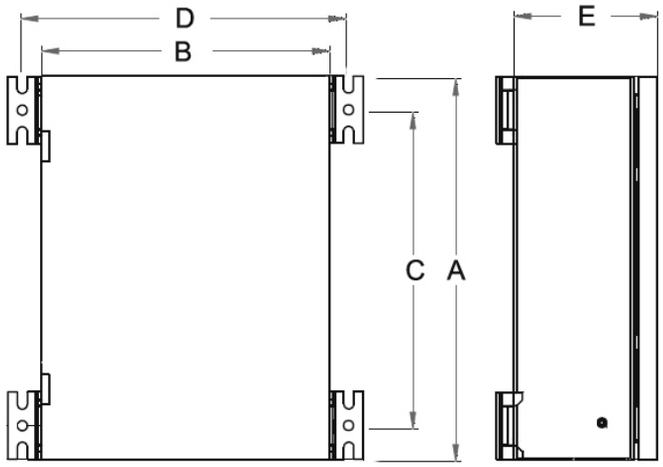
Certificate:	FIDI 19 ATEX 0057
Marking:	CE 0722
Apparatus category:	II 2GD
Marking of explosion protection:	Ex eb IIC T6 Gb Ex ia/ib IIC T6 Gb Ex eb ia/ib IIC T6 Gb Ex tb IIIC T80°C Db
Ambient temperature:	-20ºC ≤ T_a ≤ +50ºC
Degree of protection:	IP 66
Resistance to shock:	IK 09
Protection class :	I (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 15I/E …….4,5 kg SKX 16I/E……..5,2 kg SKX 18I-2/E……. 6,4 kg SKX 20I/E……12,0 kg

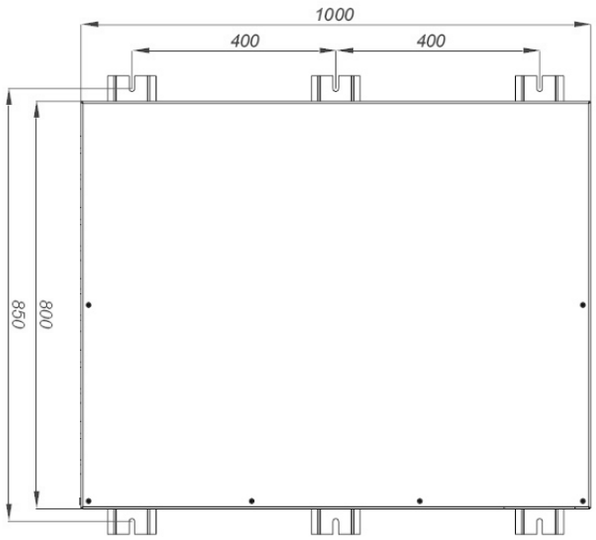
MOUNTING

With four screws through the housing holes ϕ10 mm at the peaks the rectangle:

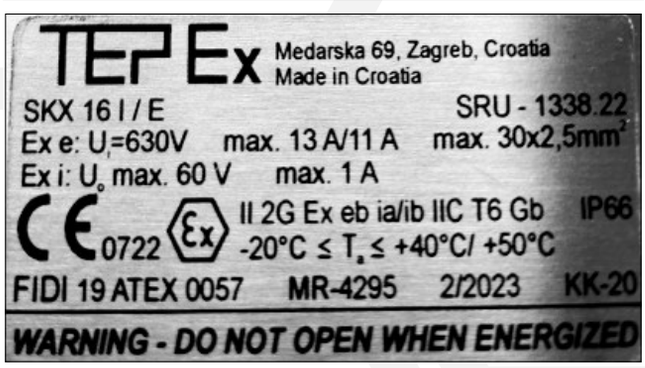
make your work surroundings safer

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



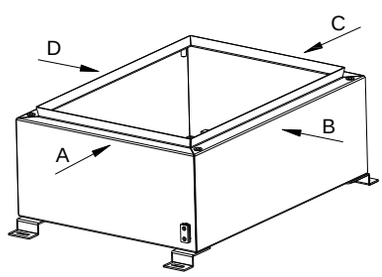


Type	A[mm]	B[mm]	C[mm]	D[mm]	E[mm]
SKX 15l/E	200	200	145	230	150
SKX 16l/E	300	300	245	330	
SKX 18l-2/E	400	300	325	330	
SKX 20l/E	600	400	530	440	200
SKX 1008020	1000	800	800	850	



Max. number of mounted cable entries:

TYPE Dimension	SKX 15l/E 200x200x150		SKX 16l/E 300x300x150		SKX 18l-2/E 400x300x150		SKX 20l/E 600x400x200		SKX 1008020 1000x800x200	
Side / Cable gland	A-C	B-D	A-C	B-D	A-C	B-D	A-C	B-D	A-C	B-D
M20x1.5	9	9	12	14	14	16	17	30	48	60
M25x1.5	7	7	5	5	5	7	15	26	36	48
M32x1.5	4	4	4	4	4	6	9	14	20	28
M40x1.5	3	3	4	4	4	6	6	12	14	22
M50x1.5	2	2	3	3	3	4	5	6	8	10
M63x1.5	1	1	2	2	3	4	4	6	6	8



All technical data is relevant at the time of print.

Terminal box SKX 15I/E (200x200x150 mm)

Table of allowed number of terminals

Nominal cross-section of conductors / terminals [mm^2]	Maximum number of terminals	Ambient temperature Ta[°C]	Imax [A]
2,5/2,5	2	-20°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	-20°C ÷ +50 °C	16
2,5/2,5	4		14
2,5/2,5	24		11
2,5/2,5	28		10
4/4	4	-20°C ÷ +40 °C	21
4/4	8		18
4/4	24		16
4/4	4	-20°C ÷ +50 °C	18
4/4	8		16
4/4	24		14
6/6	2	-20°C ÷ +40 °C	36
6/6	4		32
6/6	8		22
6/6	16		20
6/6	2	-20°C ÷ +50 °C	30
6/6	4		26
6/6	8		19
6/6	16		17
10/10	2	-20°C ÷ +40 °C	50
10/10	4		45
10/10	8		37
10/10	12		33
10/10	2	-20°C ÷ +50 °C	42
10/10	4		37
10/10	8		30
10/10	12		26
16/16	2	-20°C ÷ +40 °C	66
16/16	4		58
16/16	8		55
16/16	12		50
16/16	2	-20°C ÷ +50 °C	58
16/16	4		50
16/16	8		45
16/16	12		40
25/25	2	-20°C ÷ +40 °C	80
25/25	4		70
25/25	8		60
25/25	2	-20°C ÷ +50 °C	70
25/25	4		60
25/25	8		50
35/35	2	-20°C ÷ +40 °C	109
35/35	4		80
35/35	2	-20°C ÷ +50 °C	95
35/35	4		70

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]	Imax [A]
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 ÷ +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 ÷ +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							

All technical data is relevant at the time of print.

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]	Imax [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	-20°C ÷ +40 °C	125
50 /50	25		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							

All technical data is relevant at the time of print.

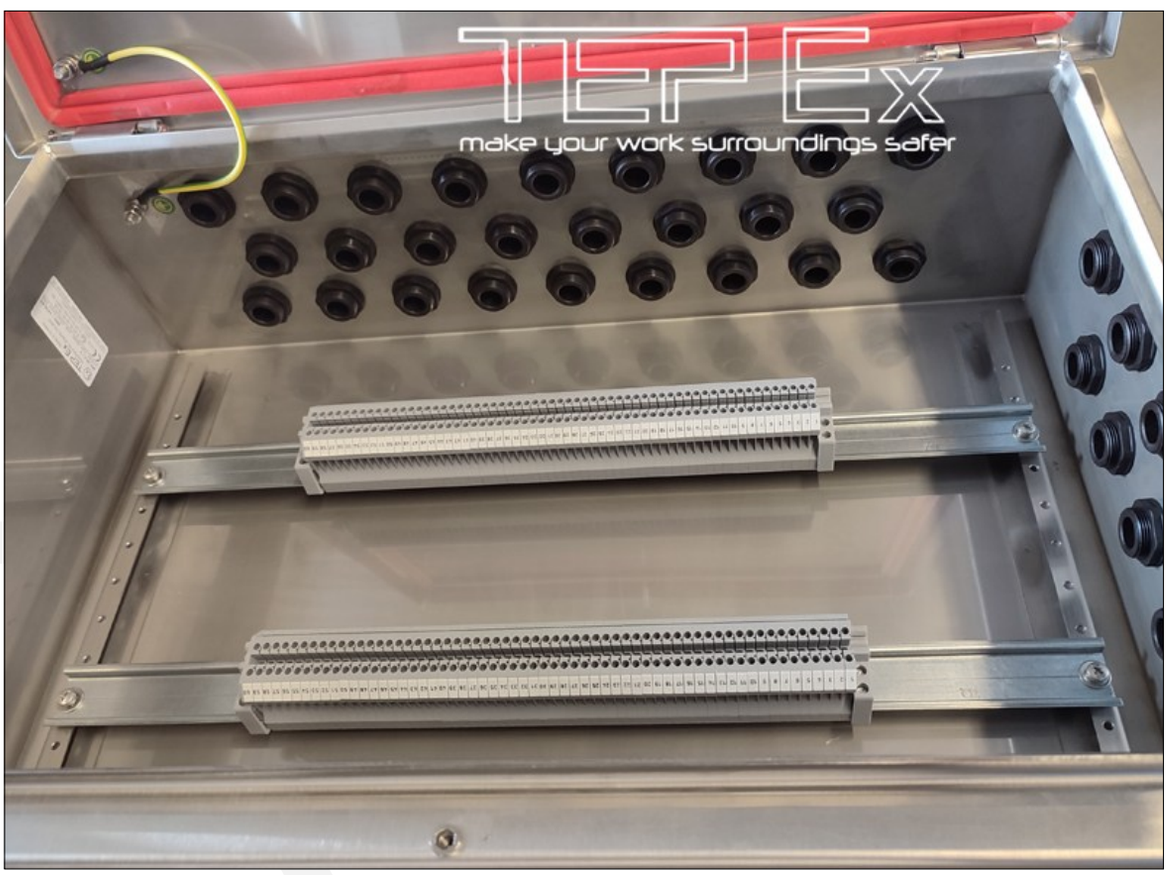
Terminal box SKX 20I/E (600x400x200 mm)

Table of allowed number of terminals

Nominal cross section of conductors / terminals (mm^2)	Maximum number of terminals	Ambient temperature Ta[°C]	Imax [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	-20°C ÷ +40 °C	80
50 /50	14		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							



Zone

1 21 2 22

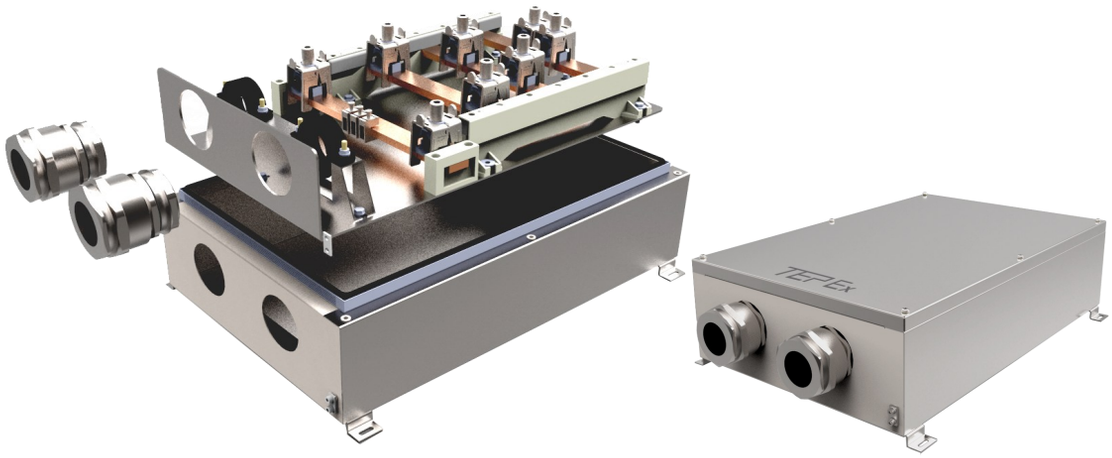
SKX busbar AISI

IP 66

IK 09

T_a -40 +50

ATEX



- For terminals from 50... 300 mm^2
- Rated operational current up to max. 450 A depending on enclosure version and size
- Hinged door

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 Ex eb IIC T6/T5 Gb Ex tb IIIC T80°C/T95°C Db
Ambient temperature ATEX:	-40ºC ≤ T_a ≤ +50ºC
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:

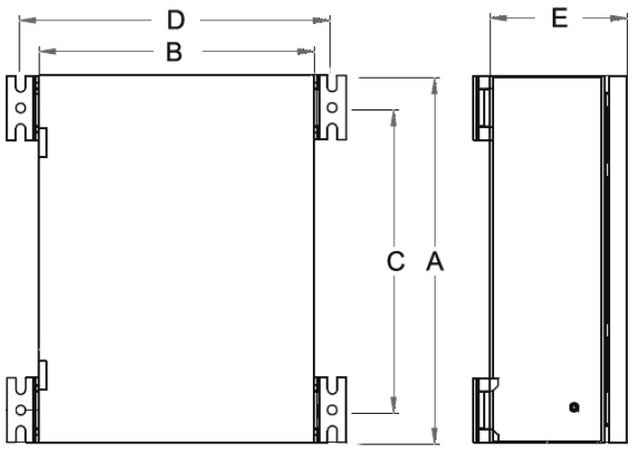
Terminal	Cross section	t_{amb} –20°C do +40°C	t_{amb} –20°C do +50°C
185 mm^2	150 mm^2	300 A	250 A
	120 mm^2	250 A	200 A
120 mm^2	95 mm^2	200 A	160 A
	70 mm^2	150 A	125 A
	50 mm^2	125 A	100 A
	35 mm^2	100 A	80 A

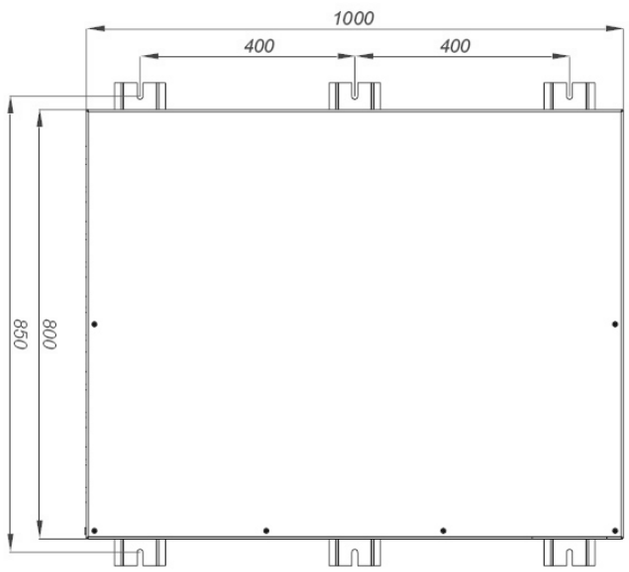
MODEL CODE

SKX xxxxxxxx- . / ...

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

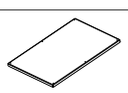
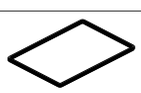
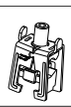
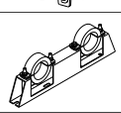
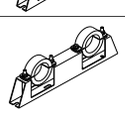
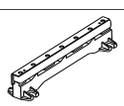
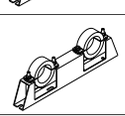
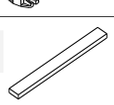
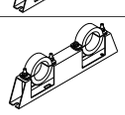
DIMENSION DRAWING (mm)





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

All technical data is relevant at the time of print.

