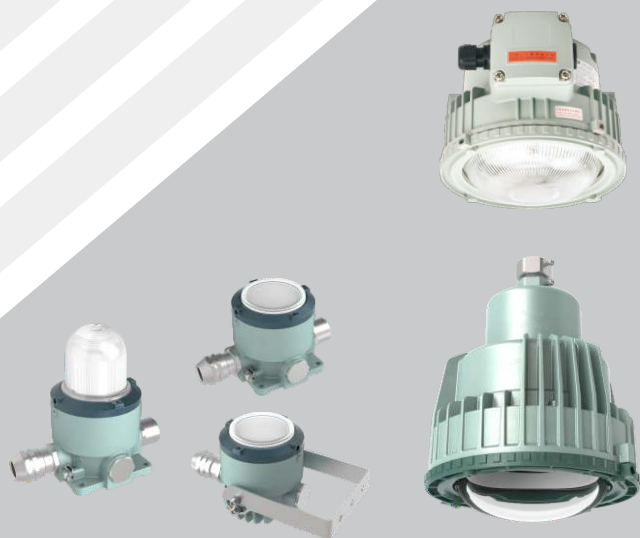




Operating instructions

CZ6474/□□□ Series
explosion-proof light fittings



CZ ELECTRIC CO.,LTD.

Add: No.1 Qixing Road, Qixing Town, Nanhu District, Jiaxing,
Zhejiang.P.R.China

Tel: +86-573-83888999 Fax: +86-573-83885001 P.C.: 314002

Http:www.cz-ex.com E-mail:cz@cz-ex.com



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 should 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

- ⊙ Use this series explosion-proof light fittings only for its intended purpose.
- ⊙ This series explosion-proof light fittings are not suitable for Zone 0 hazardous areas!
- ⊙ Incorrect or impermissible use or non-compliance with these instructions invalidates our warranty provision.
- ⊙ No changes to the device impairing its explosion-proof performance are permitted.
- ⊙ Use the explosion-proof light fittings only 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 given on this series explosion-proof light fittings.

Conformity to standards

This series explosion-proof light fittings are designed, manufactured and tested in accordance with ISO9001.

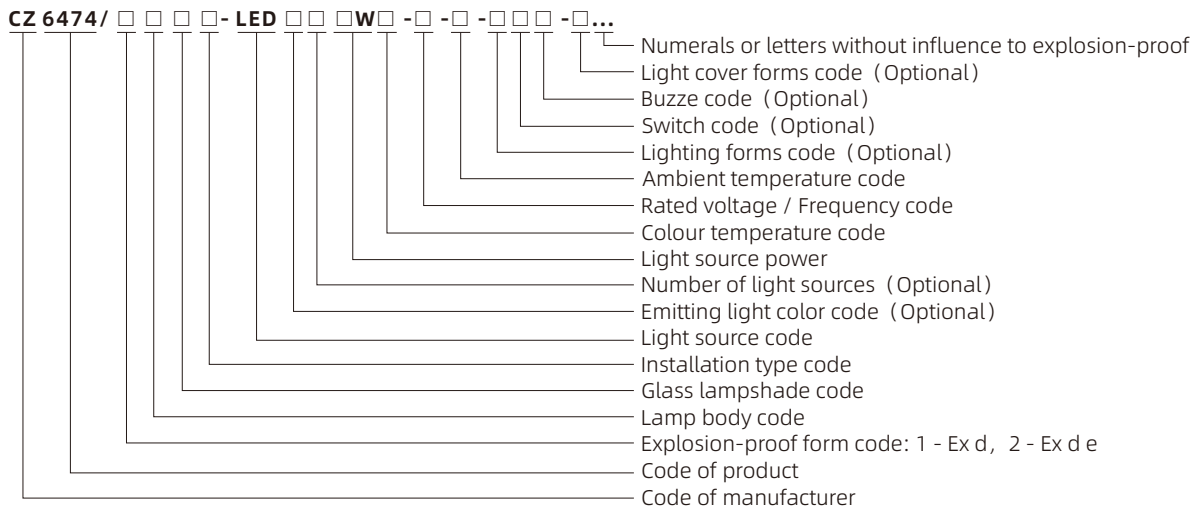
This series explosion-proof light fittings comply with the following regulations of ATEX directive 2014/34/EU and following standards:

IEC60079-0:2017	GB/T 3836.1-2021	EN IEC60079-0:2018
IEC60079-1:2014	GB/T 3836.2-2021	EN60079-1:2014
IEC60079-7:2017	GB/T 3836.3-2021	EN60079-7:2015+A1:2018
IEC60079-11:2023	GB/T 3836.4-2021	EN60079-11:2012
IEC60079-31:2022	GB/T 3836.31-2021	EN60079-31:2014

Applicable scope

The series products is suitable for the explosive hazardous area zone1, zone2 and the dust hazardous zone 21 and zone 22, work as illumination; The product can be used indoors and outdoors.

