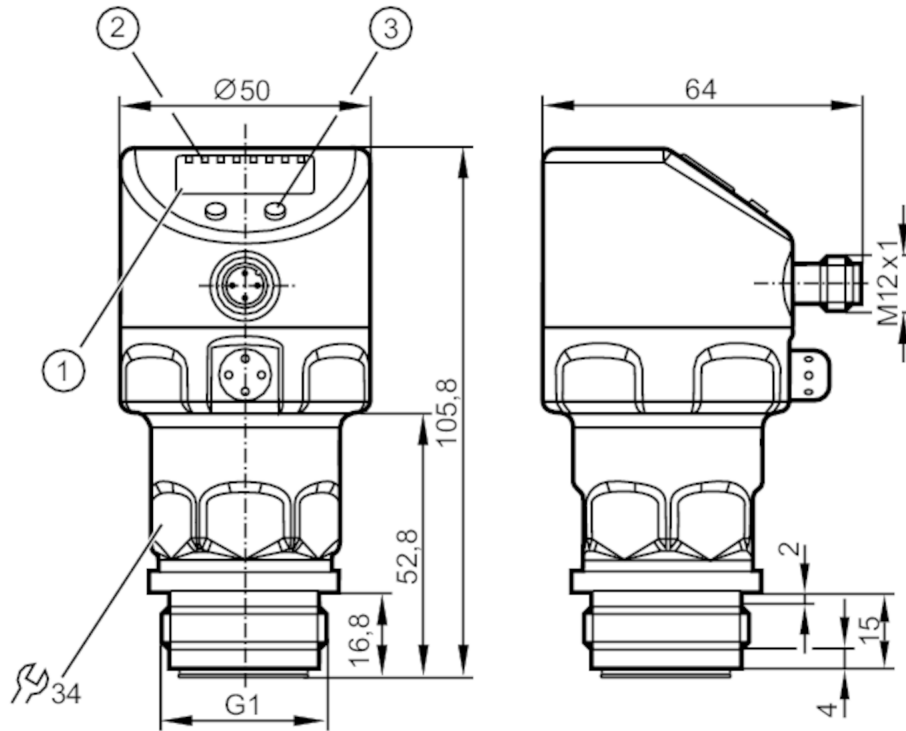


# PI2798



## Flush pressure sensor with display

PI-,25BREA01-MFRKG/US/ IP



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



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	6000 mbar	2400 inH2O
Min. bursting pressure	30000 mbar	12044 inH2O
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
<b>2-wire</b>	
Operating voltage [V]	20...32 DC
Current consumption [mA]	3.6...21
Power-on delay time [s]	1

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<b>3-wire</b>		
Operating voltage	[V]	18...32 DC
Current consumption	[mA]	< 45
Power-on delay time	[s]	0.5
<b>Inputs / outputs</b>		
Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1	
<b>Outputs</b>		
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	
<b>2-wire</b>		
Max. load	[Ω]	300
<b>3-wire</b>		
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 <sub>b</sub> - 10 V) / 20 mA
<b>Measuring/setting range</b>		
Measuring range	-12.4...250 mbar	-5...100.4 inH2O
Set point SP	-12...250 mbar	-4.8...100.4 inH2O
Reset point rP	-12.4...249.6 mbar	-5...100.2 inH2O
Analogue start point	-12.4...187.4 mbar	-5...75.2 inH2O
Analogue end point	50...250 mbar	20.1...100.4 inH2O
In steps of	0.2 mbar	0.1 inH2O
Factory setting	SP1 = 62.4 mbar	rP1 = 57.4 mbar
	SP2 = 187.4 mbar	rP2 = 182.4 mbar
	ASP = 0.0 mbar	AEP = 250.0 mbar
<b>Accuracy / deviations</b>		
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)	

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	[% 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
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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)
IO-Link revision		1.0
IO-Link device ID		257 d / 00 01 01 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]	160
UL approval	UL Approval no.	J018

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Mechanical data	
Weight [g]	356.5
Materials	stainless steel (1.4404 / 316L); FKM; PTFE; PBT; PEI; PFA
Materials (wetted parts)	ceramics (99.9 % Al <sub>2</sub> O <sub>3</sub> ); 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; inH <sub>2</sub> O; mmWS; % of the span	

Remarks	
Pack quantity	1 pcs.

### Electrical connection

Connector: 1 x M12; Contacts: gold-plated



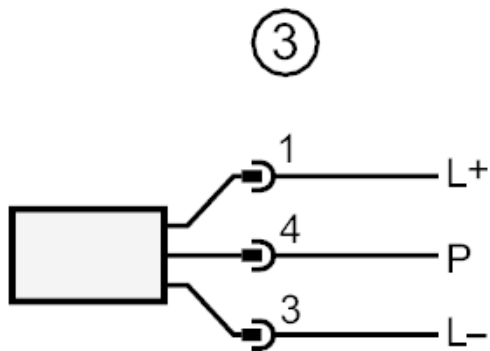
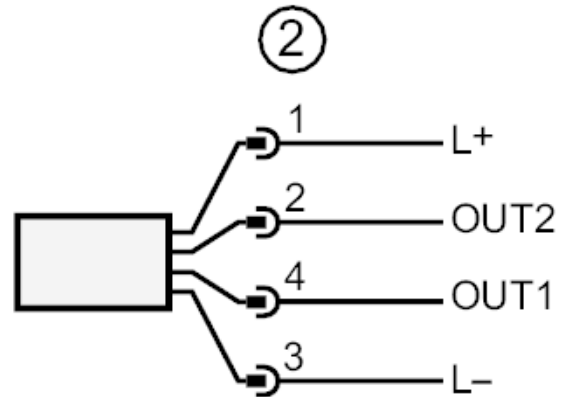
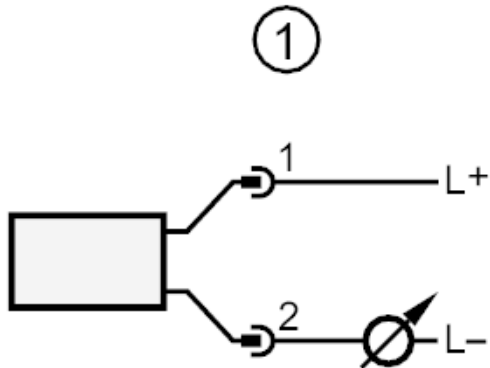
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### Connection



- |      |  |
|------|--|
| 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) |