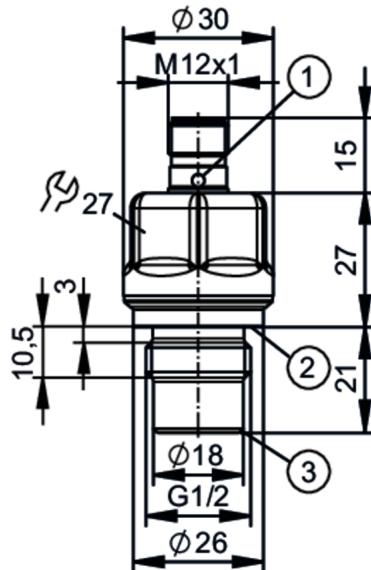


# PL1512



## Flush pressure transmitter

PL-160-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	0...160 bar	0...2320 psi	0...16 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	640 bar	9280 psi	64 MPa
Pressure rating	400 bar	5800 psi	40 MPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure		

### Electrical data

Operating voltage [V]	9.6...30 DC		
Min. insulation resistance [ $M\Omega$ ]	100; (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		
Integrated watchdog	yes		
2-wire			
Current consumption [mA]	3.5...21.5		
Power-on delay time [s]	< 1		

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3-wire			
Current consumption	[mA]	< 30	
Power-on delay time	[s]	< 0.5	
<b>Inputs / outputs</b>			
Number of inputs and outputs		Number of digital outputs: 1; Number of analogue outputs: 1	
<b>Outputs</b>			
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	
<b>Measuring/setting range</b>			
Measuring range	0...160 bar	0...2320 psi	0...16 MPa
Analogue start point	0...128 bar	0...1856 psi	0...12.8 MPa
Analogue end point	32...160 bar	464...2321 psi	3.2...16 MPa
In steps of	0.02 bar	2 psi	0.002 MPa
Factory setting	ASP = 0.0 bar	AEP = 160 bar	
Temperature monitoring			
Measuring range	-25...110 °C	-13...230 °F	
<b>Accuracy / deviations</b>			
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)	
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))	
<b>Response times</b>			
Damping process value dAP	[s]	0...99.9	
Damping for the analogue output dAA	[s]	0...99.9	

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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)
<b>Interfaces</b>		
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]	0.02
IO-Link resolution temperature	[K]	0.2
IO-Link process data (cyclical)	<b>function</b>	<b>bit length</b>
	pressure	16
	temperature	16
	device status	4
IO-Link functions (acyclical)	application specific tag; internal temperature	
Supported DeviceIDs	<b>Type of operation</b>	<b>DeviceID</b>
	default	1435
<b>Operating conditions</b>		
Ambient temperature	[°C]	-25...90
Storage temperature	[°C]	-40...100
Protection		IP 67; IP 68; IP 69
<b>Tests / approvals</b>		
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.	J053
	File number UL	E174189
<b>Mechanical data</b>		
Weight	[g]	114.15
Materials	stainless steel (316L/1.4435); stainless steel (316L/1.4404); PA; PTFE; FKM	
Materials (wetted parts)	stainless steel (316L/1.4435); 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	

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Tightening torque	[Nm]	25
Process connection	threaded connection G 1/2 external thread	
<b>Displays / operating elements</b>		
Display	operating status	2 LED, green
<b>Accessories</b>		
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	

## Remarks

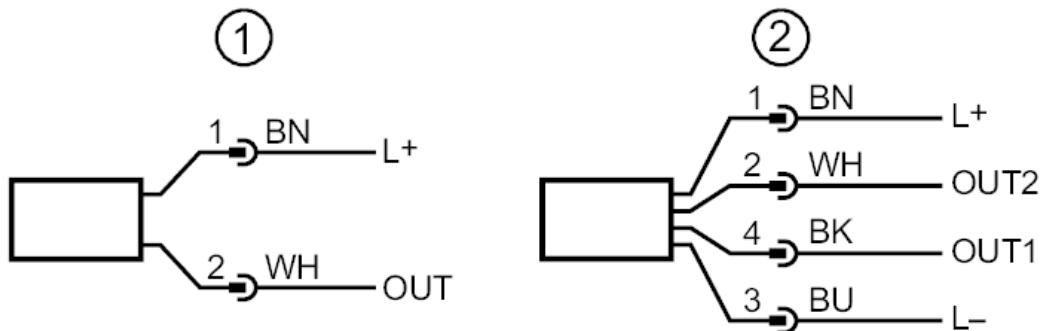
Pack quantity	1 pcs.
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## Electrical connection

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



## Connection



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