



# EU Type Examination Certificate CML 14ATEX1086X Issue 2

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment Scotia Series and KF1L Series LED Luminaires

Glasgow

3 Manufacturer Hubbell Ltd T/A Chalmit Lighting Killark, a Division of Hubbell Inc.

(Delaware)

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- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- Certification Management Limited, Unit 1 Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK, Notified Body Number 2503, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

- If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

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

10 The equipment shall be marked with the following:



Ex db eb IIB (+H<sub>2</sub> Option) T\* Gb

Ex tb IIIC T\*\*°C Db IP66

(STD Version) Ta=-20°C to xx°C

(LT Version) Ta=-50°C to xx°C

\*See tables in description below for T class and Ta

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A Snowdon Certification Officer





## 11 Description

The Scotia luminaires are LED based units that have integrated driver electronics and are rated at 120 to 277 V ac 50/60 Hz.

The enclosures are cast from an aluminium alloy, EN1706 AC-44100KF LM6. The cover of the luminaire is secured to the main enclosure using twelve M8 fastening screws, forming a flanged joint, and has a tempered glass rectangular window cemented into position. The array of LEDs is mounted inside a flameproof compartment, behind the window. There is a separate flameproof compartment housing the driver circuit which is segregated from the LED compartment by a component approved bushing. There is a flanged joint formed by a cover on the other side of the driver circuit compartment, on the back of the luminaire, secured by another twelve M8 fasteners. This back cover has another compartment moulded into it which houses some component approved increased safety terminals. This increased safety compartment is segregated from the driver circuit compartment by another bushing, has a cover which is secured by four fastening screws and has two M20 entries with the alternative option of M25 threaded entries in the sides. The luminaires may be fitted externally with a handle, a reflector and a wire guard.

There are several variants with different ratings, these are described in the tables below.

| Type identification | Watts | Current<br>*A | T* @ Ta 40°C | T* @ Ta 55°C | T**°C @<br>Ta 40°C | T**°C @<br>Ta 55°C |
|---------------------|-------|---------------|--------------|--------------|--------------------|--------------------|
| SCOD/12L/LE/**      | 125   | 1.0 – 0.5     | Т6           | T5           | T85°C              | T100°C             |
| SCOD/11L/LE/**      | 110   | 0.9 - 0.4     | Т6           | T5           | T85°C              | T100°C             |
| SCOD/08L/LE/**      | 105   | 0.9 - 0.4     | Т6           | T5           | T85°C              | T100°C             |
| SCOD/07L/LE/**      | 90    | 0.8 – 0.4     | Т6           | T5           | T85°C              | T100°C             |

| Type Identification /** | Description                               |  |  |
|-------------------------|---|--|--|
| LT                      | Low temperature version, lower Ta = -50°C |  |  |
| M25                     | M25 entry option                          |  |  |
| H2                      | Gas group IIB+H <sub>2</sub>              |  |  |

All fasteners used to secure flameproof joints are stainless steel with a minimum grade of A4.





The equipment may also be supplied and marked with the following model numbers:

| Type identification | Watts | Current<br>*A | T* @ Ta 40°C | T* @ Ta 55°C | T**°C @<br>Ta 40°C | T**°C @<br>Ta 55°C |
|---------------------|-------|---------------|--------------|--------------|--------------------|--------------------|
| KF1L19530           | 195   | 1.6 – 0.7     | T5           | N/A          | T85°C              | N/A                |
| KF1L16530           | 165   | 1.4- 0.6      | T5           | N/A          | T85°C              | N/A                |
| KF1L15030           | 150   | 1.3- 0.5      | T5           | N/A          | T85°C              | N/A                |
| KF1L12530           | 129   | 1.0-0.5       | Т6           | T5           | T85°C              | T100°C             |
| KF1L11030           | 111   | 0.9-0.4       | Т6           | T5           | T85°C              | T100°C             |
| KF1L10530           | 103   | 0.9-0.4       | Т6           | T5           | T85°C              | T100°C             |
| KF1L09030           | 79    | 0.8-0.4       | Т6           | T5           | T85°C              | T100°C             |

(N/A = combination of power and ambient temperature is not permitted).

