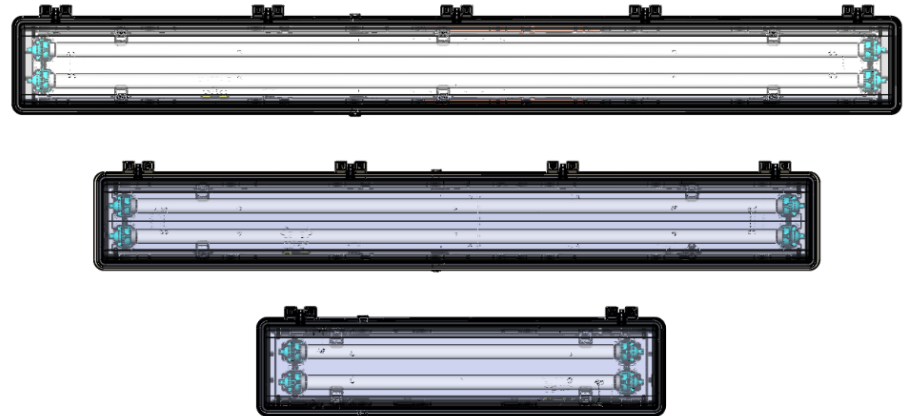




Fluorescentna svjetiljka PSF 218, PSF 236, PSF 258 Fluorescentna sigurnosna svjetiljka PSF 218E, PSF 236E

Fluorescent light fitting PSF 218, PSF 236, PSF 258 Emergency light fitting PSF 218E, 236E



Upute za uporabu

User manual



UPOZORENJE!

Upute za uporabu sadrže osnovne informacije o proizvodu. Montaža, instaliranje, uporaba i održavanje trebaju biti izvedeni prema ovoj Uputi kako bi bio osiguran siguran rad unutar nazivnih karakteristika. Ovu Uputu 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 ove Upute 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 ove Upute 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 fluorescentne svjetiljke PSF 218 / PSF 236 / PSF 258 namijenjene su za opću rasvjetu, a fluorescentna svjetiljka u slučaju opasnosti PSF 218E / PSF 236E 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/-2/.

Svjetiljka koristi standardne dvokontaktne fluorescentne cijevi T8 (Ø26mm), 18W/36W – G13 spojene u paralelnu konfiguraciju, a 58W – G13 spojene u serijsku konfiguraciju.

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 60079-0:2012+A1:2013,
- 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 9001:2015, EN ISO 80079-34:2011 i EN ISO 14001:2015.

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

Certifikat:	EXA 18 ATEX 0087		
Oznaka:			
Oznaka kategorije i protueksplozijske zaštite uređaja:	PSF 218		II 2G Ex db eb mb IIC T4 Gb
	PSF 236		II 2D Ex tb IIIA/IIIC T80°C Db
	PSF 218E		II 2G Ex db eb mb IIC T4 Gb
	PSF 236E		II 2D Ex tb IIIC T80°C Db
	PSF 258		II 2G Ex db eb mb IIC T4 Gb
Temperatura okoline:	PSF 218/236 -30°C/-20°C < T _a < +50°C		
	PSF 218E/236E -20°C < T _a < +40°C		
	PSF 258 -20°C < T _a < +50°C		

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1. PURPOSE

Explosion proof fluorescent light fittings type PSF 218 / PSF 236 / PSF 258 are intended for general lighting and emergency light fitting PSF 218E / PSF 236E 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/-2/.

Ex fluorescent light fitting PSF 218E/236E is used as fluorescent lighting fitting with two T8 (Ø26mm), 18W/36W – G13 connected in parallel configuration, 58W – G13 connected in serial configuration.

2. PRODUCT COMPLIANCE

The product complies with the standards:

- EN 60079-0:2012+A1:2013,
- 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 9001:2015, EN ISO 80079-34:2011 and EN ISO 14001:2015.

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

Certificate:	EXA 18 ATEX 0087		
Marking:			
Category and explosion protection:	PSF 218		II 2G Ex db eb mb IIC T4 Gb
	PSF 236		II 2D Ex tb IIIA/IIIC T80°C Db
	PSF 218E		II 2G Ex db eb mb IIC T4 Gb
	PSF 236E		II 2D Ex tb IIIC T80°C Db
	PSF 258		II 2G Ex db eb mb IIC T4 Gb II 2D Ex tb IIIA T80°C Db
Ambient temperature:	PSF 218/236 -30°C/-20°C < T _a < +50°C		
	PSF 218E/236E -20°C < T _a < +40°C		
	PSF 258 -20°C < T _a < +50°C		

Mehanička zaštita:	IP 66 sukladno EN 60529				
Otpornost na udar:	IK 08				
Klasa zaštite:	I (PE - zaštitno uzemljenje)				
Nazivni napon U _n :	230 V AC, 50 Hz				
Radni napon:	220-240 V, 50/60 Hz				
Nazivna struja:	PSF 218/218E – 0,17A PSF 236/236E – 0,33A PSF 258 – 0,5A				
Faktor snage:	λ=0,95				
Balast lumen factor BLF:	97,5%				
End of life EOL:	Elektroničke predspojne naprave SMP 07 i SMP 08 u potpunosti su sukladne sa EN 61349-2-3:2011+A11:2017 („end of life effect“)				
Životna dob predspojne naprave:	100 000 sati pri Tservice=65°C uz 20% ispada max. 60 000 sati pri Tservice=70°C uz 20% ispada max.				
Životna dob izvora :	20.000 sati (long life cijevi do 79.000 sati na poseban zahtjev)				
Izvor svjetlosti:	fluorescentna cijev 18W / 36W / 58W, T8-Ø26 mm, sukladno EN 60081:2008+A4:2012				
Podnožje:	G13 sukladno EN 60061-1:2008+A45:2012				
Kabelski uvodi:	Dvije uvodnice Ex e M25x1,5 za kabel Ø7-15mm i dva Ex e čepa sukladno sa EN 62444:2013				
Prolazno ožičenje:	PSF 218/236/258 - 5x1,5mm ² , max. 16A PSF 218E/236E – looping – ulaz i izlaz na jednoj strani svjetiljke				
Centralna blokadna sklopka:	Centralna blokadna sklopka osigurava beznaponsko otvaranje. Kada je centralna blokadna sklopka u poziciji “OPEN” unutarnji elementi svjetiljke nalaze se u beznaponskom stanju (elektronička predspojna naprava, grla G13...). Blokadna sklopka uključuje svjetiljku nakon zatvaranja pokrova i zakretanje blokadne sklopke u poziciju “CLOSE”. U slučaju kvara ili nedostatka jedne od fluorescentnih cijevi, elektronička predspojna naprava kod PSF 218/236/218E/236E isključuje napajanje predmetne fluorescentne cijevi, a kod PSF 258 isključuje napajanje obje fluorescentne cijevi.				
Maksimalan broj svjetiljaka (kom.) po jednom automatskom instalacijskom prekidaču:		Automatski instalacijski prekidač			
		1 p B 10A	1 p C 10A	1 p B 16A	1 p C 16A
	PSF 218	10	17	16	28
	PSF 236	10	17	16	28
	PSF 258	10	17	16	28
Kućište:	SMC, poliester ojačan staklenim vlaknima, boja RAL 7038				
Pokrov:	PC, polikarbonat				
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:	PSF 218/218E - 790 x 200 x 130 (DxŠxV) PSF 236/236E - 1370 x 200 x 130 (DxŠxV) PSF 258 – 1665 x 200 x 130 (DxŠxV)				
Masa:	PSF 218 – 7,5 kg PSF 236 – 10 kg PSF 258 – 12kg PSF 218E – 9kg PSF 236E – 12,5kg				

