

# PI2796

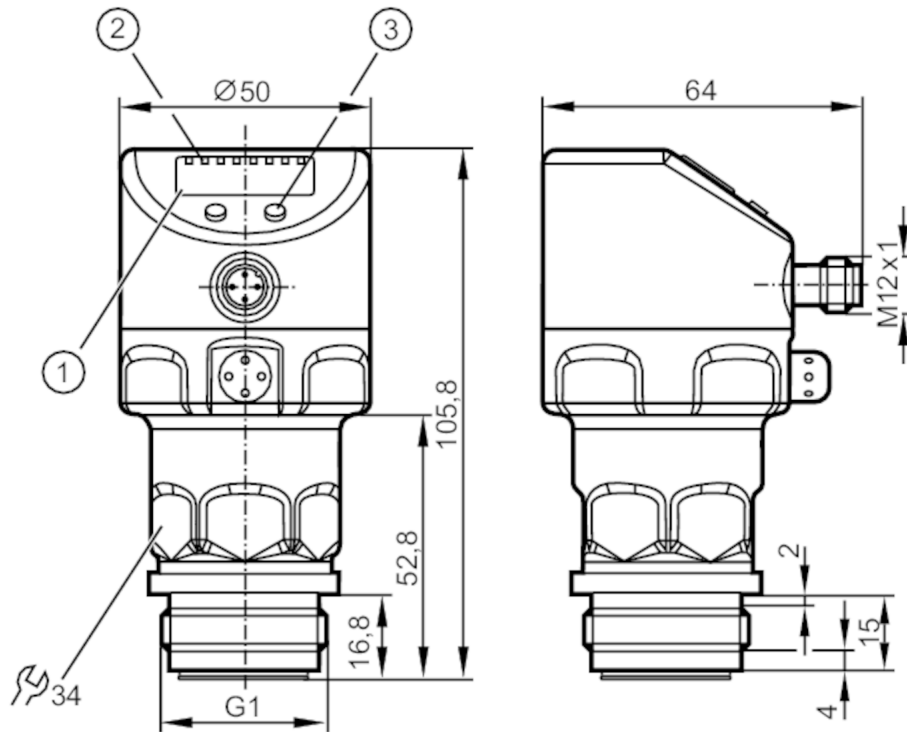


## Flush pressure sensor with display

PI-2,5-REA01-MFRKG/US/ IP

Alternative articles: PI1706

When selecting an alternative article and accessories please note that technical data may differ!



- 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	-0.124...2.5 bar	-124...2500 mbar	-1.8...36.27 psi	-12.4...250 kPa
Process connection	threaded connection G 1 external thread Aseptoflex Vario			

### 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]	-25...125; (145 max. 1h)		
Min. bursting pressure	50 bar	725 psi	5000 kPa
Pressure rating	20 bar	290 psi	2000 kPa
Vacuum resistance	-1000 mbar	-0.1 MPa	
Type of pressure	relative pressure		
No dead space	yes		
MAWP (for applications according to CRN) [bar]	20		



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Electrical data					
Min. insulation resistance	[MΩ]	100; (500 V DC)			
Protection class		III			
Reverse polarity protection		yes			
Measuring principle		hydrostatic			
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]	(U <sub>b</sub> - 10 V) / 20 mA			
Measuring/setting range					
Measuring range		-0.124...2.5 bar	-124...2500 mbar	-1.8...36.27 psi	-12.4...250 kPa
Set point SP		-0.12...2.5 bar		-1.74...36.27 psi	-12...250 kPa
Reset point rP		-0.124...2.496 bar		-1.8...36.21 psi	-12.4...249.6 kPa
Analogue start point		-0.124...1.88 bar		-1.8...27.27 psi	-12.4...188 kPa
Analogue end point		0.5...2.5 bar		7.26...36.27 psi	50...250 kPa
In steps of		0.002 bar		0.03 psi	0.2 kPa

