



# Certificate of Compliance

**Certificate:** 70029275

**Master Contract:** 169790

**Project:** 70029275

**Date Issued:** 2016-01-20

**Issued to:** Pepperl+Fuchs GmbH  
Lilienthalstrasse 200  
Mannheim, 68307  
GERMANY

**Attention:** Michael Oestreicher

*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:** Eshwar Kashyap  
Eshwar Kashyap



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**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 U.S. STANDARDS

**AEx/Ex ib [ia Ga] IIC T4 Gb**

**AEx/Ex ic [ia Ga] IIC T4 Gc**

**AEx/Ex ic IIC T4 Gc**

**[Ex ia IIC Da]**

**[AEx ia IIC Da]**

**[Ex ic IIC Dc]**

**[AEx ic IIC Dc]**

**Class I, Division 2, Group A, B, C, D, T4;**

**AIS for Class I, Division 1, Group A, B, C, D and Class II, Division 1 Groups, E, F, G, Class III:**

Fieldbus Diagnostic Handheld FDH-1; rated 8.5 ... 35 V, 10 mA (Fieldbus connection) and 9V (Trigger circuit). Intrinsically safe as per the entity parameters below and when installed as per drawing 116-0405. Ambient temperature: -20°C to +50°C.

Fieldbus circuit (4-pole round plug)	
Zone 0/Div 1, Zone 1 applications	Zone 2, Div. 2 applications
U <sub>i</sub> = 30V	U <sub>i</sub> = 35V
I <sub>i</sub> = Any <sup>1</sup>	I <sub>i</sub> = Any <sup>1</sup>
P <sub>i</sub> = Any <sup>1</sup>	P <sub>i</sub> = Any <sup>1</sup>
C <sub>i</sub> = 1.8nF	C <sub>i</sub> = 1.8nF
L <sub>i</sub> = 1.5µH	L <sub>i</sub> = 1.5µH

Trigger circuit (5-pole round plug)	USB circuit
U <sub>o</sub> /V <sub>max</sub> = 9V	U <sub>i</sub> = 6V
I <sub>o</sub> /I <sub>sc</sub> = 44µA	I <sub>i</sub> = Any <sup>1</sup>
P <sub>o</sub> = 100µW	P <sub>i</sub> = Any <sup>1</sup>
C <sub>o</sub> /C <sub>a</sub> = 4.8µF	C <sub>i</sub> = 25µF
L <sub>o</sub> /L <sub>a</sub> = 100mH	L <sub>i</sub> = 0µH

<sup>1</sup> = These values are irrelevant as the device provides internal current limitation.

**NOTE:**

Note: The above model is Equipment Class III.



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**SPECIAL CONDITION OF SAFE USE:**

1. The equipment shall only be brought into and operated inside the hazardous area without an inserted battery. Before entering the hazardous area the battery shall be removed. Only if the device is used as an associated apparatus outside the hazardous area, a battery may be used for the supply of the equipment.
2. The trigger circuit may be used in Zone 1 areas provided that the USB circuit is not connected.
3. The USB and trigger circuit may be used together in Division 2 and Zone 2 applications as per the entity parameters.

When using the device as an associated apparatus outside the hazardous area, the trigger and the USB circuit may be connected to non-intrinsically safe circuits. The maximum r.m.s. a.c. or d.c. voltage ( $U_m$ ) of the particular circuit shall be adhered to.

4. After the device has been used with an intrinsically safe circuit in type of protection "ic", it shall only be used with an intrinsically safe circuit in type of protection "ia" or "ib", if the maximum applied voltage at the intrinsically safe circuit in type of protection "ic" has not exceeded the maximum permissible voltage for the intrinsically safe circuit in type of protection "ia" or "ib".
5. All connections into the Fieldbus Diagnostic Handheld FDH-1 shall be sourced from Class 2 circuits.



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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	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements - Third Edition
CAN/CSA-C22.2 No. 60079-0:11	Explosive Atmospheres - Part 0: Equipment - General requirements
CAN/CSA-C22.2 No. 60079-11:14	Explosive Atmospheres – Part 11: Equipment protection by intrinsic safety "i"
CSA Std. C22.2 No. 213-2015	Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
ANSI/ISA-61010-1 3 <sup>rd</sup> Edition	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements - Third Edition
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
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"



## *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**

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<b>Project</b>	<b>Date</b>	<b>Description</b>
70029275	2016-01-20	Original CSA certification of the Fieldbus Diagnostic Handheld FDH-1 based on IECEX ZLM 14.0012.