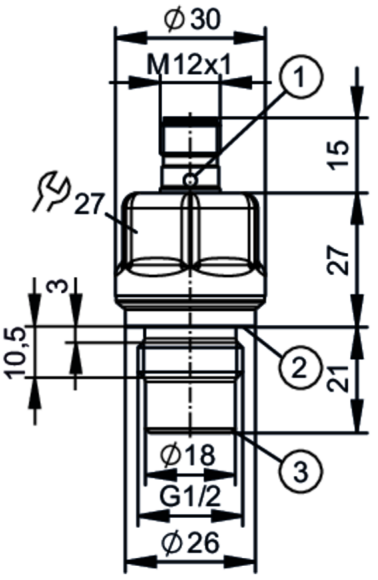
PL1502

Flush pressure transmitter

PL-100-REA12-A-DKG/US/ /



1 LED
2 Gasket DIN EN ISO 1179-2
3 area for metal sealing

IO-Link TSDP/TÜV

Product characteristics				
Number of inputs and outputs		Number of digital outputs: 1; Number of analog outputs: 1		
Measuring range		0...100 bar	0...1450 psi	0...10 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 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		400 bar	5800 psi	40 MPa
Pressure rating		250 bar	3625 psi	25 MPa
Vacuum resistance	[mbar]	-1000		
Type of pressure		relative pressure		
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		

PL1502

Flush pressure transmitter

PL-100-REA12-A-DKG/US/ /

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; 1:5)		
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		0...100 bar	0...1450 psi	0...10 MPa
Analog start point		0...80 bar	0...1160 psi	0...8 MPa
Analog end point		20...100 bar	290...1450 psi	2...10 MPa
In steps of		0.02 bar	1 psi	0.002 MPa
Factory setting		ASP = 0.0 bar	AEP = 100 bar	
		ASP = 0.0 MPa	AEP = 10 MPa	
		ASP = 0.0 psi	AEP = 1450 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)		
Temperature monitoring				
Accuracy	[K]	± 2.5 K + (0.045 x (ambient temperature - medium temperature))		

PL1502

Flush pressure transmitter

PL-100-REA12-A-DKG/US/ /

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	
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]	0.02	
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	1439
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	J052
		File number UL	E174189
Embedded Software entwickelt nach		ISO 13849-1 : 2015 (clause 4.6.2)	
Mechanical data			
Weight	[g]	115.8	

PL1502

Flush pressure transmitter

PL-100-REA12-A-DKG/US/ /

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

Displays / operating elements

Display	readiness for operation	2 LED, green

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

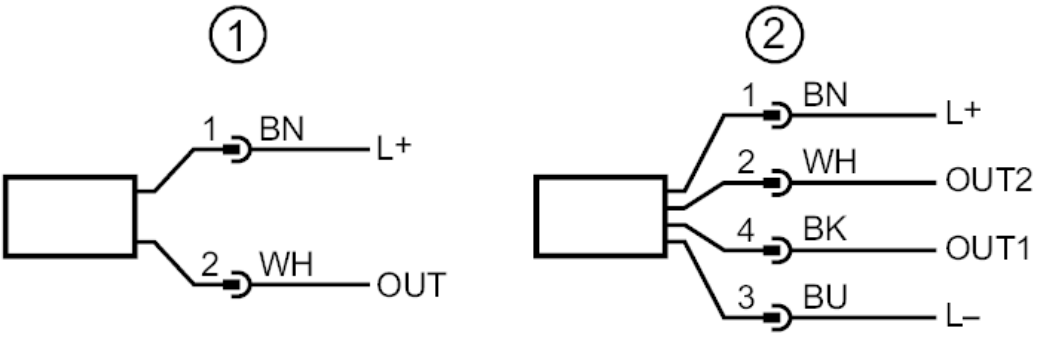
Remarks

Pack quantity	1 pcs.

Electrical connection

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

Connection

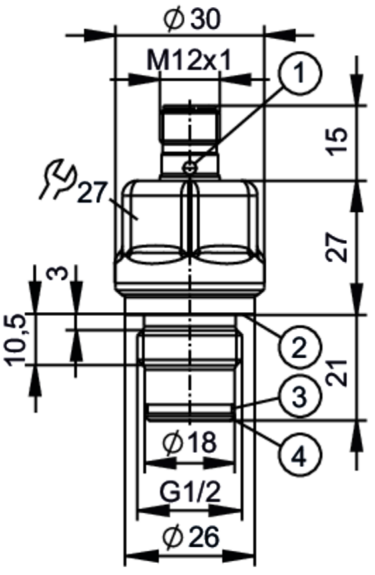


1	connection for 2-wire operation (analog)
2	connection for 3-wire operation (analog / IO-Link) OUT1: IO-Link OUT2: analog output

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		
Application			
System	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		

PL1503

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; 1:5)		
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	
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
Embedded Software entwickelt nach		ISO 13849-1 : 2015 (clause 4.6.2)	

PL1503

Flush pressure transmitter

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

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); 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

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, 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.

Electrical connection

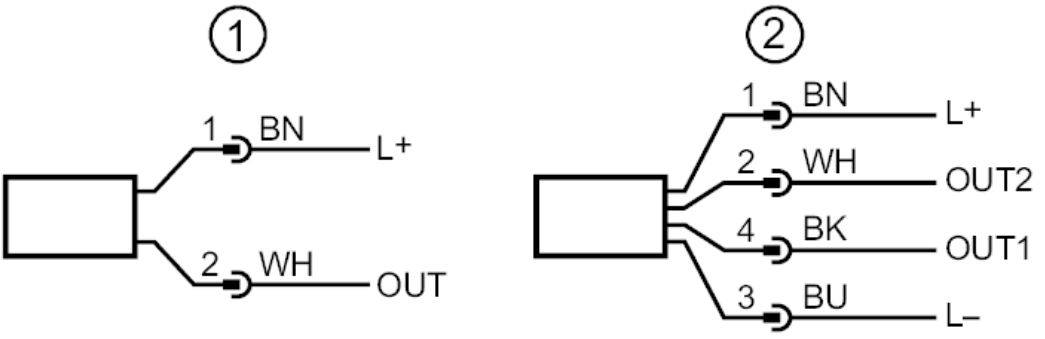
Connector: 1 x M12; coding: A; Contacts: gold-plated

PL1503

Flush pressure transmitter

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

Connection

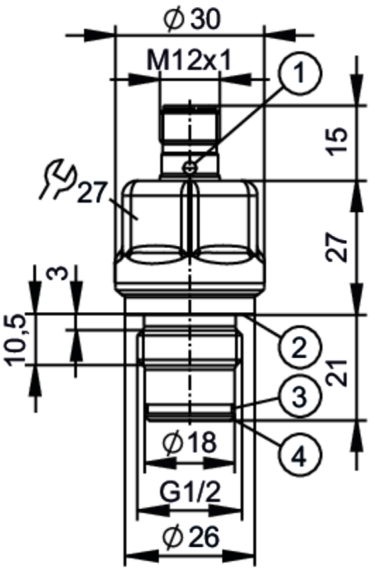


1	connection for 2-wire operation (analog)
2	connection for 3-wire operation (analog / IO-Link) OUT1: IO-Link OUT2: analog output

PL1504

Flush pressure transmitter

PL-010-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 analogue outputs: 1		
Measuring range	-1...10 bar	-14.5...145 psi	-0.1...1 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. burst pressure	175 bar	2538 psi	17 MPa
Pressure rating	70 bar	1015 psi	7 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		

PL1504

Flush pressure transmitter

PL-010-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 analogue outputs: 1		
Outputs				
Total number of outputs		2		
Output signal		analogue signal; IO-Link		
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		
Measuring/setting range				
Measuring range		-1...10 bar	-14.5...145 psi	-0.1...1 MPa
Analogue start point		-1...8 bar	-14.5...116 psi	-0.1...0.8 MPa
Analogue end point		1...10 bar	14.5...145 psi	0.1...1 MPa
In steps of		0.002 bar	0.2 psi	0.0002 MPa
Factory setting		ASP = 0.0 bar	AEP = 10.0 bar	
		ASP = 0.0 psi	AEP = 145.0 psi	
		ASP = 0.0 MPa	AEP = 1.0 MPa	
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 stabilisation	[% of the span]	0,15; (IO-Link; analogue output; (see operating instructions zero-point behaviour))		
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)		

PL1504

Flush pressure transmitter

PL-010-REA12-A-DKG/US/ /

Temperature monitoring			
Accuracy	[K]	± 2.5 K + (0.045 x (ambient temperature - medium temperature))	
Response times			
Damping process value dAP	[s]	0...99.99	
Damping for the analogue output dAA	[s]	0...99.99	
2-wire			
Step response time analogue output	[ms]	12	
3-wire			
Step response time analogue output	[ms]	3	
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 type		A; (when pin 2 not connected: B)	
Min. process cycle time	[ms]	3.5	
IO-Link resolution pressure	[bar]	0.002	
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	1437
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 no.	J050
		File number UL	E174189
Embedded Software entwickelt nach		ISO 13849-1 : 2015 (clause 4.6.2)	

PL1504

Flush pressure transmitter

PL-010-REA12-A-DKG/US/ /

Mechanical data		
Weight	[g]	113.97
Housing		cylindrical
Dimensions	[mm]	Ø 30 / L = 63
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 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

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, 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.

