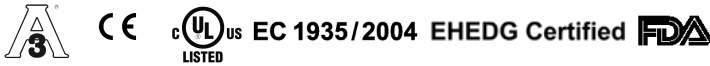


- 1: 4-digit alphanumeric display
- 2: status LEDs
- 3: Programming button
- 4: Aseptoflex sealing edge
- 5: Aseptoflex thread



Product characteristics

Combined pressure sensor

Quick disconnect

no dead space

Freely rotatable housing 350°

Zero and span adjustable

Function programmable

Process connection: for Aseptoflex adapter

2 Output

OUT1 = Switching output

OUT2 = Analog output

4-digit alphanumeric display

Measuring range: -1.00...25.00 bar / -14.4...362.7 psi / -0.100...2.500 MPa

Application

Application

Type of pressure: relative pressure
Hygienic systems, viscous media and liquids with suspended particles
Liquids and gases

Pressure rating	100 bar	1450 psi	10 MPa
Bursting pressure min.	350 bar	5070 psi	35 MPa
Medium temperature [°C]	-25...125 (145 max. 1h)		
Electrical data			
Electrical design	DC PNP/NPN		
Operating voltage [V]	18...32 DC		
Current consumption [mA]	< 50		
Insulation resistance [MΩ]	> 100 (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		

Outputs

PI2093 - Combined pressure sensor - eclass: 27201302 / 27-20-13-02

Output	2 Output OUT1 = Switching output OUT2 = Analog output		
Output function	1 x normally open / closed programmable + 1 x analog (I / U, scaleable 1:4)		
Current rating [mA]	250		
Voltage drop [V]	< 2		
Short-circuit protection	yes (non-latching)		
Overload protection	yes		
Switching frequency [Hz]	6		
Analog output	I: 4...20 mA (Ineg: 20...4 mA) / U: 0...10 V (Uneg: 10...0 V)		
Max. load [Ω]	I / Ineg: max. (Ub - 10 V) x 50; U / Uneg: min. 2000		
Measuring / setting range			
Display unit	bar, psi, MPa, % der Spanne		
Measuring range	-1.00...25.00 bar	-14.4...362.7 psi	-0.100...2.500 MPa
Setting range			
Set point, SP	-0.96...25.00 bar	-13.8...362.7 psi	-0.096...2.500 MPa
Reset point, rP	-1.00...24.96 bar	-14.4...362.1 psi	-0.100...2.496 MPa
Analog start point, ASP	-1.00...18.74 bar	-14.4...271.8 psi	-0.100...1.874 MPa
Analog end point, AEP	5.24...25.00 bar	76.2...362.7 psi	0.524...2.500 MPa
in steps of	0.02 bar	0.3 psi	0.002 MPa
Factory setting	SP1 = 6.24 bar; rP1 = 5.74 bar ASP = 0.00 bar; AEP = 25.00 bar		
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]	0.5		
Min. response time switching output [ms]	100		
Damping for the switching output (dAP) [s]	0.1...100.0		
Damping for the analog output (dAA) [s]	0.1...100.0		
Step response time analogue output [ms]	25		
Integrated watchdog	yes		
Software / programming			
Programming options	hysteresis / window function; N.O. / N.C.; output polarity; current / voltage outputs; damping; calibration of displayed values; display can be rotated / deactivated; display unit		
Environment			
Ambient temperature [°C]	-25...80		
Storage temperature [°C]	-40...100		
Protection	IP 67 / IP 69K		
Tests / approvals			
EMC	EN 61000-4-2 ESD: 4 kV CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m EN 61000-4-4 Burst: 2 kV EN 61000-4-5 Surge: 0.5/1 kV EN 61000-4-6 HF conducted: 10 V		

PI2093 - Combined pressure sensor - eclass: 27201302 / 27-20-13-02

Shock resistance	DIN IEC 68-2-27:	50 g (11 ms)
Vibration resistance	DIN IEC 68-2-6:	20 g (10...2000 Hz)
MTTF [Years]		173
Mechanical data		
Process connection	for Aseptoflex adapter	
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; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE	
Switching cycles min.	100 million	
Weight [kg]	0.406	
Displays / operating elements		
Display	Display unit 4 x 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

Programming of the output function

-----OUT1-----

- Switching output

Hno = hysteresis / normally open

Hnc = hysteresis / normally closed

Fno = window function / normally open

open

Fnc = window function / normally closed

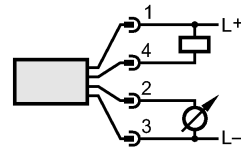
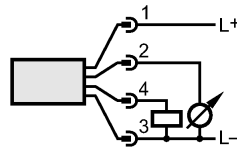
closed

-----OUT2-----

- Analog output

I = current output (4...20 mA)

U = voltage output (0...10 V)



Remarks

Remarks

*) linearity, incl. hysteresis and repeatability;
(limit value setting to DIN 16086)

***) with temperature fluctuations < 10 K

***) in % of the span per year

The 3-A qualification is only valid if adapters with 3-A qualification are used for installation.

Pack quantity [piece]

1