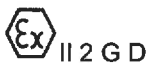




## EU Type Examination Certificate CML 21ATEX31405X Issue 0

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **LifEx-PE, LifEx-PN and LifEx-PT series of linear lighting fixtures**
- 3 Manufacturer **Cortem S.p.A.**
- 4 Address **Via Aquileia 10  
34070 Villesse  
(GO), Italy**
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, 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 IEC 60079-0:2018      EN 60079-1:2014      EN IEC 60079-7:2015+A1:2018  
EN 60079-18:2015+A1:2017      EN 60079-31:2014
- 10 The equipment shall be marked with the following:

LifEx-PE



II 2 G D

Ex db eb mb IIC T.. Gb

Ex eb mb IIC T.. Gb

(when Ex mb LED drivers are used)

Ex tb IIIC T... °C Db

Ta= refer to product description

LifEx-PN and LifEx-PT



II 2 D

Ex tb IIIC T... °C Db

Ta= refer to product description





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## 11 Description

The LifEx-P is a range of linear LED lighting fixtures that are available in three different configurations for different applications, designated as the LifEx-PE, LifEx-PT and LifEx-PN.

All versions use a polycarbonate Makrolon extrusion used as enclosure and an internal aluminium extrusion used as an internal frame.

Some of these versions, use a glass lens (LifEx-PE).

### LifEx-PE

The LifEx-PE 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. An alternative encapsulated (mb) driver may be used.

### LifEx-PN

The LifEx-PN version has an Equipment Protection Level of EPL Gc and Db and utilises types of protection increased safety (ec) and dust protection by enclosure (tb).

### LifEx-PT

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

### 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 when Ex mb battery heater is used)

The complete range has an upper ambient of +60°C.

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-PN, when Hadler LED drivers is used with an ambient temperature greater than 50°C is T5 or T4. T6 is not included.

MODEL	Maximum ambient temperature (For Zone 1-21 applications)			
	Ta = +40°C	Ta = +50°C	Ta = +55°C	Ta = +60°C
LifEx-PE-0315..	T5(53°C)	T5(63°C)	T4(68°C)	T4(73°C)
LifEx-PE-0330..	T5(53°C)	T5(63°C)	T4(68°C)	T4(73°C)
LifEx-PE-0615..	T6(57°C)	T5(67°C)	T5(72°C)	T4(77°C)
LifEx-PE-0630..	T6(57°C)	T5(67°C)	T5(72°C)	T4(77°C)



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LifEx-PE-0645..	T6(57°C)	T5(67°C)	T5(72°C)	T4(77°C)
LifEx-PE-0660..	T6(57°C)	T5(67°C)	T5(72°C)	T4(77°C)
LifEx-PE-1230..	T6(55°C)	T5(65°C)	T5(70°C)	T5(75°C)
LifEx-PE-1260..	T6(55°C)	T5(65°C)	T5(70°C)	T5(75°C)
LifEx-PE-1290..	T6(55°C)	T5(65°C)	T5(70°C)	T5(75°C)
LifEx-PE-12120..	T6(55°C)	T5(65°C)	T5(70°C)	T5(75°C)
LifEx-PE-1590..	T6(55°C)	T5(65°C)	T5(70°C)	T5(75°C)

**Table 1: Temperature Class (EPL Gb and Gc) and Maximum Surface Temperature (EPL Db) for LifEx types with glass window**

MODEL	Maximum ambient temperature			
	<i>(For Zone 2-21 applications – when Hadler LED driver is used)</i>			
	Ta = +40°C	Ta = +50°C	Ta = +55°C	Ta = +60°C
LifEx-PN-0315..	T6(47°C)	T6(57°C)	T5(62°C)	T5(67°C)
LifEx-PN-0330..	T6(54°C)	T6(64°C)	T5(69°C)	T5(74°C)
LifEx-PN-0615..	T6(47°C)	T6(57°C)	T5(62°C)	T5(67°C)
LifEx-PN-0630..	T6(47°C)	T6(57°C)	T5(62°C)	T5(67°C)
LifEx-PN-0645..	T6(47°C)	T6(57°C)	T5(62°C)	T5(67°C)
LifEx-PN-0660..	T6(54°C)	T6(64°C)	T5(69°C)	T5(74°C)
LifEx-PN-1230..	T6(47°C)	T6(57°C)	T5(62°C)	T5(67°C)
LifEx-PN-1260..	T6(47°C)	T6(57°C)	T5(62°C)	T5(67°C)
LifEx-PN-1290..	T6(47°C)	T6(57°C)	T5(62°C)	T5(67°C)
LifEx-PN-1590..	T6(47°C)	T6(57°C)	T5(62°C)	T5(67°C)