Electrical connection

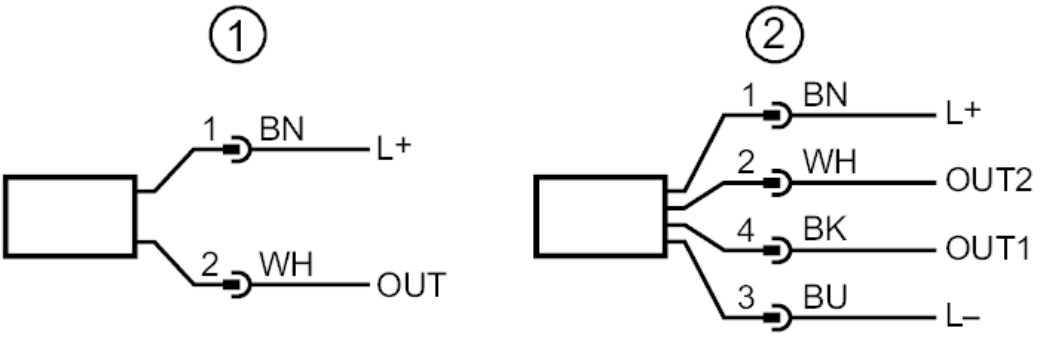
Connector: 1 x M12; coding: A; Contacts: gold-plated

PL1504

Flush pressure transmitter

PL-010-REA12-A-DKG/US/ /

Connection

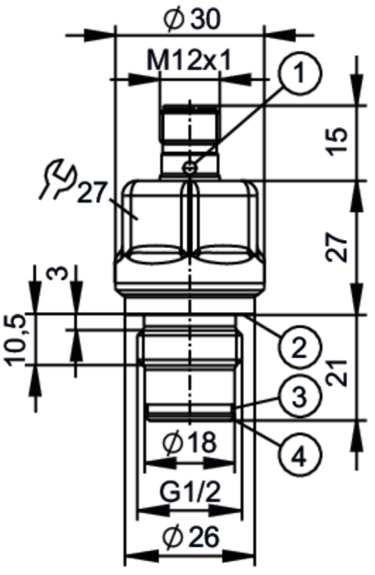


1	connection for 2-wire operation (analogue)
2	connection for 3-wire operation (analogue / IO-Link)
	OUT1: IO-Link
	OUT2: analogue output

PL1504

Flush pressure transmitter

PL-010-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...10 bar	-14.5...145 psi	-0.1...1 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 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	175 bar	2538 psi	17 MPa
Pressure rating	70 bar	1015 psi	7 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		

PL1504

Flush pressure transmitter

PL-010-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; 1:5)		
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...10 bar	-14.5...145 psi	-0.1...1 MPa
Analog start point		-1...8 bar	-14.5...116 psi	-0.1...0.8 MPa
Analog end point		1...10 bar	14.5...145 psi	0.1...1 MPa
In steps of		0.002 bar	0.2 psi	0.0002 MPa
Factory setting		ASP = 0.0 bar	AEP = 10.0 bar	
		ASP = 0.0 psi	AEP = 145.0 psi	
		ASP = 0.0 MPa	AEP = 1.0 MPa	
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)		

PL1504

Flush pressure transmitter

PL-010-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	
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]	0.002	
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	1437
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	J050
		File number UL	E174189
Embedded Software entwickelt nach		ISO 13849-1 : 2015 (clause 4.6.2)	

PL1504

Flush pressure transmitter

PL-010-REA12-A-DKG/US/ /

Mechanical data		
Weight	[g]	113.97
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

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, 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.

Electrical connection

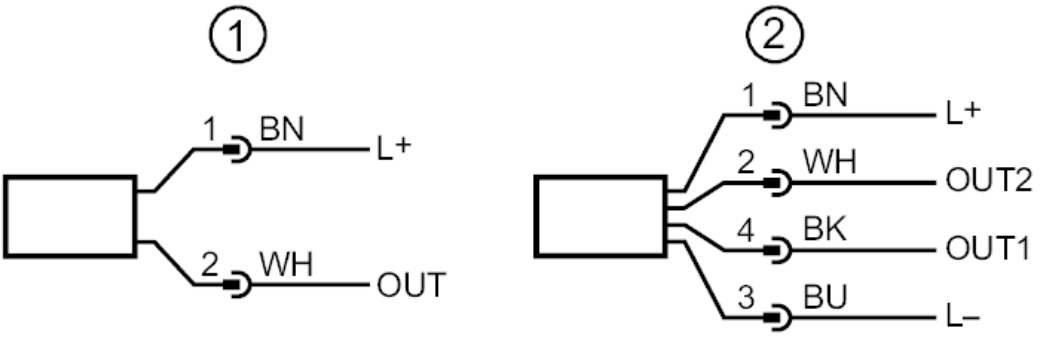
Connector: 1 x M12; coding: A; Contacts: gold-plated

PL1504

Flush pressure transmitter

PL-010-REA12-A-DKG/US/ /

Connection

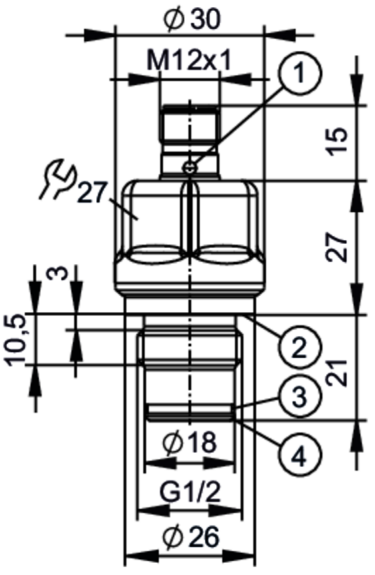


1	connection for 2-wire operation (analog)
2	connection for 3-wire operation (analog / IO-Link) OUT1: IO-Link OUT2: analog output

PL1506

Flush pressure transmitter

PL-2,5-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	-0.125...2.5 bar	-125...2500 mbar	-1.82...36.3 psi	-12.5...250 kPa
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 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	50000 mbar	725 psi	5000 kPa	
Pressure rating	30000 mbar	435 psi	3000 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			

PL1506

Flush pressure transmitter

PL-2,5-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; 1:5)			
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		-0.125...2.5 bar	-125...2500 mbar	-1.82...36.3 psi	-12.5...250 kPa
Analog start point		-125...2000 mbar	-1.81...29.01 psi	-12.5...200 kPa	
Analog end point		375...2500 mbar	5.44...36.26 psi	37.5...250 kPa	
In steps of		0.5 mbar	0.02 psi	0.05 kPa	
Factory setting		ASP = 0.0 mbar	AEP = 2500 mbar		
		ASP = 0.0 psi	AEP = 36.26 psi		
		ASP = 0.0 kPa	AEP = 250.0 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)			

PL1506

Flush pressure transmitter

PL-2,5-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	
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]	0.5	
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	1436
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	J050
		File number UL	E174189
Embedded Software entwickelt nach		ISO 13849-1 : 2015 (clause 4.6.2)	

PL1506

Flush pressure transmitter

PL-2,5-REA12-A-DKG/US/ /

Mechanical data		
Weight	[g]	112.75
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

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, 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.

Electrical connection

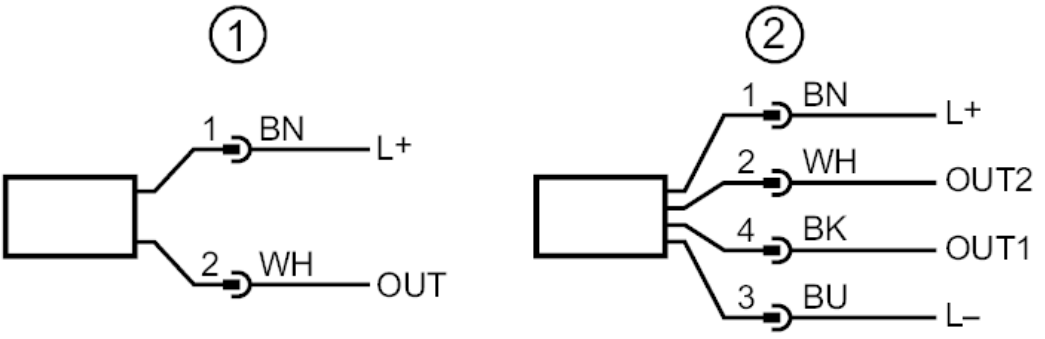
Connector: 1 x M12; coding: A; Contacts: gold-plated

PL1506

Flush pressure transmitter

PL-2,5-REA12-A-DKG/US/ /

Connection

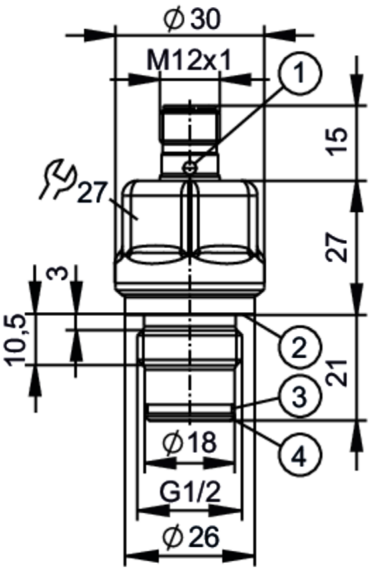


1	connection for 2-wire operation (analog)
2	connection for 3-wire operation (analog / IO-Link) OUT1: IO-Link OUT2: analog output

PL1507

Flush pressure transmitter

PL-001-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	-0.05...1 bar	-50...1000 mbar	-0.73...14.5 psi	-5...100 kPa
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 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	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			

PL1507

Flush pressure transmitter

PL-001-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; 1:5)			
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		-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)			

PL1507

Flush pressure transmitter

PL-001-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	
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 entwickelt nach		ISO 13849-1 : 2015 (clause 4.6.2)	

PL1507

Flush pressure transmitter

PL-001-REA12-A-DKG/US/ /

Mechanical data		
Weight	[g]	112.6
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

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, 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.