Model and implication

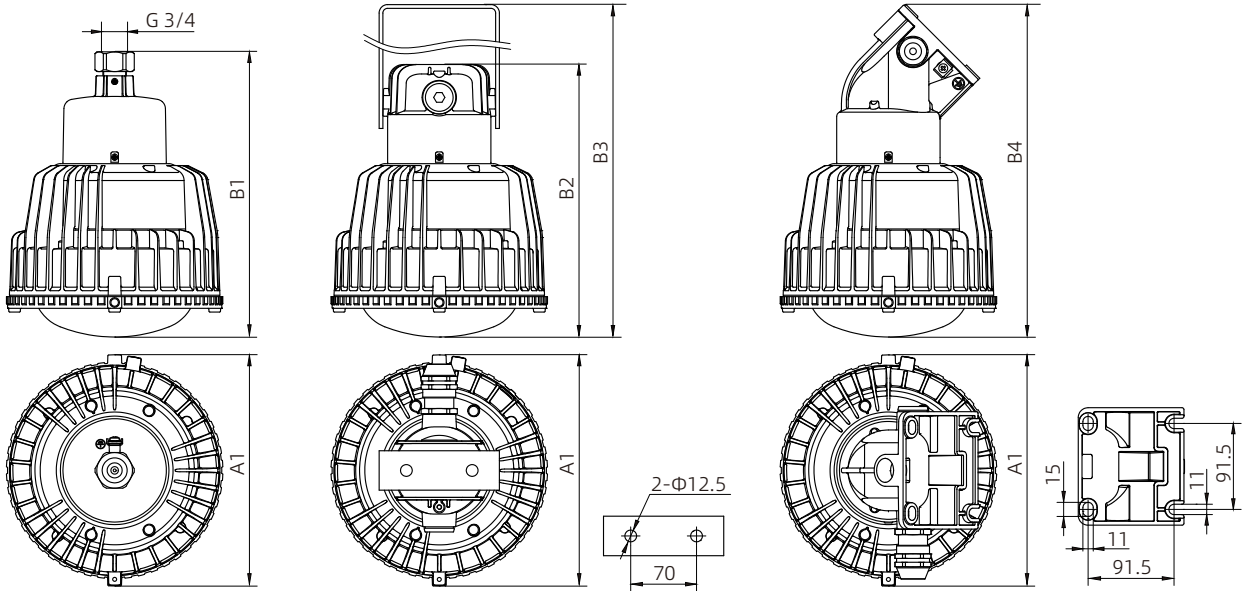


- Ex mark: II 2GD Ex db eb ib IIC /IIB+H2 T6/T5 Gb; Ex tb IIIC T80°C/95°C Db
- Test certificate: CML 23ATEX1227X; IECEx CML 23.0101X
- Ambient temperature: -60°C/-40°C≤Ta≤+40°C/+50°C/+55°C
- Terminal: L、N 2×2.5mm²; PE (internal) : 2×1-6mm², PE (external) : 2×6mm²
- See table 1 for others

Table 1:

Product type	Ex mark	Rated voltage	Rated power	Temperature class T*		
				Ta≤+40°C	Ta≤+50°C	Ta≤+55°C
CZ6474/111 □ CZ6474/121 □ CZ6474/131 □	Ex db IIC T* Gb Ex tb IIIC T*°C Db Ta≥-40°C/-60°C (Without buzzer)	100V~250V AC 50/60Hz 127V~250V DC 20V~40V DC 20V~28V AC	≤5W	T6/T80°C Flat cove	T6/T80°C Flat cove	T5/T95°C Flat cove
			≤12W	T5/T95°C Flat cove	T5/T95°C Flat cove	T4/T135°C Flat cove
			≤5W	T6/T80°C U cove	T6/T80°C U cove	T5/T95°C U cove
			≤12W			
CZ6474/135 □ CZ6474/145 □	Ex db ib IIC T* Gb Ex tb IIIC T*°C Db Ta≥-40°C/-60°C (With buzzer)	100V~250V AC 50/60Hz 127V~250V DC 20V~40V DC 24V~28V AC	≤5W	T6/T80°C Flat / U cove	T6/T80°C Flat / U cove	/
			≤45W	T6	T6	T5
CZ6474/235 □ CZ6474/245 □	Ex db IIB+H ₂ T* Gb (Ta≥-60°C) Ex tb IIIC T*°C Db	100V~250V AC 50/60Hz 127V~250V DC	≤60W	T6	T6	T5
			≤75W	T6	T6	T5
			≤90W	T6	T6	T5
CZ6474/235 □ CZ6474/245 □	Ex db eb IIC T* Gb (Ta≥-40°C) Ex db IIB+H ₂ T* Gb (Ta≥-60°C) Ex tb IIIC T*°C Db	100V~250V AC 50/60Hz 127V~250V DC	≤45W	T6	T6	T5
			≤60W	T6	T6	T5
			≤75W	T6	T6	T5
CZ6474/235 □ CZ6474/245 □	Ex db eb IIC T* Gb (Ta≥-40°C) Ex db IIB+H ₂ T* Gb (Ta≥-60°C) Ex tb IIIC T*°C Db	100V~250V AC 50/60Hz 127V~250V DC	≤90W	T6	T6	T5
			≤90W	T6	T6	T5