Zone

1 21 2 22

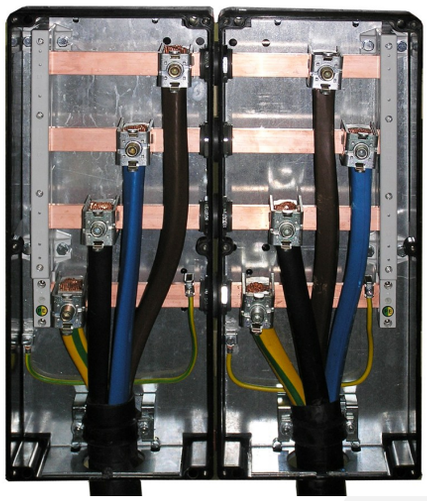
SKX busbar GRP

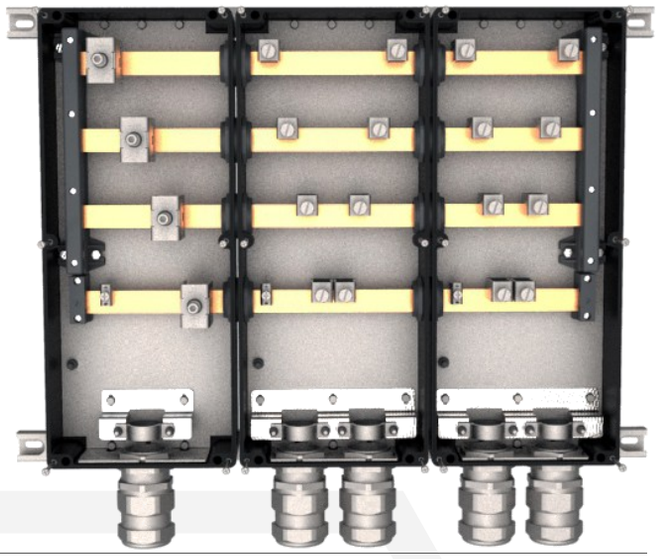
IP 66

IK 09

-20 +50

ATEX





- For terminals from 50... 300 mm^2
- Rated operational current up to max. 430 A depending on enclosure version and size

CONSTRUCTION

Enclosure: GRP
Gasket: EPDM formed gasket

TECHNICAL DATA

Certificate:	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:	-20ºC ≤ T_a ≤ +50ºC
Degree of protection:	IP 66
Resistance to shock:	IK 09
Protection class :	I (protective earthing)
Nominal voltage U_n:	630 V ±10%

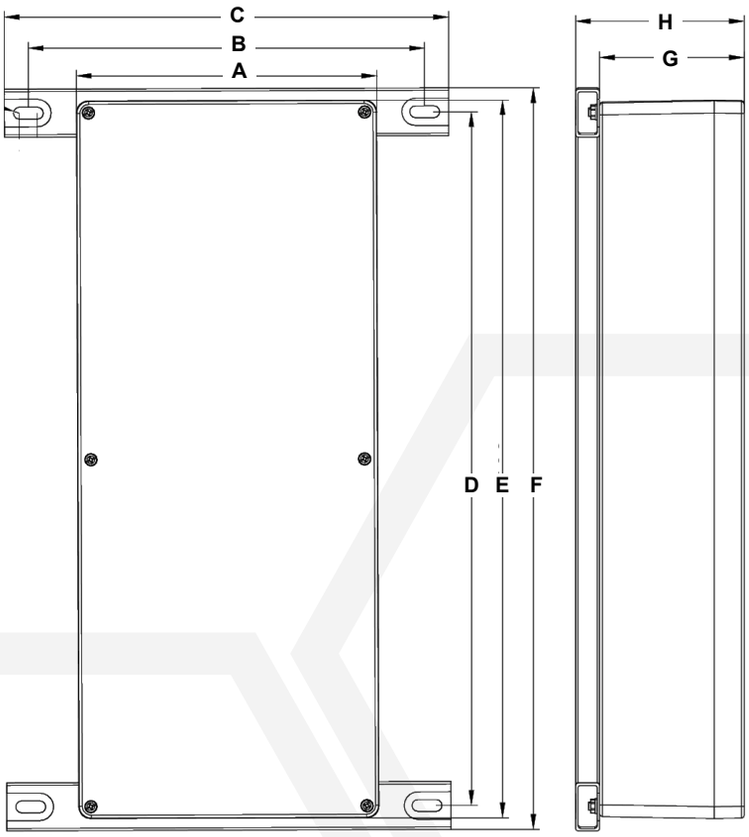
Table of maximum currents:

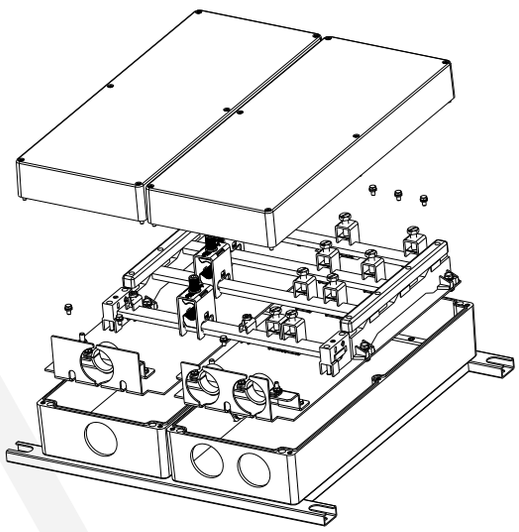
Terminal	Conductor cross section [mm^2]	Maximum thermal current of terminals / cable [A]			
		Tamax= +40°C		Tamax= +50°C	
		Cable temperature stability ≥ 70°C II 2G - T6 II 2D - T80°C	Cable temperature stability ≥ 90°C II 2G - T5 II 2D - T80°C	Cable temperature stability ≥ 70°C II 2G - T6 II 2D - T80°C	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	

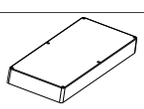
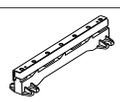
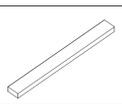
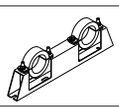
DIMENSION DRAWING (mm)





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			

All technical data is relevant at the time of print.

Zone

1 21 2 22

R3003/R3003S-.

IP 66

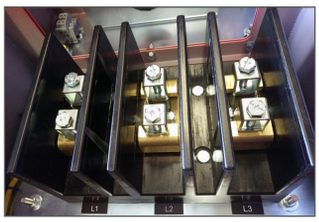
IK 09

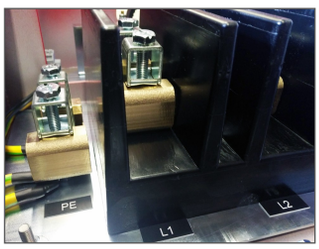
T_a -20 +40

ATEX

IM2

- Nominal voltage **6,3 kV**
- Max. current 420 A / 185 mm^2





CONSTRUCTION

Enclosure: sheet steel 2,5 mm
Gasket: EPDM formed gasket

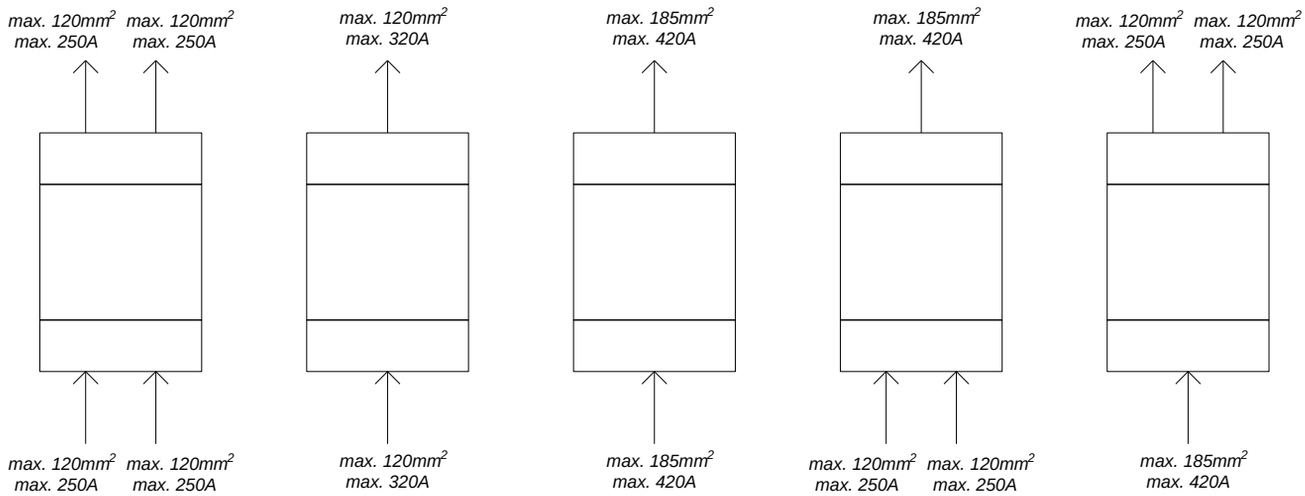
TECHNICAL DATA

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:	-20ºC ≤ T_a ≤ +40ºC
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:

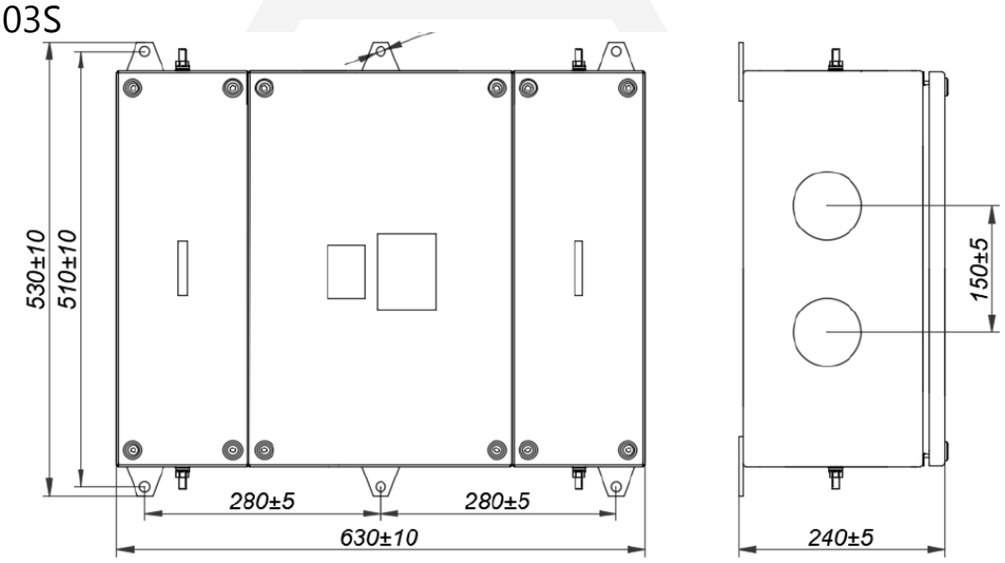
Conductor cross section	16 mm^2	25 mm^2	35 mm^2	50 mm^2	70 mm^2	95 mm^2	120 mm^2	Marking
Terminals	120 mm^2 / 185 mm^2							
Max.current temperature cable resistance 110°C	30 A	50 A	70 A	105 A	150 A	200 A	250 A	I M2 Ex eb I Mb II 2G Ex eb IIC T4 Gb II 2D Ex tb IIIC T80°C Db
Max.current temperature cable resistance 90°C	25 A	40 A	60 A	85 A	120 A	160 A	200 A	I M2 Ex eb I Mb II 2G Ex eb IIC T5 Gb II 2D Ex tb IIIC T80°C Db
Max.current temperature cable resistance 70°C	20 A	30 A	45 A	65 A	90 A	120 A	150 A	I M2 Ex eb I Mb II 2G Ex eb IIC T6 Gb II 2D Ex tb IIIC T80°C Db
Terminals number per "C" busbar	**2 + 2 (total 4 terminals and 4 cables)**							

Cable possible connection (temperature cable resistance 110°C)

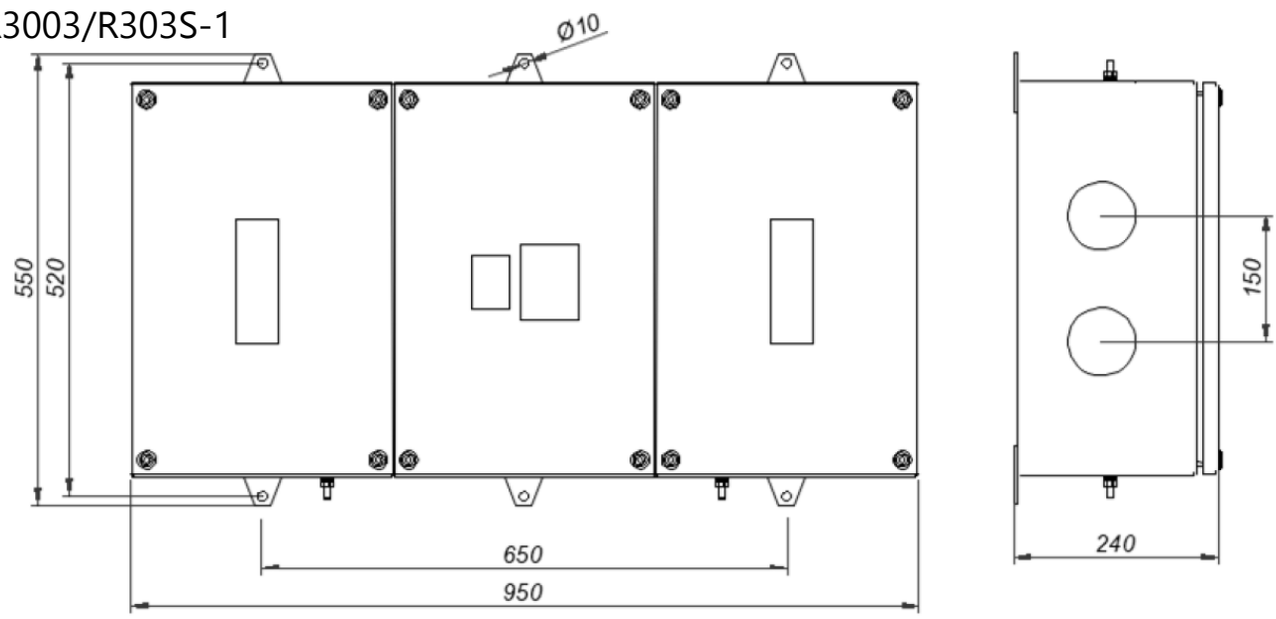


DIMENSION (mm)

R3003/R303S



R3003/R303S-1



All technical data is relevant at the time of print.