Electrical connection

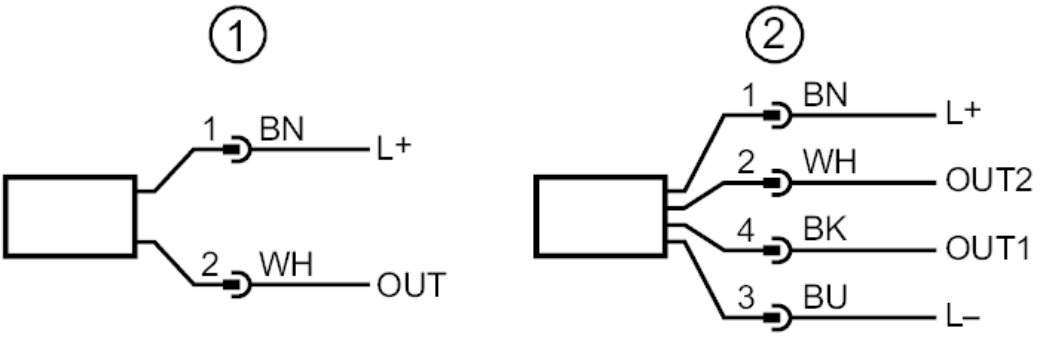
Connector: 1 x M12; coding: A; Contacts: gold-plated

PL1507

Flush pressure transmitter

PL-001-REA12-A-DKG/US/ /

Connection

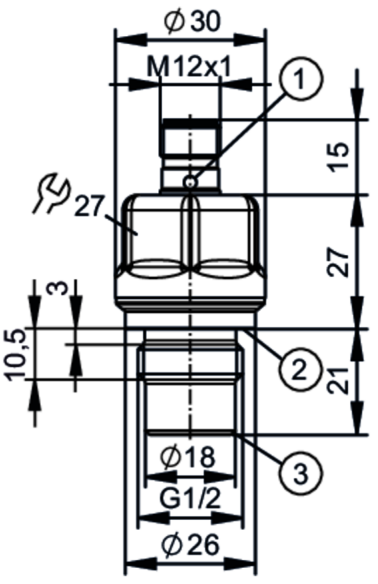


1	connection for 2-wire operation (analog)
2	connection for 3-wire operation (analog / IO-Link) OUT1: IO-Link OUT2: analog output

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 analog outputs: 1		
Measuring range	0...160 bar	0...2320 psi	0...16 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 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	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 [MΩ]	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		

PL1512

Flush pressure transmitter

PL-160-REA12-A-DKG/US/ /

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; 1:5)		
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		0...160 bar	0...2320 psi	0...16 MPa
Analog start point		0...128 bar	0...1856 psi	0...12.8 MPa
Analog 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	
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))		
Reaction times				
Damping process value dAP	[s]	0...99.9		
Damping for the analog output dAA	[s]	0...99.9		

PL1512

Flush pressure transmitter

PL-160-REA12-A-DKG/US/ /

2-wire			
Step response time analog output	[ms]	12	
3-wire			
Step response time analog output	[ms]	3	
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]	0.02	
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	1435
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	J053
		File number UL	E174189
Embedded Software entwickelt nach		ISO 13849-1 : 2015 (clause 4.6.2)	
Mechanical data			
Weight	[g]	114.15	
Housing		tubular	
Dimensions	[mm]	Ø 30 / L = 63	
Material		stainless steel (1.4435 / 316L); stainless steel (1.4404 / 316L); PA; PTFE; FKM	

PL1512

Flush pressure transmitter

PL-160-REA12-A-DKG/US/ /

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

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, 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

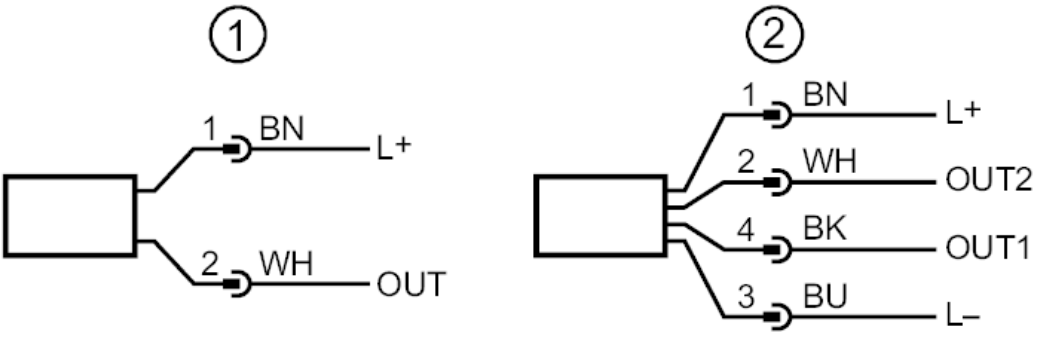
Remarks

Pack quantity	1 pcs.

Electrical connection

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

Connection

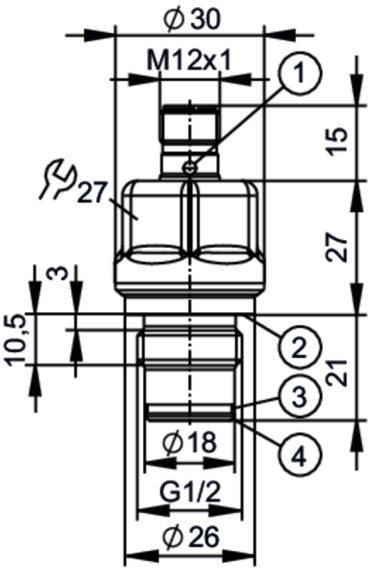


1	connection for 2-wire operation (analog)
2	connection for 3-wire operation (analog / IO-Link)
	OUT1: IO-Link
	OUT2: analog output

PL1514

Flush pressure transmitter

PL-016-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...16 bar	-14.5...232 psi	-0.1...1.6 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 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	250 bar	3625 psi	25 MPa
Pressure rating	100 bar	1450 psi	10 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		

PL1514

Flush pressure transmitter

PL-016-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; 1:5)		
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...16 bar	-14.5...232 psi	-0.1...1.6 MPa
Analog start point		-1...14 bar	-14.5...203.1 psi	-0.1...1.4 MPa
Analog end point		1...16 bar	14.5...232.1 psi	0.1...1.6 MPa
In steps of		0.002 bar	0.2 psi	0.0002 MPa
Factory setting		ASP = 0.0 bar	AEP = 16.0 bar	
		ASP = 0.0 psi	AEP = 232.1 psi	
		ASP = 0.0 MPa	AEP = 1.6 MPa	
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)		

PL1514

Flush pressure transmitter

PL-016-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	
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]	0.002	
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	1490
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	J050
		File number UL	E174189
Embedded Software entwickelt nach		ISO 13849-1 : 2015 (clause 4.6.2)	

PL1514

Flush pressure transmitter

PL-016-REA12-A-DKG/US/ /

Mechanical data		
Weight	[g]	114
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

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, 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.

