



Linear LED svjetiljka

SIF 60 LED

Linear LED sigurnosna svjetiljka

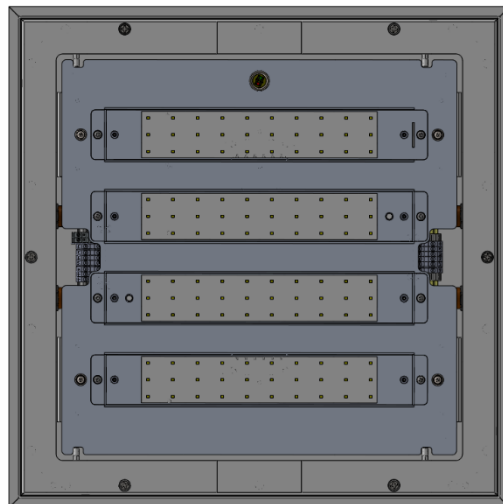
SIF 60 LED/E

Linear LED light fitting

SIF 60 LED

Emergency linear light fitting

SIF 60 LED/E



Upute za uporabu

User manual



UPOZORENJE!

Upute za uporabu sadrže osnovne informacije o proizvodu. Montaža, instaliranje, uporaba i održavanje trebaju biti izvedeni prema ovim uputama kako bi bio osiguran siguran rad unutar nazivnih karakteristika. Ove Upute nadopunjuju nacionalni Pravilnici i norme. Odgovorna osoba korisnika je dužna osigurati njihovo provođenje. Neprovođenje može umanjiti protueksplozijsku zaštitu uređaja i dovesti u opasnost ljude, imovinu i okoliš. Svako neispravno i nedozvoljeno postupanje kao i nepoštivanje odredbi ovih Uputa isključuje svaku odgovornost proizvođača.

Prije ugradnje/puštanja u pogon:

- Pažljivo pročitati cijelu Uputu za uporabu,
- Izvršiti odgovarajuću obuku odgovornog osoblja,
- Provjeriti da je sadržaj ove Upute u potpunosti razumljiv odgovornim osobama,
- Uvjeriti se da su primijenjeni svi zahtjevi nacionalnih Pravilnika i posebne sigurnosne mjere ukoliko postoje.

U slučaju nejasnoća:

- Kontaktirati proizvođača.

Tijekom pogona:

- Osigurati da ove Upute za uporabu i druge radne upute korisnika budu vidljivo istaknute i dostupne odgovornom osoblju cijelo vrijeme,
- Provjeravati provođenje ovih Uputa i svih drugih sigurnosnih uputa korisnika.



WARNING!

The user manual contains basic information about the product. Mounting, installation, usage and maintenance should be carried out under this user manual to provide and ensure safe operation within the nominal characteristics. This user manual complement national Regulation and Standards. The responsible person shall ensure their implementation. Failure off implement this user manual can reduce explosion protection and endanger people, property and the environment. Any improper and illegal actions as well as non-compliance with the provisions of this user manual excludes all responsibility by manufacturer side.

Before installation/commissioning:

- Carefully read all instructions,
- Execute proper training of responsible personnel,
- Check that the contents of these instructions is fully understandable by the responsible personnel,
- Make sure that all the requirements and national Regulations as well as all special security measures are applied.

In lack of understanding:

- Contact the manufacturer.

During operation:

- Ensure that this user manual and other work instructions are available to the responsible staff at all times,
- Check the implementation of these instructions and all other safety user's instructions

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1. NAMJENA

Protueksplozijski zaštićene linear LED svjetiljke SIF 60 LED namijenjene su za opću rasvjetu, a linear LED svjetiljke u slučaju opasnosti SIF 60 LED/E za opću rasvjetu i rasvjetu u slučaju opasnosti (sigurnosna i nadomjesna) u industrijskim prostorima na mjestima s potencijalno eksplozivnom atmosferom plinova, para i prašine u zonama opasnosti 1, 2, 21, 22 sukladno normama EN 60079-10-1 i EN 60079-10-2.

2. SUKLADNOST PROIZVODA

Proizvod je sukladan Pravilniku o opremi i zaštitnim sustavima namijenjenim za uporabu u potencijalno eksplozivnim atmosferama, NN br. 33/16.

Proizvod je sukladan normama:

- EN IEC 60079-0:2018,
- EN 60079-1:2014,
- EN IEC 60079-7:2015/A1:2018,
- EN 60079-18:2015/A1:2017,
- EN 60079-31:2014.

Proizvod je razvijen, proizveden i ispitan prema postojećem stanju tehnike, sukladno normama EN ISO 9001, EN ISO 80079-34 i EN ISO 14001.

Proizvod je sukladan ATEX Direktivi 2014/34/EU.

Proizvod je sukladan LVD Direktivi 2014/35/EU.

Proizvod je sukladan RoHS Direktivi 2011/65/EU.

Proizvod je sukladan EMC Direktivi 2014/30/EU.

3. STUPANJ ZAŠTITE I TEHNIČKI PODACI

Linear LED svjetiljka SIF 60 LED

Certifikat:	FIDI 24 ATEX 0013
Oznaka kategorije i protueksplozijske zaštite uređaja:	  II 2G Ex db eb mb IIC T6 Gb II 2D Ex tb IIIC T80°C Db
Temperatura okoline:	-20°C ≤ T _a ≤ +40°C
Mehanička zaštita:	IP66
Otpornost na udar:	IK 08
Klasa zaštite:	I (PE - zaštitno uzemljenje)
Nazivni napon Un:	110 - 230 V AC; 50/60 Hz
Nazivna snaga:	SIF 60 LED / 1 – Pin = 52W SIF 60 LED / 2 – Pin = 70W

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1. PURPOSE

Explosion proof linear LED light fittings type SIF 60 LED are intended for general lighting and emergency linear LED light fitting SIF 60 LED/E are intended for emergency and general lighting in industrial areas with potentially explosive atmosphere in Zones 1, 2, 21, 22 according to EN 60079-10-1 and EN 60079-10-2.

2. PRODUCT COMPLIANCE

The product complies with the standards:

- EN IEC 60079-0:2018,
- EN 60079-1:2014,
- EN IEC 60079-7:2015/A1:2018,
- EN 60079-18:2015/A1:2017,
- EN 60079-31:2014.

The product has been developed, manufactured and tested according to the existing state of technique accordance with the standards EN ISO 9001, EN ISO 80079-34 and EN ISO 14001.

The product is in compliance with the ATEX Directive 2014/34/EU.

The product is in compliance with the LVD Directive 2014/35/EU.

The product is in compliance with the RoHS Directive 2011/65/EU.

The product is in compliance with the EMC Directive 2014/30/EU.

