

SANITARY PRESSURE TRANSMITTER / SWITCH WITH DISPLAY

PI27 SERIES

Electronic Pressure Sensor PI27
Sanitary Process Connection

2 Outputs:
OUT1 = Switching Output
OUT2 = Switching or Analog Output

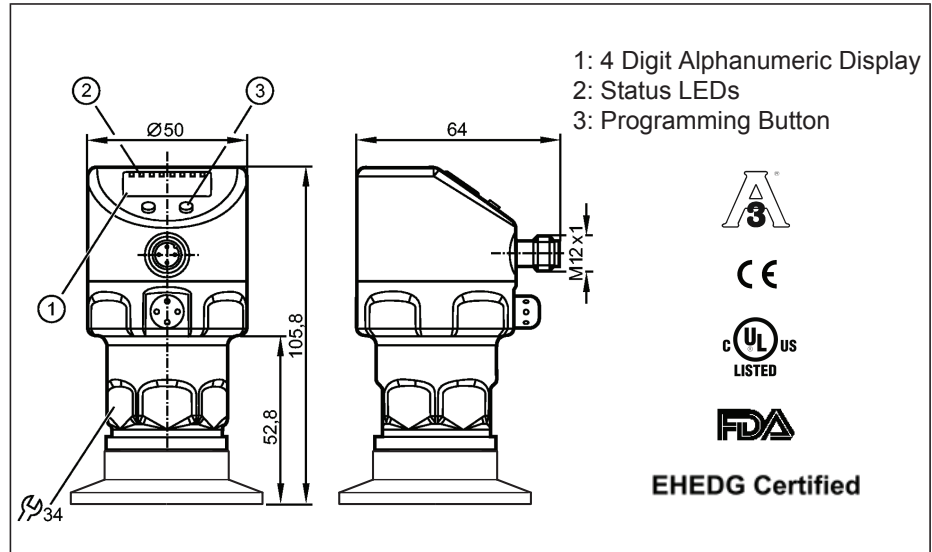
4 Digit LCD Display

Simple Pushbutton Set-up

Zero & Span Adjustable

Quickly Connects with Water Tight Standard M12 Industrial Connector
(Cables and Connectors Sold Separately)

Available in the following Ranges and % of Span with Field Selectable Scale



Model	PSI	BAR	MPa	"H ₂ O	mBAR	kPa
PI2793	-14.40 to 362.7	-1.00 to 25.00	-0.100 to 2.500	--	--	--
PI2794	-14.50 to 145.0	-1.00 to 10.00	-0.100 to 1.000	--	--	--
PI2795	-14.50 to 58.00	-1.000 to 4.000	--	--	--	-100.0 to 400.0
PI2796	-1.80 to 36.27	-0.125 to 2.500	--	-49.78 to 1004	--	-12.40 to 250.0
PI2797	--	--	--	-20.70 to 401.5	-50.0 to 1000	-5.000 to 100.0
PI2798	-0.180 to 3.630	--	--	-5.0 to 100.4	-12.40 to 250.0	-1.240 to 25.00
PI2789	--	--	--	-2.00 to 40.16	-5.0 to 100.0	-0.50 to 10.00
PI2799	-14.50 to 14.50	--	--	-401.5 to 401.5	-1000 to 1000	-100.0 to 100.0

Application

Application	Type of pressure: relative pressure Hygienic systems, viscous media and liquids with suspended particles Liquids and gases
Medium temperature [°C]	-25...125 (145 max. 1h)

Electrical data

Electrical design	2 wires DC / 3 wires DC PNP/NPN
Operating voltage [V]	20...32 DC (2L) / 18...32 DC (3L)
Current consumption [mA]	3.6...21 (2L) / < 45 (3L)
Insulation resistance [MΩ]	> 100 (500 V DC)
Protection class	III
Reverse polarity protection	yes

Outputs

Output	2-wire connection technology: analogue output 3-wire connection technology: 2 outputs OUT1 = switching output OUT2 = switching output or analogue output
Output function	1 x normally open / normally closed programmable + 1 x normally open / normally closed programmable or 1 x analog (4...20 / 20...4 mA, scalable)
Current rating [mA]	250; (3L)
Voltage drop [V]	2; (3L)

