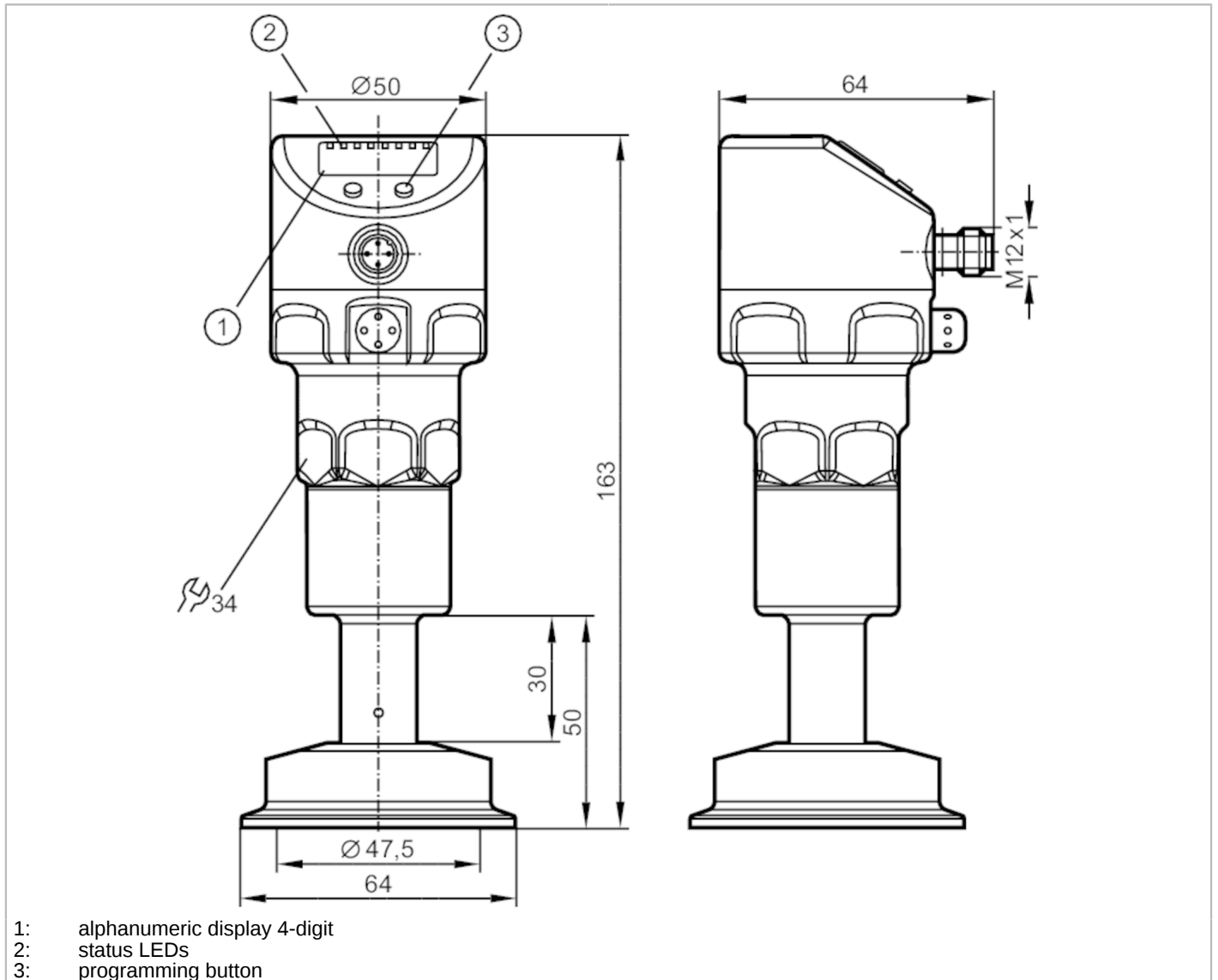


PI2304



Flush pressure sensor with display

PI-010-REZ02-MFRKG/US/ IP



EC 1935/2004

EHEDG Certified

FCM



IO-Link



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1		
Measuring range	-1...10 bar	-14.5...145 psi	-0.1...1 MPa
Process connection	Clamp DN50 (2") DIN 32676 (ISO 2852)		

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]	-20...200; (-20...90 < 0 bar)		
Min. burst 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		
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	-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
Analogue start point	-1...7.5 bar	-14.5...108.7 psi	-0.1...0.75 MPa
Analogue 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



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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)	
Zero-point stabilisation [% of the span]	IO-Link, analogue output	0,15
	display, switching output	0,2
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)	
Response times		
Damping process value dAP [s]	0...30	
Damping for the analogue output dAA [s]	0.01...99.99	
2-wire		
Step response time analogue output [ms]	45	
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	
SDCI standard	IO-Link Communication Specification, Version 1.0, January 2009, Ordner No: 10.002	
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	Type of operation	DeviceID
	default	157
Operating conditions		
Ambient temperature [°C]	-25...80	
Note on ambient temperature	Medium temperature: ≤ 160 °C	

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Ambient temperature	[°C]	-25...65
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]	1168
Housing		cylindrical
Dimensions	[mm]	Ø 50 / L = 163
Materials		stainless steel (316L/1.4404); stainless steel (316L/1.4435); PBT; PEI; PFA
Materials (wetted parts)		stainless steel (316L/1.4435)
Min. pressure cycles		10 million
Process connection		Clamp DN50 (2") DIN 32676 (ISO 2852)
Surface characteristics Ra/Rz of the wetted parts		Ra < 0.38 µm
Fill fluid for pressure transmission		NEOBEE (food grade, FDA compliant)
Diaphragm diameter	[mm]	47.5

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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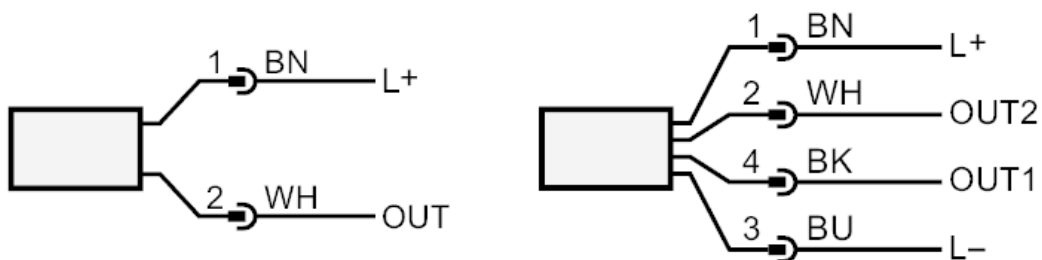


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Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated



OUT connection for 2-wire operation :
analogue output

OUT1 connection for 3-wire operation :
switching output
IO-Link

OUT2 switching output

analogue output
colours to DIN EN 60947-5-2

Core colours :

BK = black

BN = brown

BU = blue

WH = white