EU Type Examination Certificate CML 23ATEX3195X Issue 1

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

2 Equipment **STREETEX-M.. AND SQUAREX-M.. LED Lighting Fixtures**

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 Eurofins CML B.V., Chamber of Commerce No 67386717, 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 IEC 60079-7:2015+A1:2018 EN IEC 60079-18:2015+A1:2017

EN IEC 60079-31:2024

10 The equipment shall be marked with the following:

Gas Marking (Only for STREETEX-ME and SQUAREX-ME version):

Ⓔx II 2 G

Ex eb mb IIC T... Gb

IP66

Ta = -** °C to +** °C

Dust Marking (STREETEX-ME, SQUAREX-ME, STREETEX-MN, SQUAREX-MN versions):

Ⓔx II 2 D

Ex tb IIIC T...°C Db

IP66

Ta = -** °C to +**°C

Refer to the equipment Description for Temperature Class, Maximum Surface Temperature and Ambient Temperature range.

L A Brisk
Assistant Certification Manager

11 Description

The STREETEX-M.. and SQUAREX-M.. are LED lighting fixtures that are configured for use in both Gas and Dust environments, dependant on the method of explosion protection. The STREETEX contains an integral LED Driver. The SQUAREX is powered from a separate LED Driver mounted within an external flameproof enclosure or in a safe area.

The STREETEX-ME-.. and SQUAREX-ME-.. versions are suitable for Zone 1, Zone 2 and 21 and Zone 22 applications.

The STREETEX-ME-.. lighting fixture contain an LED Printed Circuit Board (PCB) compartment protected by Ex-mb , and a separate Ex-eb protected compartment containing a certified encapsulated LED Driver and connection facilities.

The STREETEX-MN-.. and the SQUAREX-MN-.. versions are suitable for Zone 21 and Zone 22 applications. The STREETEX-MN-.. lighting fixture is made by two interconnected dust tight compartments, the LED PCB compartment and the driver compartment.

The different versions of STREETEX-M.. models differ in size, power rating and configuration of the LED PCB.

The SQUAREX has only one LED PCB configuration, the SQUAREX-M..-080100. The maximum power for the SQUAREX-M..-080100 is 100W.

All STREETEX-M.. and SQUAREX-M.. versions have an environmental ingress protection level of IP 66.

Nomenclature of STREETEX

STREETEX - ..... - .... - .....
(1) (2) (3) (4) (5)

Where

(1) = STREETEX Light Fixture

(2) = Version of Lamp
- ME = Cat 2, Zone 1 2 21 22 : Ex-eb mb / Ex tb
- MN = Zone 21 22: Ex-tb

(3) = Size of lighting fixture
- 080,
- 100

(4) = Power of lighting fixture

025	24 W
050	48 W
075	72 W
100	96 W
160	160 W
200	192 W

(5) = DALI (only for DALI version)

Ratings

Type	Size	LED driver type	Nominal Wattage	Nominal Voltage (*)	Frequency
STREETEX-M..-	080025	EBM-50C	24 W	100-277 Vac / 142-431 Vdc	0-50-60 Hz
		LExD-50C		120-277 Vac / 150-420 Vdc	
		MU35H105AQ_MB/DALI		100-277 Vac / 125-300 Vdc	
	080050	EBM-75C	48 W	100-277 Vac / 142-431 Vdc	
		LExD-100C		120-277 Vac / 150-420 Vdc	
		MU100H120AQ_MB/DALI		100-277 Vac / 125-300 Vdc	
	080075	EBM-75C	72 W	100-277 Vac / 142-431 Vdc	
		LExD-100C		120-277 Vac / 150-420 Vdc	
		MU100H120AQ_MB/DALI		100-277 Vac / 125-300 Vdc	
	080100	EBM-75C	96 W	100-277 Vac / 142-431 Vdc	
		LExD-100C		120-277 Vac / 150-420 Vdc	
		MU100H120AQ_MB/DALI		100-277 Vac / 125-300 Vdc	
	080160	EBM-240C	160 W	100-277 Vac / 142-431 Vdc	
		LExD-240C		120-277 Vac / 150-420 Vdc	
		MU163H105AQ_MB/DALI		100-277 Vac / 125-300 Vdc	
	100200	EBM-240C	192 W	100-277 Vac / 142-431 Vdc	
		LExD-240C		120-277 Vac / 150-420 Vdc	

(*)The maximum voltage and ambient temperature range is limited dependant on the type of Ex Components fitted by the manufacturer in accordance with the following table.

