#### Features Assembly • 1-channel isolated barrier • 24 V DC supply (bus powered) Front view • Output 40 mA at 12 V DC, 55 mA current limit · Contact or logic control input LED green: Power supply • Entity parameter $I_0/I_{sc} = 110 \text{ mA}$ • Line fault detection (LFD) PWR LED yellow: · Test pulse immunity Status output Up to SIL 2 acc. to IEC 61508 (bus powered) FAULT LED red: **Function** Fault HiC 2873 This isolated barrier is used for intrinsic safety applications. ¥1 It supplies power to solenoids, LEDs and audible alarms located in a hazardous area. The device is controlled with a switch contact, transistor, or Place for labeling logic signal. Switch 1 ... 8 At full load, 12 V at 40 mA (with 55 mA current limit) is þ available for the hazardous area application. Line fault detection of the field circuit is indicated by a red LED and an output on the fault bus.

This device mounts on a HiC Termination Board.



## Connection



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# EPPPERL+FUCHS 1

| Concret encoifications             |                |   |  |  |  |  |  |  |
|------------------------------------|----------------|---|--|--|--|--|--|--|
| General specifications             |                | Divited Output  |  |  |  |  |  |  |
| Signal type                        |                |   |  |  |  |  |  |  |
| Functional safety related par      | rameters       |   |  |  |  |  |  |  |
| Safety Integrity Level (SIL)       |                | SIL 2   |  |  |  |  |  |  |
| Supply                             |                |   |  |  |  |  |  |  |
| Connection                         |                | SL1: 1a, 1b(-); 2a, 2b(+)   |  |  |  |  |  |  |
| Rated voltage                      | Ur             | 20.4 30 V DC bus powered via Termination Board  |  |  |  |  |  |  |
| Input current                      |                | 62 mA at 24 V, 300 Ω load   |  |  |  |  |  |  |
| Power dissipation                  |                | 1 W at 24 V, 300 Ω load   |  |  |  |  |  |  |
| Input                              |                |   |  |  |  |  |  |  |
| Connection side                    |                | control side  |  |  |  |  |  |  |
| Connection                         |                | SL1: 8a(+), 7a(-)   |  |  |  |  |  |  |
| Control input                      |                | external switch (dry contact or open collector) non isolated or logic signal input fully floating |  |  |  |  |  |  |
| Signal level                       |                | 1-signal: 1530 V DC (current limited at 3 mA) or contact close (internal 10 k $\Omega$ pull-up)   |  |  |  |  |  |  |
|                                    |                | 0-signal: 05 V DC or contact open   |  |  |  |  |  |  |
| Output                             |                |   |  |  |  |  |  |  |
| Connection side                    |                | field side  |  |  |  |  |  |  |
| Connection                         |                | SL2: 5a(+), 5b(-)   |  |  |  |  |  |  |
| Internal resistor                  | Ri             | approx. 240 $\Omega$  |  |  |  |  |  |  |
| Current                            | l <sub>e</sub> | ≤ 40 mA   |  |  |  |  |  |  |
| Voltage                            | Ū <sub>e</sub> | ≥ 12 V  |  |  |  |  |  |  |
| Current limit                      | Imax           | 55 mA   |  |  |  |  |  |  |
| Open loop voltage                  | U.             | approx. 22.5 V  |  |  |  |  |  |  |
| Load                               | - 5            | nominal 0.1 5 kQ  |  |  |  |  |  |  |
| Eault indication output            |                |   |  |  |  |  |  |  |
| Connection                         |                | SI 1: 6b  |  |  |  |  |  |  |
|                                    |                | open collector transistor (internal fault hus)  |  |  |  |  |  |  |
| Fault ourropt                      |                | 4 mA pulsing (20 mg ON, 200 mg OEE)   |  |  |  |  |  |  |
|                                    |                | land short size if detection at a 25 O  |  |  |  |  |  |  |
| Fault level                        |                | lead breakage detection at > 100 kO typical   |  |  |  |  |  |  |
| Galvanic isolation                 |                | i du brundge deletion at > 100 hsz typica   |  |  |  |  |  |  |
| Output/power supply inputs ar      | ad             | safe electrical isolation acc. to EN 60070-11: 2007, voltage peak value 375 V                     |  |  |  |  |  |  |
| collective error                   | lu             | sale electrical isolation acc. to EN 00073-11. 2007, voltage peak value 575 v                     |  |  |  |  |  |  |
| Indicators/settings                |                |   |  |  |  |  |  |  |
| Display elements                   |                | L EDs   |  |  |  |  |  |  |
| Display elements                   |                | DIP-switch  |  |  |  |  |  |  |
| Configuration                      |                | via DIP switches  |  |  |  |  |  |  |
|                                    |                | via Dir Switches  |  |  |  |  |  |  |
|                                    |                | 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 turtner information see system description.   |  |  |  |  |  |  |
| Degree of protection               |                | IEC 60529:2001  |  |  |  |  |  |  |
| Ampient 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 4 trimmed   |  |  |  |  |  |  |
|                                    |                | For further information see system description.   |  |  |  |  |  |  |
| Data for application in connection |                |   |  |  |  |  |  |  |
| with hazardous areas               |                |   |  |  |  |  |  |  |
| EU-Type Examination Certificate    |                | CESI 10 ATEX 046  |  |  |  |  |  |  |
| Marking                            |                | (Ex) II (1)G [Ex ia Ga] IIC   |  |  |  |  |  |  |
|                                    |                | (ﷺ) II (1)D [EX IA DA] IIIC   |  |  |  |  |  |  |
| Output                             |                | t (win) (≟x la livia) i   |  |  |  |  |  |  |
| Voltage                            |                |   |  |  |  |  |  |  |
| vonage                             | U <sub>o</sub> | 20.2 V  |  |  |  |  |  |  |
| Current                            | I <sub>o</sub> |   |  |  |  |  |  |  |
| Power                              | ۲ <sub>0</sub> | 693 mW  |  |  |  |  |  |  |
| Supply                             |                |   |  |  |  |  |  |  |
| Maximum safe voltage               | U <sub>m</sub> | 253 V AC (Attention! U <sub>m</sub> is no rated voltage.)   |  |  |  |  |  |  |

