

- 1: 4-digit alphanumeric display
- 2: LEDs (display unit / switching status)
- 3: Programming button

CE

#### Product characteristics

Combined pressure sensor

Connector

no dead space

Function programmable

Process connection: G 3/4

Switching output, Analogue output

4-digit alphanumeric display

Measuring range: 0...250 bar / 0...3625 psi / 0...25 MPa

Application

Application

Type of pressure: relative pressure  
viscous media and liquids with suspended particles

Pressure rating	400 bar	5800 psi	40 MPa
Bursting pressure min.	850 bar	12300 psi	85 MPa
Medium temperature [°C]		-25...80	

Electrical data

Electrical design	DC PNP
Operating voltage [V]	18...36 DC <sup>1)</sup>
Current consumption [mA]	< 50
Insulation resistance [MΩ]	> 100 (500 V DC)
Protection class	III
Reverse polarity protection	yes
Oversupply protection [V]	up to 40 V

Outputs

Output	Switching output, Analogue output
Output function	normally open / closed programmable; 4...20 mA or 0...10 V
Current rating [mA]	250
Voltage drop [V]	< 2
Short-circuit protection	pulsed
Switching frequency [Hz]	≤ 170
Analogue output	4...20 mA / 0...10 V
Max. load [Ω]	4...20 mA: max. (Ub - 10 V) x 50 / 0...10 V: min. 2000
Measuring / setting range	
Measuring range	0...250 bar   0...3625 psi   0...25 MPa

# PY9951 - Combined pressure sensor - eclass: 27201302 / 27-20-13-02

## Setting range

Set point, SP	2...250 bar	40...3620 psi	0.2...25.0 MPa
Reset point, rP	1...249 bar	20...3600 psi	0.1...24.9 MPa
in steps of	1 bar	20 psi	0.1 MPa

## Accuracy / deviations

### Deviations (% of value of measuring range)

Switch point accuracy	< ± 0.5
Characteristics deviation	< ± 0.5
Hysteresis	< ± 0.25
Repeatability	< ± 0.1
Long-term stability	< ± 0.05
in the temperature range [°C]	0...80

## Reaction times

Power-on delay time [s]	0.3
Delay time programmable dS, dr [s]	0; 0.2...50
Response time analogue output [ms]	< 3
Integrated watchdog	yes

## Software / programming

Programming options	hysteresis / window function; N.O. / N.C; on delay, off delay; damping; display unit; current / voltage output
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## Environment

Ambient temperature [°C]	-20...80
Storage temperature [°C]	-40...100
Protection	IP 67

## 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)
Vibration resistance	DIN IEC 68-2-6: 20 g (10...2000 Hz)

## Mechanical data

Process connection	G ¾
Materials (wetted parts)	stainless steel 316L / 1.4404; ceramics; FPM (Viton)
Housing materials	stainless steel (304S15); stainless steel 316L / 1.4404; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton)
Switching cycles min.	100 million
Weight [kg]	0.289

## Displays / operating elements

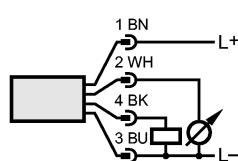
Display	Display unit 3 x LED green Switching status LED yellow Function display 4-digit alphanumeric display Measured values 4-digit alphanumeric display
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## Electrical connection

Connection	M12 connector; Gold-plated contacts
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## Wiring

2 1  
3 4



## Remarks

### Remarks

<sup>1)</sup> to EN50178, SELV, PELV  
\*) linearity, incl. hysteresis and repeatability;  
(limit value setting to DIN 16086)

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Pack quantity	[piece]	**) with temperature fluctuations < 10 K ***) in % of value of measuring range / 6 months
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