Mechanical protection:	IP 66 according to EN 60529				
Resistance to shock:	IK 08				
Class of protection:	I (PE - protective earthing)				
Rated voltage U _n :	230 V AC, 50 Hz				
Operating voltage:	220-240 V, 50/60 Hz				
Rated current:	PSF 218/218E – 0,17A PSF 236/236E – 0,33A PSF 258 – 0,5A				
Power factor:	λ=0,95				
Balast lumen factor BLF:	97,5%				
End of life EOL:	The electronic ballasts, type SMP 07 and SMP 08 fulfills the requirements according to EN 61347-2-3:2011+A11:2017 (simulation of the "end of life effect" of fluorescent lamps)				
Lifetime of ballast:	100 000 hours at Tservice=65°C with a 20% failure max. 60 000 hours at Tservice=70°C with a 20% failure max.				
Lifetime of lighting source:	20,000 hours (long tube lifetime up to 79,000 hours, only on special request)				
Light source:	fluorescent tube, 18W / 36W / 58W, T8-Ø26 mm, according to EN 60081:2008+A4:2012				
Lampholder:	G13 according EN 60061-1:2008+A45:2012				
Cable entry:	Two cable glands Ex e M25x1,5 for cable diameter Ø7-15mm and two Ex e plug in accordance with EN 62444:2013				
Through wiring:	PSF 218/236/258 - 5x1,5mm ² , max. 16A PSF 218E/236E - looping of the cables (entry and exit on one side)				
Central interlocking switch	Central interlocking switch provides an no-load condition. When the central interlocking switch is in position "OPEN" internal elements of the lamps are in no-load condition (electronic control gear, G13...). The interlocking switches power on a flashlight after closing the cover and rotate the lock switch in position "CLOSE". In case of failure or lack of one of the fluorescent tubes, electronic control gear od PSF 218/236/218E/236E shuts off the power to the malfunctioned fluorescent tubes, and PSF 258 shuts off to the both fluorescent tubes.				
Maximum number of lamps (pieces) per one automatic circuit breaker:		Automatic circuit breaker			
		1 p B 10A	1 p C 10A	1 p B 16A	1 p C 16A
	PSF 218	10	17	16	28
	PSF 236	10	17	16	28
	PSF 258	10	17	16	28
Housing:	SMC, polyester plastic reinforced with glass fibber, colour RAL 7038				
Diffuser:	PC, polycarbonate plastic				
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:	PSF 218/218E - 790 x 200 x 130 (LxWxH) PSF 236/236E - 1370 x 200 x 130 (LxWxH) PSF 258 – 1665 x 200 x 130 (LxWxH)				
Weight:	PSF 218 – 7,5 kg PSF 236 – 10 kg PSF 258 – 12kg PSF 218E – 9kg PSF 236E – 12,5kg				

