



Certificate of Compliance

Certificate: 70004139

Master Contract: 169790

Project: 80167429

Date Issued: 2023-05-31

Issued To: Pepperl+Fuchs SE
Lilienthalstrasse 200
Mannheim, Baden-Württemberg, 68307
Germany

Attention: Nils Bleshey

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: *Arbaz Ahmad*

Arbaz Ahmad

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, Division 2, Groups A, B, C, and D, Temp. Code T4:

AEx / Ex e ib mb [ia Ga] IIC T4 Gb:

AEx / Ex e ib mb [ia IIIC Da] IIC T4 Gb:

Associated equipment for Class I, Division 1, Groups A, B, C, D, Class II, Division 1, Groups E, F, G and Class III, Division 1:

Ta: -40°C to +70°C

Fieldbus Barrier type R4D0-FB-IA**.****, rated 16-32Vdc, max. 3.6W providing intrinsically safe circuits to up to 12 separate outputs when installed as per drawing 116-0400. The equipment has the following entity parameters at terminals 1(+,-) ... 12(+,-):

Certificate: 70004139

Project: 80167429

Master Contract: 169790

Date Issued: 2023-05-31

U _o /V _{oc}	17.10 V
I _o /I _{sc}	248.55 mA
P _o /P _{out}	1063 mW
R _i	68.80 Ω
C _i	Negligible
L _i	Negligible
Co/Ca (IIC)	367 nF
Lo/La (IIC)	0.47 mH
Co/Ca (IIB)	2150 nF
Lo/La (IIB)	2.0 mH
Co/Ca (IIA)	8800 nF
Lo/La (IIA)	4.0 mH

Note: These above values are only applicable, if the internal inductance L_i or the internal capacitance C_i of the connected equipment is $\leq 1\%$ of the above specified values. If L_i as well as C_i of the connected equipment are $> 1\%$ of the specified values, the specified values of L_o and C_o shall be reduced to 50 %.

The reduced capacitance of the external circuit (capacitance of the cable + internal capacitance of the connected equipment) shall not exceed 1 μ F for groups IIA, IIB and IIC and 600 nF for group IIC.

For use of the Fieldbus Barrier in a fieldbus-system:

Up to 32 FISCO field devices can be connected to each output. All field devices shall be passive (non-supplying).

For each field device:

Maximum internal capacitance $C_i = 5$ nF

Maximum internal inductance $L_i = 10$ μ H

The used fieldbus cable needs to be in the following range:

Loop resistance $R_c = 15 \dots 150$ Ω/km

Loop inductance $L_c = 0.4 \dots 1$ mH/km

Capacitance $C_c = 45 \dots 200$ nF/km

On each output circuit a maximum cable length of 1 km for group IIC and 5 km for groups IIA, IIB and IIC may be connected. If more than one device is connected, the spur cable to each device must be shorter than 60m. The maximum cable length must include all spur cables.

In accordance with the Entity-concept of Foundation Fieldbus FF-816:

Up to 6 field devices of type 111, 112, 511 or 512 may be connected to each output. All field devices shall be passive (non-supplying).

For each field device:

Maximum internal capacitance $C_i = 5$ nF

Maximum internal inductance $L_i = 20$ μ H

The used fieldbus cable needs to be in the following range:

Loop resistance $R_c = 15 \dots 150$ Ω/km



Certificate: 70004139

Project: 80167429

Master Contract: 169790

Date Issued: 2023-05-31

Loop inductance $L_c = 0.4 \dots 1$ mH/km

Capacitance $C_c = 45 \dots 200$ nF/km

On each output circuit a maximum cable length of 1 km for group IIC and 1.9 km for groups IIA, IIB and IIIC may be connected. If more than one device is connected, the spur cable to each device must be shorter than 60 m. The maximum cable length must include all spur cables.

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. 60079-7:12	Explosive Atmospheres – Part 7: Equipment protection by increased safety "e"
CAN/CSA-C22.2 No. 60079-11:14	Explosive Atmospheres – Part 11: Equipment protection by intrinsic safety "i"
CAN/CSA-C22.2 No. 60079-18:12	Explosive Atmospheres – Part 18: Equipment protection by encapsulation "m"
CSA Std. C22.2 No. 213-M1987	Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
ANSI/ISA-61010-1 3 rd Edition	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements - Third Edition
UL 913 (8 th Edition)	Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III, Division 1, Hazardous Locations
ANSI/ISA-12.12.01-2013	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 60079-7:08	Explosive Atmospheres – Part 7: Equipment protection by increased safety "e"
ANSI/UL 60079-11:13	Electrical apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety "i"
ANSI/UL 60079-18:12	Explosive atmospheres - Part 18: Equipment protection by encapsulation "m"



Certificate: 70004139

Project: 80167429

Master Contract: 169790

Date Issued: 2023-05-31

MARKINGS

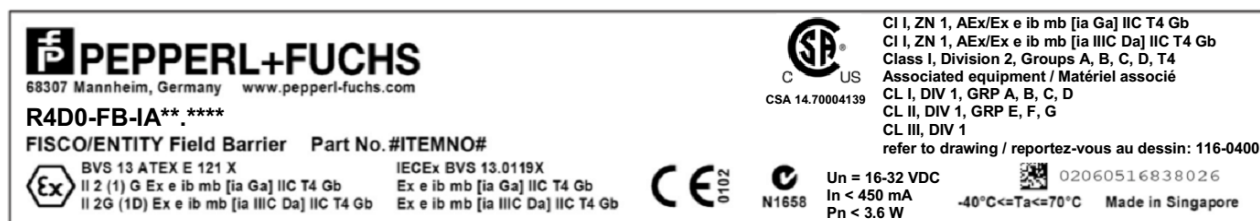
The manufacturer is required to apply the following markings:

- 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.

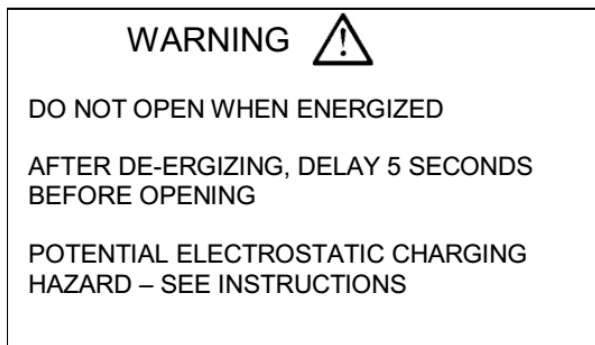
Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

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 markings may be applied via an adhesive label or they may be laser etched on the device. The adhesive label to be used is a CSA listed material (32052008 Polymatic 50, manufactured by Woelco AG, CSA File 059424) and is listed in drawing 160973CS-10.



IP-30 cover



Alternative sticker for serial number



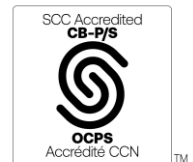


Certificate: 70004139
Project: 80167429

Master Contract: 169790
Date Issued: 2023-05-31

Notes:

Products certified under Class C225804, C225884 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca





Supplement to Certificate of Compliance

Certificate: 70004139

Master Contract: 169790

*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
80167429	2023-05-31	FIR follow-up, update Report 70004139 to address FC# 169793, FIR dated Apr 6,2023
70004139	2014-07-29	Original certification of the R4D0-FB-IA**,**** Fieldbus Barrier based on IECEx BVS 13.0119X.