

**Features**

- 1-channel signal conditioner
- 24 V DC supply
- Input for 2- or 3-wire sensors or AC sources
- Relay contact output
- Timer function
- Configurable by DIP switches
- Connection via screw terminals

**Function**

This signal conditioner provides the galvanic isolation between field circuits and control circuits.

The device transmits the status of 2- and 3-wire sensors to the relay output.

The device has an input for the following digital signals:

- Mechanical contacts
- 2-wire sensors (NAMUR, SN, DC, S0)
- 3-wire sensors (NPN, PNP, push-pull)
- AC sources

The input is reverse polarity protected and short-circuit proofed.

The connected sensors can also be supplied externally.

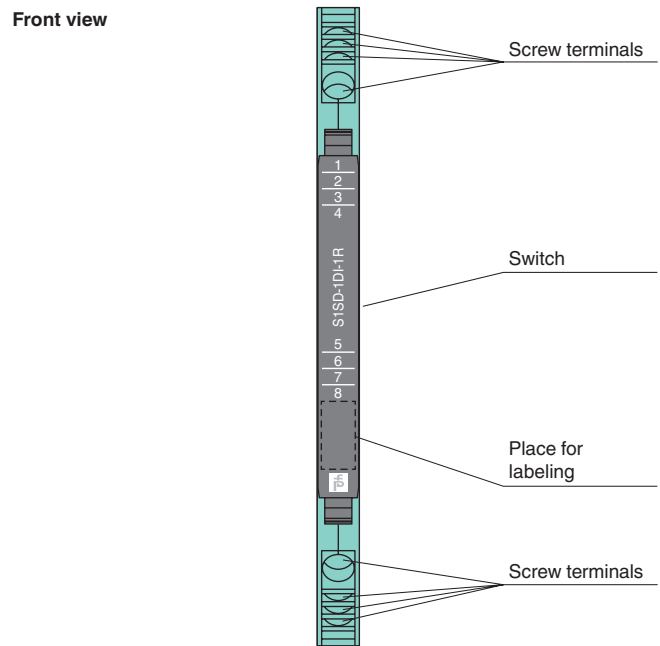
The device has an adjustable on delay, an off delay, or an one-shot function for the relay output.

The device is easily configured by the use of DIP switches.

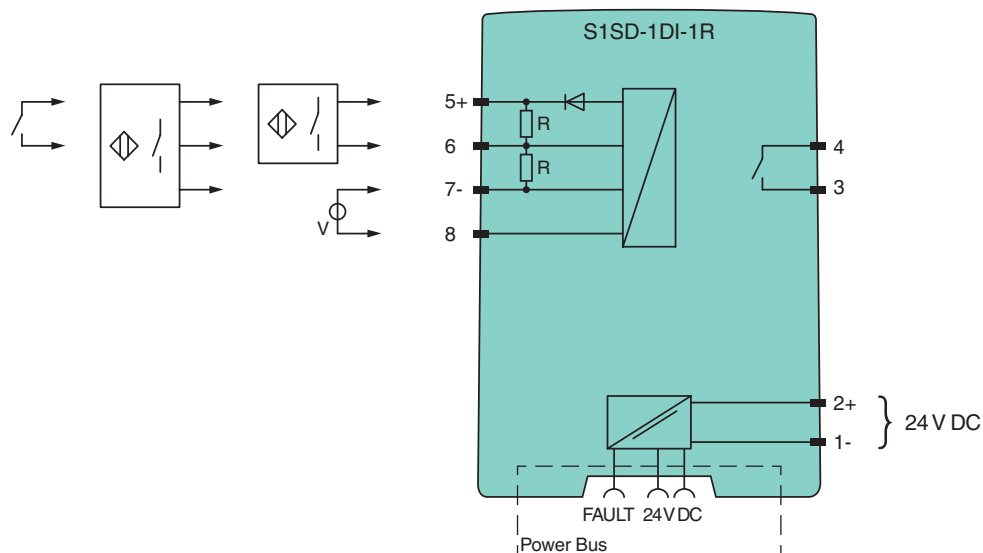
The device can be powered via terminals or Power Bus.

If used the device with Power Bus, a collective error messaging feature is available.

