

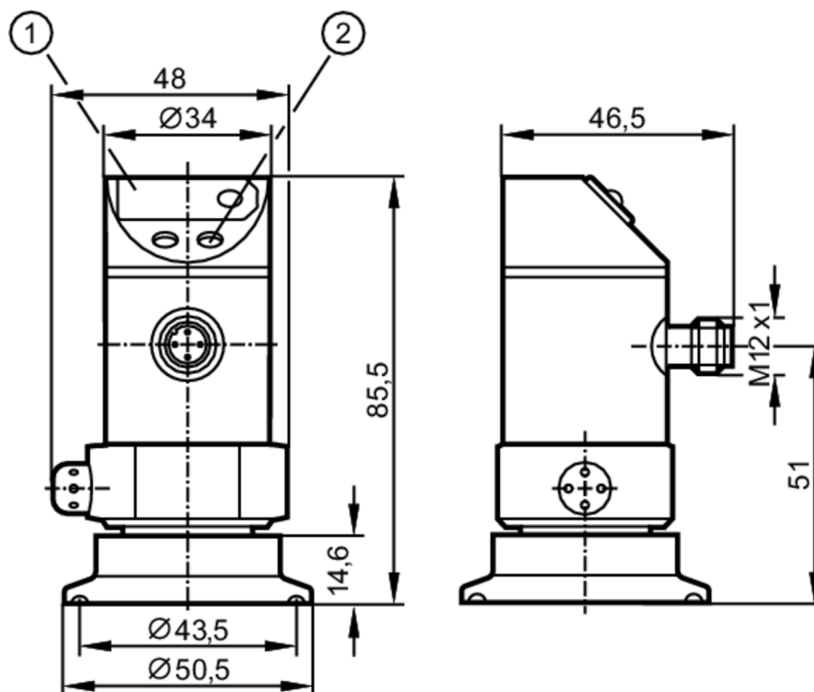
PH0104



Flush pressure sensor

PH-010-RES30-KFPKG/US/ /P

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- 1 7-segment LED display
2 Programming button



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1		
Measuring range	-0.5...10 bar	-7...145 psi	-50...1000 kPa
Process connection	1,5"		

Application

System	gold-plated contacts		
Application	flush mountable for the food and beverage industry		
Installation	Freely rotatable housing 350°		
Media	viscous media and liquids with suspended particles; liquids and gases		
Medium temperature [°C]	-25...80		
Min. bursting pressure	150 bar	2175 psi	15000 kPa
Pressure rating	50 bar	725 psi	5000 kPa
Type of pressure	relative pressure		
No dead space	yes		

Electrical data

Operating voltage [V]	20...30 DC		
Current consumption [mA]	< 60		
Min. insulation resistance [MΩ]	100; (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		



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Power-on delay time	[s]	0.2
Integrated watchdog		yes

Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1
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Outputs

Total number of outputs	2
Output signal	switching signal; analog signal; (configurable)
Electrical design	PNP/NPN
Number of digital outputs	2
Output function	normally open / closed; (configurable)
Max. voltage drop switching output DC	[V] 2
Permanent current rating of switching output DC	[mA] 250
Switching frequency DC	[Hz] < 170
Number of analog outputs	1
Analog current output	[mA] 4...20; (scalable 1:4)
Max. load	[Ω] ($U_b - 10\text{ V}$) / 20 mA
Analog voltage output	[V] 0...10; (scalable 1:4)
Min. load resistance	[Ω] 2000
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes

Measuring/setting range

Measuring range	-0.5...10 bar	-7...145 psi	-50...1000 kPa
Set point SP	-0.45...9.99 bar	-7...145 psi	-45...999 kPa
Reset point rP	-0.5...9.94 bar	-7...144 psi	-50...994 kPa
Analog start point	-0.5...7.49 bar	-7...109 psi	-50...749 kPa
Analog end point	2...9.99 bar	29...145 psi	200...999 kPa
In steps of	0.01 bar	1 psi	1 kPa

Accuracy / deviations

Repeatability	[% of the span]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation	[% of the span]	< ± 0,6; (Turn down 1:1, linearity, incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1)
Linearity deviation	[% of the span]	< ± 0,5; (Turn down 1:1)
Hysteresis deviation	[% of the span]	< ± 0,1; (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]	< ± 0,1; (0...80 °C)
Temperature coefficient span	[% of the span / 10 K]	< ± 0,2; (0...80 °C)



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Reaction times		
Response time	[ms]	< 3
Damping process value dAP	[s]	0...4
Damping for the analog output dAA in steps	[s]	0 - 0,1 - 0,5 - 2
Max. response time analog output	[ms]	3
Software / programming		
Parameter setting options	hysteresis / window; normally open / closed; switching logic; current/ voltage output; Damping; adaptation of displayed values; display can be rotated and switched off; Display unit; Zero point; span	
Operating conditions		
Ambient temperature	[°C]	-25...80
Storage temperature	[°C]	-40...100
Protection		IP 67
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 61000-4-6 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]	341.5
Material	stainless steel (1.4404 / 316L); PBT; PC; PEI; EPDM/X; FKM	
Materials (wetted parts)	stainless steel (1.4404 / 316L); ceramics (99.9 % Al2O3); PTFE	
Min. pressure cycles	100 million	
Process connection	1,5"	
Displays / operating elements		
Display	Switching status	2 x LED, red
	Function display	7-segment LED display
	Measured values	7-segment LED display
Display unit	bar; psi; kPa	
Remarks		
Pack quantity	1 pcs.	
Electrical connection		
Connector: 1 x M12; coding: A; Contacts: gold-plated		
		

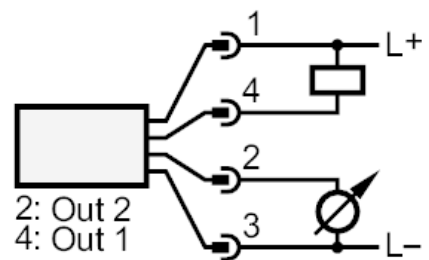
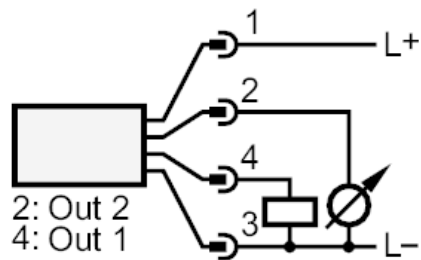
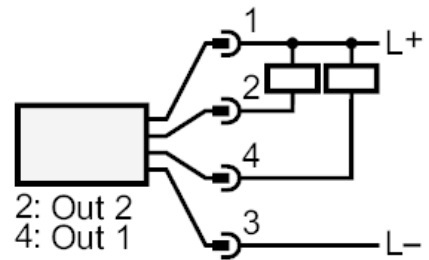
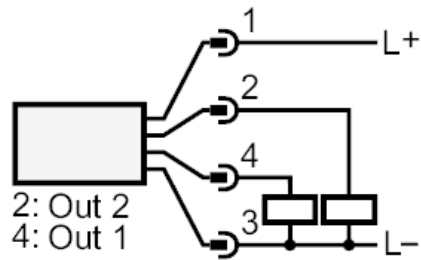




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Connection



OUT1
OUT2

Switching output
Switching output
analog output