## Variation 1

This variation introduces the following modifications:

- i. To allow alternative LED driver.
- ii. Transient suppressor is now optional
- iii. The dust surface temperatures have been aligned with the temperature classes

#### Variation 2

This variation introduces the following modifications:

- i. To update the certificate reference to the 2014/34/EU Directive.
- ii. The addition of new model numbers (KF1L series)
- iii. The addition of an alternative manufacturing location
- iv. Updates to the latest editions of the standards
- v. Update of drawing to correct typographical error

## 12 Certificate history and evaluation reports

| Issue | Date Associated report |            | Notes                          |
|-------|------------------------|------------|--------------------------------|
| 0     | 30 Oct 2014            | R309A/00   | Issue of the prime certificate |
| 1     | 17 Nov 2015            | R787A/00   | Introduction of Variation 1    |
| 2     | 14 Sep 2018            | R11903A/00 | Introduction of Variation 2    |

Note: Drawings that describe the equipment or component are listed in the Annex.





## 13 Conditions of manufacture

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

- Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
- The LED compartment of each unit marked for a low ambient temperature of -50°C and gas group IIB + H2 shall be subjected to a 13 bar hydrostatic routine overpressure test, for 15 seconds, in accordance with EN 60079-1, clause 16. There shall be no deformation or damage to the enclosure.
- 13.3 Each unit manufactured shall be subjected to a dielectric strength test of (1000+2U) x 1.2 which shall be applied for a minimum of 100 ms In accordance with EN 60079-7, Clause 6.1. LED driver may be disconnected for the test. There shall be no breakdown.
- 13.4 Equipment shall be marked in accordance with the tables in Section 11 (Description).
- When adaptors and stopping plugs are used in the construction of the luminaires, the manufacturer shall ensure that they are installed in accordance with any Special Conditions for Safe Use associated with them.

## 14 Specific Conditions of Use (Special Conditions for Safe Use)

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

- 14.1 In accordance with clause 5.1 of EN 60079-1, the critical dimensions of all non-threaded flamepaths are: 9.5 mm minimum in length with a 0.05 mm max gap.
- 14.2 The leads connected to the terminals shall be insulated for the appropriate voltage and this insulation shall extend to within 1 mm of the metal of the terminal throat
- 14.3 All terminal screws, used and unused, shall be tightened down to between 1.2Nm and 2Nm.
- 14.4 The fixture shall only be installed and wired in an ambient temperature of -10°C to +80°C

# **Certificate Annex**



**Equipment** Scotia Series and KF1L Series LED Luminaires

Manufacturer Hubbell Ltd T/A Chalmit Lighting

Killark, a Division of Hubbell Inc. (Delaware)

The following documents describe the equipment defined in this certificate:

#### Issue 0

| Drawing No | Sheets | Rev | Approved date | Title  |
|------------|--------|-----|---------------|--|
| H031521    | 1 of 1 | 0   | 30 Oct 2014   | Scotia Floodlight ATEX & IECEx Certification Details |

## Issue 1

| Drawing No | Sheets | Rev | Approved date | Title  |
|------------|--------|-----|---------------|--|
| H031521    | 1 of 1 | 1   | 17/11/2015    | Scotia Floodlight ATEX & IECEx Certification Details |

#### Issue 2

| Drawing No | Sheets | Rev | Approved date | Title  |
|------------|--------|-----|---------------|--|
| D-23990    | 1 of 3 | D   | 14 Sep 2018   | Assembly drawing                                       |
| C-23990    | 2 of 3 | Е   | 14 Sep 2018   | Label drawing  |
| H031521    | 1 of 1 | 2   | 14 Sep 2018   | Scotia floodlight ATEX and IECEx certification details |

