EU Type Examination Certificate CML 16ATEX1348 Issue 0

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

2 Equipment **EWL Series LED Lighting Fixtures and Floodlights**

3 Manufacturer **Cortem S.p.A.**

4 Address via Aquileia 10
34070 Villesse
Gorizia
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 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.

7 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.

8 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 COR1: 2013
EN 60079-1:2014
EN 60079-7:2015
EN 60079-28:2015
EN 60079-31:2014

10 The equipment shall be marked with the following:

Internal Power Supply EWL-**.. ..

Ex II 2 G D
Ex db eb op is IIC Tx Gb
Ex tb IIIC Tx°C Db
IP 66
EWL-80/..:
Ta = -20 °C to +40 °C or
Ta = -20 °C to +60 °C

External Power Supply: EWL-80..SB

Ex II 2 G D
Ex db op is IIC Tx Gb
Ex tb IIIC Tx°C Db
IP66
EWL-70/.., EWL-80..C/.., EWL-100/..:
Ta = -40 °C to +40 °C or
Ta = -40 °C to +60 °C

Tx and Tx°C see Table below:

Type	EPL	Temperature Class		Max Surface Temperature (°C)	
		Tamb ≤ 40°C	Tamb ≤ 60 °C	Tamb ≤ 40°C	Tamb ≤ 60 °C
EWL-70	Gb, Db	T6	T6	65	85
EWL-80	Gb, Db	T6	T6	65	85
EWL-801	Gb, Db	T6	T5	80	100
EWL-100	Gb, Db	T6	T5	80	100
EWL-1001	Gb, Db	T6	T5	80	100

11 Description

The EWL ... Series are LED Lighting Fixtures and Floodlights suitable for fixed installation in hazardous gas and dust environments.

The LED Floodlights have the following dimensions:

Model	LED Enclosure Diameter (mm)	Overall Length (mm)
EWL-70..	215	273
EWL-80..	261	268
EWL-80..C..	261	306
EWL-100..	385	387
EWL-1001	385	387

The Floodlights are constructed from three separate enclosures for LED Board, LED Feeder Circuit and Terminal Enclosure. The LED Board enclosure has a cemented tempered glass window that is retained either by a threaded ring (EWL-70.., EWL-80.., EWL-80..C.) or bracket (EWL-100..). The LED Feeder Circuit enclosure incorporates the separate Terminal Enclosure.

The LED Board and the LED Feeder Circuits Enclosures are joined mechanically by a threaded joint. The LED Board, LED Feeder and the Terminal Enclosure are connected using certified sealed bushings. The Terminal Enclosure contains suitably certified terminals for external connections by means of suitably certified cable glands.

The EWL-80..SB Version is powered from an External Power Source through a suitably certified barrier gland. It consists of a single lamp enclosure that containing an LED Board.

The Floodlights have an environmental protection rating of IP 66.

Nomenclature:

EWL ... ... / ...
Where

...		Size	70, 80 100
	...	C	Particular Model for Cold Environments (Size 80)
		SB	Version VDC with only LED board
	/ ...	/10	versions with optic lens 10°
		/20	versions with optic lens 20°
		/40	versions with optic lens 40°
		/12	versions with 12 VDC (Size 80, 100)
		/24	versions with 24 VDC (Size 80, 100)
		/48	versions with 48 VDC (Size 80, 100)

The equipment has the following ratings:

Model	Input Power			LED BOARD
	Voltage	Frequency	Power	No of LED's
EWL-70 EWL-70/..	220 - 240 Vac	50-60 Hz	40W	18
EWL-80 EWL-80/.. EWL-80C EWL-80C/..	100 - 277 Vac	50-60 Hz	55W	48
EWL-80/../12 EWL-80/../24 EWL-80/../48	12/ 24/ 48 Vdc	-	55W	
EWL-801 EWL-801/.. EWL-801C/..	220 - 240 Vac	50-60 Hz	110W	
EWL-80..SB	12/24/48Vdc	-	110W	
EWL-100 EWL-100/..	100 – 240 Vac 277 Vac 127 - 431 Vdc	50-60 Hz -	188W	78
EWL-100/../12 EWL-100/../24 EWL-100/../48	12/ 24/ 48 Vdc	-	183W	
EWL-1001	100 - 240 Vac 277 Vac 127 - 431 Vdc	50-60 Hz	177W	

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	01 Feb 2017	R1321A/00	Initial Issue

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.

