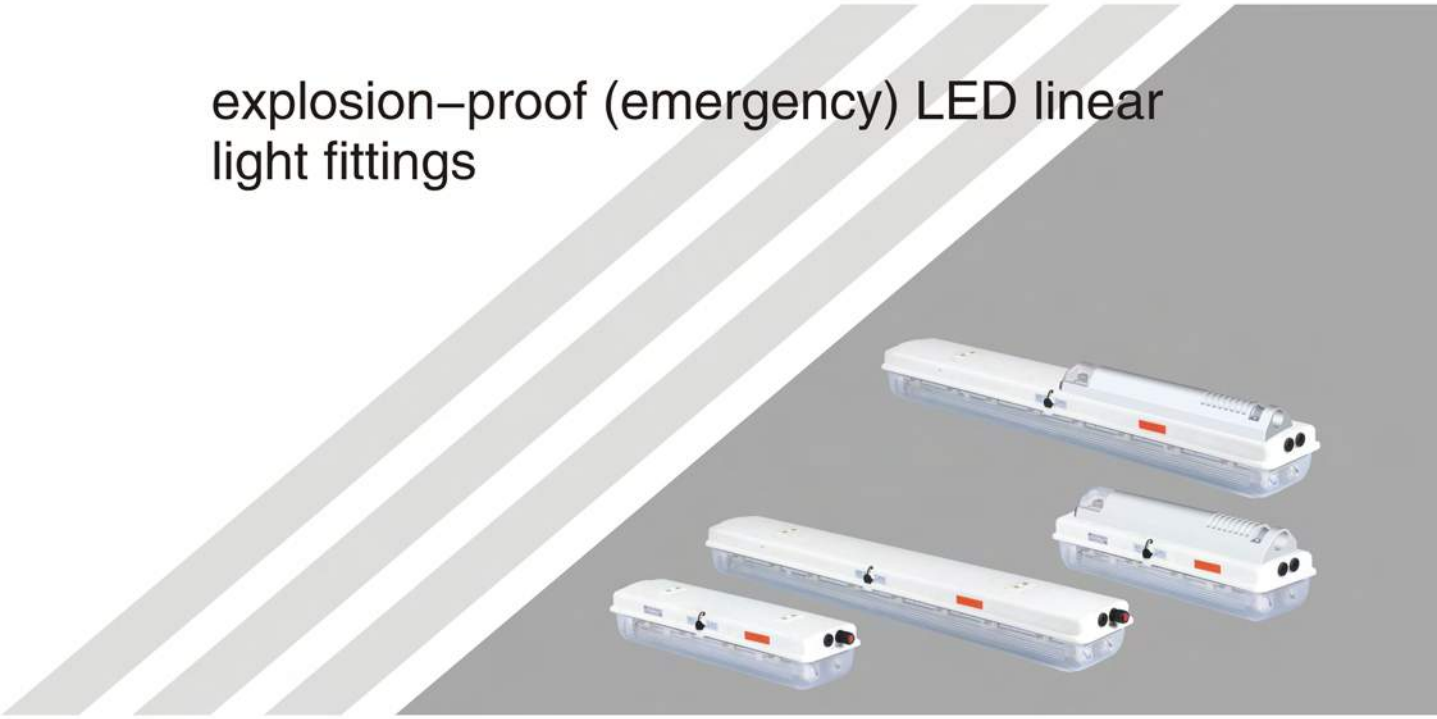
LARSON ELECTRONICS®

Operating instructions

explosion–proof (emergency) LED linear light fittings



EXPEDITED SHIPPING · SUPERIOR CUSTOM FABRICATION

LARSON ELECTRONICS LLC • 9419 E US HWY 175 • KEMP, TX 75143
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Purpose of these instructions

◎Working in hazardous areas, the safety of personnel andplant 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:
● National safety regulations;
● National accident prevention regulations;
● National installation regulations(e.g.IEC 60079-14);
● Generally recognized technical regulations;
● Safety guidelines in these operating instructions;
● Characteristic values is given on the series explosion-proof (emergency) LED linear light fitting.

