



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 INE 15.0031X** Page 1 of 4 Certificate history:
Status: **Current** Issue No: 2 Issue 1 (2018-03-28)
Date of Issue: 2019-10-10 Issue 0 (2016-01-29)
Applicant: **TECHNOR ITALSMEA**
Via Italia, 33
20060 GESSATE (MI)
Italy
Equipment: **Luminaire EV... Series**
Optional accessory:
Type of Protection: **Ex db eb tb**
Marking: Ex db IIC or IIB T... Gb
or
Ex db eb IIC or IIB T... Gb
and/or
Ex tb IIIC T... Db IP66

Approved for issue on behalf of the IECEx
Certification Body:

Thierry HOUÉIX

Position:

Ex Certification Officer

Signature:
(for printed version)



Digitally signed by
Thierry HOUÉIX

Date:

2019-10-10

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France



controlling risks
for sustainable development



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Manufacturer: **TECHNOR ITALSMEA**
Via Italia, 33
20060 GESSATE (MI)
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 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
Edition:5.0

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:

[FR/INE/ExTR15.0044/01](#)

[FR/INE/ExTR15.0044/02](#)

[FR/INE/ExTR15.0044/00](#)

Quality Assessment Report:

[FR/INE/QAR08.0002/11](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The luminaires EV... Series are composed by several Ex d enclosures designed to contain different lighting sources and their feeding apparatus (when specified) and the terminals (installed terminals or apparatus terminals or lampholder terminals) for the connection to the external feeding network.

Some variants (EVde...) include Ex e terminal box designed to contain the terminals for the connection to the external feeding network:

- WAGO terminals type 862-... certified IECEx PTB 05.0003U with type of protection Ex eb IIC Gb according to IEC 60079-0:2017 and IEC 60079-7:2017;

or

- WEIDMULLER terminals type SAK 6/35 KRG certified IECEx KEM 06.0014U with type of protection Ex e II according to IEC 60079-0:2004 and IEC 60079-7:2001; ⁽¹⁾

or

- WEIDMULLER terminals type SAKK4 and SAKK10 certified IECEx SIR 05.0032U with type of protection Ex e II according to IEC 60079-0:2004 and IEC 60079-7:2001; ⁽¹⁾

or

- WEIDMULLER terminals type BK certified IECEx SIR 05.0035U with type of protection Ex e II according to IEC 60079-0:2004 and IEC 60079-7:2001; ⁽¹⁾

or

- CONTA-CLIP terminals type SRK 6/2a certified IECEx DEK 12.0006U with type of protection Ex e IIC Gb according to IEC 60079-0:2011 and IEC 60079-7:2006-07. ⁽²⁾

⁽¹⁾ Not impacted by major technical changes of the standards IEC 60079-0:2011, IEC 60079-0:2017, IEC 60079-7:2006-07 and IEC 60079-7:2015.

⁽²⁾ Not impacted by major technical changes of the standards IEC 60079-0:2017 and IEC 60079-7:2015.

All versions of these luminaires get the degrees of protection IP66 in accordance with IEC 60529.

Luminaires c/w LEDs lighting sources can be also equipped with batteries and their charge and discharge control circuit. Those types allow light emission in case of network failure (emergency lighting).

The enclosures EV* size 5 are also used to contain a "satellite communication terminal".

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The flameproof joints are not intended to be repaired.

- During the installation, the user will take into consideration that the luminaires type EV*5** underwent only an impact test corresponding to an energy of low risk.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

For issue 02:

- Increase of the power installed into the "EV..-PR4/LED-. 70" up to 45W instead of 30W.
- Change of "type" of the following apparatus:
 - "EV..-PR2/LED-. 30" changed in "EV..-PR2/LED-. 18"
 - "EV..-PR3/LED-. 50" changed in "EV..-PR3/LED-. 26"
 - "EV..-PR4/LED-. 70" changed in "EV..-PR4/LED-. 45"
- Application of IEC 60079-0:2017.
- Addition of operating positions for metal halide lamps equal to sodium lamps.

