

Features

- 1-channel isolated barrier
- 24 V DC supply (bus or loop powered)
- Output 60 mA at 13 V DC, 65 mA current limit
- Gas group IIB
- Contact or logic control input
- Line fault detection (LFD) with separate output
- Up to SIL2 acc. to IEC 61508 (bus powered)
- Up to SIL3 acc. to IEC 61508 (loop powered)

Function

This isolated barrier is used for intrinsic safety applications. It is used to supply power to solenoid valves, audible alarms, or LED indicators in the hazardous area.

It is controlled with a loop-powered control signal, a switch contact, transistor, or logic-level signal.

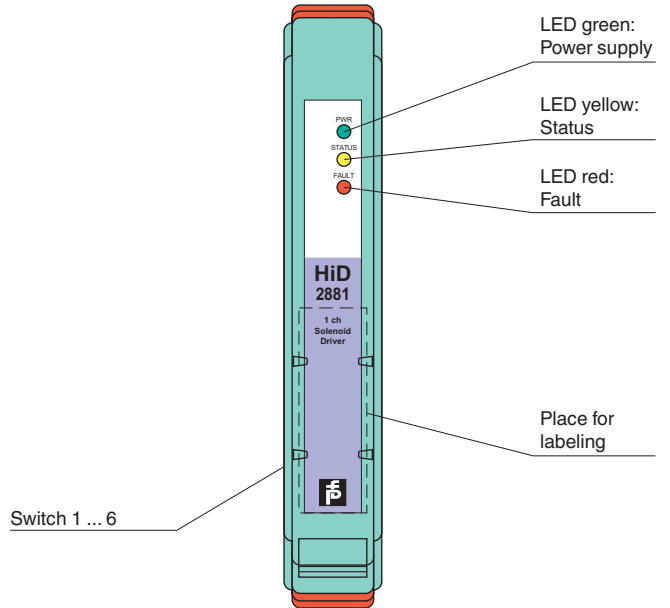
At full load, 13 V at 60 mA (with 65 mA current limit) is available for the hazardous area application.

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

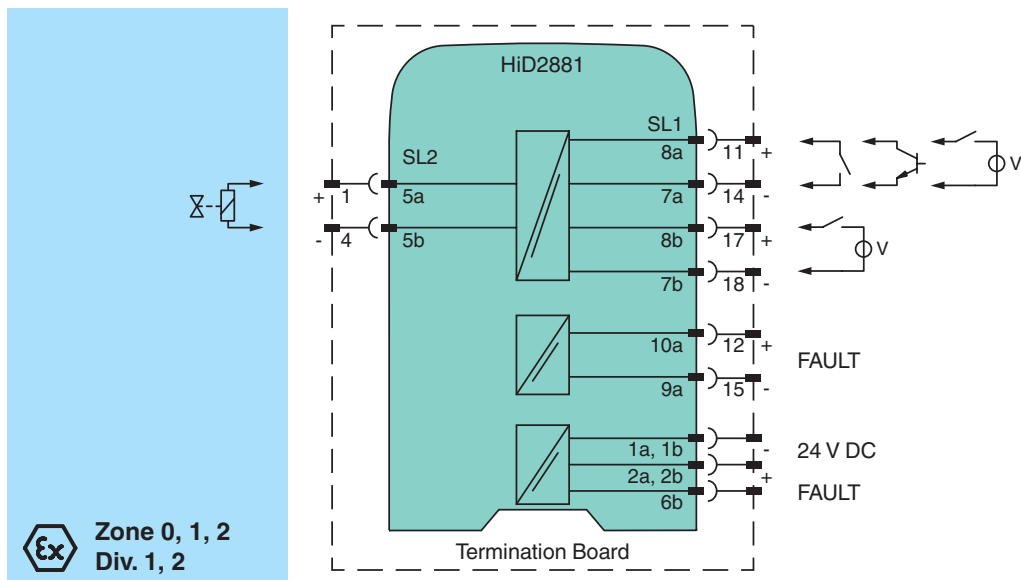
This module mounts on a HiD Termination Board.

