



# 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 EMT 20.0005X** Page 1 of 5 Certificate history:  
Status: **Current** Issue No: 2 Issue 1 (2021-05-05)  
Issue 0 (2020-07-30)  
Date of Issue: 2021-06-08  
Applicant: **Pulsar Process Measurement Limited**  
Cardinal Building  
Enigma Commercial Centre  
Sandy's Road  
Malvern  
Worcestershire WR14 1JJ  
**United Kingdom**  
Equipment: **Ultrasonic Transducers dBi-M and dBi-T series**  
Optional accessory:  
Type of Protection: **Intrinsic safety "ia"**  
Marking: Ex ia IIC Ga T4 Tamb = -40 °C to +80 °C.  
Ex ia IIIC T130 °C Da Tamb = -40 °C to +80 °C.

Approved for issue on behalf of the IECEx  
Certification Body:

**Stephen Winsor**

Position:

**Certification Manager**

Signature:  
(for printed version)

Date:

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:

**Element Materials Technology**  
**Unit 1 Pendle Place**  
**Skelmersdale**  
**West Lancashire**  
**United Kingdom**





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

Additional manufacturing locations: **Pulsar Process Measurement Limited**  
Unit 5 Lancaster Way, Earls Colne Airfield  
Business Park, Earls Colne, Nr Colchester,  
Essex, CO6 2NS  
**United Kingdom**

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 60079-11:2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

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/EMT/ExTR20.0007/00](#)

[GB/EMT/ExTR20.0007/01](#)

Quality Assessment Reports:

[GB/BAS/QAR15.0006/04](#)

[GB/SIR/QAR06.0030/11](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The dBi-T and dBi-M ultrasonic transducers are a range of low power, compact acoustic measurement devices. They are intended to be powered via an ATEX / IECEx approved power supply such as a Zener barrier.

The range of transducers consists of slightly different constructions with respect to dimensions but all have a non-metallic enclosure which house two internal electronic PCBs and a piezo crystal. The free space internally is potted with one or two types of material. Each unit has an integral screened cable for the signals, power supply and are available in lengths of 5, 10, 20, 30 m. Some of the models use syntactic foam as a facing material.

The dBi-T and dBi-M models are identical in construction, but feature different internal circuitry.

dBi-M is compatible with RS-485 Modbus communications.

dBi-T is compatible with Technolog data loggers.

Physical differences between the different model types are listed in the Annex.

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

1. Potential electrostatic hazard – the dBi transducers must only be wiped with a damp or antistatic cloth.
2. The equipment must be routinely inspected to avoid the build-up of dust layers when installed in a Zone 20, 21 or 22 environment.



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

Additional manufacturing location added.



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**Additional information:**

Element Materials Technology certification reference: GU-PULQ-0007.