3. DEGREE OF PROTECTION AND TECHNICAL DATA

Linear LED light fitting SIF 60 LED

Certificate:	FIDI 24 ATEX 0013
Category and explosion protection:	  II 2G Ex db eb mb IIC T6 Gb II 2D Ex tb IIIC T80°C Db
Ambient temperature:	-20°C ≤ T _a ≤ +40°C
Mechanical protection:	IP66
Resistance to shock:	IK 08
Class of protection:	I (PE – protective earthing)
Rated voltage Un:	110 - 230 V AC; 50/60 Hz
Rated wattage:	SIF 60 LED / 1 – Pin = 52W SIF 60 LED / 2 – Pin = 70W

Svjetlosni tok LED modula na $T_{amb} = 20^{\circ}\text{C}$	SIF 60 LED/1 – 6367 lm SIF 60 LED/2 – 8570 lm												
Svjetlosni tok svjetiljke na $T_{amb}=20^{\circ}\text{C}$	SIF 60 LED/1 – 4220 lm SIF 60 LED/2 – 5681 lm												
Koeficijent izlaznog svjetlosnog toka svjetiljke:	0,66												
Efikasnost LED modula:	122 lm/W												
Efikasnost svjetiljke:	81 lm/W												
Maksimalan broj svjetiljaka (kom.) po jednom automatskom instalacijskom prekidaču:	<table><tr><th colspan="4">Automatski instalacijski prekidač</th></tr><tr><th>1p B 10A</th><th>1p C 10A</th><th>1p B 16A</th><th>1p C 16A</th></tr><tr><td>14</td><td>18</td><td>18</td><td>23</td></tr></table>	Automatski instalacijski prekidač				1p B 10A	1p C 10A	1p B 16A	1p C 16A	14	18	18	23
Automatski instalacijski prekidač													
1p B 10A	1p C 10A	1p B 16A	1p C 16A										
14	18	18	23										
Nazivna životna dob L70B10C10:	$T_{amb\ max} - 35,000\text{h}$ $T_{amb\ max} - 10^{\circ}\text{C} - 60,000\text{h}$ $T_{amb\ max} - 20^{\circ}\text{C} - 70,000\text{h}$												
Temperatura boje:	4000K (6500K na zahtjev)												
Stupanj reprodukcije boja (CRI):	80												
LED strip:	LLE 55x280 mm, 2000 lm 830 LV ADV5, Tridonic GmbH												
LED driver:	ELG-75-C500A, MeanWell												
Faktor snage:	$\lambda=0,95$												
Kabelski uvodi:	- Četiri uvida $\varnothing 25,5$ sukladno EN 62444 s ugrađene dvije uvodnice ISO 25, Ex eb M25 x 1,5 i dva čepa ISO 25, Ex eb M25 x 1,5 - za grupu većega nazivnog promjera kabela potrebno je ukloniti unutarnji brtveni prsten   Koristiti brtveni prsten 1. i 2. za kabele vanjskog promjera $\varnothing 7-10\text{mm}$  Koristiti brtveni prsten 1. za kabele vanjskog promjera $\varnothing 10-15\text{mm}$												
Priključne stezaljke:	5 x max. 4 mm ²												
Prolazno ožičenje:	5 x 2,5 mm ² 10A ≤ Prolazno ožičenje ≤ 16A za $T_{amb}=40^{\circ}\text{C}$												
Kućište:	varena čelična konstrukcija, dvoslojno plastificirana epoksidnim prahom RAL 9000												
Staklo:	borosilikatno ravno kaljeno staklo 6 mm												
Nazivni momenti pritezanja:	pritisne matice uvodnice – 2,5 Nm tijela uvodnice u kućište – 3,5 Nm čepa u kućište – 4 Nm vijak priključne stezaljke – 0,5 Nm												
Duljina skidanja izolacije s priključnih vodiča:	9 mm												
Osnovne mjere:	600 x 600 x 155 mm (D x Š x V)												
Masa:	Cca. 18,5 kg												

Linear LED sigurnosna svjetiljka SIF 60 LED/E

Certifikat:	FIDI 24 ATEX 0013
Oznaka kategorije i protueksplozijske zaštite uređaja:	  II 2G Ex db eb mb IIC T6 Gb II 2D Ex tb IIIC T80°C Db
Temperatura okoline:	$-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$
Mehanička zaštita:	IP66
Otpornost na udar:	IK 08
Klasa zaštite:	I (PE - zaštitno uzemljenje)
Nazivni napon U_n :	230V AC, 50Hz
Nazivna snaga u mrežnom radu:	$P_{in} = 56\text{ W}$
Nazivna snaga u baterijskom radu:	$P_{out} = 8\text{ W}$

Luminous flux LED module $T_{amb}=20^{\circ}\text{C}$	SIF 60 LED/1 – 6367 lm SIF 60 LED/2 – 8570 lm															
Luminous flux light fitting $T_{amb}=20^{\circ}\text{C}$	SIF 60 LED/1 – 4220 lm SIF 60 LED/2 – 5681 lm															
Light output ratio of luminaire:	0,66															
LED modul efficacy:	122 lm/W															
System efficacy:	81 lm/W															
Maximum number of lamps (pieces) per one automatic circuit breaker:	<table><tr><th colspan="4">Automatic circuit breaker</th></tr><tr><th>1p B 10A</th><th>1p C 10A</th><th>1p B 16A</th><th>1p C 16A</th></tr><tr><td>14</td><td>18</td><td>18</td><td>23</td></tr></table>				Automatic circuit breaker				1p B 10A	1p C 10A	1p B 16A	1p C 16A	14	18	18	23
Automatic circuit breaker																
1p B 10A	1p C 10A	1p B 16A	1p C 16A													
14	18	18	23													
Estimated service life L70B10C10	$T_{amb\ max} - 35,000\text{h}$ $T_{amb\ max} - 10^{\circ}\text{C} - 60,000\text{h}$ $T_{amb\ max} - 20^{\circ}\text{C} - 70,000\text{h}$															
Corrected color temperature (CCT):	4000K (6500K on request)															
The color rendering index (CRI):	80															
LED strip:	LLE 55x280 mm, 2000 lm 830 LV ADV5, Tridonic GmbH															
LED driver:	ELG-75-C500A, MeanWell															
Power factor:	$\lambda=0,95$															
Cable entry:	- Four entry's $\varnothing 25.5$ in accordance with EN 62444 with two installed cable glands ISO 25, Ex eb M25 x 1.5 and two plugs ISO 25, Ex eb M25 x 1.5 - for a group with a larger nominal cable diameter, it is necessary to remove the inner sealing ring   Use sealing ring 1. and 2. for cable diameters $\varnothing 7-10\text{mm}$  Use sealing ring 1. for cable diameters $\varnothing 10-15\text{mm}$															
Connection terminals:	5 x max. 4 mm ²															
Through wiring:	5 x 2,5 mm ² 10A ≤ Through wiring ≤ 16A for $T_{amb}=40^{\circ}\text{C}$															
Housing:	Welded steel structure, two-layer plasticized with epoxy powder, RAL 9000															
Glass	borosilicate flat tempered glass 6 mm															
Tightening torque:	pressure screw – 2,5 Nm intermediate gland and plug – 3,5 Nm plug in housing – 4 Nm screw terminals – 0,5 Nm															
Isolation stripping length of the wires:	9mm															
Dimension:	600 x 600 x 155 mm (L x W x H)															
Weight:	Ca.18,5 kg															

