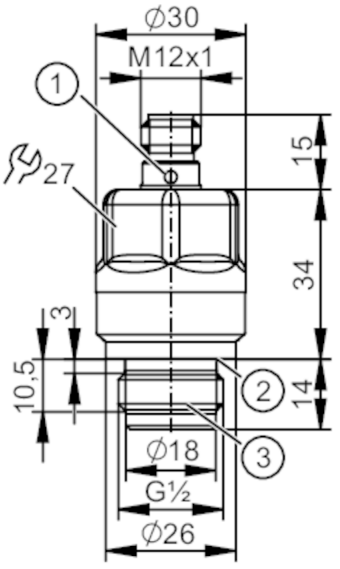
PL1343

Flush pressure transmitter

PL-040-REG12-A-DKG/US/ /



1 LED
2 Gasket DIN EN ISO 1179-2
3 threaded pin based on DIN EN ISO 1179-2

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 - 14 mm		
Application			
Special feature	gold-plated contacts		
Measuring element	ceramic-capacitive pressure measuring cell		
Temperature monitoring	yes		
Application	Industrial flush pressure transmitters, analog | PL; for industrial applications		
Media	viscous media and liquids with suspended particles; Liquids; other media on request		
Conditionally suitable for	use in gases at pressures > 25 bar only on request		
Medium temperature [°C]	-15...110; (max. -25...110°C; for permissible temperatures of other sealing materials, see “Accessories”)		
Min. burst 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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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		
Number of digital outputs		1; (IO-Link)		
Number of analog outputs		1		
Analog current output	[mA]	4...20; (scalable; 1:10)		
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
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)		
Zero-point stabilization	[% of the span]	0,15; (IO-Link; analog output; (see operating instructions zero-point behavior))		
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)		

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Temperature monitoring			
Accuracy	[K]	± 2.5 K + (0.045 x (ambient temperature - medium temperature))	
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 / <45; (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		Common - I&D	Identification and Diagnosis
		Function	Measurement data, standard resolution
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)		**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]	407	
Embedded software included		yes	
UL approval		UL approval number	J056
		File number UL	E174189

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Embedded software developed in accordance with		ISO 13849-1 : 2015 (clause 4.6.2)

Mechanical data

Weight	[g]	141.3
Housing		tubular
Dimensions	[mm]	Ø 30 / L = 63
Material		stainless steel (1.4435 / 316L); stainless steel (1.4404 / 316L); PA; PTFE; FKM
Materials (wetted parts)		stainless steel (1.4435 / 316L); Al2O3 (ceramics) surface characteristics: Ra < 0,4 µm / Rz = 4 µm; 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 - 14 mm

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, EPDM DIN EN ISO1179-2 (-25...110°C), E30451
	Gasket: G1/2, FFKM DIN EN ISO1179-2 (-5...110°C), E30513

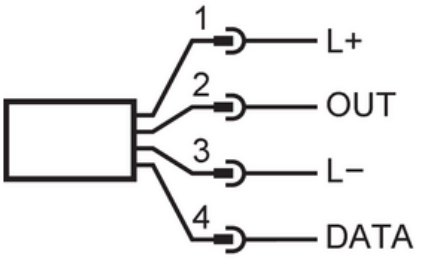
Remarks

Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated

Connection



2-wire

1	L+	
2	OUT	AO

3-wire

1	L+	
2	OUT	AO
3	L-	
4	DATA	IO-Link

AO: analog output; DATA: data interface