13.1 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.

13.2 The routine overpressure test shall be carried out on the flameproof enclosure with the static method (clause 15.1.3.1 of 60079-1 standard) at the pressure indicated on following table.

Model	Pressure values bar (PSI)	
	LED board compartment	Ballast compartment
EWL-80 EWL-801	12 (174)	10 (145)
EWL-70 EWL-80C EWL-801C	16 (232)	15.9 (231)
EWL-100 EWL-1001	15.3 (222)	23.4 (339)

13.3 The power and voltage rating marking on the label will be allocated in accordance with the table detailed in the description. The manufacturer will take all reasonable steps to ensure that the power dissipated by the terminal box does not exceed the maximum value stipulated in the table detailed in the description, and shall supply all the relevant information that will allow the installer/user to calculate the power dissipation (Watts) in accordance with IEC/EN 60079-7, Annex E, E.2 for each terminal box and install in accordance with IEC/EN 60079-14

13.4 All internal bushings are appropriately certified Ex components. They shall be installed in accordance with the certification documentation and the manufacturer's instructions. All specific Conditions of Certification/ Special Conditions for Safe Use/ Schedule of Limitations must be satisfied.

13.5 When terminals and terminal blocks are supplied with the enclosure they shall be appropriately certified Ex components. They shall be installed in accordance with the certification documentation and the manufacturer's instructions. All specific Conditions of Certification/ Special Conditions for Safe Use/ Schedule of Limitations must be satisfied. A copy of the approved terminals certification shall be provided with the terminal box documents.

All creepage and clearance distances as defined in IEC 60079-7 Table 2 shall be observed for the voltage rating marking.

The terminals and terminal blocks fitted shall be suitable for the lower operating temperature marked on the certification label and must have a minimum operating temperature suitable for the temperature class as specified in the table below:

Temperature Class	Minimum Upper Continuous Operating Temperature
T6/ T85°C	80 °C
T5/ T100°C	90 °C

13.6 If the terminals are fitted with cables/wiring by the manufacturer; all creepage and clearance distances as defined in IEC 60079-7 Table 2 shall be observed. A routine dielectric strength test shall be carried out on each unit in accordance with IEC/EN 60079-7:2015, clause 7.1.

The test voltage shall be determined on the basis of the marked maximum rated voltage, with the appropriate safety factor and test duration applied in accordance with IEC/EN 60079-7:2015, clause 6.1. No flashover or breakdown shall occur.

14 Special Conditions for Safe Use (Conditions of Certification)

None. Refer to Manufacturer's Instructions.

Certificate Annex

Certificate Number CML 16ATEX1348

Equipment EWL Series LED Lighting Fixtures and Floodlights

Manufacturer Cortem S.p.A.

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
A3-6549	1 of 6	0	01/02/2017	Lighting Fixture Series EWL Assembly and External Dimensions
A3-6549	2 of 6	0	01/02/2017	Lighting Fixture Series EWL-70...EWL-80.. Flameproof Features and Gasket Details
A3-6549	3 of 6	0	01/02/2017	Lighting Fixture Series EWL-100... Flameproof Features and Gasket Details
A3-6549	4 of 6	0	01/02/2017	Lighting Fixture Series EWL Ex-e Terminal Box/Details of Labelling
A3-6549	5 of 6	0	01/02/2017	Lighting Fixture Series EWL Earth Screws Detail/ Op is Details
A3-6549	6 of 6	0	01/02/2017	Lighting Fixture Series EWL Details of Minting/ Typical Circuit Diagram
A3-6618	1	0	01/02/2017	Lighting Fixture Series EWL 12/24/48 Vdc Special application – Direct entry