Conformity to standards

The series explosion-proof (emergency)LED linear light fittings are designed,manufactured and tested in accordance with ISO 9001 standards.The series explosion-proof (emergency) LED linear light fittings is conformity to the directive 2014/34/EU,ATEX and the following standards:

IEC60079-0 : 2011	EN60079-0 : 2012
IEC60079-1 : 2014	EN60079-1 : 2014
IEC60079-5 : 2015	EN60079-5 : 2015
IEC60079-7 : 2015	EN60079-7 : 2015
IEC60079-18 : 2014	EN60079-18 : 2015
IEC60079-28 : 2014	EN60079-28 : 2015
IEC60079-31 : 2013	EN60079-31 : 2014

Applicable scope

The series products are suitable for using in the explosive hazardous areas zone1, zone2 and the dust hazardous zone 21 and zone 22, work as illumination; The product may be used indoors and outdoors.

◎Basic data of :

●Ex mark of explosion-proof LED linear light fitting :

No fitted with position switch : Ⓔx II 2GD Ex eb mb op is q IIC T5/T4 Gb;Ex tb op is IIIC T80℃ Db

Fitted with position switch : Ⓔx II 2GD Ex db eb mb op is q IIC T5/T4 Gb;Ex tb op is IIIC T80℃ Db

●Ex mark of explosion-proof emergency LED linear light fitting :

No fitted with position switch : Ⓔx II 2GD Ex eb mb op is q IIC T4 Gb;Ex tb op is IIIC T80℃ Db

Fitted with position switch : Ⓔx II 2GD Ex db eb mb op is q IIC T4 Gb;Ex tb op is IIIC T80℃ Db

●Degree of protection:IP66

●Ambient temperature:

$-25℃ \leq Ta \leq +55℃$

●Rated voltage: AC 100 ~ 250V 50/60Hz

●Rated cross-sectional area of terminal: one or two conductors 1.5 ~ 10mm^2

●The torque is suggested to be tighteded when wiring: 1.5 Nm

●For normal illumination power and emergency power see table 1

●Emergency starting time≤0.1 S

●Battery Configuration:

4.5Ah 7.2V

●Battery designed life: ≥500 times recharging

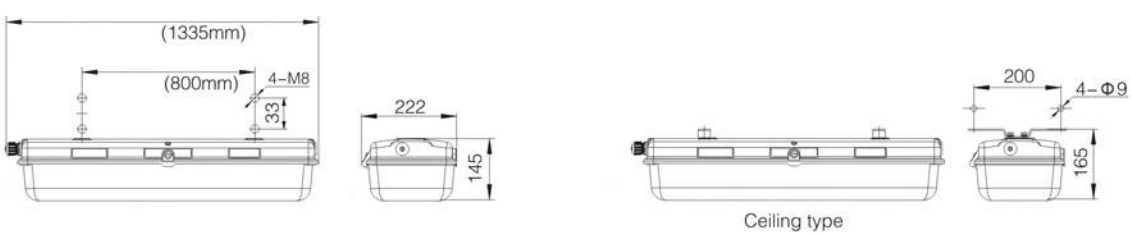
●Battery manufacturer:

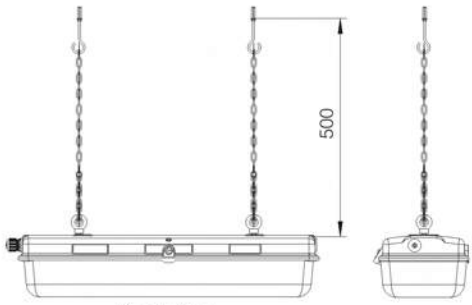
●Recharging time: 24 h

Table 1

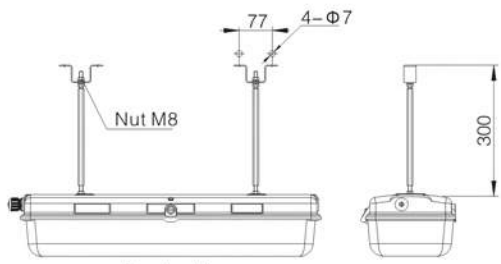
Model	Name of product	Normal illumination	Emergency illumination
ATEX-HALP-EMG-48-2L-LED-2X30W-R1-220V	Explosion-proof emergency LED linear light fitting	2×30W	2×10W

