



Product manual Z0865 LED / Z0866 LED



Explosion-proof (emergency) LED linear light fittings

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## Purpose of these instructions

- Working in hazardous areas, the safety of personnel and plant depends on complying with all relevant safety regulations
- Staff working on assembly and maintenance, therefore have a particular responsibility. They require precise knowledge of the applicable standards and regulations.
- These instructions give a brief summary of the most important safety measures. It supplements the corresponding regulations which the staff must study.



## SAFETY INSTRUCTIONS

- Only use the series explosion-proof (emergency) LED linear light fitting for its intended purpose.
- The series explosion-proof (emergency) LED Linear light fitting are not suitable for hazardous areas Zone 0!
- Incorrect or impermissible use or non-compliance with these instructions invalidates our warranty provision.
- No changes to the device impairing its explosion performance are permitted.
- Only use the explosion-proof (emergency) LED linear light fitting if they are clean and undamaged.
- Any damage can invalidate the Ex-performance.
- Observe the following during installation and operation:
  - o National safety regulations;
  - o National accident prevention regulations;
  - o National installation regulations (e.g. IEC 60079-14, EN60079-14);
  - o Generally recognized technical regulations;
  - o Safety guidelines in these operating instructions;
  - o Characteristic values is given on the series explosion-proof (emergency) LED light fitting, LED EXIT sign light fittings.

## Conformity to standards

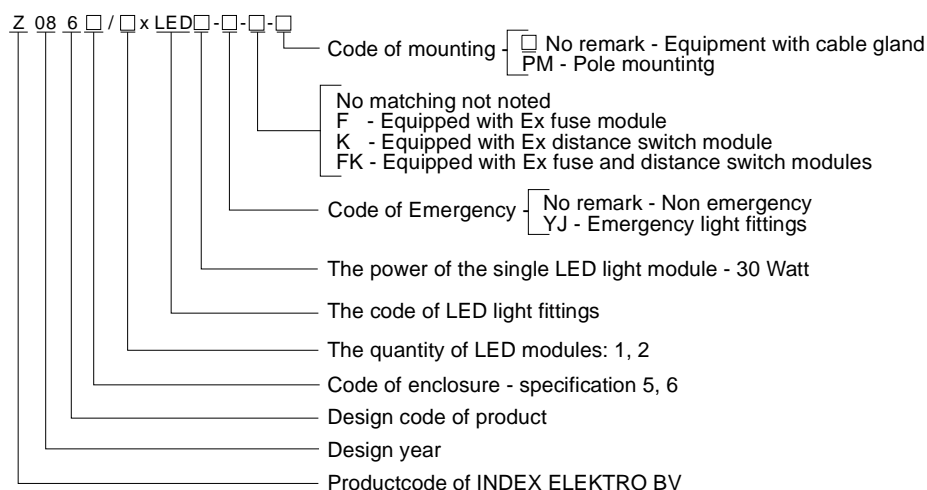
The series explosion-proof (emergency) LED light fittings are designed, manufactured and tested in accordance with ISO 9001 standards. The series explosion-proof (emergency) LED light fittings meet the following standards:

IEC60079-0	: 2011	EN 60079-0	: 2012
IEC60079-1	: 2014	EN 60079-1	: 2014
IEC60079-5	: 2015	EN 60079-5	: 2015
IEC60079-7	: 2015	EN 60079-7	: 2015
IEC60079-18	: 2015	EN 60079-18	: 2015
IEC60079-28	: 2015	EN 60079-28	: 2015
IEC60079-31	: 2013	EN 60079-31	: 2014

## Applicable scope

The series products are suitable for using in the explosive hazardous areas zone 1, zone 2 and the dust hazardous zone 21 and zone 22

## Model and implication



## Main Technical Data

### Basic data of explosion-proof LED Linear light fittings:

- Ex mark of product (not fitted with position switch):  
 $\text{Ex}$  II 2GD Ex eb mb op is q IIC T5/T4 Gb Ex tb op is IIIC T80°C Db
- Ex mark of product (fitted with position switch):  
 $\text{Ex}$  II 2GD Ex db eb mb op is q IIC T5/T4 Gb Ex tb op is IIIC T80°C Db

