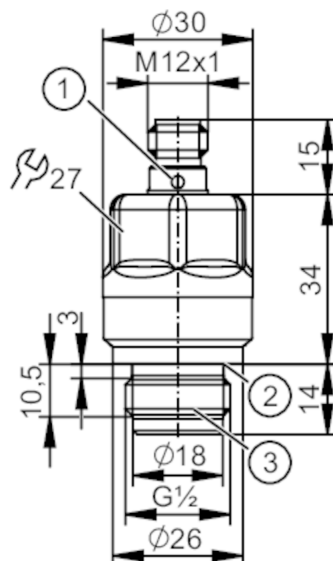


PL1307



Flush pressure transmitter

PL-001-REG12-A-DKG/US/ I



- 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	-0.05...1 bar	-50...1000 mbar	-0.73...14.5 psi	-5...100 kPa
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		
Medium temperature [°C]	-15...110; (max. -25...110°C; for permissible temperatures of other sealing materials, see "Accessories")		
Min. burst pressure	40000 mbar	580 psi	4000 kPa
Pressure rating	20000 mbar	290 psi	2000 kPa
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 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]	(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		-0.05...1 bar	-50...1000 mbar	-0.73...14.5 psi	-5...100 kPa
Analog start point		-50...800 mbar	-0.725...11.6 psi	-5...80 kPa	
Analog end point		150...1000 mbar	2.18...14.5 psi	15...100 kPa	
In steps of		1 mbar	0.005 psi	0.1 kPa	
Factory setting		ASP = 0.0 mbar	AEP = 1000 mbar		
		ASP = 0.0 psi	AEP = 14.5 psi		
		ASP = 0.0 kPa	AEP = 100 kPa		
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]	< ± 0,5; (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)			
Temperature monitoring					
Accuracy	[K]	± 2.5 K + (0.045 x (ambient temperature - medium temperature))			



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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 / <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	[mbar]	0.2
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	1864
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	J050
	File number UL	E174189
Embedded software developed in accordance with	ISO 13849-1 : 2015 (clause 4.6.2)	

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Mechanical data		
Weight	[g]	139.2
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	Display unit	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			