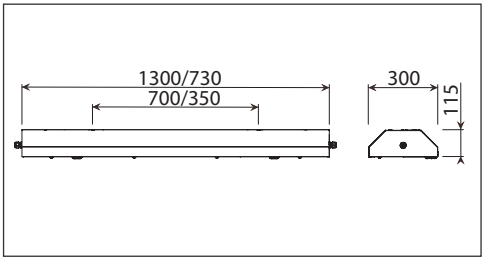
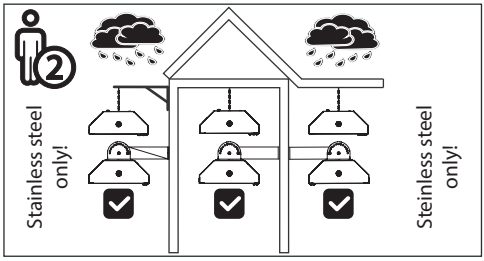
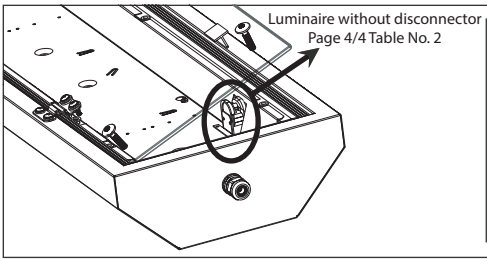
TREVOS TrEx

