

1 EU - Type Examination Certificate

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

3 Certificate Number: **ExVeritas 19 ATEX 0439X** Issue: 1

4 Equipment: **LBX series Luminaires**

5 Manufacturer: **Wolf Safety Lamp Company Ltd.**

6 Address: **Saxon Road Works, Sheffield, South Yorkshire, S8 0YA, United Kingdom**

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

8 ExVeritas, Notified Body number 2804 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems for use in potentially explosive atmospheres given in Annex II to the Directive

9 Compliance with the applicable Essential Health and Safety Requirements has been assured by compliance with the following Standards and section 16 of this certificate:

EN IEC 60079-0: 2018

EN 60079-18:2015+A1:2018

EN IEC 60079-7:2015+AMD1:2017

EN 60079-31:2014

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 EU-Type Examination Certificate relates only to the design, construction, examination and tests of the specified equipment or protective system in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment shall include the following:



II 2 G Ex eb mb IIC T4 Gb

II 2 D Ex tb IIIC T80°C Db

T_a -50°C to +65°C (*dependant on model type*)

On behalf of ExVeritas



Peter Lauritzen
Managing Director

Schedule

13 Description of Equipment or Protective System

The LBX series luminaires are LED bulkhead luminaires for use in gas Group IIC and dust Group IIIC dust and gas hazardous atmospheres. The equipment comprises of a powder coated aluminium enclosure with either two or four M20 x 1.5 or M25 x 1.5 threaded gland entries, two at either end, and a cover with a sealed glass window with option of illuminated signage. The enclosures are IP66/67 rated.

Internally, the luminaire contains LED drivers, LED modules, linear optics, and terminal blocks for user connections. Feed through terminals are provided for ease of connection and chain linking of multiple units.

The luminaires are supplied in three distinct variants, the standard LBXS versions contain only LED drivers, the LBXE versions contains an Intelligent Emergency Driver and battery pack and is maintained equipment. The LBXN versions are non-maintained equipment which contain an Intelligent Emergency Driver configured for that use type.

The LBX series luminaires model types covered under this certification are detailed in the table below:

Type	Voltage	Frequency	Current	Ambient Temperature Limits	Gas Temperature Class	Dust Surface Temperature	Driver
LBXS-L-65-110	88 - 140 V	50 - 60 Hz	0.2 A	-50 °C to 65 °C	T4	T80 °C	LDX1L-110
LBXS-L-50-110	88 - 140 V	50 - 60 Hz	0.35 A	-50 °C to 50 °C	T4	T80 °C	LDX1H-110
LBXS-L-65-110	88 - 140 V	50 - 60 Hz	0.2 A	-50 °C to 65 °C	T4	T80 °C	LDX1L-HT-110
LBXS-L-59-110	88 - 140 V	50 - 60 Hz	0.35 A	-50 °C to 59 °C	T4	T80 °C	LDX1H-HT-110
LBXS-L-65-230	180 - 277 V	50 - 60 Hz	0.1 A	-50 °C to 65 °C	T4	T80 °C	LDX1L-230
LBXS-L-50-230	180 - 277 V	50 - 60 Hz	0.15 A	-50 °C to 50 °C	T4	T80 °C	LDX1H-230
LBXS-L-65-230	180 - 277 V	50 - 60 Hz	0.1 A	-50 °C to 65 °C	T4	T80 °C	LDX1L-HT-230
LBXS-L-59-230	180 - 277 V	50 - 60 Hz	0.15 A	-50 °C to 59 °C	T4	T80 °C	LDX1H-HT-230
LBXE-L-59-110	100 - 140 V	50 - 60 Hz	0.26 A	-40 °C to 59 °C	T4	T80 °C	LDXIE-L-110
LBXE-L-59-110	100 - 140 V	50 - 60 Hz	0.41 A	-40 °C to 59 °C	T4	T80 °C	LDXIE-H-110
LBXE-L-59-230	200 - 277 V	50 - 60 Hz	0.14 A	-40 °C to 59 °C	T4	T80 °C	LDXIE-L-230
LBXE-L-59-230	200 - 277 V	50 - 60 Hz	0.19 A	-40 °C to 59 °C	T4	T80 °C	LDXIE-H-230
LBXN-L-59-110	100 - 140 V	50 - 60 Hz	0.26 A	-40 °C to 59 °C	T4	T80 °C	LDXIE-L-110
LBXN-L-59-110	100 - 140 V	50 - 60 Hz	0.41 A	-40 °C to 59 °C	T4	T80 °C	LDXIE-H-110
LBXN-L-59-230	200 - 277 V	50 - 60 Hz	0.14 A	-40 °C to 59 °C	T4	T80 °C	LDXIE-L-230
LBXN-L-59-230	200 - 277 V	50 - 60 Hz	0.19 A	-40 °C to 59 °C	T4	T80 °C	LDXIE-H-230

