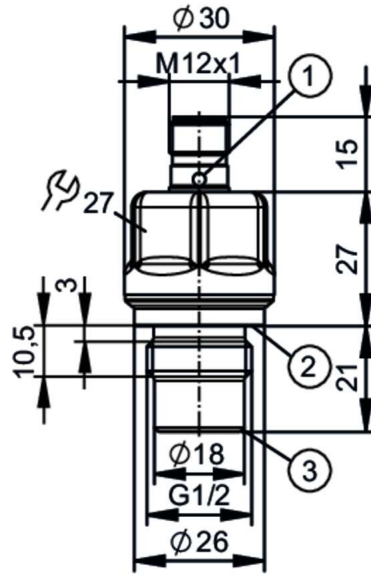


PL1543



Flush pressure transmitter

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



- 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 analog 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

System	gold-plated contacts		
Measuring element	ceramic-capacitive pressure measuring cell		
Temperature monitoring	yes		
Application	Industrial pressure / vacuum transmitters, flush mount, analog output Type PL; 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		

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Flush pressure transmitter

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2-wire			
Current consumption	[mA]	3.5...21.5	
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 analog outputs: 1		
Outputs			
Total number of outputs	2		
Output signal	analog signal; IO-Link (configurable)		
Number of digital outputs	1; (IO-Link)		
Number of analog outputs	1		
Analog current output	[mA]	4...20; (scalable; 1:5)	
Max. load	[Ω]	(U _b - 9,6 V) / 21,5 mA; 670 Ω (U _b = 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
Analog start point	-1...32 bar	-15...464 psi	-0.1...3.2 MPa
Analog 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))	

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Flush pressure transmitter

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Reaction times										
Damping process value dAP	[s]	0...99.99								
Damping for the analog output dAA	[s]	0...99.99								
2-wire										
Step response time analog output	[ms]	12								
3-wire										
Step response time analog 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 class		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)		<table border="1"> <thead> <tr> <th>Function</th> <th>bit length</th> </tr> </thead> <tbody> <tr> <td>pressure</td> <td>16</td> </tr> <tr> <td>temperature</td> <td>16</td> </tr> <tr> <td>device status</td> <td>4</td> </tr> </tbody> </table>	Function	bit length	pressure	16	temperature	16	device status	4
Function	bit length									
pressure	16									
temperature	16									
device status	4									
IO-Link functions (acyclical)		application specific tag; internal temperature								
Supported DeviceIDs		<table border="1"> <thead> <tr> <th>Type of operation</th> <th>DeviceID</th> </tr> </thead> <tbody> <tr> <td>default</td> <td>1432</td> </tr> </tbody> </table>	Type of operation	DeviceID	default	1432				
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		<table border="1"> <tbody> <tr> <td>Enclosure type</td> <td>Type 1</td> </tr> <tr> <td>UL approval number</td> <td>J056</td> </tr> <tr> <td>File number UL</td> <td>E174189</td> </tr> </tbody> </table>	Enclosure type	Type 1	UL approval number	J056	File number UL	E174189		
Enclosure type	Type 1									
UL approval number	J056									
File number UL	E174189									
Mechanical data										
Weight	[g]	114.3								

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Flush pressure transmitter

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Material	stainless steel (1.4435 / 316L); stainless steel (1.4404 / 316L); PA; PTFE; FKM
Materials (wetted parts)	stainless steel (1.4435 / 316L); Al ₂ O ₃ (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
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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

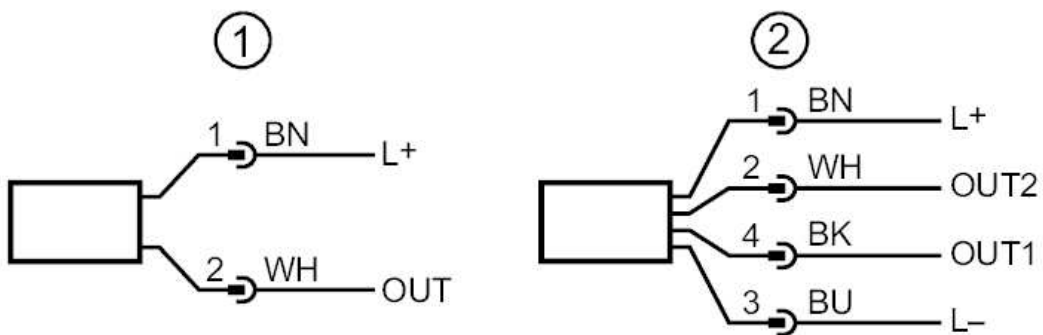
Pack quantity	1 pcs.
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Electrical connection

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



Connection



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