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

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| Certificate               | KIWA 15 ATEX 0036 X   |
|---------------------------|---|
| Marking                   | ⟨͡͡ɛx⟩ II 3G Ex ec IIC T4 Gc  |
| Directive conformity      |   |
| Directive 2014/34/EU      | EN 60079-0:2012+A11:2013, EN 60079-11:2012, EN 60079-7:2015+A1:2018   |
| International approvals   |   |
| FM approval               |   |
| Control drawing           | 116-0431 (cFMus)  |
| UL approval               |   |
| Control drawing           | 116-0383 (cULus)  |
| IECEx approval            |   |
| IECEx certificate         | IECEx CES 10.0017<br>IECEx KIWA 15.0018X  |
| IECEx marking             | [Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I<br>Ex ec IIC T4 Gc  |
| 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 settings

| Switches for channel I  | S1  | S2  | S3  | S4  | S5  | S6 | S7 | S8 |
|---|-----|-----|-----|-----|-----|----|----|----|
| Function  |     |     |     |     |     |    |    |    |
| <ul><li>Bus powered</li><li>Control input: logic signal</li><li>Line fault detection enabled</li></ul>  | ON  | OFF | ON  | OFF | ON  | х  | ON | ON |
| <ul><li>Bus powered</li><li>Control input: logic signal</li><li>Line fault detection disabled</li></ul> | OFF | OFF | ON  | OFF | OFF | х  | ON | ON |
| <ul><li>Bus powered</li><li>Control input: contact</li><li>Line fault detection enabled</li></ul>       | ON  | ON  | OFF | ON  | ON  | х  | ON | ON |
| <ul><li>Bus powered</li><li>Control input: contact</li><li>Line fault detection disabled</li></ul>      | OFF | ON  | OFF | ON  | OFF | х  | ON | ON |
| Switches for channel I  | S6  |     |     |     |     |    |    |    |
| Function  |     |     |     |     |     |    |    |    |
| Filter disable  | OFF |     |     |     |     |    |    |    |
| Filter enable   | ON  |     |     |     |     |    |    |    |

Factory settings: bus powered, control input: logic signal, line fault detection enabled, filter disabled

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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### **Output characteristics**

#### Output circuit diagram



**Output characteristic** 



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