**Assembly**



**Connection**



Release date 2017-02-27 10:34 Date of issue 2017-02-27 276405\_eng.xml

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

<b>General specifications</b>	
Signal type	Digital Input
<b>Supply</b>	
Connection	Power Bus or terminals 1-, 2+
Rated voltage $U_r$	16.8 ... 31.2 V DC
Power dissipation	0.6 W
Power consumption	1.1 W
<b>Input</b>	
NAMUR sensor	
Type	2-wire
Connection	terminals 5+, 6
Signal	acc. to EN 60947-5-6 (NAMUR)
Sensor supply	8 V
Open-circuit	< 0.1 mA
Switching point	1.2 ... 2.1 mA
Short-circuit	> 6 mA
Input impedance	1 k $\Omega$
Mechanical contact	
Type	2-wire
Connection	terminals 5+, 6
Sensor supply	15 V
External supply	16.8 ... 31.2 V DC
Switching point	8 ... 10 V / 1.2 ... 2.1 mA
Input impedance	4 k $\Omega$
SN sensor	
Type	2-wire
Connection	terminals 5+, 6
Sensor supply	8 V
Open-circuit	< 0.1 mA
Switching point	1.2 ... 2.1 mA
Short-circuit	> 6 mA
Input impedance	1 k $\Omega$
2-wire DC sensor	
Type	2-wire
Connection	terminals 5+, 6
Signal	acc. to EN 60947-5-2
Sensor supply	16 V / 25 mA , short-circuit protected
External supply	16.8 ... 31.2 V DC
Switching point	4 ... 6 V
Input impedance	1 k $\Omega$
S0 sensor	
Type	2-wire
Connection	terminals 5+, 6
Signal	acc. to EN 62053-31 , Type B
Sensor supply	15 V
Switching point	0.15 ... 2 mA
Input impedance	4 k $\Omega$
NPN sensor	
Type	3-wire
Connection	terminals 5+, 6, 7-
Signal	acc. to EN 60947-5-2
Sensor supply	16 V / 25 mA , short-circuit protected
External supply	16.8 ... 31.2 V DC
Switching point	3 ... 5 V
Input impedance	4 k $\Omega$
PNP sensor	
Type	3-wire
Connection	terminals 5+, 6, 7-
Signal	acc. to EN 60947-5-2
Sensor supply	16 V / 25 mA , short-circuit protected
External supply	16.8 ... 31.2 V DC
Switching point	8 ... 10 V
Input impedance	4 k $\Omega$
AC source	

Release date 2017-02-27 10:34 Date of issue 2017-02-27 276405\_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

Connection	terminals 7, 8
Signal	24 V AC/DC
Switching point	10 ... 15 V
Input impedance	> 680 kΩ
<b>AC source</b>	
Connection	terminals 7, 8
Signal	115 V AC/DC
Switching point	40 ... 60 V
Input impedance	> 680 kΩ
<b>AC source</b>	
Connection	terminals 7, 8
Signal	230 V AC/DC
Switching point	80 ... 115 V
Input impedance	> 680 kΩ
<b>Output</b>	
Connection	terminals 3, 4:
Output	signal, relay
Contact loading	253 V AC/2 A/cos φ > 0.7; 126.5 V AC/2 A/cos φ > 0.7; 30 V DC/2 A resistive load
Minimum switch current	2 mA / 24 V DC
Energized/De-energized delay	≤ 20 ms / ≤ 20 ms
Mechanical life	10 <sup>7</sup> switching cycles
<b>Transfer characteristics</b>	
Switching frequency	≤ 10 Hz
<b>Galvanic isolation</b>	
Output/power supply	safe electrical isolation by reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub> test voltage 3 kV, 50 Hz, 1 min
Input/Other circuits	safe electrical isolation by reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub> test voltage 3 kV, 50 Hz, 1 min
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013 (industrial locations)
Low voltage	
Directive 2014/35/EU	EN 61010-1:2010
<b>Conformity</b>	
Degree of protection	IEC 60529:2001
Protection against electrical shock	EN 61010-1:2010
<b>Ambient conditions</b>	
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)
Damaging gas	designed for operation in environmental conditions acc. to ISA-S71.04-1985, severity level G3
<b>Mechanical specifications</b>	
Connection type	screw terminals
Core cross-section	0.5 ... 2.5 mm <sup>2</sup> , 20 ... 14 AWG
Degree of protection	IP20
Mass	approx. 60 g
Dimensions	6.2 x 97 x 107 mm (0.24 x 3.82 x 4.21 inch), housing type S1
Mounting	on 35 mm DIN mounting rail acc. to EN 60715:2001
<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> .
<b>Accessories</b>	
Optional accessories	power feed module S1SD-2PF Power Bus POWERBUS-SETL5.*** Power Bus POWERBUS-SETH5.*** cover for DIN mounting rail POWERBUS-COV.250 end cap POWERBUS-CAP