◎Outline dimensions and mounting way

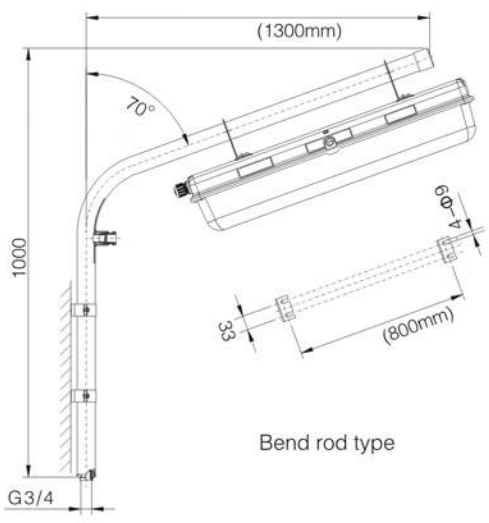




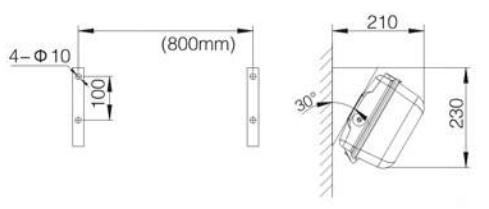
Chain type



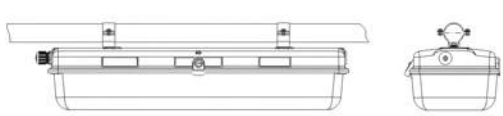
Pendant type



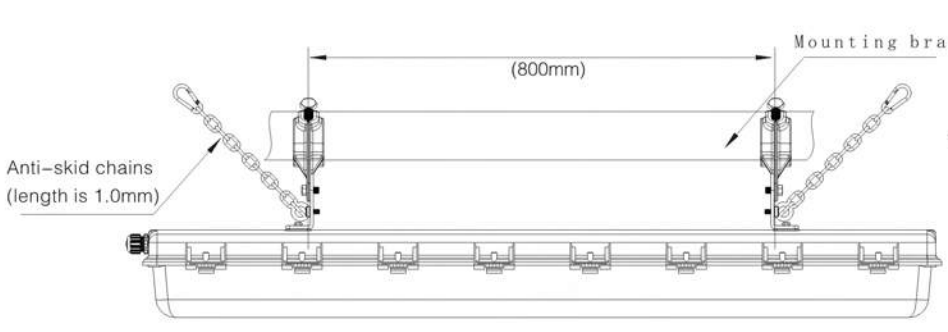
Bend rod type



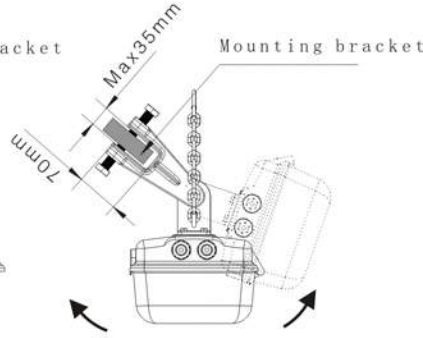
Bracket type



Clamp type

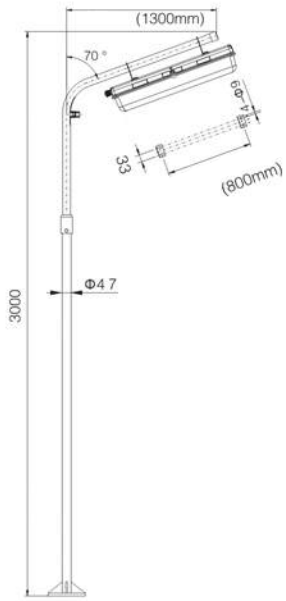


Bracket type

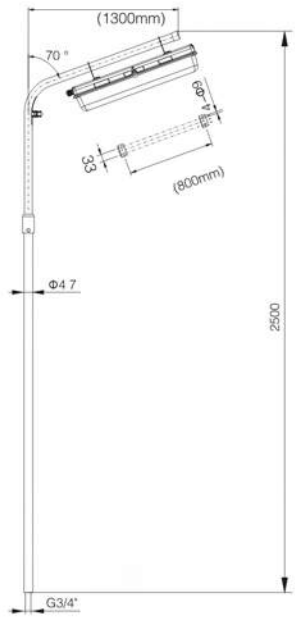


The angle is adjustable

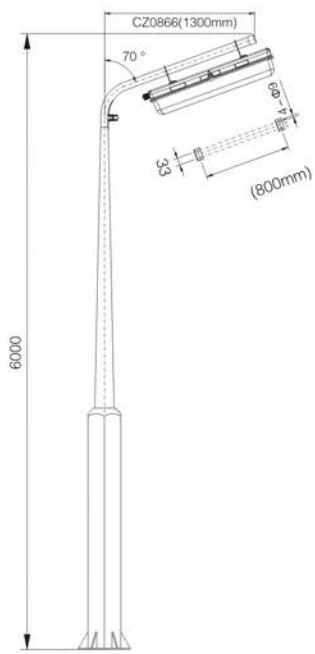
◎Outline dimensions and mounting way



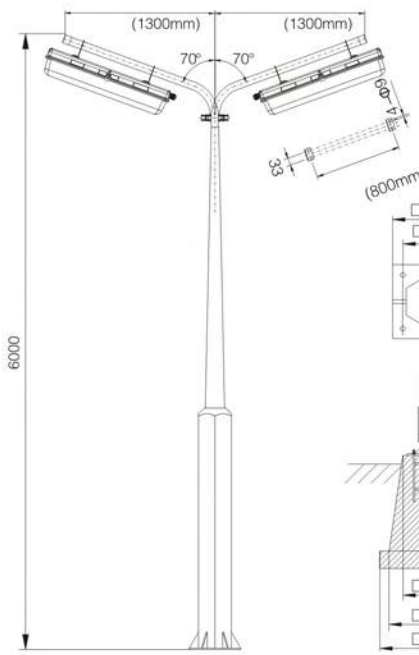
