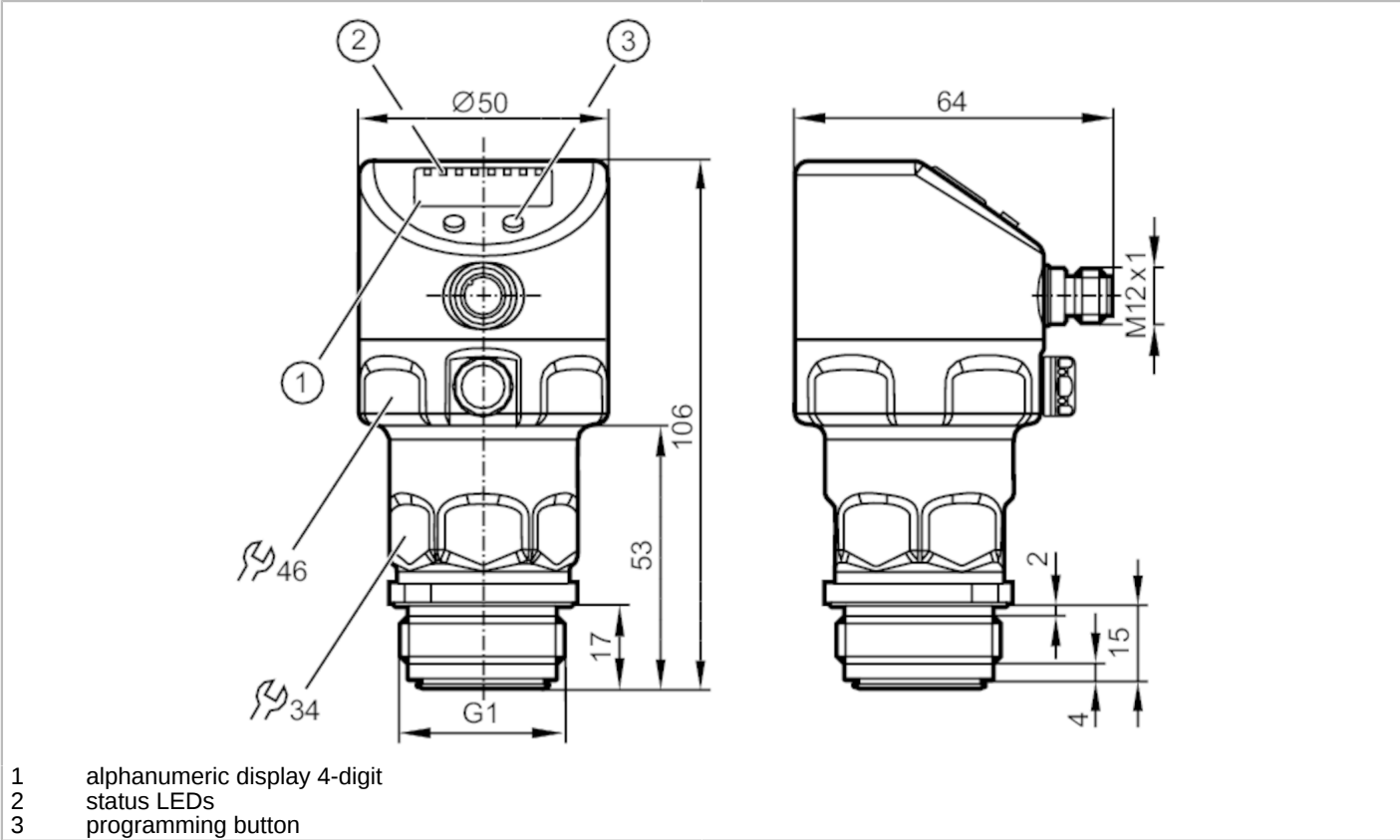




Flush pressure sensor with display

PI-1,6-REA01-MFRKG/US/ IP

Alternative articles: PI1717
When selecting an alternative article and accessories please note that technical data may differ!



ACS CRN UL US LISTED EC 1935/2004 EHEDG Certified FCM FDA IO-Link Reg31 UK CA

Product characteristics				
Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1			
Measuring range	-0.1...1.6 bar	-100...1600 mbar	-1.46...23.2 psi	-10...160 kPa
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	40000 mbar	580 psi	4000 kPa	
Pressure rating	15000 mbar	215 psi	1500 kPa	
Vacuum resistance [mbar]	-1000			
Vacuum resistance [MPa]	-0.1			
Type of pressure	relative pressure			
No dead space	yes			
MAWP (for applications according to CRN) [bar]	15			
Electrical data				
Min. insulation resistance [MΩ]	100; (500 V DC)			



Flush pressure sensor with display

PI-1,6-REA01-MFRKG/US/ /P

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 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]	(Ub - 10 V) / 20 mA		
Measuring/setting range				
Measuring range	-0.1...1.6 bar	-100...1600 mbar	-1.46...23.2 psi	-10...160 kPa
Set point SP	-96...1600 mbar	-1.4...23.2 psi	-9.6...160 kPa	
Reset point rP	-100...1598 mbar	-1.44...23.16 psi	-10...159.8 kPa	
Analogue start point	-100...1200 mbar	-1.46...17.42 psi	-10...120 kPa	
Analogue end point	300...1600 mbar	4.34...23.2 psi	30...160 kPa	
In steps of	2 mbar	0.02 psi	0.2 kPa	
Factory setting		SP1 = 0.4 bar	rP1 = 0.368 bar	
		SP2 = 1.2 bar	rP2 = 1.168 bar	
		ASP = 0.0 bar	AEP = 1.6 bar	
		dAP = 0.06 s	dAA = 0.03 s	



Flush pressure sensor with display

PI-1,6-REA01-MFRKG/US/ IP

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)	
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	
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	
SIO mode	yes	
Required master port type	A	
Process data analogue	1	
Process data binary	2	
Min. process cycle time [ms]	2.3	
Supported DeviceIDs	Type of operation	DeviceID
	default	727
Operating conditions		
Ambient temperature [°C]	-25...80	
Storage temperature [°C]	-40...100	
Protection	IP 67; IP 68; IP 69K	



Flush pressure sensor with display

PI-1,6-REA01-MFRKG/US/ /P

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 no.	J018
	File number UL	E174189

Mechanical data		
Weight [g]		360
Housing		cylindrical
Dimensions [mm]		Ø 50 / L = 106
Materials		stainless steel (316L/1.4404); FKM; PTFE; PBT; PEI; PFA
Materials (wetted parts)		ceramics (99.9 % Al ₂ O ₃); stainless steel (316L/1.4435); 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		mbar; kPa; psi; inH ₂ O; mWS; % of the span

Remarks	
Pack quantity	1 pcs.

Electrical connection

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



Flush pressure sensor with display

PI-1,6-REA01-MFRKG/US/ /P

Connection



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