Linear LED emergency light fitting SIF 60 LED/E

Certificate:	FIDI 24 ATEX 0013
Category and explosion protection:	  II 2G Ex db eb mb IIC T6 Gb II 2D Ex tb IIIC T80°C Db
Ambient temperature:	$-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$
Mechanical protection:	IP66
Resistance to shock:	IK 08
Class of protection:	I (PE – protective earthing)
Rated voltage U_n :	230 V AC, 50 Hz
Rated power in mains operation mode:	$P_{in} = 56\text{ W}$
Rated power in battery operation mode:	$P_{out} = 8\text{ W}$

Svjetlosni tok LED modula na T _{amb} = 20°C	6856 lm														
Svjetlosni tok svjetiljke na T _{amb} = 20°C	4545 lm														
Koeficijent izlaznog svjetlosnog toka svjetiljke:	0,66														
Efikasnost LED modula:	122 lm/W														
Efikasnost svjetiljke:	81 lm/W														
Nazivna životna dob L70B10C10:	T _a ≤ 20°C > 130 000 h	T _a ≤ 30°C 100 000 h	T _a ≤ 40°C 50 000 h												
Temperatura boje:	4000K (6500K na zahtjev)														
Stupanj reprodukcije boja (CRI):	80														
Faktor snage:	λ=0,95														
LED strip:	LLE 55x280 mm, 2000 lm 830 LV ADV5, Tridonic GmbH														
LED driver:	Luxtronic Emergency lighting unit, Hadler GmbH														
Baterijski zaštitni modul BSM 01	Zaštita od druge greške														
Baterija:	Ni-Mh Saft VHT D, 6V 10Ah ugrađena u svjetiljku, mikroprocesorski upravljano punjenje, pražnjenje i nadzor baterije														
Nazivna autonomija:	3 sata pri -10°C ≤ T _a ≤ +40°C														
Napon prelaska s mrežnog na baterijsko napajanje:	U < 0,8 U _N u trajanju više od 0,5 s														
Napon prelaska s baterijskog na mrežno napajanje:	U > 0,9 U _N u trajanju više od 1 s														
Režim punjenja:	Standardno punjenje: 400 mA Trickle charge: 170 mA Uvjet punjenja: -10°C ≤ T _a ≤ +40°C														
Režim pražnjenja:	Struja pražnjenja: 2 A pri naponu baterije 6 V Min. napon pražnjenja: 4,8 V Uvjet pražnjenja: -10°C ≤ T _a ≤ +40°C														
Maksimalan broj svjetiljaka (kom.) po jednom automatskom instalacijskom prekidaču:	<table><tr><th colspan="4">Automatski instalacijski prekidač</th></tr><tr><th>1p B 10A</th><th>1p C 10A</th><th>1p B 16A</th><th>1p C 16A</th></tr><tr><td>14</td><td>18</td><td>18</td><td>23</td></tr></table>			Automatski instalacijski prekidač				1p B 10A	1p C 10A	1p B 16A	1p C 16A	14	18	18	23
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Kabelski uvodi:	- Četiri uvida Ø25,5 sukladno EN 62444 s ugrađene dvije uvodnice ISO 25, Ex eb M25 x 1,5 i dva čepa ISO 25, Ex eb M25 x 1,5 - za grupu većega nazivnog promjera kabla potrebno je ukloniti unutarnji brtveni prsten   Koristiti brtveni prsten 1. i 2. za kabele vanjskog promjera Ø7-10mm  Koristiti brtveni prsten 1. za kabele vanjskog promjera Ø 10-15mm														
Priključne stezaljke:	8 x max. 4 mm ²														
Prolazno ožičenje:	5 x 2,5 mm ² Prolazno ožičenje ≤ 10 A														
Kućište:	varena čelična konstrukcija, dvoslojno plastificirana epoksidnim prahom														
Staklo:	borosilikatno ravno kaljeno staklo 6 mm														
Nazivni momenti pritezanja:	pritisne matice uvodnice – 2,5 Nm tijela uvodnice u kućište – 3,5 Nm čepa u kućište – 4 Nm vijak priključne stezaljke – 0,5 Nm														
Duljina skidanja izolacije s priključnih vodiča:	9 mm														
Osnovne mjere:	600 x 600 x 160 mm (D x Š x V)														
Masa:	Cca. 20 kg														

