IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx CML 23.0140X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 2	Issue 1 (2024-04-30) Issue 0 (2024-01-05)
Date of Issue:	2024-12-09		

Applicant: **Hubbell Limited t/a Chalmit Lighting**
Ashton Road,
Bredbury Park Industrial Estate,
Bredbury, SK6 2QN,
United Kingdom

Equipment: **Protecta IV LED**

Optional accessory:

Type of Protection: **Flameproof Ex "db", Increased Safety Ex "eb", Dust Ignition Ex "tb"**

Marking: Ex db eb IIC T5/T6 Gb

Ex tb IIIC T100°C/T85°C Db

Ta = -40°C to +60°C

Ta = -25°C to +60°C for emergency only

Approved for issue on behalf of the IECEx Certification Body: **Stelios Roumbedakis**

Position: **Certification Manager**

Signature: (for printed version) S.Roumbedakis

Date: (for printed version) 2024-12-09

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

Eurofins E&E CML Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom

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Manufacturer: **Hubbell Limited t/a Chalmit Lighting**
Ashton Road,
Bredbury Park Industrial Estate,
Bredbury, SK6 2QN,
United Kingdom

Manufacturing locations: **Hubbell Limited t/a Chalmit Lighting**
Ashton Road,
Bredbury Park Industrial Estate,
Bredbury, SK6 2QN,
United Kingdom

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-31:2022 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

GB/CML/ExTR23.0232/00 GB/CML/ExTR24.0070/00 GB/CML/ExTR24.0157/00

Quality Assessment Report:

GB/SGS/QAR24.0002/00

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The Protecta IV LED Luminaire comprises a control gear and has emergency and non-emergency variants.

Refer to Certificate Annex for full Product Description and Conditions of Manufacture.

SPECIFIC CONDITIONS OF USE: YES as shown below:
Refer to Certificate Annex.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1
This issue introduces the following changes:

1. To recognize a change to the applicant's and manufacturer's name and address.

Issue 2

This issue introduces the following changes:

1. To assess and permit the introduction of an alternative inverter fitted internally in the equipment.
2. To recognise 220-240VAC as the only voltage for the alternative inverter option.
3. To recognise a change to the applicant's and manufacture's details.

Annex:

Certificate Annex IECEx CML 23.0140X Issue 2.pdf

Annexe to:	**IECEx CML 23.0140X, Issue 2**
Apparatus:	**Protecta IV LED Luminaire**
Applicant:	**Hubbell Limited t/a Chalmit Lighting**

Description

The Protecta IV LED Luminaire comprises a control gear and has emergency and non-emergency variants.

The luminaire body is manufactured from glass reinforced polyester resin and the diffuser is manufactured from polycarbonate. The diffuser is hinged along one side to the body of the luminaire and along the other side a quick release snap-on clamp bar runs the entire length and is used to seal the diffuser to the body. A gasket is secured in a groove in the body of the luminaire and forms an IP66/67 seal.

GRP models are identified by the catalogue code PR4B/02L/LE/***. The code further defines the number and power of LED's, emergency, voltage etc.

The control gear components are mounted within the body of the luminaire via a removable gear tray.

The electronic control gear is Ex component certified. The component certification covers the flameproof Ex db Driver/Inverter and the LED module. Emergency models have a 6-volt battery made up of 5 NiMH batteries connected in series rated at a capacity of 4Ah. The Chalmit control gear controls the charging and discharging of the battery, providing under-voltage and over-voltage protection and preventing reverse polarity charging of the cells.

The body of the enclosure is fitted with 4 cable entries, maximum two at each end. The permitted component certified blanking elements to be used are detailed in the table below. Other suitable equipment certified blanking elements may be used.

The equipment maybe fitted with 501/RCG in-line connector, currently afforded IECEx CML 20.0137X, which allows connection for multiple number of lighting fixtures.

The equipment is fitted with the following equipment certified Hot swappable battery stick currently afforded certificate number IECEx CML18.0169X.

In addition to the above, suitably Ex equipment approved blanking elements/plugs maybe used.

The enclosure must be fitted with suitably approved cable entry devices which shall maintain the ingress protection rating of the enclosure.

The body is also fitted with 2 x M8 bushes for mounting purposes. The stainless-steel bodied version is supplied with external brackets to allow for mounting.

Brass earth continuity plates are fitted to the entries of the luminaires on the GRP bodied versions and an internal/external M8 earth stud is fitted to the body of the stainless-steel bodied version. An earth terminal is also fitted to the gear tray. All the earth points are connected via earth conductors.

The marking of the Protecta IV LED Luminaire is:-

Ex db eb IIC T5/T6 Gb

Ex tb IIIC T100°C/T85°C Db IP66/67

T_{amb} = -40°C to +60°C

T_{amb} = -25°C to +60°C for luminaire with emergency option

When Protecta IV LED luminaire is fitted with internal opaque diffuser the equipment shall be marked with ambient temperature range: T_{amb} = -40°C to +45°C.