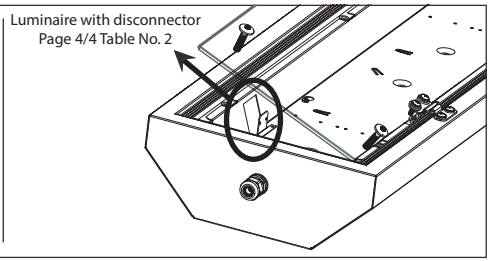
IP66

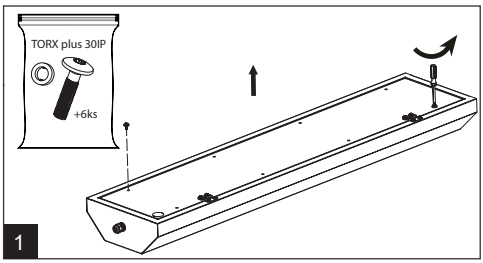
220-250V
0/50/60Hz

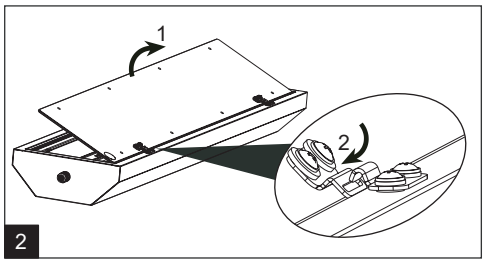


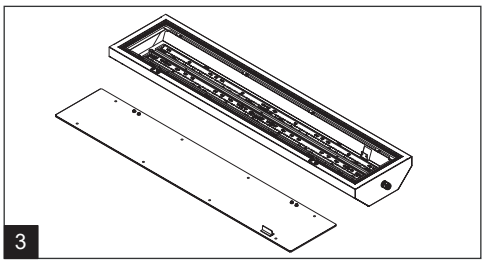


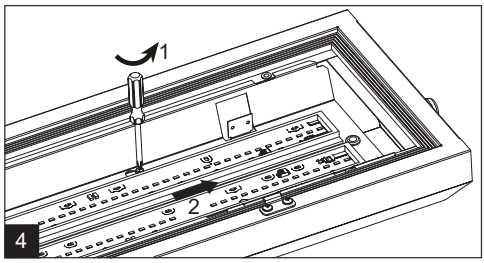


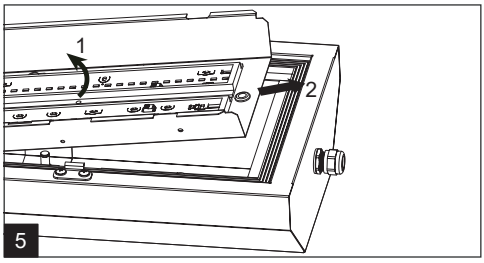


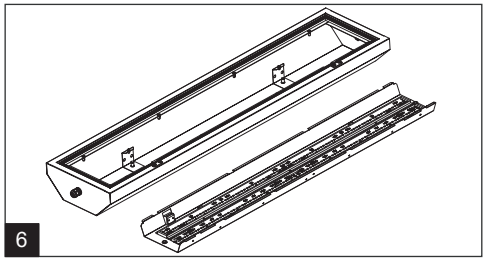


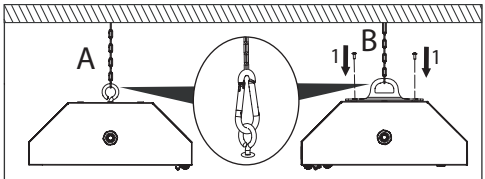




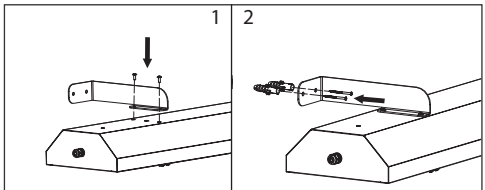




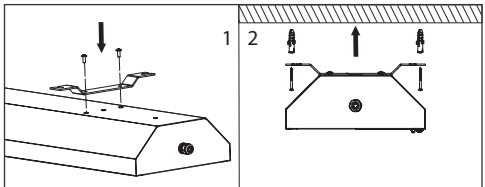




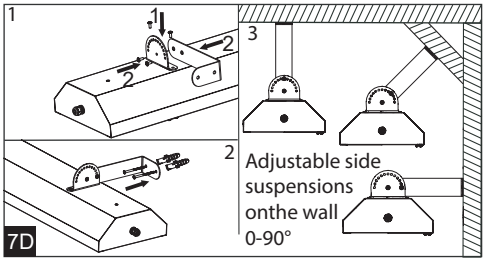
7A A - Suspensory eyes M6 (x.4ft)
B - Suspensory eyes M6 (x.2ft)



