



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 09ATEX1100** Issue: **2**

4 Equipment: **HDL Series Wellglass Luminaires**

5 Applicant: **Hadar Lighting**

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

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

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, 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 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2006      EN 60079-1:2007      EN 60079-7:2007      EN 61241-1:2004  
IEC 60079-0:2007 (used for guidance in respect of marking and general requirements for dust)

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 EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 2 G D  
Ex de IIB T4 Gb (Pendant)  
Ex de IIB T3 Gb (Universal)  
Ex de IIC T4 Gb (Pendant)  
Ex de IIC T3 Gb (Universal)  
Ex tb IIIC 130°C Db IP67 (Pendant)  
Ex tb IIIC 175°C Db IP67 (Universal)  
(Ta = -20°C to +55°C or 45°C)

or



Marked for Dust Applications Only

II 2 D  
Ex tb IIIC 130°C Db IP67 (Pendant)  
Ex tb IIIC 175°C Db IP67 (Universal)

Project Number 23841  
C. Index 05

C Ellaby  
Certification Officer

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 09ATEX1100  
Issue 2

13 DESCRIPTION OF EQUIPMENT

The HDL series Wellglass Luminaires externally comprise a main housing, a domed shape lampglass, a lampglass ring and a lampglass retainer, internally a removeable casting houses the control gear and lampholder. The main housing, lampglass ring, lampglass retainer and control gear housing are manufactured from cast aluminium alloy LM6, the lampglass is manufactured from toughened borosilicate glass. The lampglass is retained within the lampglass ring by silicone resin and the lampglass retaining casting is secured to the lampglass ring by six, M6 x 16, socket head cap screws and the lampglass ring is secured to the main housing by four, M12 x 30 socket head cap screws. The main housing contains two bosses in the side wall, each with an M20 x 1.5 threaded hole to allow fitting a suitable certified cable gland. The HDL series contains three compartments, the top compartment is rated Ex d and houses the lamp and lampholder, the middle compartment is rated Ex e and contains the mains incoming terminal block and gland entry point, the bottom compartment is rated Ex d and houses the ballast, capacitor, ignitor etc. Electrical connection between the three compartments is via two compound filled bush assemblies.

Lamp ratings and control gear configurations

Style	Ratings	Control Gear
GLS lamps	250 V max. ac/dc 50/60 Hz	-
MBI lamps	220 - 250 V ac 50/60 Hz	Ballast, capacitor & optional ignitor
MBF lamps	220 - 250 V ac 50/60 Hz	Ballast, capacitor & optional ignitor
SON lamps	220 - 250 V ac 50/60 Hz	Ballast, capacitor & optional ignitor
TH lamps	250 V max. ac/dc 50/60 Hz	-

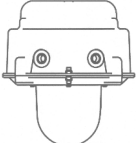
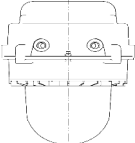
Design options

- The main body and lampglass ring may be manufactured from cast aluminium alloy LM25 or AL102.
- The lampglass may be manufactured in different colours.
- The cable entry points may use different threadforms, e.g.:
 

BSPP to BS 2779:1986	NPT to ANSI/ASME B1.20.1:1983
BSPT to BS 21:1985	NPT to USAS B2.1:1968
ET (conduit) to BS 31:1940 (1979) Table A	PG to DIN 40430:1971
ISO to 7/1:1992	

Variation 1 - This variation introduced the following change:

- i. The introduction of the Large Wellglass Luminaire; the previously defined design options together with the lamp ratings and control gear configurations are relevant to the new large version, however, different routine pressure tests apply, see clause 17.3. The following table clarifies the details of the products that are covered by this certificate, the original description being modified accordingly.

Description	Small Wellglass Discharge/GLS Lamps	Large Wellglass Discharge/GLS Lamps
Type ref.	HDL113	HDL114
Protection	Ex d e	Ex d e
Rating	Up to 200 W	Up to 400 W
Ambient temp.	-20°C to +55°C	-20°C to +45°C
Outline drawing		

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**Sira Certification Service**

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## SCHEDULE

### EC TYPE-EXAMINATION CERTIFICATE

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Issue 2

**Variation 2** - This variation introduced the following changes:

- i. The HDL113 and HDL114 Wellglass Luminaires were allowed to bear dust marking only, the Conditions of Certification have therefore been modified to recognise that products marked in this fashion do not require to be subjected to routine overpressure testing.

#### 14 DESCRIPTIVE DOCUMENTS

##### 14.1 Drawings

Refer to Certificate Annexe.

##### 14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	2 June 2009	R51A20042A	The release of the prime certificate.
1	30 March 2010	R20765A/00	The introduction of Variation 1.
2	06 December 2010	R23841A/00	The introduction of Variation 2.

#### 15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

None

#### 16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the 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 EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 When marked for use with explosive gases, each wellglass assembly shall be subjected to a routine overpressure test in accordance with EN 60079-1:2007 clause 16 at one of the pressures detailed below depending upon the application:

Small Wellglass Luminaires (HDL113)		Large Wellglass Luminaires (HDL114)	
IIB Application	IIC Application	IIB Application	IIC Application
8.9 bar	11.5 bar	11.8 bar	14.6 bar

17.4 When marked for use with explosive gases, each control gear enclosure shall be subjected to a routine overpressure test in accordance with EN 60079-1:2007 clause 16 at one of the pressures detailed below depending upon the application.

Small Wellglass Luminaires (HDL113)		Large Wellglass Luminaires (HDL114)	
IIB Application	IIC Application	IIB Application	IIC Application
10.0 bar	13.0 bar	10.0 bar	13.0 bar

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# Certificate Annexe

Certificate Number: Sira 09ATEX1100  
Equipment: HDL Series Wellglass Luminaires  
Applicant: Hadar Lighting



## Issue 0

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
ALC0009	1 of 2	0	18 May 09	Wellglass Range of Luminaires
ALC0009	2 of 2	0	18 May 09	Wellglass Range of Luminaires

## Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
ALC0009	1 of 3	1	18 Mar 10	Wellglass Range of Luminaires
ALC0009	2 of 3	1	18 Mar 10	Wellglass Range of Luminaires
ALC0009	3 of 3	0*	18 Mar 10	Wellglass Range of Luminaires

\* The revision status of this drawing was changed by Issue 2 to correct a typographical error

## Issue 2

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
ALC0009	1 of 3	2	02 Dec 10	Wellglass Range Of Luminaires
ALC0009	2 of 3	2	02 Dec 10	Wellglass Range Of Luminaires
ALC0009	3 of 3	1	02 Dec 10	Wellglass Range Of Luminaires

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