Flange type



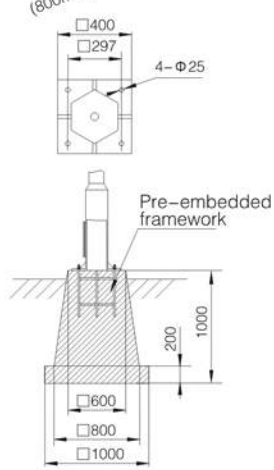
Fence type



Street light pole of single arm

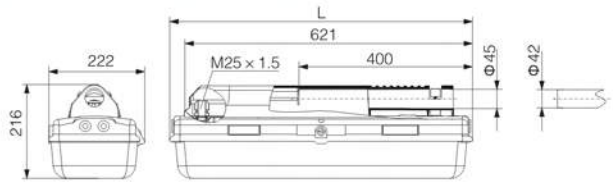


Street light pole of double arms



Street light concrete base diagram

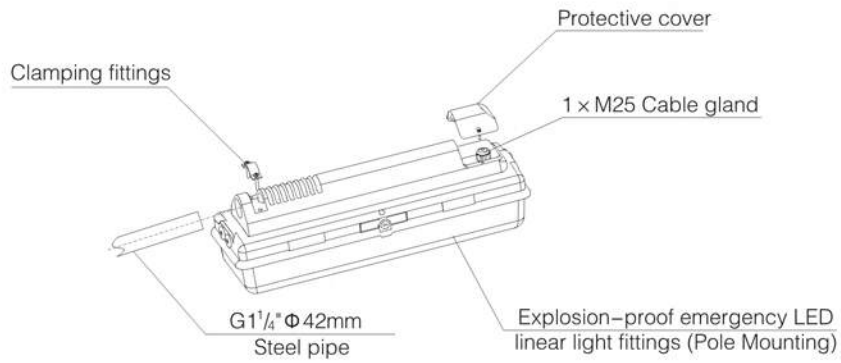
◎Outline dimensions and mounting way

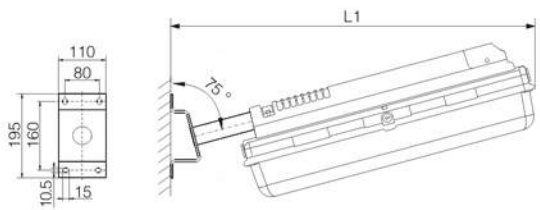


Type	L	L1	L2	H1	H2
ATEX-HALP-EMG-48-2L-LED-2X30W-R1-220V	1310	1440	1405	2740	2750

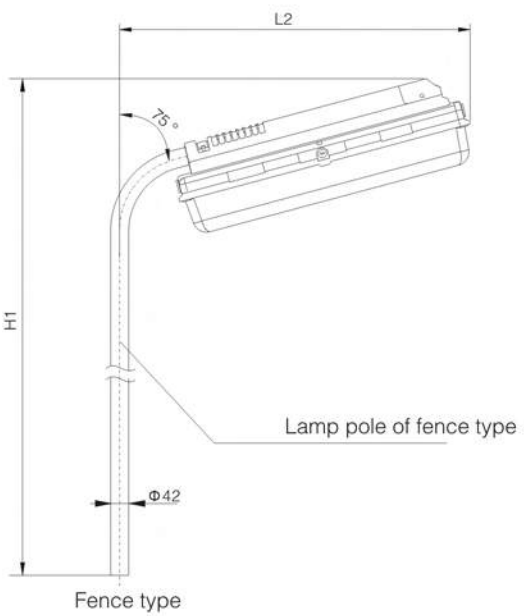
Explosion–proof (emergency) LED linear light fittings(Pole Mounting)

◎Diagram:

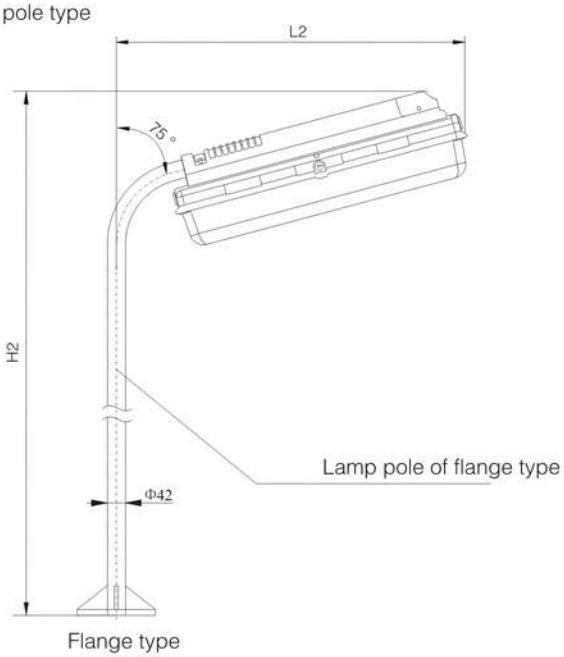




Wall mounting bracket of pole type

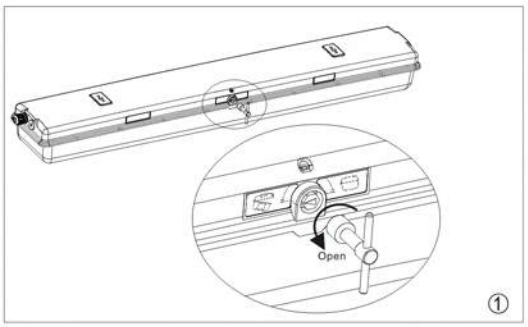


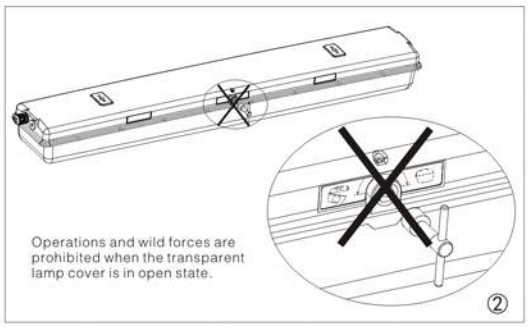
Fence type

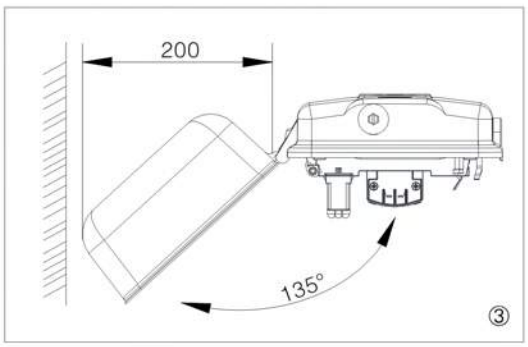


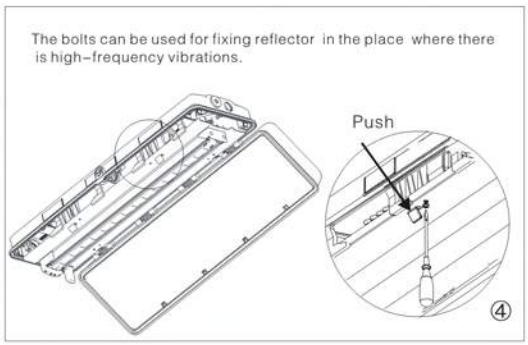
Flange type

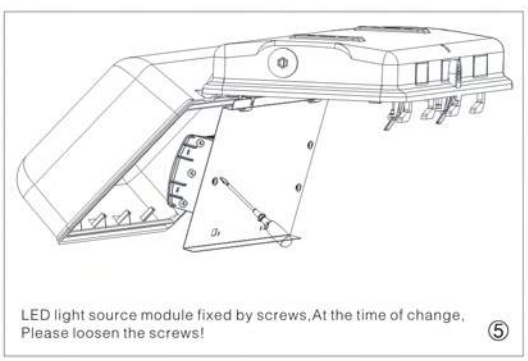
◎Outline dimensions and mounting way

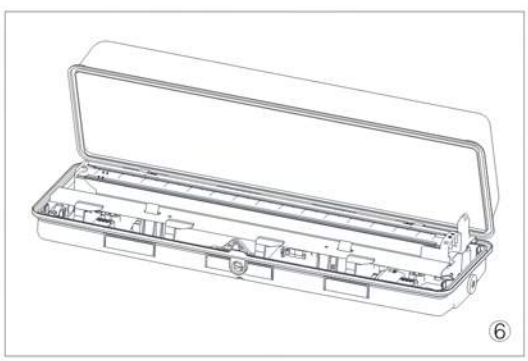


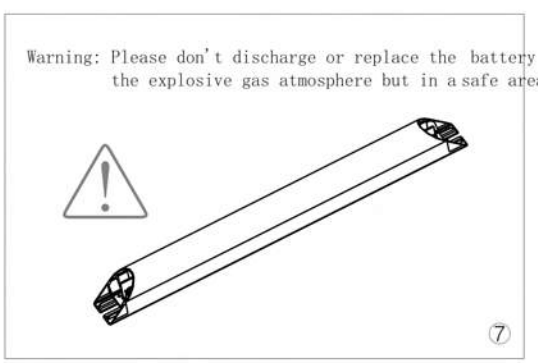


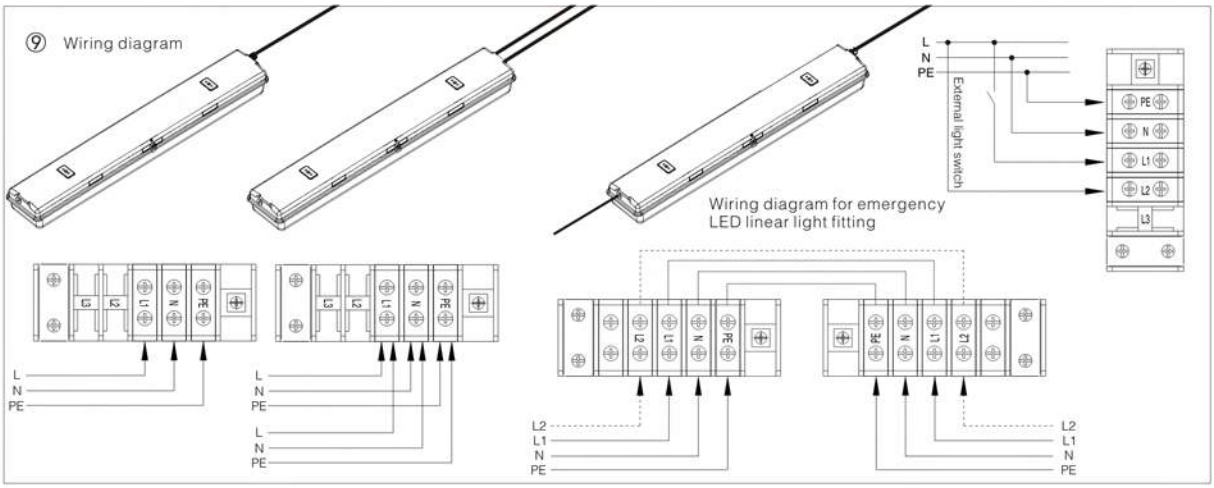












Operation/installation

◎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 useis shall observe the following stipulate in order to ensure the normal working and safety of explosion-proof (emergency) LED linear light fitting.

●Explosion-proof(emergency)LED linear light fitting is suitable for use in hazardous areas,zone 1、2and21、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 des-truction insulation or vapor;

●Cables must be connected with due care, ieey.

●Crimped joint for wires should be done(such as compressing and connecting with wiring lug or bushing) to prevent mulit-conductor sliping from stipulated position or not to be compressed;

●Insulation must come up to the terminal;

●Virtued electrical wire is not permitted must not be damaged electrical wire;

●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(refer to main technical data);

◎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 lable 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.