### Basic data of explosion-proof (emergency) LED Linear light fittings:

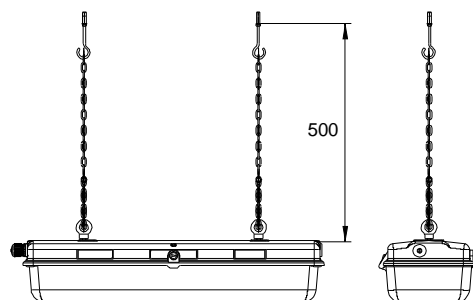
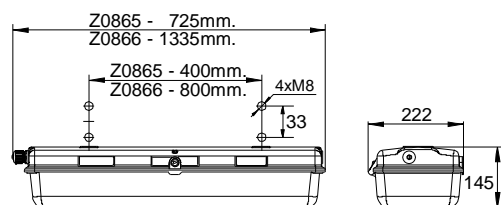
- Ex mark of product (not fitted with position switch):  
 $\text{Ex}$  II 2GD Ex eb mb op is q IIC T4 Gb Ex tb op is IIIC T80°C Db
- Ex mark of product (fitted with position switch):  
 $\text{Ex}$  II 2GD Ex db eb mb op is q IIC T4 Gb Ex tb IIIC T80°C Db
- Degree of protection: IP66
- Ambient temperature non emergency types:  $-25^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}/+55^{\circ}\text{C}$   
 Ambient temperature Emergency types:  $-25^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$ .
- Rated voltage: AC100 ~ 250V
- Rated frequency: 50/60Hz
- Rated cross-sectional area of terminals: one or two conductors 1.5~10 mm<sup>2</sup>
- Suggested moment of screw down: 1.5Nm
- For normal illumination power and emergency power see table 1
- Emergency starting time  $\geq 0.1$  Sec. Emergency illuminating time > 120 min.
- Battery Configuration: Z0865: Z0819/3.0Ah - 7.2V / Z0866: Z0819/4.5Ah 7.2V
- Battery recharging time: 24h - designed life :  $\geq 500$  times recharging

**Table 1**

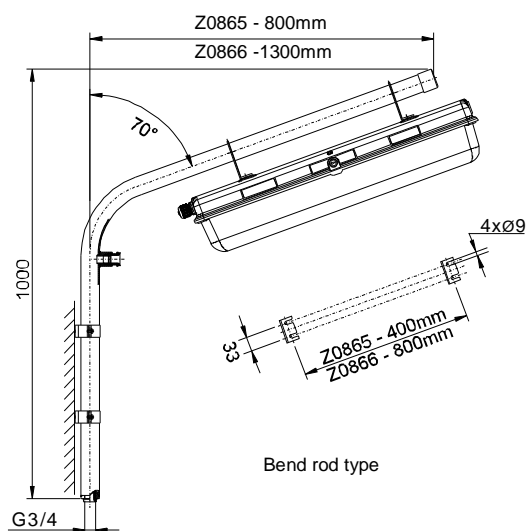
Model	Name of product	Normal illumination	Emergency illumination
Z0865/1 x LED 30W	Explosion proof LED linear light fitting	1 x 30W	
Z0865/1 x LED 30W -YJ	Explosion proof Emergency LED linear light fitting	1 x 30W	1 x 10W
Z0865/2 x LED 30W	Explosion proof LED linear light fitting	2 x 30W	
Z0865/2 x LED 30W -YJ	Explosion proof Emergency LED linear light fitting	2 x 30W	2 x 10W

## Outline dimensions and mounting way

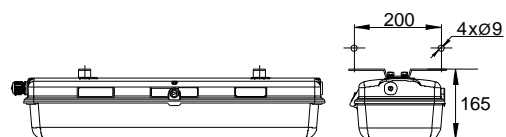
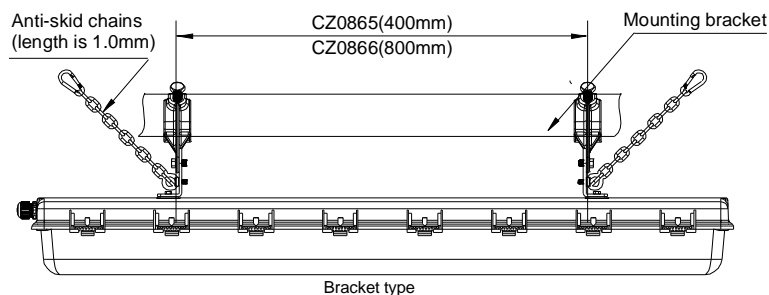
- Z086□□ x LED□W, Z086□□ x LED□W-YJ



