



IECEX Certificate of Conformity

4066

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX CML 15.0044X** Page 1 of 4 Certificate history:
Issue 0 (2016-06-13)

Status: **Current** Issue No: 1

Date of Issue: 2019-11-20

Applicant: **CORTEM S.p.A**
Via Aquileia 10
34070 Villesse
Gorizia
Italy

Equipment: **EXEL Luminaire**

Optional accessory:

Type of Protection: **Increased safety, flameproof, encapsulation, optical radiation, dust protection by enclosure**

Marking: Ex db eb mb op is IIC T* Gb
Ex tb op is IIIC T**°C Db
Ta=-20/-40°C to +40/50/55°C
(See product description in Annex for marking options)

Approved for issue on behalf of the IECEx
Certification Body:

A C Smith

Position:

Technical Operations Director

Signature:
(for printed version)

Date:

2019-11-20

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2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

Eurofins E&E CML Limited
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New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom





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Manufacturer: **CORTEM S.p.A**
Via Aquileia 10
34070 Villesse
Gorizia
Italy

Additional
manufacturing
locations:

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 equipment 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

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-28:2015 Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
Edition:2

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with 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 Reports:

GB/CML/ExTR15.0048/00

GB/CML/ExTR16.0035/00

GB/CML/ExTR19.0243/00

Quality Assessment Report:

IT/CES/QAR06.0002/13



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The EXEL is a luminaire that is comprised of an increased safety enclosure, encapsulated LEDs and a flameproof driver assembly. The increased safety enclosure is comprised of two parts, a GRP base and transparent polycarbonate lid joined by a silicon gasket which provides an IP66 seal.

(Refer to Annex for full product description)

SPECIFIC CONDITIONS OF USE: YES as shown below:

For EXEL luminaires with the LED Driver types EBL3040-1 or EBL4040-2 fitted, the flameproof joints of these driver types are not intended to be repaired.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
See Annex for details of changes.

Annex:

IECEX CML 15.0044X - Certificate Annex_1.pdf

Annexe to: IECEx CML 15.0044X Issue 1
Applicant: Cortem S.p.A.
Apparatus: EXEL Luminaire



Description

The EXEL is a luminaire that is comprised of an increased safety enclosure, encapsulated LEDs and a flameproof driver assembly. The increased safety enclosure is comprised of two parts, a GRP base and transparent polycarbonate lid joined by a silicon gasket which provides an IP66 seal.

Design Options

The luminaire is available with 1 or 2 LED tubes, which are available as 600 mm or 1,200 mm in length.

The luminaire is available as a standard luminaire with mains supply, or for emergency lighting with a 4 Ah or 7 Ah integrated battery, or for standard and emergency lighting with mains supply and 4 Ah or 7 Ah integrated battery.

The luminaire for emergency lighting is available either with 4 Ah or 7 Ah integrated battery or with a 4 Ah or 7 Ah battery in an increased safety enclosure attached to the luminaire.

Product Type Reference:

The product type is derived from the following options:

EXEL-ABBBCCDE

EXEL-	Product type	EXEL Increased safety lighting fixture
A	EXEL-Tubes	
	1	Single LED Tube
	2	Double LED Tube
BBB	Tubes	
	15L	600mm, 15W LED Tube
	30L	1200mm, 30W LED Tube
CC	Additional Functions (optional code for alternative versions)	
	(No additional code) for standard version	
	EE	Emergency mode operation only
	EF	Normal and emergency mode operation
D	Battery Capacity (Emergency versions only)	
	4	4 Ah Battery
	7	7 Ah Battery
E	Battery Box (Emergency versions only)	
	(No additional code) for integrated battery version	
	E	External battery box version

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With a typical type being:

EXEL-215LEE4E

The product carries the following markings:

Markings Table

Version	Marking	Ambient Temperature Range
EXEL-115L EXEL-215L EXEL-130L EXEL-230L	Ex db eb mb op is IIC T6 Gb Ex tb op is IIIC T*49°C Db	-40°C to +40°C
EXEL-115LEF.. EXEL-115LEF.. EXEL-215LEE.. EXEL-215LEE.. EXEL-130LEF.. EXEL-130LEE.. EXEL-230LEF.. EXEL-230LEE..	Ex db eb mb op is IIC T6 Gb Ex tb op is IIIC T55°C Db	-20°C to +40°C
EXEL-115LEF.. EXEL-115LEF.. EXEL-215LEE.. EXEL-215LEE.. EXEL-130LEF.. EXEL-130LEE.. EXEL-230LEF.. EXEL-230LEE..	Ex db eb mb op is IIC T5 Gb Ex tb op is IIIC T61°C Db	-20°C to +50°C
EXEL-115LEF..E EXEL-115LEF..E EXEL-215LEE..E EXEL-215LEE..E EXEL-130LEF..E EXEL-130LEE..E EXEL-230LEF..E EXEL-230LEE..E	Ex db eb mb op is IIC T6 Gb Ex tb op is IIIC T*49°C Db	-20°C to +40°C
EXEL-115LEF..E EXEL-115LEF..E EXEL-215LEE..E EXEL-215LEE..E EXEL-130LEF..E EXEL-130LEE..E EXEL-230LEF..E EXEL-230LEE..E	Ex db eb mb op is IIC T5 Gb Ex tb op is IIIC T64°C Db	-20°C to +55°C



The equipment has the following ratings:

Ratings Table

Version	Ballast/driver	Input Voltage
Standard Versions EXEL-115L EXEL-215L EXEL-130L EXEL-230L	Type 1	220-240 V a.c. /d.c.
	Type 2	110-277 V a.c. /d.c.
	Type 3	220-240 V a.c. /d.c.
Emergency only versions EXEL-115LEE.. EXEL-215LEE.. EXEL-130LEE.. EXEL-230LEE.. EXEL-115LEE..E EXEL-215LEE..E EXEL-130LEE..E EXEL-230LEE..E	Inverter	110-240 V a.c. /d.c.
Standard versions with emergency EXEL-115LEF.. EXEL-215LEF.. EXEL-130LEF.. EXEL-230LEF.. EXEL-115LEF..E EXEL-215LEF..E EXEL-130LEF..E EXEL-230LEF..E	Type 1	220-240 V a.c. /d.c.
	Type 2	110-277 V a.c. /d.c.
	Type 3	220-240 V a.c. /d.c.
	Inverter	110-240 V a.c. /d.c.

Variation 1

This variation introduces the following modifications:

- i. The introduction of the emergency lighting version of the EXEL luminaire. The EXEL-xxxLEE model is similar to the existing EXEL-LEF but with mains supplied LED driver not included.
- ii. The introduction of the emergency lighting version of the EXEL luminaire with external battery box. The EXEL-LEE-E is similar to the EXEL-LEF, but with the mains supplied LED driver not included and a 4 Ah or 7 Ah battery (certified under IECEx CES 13.0006U and



- CESI 00ATEX032U) placed within an increased safety enclosure (certified under IECEx CES 11.0032X), attached to the luminaire enclosure.
- iii. The introduction of the standard/emergency lighting version of the EXEL luminaire with external battery box. EXEL-LEF-E is similar to the existing EXEL-LEF, but with a 4 Ah or 7 Ah battery (certified under IECEx CES 13.0006U and CESI 00ATEX032U) placed within an increased safety enclosure (certified under IECEx CES 11.0032X), external to the luminaire enclosure.
 - iv. To permit the use of B-0305/B-0306 Series fuses (certified under IECEx CML 19.0170U and CML 19ATEX5473U) when using the Cortem LTTxxxxE/x type LED tubes is provided without the fuse mounted on the LED module PCB.
 - v. To permit the use of the EBL4040-2.. and EBL3040-1.. Series of LED drivers and EIL4040-1.. Series Inverters (all certified under IECEx CML 17.0061U and CML 17ATEX1131U) as alternative parts the existing LED driver and inverter used.
 - vi. The introduction of the EXEL-1..L version to the EXEL luminaire range. The EXEL-1..L version is similar to the existing version (EXEL-2..L) but with a single LED tube instead of two LED tubes.
 - vii. Following appropriate reassessment, the standards used in the existing certification have been updated to the latest available editions.

Conditions of manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- i. 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.
- ii. Each luminaire shall be subjected to a routine dielectric strength test of $2 X U + 1000V$ rms and a minimum of 1500V for 60 seconds as per EN 60079-7 clause 7.1. Alternatively the test may be carried out at 1.2 times the test voltage, but maintained for 100ms. A DC test voltage may be used but shall be 1.4 X the specified AC rms test voltage. The LED modules and driver may be disconnected for this test.
- iii. Each encapsulated LED assembly shall be subjected to a routine dielectric strength test of 500V for 1 second, as per EN 60079-18 clause 9.2. Alternatively the test may be carried out at 1.2 times the test voltage, but maintained for 100ms
- iv. The LED modules of each piece of "m" equipment shall be subjected to a visual inspection. No damage shall be evident, such as cracks in the compound, exposure of the parts, flaking, inadmissible shrinkage, swelling, decomposition, failure of adhesion, or softening.
- v. The luminaires shall be marked according to document A4-7443 Revision 0

Components covered by Ex Certificates issued to older editions of Standards

Certificate number	Standards (incl Ed)	Assessment result
IECEX CES 13.0008U	IEC 60079-0 Ed 6	Technical differences evaluated and found satisfactory. For detail see ExTR
	IEC 60079-1 Ed 6	Technical differences evaluated and found satisfactory. For detail see ExTR
	IEC 60079-7 Ed 4	Technical differences evaluated and found satisfactory. For detail see ExTR
IECEX CES 15.0005U	IEC 60079-0 Ed 6	Technical differences evaluated and found satisfactory. For detail see ExTR
	IEC 60079-1 Ed 6	Technical differences evaluated and found satisfactory. For detail see ExTR
	IEC 60079-7 Ed 4	Technical differences evaluated and found satisfactory. For detail see ExTR
	IEC 60079-31 Ed 1	Technical differences evaluated and found satisfactory. For detail see ExTR
IECEX CES 13.0006U	IEC 60079-0 Ed 6	Technical differences evaluated and found satisfactory. For detail see ExTR
	IEC 60079-7 Ed 4	Technical differences evaluated and found satisfactory. For detail see ExTR



Certificate number	Standards (Incl Ed)	Assessment result
IECEX CES 11.0030U	IEC 60079-0 Ed 5	Technical differences evaluated and found satisfactory. For detail see ExTR
	IEC 60079-1 Ed 6	Technical differences evaluated and found satisfactory. For detail see ExTR
	IEC 60079-7 Ed 4	Technical differences evaluated and found satisfactory. For detail see ExTR
	IEC 60079-31 Ed 1	Technical differences evaluated and found satisfactory. For detail see ExTR
IECEX CML 19.0170U	IEC 60079-0 Ed 7	Current edition of standard
	IEC 60079-18 Ed 4.1	Current edition of standard
	IEC 60079-7 Ed 5.1	Current edition of standard