

**Features**

- 2-channel isolated barrier
- 24 V DC supply (bus powered)
- Dry contact or NAMUR inputs
- 2 passive transistor outputs
- Line fault detection (LFD)
- Reversible mode of operation
- Up to SIL2 acc. to IEC 61508

**Function**

This isolated barrier is used for intrinsic safety applications. It transfers digital signals (NAMUR sensors/mechanical contacts) from a hazardous area to a safe area.

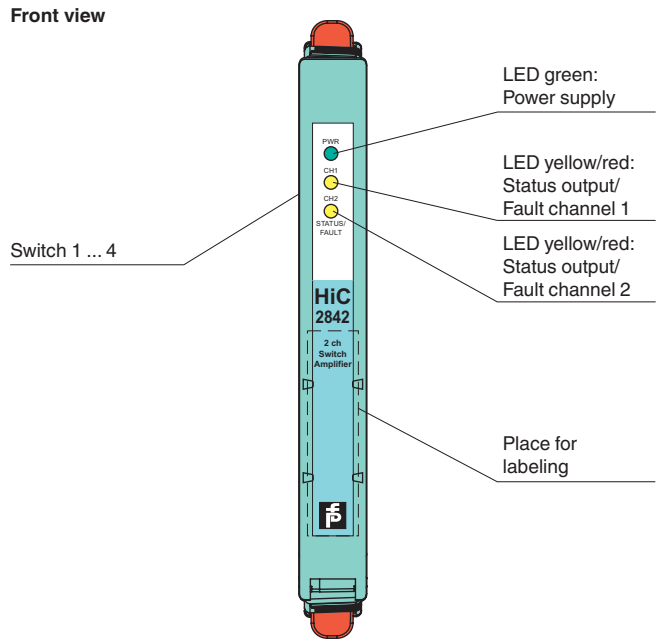
The proximity sensor or switch controls two passive transistors for the safe area load. Both transistor outputs are isolated from each other and isolated from the power supply.

The mode of operation can be reversed using switches S1 and S3. Switches S2 and S4 enable or disable line fault detection of the field circuit.

During an error condition, the transistors revert to their de-energized state and LEDs indicate the fault according to NAMUR NE44. A separate output bus is available. The fault conditions can be monitored via a Fault Indication Board.

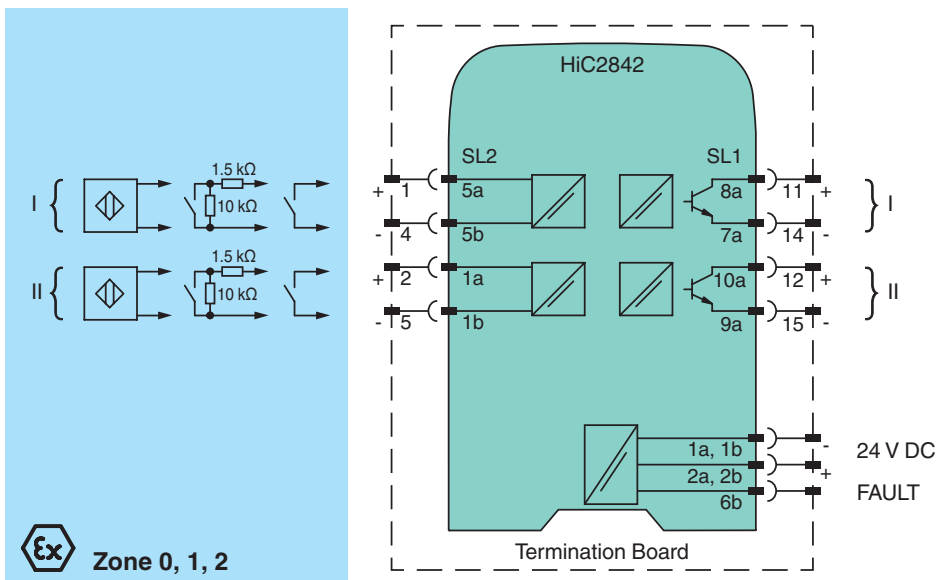
This module mounts on a HiC Termination Board.

