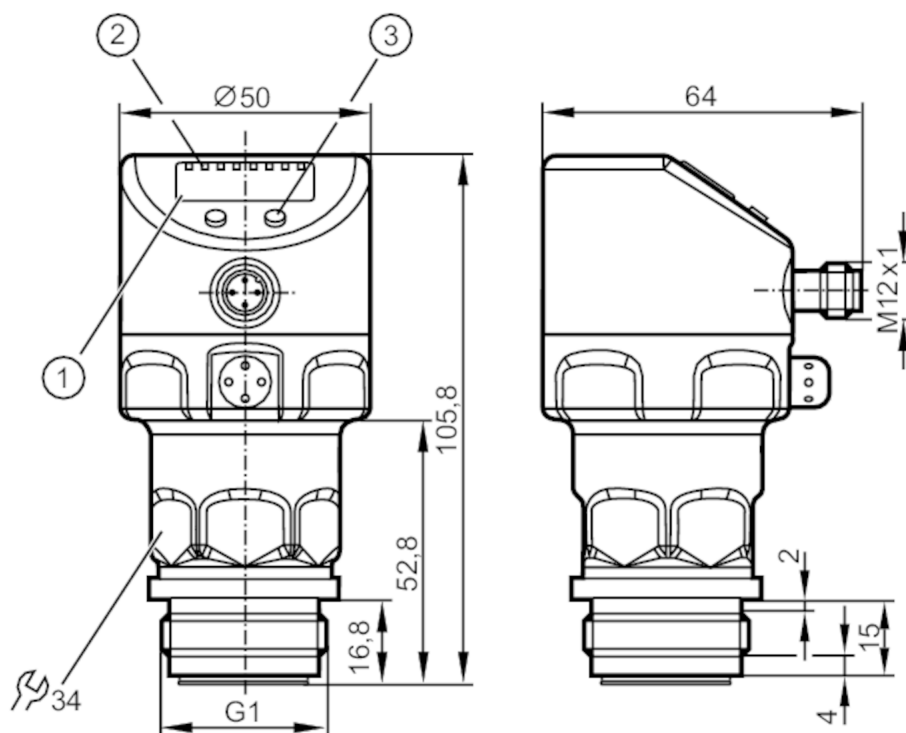




Flush pressure sensor with display

PI-,10BREA01-MFRKG/US/ IP



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



ACS



CRN



EC 1935/2004 EHEDG Certified

FCM



Reg31

Product characteristics

Output signal	switching signal; analog signal; IO-Link; (configurable)			
Measuring range	-0.005...0.1 bar	-5...100 mbar	-2...40.16 inH ₂ O	-0.5...10 kPa
Process connection	threaded connection G 1 external thread Aseptoflex Vario			

Application

System	gold-plated contacts		
Application	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	30000 mbar	12044 inH ₂ O	3000 kPa
Pressure rating	4000 mbar	1606 inH ₂ O	400 kPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure		
No dead space	yes		
MAWP (for applications according to CRN) [bar]	4		



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PI-,10BREA01-MFRKG/US/ /P

Electrical data		
Min. insulation resistance	[MΩ]	100; (500 V DC)
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



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Measuring/setting range						
Measuring range		-0.005...0.1 bar	-5...100 mbar	-2...40.16 inH2O	-0.5...10 kPa	
Set point SP		-4.8...100 mbar		-1.92...40.16 inH2O		-0.48...10 kPa
Reset point rP		-5...99.8 mbar		-2...40.08 inH2O		-0.5...9.98 kPa
Analog start point		-5...75 mbar		-2...30.12 inH2O		-0.5...7.5 kPa
Analog end point		20...100 mbar		8.04...40.16 inH2O		2...10 kPa
In steps of		0.1 mbar		0.04 inH2O		0.01 kPa
Factory setting				SP1 = 25 mbar		rP1 = 23 mbar
				SP2 = 75 mbar		rP2 = 73 mbar
				ASP =0 mbar		AEP = 100 mbar
Accuracy / deviations						
Switch point accuracy		< ± 0,5; (Turn down 1:1)				
[% of the span]						
Repeatability		< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)				
[% of the span]						
Characteristics deviation		< ± 0,5; (Turn down 1:1 linearity, incl. hysteresis and repeatability limit value setting to DIN 16086)				
[% of the span]						
Linearity deviation		< ± 0,25; (Turn down 1:1)				
[% of the span]						
Hysteresis deviation		< ± 0,2; (Turn down 1:1)				
[% of the span]						
Long-term stability		< ± 0,1; (Turn down 1:1; per year)				
[% of the span]						
Temperature coefficient zero point		< ± 0,1; (0...70 °C)				
[% of the span / 10 K]						
Temperature coefficient span		< ± 0,2; (0...70 °C)				
[% of the span / 10 K]						
Reaction times						
Damping for the switching output dAP	[s]	0...30				
Damping for the analog output dAA	[s]					
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						



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Interfaces		
Communication interface		IO-Link
Transmission type		COM2 (38,4 kBaud)
IO-Link revision		1.0
IO-Link device ID		259 d / 00 01 03 h
Profiles		no profile
SIO mode		yes
Required master port class		A
Process data analogue		1
Process data binary		2
Min. process cycle time	[ms]	2.3
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
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]	160
Note on approval		Factory certificate available as download at www.factory-certificate.ifm
UL approval		UL approval number J018
Mechanical data		
Weight	[g]	352.3
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 / 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; inH2O; mmWS; % of the span
Remarks		
Pack quantity		1 pcs.
Electrical connection		
Connector: 1 x M12; Contacts: gold-plated		

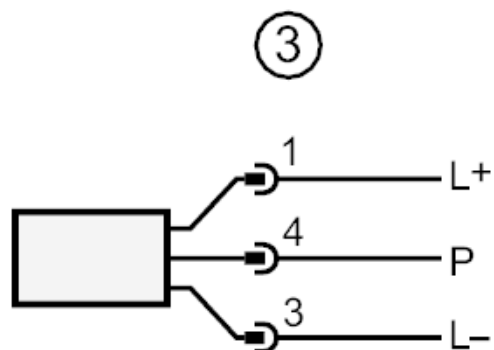
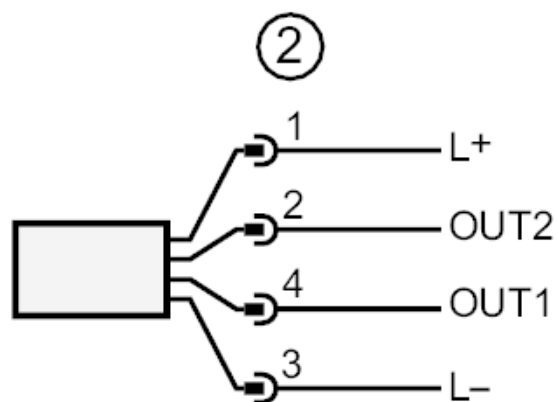
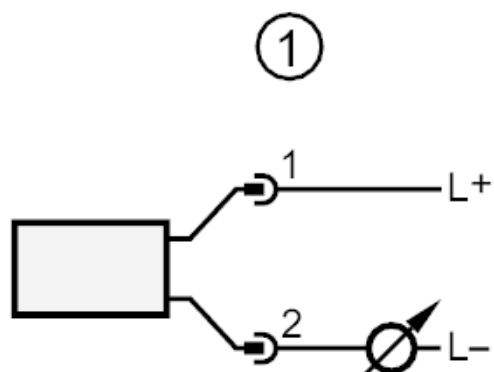


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Connection



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