

# TYPE-EXAMINATION CERTIFICATE

1. Type-examination Certificate (Module A)
2. Equipment or Protective System intended for use in potentially explosive atmospheres (Directive 2014/34/EU)
3. Type examination certificate Nr **ITS19ATEX44455X**



4. **Product:** High Temperature Vibration Sensors (EX357 SERIES)
5. **Manufacturer:** PCB Piezotronics, Incorporated      **Applicant:** PCB Piezotronics, Incorporated
6. **Address:** 3425 Walden Avenue, Depew, NY 14043-2495, USA      **Address:** 3425 Walden Avenue, Depew, NY 14043-2495, USA

7. This product and any acceptable variation thereto are specified in the schedule to this certificate and therein referred to.
8. INTERTEK ITALIA S.p.A., certifies that the equipment or protective system has been found to comply with the essential Health and Safety Requirements relating to the design and construction of equipment and protective system intended for use in potentially explosive atmosphere, given in Annex II of the Directive.  
The examination and tests results are recorded in confidential technical evaluation Intertek Testing and Certification Report Nr. 103645218CRT-003d, 103645218CRT-003e, 103645218CRT-003f; Dated: 2019-01-29.
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012+A11:2013 and EN 60079-15:2010 except in respect of those requirements referred to at item 18 of the Schedule
10. If the sign X is placed after the certificate number, it indicates that the product is subject to Special Conditions for Safe Use specified in the schedule to this certificate.
11. This Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
12. The marking of the product shall include the following:



II 3 G Ex nA IIC T6...770°C Gc\*  
0°C < Tamb < +755°C

Certificate issue date

26 March 2019

*Gian Paolo Tondetta*

**Gian Paolo Tondetta**  
Certification Manager ATEX  
Intertek Italia S.p.A. (NB 2575)

This certificate is the transfer of the certificate issued by Intertek Testing & Certification Ltd. having the same number.



This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Intertek Italia S.p.A. Via Miglioli, 2/A - 20063 Cernusco sul Naviglio, Milano - Italy



13. SCHEDULE

14. TYPE EXAMINATION CERTIFICATE NUMBER: **ITS19ATEX4445X**

15. DESCRIPTION OF THE EQUIPMENT OR PROTECTIVE SYSTEM

The EX357 Series products are High Temperature Vibration Sensors. There are various Models based on different construction combinations: family type, connector type, cable type, and/or cable length. All models have similar sensing elements: incorporated Piezo element (capacitive) for high temperatures. The vibration sensors provide a charge output when subjected to mechanical motion. The sensors have nickel-based alloy housings.

Models:

**EX357XXXX/MNNZZ Series High Temperature Sensor**

- Where X: family type (assigned as a letter A to Z)
- YYY: variation type (sequential number that together with the letter X make up the model number).
- MNNZZ: specifies connectors type and cable length - Optional
  - "M": is present only for metric length for integral cable option - Optional
  - "NNN": specifies cable length (32 feet or 10 meters) (three numbers) - Optional
  - "ZZ": specifies connectors type (two letters) - Optional

Temperature classification in function of the operating temperature:

- T6 at ambient + 75°C
- T5 at ambient + 90°C
- T4 at ambient + 125°C
- T3 at ambient + 190°C
- T2 at ambient + 285°C
- T1 at ambient + 435°C
- 770°C at ambient 755°C

16. DRAWINGS AND DOCUMENTS

TITLE	DOCUMENT Nr	LEVEL	DATE
*Technical file intrinsic safety Ex nA	70093	B	25 Jan. 19
*Descriptive notice for the certification of IMI vibration sensors	70098	NR	1/17/19
*Assembly approval EX357XXXX/MNNZZ series high temp sensor	69893	NR	1/25/19
*Approval EX357XXXX/MNNZZ interconnections	69892	NR	1/24/19
*XTAL approval drawing	69894	NR	9/21/18
*Instructions for use – EX357XXXX/MNNZZ	70101	NR	No Date

Copies of the above listed documents are kept at Intertek Italia S.p.A. archive.

