



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx CML 14.0034X

Issue No: 2

Certificate history:

Issue No. 2 (2018-10-30)

Status: **Current**

Issue No. 1 (2015-11-17)

Date of Issue: **2018-10-30**

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Issue No. 0 (2014-12-18)

Applicant: **Hubbell Ltd T/A Chalmit Lighting**  
388 Hillington Road  
Glasgow  
G52 4BL  
**United Kingdom**

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

Optional accessory:

Type of Protection: **Flameproof, Increased Safety, Dust**

Marking:  
Ex db eb IIB (+H<sub>2</sub> Option) T\* Gb  
Ex tb III C T\*\*°C Db IP66  
(STD Version) Ta=-20°C to xx°C  
(LT Version) Ta=-50°C to xx°C  
See tables in full Description in Annex for T class and Ta

Approved for issue on behalf of the IECEx  
Certification Body:

A Snowdon MIET

Position:

Certification Officer

Signature:  
(for printed version)

A Snowdon

Date:

October 30, 2018

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.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**Certification Management Limited**  
Unit 1, Newport Business Park  
New Port Road  
Ellesmere Port, CH65 4LZ  
United Kingdom





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Manufacturer: **Hubbell Ltd T/A Chalmers Lighting**  
388 Hillington Road  
Glasgow  
G52 4BL  
United Kingdom

Additional Manufacturing location(s):

**Killark, a Division of Hubbell Inc. (Delaware)**

3940 Dr. Martin Luther King Drive  
St. Louis  
Missouri 63113  
USA  
United States of America

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 apparatus 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:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2014-06</b> Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2013</b> Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
<b>IEC 60079-7 : 2015</b> Edition:5.0	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical 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 Report:

GB/CML/ExTR14.0037/00 GB/CML/ExTR15.0092/00 GB/CML/ExTR18.0164/00

### Quality Assessment Report:

GB/BAS/QAR06.0027/05 GB/SIR/QAR16.0021/01



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

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

**See annex for complete description, model numbers and conditions of manufacture.**

**SPECIFIC CONDITIONS OF USE: YES as shown below:**

**See Annex for Conditions of Certification/Specific Conditions of Use**



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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

### Variation 1

This variation introduces the following modifications:

1. To allow alternative LED driver.
2. Transient suppressor is now optional
3. The dust surface temperatures have been aligned with the temperature classes

### Variation 2

This variation introduces the following modifications:

1. The addition of new model numbers (KF1L series)
2. The addition of an alternative manufacturing location
3. Updates to the latest editions of the standards
4. Update of drawing to correct typographical error

### Annex:

[Certificate Annex IECEx CML 14\\_0034X Issue 2.pdf](#)

**Annexe to:** IECEx CML 14.0034X Issue 2  
**Applicant:** Hubbell Ltd. T/A Chalmit Lighting  
**Apparatus:** Scotia Series and KF1L Series LED luminaires



## Description of Equipment

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 *A	T* @ Ta +40°C	T* @ Ta +55°C	T**°C @ Ta +40°C	T**°C @ Ta +55°C
SCOD/12L/LE/**	125	1.0 – 0.5	T6	T5	T85°C	T100°C
SCOD/11L/LE/**	110	0.9 – 0.4	T6	T5	T85°C	T100°C
SCOD/08L/LE/**	105	0.9 – 0.4	T6	T5	T85°C	T100°C
SCOD/07L/LE/**	90	0.8 – 0.4	T6	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 *A	T* @ Ta 40°C	T* @ Ta 55°C	T***C @ Ta 40°C	T***C @ 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	T6	T5	T85°C	T100°C
KF1L11030	111	0.9-0.4	T6	T5	T85°C	T100°C
KF1L10530	103	0.9-0.4	T6	T5	T85°C	T100°C
KF1L09030	79	0.8-0.4	T6	T5	T85°C	T100°C

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

#### 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. The addition of new model numbers (KF1L series)
- ii. The addition of an alternative manufacturing location
- iii. Updates to the latest editions of the standards
- iv. Update of drawing to correct typographical error

## Conditions of Manufacture

- i. The LED compartment of each unit marked for a low ambient temperature of  $-50^{\circ}\text{C}$  and gas group IIB +  $\text{H}_2$  shall be subjected to a 13 bar hydrostatic routine overpressure test, for 10 seconds, in accordance with IEC 60079-1, clause 16. There shall be no deformation or damage to the enclosure.
- ii. Each unit manufactured shall be subjected to a dielectric strength test of  $(1000+2U) \times 1.2$  which shall be applied for a minimum of 100 ms In accordance with IEC 60079-7, clause 6.1. LED driver may be disconnected for the test. There shall be no breakdown.
- iii. Equipment shall be marked in accordance with the tables in the description.
- iv. 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.

## Conditions of Certification (Specific Conditions of Use)

- i. In accordance with clause 5.1 of IEC 60079-1, the critical dimensions of all non-threaded flamepaths are: 9.5 mm minimum in length with a 0.05 mm max gap.
- ii. 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.
- iii. All terminal screws, used and unused, shall be tightened down to between 1.2Nm and 2Nm.
- iv. The fixture shall only be installed and wired in an ambient temperature of  $-10^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$ .