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

Commisioning

◎Please ensure the following conditions before the light fitting is prepared for running:

- The light fitting has been installed well according to the stipulations.
- The normal connection of conducting wire, the effectively earthed product
- The unused cable glands have been sealed.
- All sealing components play roles in sealing.
- The light fitting has not been damaged.
- The LED sigal inductor can give normal signal:

Green–recharging induction Yellow–Fault induction Red–Discharging induction

Maintenance / servicing

◎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 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, the parts from our company can only be replaced for. If you have any question about fault, you should consult our company or return to our company for repairmen.

◎The repair and maintenance should be performed by the professional and qualified person;

◎Please note that wiping with a wet cloth when cleaning the light fittings;

◎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;
- All sealing devices act as the seal.The ageing phenomenon such as crack, softening and etc.,then the seals should be changed for original seals from our company.
- Check if the wiring is loose.
- Check if the earthing is well .

◎The following points are recommended to check when it finds that the lamp tube can not be lighted during maintenance:

- whether the power supply system is normal or not.
- whether the fuse module is switched off or not.
- LED signal indicator status: Green–Recharging indication、Yellow–Fault indication、Red–Discharging indication
- Whether the battery can discharge normally and is it aging or not.
- Whether the electrical components such as control switches, ballest etc.are fault or not?

◎The batteries are consumable elements, please change for new one timely.



Warning: Please don't discharge or replace the battery in the explosive gas atmosphere but in a safe area.

Accessories/spare parts

◎The original accessories and spare parts which are made by Larson Electronics can only be used. For some accessories are supplied by manufacturer and their order number see our latest catalogue.

Disposal/recycling

◎The respective valid national regulations for waste disposal shall be observed when disposing of apparatus!

◎We are pleased to answer any special questions you may have Please contact your nearest service center.

Chemical Compatibility

The equipment involves the following non–metallic material and should be considered with regards chemical compatibility.

Enclosure Cover –Polycarbonate Enclosure Base –SMC Lock–Nylon Gasket–Silicone

Cover of light –Polycarbonate Blanking cap of light –Nylon Sealant of light –Polyurethane

Cover and enclosure of power –Nylon Sealant of power –Polyurethane