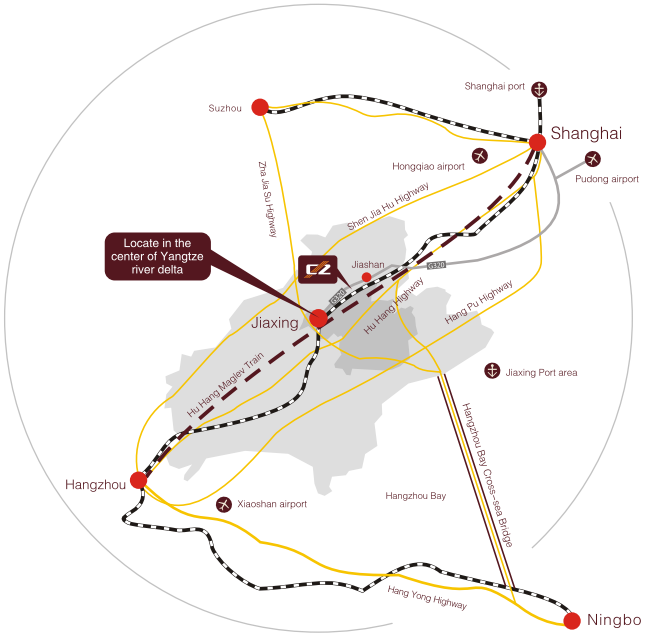


CZ EXPLOSION-PROOF ELECTRIC APPLIANCES CO.,LTD.

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
Sales line: +86-573-83888809/83888819/83888821

International trade: +86-573-83883599 Fax:+86-573-83883986
Http: www.cz-ex.com E-mail: cz@cz-ex.com

Service station

International IEC Ex Approval

Europe union ATEX Approval

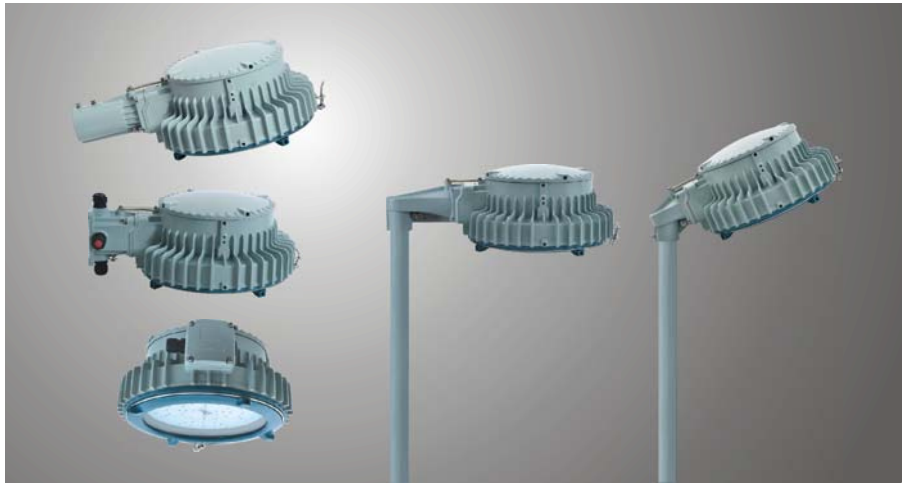
Customs Union CU-TR Approval

CZ0870d/LED
Explosion-proof light fittings

CZ0870n/LED
Explosion-proof light fittings

M0870/LED Industrial light fittings

2017



Descriptions:

The enclosures of LED explosion–proof light fittings are manufactured of die–cast aluminum alloy, with epoxy resin powder sprayed on the surfaces. Therefore, they have good anti–corrosion performance. The transparent cover is made by the toughened glass , and the exposed fasteners are made of stainless steel. Explosion –proof LED light fitting's terminal box side entry, is suitable for rubber–coated and the armored cable wiring. The internationally certified PHOENIX cage type terminals are selected as the internal terminals, which are convenient for wiring. Explosion–proof lights have LED chips inside which are formed to module by professionally optical luminous distribution design. There are four different luminous angles for option. Heat dissipation structure which is designed after professional thermal analysis and the special thermal conductivity structure of aluminum pcb can ensure the heat generated from working can be dissipated well. It can satisfy the related requirements of illumination in petrochemical, chemical and marine industries.