Luminous flux LED module T _{amb} =20°C	6856 lm														
Luminous flux light fitting T _{amb} =20°C	4545 lm														
Light output ratio of luminaire:	0,66														
LED modul efficacy:	122 lm/W														
System efficacy:	81 lm/W														
Estimated service life L70B10C10	T _a ≤ 20°C > 130 000 h	T _a ≤ 30°C 100 000 h	T _a ≤ 40°C 50 000 h												
Corrected color temperature (CCT):	4000K (6500K on request)														
The color rendering indeks (CRI):	80														
Power factor:	λ=0,95														
LED strip:	LLE 55x280 mm, 2000 lm 830 LV ADV5, Tridonic GmbH														
LED driver:	Luxtronic Emergency lighting unit, Hadler GmbH														
Battery security module BSM 01	Protection from second faults														
Battery:	Ni-Mh Saft VHT D, 6V 10Ah built-in lighting, microprocessor controlled charging, discharging and battery monitoring														
Rated autonomy:	3 hours at -10°C ≤ T _a ≤ +40°C														
Charge-over battery operation:	U < 0,8 U _N for more than 0,5 s														
Charge-over mains supply operation:	U > 0,9 U _N for more than 1 s														
Charge mode:	Standard charge: 400 mA Trickle charge: 170 mA Condition charge: -10°C ≤ T _a ≤ +40°C														
Discharge mode:	Discharge current: 2 A at battery voltage 6 V Min. charge voltage: 4,8 V Condition charge: -10°C ≤ T _a ≤ +40°C														
Maximum number of lamps (pieces) per one automatic circuit breaker:	<table><tr><th colspan="4">Automatic circuit breaker</th></tr><tr><th>1p B 10A</th><th>1p C 10A</th><th>1p B 16A</th><th>1p C 16A</th></tr><tr><td>14</td><td>18</td><td>18</td><td>23</td></tr></table>			Automatic circuit breaker				1p B 10A	1p C 10A	1p B 16A	1p C 16A	14	18	18	23
Automatic circuit breaker															
1p B 10A	1p C 10A	1p B 16A	1p C 16A												
14	18	18	23												
Cable entry:	- Four entry's Ø25.5 in acc. with EN 62444 with two installed cable glands ISO 25, Ex eb M25 x 1.5 and two plugs ISO 25, Ex eb M25 x 1.5 - for a group with a larger nominal cable diameter, it is necessary to remove the inner sealing ring   Use sealing ring 1. and 2. for cable diameters Ø 7-10mm  Use sealing ring 1. for cable diameters Ø 10-15mm														
Connection terminal:	8 x max. 4 mm ²														
Throught wiring:	5 x 2,5 mm ² Throught wiring: ≤ 10 A														
Housing:	welded steel structure, two-layer plasticized with epoxy powder														
Glass:	borosilicate flat tempered glass 6 mm														
Tightening torque:	pressure screw – 2,5 Nm intermediate gland and plug – 3,5 Nm plug in housing – 4 Nm screw terminals – 0,5 Nm														
Isolation stripping length of the wires:	9 mm														
Dimension:	600 x 600 x 160 mm (L x W x H)														
Weight:	Ca. 20 kg														

4. TIPNA OZNAKA

Svjetiljka LED, tip SIF 60 LED/1 - P = 52W
Svjetiljka LED, tip SIF 60 LED/2 - P = 70W
Svjetiljka LED, tip SIF 60 LED/E - P = 56 W

5. MONTAŽA

Montažu i instaliranje svjetiljke treba vršiti prema uputama proizvođača, nacionalnim Propisima i Pravilnicima kao i prema općenito priznatim pravilima tehnike.

Kvaliteta upotrijebljenih materijala jamči funkcionalnost sukladnu normi u normalnoj industrijskoj atmosferi.

Za granične slučajeve molimo obratiti se proizvođaču.

Kabli se uvode u kućište kroz predviđene uvodnice. Pri tome treba provjeriti da su kabli čisti i neoštećeni. Posebnu pažnju treba posvetiti odabiru unutarnjeg brtvenog prstena uvodnice prema vanjskom promjeru kabela. Pritisnu maticu uvodnice i tijelo uvodnice treba pritegnuti nazivnim momentom prema vrijednostima u tehničkim podacima. Neiskorišteni uvod obavezno treba zatvoriti predviđenim čepom.

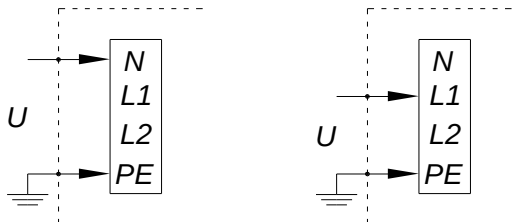
Električno spajanje se vrši priključkom vodiča na stezaljke priključne letvice L1, L2, L3, N, PE i pritezanjem vijka stezaljke nazivnim momentom. Kod trofaznog prolaznog ožičenja treba paziti na simetriranje faza i po potrebi prespojiti fazne priključke predspojne naprave.

Kod puštanja u pogon kontrolna izolacijska mjerenja treba vršiti s ispitnim naponom max. 500 V DC i to između:

- neutralnog vodiča i zemlje
- faznog vodiča L1 i zemlje
- faznog vodiča Lsw i zemlje

Ispitivanje između faznog i neutralnog vodiča nije dopušteno i može voditi uništenju proizvoda.

Specifični uvjeti uporabe: Dozvoljena je samo horizontalna montaža svjetiljke s okvirom stakla usmjerenim prema tlu.



Montaža ugradbene svjetiljke za čiste prostore:

LED svjetiljka se montira u otvor stropa 575±4 x 575±4 mm. Svjetiljka se pozicionira i učvršćuje preko okastih vijaka (SIF 20-130) uz pomoć čeličnog užeta ili lanca, a precizno podešavanje visine vrši se uz pomoć zatezača.

4. TYPE

LED light fitting, type SIF 60 LED/1 - P = 52W
LED light fitting, type SIF 60 LED/2 - P = 70W
LED light fitting, type SIF 60 LED/E - P = 56 W

5. MOUNTING

Mounting and installation of lamps is should be carried out according to the technical data marking plate of the lamp, and the additional manufacturer's instructions, national rules and regulations, as well as the generally recognized rules of technique.

The quality of the used materials ensures compliance in the standard industrial atmosphere. For special requirements please contact the manufacturer.

Cables should be installed in housing via provided cable gland. It is necessary to check that the cables are clean and undamaged. Particular attention should be paid to the selection of the inner sealing rings of the cable glands to the outside diameter of the cable. Pressure screw and intermediate gland have to be tightened with nominal torque. Unused entries should be closed by provided Ex d plug.

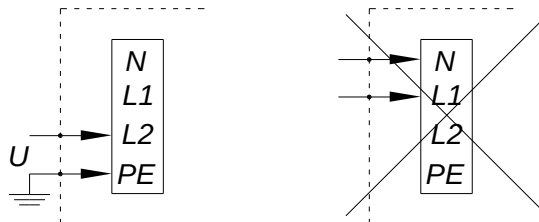
Electrical connection is made with connecting cables on terminals L1, L2, L3, N, PE and tightening the clamps with nominal torque. At the three-phase through wiring should be taken of the balancing phase and optionally reconnect phase connections electronic balast.

With the commissioning the control measurements of the isolation should be performed with the test voltage max. 500 V DC between:

- Neutral and earth conductor
- Phase L1 and earth conductor
- Phase Lsw and earth conductor

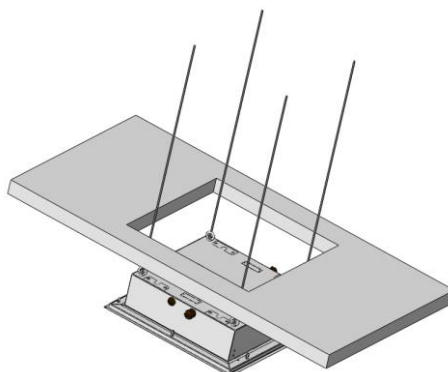
Testing between the phase and neutral conductor is not allowed and will get the wrong value and can lead to destruction of the product.

