Enclosure Leakage Sensor

FieldConnex® Fieldbus

ELS-1

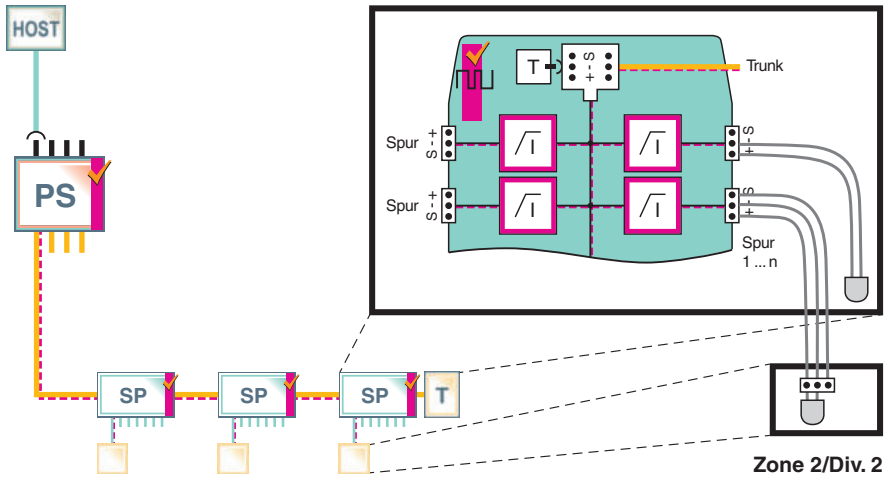
- Indication via LED and Advanced Diagnostics
- Intrinsically safe, FISCO or Entity
- For instrument or device coupler
- Fits inside terminal compartment
- For FOUNDATION Fieldbus H1 and PROFIBUS PA

Enlcosure leakage sensor for operation with FOUNDATION Fieldbus and PROFIBUS PA

Function

The enclosure leakage sensor senses water ingress in field device housings or junction boxes. It fits into the enclosure and sends alarms via the fieldbus network. It is certified intrinsically safe Ex ia for installation in Zone 0.
The alarm is indicated via LED and in the control room via FieldConnex® Advanced Diagnostics. Corrective actions can thus prevent effects from becoming irreversible or avoid conditions adverse to plant performance.
The ELS-1 connects in parallel to field instruments, trunk or spur connectors of compatible device coupler.

Connection



Technical Data

General specifications		
Design / Mounting		Cabinet installation
Installation in hazardous area		Zone 1 / Div. 1
Fieldbus connection		
Rated voltage	U_N	9 ... 32 V
Power dissipation		670 mW
Self current consumption		max. 6 mA
Indicators/operating means		
LED ERR		green flashing: status OK , red flashing: maintenance required
Transfer characteristics		
Internal measurement cycle		in normal state 30 s in alarm state 300 s

Release date: 2025-02-07 Date of issue: 2025-02-07 Filename: 240603_eng.pdf

Technical Data

Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013
Standard conformity		
Electromagnetic compatibility		NE 21:2006
Degree of protection		IEC 60529
Fieldbus standard		IEC 61158-2
Climatic conditions		IEC 60721
Shock resistance		EN 60068-2-27
Vibration resistance		EN 60068-2-6
Ambient conditions		
Ambient temperature		-40 ... 80 °C (-40 ... 176 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Relative humidity		100 %
Shock resistance		15 g 11 ms
Vibration resistance		1 g , 10 ... 150 Hz
Life span		exposed to rain water 8760 h , exposed to sea water 1440 h
Mechanical specifications		
Connection type		two strands, length 180 mm with cable ferrules, PVC insulation
Core cross section		0.25 mm²
Degree of protection		IP67
Mass		10 g
Data for application in connection with hazardous areas		
EU-type examination certificate		SIRA 12 ATEX 2129X
Marking		⟨Ex⟩ II 1G Ex ia IIC T4
Voltage	U_i	24 V
Internal capacitance	C_i	negligible 0 nF
Internal inductance	L_i	negligible 0 µH
Certificate		SIRA 12 ATEX 4154X
Marking		⟨Ex⟩ II 3G Ex nAc IIC T4 , ⟨Ex⟩ II 3G Ex ic IIC T4
Voltage	U_i	33 V
Internal capacitance	C_i	negligible 0 nF
Directive conformity		
Directive 2014/34/EU		EN IEC 60079-0:2018+AC:2020 , EN 60079-11:2012 , EN 60079-15:2010 , EN 60079-26:2015
Supplementary information		FISCO field device
International approvals		
UL approval		
Control drawing		116-B028
Approved for		Class I, Division 1, Groups A, B, C, D, T4 , Class I, Division 2, Groups A, B, C, D, T4
cULus		E326119
IECEx approval		
IECEx certificate		IECEx SIR 12.0052X
IECEx marking		Ex ia IIC T4 Ex ic IIC T4 Ex nAc IIC T4
General information		
Supplementary information		Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com.

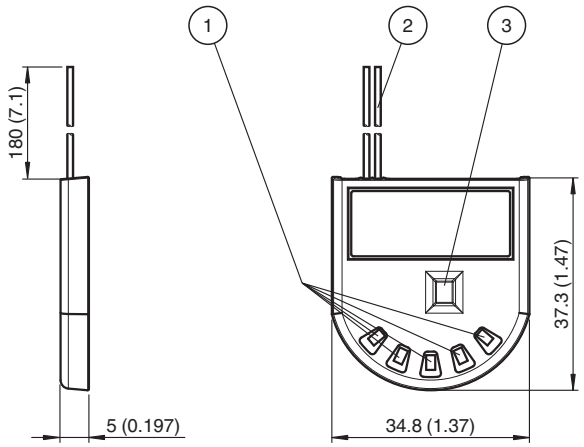
Release date: 2025-02-07 Date of issue: 2025-02-07 Filename: 240603_eng.pdf

Assembly

Release date: 2025-02-07 Date of issue: 2025-02-07 Filename: 240603_eng.pdf

Additional Information

Dimensions and Assembly



Dimensions in mm (in)

1 Sensor elements
2 Connection line
3 LED

Release date: 2025-02-07 Date of issue: 2025-02-07 Filename: 240603_eng.pdf