

CERTIFICATE OF CONFORMITY

- HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS**
- Certificate No:** FM18CA0121X
- Equipment:** KFD2-WAC2-Ex1.D*
(Type Reference and Name) Signal Converter
- Name of Listing Company:** Pepperl+Fuchs GmbH
- Address of Listing Company:** Lilienthalstrasse 200
D-68307 Mannheim
Germany
- The examination and test results are recorded in confidential report number:

3034692 dated 23rd June 2009
- FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

CAN/CSA-C22.2 No. 60079-0:2011, CAN/CSA-C22.2 No. 60079-11:2014,
CAN/CSA-C22.2 No. E60079-15:2002 (Re-affirmed 2006), CAN/CSA-C22.2 No. 61010-1:2004, CAN/CSA-C22.2 No.213:1987 (Re-affirmed 2008)
- 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.
- 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.

Certificate issued by:



J.E. Marquedant
Manager, Electrical Systems

13 December 2018

Date

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

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SCHEDULE



Canadian Certificate Of Conformity No: FM18CA0121X

10. Equipment Ratings:

Associated intrinsically safe (entity) equipment with connections for Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; Associated intrinsically safe (entity) equipment with [Ex ia] connections for Class I, Zone 0, Group IIC per control drawing 116-0302; Class I, Division 2, Groups A, B, C, D, temperature class T4, Ex nA nC IIC Gc for Class I, Zone 2, temperature class T4 hazardous (classified) locations. The equipment is Approved for use over an ambient temperature range of -20°C to 60°C.

11. The marking of the equipment shall include:

CL I, DIV 2, GP A-D T4, IS circuits for CL I, II, III, DIV 1, GP A-G; CL I, ZN 2 Ex nA nC IIC T4 Gc, IS circuits for CL 1, ZN 0 [Ex ia] IIC, install per 116-0302. Ambient temperature: -20°C to +60°C

12. Description of Equipment:

General – The KFD2-WAC2-Ex1.D* Signal Converter provides intrinsically safe isolated outputs for apparatus located within a Division 1, Zone 0 or Zone 1 hazardous location.

Construction - The KFD2-WAC2-Ex1.D* utilizes a polycarbonate enclosure which provides a degree of protection of IP20 and is configured for mounting to a 35 mm DIN rail. Connection to field wiring is by way of externally-mounted screw terminals.

Ratings – The input voltage is 20-30 V. The signal converter was assessment for a maximum Um of 250 V rms. The rated ambient temperature range is -20°C to +60°C.

Model designation and entity parameters are as follows:

KFD2-WAC2-Ex1.Da, where “a” indicates options not impacting the types of protection

Terminals: 1,2,3,4,5,6					
V _{oc} , U _o (V)	I _{sc} , I _o (mA)	P _o (mW)	Group	C _a , C _o (µF)	L _a , L _o (mH)
14	238	833	A, B, IIC	0.73	0.62
			C, E, F, G, IIB	4.6	2.5
			D, IIA	17	5

13. Specific Conditions of Use:

- 1) In Class I, Division 2 installations, the isolators shall be installed within a tool-secured enclosure which is capable of accepting one or more of the Class I, Division 2 wiring methods as specified in the Canadian Electrical Code (C22.1).
- 2) In Class I, Zone 2 installations, the isolators shall be installed within a tool-secured enclosure which is capable of accepting one or more of the Class I, Zone 2 wiring methods as specified in the Canadian Electrical Code (C22.1). Where installed in outdoor or potentially wet locations, the enclosure shall, at

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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 require 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.

16. **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
23 rd June 2009	Original issue as certificate 3034692
13 th December 2018	<u>Supplement: 1</u> Report reference: RR215072 dated 13 th December 2018 Description of Change: Minor changes to construction and documentation. Adopt new format certificate. Correct and update list of applicable standards. Relocate critical documentation from file 3009603 to file 3034692.

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