

**Features**

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

**Function**

This isolated barrier is used for intrinsic safety applications. The device supplies power to solenoids, LEDs and audible alarms located in a hazardous area.

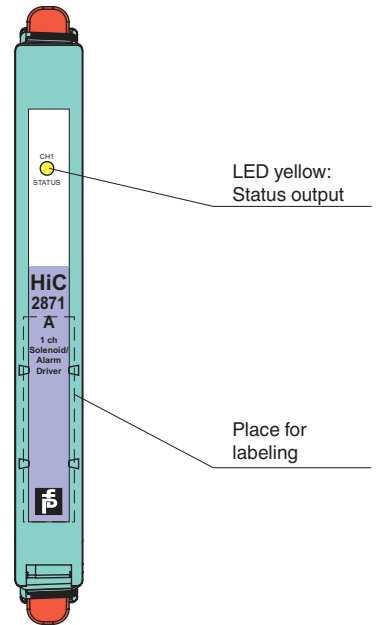
The device is loop powered, so the available energy at the output is received from the input signal. The output signal has a resistive characteristic. As a result the output voltage and current are dependent on the load and the input voltage.

At full load, 12 V at 45 mA is available for the hazardous area application.

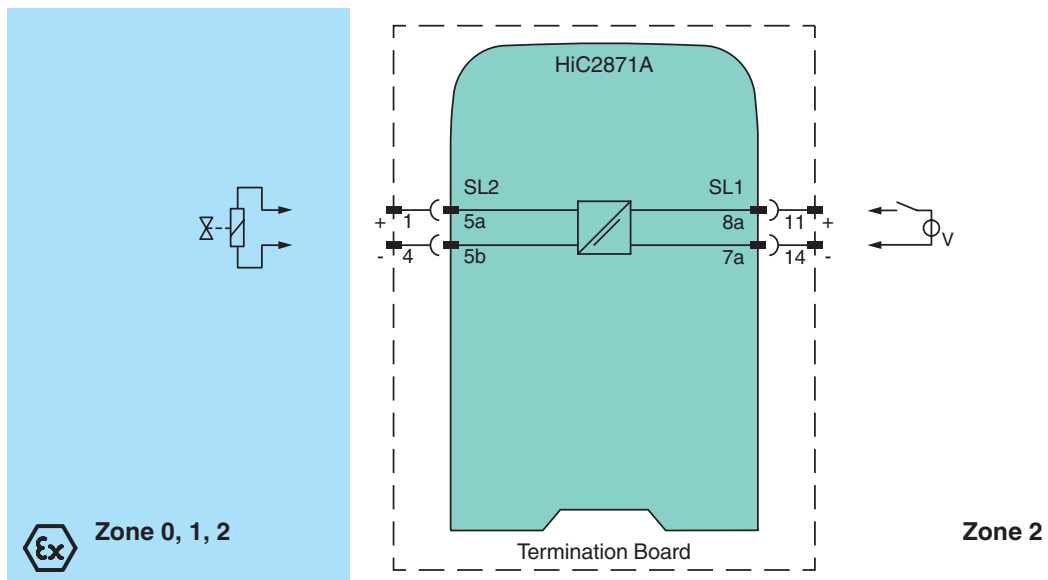
This device mounts on a HiC Termination Board.