Internal wiring is by 0.75mm^2 or 1.0mm^2 stranded copper conductors with PVC insulation. Through wiring is by 2.5mm^2 or 4mm^2 stranded conductors with PVC insulation.

Various options are permitted as indicated below: -

1. Version of the enclosure with pole mounting option. The base of the enclosure incorporates a sleeve for the pole. The sleeve is fitted internally with a certified cable gland and a silicone seal around the entry which maintains the IP66/67 rating of the luminaire. Grub screws are incorporated into the sleeve to secure the luminaire to the pole once mounted. When the pole mounted variation is used, the luminaire is restricted to the temperature range and IP rating of the cable gland.

The equipment is included with the following model options:

CHALMIT MODEL NUMBER	POWER W	CURRENT A	VOLTS	LIGHT SOURCE
PR4B/02L/LE/**	16	0.14 - 0.063	110-277 Vac 127-250 Vdc	1 X LED STRIP
PR4B/0^L/LE/**	36	0.33 - 0.15	110-277 Vac 127-250 Vdc	1 X LED STRIP
PR4B/05L/LE/**	36	0.33 - 0.15	110-277 Vac 127-250 Vdc	2 X LED STRIP
PR4B/07L/LE/**	49	0.44 - 0.20	110-277 Vac 127-250 Vdc	2 X LED STRIP
PR4B/02L/LE/EM/**	18.5	0.14 - 0.073	110-277 Vac 127-250 Vdc	1 X LED STRIP
PR4B/0^L/LE/EM/**	38.5	0.36 - 0.16	110-277 Vac 127-250 Vdc	1 X LED STRIP
PR4B/05L/LE/EM/**	38.5	0.36 - 0.16	110-277 Vac 127-250 Vdc	2 X LED STRIP
PR4B/07L/LE/EM/**	52	0.5 - 0.2	110-277 Vac 127-250 Vdc	2 X LED STRIP

The following components are incorporated in the luminaire:

Component	Certificate Numbers
DRIVER/INVERTER – 75D	IECEx CML18.0163U
DRIVER/INVERTER – 200D	IECEx CML20.0107U
LED MODULE	IECEx CML21.0127U
Screwless modular feed-through and single terminal block, Type 262-1** and Type 262-2**	IECEx PTB 04.0004U
387 Range of Stopping plug	IECEx BAS 06.0029U
Terminal Block	IECEx TUR 18.0019U

Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components, the manufacturer of the product defined on this certificate shall continually monitor these parts/components for any modifications introduced by the manufacturer(s) of these constituent parts. If the manufacturer of any constituent part introduces any changes which affect the compliance of the certified product that is the subject of this certificate, the manufacturer is required to have this certificate updated.

ii. The equipment complete assembly shall be subjected to a dielectric strength test in accordance with IEC 60079-7 clause 7.1. The test voltage (1000+2U) or 1500V shall be applied to the equipment electrical wirings and earth, or to an appropriate industrial standard. No flash or leakage of current shall be observed.

Specific Conditions of Use

The following conditions relate to safe installation and/or use of the equipment.

i. The equipment is for fixed installation only and shall be protected against the risks resulting electrostatic discharge. See manufacturer instruction manual for the necessary guidance.

ii. The flameproof joint and path of the driver/inverter and LED module inside the equipment shall not be repaired or serviced.

iii. The equipment shall be installed with suitably approved Ex equipment blanking plugs.

Components used which are covered by Ex Certificates issued to older editions of Standards

Component	Certificate Numbers	Standards Applied	Differences Considered
DRIVER/INVERTER – 75D	IECEx CML18.0163U	IEC 60079-0:2017 Ed.7 IEC 60079-1:2014 Ed.7	No technical differences are considered.
DRIVER/INVERTER – 200D	IECEx CML20.0107U	IEC 60079-0:2017 Ed.7 IEC 60079-1:2014 Ed.7	No technical differences are considered.
LED MODULE	IECEx CML21.0127U	IEC 60079-0:2017 Ed.7 IEC 60079-1:2014 Ed.7	No technical differences are considered.
Screwless modular feed-through and single terminal block, Type 262-1** and Type 262-2**	IECEx PTB 04.0004U	IEC 60079-0:2017 Ed.7 IEC 60079-7:2017 Ed.5.1	No technical differences are considered.
387 Range of Stopping plug	IECEx BAS 06.0029U	IEC 60079-0:2017 Ed.7 IEC 60079-7:2017 Ed.5.1 IEC 60079-31:2013 Ed.2	No technical differences are considered.
Terminal Block	IECEx TUR 18.0019U	IEC 60079-0:2017 Ed.7 IEC 60079-7:2017 Ed.5.1	No technical differences are considered.