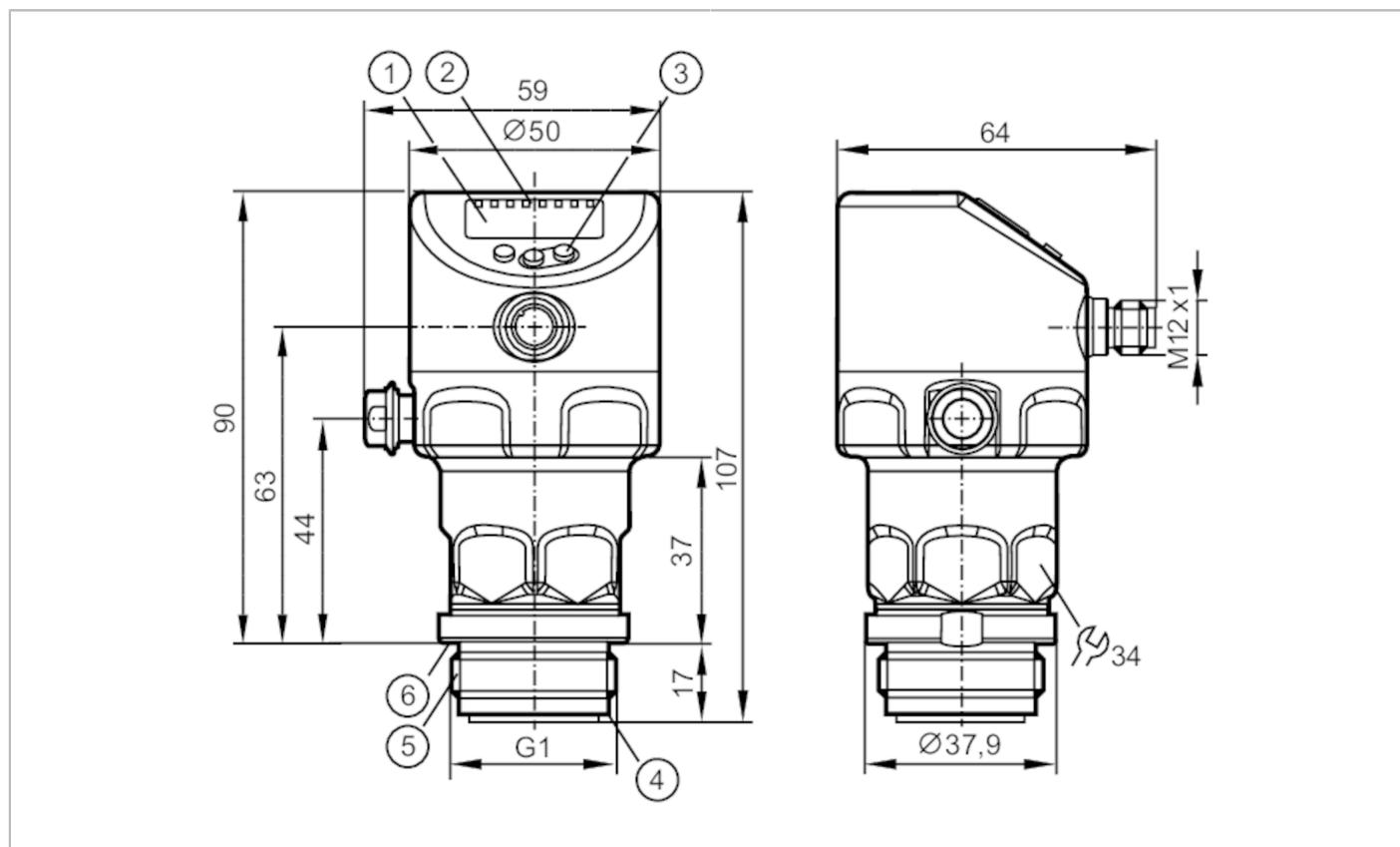


PY1728



Flush pressure sensor with display

PI-,25BREA01-MFRKG/US/ IP



EC 1935/2004

EHEDG Certified

FCM



IO-Link



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1			
Measuring range	-12.4...250 mbar	-5...100.4 inH ₂ O	-1.24...25 kPa	-126...2550 mmWS
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...150		
Min. burst pressure	30000 mbar	12044 inH2O	3000 kPa
Pressure rating	6000 mbar	2400 inH2O	600 kPa
Vacuum resistance	-1000 mbar	-0.1 MPa	
Type of pressure	relative pressure; vacuum		
No dead space	yes		
MAWP (for applications according to CRN) [bar]	6		