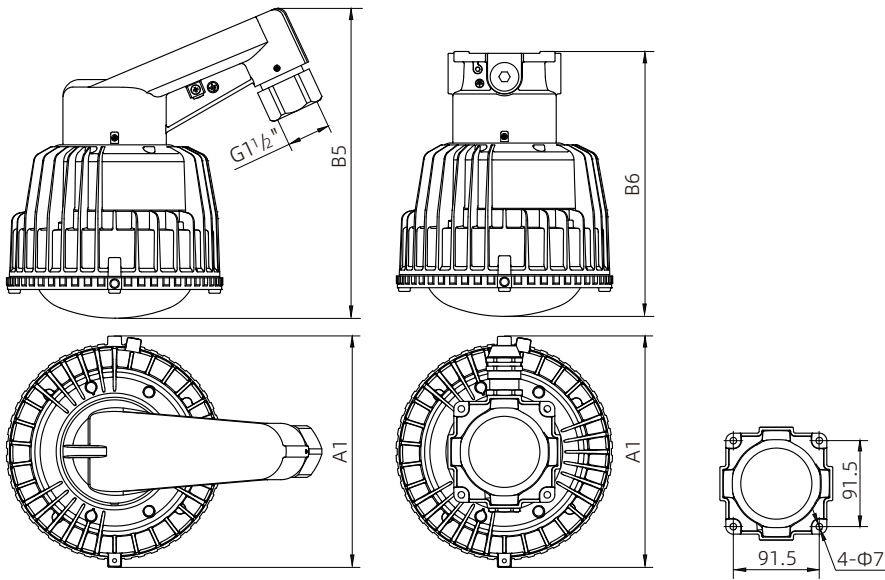
Outline and installation dimensions



Pendant type mounting

Bracket type mounting

Wall type mounting

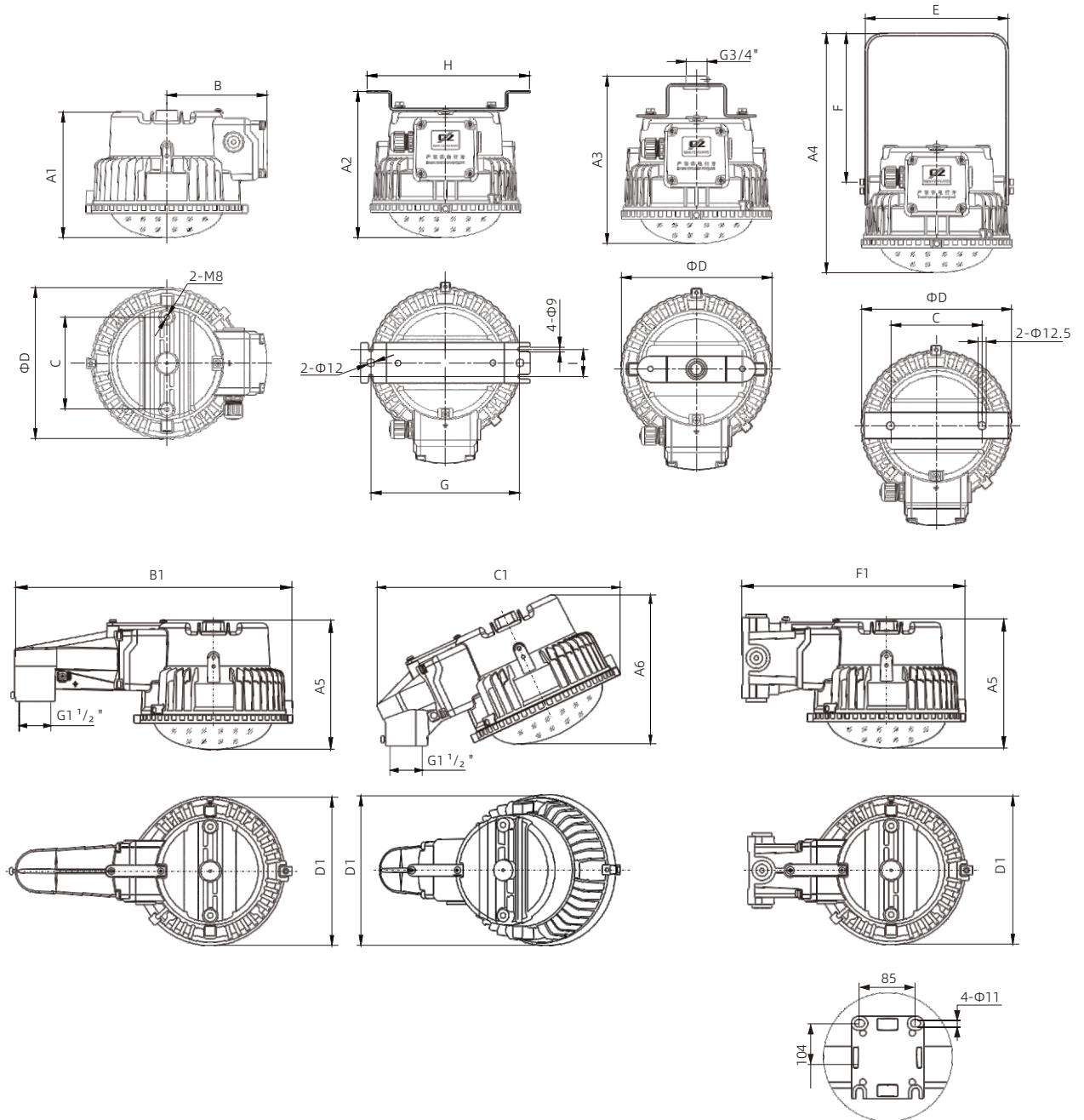


Platform type lamp 25° mounting

