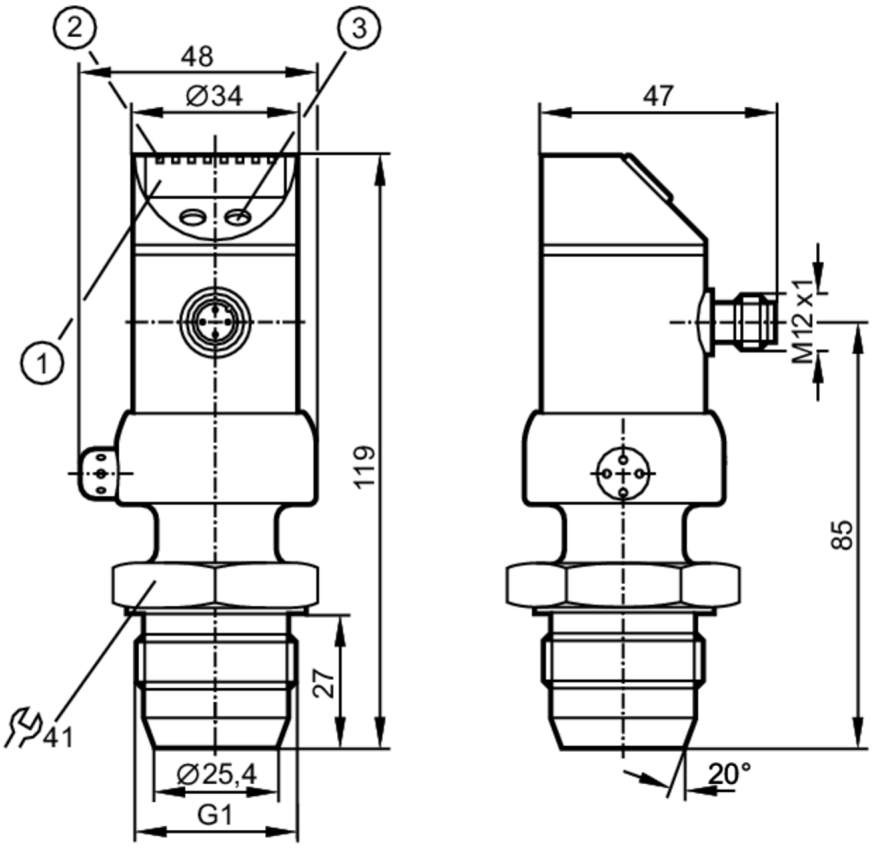
PIM693

Pressure sensor with diagnostic function for pumps

PIM025-REA01-KFPKG/US/ /P



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

EC 1935/2004 EHEDG Tested FCM

Product characteristics				
Number of inputs and outputs		Number of digital outputs: 2; Number of analogue outputs: 1		
Measuring range		-1...25 bar	-14.4...362.7 psi	-0.1...2.5 MPa
Process connection		threaded connection G 1 external thread sealing cone		
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...125; (145 max. 1h)		
Min. bursting pressure		350 bar	5070 psi	35 MPa
Pressure rating		100 bar	1450 psi	10 Mpa
Type of pressure		relative pressure; vacuum		
No dead space		yes		
Electrical data				
Operating voltage	[V]	18...32 DC		
Current consumption	[mA]	< 50		

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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	
Outputs		
Total number of outputs	2	
Output signal	switching signal; analogue signal; (configurable)	
Electrical design	PNP	
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]	350	
Notes on switching frequency [Hz]	OUT2	
Number of analogue outputs	1	
Analogue current output [mA]	4...20, invertible; (scalable)	
Max. load [Ω]	(Ub - 10 V) / 20 mA	
Short-circuit protection	yes	
Type of short-circuit protection	pulsed	
Overload protection	yes	

Measuring/setting range			
Measuring range	-1...25 bar	-14.4...362.7 psi	-0.1...2.5 MPa
Set point SP	-0.96...25 bar	-13.8...362.7 psi	-0.096...2.5 MPa
Reset point rP	-1...24.96 bar	-14.4...362.1 psi	-0.1...2.496 MPa
Analogue start point	-1...18.74 bar	-14.4...271.8 psi	-0.1...1.874 MPa
Analogue end point	5.24...25 bar	76.2...362.7 psi	0.524...2.5 MPa
In steps of	0.02 bar	0.3 psi	0.002 MPa
Factory setting		OU1 = Fnc	OU2 = I
		ASP = 0.00 bar	AEP = 25.00 bar

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	< ± 0,1; (Turn down 1:1; per year)

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[% of the span]		
Temperature coefficient zero point [% of the span / 10 K]		< ± 0,15; (0...70 °C)
Temperature coefficient span [% of the span / 10 K]		< ± 0,1; (0...70 °C)
Response times		
Response time [ms]		< 2.5
Damping process value dAP [s]		0...10
Damping for the analogue output dAA [s]		0...10
Step response time analogue output [ms]		0.2
Software / programming		
Parameter setting options		zero point; span
Operating conditions		
Ambient temperature [°C]		-25...80
Storage temperature [°C]		-40...100
Protection		IP 67; 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]		188
Mechanical data		
Weight [g]		457
Materials		stainless steel (1.4404 / 316L); PC; PBT; PEI; FKM; PTFE
Materials (wetted parts)		ceramics (99.9 % Al2O3); stainless steel (1.4435 / 316L); surface characteristics: Ra < 0,4 / Rz 4; PTFE
Min. pressure cycles		100 million
Process connection		threaded connection G 1 external thread sealing cone
Displays / operating elements		
Display	Display unit	4 x LED, green
	switching status	2 x LED, yellow
	function display	alphanumeric display, 4-digit
	measured values	alphanumeric display, 4-digit
Remarks		
Remarks		pump diagnosis for pumps with constant rotational speed (+/- 10 % deviation of the taught rotational speed)
		speed range 40...3000 U/min
		minimum pressure for pump diagnosis 0,5 bar
		The 3-A qualification is only valid if adapters with 3-A qualification are used for installation.
Pack quantity		1 pcs.

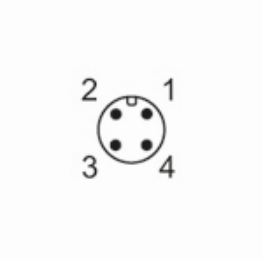
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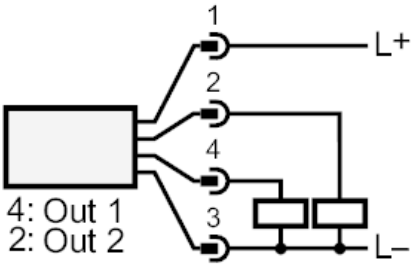
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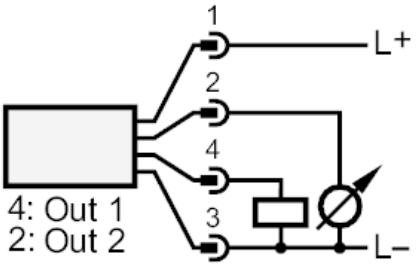
Electrical connection

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



Connection





OUT1	pump diagnosis
OUT2	pressure monitoring