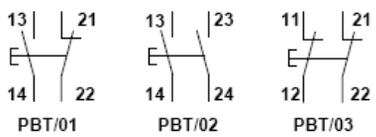
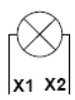
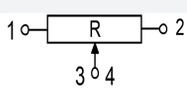
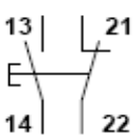
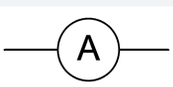
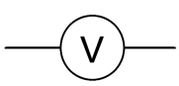
NOTES

Control units

SKX 12 .... SKX 20

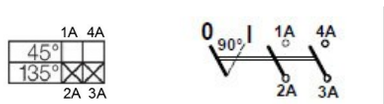
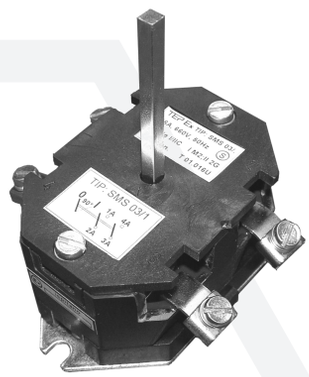
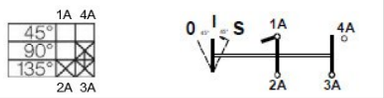
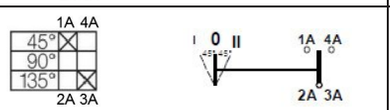
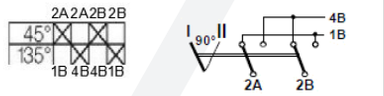
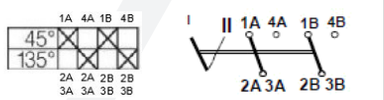
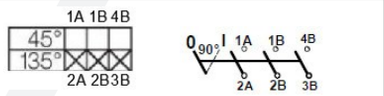
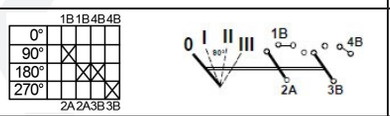
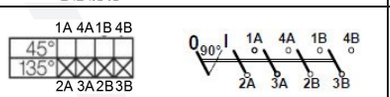
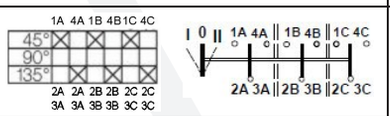
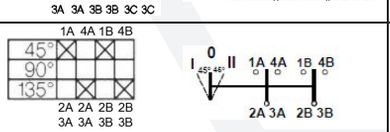
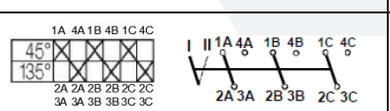
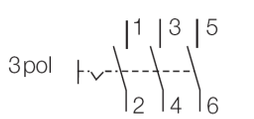
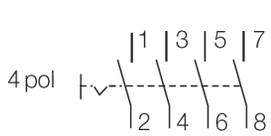
BUILT-IN COMPONENTS ACTUATORS AND INDICATORS

BUILT-IN COMPONENTS

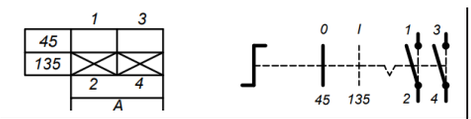
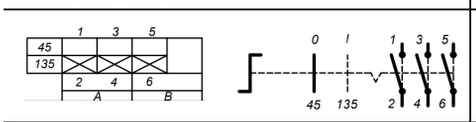
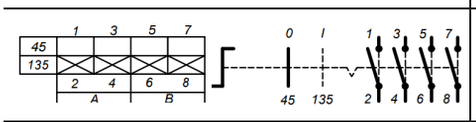
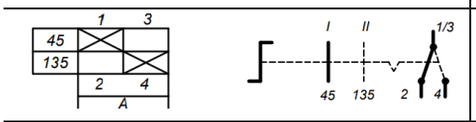
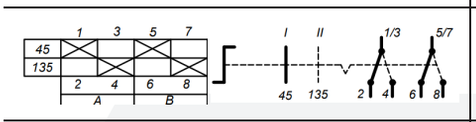
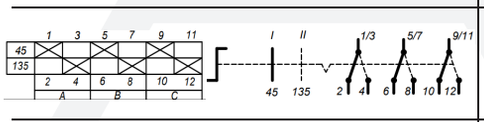
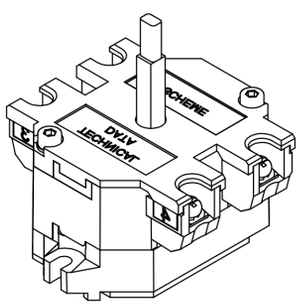
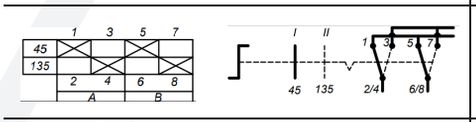
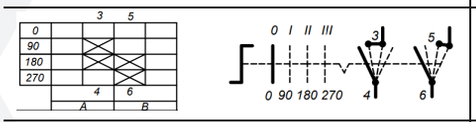
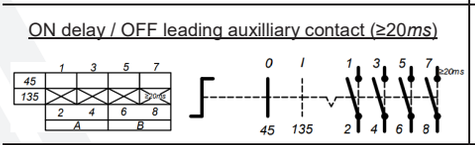
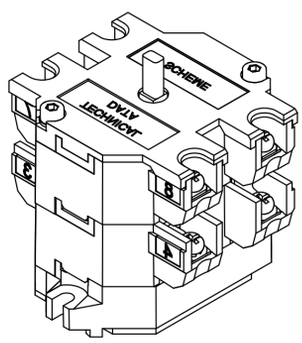
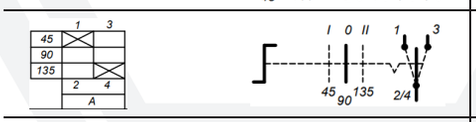
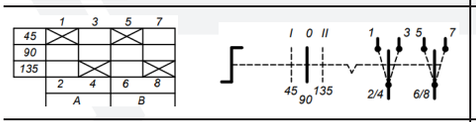
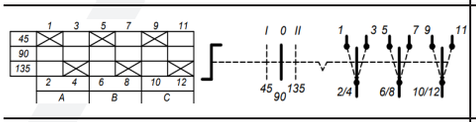
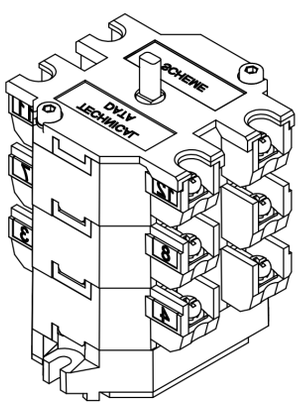
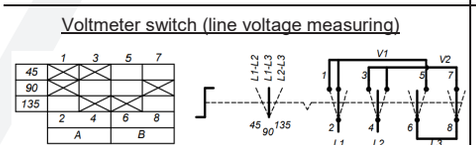
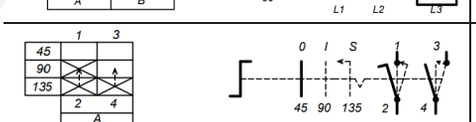
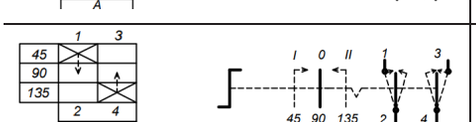
Description, type	Scheme	Overview
Pushbutton PBT/. • Isulation voltageU_i: 690V AC • Rated thermal current I_{th}: 16 A • Terminals: 2,5 mm^2		
Signal lamp SLP • Rated voltage: 12-250 V / 230-400 V AC/DC • Max. current: 20-8 mA • Terminals: 2,5 mm^2		
Potentiometer • Rated voltage: 315 V AC/DC • Rated power: 1 W • Characteristic: linear • Terminals: 2,5 mm^2	 Resistance R: 1,0 kΩ 5,0 kΩ 10 kΩ	
Double Pushbutton • Rated voltage: 630 V AC • Rated current: 16 A • Terminals: 2,5 mm^2		
Measuring instrument ammeter AM 72 • instrument with moving-coil • DC milammeter (0 - 20 mA, 4 - 20 mA) or ammeter for current transformer (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 mm^2		
Measuring instrument voltmetter 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 mm^2		

SKX 12 .... SKX 20

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 : 40– 100 A Terminals: 16 - 25 mm^2	 	

BUILT-IN COMPONENTS

Description, type	Scheme / types	Overview
Control switch SMS 04/. • Rated voltage: 660 V AC • Rated current: 20 A • Terminals: 2,5 mm^2	 SMS 04/2	
	 SMS 04/3	
	 SMS 04/4	
	 SMS 04/9	
	 SMS 04/10	
	 SMS 04/11	
	 SMS 04/17	
	 SMS 04/18	
	ON delay / OFF leading auxilliary contact (≥20*ms*)  SMS 04/23	
	 SMS 04/49	
	 SMS 04/52	
	 SMS 04/53	
	Voltmeter switch (line voltage measuring)  SMS 04/61	
	 SMS 04/70	
	 SMS 04/75	

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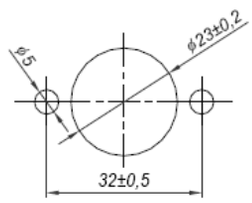
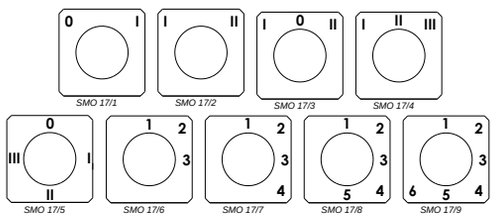
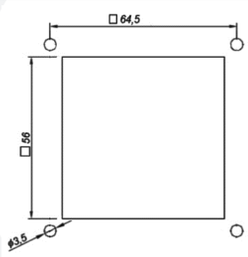
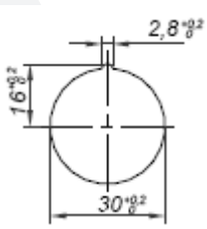
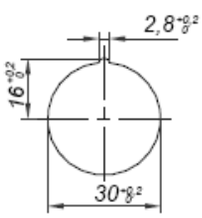
ACTUATORS AND INDICATORS

Description, type	Mounting	Overview
Switch actuator SMO 17/.		 
Switch actuator		
Front element of measuring instruments (ammeter or voltmeter) SAM 72		
Pushbutton actuator SPO 01/.		

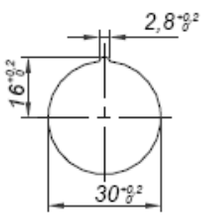
Type SPO 01/.

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**

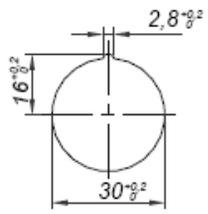
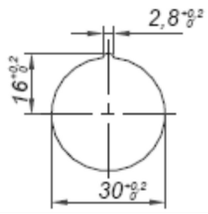
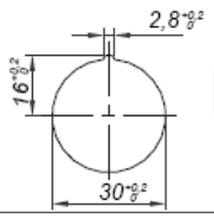
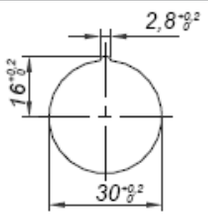
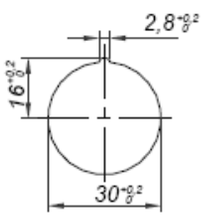
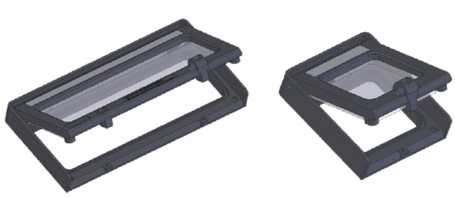
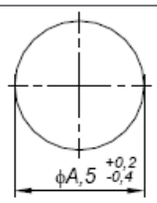
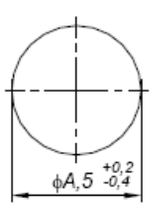
Front element of signal lamp SPO 02/.	

Type SPO 02/.

SPO 02/01	**RED**
SPO 02/02	**GREEN**
SPO 02/03	**AMBER**
SPO 02/04	**TRANSPARENT**
SPO 02/05	**BLUE**

Key-operated pushbutton actuator		

ACTUATORS AND INDICATORS

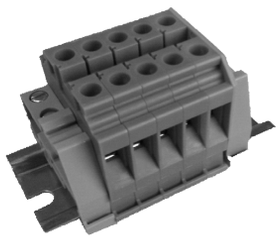
Description, type	Mounting	Overview
Mushroom-head pushbutton actuator (EMERGENCY-STOP)		
Key-operated mushroom-head pushbutton actuator (EMERGENCY-STOP)		
Potentiometer acuator		
Double pushbutton actuator		
Pushbutton rotate actuator		
Inspection Ex eb window 120x140 mm 280x140 mm	-	
Cable gland plastic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

SKX 12 .... SKX 20

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 mm^2, 2 x 4 mm^2 + 2 x 2,5 mm^2	-	
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 A ....50 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 mm^2 • 2 terminals 16 mm^2 • Rated voltage: 690 V AC • Rated current: 10/16 A	-	
N/PE busbar (only for SKX 15, 17, 18 & 20) • 11 x max. 2x4 mm^2		
HRC Fuse Ex d, 3p	-	
Transformator Ex eb • Factory protected against overload	-	

Zone

1 21 2 22

SKX 12 ... SKX 15

IP 66

IK08

T_a -20 +50

ATEX

IM2

- 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

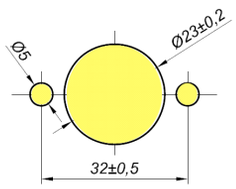
Certificate:	Ex FIDI 19 ATEX 0051X
Marking:	CE 0722
Apparatus category:	II 2GD I M2
Marking of explosion protection:	Ex db eb ia/ib mb IIC T6 Gb Ex db eb ia/ib mb I Mb Ex tb IIIC T80°C Db
Ambient temperature:	-20ºC ≤ T_a ≤ +40ºC / +50ºC /+55ºC
Degree of protection:	IP 66 category 1 for II 2GD IP 64 category 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

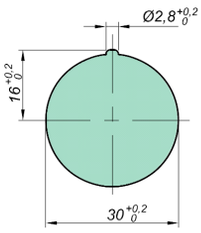
With screw kit through the housing holes ϕ6 mm at the peaks the rectangle:
SKX 12: 75 x 50 mm
SKX 13: 75 x 100 mm
SKX 14: 75 x 150 mm
SKX 15/15H: 125 x 150 mm

Possible combinations and layout of indicators and actuators components

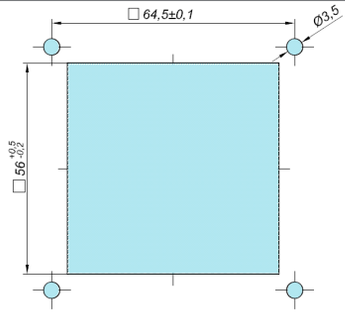
** mounting proposals and dimensions*



Switch actuator SMO 17/.
Switch mounting

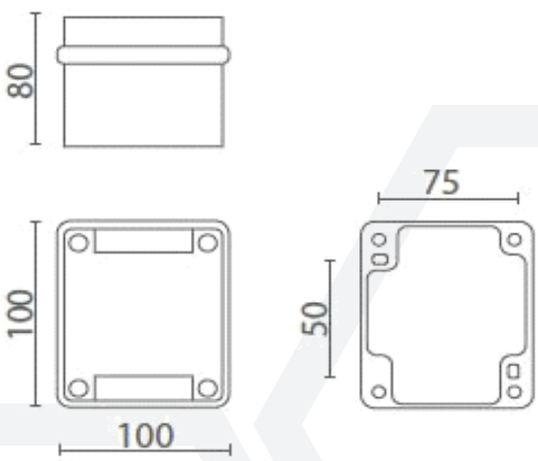


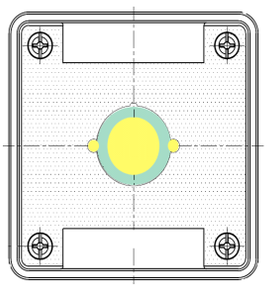
Pushbutton actuator SPO 01/.
Front element of signal lamp SPO 02/.
Pushbutton, signal lamp and potentiometer mounting



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

Enclosure type SKX 12



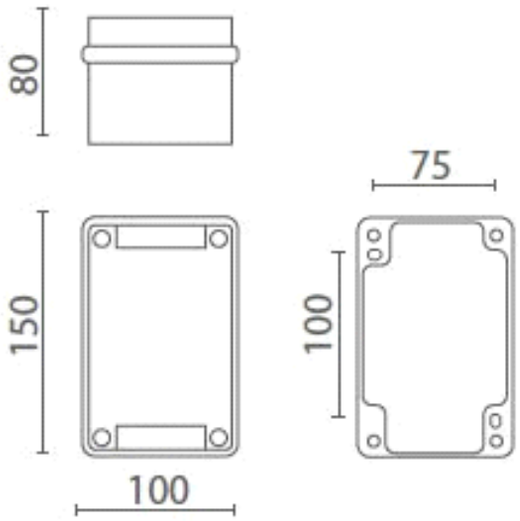


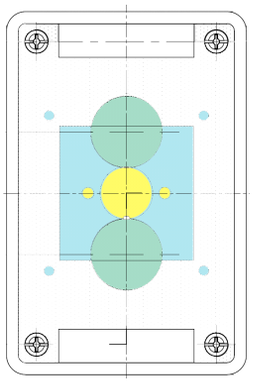
Max. No. of cable glands (for plastic cable glands)			
cable gland side	**M16**	**M20**	**M25**
A-C	2	2	1
B-D	2	2	1

All technical data is relevant at the time of print.