**Table 2: Temperature Class (EPL Gc) and Maximum Surface Temperature (EPL Db) for LifEx types when Hadler LED driver is used**



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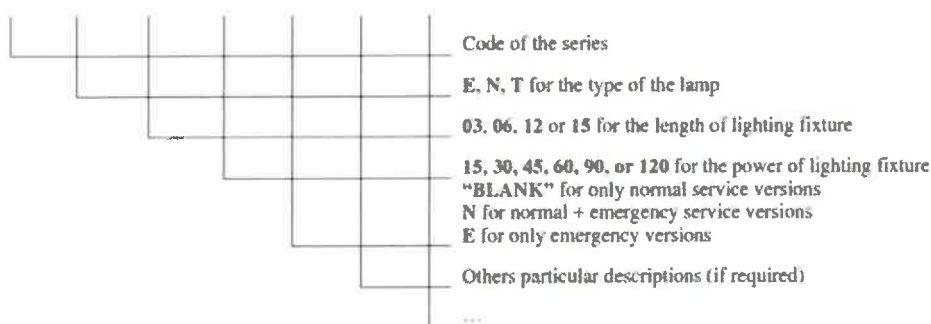
MODEL	Maximum ambient temperature (For Zone 21 applications)			
	Ta = +40°C	Ta = +50°C	Ta = +55°C	Ta = +60°C
LifEx-PT-0315..	47°C	57°C	62°C	67°C
LifEx-PT-0330..	47°C	57°C	62°C	67°C
LifEx-PT-0615..	54°C	64°C	69°C	74°C
LifEx-PT-0630..	47°C	57°C	62°C	67°C
LifEx-PT-0645..	47°C	57°C	62°C	67°C
LifEx-PT-0660..	54°C	64°C	69°C	74°C
LifEx-PT-1230..	47°C	57°C	62°C	67°C
LifEx-PT-1260..	47°C	57°C	62°C	67°C
LifEx-PT-1290..	47°C	57°C	62°C	67°C
LifEx-PT-12120..	54°C	64°C	69°C	74°C
LifEx-PT-1590..	47°C	57°C	62°C	67°C

**Table 3: Maximum Surface Temperature (EPL Db) for LifEx types for Zone 21 environment**

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-P   .



Other suffix can be added on the code for particular configurations

## 12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	30 Jun 2022	R14827A/00	Issue of Prime Certification

Note: Drawings that describe the equipment or component are listed in the Annex.



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### **13 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. The LifEx series lighting fixtures are to be designed in accordance with general electrical safety standards.
- iii. The routine dielectric strength test on the LifEx-PE and LifEx-PN luminaries with applied voltage shall be performed at  $2U + 1000V$  with a minimum value of 1560V (U = maximum rated voltage of the lamp)
- iv. 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  $+40^{\circ}C$ .
- v. 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.

### **14 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. Impact testing was conducted at 4J only, therefore the equipment must only be installed where there is a low risk of impact, this is in accordance with 60079-0 Clause 26.4.

## Certificate Annex

**Certificate Number** CML 21ATEX31405X  
**Equipment** LifEx-PE, LifEx-PN and LifEx-PT series of linear lighting fixtures  
**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
A3-7714	1 of 6	0	30 Jun 2022	LifEx-PE lighting fixtures Assembly and External Dimensions
A3-7714	2 of 6	0	30 Jun 2022	LifEx-PN & LifEx-PT Lighting fixtures Assembly and External Dimensions
A3-7714	3 of 6	0	30 Jun 2022	Construction, earthing and IP protection details Assembly
A3-7714	4 of 6	0	30 Jun 2022	LifEx-P...N & LifEx-P...E Lighting Fixtures Assembly
A3-7714	5 of 6	0	30 Jun 2022	Battery Box details Assembly
A3-7714	6 of 6	0	30 Jun 2022	Example of accessories Assembly
A4-7713	1 to 7	0	30 Jun 2022	Technical Note