Features

- 1-channel isolated barrier
- 24 V DC supply (bus powered)
- Output 40 mA at 12 V DC, 52 mA current limit
- Contact or logic control input
- Line fault detection (LFD)

Function

This isolated barrier is used for intrinsic safety applications. It supplies power to solenoids, LEDs, and audible alarms located in a hazardous area.

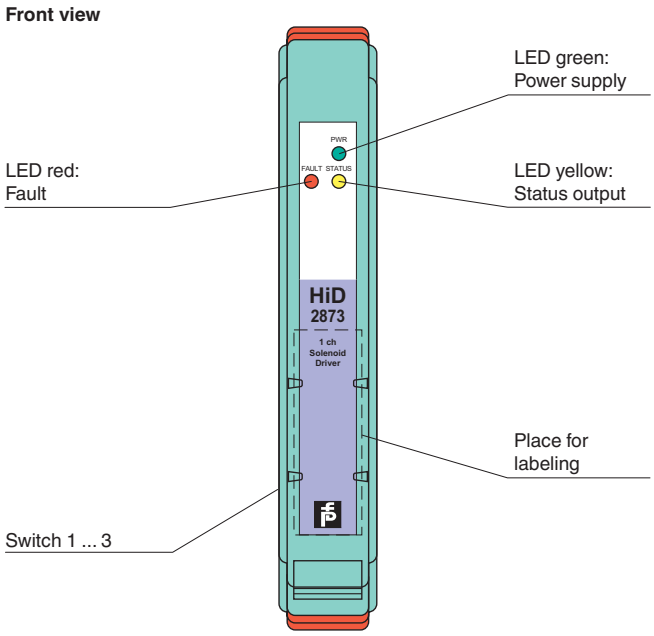
It is controlled with a switch contact, transistor, or logic-level signal.

At full load, 12 V at 40 mA (with 52 mA current limit) is available for the hazardous area application.

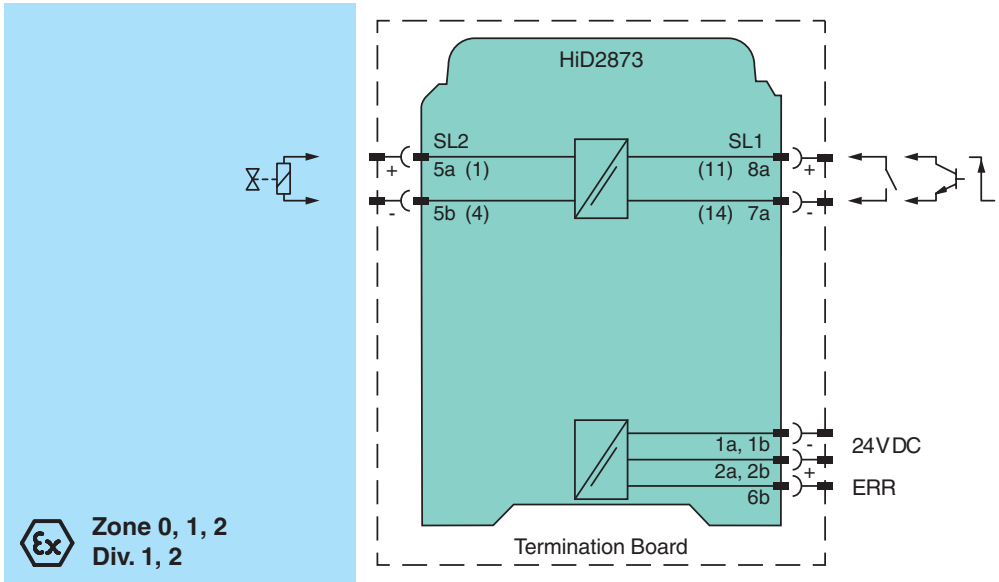
Line fault detection of the field circuit is indicated by a red LED and an output on the fault bus. The fault conditions are monitored via a Fault Indication Board.

This module mounts on a HiD Termination Board.

