

Features

- 2-channel isolated barrier
- 24 V DC supply (bus or loop powered)
- Output 40 mA at 11.2 V DC, 55 mA current limit
- Contact or logic control input
- Entity parameter $I_o/I_{sc} = 93 \text{ mA}$
- 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 supplies power to solenoids, LEDs, and audible alarms located in a hazardous area.

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

At full load, 11.2 V at 40 mA (with 55 mA current limit) is available for the hazardous area application.

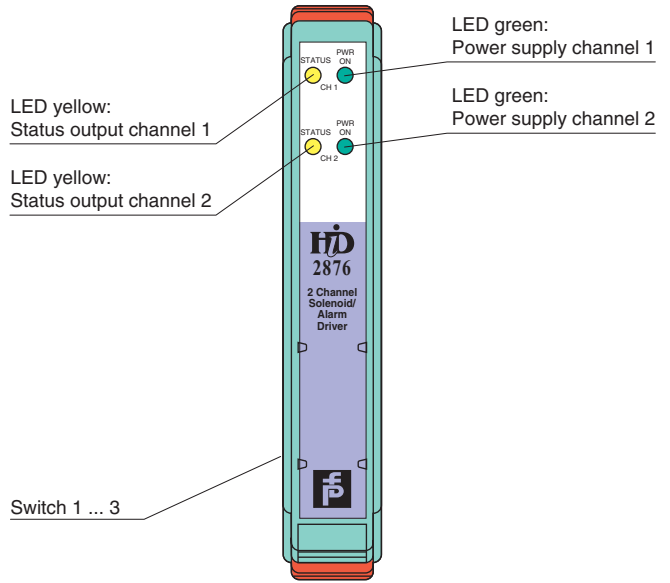
An alternative low current output is available for driving a single LED without installing an external current limiting resistor.

This module has a low $I_o/I_{sc} = 93 \text{ mA}$ entity parameter.

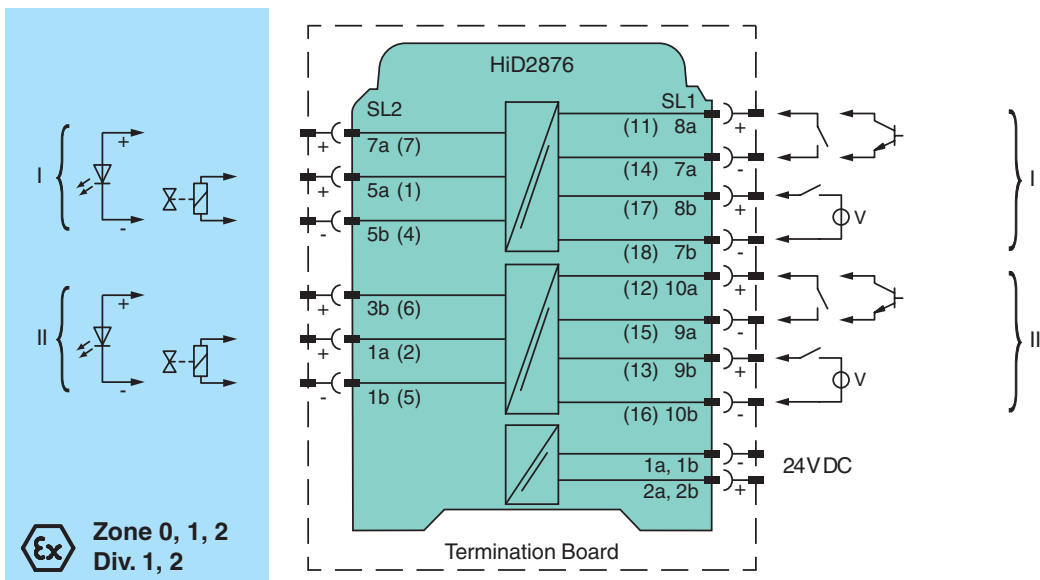
This module mounts on a HiD Termination Board.

Assembly

Front view



Connection



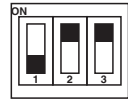
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General specifications	
Signal type	Digital Output
Supply	
Connection	SL1: 1a(-), 1b(-); 2a(+), 2b(+)
Rated voltage	20.4 ... 30 V via Termination Board 21 ... 30 V DC loop powered
Input	
Connection	SL1: 8a(+), 7a(-); 10a(+), 9a(-) bus powered SL1: 8b(+), 7b(-); 9b(+), 10b(-) loop powered
Control input	voltage free contact or open collector output on with contact close or transistor on output off with contact open or transistor off
Input current	30 mA with open output 70 mA with 300 Ω load 80 mA with shorted output
Power loss	1.2 W at 24 V, 300 Ω load (per channel)
Inrush current	1 A , 0.5 ms loop powered
Output	
Connection	SL2: 5a(+), 5b(-), 7a(+); 1a(+), 1b(-), 3b(+)
Output voltage	40 mA at 11.2 V DC, 55 mA current limit
Switching frequency f	max. 50 Hz
Response time	turn-on time 1 ms, turn-off time 8 ms, at 300 Ω load
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 3 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	93 mA
Power P _o	605 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
Output/Output	safe electrical isolation acc. to EN 60079-11:2007, voltage peak value 60 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 .

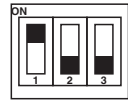
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Configuration

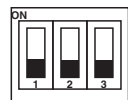
Switch positions



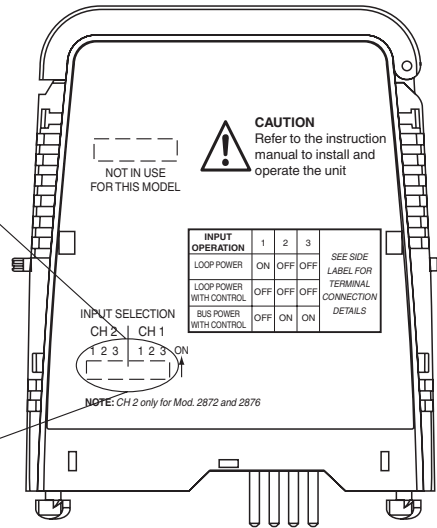
Bus power with control



Loop power



Loop power with control



Channel 2 only for HiD2876.

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.



When both channels of the solenoid driver are operated in normally energised condition, either the load must be reduced or increased spacing/ventilation be applied to reduce the temperature rise. Contact Pepperl+Fuchs for guidance.

Output characteristic