Assembly

Front view



Connection



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

General specifications	
Signal type	Digital Output
Supply	
Connection	SL1: 1a(-), 1b(-); 2a(+), 2b(+)
Rated voltage	20.4 ... 30 V via Termination Board 21 ... 30 V DC loop powered , reverse polarity protected
Input	
Connection	SL1: 8a(+), 7a(-); 8b(+), 7b(-)
Control input	external switch (dry contact or open collector) non isolated or logic signal input fully floating
Input current	80 mA at 24 V, 300 Ω load
Power loss	1.3 W at 24 V, 300 Ω load
Inrush current	1 A , max. 2 ms, loop powered
Operating mode	output on with contact close or transistor on or logic level > 4 V output off with contact open or transistor off or logic level < 1.5 V
Output	
Connection	SL2: 5a(+), 5b(-)
Output voltage	60 mA at 13 V DC, 65 mA current limit
Load	0.1 ... 5 kΩ
Switching frequency f	max. 50 Hz
Response time	turn-on time 2 ms, turn-off time 8 ms, at 300 Ω load
Error message output	
Connection	SL1: 6b SL1: 10a(+), 9a(-)
Output type	SL1: 6b open collector transistor (internal fault bus) SL1: 10a(+), 9a(-) optocoupled transistor (rating 30 V, max. 50 mA)
Fault current	4 mA typical
Fault level	lead short-circuit detection at < 25 Ω lead breakage detection at > 100 kΩ typical
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 4 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	184 mA
Power P _o	1.2 W
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
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	

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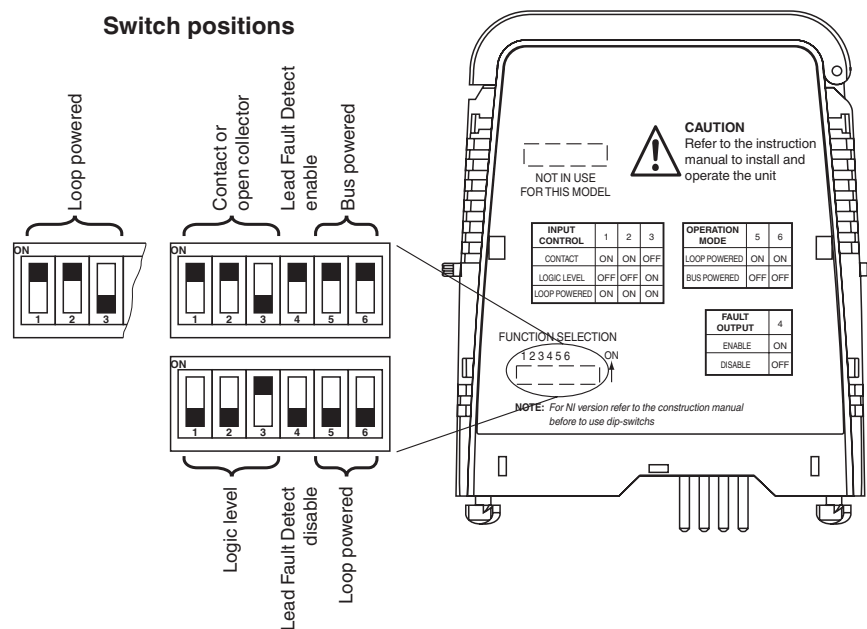
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CSA approval	
Control drawing	366-005CS-12B (cCSAus)
General information	
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com .

Configuration



The operation mode can be configured as:

- bus powered mode
- loop powered mode

The input control type can be configured as:

- voltage free contact control
- logic-level control

The fault output can be configured as:

- fault enable
- fault disable

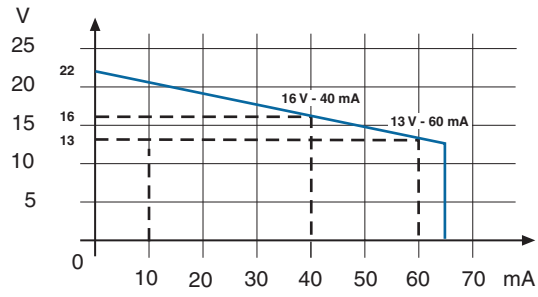
Configure the device in the following way:

- Push the red Quick Lok Bars on each side of the device in the upper position.
- Remove the device from Termination Board.
- Set the DIP switches according to the figure.



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

Output characteristic



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