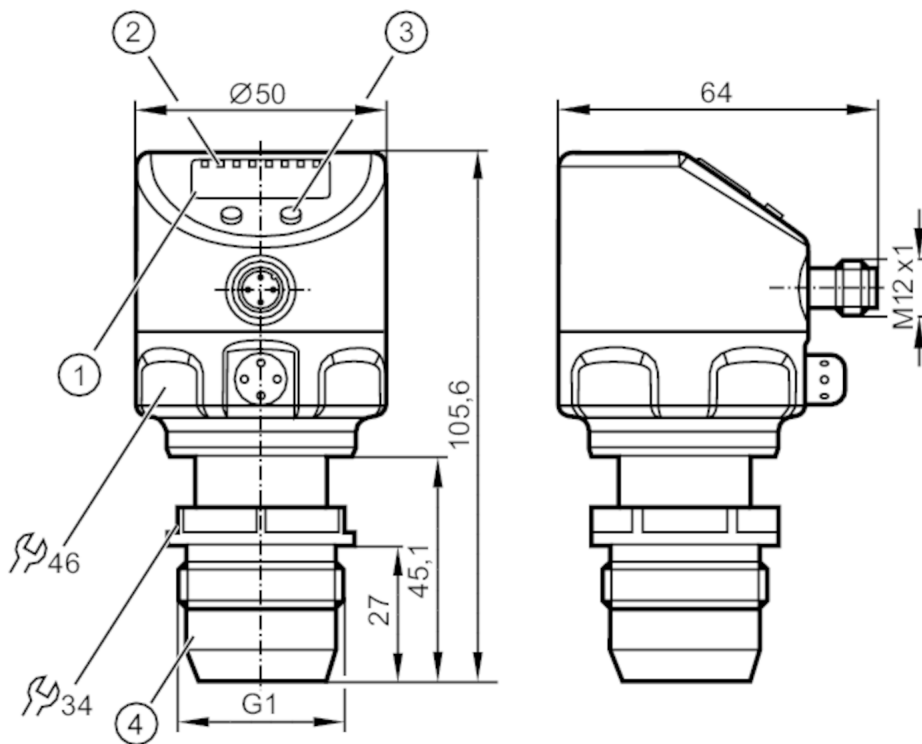


PI2899



Flush pressure sensor with display

PI-1-1BREA01-MFRKG/US/ IP



- 1 alphanumeric display 4-digit
- 2 status LEDs
- 3 programming button
- 4 G 1 sealing cone external thread

Attention: The unit must only be installed in a process connection for G1 sealing cone. The G1A sealing cone of the unit is only suited for adapters with metal end stop.

ACS CE cUL_{US} LISTED EAC EC 1935/2004 EHEDG Certified FDA IO-Link

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
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-1-1BREA01-MFRKG/US/ IP

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	-1000...1000 mbar	-14.5...14.5 psi
Set point SP	-998...1000 mbar	-14.45...14.5 psi
Reset point rP	-1000...998 mbar	-14.5...14.45 psi
Analogue start point	-1000...500 mbar	-14.5...7.25 psi
Analogue end point	-500...1000 mbar	-7.25...14.5 psi
In steps of	1 mbar	0.05 psi
Factory setting	SP1 = -500 mbar	rP1 = -540 mbar
	SP2 = 500 mbar	rP2 = 460 mbar
	ASP = -1000 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)	

PI2899



Flush pressure sensor with display

PI-1-1BREA01-MFRKG/US/ IP

	[% of the span]	
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 for the switching output 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
IO-Link device ID		258 d / 00 01 02 h
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

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]	148.66

PI2899



Flush pressure sensor with display

PI-1-1BREA01-MFRKG/US/ IP

Mechanical data	
Weight [g]	338.8
Materials	stainless steel (1.4404 / 316L); FKM; PTFE; PBT; PEI; PFA
Materials (wetted parts)	ceramics (99.9 % Al ₂ O ₃); 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 sealing cone

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	
Remarks	Attention: The unit must only be installed in a process connection for G1 sealing cone. The G1A sealing cone of the unit is only suited for adapters with metal end stop.
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; Contacts: gold-plated

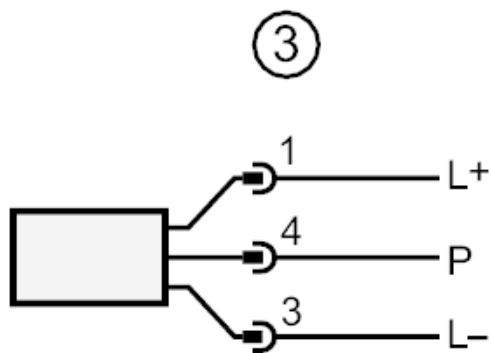
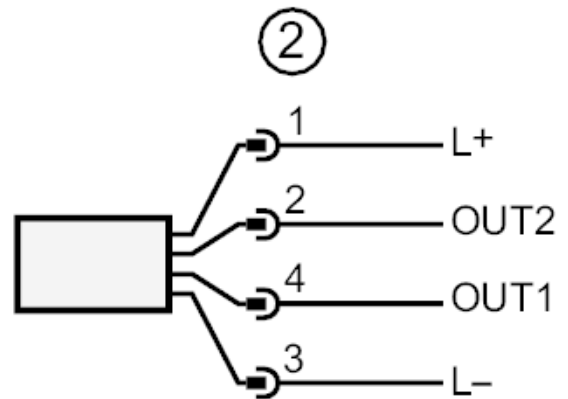
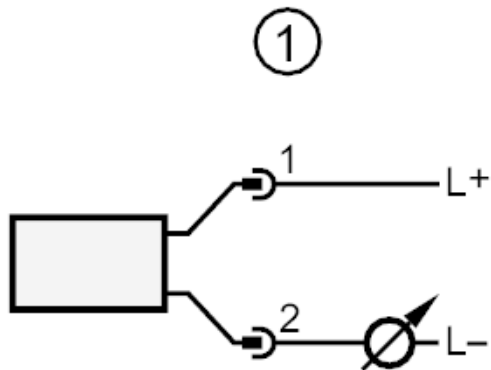




Flush pressure sensor with display

PI-1-1BREA01-MFRKG/US/ IP

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)