Features

- 1-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 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.
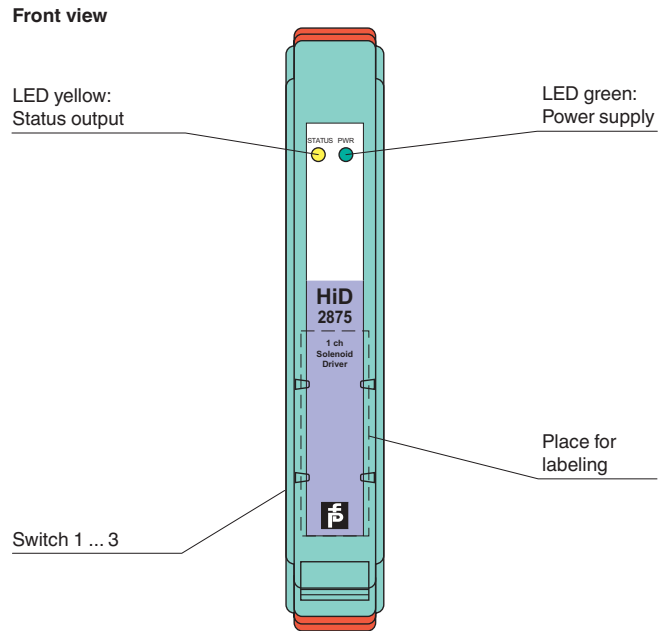
At full load, 11.2 V at 40 mA (with 55 mA current limit) is available for the hazardous area application.

An alternative low current output is available for driving a single LED without installing an external current limiting resistor.
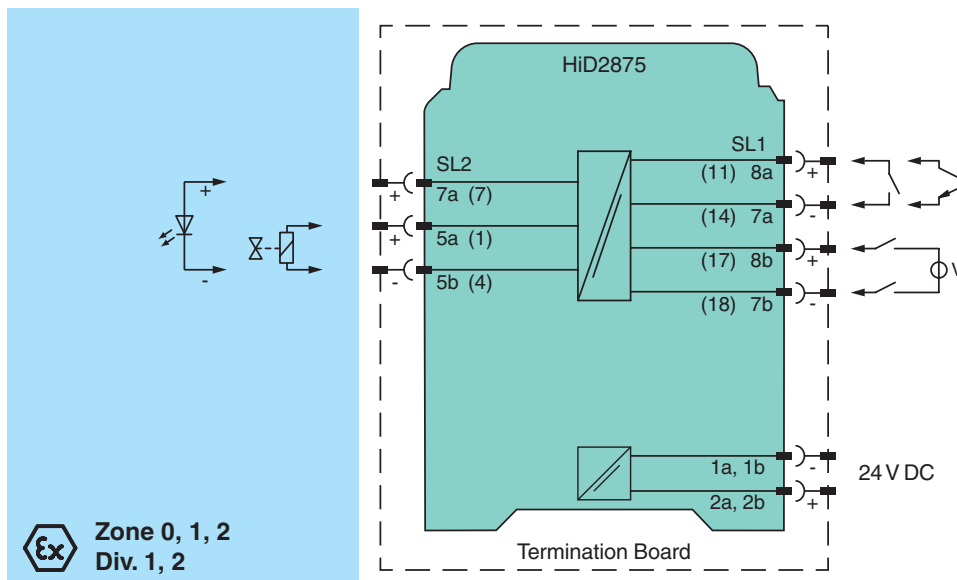
This module has a low I_o/I_{sc} = 93 mA entity parameter.

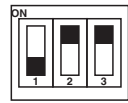This module mounts on a HiD Termination Board.

Assembly

Front view

LED yellow: Status output

LED green: Power supply

Place for labeling

Switch 1 ... 3

CE   Ex   SIL3

Connection

Zone 0, 1, 2
Div. 1, 2

Termination Board

24 V DC

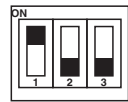| General specifications		
Signal type		Digital Output
Supply		
Connection		SL1: 1a(-), 1b(-); 2a(+), 2b(+)
Rated voltage		20.4 ... 30 V via Termination Board 21 ... 30 V DC loop powered
Input		
Connection		SL1: 8a(+), 7a(-); 8b(+), 7b(-)
Control input		voltage free contact or open collector output on 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
Inrush current		1 A , 0.5 ms loop powered
Output		
Connection		SL2: 5a(+), 5b(-), 7a(+)
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		⟨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	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
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.

Subject to reasonable modifications due to technical advances.

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Configuration

Switch positions

Bus power
with control

Loop power

Loop power
with control

INPUT OPERATION	1	2	3	
LOOP POWER	ON	OFF	OFF	*SEE SIDE LABEL FOR TERMINAL CONNECTION DETAILS*
LOOP POWER WITH CONTROL	OFF	OFF	OFF	
BUS POWER WITH CONTROL	OFF	ON	ON	

CAUTION
Refer to the instruction manual to install and operate the unit

NOT IN USE
FOR THIS MODEL

INPUT SELECTION
CH 2 | CH 1
1 2 3 | 1 2 3 ON

NOTE: *CH 2 only for Mod. 2872 and 2876*
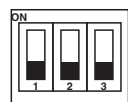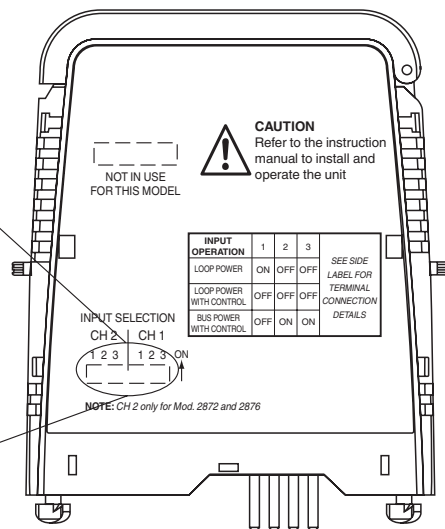
Channel 2 only for HiD2876.

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.

Output characteristic

High current output
at terminals 1+, 4-
and terminals 2+, 5- (only for HiD2876)

Low current output
at terminals 7+, 4-
and terminals 6+, 5- (only for HiD2876)

Release date 2012-06-28 09:43   Date of issue 2012-06-28   121486_eng.xml

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