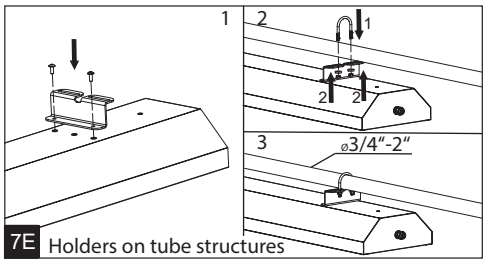
7B Side suspensions on the wall



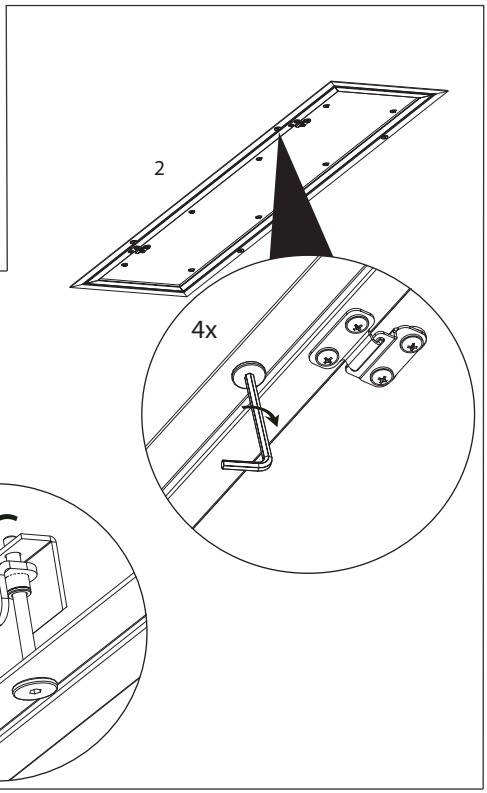
7C Holders directly on the ceiling



7D



7E Holders on tube structures

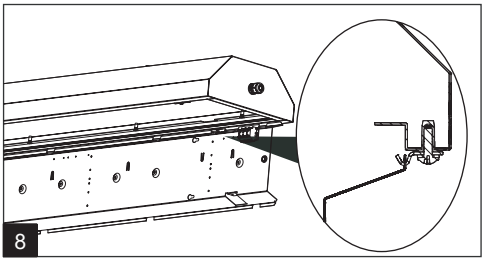


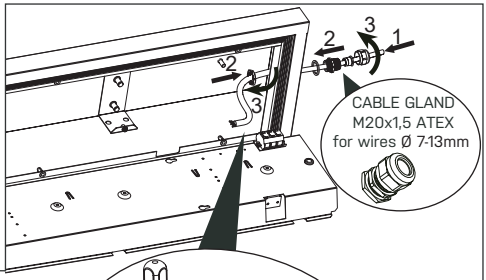
7F

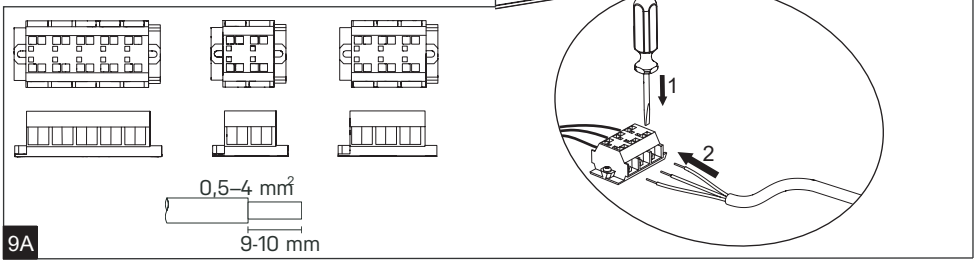
TREVOS TrEx

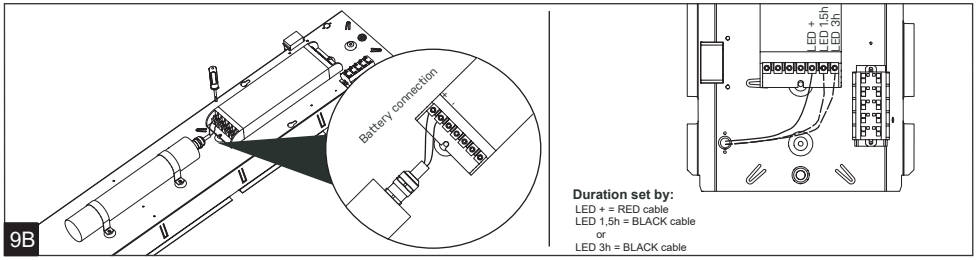
IP66

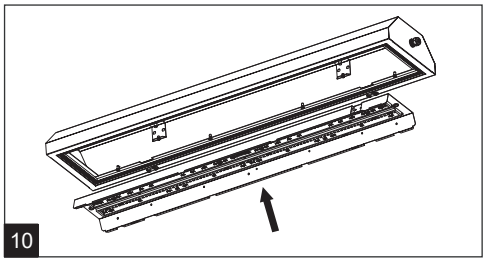
220-250V
0/50/60Hz

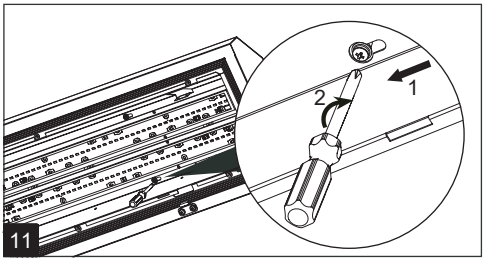


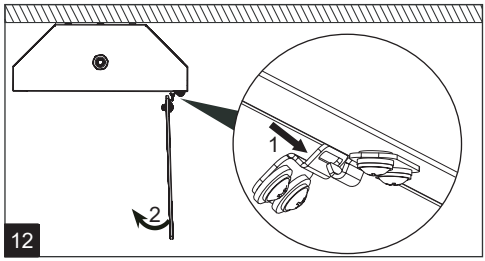


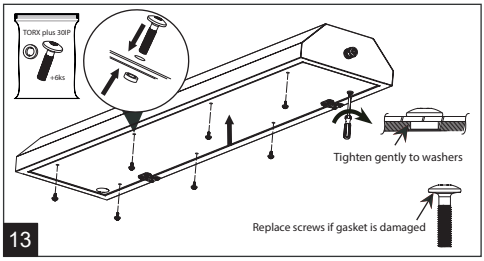












The luminaires comply with the following standards:

ATEX
EN 60079-0:2012 + A11:2013 ; EN IEC 60079-0:2018 ; EN 60079-1:2014 ; EN 60079-7:2015 ; EN 60079-18:2015 ; EN 60079-28:2015 ; EN 60079-31:2014

General requirements and standards
EN 60598-1:2015 ; EN 60598-2-1:89 ; EN 62471:2008 ; EN 55015:2013 ; EN 60598-2-22:2014 ; EN 61547:2009 ; EN 61000-3-2:14 ; EN 61547:2009 ; EN 61000-3-2:14 ; EN 61000-3-3:13

RoHS
EN 50581:2012

Technical instructions for instalation of luminaires series TrEx

For the instalation and operation in explosive environments it is essential to obey safety conditions according to national laws and standards.

1. Take out the luminaire from its transport package
2. Loose the bolts of the the housing and take of the safety glass
3. Loose the bolts holding reflector and move the reflector of the groove and take it out the luminaire
4. Mount the empty housing in one of the described ways according to the manual
5. Pull the connection cabel through the M20x1,5(M25) ATEX cable gland. Tighten the cable gland. The connection cable must have an outer diameter as type of cable gland. This is crucial for a proper function of the cable gland. The unused cable gland is sealed with a ATEX plug.
6. Hang the reflecor on the hinge, then connect the connection cabel to the free side of the terminal block as follows:

Terminal	1F instalation	3F instalation	M3h instalation
L1	Phase conductor	Phase conductor	Phase conductor
L2	-	Phase conductor	-
L3	-	Phase conductor	M3h
N	Neutral conductor	Neutral conductor	Neutral conductor
⏚	Earthing conductor	Earthing conductor	Earthing conductor

Take care about the correct wire stripping (9-10mm) and proper insertion of wire into the terminal block. The terminal block allows to use wires with a cross section of max. 4mm^2. In case of continious wiring keep maximum number of luminaires according to Tab.2.

7. Put the reflector back into the luminaire and fix up by bolts
8. Hang the safety glass cover into the hinge and secure it by bolts

Manufacturer is not responsible for damages caused due to disregard of this technical instructions!

1. Usage of luminaires

TrEx variants: 1.2ft 3200/xxx, 1.2ft 4400/xxx, 1.4ft 6400/xxx, 1.4ft 8800/xxx, 1.5ft 8000/xxx, 1.5ft 11000/xxx, 2.2ft 6400/xxx, 2.4ft 12800/xxx, 2.5ft 16000/xxx are luminaires intended into ambient temperature from -40°C to + 55°C

TrEx variants: 2.2 8800/xxx, 2.4ft 17600/xxx, 2.5ft 22000/xxx are luminaires intended into ambient temperature from -40°C to +50°C

TrEx Mxh modifications are luminaires intended into ambient temperature from 0°C to +40°C

These luminaires are used in environments with explosion hazard: **Tab.1**

	Description of outerinfluences	Area classification	
		Description	According to standard
Explosion hazard of flammable dust	**BE3N1**	**ZONE 21,22**	**EN 60 079-17 EN 60 079-14 EN 60 079-10-2**
Explosion hazard of flammable gas and vapour	**BE3N2**	**ZONE 1,2**	**EN 60 079-10-1 EN 60 079-17 EN 60 079-14**

Tab.2

Use in potentially explosive environments		
TÜV CYPRUS	TrEx DIS, TrEx DIS Mxh, TrEx Mxh	II 2G Ex db eb mb op is IIC T4 Gb
		II 2D Ex tb IIIC T 68°C Db
	TrEx	II 2G Ex eb mb op is IIC T4 Gb
		II 2D Ex tb IIIC T 68°C Db

Definition of symbols:

Ex	II	2	G	Ex	db	eb	mb	op	is	IIC	T4	Gb
General sign for equipment in poten ally explosive atmospheres	Equipment group	Equipment category	Explosive atmosphere gases	Equipment for poten ally explosive atmospheres	Symbol of protec on type in use: protec on by a solid seal	Symbol of protec on type in use: secured design	Symbol of protec on type in use: encapsula on with po ng compound	Symbol of protec on type in use: op cal radia on		Equipment group	Temperature class	Equipment protec on level

Ex	II	2	D	Ex	tb	IIIC	T68°C	Db
General sign for equipment in poten ally explosive atmospheres	Equipment group	Equipment category	Explosive atmosphere dust	Equipment for poten ally explosive atmospheres	Symbol of protec on type in use: protec on against igni on of dust by a cover	Equipment group	Maximum surface temperature of the device	Equipment protec on level

2. Conditions of use and maintainance

Luminaires which are used in the above mentioned environments are under reference to the standards which are listed in Tab.1

– The luminaire must not be opened if the terminal block is voltage-carrying. Change the diffuser if it is cracked!
– LED components are included inside the luminaire. The light source contained in this luminaire shall only be replaced by the manufacturer or his service agent or a similar qualified person.
– The opening in the unused cable gland must be sealed with a ATEX plug

Warning: Potential electrostatic charping hazard. In an environment with explosion hazard the luminaire should be cleaned only with a moist cloth and the operative has to be earthed.

– The luminaire TrEx is approved for single and triple phase continuous wiring. Maximum allowed number of luminaires connected on one phase is listed in Tab.3
– Disconnecting and replacing of the ex proof battery box in the luminaire is only possible out of the environment with explosing hazard.
– The recommended fuse rating for continiously wired luminaires is type B; 10 A or 16 A

3. Certification

Below stated luminaires have the following certificate: ATEX certificate **TÜV CYPRUS**

Tab.3

Luminaire type	automatic cutout 10A	automatic cutout 16A
TrEx 1.2ft	25	40
TrEx 1.4ft	25	40
TrEx 1.5ft	25	40
TrEx 2.2ft	25	40
TrEx 2.4ft	12	20
TrEx 2.5ft	12	20

Ex proof battery box HM 4Ah

… for explosion-proof luminaires of group II, category II (zones 1 and 2).

Ex proof battery box HM 4Ah is suitable for luminaires in areas with a risk of explosion of gases, fumes and dust for zones 1 and 2.
Meets the requirements of Directive 2014/34 / EU of the European Parliament and of the Council. Resistant to chemically aggressive environments, it is suitable for industrial premises such as chemical plants, gas and oil processing plants, power plants, military facilities, car factories, laboratories and other heavy and engineering industries.

Intended for use in luminaires designed for potentially explosive atmospheres.

ATEX certificate: AR19ATEX131U
For II 2G Ex db IIC T4 Gb

Definition of symbols:

	II	2	G	Ex	db	IIC	T4	Gb
General sign for equipment in potentially explosive atmospheres	Equipment group	Equipment category	Explosive atmosphere gases	Equipment for potentially explosive atmospheres	Symbol of protection type in use: protection by a solid seal	Equipment group	Temperature class	Equipment protection level

Ex proof battery box HM 4Ahcomply with the following standards:
ATEX : EN IEC 60079-0:2018 ; EN 60079-1:2014

Compliance with the essential health and safety requirements is ensured by verifying compliance with the standards of IEC 60079-0: 2018 and EN 60079-1: 2014

TECHNICAL DATA OF THE EX PROOF BATTERY BOX HM 4Ah:
- Plastic box
- Cable gland: metallic ATEX cable gland, M16x1.5 Ex II 2G Ex db IIC Gb/Ex eb IIC Gb/II 2D Ex tb IIIC Db IP66/IP67
- Cross-sections of connecting conductors 1.0–2.5 mm2

TECHNICAL DATA OF THE ACCUMULATOR:
- Maintenance-free high-temperature accumulators of the type NiCd HT
- Environment temperature of the accumulator (ta): 0° - + 40° C
- Voltage of the accumulator: 4.8 V
- Capacity: 1/3 hour – 4Ah
- Charging current: 220mA, 80mA permanent
- Discharge current: 0.9A – 1.75A
- Discharge cut-off voltage - 4V
- Time of charging 24 hours
- Reverse polarity protection
- PTC protection: 3.5A, 2.5W
- Protection: IP66