Explosion–proof light fittings can be sorted as: bracket type, platform type, wall type and street type..

The mounting ways of the explosion–proof platform light fittings C–90° are fence type and platform flange type.

The mounting ways of the explosion–proof platform light fittings D–25° are fence type and platform flange type.

- IECEX and ATEX certified
- There is a feature of good electromagnetic compatibility and it does not cause interference to the system power grid.
- There is a good performance of vibration due to the LED is the solid–state light source.
- The degree of protection is up to IP66.
- It is convenient to be mounted and maintained.

Zone 1 and zone 2　　Zone 21 and zone 22

CZ0870d/LED Explosion–proof light fittings
1 Zone

- Main technical data:

Certification	Ex mark	Meet the standard
China: CNEx 14.0747X	Ex d e ⅡC T5/T4 Gb Ex tD A21 IP66 T95℃/T130℃	GB3836 GB12476
IECEx: IECEx CNEX 17.0001X	Ex db eb op is ⅡC T5/T4 Gb Ex tb ⅢC T95℃/T130℃ Db	IEC60079
ATEX: CNEx 16 ATEX 0010X	⟨Ex⟩ Ⅱ 2GD Ex db eb op is ⅡC T5/T4 Gb Ex tb ⅢC T95℃/T130℃ Db	EN60079

Intended use: Can be used in zone 1 and zone 2
Can be used in zone 21 and zone 22
Degree of protection: IP66
Rated voltage: 110V~250V AC 50/60Hz
Ambient temperature: -20℃ ⩽ Ta ⩽ +40℃/+55℃, 40℃ ⩽ Ta ⩽ +40℃/+55℃
Light source / Colour temperature: LED / 5700K
Power factor: ⩾ 0.95
Terminal: L1, N cage type terminal 2-2.5mm², PE terminal: 2 × 10mm²
Conformity to: CE 2460
Cable entry: **B**—Bracket type lamp (Standard configuration)
Moulded plastic 1 × M25 × 1.5, outside diameter: Φ8-17mm
Moulded plastic 1 × M25 × 1.5 stopping plug
C—Platform type lamp 90°
D—Platform type lamp 25°
F—Street lamp
(Standard configuration)
Moulded plastic 1 × M25 × 1.5, outside diameter: Φ8-17mm
E—Wall type lamp (Standard configuration)
Moulded plastic 1 × M25 × 1.5, outside diameter: Φ8-17mm
Moulded plastic 3 × M25 × 1.5 stopping plugs

- Order specifications:

B

C

D

E

F

Power	Luminous flux (lm)	Angle of luminous	Height	Temperature class* Ta⩽+40℃	Temperature class* Ta⩽+55℃	Weight	Order No.
90W	9693	120°	⩽5m	T5	T4	11.8kg	**CZ0870d/105□–LED90W–□–B+□**
120W	12131	120°	⩽5m	T5	T4	12kg	**CZ0870d/105□–LED120W–□–B+□**
160W	14819	120°	⩽5m	T5	T4	12.2kg	**CZ0870d/105□–LED160W–□–B+□**
90W	10466	60°	6 ~ 8m	T5	T4	11.8kg	**CZ0870d/108□–LED90W–□–B+□**
120W	12888	60°	6 ~ 8m	T5	T4	12kg	**CZ0870d/108□–LED120W–□–B+□**
160W	15407	60°	6 ~ 8m	T5	T4	12.2kg	**CZ0870d/108□–LED160W–□–B+□**
90W	9350	85°×135°	8 ~ 10m	T5	T4	11.8kg	**CZ0870d/110□–LED90W–□–B+□**
120W	10813	85°×135°	8 ~ 10m	T5	T4	12kg	**CZ0870d/110□–LED120W–□–B+□**
160W	15037	85°×135°	8 ~ 10m	T5	T4	12.2kg	**CZ0870d/110□–LED160W–□–B+□**
90W	10385	40°	8 ~ 12m	T5	T4	11.8kg	**CZ0870d/112□–LED90W–□–B+□**
120W	12851	40°	8 ~ 12m	T5	T4	12kg	**CZ0870d/112□–LED120W–□–B+□**
160W	15443	40°	8 ~ 12m	T5	T4	12.2kg	**CZ0870d/112□–LED160W–□–B+□**

