

CERTIFICATE OF CONFORMITY

- HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
- Certificate No:** FM18US0254X
- 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:

FM Class 3600:1998, FM Class 3610:2007, FM Class 3611:2004, FM Class 3810:2005,
ANSI/ISA 12.12.02:2003, ANSI/ISA 60079-0:2009, ANSI/ISA 60079-11:2014
- 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. F. Marquedant
VP, 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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FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
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SCHEDULE



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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 [AEx 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, AEx 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 AEx nA nC IIC T4 Gc, IS circuits for CL 1, ZN 0 [AEx 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 National Electrical Code (ANSI/NFPA 70).
- 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 National Electrical Code (ANSI/NFPA 70). Where installed in outdoor or potentially wet locations, the enclosure

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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.

14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

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
25 th May 2010	<u>Supplement: 1</u> Report reference: 3034692rev100409 dated 25 th May 2010 Description of Change: Correct errors in original report, including edition references for standards FM 3600 and FM 3610.
13 th December 2018	<u>Supplement: 2</u> Report reference: RR215072 dated 13 th December 2018 Description of Change: Minor changes to construction and documentation. Correct and update list of applicable standards. Relocate critical documentation from file 3009603 to file 3034692.

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