Simulator

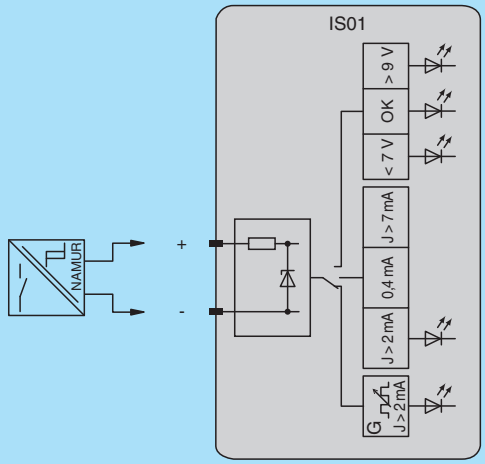
IS01

- 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 kΩ 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



Zone 0, 1, 2
Div. 1, 2

Technical Data

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

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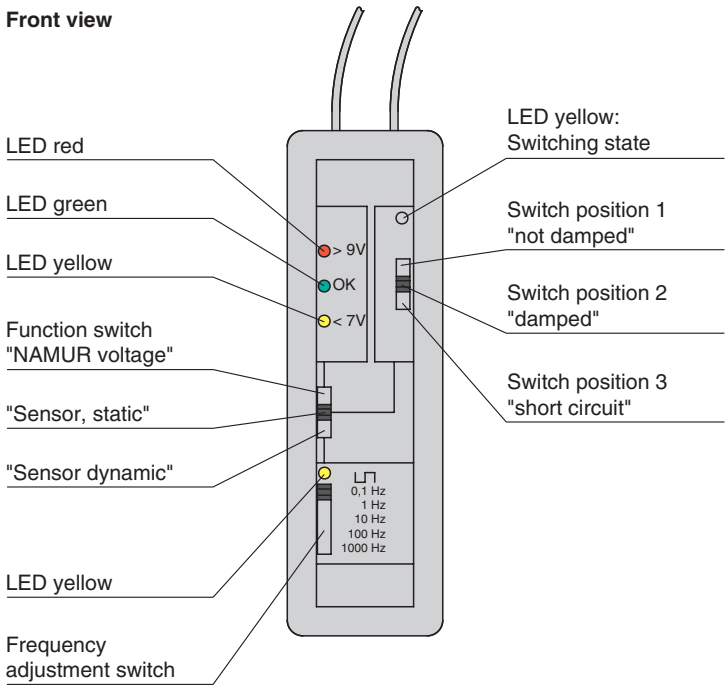
Technical Data

Ambient conditions		
Ambient temperature		-20 ... 50 °C (-4 ... 122 °F)
Storage temperature		-25 ... 70 °C (-13 ... 158 °F)
Mechanical specifications		
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
Data for application in connection with hazardous areas		
EU-Type Examination Certificate		DMT 02 ATEX E 008
Marking		⟨Ex⟩ II 1G EEx ia IIB T4
Voltage	U_i	16 V DC
Current	I_i	55 mA
Power	P_i	245 mW
Directive conformity		
Directive 2014/34/EU		EN 60079-0:2012+A11:2013 , EN 60079-11:2012
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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Additional Information

Operation:

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

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.

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