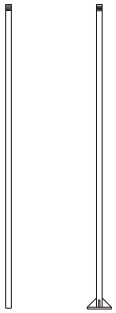
The mounting ways of the light fittings
B–Bracket type lamp
C–Platform type lamp 90°
D–Platform type lamp 25°
E–Wall type lamp
F–Street lamp
Ambient temperature
2 — -20℃ to+40℃/+55℃
4 — -40℃ to+40℃/+55℃
Code of cable gland see page 03
Order No.of mounting accessories (no need, no mark), see page 03

• Code of cable gland

B—Code of cable gland for bracket type lamp		
Code	Specification	Cable diameter
B	One moulded plastic M25 × 1.5 cable gland, one moulded plastic M25 × 1.5 stopping plug	Φ8-17mm
C	One brass CZ0221/M25 × 1.5 metal cable gland, one moulded plastic M25 × 1.5 stopping plug	Φ8-17mm
D	Two moulded plastic M25 × 1.5 cable glands	Φ8-17mm
E	Two brass CZ0221/M25 × 1.5 metal cable glands	Φ8-17mm
F	One brass CZ0227/M25 × 1.5-G 3/4″ increasd safety metal cable gland, one moulded plastic M25 × 1.5 stopping plug	Φ11-15mm
G	Two brass CZ0227/M25 × 1.5-G 3/4″ increasd safety metal cable glands	Φ11-15mm
H	One brass CZ0226/M25 × 1.5-(G02) increasd safety metal cable gland (stopping boxes), one moulded plastic M25 × 1.5 stopping plug	Φ11.5-16mm
I	Two brass CZ0226/M25 × 1.5-G02 increasd safety metal cable glands (stopping boxes)	Φ11.5-16mm
E—Code of cable gland for wall type lamp		
13	One moulded plastic M25 × 1.5 cable gland, three moulded plastic M25 × 1.5 stopping plugs.	Φ8-17mm
22	Two moulded plastic M25 × 1.5 cable glands, two moulded plastic M25 × 1.5 stopping plugs.	Φ8-17mm
31	Three moulded plastic M25 × 1.5 cable glands, one moulded plastic M25 × 1.5 stopping plug.	Φ8-17mm
40	Four moulded plastic M25 × 1.5 cable glands	Φ8-17mm
04	Four moulded plastic M25 × 1.5 stopping plugs.	
Note: If matched with metal cable gland, note after code.		

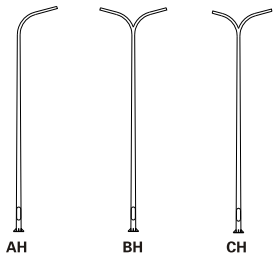
Note: Cable gland for platform type lamp, street type **C**, **D**, **F** is equipped, no need to be mentioned.

• Mounting accessories:

Illustration	Descriptions	Unit	Order No.
Mounting bracket	Accessories for bracket type lamp	Set	**D0879/2**
Lamp pole of fence type  Lamp pole of flange type	Lamp pole of fence type, G1½" galvanized steel pipe material and powder coated surface	Set	**D8725**
	Lamp pole of flange type, G1½" galvanized steel pipe material and powder coated surface	Set	**D8726**

• Accessories for street type lamp

Order specification of the lamp pole of street light:



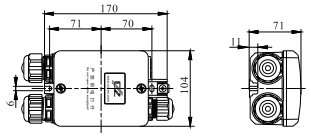
Descriptions	Order No.
Lamp pole of single arm	**AH□+□**
Lamp pole of double arms with equal length	**BH□+□**
Lamp pole of double arms with non-equal length	**CH□+□**

CH□+□
- The height of lamp lole
  - 6m
  - 8m
  - 10m
  - 12m
  - 15m
- The order No. of CZ0930 explosion-proof terminal box

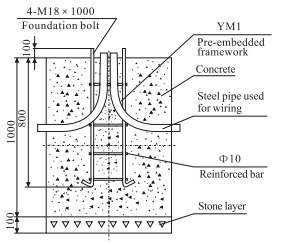
• The order No. of CZ0930 explosion-proof terminal box

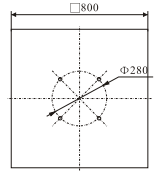
Illustration	Descriptions	Cable entries			Order No.
		The inlet cable	The number of inlets	The number of outlets	
	Single lamp equipped with one fuse	Rubber-coated cable	2 × M32 Moulded plastic cable gland	1 × M25 Moulded plastic cable gland	**10**
		Armoured cable	2 × M32 Brass cable gland	1 × M25 Brass cable gland	**11**
	Double lamps equipped with two fuses	Rubber-coated cable	2 × M32 Moulded plastic cable gland	2 × M25 Moulded plastic cable gland	**20**
		Armoured cable	2 × M32 Brass cable gland	2 × M25 Brass cable gland	**21**

• The outline dimension of the CZ0930 explosion-proof terminal box:



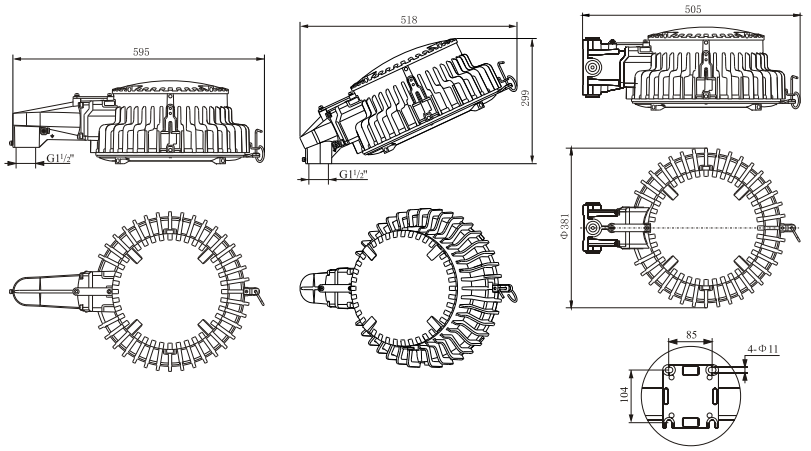
• Base diagram:



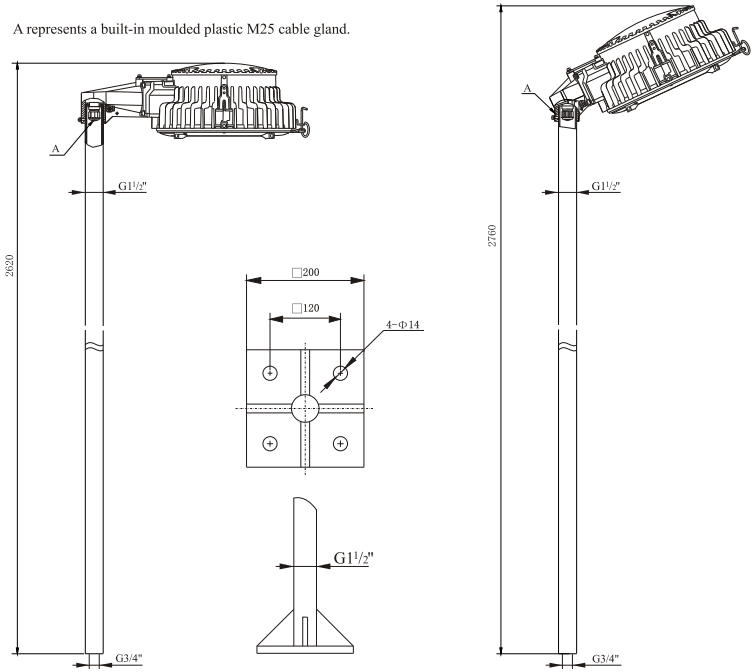


This base diagram is used for the lamp with height less than 10 meters.

- Outline and installation dimensions:



A represents a built-in moulded plastic M25 cable gland.

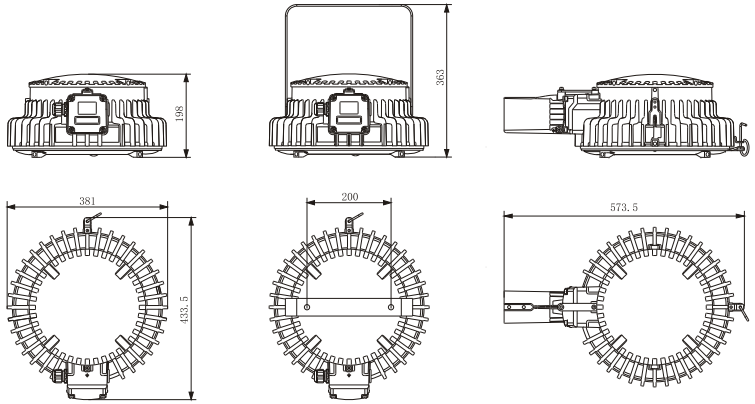


C — Lamp cap mounted in the angle of 90° Fence type

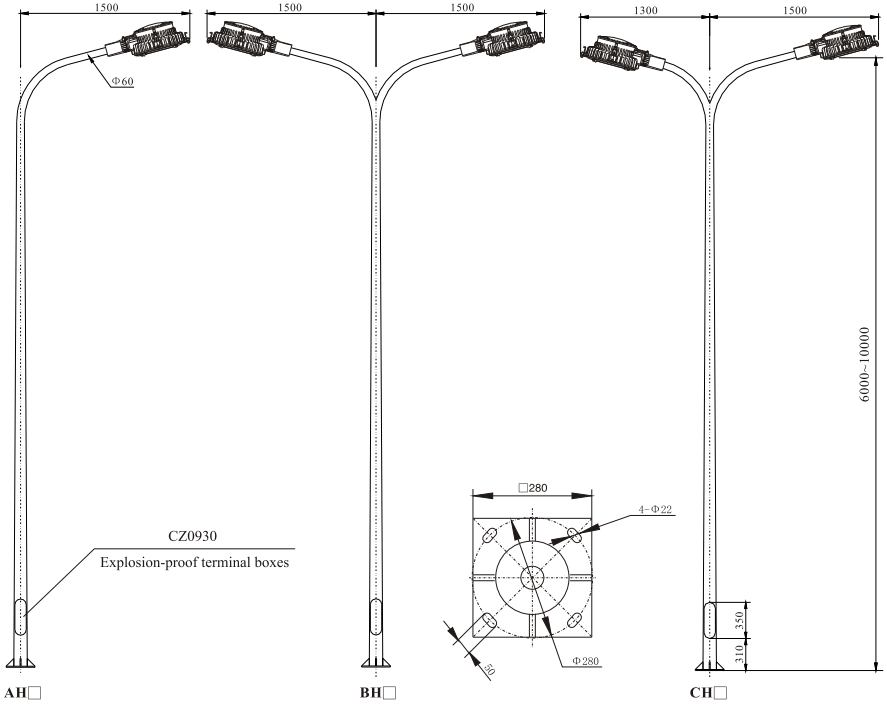
Flange type

D — Lamp cap mounted in the angle of 25° Fence type

- Outline and installation dimensions:

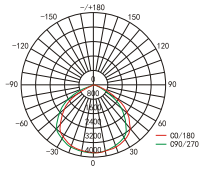


- Mounting ways and outline dimensions:



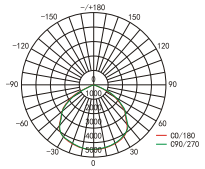
- Luminous intensity distribution curve:

Luminous intensity unit: cd



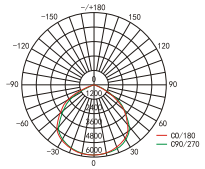
The average beam angle (50%) : 110.2°

CZ0870d/105-LED90W



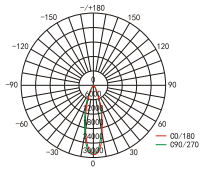
The average beam angle (50%) : 111.5°

CZ0870d/105B-LED120W



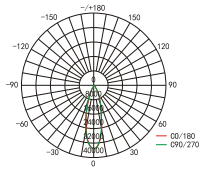
The average beam angle (50%) : 107.8°

CZ0870d/105B-LED160W



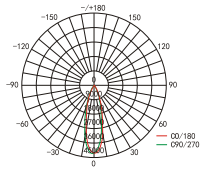
The average beam angle (50%) : 28.4°

CZ0870d/108-LED90W



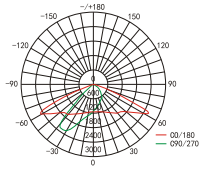
The average beam angle (50%) : 28.4°

CZ0870d/108-LED120W



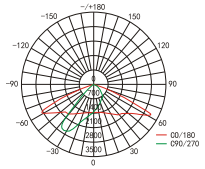
The average beam angle (50%) : 27.9°

CZ0870d/108-LED160W



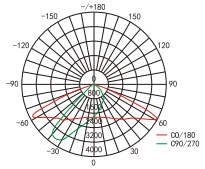
The average beam angle (10%) : 127°

CZ0870d/110-LED90W



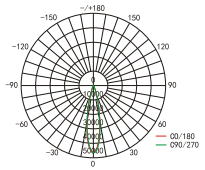
The average beam angle (10%) : 126.6°

CZ0870d/110-LED120W



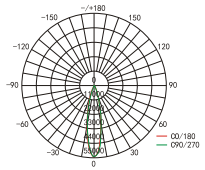
The average beam angle (10%) : 126.9°

CZ0870d/110-LED160W



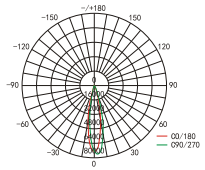
The average beam angle (50%) : 22.2°

CZ0870d/112-LED90W



The average beam angle (50%) : 22.5°

CZ0870d/112-LED120W



The average beam angle (50%) : 21.8°

CZ0870d/112-LED160W

[1] # EU-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**

[3] EU-Type Examination Certificate Number: **CNEX 16 ATEX 0010 X Issue 0**

[4] Equipment or Protective System: **LED explosion-proof light fittings model CZ0870d**

[5] Manufacturer: **CZ Explosion-proof Electric Appliances Co., Ltd.**

[6] Address: **No.1 Qixing Rd, Qixing Town, Nanhu District, Jiaxing, Zhejiang, P.R. China**

[7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] CNEX-Global B.V., Notified Body number 2614, in accordance with Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No. **150002**.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012+A11:2013 **EN 60079-1:2014** **EN 60079-7:2015**
EN 60079-28:2015 **EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to specific conditions for use specified in the schedule to this certificate.

[11] This EU – Type examination certificate relates only to the design and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following:

II 2 G **Ex db eb op is IIC T5/T4 Gb** or
II 2 D **Ex tb IIIC T95℃/T130℃ Db**

Certification officer: Wu Jianguo Signature: Wu Jianguo

Date of issue: 2016-12-20

This certificate may only be reproduced in its entirety and without any change, including schedule

[13] **SCHEDULE**

[14] **EU-TYPE EXAMINATION CERTIFICATE No.**
CNEX 16 ATEX 0010 X Issue 0
Report: 150002

[15] Description of equipment:
The LED explosion-proof light model CZ0870d is made of an aluminum enclosure with a toughened glass window and consists of a light and electronics compartment in type of explosion protection flameproof enclosure 'db' and a terminal enclosure in type of explosion protection increased safety 'eb'. If used in explosive dust environments, the enclosure can be regarded as having the type of explosion protection 'tb'. Cables can be connected through cable glands in the terminal enclosure.

Nomenclature for CZ 08 70 d / a b – LED cW:

CZ	=	Manufacturer abbreviation
08	=	Year of development
70	=	Light fitting specification code
d	=	Flame proof 'd'
a	=	Angle of luminous code (105=120°, 108=60°, 110=85°x135°, 112=40°)
b	=	Mounting arrangements (B=Bracket type lamp, C=Platform type lamp 90°, D=Platform type lamp 25°, E=Wall type lamp, F=Street lamp)
LED	=	LED light source
cW	=	Power (90 W, 120 W or 160 W)

Electrical Data:
Rated voltage ……. : 110~250 Vac
Rated power ……... : 90 W, 120 W, 160 W
Rated frequency ……. : 50/60 Hz

Mounting Instructions:
See the Operating Instructions from the manufacturer.

Installation Instructions:
Only suitable certified increased safe cable glands and stopping plugs are to be used, suitable for the conditions of use, minimum IP66 rated and correctly installed.
See the Operating Instructions from the manufacturer.

Routine Tests:
Each flameproof enclosure shall be tested conform EN 60079-1 cl. 16.1, with an overpressure maintained for minimum 10 seconds, as follows:

Ambient temperature range [°C]	Electronics compartment [MPa]	Light source compartment [MPa]
$-20 \leq Ta \leq +40 / +55$	1.14	1.04
$-40 \leq Ta \leq +40 / +55$	1.26	1.46

Each increased safe terminal compartment shall be tested with a dielectric strength test conform EN 60079-7 cl. 7.1, with a voltage of 1500 Vac for minimum 60 seconds.

This certificate may only be reproduced in its entirety and without any change, including schedule

[13] **SCHEDULE**

[14] **EU-TYPE EXAMINATION CERTIFICATE No.**
CNEX 16 ATEX 0010 X Issue 0
Report: 150002

[16] Descriptive Documents:
Detailed in the Test Report Cover document. (ref. CQST/ExTR1601G001).

[17] Specific Conditions for Use:
The ambient temperature range is limited as follows:

-20 °C ≤ Ta ≤ +40 °C / +55 °C, or

-40 °C ≤ Ta ≤ +40 °C / +55 °C.

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 two fasteners screws on the lamp body shall only be replaced with the correct type, provided by the manufacturer. See the Operating Instructions from the manufacturer.

[18] Essential Health and Safety Requirements:
Concerning ESR this Schedule verifies compliance with the Annex III of 2014/34/EU directive only. The manufacturer's Declaration of Conformity declares compliance with other relevant requirements and Directives.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.

Additional Information:
The enclosure of the LED explosion-proof light model CZ0870d successfully passed the tests for the Ingress Protection level IP66 to EN 60529.

This certificate may only be reproduced in its entirety and without any change, including schedule