Specific conditions of use: Only horizontal mounting of the lamp with the glass frame directed towards the ground is allowed.



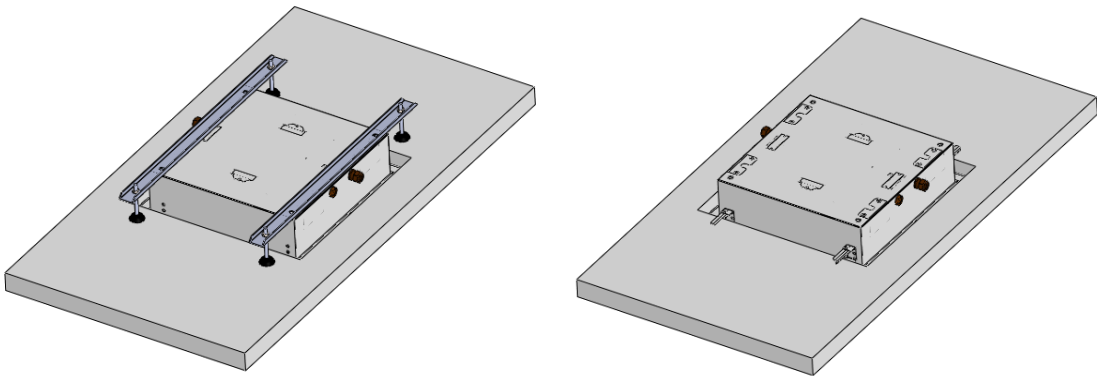
Recessed mounting in clean area:

LED lamp is installed in the ceiling opening 575±4 x 575±4mm. The lamp is positioned and secured via eye bolts (SIF 20-130) with the help of a steel rope or chain, and precise height adjustment is performed with the tensioner.



Moguća je i montaža preko nosača za ugradbenu montažu (SIF 20-140 [standardni raspon stezanja od 30 do 50mm] ili SIF 20-150). Rub okvira svjetiljke mora biti prislonjen na vanjsku stranu spuštеноg stropa.

Mounting is also possible with the use of mounting brackets (SIF 20-140 [standard clamping range from 30 to 50 mm] ili SIF 20-150. The edge of the lamp frame must be aligned with the outside of the lowered ceiling.

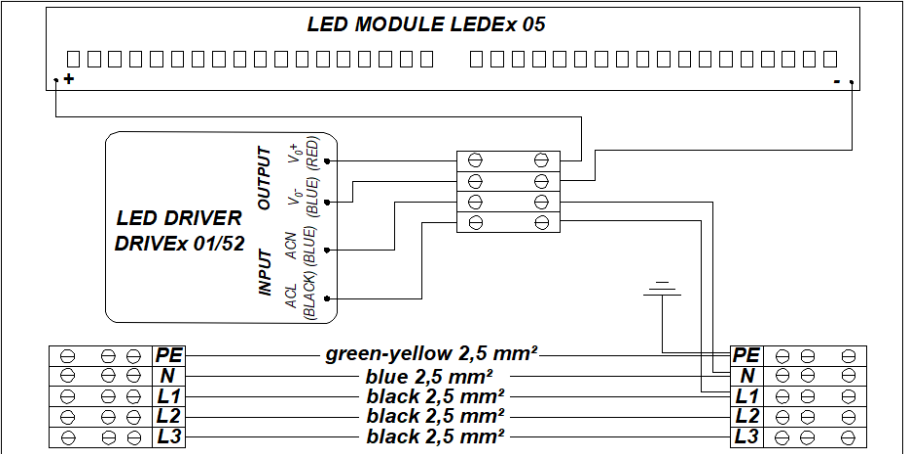


Nakon pozicioniranja i učvršćivanja svjetiljke, zazor između okvira svjetiljke i stropa popunjava se silikonom. Nosača za ugradbenu montažu SIF 20-140 ima standardni raspon stezanja od 30mm do 50 mm. Drugi rasponi dostupni na upit.

After positioning and fixing the lamp, the gap between the lamp and ceiling frame is filled with silicon. The SIF 20-140 mounting bracket has a standard clamping range of 30mm to 50mm. Other ranges available on request.

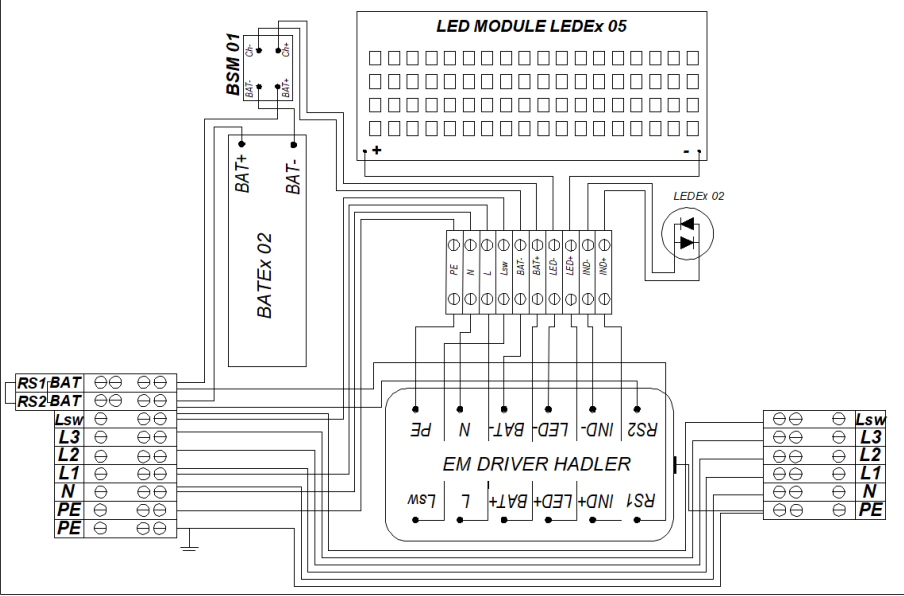
Električna shema spajanja SIF 60 LED

Wiring diagram SIF 60 LED



Električna shema spajanja SIF 60 LED/E

Wiring diagram SIF 60 LED/E

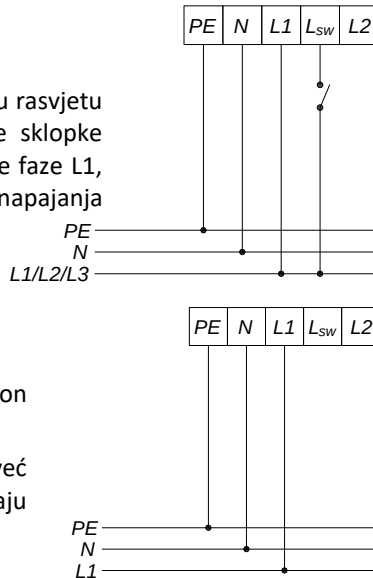


6. NAČIN RADA I INSTALIRANJE SIF 60 LED/E

Moguć je rad u dvije vrste spoja:

a) Trajan spoj (Dauerschaltung, maintained)

Svjetiljka se može koristiti za opću i orijentacijsku rasvjetu s mrežnim napajanjem Lsw preko instalacijske sklopke korisnika. U slučaju pada napona ili ispada trajne faze L1, bez obzira na stanje sklopke u krugu mrežnog napajanja Lsw (uključeno ili isključeno mrežno napajanje), svjetiljka svijetli u režimu baterijskog napajanja.



