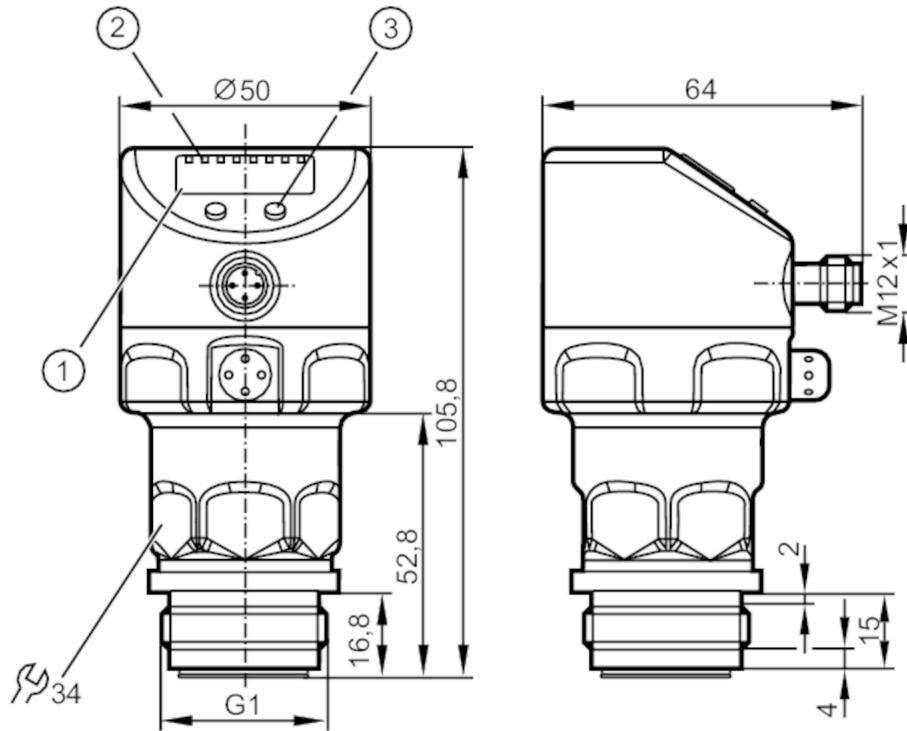


PI2797



Flush pressure sensor with display

PI-001BREA01-MFRKG/US/ /P



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



ACS



EHEDG

EC 1935/2004 EHEDG Certified



Reg31

Application

Application	hygienic systems	
Media	viscous media and liquids with suspended particles; liquids and gases	
Medium temperature [°C]	-25...125; (145 max. 1h)	
Pressure rating	10000 mbar	145 psi
Min. bursting pressure	30000 mbar	435 psi
Type of pressure	relative pressure	
no dead space	yes	

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



Flush pressure sensor with display

PI-001BREA01-MFRKG/US/ /P

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]	(Ub - 10 V) / 20 mA		
Measuring/setting range				
Measuring range		-50...1000 mbar	-0.73...14.5 psi	
Set point SP		-48...1000 mbar	-0.7...14.5 psi	
Reset point rP		-50...998 mbar	-0.73...14.47 psi	
Analog start point		-50...750 mbar	-0.73...10.88 psi	
Analog end point		200...1000 mbar	2.9...14.5 psi	
in steps of		1 mbar	0.01 psi	
Factory setting			SP1 = 250 mbar	rP1 = 230 mbar
			SP2 = 750 mbar	rP2 = 730 mbar
			ASP = 0 mbar	AEP = 1000 mbar
Accuracy / deviations				
Switch point accuracy		< ± 0,2; (Turn down 1:1)		
[% of the span]				
Repeatability		< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)		
[% of the span]				
Characteristics deviation		< ± 0,2; (Turn down 1:1 linearity, incl. hysteresis and repeatability limit value setting to DIN 16086)		
[% of the span]				
Linearity deviation		< ± 0,15; (Turn down 1:1)		
[% of the span]				
Hysteresis deviation		< ± 0,15; (Turn down 1:1)		



Flush pressure sensor with display

PI-001BREA01-MFRKG/US/ /P

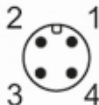
[% of the span]		
Long-term stability		< ± 0,1; (Turn down 1:1; per year)
	[% of the span]	
Temperature coefficient zero point		< ± 0,05; (0...70 °C)
	[% of the span / 10 K]	
Temperature coefficient span		< ± 0,15; (0...70 °C)
	[% of the span / 10 K]	
Reaction times		
Damping for the switching output dAP	[s]	0...30
Damping for the analog output dAA	[s]	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
IO-Link device ID		256 d / 00 01 00 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

PI2797



Flush pressure sensor with display

PI-001BREA01-MFRKG/US/ /P

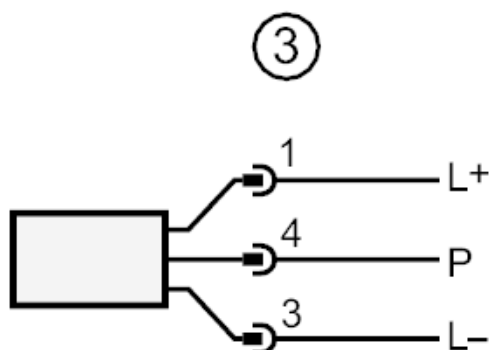
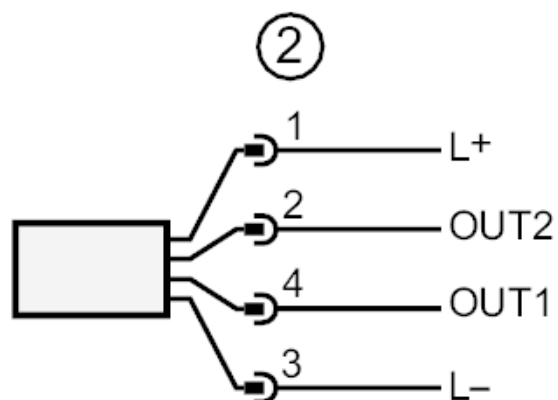
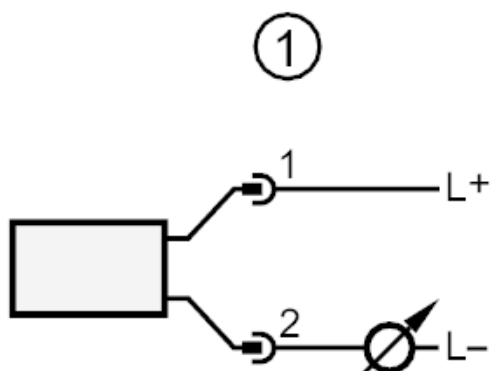
Mechanical data		
Weight	[g]	356.3
Material	stainless steel (1.4404 / 316L); FKM; PTFE; PBT; PEI; PFA	
Materials (wetted parts)	ceramics (99.9 % Al2O3); PTFE; stainless steel (1.4435 / 316L); surface characteristics: Ra < 0,4 / Rz 4	
Min. pressure cycles	100 million	
Process connection	threaded connection 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; inH2O; mWS; % of the span	
Remarks		
Pack quantity	1 pcs.	
Electrical connection		
Connector: 1 x M12; Contacts: gold-plated		
		



Flush pressure sensor with display

PI-001BREA01-MFRKG/US/ /P

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) |