Features

- 2-channel isolated barrier
- 24 V DC supply (bus or loop powered)
- Contact or logic control input
- 2 relay contact outputs to the field side

Function

This isolated barrier is used for intrinsic safety applications. It is used to initiate control signals or to switch power from a protected supply to a load in a hazardous area.

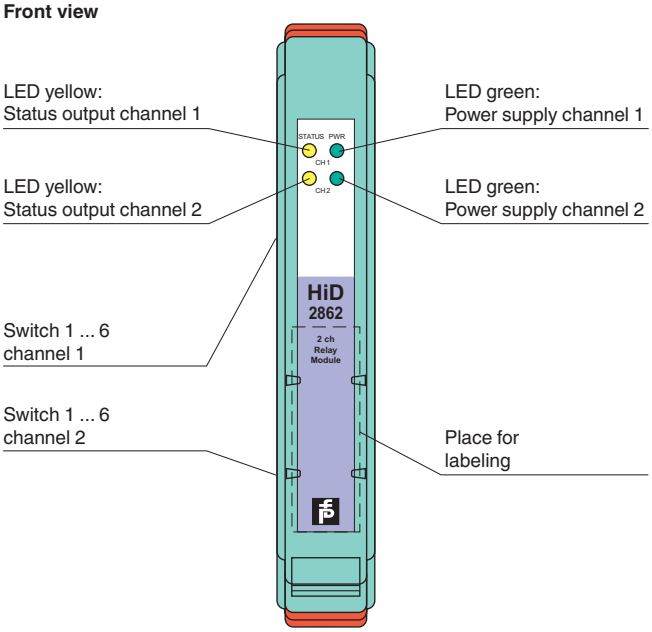
The relay output is driven from a loop-powered safe area control signal or controlled by a safe area switch contact, transistor, or logic-level input.

These command signals can be combined to enable the interaction of DCS and ESD systems. Each channel can be loop-powered, ensuring high integrity operation. LEDs provide the relay status of each channel.

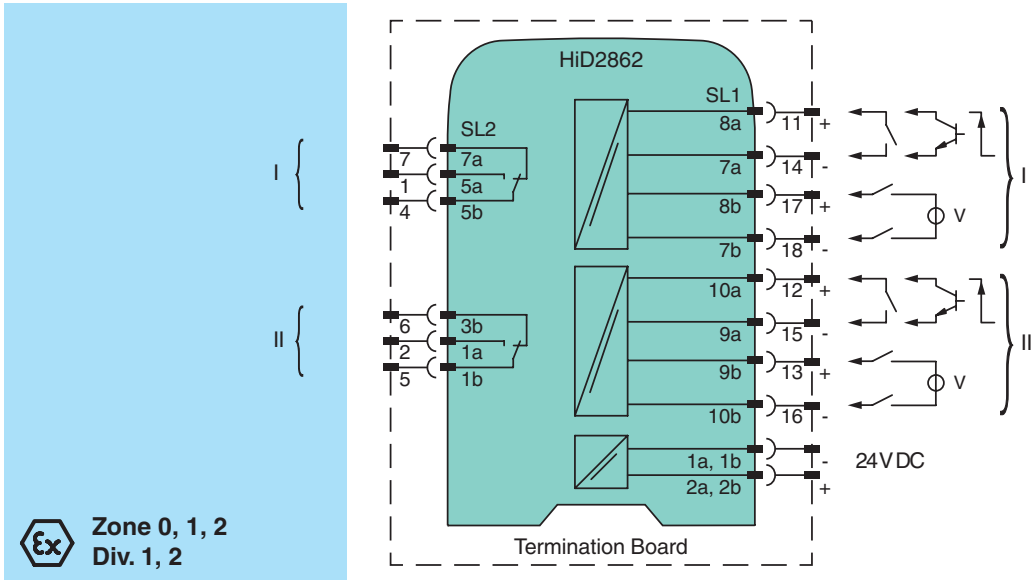
This module mounts on a HiD Termination Board.