Ceiling type mounting

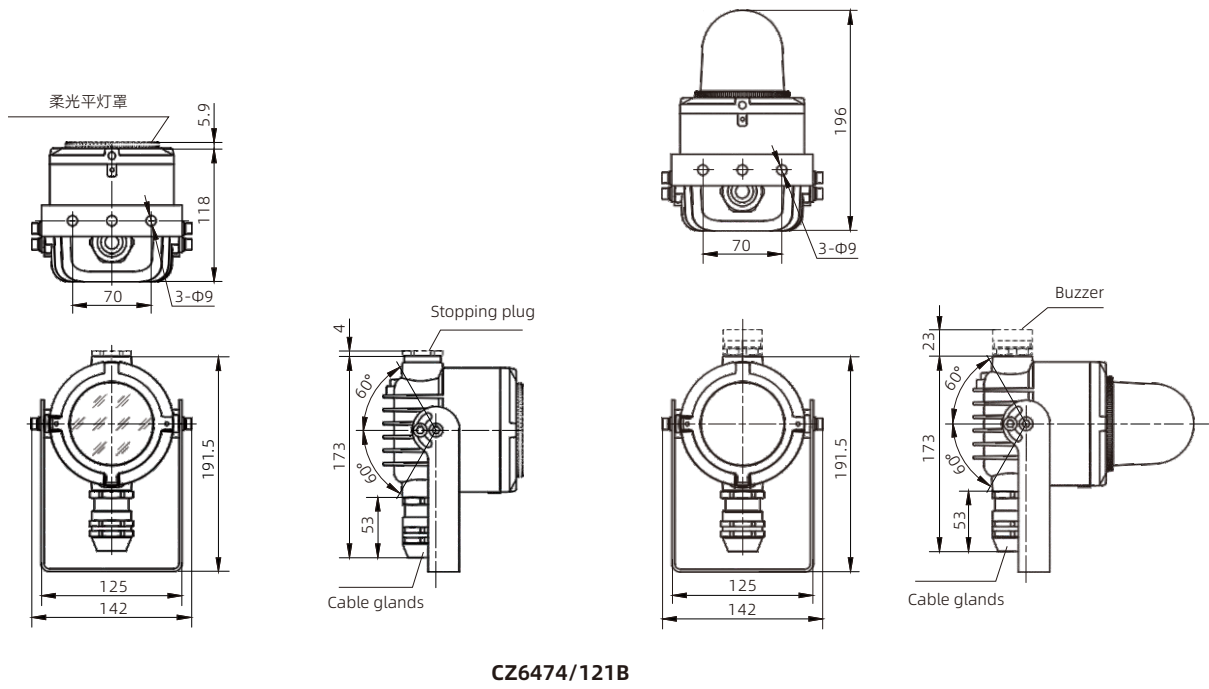
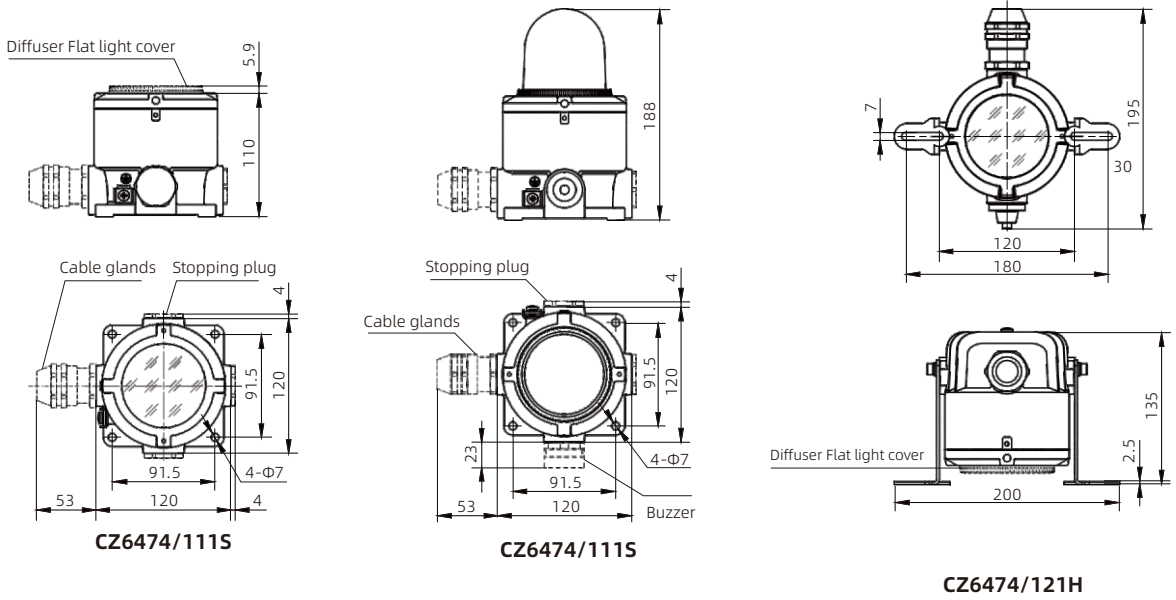
Type	A1	B1	B2	B3	B4	B5	B6
CZ6474/135	246	305	290	396	354	330	282
CZ6474/145	297	310	299	405	363	339	291