Electrical connection

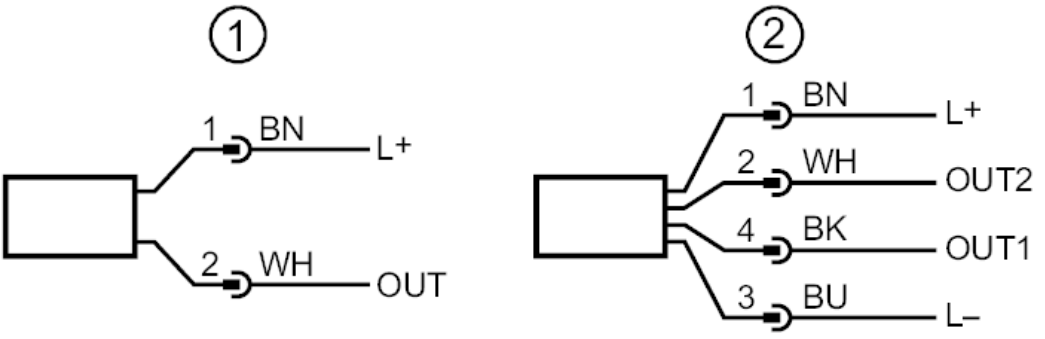
Connector: 1 x M12; coding: A; Contacts: gold-plated

PL1514

Flush pressure transmitter

PL-016-REA12-A-DKG/US/ /

Connection

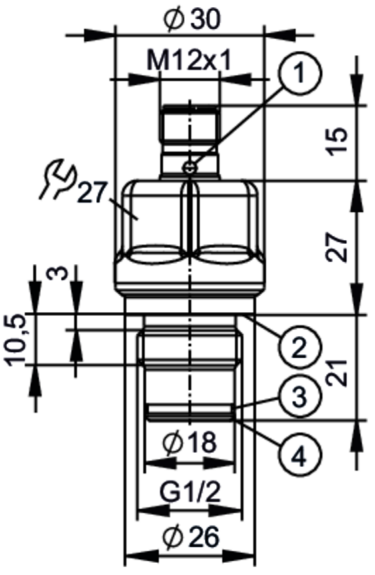


1	connection for 2-wire operation (analog)
2	connection for 3-wire operation (analog / IO-Link) OUT1: IO-Link OUT2: analog output

PL1515

Flush pressure transmitter

PL-006-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...6 bar	-14.5...87 psi	-100...600 kPa
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 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	120 bar	1740 psi	12000 kPa
Pressure rating	50 bar	725 psi	5000 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		

PL1515

Flush pressure transmitter

PL-006-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; 1:5)		
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...6 bar	-14.5...87 psi	-100...600 kPa
Analog start point		-1...4.8 bar	-14.5...69.6 psi	-100...480 kPa
Analog end point		1...6 bar	14.5...87 psi	20...600 kPa
In steps of		0.002 bar	0.1 psi	0.2 kPa
Factory setting		ASP = 0.0 bar	AEP = 6.0 bar	
		ASP = 0.0 kPa	AEP = 600kPa	
		ASP = 0.0 psi	APE = 87 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)		

PL1515

Flush pressure transmitter

PL-006-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	
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]	0.002	
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	1434
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	J050
		File number UL	E174189
Embedded Software entwickelt nach		ISO 13849-1 : 2015 (clause 4.6.2)	

PL1515

Flush pressure transmitter

PL-006-REA12-A-DKG/US/ /

Mechanical data		
Weight	[g]	113.8
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

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, 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.

Electrical connection

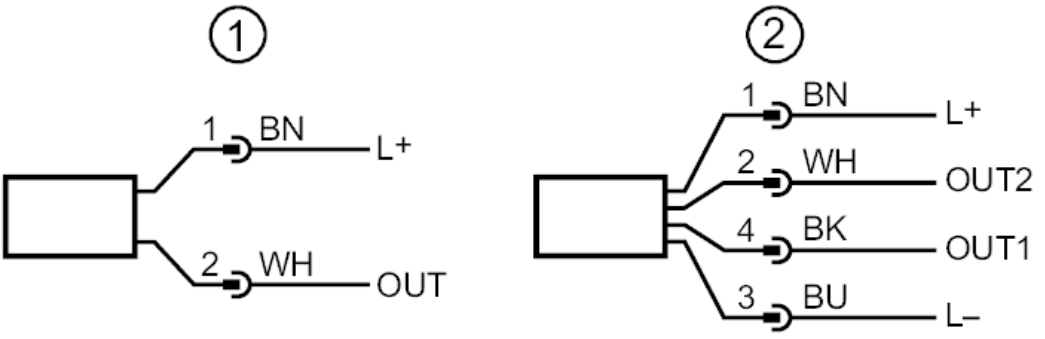
Connector: 1 x M12; coding: A; Contacts: gold-plated

PL1515

Flush pressure transmitter

PL-006-REA12-A-DKG/US/ /

Connection

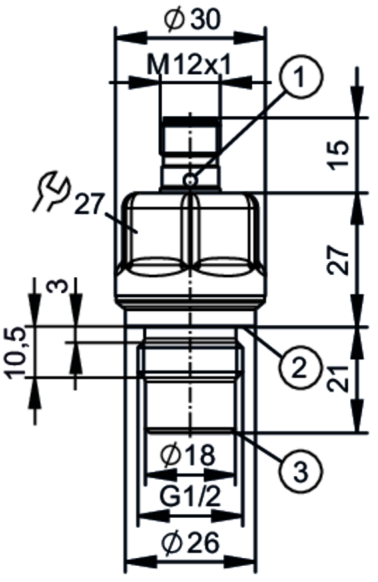


1	connection for 2-wire operation (analog)
2	connection for 3-wire operation (analog / IO-Link) OUT1: IO-Link OUT2: analog output

PL1523

Flush pressure transmitter

PL-060-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 analog outputs: 1		
Measuring range	0...60 bar	0...870 psi	0...6 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 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]	-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	340 bar	4930 psi	34 MPa
Pressure rating	240 bar	3480 psi	24 MPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure		
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		

PL1523

Flush pressure transmitter

PL-060-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; 1:5)		
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		0...60 bar	0...870 psi	0...6 MPa
Analog start point		0...48 bar	0...696 psi	0...4.8 MPa
Analog end point		12...60 bar	174...870 psi	1.2...6 MPa
In steps of		0.01 bar	1 psi	0.001 MPa
Factory setting		ASP = 0.0 bar	AEP = 60.0 bar	
		ASP = 0.0 MPa	AEP = 6 MPa	
		ASP = 0.0 psi	AEP = 870 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)		

PL1523

Flush pressure transmitter

PL-060-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	
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	1433
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	J057
		File number UL	E174189
Embedded Software entwickelt nach		ISO 13849-1 : 2015 (clause 4.6.2)	

PL1523

Flush pressure transmitter

PL-060-REA12-A-DKG/US/ /

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); 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

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, 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.

Electrical connection

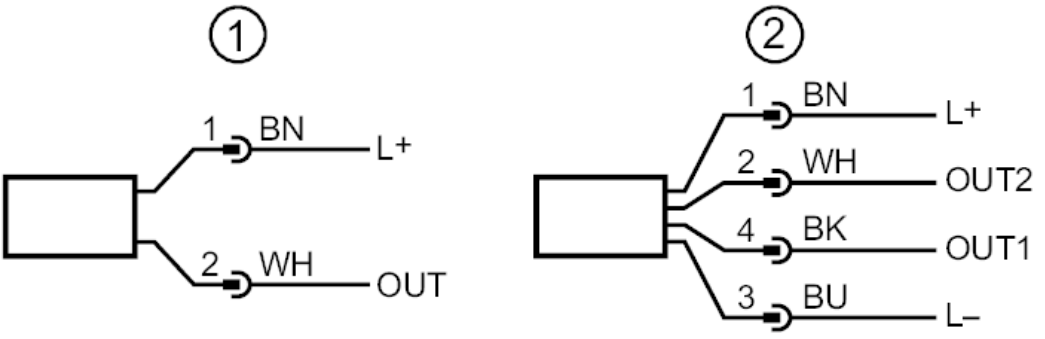
Connector: 1 x M12; coding: A; Contacts: gold-plated

PL1523

Flush pressure transmitter

PL-060-REA12-A-DKG/US/ /

Connection

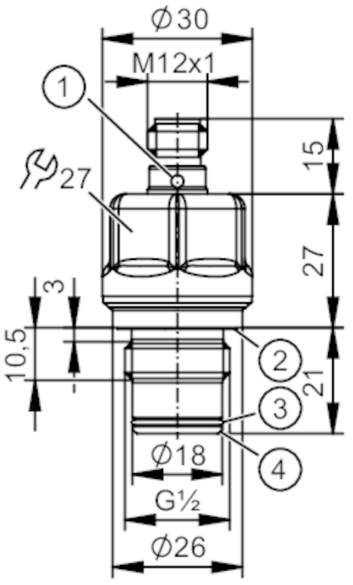


1	connection for 2-wire operation (analog)
2	connection for 3-wire operation (analog / IO-Link) OUT1: IO-Link OUT2: analog output

PL1604

Flush pressure transmitter

PL-010-REA12-A-DKG/US/ /



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

Product characteristics			
Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1		
Measuring range	-1...10 bar	-14.5...145 psi	-0.1...1 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. burst pressure	175 bar	2538 psi	17 MPa
Pressure rating	70 bar	1015 psi	7 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		

PL1604

Flush pressure transmitter

PL-010-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 analogue outputs: 1		
Outputs				
Total number of outputs		2		
Output signal		analogue signal; IO-Link		
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		
Measuring/setting range				
Measuring range		-1...10 bar	-14.5...145 psi	-0.1...1 MPa
Analogue start point		-1...8 bar	-14.5...116 psi	-0.1...0.8 MPa
Analogue end point		1...10 bar	14.5...145 psi	0.1...1 MPa
In steps of		0.002 bar	0.2 psi	0.0002 MPa
Factory setting		ASP = 0.0 bar	AEP = 10.0 bar	
		ASP = 0.0 psi	AEP = 145.0 psi	
		ASP = 0.0 MPa	AEP = 1.0 MPa	
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)		
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))		

