



Pressure sensor with display

PE-025-REG14-MFRKG/US/ IE



- 1 alphanumeric display 4-digit red/green
- 2 LEDs Display unit / switching status
- 3 programming button
- 4 upper part of the housing can be rotated 345°
- 5 Sealing



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1		
Measuring range	-1...25 bar	-14.5...362.5 psi	-0.1...2.5 MPa
Process connection	threaded connection G 1/4 external thread internal thread:M5; DIN EN ISO 1179-2		

Application

Special feature	Gold-plated contacts		
Measuring element	ceramic-capacitive pressure measuring cell		
Application	for industrial applications		
Media	liquids and gases		
Medium temperature [°C]	-25...80		
Min. bursting pressure	350 bar	5075 psi	35 MPa
Pressure rating	150 bar	2175 psi	15 MPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure		

Electrical data

Operating voltage [V]	18...30 DC; (to SELV/PELV)		
Current consumption [mA]	< 35		
Min. insulation resistance [MΩ]	100; (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		



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Power-on delay time	[s]	0.3	
Integrated watchdog		yes	
Inputs / outputs			
Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1		
Outputs			
Total number of outputs	2		
Output signal	switching signal; analogue signal; IO-Link; (configurable)		
Electrical design	PNP/NPN		
Number of digital outputs	2		
Output function	normally open / normally closed; (parameterisable)		
Max. voltage drop switching output DC	[V]	2	
Permanent current rating of switching output DC	[mA]	250	
Switching frequency DC	[Hz]	< 500	
Number of analogue outputs	1		
Analogue current output	[mA]	4...20; (scalable 1:5)	
Max. load	[Ω]	500	
Analogue voltage output	[V]	0...10; (scalable 1:5)	
Min. load resistance	[Ω]	2000	
Short-circuit protection	yes		
Type of short-circuit protection	pulsed		
Overload protection	yes		
Measuring/setting range			
Measuring range	-1...25 bar	-14.5...362.5 psi	-0.1...2.5 MPa
Set point SP	-0.85...25 bar	-12...362.5 psi	-0.085...2.5 MPa
Reset point rP	-0.95...24.9 bar	-13.5...361 psi	-0.095...2.49 MPa
Analogue start point	-1...20 bar	-14.5...290 psi	-0.1...2 MPa
Analogue end point	4...25 bar	58...362.5 psi	0.4...2.5 MPa
In steps of	0.05 bar	0.5 psi	0.005 MPa
Accuracy / deviations			
Switch point accuracy	[X21]	< ± 0,4; (Turn down 1:1)	
Repeatability	[X21]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)	
Characteristics deviation	[X21]	< ± 0,25 (BFSL) / < ± 0,5 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line; LS = limit value setting)	
Hysteresis deviation	[X21]	< ± 0,1; (Turn down 1:1)	
Long-term stability	[X21]	< ± 0,05; (Turn down 1:1; per 6 months)	
Temperature coefficient zero point	[X22]	0,2; (-25...80 °C)	
Temperature coefficient span	[X22]	0,2; (-25...80 °C)	
Notes on the accuracy / deviation	switch point accuracy, linearity error under DNV GL: < ± 1%: < ± 1%		
Response times			
Response time	[ms]	< 1.5	



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Delay time programmable dS, dr	[s]	0...50
Damping process value dAP	[s]	0...4
Damping for the analogue output dAA	[s]	0...4
Max. response time analogue output	[ms]	3

Software / programming

Parameter setting options	hysteresis / window; normally open / normally closed; switch-on/ switch-off delay; Damping; Display unit; current/voltage output
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Interfaces

Communication interface	IO-Link				
Transmission type	COM2 (38,4 kBaud)				
IO-Link revision	1.1				
SDCI standard	IEC 61131-9				
Profiles	Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis				
SIO mode	yes				
Required master port type	A				
Process data analogue	1				
Process data binary	2				
Min. process cycle time	[ms] 2.3				
Supported DeviceIDs	<table> <tr> <th>Type of operation</th><th>DeviceID</th></tr> <tr> <td>default</td><td>462</td></tr> </table>	Type of operation	DeviceID	default	462
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Operating conditions

Ambient temperature	[°C]	-25...80
Storage temperature	[°C]	-40...100
Protection		IP 65; IP 67

Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	20 g (10...2000 Hz)
MTTF	[ANN]	161
UL approval	UL Approval no.	J012
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data

Weight	[g]	261
Materials	stainless steel (1.4404 / 316L); PBT+PC-GF30; PBT-GF20; PC; EPDM	
Materials (wetted parts)	stainless steel (1.4404 / 316L); Al2O3 (99.9%; ceramics); EPDM	
Min. pressure cycles	100 million	
Tightening torque	[Nm]	25...35; (recommended tightening torque; depends on lubrication, seal and pressure rating)
Process connection	threaded connection G 1/4 external thread internal thread:M5; DIN EN ISO 1179-2	
Process connection sealing	EPDM	
Restrictor element integrated	no (can be retrofitted)	

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Displays / operating elements

Display	Display unit	3 x LED, green (bar, psi, MPa)
	switching status	2 x LED, yellow
	measured values	alphanumeric display, red/green 4-digit

Remarks

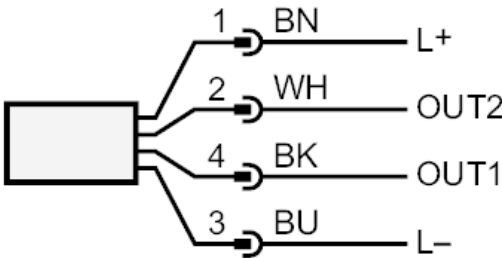
Pack quantity	1 pcs.
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Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



OUT1 switching output or IO-Link
OUT2 switching output or analogue output
 colours to DIN EN 60947-5-2
 Core colours :
BK = black
BN = brown
BU = blue
WH = white