



Certificate of Compliance

Certificate: 1469131

Master Contract: 184981

Project: 80008175

Date Issued: 2019-07-23

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

Attention: Carrie Termin

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.



Issued by: Hossein Saleh
Hossein Saleh

PRODUCTS

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 US Standards

**Class I, Div. 1, Groups A, B, C and D; Class II, Div. 1, Groups E, F and G; Class III, Div. 1
Ex ia IIC T4
AEx ia IIC T4**

Generic Model Nomenclature:

a = TO or blank where TO is Temperature Output Option
b = M or blank where M is Metric stud option



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c = any alpha digit as follows dealing with changes not affecting the certification:

A-Z for EX602 series

A-Z for EX603 series

A-Z for EX606 series

A-Z for EX607 and EX608 series

d = any numeric digit denoting connector style or integral cable

e = any numeric digit denoting variations in sensor sensitivity

Two Wire Models that pertain to schematic 71758:

- Model EXab602cde, EXab603cde, EXab606cde, EXab607cde and EXab608cde Vibration Sensors, input rated 28 Vdc max, 20 mA; intrinsically safe with entity parameters of: $U_i (V_{max}) = 28 \text{ V}$, $I_i (I_{max}) = 93 \text{ mA}$, $P_i = 0.65 \text{ W}$, $C_i = 46.5 \text{ nF}$, $L_i = 0$; when installed per installation drawing 29876; Temperature Code T4 at maximum ambient 121 °C.

- Model EXab602cde, EXab603cde, EXab606cde, EXab607cde and EXab608cde Vibration Sensors, input rated 28 Vdc max, 20 mA; intrinsically safe with entity parameters (for models with integral cables up to 500 feet) of: $U_i (V_{max}) = 28 \text{ V}$, $I_i (I_{max}) = 93 \text{ mA}$, $P_i = 0.65 \text{ W}$, $C_i = 77 \text{ nF}$, $L_i = 152.5 \mu\text{H}$; when installed per installation drawing 29876; Temperature Code T4 at maximum ambient 121 °C.

- Model 200350 Vibration Sensors, input rated 28 Vdc max, 20 mA max; intrinsically safe with entity parameters of: $U_i (V_{max}) = 30\text{V}$, $I_i (I_{max}) = 200\text{mA}$, $P_i = 1 \text{ W}$, $C_i = 16.2 \text{ nF}$, $L_i = 0$; when installed per installation drawing 22775; Temperature Code T4 at maximum ambient 121 °C.

Three Wire Models that pertain to schematic 45280:

- Model EXab602cde, EXab603cde, EXab606cde, EXab607cde, EXab608cde Vibration Sensors, intrinsically safe with entity parameters of: $U_i (V_{max}) = 8 \text{ V}$, $I_i (I_{max}) = 160 \text{ mA}$, $P_i = 1 \text{ W}$, $C_i = 44.6 \text{ nF}$, $L_i = 100 \mu\text{H}$; when installed per installation drawing 45279; Temperature Code T4 at maximum ambient 121 °C.

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

Class I, Div. 2, Groups A, B, C and D

Ex nL IIC T4

AEx nA IIC T4

Generic Model Nomenclature:

a = TO or blank where TO is Temperature Output Option

b = M or blank where M is Metric stud option

c = any alpha digit as follows dealing with changes not affecting the certification:

A-Z for EX602 series



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A-Z for EX603 series

A-Z for EX606 series

A-Z for EX607 and EX608 series

d = any numeric digit denoting connector style or integral cable

e = any numeric digit denoting variations in sensor sensitivity

Two Wire Models that pertain to schematic 71758:

- Model EXab602cde, EXab603cde, EXab606cde, EXab607cde and EXab608cde Vibration Sensors, input rated 28 Vdc max, 20 mA; non-incendive with entity parameters (for connector versions) of: $U_i (V_{max}) = 28 \text{ V}$, $I_i (I_{max}) = 93 \text{ mA}$, $P_i = 0.65 \text{ W}$, $C_i = 46.5 \text{ nF}$, $L_i = 0$; when installed per installation drawing 29876; Temperature Code T4 at maximum ambient 121 °C.

- Model EXab602cde, EXab603cde, EXab606cde, EXab607cde and EXab608cde Vibration Sensors, input rated 28 Vdc max, 20 mA; non-incendive with entity parameters (for models with integral cables up to 500 feet) of: $U_i (V_{max}) = 28 \text{ V}$, $I_i (I_{max}) = 93 \text{ mA}$, $P_i = 0.65 \text{ W}$, $C_i = 77 \text{ nF}$, $L_i = 152.5 \text{ } \mu\text{H}$; when installed per installation drawing 29876; Temperature Code T4 at maximum ambient 121 °C.

