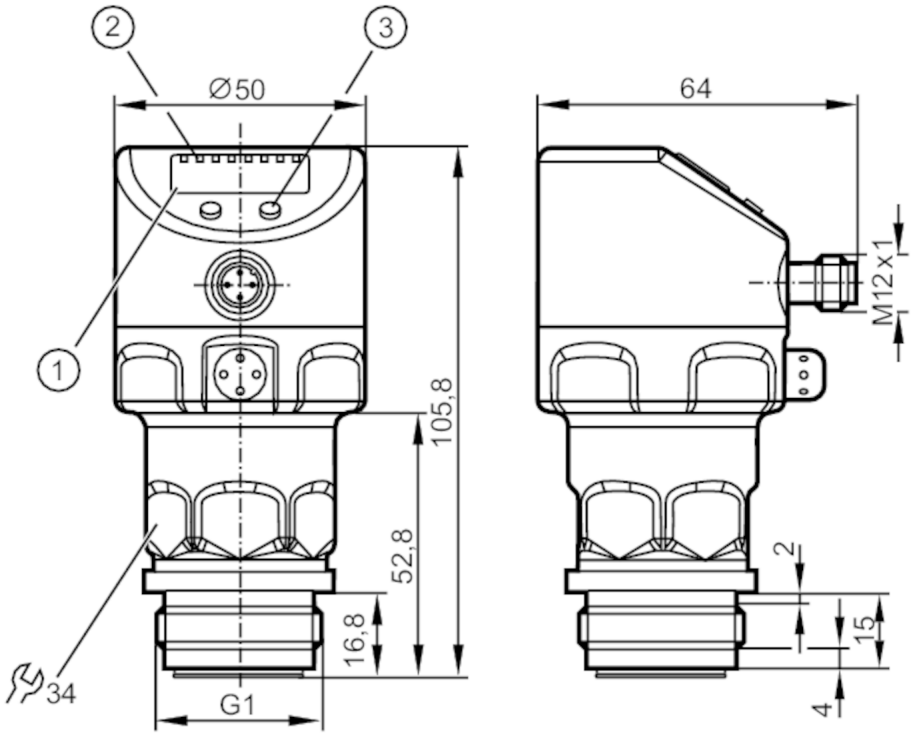
PI2794

Flush pressure sensor with display

PI-010-REA01-MFRKG/US/ /P

Alternative articles: PI1704

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

Product characteristics			
Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1		
Measuring range	-1...10 bar	-14.5...145 psi	-0.1...1 MPa
Process connection	threaded connection G 1 external thread Aseptoflex Vario		
Application			
System	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	150 bar	2175 psi	15 MPa
Pressure rating	50 bar	725 psi	5 Mpa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure; vacuum		
No dead space	yes		
MAWP (for applications according to CRN)	50 bar	725 psi	5 MPa

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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

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Measuring/setting range			
Measuring range	-1...10 bar	-14.5...145 psi	-0.1...1 MPa
Set point SP	-0.98...10 bar	-14.2...145 psi	-0.098...1 MPa
Reset point rP	-1...9.98 bar	-14.5...144.7 psi	-0.1...0.998 MPa
Analog start point	-1...7.5 bar	-14.5...108.7 psi	-0.1...0.75 MPa
Analog end point	1.5...10 bar	21.8...145 psi	0.15...1 MPa
In steps of	0.01 bar	0.1 psi	0.001 MPa
Factory setting		SP1 = 2.50 bar	rP1 = 2.30 bar
		SP2 = 7.50 bar	rP2 = 7.30 bar
		ASP = 0.00 bar	AEP = 10.00 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

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Interfaces			
Communication interface		IO-Link	
Transmission type		COM2 (38,4 kBaud)	
IO-Link revision		1.0	
Profiles		no profile	
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	157
Operating conditions			
Ambient temperature	[°C]	-25...80	
Storage temperature	[°C]	-40...100	
Protection		IP 67; IP 68; IP 69K	
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]	160	
Note on approval		Factory certificate available as download at www.factory-certificate.ifm	
Mechanical data			
Weight	[g]	351.8	
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 / Rz 4; PTFE	
Min. pressure cycles		100 million	
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.	
Electrical connection			

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

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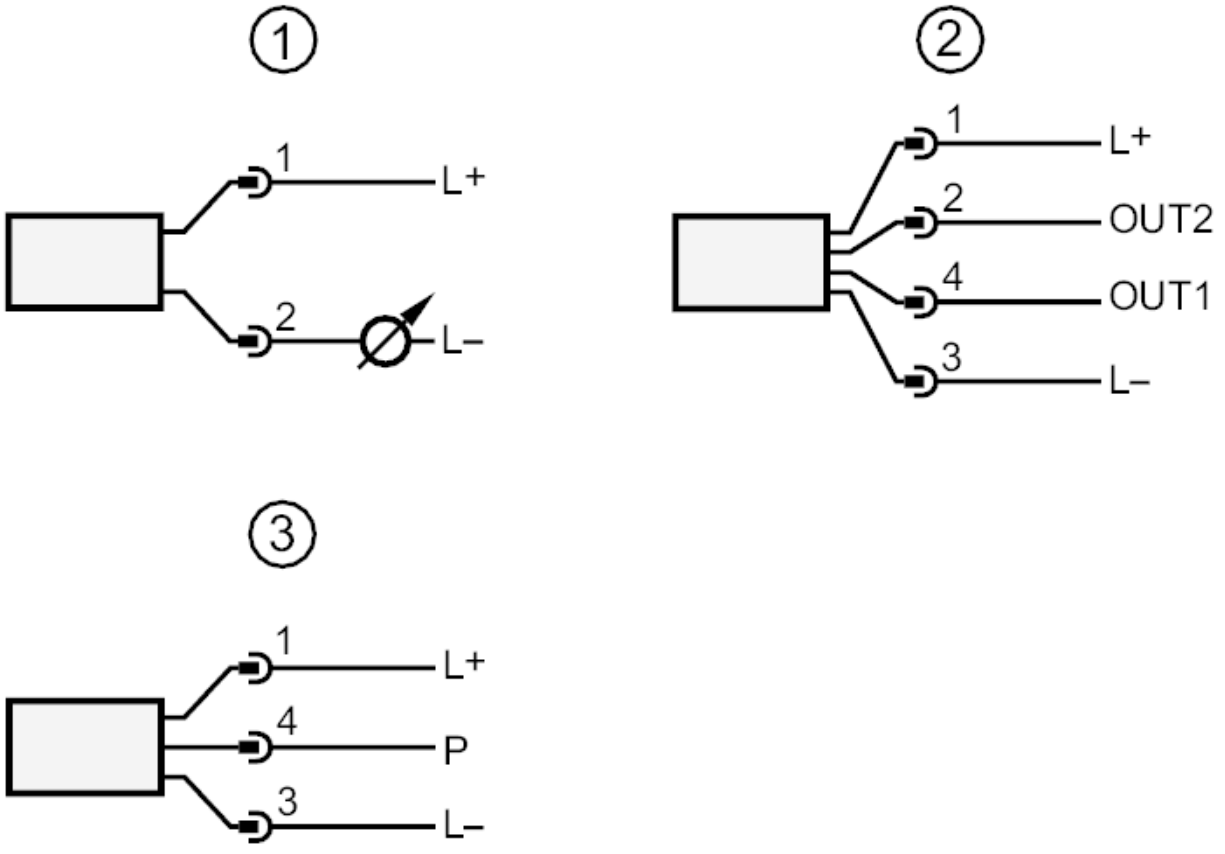
Connection



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)