

**Features**

- 2-channel isolated barrier
- 24 V DC supply (bus powered)
- Dry contact or NAMUR inputs
- 2 relay contact outputs
- Line fault detection (LFD)
- 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.

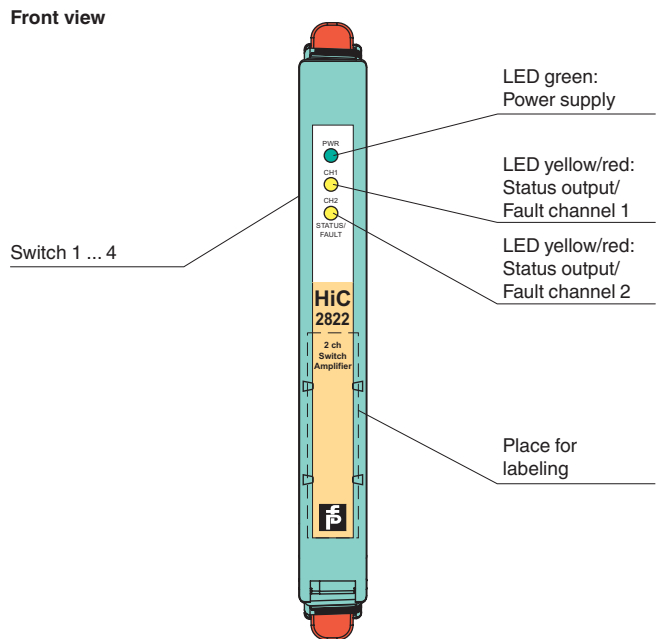
The proximity sensor or switch controls a form A normally open relay output for the safe area load. The module output changes state when the input signal changes state. The mode of operation can be reversed with the switches S1 and S3 on the side of the unit.

Line fault detection (LFD) can be selected or disabled via the switches S2 and S4.

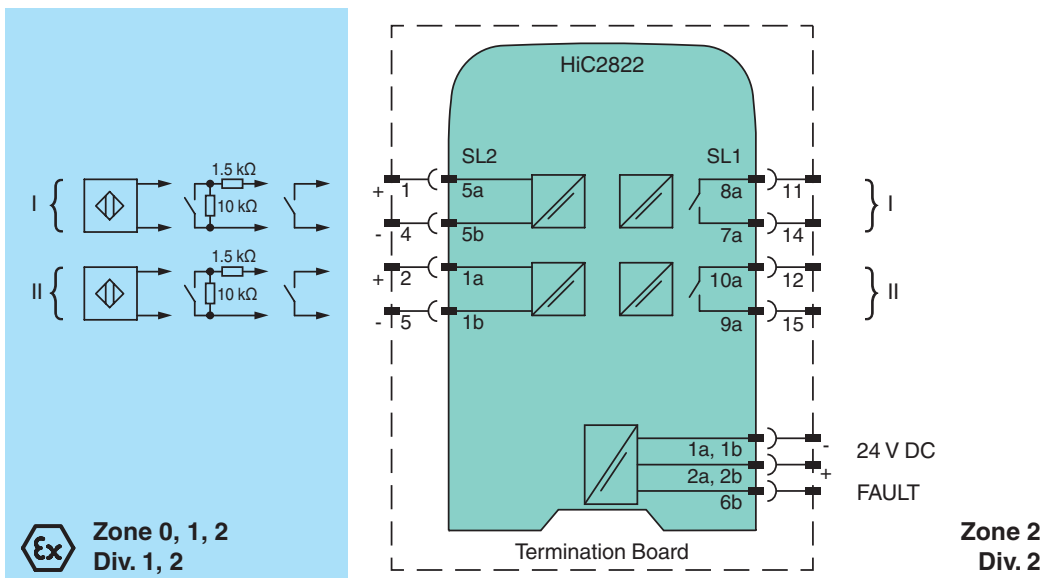
During an error condition, the relay reverts to its de-energized state and the LEDs indicate the fault. A separate fault output bus is available. The fault conditions can be monitored via a Fault Indication Board.

This module mounts on a HiC Termination Board.

