CERTIFICATE OF CONFORMITY

1. **HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS**
2. **Certificate No:** **FM22CA0014X**
3. **Equipment:** **KFD2-HLC-Ex1.D.** HART Loop Converter**
   (Type Reference and Name)
4. **Name of Listing Company:** **Pepperl+Fuchs SE**
5. **Address of Listing Company:** **Lilienthalstrasse 200**
   Mannheim D-68307
   Germany
6. The examination and test results are recorded in confidential report number:

   3032427 dated 5th December 2008
7. 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. 94:2001, CSA-C22.2 No. 213:2004, CSA-C22.2 No. 142:2004, CSA-C22.2 No. 60529:2005, CAN/CSA-C22.2 No. 60079-0:2006, CAN/CSA-C22.2 No. 60079-11:2011, CAN/CSA-C22.2 No. 60079-15:2006
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.

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

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com

SCHEDULE

Canadian Certificate Of Conformity No: FM22CA0014X

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 (entity) connections to Class I, II and III, Division 1, Groups A, B, C, D, E, F and G; Intrinsically safe (entity) connections to Class I, Zone 0, [Ex ia] IIC per control drawing 116-0129P; Nonincendive for Class I, Division 2, Groups A, B, C and D; Non-sparking, Class I, Zone 2, Ex nA IIC; T4, Ta = -20°C to +60°C

11. The marking of the equipment shall include:
Intrinsically Safe connections to Class I, II, III, Division 1 Groups ABCDEFG; Entity – 116-0129
Intrinsically Safe connections to Class I, Zone 0, [Ex ia] IIC; Entity – 116-0129
Class I, Division 2, Groups ABCD T4
Class I, Zone 2 , Ex nA IIC T4
Ta = -20°C to +60°C

12. **Description of Equipment:**

General – The KFD2-HLC-Ex.1.D** are designed for industrial and Hazardous Location applications. The KFD2 Series HLC (HART-Loop-Converter) is intended to power a multi-variable HART field device located in the hazardous area. As an alternative, the HLC can be connected to an existing, separately powered IS loop operating in a passive HART mode. In both cases, the HLC will use the HART protocol to get three dynamic variables from the field device and to repeat them as 4-20mA signals on three safe area fully floating loops. All three versions have a front accessible LCD with push-button for the working configuration and visualization. While the KFD2-HLC-Ex1.D provides only basic function, the version KFD2-HLC-Ex1.D.2W provides two additional relay outputs and the version KFD2-HLC-Ex1.D.4S provides four additional relay outputs as fault indications versus the Safe Area side.

Ratings - The KFD2-HLC-Ex.1.D** utilize the following Entity parameters:

Entity Parameters	Terminals 1, 4 to 3	Terminals 2, 5 to 3
V_{oc}, U_o (V)	25.2	1.1
I_{sc}, I_o (mA)	104.9	11.9
P_o (mW)	661	4
U_i (V)	---	28
P_i (W)	---	1.33
C_a, C_o, Groups A, B, IIC (µF)	0.105	100
L_a, L_o, Groups A, B, IIC (mH)	3.2	251
L_o/R_o, Groups A, B, IIC (µH/Ω)	53	10000

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. In Class I, Zone 2 installations, the installer shall ensure protection of supply terminals against transient voltages exceeding 140% of the rated supply voltage.
4. 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.

16. **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
5th December 2008	Original Issue.
24th March 2022	Supplement 1: Report Reference: RR231738 dated 24th March 2022. Description of the Change: 1) CSA C22.2 No. 157:2002 removed from standards list 2) CSA C22.2 No. 60079-11:2002 updated to CSA C22.2 No. 60079-11:2011 3) Certificate updated to new format