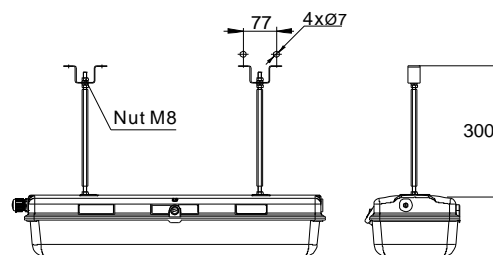
Chain type



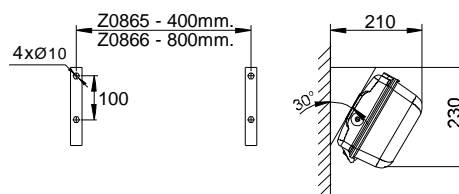
Bend rod type



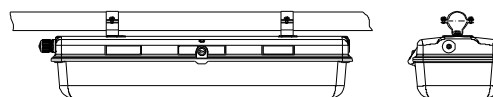
Ceiling type



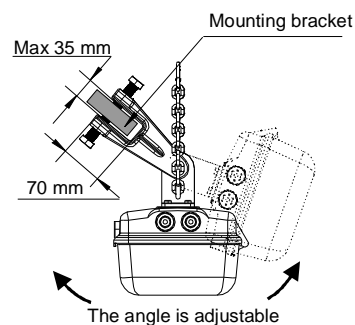
Pendant type



Bracket type

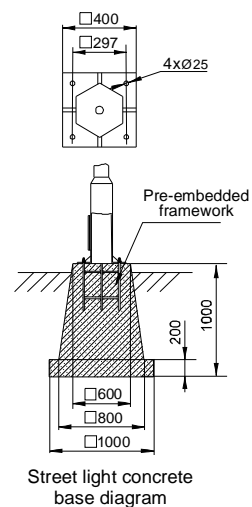
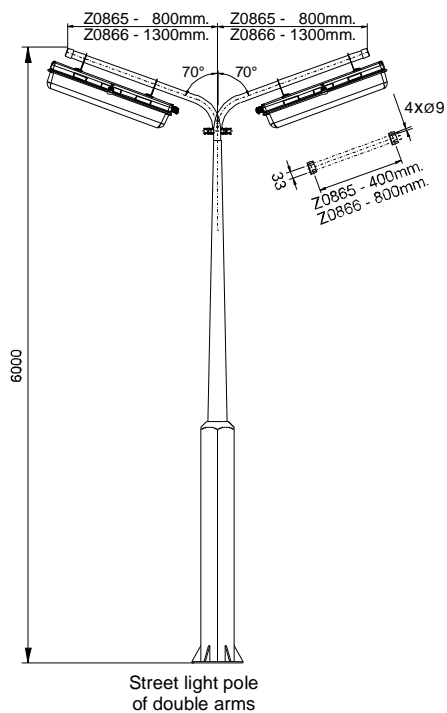
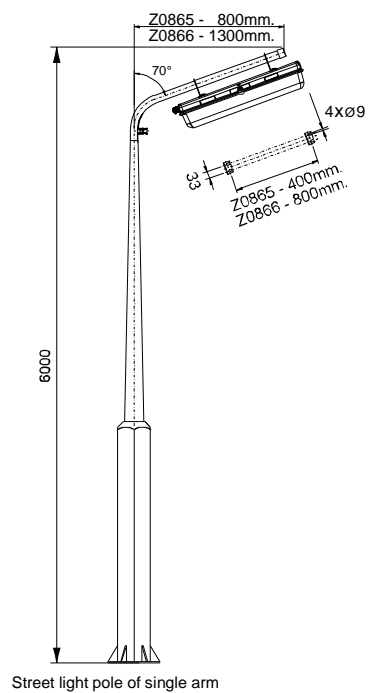
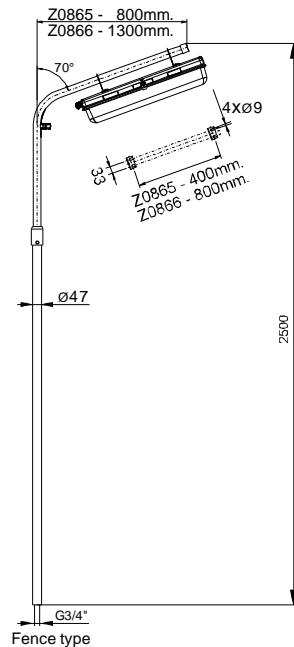
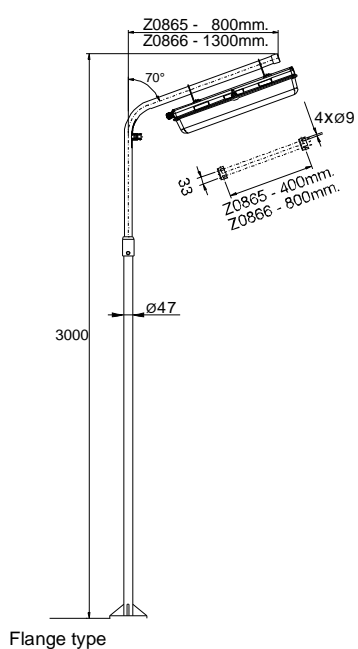