PSF 218E / 236E

Baterija:	PSF 218E - Ni-Mh Saft VHT D, 4,8V 6Ah PSF 236E - Ni-Mh Saft VHT F, 4,8V 10Ah ugrađena u svjetiljku, mikroprocesorski upravljano punjenje, pražnjenje i nadzor baterije																		
Životna dob izvora :	srednja, 10.000 sati (long life cijevi do 70.000 sati na poseban zahtjev)																		
Nazivna autonomija:	1,5 / 3 sata																		
Svjetlosni tok u baterijskom radu η_{BLF} (balast lumen faktor):	<table><tr><td></td><td>Autonomija</td><td>PSF 218E</td><td>PSF 236E</td></tr><tr><td></td><td>1,5h</td><td>60% (800lm)</td><td>60% (2000lm)</td></tr><tr><td></td><td>3h</td><td>40% (550lm)</td><td>30% (1000lm)</td></tr></table>				Autonomija	PSF 218E	PSF 236E		1,5h	60% (800lm)	60% (2000lm)		3h	40% (550lm)	30% (1000lm)				
	Autonomija	PSF 218E	PSF 236E																
	1,5h	60% (800lm)	60% (2000lm)																
	3h	40% (550lm)	30% (1000lm)																
Emergency ballast lumen factor:	<table><tr><td></td><td colspan="2">Autonomija</td><td></td></tr><tr><td></td><td>3h</td><td>1,5h</td><td></td></tr><tr><td>PSF 218E</td><td>40%</td><td>60%</td><td></td></tr><tr><td>PSF 236E</td><td>30%</td><td>60%</td><td></td></tr></table>		Autonomija				3h	1,5h		PSF 218E	40%	60%		PSF 236E	30%	60%			
	Autonomija																		
	3h	1,5h																	
PSF 218E	40%	60%																	
PSF 236E	30%	60%																	
Vrijeme punjenja baterije:	24 sati (15 sati > 90% autonomije), Nakon 24 sata trajno dopunjavanje baterija u „trickle charge“ režimu																		
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																		
Vrijeme prorade emergency moda:	0,5s																		
Režim punjenja:	<table><tr><td></td><td colspan="2">I_{sr} [mA]</td></tr><tr><td></td><td>BATEx 01/6</td><td>BATEx 01/10</td></tr><tr><td>Nazivna struja:</td><td>300</td><td>600</td></tr><tr><td>Trickle charge:</td><td>75</td><td>150</td></tr></table>		I_{sr} [mA]			BATEx 01/6	BATEx 01/10	Nazivna struja:	300	600	Trickle charge:	75	150						
		I_{sr} [mA]																	
		BATEx 01/6	BATEx 01/10																
	Nazivna struja:	300	600																
	Trickle charge:	75	150																
Uvjeti punjenja nazivnom strujom: $U_{\text{čelije}} \leq 1,58 \text{ V}$ $-20^{\circ}\text{C} \leq t_{\text{čelije}} \leq +75^{\circ}\text{C}$ $t_{\text{punjenja}} \leq 24$ sata nakon reseta napona																			
Uvjeti punjenja u režimu „trickle charge“: $U_{\text{čelije}} \leq 1,58 \text{ V}$ $-20^{\circ}\text{C} \leq t_{\text{čelije}} \leq +75^{\circ}\text{C}$ $t_{\text{punjenja}} > 24$ sata nakon reseta napona																			
Režim pražnjenja:	<table><tr><td></td><td colspan="2">I_{sr} [A]</td></tr><tr><td></td><td>BATEx 01/6</td><td>BATEx 01/10</td></tr><tr><td>Autonomija 1,5h</td><td>2,6 – 3,3</td><td>5,0 – 6,5</td></tr><tr><td>Autonomija 3h</td><td>1,9 – 2,4</td><td>2,8 – 3,4</td></tr></table>		I_{sr} [A]			BATEx 01/6	BATEx 01/10	Autonomija 1,5h	2,6 – 3,3	5,0 – 6,5	Autonomija 3h	1,9 – 2,4	2,8 – 3,4						
		I_{sr} [A]																	
		BATEx 01/6	BATEx 01/10																
	Autonomija 1,5h	2,6 – 3,3	5,0 – 6,5																
Autonomija 3h	1,9 – 2,4	2,8 – 3,4																	
Uvjeti: $U_{\text{čelije}} \geq 0,9 \text{ V}$ $-20^{\circ}\text{C} \leq t_{\text{čelije}} \leq +75^{\circ}\text{C}$																			

Svjetiljka se isporučuje s max. napunjenim baterijama.

Moguće je prilikom dužeg skladištenja (više od 6mj je svjetiljka zatvorena bez priključka na napon) da LED indikator ne proradi odmah. Nakon toga je potrebno regenerirati baterije (puniti baterije oko 2 sata) i tada će LED indikator proraditi.

Battery:	PSF 218E - Ni-Mh Saft VHT D, 4,8V 6Ah PSF 236E - Ni-Mh Saft VHT F, 4,8V 10Ah built-in lighting, microprocessor controlled charging, discharging and battery monitoring		
Lifetime of lighting source:	medium, 10,000 hours (long tube lifetime up to 70,000 hours, only on special request)		
Rated autonomy:	1,5 / 3 hours		
Luminous flux in battery mode η_{BLF} (ballast lumen factor):	Autonomy	PSF 218E	PSF 236E
	1,5h	60% (800lm)	60% (2000lm)
	3h	40% (550lm)	30% (1000lm)
Emergency ballast lumen factor:		Autonomy	
		3h	1,5h
	PSF 218E	40%	60%
	PSF 236E	30%	60%
Charging time:	24 hours (15 hours > 90% autonomy) After 24 hours permanent filling battery in „trickle charge“ mode		
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		
Response time emergency mode:	0,5s		
Charging mode:		I_{sr} [mA]	
		BATEx 01/6	BATEx 01/10
	Rated current:	300	600
	Trickle charge:	75	150
	Charging conditions of rated current: $U_{cells} \leq 1,58 \text{ V}$ $-20^{\circ}\text{C} \leq t_{cells} \leq +75^{\circ}\text{C}$ $T_{charge} \leq 24$ hours after voltage reset Charging conditions in „trickle charge“ mode $U_{cells} \leq 1,58 \text{ V}$ $-20^{\circ}\text{C} \leq t_{cells} \leq +75^{\circ}\text{C}$ $t_{charge} > 24$ hours after voltage reset		
Discharge mode:		I_{sr} [A]	
		BATEx 01/6	BATEx 01/10
	Autonomy 1,5h	2,6 – 3,3	5,0 – 6,5
	Autonomy 3h	1,9 – 2,4	2,8 – 3,4
	Uvjeti: $U_{cells} \geq 0,9 \text{ V}$ $-20^{\circ}\text{C} \leq t_{cells} \leq +75^{\circ}\text{C}$		

The light fitting is supplied with max. charged batteries.

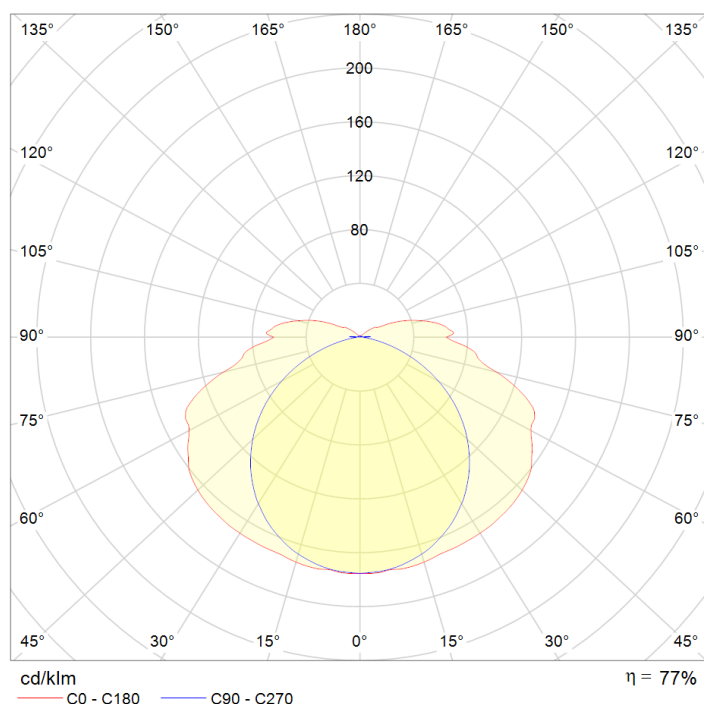
It's possible during prolonged storage (lamp is closed more than six months without connection to the voltage) that the LED indicator doesn't work immediately. At that moment it's necessary to regenerate the batteries (recharge the batteries for approx. 2 hours) and then the LED indicator will start to work properly.