**Assembly**



**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	≤ 600 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	≥ 20 ms / ≥ 20 ms	
<b>Output</b>		
Connection	SL1: 8a, 7a; 10a, 9a	
Output I	signal ; relay	
Output II	signal ; relay	
Contact loading	50 V DC / 0.5 A	
Minimum switch current	2 mA / 24 V DC	
Energized/De-energized delay	≤ 20 ms / ≤ 20 ms	
Mechanical life	10 <sup>7</sup> switching cycles	
<b>Error message output</b>		
Connection	SL1: 6b	
Output type	open collector transistor (internal fault bus)	
<b>Transfer characteristics</b>		
Switching frequency	≤ 10 Hz	
<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 60529:2001	
Input	EN 60947-5-6:2000	
<b>Ambient conditions</b>		
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)	
<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	BASEEFA 06 ATEX 0093 X , 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)G [Ex ia Ga] IIC $\text{Ex}$ II (1)D [Ex ia Da] IIIC $\text{Ex}$ I (M1) [Ex ia Ma] I	
Input	[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I	
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>		
Contact loading	50 V DC / 0.5 A	
Maximum safe voltage	U <sub>m</sub>	253 V AC (Attention! The rated voltage can be lower.)

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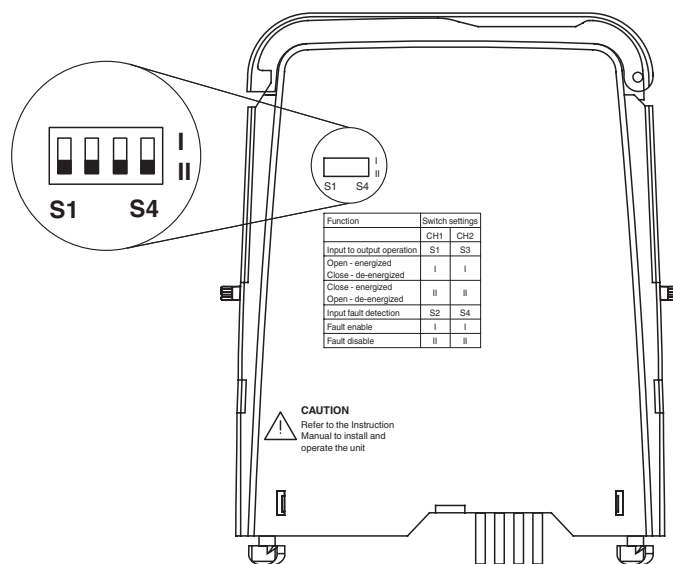
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Statement of conformity	PF 08 CERT 1047 X
Group, category, type of protection, temperature class	⊕ II 3G Ex nA nC IIC T4 Gc
Electrical isolation	
Input/Output	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Input/power supply	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Directive conformity	
Directive 94/9/EC	EN 60079-0:2009, EN 60079-11:2012 , EN 60079-15:2010
<b>International approvals</b>	
FM approval	
Control drawing	16-534FM-12 (cFMus)
IECEX approval	IECEX BAS 06.0026X
Approved for	[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I
<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



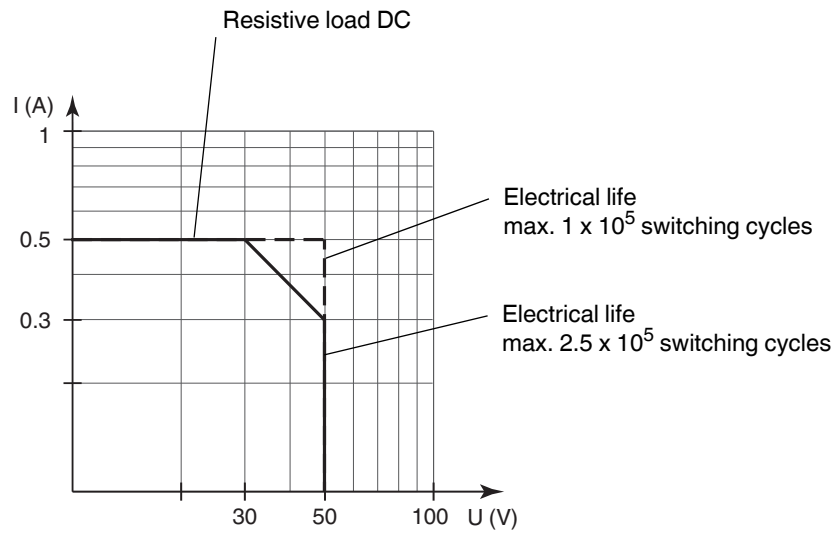
Configure the device in the following way:

- 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.*

**Maximum switching power of output contacts**



The maximum number of switching cycles is depending on the electrical load and may be higher when reduced currents and voltages are applied.