



# Certificate of Compliance

**Certificate:** 1458684 (221421)

**Master Contract:** 221421

**Project:** 70076706

**Date Issued:** 2017-06-06

**Issued to:** Connection Technology Center, Inc.  
7939 Rae Boulevard  
Victor, New York 14564  
USA

**Attention:** Colin Walker

*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:**

## PRODUCTS

**CLASS - C225804 - PROCESS CONTROL EQUIPMENT-Intrinsically Safe, Entity - For Hazardous Locations-**

**CLASS - C225884 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity-- For Hazardous Locations - Certified to US Standards**

**Class I, Groups A, B, C, D; Class II, Groups E, F, G; Class III**

**Canada: Ex ia IIC T3/T4; DIP A20 IP6X 150°C (T-Code =T3) or T105°C (T-Code = T4)**

**USA: AEx ia IIC T3/T4, Class I, Zone 0; AEx iaD 20 150°C (T-Code =T3) or T105°C (T-Code = T4)**

Transducer Sensor - AC90\* Series - Temperature code T3; ambient temperature range -54°C to +125°C

Transducer Sensor - LP8\*\* and LP9\*\* Series – Temperature Code T4; ambient temperature range -40°C to +80°C

- Intrinsically safe with Entity Parameters –  $U_i = 28\text{VDC}$ ,  $I_i = 100\text{mA}$ ,  $P_i = 1\text{W}$ ,  $C_i = 70\text{nF}$ ,  $L_i = 51\mu\text{H}$

Transducer Sensor - AC91\*, AC83\*, VE9\*\*, and WT83\*, Series - Ambient Temperature Range -40°C to +80°C (Temperature Code T4) or -40°C to +125°C (Temperature Code T3)



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- Intrinsically safe with Entity Parameters –  $U_i = 28\text{VDC}$ ,  $I_i = 100\text{mA}$ ,  $P_i = 1\text{W}$ ,  $C_i = 0\text{nF}$ ,  $L_i = 0\mu\text{H}$  (when not provided with integral cable)
- Intrinsically safe with Entity Parameters –  $U_i = 28\text{VDC}$ ,  $I_i = 100\text{mA}$ ,  $P_i = 1\text{W}$ ,  $C_i = 80.4\text{nF}$ ,  $L_i = 137.76\mu\text{H}$  (when provided with a maximum of 1300feet (400m) of integral cable)

Transducer Sensor – AC7\*\* Series - Ambient Temperature Range  $-40^\circ\text{C}$  to  $+80^\circ\text{C}$  (Temperature Code T4) or  $-40^\circ\text{C}$  to  $+121^\circ\text{C}$  (Temperature Code T3)

- Intrinsically safe with Entity Parameters –  $U_i = 6\text{VDC}$ ,  $I_i = 3\text{A}$ ,  $P_i = 1\text{W}$ ,  $C_i = 1\mu\text{F}$ ,  $L_i = 0\mu\text{H}$  (when not provided with integral cable)
- Intrinsically safe with Entity Parameters –  $U_i = 6\text{VDC}$ ,  $I_i = 3\text{A}$ ,  $P_i = 1\text{W}$ ,  $C_i = 1\mu\text{F}$ ,  $L_i = 42\mu\text{H}$  (when provided with a maximum of 1300 feet (400m) of integral cable)

Transducer Sensor – TA7\*\* Series - Ambient Temperature Range  $-40^\circ\text{C}$  to  $+80^\circ\text{C}$  (Temperature Code T4) or  $-40^\circ\text{C}$  to  $+121^\circ\text{C}$  (Temperature Code T3)

- Intrinsically safe with Entity Parameters –  $U_i = 6\text{VDC}$ ,  $I_i = 3\text{A}$ ,  $P_i = 1\text{W}$ ,  $C_i = 1\mu\text{F}$ ,  $L_i = 0\mu\text{H}$  (when not provided with integral cable)
- Intrinsically safe with Entity Parameters –  $U_i = 6\text{VDC}$ ,  $I_i = 3\text{A}$ ,  $P_i = 1\text{W}$ ,  $C_i = 1\mu\text{F}$ ,  $L_i = 336\mu\text{H}$  (when provided with a maximum of 1300 feet (400m) of integral cable)

Transducer Sensor – AC86\* Series - Ambient Temperature Range  $-40^\circ\text{C}$  to  $+80^\circ\text{C}$  (Temperature Code T4) or  $-40^\circ\text{C}$  to  $+121^\circ\text{C}$  (Temperature Code T3)

- Intrinsically safe with Entity Parameters –  $U_i = -28\text{VDC}$ ,  $I_i = 120\text{mA}$ ,  $P_i = 1\text{W}$ ,  $C_i = 46\text{nF}$ ,  $L_i = 0\mu\text{H}$  (when not provided with integral cable)
- Intrinsically safe with Entity Parameters –  $U_i = -28\text{VDC}$ ,  $I_i = 120\text{mA}$ ,  $P_i = 1\text{W}$ ,  $C_i = 46\text{nF}$ ,  $L_i = 42\mu\text{H}$  (when provided with a maximum of 1300 feet (400m) of integral cable)

Note: Asterisks “\*\*” denotes alpha-numeric characteristic denoting mounting configurations, connector types or approval agencies per drawings INS10017 and, INS10018 and INS10075.