TIP / TYPE	P [W]	IZVOR / LAMP TYPE	Un [V]	Ø [lm]	GRLO / LAMP HOLDER	In [A]	MASA / WEIGHT
PSF 218	2 x 18	T8	230	2 x 1350	G13	0,17	7,5 kg
PSF 236	2 x 36			2 x 3350		0,33	10 kg
PSF 258	2 x 58			2 x 5200		0,5	12 kg

TIP / TYPE	P [W] MAIN	IZVOR / LAMP TYPE	Un [V]	Ø [lm]			GRLO / LAMP HOLDER	In [A]	MASA / WEIGHT
				MAIN	EM. 1,5h	EM. 3h			
PSF 218E	2 x 18	T8	230	2 x 1350	1 x 800	1 x 550	G13	0,17 A	9 kg
PSF 236E	2 x 36			2 x 3350	1 x 2000	1 x 1000		0,33 A	12,5 kg

5. POLARNA KARAKTERISTIKA

5. POLAR CURVE



6. MONTAŽA I INSTALACIJA

6. MOUNTING AND INSTALLATION

Svjetiljka se standardno isporučuje sa fluorescentnim cijevima, sa dvije Ex eb uvodnice M25 (za kabel 7-15mm), tri Ex eb čepa M25 te priborom za ovjesnu montažu (PSF 30-150).

Svjetiljka je namijenjena za vanjsku i unutarnju primjenu.

Napomene za sigurnu instalaciju i montažu:

- Provjera temperature okoline
- Mogućnost instalacije u zonama opasnosti 1, 2, 21, 22
- Provjera mjesta ulaza kabela u svjetiljku (narušena mehanička zaštita, IP broj)
- **Oštećenje svjetiljke narušava protueksplozijsku zaštitu prostora u koji je instalirana!**

Otvaranje i zatvaranje svjetiljke:

Skinuti gumenu zaštitu sa centralne blokadne sklopke. Okrenuti centralnu osovinu 180° ulijevo (natpisna pločica - OPEN), s nasadnim ključem. Klizači oslobađaju transparentni pokrov i svjetiljka se otvara. Prilikom zatvaranja slijediti obrnuti redoslijed radnji.

Prilikom zatvaranja svjetiljke, obratiti pažnju na pozicioniranje brtve (utor u pokrovu) u odnosu na kućište.



Fluorescent lighting fitting comes standard with fluorescent tubes, two Ex eb cable glands M25 (for cable 7-15mm), three Ex eb plug M25 and accessories for suspension assembly (PSF 30-150).

The lamp is designed for indoor and outdoor use.

Notes for safe installation and assembly:

- Check the ambient temperature
- Possibility of installation in hazardous areas 1, 2, 21, 22
- Checking of cable entry into the fluorescent lighting fitting (compromised mechanical protection, IP number)
- **Damage lamps does not ensures explosion protection of the area in which lamp is installed!**

Opening and closing of the fluorescent light fitting:

Remove the rubber protection on the central interlocking switch. Turn the central axis 180° to the left (marking - OPEN) with a socket wrench. Sliders release transparent cover and the lamp opens. When closing follow the orders of operations in reverse.

When closing, pay special attention to the positioning of the seal (slot in the cover) relative to the housing.

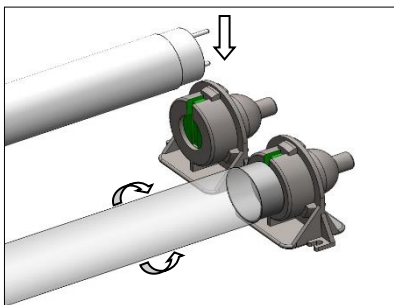
- Zakretanjem centralne blokadne sklopke, svjetiljka je u beznaponskom stanju
 - Glavne priključne stezaljke: L, N
 - U otvorenom položaju, mehanička blokada onemogućava pristup blokadnoj sklopki
- PRILIKOM OTVARANJA KORISTITI UMJERENU SILU!**



- By turning the central lock switch, the fluorescent light fitting is in no-load state
 - The main connections terminals: L, N
 - In the open position, the mechanical lock prevents access to the interlocking switches
- USE MODERATE FORCE WHEN OPENING!**

Zamjena fluorescentnih cijevi ("dvokontaktno" grlo G13)

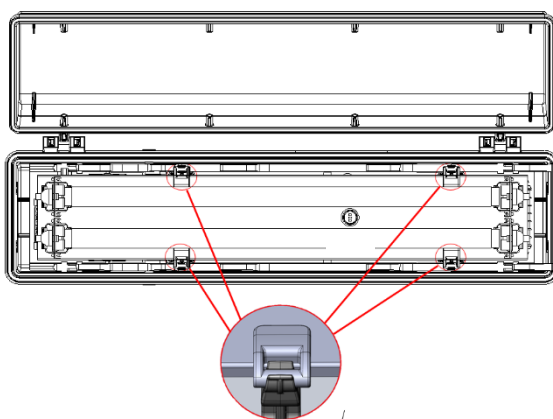
Postaviti oba kraja fluorescentne cijevi u utore grla, nakon toga izvršiti rotaciju fluo cijevi u lijevu ili desnu stranu.



Replacing of the fluorescent tubes ("two contacts" lamp holder G13)

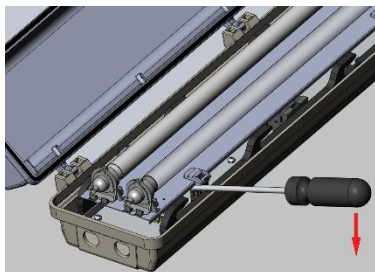
Set both ends of the fluorescent tube in the lamp holder slots, then perform the rotation of the fluorescent tubes in the left or right side.

Odsijač s G13 grlima i T8 fluorescentnim cijevima je pomoću nosača odsijača i panta odsijača pričvršćen na temeljnu ploču na 4 ili 6 različitih mjesta (2 ili 3 na svakoj strani).



