



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



us

EC 1935/2004 EHEDG Certified



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: -1000...1000 mbar

Application

Application

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

Pressure rating [mbar]

10000

Bursting pressure min. [mbar]

30000

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

PI2099 - 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	mbar, kPa, psi, inH2O, mWS, % der Spanne
Measuring range [mbar]	-1000...1000
Setting range	
Set point, SP [mbar]	-998...1000
Reset point, rP [mbar]	-1000...998
Analog start point, ASP [mbar]	-1000...500
Analog end point, AEP [mbar]	-500...1000
in steps of [mbar]	1
Factory setting	SP1 = -500 mbar; rP1 = -540 mbar ASP = -1000 mbar; AEP = 1000 mbar
Accuracy / deviations	
Accuracy / deviations (in % of the span) Turn down 1:1	
Switch point accuracy	< \pm 0.2
Characteristics deviation *)	< \pm 0.2
Linearity	< \pm 0.15
Hysteresis	< \pm 0.15
Repeatability **)	< \pm 0.1
Long-term stability ***)	< \pm 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	< \pm 0.05
Greatest TEMPCO of the span	< \pm 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
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)
MTTF [Years]		163
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]	0.404	
Displays / operating elements		
Display	Display unit 6 x 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 Fnc = window function / normally closed -----OUT2----- - Analog output I = current output (4...20 mA) U = voltage output (0...10 V)		
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	