SKX 12 ... SKX 15

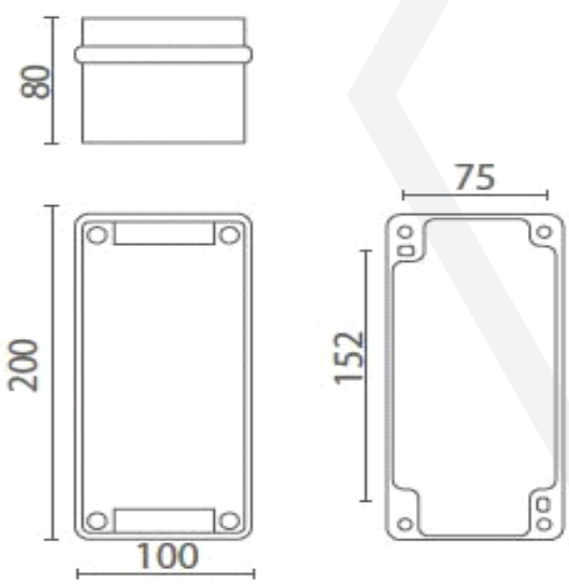
Enclosure type SKX 13

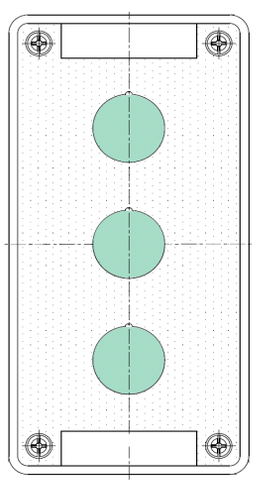




Max. No. of cable glands (for plastic cable glands)			
cable gland / side	**M16**	**M20**	**M25**
A-C	2	2	1
B-D	4	3	2

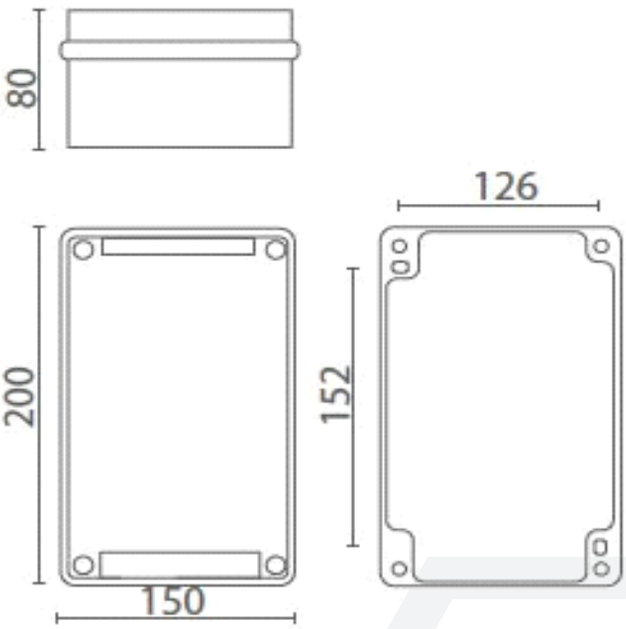
Enclosure type SKX 14

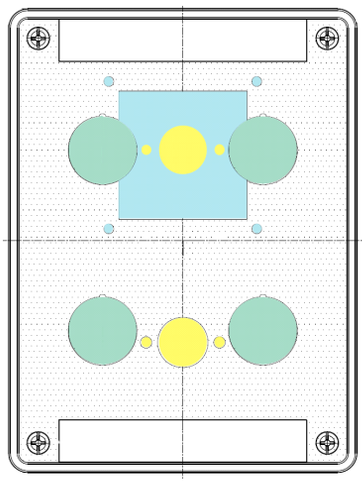




Max. No. of cable glands (for plastic cable glands)				
cable gland / side	**M16**	**M20**	**M25**	**M32**
A-C	2	2	1	1
B-D	6	4	3	2

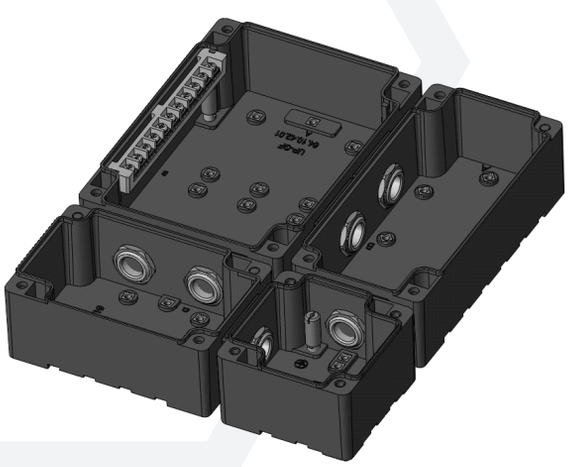
Enclosure type SKX 15

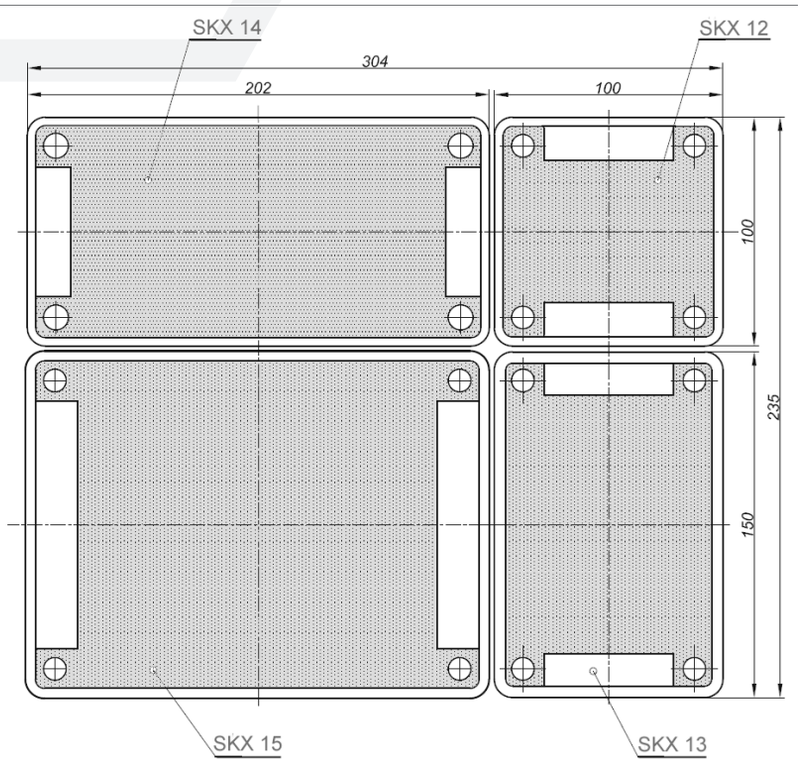




Max. No. of cable glands (for plastic cable glands)				
cable gland side	M16	M20	M25	M32
A-C	4	3	2	1
B-D	6	4	3	2

Various combinations of merged set (combination) of SKX enclosures



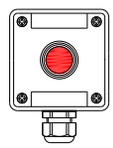
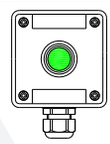
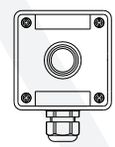
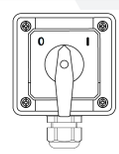
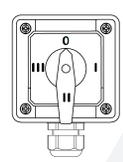
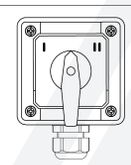
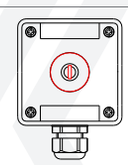
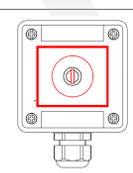
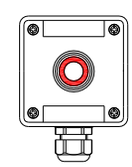
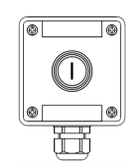


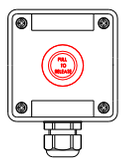
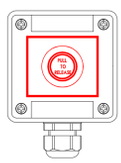
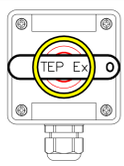
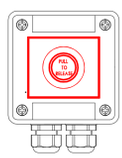
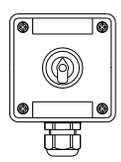
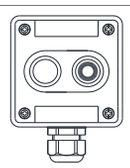
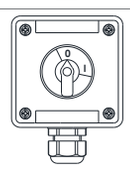
SKX 12 ... SKX 15

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	

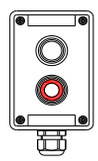
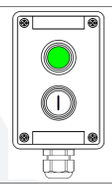
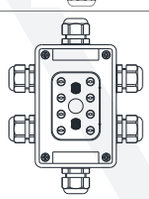
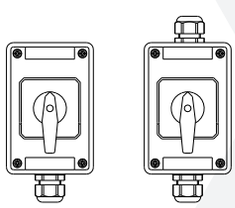
Type	Built-in components and actuator / indicator	Overview
SKX 12/34	Pushbutton PBT 01 (1NO+1NC) - Mushroom-head pushbutton actuator - cable gland SPU 25	
SKX 12/34-1	Pushbutton PBT 01 (1NO+1NC) - Mushroom-head pushbutton actuator with accidental contact protection - cable gland SPU 25	
SKX 12/34-2	Pushbutton PBT 01 (1NO+1NC) - Mushroom-head pushbutton actuator with unauthorized deactivation protective collar - cable gland SPU 25	
SKX 12/35	Pushbutton PBT 01 (1NO+1NC) - Mushroom-head pushbutton actuator with protector (fire alarm) - 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 12/42	Control switch - pushbutton rotational actuator (small) - cable gland SPU 25	

SKX 12 ... SKX 15

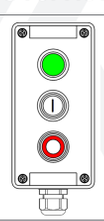
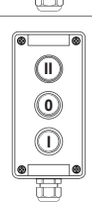
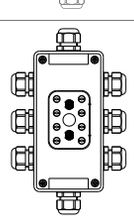
MODEL CODE

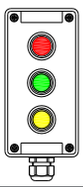
The program consists of serial control units and control units tailored to customer's request.

SKX 13/..

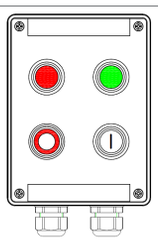
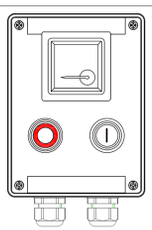
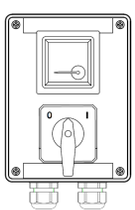
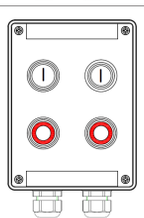
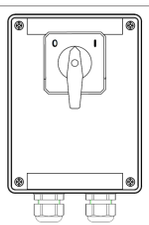
Type	Built-in components and actuator / indicator	Overview
SKX 13/1	2x pushbutton PBT 01 (1NO+1NC) - SPO 01/1 - SPO 01/2 - cable gland SPU 25	
SKX 13/11	Pushbutton PBT 01 (1NO+1NC) - SPO 01/2 - Signal lamp SLP - Front element of signal lamp SPO 02/2 - cable gland SPU 25	
SKX 13/21	Mantle terminals SL 8 - 6x cable gland SPU 25	
SKX 13/10	Switch SMS 04/2 - switch actuator SMO 17/1 - cable gland SPU 25	
SKX 13/20	SMS 04/9 - SMO 17/2 - SPU 25	
SKX 13/30	SMS 04/17 - SMO 17/2 - SPU 25	
SKX 13/40	SMS 04/10 - SMO 17/2 - SPU 25	
SKX 13/60	SMS 04/49 - SMO 17/3 - SPU 25	
SKX 13/70	SMS 04/70 - SMO 17/1 - SPU 25	
SKX 13/80	SMS 04/3 - SMO 17/1 - 2x SPU 25	
SKX 13/100	SMS 04/18 - SMO 17/5 - SPU 25	
SKX 13/110	SMS 04/4 - SMO 17/1 - 2x SPU 25	
SKX 13/120	SMS 04/52 - SMO 17/3 - 2x 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	
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	

SKX 15/..