Clamp type



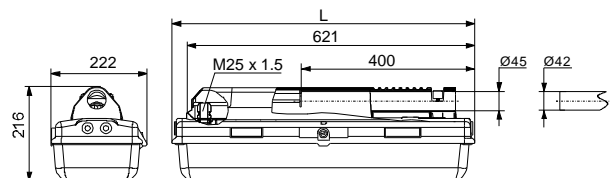


## Outline dimensions and mounting way



## Outline dimensions and mounting way

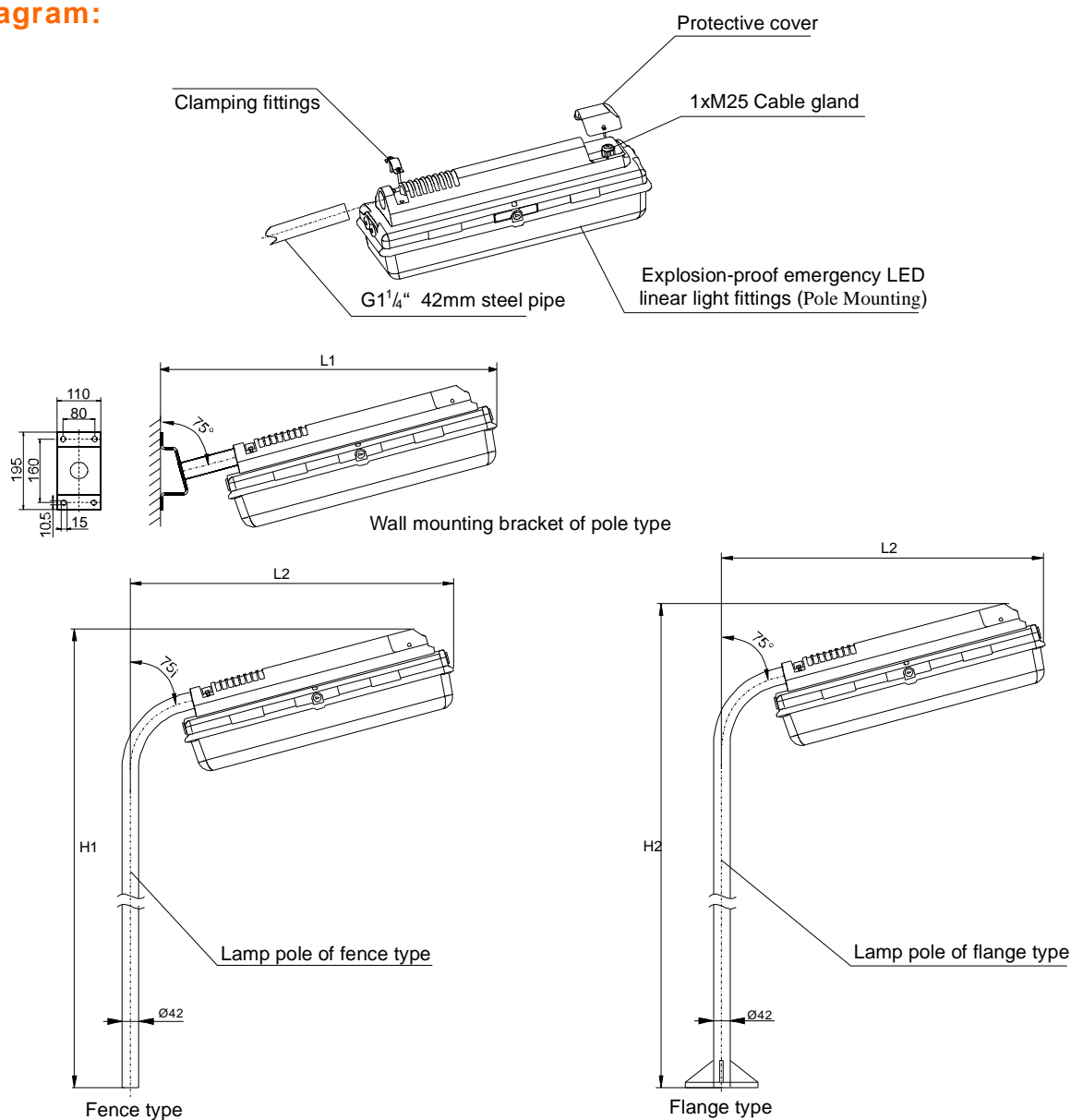
- Z086□□ x LED□W-PM, Z086□□ x LED□W-YJ-PM