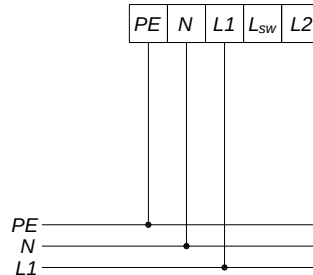
The lamp can operate with two types of connection:

a) Maintained (Dauerschaltung)

The light fitting can be used for general and orientation lighting with main power supply via Lsw (installation switch). In case of voltage drop or an interruption in the mains power supply L1, the light fitting will continue to operate in battery-powered mode, regardless of the status of installation switch Lsw.

b) Pripravan spoj (Bereitschaftschaltung, non maintained)

Svjetiljka ne može raditi na mrežnom napajanju već isključivo u režimu baterijskog napajanja u slučaju pada napona ili ispada trajne faze L1



b) Non maintained (Bereitschaftschaltung)

In case of voltage drop or an interruption in the mains power supply L1, the light fitting will operate only in battery-powered mode.

Svjetiljka ima funkciju *Remote switch*.

Korisnik sam upravlja tom funkcijom.

Remote switch ON: baterijski rad aktiviran

Remote switch OFF: baterijski rad deaktiviran

Svjetiljka ima dvije funkcije:

- test funkcionalnosti: provjerava ispravnost sigurnosne rasvjete
 - prvi test pokreće se 1h nakon priključenja na napon
 - ako je test prošao uspješno, svaki sljedeći pokreće se za 7 dana
- test kapaciteta baterija: provjerava trajanje autonomije
 - prvi test pokreće se 7 dana nakon priključenja na napon
 - ako je test prošao uspješno, svaki sljedeći pokreće se za 365 dana

The light fitting has *Remote switch* function.

The user manages this function himself.

Remote switch ON: emergency mode activated

Remote switch OFF: emergency mode deactivated

The light fitting has two functions:

- Function test: verifies the functionality of emergency lighting
 - first test is started 1h after power supply
 - if the test has passed successfully, each next runs in 7 days
- Capacity test: verifies the emergency time
 - first test is started 7 days after power supply
 - if the test has passed successfully, each next runs in 365 days

Svjetiljka je izvedena s elektroničkim sklopom sa samonadzorom funkcionalnosti nužne rasvjete i signalizacijom stanja. Samonadzor je trajan. Signalizacija stanja vrši se crvenom i zelenom signalnom LED-om u stanju svjetiljke kada ona ne svijetli.



The light fitting is equipped with an electronic set for emergency lighting self-monitoring function and status signalling function. Self-monitoring is permanent. Status signalization is indicated with red and green indicator LED when the light fitting does not work.

Signalizacija LED indikatora sukladna EN 62034:

LED indicator signaling in accordance with EN 62034:

OPIS	Status LED indicator	DESCRIPTION
Test funkcionalnosti ili test kapaciteta baterija je u tijeku	● ○ ● ○ ● ○ ● ○	Function or Capacity test ongoing
Greška LED izvora (kratki spoj, prazni hod...)	● ● ● ● ● ● ● ●	Lamp failure (short circuit, open loop)
Greška baterije (napon, kapacitet)	● ● ● ● ○ ○ ○ ○	Battery failure (Voltage, Capacity)
Baterijski rad je deaktiviran	● ● ● ● ● ● ● ●	Emergency Mode deactivated (Inhibit Mode)
Mrežni rad, punjenje	● ● ● ● ● ● ● ●	Normal Mode, Charging

Svaka točkica označava vrijeme od 256ms / Every dot correspond to 256 ms of time

Razlozi nefunkcionalnosti mogu biti slijedeći (po vjerojatnosti događanja):

Reasons for this may include some of the following (the probability of events):

- baterije su prazne. Treba ostaviti svjetiljku na mrežnom napajanju. Nakon nekog vremena signalizacija će sama preći u zeleno LED svjetlo i nužna rasvjeta će postati funkcionalna,
- centralna blokadna sklopka nije adekvatno zategnuta – svjetiljka je u beznaponskom stanju. Treba adekvatno zategnuti centralnu blokadnu sklopku i signalizacija će sama preći u zeleni LED svjetlo i nužna rasvjeta će postati funkcionalna,
- električki priključak je izveden pogrešno. Priključak treba izvršiti prema shemi spajanja,
- baterije su stare, trajno se pune nazivnom strujom punjena i pregrijavaju se. Potrebno je zamijeniti baterijski modul BATEX 01,
- baterije su stare i ne mogu dosegnuti potreban napon punjenja i kapacitet. Potrebno je zamijeniti baterijski modul BATEX 01/10,

- temperatura okoline je izvan danih granica.

Samonadzor ne uključuje kontrolu ispravnosti LED-a.

Opis oznake na svjetiljci,

sukladno EN 60598-2-22:

X	1	ABCD	180
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X - sigurnosna svjetiljka s baterijama ugrađenim u svjetiljku,

1 - sigurnosna svjetiljka u trajnom spoju,

A - sigurnosna svjetiljka sa samonadzorom i signalizacijom stanja,

B - sigurnosna svjetiljka s mogućnosti rada na mreži i automatskog uključivanja nakon povrata napajanja,

C - sigurnosna svjetiljka s „Remote switch“ funkcijom,

D - sigurnosna svjetiljka za prostore s posebnim opasnostima,

180 - sigurnosna svjetiljka s autonomijom max. 3h.

- batteries are empty. The lamp should be left on the main power supply. After a while the signalization will by itself transfer into green LED lights and emergency lighting will become functional
- central interlocking switch is not adequately tightened – light fitting is in non load condition. It should adequately tightened central interlocking switch and green light and emergency lighting becomes functional,
- connection is made incorrectly. Connection should be made according to the connection scheme
- batteries are old, permanently charged with rated current and are overheating. It is necessary to replace the battery module BATEX 01,
- batteries are old and can't reach the required charging voltage and capacity. It is necessary to replace the battery module BATEX 01,
- ambient temperature is outside specification limits.