**Assembly**

Front view



**Connection**



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

|  |           |  |
|--|-----------|--|
| <b>General specifications</b>                                  |           |  |
| Signal type  |           | Digital Output   |
| <b>Functional safety related parameters</b>                    |           |  |
| Safety Integrity Level (SIL)                                   |           | SIL 3  |
| <b>Supply</b>  |           |  |
| Connection   |           | loop powered   |
| Rated voltage  | $U_r$     | 19 ... 30 V DC loop powered  |
| Power dissipation  |           | < 1.3 W  |
| <b>Input</b>   |           |  |
| Connection side  |           | control side   |
| Connection   |           | SL1: 7a(-), 9a(-); 8a(+), 10a(+)   |
| Test pulse length  |           | ≤ 2 ms from DO card  |
| Signal level   |           | 1-signal: 19 ... 30 V DC<br>0-signal: 0 ... 5 V DC   |
| Rated voltage  | $U_r$     | 19 ... 30 V DC   |
| Rated current  | $I_r$     | 0-signal: typ. 1.6 mA at 1.5 V DC; typ. 8 mA at 3 V DC (maximum leakage current DO card)<br>1-signal: ≥ 36 mA (minimum load current DO card) |
| Inrush current   |           | ≤ 200 mA after 100 μs  |
| <b>Output</b>  |           |  |
| Connection side  |           | field side   |
| Connection   |           | SL2: 5a(+), 5b(-)  |
| Internal resistor  | $R_i$     | approx. 240 Ω  |
| Current  | $I_e$     | ≤ 45 mA  |
| Voltage  | $U_e$     | ≥ 12 V   |
| Current limit  | $I_{max}$ | 45 mA  |
| Open loop voltage  | $U_s$     | typ. 24.6 V  |
| Switching frequency  | $f$       | max. 10 Hz   |
| Energized/De-energized delay                                   |           | 28 ms / 10 ms  |
| <b>Galvanic isolation</b>                                      |           |  |
| Output/other circuits  |           | basic insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>  |
| <b>Indicators/settings</b>                                     |           |  |
| Display elements   |           | LED  |
| Labeling   |           | space for labeling at the front  |
| <b>Directive conformity</b>                                    |           |  |
| Electromagnetic compatibility                                  |           |  |
| Directive 2014/30/EU   |           | EN 61326-1:2013 (industrial locations)   |
| <b>Conformity</b>  |           |  |
| Electromagnetic compatibility                                  |           | NE 21:2012 , EN 61326-3-2:2008<br>For further information see system description.  |
| Degree of protection   |           | IEC 60529:2013   |
| Protection against electrical shock                            |           | EN 61010-1:2010  |
| <b>Ambient conditions</b>                                      |           |  |
| Ambient temperature  |           | -20 ... 70 °C (-4 ... 158 °F)  |
| <b>Mechanical specifications</b>                               |           |  |
| Degree of protection   |           | IP20   |
| Mass   |           | approx. 150 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 4 trimmed<br>For further information see system description.   |
| <b>Data for application in connection with hazardous areas</b> |           |  |
| EU-Type Examination Certificate                                |           | EXA 17 ATEX 0040 X   |
| Marking  |           | ⊕ Ex II 3(1)G Ex ec [ia Ga] IIC T4 Gc<br>⊕ Ex II (1)D [Ex ia Da] IIIC<br>⊕ Ex I (M1) [Ex ia Ma] I  |
| Output   |           | Ex ia  |
| Voltage  | $U_o$     | 26 V   |
| Current  | $I_o$     | 110 mA   |
| Power  | $P_o$     | 715 mW   |
| <b>Input</b>   |           |  |
| Maximum safe voltage   | $U_m$     | 60 V (Attention! The rated voltage can be lower.)  |
| <b>Galvanic isolation</b>                                      |           |  |
| Input/Output   |           | safe electrical isolation acc. to IEC/EN 60079-11, rated insulation voltage 300 V <sub>rms</sub>   |
| <b>Directive conformity</b>                                    |           |  |
| Directive 2014/34/EU   |           | EN 60079-0:2012+A11:2013 , EN 60079-7:2015 , EN 60079-11:2012  |

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|                                |   |
|--------------------------------|---|
| <b>International approvals</b> |   |
| IECEX approval                 | IECEX EXA 17.0009X  |
| Approved for                   | Ex ec [ia Ga] IIC T4 Gc , [Ex ia Da] IIIC , [Ex ia Ma] I  |
| <b>General information</b>     |   |
| Supplementary information      | Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> . |

### Configuration

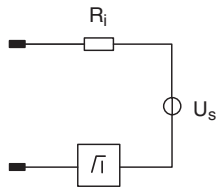
No user configuration available for this device.



*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 characteristics

Output circuit diagram



Output characteristic