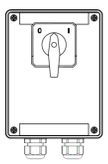
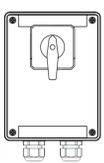
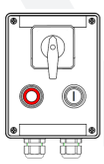
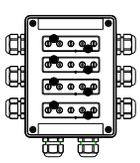
Type	Built-in components and actuator / indicator	Overview
SKX 15/1	2x pushbutton PBT 01 (1NO+1NC) - SPO 01/1 - SPO 01/2 - 2x signal lamp SLP - 02/1 - SPO 02/2 - 2x cable gland SPU 25	
SKX 15/11	2x pushbutton PBT 01 (1NO+1NC) - pushbutton actuator SPO 01/1 - SPO 01/2 - ammeter AM 72 with scale created according to customer's request - 2x cable gland SPU 25	
SKX 15/21	- switch SMS 04/70 - 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 04/3 - switch actuator SMO 17/1 - 2x max. 16 mm2 feed through terminal blocks - 2x cable gland SPU 25	
SKX 15/70	- switch SMS 04/4 - switch actuator SMO 17/1 (lockable in position 0) - 2x cable gland SPU 25 - 1x polyamide cable gland M16 (5-10 mm) - Spare part (inserted in a plastic bag): 1x polyamide plug M16	

SKX 12 ... SKX 15

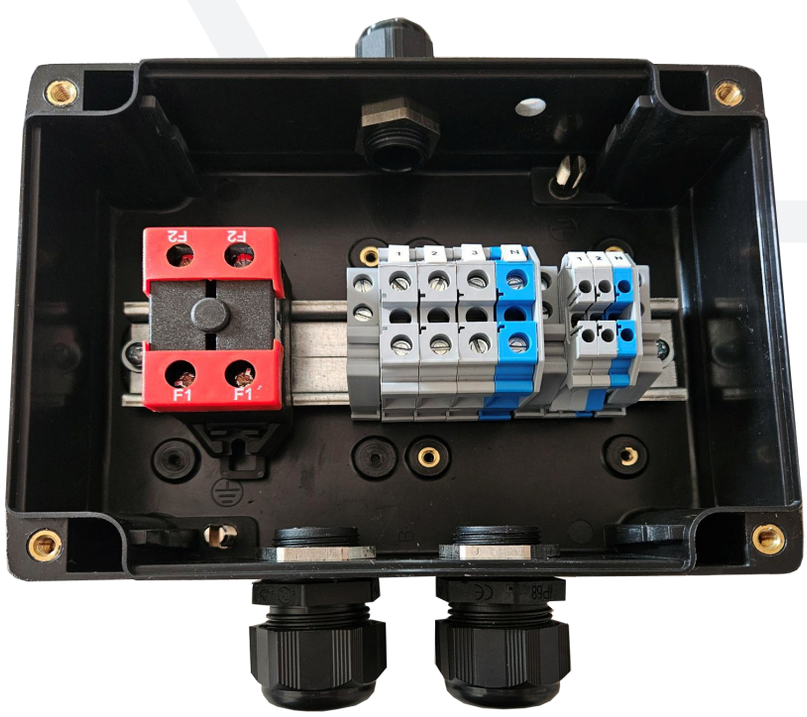
MODEL CODE

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 04/11 - SMO 17/2 - 2x cable gland SPU 25	
SKX 15/90	Switch SMS 04/53 - SMO 17/3 I-0-II - 2x cable gland SPU 25	
SKX 15/51	Switch SMS 04/52 - SMO 17/3 I-0-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)




PULL TO RELEASE
UPOZORENJE
NE OTVARAJ POD
NAPONOM


I
II
FILL
Hi
HiHi
STOP
START
TEP Ex
WARNING
DO NOT OPEN WHEN ENERGIZED
TEP Ex


PULL TO RELEASE
EMERGENCY STOP
TEP Ex
WARNING
DO NOT OPEN WHEN ENERGIZED

Zone

1 21 2 22

SKX 16 .... SKX 20

IP 66

IK 08/09

T_a -20 +50

ATEX

- Enclosures made of glass-fibre reinforced polyester resin **GRP**
- Stainless steel **AISI 316L**
- 3 basic enclosure sizes in GRP
- 5 basic enclosure sizes in stainless steel
- Alone or in various combinations of merged set
- Equipped with built-in components
  - ⇒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

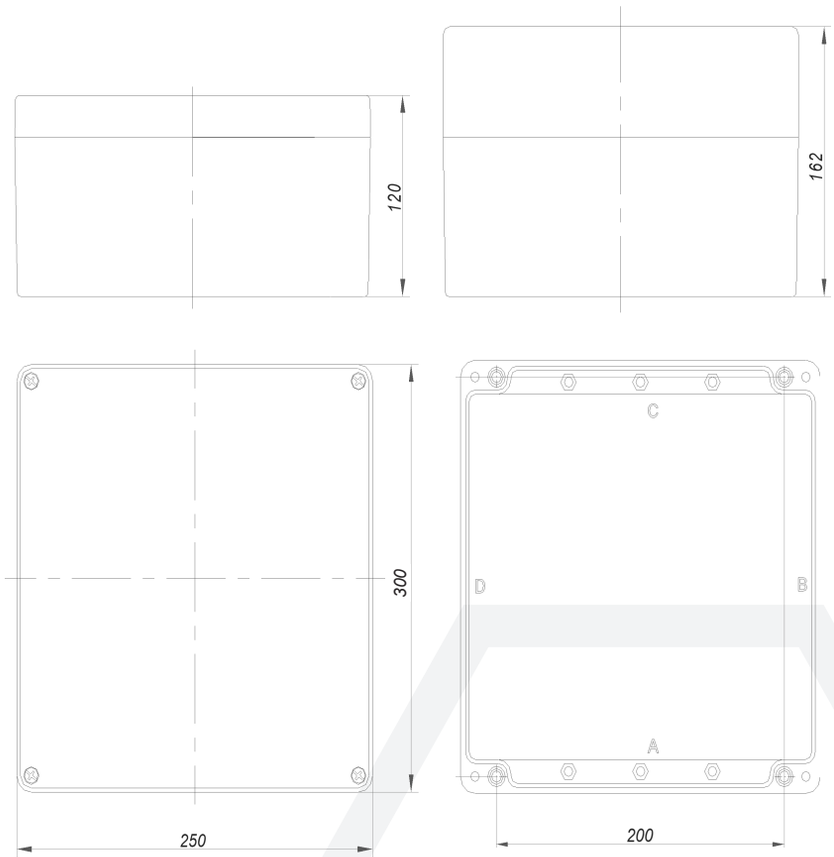
Certificate:	Ex FIDI 19 ATEX 0052X, FIDI 19 ATEX 0053
Marking:	CE 0722
Apparatus category:	II 2G II 2D
Marking of explosion protection:	Ex db eb mb ia/ib IIC T4-T6 Gb Ex tb IIIC T80°C Db
Ambient temperature:	-20ºC ≤ T_a ≤ +40ºC / +50ºC
Degree of protection:	IP 66 category 1
Resistance to shock:	IK 08 (GRP enclosures) IK 09 (stainless steel enclosures)
Protection class :	I (protective earthing)
Rated voltage:	690 V AC (with mantle terminal blocks SL5, SL8; Ui = 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***

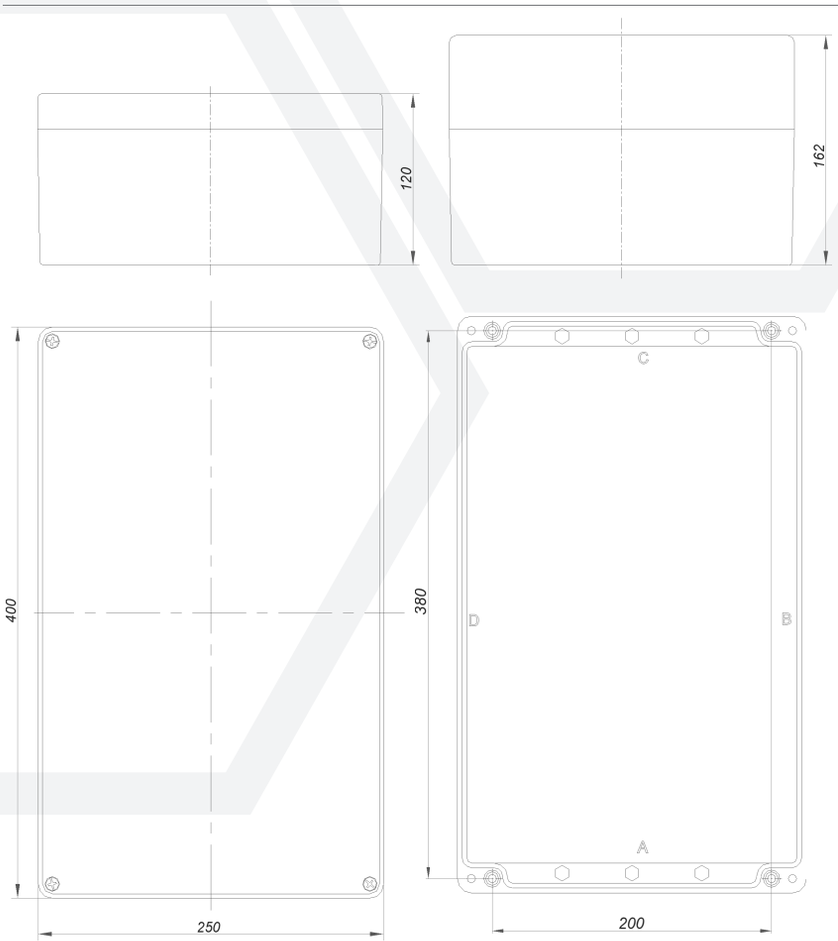
⇒ *managing the combination of the housing* ***MMK 403016***
⇒ ***I*** *- stainless steel enclosure AISI 316L*
⇒ *performed by production number* ***1280***

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

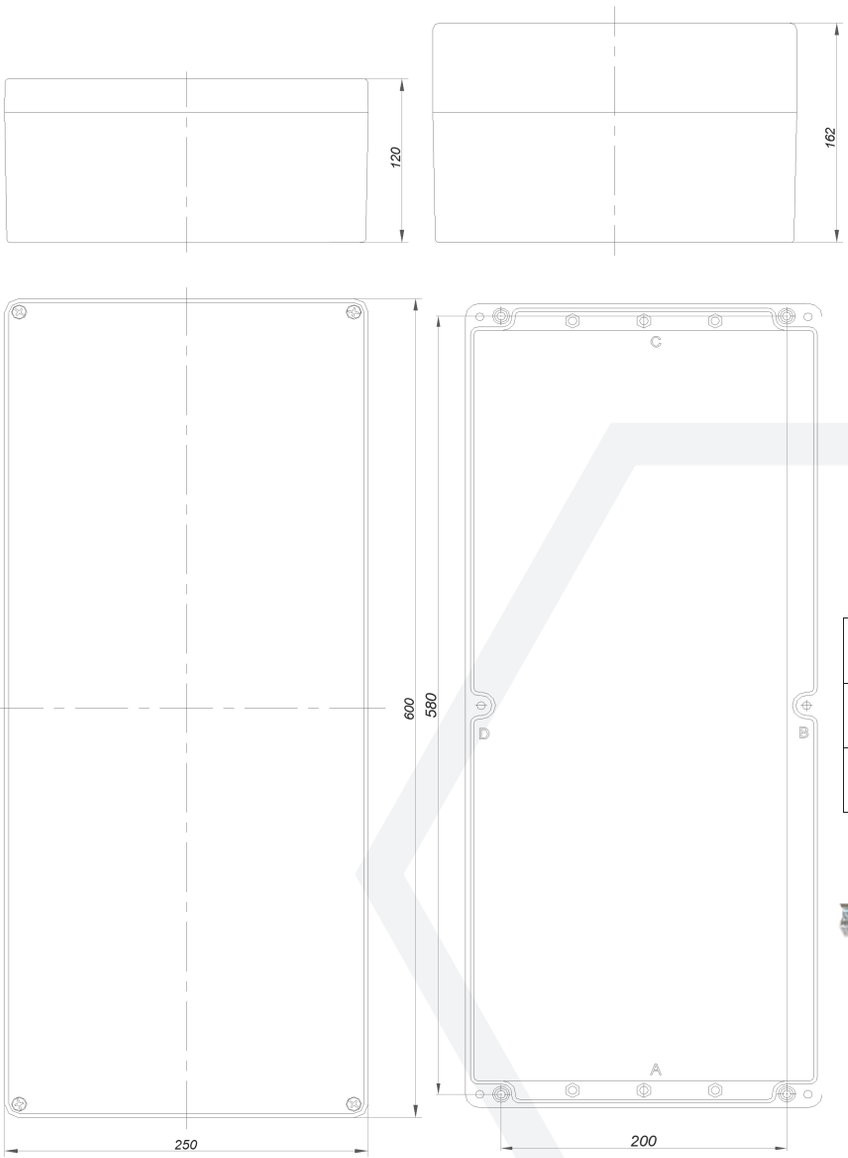


Side / Cable gland	M20	M25	M32	M40	M50	M63
B-D	17	15	9	6	5	4
A-C	9	7	3	3	2	2

All technical data is relevant at the time of print.

SKX 16 .... SKX 20

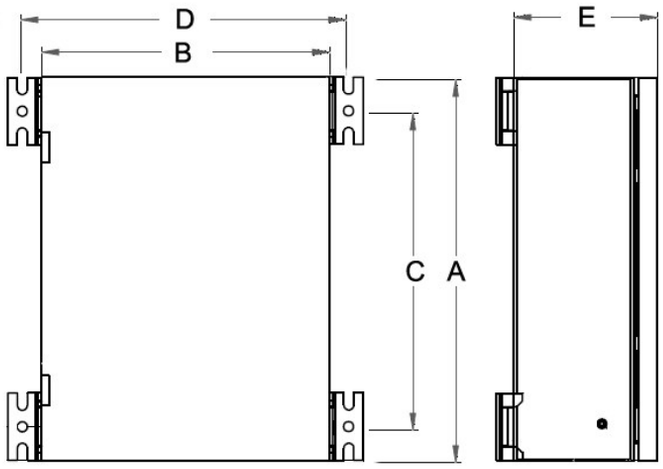
GRP enclosure SKX 20

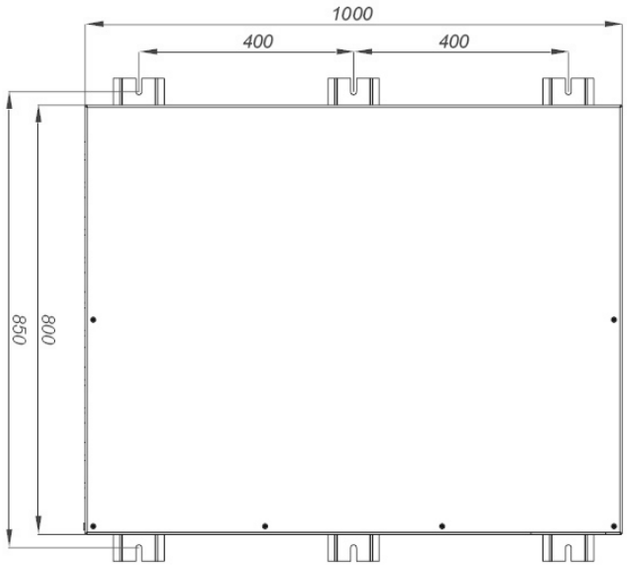


Side / Cable gland	M20	M25	M32	M40	M50	M63
B-D	24	22	12	8	6	6
A-C	9	7	3	3	2	2

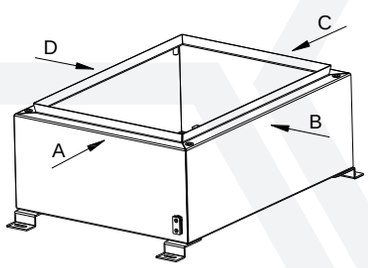
Example: Ex control units with GRP enclosures

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 15I/SRU	200	200	145	230	150
SKX 16I/SRU	300	300	245	330	
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 15I/E** 200x200x150		**SKX 16I/E** 300x300x150		**SKX 18I-2/E** 400x300x150		**SKX 20I/E** 600x400x200		**SKX 1008020** 1000x800x200	
Side / Cable gland	A-C	B-D	A-C	B-D	A-C	B-D	A-C	B-D	A-C	B-D
M20x1.5	9	9	12	14	14	16	17	30	48	60
M25x1.5	7	7	5	5	5	7	15	26	36	48
M32x1.5	4	4	4	4	4	6	9	14	20	28
M40x1.5	3	3	4	4	4	6	6	12	14	22
M50x1.5	2	2	3	3	3	4	5	6	8	10
M63x1.5	1	1	2	2	3	4	4	6	6	8

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

Zone

1 21 2 22

R3003/100

IP 66

IK 09

T_a -20 +40

ATEX

- 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:	-20ºC ≤ T_a ≤ +40ºC
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 mm2, max. 50 mm2
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)

