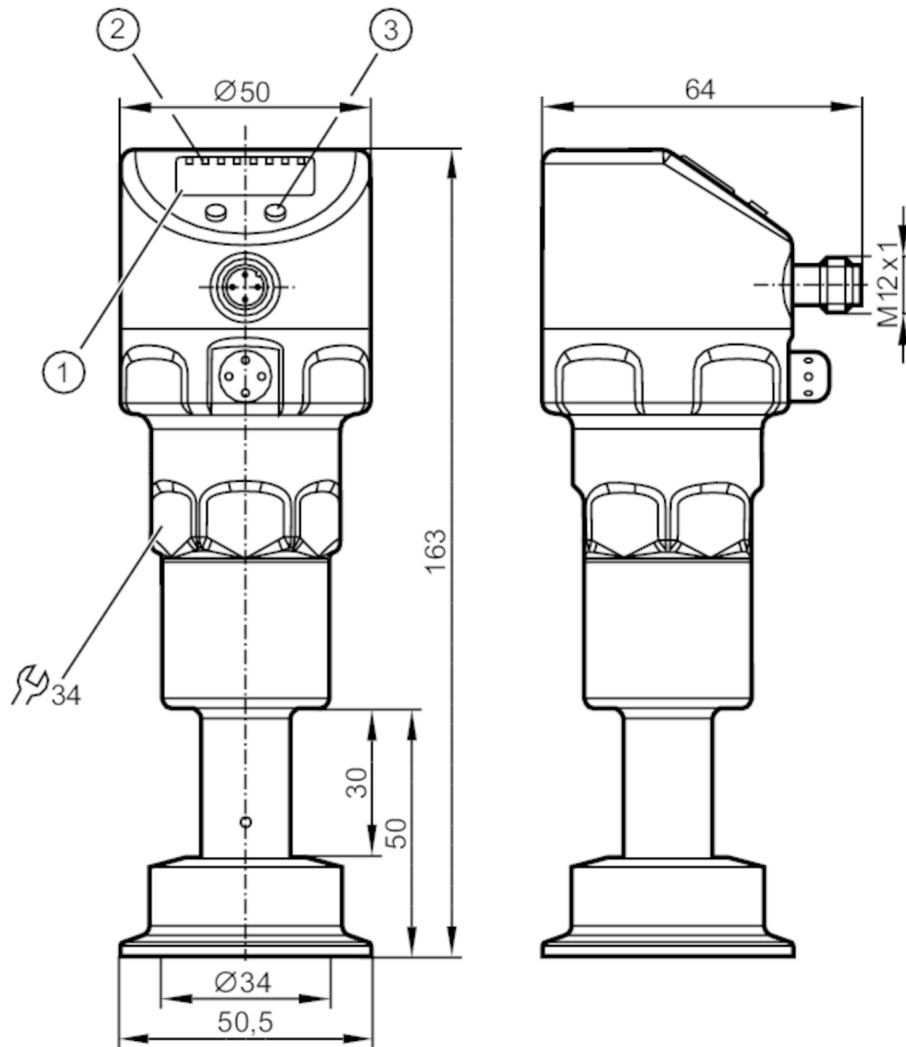


# PI2204



## Flush pressure sensor with display

PI-010-REZ01-MFRKG/US/ IP



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



EC 1935/2004 EHEDG Certified FCM FDA IO-Link UK CA

### Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1		
Measuring range	-1...10 bar	-14.5...145 psi	-0.1...1 MPa
Process connection	Clamp DN40 (1.5") DIN 32676 (ISO 2852)		

### 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]	-20...200; (-20...90 < 0 bar)		
Min. bursting pressure	100 bar	1450 psi	10 MPa
Pressure rating	50 bar	725 psi	5 MPa
Type of pressure	relative pressure; vacuum		

### Electrical data

Min. insulation resistance [MΩ]	100; (500 V DC)
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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		
<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 analog outputs: 1		
<b>Outputs</b>			
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		
<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	-1...10 bar	-14.5...145 psi	-0.1...1 MPa
Set point SP	-0.98...10 bar	-14.2...145 psi	-0.098...1 MPa
Reset point rP	-1...9.98 bar	-14.5...144.7 psi	-0.1...0.998 MPa
Analog start point	-1...7.5 bar	-14.5...108.7 psi	-0.1...0.75 MPa
Analog end point	1.5...10 bar	21.8...145 psi	0.15...1 MPa
In steps of	0.01 bar	0.1 psi	0.001 MPa
Factory setting		SP1 = 2.50 bar	rP1 = 2.30 bar
		SP2 = 7.50 bar	rP2 = 7.30 bar
		ASP = 0.00 bar	AEP = 10.00 bar



## Flush pressure sensor with display

PI-010-REZ01-MFRKG/US/ /P

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]		< ± 0,2; (0...200 °C)
Temperature coefficient span [% of the span / 10 K]		< ± 0,15; (0...200 °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)
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 class		A
Process data analog		1
Process data binary		2
Min. process cycle time [ms]		2.3
Supported DeviceIDs	<b>Type of operation</b> default	<b>DeviceID</b> 157
Operating conditions		
Ambient temperature [°C]		-25...80
Note on ambient temperature		Medium temperature: ≤ 160 °C
Ambient temperature [°C]		-25...65

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## Flush pressure sensor with display

PI-010-REZ01-MFRKG/US/ IP

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	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	20 g (10...2000 Hz)
MTTF [years]		142
Note on approval	Including free 6-point calibration certificate.	

### Mechanical data

Weight [g]	1053
Housing	tubular
Dimensions [mm]	Ø 50 / L = 163
Material	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 DN40 (1,5") DIN 32676 (ISO 2852)
Surface characteristics Ra/Rz of the wetted parts	< 0.38 / -
Fill fluid for pressure transfer	NEOBEE (food grade, FDA compliant)
Diaphragm diameter [mm]	34

### 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; psi; MPa; % of the span	

### Remarks

Pack quantity	1 pcs.
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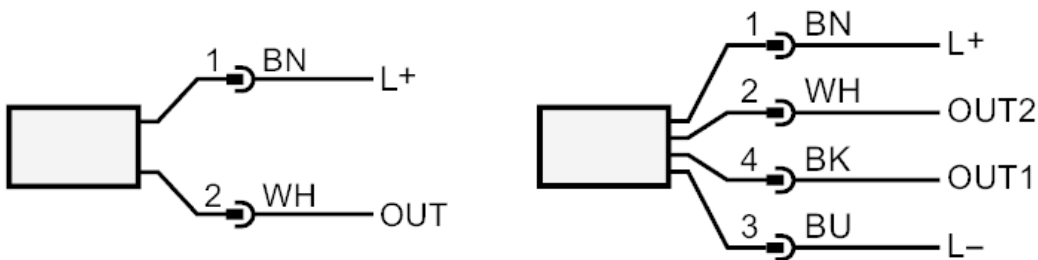


## Flush pressure sensor with display

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### Electrical connection

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



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