



Solenoid Driver

HiC2871

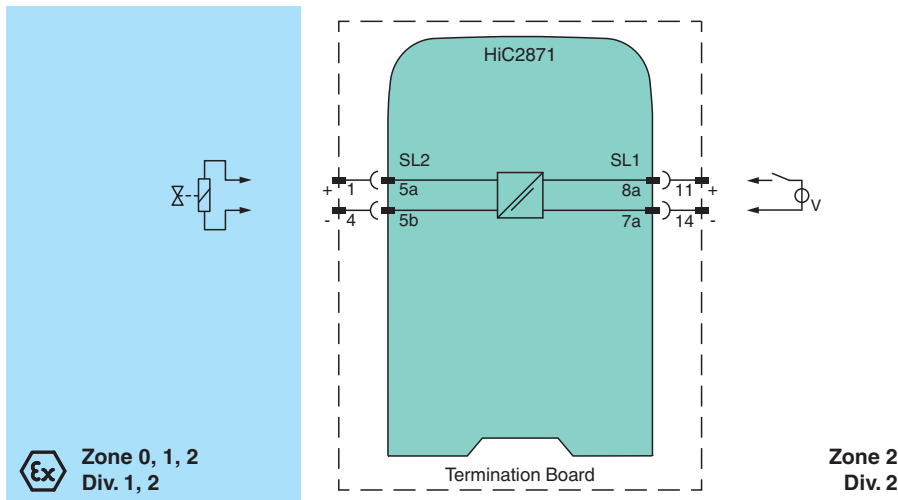
- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- Output 45 mA at 12 V DC
- Up to SIL 3 acc. to IEC/EN 61508



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 loop powered, so the available energy at the output is received from the input signal. The output signal has a resistive characteristic. As a result the output voltage and current are dependent on the load and the input voltage. At full load, 12 V at 45 mA is available for the hazardous area application. This module mounts on a HiC Termination Board.

Connection



Technical Data

General specifications

Signal type Digital Output

Functional safety related parameters

Safety Integrity Level (SIL) SIL 3

Supply

Connection loop powered
 Rated voltage U_r 19 ... 30 V DC loop powered
 Power dissipation < 1 W

Input

Connection side control side
 Connection SL1: 8a(+), 7a(-)

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

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Technical Data

Rated voltage	U_r	19 ... 30 V loop powered
Current		≤ 72 mA at $U_i = 19$ V, ≤ 50 mA at $U_i = 30$ V with 265 Ω output load ≤ 45 mA at $U_i = 19$ V, ≤ 31 mA at $U_i = 30$ V with shorted output ≤ 14 mA at $U_i = 19$ V, ≤ 11 mA at $U_i = 30$ V no load at output
Inrush current		≤ 200 mA after 100 μ s
Output		
Connection side		field side
Connection		SL2: 5a(+), 5b(-)
Internal resistor	R_i	≤ 238 Ω
Current	I_e	≤ 45 mA
Voltage	U_e	≥ 12 V
Open loop voltage	U_s	≥ 22.7 V
Output signal		These values are valid for the rated operating voltage 19 ... 30 V DC.
Energized/De-energized delay		single operation: typ. 1.7 ms/50 μ s; periodical: typ. 5 μ s/50 μ s
Indicators/settings		
Display elements		LED
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
Protection against electrical shock		EN 61010-1:2010
Ambient conditions		
Ambient temperature		-20 ... 60 $^{\circ}$ C (-4 ... 140 $^{\circ}$ F)
Mechanical specifications		
Degree of protection		IP20
Mass		approx. 100 g
Dimensions		12.5 x 106 x 128 mm (0.5 x 4.2 x 5.1 inch) (W x H x D)
Mounting		on termination board
Coding		pin 1 and 4 trimmed For further information see system description.
Data for application in connection with hazardous areas		
EU-type examination certificate		BASEEFA 06 ATEX 0171X
Marking		Ⓔ II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 $^{\circ}$ C $\leq T_{amb} \leq 60$ $^{\circ}$ C)
Output		[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I
Voltage	U_o	25.2 V
Current	I_o	110 mA
Power	P_o	693 mW
Input		
Maximum safe voltage	U_m	250 V (Attention! The rated voltage can be lower.)
Certificate		PF 08 CERT 1048 X
Marking		Ⓔ II 3G Ex nA IIC T4 Gc
Galvanic isolation		
Input/Output		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Directive conformity		
Directive 2014/34/EU		EN 60079-0:2012+A11:2013, EN 60079-11:2012, EN 60079-15:2010
International approvals		
FM approval		
Control drawing		16-534FM-12 (cFMus)
IECEX approval		
IECEX certificate		IECEX BAS 06.0031X

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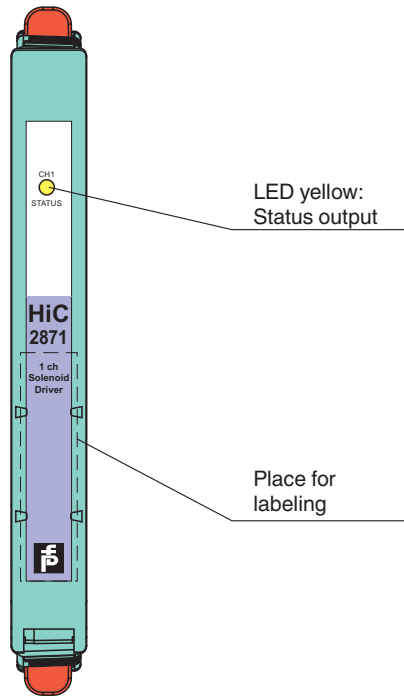
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Technical Data

IECEX marking	[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I
General information	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com .

Assembly

Front view



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Configuration

No user configuration available for this device.

Safety Information

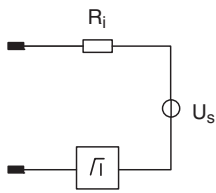


*The pins for this device are trimmed to polarize it according to its safety parameter. Do not change!
For further information see system description.*

Characteristic Curve

Output characteristics

Output circuit diagram



Output characteristic

