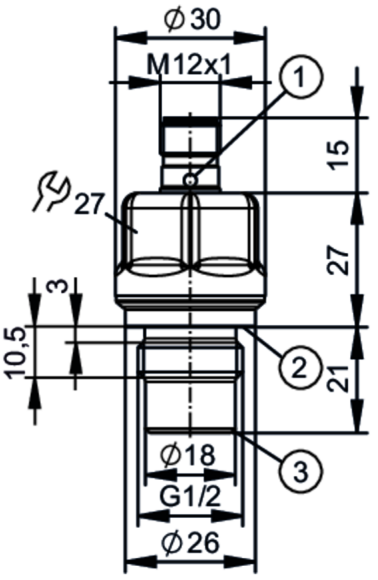
PL1543

Flush pressure transmitter

PL-040-REA12-A-DKG/US/ /



1 LED
2 Gasket DIN EN ISO 1179-2
3 area for metal sealing

Product characteristics			
Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1		
Measuring range	-1...40 bar	-14.5...580 psi	-0.1...4 MPa
Process connection	threaded connection G 1/2 external thread		
Application			
Special feature	Gold-plated contacts		
Measuring element	ceramic-capacitive pressure measuring cell		
Temperature monitoring	yes		
Application	flush mountable for industrial applications; for industrial applications		
Media	viscous media and liquids with suspended particles; Liquids; other media on request		
Medium temperature [°C]	-25...110; (flush mount zero-leak using metal-to-metal seal. for permissible temperatures of other sealing versions, see sealing materials under “Accessories”)		
Min. bursting pressure	300 bar	4350 psi	30 MPa
Pressure rating	175 bar	2538 psi	17 MPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure; vacuum		
No dead space	yes		
Electrical data			
Operating voltage [V]	9.6...30 DC		
Min. insulation resistance [MΩ]	100; (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		
Integrated watchdog	yes		
2-wire			
Current consumption [mA]	3.5...21.5		

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Power-on delay time	[s]	< 1		
3-wire				
Current consumption	[mA]	< 30		
Power-on delay time	[s]	< 0.5		
Inputs / outputs				
Number of inputs and outputs		Number of digital outputs: 1; Number of analogue outputs: 1		
Outputs				
Total number of outputs		2		
Output signal		analogue signal; IO-Link (configurable)		
Number of digital outputs		1; (IO-Link)		
Number of analogue outputs		1		
Analogue current output	[mA]	4...20; (scalable; 1:5)		
Max. load	[Ω]	(Ub - 9,6 V) / 21,5 mA; 670 Ω (Ub = 24 V)		
Short-circuit proof		yes		
Overload protection		yes		
Measuring/setting range				
Measuring range		-1...40 bar	-14.5...580 psi	-0.1...4 MPa
Analogue start point		-1...32 bar	-15...464 psi	-0.1...3.2 MPa
Analogue end point		7...40 bar	102...580 psi	0.7...4 MPa
In steps of		0.01 bar	1 psi	0.001 MPa
Factory setting		ASP = 0.0 bar	AEP = 40.0 bar	
		ASP = 0.0 MPa	AEP = 4 MPa	
		ASP = 0.0 psi	AEP = 580 psi	
Temperature monitoring				
Measuring range		-25...110 °C	-13...230 °F	
Accuracy / deviations				
Repeatability	[% of the span]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)		
Characteristics deviation	[% of the span]	< ± 0,8; (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]	< ± 0,1 (-25...85 °C) < ± 0,3 (85...110 °C)		
Temperature coefficient span	[% of the span / 10 K]	< ± 0,1 (-25...85 °C) < ± 0,3 (85...110 °C)		
Temperature monitoring				
Accuracy	[K]	± 2.5 K + (0.045 x (ambient temperature - medium temperature))		
Response times				
Damping process value dAP	[s]	0...99.99		

