



# 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)

Certificate No.: **IECEx CML 17.0126X**

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Certificate history:

Status: **Current**

Issue No: 2

[Issue 1 \(2019-04-29\)](#)

[Issue 0 \(2018-06-12\)](#)

Date of Issue: 2020-05-21

Applicant: **Pulsar Process Measurement**  
Cardinal Building  
Enigma Commercial Centre  
Sandy's Road  
Malvern  
WR14 1JJ  
**United Kingdom**

Equipment: **mmWave**

Optional accessory:

Type of Protection: **Encapsulation "mb"**

Marking: Ex mb IIC T4 Gb  
Ex mb IIIC T135°C Db  
  
Ta= -20°C to +80°C

Approved for issue on behalf of the IECEx  
Certification Body:

**R C Marshall**

Position:

**Certification Officer**

Signature:  
(for printed version)

Date:

2020-05-21

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting [www.iecex.com](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**Eurofins E&E CML Limited**  
Unit 1, Newport Business Park  
New Port Road  
Ellesmere Port, CH65 4LZ  
United Kingdom





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Manufacturer: **Pulsar Process Measurement**  
Cardinal Building  
Enigma Commercial Centre  
Sandy's Road  
Malvern  
WR14 1JJ  
**United Kingdom**

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 60079-18:2014** Explosive atmospheres – Part 18: Equipment protection by encapsulation “m”  
Edition: 4.0

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:

[GB/CML/ExTR17.0153/00](#)

[GB/CML/ExTR19.0037/00](#)

[GB/CML/ExTR20.0119/00](#)

Quality Assessment Report:

[GB/SIR/QAR06.0030/10](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The mmWAVE is a DC powered level measurement sensor utilising radar technology. The sensor is housed in a non-metallic enclosure with integral five core cable which connects to control equipment located in the safe area providing power and data communication.

The enclosure incorporates a threaded cap which allows the equipment to be mounted on a suitable bracket or flange.

Refer to Annex for full description and conditions of manufacture.

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

Refer to Annex for specific conditions of use.



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Date of issue: 2020-05-21

Issue No: 2

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

This variation introduced the following changes:

1. The use of an alternative internal dome material
2. Update of standard to IEC60079-0 Ed.7
3. Minor circuit and PCB layout changes

## **Issue 2**

This variation introduced the following changes:

1. Minor change to the label that doesn't affect the certification

## **Annex:**

[IECEx CML 17.0126X Iss. 2 Certificate Annex.pdf](#)

**Annexe to:** IECEx CML 17.0126X Issue 2  
**Applicant:** Pulsar Process Measurement  
**Apparatus:** mmWave



## Product Description

The mmWAVE is a DC powered level measurement sensor utilising radar technology. The sensor is housed in a non-metallic enclosure with integral five core cable which connects to control equipment located in the safe area providing power and data communication. The enclosure incorporates a threaded cap which allows the equipment to be mounted on a suitable bracket or flange.

The equipment is powered from a nominal 24Vdc power supply located in the safe area. The output of the sensor is sent via a signalling wire to external control equipment.

The equipment is fully encapsulated to allow use in areas requiring equipment protection levels Gb and Db and has the following ratings:

Um = 28Vdc (supply input)

Um = 6Vdc (signal connection)

The equipment is available with various power outputs represented by the dBRx marking on the label.

## 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. Each piece of equipment shall be visually inspected. No damage shall be evident, such as cracks in the compound, exposure of encapsulated parts, flaking, inadmissible shrinkage, swelling, decomposition, failure of adhesion, or softening.





## Specific Conditions of Use

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

- i. Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore, the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces (e.g. steam generation or windblown dust). In addition, the equipment shall only be cleaned with a damp cloth.
- ii. The equipment shall be routinely inspected to avoid the build-up of dust layers when installed in Zones 21 or 22.
- iii. The equipment shall not be used if there are any cracks or damage to the enclosure.
- iv. The power supply and signal connections to the equipment shall each incorporate a 100mA fuse located in the safe area. The fuses shall have a minimum breaking capacity of 1500A.
- v. The equipment shall only be installed in areas where there is a low risk of mechanical danger