Outline and installation dimensions

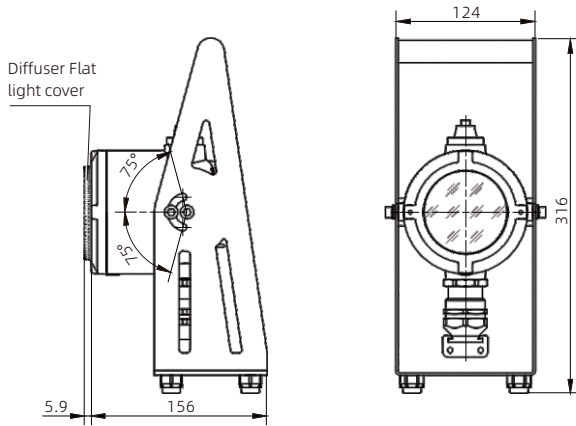


Type	A1	A2	A3	A4	A5	A6	B	B1	C	C1	ΦD	D1	E	F	F1	G	H	I
CZ6474/235	187	217	251	361	187	225	153	435	140	370	230	230	220	229	272	220	250	40
CZ6474/245	195	225	258	403	195	253	180	485	160	415	280	280	268	265	377	240	270	40

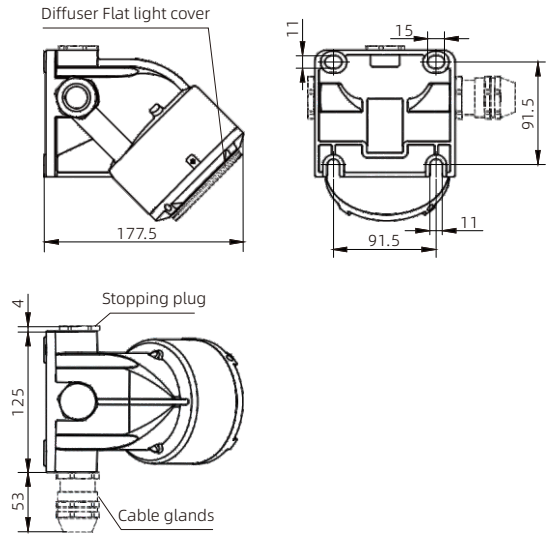
Outline and installation dimensions



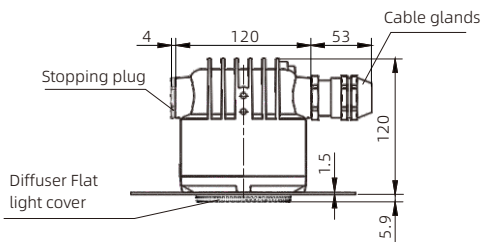
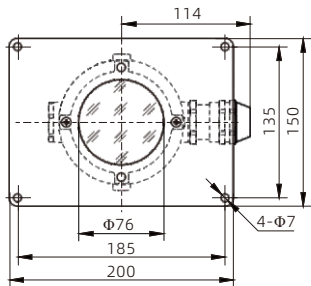
Outline and installation dimensions