14 Descriptive Documents

14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
R3004/A/1	2021-09-09	0	Initial issue of the Prime Certificate
R3083/A/1	2023-01-04	1	Addition of LDXIE type driver to product range

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Schedule

14.2 Compliance Drawings:

Issue 1

Title:	Drawing No.:	Rev. Level:	Date:
*LBX Bulkhead Standard Lid Assembly	LD-0141	09	28/10/2022
*LBX Bulkhead Standard General Assembly	LD-0142	08	28/10/2022
*LBX Wiring and Layout	LD-0144	09	23/09/2022
*LBX Bulkhead Technical Manual (15 pages)	LD-0148	04	06/12/2022
*LBX Bulkhead Enclosure Construction	LD-0151	09	23/09/2022
*LBX Bulkhead Certification Label (2 pages)	LD-0159	08	28/10/2022
*LBX Bulkhead Emergency Lid Assembly	LD-0342	01	28/10/2022
*LBX Bulkhead Emergency General Assembly	LD-0343	01	23/09/2022
*LBX Bulkhead Emergency Electronics and Wiring	LD-0344	01	28/10/2022

15 Conditions of Certification

15.1 Special Conditions for Safe Use

1. Cable entries into the equipment shall utilise suitably certified cable glands and shall provide a minimum degree of protection of IP66 or IP67 (dependent on the installation environment).
2. Unused cable entry apertures shall be closed with suitably certified blanking plugs which provide a minimum degree of protection of IP66 or IP67 (dependent on the installation environment).
3. When used in potentially hazardous dust atmospheres, the equipment shall be installed so as to minimize the risk from electrostatic discharge. In particular, the equipment shall not be installed where there is a likelihood of there being a static generating mechanism, such as steam generation or fast moving particles over the surface of the equipment.
4. The equipment shall only be used with a power source having a prospective short circuit current which does not exceed 1500A.
5. **Emergency versions:** The end user must ensure that no hazardous atmosphere is present before replacing the battery pack. Only the specific replacement battery packs that are listed in the instruction manual may be fitted. The manufacturer shall specify only suitably temperature rated battery packs as compatible. When transporting the battery pack through a potentially hazardous atmosphere the bare ends of the flying leads must be protected to IP30.

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15.2 Routine tests

1. 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.
2. The equipment shall be subjected to an electric strength test in accordance with EN 60079-7 Clause 6.1 using a test voltage of:
 - For models LBX*/230, LBX*/E/230 and LBXNE/230, 1554Vac applied between supply connections and frame, for a period of 60 secs
 - For models LBX*/110, LBX*/E/110 and LBXNE/110, 1500Vac applied between supply connections and frame, for a period of 60 secs

Alternatively, a test voltage of 20% higher may be applied for 0.1 seconds. A DC test voltage is allowed as an alternative to the AC test voltage and shall be 140% of the specified AC r.m.s. test voltage.

16 Essential Health and Safety Requirements

Essential Health and Safety Requirements are addressed by the standards listed in section 9 and where required the report listed in section 14.1

The manufacturer shall inform the Notified Body of any modifications to the design of the product described by this schedule.

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