PL1604

Flush pressure transmitter

PL-010-REA12-A-DKG/US/ /

Response times			
Damping process value dAP	[s]	0...99.99	
Damping for the analogue output dAA	[s]	0...99.99	
2-wire			
Step response time analogue output	[ms]	12	
3-wire			
Step response time analogue output	[ms]	3	
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 type		A; (when pin 2 not connected: B)	
Min. process cycle time	[ms]	3.5	
IO-Link resolution pressure	[bar]	0.002	
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	1437
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 no.	J050
		File number UL	E174189
Embedded Software entwickelt nach		ISO 13849-1 : 2015 (clause 4.6.2)	
Mechanical data			
Weight	[g]	113	

PL1604

Flush pressure transmitter

PL-010-REA12-A-DKG/US/ /

Housing		cylindrical
Dimensions	[mm]	Ø 30 / L = 63
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 µm / Rz = 4 µm; PTFE; EPDM
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

Accessories

Items supplied	O-ring: 1 x (16,4 x 1 mm), EPDM (-25...110°C), E30511
	Gasket: 1 x G1/2, EPDM DIN EN ISO1179-2 (-25...110°C), E30451
Accessories (optional)	Gasket: 1 x G1/2, FKM DIN EN ISO1179-2 (-15...110°C), E30492
	Gasket: 1 x G1/2, FFKM DIN EN ISO1179-2 (-5...110°C), E30513
	O-ring: 1 x (16,4 x 1 mm), FKM (-15...110°C), E30510
	O-ring: 1 x (16,4 x 1 mm), FFKM (-5...110°C), E30512

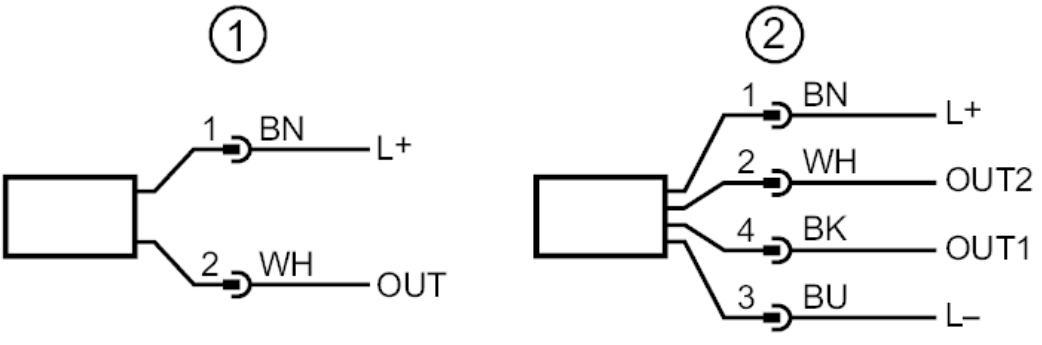
Remarks

Pack quantity	1 pcs.

Electrical connection

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

Connection

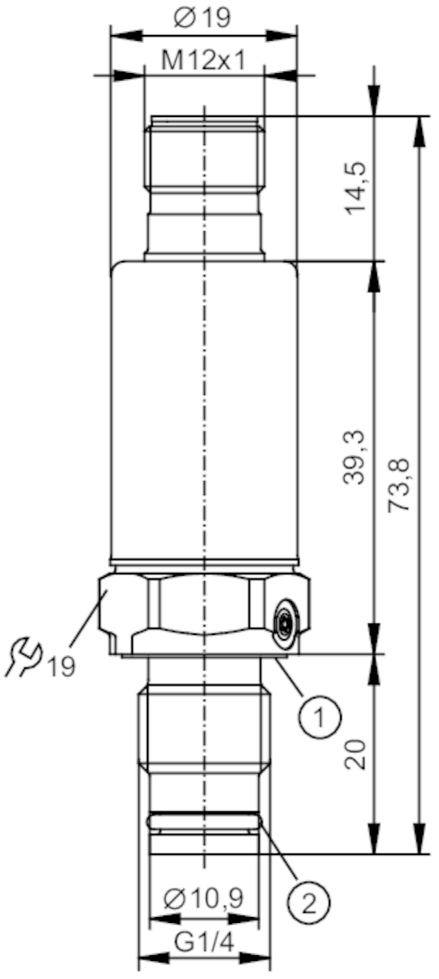


1 connection for 2-wire operation (analogue)
2 connection for 3-wire operation (analogue / IO-Link)
OUT1: IO-Link
OUT2: analogue output

PL5400

Flush pressure transmitter

PL-400-SEG14-A-ZVG/US/ /W



1 Gasket DIN 3869-14-FKM
2 O-ring 8.5 x 1.5 FKM

Product characteristics				
Number of inputs and outputs		Number of analog outputs: 1		
Measuring range		0...400 bar	0...5800 psi	0...40 MPa
Process connection		threaded connection G 1/4 external thread		
Application				
Measuring element		thin film measuring cell with diaphragm seal technique		
Application		Industrial flush pressure transmitters, analog | PL; for industrial applications		
Media		viscous media and liquids with suspended particles; liquids and gases		
Medium temperature	[°C]	-20...90		
Min. burst pressure		1700 bar	24655 psi	170 MPa
Pressure rating		800 bar	11580 psi	80 MPa
Note on pressure rating		static		
Vacuum resistance		-1000 mbar	-0.1 MPa	
Type of pressure		relative pressure		

PL5400

Flush pressure transmitter

PL-400-SEG14-A-ZVG/US/ /W

Electrical data				
Operating voltage	[V]	8.5...36 DC		
Min. insulation resistance	[MΩ]	100; (500 V DC)		
Protection class		III		
Reverse polarity protection		yes		
Power-on delay time	[s]	0.1		
Inputs / outputs				
Number of inputs and outputs		Number of analog outputs: 1		
Outputs				
Total number of outputs		1		
Output signal		analog signal		
Number of analog outputs		1		
Analog current output	[mA]	4...20		
Max. load	[Ω]	(Ub – 8,5 V) / 21,5 mA; @8,5V= 0 Ω; @12V max. 160 Ω; @24V max. 720 Ω		
Short-circuit proof		yes		
Overload protection		yes		
Measuring/setting range				
Measuring range		0...400 bar	0...5800 psi	0...40 MPa
Accuracy / deviations				
Repeatability	[% of the span]	< ± 0,05; (with temperature fluctuations < 10 K)		
Characteristics deviation	[% of the span]	< ± 0,5; (incl. drift when overtightened, zero point and span error, non-linearity, hysteresis)		
Linearity deviation	[% of the span]	< ± 0,1 (BFSL) / < ± 0,2 (LS)		
Hysteresis deviation	[% of the span]	< ± 0,2		
Long-term stability	[% of the span]	< ± 0,1; (per 6 months)		
Temperature coefficient zero point	[% of the span / 10 K]	< 0,2 (-25...90 °C)		
Temperature coefficient span	[% of the span / 10 K]	< 0,15 (-25...90 °C)		
Reaction times				
Step response time analog output	[ms]	2		
Operating conditions				
Ambient temperature	[°C]	-25...90		
Storage temperature	[°C]	-25...100		
Protection		IP 67; IP 69K		
Tests / approvals				
EMC		DIN EN 61000-6-2		
		DIN EN 61000-6-3		
Shock resistance		DIN EN 60068-2-27	50 g (11 ms)	
Vibration resistance		DIN EN 60068-2-6	20 g (10...2000 Hz)	

PL5400

Flush pressure transmitter

PL-400-SEG14-A-ZVG/US/ /W

MTTF	[years]	787	
UL approval		UL approval number	J047
		File number UL	E174189

Mechanical data

Weight	[g]	64.6
Housing		tubular
Dimensions	[mm]	Ø 19 / L = 73.8
Material		stainless steel (630/1.4542/17-4 PH); stainless steel (1.4404 / 316L); PEI
Materials (wetted parts)		stainless steel (630/1.4542/17-4 PH); stainless steel (1.4435 / 316L); FKM
Min. pressure cycles		60 million; (at 1.2 times nominal pressure)
Tightening torque	[Nm]	25...35; (recommended tightening torque; Depends on lubrication, seal and pressure rating)
Process connection		threaded connection G 1/4 external thread
Process connection sealing		FKM
Fill fluid for pressure transfer		NEOBEE (food grade, FDA compliant)

Accessories

Items supplied	O-rings: 1 x (8,5 mm x 1,5 mm), FKM, E30517
	Gasket: 1 x G1/4 DIN EN ISO 1179-2, FKM, E30145
Accessories (optional)	O-ring : 5 x (8,5mm x 1,5 mm), FKM, E30517
	O-ring : 1 x (8,5mm x 1,5 mm), FFFM, E30518
	O-ring : 5 x (8,5mm x 1,5 mm), EPDM, E30519
	Gasket : 10 x G/1/4 DIN EN ISO 1179-2, FKM, E30145
	Gasket : 1 x G/1/4 DIN EN ISO 1179-2, FFKM, E30520
	Gasket : 10 x G/1/4 DIN EN ISO 1179-2, EPDM, E30442

Remarks

Remarks	BFSL = Best Fit Straight Line
	LS = limit value setting
Pack quantity	1 pcs.

