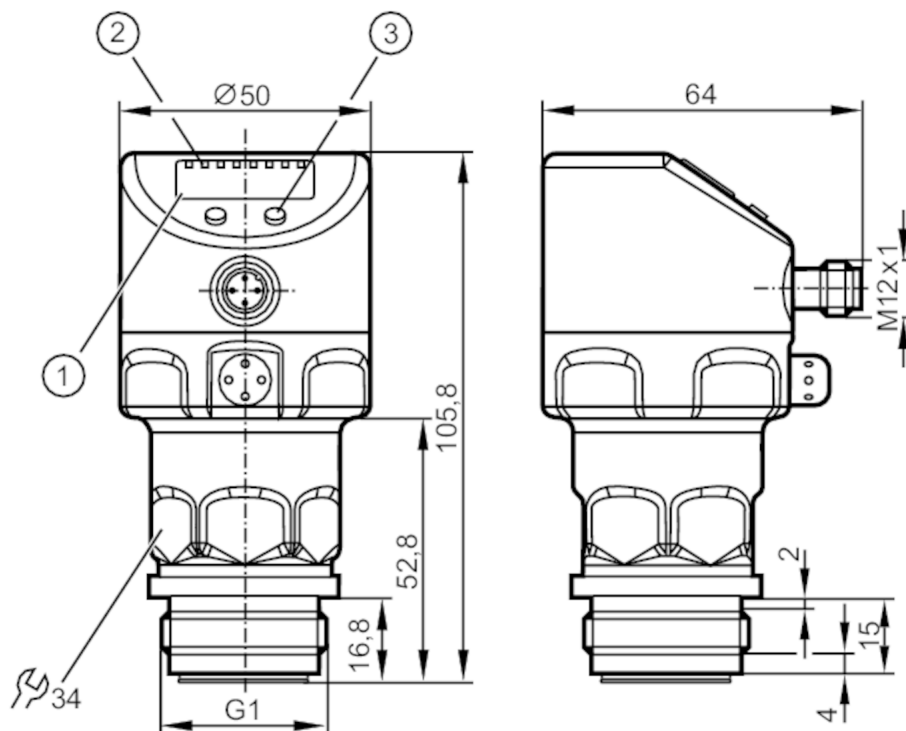




Pressure sensor with display

PI-025-REA01-MFRKG/US/ IP



- 1 alphanumeric display 4-digit
- 2 status LEDs
- 3 programming button



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1	
Measuring range	-1...25 bar	-14.4...362.7 psi
Measuring range [MPa]	-0.1...2.5	
Process connection	threaded connection G 1 external thread Aseptoflex Vario	

Application

Special feature	Gold-plated contacts	
Application	flush mountable for the food and beverage industry	
Media	viscous media and liquids with suspended particles; liquids and gases	
Medium temperature [°C]	-25...125; (145 max. 1h)	
Min. bursting pressure	350 bar	5070 psi
Min. bursting pressure [MPa]	35	
Pressure rating	100 bar	1450 psi
Pressure rating [MPa]	10	
Type of pressure	relative pressure	
No dead space	yes	

Electrical data

Min. insulation resistance [MΩ]	100; (500 V DC)	
Protection class	III	



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Reverse polarity protection		yes
Integrated watchdog		yes
2-wire		
Operating voltage	[V]	20...32 DC
Power-on delay time	[s]	1
3-wire		
Operating voltage	[V]	18...32 DC
Current consumption	[mA]	< 45
Power-on delay time	[s]	0.5
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)
Number of analogue outputs		1
Analogue current output	[mA]	4...20, invertible; (scalable)
Short-circuit protection		yes
Type of short-circuit protection		pulsed
Overload protection		yes
2-wire		
Max. load	[Ω]	300
3-wire		
Max. voltage drop switching output DC	[V]	2
Permanent current rating of switching output DC	[mA]	250
Switching frequency DC	[Hz]	125
Max. load	[Ω]	(U _b - 10 V) / 20 mA
Measuring/setting range		
Measuring range		-1...25 bar -14.4...362.7 psi
Measuring range	[MPa]	-0.1...2.5
Set point SP		-0.96...25 bar -13.8...362.7 psi
Set point SP	[MPa]	-0.096...2.5
Reset point rP		-1...24.96 bar -14.4...362.1 psi
Reset point rP	[MPa]	-0.1...2.496
Analogue start point		-1...18.74 bar -14.4...271.8 psi
Analogue start point	[MPa]	-0.1...1.874
Analogue end point		5.24...25 bar 76.2...362.7 psi
Analogue end point	[MPa]	0.524...2.5
In steps of		0.02 bar 0.3 psi
In steps of	[MPa]	0.002



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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

Switch point accuracy [% of the span]	$< \pm 0,2$; (Turn down 1:1)
Repeatability [% of the span]	$< \pm 0,1$; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation [% of the span]	$< \pm 0,2$; (Turn down 1:1; linearity, incl. hysteresis and repeatability; limit value setting to DIN EN IEC 62828-1)
Linearity deviation [% of the span]	$< \pm 0,15$; (Turn down 1:1)
Hysteresis deviation [% of the span]	$< \pm 0,15$; (Turn down 1:1)
Long-term stability [% of the span]	$< \pm 0,1$; (Turn down 1:1; per year)
Temperature coefficient zero point [% of the span / 10 K]	$< \pm 0,05$; (0...70 °C)
Temperature coefficient span [% of the span / 10 K]	$< \pm 0,15$; (0...70 °C)

Response times

Damping process value dAP [s]	0...30
Damping for the analogue output dAA [s]	0.01...99.99

2-wire

Step response time analogue output [ms]	45
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3-wire

Min. response time of switching output (dAP) [ms]	3
Step response time analogue output [ms]	7

Interfaces

Communication interface	IO-Link
Transmission type	COM2 (38,4 kBaud)
IO-Link revision	1.0
Profiles	no profile
Process data analogue	1
Process data binary	2
Min. process cycle time [ms]	2.3

Operating conditions

Ambient temperature [°C]	-25...80
Storage temperature [°C]	-40...100
Protection	IP 67; IP 68; IP 69K



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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	[years]	148.85
Mechanical data		
Weight	[g]	297.5
Materials	stainless steel (316L/1.4404); FKM; PTFE; PBT; PEI; PFA	
Materials (wetted parts)	ceramics (99.9 % Al2O3); stainless steel (316L/1.4435); surface characteristics: Ra < 0,4 / Rz 4; PTFE	
Min. pressure cycles	100 million	
Tightening torque	[Nm]	35; (recommended tightening torque; depends on lubrication, seal and pressure rating)
Process connection	threaded connection G 1 external thread Aseptoflex Vario	
Displays / operating elements		
Display	Display unit	LED, green
	switching status	LED, yellow
	function display	alphanumeric display, 4-digit
	measured values	alphanumeric display, 4-digit
Display unit	bar; psi; MPa; % of the span	
Remarks		
Pack quantity	1 pcs.	

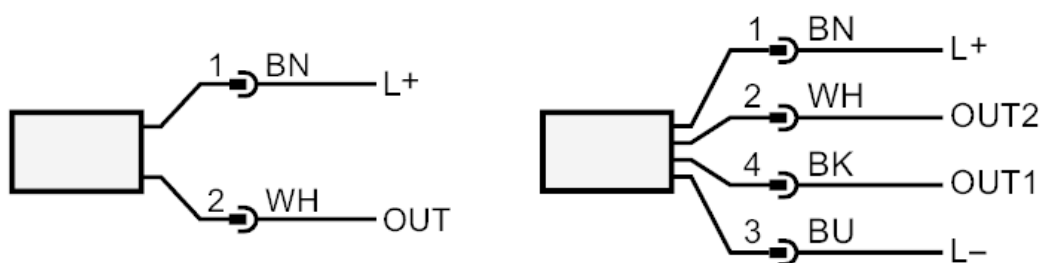


Pressure sensor with display

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

Electrical connection

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



OUT

connection for 2-wire operation :
analogue output

OUT1

connection for 3-wire operation :
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