



# 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 SIM 22.0005X** Page 1 of 3 [Certificate history:](#)  
Status: **Current** Issue No: 0  
Date of Issue: 2022-11-02  
Applicant: **PCB Piezotronics Inc**  
3425 Walden Avenue  
Depew, New York 14043  
United States of America  
Equipment: **Microphone system - Type : Ex378YYYY**  
Optional accessory:  
Type of Protection: **Intrinsic Safety "i"**  
Marking: Ex ia I Ma  
Ex ia IIC T4 Ga

Approved for issue on behalf of the IECEX  
Certification Body:

**Geoffrey Barnier**

Position:

**Principal Engineer - Certification**

Signature:  
(for printed version)

2 November 2022

Date:  
(for printed version)

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2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

**Safety in Mines Testing and Research Station (Simtars)**  
2 Robert Smith Street, REDBANK QLD 4301  
Australia

# Simtars



# IECEX Certificate of Conformity

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Date of issue: 2022-11-02

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Manufacturer: **PCB Piezotronics Inc**  
3425 Walden Avenue  
Depew, New York 14043  
**United States of America**

Manufacturing  
locations: **PCB Piezotronics Inc**  
3425 Walden Avenue  
Depew, New York 14043  
**United States of America**

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

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 Report:

[FR/LCIE/ExTR17.0074/00](#)

Quality Assessment Report:

[NL/DEK/QAR14.0004/05](#)



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Date of issue: 2022-11-02

Issue No: 0

## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The apparatus is an ICP Microphone Systems, type 378XYYY, integrating a microphone cartridge and a preamplifier.

The delivered signal from ICP Microphone Systems provides a typical +/- 7V peak voltage output signal when making acoustic measurements.

The microphone cartridge is the sensing element (piezoelectric element) and is primarily made from stainless metal alloys.

The preamplifier has a stainless steel housing that contains a PC board with a mating connector at on one end for the microphone cartridge and at the other end to provide the interface to an external cable assembly.

The equipment is intended to be used for leak detection and acoustic noise tests in gaseous or mining explosive areas.

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

Ambient temperature range: -40°C to +80°C.

The intrinsically safe apparatus shall only be connected to associated intrinsically safe apparatus certified for the intended use. This association shall comply with the requirements of the standard IEC 60079-25.

The mounting of the apparatus into an installation must be carried out in such a way that sensor metallic body and cable shield are reliably connected to the system earth.

The apparatus must be connected according to instruction manual.

For final installation in mining application, the user shall take all necessary precautions to maintain the minimum degree of protection IP20 of the sensor connection when connected according to the requirements of IEC 60079-14 standard.

## **Annex:**

[IECEX SIM 22.0005X-0 Microphone EX378XYYY Annex.pdf](#)



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**Annex**

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## Manufacturer's documents:

### Drawings associated with Issue 0:

Drawing No	Subject	Rev.	Date
65672	DESCRIPTIVE NOTICE FOR THE CERTIFICATION OF ICP® Microphone Systems	NR	10/05/16
65082 (Sheets 1 and 2 of 2)	APPROVAL SCHEMATIC AND BOM	NR	10/7/14
65250	APPROVAL ASSEMBLY MICROPHONE SYSTEM	NR	8/23/16
65542	PC BOARD APPROVAL LAYOUT	B	5/22/17
77198 (Sheets 1 and 2 of 2)	Instructions for Use – EX378XXXX Microphone System Series	NR	-
65241	LCIE APPROVAL INTERCONNECTION	NR	10/18/16
77197 (Sheets 1 and 2 of 2)	APPROVAL ETCHING DRAWING MICROPHONE CARTRIDGE	NR	10/20/22

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