



IECEX Certificate of Conformity

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 20.0008X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 2	Issue 1 (2022-07-01) Issue 0 (2020-05-06)
Date of Issue:	2025-02-11		
Applicant:	CORTEM S.p.A. Via Aquileia 10 34070 Villesse Gorizia Italy		
Equipment:	LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures		
Optional accessory:			
Type of Protection:	Flameproof Ex "d", Increased Safety Ex "e", Restricted breathing Ex "nR", Encapsulation Ex "m" and Dust Protection Ex "t"		
Marking:	LifEx-ME	LifEx-MN	LifEx-MT
	Ex db eb mb IIC T.. Gb Ex tb IIIC T... °C Db IP66	Ex ec IIC T... Gc Ex nR IIC T... Gc Ex tb IIIC T... °C Db IP66	Ex tb IIIC T... °C Db IP66
	Ta= see annex		

Approved for issue on behalf of the IECEx
Certification Body:

L A Brisk

Position:

Assistant Certification Manager

Signature:
(for printed version)

11 Feb 2025

Date:
(for printed version)

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Ellesmere Port, CH65 4LZ
United Kingdom





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

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

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 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-15:2017 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:5.0

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

IEC 60079-31:2022 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

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/ExTR20.0012/00](#)

[GB/CML/ExTR22.0031/00](#)

[GB/CML/ExTR24.0250/00](#)

Quality Assessment Report:

[IT/CES/QAR06.0002/18](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

See Annex for full description and Conditions of Manufacture.

SPECIFIC CONDITIONS OF USE: YES as shown below:

See Annex for Specific Conditions of Use



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1

This issue introduces the following changes:

1. Addition of an optional new removable cover for "easy installation"
2. Addition of an optional external battery box;
3. Minimum ambient temperature extended to -60°C for emergency versions when Ex mb battery heater is used;
4. Additional optional Ex mb EBM LED driver and emergency module as an alternative to EBL3040 / EBL4040 Ex db models;
5. The power range of the 300 mm version has been extended from the existing 10 W and 15 W range to include a 30 W version, the model type for the 30 W version being LifEx-M...-0330.

Issue 2

This issue introduces the following changes:

1. To introduce a new terminal block type TBEx-...V (for EPL Gb versions)
2. Introduction of the type of protection Ex nR (for EPL Gc versions), as the result the product descriptions have been updated.
3. To update and review the product against the latest standard IEC 60079-31:2022 Ed. 3.
4. To recognise corrections to product description

Annex:

[Annex to IECEx CML 20.0008X Iss. 2_1.pdf](#)

Annexe to: IECEx CML 20.0008X Issue 02
Apparatus: LifEx-ME, LifEx-MN and LifEx-MT series of linear lighting fixtures
Applicant: Cortem S.p.A.



Description

The LifEx is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-ME, LifEx-MT and LifEx-MN.

LifEx-ME

The LifEx-ME version has an Equipment Protection Level of EPL Gb and Db and utilises types of protection increased safety (eb) and dust protection by enclosure (tb), along with encapsulation (mb) for the light source and flameproof (db) for the driver.

It is constructed from an aluminium enclosure, with either a glass or polycarbonate lens and with optional polycarbonate diffuser.

LifEx-MN

The LifEx-MN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) or restricted breathing (Ex nR) and dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

LifEx-MT

The LifEx-MT versions has an Equipment Protection Level of EPL Db and utilises types of protection dust protection by enclosure (tb).

It is constructed from an aluminium enclosure, with polycarbonate diffuser and/or with optional glass or polycarbonate lens.

Design Options

Every configuration is available in lengths ranging from 300 mm to 1500 mm, and power ratings up to a maximum of 105W of nominal power.

The LifEx can be used in only normal service, in only emergency service or in normal and emergency service.

