



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx CML 16.0106X

Issue No: 1

Certificate history:

Issue No. 1 (2017-09-04)

Issue No. 0 (2016-09-27)

Status: **Current**

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Date of Issue: **2017-09-04**

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

Equipment: **Microflow**

Optional accessory:

Type of Protection: **Encapsulation**

Marking:

Ex mb IIC T4 Gb  
Ex mb IIIC T135°C Db  
Ta = -20°C to +60°C

Approved for issue on behalf of the IECEx  
Certification Body:

A Snowdon

Position:

Certification Officer

Signature:  
(for printed version)

Date:

September 4, 2017

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 the [Official IECEx Website](#).

Certificate issued by:

**Certification Management Limited**  
Unit 1, Newport Business Park  
New Port Road  
Ellesmere Port, CH65 4LZ  
United Kingdom





# IECEX Certificate of Conformity

Certificate No: IECEx CML 16.0106X Issue No: 1

Date of Issue: **2017-09-04** Page 2 of 4

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

Additional Manufacturing location(s):

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 electrical apparatus 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 : 2011** Explosive atmospheres - Part 0: General requirements  
Edition:6.0

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

*This Certificate **does not** indicate compliance with electrical 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:

[GB/CML/ExTR16.0144/00](#) [GB/CML/ExTR17.0151/00](#)

Quality Assessment Report:

[GB/SIR/QAR06.0030/07](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The MicroFlow is a DC powered process flow measurement sensor utilising radar technology.

**Refer to annex for full description and conditions of manufacture.**

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

**See annex for Specific Conditions of Use/Conditions of Certification.**



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

### **Issue 1**

This variation introduces the following modifications:

1. Changes to the circuit and PCB layout of the power supply board.
2. Addition of supply parameters to the MicroFlow description.

### **Annex:**

[IECEX CML 16.0106X Annex Issue 1.pdf](#)

**Annexe to:** IECEx CML 16.0106X Issue 1  
**Applicant:** Pulsar Process Measurement Ltd.  
**Apparatus:** Microflow



## Product Description

The MicroFlow is a DC powered process flow measurement sensor utilising radar technology. The sensor is housed in a non-metallic enclosure with integral cable which connects to control equipment located in the safe area. The equipment is powered from a nominal 24Vdc power supply located in the safe area. The output of the sensor is sent via an RS485 data link to external control equipment. The enclosure incorporates a threaded cap which allows the equipment to be mounted on a suitable bracket.

The equipment is fully encapsulated to allow use in areas requiring equipment protection levels Gb and Db.

The equipment has the following ratings:

Um = 28Vdc (supply input)

Um = 5Vdc (RS485 data connection)

## Conditions of manufacture

The following are conditions of manufacture:

- 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.

## Conditions of Certification

The following conditions relate to the 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. 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.