For issue 01:

- Introduction of downward installation tilted up to 60° (inclination) for EV(*) 3/NA (**) 70.
- Introduction of downward installation tilted up to 60° (inclination) for EV(*) 4/NA (**) 150.
- Introduction of downward installation tilted up to 60° (inclination) for EV(*) 4/NA (**) 250.
- Introduction of downward installation tilted up to 60° (inclination) for EV(*) 5/NA (**) 400.
- Introduction of downward installation tilted up to 60° (inclination) for EV(*) 5/NA (**) 250.
- Introduction of EV(*) 5/FC 75.
- Introduction of EV(*) 4/FC 65.
- Introduction of Ex e terminals type SRK 6/2a (Manufacturer CONTA CLIP and Certificate IECEX DEK 12.0006U)
- Introduction of new material (silicone) for O-rings on threaded joints
- Introduction of emergency feeding apparatus including battery
- Introduction of Satellite communication apparatus
- Application of the standard IEC 60079-7:2015

(*) A or CC or de

(**) B: with ballast housing

For issue 02:

- Increase of the power installed into the "EV..-PR4/LED-. 70" up to 45 W instead of 30 W.
- Change of "type" of the following equipment:
 - o "EV..-PR2/LED-. 30" changed in "EV..-PR2/LED-. 18"
 - o "EV..-PR3/LED-. 50" changed in "EV..-PR3/LED-. 26"
 - o "EV..-PR4/LED-. 70" changed in "EV..-PR4/LED-. 45"
- Application of IEC 60079-0:2017.
- Addition of operating positions for metal halide lamps equal to sodium lamps.

Annex:

Annex to [IECEX INE 15.0031X-02_Annex_2.pdf](#)



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PARAMETERS RELATING TO THE SAFETY

Maximum Current: up to 10 A according to versions

Rated Voltage: from 9 V to 305 V AC/DC according to versions

Frequency: 50 Hz / 60 Hz

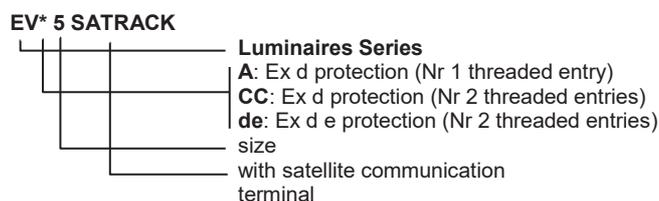
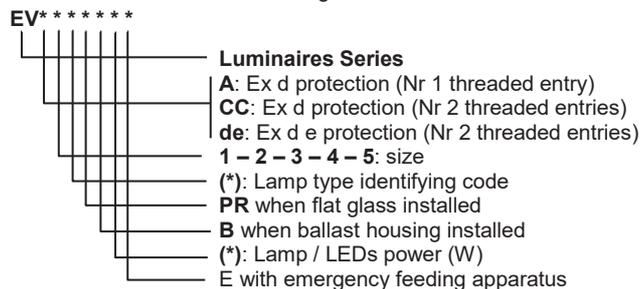
MARKING

Marking has to be readable and indelible; it has to include the following indications:

- TECHNOR ITALSMEA ⁽¹⁾
- 20060 GESSATE (MI) - ITALY
- EV...⁽²⁾
- IECEx INE 15.0031X
- (Serial number)
- Ex db IIC or IIB⁽³⁾ T⁽⁴⁾ Gb or Ex db eb IIC or IIB⁽³⁾ T⁽⁴⁾ Gb
- and/or Ex tb IIIC T⁽⁵⁾ Db IP66
- Tamb. ⁽⁶⁾
- Tcable: ⁽⁷⁾
- Rated Current and Rated Voltage (as defined in the manufacturer's documents for EVde versions)
- WARNINGS:
 - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
 - DO NOT OPEN WHEN ENERGIZED
 - CABLE ENTRIES – SEE INSTRUCTIONS
 - Use only replaceable battery pack type ... ⁽⁸⁾
 - POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS ⁽⁹⁾
 - INSTALLATION POSITION – SEE INSTRUCTIONS ⁽¹⁰⁾

⁽¹⁾ Optional Brands COMBUSTION AND ENERGY – Luxsolar or TIDELAND can be added in the marking with the sentence “manufactured by TECHNOR ITALSMEA”

⁽²⁾ The type is completed by letters and numbers in accordance with the manufacturing variations:





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Following types are used with the optional Brand COMBUSTION AND ENERGY - Luxsolar:



Following types are used with the optional Brand TIDELAND:



- ⁽³⁾ IIB with satellite communication terminal
- ⁽⁴⁾ T6 or T5 or T4 or T150°C or T3 as defined in the manufacturer's documents according to lighting sources and maximum ambient temperature
T6 with satellite communication terminal
- ⁽⁵⁾ T85°C or T100°C or T110°C or T135°C or T150°C or T200°C or others as defined in the manufacturer's documents according to lighting sources and maximum ambient temperature
T85°C with satellite communication terminal
- ⁽⁶⁾ Ambient temperature range specified according to versions (when different from -20°C to +40°C) and within the range -60°C to +60°C
- ⁽⁷⁾ Tcable as defined in the manufacturer's documents according to lighting sources and maximum ambient temperature
- ⁽⁸⁾ Only when batteries are used for feeding LEDs lighting sources in case of network failure. The types of batteries are defined in the manufacturer's documents.
- ⁽⁹⁾ Only when the paint thickness is higher than 0.2mm for IIC or 2 mm when the equipment is marked for IIB / IIIC
- ⁽¹⁰⁾ Only when the equipment is subject to installation restrictions