CHARACTERISTIC OF THE EMERGENCY MODULE:
- Automatic switchover between network and emergency feeding of the light fitting
- LED signalling of the condition of the emergency module
- Protection from complete discharge of the accumulator

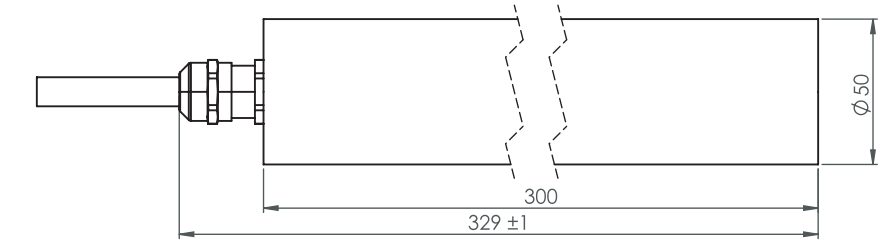
MOUNTING AND OPERATION:
- During storage the accumulator must be disconnected from the module
- The voltage of one accumulator cell must not drop below 1.2V
- An accumulator must be charged 24 hours
- The replacement of the accumulator is necessary if the light fitting does not meet the nominal service life – after 4 years at the most
- For the proper function of the accumulator, it is necessary to carry out formatting of the accumulator (after charging it for 24 hours, to discharge it completely, repeating this cycle 3x)
- The function of the module is to be checked every month – if the light fitting does not operate in the prescribed manner, check the light source and the accumulator
- In order to prevent the discharge of the accumulator, during the mounting connect the accumulator to the module only after the light fitting has been connected to the network feeding; carry out the test of the function by disconnecting the feeding of the light fitting.

ADVICE:
- The manufacturer is not liable for the defects due to unprofessional handling of the light fitting. The light fitting must b e connected to electric network by a professional technician in accordance with valid standards and regulations.
- Do not check the duration of work of the emergency operation sooner than 36 hours after the connection of the light fitting with emergency module to the network.
- The emergency module operates properly only with the accumulator fully charged; avoid frequent discharging and charging of the accumulator – the operation of the light fitting with the accumulator not charged completely shortens the service life of the light source.
- Potential electrostatic charring hazard. In an environment with explosion hazard the Ex proof battery box HM 4Ah should be cleaned only with a moist cloth and the operative has to be earthed.

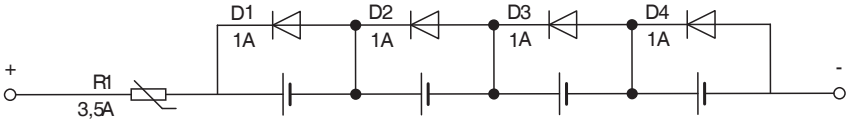
In case of problems or doubts, contact your supplier!
The light fitting and the emergency module must be fed from the same phase!!!

MODULE TYPE	INPUT	LUMINOUS FLUX IN EMERGENCY REGIME			
		Length	Σlm	1h	3h
Electronic ballast and emergency inverter for LED lamp	25-50W	1.2ft	3200	44%	28%
		1.2ft	4400	30%	19%
		1.4ft	6400	18%	13%
		1.4ft	8800	12%	9%
		1.5ft	8000	14%	10%
		1.5ft	11000	9%	7%

DIMENSIONS OF THE BATTERY BOX:



WIRING DIAGRAM OF THE ACCUMULATOR:



Dx - Quick Schottky diode 1N5819
R1 - PTC 3,5A ; 2,5W

WIRING DIAGRAM OF THE EMERGENCY MODULE:



LED DIODE CONNECTION :

Setting of 1h and 3h operation is selected by connection of Charging Indicator (LED) to terminals 5, 6 and 7 as you can see in the wiring diagram.

TEST :

NOTE: A full test should not be activated when the battery is empty or low capacity-this could result in a wrong error-message.

Manual test:

By disconnecting the mains when the battery has been charged for a minimum of 24 hours.

Status of the test must be observed manually. In case of failure: repair the problem and re-test, or reset unit by disconnecting mains.