Electrical connection

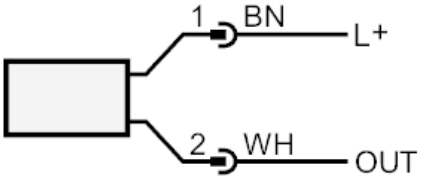
Connector: 1 x M12; coding: A

PL5400

Flush pressure transmitter

PL-400-SEG14-A-ZVG/US/ /W

Connection

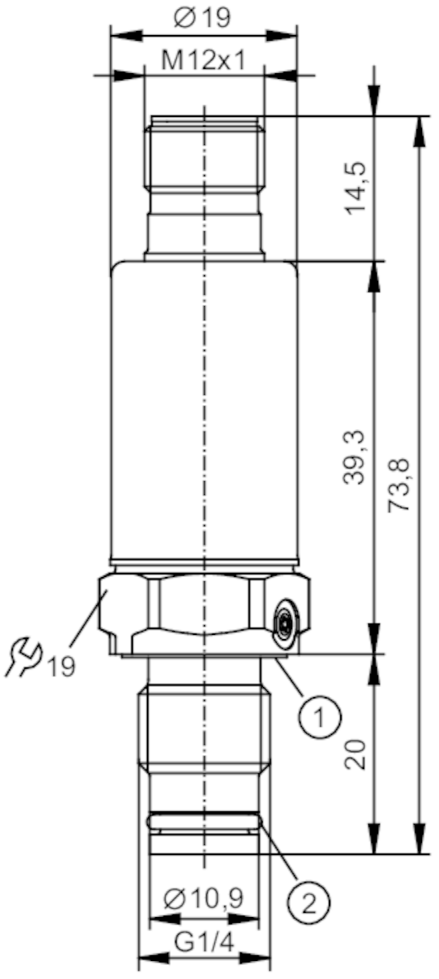


OUT	analog output
	Colors to DIN EN 60947-5-2
	Core colors :
BN	brown
WH	white

PL5401

Flush pressure transmitter

PL-250-SEG14-A-ZVG/US/ /W



1 Gasket DIN 3869-14-FKM
2 O-ring 8.5 x 1.5 FKM

Product characteristics				
Number of inputs and outputs	Number of analog outputs: 1			
Measuring range	0...250 bar	0...3625 psi	0...25 MPa	
Process connection	threaded connection G 1/4 external thread			

Application				
Measuring element	thin film measuring cell with diaphragm seal technique			
Application	Industrial flush pressure transmitters, analog | PL; for industrial applications			
Media	viscous media and liquids with suspended particles; liquids and gases			
Medium temperature [°C]	-20...90			
Min. burst pressure	1200 bar	17400 psi	120 MPa	
Pressure rating	625 bar	9060 psi	62.5 MPa	
Note on pressure rating	static			
Vacuum resistance	-1000 mbar	-0.1 MPa		
Type of pressure	relative pressure			

PL5401

Flush pressure transmitter

PL-250-SEG14-A-ZVG/US/ /W

Electrical data				
Operating voltage	[V]	8.5...36 DC		
Min. insulation resistance	[MΩ]	100; (500 V DC)		
Protection class		III		
Reverse polarity protection		yes		
Power-on delay time	[s]	0.1		
Inputs / outputs				
Number of inputs and outputs		Number of analog outputs: 1		
Outputs				
Total number of outputs		1		
Output signal		analog signal		
Number of analog outputs		1		
Analog current output	[mA]	4...20		
Max. load	[Ω]	(Ub – 8,5 V) / 21,5 mA; @8,5V= 0 Ω; @12V max. 160 Ω; @24V max. 720 Ω		
Short-circuit proof		yes		
Overload protection		yes		
Measuring/setting range				
Measuring range		0...250 bar	0...3625 psi	0...25 MPa
Accuracy / deviations				
Repeatability	[% of the span]	< ± 0,05; (with temperature fluctuations < 10 K)		
Characteristics deviation	[% of the span]	< ± 0,5; (incl. drift when overtightened, zero point and span error, non-linearity, hysteresis)		
Linearity deviation	[% of the span]	< ± 0,1 (BFSL) / < ± 0,2 (LS)		
Hysteresis deviation	[% of the span]	< ± 0,2		
Long-term stability	[% of the span]	< ± 0,1; (per 6 months)		
Temperature coefficient zero point	[% of the span / 10 K]	< 0,2 (-25...90 °C)		
Temperature coefficient span	[% of the span / 10 K]	< 0,15 (-25...90 °C)		
Reaction times				
Step response time analog output	[ms]	2		
Operating conditions				
Ambient temperature	[°C]	-25...90		
Storage temperature	[°C]	-25...100		
Protection		IP 67; IP 69K		
Tests / approvals				
EMC		DIN EN 61000-6-2		
		DIN EN 61000-6-3		
Shock resistance		DIN EN 60068-2-27	50 g (11 ms)	
Vibration resistance		DIN EN 60068-2-6	20 g (10...2000 Hz)	

PL5401

Flush pressure transmitter

PL-250-SEG14-A-ZVG/US/ /W

MTTF	[years]	787	
UL approval		UL approval number	J046
		File number UL	E174189

Mechanical data

Weight	[g]	64
Housing		tubular
Dimensions	[mm]	Ø 19 / L = 73.8
Material		stainless steel (630/1.4542/17-4 PH); stainless steel (1.4404 / 316L); PEI
Materials (wetted parts)		stainless steel (630/1.4542/17-4 PH); stainless steel (1.4435 / 316L); FKM
Min. pressure cycles		60 million; (at 1.2 times nominal pressure)
Tightening torque	[Nm]	25...35; (recommended tightening torque; Depends on lubrication, seal and pressure rating)
Process connection		threaded connection G 1/4 external thread
Process connection sealing		FKM
Fill fluid for pressure transfer		NEOBEE (food grade, FDA compliant)

Accessories

Items supplied	O-rings: 1 x (8,5 mm x 1,5 mm), FKM, E30517
	Gasket: 1 x G1/4 DIN EN ISO 1179-2, FKM, E30145
Accessories (optional)	O-ring : 5 x (8,5mm x 1,5 mm), FKM, E30517
	O-ring : 1 x (8,5mm x 1,5 mm), FFFM, E30518
	O-ring : 5 x (8,5mm x 1,5 mm), EPDM, E30519
	Gasket : 10 x G/1/4 DIN EN ISO 1179-2, FKM, E30145
	Gasket : 1 x G/1/4 DIN EN ISO 1179-2, FFKM, E30520
	Gasket : 10 x G/1/4 DIN EN ISO 1179-2, EPDM, E30442

Remarks

Remarks	BFSL = Best Fit Straight Line
	LS = limit value setting
Pack quantity	1 pcs.

Electrical connection

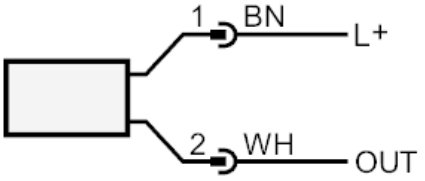
Connector: 1 x M12; coding: A

PL5401

Flush pressure transmitter

PL-250-SEG14-A-ZVG/US/ /W

Connection

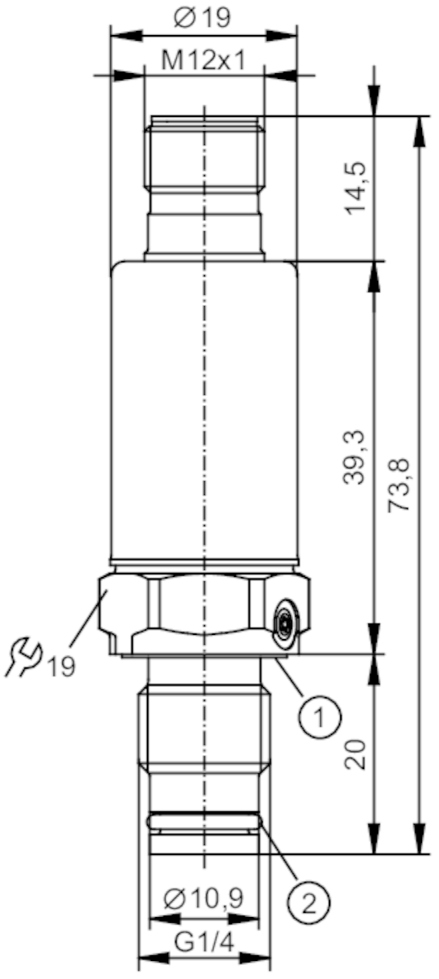


OUT	analog output
	Colors to DIN EN 60947-5-2
	Core colors :
BN	brown
WH	white

PL5402

Flush pressure transmitter

PL-100-SEG14-A-ZVG/US/ /W



1 Gasket DIN 3869-14-FKM
2 O-ring 8.5 x 1.5 FKM

Product characteristics			
Number of inputs and outputs	Number of analog outputs: 1		
Measuring range	0...100 bar	0...1450 psi	0...10 MPa
Process connection	threaded connection G 1/4 external thread		
Application			
Measuring element	thin film measuring cell with diaphragm seal technique		
Application	Industrial flush pressure transmitters, analog | PL; for industrial applications		
Media	viscous media and liquids with suspended particles; liquids and gases		
Medium temperature [°C]	-20...90		
Min. burst pressure	1000 bar	14500 psi	100 MPa
Pressure rating	250 bar	3626 psi	25 MPa
Note on pressure rating	static		
Vacuum resistance	-1000 mbar	-0.1 MPa	
Type of pressure	relative pressure		