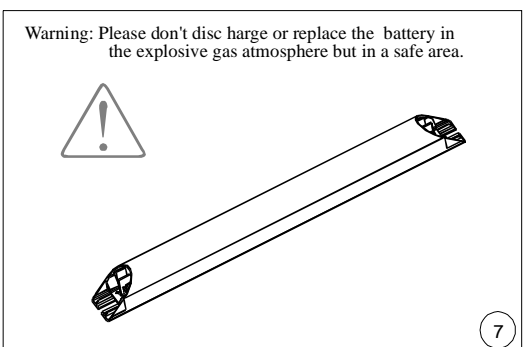
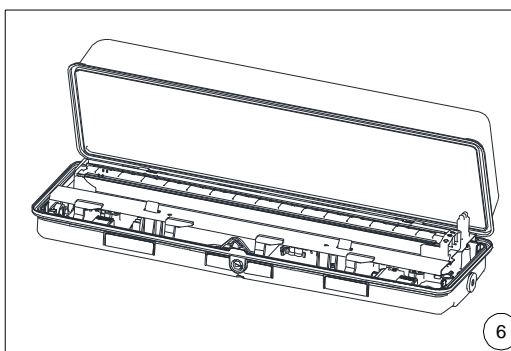
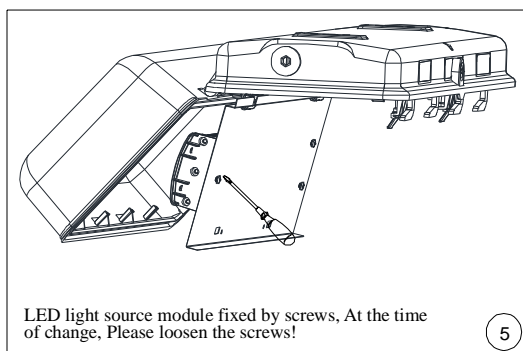
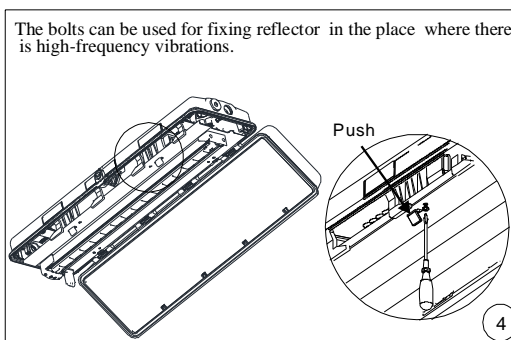
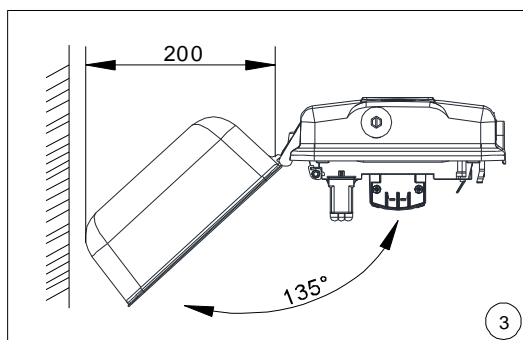
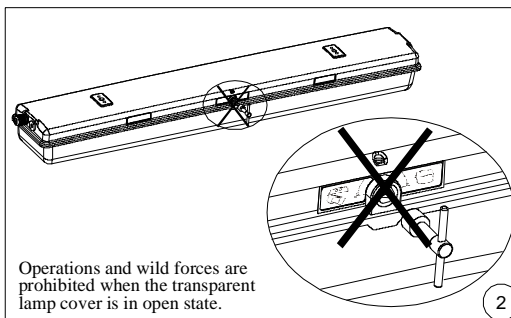
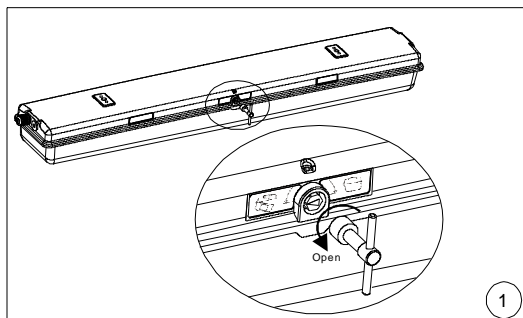
Type	L	L1	L2	H1	H2
Z0865	698	850	815	2635	2645
Z0866	1310	1440	1405	2740	2750

