



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

Certificate No.: **IECEX ETL 20.0037X** Page 1 of 4 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2021-02-24

Applicant: **PCB Piezotronics, Inc.**
3425 Walden Ave.
Depew, NY 14043
United States of America

Equipment: **EX1503 Series Pressure Sensor**

Optional accessory:

Type of Protection: **Intrinsic Safety "ia", Non arcing 'nA'**

Marking: Ex ia IIC T4 Ga
Ex nA IIC T4 Gc
-40°C ≤ Tamb ≤ +121°C
IECEX ETL 20.0037X

Approved for issue on behalf of the IECEx
Certification Body:

Kevin J. Wolf

Position:

Certification Officer

Signature:
(for printed version)

Date:

2021-02-24

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 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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Manufacturer: **PCB Piezotronics, Inc.**
3425 Walden Ave.
Depew, NY 14043
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 60079-0:2017 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

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/ExTR20.0043/00](#)

[US/ETL/ExTR20.0044/00](#)

Quality Assessment Report:

[NL/DEK/QAR14.0004/04](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The equipment covered by this certificate are PCB Pressure Sensors with strain gage sensing elements and built-in electronics. The equipment provides a 4-20mA current output when subjected to mechanical motion (pressure). These sensors are designed to be energy limited. The equipment rating is 28 VDC. The equipment entity parameter ratings for 'ia' are $U_i = 28V$, $I_i = 100mA$, $P_i = 0.65W$, $C_i = 0F$, $L_i = 2.4\mu H$.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The specific conditions for protection method "ia" is that a protected apparatus must only be connected to certified associated intrinsically safe equipment and this combination must be compatible regarding intrinsic safety rules.
- The specific conditions for protection method "nA" is 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.
- The end user is to use and Ex certified IP 54 minimum plug with the socket.



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Equipment (continued):

EX1503xyyy Series Pressure Sensors where:

x = A through Z Family Code

yyy = 01 through 999 indicating variations in sensitivity, mounting thread or adaptor.

Annex:

[103974085CRT-001 - Annex for IECEx Certificate.pdf](#)



Annex to IECEx Certificate of Conformity

Certificate No:	IECEX ETL 20.0037X	Issue No. 0
Annex No. 1		

Technical Documents 'nA'			
Title:	Drawing No.:	Rev. Level:	Date:
IECEX Technical File Non-Arcing (Sheets: 2)	69279	NR	April 9, 2018
Descriptive Notice For The Certification Of PCB Pressure Sensors	69277	NR	April 9, 2018
Approval Board Assembly	74229	NR	-
Etching Drawing	69272	NR	-
Approval Schematic & BOM (Sheets: 2)	69297	NR	1/4/2021
Approval Assembly Model EX1503 Series	74226	NR	1/4/2021
Approval Interconnection (Sheets: 2)	69269	NR	1/4/2021
Instructions For Use – EX1503 Series Pressure Sensors (Sheets: 2)	69307	NR	-

Technical Documents 'ia'			
Title:	Drawing No.:	Rev. Level:	Date:
IECEX Technical File Intrinsic Safety (Sheets: 2)	69278	NR	April 9, 2018
Descriptive Notice For The Certification Of PCB Pressure Sensors	69276	NR	April 9, 2018
Approval Board Assembly	74229	NR	-
Etching Drawing	69272	NR	1/4/2021
Approval Schematic & BOM (Sheets: 2)	69297	NR	1/4/2021
Approval Assembly Model EX1503 Series	74226	NR	1/4/2021
Approval Interconnection (Sheets: 2)	69269	NR	1/4/2021
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Required Manufacturer Routine Testing		
Test	Title/Description of Test	Standard and Clause
1	Dielectric Strength Test <ul style="list-style-type: none"> A routine dielectric strength test shall be carried out in accordance with Clause 23.2.1. Alternatively, a test shall be carried out at 1.2 times the test voltage but maintained for at least 100ms. 	IEC 60079-15 Clause 23.2.1