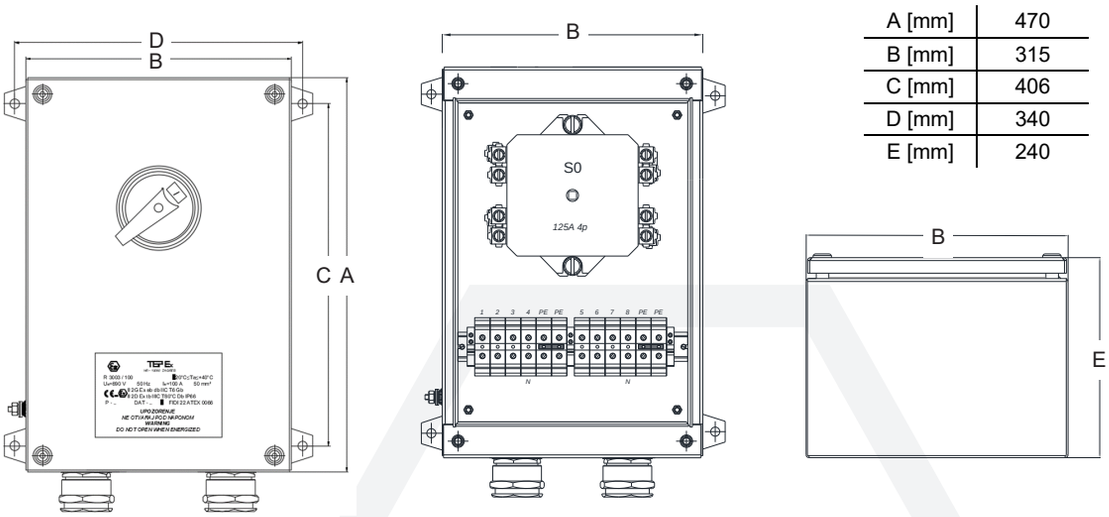
MOUNTING

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

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

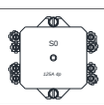
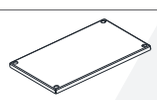
Nominal cross section of conductors / terminals (mm2)	Maximum number of terminals	Ambient temperature Ta[°C]	Imax [A]
35/35	14	-20°C ÷ +40 °C	100 A
50/50	12		

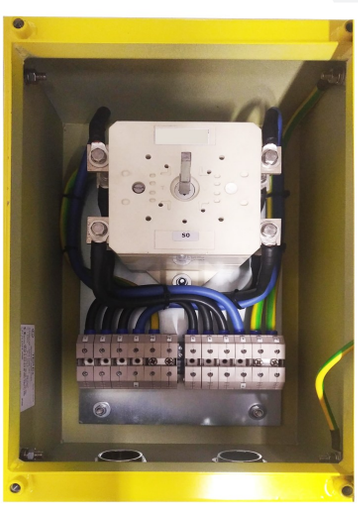
DIMENSION DRAWING (mm)



A [mm]	470
B [mm]	315
C [mm]	406
D [mm]	340
E [mm]	240

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 mm2	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.

NOTES

Grounding control device

Zone

1 21 2 22

GGCD

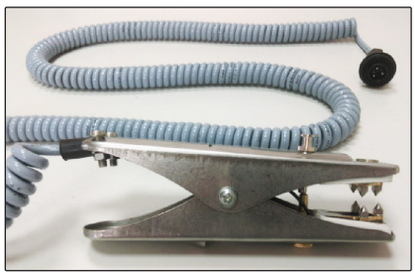
IP 66

IK08

T_a -20 +50

ATEX

- Active grounding system for static grounding and permanent monitoring
- Permanent removal of electrostatic charge during filling or emptying tanks (road tracks, 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

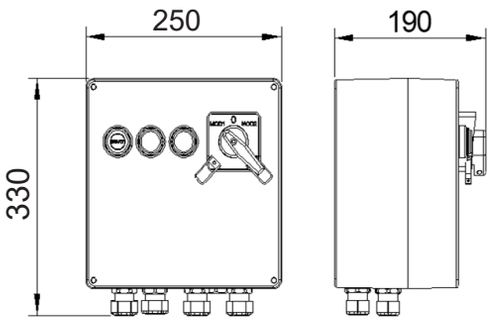
Certificate:	Ex FIDI 19 ATEX 0050
Marking:	CE 0722
Apparatus category:	II 2GD
Marking of explosion protection:	Ex Ex eb db [ib] mb IIC T5 Gb Ex tb [ib] IIIC T80C° Db
Ambient temperature:	-20ºC ≤ T_a ≤ +50ºC
Degree of protection:	IP 66
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
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

MODEL CODE

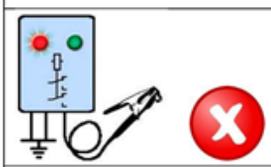
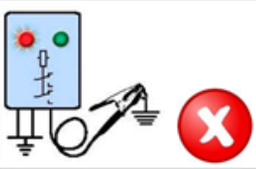
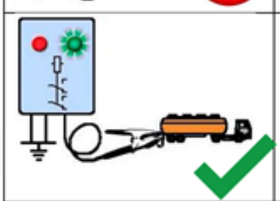
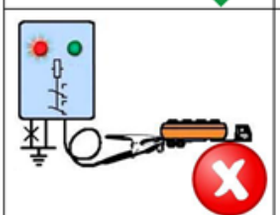
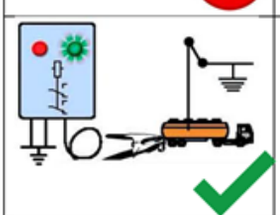
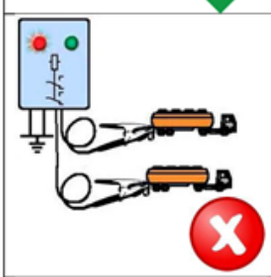
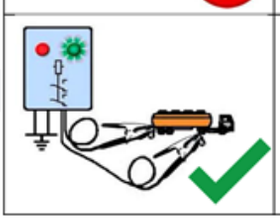
GGCD 01 / . . - .

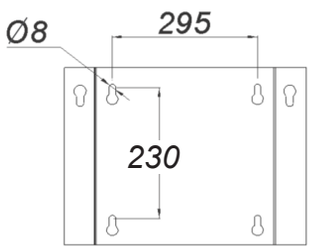
Basic product code
Product version:
K1 - type with one clamp K1, with 10 m cable*
K2 - type with two clamps K2, with 2x10 m cable*
*cables up to 50 m are available on customer's request
Nominal voltage:
1 - 24 V ± 10 % DC
2 - 230 V ± 10 % AC

DIMENSION DRAWING (mm)



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.

GGCD

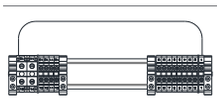
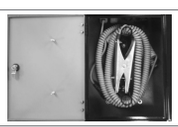
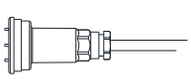
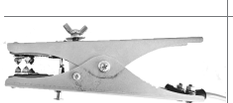
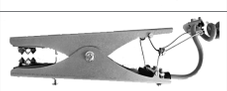
OPERATING PRINCIPLE

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	SKETCH	DESCRIPTION	CODE
	Control module GGCD 01	GGCD 01 10-110		Cable storage box	GGCD 01 10-160
	Connecting cable 0,5m with a coupler GGCD 01/K1	GGCD 01 10-120		Clamp K1 with a 10m cable and plug (for GGCD 01/K1	GGCD 01 10-140
	Connecting cable 0,5m with a coupler GGCD 01/K12	GGCD 01 10-130		Clamp K2 with a 10m cable and plug (for GGCD 01/K2	GGCD 01 10-150
	Clamp with screw for fixing to the grounding object	GGCD 01 20-110		Clamp with a metal wire for automatic release from the grounding object	GGCD 01 20-120

NOTES

Distribution cabinets
Busbar enclosures

Zone

1 21 2 22

R3002...R3006

IP 66

IK 09

T_a -20 +50

ATEX

IM2

- 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:

Indirect : via Ex eb enclosure multiwire bushing, conductor insulator

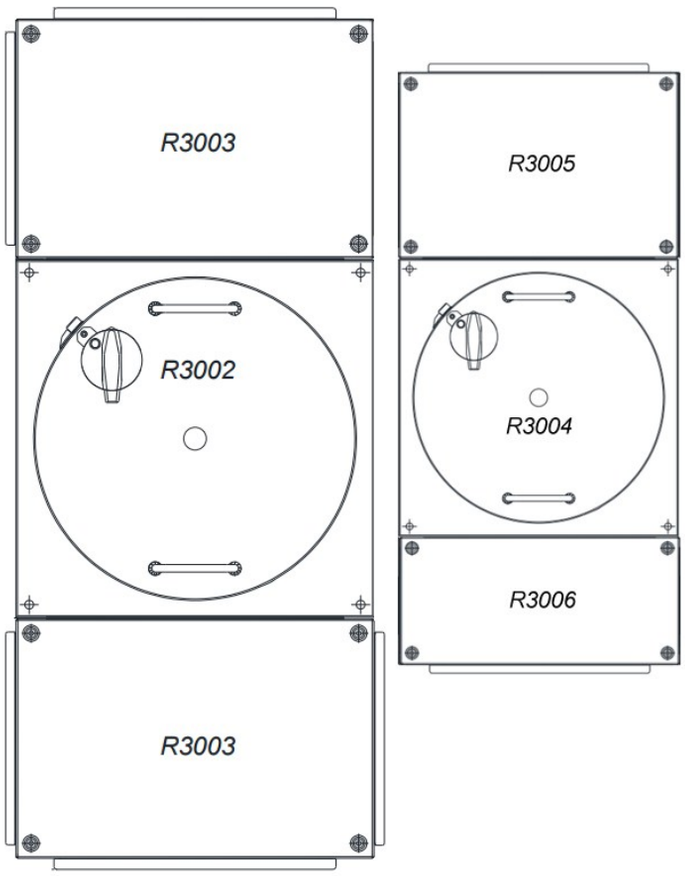
CONSTRUCTION

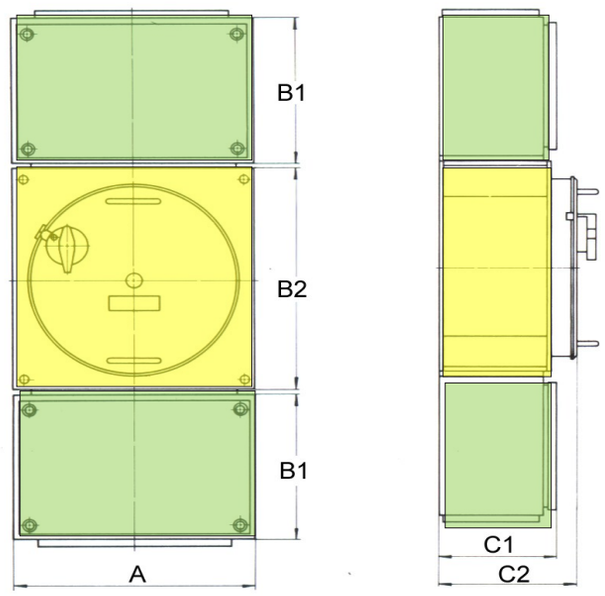
Enclosure: sheet steel (Ex db enclosure 12 mm thickness, Ex eb enclosure 3 mm thickness
Gasket: EPDM, neoprene, silicone

TECHNICAL DATA

Certificate:	FIDI 19 ATEX 0058X
Marking:	CE 0722
Apparatus category:	II 2(1)GD I M2 (M1)
Marking of explosion protection:	Ex db eb [ib] [ia Ga] ia/ib IIC T6/T5 Gb Ex tb IIIC T80°C / T90°C Db Ex db eb [ib] [ia Ma] ia/ib I Mb
Ambient temperature:	-20ºC ≤ T_a ≤ +40ºC / +50ºC
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 630 A (depends upon built-in device)
Terminal cross-section:	Up to 300 mm^2
Weight (empty enclosure): **- Enclosure R3002** **- Enclosure R3002-1** **- Enclosure R3003** **- Enclosure R3003-1** **- Enclosure R3004** **- Enclosure R3005** **- Enclosure R3006**	 76,0 kg 95,1 kg 14,0 kg 14,3 kg 42,2 kg 12,0 kg 7,0 kg
Color:	Yellow, RAL1016 (other colors on request)
Mounting types:	temporary wall-mounted free-standing (with or without protection canopy)

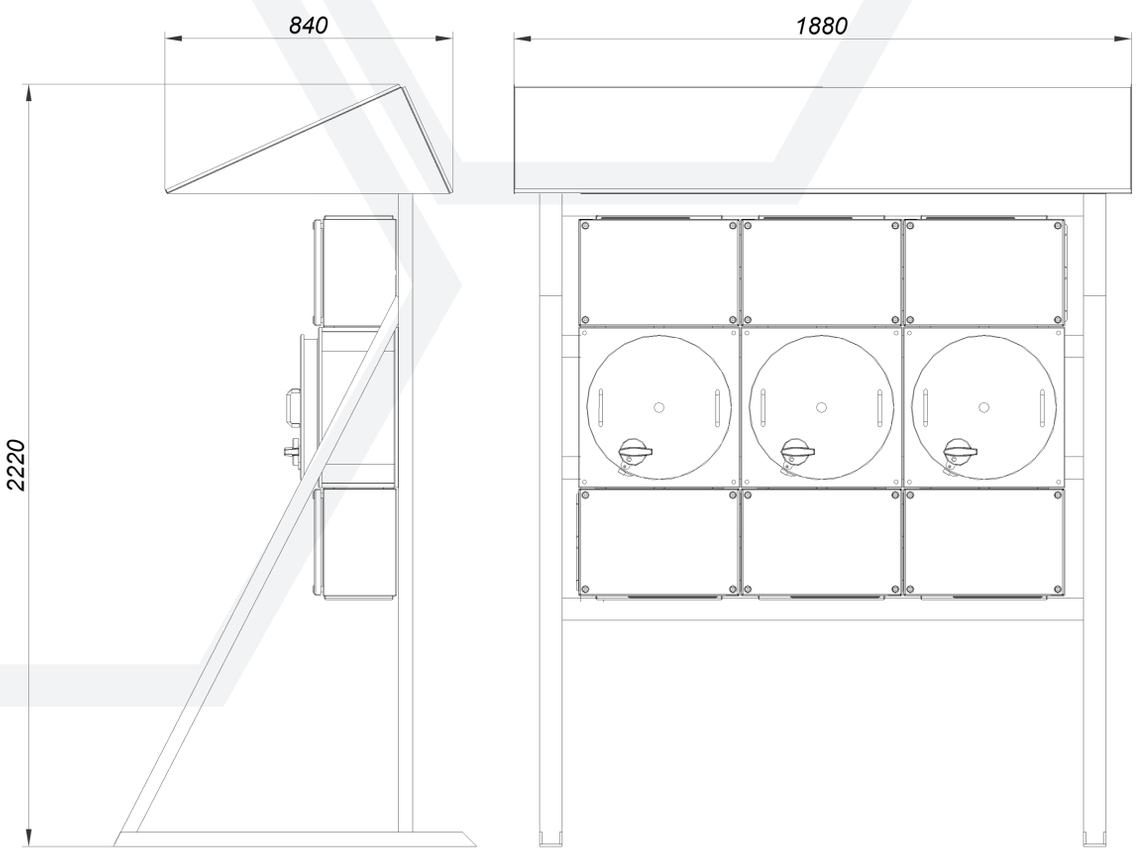
DIMENSION DRAWING (mm)





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	

Free-standing modular system with protection canopy



All technical data is relevant at the time of print.

R3002...R3006

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.

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.

