

Features

- 1-channel isolated barrier
- 24 V DC supply (bus powered)
- Current output up to 650 Ω load
- Low power dissipation
- Up to SIL 2 acc. to IEC 61508

Function

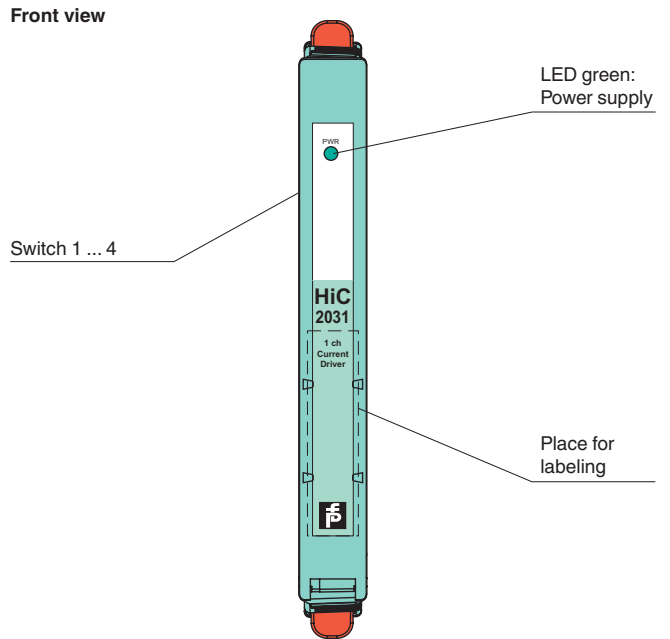
This isolated barrier is used for intrinsic safety applications. It repeats a 4 mA ... 20 mA input signal from a control system to drive HART I/P converters, valve actuators, and displays located in a hazardous area.

Digital signals may be superimposed on the analog values in the hazardous or safe area, which are transferred bi-directionally.

An open field circuit presents a high impedance to the control side to allow alarm conditions to be monitored by control systems.

This module mounts on a HiC Termination Board.

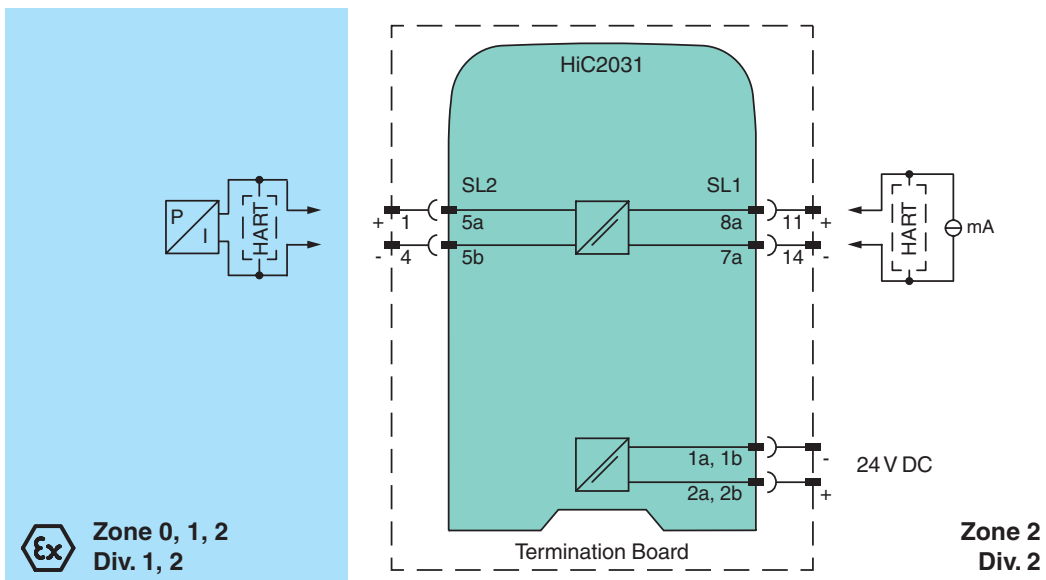
Assembly



SIL 2



Connection



Release date 2017-08-09 14:48 Date of issue 2017-08-10 272020_eng.xml

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0002
pa-info@us.pepperl-fuchs.com