Type	Size	Nominal Wattage	Nominal Current	Frequency
SQUAREX-M..-	080100	100 W	Up to 1,000 mA	0

Ambient temperature, Temperature Class and Maximum Surface Temperature

The Lighting Fixtures are suitable for use in ambient temperatures down to -60°C, except when equipped with drivers covered by certificates TPS 23 ATEX 117594 0012 U or TPS 23 ATEX 117594 0013 U or TPS 24 ATEX 117594 0045 U. In such cases, refer to the Conditions of Manufacture.

STREETEX-M..-..

			Temperature Class (EPL Gb)				Maximum Surface Temperature °C (EPL Db)			
Ambient Temperature			40 °C	50 °C	55 °C	60 °C	40 °C	50 °C	55 °C	60 °C
Light Fixture										
Type	Size	Nominal Power (W)								
StreetEX-M..	080025	24 W	T5	T4	T4	T4	93°C	103°C	108°C	113°C
	080050	48 W	T5	T4	T4	T4	93°C	103°C	108°C	113°C
	080075	72 W	T5	T4	T4	T4	93°C	103°C	108°C	113°C
	080100	96 W	T5	T4	T4	T4	93°C	103°C	108°C	113°C
	100160	160W	T5	T4	T4	T4	92°C	102°C	107°C	112°C
	100200	192 W	T5	T4	T4	T4	92°C	102°C	107°C	112°C

SQUAREX-M..

			Temperature Class (EPL Gb)				Maximum Surface Temperature °C (EPL Db)			
Ambient Temperature			40 °C	50 °C	55 °C	60 °C	40 °C	50 °C	55 °C	60 °C
Light Fixture										
Type	Size	Nominal Power (W)								
SQUAREX-M..	080100	100 W	T5	T4	T4	T4	93°C	103°C	108°C	113° C

Ex Component approved parts

Part Type	Manufacturer	Model/Type	Certificate No.	Ex Marking String	Standard(s) and date(s)/edition(s)
LED Driver	CORTEM S.p.A.	EBM	CML 21ATEX51156U	Ex mb IIC Gb	EN IEC 60079-0:2018 EN 60079-18:2015+A1:2017
	CORTEM S.p.A.	LExD-...	CML 25ATEX5390U	Ex mb IIC Gb	EN IEC 60079-0:2018 EN 60079-18:2015+A1:2017
	MOONS' Electric	MU035.../DALI	TPS 23 ATEX 117594 0012 U	Ex mb IIC Gb	EN IEC 60079-0:2018 EN 60079-18:2015+A1:2017
	MOONS' Electric	MU100.../DALI	TPS 23 ATEX 117594 0013 U	Ex mb IIC Gb	EN IEC 60079-0:2018 EN 60079-18:2015+A1:2017
	MOONS' Electric	MU163.../DALI	TPS 24 ATEX 117594 0045 U	Ex mb IIC Gb	EN IEC 60079-0:2018 EN 60079-18:2015+A1:2017
Terminals	Cabur SRL	BPL4, TPL4	CESI 03 ATEX 164U	Ex eb IIC Gb	EN 60079-0 : 2012+A11 :2013 EN 60079-7:2015
	PHOENIX	UT2,5 , UT4	KEMA 04 ATEX 2048U	Ex eb IIC Gb	EN IEC 60079-0:2018 EN 60079-7:2015/A1:2018
	PHOENIX	G5/3	PTB 06 ATEX 1034U	Ex eb IIC Gb	EN IEC 60079-0:2018 EN 60079-7:2015/A1:2018
	CORTEM S.p.A.	TBEx-...V	FIDI 23 ATEX 0053U	Ex eb IIC Gb	EN IEC 60079-0:2018 EN 60079-7:2015/A1:2018

Ex Equipment approved parts

Part Type	Manufacturer	Model/Type	Certificate No.	Ex Marking String
Breather/drain Plugs	Cortem S.p.A	ECDE...	CML 16ATEX1351X	Ex eb IIC Gb Ex tb IIIC Db

Variation 1

This variation introduces the following changes:

i. To introduce new luminaire models STREETEX-ME-..-DALI incorporating LED drivers with DALI interface.
ii. To introduce alternative LED Drivers for luminaires series STREETEX.
iii. To update the LED Board for models STREETEX-M..-080100 and STREETEX-M..-100200.
iv. To introduce models STREETEX-M..-100160
v. To introduce a new terminal block type TBEx...V for luminaires series STREETEX.
vi. To update to the latest version of the standard EN IEC 60079-31:2024 and IEC 60079-31:2022 Ed. 3.
vii. To allow other industrial LED drivers equivalent to the existing drivers for the models STREETEX-MN (applicable only for luminaires Cat 2, EPL Db)

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06 July 2023	R15890/00	Issue of prime certificate
1	27 Aug 2026	R21340A/00	Introduction of Variation 1

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.

