# Certificate of Compliance

**Certificate:** 1742175 **Master Contract:** 184981

**Project:** 80131422 **Date Issued:** May 19, 2023

**Issued To:** **PCB Piezotronics**
**3425 Walden Ave**
**Depew, New York, 14043**
**United States**

**Attention: Wendy Willard**

***The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only***

C US

**Issued by:** R Papiah

**PRODUCTS**

**CLASS 2258 03** - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations
**CLASS 2258 83** - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations - CERTIFIED TO U.S. STANDARDS

**Ex nA IIC TX:**
**AEx nA IIC TX:**
**Class I, Division 2, Groups A, B, C, D:**

Models 176XYY/MZZZ-AA High Temperature Pressure Transducer; non-incendive with entity parameters as shown below; must be installed per installation drawing 57723; temperature code as shown below.

| Entity Parameters | Temperature Code |
|---|---|
| Ui / Vmax = 30V<br>Ii/Imax =300 mA<br>Pi / Pmax = 1W<br>Ci = 5nF<br>Li = 300µH | T6 (-70°C to 80°C)<br>T5 (-70°C to 95°C)<br>T4 ( -70°C to 130°C)<br>T3 ( -70°C to 195°C)<br>T2 ( -70°C to 290°C)<br>T1 ( -70°C to 440°C)<br>T530 (-70°C to 530°C)<br>T660 (-70°C to 650°C)<br>T770 (-70°C to 760°C) |

Notes:
1. For Canadian Installations, sensor case must be bonded to ground according to Section 18-182 of the CEC, Part 1.
2. For US Installations, sensor case must be bonded to ground according to Article 501.16 of the NEC.

**CLASS 2258 04** - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations
**CLASS 2258 84** - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations - CERTIFIED TO U.S. STANDARDS

**Ex ia IIC TX:**
**AEx ia IIC TX:**
**Class I, Division 1, Groups A, B, C, D:**

Models 176XYY/MZZZ-AA High Temperature Pressure Transducer; intrinsically safe with entity parameters as shown below; must be installed as per installation drawing 57723; temperature code as shown below;

| Entity Parameters | Temperature Code |
|---|---|
| Ui / Vmax = 30V<br>Ii/ Imax =300mA<br>Pi / Pmax = 1W<br>Ci = 5nF<br>Li = 300µH | T6 (-70°C to 80°C)<br>T5 (-70°C to 95°C)<br>T4 (-70°C to 130°C)<br>T3 (-70°C to 195°C)<br>T2 (-70°C to 290°C)<br>T1 (-70°C to 440°C)<br>T530 (-70°C to 530°C)<br>T660 (-70°C to 650°C)<br>T770 (-70°C to 760°C) |

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## APPLICABLE REQUIREMENTS

| | |
|---|---|
| CAN/CSA-C22.2 No. 0-M91 (R2001) | General Requirements – Canadian Electrical Code, Part II |
| CAN/CSA C22.2 No. 61010-1-12, UPD1: 2015, UPD2: 2016, AMD1: 2018 | Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements |
| UL 61010-1, 3rd edition (2012), AMD1: 2018 | Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements |
| C22.2 No. 213-M1987 (R2008) | Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations |
| CAN/CSA-E60079-0:02 | Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic Safety "i" |
| CAN/CSA-C22.2 No. 60079-11:14 (R2018) | Explosive Atmospheres – Part 11: Equipment protection by intrinsic safety "i" |
| CAN/CSA-E60079-15:02 | Electrical apparatus for explosive gas atmospheres - Part 15: Type of Protection "n" |
| UL 913 (8th Ed.) | Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III, Division 1, Hazardous Locations |
| FM Std. No. 3600-1998 | Electrical Equipment for Use in Hazardous (Classified) Locations – General Requirements |
| FM Std. No. 3611-1999 | Nonincendive Electrical Equipment for Use in Class I and II, Division 2, and Class III, Divisions 1 and 2, Hazardous (Classified) Locations |
| ANSI/UL 60079-15:02 | Electrical Apparatus for Explosive Gas Atmospheres - Part 15: Type of Protection "n". |
| ANSI/UL 60079-0:13 | Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements |
| ANSI/UL 60079-11:13 | Electrical apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety "i" |

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## MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Markings are etched directly into the Sensor enclosure body. The following marking details appear:

- CSA Monogram with C-US indicator.
- Submittor Identification
- Certificate reference CSA 06.1742175
- Model Number
- Serial Number, Date Code or Month and Year of Manufacture
- Electrical Rating
- Hazardous Location Designation
- The term 'Class I, Zone 0' adjacent to the AEx ia IIC T6...T770 marking
- The term 'Class I, Zone 2' adjacent to the AEx nA IIC T6...T770 marking
- Ambient temperature range as per product listing

Notes:

Products certified under Class C225803, C225804, C225883, C225884 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC).
www.scc.ca

SCC Accredited CB-P/S OCPS Accrédité CCN

## *Supplement to Certificate of Compliance*

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***The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.***

## Product Certification History

| Project | Date | Description |
|---|---|---|
| 80131422 | 2023-05-19 | Update to report 1742175 for Model 176XYY/MZZZ-AA, High Temperature Pressure Transducer to include a higher temperature range from the current 660° to 770°C, Increased Ii/ Imax from 100 mA to 300 mA. Reduced inductance from Li≤500µH to Li≤300µH; Update of enclosure material specification: materials do not contain by mass more than 10% in total Magnesium, Titanium and Zirconium and 7.5% in total magnesium. Upgrade to the latest ordinary locations standards. |
| 70068556 | 2016-05-06 | Temperature Range Modification 176 Series |
| 70028573 | 2015-06-22 | Update to the Report 1742175 for Model 176XYY/MZZ construction with alternative type of piezo crystal and additional temperature ranges. |
| 2692514 | 2014-05-23 | Update to add Class I, Div. 1, Groups A, B, C, and D and AEx/Ex ia IIC T4...T1 markings. |
| 1742175 | 2006-05-04 | Model 176Mxx High Temperature Pressure Transducer for Div. 2/Zone 2 Hazardous Locations. |