Germany: +49 621 776 2222
pa-info@de.pepperl-fuchs.com

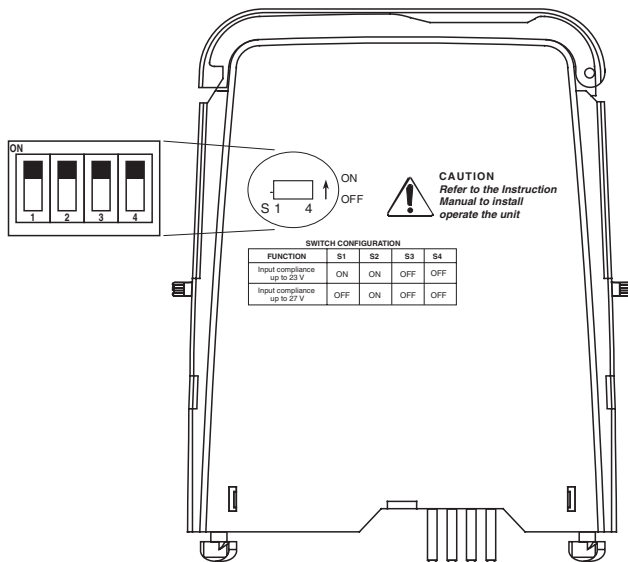
Singapore: +65 6779 9091
pa-info@sg.pepperl-fuchs.com

General specifications		
Signal type		Analog output
Functional safety related parameters		
Safety Integrity Level (SIL)		SIL 2
Supply		
Connection		SL1: 1a(-), 1b(-); 2a(+), 2b(+)
Rated voltage	U_r	19 ... 30 V DC bus powered via Termination Board
Ripple		≤ 10 %
Rated current	I_r	≤ 30 mA
Power dissipation		≤ 600 mW
Power consumption		≤ 700 mW
Input		
Connection side		control side
Connection		SL1: 8a(+), 7a(-)
Input signal		4 ... 20 mA limited to approx. 30 mA
Input voltage		depending on switch configuration open loop voltage of the control system < 23 V open loop voltage of the control system < 27 V
Voltage drop		depending on switch configuration open loop voltage of the control system < 23 V: approx. 6 V at 20 mA open loop voltage of the control system < 27 V: approx. 10 V at 20 mA
Input resistance		> 100 kΩ, with field wiring open
Output		
Connection side		field side
Connection		SL2: 5a(+), 5b(-)
Current		4 ... 20 mA
Load		0 ... 650 Ω
Voltage		≥ 13 V at 20 mA
Ripple		20 mV rms
Transfer characteristics		
Deviation		at 20 °C (68 °F), 0/4 ... 20 mA ≤ ± 0.1 % incl. non-linearity and hysteresis
Influence of ambient temperature		< 2 μA/K (0 ... 60 °C (32 ... 140 °F)); < 4 μA/K (-20 ... 0 °C (-4 ... 32 °F))
Frequency range		field side into the control side: bandwidth with 0.5 V _{pp} signal 0 ... 3 kHz (-3 dB) control side into the field side: bandwidth with 1 mA _{pp} signal 0 ... 3 kHz (-3 dB)
Rise time		10 to 90 % ≤ 100 ms
Galvanic isolation		
Input/Output		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Input/power supply		functional insulation acc. to IEC 62103, rated insulation voltage 50 V _{eff}
Output/power supply		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Indicators/settings		
Display elements		LED
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		
Electromagnetic compatibility		NE 21:2006 For further information see system description.
Degree of protection		IEC 60529:2001
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
Degree of protection		IP20
Mass		approx. 100 g
Dimensions		12.5 x 128 x 106 mm (0.5 x 5.1 x 4.2 inch)
Mounting		on Termination Board
Coding		pin 1 and 3 trimmed For further information see system description.
Data for application in connection with hazardous areas		
EU-Type Examination Certificate		CESI 06 ATEX 017
Marking		⊕ II (1)GD [Ex ia] IIC, [Ex iaD] [circuit(s) in zone 0/1/2/20/21/22] ⊕ I (M1) [Ex ia] I
Output		Ex ia IIC, Ex iaD

Release date 2017-08-09 14:48 Date of issue 2017-08-10 272020_eng.xml

Supply		
Maximum safe voltage	U_m	253 V AC (Attention! U_m is no rated voltage.)
Equipment		
Voltage	U_o	25.2 V
Current	I_o	100 mA
Power	P_o	630 mW
Certificate		
KIWA 15 ATEX 0035 X		
Marking		
⊕ II 3G Ex nA IIC T4 Gc		
Directive conformity		
Directive 2014/34/EU		
EN 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 60079-15:2010 , EN 50303:2000		
International approvals		
FM approval		
Control drawing		16-534FM-12 (cFMus)
IECEX approval		
IECEX CES 06.0002		
General information		
Supplementary information		
Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com .		

Configuration



Switch position

Function	S1	S2	S3	S4
Open loop voltage of the control system < 23 V	ON	ON	OFF	OFF
Open loop voltage of the control system < 27 V	OFF	ON	OFF	OFF

Factory settings: open loop voltage of the control system < 23 V

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.