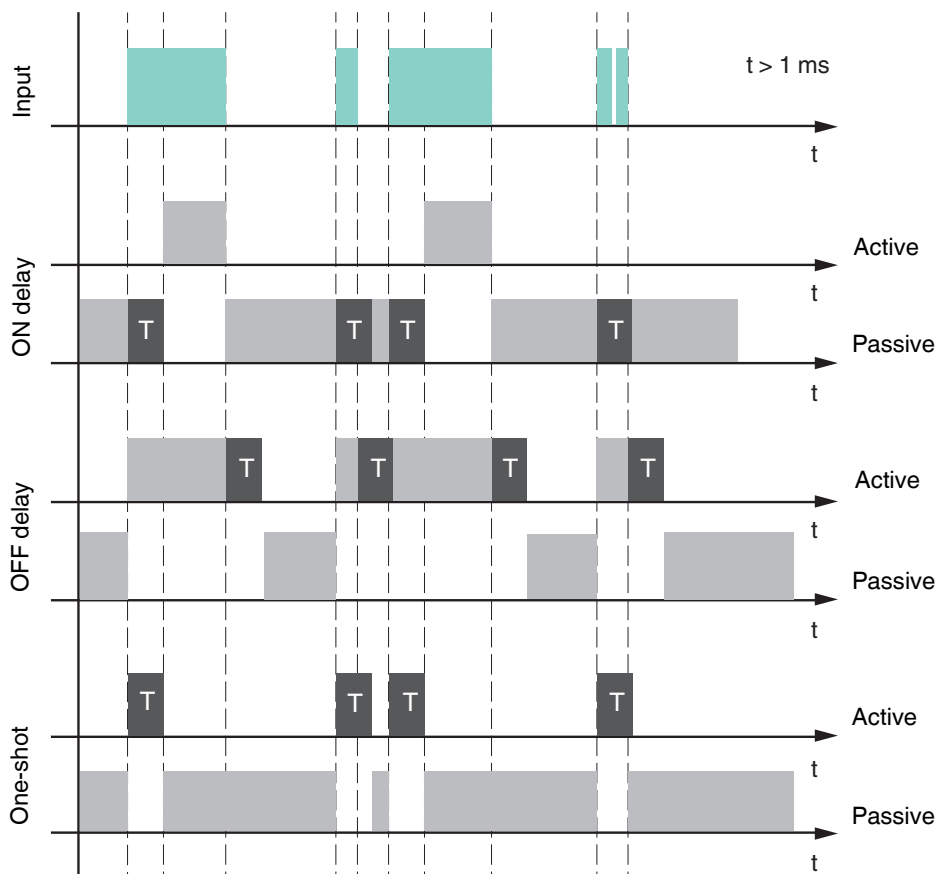
Release date 2017-02-27 10:34 Date of issue 2017-02-27 276405\_eng.xml

## Configuration

### Switch settings

Switch	S									
	1	2	3	4	5	6	7	8	9	10
<b>Sensor</b>										
NAMUR/SN sensor										
PNP sensor/mechanical contact/push-pull	ON									
2-wire DC sensor		ON								
NPN sensor	ON	ON								
S0 sensor			ON							
<b>AC sources</b>										
24 V	ON		ON							
120 V		ON	ON							
230 V	ON	ON	ON							
<b>Output</b>										
Not inverted										
Inverted ON				ON						
<b>Timer</b>										
Timer off										
On delay						ON				
Off delay					ON					
One-shot					ON	ON				
<b>Time T</b>										
0.5 s										
1 s							ON			
5 s								ON		
10 s							ON	ON		

### Timer function



Release date 2017-02-27 10:34 Date of issue 2017-02-27 276405\_eng.xml

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

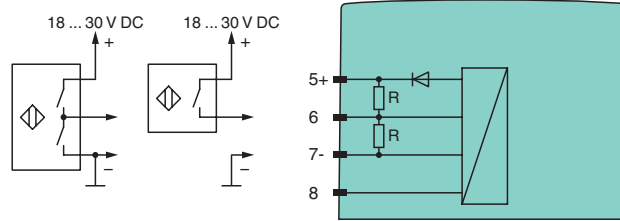
USA: +1 330 486 0002  
pa-info@us.pepperl-fuchs.com

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

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

**Additional function**

**External supply**



For mechanical contacts, 2-wire DC sensors and 3-wire sensors.