

PL1503



Flush pressure transmitter

PL-025-REA12-A-DKG/US/ /



- 1 LED
- 2 sealing DIN EN ISO 1179-2
- 3 groove for O-ring 16.4 x 1.0
- 4 area for metal sealing



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1		
Measuring range	-1...25 bar	-14.5...362.6 psi	-0.1...2.5 MPa
Process connection	threaded connection G 1/2 external thread - 21 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]	-25...110; (flush mount zero-leak using metal-to-metal seal. For permissible temperatures of other sealing versions, see sealing materials under "Accessories")		
Min. burst pressure	280 bar	3600 psi	28 MPa
Pressure rating	130 bar	1885 psi	13 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



Flush pressure transmitter

PL-025-REA12-A-DKG/US/ /

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...25 bar	-14.5...362.6 psi	-0.1...2.5 MPa
Analog start point	-1...20 bar	-14.5...290.1 psi	-0.1...2 MPa
Analog end point	4...25 bar	58...362.6 psi	0.4...2.5 MPa
In steps of	0.005 bar	0.5 psi	0.0005 MPa
Factory setting	ASP = 0.0 bar	AEP = 25.0 bar	
	ASP = 0.0 MPa	AEP = 2.5 MPA	
	ASP = 0.0 psi	AEP = 362.6 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]	< ± 0,5; (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)	

PL1503



Flush pressure transmitter

PL-025-REA12-A-DKG/US/ /

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]	0.005
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	1438
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
Embedded software included	yes	
UL approval	UL approval number	J051
	File number UL	E174189

PL1503



Flush pressure transmitter

PL-025-REA12-A-DKG/US/ /

Embedded software
developed in accordance with

ISO 13849-1 : 2015 (clause 4.6.2)

Mechanical data

Weight [g]	114.32
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); Al ₂ O ₃ (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 - 21 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
	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

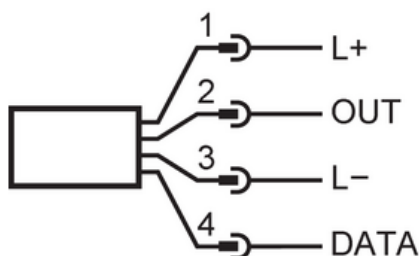
Pack quantity	1 pcs.
---------------	--------

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 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