Self-monitoring does not include a control of the LEDs validity.

Description of tag on the light fitting, according to EN 60598-2-22:

X	1	ABCD	180
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X - emergency light fitting with built-in batteries

1 - emergency light fitting in a permanent connection

A - emergency light fitting with self-monitoring and status signalling function

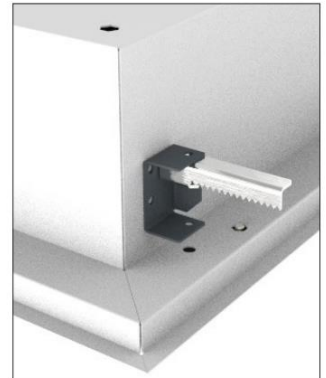
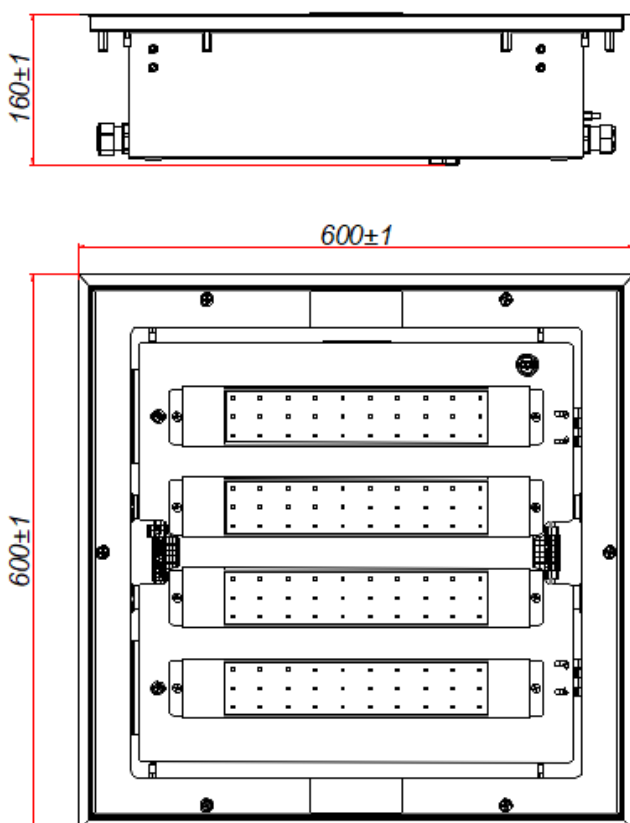
B - Emergency light fitting with main power supply option and automatically turn ON after power return option

C - emergency light fitting with „Remote switch“ function

D - emergency light fitting for use in areas with special hazards

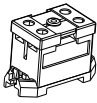
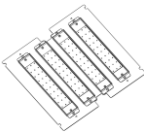
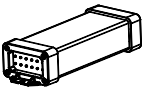
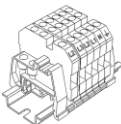
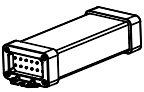
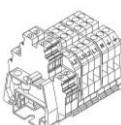
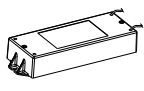
180 - emergency light fitting with autonomy of max. 3h.

7. DIMENZIJE



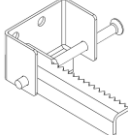
7. DIMENSIONS

8. REZERVNI DIJELOVI

SKICA / SKETCH	OPIS / DESCRIPTION	OZNAKA ZA NARUDŽBU / MODEL CODE	SKICA / SKETCH	OPIS / DESCRIPTION	OZNAKA ZA NARUDŽBU / MODEL CODE
	Sklop okvira stakla SIF 60 LED Glass frame assembly SIF 60 LED	SIF 10-100		Baterijski zaštitni modul BSM 01 Battery protection module BSM 01	BSM 01
	LED modul LEDEx 05 LED module LEDEx 05	LEDEx 035		Signalni LED indikator LEDEx 02 Signal LED indicator LEDEx 02	LEDEx 02
	LED driver DRIVEx 01	DRIVEx 01		Redne stezaljke 5 x 0,5-4mm ² , set Connection terminals 5 x 0,5-4mm ² , set	SIF 10-130
	LED EM driver DRIVEx 02	DRIVEx 02		Redne stezaljke 5 x 0,5-4mm ² , set Connection terminals 5 x 0,5-4mm ² , set	SIF 10-140
	Baterijski modul BATEx 02 Battery module BATEx 02	BATEx 02		Ex eb kabelska uvodnica SPU 25 Ex eb cable gland SPU 25	SPU 25
				Ex eb čep SPC25 Ex eb plug SPC25	SPC 25

8. SPARE PARTS

9. PRIBOR

SKICA / SKETCH	OPIS / DESCRIPTION	OZNAKA ZA NARUDŽBU / MODEL CODE	SKICA / SKETCH	OPIS / DESCRIPTION	OZNAKA ZA NARUDŽBU / MODEL CODE
	Okasti vijak M8 Eye bolt M8	SIF 20-130		Nosač za ugradbenu montažu Bracket for built-in mounting	SIF 20-150
	Nosač za ugradbenu montažu (standardni raspon pritezanja) Bracket for built-in mounting (standard clamping range)	SIF 20-140			

9. ACCESSORIES

10. ODRŽAVANJE, POPRAVAK, OBNAVLJANJE I PREGRADNJA

Potrebno je obavljati preglede i održavanje svih dijelova o kojima ovisi protueksplozijska zaštita sukladno normi EN 60079-17, općim i posebnim uvjetima proizvođača i Pravilnicima korisnika, a naročito:

- da su kućište, svi dijelovi kućišta, staklo i brtva kompletni bez puknuća i oštećenja,

10. INSPECTION, MAINTENANCE, REPAIR AND OVERHAUL

Inspections are carried out in accordance with EN 60079-17, general and special conditions of manufacturer and users Regulations and includes supervision of parts on which the explosion protection depends, especially:

- the housing, all part of housing, glass and seal are without rupture and damage,

- da su vijci prihvatnih stezaljki pritegnuti nazivnim momentima,
- da su uvodnice i čepovi instalirani prema uputama proizvođača i da su brtve uvodnica neoštećene, a pritisne matice pritegnute nazivnim momentom.

U opseg održavanja ulazi i zamjena dijelova koje proizvođač osigurava i navodi u popisu rezervnih dijelova.

Svi drugi zahvati imaju karakter popravka. Popravak obavlja proizvođač ili od proizvođača ovlaštena pravna osoba, originalnim dijelovima prema proizvodnoj dokumentaciji, a sve sukladno normi EN 60079-19.

