



# 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](http://www.iecex.com)

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Issue 0 (2022-02-22)

Status: **Current** Issue No: 1

Date of Issue: 2023-06-28

Applicant: **BARTEC F.N. S.R.L.**  
Via M. Pagano, 3  
I - 20090 Trezzano sul Naviglio (MI)  
**Italy**

Equipment: **Lighting fixtures series GLL-\*\*\***

Optional accessory:

Type of Protection: **db, eb, mb, tb**

Marking: Ex db eb mb IIC T5 or T4 Gb  
Ex tb IIIC T85°C Db IP66

The complete marking is detailed in Annex.

Approved for issue on behalf of the IECEx  
Certification Body:

Position:

Signature:  
(for printed version)

Date:  
(for printed version)



**Thierry HOUEIX**

**Ex Certification Officer**

Signé électroniquement  
Digitally signed by  
Thierry HOUEIX  
Ex Certification Officer  
Délégué Certification

**2023-06-29**

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F-60550 Verneuil-en-Halatte  
**France**



controlling risks |  
for sustainable development



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Manufacturer: **BARTEC F.N. S.R.L.**  
Via M. Pagano, 3  
I - 20090 Trezzano sul Naviglio (MI)  
**Italy**

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 60079-31:2013](#) 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 Report:

[FR/INE/ExTR21.0040/01](#)

Quality Assessment Report:

[IT/CES/QAR09.0003/15](#)



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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The LED lighting fixture series GLL-\*\*\* is suitable for gas explosive atmospheres EPL Gb for Group IIC and for dust explosive atmospheres EPL Db for Group IIIC.

The "Ex eb" and "Ex tb" enclosure is realized by a transparent polycarbonate cover and a body made in Glass Reinforced Plastic. Protection degree is obtained by a gasket fitted inside a groove on the body and by closing clips as detailed in the instruction manual. When required as defined in the instruction manual, a venting valve covered by Ex Component Certificate could be fitted on the body. The enclosures are provided with plain entries for cable glands or blanking elements.

The lighting fixture includes :

- One LED module protected by "Ex mb".
- One driver housing protected by "Ex db" closed by an integral sealed bushing on one side.
- Terminals covered by Ex Component Certificates and internal wiring protected by "Ex eb".

An emergency version of the lighting is available with the following relevant characteristics:

- Encapsulated LED indicator protected by "Ex mb".
- Inverter installed inside an additional driver housing protected by "Ex db" closed by an integral bushing.
- Battery pack protected by "Ex eb" provided with a pluggable connector.

The lighting fixture get the degrees of protection IP66 in accordance with IEC 60529.

## SPECIFIC CONDITIONS OF USE: YES as shown below:

- Potential electrostatic charging hazard: clean only with a damp cloth. See also the instruction manual of the manufacturer.
- During the installation, the user will take into consideration that the equipment underwent only a shock corresponding to an energy of a low risk.

Specific conditions of use referring to the driver housing model "EB" protected by "Ex db":

- The widths of the flameproof joints are superior than those specified in tables of IEC 60079-1 standard. To contact the original manufacturer for any repairs of the flameproof joints.
- The two covers shall be fixed by screws with minimum quality A2-70.

The instructions for safe use are completed by those stipulated in the instructions manuals of the manufacturer



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## **DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**

For the issue 01:

Introduction of an emergency version

### **Annex:**

[IECEX INE 21.0056X-01\\_Annex.pdf](#)



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## PARAMETERS RELATING TO THE SAFETY

Maximum Voltage/Frequency: 277 Vac / 50÷60 Hz

Nominal power of LED module: 45W for lighting fixture GLL-088

The lighting fixture include internal suitable fuse with nominal current of 400mA and capable to withstand a prospective short-circuit current of 1500A to protect the "Ex mb" LED modules.

The lighting fixtures can be used in the following ambient temperature range:

- From -20°C to +53°C for temperature class T5 / T85°C for standard version
- From -20°C to +47°C for temperature class T5 / T85°C for emergency version
- From -20°C to +60°C for temperature class T4 / T85°C for standard version
- From -20°C to +55°C for temperature class T4 / T85°C for emergency version

## MARKING

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

- BARTEC FN <sup>(1)</sup>
- I - 20090 Trezzano sul Naviglio (MI)
- GLL-\*\*\* <sup>(2)</sup>
- IECEx INE 21.0056X
- (Serial number)
- Ex db eb mb IIC T<sup>(3)</sup> Gb
- Ex tb IIIC T85°C Db
- IP66
- -20°C < Tamb < ...°C <sup>(3)</sup>
- *Rated Current and Rated Voltage or rated power (as defined in the manufacturer's documents)*
- **WARNINGS:**
  - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
  - DO NOT OPEN WHEN ENERGIZED
  - POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS
  - BATTERY PACK CAN BE SUBSTITUTED ONLY WITH SAME MODEL FROM BARTEC F.N.

<sup>(1)</sup> Optional Brands "BARTEC FEAM" or "BARTEC NASP" can be added in the marking with the sentence "manufactured by BARTEC FN"

<sup>(2)</sup> The dots are replaced by a codification according to the manufacturing variations.

<sup>(3)</sup> Temperature class T5 for ambient temperature up to +53°C for standard version  
Temperature class T5 for ambient temperature up to +47°C for emergency version  
Temperature class T4 for ambient temperature up to +60°C for standard version  
Temperature class T4 for ambient temperature up to +55°C for emergency version

## ROUTINE EXAMINATIONS AND TESTS

- In accordance with clause 7.1 of the IEC 60079-7 standard, each lighting fixture has to have successfully passed; before delivery, a dielectric strength test on each of the different circuits of the connection units, performed according to the relevant standards, the supply voltage shall be applied during one minute.
- In accordance with clause 9.1 from the IEC 60079-18 standard, each LED module shall be subjected to visual inspection after polymerisation of the resin in order to check that there is no damage that could impair the protection mode.
- In accordance with 9.2 of the standard IEC 60079-18, each LED module shall successfully pass a dielectric strength test at the relevant supply voltage between active parts and metallic frame.
- In accordance with clause 16.2 of the IEC 60079-1 standard, the driver housing is exempted of routine test due to the fact that it has undergone a static test at 4 times the reference pressure under 28.8 bar



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- **For the encapsulated LED Indicator:**

Each piece of equipment defined above shall be subjected to a visual inspection according to 9.1 of IEC 60079-18;

And it shall be subjected to a dielectric strength test to test the isolation of circuits from each other and from their environment according to 9.2 of IEC 60079-18.

## **LIST OF THE COMPONENT INTENDED TO BE INSTALLED**

<b>TABLE 1 : LIST OF Ex COMPONENTS</b>					
<b>Ex component</b>	<b>Manufacturer</b>	<b>Type</b>	<b>Certificate</b>	<b>Standards</b>	<b>Ex Marking</b>
Venting Valve	W. L. Gore & Associates GmbH	Gore® PolyVent Ex+ (PMF200400)	IECEX IBE 17.0013U (Issue 02)	IEC 60079-0: 2017 IEC 60079-7: 2017 IEC 60079-31: 2013	Ex eb IIC Gb Ex tb IIIC Db IP66
Terminals	WAGO Kontakttechnik GmbH & Co. KG	862.....	IECEX PTB 05.0003U (Issue 03)	IEC 60079-0: 2017 IEC 60079-7: 2017	Ex eb IIC Gb
Terminals	Weidmüller Interface GmbH	WDU	IECEX ULD 14.0005U (Issue 07)	IEC 60079-0: 2017 IEC 60079-7: 2017	Ex eb IIC Gb
Terminals	Weidmüller Interface GmbH	AKZ-AKE	IECEX TUR 18.0024U (Issue 02)	IEC 60079-0: 2017 IEC 60079-7: 2017	Ex eb IIC Gb
Terminals	WAGO Kontakttechnik GmbH & Co. KG	264.....	IECEX PTB 04.0003U (Issue 04)	IEC 60079-0: 2017 IEC 60079-7: 2017	Ex eb IIC Gb