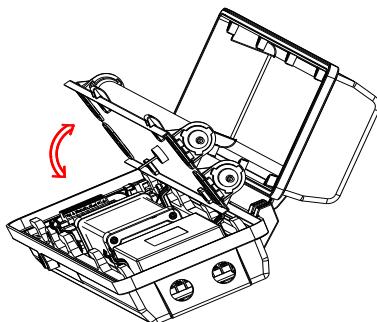
Internal reflector, with G13 lamp holders and T8 fluorescent tubes, is with reflector hinges and reflector lens carriers attached to the base plate at four or six different sites (two or three on each side).

Pristup stezaljkama obavlja se pomoću odvijača na način da je potrebno odvojiti pante odsijača od nosača odsijača na istoj strani laganim pritiskom odvijača prema dolje.



Access to terminals is done with a screwdriver in a manner that is necessary to separate the hinges bracket of the reflector lens on the same side by applying a moderate force with a screwdriver toward the downward direction

Rotiranjem sklopa odsijača dobiva se pristup stezaljkama i ostalim ugradbenim komponentama pričvršćeni na temeljnu ploču. *Napomena: moguće je odvojiti pante odsijača od nosača odsijača i na drugoj strani i dobiti pristup stezaljkama rotiranjem sklopa odsijača u drugu stranu.*



Gaining access to the terminals is achieved by rotating assembly of the reflector.

Note: it is possible to separate the hinges reflector lens from the bracket and gain access to the other side of the terminals by rotating assembly of the reflector lens to the other side.

Zatvaranje se obavlja suprotnim redoslijedom radnji s tim da se pant odsijača vraća u nosač odsijača samo laganim pritiskom ruke.

Closing is done in reverse order of actions by bringing hinge reflector lens back to mount of the reflector lens only by light hand pressure.

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

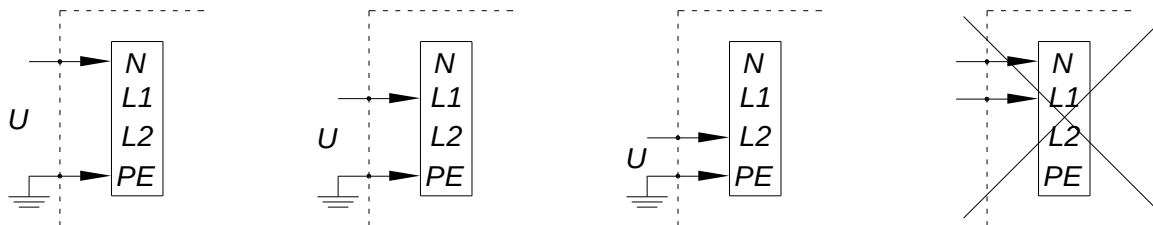
- neutralnog vodiča i zemlje
- faznog vodiča L1 i zemlje
- faznog vodiča Lsw i zemlje

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

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

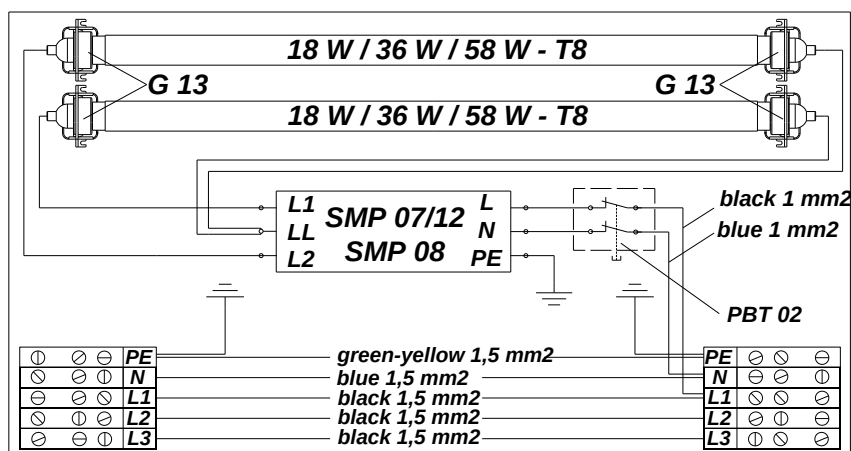
- Neutral and earth conductor
- Phase L1 and earth conductor
- Phase Lsw and earth conductor

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



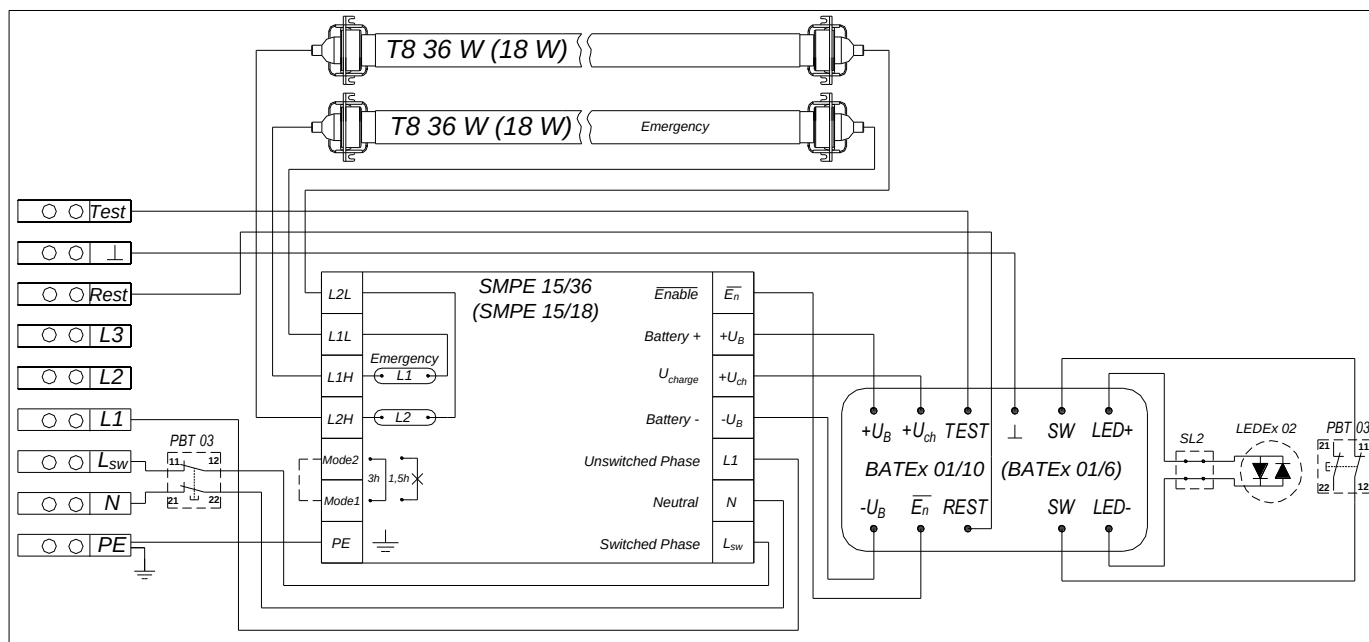
Električna shema spajanja PSF 218/236/258:

Wiring diagram PSF 218/236/258:



Električna shema spajanja PSF 218E/236E

Wiring diagram PSF 218E/236E:



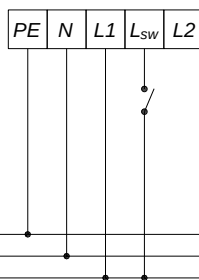
7. NAČIN RADA I INSTALIRANJE PSF 218E/236E

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.

PE
N
L1/L2/L3



7. OPERATING MODES AND INSTALLATION PSF 218E/236E

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)

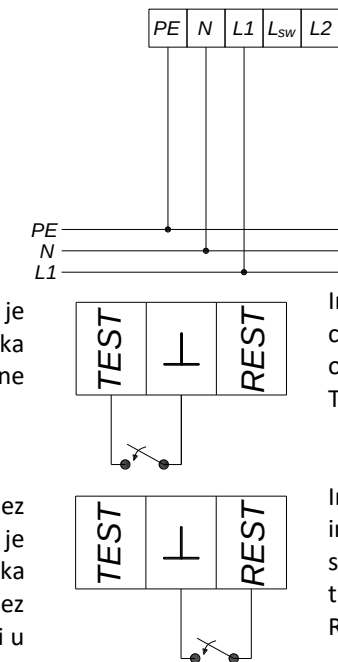
Svjetiljka ne može raditi na mrežnom napajanju već isključivo u režimu baterijskog napajanja u slučaju pada napona ili ispada trajne faze L1

U oba spoja, u prisustvu trajne faze L1 moguće je uključenjem sklopke u strujnom krugu TEST (oznaka TEST na stezaljkama) provjeriti ispravnost nužne rasvjete.

U oba spoja, u prisustvu ili ispadu trajne faze L1, bez obzira na stanje mrežnom napajanja Lsw, moguće je uključenjem sklopke u strujnom krugu RESET (oznaka REST na stezaljkama) isključiti nužnu rasvjetu. Bez obzira na stanje RESET funkcije, svjetiljka će svijetliti u mrežnom radu.

Moguće je paralelno spajanje do 100 TEST/RESET strujnih krugova (više svjetiljaka) istog polariteta na jednu sklopku. Za veći broj paralelno spojenih TEST/RESET strujnih krugova i veće duljine kabela molimo kontaktirati proizvođača.

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.



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.

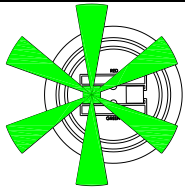
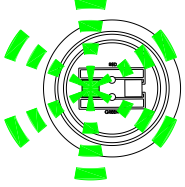
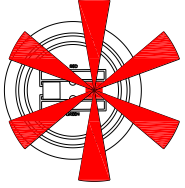
In both types of the connection in the presence of continuous phase L1, it is possible to verify the correctness of the emergency system by turning on the switch in the TEST circuit.

In both types of the connection in the presence or interruption of continuous phase L1, regardless of the status of the power supply Lsw, it is possible to turn OFF the emergency lighting, by turning ON the switch in the RESET circuit.

Max. 100 light fitting in line wiring can be connected per external switch. For larger numbers of line wiring of TEST/RESET circuits and longer cable lengths, please consult the manufacturer.



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.

FUNKCIJA	LED INDIKATOR LED INDICATOR	FUNCTION
Upućuje na funkcionalnost nužne rasvjete i nazivnu autonomiju s baterijama napunjenim do nazivnog kapaciteta. Baterije se trajno nadopunjavaju u režimu „trickle charge“ (24 sata od početka punjenja)	 Zelena LED, trajno svjetlo Green LED, permanent lighting	Indicates the optimal functionality of the emergency system and the nominal autonomy, with batteries rated capacity. Batteries are permanently charged in "trickle charge" mode (24 hours from the start of charging).
Upućuje na funkcionalnost nužne rasvjete ali ne s nazivnom autonomijom, baterije su u fazi punjenja nazivnom strujom. Temperatura okoline je unutar granice.	 Zelena LED, treptće svjetlo Green LED, blinking lighting	Indicates the functionality of the emergency system in non-nominal autonomy. Batteries are under charging phase with rated current. Ambient temperature is within the limits.
Upućuje na nefunkcionalnost nužne rasvjete. Kvar će biti signaliziran odmah po nastajanju.	 Crvena LED, trajno svjetlo Red LED, permanent lighting	Indicates the dysfunction of the emergency system. The fault will be signalled immediately as it occurs

Razlozi nefunkcionalnosti mogu biti slijedeći (po vjerojatnosti događanja):

- baterije su prazne. Treba ostaviti svjetiljku na mrežnom napajanju. Nakon nekog vremena signalizacija će sama preći u zeleni LED treptajeće 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 treptajeće 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 01/6 ili BATEX 01/10,
 - baterije su stare i ne mogu dosegnuti potreban napon punjenja i kapacitet. Potrebno je zamijeniti baterijski modul BATEX 01/6 ili BATEX 01/10,
 - osigurač u krugu baterije 16 AT je neispravan. Potrebno je zamijeniti baterijski modul BATEX 01/6 ili BATEX 01/10,
 - temperatura okoline je izvan danih granica.
- Samonadzor ne uključuje kontrolu ispravnosti LED-a.

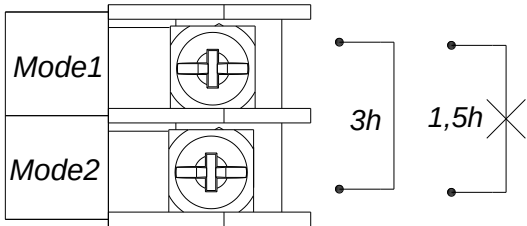
Opis oznake na svjetiljci

X	1	ABCD	180
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,
sukladno EN 60598-2-22:2014:

- 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 uključjenja nakon povrata napajanja,
- C - sigurnosna svjetiljka s RESET funkcijom,
- D - sigurnosna svjetiljka za prostore s posebnim opasnostima,
- 180 - sigurnosna svjetiljka s autonomijom max. 3h.

Svjetiljka ima mogućnost autonomije od 1,5 i 3 sata. Za autonomiju od 3 sata potrebno je kratko spojiti stezaljke Mode1 i Mode 2. Za autonomiju od 1,5 sata, stezaljke Mode1 i Mode2 su u praznom hodu (nespojene).



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

- 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, blinking 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 blinking lights 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 01/6 or BATEX 01/10,
 - batteries are old and can't reach the required charging voltage and capacity. It is necessary to replace the battery module BATEX 01/6 or BATEX 01/10,
 - the fuse in the battery circuit 16AT is faulty. Should be replace the battery module BATEX 01/6 or BATEX 01/10,
 - ambient temperature is outside specification limits.
- Self-monitoring does not include a control of the LEDs validity.

Description of tag on the light fitting

X	1	ABCD	180
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,
according to EN 60598-2-22:2014:

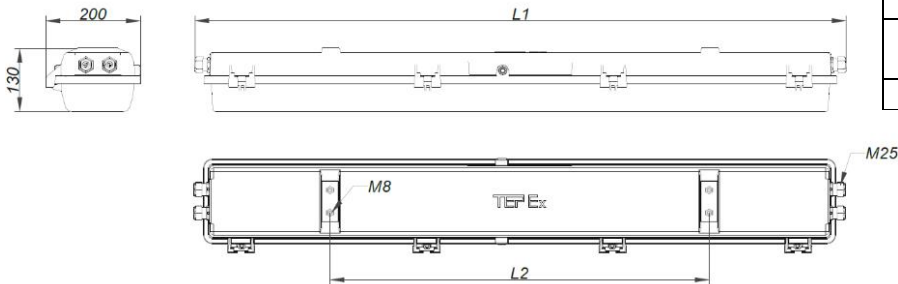
- X - emergency light fitting with built-in batteries
- 1 - emergency light fitting in a permanent connection
- A - emergency light fitting with self-monitoring and status signalling function
- B - Emergency light fitting with main power supply option and automatically turn ON after power return option
- C - emergency light fitting with RESET function
- D - emergency light fitting for use in areas with special hazards
- 180 - emergency light fitting with autonomy of max. 3h.

Light fitting has a possibility of autonomy of 1,5 and 3 hours. For the autonomy of 3 hours is necessary to short circuit the terminals Mode 1 and Mode 2. The autonomy of 1,5 hours, terminals of Mode1 and Mode2 are not connected

Autonomija (Autonomy)	PSF 218E	PSF 236E
1,5 h	60% (800lm)	60% (2000lm)
3 h	40% (550lm)	30% (1000lm)

8. DIMENZIJE

8. DIMENSIONS

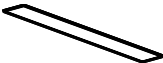
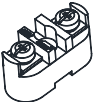
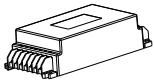
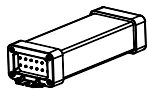


	L1 [mm]	L2 [mm]
PSF 218 PSF 218E	750	400
PSF 236 PSF 236E	1370	800
PSF 258	1665	800



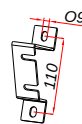
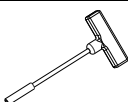
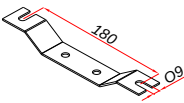
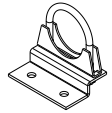
9. REZERVNI DIJELOVI

9. SPARE PARTS

SKICA (SKETCH)	OPIS (DESCRIPTION)	OZNAKA ZA NARUDŽBU (MODEL CODE)	SKICA (SKETCH)	OPIS (DESCRIPTION)	OZNAKA ZA NARUDŽBU (MODEL CODE)
	Pokrov PSF (Diffuser PSF)	PSF 218 10-110 PSF 236 20-110 PSF 258 30-110		Signalni LED indikator (Signal LED indicator)	LEDEx 02
	Brtva PSF (Gasket PSF)	PSF 218 10-120 PSF 236 20-120 PSF 258 30-120		Stezaljka Thermal	SL2
	Elektronička predspojna naprava (Electronic control gear)	SMP 07 SMP 08		Redne stezaljke 5 x 0,5-4mm ² , set Terminal 5 x 0,5-4mm ²	PSF 218 10-130
	El. predspojna naprava i pretvarač za rasvjetu u slučaju opasnosti (Electronic ballast and inverter for emergency lighting)	SMPE 15-1 SMPE 15-2		Ex eb kabelska uvodnica SPU 25 (Ex eb cable gland)	SPU 25
	Baterijski modul (Battery module)	BATEx 01/6 BATEx 01/10		Ex eb čep M25 (Ex eb plug)	SPC 25

10. PRIBOR

10. ACCESSORIES

SKICA (SKETCH)	OPIS (DESCRIPTION)	OZNAKA ZA NARUDŽBU (MODEL CODE)	SKICA (SKETCH)	OPIS (DESCRIPTION)	OZNAKA ZA NARUDŽBU (MODEL CODE)
	PSF Ovjesna montaža, set	PSF 30-110		PSF Zidna montaža pod kutom, set	PSF 30-120
	T8 ključ	PSF 30-130		Okasti vijak M8	PSF 30-140
	PSF Zidna montaža set	PSF 30-150		Metalne uvodnice za armirane kabele M25 (kabel Ø13-21mm), set	PSF 30-160
	PSF Montaža na cijev, set	PSF 30-170			

11. ODRŽAVANJE, POPRAVAK, OBNAVLJANJE I PREGRADNJA

Potrebno je obavljati preglede i održavanje svih dijelova o kojima ovisi protueksplozijska zaštita sukladno normi EN 60079-17:2014, općim i posebnim uvjetima proizvođača i Pravilnicima korisnika, a naročito:

- da su kućište, svi dijelovi kućišta, pokrov i brtva kompletni bez puknuća i oštećenja,
- 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 60079-19:2011.

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.

12. 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.