SANITARY PRESSURE TRANSMITTER / SWITCH

Short-circuit protection		yes (non-latching)
Overload protection		yes
Switching frequency	[Hz]	--- (2L) / 125 (3L)
Analog output		I: 4...20 mA (Ineg: 20...4 mA)
Max. load	[Ω]	300 (2L) / max. (U _b - 10 V) x 50 (3L)

Accuracy / deviations

Accuracy / deviations (in % of the span) Turn down 1:1		
Switch point accuracy		< ± 0.2
Characteristics deviation *)		< ± 0.2
Linearity		< ± 0.15
Hysteresis		< ± 0.15
Repeatability **)		< ± 0.1
Long-term stability ***)		< ± 0.1
Temperature coefficients (TEMPCO) in the temperature range 0...70° C (in % of the span per 10 K)		
Greatest TEMPCO of the zero point		< ± 0.05
Greatest TEMPCO of the span		< ± 0.15

Reaction times

Power-on delay time	[s]	1 (2L) / 0.5 (3L)
Min. response time switching output	[ms]	--- (2L) / 3 (3L)
Damping for the switching output (dAP)	[s]	0.00...30.00
Damping for the analog output (dAA)	[s]	0.01...99.99
Step response time analogue output	[ms]	45 (2L) / 7 (3L)

Environment

Ambient temperature	[°C]	-25...80
Storage temperature	[°C]	-40...100

Protection

		IP 67 / IP 68 / IP 69K
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EMC	EN 61000-4-2 ESD:	4 kV CD / 8 kV AD
	EN 61000-4-4 HF radiated:	10 V/m
	EN 61000-4-3 Burst:	2 kV
	EN 61000-4-5 Surge:	0.5/1 kV
	EN 61000-4-6 HF conducted:	10 V

Shock resistance	DIN IEC 68-2-27:	50 g (11 ms)
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Vibration resistance	DIN IEC 68-2-6:	20 g (10...2000 Hz)
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MTTF	[Years]	160
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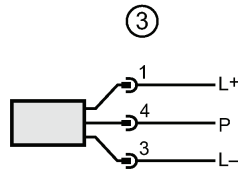
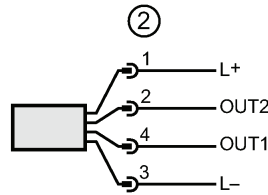
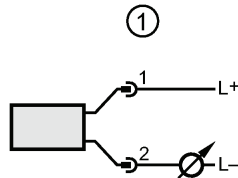
SANITARY PRESSURE TRANSMITTER / SWITCH

Mechanical data	
Process connection	Tri-Clamp, DIN, or Varinline
Materials (wetted parts)	ceramics (99.9 % Al ₂ O ₃); PTFE; stainless steel 316L / 1.4435; surface characteristics: Ra < 0.4 / Rz 4
Housing materials	stainless steel 316L / 1.4404; FPM (Viton); PTFE; PBT (Pocan); PEI; PF A
Switching cycles min.	100 million
Weight [kg]	0.316

Displays / operating elements	
Display	Display unit LED green Switching status LED yellow Function display 4-digit alphanumeric display Measured values 4-digit alphanumeric display

Electrical connection	
Connection	M12 connector; gold-plated contacts

Wiring



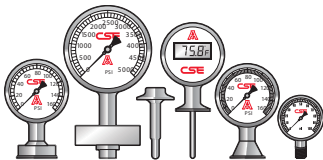
- 1 connection for 2-wire operation
- 2 connection for 3-wire operation
- 3 connection for IO-Link parameter setting (P = communication via IO-Link)

Remarks

Remarks	(2L) = value for 2-wire operation (3L) = value for 3-wire operation *) linearity, incl. hysteresis and repeatability; (limit value setting to DIN 16086)	**) with temperature fluctuations < 10 K ***) in % of the span per year
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Pack quantity [piece]	1
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We reserve the right to make technical alterations without prior notice.



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For more information or for a distributor in your area, contact us:
 Chicago Stainless Equipment, Inc.
 772-781-1441
www.ChicagoStainless.com
webinfo@chicagostainless.com