PL5402

Flush pressure transmitter

PL-100-SEG14-A-ZVG/US/ /W

Electrical data				
Operating voltage	[V]	8.5...36 DC		
Min. insulation resistance	[MΩ]	100; (500 V DC)		
Protection class		III		
Reverse polarity protection		yes		
Power-on delay time	[s]	0.1		
Inputs / outputs				
Number of inputs and outputs		Number of analog outputs: 1		
Outputs				
Total number of outputs		1		
Output signal		analog signal		
Number of analog outputs		1		
Analog current output	[mA]	4...20		
Max. load	[Ω]	(Ub – 8,5 V) / 21,5 mA; @8,5V= 0 Ω; @12V max. 160 Ω; @24V max. 720 Ω		
Short-circuit proof		yes		
Overload protection		yes		
Measuring/setting range				
Measuring range		0...100 bar	0...1450 psi	0...10 MPa
Accuracy / deviations				
Repeatability	[% of the span]	< ± 0,05; (with temperature fluctuations < 10 K)		
Characteristics deviation	[% of the span]	< ± 0,5; (incl. drift when overtightened, zero point and span error, non-linearity, hysteresis)		
Linearity deviation	[% of the span]	< ± 0,1 (BFSL) / < ± 0,2 (LS)		
Hysteresis deviation	[% of the span]	< ± 0,2		
Long-term stability	[% of the span]	< ± 0,1; (per 6 months)		
Temperature coefficient zero point	[% of the span / 10 K]	< 0,25 (-25...90 °C)		
Temperature coefficient span	[% of the span / 10 K]	< 0,15 (-25...90 °C)		
Reaction times				
Step response time analog output	[ms]	2		
Operating conditions				
Ambient temperature	[°C]	-25...90		
Storage temperature	[°C]	-25...100		
Protection		IP 67; IP 69K		
Tests / approvals				
EMC		DIN EN 61000-6-2		
		DIN EN 61000-6-3		
Shock resistance		DIN EN 60068-2-27	50 g (11 ms)	
Vibration resistance		DIN EN 60068-2-6	20 g (10...2000 Hz)	

PL5402

Flush pressure transmitter

PL-100-SEG14-A-ZVG/US/ /W

MTTF	[years]	787	
UL approval		UL approval number	J045
		File number UL	E174189

Mechanical data

Weight	[g]	66
Housing		tubular
Dimensions	[mm]	Ø 19 / L = 73.8
Material		stainless steel (630/1.4542/17-4 PH); stainless steel (1.4404 / 316L); PEI
Materials (wetted parts)		stainless steel (630/1.4542/17-4 PH); stainless steel (1.4435 / 316L); FKM
Min. pressure cycles		60 million; (at 1.2 times nominal pressure)
Tightening torque	[Nm]	25...35; (recommended tightening torque; Depends on lubrication, seal and pressure rating)
Process connection		threaded connection G 1/4 external thread
Process connection sealing		FKM
Fill fluid for pressure transfer		NEOBEE (food grade, FDA compliant)

Accessories

Items supplied	O-rings: 1 x (8,5 mm x 1,5 mm), FKM, E30517
	Gasket: 1 x G1/4 DIN EN ISO 1179-2, FKM, E30145
Accessories (optional)	O-ring : 5 x (8,5mm x 1,5 mm), FKM, E30517
	O-ring : 1 x (8,5mm x 1,5 mm), FFFM, E30518
	O-ring : 5 x (8,5mm x 1,5 mm), EPDM, E30519
	Gasket : 10 x G/1/4 DIN EN ISO 1179-2, FKM, E30145
	Gasket : 1 x G/1/4 DIN EN ISO 1179-2, FFKM, E30520
	Gasket : 10 x G/1/4 DIN EN ISO 1179-2, EPDM, E30442

Remarks

Remarks	BFSL = Best Fit Straight Line
	LS = limit value setting
Pack quantity	1 pcs.

Electrical connection

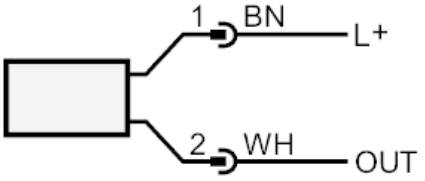
Connector: 1 x M12; coding: A

PL5402

Flush pressure transmitter

PL-100-SEG14-A-ZVG/US/ /W

Connection

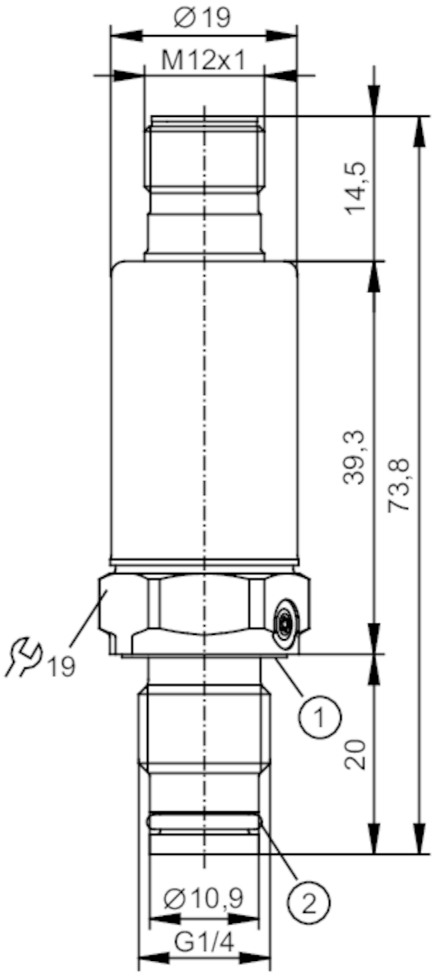


OUT	analog output
	Colors to DIN EN 60947-5-2
	Core colors :
BN	brown
WH	white

PL5412

Flush pressure transmitter

PL-160-SEG14-A-ZVG/US/ /W



1 Gasket DIN 3869-14-FKM
2 O-ring 8.5 x 1.5 FKM

Product characteristics			
Number of inputs and outputs	Number of analog outputs: 1		
Measuring range	0...160 bar	0...2320 psi	0...16 MPa
Process connection	threaded connection G 1/4 external thread		
Application			
Measuring element	thin film measuring cell with diaphragm seal technique		
Application	Industrial flush pressure transmitters, analog | PL; for industrial applications		
Media	viscous media and liquids with suspended particles; liquids and gases		
Medium temperature [°C]	-20...90		
Min. burst pressure	1100 bar	15950 psi	110 MPa
Pressure rating	400 bar	5800 psi	40 MPa
Note on pressure rating	static		
Vacuum resistance	-1000 mbar	-0.1 MPa	
Type of pressure	relative pressure		

PL5412

Flush pressure transmitter

PL-160-SEG14-A-ZVG/US/ /W

Electrical data				
Operating voltage	[V]	8.5...36 DC		
Min. insulation resistance	[MΩ]	100; (500 V DC)		
Protection class		III		
Reverse polarity protection		yes		
Power-on delay time	[s]	0.1		
Inputs / outputs				
Number of inputs and outputs		Number of analog outputs: 1		
Outputs				
Total number of outputs		1		
Output signal		analog signal		
Number of analog outputs		1		
Analog current output	[mA]	4...20		
Max. load	[Ω]	(Ub – 8,5 V) / 21,5 mA; @8,5V= 0 Ω; @12V max. 160 Ω; @24V max. 720 Ω		
Short-circuit proof		yes		
Overload protection		yes		
Measuring/setting range				
Measuring range		0...160 bar	0...2320 psi	0...16 MPa
Accuracy / deviations				
Repeatability	[% of the span]	< ± 0,05; (with temperature fluctuations < 10 K)		
Characteristics deviation	[% of the span]	< ± 0,5; (incl. drift when overtightened, zero point and span error, non-linearity, hysteresis)		
Linearity deviation	[% of the span]	< ± 0,1 (BFSL) / < ± 0,2 (LS)		
Hysteresis deviation	[% of the span]	< ± 0,2		
Long-term stability	[% of the span]	< ± 0,1; (per 6 months)		
Temperature coefficient zero point	[% of the span / 10 K]	< 0,2 (-25...90 °C)		
Temperature coefficient span	[% of the span / 10 K]	< 0,15 (-25...90 °C)		
Reaction times				
Step response time analog output	[ms]	2		
Operating conditions				
Ambient temperature	[°C]	-25...90		
Storage temperature	[°C]	-25...100		
Protection		IP 67; IP 69K		
Tests / approvals				
EMC		DIN EN 61000-6-2		
		DIN EN 61000-6-3		
Shock resistance		DIN EN 60068-2-27	50 g (11 ms)	
Vibration resistance		DIN EN 60068-2-6	20 g (10...2000 Hz)	