Pregradnja i obnavljanje nisu dozvoljeni.

Ukoliko popravak ili bilo koji drugi zahvat na proizvodu obavlja neovlaštena osoba, prestaje svaka odgovornost proizvođača za proizvod, a jamstvo i deklaracija sukladnosti proizvođača postaju nevažeći.

11. ODGOVORNOSTI I OVLAŠTENJA

Ova Uputa predstavlja najvažniju informaciju o proizvodu. Nadopunjuju ju odgovarajući nacionalni zakoni i propisi. Proizvodnja, uporaba, certifikacija i nadzor određene su na nacionalnoj razini:

- a) Pravilnikom o opremi i zaštitnim sustavima namijenjenim za uporabu u prostorima ugroženim eksplozivnom atmosferom (NN br. 33/16, odnosno EU Direktiva ATEX 2014/34/EU) i
- b) Pravilnikom o najmanjim zahtjevima sigurnosti i zaštite zdravlja radnika te tehničkom nadgledanju postrojenja, opreme, instalacija i uređaja u prostorima ugroženim eksplozivnom atmosferom (NN br. 39/06, 106/07.), odnosno EU Direktivi 1999/92/EC (ATEX 137).

Odgovorna osoba dužna je osigurati njihovo provođenje u pogonu.

12. SKLADIŠTENJE I TRANSPORT

Transport i skladištenje treba vršiti samo u originalnoj ambalaži, na način istaknut na kartonskoj kutiji.

13. JAMSTVO PROIZVOĐAČA

Proizvođač daje jamstvo na svjetiljku u trajanju od pet godine te jamstvo na baterije u trajanju od šest mjeseci od trenutka preuzimanja proizvoda prema odredbama Zakona o obveznim odnosima. Ova izjava ima snagu Jamstvenog lista.

- the screws of connecting terminals are tightening with nominal torque,
- the glands, plugs, terminals, pressure screw, intermediate gland, screw of the glass cover are without rupture and damage and tightening with nominal torque

All the repairs are performed by the manufacturer or the manufacturer's authorized personal and the original parts must be provided according to the product documentation, all in accordance with EN 60079-19.

Overhaul and modifications are not allowed.

If repair or any other procedure are performed on the product by unauthorized person, all producer responsibility for the product and the warranty and the manufacturer's declaration of conformity becomes invalid.

10. RESPONSIBILITY AND AUTHORIZATION

This instruction is the basic information about the product. It is completed by the corresponding national laws and regulations. Production, use, certification and supervision are determined at the national level:

- a) Regulations concerning equipment and protective systems intended for use in potentially explosive atmospheres EU directive 2014/34/EU and
- b) Regulations on minimum requirements for safety and health protection of workers and technical inspection of facilities, equipment, installations and equipment in hazardous areas EU directive 1999/92/EC (ATEX 137).

The responsible person shall ensure their implementation at the working facility.

12. STORAGE AND TRANSPORT

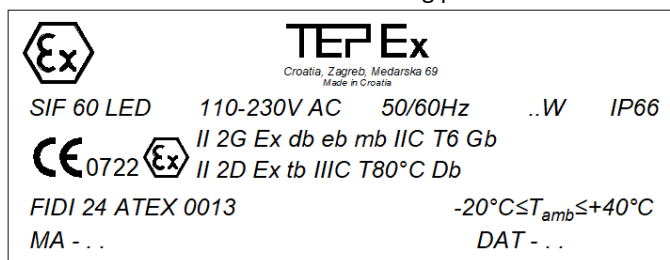
Transportation and warehousing of the lamps is only allowed in the original packaging, as outlined in a cardboard box.

13. MANUFACTURER'S WARRANTY

The manufacturer provides a warranty on the light fitting for a period of five years and a warranty on batteries for a period of six months starting from the moment of taking over the product under the provisions of this user manual and the law on obligations. This statement has the force of Warranty sheet.

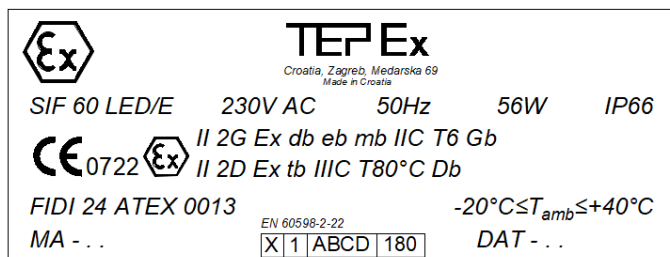
14. OZNAČAVANJE

Protueksplozijski zaštićena LED svjetiljka SIF 60 LED i SIF 60 LED/E označena je natpisnom pločicom na okviru kućišta:



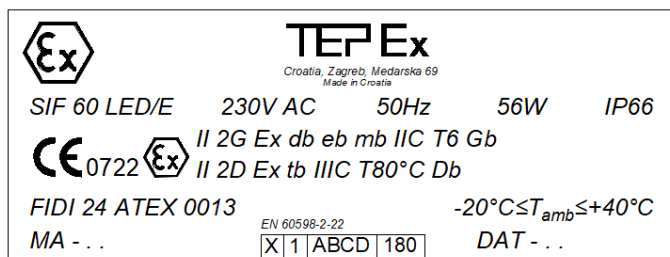
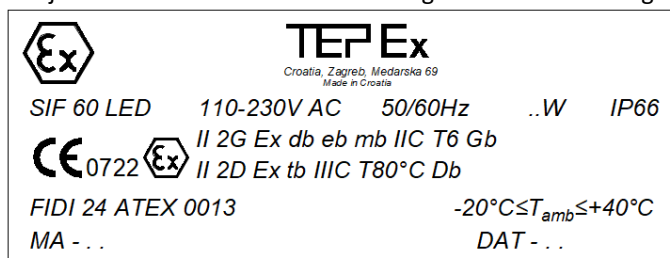
14. MARKING

Explosion proof LED light fitting type SIF 60 LED i SIF 60 LED/E is marked with marking plate on frame of housing:



Protueksplozijski zaštićena LED svjetiljka SIF 60 LED i SIF 60 LED/E označena je natpisnom naljepnicom u unutrašnjosti kućišta:

Explosion proof LED light fitting type SIF 60 LED i SIF 60 LED/E is marked with marking label inside housing:



Protueksplozijski zaštićena LED svjetiljka SIF 60 LED i SIF 60 LED/E označena je pločicom upozorenja na okviru kućišta:

Explosion proof LED light fitting type SIF 60 LED i SIF 60 LED/E is marked with warning plate on frame of housing:

