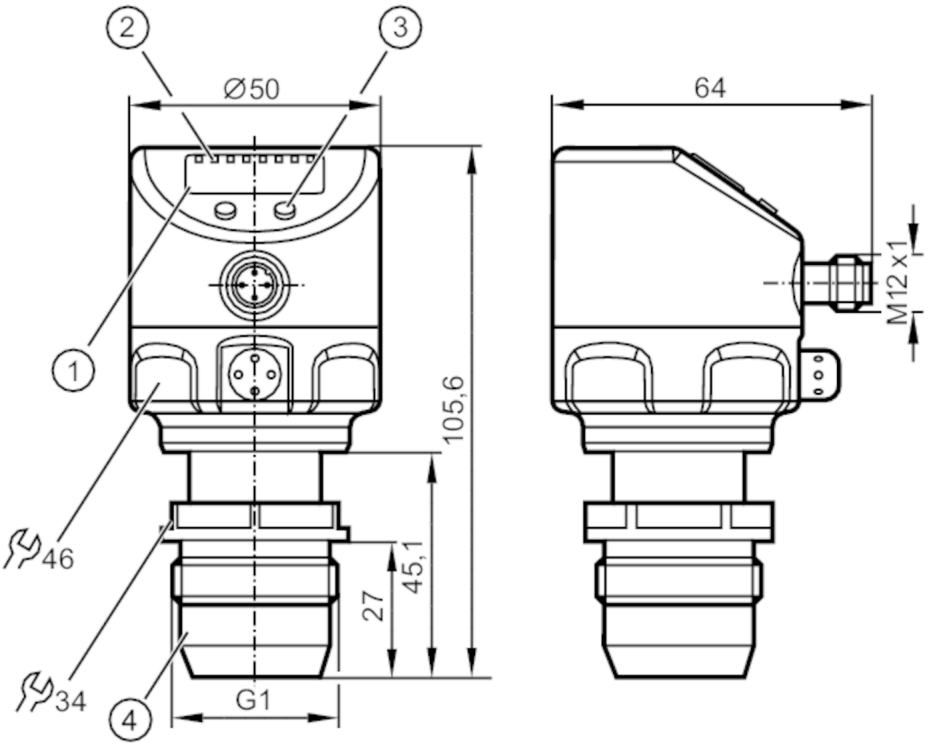
PI2896

Flush pressure sensor with display

PI-2,5-REA01-MFRKG/US/ /P

Alternative articles: PI1806

When selecting an alternative article and accessories please note that technical data may differ!



1 alphanumeric display 4-digit
2 status LEDs
3 Programming button
4 G 1 sealing cone external thread
Attention: The unit must only be installed in a process connection for G1 sealing cone.
The G1A sealing cone of the unit is only suited for adapters with metal end stop.

ACS CE CRN cULus LISTED EC 1935/2004 EHEDG Tested FCM FDA IO-Link UKCA

Product characteristics				
Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1			
Measuring range	-0.124...2.5 bar	-124...2500 mbar	-1.8...36.27 psi	-12.4...250 kPa
Process connection	threaded connection G 1 external thread sealing cone Attention: The unit must only be installed in a process connection for G1 sealing cone.; The G1A sealing cone of the unit is only suited for adapters with metal end stop.			

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. burst pressure	50 bar	725 psi	5000 kPa	
Pressure rating	20 bar	290 psi	2000 kPa	
Vacuum resistance	-1000 mbar	-0.1 MPa		
Type of pressure	relative pressure			

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MAWP (for applications according to CRN)	[bar]	20
Electrical data		
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Integrated watchdog		yes
2-wire		
Operating voltage	[V]	20...32 DC
Current consumption	[mA]	3.6...21
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 analog outputs: 1
Outputs		
Total number of outputs		2
Output signal		switching signal; analog signal; IO-Link; (configurable)
Electrical design		PNP/NPN
Number of digital outputs		2
Output function		normally open / closed; (configurable)
Number of analog outputs		1
Analog current output	[mA]	4...20, invertible; (scalable)
Short-circuit protection		yes
Type of short-circuit protection		yes (non-latching)
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]	(Ub - 10 V) / 20 mA

Measuring/setting range				
Measuring range	-0.124...2.5 bar	-124...2500 mbar	-1.8...36.27 psi	-12.4...250 kPa
Set point SP	-0.12...2.5 bar	-1.74...36.27 psi	-12...250 kPa	
Reset point rP	-0.124...2.496 bar	-1.8...36.21 psi	-12.4...249.6 kPa	
Analog start point	-0.124...1.88 bar	-1.8...27.27 psi	-12.4...188 kPa	
Analog end point	0.5...2.5 bar	7.26...36.27 psi	50...250 kPa	
In steps of	0.002 bar	0.03 psi	0.2 kPa	

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Factory setting		SP1 = 0.624 bar	rP1 = 0.574 bar
		SP2 = 1.874 bar	rP2 = 1.824 bar
		ASP = 0.000 bar	AEP = 2.500 bar

Accuracy / deviations		
Switch point accuracy [% of the span]		< ± 0,2; (Turn down 1:1)
Repeatability [% of the span]		< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation [% of the span]		< ± 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]		< ± 0,15; (Turn down 1:1)
Hysteresis deviation [% of the span]		< ± 0,15; (Turn down 1:1)
Long-term stability [% of the span]		< ± 0,1; (Turn down 1:1; per year)
Temperature coefficient zero point [% of the span / 10 K]		< ± 0,05; (0...70 °C)
Temperature coefficient span [% of the span / 10 K]		< ± 0,15; (0...70 °C)
Reaction times		
Damping process value dAP [s]		0...30
Damping for the analog output dAA [s]		0.01...99.99
2-wire		
Step response time analog output [ms]		45
3-wire		
Min. response time of switching output (dAP) [ms]		3
Step response time analog output [ms]		7
Interfaces		
Communication interface		IO-Link
Transmission type		COM2 (38,4 kBaud)
IO-Link revision		1.0
SIO mode		yes
Required master port class		A
Process data analog		1
Process data binary		2
Min. process cycle time [ms]		2.3
Supported DeviceIDs	**Type of operation**	**DeviceID**
	default	159
Operating conditions		
Ambient temperature [°C]		-25...80
Storage temperature [°C]		-40...100
Protection		IP 67; IP 68; IP 69K

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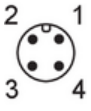
Tests / approvals			
EMC		EN 61000-4-2 ESD	4 kV CD / 8 kV AD
		EN 61000-4-3 HF radiated	10 V/m
		EN 61000-4-4 Burst	2 kV
		EN 61000-4-5 Surge	0,5/1 kV
		EN 61000-4-6 HF conducted	10 V
Shock resistance		DIN IEC 68-2-27	50 g (11 ms)
Vibration resistance		DIN IEC 68-2-6	20 g (10...2000 Hz)
MTTF	[years]	148.85	
Note on approval		Factory certificate available as download at www.factory-certificate.ifm	
Mechanical data			
Weight	[g]	378	
Housing		tubular	
Dimensions	[mm]	Ø 50 / L = 105.6	
Material		stainless steel (1.4404 / 316L); FKM; PTFE; PBT; PEI; PFA	
Materials (wetted parts)		ceramics (99.9 % Al2O3); stainless steel (1.4435 / 316L) surface characteristics: Ra < 0,4 µm / Rz = 4 µm; PTFE	
Min. pressure cycles		100 million	
Process connection		threaded connection G 1 external thread sealing cone Attention: The unit must only be installed in a process connection for G1 sealing cone.; The G1A sealing cone of the unit is only suited for adapters with metal end stop.	
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; kPa; psi; inH2O; mWS; % of the span	
Remarks			
Pack quantity		1 pcs.	

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated



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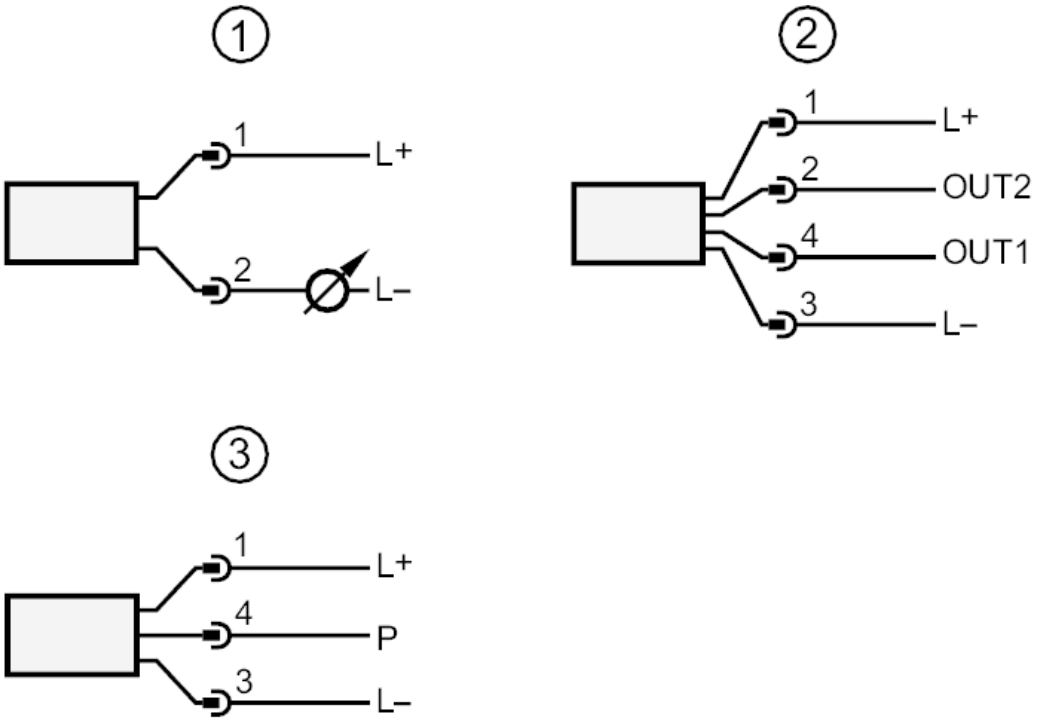
Connection



1	connection for 2-wire operation
2	connection for 3-wire operation :
OUT1	Switching output
OUT2	Switching output analog output
3	connection for IO-Link parameter setting (P = communication via IO-Link)