SELF TEST:

By using a bipolar LED connected to the 2 of the 3 pins5, 6 or 7 as shown above, then a selftest will be performed. This test will automatically run a short test after 24h, then monthly and a full annual test operating the Emergency Lamp (LAMP 1) from the battery.

The test - timer includes a random period to avoid all luminaires to self-test at the same time. Disconnection/reset of mains and battery at the same time will reset the test timer. Test- program is conducted acc to IEC 62034.

Indicator LED (green) no self-test	Indicator LED (red/green) self-test	System status	Action
Continuous green	Continuous green	System ok	Battery charging ok and no faults apparent.
No light	Continuous blinking red	Battery capacity problem	24 h charge period after last discharge not completed, or faulty battery. Re-test system after 24h charging period, or replace battery
No light	Intermittent blinking red	Faulty lamp	Faulty or missing lamp. Replace lamp. Lower lamp power in emergency mode may cause lamp-fault detection on functioning lamp. Fluorescent lamps are sensitive to lower ambient temperatures.
No light	Continuous red	Charging error	Battery defective or missing. Connect or replace battery.
No light	No light	No function	Connect to mains supply voltage within specified limits.

TABLE FOR CUSTOMER'S RECORDS OF THE COURSE OF TESTS AND SERVICE LIFE OF EMERGENCY MODULE OF LIGHT FITTING:

Type:		Date of installation:				Place of installation:					
month	test	1st YEAR		2ND YEAR		3RD YEAR		4TH YEAR		5TH YEAR	
		date	signature	date	signature	date	signature	date	signature	date	signature
1	FUNCTION										
2	FUNCTION										
3	FUNCTION										
4	FUNCTION										
5	FUNCTION										
6	FUNCTION										
7	FUNCTION										
8	FUNCTION										
9	FUNCTION										
10	FUNCTION										
11	FUNCTION										
12	FUNCTION										

www.trevos.cz

EU DECLARATION OF CONFORMITY

No.:6/10/24

Product model/product: Industrial LED luminaire Ex, IP66

TrEx DIS, TrEx DIS Mxh, TrEx Mxh	*II 2G Ex db eb mb op is IIC T4 Gb* *II 2D Ex tb IIIC T68°C Db*
TrEx	*II 2G Ex eb mb op is IIC T4 Gb* *II 2D Ex tb IIIC T68°C Db*

Name and address of the manufacturer: **TREVOS, a.s.**
Nová Ves 34, 511 01 Turnov, Czech Republic

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Object of the declaration: **TrEx 1.2ft, 1.4ft, 1.5ft, 2.2ft, 2.4ft, 2.5ft**
Modification: DIS, INOX, 1F, 3F, Mxh
Variants: 3200/xxx, 4400/xxx, 6400/xxx, 8000/xxx, 8800/xxx, 11000/xxx, 12800/xxx, 16000/xxx, 17600/xxx, 22000/xxx

xxx - Colour temperature of LED

The object of the declaration is in conformity with the relevant harmonisation legislation of the European Union and the standards on the basis of which the conformity is declared:

		European standards including amendments
2014/30/EU	including amendments	EN IEC 60079-0:2018
2014/34/EU	including amendments	EN 60079-1:2014
2014/35/EU	including amendments	EN 60079-7:2015
2011/65/EU	including amendments	EN 60079-18:2015
		EN 60079-28:2015
		EN 60079-31:2014
		EN IEC 61000-3-2:2019
		EN 61000-3-3:2013
		EN IEC 55015:2019
		EN 60598-2-22:2014
		EN IEC 60598-1:2021
		EN IEC 60598-2-1:2021
		EN IEC 62471-7:2023

Complementary information:
ATEX certificate TÜV CY 21 ATEX 0206562 X of 2024-05-22
Notified body of the surveillance certification: Notified Body No.2261
TÜV CYPRUS Ltd, 2 Papaflessa Str., 2235 Latsia, Nicosia.

Place of issue: Turnov

Date of issue: 14.09.2024

Manufacturer representative:
David Lazar

Position: certification

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Nová Ves 34
511 01 Turnov
IČO: 07829965