



FM Approvals
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Member of the FM Global Group

CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

KFD2-HLC-Ex1.D. Model. HART-Loop-Converter.
KFD2-HLC-Ex1.D.2W Model. HART-Loop-Converter.
KFD2-HLC-Ex1.D.4S Model. HART-Loop-Converter.
 AIS/I,II,III/1/ABCDEFG - 116-0129P; Entity
 I/O/[AEx ia] IIC - 116-0129P; Entity
 NI/II/2/ABCD/T4; $-20\text{ }^{\circ}\text{C} \leq T_a \leq +60\text{ }^{\circ}\text{C}$
 I/2/AEx nA II T4, $-20\text{ }^{\circ}\text{C} \leq T_a \leq +60\text{ }^{\circ}\text{C}$

Entity Parameters	Terminals 1, 4 to 3	Terminals 2, 5 to 3
Voc, Uo (V)	25.2	1.1
Isc, Io (mA)	104.9	11.9
Po (mW)	661	4
Ui (V)		28
Pi (W)		1.33
Ca, Co, Groups A, B, IIC (uF)	0.105	100
La, Lo, Groups A, B, IIC (mH)	3.2	251
Lo/Ro, Groups A, B, IIC (uH/Ω)	53	10,000

Special Conditions of Use:

- 1) *In Class I, Division 2 installations, the subject equipment shall be mounted within a too-secured enclosure which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the National Electrical Code (ANSI/NFPA 70).*
- 2) *In Class I, Zone 2 installations, the subject equipment shall be mounted within a too-secured enclosure which is capable of accepting one or more of the Class I, Zone 2 wiring methods specified in the National Electrical Code (ANSI/NFPA 70). 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.*

Equipment Ratings:

KFD2-HLC-Ex1.D, KFD2-HLC-Ex1.D.2W and HFD2-HLC-Ex1.D.4S HART-Loop-Converter :
Intrinsically safe (entity) connections to Class I, II and III, Division 1, applicable Groups A, B, C, D, E, F and G; intrinsically safe (entity) connections to Class I, [AEx ia] IIC per control drawing 116-0129P; Entity; nonincendive for Class I, Division 2, Groups A, B, C and D, T4 at Tambient = -20°C to +60°C; non-sparking, Class I, AEx nA IIC, Tambient = -20°C to +60°C, hazardous (classified) indoor locations

FM Approved for:

Pepperl+Fuchs, Inc.
Twinsburg, OH
U.S.A.

This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

Class 3600	1998
Class 3610	2007
Class 3611	2004
Class 3810	2005
ANSI/ISA-12.00.01	1999
ANSI/ISA-12.02.01	2002
ANSI/ISA-82.02.01	2004
ANSI/IEC 60529	2004
ANSI/NEMA 250	1991

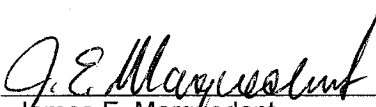
Original Project ID: 3032427

Approval Granted: *December 5, 2008*

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
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FM Approvals LLC


James E. Marquedant
Group Manager, Electrical

5 December 2008
Date