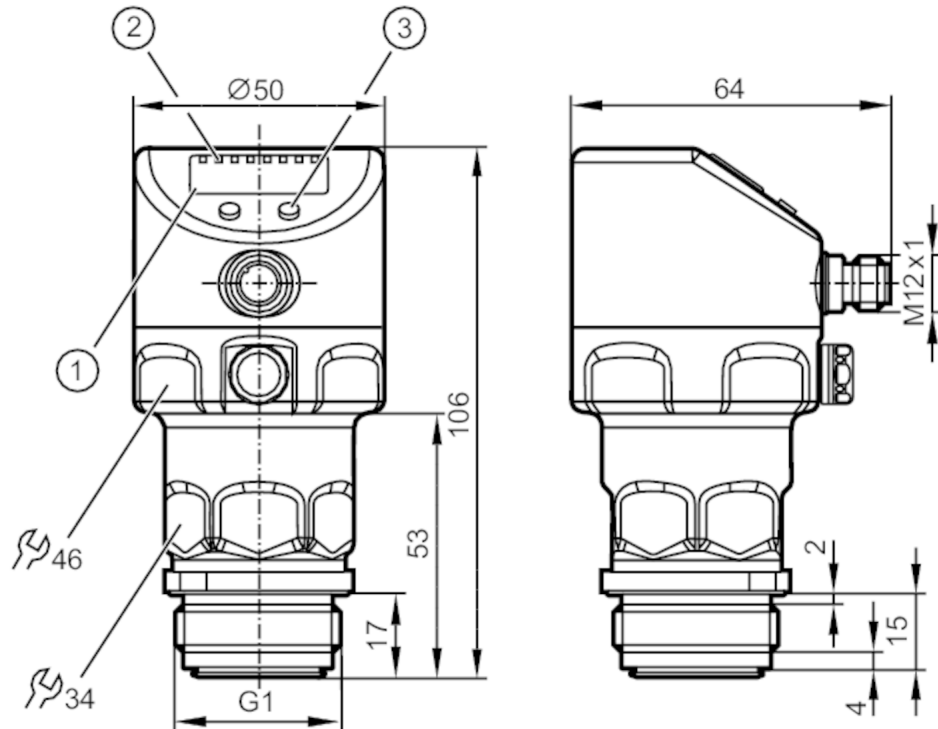


PI2714



Flush pressure sensor with display

PI-016-REA01-MFRKG/US/ I/P



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



ACS



CRN



UL

EC 1935/2004

EHEDG

Certified

FCM

FDA

IO-Link

Reg31

Product characteristics

Output signal	switching signal; analog signal; IO-Link; (configurable)		
Measuring range	-1...16 bar	-14.6...232 psi	-0.1...1.6 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	250 bar	3625 psi	25 MPa
Pressure rating	75 bar	1085 psi	7.5 Mpa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure; vacuum		
No dead space	yes		
MAWP (for applications according to CRN) [bar]	60		

Electrical data

Min. insulation resistance [MΩ]	100; (500 V DC)
Protection class	III
Reverse polarity protection	yes
Integrated watchdog	yes

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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	-1...16 bar	-14.6...232 psi	-0.1...1.6 MPa
Set point SP	-0.98...16 bar	-14.2...232 psi	-0.098...1.6 MPa
Reset point rP	-1...15.98 bar	-14.6...231.6 psi	-0.1...1.598 MPa
Analog start point	-1...12 bar	-14.6...174 psi	-0.1...1.2 MPa
Analog end point	3...16 bar	43.6...232 psi	0.3...1.6 MPa
In steps of	0.02 bar	0.2 psi	0.002 MPa
Factory setting		SP1 = 4.0 bar	rP1 = 3.68 bar
		SP2 = 12.0 bar	rP2 = 11.68 bar
		ASP = 0.0 bar	AEP = 16.0 bar
Accuracy / deviations			
Switch point accuracy	< ± 0,2; (Turn down 1:1)		



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	[% of the span]	
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)

Reaction times

Damping for the switching output dAP	[s]	0...30
Damping for the analog output dAA	[s]	0.01...99.99

2-wire

Step response time analog output	[ms]	45
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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	
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	729

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]	154	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	

Mechanical data

Weight [g]	361
Material	stainless steel (1.4404 / 316L); FKM; PTFE; PBT; PEI; PFA
Materials (wetted parts)	ceramics (99.9 % Al ₂ O ₃); 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; MPa; psi; % of the span	

Remarks

Pack quantity	1 pcs.
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Electrical connection

Connector: 1 x M12; Contacts: gold-plated

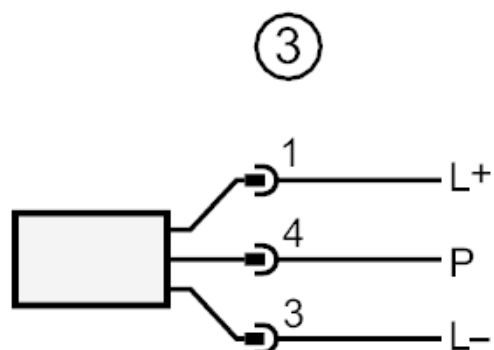
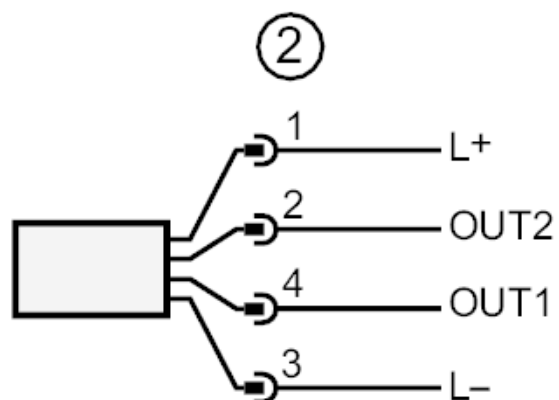
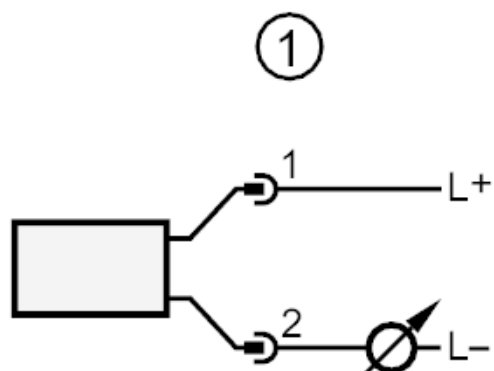




Flush pressure sensor with display

PI-016-REA01-MFRKG/US/ IP

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) |