



Certificate of Compliance

Certificate: 2033214

Master Contract: 184981

Project: 80020282

Date Issued: 2019-12-19

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: *Thong Tong*
Thong Tong

PRODUCTS

CLASS - C225803 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non Incendive Systems - For Hazardous Locations

CLASS - C225883 - PROCESS CONTROL EQUIPMENT-Intrinsically Safe and Non-Incendive Systems-For Hazardous Locations-Certified to U.S. Standards

Ex nL IIC T3:

AEx nA IIC T3:

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

Models EX686X0x Vibration Sensors, input rated 12-30 Vdc max, 1 mA consumption, 100 mA max. flow-through; non-incendive with entity parameters of: U_i (V max) = 30V, I_i (I max) = 100mA, P_i (Pmax) = 1W, C_i = 0, L_i = 28 uH; when installed per installation Dwg 39483; Temp Code T3 @ Max Ambient 85 Deg C.

Models EX686X1y and EX686X6y Vibration Sensors, input rated 12-30 Vdc max, 1 mA consumption, 100 mA max. flow-through; non-incendive with entity parameters of: U_i (V max) = 30V, I_i (I max) = 100mA, P_i (Pmax)



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= 1W, Ci = 61 nF, Li = 333 μ H; when installed per installation Dwg 39483; Temp Code T3 @ Max Ambient 85 Deg C.

Notes:

1. For Canadian Installations, sensor case must be bonded to ground according to Section 18 of the CEC, Part 1.
2. For US Installations, sensor case must be bonded to ground according to Articles 501 and 505 of the NEC.
3. Letter X following product identifier number EX686 may be a capital letter from B to Z denoting Model revision level for minor revisions restricted to changes of values of capacitors and resistors within the approval limits specified on control drawing 39481 page 1 and 2. The "x" or "y" in the model code may be a number from 0 thru 9 which denotes variations in frequency response, sensitivity, and mounting configuration of the sensors.
4. An alphanumeric code (-XXXXX) following the Model Number indicates cable length and termination. Cable length not to exceed 304.5m (999ft).

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

CLASS 2258 82 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations - CERTIFIED TO U.S. STANDARDS

4.

Ex nA IICT3:

AEx nA IIC T3:

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

Models EX686X7x Vibration Sensors, input rated 24-240 Vdc, 1 mA consumption, 500 mA max. flow-through; 24-240 Vac, 50/60 Hz, 1 mA consumption, 500 mA max. flow-through; suitable for use in Class I, Div. 2 or Class I, Zone 2 locations, when installed per installation Dwg 39486; Temp Code T3 @ Max Ambient 85 Deg C.

Models EX686Xyyyyyy6 Vibration Sensors, input rated 24-240 Vdc, 1 mA consumption, 500 mA max. flow-through; 24-240 Vac, 50/60 Hz, 1 mA consumption, 500 mA max. flow-through; suitable for use in Class I, Div. 2 or Class I, Zone 2 locations, when installed per installation Dwg 39486; Temp Code T3 @ Max Ambient 85 Deg C.

Notes:

1. Sensor must be installed in a suitable enclosure, acceptable to the local inspection authority having jurisdiction.
2. Letter X following product identifier number EX686 may be a capital letter from B to Z denoting Model revision level for minor revisions restricted to changes of values of capacitors and resistors within the approval limits specified on control drawing 39481 page 1 and 2. The "x" in the model code may be a number from 0 thru 9 which denotes variations in frequency response, sensitivity, and mounting configuration of the sensors.



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3. An alphanumeric code (-XXXXX) following the Model Number indicates cable length and termination. Cable length not to exceed 304.5m (999ft).
4. The “yyyyy” in the model code may be a number from 0 thru 9 which denotes variations in frequency response, sensitivity, and mounting configuration of the sensors.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 0-M91	- General Requirements – Canadian Electrical Code, Part II
C22.2 No. 142-M1987	- Process Control Equipment
C22.2 No. 213-M1987	- Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
UL 916 (3 rd Ed.)	- Energy Management Equipment
UL 1604 (3 rd Ed.)	- Electrical Equipment for Use in Class I and II, Division 2; Class III Hazardous (Classified) Locations
ANSI/ISA 12.12.01-2007	- Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations
CAN/CSA-E60079-15:02	- Electrical apparatus for explosive gas atmospheres - Part 15: Type of Protection "n"
ANSI/UL 60079-15:02	- Electrical apparatus for Explosive Gas Atmospheres - Part 15: Type of Protection “n”

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:

Div. 2 Non-Incendive models

- CSA Monogram with C US indicator.



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- Submitter Identification
- Model Number
- Serial Number, Date Code or Month and Year of Manufacture
- Electrical Rating
- Hazardous Location Designation (ie Ex nL IICT4, AEx nA IICT4, Class I, Div. 2, Groups A, B, C and D)
(In addition to these required markings, the following optional markings may also appear: Class I, Zone 2, Group IIC, T4)
- Certificate # reference (ie. 2008 2033214)
- "WARNING – EXPLOSION HAZARD. DO NOT CONNECT OR DISCONNECT WHEN ENERGIZED." or equivalent.
- "AVERTISSEMENT – RISQUE D'EXPLOSION. NE PAS BRANCHER NI DÉBRANCHER SOUS TENSION." or equivalent.

Div. 2 Non-arcing models (.....X7x)

- 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 (ie Ex nA IIC T3, AExnA IICT3, Class I, Div. 2, Groups A, B, C and D)
(In addition to these required markings, the following optional markings may also appear: Class I, Zone 2, Group IIC, T3)
- Certificate # reference (ie. 2008 2033214 X)
- "WARNING – EXPLOSION HAZARD. DO NOT CONNECT OR DISCONNECT WHEN ENERGIZED." or equivalent.
- "AVERTISSEMENT – RISQUE D'EXPLOSION. NE PAS BRANCHER NI DÉBRANCHER SOUS TENSION." or equivalent.

ALTERATIONS

1. Markings as above appear.
2. Internal wiring is rated for temperatures of 200 Deg. C.



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
80020282	2019-12-19	Update to CSA report 2033214 to change Model EX686B to EX686X to allow minor modifications.
0002033214	2008-09-25	Model EX686B Series Vibration sensors for Class I, Div. 2, and Zone 2 hazardous locations - North America