Assembly

Front view



Connection



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General specifications		
Signal type		Digital Output
Supply		
Connection		SL1: 1a(-), 1b(-); 2a(+), 2b(+)
Rated voltage	U_r	20.4 ... 30 V DC loop powered 20.4 ... 30 V DC bus powered via Termination Board
Rated current	I_r	loop powered 27 mA at 24 V (per channel) bus powered 30 mA at 24 V (per channel)
Power dissipation		loop powered 0.6 W at 24 V (per channel) bus powered 0.9 W at 24 V (per channel)
Input		
Connection side		control side
Connection		SL1: 8a(+), 7a(-), 8b(+), 7b(-); 10a(+), 9a(-), 9b(+), 10b(-)
Control input		external switch (voltage free contact or open collector) or logic level signal
Input resistance		2.5 kΩ
Operating mode		relay energized with cntact closed, transistor on or logic level > 4 V relay de-energized with contact open, transistor off or logic level < 2 V
Output		
Connection side		field side
Output type		
Connection		SL2: 5a, 5b, 7a; 1a, 1b, 3b
Contact loading		50 V DC / 1 A
Transfer characteristics		
Switching frequency		10 Hz
Galvanic isolation		
Input/power supply		functional insulation acc. to EN 50178, rated insulation voltage 50 V_{eff}
Indicators/settings		
Display elements		LEDs
Control elements		DIP-switch
Configuration		via DIP switches
Labeling		space for labeling at the front
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
Conformity		
Galvanic isolation		EN 50178
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 inch)
Mounting		on Termination Board
Coding		pin 1, 2, 3 and 4 trimmed For further information see system description.
Data for application in connection with hazardous areas		
EU-Type Examination Certificate		CESI 02 ATEX 086
Marking		⟨Ex⟩ II (1)G [Ex ia Ga] IIC , ⟨Ex⟩ II (1)D [Ex ia Da] IIIC
Input		Ex ia, Ex iaD
Voltage	U_i	30 V
Current	I_i	1 A
Supply		
Maximum safe voltage	U_m	250 V AC (Attention! U_m is no rated voltage.)
Certificate		PF 11 CERT 2109 X
Marking		⟨Ex⟩ II 3G Ex nA nC IIC T4 Gc
Galvanic 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
Output/Output		safe electrical isolation acc. to EN 60079-11:2007, voltage peak value 60 V
Directive conformity		
Directive 2014/34/EU		EN 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 60079-15:2010

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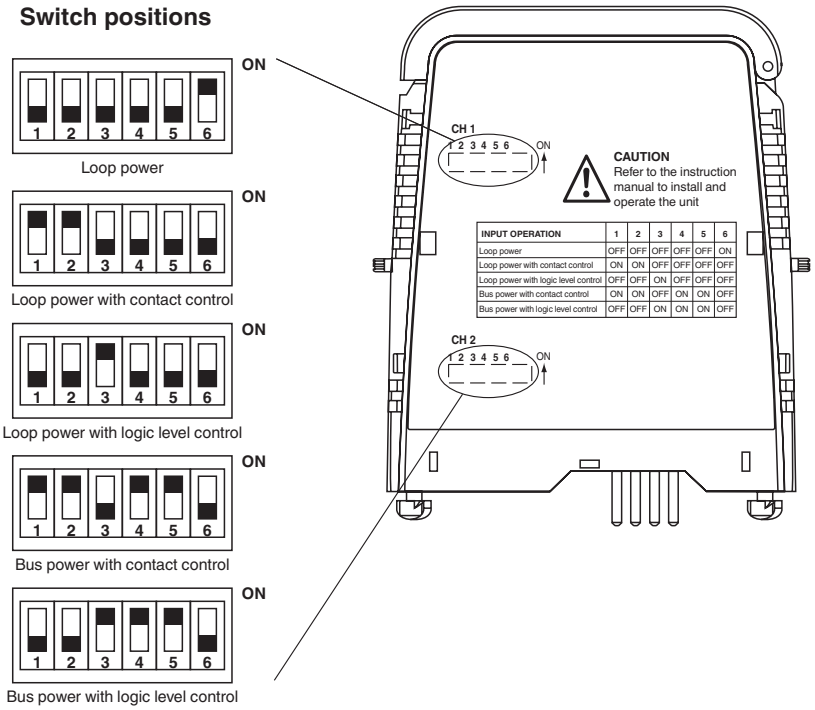
International approvals	
IECEx approval	IECEx TUN 04.0012
Approved for	[Ex ia] IIC
General information	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com.

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.

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