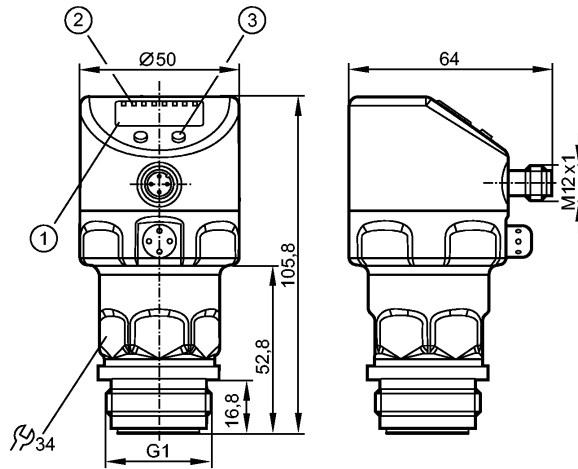


PI2793

PI-025-REA01-MFRKG/US/ /P

Pressure sensors



- 1: 4-digit alphanumeric display
- 2: LEDs
- 3: Programming button



Made in Germany

Product characteristics

Combined pressure sensor
Connector
Process connection: G 1 A / Aseptoflex Vario
Display units:
bar, psi, MPa, % of the span
Function programmable
2-wire connection technology: analogue output
3-wire connection technology: 2 outputs OUT1 = switching output OUT2 = switching output or analogue output
4-digit alphanumeric display
Measuring range: -1.00...25.00 bar / -14.4...362.7 psi / -0.100...2.500 MPa

Application

Application	Type of pressure: relative pressure Hygienic systems, viscous media and liquids with suspended particles Liquids and gases		
Pressure rating	100 bar	1450 psi	10 MPa
Bursting pressure min.	350 bar	5070 psi	35 MPa
Medium temperature [°C]	-25...125 (145 max. 1h)		

Electrical data

Electrical design	2 wires DC / 3 wires DC PNP/NPN		
Operating voltage [V]	20...32 DC (2L) / 18...32 DC (3L)		
Current consumption [mA]	3.6...21 (2L) / < 45 (3L)		
Insulation resistance [MΩ]	> 100 (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		

Outputs

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Pressure sensors

Output	2-wire connection technology: analogue output 3-wire connection technology: 2 outputs OUT1 = switching output OUT2 = switching output or analogue output
Output function	1 x normally open / normally closed programmable + 1 x normally open / normally closed programmable or 1 x analogue (4...20 / 20...4 mA, scalable)
Current rating [mA]	--- (2L) / 250 (3L)
Voltage drop [V]	--- (2L) / < 2 (3L)
Short-circuit protection	pulsed
Overload protection	yes
Switching frequency [Hz]	--- (2L) / 125 (3L)
Analogue output	I: 4...20 mA (Ineg: 20...4 mA)
Max. load [Ω]	300 (2L) / max. (U _b - 10 V) x 50 (3L)

Measuring / setting range			
Measuring range	-1.00...25.00 bar	-14.4...362.7 psi	-0.100...2.500 MPa
Setting range			
Set point, SP	-0.96...25.00 bar	-13.8...362.7 psi	-0.096...2.500 MPa
Reset point, rP	-1.00...24.96 bar	-14.4...362.1 psi	-0.100...2.496 MPa
Analogue start point, ASP	-1.00...18.74 bar	-14.4...271.8 psi	-0.100...1.874 MPa
Analogue end point, AEP	5.24...25.00 bar	76.2...362.7 psi	0.524...2.500 MPa
in steps of	0.02 bar	0.3 psi	0.002 MPa
Factory setting	SP1 = 6.24 bar; rP1 = 5.74 bar SP2 = 18.74 bar; rP2 = 18.24 bar ASP = 0.00 bar; AEP = 25.00 bar		

Accuracy / deviations	
Accuracy / deviations (in % of the span) Turn down 1:1	
Switch point accuracy	< ± 0.2
Characteristics deviation *)	< ± 0.2
Linearity	< ± 0.15
Hysteresis	< ± 0.15
Repeatability **)	< ± 0.1
Long-term stability ***)	< ± 0.1
Temperature coefficients (TEMPCO) in the temperature range 0...70° C (in % of the span per 10 K)	
Greatest TEMPCO of the zero point	< ± 0.05
Greatest TEMPCO of the span	< ± 0.15

Reaction times	
Power-on delay time [s]	1 (2L) / 0.5 (3L)
Min. response time switching output [ms]	--- (2L) / 3 (3L)
Damping for the switching output (dAP) [s]	0.00...30.00
Damping for the analogue output (dAA) [s]	0.01...99.99
Step response time analogue output [ms]	45 (2L) / 7 (3L)
Integrated watchdog	yes

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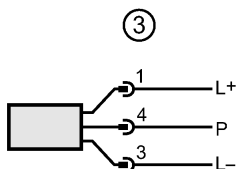
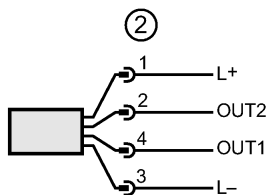
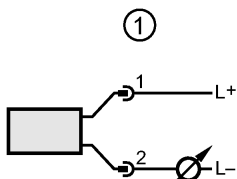
Pressure sensors

Interfaces	
IO-Link Device	
Transfer type	COM2 (38.4 kBaud)
IO-Link revision	1.0
SDCI standard	
IO-Link Device ID	156 d / 00 00 9C h
Profiles	no profile
SIO mode	yes
Required master port type	A
Process data analogue	1
Process data binary	2
Min. process cycle time [ms]	2.3
Environment	
Ambient temperature [°C]	-25...80
Storage temperature [°C]	-40...100
Protection	IP 67 / IP 68 / IP 69K
Tests / approvals	
EMC	EN 61000-4-2 ESD: 4 kV CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m EN 61000-4-4 Burst: 2 kV EN 61000-4-5 Surge: 0.5/1 kV EN 61000-4-6 HF conducted: 10 V
Shock resistance	DIN IEC 68-2-27: 50 g (11 ms)
Vibration resistance	DIN IEC 68-2-6: 20 g (10...2000 Hz)
MTTF [Years]	160
Mechanical data	
Process connection	G 1 A / Aseptoflex Vario
Materials (wetted parts)	ceramics (99.9 % Al ₂ O ₃); PTFE; stainless steel 316L / 1.4435; surface characteristics: Ra < 0.4 / Rz 4
Housing materials	stainless steel 316L / 1.4404; FPM (Viton); PTFE; PBT (Pocan); PEI; PFA
Switching cycles min.	100 million
Weight [kg]	0.314
Displays / operating elements	
Display	Display unit LED green Switching status LED yellow Function display 4-digit alphanumeric display Measured values 4-digit alphanumeric display
Electrical connection	
Connection	M12 connector; Gold-plated contacts
Wiring	

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Pressure sensors



- 1 connection for 2-wire operation
- 2 connection for 3-wire operation
- 3 connection for IO-Link parameter setting (P = communication via IO-Link)

Remarks

Remarks	(2L) = value for 2-wire operation (3L) = value for 3-wire operation *) linearity, incl. hysteresis and repeatability; (limit value setting to DIN 16086) **) with temperature fluctuations < 10 K ***) in % of the span per year
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Pack quantity	[piece]	1
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