

# TYPE EXAMINATION CERTIFICATE

Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive  
2014/34/EU

1. Type Examination Certificate Number: ITS18ATEX203388X Issue 01
2. Product: Piezoelectric Vibration Sensor model EX604XXXX
3. Manufacturer: IMI Sensors a Division of PCB Piezotronics
4. Address: 3425 Walden Ave  
Depew, NY 14043-2417  
USA
5. This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
6. Intertek Testing and Certification Limited, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of the products intended for use in potentially explosive atmospheres given in Annex II of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.
7. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012+A11:2013, EN 60079-11:2012 and EN 60079-15:2010 except in respect of those requirements referred to within item 14 of the Schedule
8. If the sign "X" is placed after the certificate number, it indicates that the product is subject to the special conditions of use specified in the Schedule to this certificate.
9. This Type Examination Certificate relates only to the design of the specified product and not to specific items subsequently manufactured.
10. The marking of the product shall include the following:



II 3 G Ex ic IIC T4 Gc

II 3 G Ex nA IIC T4 Gc

-54°C ≤ Ta ≤ 121°C

Certification Officer:

Kevin J. Wolf

Date:

18 December 2019

## SCHEDULE:

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### 11. Description of Equipment or Protective System

The model EX604XXXX 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.

EX604XXXX

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.

### 12. Report Number

Intertek Report: 103291356DAL-002 Dated: 06/12/2018.

Intertek Report: 104038114DAL-002 Dated: 18/12/2019.

### 13. Conditions of Certification

#### (a). Special Conditions of Use

- 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 EN 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.

#### (b). Conditions of Manufacture - Routine Tests

- Completed equipment shall be subjected to a routine dielectric strength test per the

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requirements of IEC 60079-15. Test procedures are as follows:

Voltage: 500Vrms  
Duration: 60s  
Permitted leakage current: 5mA

Alternatively, the equipment can be subjected to the following parameters.

Voltage: 600Vrms  
Duration: 0.1s  
Permitted leakage current: 5mA

The manufacturer is required to record and maintain all results obtained.

**14. Essential Health and Safety Requirements (EHSRs)**

The relevant Essential Health and Safety Requirements (EHSRs) affected by this variation have been identified and assessed in Intertek Report: 103291356DAL-002-EHSR Dated: 6/12/2018.

**15. Drawings and Documents**

Title:	Drawing No.:	Rev. Level:	Date:
ATEX Technical File	68445	A	11/12/19

**16. Details of Certificate changes Issue 1**

- Addition of integral cable version of equipment for Ex ic version