



Proyectores de lámparas de bulbo en  
atmósferas explosivas Serie: EVZ Large body

Ex- Scheinwerferleuchte  
für Hochdruck - Entladungslampen Serie: EVZ Large body

Ex- Luminaire for High Pressure Discharge  
Lamps Serie: EVZ Large body

IM0077



Betriebsanleitung  
Operating instructions  
Mode d'emploi

**COOPER** Crouse-Hinds

CZ: "Tento návod k použití si můžete vyžádat ve svém mateřském jazyce u příslušného zastoupení společnosti Cooper Crouse-Hinds/CEAG ve vaší zemi."

DK: "Montagevejledningen kan oversættes til andre EU-sprog og rekvireres hos Deres Cooper Crouse-Hinds/CEAG leverandør"

E: "En caso necesario podrá solicitar de su representante Cooper Crouse-Hinds/CEAG estas instrucciones de servicio en otro idioma de la Unión Europea"

EST: "Seda kasutusjuhendit oma riigikeeles võite küsida oma riigis asuvas asjaomases Cooper Crouse-Hinds/CEAG esindusest."

FIN: "Tarvittaessa tämän käyttöohjeen käännös on saatavissa toisella EU:n kielellä Teidän Cooper Crouse-Hinds/CEAG - edustajaltanne"

GR: "Εάν χρειασθεί, μεταφράση των οδηγιών χρήσεως σε άλλη γλώσσα της ΕΕ, μπορεί να ζητηθεί από τον Αντιπρόσωπο της Cooper Crouse-Hinds/CEAG"

H: "A kezelési útmutatót az adott ország nyelvén a Cooper Crouse-Hinds/CEAG cég helyi képviselőtől igényelheti meg."

I: "Se desiderate la traduzione del manuale operativo in un'altra lingua della Comunità a Europa potete richiederla al vostro rappresentante Cooper Crouse-Hinds/CEAG"

LT: "Šios naudojimo instrukcijos, išverstos į Jūsų gimtąją kalbą, galite pareiklauti atsakingoje "Cooper Crouse-Hinds/CEAG" atstovybėje savo šalyje."

LV: "Šo ekspluatācijas instrukciju valsts valodā varat pieprasīt jūsu valsts atbildīgajā Cooper Crouse-Hinds/CEAG pārstāvniecībā."

M: "Jistghu jitolbu dan il-manwal fil-lingwa nazzjonali tagħhom minghand ir-rappreżentant ta' Cooper Crouse Hinds/CEAG f'pajjiżhom."

NL: "Indien noodzakelijk kan de vertaling van deze gebruiksinstructie in een andere EU-taal worden opgevraagd bij Uw Cooper Crouse-Hinds/CEAG - vertegenwoordiging"

P: "Se for necessária a tradução destas instruções de operação para outro idioma da União Europeia, pode solicitá-la junto do seu representante Cooper Crouse-Hinds/CEAG"

PL: "Niniejsza instrukcja obsługi w odpowiedniej wersji językowej można zamówić w przedstawicielstwie firmy Cooper Crouse-Hinds/CEAG na dany kraj."

S: "En översättning av denna montage- och skötselinstruktion till annat EU - språk kan vid behov beställas från Er Cooper Crouse-Hinds/CEAG - representant"

SK: "Tento návod na obsluhu Vám vo Vašom rodnom jazyku poskytne zastúpenie spoločnosti Cooper Crouse-Hinds/CEAG vo Vašej krajine."

SLO: "Navodila za uporabo v Vašem jeziku lahko zahtevate pri pristojnem zastopništvu podjetja Cooper Crouse-Hinds/CEAG v Vaši državi."

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China

Authorised Distributor:

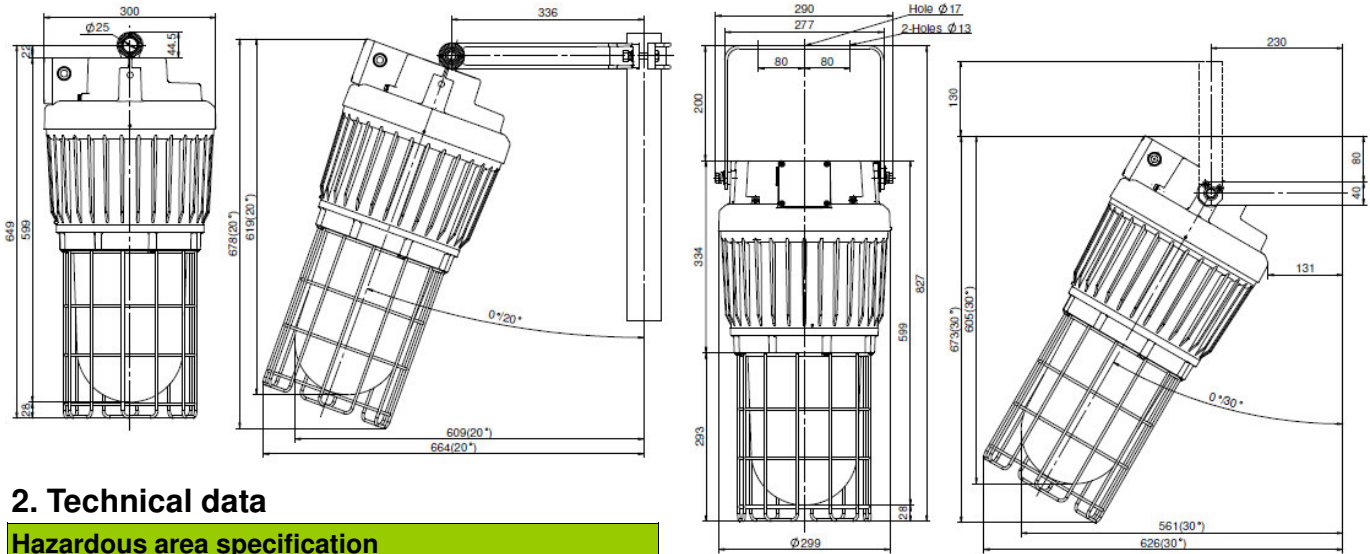
**AMPMECH**

46, Jalan SS 22/21, Damansara Jaya,  
47400 Petaling Jaya, Selangor Darul Ehsan, Malaysia.

Email: [info@ampmech.com](mailto:info@ampmech.com)

Web access: <http://www.ampmech.com>

## 1. Dimensions



## 2. Technical data

### Hazardous area specification

Type of protection:	Ex de (Flameproof, Increase Safety) Dust protected enclosure
ATEX classification:	Group II Category 2 G D
Certification Marking:	II2 G Ex de IIC II2 D Ex tD A21 IP66
Ambient temperature:	-40°C~+55°C
Temperature class:	Refer to Type configuration
EC type examination Certification No.:	TÜV 11 ATEX 7092 X
IECEx Certificate No.:	IECEx CQM 11.0002
Degree of protection:	IP 66 acc. to EN60529/IEC60529
Approval of the production Quality assurance:	Baseefa ATEX 5952

### Enclosure specification

Material of enclosure:	Metal alloy aluminum without Cu
Finish:	Painted polyester power coat grey
Material of glass:	Tempered glass
Mounting plate:	Stainless steel or painted power coat
Fasteners:	All external fasteners stainless steel
Installation:	Mounting bracket with aiming quadrant
Weight:	Refer to Type Configuration.

### Entry specification

Indirect entry: 2×M20×1.5 or 2×M25×1.5 or 2×NPT3/4" cable entry. One entry is fitted with an Exe stopping plug.

### Electrical specification

Wattage:	150W/250W/400W/600W
Voltage:	220V/230V 50/60Hz, 240V 50Hz
Lampholder:	E40
Insulation class:	I acc. to IEC60598
Terminals capacity:	3 or 5 core 6mm <sup>2</sup> max. conductor/cable
Lamp:	High pressure Sodium/Metal Halide

## 3. Conformity with standards

This explosion protection luminaires meet the requirements of EN/IEC60079-0, EN/IEC60079-1, EN/IEC60079-7, EN/IEC61241-0, EN/IEC61241-1.

It also complies with the EC Directives for "Apparatus and protective system for use in explosion atmospheres"(94/9/EC). It has been designed, manufactured and tested in accordance to the state of the art and according to ISO 9001:2000.

The luminaires are suitable for use in explosive atmospheres, Zone1,Zone2 according to IEC60079-10-1 and dust area Zone21 and Zone22 according to IEC60079-10-2.

## 4. Safety Instructions



**This product should be installed, inspected, and maintained by a qualified electrician only, in accordance with national regulation, including the relevant standard and, where applicable, in acc. with IEC 60079-17 on electrical apparatus for explosive atmospheres.**

**The national safety rules and regulations for prevention of accidents and the following safety instructions in these operating instructions, will have to be observed!**

- **The luminaires must not be operated in Zone0 and in Zone20!**
- **When using in zone 22, the requirements of IEC/EN 60079-14 relating to temperature must be observed. The indicated surface temperatures in table 2 are not related to a layers above 5 mm thickness.**
- **Before opening, electrical power to the luminaire must be turned off for at least 10 minutes!**
- **Do not install where the marked operating temperature exceed the ignition temperature of the hazardous atmosphere.**
- **Do not operate in ambient temperatures above those indicated on the luminaire nameplate.**
- **The luminaires shall be operated as intended and only in undamaged and perfect conditions!**
- **Keep tightly closed when in operation!**
- **The technical data indicated on the luminaires are to be observed!**
- **Change of the design and modifications to the luminaires are not permitted!**
- **Multiple, short-term switching must be observed!**
- **Only genuine Cooper Crouse-Hinds spare parts may be used for replacement!**
- **Repairs that affect the explosion protection, may only be carried out by Cooper Crouse-Hinds or qualified electrician!**
- **Do not keep these operating instructions inside the luminaires during operation!**

## 5. Field of Application

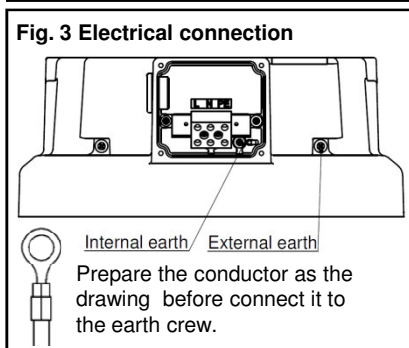
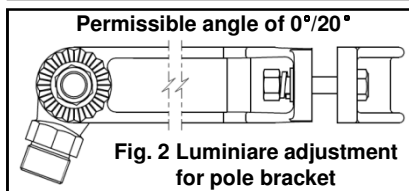
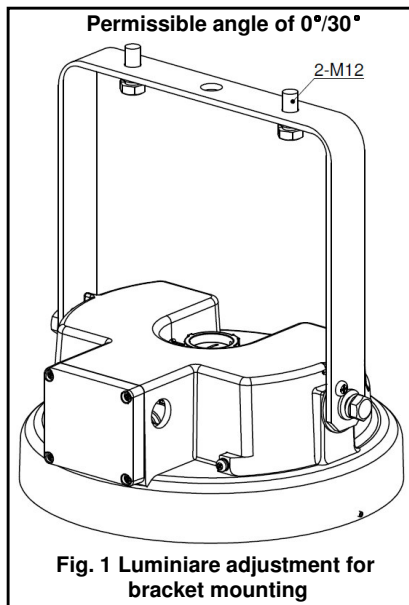
The ATEX category 2 GD Luminaire with a separate Exe terminal box utilizes Exde protection and IP66 sealing making it suitable for use for potentially explosive atmospheres including ignitable gas and dust applications. The luminaire is designed for use in Zone1/Zone21 and zone2/Zone22 hazardous areas in indoors and outdoors in Marine and Wet locations, where moisture, dirt, corrosion, vibration and rough usage may be present.

Application ambient temperature is -40°C~+55°C. Refer to the luminaire nameplate for specific classification information, maximum ambient temperature suitability and corresponding operating temperature (T- Number).

The enclosure materials used, including any external metal parts, are high quality materials that ensure a corrosion resistance and resistance to chemical substances according to the requirements for use in a "normal" industrial atmosphere. In case of use in an extremely aggressive atmospheres, please refer to manufacture.

## 6. Type configuration

Std. Cat No.	Watt (W)	Lamp	Voltage	Lampholder	T Class (Gas)			T °C (Dust)			Weight (Kg)
					+40°C	+50°C	+55°C	+40°C	+50°C	+55°C	
EVZIS*15***	150	HPS	220V 50Hz 230V 50Hz 240V 50Hz 220V 60Hz 230V 60Hz	E40	T4	T4	T4	98	108	113	15
EVZIM*15***	150	MH		E40	T4	T4	T4	100	110	115	15
EVZIS*25***	250	HPS		E40	T3	T3	T3	134	144	149	16
EVZIM*25***	250	MH		E40	T3	T3	T3	132	142	147	16
EVZIS*40***	400	HPS		E40	T3	T3	T3	146	156	161	18
EVZIM*40***	400	MH		E40	T3	T3	T3	167	177	182	18
EVZIS*60***	600	HPS		E40	T3	T3	T3	167	177	182	20



## 7. Installation

### 7.1 General

The respective national regulations IEC/EN 60079-14 as well as the general rules of engineering which apply to the installation and operation of explosion protected apparatus will have to be observed!

**Do not install where the marked operating temperature exceed the ignition temperature of the hazardous atmosphere!**

**Do not operate in ambient temperatures above those indicated on the luminaire nameplate!**

**The improper installation and operation may result in the explosion protection and invalidation of the guarantee.**

### 7.2 Mounting luminaire

#### 7.2.1 Mounting the bracket

Only use the accompanying mounting bracket! Securely fasten the mounting bracket to a suitable base with sufficient load-bearing capacity. See Fig.1 and Fig.2 for detail.

#### 7.2.2 Adjustment of floodlight

Loosen the set screw and fixing screws to rotate the bracket to set the required tilt angle between 0° and 30° and 0° and 20° according to different mounting bracket.

Re-tighten the set screw and fixing screws.

**The lamp must not be illuminated when at a distance of less than 0.5m from inflammable material.**

### 7.3 Cable entries/blanking plugs

The "Increased safety (Exe)" properties must be preserved when, for example, using cables and wires of sufficient diameter. Unused holes shall be closed with a certified blanking plug in order to establish the Exe protection category.

The cable glands and blanking plugs should be Ex tD certified if the whole product is Ex tD certified also.

The authoritative mounting guidelines for the cable glands used must be observed.

Mounting the selected cable entries (cable glands) acc. type and dimensions of the main connection cable. Following their manufacturer instructions.

### 7.4 Opening/closing the luminaire

#### 7.4.1 General

**The opening of luminaire always shall be without voltage!**

**All gasket seals must be clean and undamaged before closing the luminaire. Make sure the luminaires is well closed before operation!**

**There are Exd thread joints between the housing and the globe and between the housing and top hat!**

**Top hat has been fixed to the housing by the manufacturer before delivery, and the Exd thread joint has been tightened by the set screw which is not permitted to be loosen by the user.**

#### 7.4.2 Terminal cover

Unscrew the screws and remove the terminal compartment cover.

Carry out the steps in reverse order to close the luminaire.

Check all screws to ensure a secure fit (Torque for screws: 1.5 Nm).

### 7.4.3 Globe

Loosen the set screw in the ballast housing and unscrew the globe from ballast housing.

To ensure that the globe assembly is in-line with the ballast housing, rotate the globe assembly through 180° anti-clockwise in order to accurately line up the threads, then thread globe assembly onto ballast housing until assembly seats firmly against O-ring. Tighten the set screws to secure globe housing.

### 7.5 Electrical connection

**The electrical connection of the lamp must only be established by qualified electricians. Make sure the supply voltage is the same as the luminaire voltage!**

**Use proper supply wiring as specified on the nameplate of the luminaire and in this instructions!**

**Excessive tightening may affect or damage the connection.**

See section 6.5 for notes on opening and closing the lamp.

Connect cable according to the terminal numbering and circuit diagram.

The conductors shall be connected with special care in order to maintain the explosion category. Leads connected to the terminals shall be insulated for the appropriate voltage and this insulation shall extend to within 1mm of the metal of the terminal throat.

The conductor itself shall not be damaged.

The connectible min. and max. conductor cross-sections shall be observed (see technical data). All terminal screws, used and unused, shall be tightened down to between 1.2~2Nm for MK/6 and 0.5~0.7Nm for BK.

Main connection: See wiring diagram.

Fig.4 and Fig.5.

### 7.6 Lamp mounting

**Only must be mounting appropriated lamps for the supplied luminaire see indications on the nameplate of the luminaire and in this instructions!**

See section 6.5 for notes on opening and closing the lamp. The lamp must be screwed tightly into the lampholder.

Ensure it is screwed in fully so that no sparks or other unauthorized operating states may occur. Protect the glass on the lamp from breaking when screwing in.

## 8. Putting into operation

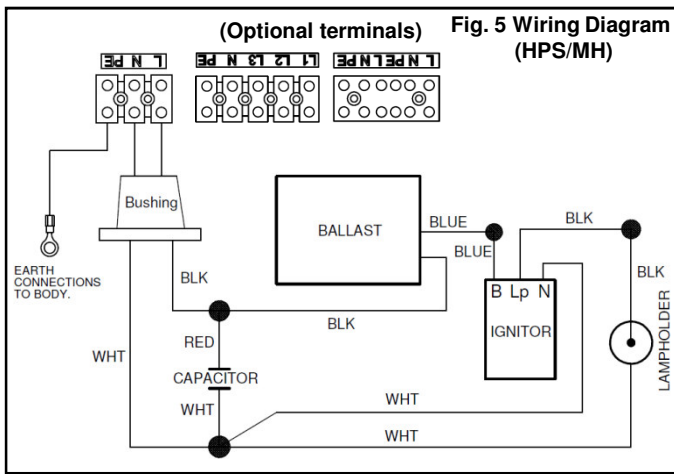
Prior to putting the apparatus into operation, the tests specified in the relevant national regulations shall be carried out.

Insulation measurements may only be carried out between PE and the external conductor L1 (L2, L3) as well as between PE and N.

- Measurement voltage: Max. 1 kV AC/DC

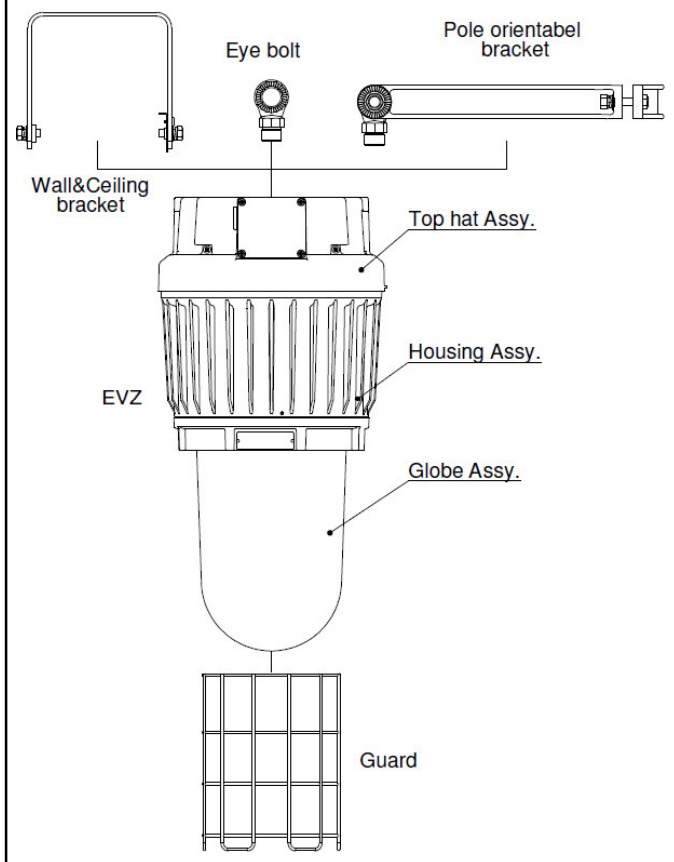
- Measurement current: Max.10 mA

-The luminaire may only be operated when closed.



**Fig. 6 Family tree**

A complete EVZ luminaire consists of: A Housing Assy, Top hat Assy, Glob Assy, a mounting bracket, with or without guard and/or reflector.



## 9. Maintenance/Service

### 9.1 General

The relevant national regulations which apply to the maintenance/servicing of electrical apparatus in explosive atmospheres, shall be observed (EN/IEC 60079-17). The interval between maintenance depends upon the ambient conditions and the hours of operation. The recommendations given within EN/IEC 60079-17 for recurring checks must be observed.

## 9.2 Checks

During maintenance, the parts affecting the level of protection must be checked in particular:

- Enclosure and glass for cracks and damage.
- Seals for damage.
- Terminal, screw glands and blanking plugs for secure fitting.
- The flameproof joint have to be clean undamaged, without corrosion and perfect greased.
- To maintain the light output, clean the protective glass and reflector periodically with a damp cloth or a mild cleaning fluid.
- If this product is used in the combustible dust area, outside of enclosure must be cleaned on a regular basis to prevent accumulation of dust.

**Cleaning the rests of grease and corrosion do not use sharp metallic devices that can damage the threads of the joint, and greasing them using appropriate grease terminally and chemically stable with a drop point  $\geq 200^{\circ}\text{C}$  like e.g.: HTL lubricant from Cooper Crouse-Hinds!**

**When the housing need to be repainted, pay attention that the flameproof joints test without any part with coating!**

## 9.3 Lamp change

The suggested interval between lamp changes given by the lamp manufacturer should be followed.

Disconnect power to the luminaire and allow the luminaire to cool completely.

See section 6.5 for notes on opening and closing the lamp. If the luminaire was previously in operation then wait 10 mins. before opening. Ensure that no hazardous atmosphere is present.

See section 6.7 for notes on inserting the lamp.

## 10. Repair/Overhaul/Modifications

### 10.1 General

**The national regulations EN/IEC60079-19 have to be observed!**

**Repairs and overhaul may only be carried out with genuine Cooper Crouse-Hinds spare parts.**

Before replacing or disassembling individual parts, observe the following:

**Disconnect the power supply to the equipment before maintenance/repair.**

**Make sure that there is no explosive atmosphere when opening the equipment.**

See section 6.5 for notes on opening and closing the lamp.

**Only use original spare parts.**

**If the luminaire was previously in operation then wait 15 mins. before opening.**

**Repairs that affect the explosion protection, may only be carried out by Cooper Crouse-Hinds or a qualified electrician in compliance with the applicable national rules.**

**Modifications to the device or changes to its design are not permitted.**

**After carrying out repair or overhaul work, ensure that the "Exde" properties have not been affected.**

Assistance may also be obtained through Cooper Electronic Technologies (Shanghai) Co., Ltd. Sales Service department, 955 ShengLi Road, Pudong Shanghai 201201.

Phone (86) 21-28993600

## 11. Disposal/Recycling

When the apparatus is disposed of, the respective national regulations on waste disposal will have to be observed.