



# Certificate of Compliance

**Certificate:** 2424186

**Master Contract:** 158887

**Project:** 2424186

**Date Issued:** June 23, 2011

**Issued to:** Phoenix Contact Inc.  
P.O. Box 4100  
Harrisburg, PA 17111-0100  
USA  
Attention: Kurt B. Boegli

*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.*



*Richard Dibler Jr*

**Issued by:** Richard Dibler Jr

## **PRODUCTS**

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

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

**Ex nA [ia] IIC T4**

**Class I, Zone 2, AEx nA [ia] IIC T4**

FB-ISO Fieldbus Device Coupler Isolated I.S. Output; Ambient range:  $-40^{\circ}\text{C} \leq \text{Ta} \leq +60^{\circ}\text{C}$ ;  $32\text{V}_{\text{max}}$ ,  $70\text{ mA}$ .  
Entity Parameters:  $U_m = 253\text{ Vac}$ ,  $U_o = 17.2\text{ V}$ ,  $I_o = 349\text{ mA}$ ,  $P_o = 1.5\text{ W}$ ,  $C_i = 0$ ;  $L_i = 10\text{ }\mu\text{H}$

## **Conditions of Certification**

- If the module is installed in a Class I, Division 2 hazardous area, it shall be housed in an enclosure that requires the use of a tool to enter the enclosure.
- If the module is installed in a Zone 2 hazardous area, it shall be housed in an enclosure that is coded Ex nA, Ex e, Ex d or Ex p. If the module is installed in a zone 22 or 21 hazardous area, it shall be housed in an



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enclosure that is coded Ex tD or Ex t. For some types of enclosure, additional certification will be required to permit the installation of the module within the enclosure. Reference should be made to the enclosure certificate. The installer shall ensure that the maximum ambient temperature of the module when installed is not exceeded.

- If the module is installed in non-hazardous area, the enclosure or location shall provide suitable protection. This may either be by the use of an outer enclosure approved for use in zone 2 or 22 or otherwise meeting the following requirements:
  - Non-metallic enclosures must be capable of withstanding the thermal endurance requirements of IEC 60079-0, prior to impact and IP54 testing.
  - Any enclosure must be capable of withstanding an impact of 7J or the module otherwise protected from impact
  - The enclosure or location must provide an ingress protection of at least IP54.
  - If exposed to sunlight, non-metallic enclosures must be capable of meeting the requirements of IEC 60079-0 clause 26.10 regarding resistance to light.
- When the module is mounted in a zoned area, connection and disconnection of the module from the rail while live is only permitted if the potentially explosive atmosphere is shown to be absent.
- The FB-ISO has an intrinsically safe output that may be connected to compatible intrinsically safe equipment where there is a flammable gas hazard. The FB-ISO may also be suitable for connection to suitably-certified equipment where there is a flammable dust hazard (e.g. Ex tD, Ex ta, Ex tb, Ex tc). It is the installer's responsibility to check that the output parameters of the FB-ISO are compatible with the input parameters of the connected equipment in the hazardous area.

**APPLICABLE REQUIREMENTS**

CSA Standard C22.2 No. 0-M1991	General Requirements: Canadian Electrical Code Part II
CSA Standard C22.2 No.142-M1987	Process Control Equipment
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"
UL Standard 508, Seventeenth Edition	Industrial Control Equipment
UL 60079-0, Fourth Edition	Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
ANSI/UL Standard 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"
IEC 60079-27: 2008, Second Edition	Electrical apparatus for explosive gas atmospheres - Part 27: Fieldbus Intrinsically Safe Concept (FISCO) and Fieldbus Non-incendive Concept (FNICO) (used as a guide)



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## **MARKINGS**

The following markings are laser etched onto the enclosure.

- Manufacturers name, or CSA Master Contract number adjacent the CSA Mark, in lieu of manufacturers name.
- Model designation, as specified in the PRODUCTS section, above.
- Complete electrical rating, as specified in the PRODUCTS section, above.
- Entity parameters (equipment may be referenced to installation instructions)
- Maximum ambient temperature rating, as specified in the PRODUCTS section, above.
- Date code / Serial number traceable to month and year of manufacture.
- The CSA mark, with or without the “c” and/or “us” indicators.
- Hazardous Location designation, as specified in the PRODUCTS section, above.
- Temperature code, as specified in the PRODUCTS section, above.
- The following statements
  - WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT (module from Tbus) WHILE CIRCUIT IS LIVE UNLESS AREA IS KNOWN TO BE NON-HAZARDOUS. Live working on the spur connection is permitted.
- The following markings may appear (or similar):

*Install in:* Class I, Division 2, Groups A - D

*Spur to:* Class I, Groups A - D, Class II, Groups E - G, Class III; I.S. and Nonincendive

Ex nA [ia] IIC T4, FISCO/Entity power supply (spur)

Class I, Zone 2, AEx nA [ia] IIC T4, FISCO/Entity power supply (spur)

Ex nA [nL] IIC T4, FNICO/Entity power supply (spur)

Class I, Zone 2, AEx nA [nL] IIC T4, FNICO/Entity power supply (spur)

*Note - Jurisdictions in Canada may require these markings to also be provided in French language. It is the responsibility of the manufacturer to provide bilingual marking, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities. It is the responsibility of the manufacturer to determine this requirement and have bilingual wording added to the "Markings".*