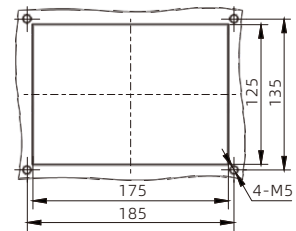
CZ6474/121P



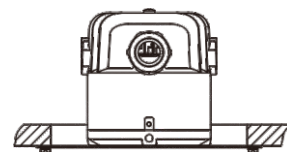
CZ6474/121E



CZ6474/131R



Drilling hole dimension of recessed lighting



Mounting diagram of recessed lighting

Installation / operation

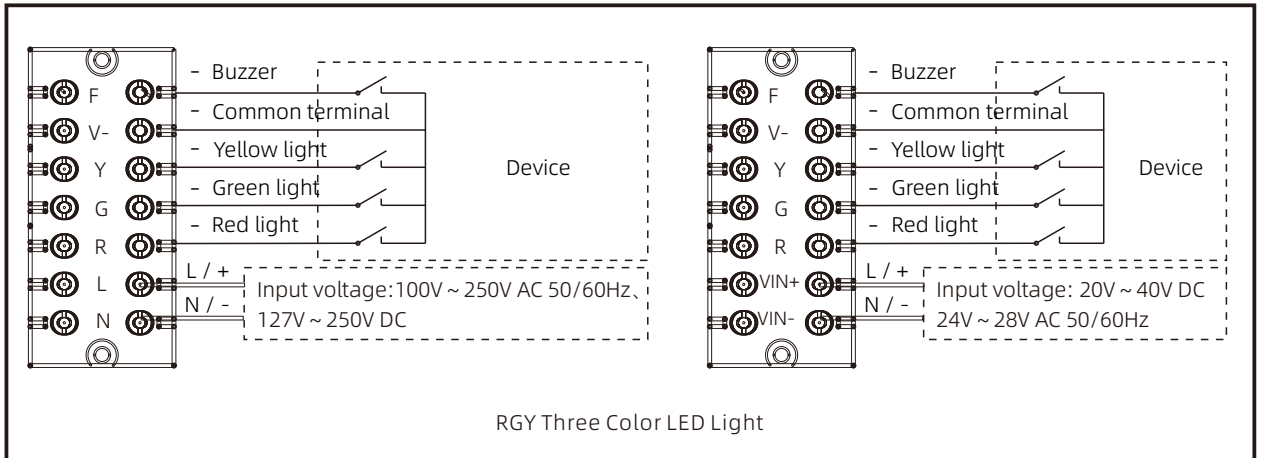
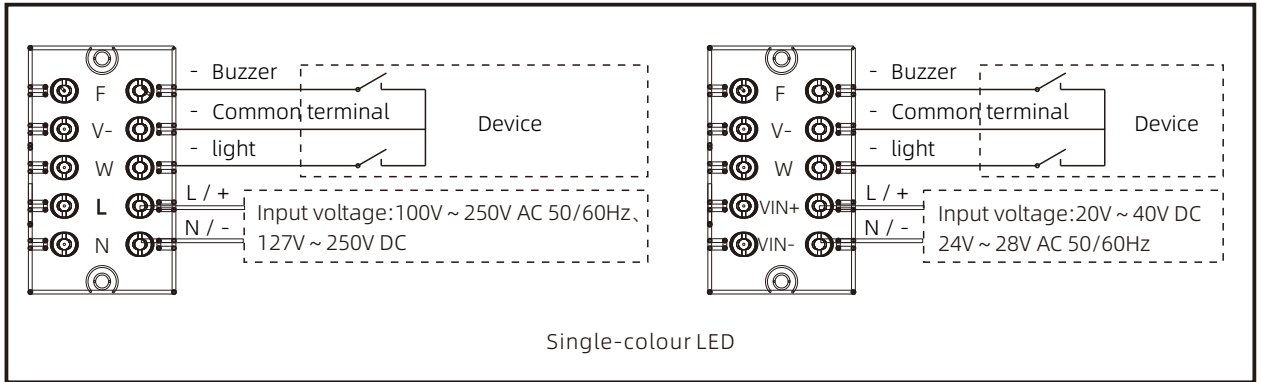
- ◎ Transport and storage in original packaging only national safety and installations regulations and the generally accepted rules of engineering practice must be observed when installing and operating this equipment.
- ◎ In order to guarantee that the explosion-proof light fittings normal work and the security, the user must observe following stipulated:
 - The series products is suitable for the explosive hazardous area zone 1, zone 2 and the dust hazardous zone 21 and zone 22; The product can be used indoors and outdoors.
 - The ambient temperature is not lower than -40°C , not higher than $+55^{\circ}\text{C}$.
 - The explosion-proof light fittings should be used under the following atmospheric condition:
 - The pressure is $80\text{kPa}(0.8\text{bar})\sim 110\text{kPa}(1.1\text{bar})$
 - The volume ratio of standard oxygen content is 21% air.



