CERTIFICATE OF CONFORMITY

FM Approvals

1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** **FM17US0334X**
3. **Equipment:** **KFD Series Transformer Isolated Devices**
   (Type Reference and Name)
4. **Name of Listing Company:** **Pepperl+Fuchs SE**
5. **Address of Listing Company:** **Lilienthalstrasse 200, D-68307 Mannheim, Germany**
6. The examination and test results are recorded in confidential report number:

   1Z2A1.AX dated 28th March 1995

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

   FM 3600:2022, FM 3610:2015, FM 3611:2016, FM 3810:2018

8. 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.
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:

    Intrinsically safe outputs for connection to Class I, II and III, Division 1, Groups A, B, C, D, E, F and G, Entity when in installed in accordance with drawing number 116-0129. Nonincendive for use in Class I, Division 2 Groups A, B, C and D, temperature class T4, -20°C ≤ Ta ≤ 60°C.

11. The marking of the equipment shall include:

    Intrinsically safe “Entity” connections for Class I, II, III, Division 1, Groups A, B, C, D, E, F& G;
    Nonincendive for use in Class I, Division 2, Groups A, B, C and D;
    T4 when installed per P+F Control Drawing 116-0129.

12. **Description of Equipment:**

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

06/16/2026
Date

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

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FM Approvals LLC. 1165 Boston-Providence Turnpike, Norwood, MA 02062 USA
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SCC Accredited CB-P/S OCPS Accredité CCN

SCHEDULE

US Certificate of Conformity No: FM17US0334X

The transformer-isolated associated apparatus limit energy in electrical circuits to intrinsically safe levels. The modules are housed within polymeric enclosures providing IP20 ingress protection. Mounting is by way of DIN rail. Electrical connections are via screw terminals or Power Rail

The isolators are rated for operation over 20 to 35 Vdc. Rated operating ambient temperature range is -20°C to 60°C. Applicable models and entity parameters are as follows:

Type	***V_{oc} (V)***	***I_{sc} (mA)***	***V_t (V)***	***I_t (mA)***	***C_a (µF)***	***L_a (mH)***
Potentiometer Amplifiers:						
KFD2-PT2-Ex1-a, *where a = 1 to 5 or blank*	–	–	10.4	31.4	2.53	36.07
KFD2-PT2-Ex1-Y98312	–	–	10.4	46	2.53	17.23
KFD2-PT2-Ex1-1-Y107265	–	–	10.4	46	2.53	17.23
KFD2-PT2-Ex1-2-Y107266	–	–	10.4	46	2.53	17.23
KFD2-PT2-Ex1-3-Y107267	–	–	10.4	46	2.53	17.23
KFD2-PT2-Ex1-4-Y107268	–	–	10.4	46	2.53	17.23
KFD2-PT2-Ex1-5-Y107269	–	–	10.4	46	2.53	17.23
KFD2-PT2-Ex1-6-Y112844	–	–	10.4	46	2.53	17.23
	4.3	22.0	–	–	0.099	2.82
Single-Channel Smart Current Driver:						
KFD2-SCD-Ex1.LK	25.2	93.0	–	–	0.107	4.30
Single-Channel Voltage Repeaters:						
KFD2-VR-Ex1.18	18.0	4.2	–	–	0.309	492
KFD2-VR-Ex1.19	18.0	4.2	–	–	0.309	492
KFD2-VR-Ex1.19-Y109129	15.5	7.2	–	–	0.309	492

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1. The Transformer Isolators shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.

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
28 March 1995	Original Issue
3 November 1995	Supplement 1: Report Reference: 1Z2A1.AXrev951016 dated 3rd November 1995 Description of Change: Addition of Approval for Class I, Division 2
22 August 1997	Supplement 2: Report Reference: 1Z2A1.AXrev970813 dated 22nd August 1997 Description of Change: Correction to Approval Guide Listing
10 June 2013	Supplement 3: Report Reference: 1Z2A1.AXrev130521 dated 10th June 2013 Description of Change: Partial de-listing of Approved products
10 June 2015	Supplement 4: Report Reference: 3049791 dated 10th June 2015 Description of Change: Re-examination to FM Class 3610, 2010
27 November 2017	Supplement 5: Report Reference: RR211726 dated 27th November 2017 Description of Change: Re-listing of model KFD2-CD-Ex1.32a, de-listing of invalid model number KFD2-SD-Ex1.10100. Removal of previously de-listed model KFD2-CR-Ex1.30-340. Removal of KFD0-CS-Ex 1.51P, separately addressed under Project ID / Certificate 3003045, from Certificate

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Date	Description
8 February 2018	Supplement 6: Report Reference: 3063575 dated 8th February 2018 Description of Change: Design changes to model #KFD2-CD-Ex1.32-a. FM 3600, FM 3610, FM 3611, and FM 3810 have been updated to the latest editions. Corrected the company address to the Mannheim, Germany location.
16 June 2026	Supplement 7: Report Reference: RR250964 dated 16 June 2026. Description of the Change(s): Delist of model KFD2-CD-Ex1.32-a. FM3600 updated to 2022 for non-technical reasons.

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