The minimum ambient temperature for the range is:

- -60°C for versions without battery
- -20°C for versions with battery (-60°C Ex mb battery heater is used)



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The range is available with the following maximum ambient temperatures:

MODEL	With glass lens and with/without polycarbonate diffuser	With Polycarbonate lens and with/without polycarbonate diffuser	Without lens polycarbonate diffuser only
LifEx-M...0310	+60°C	+60°C	+60°C
LifEx-M...0315	+60°C	+60°C	+60°C
LifEx-M...0330	+60°C	Configuration not available	Configuration not available
LifEx-M...0615	+60°C	+60°C	+60°C
LifEx-M...0630	+60°C	+50°C	+60°C
LifEx-M...0645	+57°C	+47°C	+60°C
LifEx-M...0660	+47°C	Configuration not available	+58°C
LifEx-M...1230	+60°C	+60°C	+60°C
LifEx-M...1260	+60°C	+50°C	+60°C
LifEx-M...1290	+60°C	+40°C	+60°C
LifEx-M...12120	+54°C	Configuration not available	+60°C
LifEx-M...1590	+60°C	+40°C	+60°C

Table 1: Maximum Ambient Temperatures

The following tables provide the Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for each LifEx type, with the following notes:

- The LifEx-MN under Ex ec execution with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.
- The Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) in the tables below are not applicable when the ambient temperature is not permitted in the above maximum ambient temperature range table
(For example, the LifEx-M...0660 is not permitted with polycarbonate lens, therefore the Temperature Class (EPL Gb) and Maximum Surface Temperature (EPL Db) for this version in tables 2 and 3 are not applicable)



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MODEL	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db)													
	Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T51°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T51°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T51°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T64°C	T6	T69°C	T5	T71°C	T5	T74°C	T5	T78°C	T5	T81°C	T4	T84°C	T4
LifEx-M...0645	T67°C	T5	T72°C	T5	T74°C	T5	T77°C	T5	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...0660	T72°C	T5	T77°C	T4	T79°C	T4	T82°C	T4	T86°C	T4	T89°C	T4	T92°C	T4
LifEx-M...1230	T53°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T62°C	T6	T67°C	T5	T69°C	T5	T72°C	T5	T76°C	T5	T79°C	T4	T82°C	T4
LifEx-M...1290	T67°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4
LifEx-M...12120	T70°C	T5	T75°C	T4	T77°C	T4	T80°C	T4	T84°C	T4	T87°C	T4	T90°C	T4
LifEx-M...1590	T67°C	T5	T72°C	T5	T74°C	T4	T77°C	T4	T81°C	T4	T84°C	T4	T87°C	T4

Table 2: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and with polycarbonate diffuser

MODEL	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db)													
	Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc	EPL Db	EPL Gb/Gc
LifEx-M...0310	T57°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0315	T57°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0615	T57°C	T6	T62°C	T6	T64°C	T6	T67°C	T6	T71°C	T6	T74°C	T6	T77°C	T6
LifEx-M...0630	T80°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...0645	T83°C	T5	T88°C	T5	T90°C	T5	T93°C	T5	T97°C	T4	T100°C	T4	T103°C	T4
LifEx-M...0660	T95°C	T5	T100°C	T4	T102°C	T4	T105°C	T4	T109°C	T4	T112°C	T4	T115°C	T4
LifEx-M...1230	T60°C	T6	T65°C	T6	T67°C	T6	T70°C	T6	T74°C	T6	T77°C	T6	T80°C	T6
LifEx-M...1260	T80°C	T6	T85°C	T5	T87°C	T5	T90°C	T5	T94°C	T5	T97°C	T4	T100°C	T4
LifEx-M...1290	T89°C	T5	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4
LifEx-M...12120	T91°C	T5	T96°C	T4	T98°C	T4	T101°C	T4	T105°C	T4	T108°C	T4	T111°C	T4
LifEx-M...1590	T89°C	T5	T94°C	T5	T96°C	T4	T99°C	T4	T103°C	T4	T106°C	T4	T109°C	T4

Table 3: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx types with glass/polycarbonate lens and without polycarbonate diffuser



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MODEL	Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db)					
	Based on ambient temperature					
	40°C		55°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-ME-0330	T58°C	T6	T73°C	T6	T78°C	T5
LifEx-MN-0330	T58°C	T6	T73°C	T5	T78°C	T4
LifEx-MT-0330	T58°C	-	T73°C	-	T78°C	-

