



# Simulator

## IS01

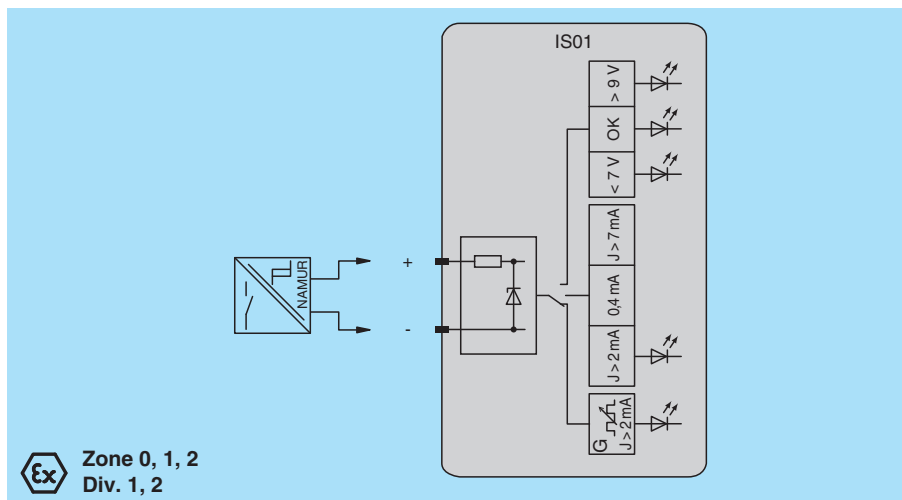
- 1-channel
- Loop powered
- NAMUR sensor simulator and pulse generator
- Simulates line faults



### Function

This simulator imitates a NAMUR proximity sensor by implementing a three-position switch. A three-position switch facilitates the selection of various test conditions. The first position (NAMUR voltage) simulates a 1 k $\Omega$  resistive load, while the second position (sensor static) offers various sensor-damping conditions, including a short circuit simulation. The third switch position (sensor dynamic) offers the user several frequency settings between 0.1 Hz ... 1 kHz using a rectangular wave with a 50 % duty cycle.

### Connection



### Technical Data

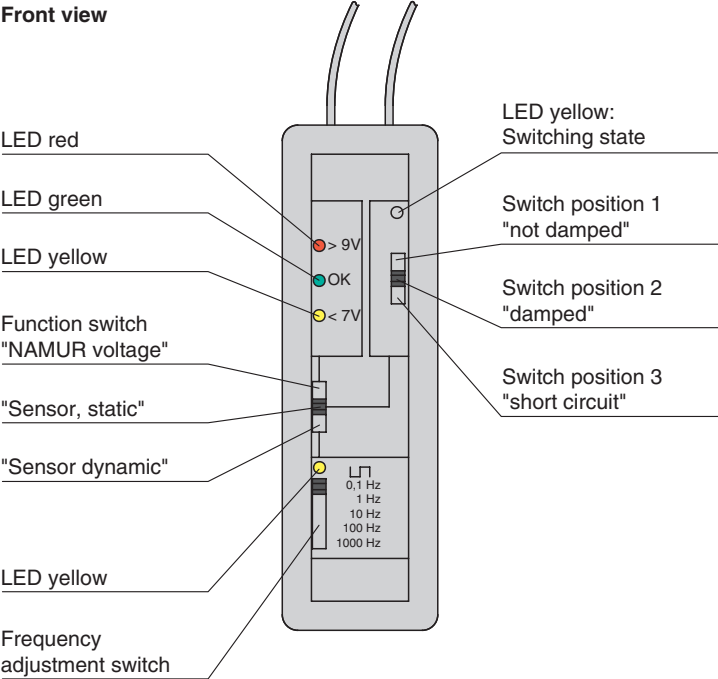
<b>Supply</b>	
Connection	loop powered
<b>Indicators/settings</b>	
Control elements	slide switches
Configuration	via slide switches
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013 (industrial locations)
<b>Conformity</b>	
Electromagnetic compatibility	NE 21
Degree of protection	IEC 60529

# Technical Data

<b>Ambient conditions</b>			
Ambient temperature			-20 ... 50 °C (-4 ... 122 °F)
Storage temperature			-25 ... 70 °C (-13 ... 158 °F)
<b>Mechanical specifications</b>			
Degree of protection			IP20
Mass			approx. 70 g
Dimensions			40 x 130 x 25 mm (1.6 x 5.1 x 1 inch)
Construction type			gray ABS handheld housing
<b>Data for application in connection with hazardous areas</b>			
EU-type examination certificate			DMT 02 ATEX E 008
Marking			II 1G EEx ia IIB T4
Voltage	U <sub>i</sub>		16 V DC
Current	I <sub>i</sub>		55 mA
Power	P <sub>i</sub>		245 mW
<b>Directive conformity</b>			
Directive 2014/34/EU			EN 60079-0:2012+A11:2013 , EN 60079-11:2012
<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> .

# Assembly

Front view



# Use

The simulator is used instead of a sensor and is connected to an input according to EN 60947-5-6 NAMUR. Three different test functions may be selected using the function switch.

**Function switch position "NAMUR voltage"**  
The voltage of the control circuit can be tested according to EN 60947-5-6 NAMUR. In this case the initiator simulator has an internal resistance of 1 kΩ.

**Function switch position "Sensor static"**

- Switch position 1: control circuit J > 2.1 mA (initiator not damped)
- Switch position 2: control circuit J about 0.4 mA (initiator damped)
- Switch position 3: control circuit J > 7.0 mA (lead short circuit)

**Function switch position "Sensor dynamic"**  
A quartz controlled rectangular wave controller produces a signal with a duty ratio of 50 % : 50 %. The frequency can be adjusted from 0.1 Hz up to 1 kHz using the slide switch.