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Factory setting	SP1 = 0.624 bar	rP1 = 0.574 bar
	SP2 = 1.874 bar	rP2 = 1.824 bar
	ASP = 0.000 bar	AEP = 2.500 bar
	dAP = 0.06 s	dAA = 0.03 s

### 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 [% of the span]	< ± 0,2; (Turn down 1:1, linearity, incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1)
Linearity deviation [% of the span]	< ± 0,15; (Turn down 1:1)
Hysteresis deviation [% of the span]	< ± 0,15; (Turn down 1:1)
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 process value dAP [s]	0...30
Damping for the analogue output dAA [s]	0.01...99.99
<b>2-wire</b>	
Step response time analogue output [ms]	45
<b>3-wire</b>	
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	
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	<b>Type of operation</b>	<b>DeviceID</b>
	default	159

### Operating conditions

Ambient temperature [°C]	-25...80
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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	
Note on approval	factory certificate available as download at <a href="http://www.factory-certificate.ifm">www.factory-certificate.ifm</a>	

### Mechanical data

Weight [g]	358.5	
Housing	cylindrical	
Dimensions [mm]	Ø 50 / L = 105.8	
Materials	stainless steel (316L/1.4404); FKM; PTFE; PBT; PEI; PFA	
Materials (wetted parts)	ceramics (99.9 % Al <sub>2</sub> O <sub>3</sub> ); stainless steel (316L/1.4435); surface characteristics: Ra < 0,4 / Rz 4; PTFE	
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	bar; kPa; psi; inH <sub>2</sub> O; mWS; % of the span	

### Remarks

Pack quantity	1 pcs.
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### Electrical connection

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

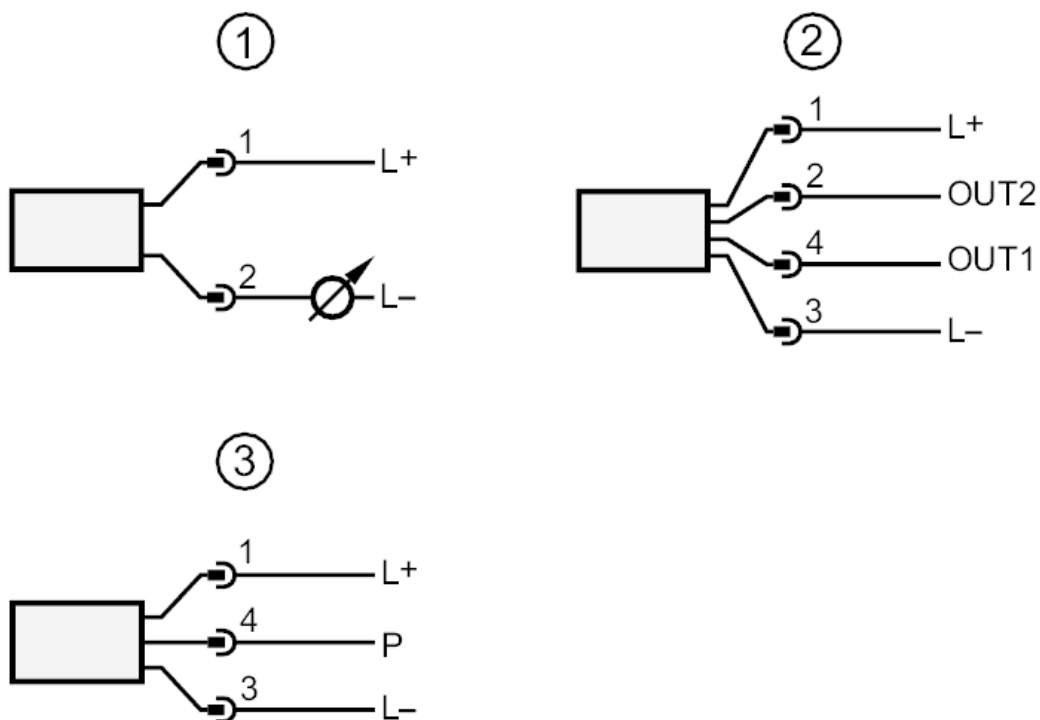




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### Connection



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