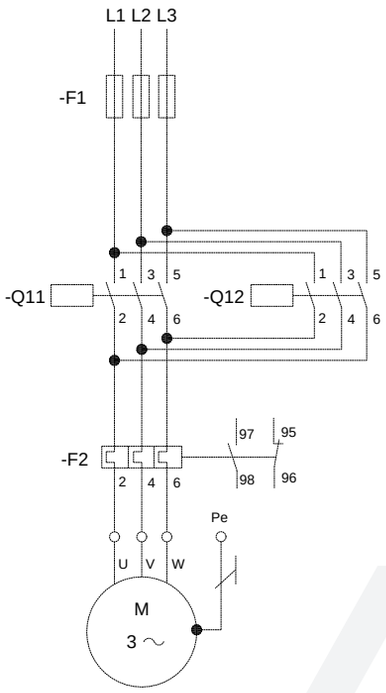
Data required for the layout of control and distribution boards

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

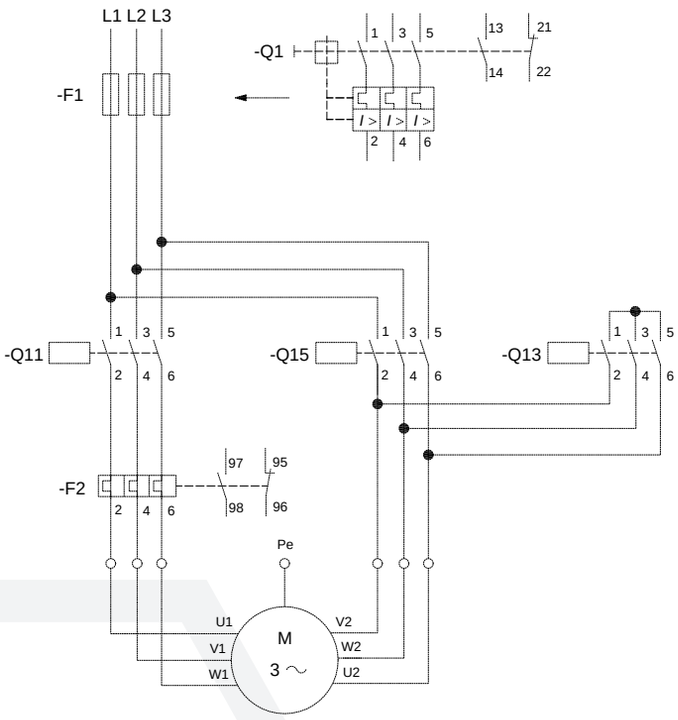
- the required minimum type of protection
- as appropriate, details of the hazardous atmosphere for which the equipment must be suitable
- single line or wiring diagram
- schematic for control systems
- operating, auxiliary and control voltages
- frequency
- power and current ratings of connected loads
- 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

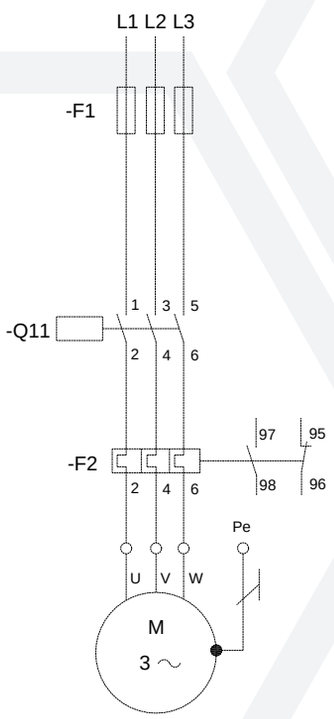
Examples of wiring diagram for distribution cabinets



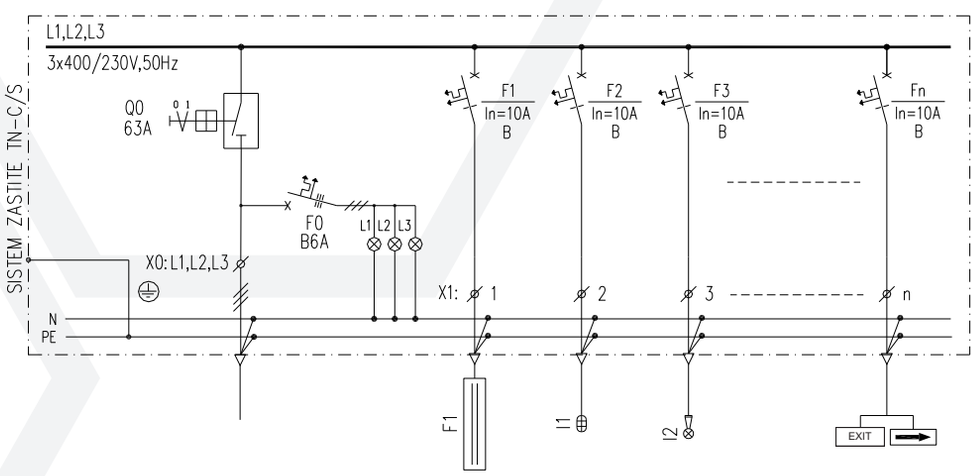
A) Direct on line start of tree phase motor; two directions of rotation



B) STAR-DELTA switching of three phase motor



C) Direct on line start of tree phase motor



D) Light fittings control panel

NOTES

Signalling devices
Plugs and sockets
Accessories

Zone

0 1 2

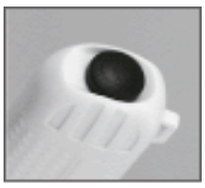
Sigma 4AA / DS-14 / 3C

LED

IP 68

-20 +40

ATEX



Push Button

LED

- For inspection and maintenance work

TECHNICAL DATA type Sigma 4AA

Apparatus category:	II 1G
Marking of explosion protection:	Ex ia IIC T4 Ga
Ambient temperature:	-20 ºC ≤ T_a ≤ +40ºC
Degree of protection:	IP 68
Luminous flux:	High: 185lm | Low: 70lm | Flashing: 180lm
Lenght of light beam:	130 m
Batterry:	4x AA type
Autonomy:	app. 14 hours
Weight:	100 g (without batterry)
Dimension:	175x45x45 mm

ATEX ZONE 0 Ex CE RoHS IEC IECEx

TECHNICAL DATA type DS-14 (headlamp)

Apparatus category:	II 1G
Marking of explosion protection:	Ex ia IIC T4 Ga
Ambient temperature:	-20 ºC ≤ T_a ≤ +40ºC
Degree of protection:	IP 67
Luminous flux:	75 lm / low mode , 215 lm / High mode
Lenght of light beam:	75 m / 100 m
Batterry:	3x AAA type
Autonomy:	app. 4 hours
Weight:	145 g (without batterry)
Dimension:	80x50x45 mm

ATEX ZONE 0 | Ex | CE | RoHS | IEC | IECEx

TECHNICAL DATA type SA-SIGMA-3C

Apparatus category:	II 1G
Marking of explosion protection:	Ex ia IIC T4 Ga
Ambient temperature:	-20 ºC ≤ T_a ≤ +40ºC
Degree of protection:	IP 68
Luminous flux:	57 / 150 lm
Lenght of light beam:	154 / 248 m
Batterry:	3x C type
Autonomy:	app. 42 / 70 hours
Weight:	190 g (without batterry)
Dimension:	220x60x85 mm

12 Ø5 LEDs

Push Button

All technical data is relevant at the time of print.

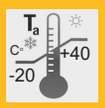
Zone

0 1 2

DF2001 / SIGMA RA

LED

IP 54



ATEX

- For inspection and maintenance work
- DF 2001 is a re-chargeable flash-light which de-signed with ergo-nomics pistol grip for comfortable hold and lithium ion battery allows the flashlight to run for 9 hours of con-tinuous use on high mode.

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

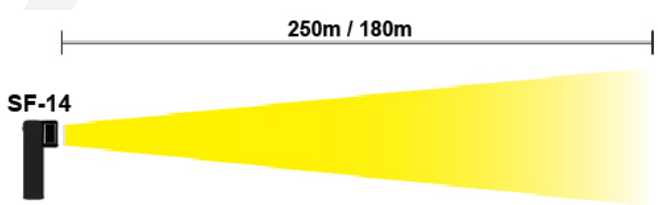
Apparatus category:	II 1G I M1
Marking of explosion protection:	Ex ia op is IIC T4 Ga I M1 Ex ia op is I Ma
Ambient temperature:	-20 ºC ≤ T_a ≤ +40ºC
Degree of protection:	IP 54
Mode:	High/ Middle/ Low/Off
Light Output :	(H)222 lm / (M)69 lm / (L)11 lm
Lenght of light beam:	(H)270 m / (M)240 m / (L)110 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

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 SIGMA RA

Apparatus category:	II 1G I M1
Marking of explosion protection:	Ex ia IIC T4 Ga Ex ia I Ma
Ambient temperature:	-20 ºC ≤ T_a ≤ +40ºC
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
Batterry:	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.

Zone

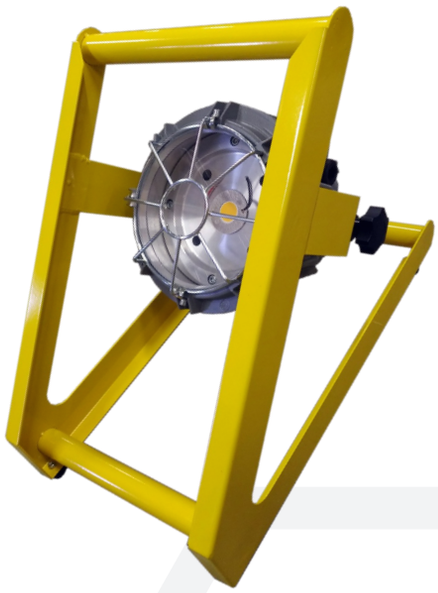
1 2 21 22

PLFS 50 LED PR

LED IP 66

T_a -40 +40

ATEX



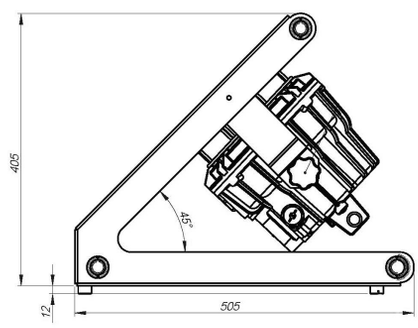
- High color rendering index CRI 80
- Estimated service life 50 000 hours
- With OVP, OCP, OTP protection
- Autonomous reactivation after recovery
- Junction box, connection cable (20 m, 50 m), Ex socket/plug (on request)

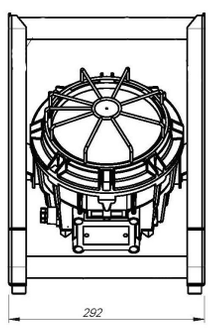
CONSTRUCTION

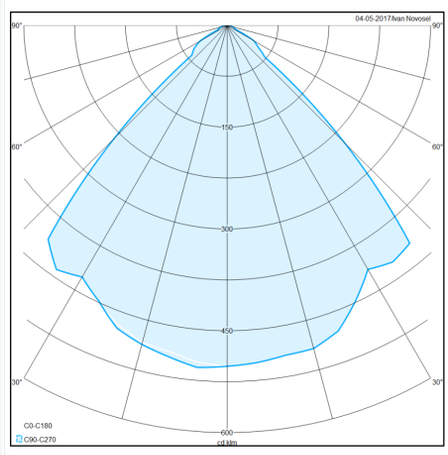
Enclosure: aluminium painted casting
Diffuser: borosilicate glass,
Accessories: protected galvanized steel grid
Gasket: silicon

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:	-40ºC ≤ T_a ≤ +40ºC
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







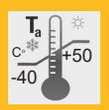
make your work surroundings safer

Zone

1 2 21 22

MDS

IP 66



ATEX

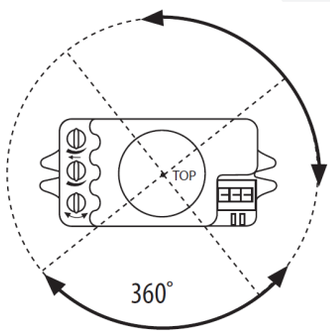
- Controlling lighting installations
- High frequency motion sensor
- Adjustable on- off time
- The motion sensor, which features an 8 m beam width, a total switching load of 1200 W
- Maximum horizontal angle of operation of the motion sensor – 360°
- Capability to set the light intensity of the environment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

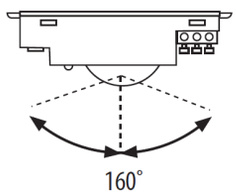
CONSTRUCTION

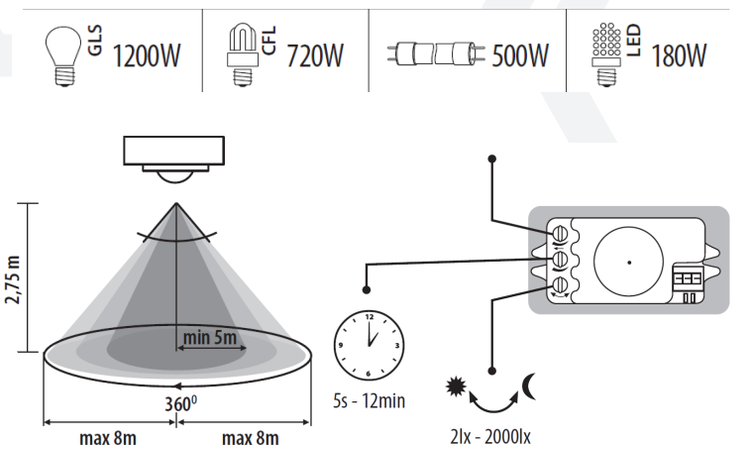
Enclosure: aluminium painted casting
Diffuser: borosilicate glass,
Gasket: silicon

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:	-40ºC ≤ T_a ≤ +50ºC
Degree of protection:	IP 66
Resistance to shock:	IK 08
Protection class :	I (protective earthing)
Rated voltage:	220-240 VAC
Frequency:	50 / 60 Hz







make your work surroundings safer

Zone

1 21 2 22

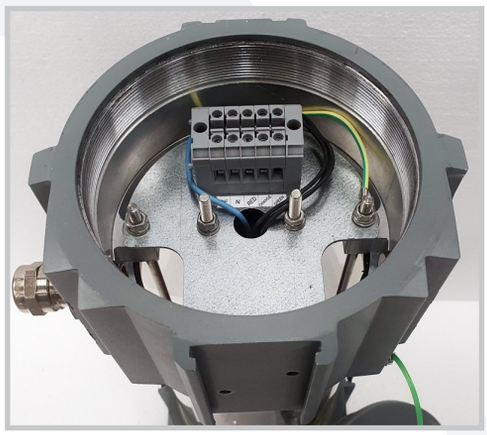
FLXS 118 LED

LED | IP 66

IK08 | T_a -20 +50

ATEX

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



CONSTRUCTION

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

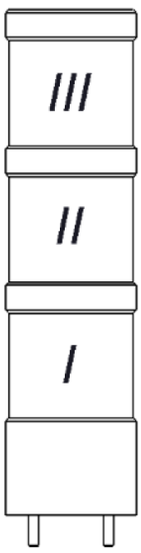
TECHNICAL DATA

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:	-20ºC ≤ T_a ≤ +50ºC
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 . . / .

