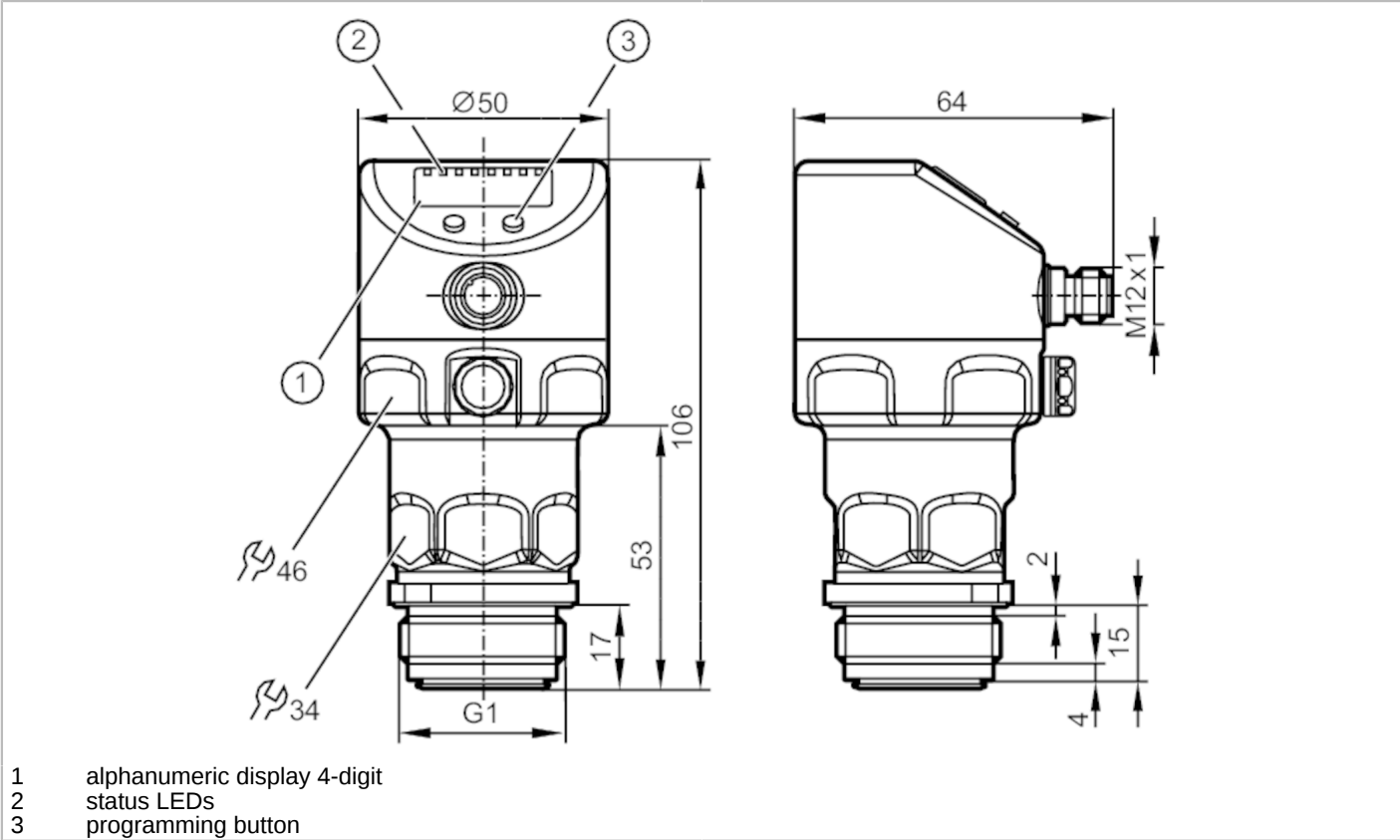




Flush pressure sensor with display

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 CE CRN US LISTED EC 1935/2004 EHEDG Certified FCM FDA IO-Link Reg31

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			
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)			
Protection class	III			



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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]	(U _b - 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
Accuracy / deviations	
Switch point accuracy [X21]	< ± 0,2; (Turn down 1:1)



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Repeatability	[X21]	$< \pm 0,1$; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation	[X21]	$< \pm 0,2$; (Turn down 1:1, linearity, incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1)
Linearity deviation	[X21]	$< \pm 0,15$; (Turn down 1:1)
Hysteresis deviation	[X21]	$< \pm 0,15$; (Turn down 1:1)
Long-term stability	[X21]	$< \pm 0,1$; (Turn down 1:1; per year)
Temperature coefficient zero point	[X22]	$< \pm 0,05$; (0...70 °C)
Temperature coefficient span	[X22]	$< \pm 0,15$; (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	

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
	DIN IEC 68-2-27	50 g (11 ms)
Shock resistance	DIN IEC 68-2-6	20 g (10...2000 Hz)
Vibration resistance		
MTTF	[ANN]	154



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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
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

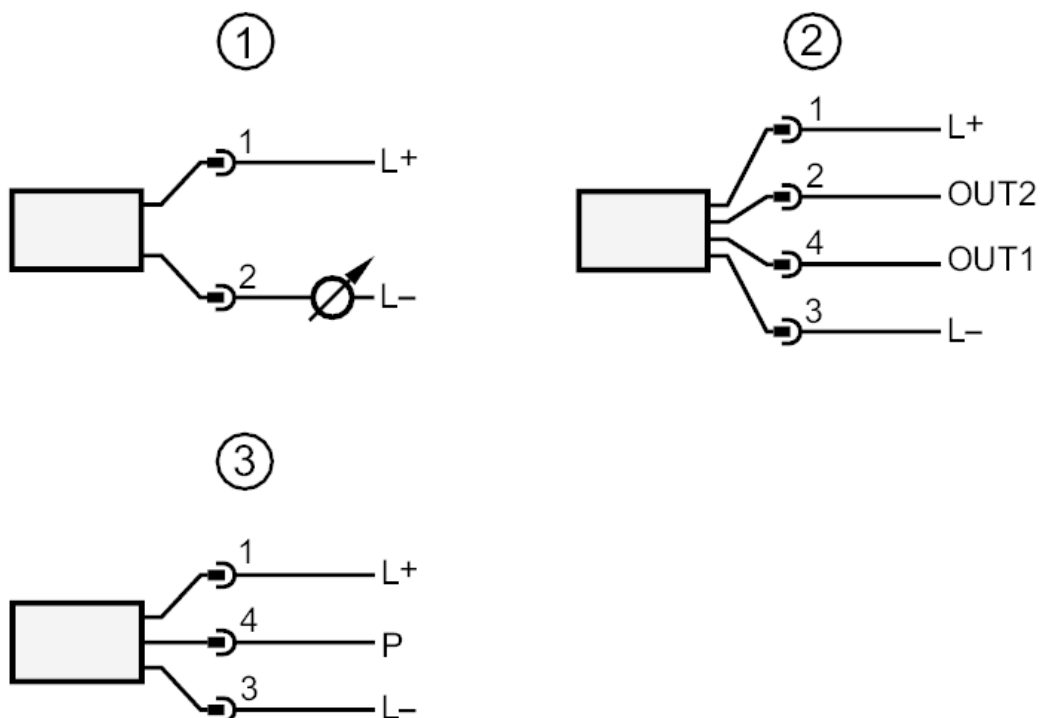
Connector: 1 x M12; coding: A; Contacts: gold-plated



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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)