**Assembly**



**SIL2**

**Connection**



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

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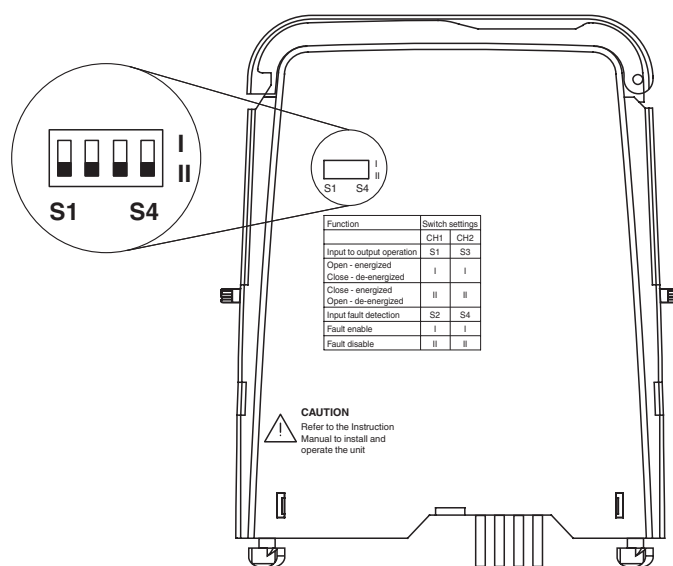
<b>General specifications</b>		
Signal type	Digital Input	
<b>Supply</b>		
Connection	SL1: 1a(-), 1b(-); 2a(+), 2b(+)	
Rated voltage	19 ... 30 V DC via Termination Board	
Ripple	≤ 10 %	
Rated current	≤ 30 mA	
Power loss	≤ 600 mW	
Power consumption	≤ 700 mW	
<b>Input</b>		
Connection	SL2: 5a(+), 5b(-); 1a(+), 1b(-)	
Rated values	acc. to EN 60947-5-6 (NAMUR), see system description for electrical data	
Open circuit voltage/short-circuit current	approx. 10 V DC / approx. 8 mA	
Switching point/switching hysteresis	1.2 ... 2.1 mA / approx. 0.2 mA	
Line fault detection	breakage I ≤ 0.1 mA , short-circuit I ≥ 6.5 mA	
Pulse/Pause ratio	≥ 100 μs / ≥ 100 μs	
<b>Output</b>		
Connection	SL1: 8a(+), 7a(-); 10a(+), 9a(-)	
Rated voltage	30 V DC	
Rated current	50 mA	
Response time	≤ 200 μs	
Signal level	1-signal: (external voltage) - 1 V max. for 50 mA (T <sub>amb</sub> = 25 °C (77 °F)) 0-signal: blocked output (off-state current ≤ 10 μA)	
Output I	signal ; Transistor	
Output II	signal ; Transistor	
<b>Error message output</b>		
Connection	SL1: 6b	
Output type	open collector transistor (internal fault bus)	
<b>Transfer characteristics</b>		
Switching frequency	≤ 5 kHz	
<b>Electrical isolation</b>		
Output/power supply	basic insulation acc. to EN 50178, rated insulation voltage of 50 V AC	
Output/Output	basic insulation acc. to EN 50178, rated insulation voltage of 50 V AC	
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2004/108/EC	EN 61326-1:2006	
<b>Conformity</b>		
Electrical isolation	EN 50178:1997	
Electromagnetic compatibility	NE 21:2006 For further information see system description.	
Degree of protection	IEC 60529	
Protection against electrical shock	IEC 61140	
<b>Ambient conditions</b>		
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)	
Relative humidity	≤ 90 % , non-condensing	
<b>Mechanical specifications</b>		
Degree of protection	IP20	
Mass	approx. 100 g	
Dimensions	12.5 x 128 x 106 mm (0.5 x 5.1 x 4.2 in)	
Mounting	on Termination Board	
Coding	pin 1 and 2 trimmed For further information see system description.	
<b>Data for application in connection with Ex-areas</b>		
EC-Type Examination Certificate	BVS 09 ATEX E 157 , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>	
Group, category, type of protection	$\text{Ex}$ II (1)GD [Ex ia] IIC, [Ex iaD] [circuit(s) in zone 0/1/2/20/21/22] $\text{Ex}$ I (M1) [Ex ia] I	
Input	Ex ia, Ex iaD	
Voltage	U <sub>o</sub>	10.5 V
Current	I <sub>o</sub>	17.1 mA
Power	P <sub>o</sub>	45 mW (linear characteristic)
<b>Supply</b>		
Maximum safe voltage	U <sub>m</sub>	253 V AC (Attention! U <sub>m</sub> is no rated voltage.)
<b>Output</b>		
Maximum safe voltage	U <sub>m</sub>	253 V AC (Attention! The rated voltage can be lower.)

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<b>Electrical isolation</b>	
Input/Output	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Input/power supply	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
<b>Directive conformity</b>	
Directive 94/9/EC	EN 60079-0:2006, EN 60079-11:2007 , EN 61241-11:2006, EN 61241-0:2006 , EN 60079-26:2007
<b>International approvals</b>	
<b>UL approval</b>	
Control drawing	116-0331
<b>IECEx approval</b>	
Approved for	[Ex ia Ga] IIC, [Ex ia] I , [Ex iaD]
<b>General information</b>	
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



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.*