

CERTIFICATE OF CONFORMITY



- HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS**
- Certificate No:** FM22CA0015X
- Equipment:** KFD2-CRG2-Ex1.Da Transmitter Supply Isolator
(Type Reference and Name) KFU8-CRG2-Ex1.Da Transmitter Supply Isolator
- Name of Listing Company:** Pepperl+Fuchs SE
- Address of Listing Company:** Lilienthalstrasse 200
Mannheim D-68307
Germany
- The examination and test results are recorded in confidential report number:
3033495 dated 17th September 2008
- FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:
CSA-C22.2 No. 213:1987, CAN/CSA-C22.2 No. 60079-0:2007, CAN/CSA-C22.2 No. 60079-11:2011,
CAN/CSA-C22.2 No. 60079-15:2002, CAN/CSA-C22.2 No. 1010-1:1992
- If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

24 March 2022

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

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SCHEDULE



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9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

10. Equipment Ratings:

KFD2-CRG2-Ex1.Da Transmitter Supply Isolator

Associated Intrinsically Safe apparatus for connection to Class I, II and III, Division 1, Groups ABCDEFG;
Intrinsically safe connections to Class I, Zone 0, [Ex ia] IIC
Non sparking and Protected sparking, Class I, Zone 2, Ex nA nC, Group IIC T4
Nonincendive for Class I, Division 2, Groups A, B, C and D; T4
Ta = -20°C to +60°C

KFU8-CRG2-Ex1.Da Transmitter Supply Isolator

Associated Intrinsically Safe apparatus for connection to Class I, II and III, Division 1, Groups ABCDEFG;
Intrinsically safe connections to Class I, Zone 0, [Ex ia] IIC
Ta = -20°C to +60°C

11. The marking of the equipment shall include:

KFD2-CRG2-Ex1.Da Transmitter Supply Isolator

Intrinsically Safe connections to Class I, II, III, Division 1, Groups A, B, C, D, E, F and G; Entity 16-554FM-12
Intrinsically Safe connections to Class I, Zone 0, [Ex ia] IIC– Entity 16-554FM-12
Ex nA nC IIC T4
Class I, Division 2, Groups A, B, C and D; T4
Ta = -20°C to +60°C

KFU8-CRG2-Ex1.Da Transmitter Supply Isolator

Intrinsically Safe connections to Class I, II, III, Division 1, Groups A, B, C, D, E, F and G; Entity 16-554FM-12
Intrinsically Safe connections to Class I, Zone 0, [Ex ia] IIC; Entity 16-554FM-12
Ta = -20°C to +60°C

12. **Description of Equipment:**

General - The KF**-CRG*-Ex1.** is a Transmitter Supply Isolator which provides intrinsically safe isolated outputs for apparatus located within a Division 1, Zone 0 or Zone 1, hazardous (classified) location. The input voltage of the isolator is 20-30V dc for the KFD2 versions and 20 to 90Vdc or 48 to 253Vac for the KFU8 options. Both versions have been assessed for a Um of 250V.

The KF**-CRG*-Ex1.** is a Transmitter Supply Isolator circuit is housed within a polycarbonate enclosure offering a degree of protection of at least IP20 and is intended for DIN rail mounting. There are two printed circuit boards within the KF**-CRG*-Ex1.**, the power supply board and the amplifier board.

The KF**-CRG*-Ex1.** has been examined and tested for operation at ambient temperatures of -20°C to +60°C.

Ratings –

KFD2-CRG2-Ex1.Da Transmitter Supply Isolator

a = options which do not affect intrinsic safety.

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KFU8-CRG2-Ex1.Da Transmitter Supply Isolator

a = options which do not affect intrinsic safety.

V_{oc} (U_o) (V)	I_{sc} (I_o) (mA)	P_o (mW)	Group	C_a, C_o (μF)	L_a, L_o (mH)
Terminals 1, 2, 3					
25.8	112	720	A, B, IIC	0.101	2.5
			C, E, F, G, IIB	0.78	10
			D, IIA	2.67	20
Terminals 1, 3					
25.8	93.7	603	A, B, IIC	0.101	4
			C, E, F, G, IIB	0.78	15
			D, IIA	2.67	30
Terminals 2, 3					
5	0.3	0.3	A, B, IIC	1000	1000
			C, E, F, G, IIB	1000	1000
			D, IIA	1000	1000

13. **Specific Conditions of Use:**

1. In Class I, Division 2 installations, the subject equipment shall be mounted within a tool-secured enclosure which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the Canadian Electrical Code (C22.1)
2. In Class I, Zone 2 installations, the subject equipment shall be mounted within a tool-secured enclosure which is capable of accepting one or more of the Class I, Zone 2 wiring methods specified in the Canadian Electrical Code (C22.1). Where installed in outdoor or potentially wet locations, the enclosure shall, at a minimum, meet the requirements of IP54. Where installed in dry, clean, indoor locations, the enclosure shall, at a minimum, meet the requirements of IP4X
3. It is the responsibility of the manufacturer to provide warning markings in French where required by local jurisdictions.

14. **Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals Canadian Certification Scheme.

15. **Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

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16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
17 th September 2008	Original Issue.
24 th March 2022	<u>Supplement 3:</u> Report Reference: – RR231738 dated 24 th March 2022. Description of the Change: <ol style="list-style-type: none">1) CSA C22.2 No. 157:2002 removed from standards list2) CSA C22.2 No. 60079-11:2002 updated to CSA C22.2 No. 60079-11:20113) Certificate updated to new format

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