- Model 200350 Vibration Sensor, input rated 28 Vdc max, 20 mA max; non-incendive when connected to CSA Certified Power/Signal Monitoring units when installed per installation drawing 22775; Temperature Code T4 at maximum ambient 121 °C.

Three Wire Models that pertain to schematic 45280:

- Model EXab602cde, EXab603cde, EXab606cde, EXab607cde, EXab608cde Vibration Sensors, non-incendive with entity parameters of: $U_i (V_{max}) = 8 \text{ V}$, $I_i (I_{max}) = 160 \text{ mA}$, $P_i = 1 \text{ W}$, $C_i = 44.6 \text{ nF}$, $L_i = 100 \text{ } \mu\text{H}$; when installed per installation drawing 45279; Temperature Code T4 at maximum ambient 121 °C.

Conditions of Acceptability:

1. For Canadian Installations, sensor case must be bonded to ground according to CEC, Part 1.
2. For US Installations, sensor case must be bonded to ground according to NEC.



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APPLICABLE REQUIREMENTS

CAN/CSA Std C22.2 No. 0-M91	General Requirements – Canadian Electrical Code, Part II
CSA Std C22.2 No. 142-M1987	Process Control Equipment
CSA STD C22.2 No. 213-16	Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
CAN/CSA-C22.2 No. 157-92	Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations
CAN/CSA-E60079-0:02	Electrical apparatus for explosive gas atmospheres - Part 0: General Requirements
CAN/CSA- E60079-11:02	Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic Safety “i”
CAN/CSA- E60079-15:02	Electrical apparatus for explosive gas atmospheres - Part 15: Type of Protection “n”
UL Std No. 916	Energy Management Equipment
UL Std No. 913	Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III, Division 1, Hazardous Locations
ANSI/ISA 12.12.01-2015	Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) 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 60079-0:02	Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
ANSI/UL 60079-11:02	Electrical Apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety “i”
ANSI/UL 60079-15:02	Electrical Apparatus for Explosive Gas Atmospheres - Part 15: Type of Protection “n”



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MARKINGS

I.S. models

- CSA Monogram with C US Indicator
- Submitter Identification
- Model Number
- Serial Number, Date Code or Month and Year of Manufacture
- Electrical Rating
- Hazardous Location Designation (i.e., the symbol Ex ia IIC T4; AEx ia IIC T4; Class I, Div. 1, Groups A, B, C and D; Class II, Div. 1, Groups E, F and G; Class III, Div. 1)
- Certificate # reference (i.e., 2006 1469131)
- Reference to Installation Instructions

Div. 2 Non-Incendive models

- CSA Monogram with C US indicator.
- Submitter Identification
- Model Number
- Serial Number, Date Code or Month and Year of Manufacture
- Electrical Rating
- Hazardous Location Designation (i.e., Ex nL IIC T4, AEx nA IIC T4, Class I, Div. 2, Groups A, B, C and D)
- Certificate # reference (i.e., 2006 1469131)



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
80008175	2019-07-23	Update Report 1469131 to cover changes applicable to Two Wire Model Vibration Sensors that pertain to schematic 71758 and are used in Class I/II/III Division 1, Zone 0; and, Class I Division 2, Zone 2. Updates include: Addition of three capacitors; A change in values of Entity Parameters.
000070125525	2017-09-05	Update CSA Report 1469131 to assess the modified entity parameters for the 3 wire type Vibration Sensors.
000070079443	2016-07-15	Update Report 1469131 to assess the replacing of a new temperature output chip LM45 instead of old sensor temperature output chip LM35 for Class I, Div 1, Groups A, B, C, D, Class II, Div 1, Groups E, F and G ,Class III, Div 1 A/Ex ia IIC for all EXTO models indicated on the original report 1469131. Model No: EXAb607cde and EXAb608cde and ab608cde with New Temperature output chip LM45 for the #EXTO# models
0002625009	2013-07-19	Update to report 1469131 to include revised drawings and remove "Date" column from the Descriptive Document List.
0002285154	2010-04-14	Update of Report 1469131 to include models EXAb602cde, EXAb603cde, EXAb606cde, EXAb607cde, and EXAb608cde.
0001750643	2006-04-18	Update to Include models EX602Dxx, EX606Bxx, EX607Axx and EX608A1x; addition of models EX603C1x and EX603C6x.
0001469131	2003-08-22	Original Certification - Models 603C01 and 200350.