Certificate of Compliance

Certificate:	80072560	**Master Contract:**	169790
Project:	80072560	**Date Issued:**	November 09, 2021

Issued To: **Pepperl + Fuchs SE**
Liliethalstrasse 200
68307 Mannheim
Germany

Attention: Paul Wolfenden

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: *B J Allen*

B J Allen

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

Canada:
[Ex ia Ga] IIC, [Ex ia Da] IIIC
IS Outputs: Class I, Division 1, Groups A, B, C, D; Class II, Groups E, F and G; Class III

U.S.:
[AEx ia Ga] IIC, [AEx ia Da] IIIC
IS Outputs: Class 1, Class I, Division 1, Groups A, B, C, D; Class II, Groups E, F and G; Class III

The HiD2030 and HiD2030SK Smart Transmitter Power Supplies: Ambient temperature range: -40°C ≤ Tamb ≤+60°C, having the following intrinsically safe outputs when connected per drawing number 116-0486.

Electrical data:

At the safe area side Connector SL1

U_m = 250 V

SL2 Connector pins channels 1 and 2	Uo (V)	Io (mA)	Po (mW)	Ci (nF)	Li	Ui	Ii
Channel 1							
5a, 5b	26	93	605	1.05	0		
5b, 7a	1.2	50	15	5.64	0	28V	93mA
Channel 2							
1a, 1b	26	93	605	1.05	0		
1b, 3b	1.2	50	15	5.64	0	28V	93mA

Connector SL2 pins 5a(+), 5b(-) and 1a(+), 1b(-)

Group	D/IIA	C, E-G/IIB/IIIC	A-B/IIC
Co	2.6µF	770nF	99nF
Lo	32.8mH	16.4mH	4.1mH
Lo/Ro	470µH/Ohm	235 µH/Ohm	58µH/Ohm

Connector SL2 pins 5b(+),7a(-) and 1b(+), 3b(-)

Group	D/IIA	C, E-G/IIB/IIIC	A-B/IIC
Co	1000µF	1000µF	1000µF
Lo	110mH	52mH	14mH
Lo/Ro	16.8mH/Ohm	8.4 mH/Ohm	2.1mH/Ohm

Note
The above parameters apply when one of the two conditions below is given:
-The total Li of the external circuit (excluding the cable) is <1% of the Lo value or
-The total Ci of the external circuit (excluding the cable) is <1% of the Co value

The above parameters are reduced to 50% when both of the two conditions below are given:
-The total Li of the external circuit (excluding the cable) is >1% of the Lo value and
-The total Ci of the external circuit (excluding the cable) is >1% of the Co value.
The reduced capacitance of the external circuit (including the cable) shall not be greater than 1µF for Groups C-G, IIA, IIB/IIIC and 600nF for Groups A-B, IIC.

Conditions of Acceptability for Haz Loc:

1 The device must be installed and operated only in an environment of overvoltage category II (or better) according to IEC/EN 60664-1.
2 The device must be installed in an unclassified location, and operated only in a controlled environment that ensures a pollution degree 2 (or better) according to IEC/EN 60664-1.

Conditions of Acceptability for Ord Loc:

1) These barriers are certified only for use in complete assemblies where the suitability of the combination is to be determined in the end application.
2) Equipment has only been tested for electrical safety. No evaluation of functional safety and performance characteristics has been conducted.
3) Equipment is only to be installed by trained personnel in accordance with the manufacturer's installation instructions.
4) Temperature of terminals - if the Termination Board is intended to be installed in a field wiring box in the end application, a marking to warn the installer to consult the installation instructions before determining the temperature rating of the cables connected to the terminals shall be provided.
5) This equipment is for use with separately approved HiD Termination Boards.
6) Suitable enclosure shall be provided when installed at end-product application.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 60079-0:19 Ed4	Explosive atmospheres — Part 0: Equipment — General requirements
CAN/CSA-C22.2 No. 60079-11:14 Ed2	Explosive atmospheres — Part 11: Equipment protection by intrinsic safety “i”
UL 60079-0 Seventh Edition	Explosive atmospheres — Part 0: Equipment — General requirements
UL 60079-11 Sixth Edition	Explosive atmospheres — Part 11: Equipment protection by intrinsic safety “i”
UL 913 Eighth Edition	Explosive atmospheres —Intrinsically Safe Apparatus for use in Class I, II and III, Division 1, Hazardous (Classified) Locations
CAN/CSA C22.2 No. 61010-1-12, UPD1: 2015, UPD2: 2016, AMD1: 2018	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
UL 61010-1, 3rd edition (2012), AMD1: 2018	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements

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.

The following markings are provided on CSA-accepted laser or printed labels as specified in drawing 16-1544CS-10.

- Manufacturer's name: "Pepperl+Fuchs", or CSA Master Contract Number "169790", adjacent to the CSA Mark in lieu of manufacturer's name.
- Certificate number in the format: CSA21CA80072560X.
- Model designation: As specified in the PRODUCTS section, above.
- Electrical ratings: As specified in the PRODUCTS section, above.
- Ambient temperature rating: As specified in the PRODUCTS section, above.
- Manufacturing date in MMYY format, or serial number, traceable to year and month of manufacture.
- Enclosure ratings: As specified in the PRODUCTS section, above.
- The CSA Mark, as shown on the Certificate of Conformity.
- Hazardous Location designation: As specified in the PRODUCTS section, above (may be abbreviated).
- Temperature range: As specified in the PRODUCTS section, above.

The following additional markings are also provided for the HiD2030 and HiD2030SK Smart Transmitter Power Supplies:

- The symbol "[Exia]"
- The words "Associated Equipment"
- Reference to I.S. Control Drawing
- Entity Parameters, Nominal Input, Switched Output
- The words "WARNING– SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY".
  AVERTISSEMENT - LA SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA SÉCURITÉ INTRINSÈQUE

Additional marking for Ord Loc

Mark	Symbol	Reference	Title	Mark	Symbol	Reference	Title
√		IEC 60417-5031	Direct current	√		ISO 7000-0434A	Caution