Explosion-proof (emergency) LED linear light fittings (Pole Mounting)

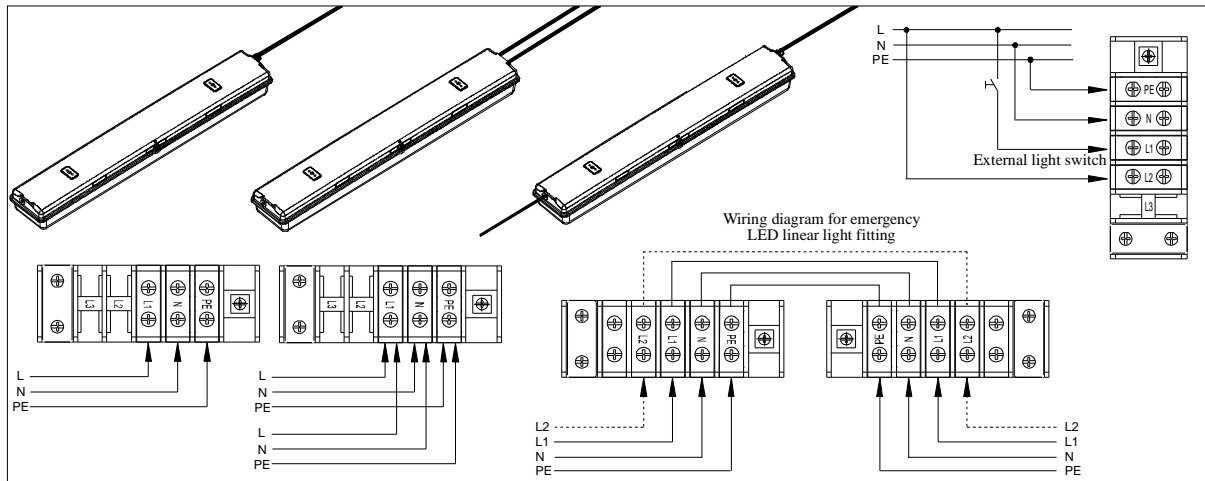
## Diagram:



## Outline dimensions and mounting way



## Wiring diagram



## Operation/installation

- Transport and storage in original packaging only
- National safety and installations regulations and the generally accepted rules of engineering practice must be observed when mounting and operating this equipment.
- The users shall follow instructions in order to ensure the normal working and safety of the explosion-proof (emergency) LED linear light fitting
- Explosion-proof(emergency)LED linear light fitting is suitable for use in hazardous areas, zone 1-2 and 21-22.
- Explosion-proof(emergency)LED linear light fitting should be used under the following atmospheric conditions:
  - \* The pressure is 80kPa(0.8bar)~110kPa(1.1bar) ;
  - \* The volume ratio of standard oxygen content is 21% air;
  - \* The Ambient air relative humidity is less than: 95%;
  - \* There is no obvious shake and impact vibration place;
  - \* Under the environment of gas that there is no obvious destruction insulation or vapor;
- Cables must be connected with due care.
- Crimped joint for wires should be done (such as compressing and connecting with wiring lug or bushing) to prevent multiconductor slipping from stipulated position or not to be compressed.
- Insulation must come up to the terminal.
- Electrical wire must not be damaged;
- All screws on the connection terminals, including unused ones, must be fully tightened. A check must be carried out on correct installation before the devices go into service.
- The required IP rating for explosion-proof degree of protection must be assured.
- Caution: Clean only with a damp cloth!
- If a clearance hole is used for the mounting of the stopping plug, it shall have a diameter no greater than 0.7mm more than the largest normal thread size of the stopping plug being used.
- After power off, the time of light fitting internal capacitor discharge to remaining 0.02mJ is less than 200ms

## Cable gland,stopping plug

- Generally, only certified cable glands and stopping plugs are permitted for use. However, the explosion-proof performance after the coordinate use should not be lower than the explosion-proof performance of the overall product;
- When using cable entries with lower IP66 protection than that which applies to the device, the IP protection of the whole device will be reduced.
- The mounting directives applicable to the cable entries used shall be observed.
- Care has to be taken that when fitting the cable entries, sealing inserts appropriate to the cable diameter are used.
- The outside diameter range of cable is detailed in the label on the cable.
- Unused holes shall be closed with a certified blanking plug and the diameter of blanking plug shall be properly adapted to the cable diameter.
- In order to ensure the required minimum protection category, the bolts of cable glands, blanking plug and relevant sealing bolts are to be tightened down.
- The clearance holes for plain entries shall have a diameter not more than 0,7 mm greater than the nominal diameter of the entry thread gland or fitting. The inside of the enclosure shall be provided with sufficient room to attach a locknut to the gland or fitting.



Over tightening of cable glands, blanking plug and relevant sealing bolts might impair the protection category.

## Commissioning

- Please ensure the following conditions before the light fitting is prepared for running:
  - \* The light fitting has been installed properly.
  - \* Unused cable entries must be sealed.
  - \* The light fitting has not been damaged.
  - \* The LED signaling gives the following signals:
    - Green - Main electric induction
    - Yellow - Fault indication
    - Red - Charge indication

## Maintenance / service

- Observe the national regulation of control overhaul and standard seriously. The components that have important influence to the explosion-proof performance shall be examined carefully. Before disassembling or replacement make sure that the device is disconnected from the voltage. Repairs and overhaul may only be carried out with original INDEX ELEKTRO spare parts and by a qualified electrician!
- Modifications to the device or changes of its design are not permitted.
- If there are damaged explosion-proof parts, only original parts supplied by Index Elektro BV may replace them. If you have any question about fault, consult or return the product to Index Elektro BV for repair.
- The repair and maintenance should be performed by the professional and qualified person;
- Please note: cleaning of the light fittings is only allowed with a damp cloth
- The following points must be checked during maintenance;
  - \* Check if the built-in component is damaged;
  - \* Check if the built-in component is fixed reliably;
- Over tightening of cable glands, blanking plug and relevant sealing bolts might impair the protection category.
- All sealing devices act as the seal. When ageing phenomenon's such as crack, softening etc appear, the seals should be changed with original seals from Index Elektro BV.
- The following points are recommended to check when it appears that the lamp tube cannot be lighted during maintenance:
  - o Whether the power supply system is normal or not.
  - o Whether the fuse module is switched off or not.
- LED signal indicator status: Green-Main electric induction, Yellow-Fault indication, Red-Charge indication
- Whether the battery can discharge normally and whether it is aging or not.
- Whether the electrical components such as control switches, drivers etc. are fault or not.
- The batteries are consumable elements, please change for a new one timely.



Warning: Do not discharge or replace battery in an explosive atmosphere

## Accessories / spare parts

- Only the original accessories and spare parts which are made by Index Elektro BV can be used.
- For some accessories and supplies see our latest catalogue or visit the website [www.indexelektro.nl](http://www.indexelektro.nl)

## Disposal / recycling

- The respective valid national regulations for waste disposal shall be observed when disposing of the apparatus!
- We are pleased to answer any special questions you may have. Please contact Index Elektro BV.