**CLASS 2258 02 - PROCESS CONTROL EQUIPMENT** - For Hazardous Locations

**CLASS 2258 82 - PROCESS CONTROL EQUIPMENT** - For Hazardous Locations - Certified to US Standards

**Class I, Division 2, Groups A, B, C, and D; Class II, Division 2, Groups F and G; Class III**

**Canada: Ex nA IIC T3/T4; DIP A22 IP6X T150°C (T-Code =T3) or T105°C (T-Code = T4)**

**USA: AEx nA IIC T3/T4, Class I, Zone 2; AEx tD 22, IP6X T150°C (T-Code =T3) or T105°C (T-Code = T4)**

Transducer Sensor - AC92\* Series - Temperature code T3; ambient temperature range  $-54^\circ\text{C}$  to  $+125^\circ\text{C}$

Transducer Sensor - LP8\*\* and LP9\*\* Series – Temperature Code T4; ambient temperature range  $-40^\circ\text{C}$  to  $+80^\circ\text{C}$

Transducer Sensor - AC93\*, AC7\*\*, AC87\*, WT84\*, VE8\*\* Series - Ambient Temperature Range  $-40^\circ\text{C}$  to  $+80^\circ\text{C}$  (Temperature Code T4) or  $-40^\circ\text{C}$  to  $+125^\circ\text{C}$  (Temperature Code T3)



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NOTE: Class I, Division 2 / Ex nA IIC when installed using an approved Zone 2 / Division 2 rated cable in accordance with the CEC or the NEC. Suitability of final installation is to be determined by the authority having local jurisdiction.

Note: Asterisks “\*\*\*” denotes alpha-numeric characteristic denoting mounting configurations, connector types or approval agencies per drawings INS10038 and INS10039.

### **APPLICABLE REQUIREMENTS**

- CSA Standard C22.2 No. 0-M1991 – General Requirements Canadian Electrical Code Part II  
CSA Standard C22.2 No. 25-M1966 – Enclosures for Use in Class II Groups E, F and G Hazardous Locations  
CSA Standard C22.2 No. 142-M1987 – Process Control Equipment  
CSA Standard C22.2 No. 157-M1992 – Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations  
CSA Standard C22.2 No. 213-M1987 – Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations  
CAN/CSA E60079-0:07 – 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”  
CAN/CSA-E61241-1-1:02 – Electrical apparatus for use in the presence of combustible dust – Part 1-1: Electrical apparatus protected by enclosures and surface temperature limitation – Specification for apparatus  
  
UL Standard 913, Seventh Edition – Intrinsically Safe Apparatus and Associated Apparatus for use in Class I, II, III, Division 1, Hazardous (Classified) Locations  
UL Standard 916, Third Edition – Safety Energy Management Equipment  
UL Standard 1203, Fourth Edition – Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations  
ANSI/ISA-12.12.01-2007 – Non-Incendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations  
UL 60079-0, Fourth Edition – Electrical Apparatus for Explosive Gas Atmospheres – Part 0: General Requirements  
UL 60079-11, Second Edition – Electrical apparatus for explosive gas atmospheres – Part 11: Intrinsic safety “i”  
UL 60079-15, First Edition – Electrical Apparatus for Explosive Gas Atmospheres – Part 15: Electrical Apparatus with Type of Protection “n”  
  
ANSI/ISA 61241-0-2006 – Electrical Apparatus for Use in Zone 20, Zone 21 and Zone 22 Hazardous (Classified) Locations – General Requirements  
ANSI/ISA 61241-1-2006 – Electrical Apparatus for Use in Zone 21 and Zone 22 Hazardous (Classified) Locations – Protection by Enclosures “tD”  
ANSI/ISA 61241-11-2006 – Electrical Apparatus for Use in Zone 20, Zone 21 and Zone 22 Hazardous (Classified) Locations – Protection by Intrinsic Safety “iD”



## *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**

<b>Project</b>	<b>Date</b>	<b>Description</b>
70076706	2017-06-06	Update to report 1458684 to include 5 new amplifier board = INS10074 (VE9** and VE8**Series), INS10078 (WT83*, AC83* and AC84* Series), INS10076 (AC7** Series) and INS10084 (AC86* and AC87* Series).
70040705	2015-11-20	Update to Report 1458684 to include adding of Epoxies and an alternate Piezo-Electric Device.
2274933	2010-02-11	Update to report 1458684 to correct diodes being used in the equipment based on findings of IECEx report
2126082	2009-12-23	Update to report 1458684 to include new model of vibration sensor
1809025	2006-11-23	Update to Report 1458684 to include div / zone 2 requirements.
1531993	2004-03-23	Update to Report 1458684 to Cover model series variation.
1458684	2004-02-04	CSA C/US Certification of I.S. Transducer Sensor, Model Series AC9**, LP8** and LP9** with Entity Parameters for Hazardous Locations.