Electrical data

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



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Integrated watchdog	yes			
2-wire				
Operating voltage	[V]	20...30 DC		
Current consumption	[mA]	3.5...21.5		
Power-on delay time	[s]	< 1		
3-wire				
Operating voltage	[V]	18...30 DC		
Current consumption	[mA]	5...45; (430 bei max. Laststrom)		
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			
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]	100		
Switching frequency DC	[Hz]	125		
Max. load	[Ω]	(Ub - 10 V) / 21,5 mA; 650 Ω (Ub = 24 V)		
Measuring/setting range				
Measuring range	-12.4...250 mbar	-5...100.4 inH2O	-1.24...25 kPa	-126...2550 mmWS
Set point SP	-12...250 mbar	-4.8...100.4 inH2O	-1.2...25 kPa	-122...2549 mmWS
Reset point rP	-12.4...249.6 mbar	-5...100.2 inH2O	-1.24...24.96 kPa	-126...2545 mmWS
Analog start point	-12.4...199.4 mbar	-5...80.1 inH2O	-1.24...19.94 kPa	-126...2033 mmWS
Analog end point	38.2...250 mbar	15.3...100.4 inH2O	3.82...25 kPa	390...2549 mmWS
Min. difference between SP and rP	0.5 mbar	0.2 inH2O	0.05 kPa	5 mmWS
In steps of	0.1 mbar	0.1 inH2O	0.01 kPa	1 mmWS
Factory setting		SP1 =62.5 mbar	rP1 = 57.5 mbar	
		SP2 = 187.5 mbar	rP2 = 182.5 mbar	
		ASP = 0.00 mbar	AEP = 250 mbar	
		dAP = 0.06 s	dAA = 0.06 s	



Flush pressure sensor with display

PI-,25BREA01-MFRKG/US/ /P

Temperature monitoring		
Measuring range	-25...150 °C	-13...302 °F
Accuracy / deviations		
Switch point accuracy [% of the span]	< ± 0,2; (DIN EN IEC 62828-1; 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; (DIN IEC EN 62828-1 incl. zero point and span error, non-linearity, hysteresis; Turn down 1:1)	
Linearity deviation [% of the span]	< ± 0,15; (Turn down 1:1)	
Zero-point stabilization [% of the span]	IO-Link, analog output	0,15; (see operating instructions zero-point behavior)
	Display, Switching output	0,2
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)	
Total deviation over temperature range	Temperature range	total deviation
	-25...15 °C	Characteristics deviation ± 0,1 % of the span / 10 K
	15...80 °C	Characteristics deviation
	80...150 °C	Characteristics deviation ± 0,15 % of the span / 10 K
Notes on the accuracy / deviation	for further details see section Diagrams and graphs	
Temperature monitoring		
Accuracy [K]	± 2,5+ (0,08 x (Umgebungstemperatur - Mediumtemperatur))	
Repeatability [K]	± 0,2	
Resolution [K]	0.2	
Reaction times		
Damping process value dAP [s]	0...99.99	
Damping for the analog output dAA [s]	0...99.99	
2-wire		
Step response time analog output [ms]	30	
3-wire		
Min. response time of switching output (dAP) [ms]	3	
Step response time analog output [ms]	7	
Temperature monitoring		
Dynamic response T05 / T09 [s]	< 45 / < 200; (DIN EN 60751 water ; > 0,9 m/s)	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	



Flush pressure sensor with display

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SDCI standard		IEC 61131-9	
Profiles	Common - I&D		Identification and Diagnosis
	Function		Measurement data, high resolution
SIO mode	yes		
Required master port class	A		
Min. process cycle time [ms]	5.6		
IO-Link resolution pressure [mbar]	0.01		
IO-Link resolution temperature [K]	0.2		
IO-Link process data (cyclical)	Function	bit length	
	pressure	32	
	temperature	32	
	device status	4	
	binary switching information	2	
IO-Link functions (acyclical)	application specific tag; internal temperature; operating hours counter; switching cycles counter; Pressure peak counter; measuring cell diagnosis		
Supported DeviceIDs	Type of operation	DeviceID	
	default	1942	
Operating conditions			
Ambient temperature [°C]	-25...80		
Storage temperature [°C]	-40...100		
Protection	IP 67; IP 68; IP 69K		
Tests / approvals			
EMC	DIN EN 61326-1		
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]	201		
UL approval	UL approval number	J048	
	File number UL	E174189	
Mechanical data			
Weight [g]	360.45		
Housing	tubular		
Dimensions [mm]	Ø 50 / L = 107		
Material	Housing: stainless steel (1.4404 / 316L); Pushbuttons: PBT; sealings: FKM; M12 connector: PEI; Display: PFA; ventilation diaphragm: PTFE		
Materials (wetted parts)	measuring cell: ceramics (99.9 % Al2O3); Process connection: stainless steel (1.4435 / 316L) surface characteristics: Ra < 0,4 µm / Rz = 4 µm; sealing: PTFE		
Min. pressure cycles	100 million		
Tightening torque [Nm]	35		
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	mbar; kPa; inH2O; mmWS		

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Remarks

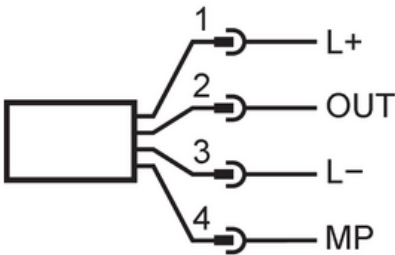
Pack quantity	1 pcs.
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Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated



Connection



2-wire

1	L+	
2	OUT	AO

3-wire

1	L+	
2	OUT	DO2 (NO/NC), AO
3	L-	
4	MP	DO1 (NO/NC), IO-Link

Parameter setting

1	L+	
3	L-	
4	MP	IO-Link