

**Features**

- 1-channel isolated barrier
- 24 V DC supply (bus powered)
- 2-, 3-, and 4-wire RTDs or potentiometer
- Linearized output 4 mA ... 20 mA
- Sensor breakage detection
- Simple span and zero selection

**Function**

This isolated barrier is used for intrinsic safety applications. It is a temperature converter that accepts input from resistance temperature detectors (RTD) or potentiometers from a hazardous area and converts them to an isolated analog current signal in the safe area.

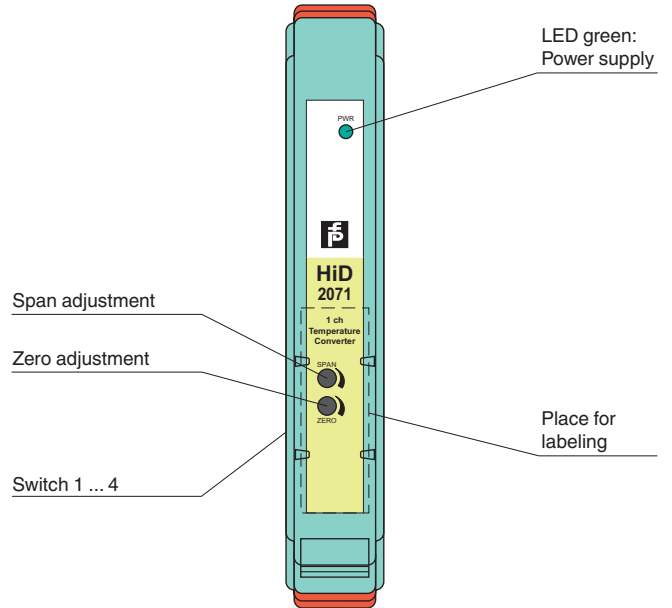
Input type, range, and error handling parameters are configurable by DIP switches and potentiometers.

The output is isolated from the input and are referenced to the power supply common.

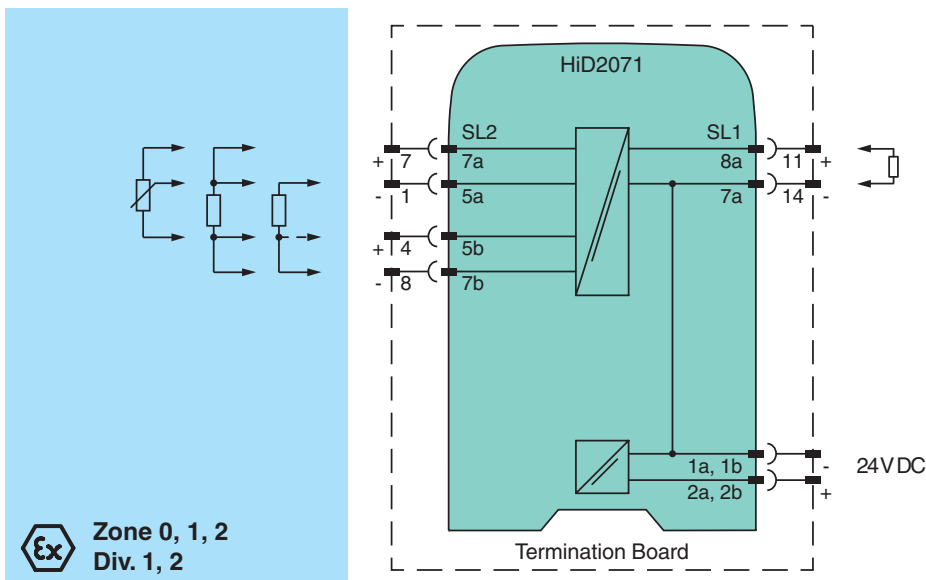
This module mounts on a HiD Termination Board.