PL5412

Flush pressure transmitter

PL-160-SEG14-A-ZVG/US/ /W

MTTF	[years]	787	
UL approval		UL approval number	J046
		File number UL	E174189

Mechanical data

Weight	[g]	65
Housing		tubular
Dimensions	[mm]	Ø 19 / L = 73.8
Material		stainless steel (630/1.4542/17-4 PH); stainless steel (1.4404 / 316L); PEI
Materials (wetted parts)		stainless steel (630/1.4542/17-4 PH); stainless steel (1.4435 / 316L); FKM
Min. pressure cycles		60 million; (at 1.2 times nominal pressure)
Tightening torque	[Nm]	25...35; (recommended tightening torque; Depends on lubrication, seal and pressure rating)
Process connection		threaded connection G 1/4 external thread
Process connection sealing		FKM
Fill fluid for pressure transfer		NEOBEE (food grade, FDA compliant)

Accessories

Items supplied	O-rings: 1 x (8,5 mm x 1,5 mm), FKM, E30517
	Gasket: 1 x G1/4 DIN EN ISO 1179-2, FKM, E30145
Accessories (optional)	O-ring : 5 x (8,5mm x 1,5 mm), FKM, E30517
	O-ring : 1 x (8,5mm x 1,5 mm), FFFM, E30518
	O-ring : 5 x (8,5mm x 1,5 mm), EPDM, E30519
	Gasket : 10 x G/1/4 DIN EN ISO 1179-2, FKM, E30145
	Gasket : 1 x G/1/4 DIN EN ISO 1179-2, FFKM, E30520
	Gasket : 10 x G/1/4 DIN EN ISO 1179-2, EPDM, E30442

Remarks

Remarks	BFSL = Best Fit Straight Line
	LS = limit value setting
Pack quantity	1 pcs.

Electrical connection

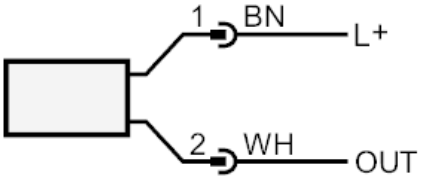
Connector: 1 x M12; coding: A

PL5412

Flush pressure transmitter

PL-160-SEG14-A-ZVG/US/ /W

Connection

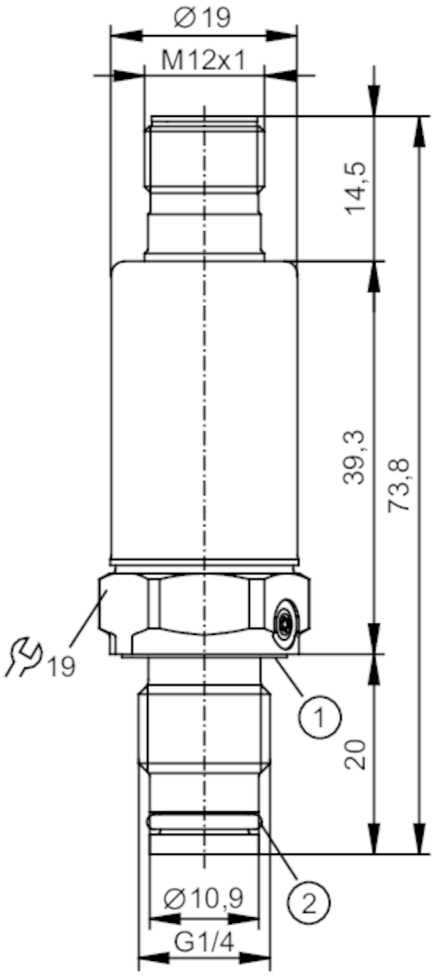


OUT	analog output
	Colors to DIN EN 60947-5-2
	Core colors :
BN	brown
WH	white

PL5423

Flush pressure transmitter

PL-060-SEG14-A-ZVG/US/ /W



1 Gasket DIN 3869-14-FKM
2 O-ring 8.5 x 1.5 FKM

Product characteristics			
Number of inputs and outputs	Number of analog outputs: 1		
Measuring range	0...60 bar	0...870 psi	0...6 MPa
Process connection	threaded connection G 1/4 external thread		
Application			
Measuring element	thin film measuring cell with diaphragm seal technique		
Application	Industrial flush pressure transmitters, analog | PL; for industrial applications		
Media	viscous media and liquids with suspended particles; liquids and gases		
Medium temperature [°C]	-20...90		
Min. burst pressure	900 bar	13050 psi	90 MPa
Pressure rating	150 bar	2175 psi	15 MPa
Note on pressure rating	static		
Vacuum resistance	-1000 mbar	-0.1 MPa	
Type of pressure	relative pressure		

PL5423

Flush pressure transmitter

PL-060-SEG14-A-ZVG/US/ /W

Electrical data				
Operating voltage	[V]	8.5...36 DC		
Min. insulation resistance	[MΩ]	100; (500 V DC)		
Protection class		III		
Reverse polarity protection		yes		
Power-on delay time	[s]	0.1		
Inputs / outputs				
Number of inputs and outputs		Number of analog outputs: 1		
Outputs				
Total number of outputs		1		
Output signal		analog signal		
Number of analog outputs		1		
Analog current output	[mA]	4...20		
Max. load	[Ω]	(Ub – 8,5 V) / 21,5 mA; @8,5V= 0 Ω; @12V max. 160 Ω; @24V max. 720 Ω		
Short-circuit proof		yes		
Overload protection		yes		
Measuring/setting range				
Measuring range		0...60 bar	0...870 psi	0...6 MPa
Accuracy / deviations				
Repeatability	[% of the span]	< ± 0,05; (with temperature fluctuations < 10 K)		
Characteristics deviation	[% of the span]	< ± 0,5; (incl. drift when overtightened, zero point and span error, non-linearity, hysteresis)		
Linearity deviation	[% of the span]	< ± 0,1 (BFSL) / < ± 0,2 (LS)		
Hysteresis deviation	[% of the span]	< ± 0,2		
Long-term stability	[% of the span]	< ± 0,1; (per 6 months)		
Temperature coefficient zero point	[% of the span / 10 K]	< 0,35 (-25...90 °C)		
Temperature coefficient span	[% of the span / 10 K]	< 0,15 (-25...90 °C)		
Reaction times				
Step response time analog output	[ms]	2		
Operating conditions				
Ambient temperature	[°C]	-25...90		
Storage temperature	[°C]	-25...100		
Protection		IP 67; IP 69K		
Tests / approvals				
EMC		DIN EN 61000-6-2		
		DIN EN 61000-6-3		
Shock resistance		DIN EN 60068-2-27	50 g (11 ms)	
Vibration resistance		DIN EN 60068-2-6	20 g (10...2000 Hz)	

PL5423

Flush pressure transmitter

PL-060-SEG14-A-ZVG/US/ /W

MTTF	[years]	787	
UL approval		UL approval number	J045
		File number UL	E174189

Mechanical data

Weight	[g]	65
Housing		tubular
Dimensions	[mm]	Ø 19 / L = 73.8
Material		stainless steel (630/1.4542/17-4 PH); stainless steel (1.4404 / 316L); PEI
Materials (wetted parts)		stainless steel (630/1.4542/17-4 PH); stainless steel (1.4435 / 316L); FKM
Min. pressure cycles		60 million; (at 1.2 times nominal pressure)
Tightening torque	[Nm]	25...35; (recommended tightening torque; Depends on lubrication, seal and pressure rating)
Process connection		threaded connection G 1/4 external thread
Process connection sealing		FKM
Fill fluid for pressure transfer		NEOBEE (food grade, FDA compliant)

Accessories

Items supplied	O-rings: 1 x (8,5 mm x 1,5 mm), FKM, E30517
	Gasket: 1 x G1/4 DIN EN ISO 1179-2, FKM, E30145
Accessories (optional)	O-ring : 5 x (8,5mm x 1,5 mm), FKM, E30517
	O-ring : 1 x (8,5mm x 1,5 mm), FFFM, E30518
	O-ring : 5 x (8,5mm x 1,5 mm), EPDM, E30519
	Gasket : 10 x G/1/4 DIN EN ISO 1179-2, FKM, E30145
	Gasket : 1 x G/1/4 DIN EN ISO 1179-2, FFKM, E30520
	Gasket : 10 x G/1/4 DIN EN ISO 1179-2, EPDM, E30442

Remarks

Remarks	BFSL = Best Fit Straight Line
	LS = limit value setting
Pack quantity	1 pcs.

Electrical connection

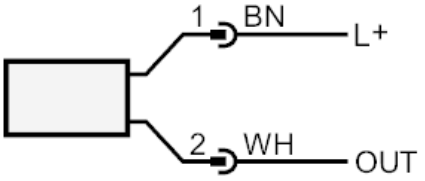
Connector: 1 x M12; coding: A

PL5423

Flush pressure transmitter

PL-060-SEG14-A-ZVG/US/ /W

Connection



OUT	analog output
	Colors to DIN EN 60947-5-2
	Core colors :
BN	brown
WH	white