

# EU TYPE-EXAMINATION CERTIFICATE

1. EU type-examination Certificate (Module B)
2. Equipment or Protective System intended for use in potentially explosive atmospheres (Directive 2014/34/EU)



3. EU type examination certificate Nr **ITS19ATEX24454X**

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., Notified Body n° 2575 in accordance with article 17 of the Directive 2014/34/EU of the European Parliament and Council of the 26 February 2014, 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-002d, 103645218CRT-002e, 103645218CRT-002f; 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, EN 60079-11:2012 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 EU-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 1 G Ex ia IIC T6...770°C Ga  
0°C < Tamb < +755°C

Certificate issue date

25 March 2019

**Gian Paolo Tondetta**

Certification Manager ATEX  
Intertek Italia S.p.A. (NB 2575)



PDR N° 277B

Membro degli Accordi di Mutuo  
Riconoscimento EA, IAF e ILAC

Signatory of EA, IAF and ILAC  
Mutual Recognition Agreements

This certificate is the transfer of the certificate issued by Intertek Testing & Certification Ltd. (NB 0359) 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. EU TYPE EXAMINATION CERTIFICATE NUMBER: **ITS19ATEX24454X**

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

CE Marking shall be accompanied by the identification number of the Notified Body responsible for surveillance of production.

16. **DRAWINGS AND DOCUMENTS**

TITLE	DOCUMENT Nr	LEVEL	DATE
Technical File Intrinsic Safety Ex ia	70092	B	25 Jan 19
Descriptive notice for the certification of IMI vibration sensors	70097	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 Accelerometer series	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**



13. SCHEDULE

14. EU TYPE EXAMINATION CERTIFICATE NUMBER: **ITS19ATEX24454X**

The apparatus must only be connected to a certified associated intrinsically safe equipment. This combination must be compatible regarding intrinsic safety rules (see electrical parameters). The apparatus shall be connected according to drawing 69892.

1. The mounting of the apparatus into an installation must be carried out in such a way that metallic body of the accelerometer and cable shield are reliably connected to the system earth.
2. The cable used must have an operating temperature compatible with the environment in which the accelerometer is installed.

Device complies with the requirements of the dielectric test per clause 6.3.13 of standard IEC 60079-11.

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-002d, 103645218CRT-002e, 103645218CRT-002f; Dated: 2019-01-29.

19. ROUTINE (FACTORY) TESTS

None.

20. DETAIL OF CERTIFICATE CHANGES

None.

# EU-TYPE EXAMINATION CERTIFICATE

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

1. **EU-Type Examination Certificate Number:** ITS19ATEX24454X **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, Notified Body number 0359 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council dated 26 February 2014, certifies that the product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II of the Directive.
7. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012+A11:2013 and EN 60079-11:2012 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 EU-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.
10. The marking of the product shall include the following:



II 1 G Ex ia IIC T6...770°C Ga  
0°C < Tamb < +755°C

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

*Kevin J. Wolf*

Kevin J. Wolf

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

31 January 2019

## **SCHEDULE:**

**EU-Type Examination Certificate Number: ITS19ATEX24454X**

### **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  
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Temperature classification in function of the operating temperature:

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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-002d, 103645218CRT-002e, 103645218CRT-002f; Dated: 2019-01-31.

## SCHEDULE:

EU-Type Examination Certificate Number: ITS19ATEX24454X

### 13. Special Conditions of Certification

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

The apparatus must only be connected to a certified associated intrinsically safe equipment. This combination must be compatible regarding intrinsic safety rules (see electrical parameters). The apparatus shall be connected according to drawing 69892.

1. The mounting of the apparatus into an installation must be carried out in such a way that metallic body of the accelerometer and cable shield are reliably connected to the system earth.
2. The cable used must have an operating temperature compatible with the environment in which the accelerometer is installed.

Device complies with the requirements of the dielectric test per clause 6.3.13 of standard IEC 60079-11.

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

None

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

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Reports: 103645218CRT-002d, 103645218CRT-002e, 103645218CRT-002f; Dated: 2019-01-31.

### 15. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
TECHNICAL FILE INTRINSIC SAFETY Ex ia	70092	B	25 Jan. 19
DESCRIPTIVE NOTICE FOR THE CERTIFICATION OF IMI VIBRATION SENSORS	70097	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