

Features

- 2-channel isolated barrier
- 24 V DC supply (bus powered)
- Current output up to 750 Ω load
- SMART I/P and valve positioners
- Line fault detection (LFD)
- Up to SIL2 acc. to IEC 61508

Function

This isolated barrier is used for intrinsic safety applications. It repeats a 4 mA ... 20 mA input signal from a control system to drive SMART I/P converters, valve actuators, and displays located in a hazardous area.

Digital signals may be superimposed on the analog values in the hazardous or safe area, which are transferred bi-directionally.

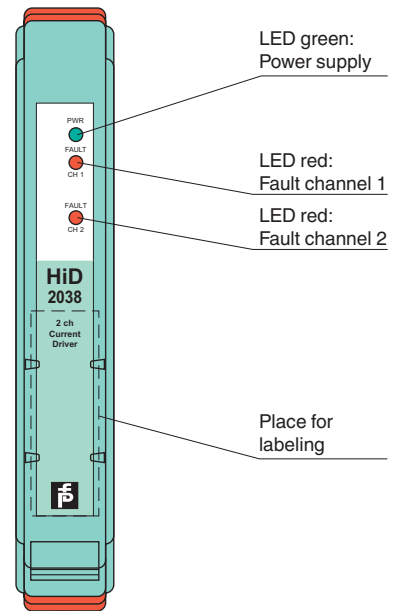
An open field circuit presents a high impedance to the control side to allow alarm conditions to be monitored by control systems.

Line fault detection of the field circuit is indicated by a red LED and an output on the fault bus. The fault conditions can be monitored via a Fault Indication Board.

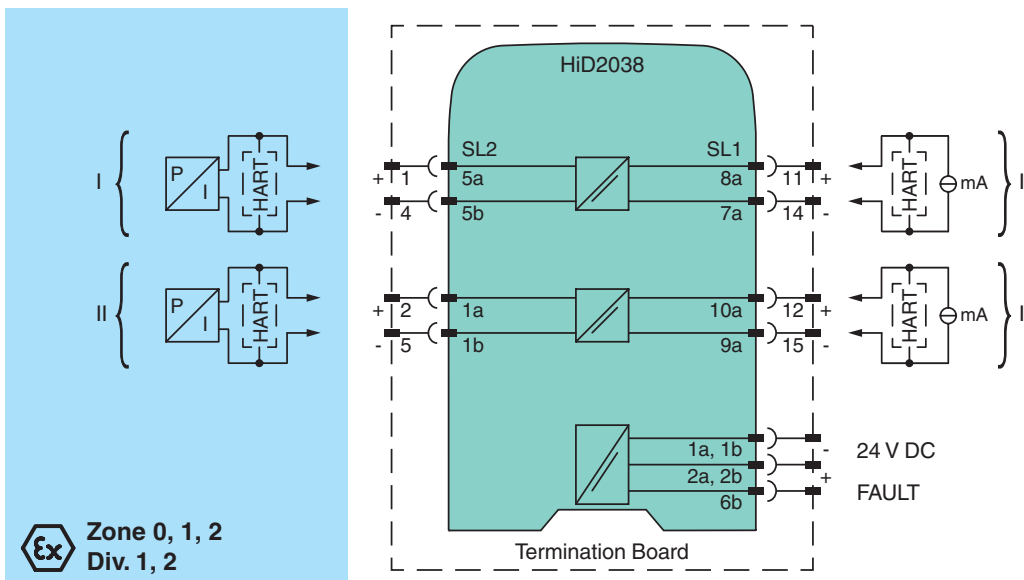
This module mounts on a HiD Termination Board.

Assembly

Front view



Connection



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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

General specifications	
Signal type	Analog output
Supply	
Connection	SL1: 1a(-), 1b(-); 2a(+), 2b(+)
Rated voltage	20.4 ... 30 V via Termination Board
Rated current	40 mA at 24 V, 20 mA output (per channel)
Power loss	0.85 W at 24 V (per channel)
Input	
Connection	SL1: 8a(+), 7a(-); 10a(+), 9a(-)
Input current	4 ... 20 mA , reverse polarity protected
Signal level	input voltage drop < 4 V with field wiring intact input current < 1.2 mA with field wiring open
Output	
Connection	SL2: 5a(+), 5b(-); 1a(+), 1b(-)
Load	0 ... 750 Ω
Output signal	4 ... 20 mA
Ripple	15 mV _{eff}
Response time	50 ms , 10 ... 90 % step change
Line fault detection	breakage, load > 100 kΩ, short-circuit, load < 70 Ω
Error message output	
Connection	SL1: 6b
Output type	open collector transistor (internal fault bus)
Transfer characteristics	
Calibrated accuracy	< ± 0.1 % of full-scale value
Influence of temperature	< ± 0.01 %/K
Frequency range	0.5 ... 40 kHz within 3 db, (-6 db at 100 kHz) for use with SMART positioners using HART protocol
Influence of load	< ± 0.1 % of full-scale value from 0 ... 750 Ω
Linearity	< ± 0.1 % of full-scale value
Electrical isolation	
Input/power supply	functional insulation acc. to DIN EN 50178, rated insulation voltage 50 V _{eff}
Input/input	functional insulation acc. to DIN EN 50178, rated insulation voltage 50 V _{eff}
Directive conformity	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
Conformity	
Electromagnetic compatibility	NE 21:2006 For further information see system description.
Degree of protection	IEC 60529
Ambient conditions	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Relative humidity	5 ... 90 %, non-condensing up to 35 °C (95 °F)
Mechanical specifications	
Degree of protection	IP20
Mass	approx. 140 g
Dimensions	18 x 106 x 128 mm (0.7 x 4.2 x 5 in)
Mounting	on Termination Board
Coding	pin 1 and 3 trimmed For further information see system description.
Data for application in connection with Ex-areas	
EC-Type Examination Certificate	CESI 02 ATEX 086 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	⊕ II (1)G [Ex ia Ga] IIC , ⊕ II (1)D [Ex ia Da] IIIC
Output	Ex ia, Ex iaD
Voltage	U _o 26 V
Current	I _o 93 mA
Power	P _o 605 mW
Supply	
Maximum safe voltage	U _m 250 V AC (Attention! U _m is no rated voltage.)
Statement of conformity	PF 11 CERT 2109 X , observe statement of conformity
Group, category, type of protection, temperature class	⊕ II 3G Ex nA IIC T4 Gc [device in zone 2]
Electrical isolation	
Input/Output	safe electrical isolation acc. to EN 60079-11: 2007, voltage peak value 375 V
Output/power supply	safe electrical isolation acc. to EN 60079-11: 2007, voltage peak value 375 V

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Output/Output	safe electrical isolation acc. to EN 60079-11:2007, voltage peak value 60 V
Directive conformity	
Directive 94/9/EC	EN 60079-0:2009, EN 60079-11:2007, EN60079-15:2005 , EN 60079-26:2007 , EN 61241-11:2006
International approvals	
CSA approval	
Control drawing	366-005CS-12B (cCSAus)
General information	
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com .

Configuration

No user configuration available for this device.



*The pins for this device are trimmed to polarize it according to its safety parameter. Do not change!
For further information see system description.*