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Damping for the analogue output dAA	[s]	0...99.99	
2-wire			
Step response time analogue output	[ms]	12	
3-wire			
Step response time analogue output	[ms]	3	
Temperature monitoring			
Dynamic response T05 / T09	[s]	< 10 / < 25; (DIN EN 60751 water; > 0,9 m/s)	
Interfaces			
Communication interface		IO-Link	
Transmission type		COM2 (38,4 kBaud)	
IO-Link revision		1.1	
SDCI standard		IEC 61131-9	
Profiles		Smart Sensor ED2: Identification and Diagnosis (0x4000), Measurement Data Channel (0x800A)	
SIO mode		no	
Required master port type		A; (when pin 2 not connected: B)	
Min. process cycle time	[ms]	3.5	
IO-Link resolution pressure	[bar]	0.01	
IO-Link resolution temperature	[K]	0.2	
IO-Link process data (cyclical)		**function**	**bit length**
		pressure	16
		temperature	16
		device status	4
IO-Link functions (acyclical)		application specific tag; internal temperature	
Supported DeviceIDs		**Type of operation**	**DeviceID**
		default	1432
Operating conditions			
Ambient temperature	[°C]	-25...90	
Storage temperature	[°C]	-40...100	
Protection		IP 67; IP 68; IP 69	
Tests / approvals			
EMC		DIN EN 61326-1	
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]	427	
UL approval		Enclosure type	Type 1
		UL Approval no.	J056
		File number UL	E174189
Mechanical data			
Weight	[g]	114.3	
Materials		stainless steel (1.4435 / 316L); stainless steel (1.4404 / 316L); PA; PTFE; FKM	

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Materials (wetted parts)		stainless steel (1.4435 / 316L); Al2O3 (ceramics); surface characteristics : Ra < 0,4 / Rz 4; PTFE; (FKM for sealing with seal DIN EN ISO 1179-2, see operating instructions)
Min. pressure cycles		100 million
Tightening torque	[Nm]	25
Process connection		threaded connection G 1/2 external thread

Displays / operating elements

Display	operating status	2 LED, green

Accessories

Items supplied	Gasket: G1/2, FKM DIN EN ISO1179-2 (-15...110°C), E30492
Accessories (optional)	Gasket: G1/2, FKM DIN EN ISO1179-2 (-15...110°C), E30492
	Gasket: G1/2, EPDM DIN EN ISO1179-2 (-25...110°C), E30451
	Gasket: G1/2, FFKM DIN EN ISO1179-2 (-5...110°C), E30513
	O-ring: 16,4 x 1, FKM (-15...110°C), E30510
	O-ring: 16,4 x 1, EPDM (-25...110°C), E30511
	O-ring: 16,4 x 1, FFKM (-5...110°C), E30512

Remarks

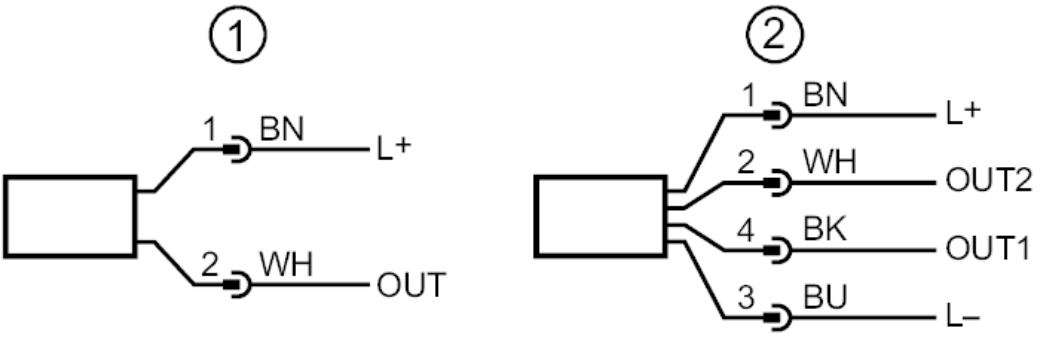
Pack quantity	1 pcs.

Electrical connection

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



Connection



1 connection for 2-wire operation (analogue)
2 connection for 3-wire operation (analogue / IO-Link)
OUT1: IO-Link
OUT2: analogue output