

PF2054



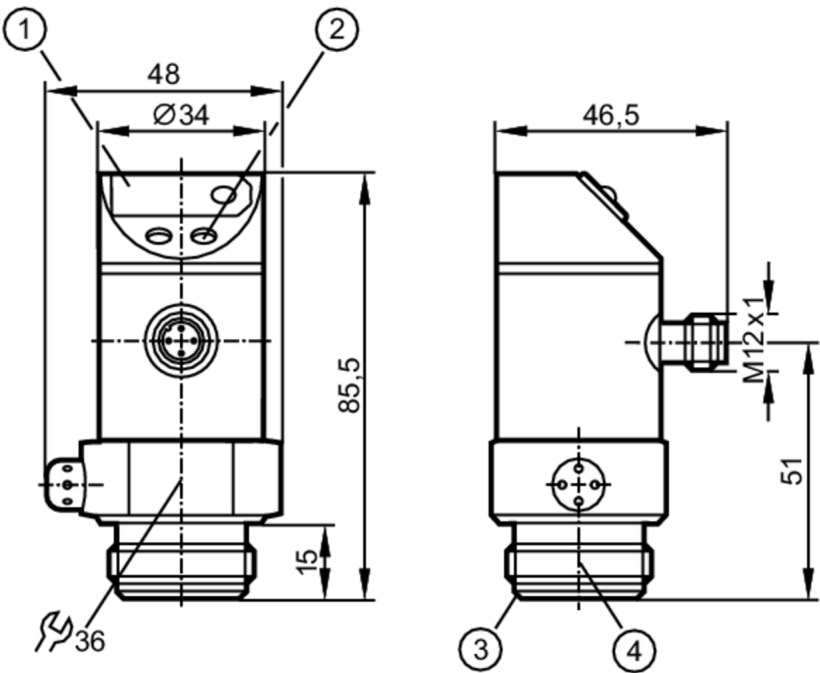
Flush pressure sensor

PF-010-RES30-MFRKG/US/ /P

phase-out article
Discontinuation date: 03/31/2024

Alternative articles: PI1004 or PI1704
When selecting an alternative article and accessories please note that technical data may differ!

Please do not use for new projects.
no more adapters available as accessories



- 1 7-segment LED display
- 2 programming button
- 3 Aseptoflex sealing edge
- 4 Aseptoflex thread



Product characteristics				
Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1			
Measuring range	-0.5...10 bar	-7...145 psi	-50...1000 kPa	-0.05...1 MPa
Process connection	threaded connection Aseptoflex external thread Aseptoflex			

Application			
Special feature	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		



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No dead space	yes
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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
Power-on delay time [s]	0.2
Integrated watchdog	yes

Inputs / outputs

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

Total number of outputs	2
Output signal	switching signal; analogue signal; (configurable)
Electrical design	PNP/NPN
Number of digital outputs	2
Output function	normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	250
Switching frequency DC [Hz]	< 170
Number of analogue outputs	1
Analogue current output [mA]	4...20; (scalable 1:4)
Max. load [Ω]	(U _b - 10 V) / 20 mA
Analogue voltage output [V]	0...10; (scalable 1:4)
Min. load resistance [Ω]	2000
Short-circuit protection	yes
Type of short-circuit protection	pulsed
Overload protection	yes

Measuring/setting range

Measuring range	-0.5...10 bar	-7...145 psi	-50...1000 kPa	-0.05...1 MPa
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	
Analogue start point	-0.5...7.49 bar	-7...109 psi	-50...749 kPa	
Analogue end point	2...9.99 bar	29...145 psi	200...999 kPa	
In steps of	0.01 bar	1 psi	1 kPa	
Factory setting		SP1 = 2.50 bar	rP1 = 2.30 bar	
		ASP = 0.00 bar	AEP = 9.99 bar	

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)



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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)

Response times	
Response time [ms]	< 3
Damping process value dAP [s]	0...4
Damping for the analogue output dAA in steps [s]	0 - 0,1 - 0,5 - 2
Max. response time analogue output [ms]	3

Software / programming	
Parameter setting options	hysteresis / window; normally open / normally 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)
MTTF [years]		181

Mechanical data	
Weight [g]	279.65
Materials	stainless steel (316L/1.4404); PBT; PC; PEI; EPDM/X; FKM
Materials (wetted parts)	ceramics (99.9 % Al ₂ O ₃); stainless steel (316L/1.4435); surface characteristics: Ra < 0,4 / Rz 4; PTFE
Min. pressure cycles	100 million
Process connection	threaded connection Aseptoflex external thread Aseptoflex

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	
Remarks	The 3-A qualification is only valid if adapters with 3-A qualification are used for installation.
Notes	Please do not use for new projects.; no more adapters available as accessories

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Pack quantity

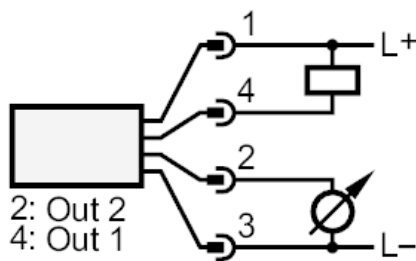
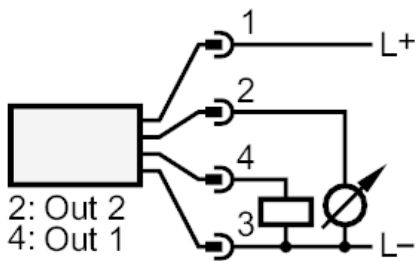
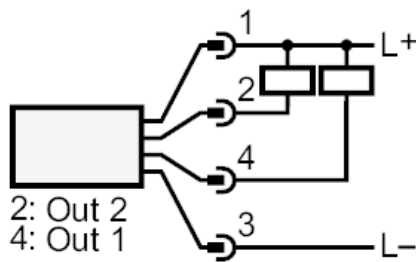
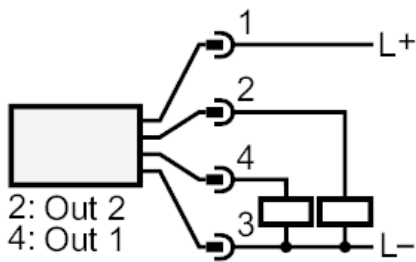
1 pcs.

Electrical connection

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



Connection



OUT1	switching output
OUT2	switching output
	analogue output