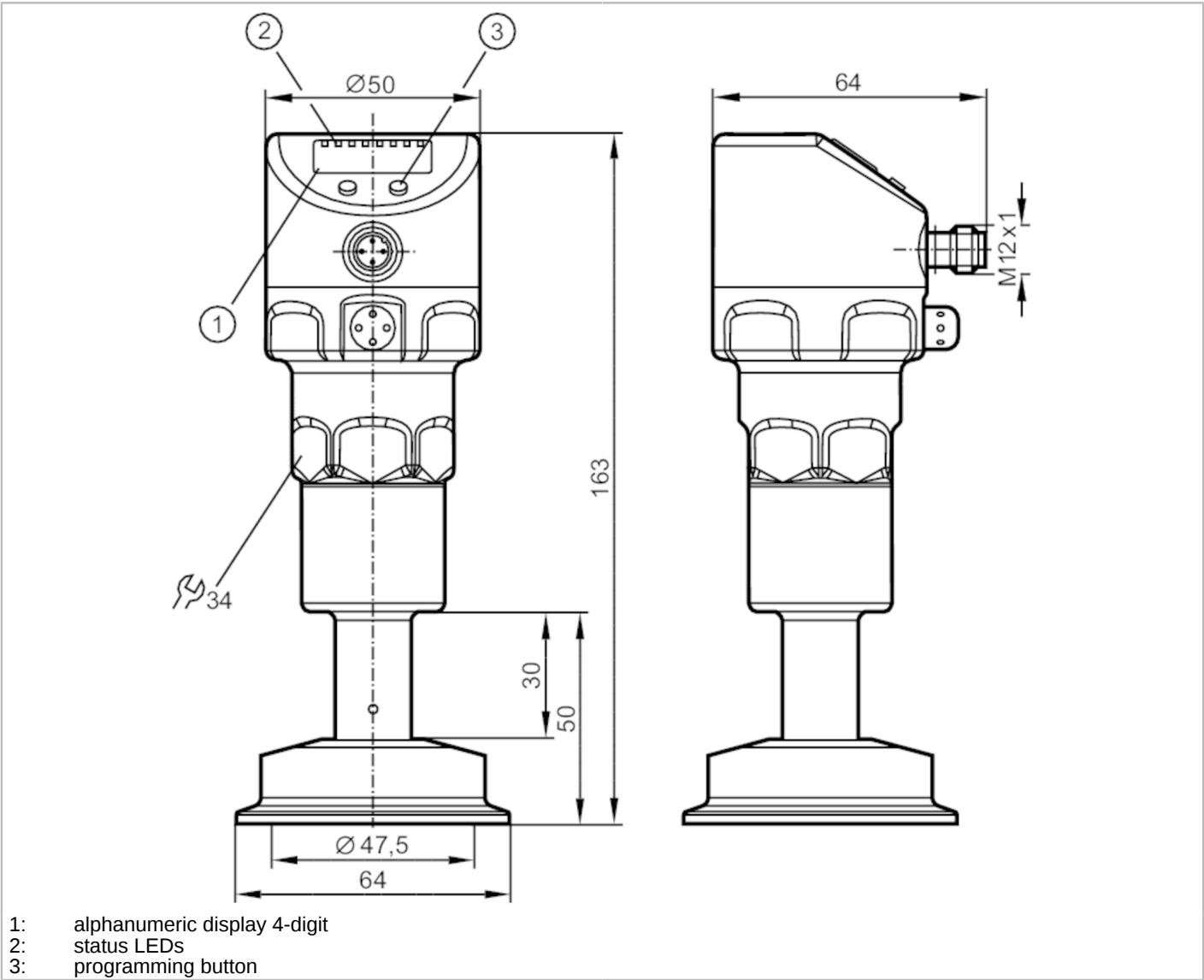




Flush pressure sensor with display

PI-1-1BREZ02-MFRKG/US/ IP



- 1: alphanumeric display 4-digit
- 2: status LEDs
- 3: programming button



Product characteristics			
Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1		
Measuring range	-1000...1000 mbar	-14.5...14.5 psi	-100...100 kPa
Process connection	Clamp DN50 (2") DIN 32676 (ISO 2852)		
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]	-20...200		
Min. bursting pressure	30000 mbar	435 psi	3000 kPa
Pressure rating	10000 mbar	145 psi	1000 kPa
Type of pressure	relative pressure; vacuum		
Electrical data			
Min. insulation resistance [MΩ]	100; (500 V DC)		



Flush pressure sensor with display

PI-1-1BREZ02-MFRKG/US/ IP

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 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]	(Ub - 10 V) / 20 mA	
Measuring/setting range			
Measuring range	-1000...1000 mbar	-14.5...14.5 psi	-100...100 kPa
Set point SP	-998...1000 mbar	-14.45...14.5 psi	-99.8...100 kPa
Reset point rP	-1000...998 mbar	-14.5...14.45 psi	-100...99.8 kPa
Analogue start point	-1000...500 mbar	-14.5...7.25 psi	-100...50 kPa
Analogue end point	-500...1000 mbar	-7.25...14.5 psi	-50...100 kPa
In steps of	1 mbar	0.05 psi	0.1 kPa
Factory setting		SP1 = -500 mbar	rP1 = -540 mbar
		SP2 = 500 mbar	rP2 = 460 mbar
		ASP = -1000 mbar	AEP = 1000 mbar



Flush pressure sensor with display

PI-1-1BREZ02-MFRKG/US/ IP

Accuracy / deviations		
Switch point accuracy	[X21]	< ± 0,2; (Turn down 1:1)
Repeatability	[X21]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation	[X21]	< ± 0,2; (Turn down 1:1 , linearity, incl. hysteresis and repeatability , limit value setting to DIN EN IEC 62828-1)
Linearity deviation	[X21]	< ± 0,15; (Turn down 1:1)
Hysteresis deviation	[X21]	< ± 0,15; (Turn down 1:1)
Long-term stability	[X21]	< ± 0,1; (Turn down 1:1; per year)
Temperature coefficient zero point	[X22]	< ± 0,3; (0...200 °C)
Temperature coefficient span	[X22]	< ± 0,15; (0...200 °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	
SDCI standard	IO-Link Communication Specification, Version 1.0, January 2009, Ordner No: 10.002	
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	108
Operating conditions		
Ambient temperature	[°C]	-25...80
Note on ambient temperature	Medium temperature: ≤ 160 °C	
Ambient temperature	[°C]	-25...65
Note on ambient temperature	Medium temperature: ≤ 200 °C	
Storage temperature	[°C]	-25...100
Protection	IP 67; IP 68; IP 69K	
Tests / approvals		
EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	



Flush pressure sensor with display

PI-1-1BREZ02-MFRKG/US/ IP

Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	20 g (10...2000 Hz)
MTTF [ANN]	141	
Note on approval	Including free 6-point calibration certificate.	

Mechanical data

Weight [g]	1200.3	
Materials	stainless steel (1.4404 / 316L); stainless steel (1.4435 / 316L); PBT; PEI; PFA	
Materials (wetted parts)	stainless steel (1.4435 / 316L)	
Min. pressure cycles	10 million	
Process connection	Clamp DN50 (2") DIN 32676 (ISO 2852)	
Surface characteristics Ra/Rz of the wetted parts	< 0.38 / -	
Fill fluid for pressure transmission	NEOBEE (food grade, FDA compliant)	
Diaphragm diameter [mm]	47.5	

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.
---------------	--------

PI2309

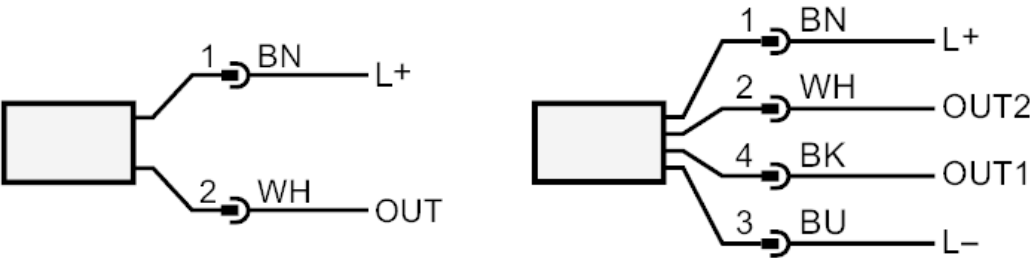


Flush pressure sensor with display

PI-1-1BREZ02-MFRKG/US/ /P

Electrical connection

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



OUT	connection for 2-wire operation : analogue output
OUT1	connection for 3-wire operation : switching output
OUT2	IO-Link switching output analogue output
	colours to DIN EN 60947-5-2
	Core colours :
BK =	black
BN =	brown
BU =	blue
WH =	white