**Assembly**

Front view



**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	Analog input
<b>Supply</b>	
Connection	SL1: 1a(-), 1b(-); 2a(+), 2b(+)
Rated current	30 mA at 24 V, 20 mA output
Power loss	0.6 W at 24 V
<b>Input</b>	
Connection	SL2: 7a(+), 5a(-), 5b(+), 7b(-)
RTD	2-, 3- or 4-wire Pt100 acc. to DIN 43760
Measuring current	max. 0.4 mA
Measurement range	-200 ... 850 °C (-328 ... 1562 °F)
Span limits	40 ... 850 °C (104 ... 1562 °F)
Zero suppression	± 500 % of span
Potentiometer	3-wire
Measurement range	100 ... 300 Ω or 0.3 ... 100 kΩ with external shunt
Line fault detection	sensor burnout, upscale or downscale (selectable) (not on potentiometer and 4-wire RTD)
<b>Output</b>	
Connection	SL1: 8a(+), 7a(-)
Load	0 ... 650 Ω
Output signal	4 ... 20 mA or 1 ... 5 V (on 250 Ω, 0.1 % internal shunt) Output signal is linear with temperature for Pt100.
Ripple	10 mV <sub>rms</sub> (at load 250 Ω)
<b>Transfer characteristics</b>	
Calibrated accuracy	< ± 0.1 % of full-scale value (current output)
Influence of temperature	< ± 0.01 %/K on zero and span
Influence of load	< ± 0.1 % of full-scale value from 0 ... 650 Ω
Rise time/fall time	typ. 150 ms
Linearity	< ± 0.1 % of full-scale value (terminal based °C or °F input to mA out for Pt100)
<b>Electrical isolation</b>	
Output/power supply	none
<b>Directive conformity</b>	
Electromagnetic compatibility Directive 2004/108/EC	EN 61326-1:2006
<b>Conformity</b>	
Electromagnetic compatibility	NE 21:2006 For further information see system description.
Degree of protection	IEC 60529
<b>Ambient conditions</b>	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Relative humidity	5 ... 90 %, non-condensing up to 35 °C (95 °F)
<b>Mechanical specifications</b>	
Degree of protection	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 2 trimmed For further information see system description.
<b>Data for application in connection with Ex-areas</b>	
EC-Type Examination Certificate	CESI 02 ATEX 086 , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>
Group, category, type of protection	⊕ II (1)G [Ex ia Ga] IIC , ⊕ II (1)D [Ex ia Da] IIIC
Input	Ex ia, Ex iaD
Voltage U <sub>o</sub>	13.2 V
Current I <sub>o</sub>	20 mA
Power P <sub>o</sub>	66 mW
<b>Supply</b>	
Maximum safe voltage U <sub>m</sub>	250 V AC (Attention! U <sub>m</sub> is no rated voltage.)
<b>Statement of conformity</b>	
Group, category, type of protection, temperature class	⊕ II 3G Ex nA IIC T4 Gc [device in zone 2]
<b>Electrical isolation</b>	
Input/Output	safe electrical isolation acc. to EN 60079-11: 2007, voltage peak value 375 V
Input/power supply	safe electrical isolation acc. to EN 60079-11: 2007, voltage peak value 375 V
<b>Directive conformity</b>	
Directive 94/9/EC	EN 60079-0:2009, EN 60079-11:2007, EN60079-15:2005 , EN 60079-26:2007 , EN 61241-11:2006

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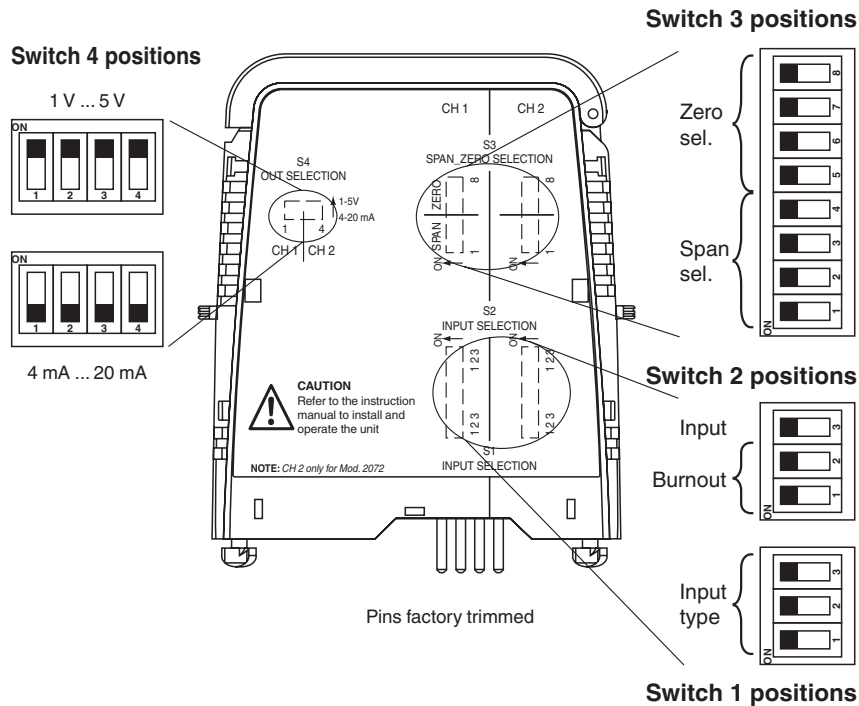
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<b>International approvals</b>	
CSA approval	
Control drawing	366-005CS-12B (cCSAus)
<b>General information</b>	
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

**Configuration**



The inputs can be configured as:

- RTD (2-, 3- or 4-wire) or POT
- Input zero and span value
- Burnout detection upscale (UP) or downscale (DOWN) (only for 2-, 3-wire)

 For Information for input range setting and the tables with the values for zero and span of the thermocouples refer to operating instructions.


Input	S1-1	S1-2	S1-3	S2-3
RTD 2 W	ON	ON	ON	ON
RTD 3 W	ON	ON	ON	ON
RTD 4 W	ON	OFF	OFF	ON
POT	OFF	OFF	OFF	OFF

Burnout	S2-1	S2-2
UP	ON	OFF
DOWN	OFF	ON
POT Input	OFF	OFF

The outputs can be configured as:

- Current output 4 mA ... 20 mA
- Voltage output 1 V ... 5 V

Output	CH 1		CH 2 (only for HiD2072)	
	S4-1	S4-2	S4-3	S4-4
4 mA ... 20 mA	OFF	OFF	OFF	OFF
1 V ... 5 V	ON	ON	ON	ON

 Channel 2 only for HiD2072.

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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