

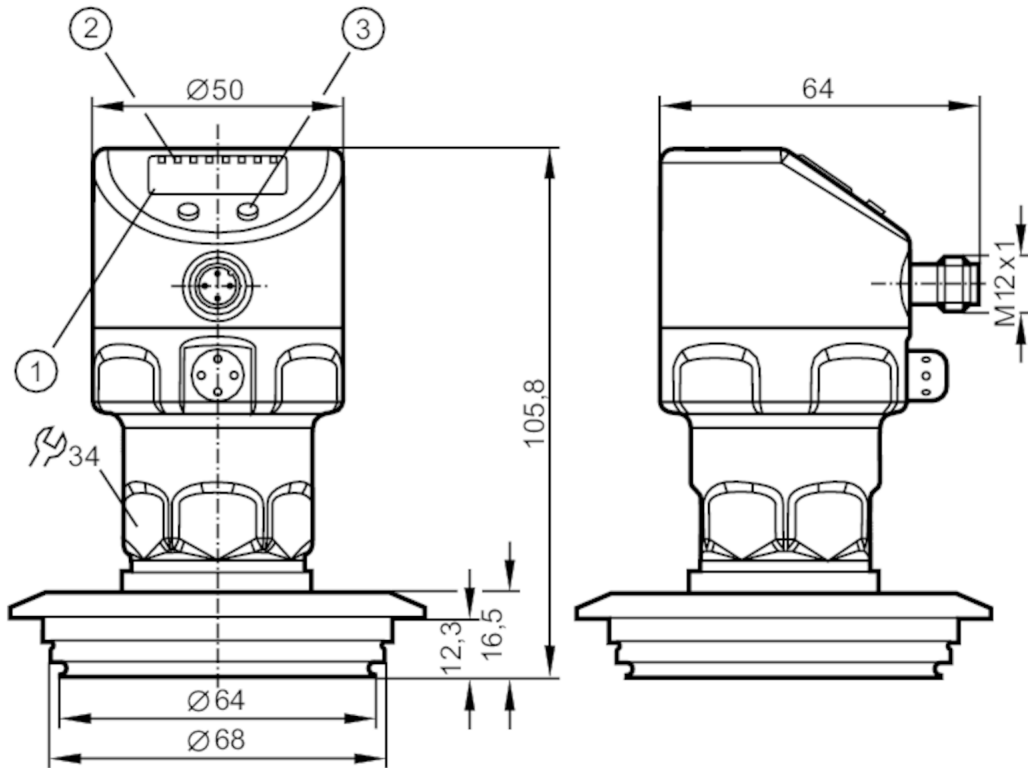
PH5007



Flush pressure sensor with display

PH-001BREA01-MFRKG/US/ IP

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- 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 analog outputs: 1	
Measuring range	-0.05...1 bar	-50...1000 mbar
Process connection	Varivent Form N, DN40 (1,5"), Ø 68 mm	

Application

System	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...125; (145 max. 1h)
Min. bursting pressure [mbar]	30000
Pressure rating [mbar]	10000
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

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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
Measuring/setting range		
Measuring range	-0.05...1 bar	-50...1000 mbar
Set point SP	[mbar]	-48...1000
Reset point rP	[mbar]	-50...998
Analog start point	[mbar]	-50...750
Analog end point	[mbar]	200...1000
In steps of	[mbar]	1
Accuracy / deviations		
Switch point accuracy [% of the span]	< ± 0,2; (Turn down 1:1)	
Repeatability [% of the span]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)	
Characteristics deviation	< ± 0,2; (Turn down 1:1 , linearity, incl. hysteresis and repeatability , limit value setting to DIN EN IEC 62828-1)	

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	[% of the span]	
Linearity deviation	[% of the span]	$< \pm 0,15$; (Turn down 1:1)
Hysteresis deviation	[% of the span]	$< \pm 0,15$; (Turn down 1:1)
Long-term stability	[% of the span]	$< \pm 0,1$; (Turn down 1:1; per year)
Temperature coefficient zero point	[% of the span / 10 K]	$< \pm 0,05$; (0...70 °C)
Temperature coefficient span	[% of the span / 10 K]	$< \pm 0,15$; (0...70 °C)

Reaction times

Damping process value dAP	[s]	0...30
Damping for the analog output dAA	[s]	0.01...99.99
2-wire		
Step response time analog output	[ms]	45
3-wire		
Min. response time of switching output (dAP)	[ms]	3
Step response time analog output	[ms]	7

Interfaces

Communication interface	IO-Link
Transmission type	COM2 (38,4 kBaud)

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)

Mechanical data

Weight	[g]	788.6
Material		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
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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; coding: A; Contacts: gold-plated

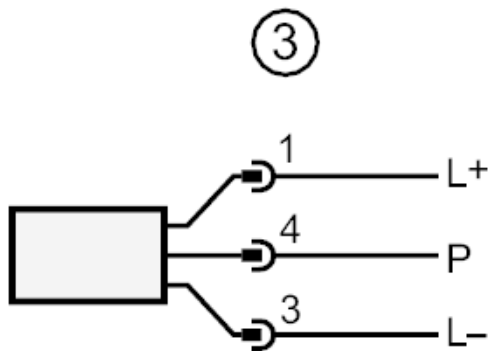
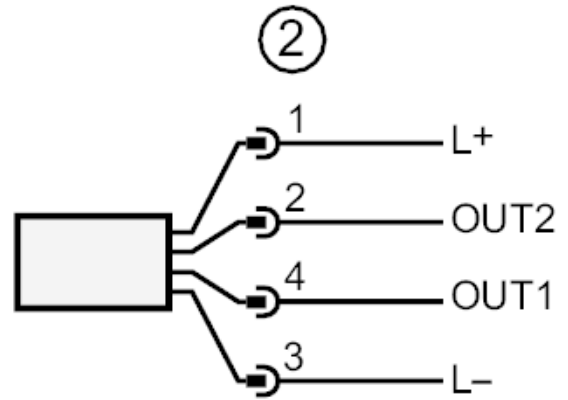
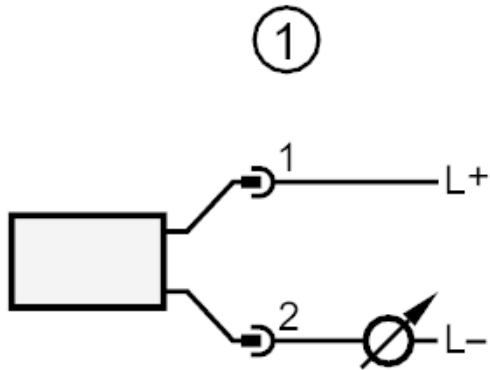




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Connection



- 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)