13. SKLADIŠTENJE I TRANSPORT

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

14. JAMSTVO PROIZVOĐAČA

Proizvođač daje jamstvo na proizvod u trajanju od godine dana prema odredbama Zakona o obveznim odnosima. Ova izjava ima snagu Jamstvenog lista.

11. INSPECTION, MAINTENANCE, REPAIR AND OVERHAUL

Inspections are carried out in accordance with EN 60079-17:2014, 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, diffuser and seal are without rupture and damage,
- 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 60079-19:2011.

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.

12. 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.

13. STORAGE AND TRANSPORT

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

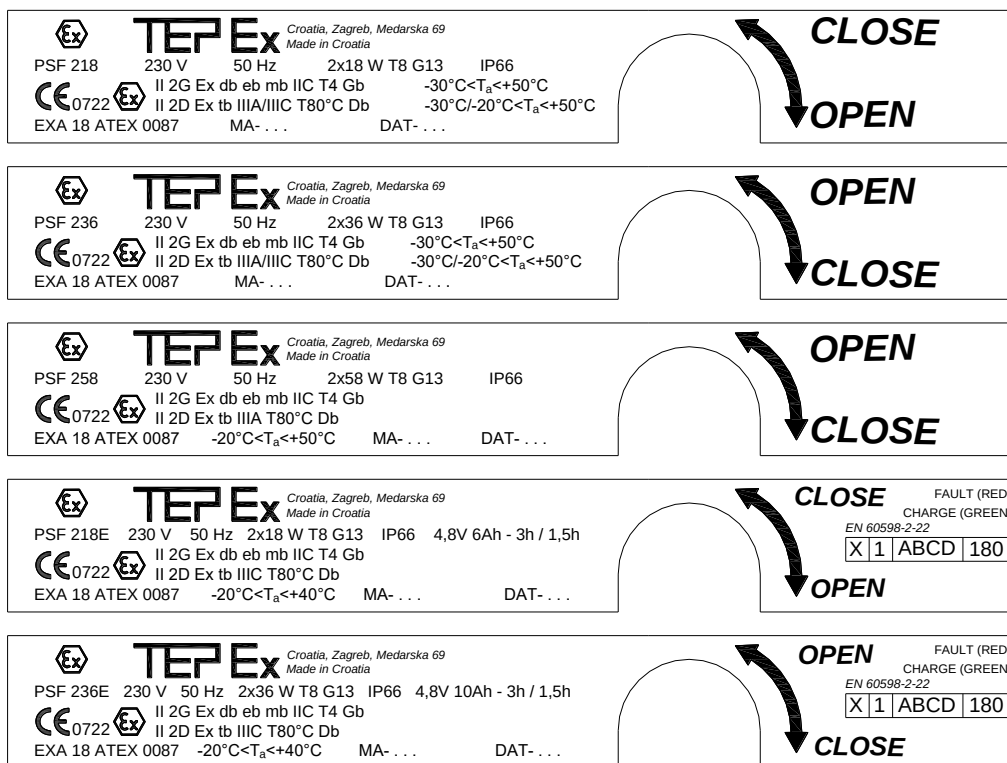
14. MANUFACTURER'S WARRANTY

The manufacturer provides a warranty on the product for a period of one year under the provisions of this user manual and the law on obligations. This statement has the force of Warranty sheet.

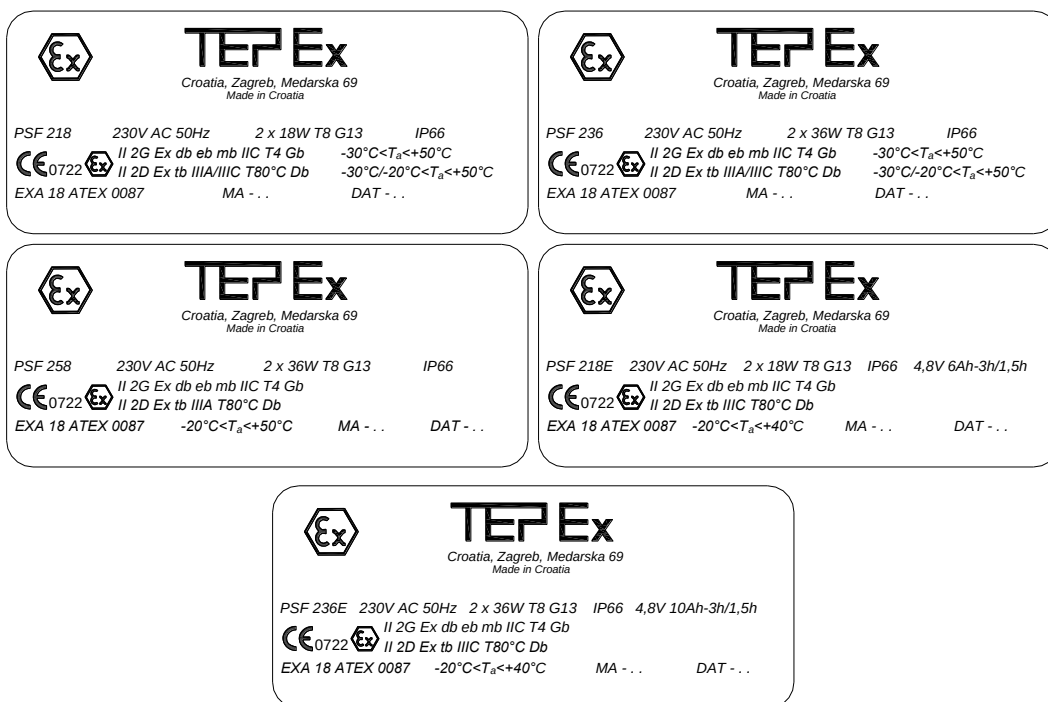
15. OZNAČAVANJE

Protueksplozijski zaštićena fluorescentna sigurnosna svjetiljka PSF 218/236/258/218E/236E označena je:

- natpisnom pločicom s tehničkim podacima na kućištu:



- natpisnom naljepnicom s tehničkim podacima na odsijaču unutar kućišta:



- tekстом na pokrovu:

WARNING
POTENTIAL ELECTROSTATIC CHARGING HAZARD
CLEAN ONLY WITH A DAMP CLOTH

15. MARKING

Explosion proof emergency fluorescent light fitting type PSF 218/236/258/218E/236E is marked with:

- external marking plate with technical data on housing:

- marking label with technical data on internal reflector:

- text on diffuser: