



1 **TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 09ATEX5160X** Issue: **2**

4 Equipment: Type HDL 103 LED Luminaire

5 Applicant: Hadar Lighting

6 Address: Jubilee Industrial Estate
Ashington
Northumberland
NE63 8UG
UK

7 This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service certifies that this equipment has been found to comply with the Essential Health and Safety Requirements that relate to the design of Category 2 equipment, which is intended for use in potentially explosive atmospheres. These Essential Health and Safety Requirements are given in Annex II to European Union Directive 94/9/EC of 23 March 1994.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:

EN 60079-0:2006 EN 60079-7:2007 IEC 60079-18:2009 Ed 3
IEC 60079-0:2007 (used for guidance in respect of marking) IEC 60079-31:2008 Ed 1

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request

10 If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This TYPE EXAMINATION CERTIFICATE relates only to the design of the specified equipment, and not to specific items of equipment subsequently manufactured.

12 The marking of the equipment shall include the following:



II 2 GD
Ex emb IIC T5 Gb
Ex t IIIC T68°C Db IP66/IP67
Ta = -20°C to +55°C

Project Number 33610

C Ellaby
Deputy Certification Manager

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SCHEDULE

TYPE EXAMINATION CERTIFICATE

Sira 09ATEX5160X
Issue 2

13 DESCRIPTION OF EQUIPMENT

The Type HDL 103 LED Luminaire comprises an aluminium or stainless steel cylindrical base and lid. The lid is secured to the base by four M8 x 20 mm steel screws.

The unit is intended for use in fixed installations and is provided with mounting points for this purpose.

The lid comprises of either an aluminium or stainless steel plate and a translucent polycarbonate dome. A metal ring secures the dome to the outside of the plate. An LED assembly is mounted to the plate in the space formed between the plate and the dome. The LED assembly comprises a printed circuit board and a translucent polycarbonate cover. The polycarbonate cover is mounted to the plate such that it forms an encapsulated housing for the printed circuit board. The printed circuit board may be fitted with up to 6 coloured or infra-red LEDs.

Up to 3 cable entry holes may be provided depending on customer requirements.

Internal and external earthing facilities are provided.

The units are designed for use on an electrical supply of 100 V at 0.12 A to 254 V at 0.047 A, 50/60 Hz and 24 V at 0.5 A a.c./d.c.

Variation 1 - This variation introduced the following changes:

- i. The introduction of an optional reflector.
- ii. The introduction of an optional recessed mounting arrangement and guard.

Variation 2 - This variation introduced the following change:

- i. The HDL103 luminaire was approved to be operated from a 110 V d.c. power supply.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	02 June 2010	R19591A/00	The release of the prime certificate.
1	19 November 2012	R28334A/00	The introduction of Variation 1
2	14 April 2014	R33610A/00	The introduction of Variation 2



SCHEDULE

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Issue 2

15 SPECIAL CONDITIONS FOR SAFE USE

- 15.1 Except for internal wiring, not more than one single or multiple strand lead shall be connected into either side of any terminal, unless multiple conductors have been joined in a suitable manner, e.g. two conductors into a single insulated crimped boot lace ferrule.
- 15.2 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.
- 15.3 When terminals in accordance with certificate IECEX SIR 05.0035U are used, all terminal screws, used and unused, shall be tightened down to between 0.5 Nm and 0.7 Nm.
- 15.4 When terminals in accordance with certificate IECEX SIR 05.0037U are used, all terminal screws, used and unused, shall be tightened down to between 1.2 Nm and 2 Nm.
- 15.5 When terminals in accordance with certificates IECEX SIR 05.0035U and IECEX SIR 05.0037U are used, they shall only be installed and wired with cable within a temperature range of -10°C to 80°C.
- 15.6 When cross-connecting combs are used on terminals to certificates IECEX SIR 05.0035U and IECEX SIR 05.0037U, the relevant conditions of certification associated with those certificates shall be applied.
- 15.7 Cable entry holes shall be fitted with either an appropriately certified cable gland or appropriately certified blanking element. These shall provide and maintain a minimum enclosure ingress protection of IP66 or IP67 as appropriate.
- 15.8 The supply circuit must be protected by a fuse capable of withstanding a prospective short circuit current of 1500 A.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed reports listed in Section 14.2.

17 CONDITIONS OF CERTIFICATION

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of Type Examination Certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.
- 17.3 Every unit shall be subjected to a routine dielectric strength test of at least 1508 V r.m.s. a.c. applied for at least 1 s, or at least 1810 V r.m.s. a.c. applied for at least 100 ms, between all terminals and the equipment enclosure, in accordance with Clause 9.2 of IEC 60079-18:2009.
- 17.4 Every unit shall be subjected to a visual inspection in accordance with Clause 9.1 of IEC 60079-18:2009.

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Certificate Annexe

Certificate Number: Sira 09ATEX5160X
Equipment: Type HDL 103 LED Luminaire
Applicant: Hadar Lighting



Issue 0

Drawing No.	Sheet	Rev.	Date (Sira stamp)	Description
ALC0013	1 and 2	0	26 May 10	HDL 103 LED Luminaire

Issue 1

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Description
ALC0013	1 to 3	02	18 Nov 12	HDL 103 LED Luminaire
ALC0020	1 to 3	00	18 Nov 12	HDL 103 Recessed

Issue 2

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Description
ALC0013	1 to 3	03	03 Apr 14	HDL 103 LED Luminaire
ALC0020	1 to 3	01	03 Apr 14	HDL 103 Recessed

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