Do not open while energized!

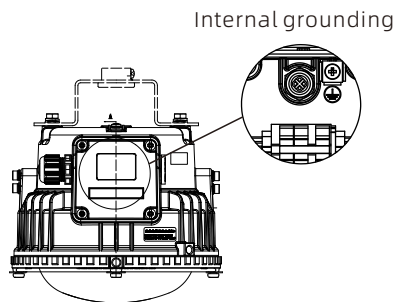
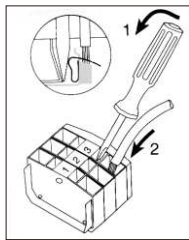
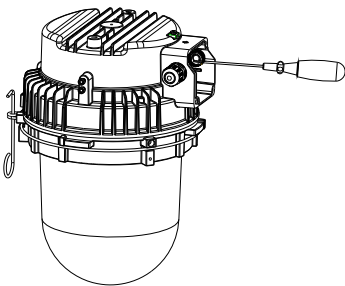
Must cool down for 10 minutes before open the light fittings!

- ◎ When mount or open the coverglass suites, the flameproof thread and the coverglass are not damaged;
- ◎ When open the light fittings, that the flameproof thread is clean must be guaranteed in order to avoid affecting the explosion-proof performance and installation of the light fitting;
- ◎ Wire connecting.
 1. Size appropriate “—” screwdriver inserts the terminal like the position of chart 1, causes the post to the clamp line mouth to open;
 2. Appropriate wire inserts the clamp line mouth, draws out the screwdriver, the wire reliably is then locked;
- ◎ The terminal is Explosion-proof terminal, each terminal's in-out port has two terminals positions, each positions only can insert one lead.
- ◎ The cable must not be damaged; Cautious disposal of cable connection, for instance:
 - The cable must be inserted in the terminal reliably;
 - The cable does not allow to have the phenomenon of empty meets;
 - The cable must not be damaged;
 - The both internal and external earthing shall be connected reliably.
 - 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.
- ◎ Grounding terminal tightening torque: $3.2 \sim 4.8\text{Nm}$
 - Internal grounding conductor cross-sectional area: \geq conductor cross-sectional area per phase S
 - External grounding conductor cross-sectional area: $\geq 4\sim 6\text{mm}^2$
- ◎ Wiring diagram of CZ6474/1 □ 1 LED explosion-proof light (LED warning light)
 - Wire cross-sectional area: $0.75 \sim 2.5\text{mm}^2$
 - Wire stripping length: 4 mm
 - Proposed tighteningscrew torque: $0.6 \sim 0.8\text{Nm}$
 - CZ6474/1 □ 1 Explosion-proof lamp wiring diagram



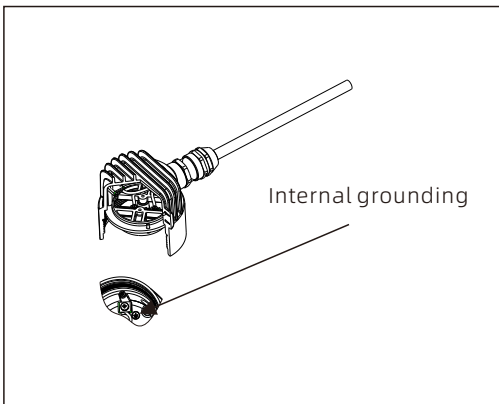
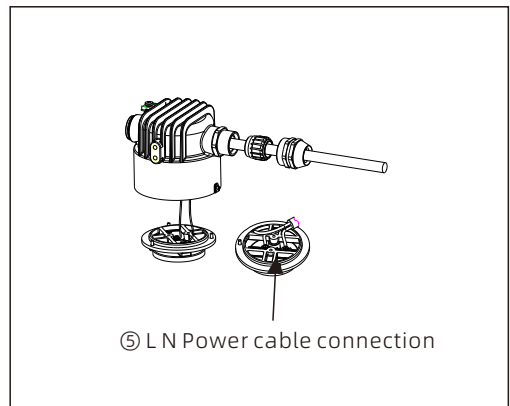
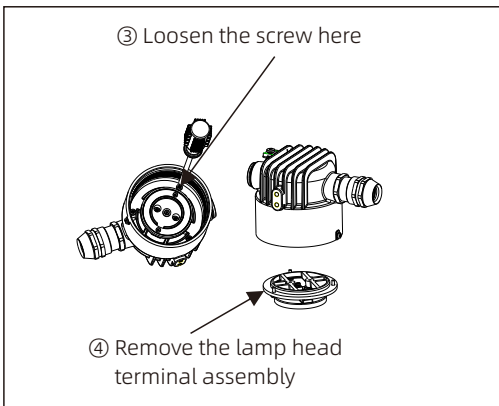
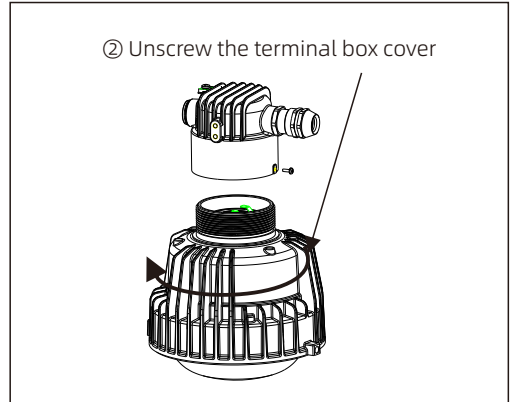
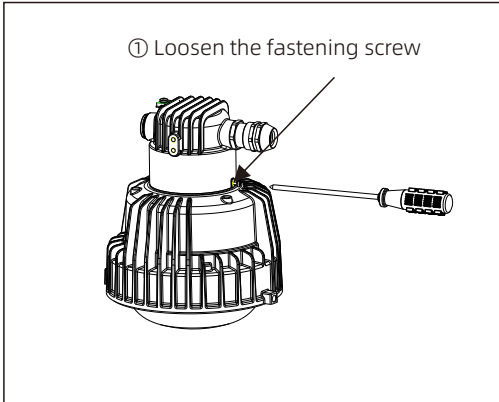
©CZ6474/2□5 LED explosion-proof lamp wiring diagram