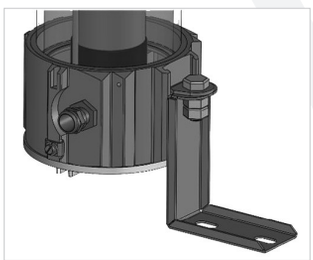
- Basic marking code:
- Rated voltage:
  - 1 – 24 V AC/DC
  - 2 - 110-120 V AC
  - 3 - 230-240 V AC
- LED modules 1-3
  - R - red LED module
  - O - orange LED module
  - G - green LED module
- Light type
  - S - steady light
  - F - flashlight



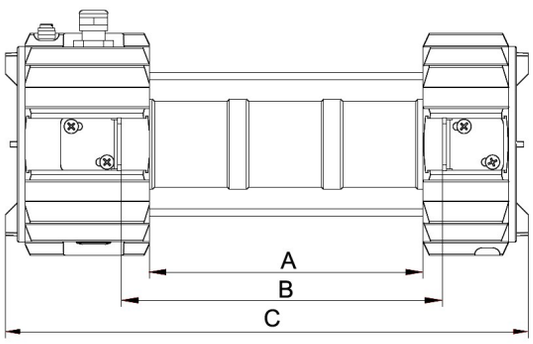
MOUNTING

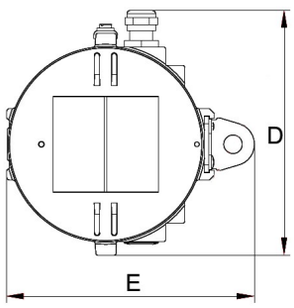
Pendant, on pipe, wall, ceiling mounting . Operates in any position.





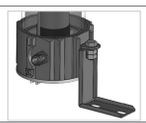
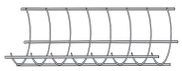
DIMENSION DRAWING (mm)





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.

Zone

1 21 2 22

T0251/T0252/T0253/T0254

IP 66

IK 10

T_a -40 +55

ATEX

- 16 A to 125 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

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 25 ATEX 0011X
Marking:	CE 0722
Apparatus category:	II 2GD
Marking of explosion protection:	Ex db eb IIC T6…T5 Gb Ex tb IIIC T80°C… T95°C Db Ex db eb IIC Gb Ex tb IIIC Db
Ambient temperature:	-40°C ≤ T_{amb} ≤ +45°C/+55°C
Degree of protection:	IP 66
Impact resistance:	IK10
Cable entries:	Wall type socket: 1xM25/M32 cable gland Coupler type socket: cable diameter 8-18.5 mm Plug: cable diameter 8-18.5 mm

Wall socket

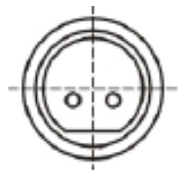
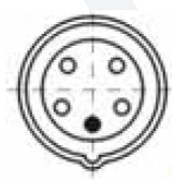
Coupler socket

Panel socket

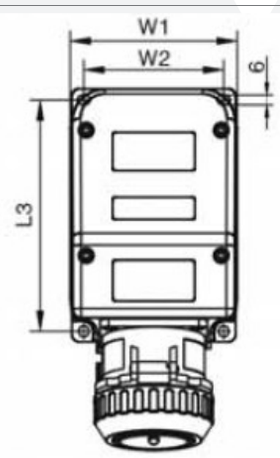
Plug

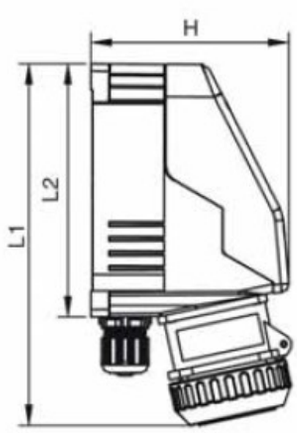
Plug with protective cover

MODEL CODE T0251 16A 2P/3P/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
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
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

DIMENSION type T0251 / 16 A

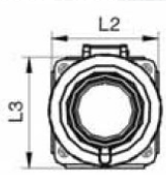


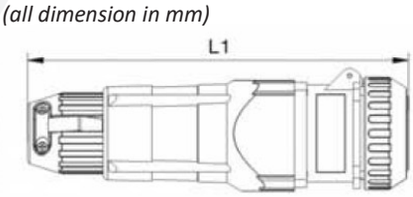


WALL SOCKET (all dimension in mm)

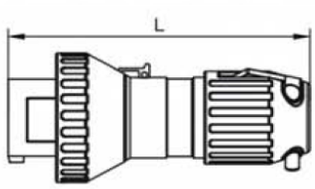
Poles	W1	W1	L1	L2	L3	H
2P/3P	103	86	223	156	142	122
4P/5P	123	106	241	176	163	147

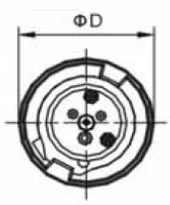
COUPLER SOCKET (all dimension in mm)





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
5P	84	187

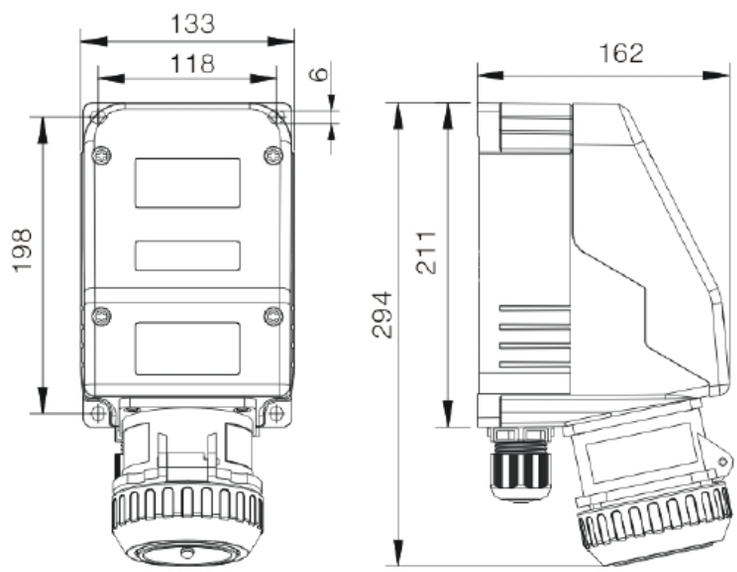
All technical data is relevant at the time of print.

T0251/T0252/T0253/T0254

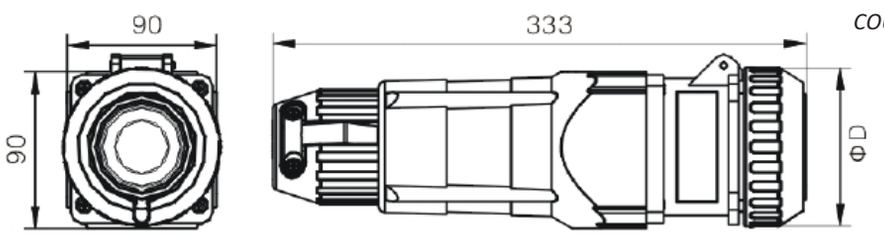
MODEL CODE T0252 32A 4P/5P

380-415 V 32A 4P		
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
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

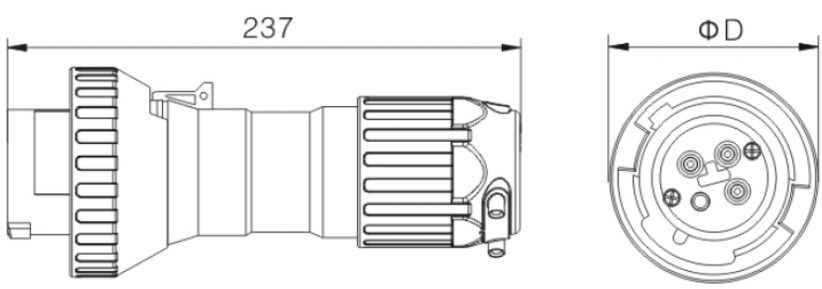
DIMENSION type T0252 / 32 A



WALL SOCKET (all dimension in mm)



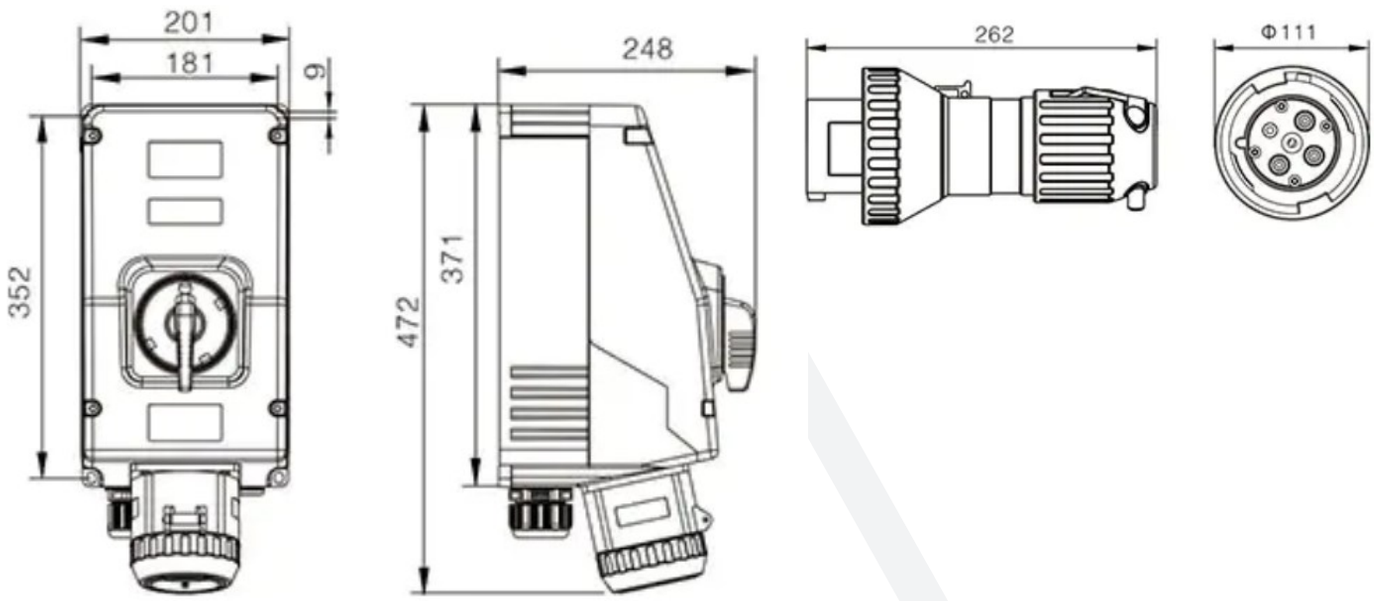
COUPLER SOCKET (all dimension in mm)



PLUG (all dimension in mm)
D 4P - ϕ96mm
D 5P - ϕ101mm

MODEL CODE T0253 63A 4P/5P

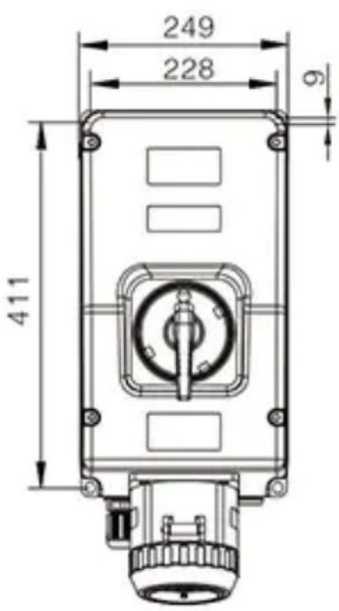
DESCRIPTION	PIN configuration	ORDER CODE
380-415V 63A 5P		
Wall socket		R-5P-63A-415V
Plug		P-5P-63A-415V

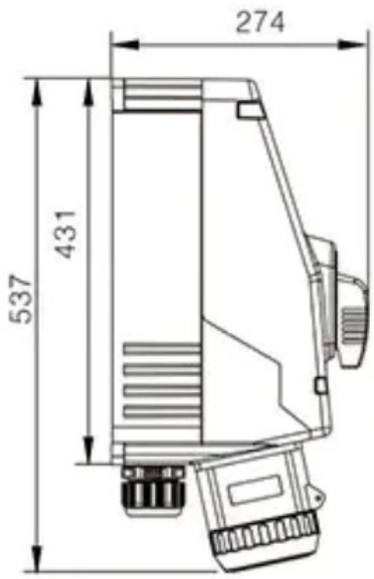


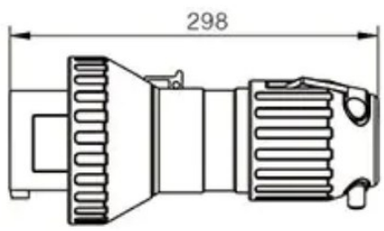
T0251/T0252/T0253/T0254

MODEL CODE T0254 125A 5P

DESCRIPTION	PIN configuration	ORDER CODE
380-415V 125A 5P		
Wall socket		R-5P-125A-415V
Plug		P-5P-125A-415V








WARNING
DO NOT OPEN WHEN ENERGIZED


WARNING
DO NOT OPEN WHEN ENERGIZED

Zone

1 2

RSM

IK 08

-50 +120

IECEx ATEX

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

CONSTRUCTION

Brass body (SS AISI 316 on special request)

TECHNICAL DATA

Certificate:	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:	-50ºC ≤ $T_{service}$ ≤ +120ºC
Rated voltage U_o / U: :	400/1000 VAC
Rated current I_e:	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	
RSM 31	12 x 1,5 mm^2				
RSM 33	6 x 2,5 mm^2			110	3x440 + 3x310
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		
RSM 51	6 x 16 mm^2	M42x1,5-6g/18	OK 46 / 30	150	480
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		
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

Zone

1 21 2 22

Cable glands

IP 68

Ta -35 +90

ATEX

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

PLASTIC CABLE GLANDS Exe

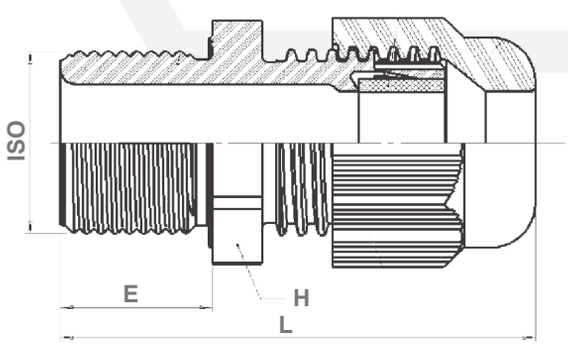
Polyamide body / neoprene gasket

TECHNICAL DATA

Apparatus category:	II 2GD
Marking of explosion protection:	Ex eb, Ex i
Ambient temperature:	-35 ºC ≤ T_{amb} ≤ +95ºC
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



METAL Ex d/e CABLE GLANDS
(double sealing, for armoured cable) type 4F / type 1F for non-armoured cable

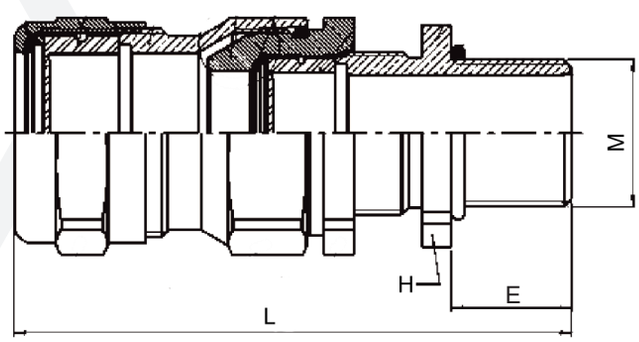
Brass nickel plated (AISI 316 on special request)

TECHNICAL DATA

Apparatus category:	II 2GD
Marking of explosion protection:	Ex db/eb
Ambient temperature:	-40 ºC ≤ T_{amb} ≤ +95ºC
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.

NOTES

NOTES

NOTES

Financira
Europska unija

Printed in the Republic of Croatia, February 2026, TEPEx d.o.o.

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