ROUTINE EXAMINATIONS AND TESTS

Each piece of equipment defined above has to have successfully passed; before delivery:

- In accordance with clause 7.1 of the IEC 60079-7 standard, a dielectric strength test on each of the different circuits of the terminal box for EV de versions, performed according to the relevant standards, the supply voltage shall be applied for one minute.
- In accordance with clause 16.1 of the IEC 60079-1 standard, a static overpressure test (at 1.5 times the reference pressure) of a period comprised between 10 and 60 seconds under:

Types	Drawings	1.5 times the reference pressure (bar)	
		Minimum ambient temperature ≥ -20°C	Minimum ambient temperature ≥ -60°C
EVA 3, EVCC 3, EVde 3 Globe glass c/w Glass holder ring Lamp housing	AC1407 sheets 1, 3 and 5	12.9	17.7
EVA 4, EVCC 4, EVde 4 Globe glass c/w Glass holder ring Lamp housing			



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Types	Drawings	1.5 times the reference pressure (bar)	
		Minimum ambient temperature $\geq -20^{\circ}\text{C}$	Minimum ambient temperature $\geq -60^{\circ}\text{C}$
EVA 5, EVCC 5, EV de 5 EVA L864-LXS, EVCC L864-LXS, EVA L865-LXS, EVCC L865-LXS, EVde L864-LXS, EVde L865-LXS Globe glass c/w Glass holder ring Lamp housing	AC1407 sheets 1 and 5	14.4	19.4
EVA PR 1, EVCC PR 1, EV de PR 1 Flat glass c/w Glass holder ring	AC1407 sheets 2, 4 and 6	11.4	17.7
EVA PR 2, EVCC PR 2, EV de PR 2 Flat Glass c/w Glass holder ring			
EVA PR 3, EVCC PR 3, EV de PR 3 Flat glass c/w Glass holder ring Lamp housing			
EVA PR 4, EVCC PR 4, EV de PR 4 Flat glass c/w Glass holder ring Lamp housing	AC1407 sheets 2, 4 and 6	12.9	17.7
EVA PR 5, EVCC PR 5, EV de PR 5 Flat glass c/w Glass holder ring Lamp housing	AC1407 sheets 2 and 6	12.9	17.7
Ballast housing size 2	AC1407 sheets 3, 4, 5 and 6	N/A	17.7
Ballast housing size 3	AC1407 sheets 3, 4, 5 and 6		
Ballast housing size 4	AC1407 sheets 3, 4, 5 and 6		
Ballast housing screw cap size 4	AC1407 sheets 5 and 6	14.4	19.4
Sealed bushing M20 as per drawing AS 1407 sheet 10 sketch A	AC1407 sheet 10	14.4	19.4

- In accordance with clause 16.2 of the IEC 60079-1 standard:
 - o The luminaires type EVA 1, EVCC 1, EVde 1 are exempted of routine test because these luminaires have undergone a type test at 4 times the reference pressure under 47.2 bar.
 - o The luminaires type EVA 2, EVCC 2, EVde 2, EVA L810-LXS, EVCC L810-LXS, EVde L810-LXS (with or without ballast housing) are exempted of routine test because these luminaires have undergone a type test at 4 times the reference pressure under 47.2 bar.
 - o The lamp housings of luminaires type EVA PR 1, EVCC PR 1, EVde PR 1 are exempted of routine test because these housings have undergone a type test at 4 times the reference pressure under 47.2 bar.
 - o The lamp housings of luminaires type EVA PR 2, EVCC PR 2, EVde PR 2 are exempted of routine test because these housings have undergone a type test at 4 times the reference pressure under 47.2 bar.
 - o The ballast housings sizes 2, 3 and 4 are exempted of routine test for minimum ambient temperature $\geq -20^{\circ}\text{C}$ because these housings have undergone a type test at 4 times the reference pressure under 33.6 bar.
 - o The terminal boxes EVA and EVCC are exempted of routine test because these boxes have undergone a type test at 4 times the reference pressure under 51.6 bar.
 - o The terminal box for EVde versions is exempted of routine test because the bottom face of this box has undergone a type test at 4 times the reference pressure under 51.6 bar.