



# 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 ETL 18.0017X** Page 1 of 4 Certificate history:  
Issue 0 (2018-06-28)

Status: **Current** Issue No: 1

Date of Issue: 2019-12-18

Applicant: **IMI Sensors a Division of PCB Piezotronics**  
3425 Walden Ave  
Depew, NY 14043-2417  
USA  
United States of America

Equipment: **Piezoelectric Vibration Sensor**

Optional accessory:

Type of Protection: **Intrinsic Safety "ic" , Non-sparking "nA"**

Marking: Ex ic IIC T4 Gc  
Ex nA IIC T4 Gc  
-54°C ≤ Tamb ≤ 121°C  
IECEX ETL 18.0017X

Approved for issue on behalf of the IECEx  
Certification Body:

**Kevin J. Wolf**

Position:

**Certification officer**

Signature:  
(for printed version)

Date:

2019-12-18

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:

**Intertek**  
3933 US Route 11 South  
Cortland NY 13045-2995  
United States of America



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Date of issue: **2019-12-18** Issue No: 1

Manufacturer: **IMI Sensors a Division of PCB Piezotronics**  
3425 Walden Ave  
Depew, NY 14043-2417  
USA  
**United States of America**

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 60079-0:2011** Explosive atmospheres - Part 0: General requirements  
Edition:6.0

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

**IEC 60079-15:2010** Explosive atmospheres - Part 15: Equipment protection by type of protection "n"  
Edition:4

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:

US/ETL/EXTR18.0022/00 US/ETL/EXTR18.0022/01

Quality Assessment Report:

NL/DEK/QAR14.0004/03



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Date of Issue: **2019-12-18**

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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The model EX604XYYY is a piezoelectric vibration sensor that utilizes a Piezoelectric Crystal to convert a mechanical vibration measurement into an electric signal. The sensor consists of a sealed cylindrical metal case with a diameter of 3.5mm and height of 2.5mm, which houses a PCB substrate board and 3 piezo crystal elements. The circuitry is connected to a connector welded on the metal case or to an integral cable.

Model Description: EX604XYYY

X = One Letter from A to Z denoting revision level (with "M" reserved for customer Special Orders)

YYY = Two or Three Numbers 00 to 999 which cable/connector type and sensitivity, filtering, or bias.

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

- All sealing devices including cable glands, blanking elements, thread adapters, stopping plugs and connectors shall be suitably certified when the equipment is installed in accordance with type of protection Ex nA. This connection shall maintain a minimum degree of protection of IP54 and have been submitted to all relevant type tests of IEC 60079-0. The sealing device shall have a rated service temperature in excess of -54°C to +121°C and be suitably sized for the cabling which is carried. Installation shall take into account any applicable special conditions for safe use or schedule of limitations and all relevant installation requirements of IEC 60079-14.
- When the equipment is installed in accordance with method of protection Ex nA, the connection between the provided socket and installed plug must be made in a manner that cannot be separated without the use of a tool.
- When the equipment is installed in accordance with type of protection Ex nA, the equipment shall be provided with transient protection which limits the input voltage to 39.2V (140% of the peak rated voltage value) at the supply terminals to the equipment.
- Integral cable version is limited to Ex Ic version of equipment. Maximum cable length specified is 327'.
- All cabling shall be rated for a minimum ambient range of -54°C to +121°C.



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

- Addition of integral cable version of equipment (EX Ic version only)

#### **Annex:**

[Annex for IECEx Certificate of Conformity - Issue 1.pdf](#)



# Annex to IECEx Certificate of Conformity

<b>Certificate No:</b>	<b>IECEX ETL 18.0017X</b>	<b>Issue No. 1</b>
<b>Annex No. 1</b>		

Technical Documents			
Title:	Drawing No.:	Rev. Level:	Date:
IECEX Technical File	68432	A	11/12/19

Required Manufacturer Routine Testing		
Test	Title/Description of Test	Standard and Clause
1	<p>Completed equipment shall be subjected to a routine dielectric strength test. Test procedures are as follows:</p> <p>Voltage: 500Vrms Duration: 60s Permitted leakage current: 5mA</p> <p>Alternatively, the equipment can be subjected to the following parameters.</p> <p>Voltage: 600Vrms Duration: 0.1s Permitted leakage current: 5mA</p> <p>The manufacturer is required to record and maintain all results obtained.</p>	IEC 60079-15 Clause 23.2.1