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 manufacturer shall ensure that all Ex-Components are installed in accordance with their Schedule of Limitations and manufacturer's instructions, including but not limited to, the creepage and clearance requirements of IEC 60079-7 and wiring size and termination method and that the equipment markings are within the service temperature range and ratings of all the Ex-Components fitted.

iii. The Manufacturer shall provide copies of certificates and instructions for all certified components installed in the STREETEX AND SQUAREX Series.

iv. The manufacturer shall ensure that the LED Driver maximum output current is restricted to the limits specified in the manufacturer's documentation for the nominal power and fixture type.

v. The routine dielectric strength test on the Increased safety (eb mb) luminaires series STREETEX AND SQUAREX with applied voltage shall be performed at 2U + 1,000V with a minimum value of 1,560V (U = maximum rated voltage of the lamp), between each circuit and earthed metal parts as per IEC 60079-7 Clause 7.1.

vi. A routine visual inspection of the encapsulated parts is required, as per Clause 9.1 of EN/IEC 60079-18. There shall be no visible damage or deformation to the encapsulant.

vii. Where the drivers covered by the certificate TPS 23 ATEX 117594 0012 U or TPS 23 ATEX 117594 0013 U or TPS 24 ATEX 117594 0045 U are used, the equipment shall be marked suitable for -50˚C.

14 Specific Conditions of Use (Special Conditions)

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

i. 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.

ii. Use suitably certified cable glands with an IP Protection of IP 66 and an applicable method explosion protection applicable with the equipment markings:

The temperature at the entry point may reach up to 95°C. Suitably rated cable and cable glands must be used as per Safety, maintenance, and mounting instructions.

iii. The equipment shall be installed in a location that satisfies the requirement for a Low Risk of Mechanical Danger.

iv. For inspection and replacement of seals and gaskets – consult the manufacturer.

v. Luminaires incorporating MU035xx or MU100xx or MU163xx or LExD-50C or LExD-100C or LExD-240C drivers shall only be connected to an electrical power supply with a maximum prospective short-circuit current of 1500A.

Certificate Annex

Certificate Number	**CML 23ATEX3195X**
Equipment	**STREETEX-ME AND SQUAREX-ME LED 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
A3-8094	1 to 2 of 9	0	06 Jul 2023	Lighting Fixture Series STREETEX Assembly and External Dimensions
A3-8094	3 of 9	0	06 Jul 2023	Lighting Fixture Series STREETEX Differences between -MN and -ME versions
A3-8094	4 of 9	0	06 Jul 2023	Lighting Fixture Series STREETEX Gasket dimensions and details of encapsulation
A3-8094	5 of 9	0	06 Jul 2023	Lighting Fixture Series STREETEX Wiring and Label
A3-8094	6 of 9	0	06 Jul 2023	Lighting Fixture Series STREETEX Details of mounting/ Typical Circuit Diagram
A3-8094	7 of 9	0	06 Jul 2023	Lighting Fixture Series SQUAREX Assembly and External Dimensions
A3-8094	8 of 9	0	06 Jul 2023	Lighting Fixture Series SQUAREX Gasket details / Typical Circuit Diagram
A3-8094	9 of 9	0	06 Jul 2023	Lighting Fixture Series SQUAREX Gasket and Dimension details
A4-8117	1 to 7	0	06 Jul 2023	Technical Note

Issue 1

Drawing No.	Sheets	Rev	Approved date	Title
A3-8094	1 to 2 of 9	1	27 Aug 2026	Drawing Lighting Fixture Series STREETEX: Assembly and External Dimensions
	3 of 9	1	27 Aug 2026	Drawing Lighting Fixture Series STREETEX: Differences between -MN and -ME versions

Certificate Annex

Certificate Number CML 23ATEX3195X

Equipment STREETEX-ME AND SQUAREX-ME LED Lighting Fixtures

Manufacturer Cortem S.p.A

Drawing No.	Sheets	Rev	Approved date	Title
	4 of 9	1	27 Aug 2026	Drawing Lighting Fixture Series STREETEX: Gasket dimensions and details of incapsulation
	5 of 9	1	27 Aug 2026	Drawing Lighting Fixture Series STREETEX: Wiring and Label
	6 of 9	1	27 Aug 2026	Drawing Lighting Fixture Series STREETEX: Details of mounting/ Typical Circuit Diagram
	7 of 9	1	27 Aug 2026	Drawing Lighting Fixture Series SQUAREX: Assembly and External Dimensions
	8 of 9	1	27 Aug 2026	Drawing Lighting Fixture Series SQUAREX: Gasket details / Typical Circuit Diagram
	9 of 9	1	27 Aug 2026	Drawing Lighting Fixture Series SQUAREX: Gasket and Dimension details
A4-8117	1 to 13	1	27 Aug 2026	Technical Note