Table 4: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx-M...-0330 types with glass/polycarbonate window and without polycarbonate diffuser

MODEL	Temperature Class (EPL Gc only) and Maximum Surface Temperature (EPL Db)													
	Based on ambient temperature													
	40°C		45°C		47°C		50°C		54°C		57°C		60°C	
	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc	EPL Db	EPL Gc
LifEx-M...0310	T51°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0315	T51°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0615	T51°C	T6	T56°C	T6	T58°C	T6	T61°C	T6	T65°C	T6	T68°C	T6	T71°C	T6
LifEx-M...0630	T64°C	T6	T69°C	T6	T71°C	T6	T74°C	T6	T78°C	T6	T81°C	T5	T84°C	T5
LifEx-M...0645	T67°C	T6	T72°C	T6	T74°C	T6	T77°C	T6	T81°C	T5	T84°C	T5	T87°C	T5
LifEx-M...0660	T72°C	T6	T77°C	T6	T79°C	T6	T82°C	T5	T86°C	T5	T89°C	T5	T92°C	T5
LifEx-M...1230	T53°C	T6	T58°C	T6	T60°C	T6	T63°C	T6	T67°C	T6	T70°C	T6	T73°C	T6
LifEx-M...1260	T62°C	T6	T67°C	T6	T69°C	T6	T72°C	T6	T76°C	T6	T79°C	T6	T82°C	T5
LifEx-M...1290	T67°C	T6	T72°C	T6	T74°C	T6	T77°C	T6	T81°C	T5	T84°C	T5	T87°C	T5
LifEx-M...12120	T70°C	T6	T75°C	T6	T77°C	T6	T80°C	T6	T84°C	T5	T87°C	T5	T90°C	T5
LifEx-M...1590	T67°C	T6	T72°C	T6	T74°C	T6	T77°C	T6	T81°C	T5	T84°C	T5	T87°C	T5

Table 5: Temperature Class (EPL Gc only) and Maximum Surface Temperature (EPL Db) for LifEx types without glass/polycarbonate lens and with polycarbonate diffuser



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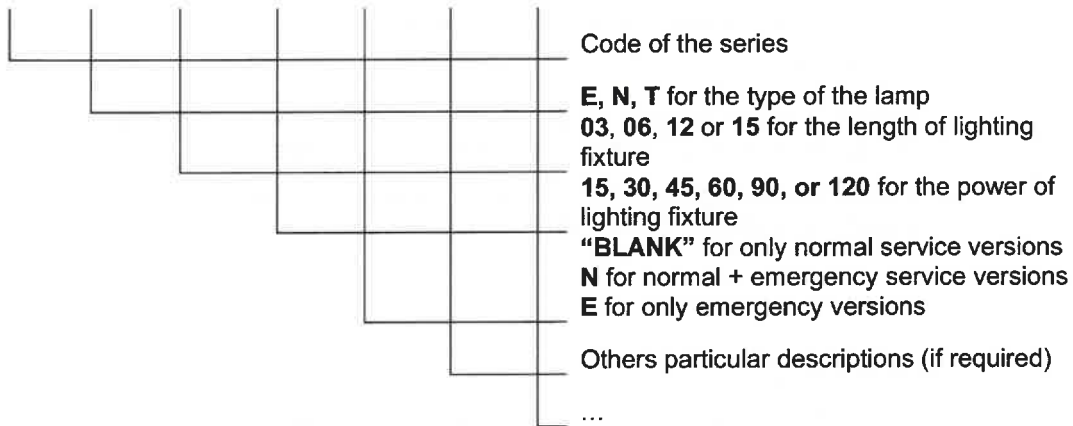




The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66. The gaskets on the caps provide the degree of protection.

