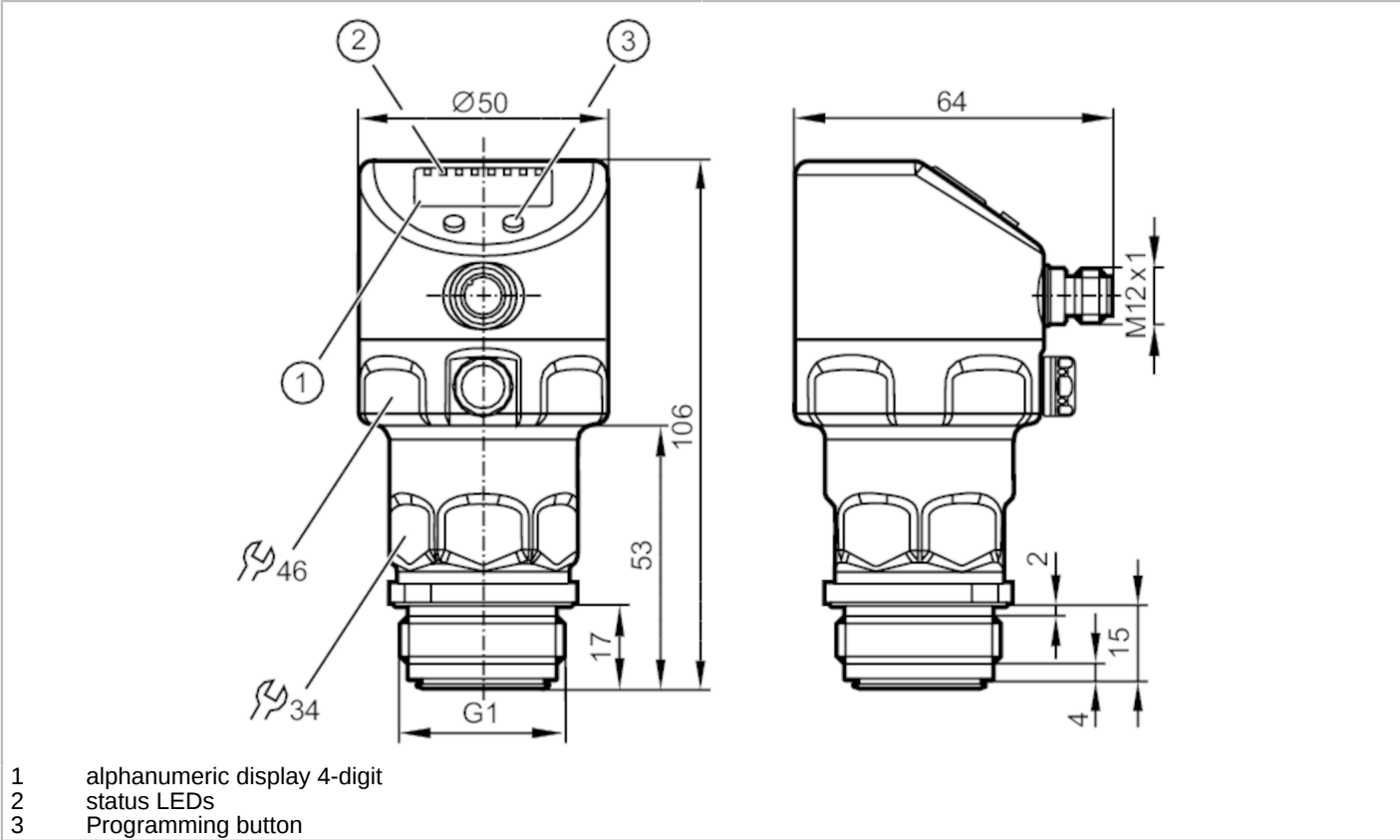




Flush pressure sensor with display

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

Alternative articles: PI1714
When selecting an alternative article and accessories please note that technical data may differ!



ACS CRN LISTED EHEDG Certified FDA Reg31

Product characteristics			
Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1		
Measuring range	-1...16 bar	-14.6...232 psi	-0.1...1.6 MPa
Process connection	threaded connection G 1 external thread with Aseptoflex Vario sealing contour		
Note	G1 Gewinde nach ISO 228. Alternativ dichtend über rückwärtige Dichtkontur mit Dichtung in Anlehnung an DIN EN ISO 1179-2.		
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	250 bar	3625 psi	25 MPa
Pressure rating	75 bar	1085 psi	7.5 MPa
Vacuum resistance	-1000 mbar		-0.1 MPa
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)		



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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]	(U _b - 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
		dAP = 0.06 s	dAA = 0.03 s



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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	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	
UL approval	UL approval number	J018
	File number UL	E174189
Mechanical data		
Weight	[g]	361
Housing		tubular
Dimensions	[mm]	Ø 50 / L = 106
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 with Aseptoflex Vario sealing contour
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.
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)