

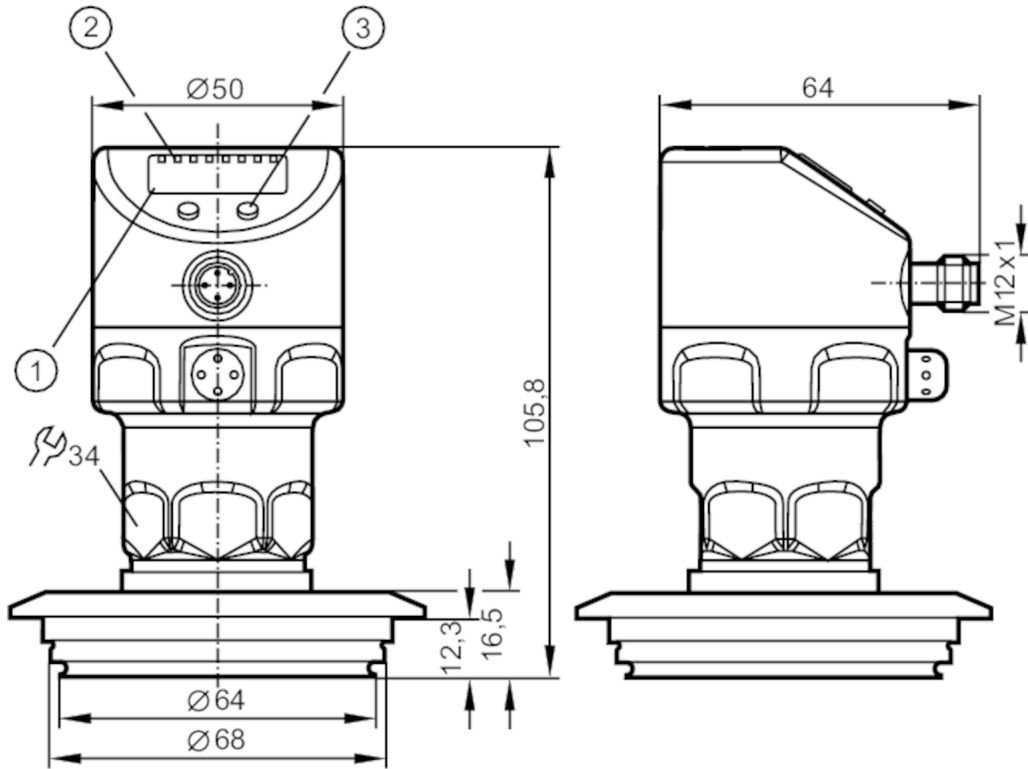
PH5007



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

Output signal	switching signal; analogue signal; IO-Link; (configurable)	
Measuring range	-0.05...1 bar	-50...1000 mbar
Process connection	Varivent Form N, DN40 (1,5"), D = 68; Form N	

Application

Special feature	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)	
Pressure rating [mbar]	10000	
Min. bursting pressure [mbar]	30000	
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 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	-0.05...1 bar -50...1000 mbar
Set point SP [mbar]	-48...1000
Reset point rP [mbar]	-50...998
Analogue start point [mbar]	-50...750
Analogue 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 16086)

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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)

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
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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)

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
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		Varivent Form N, DN40 (1,5"), D = 68; Form N

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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; Contacts: gold-plated

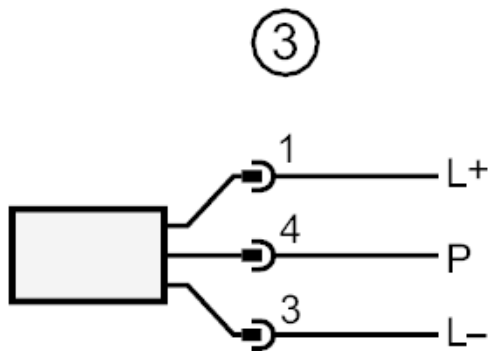
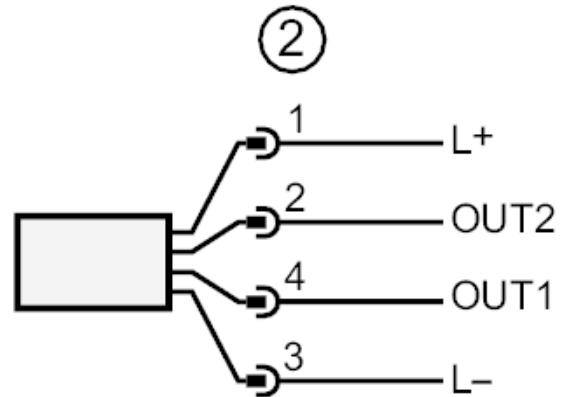
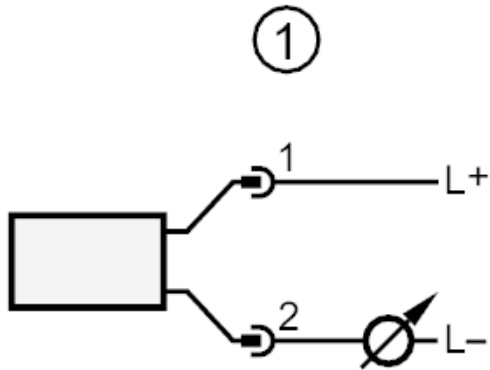




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Connection



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

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