The equipment uses the following nomenclature:

LifEx-M -



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 of the product defined on this certificate shall continually monitor these parts/components for any modifications introduced by the manufacturer(s) of these constituent parts. If the manufacturer of any constituent part introduces any changes which affect the compliance of the certified product that is the subject of this certificate, the manufacturer is required to have this certificate updated.
- ii. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
- iii. Each unit of LifEx-ME and LifeEx-MN luminaires shall be subjected to a routine dielectric strength test in accordance with the requirements of IEC 60079-7: 2017 Ed 5.1/ IEC 60079-15:2017 Ed 5.0 standards. The test shall be conducted at a voltage of at least $2U + 1000V$ with a minimum value of 1560V (U = maximum rated voltage of the lamp). There shall be no breakdown or flashover observed as a result of the test.
- iv. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.
- v. Where the removable battery pack is used with phoenix contacts, if used with a T6 version of the equipment, the maximum ambient shall be limited to +40°C.



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vi. When luminaire LifEx-MN marked with Ex nR and fitted with a test port, the routine test might be omitted as per clause 12.2.1, since a type test in accordance with clause 11.3.2 was conducted at higher level. However, when the equipment is not fitted with a test port a routine test shall be conducted by the manufacturer according to clause 12.2.2.1.2 as indicated in below together with alternative methods.

- Internal pressure of 0.3kPa or (3 mbar) below atmospheric pressure shall not change to half the initial value in 180 seconds.

Alternative methods:

- a. Internal pressure of 3kPa or (30 mbar) below atmospheric pressure, shall not change to at most 2.7 kPa or (2.7 mbar) in 27 seconds.
- b. Internal pressure of 0.3kPa or (3 mbar) below atmospheric pressure, shall not change to at most 0.27 kPa or (0.27 mbar) in 27 seconds.

Specific Conditions of Use

The following conditions relate to safe installation and/or use of the equipment.

- i. Cable entries are provided which have less than 5 threads engaged. Care must be taken to ensure the correct gaskets and washers are used with the cable gland to maintain IP66.
- ii. The equipment uses an external part that is constructed from non-metallic materials, and as such care is to be taken to prevent an electro-static charging hazard. See instruction manual for details.
- iii. For versions with glass window of 4mm thickness without cover, the luminaire must be installed in a location with a low risk of mechanical danger.
- iv. The temperature at the entry point may reach up to 75°C. Suitably rated cable glands must be used.
- v. When Luminaire Ex "nR" Type LifEx-MN is fitted with test port and has been subjected to maintenance e.g. replacing gasket, a restricted breathing routine test shall be conducted in accordance with clause 12.2.2.1.1. Luminaire with test port:

- Internal pressure of 0,3kPa or (3 mbar) below atmospheric pressure shall not change to half the initial value in 90 seconds.

Alternative methods:

- a. Internal pressure of 3kPa or (30 mbar) below atmospheric pressure, shall not change to at most 2.7 kPa or (27 mbar) in 14 seconds.
- b. Internal pressure of 0,3kPa or (3 mbar) below atmospheric pressure, shall not change to at most 0.27 kPa or (2;7 mbar) in 14 seconds.

vi. Luminaire Ex "nR" Type LifEx-MN has been exempted to have a test port, as such when it is subjected to service or maintenance the end users must follow the manufacturer instruction manual for replacing the involved gasket.



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Components covered by Ex Certificates issued to older editions of Standards

Certificate number	Standards (incl Ed)	Assessment result
IECEX CML 17.0061U	IEC 60079-0 (Ed.6.0) (2011)	No applicable technical differences
IECEX CES 11.0008U	IEC 60079-0 (Ed.6.0) (2011) IEC 60079-0 (Ed 5.0) (2017)	No applicable technical differences
IECEX CES 11.0007U	IEC 60079-0 (Ed.6.0) (2011) IEC 60079-0 (Ed 5.0) (2017)	No applicable technical differences
IECEX CES 11.0030U	IEC 60079-0 (Ed.6.0) (2011) IEC 60079-7 (Ed.5.0) (2015)	No applicable technical differences
IECEX CES 14.0030U	IEC 60079-0 (Ed.6.0) (2011)	No applicable technical differences
IECEX CES 11.0031	IEC 60079-0 (Ed.5) (2007-10) IEC 60079-1 (Ed.6) (2007-04) IEC 60079-7 (Ed.4) (2006-07)	No applicable technical differences



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