Assembly



Connection

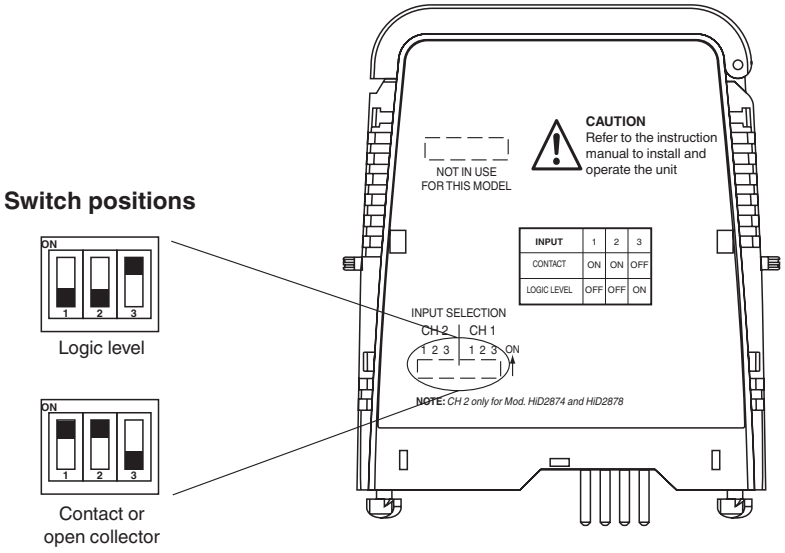


Release date 2012-06-28 09:43 Date of issue 2012-06-28 121502_eng.xml

General specifications		
Signal type		Digital Output
Supply		
Connection		SL1: 1a(-), 1b(-); 2a(+), 2b(+)
Rated voltage		20.4 ... 30 V via Termination Board
Input current		65 mA at 24 V, 300 Ω load
Power loss		1.1 W at 24 V, 300 Ω load
Input		
Connection		SL1: 8a(+), 7a(-)
Control input		external switch (dry contact or open collector) non isolated or logic signal input fully floating
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		40 mA at 12 V DC, 52 mA current limit
Load		0.1 ... 5 kΩ
Switching frequency	f	max. 250 Hz
Response time		turn-on time 1 ms, turn-off time 2 ms, at 300 Ω load
Error message output		
Connection		SL1: 6b
Output type		open collector transistor (internal fault bus)
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.
Protection degree		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		
Protection degree		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 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		⟨Ex⟩ II (1)G [Ex ia Ga] IIC , ⟨Ex⟩ II (1)D [Ex ia Da] IIIC
Output		Ex ia, Ex iaD
Voltage	U_o	26 V
Current	I_o	110 mA
Power	P_o	715 mW
Supply		
Maximum safe voltage	U_m	250 V AC (Attention! U_m is no rated voltage.)
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 , 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.

Release date 2012-06-28 09:43 Date of issue 2012-06-28 121502_eng.xml

Configuration



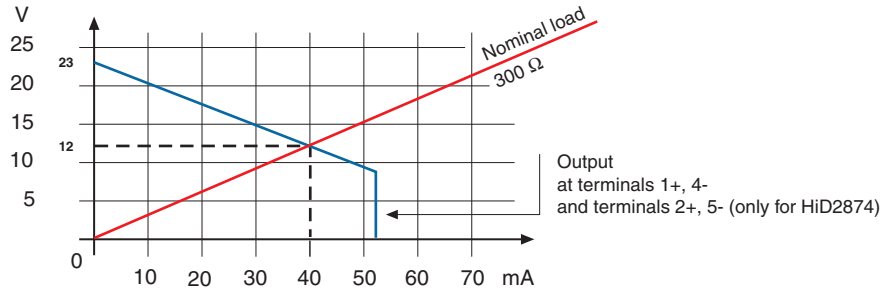
Channel 2 only for HiD2874 and HiD2878.

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



Release date 2012-06-28 09:43 Date of issue 2012-06-28 121502_eng.xml