17. SPECIAL CONDITIONS FOR SAFE USE

The apparatus must be only connect to an equipment whose electrical parameters are compatible with the electrical parameters. The apparatus shall be connected according to drawing 68438 (page 2/2). The connected cable and the connector must provide a minimum ingress protection of IP54, when assessed according to IEC 60079-0 and IEC 60079-15. Unused connector must be fitted with an appropriately rated blanking cover.



13. SCHEDULE

14. TYPE EXAMINATION CERTIFICATE NUMBER: **ITS19ATEX44455X**

18. **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

The relevant essential Health and Safety Requirements have been identified and assessed in Intertek Testing and Certification report nr. 103645218CRT-003d, 103645218CRT-003e, 103645218CRT-003f; Dated: 2019-01-29.

19. **ROUTINE (FACTORY) TESTS**

Dielectric Strength Test Per EN 60079-15

20. **DETAIL OF CERTIFICATE CHANGES**

None.

# TYPE EXAMINATION CERTIFICATE

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

1. **Type Examination Certificate Number:** ITS19ATEX44455X Issue 00
2. **Product:** High Temperature Vibration Sensors  
(EX357 SERIES)
3. **Manufacturer:** PCB Piezotronics, Incorporated.
4. **Address:** 3425 Walden Avenue, Depew, NY 14043-2495, 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 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 nA IIC T6...770°C Gc\*  
0°C < Tamb < +755°C

**Certification Officer:** \_\_\_\_\_

*Kevin J. Wolf*  
Kevin J. Wolf

**Date:** \_\_\_\_\_

31 January 2019

## SCHEDULE:

TYPE EXAMINATION CERTIFICATE NUMBER ITS19ATEX44455X

### 11. Description of Equipment or Protective System

The EX357 Series products are High Temperature Vibration Sensors. There are various Models based on different construction combinations: family type, connector type, cable type, and/or cable length. All models have similar sensing elements: incorporated Piezo element (capacitive) for high temperatures. The vibration sensors provide a charge output when subjected to mechanical motion. The sensors have nickel-based alloy housings.

Models:

EX357XYYY/MNNZZ Series High Temperature Sensor

- Where X: family type (assigned as a letter A to Z)  
YYY: variation type (sequential number that together with the letter X make up the model number).  
MNNZZ: specifies connectors type and cable length - Optional  
"M": is present only for metric length for integral cable option - Optional  
"NNN": specifies cable length (32 feet or 10 meters) (three numbers) - Optional  
"ZZ": specifies connectors type (two letters) - Optional

Temperature classification in function of the operating temperature:

T6 at ambient + 75°C

T5 at ambient + 90°C

T4 at ambient + 125°C

T3 at ambient + 190°C

T2 at ambient + 285°C

T1 at ambient + 435°C

770°C at ambient 755°C

### 12. Report Number

Intertek Reports: 103645218CRT-003d, 103645218CRT-003e, 103645218CRT-003f; Dated: 2019-01-31.

### 13. Conditions of Certification

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

1. The apparatus must be only connect to an equipment whose electrical parameters are compatible with the electrical parameters. The apparatus shall be connected according to drawing 68438 (page 2/2). The connected cable and the connector must provide a minimum ingress protection of IP54, when assessed according to IEC 60079-0 and IEC 60079-15. Unused connector must be fitted with an appropriately rated blanking cover.

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

Dielectric Strength Test Per EN 60079-15

## SCHEDULE:

TYPE EXAMINATION CERTIFICATE NUMBER ITS19ATEX44455X

### 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 Reports: 103645218CRT-003d, 103645218CRT-003e, 103645218CRT-003f; Dated: 2019-01-31

### 15. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
*TECHNICAL FILE INTRINSIC SAFETY Ex nA	70093	B	25 Jan. 19
*DESCRIPTIVE NOTICE FOR THE CERTIFICATION OF IMI VIBRATION SENSORS	70098	NR	1/17/19
*ASSEMBLY APPROVAL EX357XYYY/MNNZZ SERIES HIGH TEMP SENSOR	69893	NR	1/31/19
*APPROVAL EX357XYYY/MNNZZ INTERCONNECTIONS	69892	NR	1/30/19
*XTAL APPROVAL DRAWING	69894	NR	9/21/18
*INSTRUCTIONS FOR USE – EX357XYYY/MNNZZ Accelerometer Series	70101	NR	No Date