- Wire cross-sectional area: 0.75-4mm²
- Wire stripping length: 8 mm



©CZ6474/1□5 LED explosion-proof lamp wiring diagram

- Wire cross-sectional area: 0.75-4mm²
- Wire stripping length: 8 mm
- Proposed tighteningscrew torque:0.6~0.8Nm



Cable gland, stopping plug

- ⊙ This series products shall be used with certified IECEx and ATEX directive 2014/34/EU cable entries and stopping plugs, the cable entries and stopping plugs Ex-mark must be CZ6474/1□□ : Ⓢ II 2GD Ex db II C Gb; Ex tb IIIC Db ; CZ6474/2□5 : Ⓢ II 2GD Ex eb II C Gb; Ex tb IIIC Db , minimum IP66 rated and correctly installed .
- ⊙ CZ6474/1□5A LED Explosion-proof Lamp Introduction cable diameter: Φ8-11.5mm. Tightening torque of 5 Nm at the lead-in port;
- ⊙ Its installing and operating instructions should be observed if other cable glands are used;
- ⊙ Care should be taken to the cable glands which should be matched with the used cable outside diameter properly; the outer diameter of being used cable see mark of cable gland.
- ⊙ Not use cable entries system must use our company stopping plug to seal, diameter of stopping plug is fit to cable entries diameter intended.
- ⊙ In order to ensure the required minimum degree of protection, 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 performance of protection .

Being operational

- ⊙ Before being operational, should carry on the test according to the stated method in the related rule.
- ⊙ Before being operational, you should examine the lighting fittings' correct function and mounting according to this instruction and other feasible regulation.
- ⊙ There will be a temperature rise on the surface of light fitting when it is used and it is normal phenomena. Don't touch the transparent parts due to its temperature is high.

Accessories / spare parts

- ⊙ Only original spare parts as well as original accessories made by CZ ELECTRIC CO., LTD can be used.

Maintenance

- ⊙ Observes strictly your country control overhaul and standard. The spare parts which have the important effect to explosion-proof performance must inspect carefully and specially. All the maintenance and repair must use the original component made by CZ ELECTRIC CO., LTD, replacing and repairing should take by professional electrician!
- ⊙ The following points must be checked during maintenance:
 - when cable enters sealing ageing, must be change in time.
 - Compliance with permitted temperatures;
 - Check if the built-in component is fixed reliably;
 - Check if the earthing is well connected.
 - Check if the glass cover and light fitting have flaw or damage.
 - Check if all the seals are in the hermetic working state.
 - Check if the flameproof thread is damaged.
- ⊙ Notice: You should often carry through the maintenance to make the light fitting all right, checking at least one time each year.

Specific Conditions for Use

- ◎ The ambient temperature range is limited as follows: $-40^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}/+55^{\circ}\text{C}$, or $-60^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}/+55^{\circ}\text{C}$
 $-60^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$ (Ex db ib)
- ◎ Repair of the threaded joints must be made in compliance with the specifications provided by the manufacturer. Repairs must not be made only on the basis of values specified in table 4 of EN 60079-1.
- ◎ The fastener screw on the lamp body shall only be replaced with the correct type, provided by the manufacturer.

Disposal/recycling

- ◎ The respective valid national regulations for disposal of waste shall be observed strictly when disposing of apparatus!
- ◎ We are pleased to answer any special questions you may have. Please contact your nearest CZ service station.