

PN3002



Pressure sensor with display

PN-100-SBR14-MFPKG/US/ IV

phase-out article

Alternative articles: PN3092

When selecting an alternative article and accessories please note that technical data may differ!



- 1 alphanumeric display 4-digit
- 2 LEDs Display unit / switching status
- 3 programming button



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1		
Measuring range	0...100 bar	0...1450 psi	0...10 MPa
Process connection	threaded connection G 1/4 internal thread		

Application

Special feature	Gold-plated contacts		
Application	for industrial applications		
Media	liquids and gases		
Conditionally suitable for	use in gases at pressures > 25 bar only on request		
Medium temperature [°C]	-25...80		
Min. bursting pressure	650 bar	9400 psi	65 MPa
Pressure rating	300 bar	4350 psi	30 MPa
Type of pressure	relative pressure		

Electrical data

Operating voltage [V]	18...36 DC; (to SELV/PELV)		
Current consumption [mA]	< 50		
Min. insulation resistance [MΩ]	100; (500 V DC)		



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Protection class	III
Reverse polarity protection	yes
Overvoltage protection	yes; (< 40 V)
Power-on delay time [s]	0.3
Integrated watchdog	yes

Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1
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Outputs

Total number of outputs	2
Output signal	switching signal; analogue signal; (configurable)
Electrical design	PNP
Number of digital outputs	1
Output function	normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	250
Switching frequency DC [Hz]	< 170
Number of analogue outputs	1
Analogue current output [mA]	4...20
Max. load [Ω]	500
Analogue voltage output [V]	0...10
Min. load resistance [Ω]	2000
Short-circuit protection	yes
Type of short-circuit protection	pulsed

Measuring/setting range

Measuring range	0...100 bar	0...1450 psi	0...10 MPa
Set point SP	1...100 bar	20...1450 psi	0.1...10 MPa
Reset point rP	0.5...99.5 bar	10...1440 psi	0.05...9.95 MPa
In steps of	0.5 bar	10 psi	0.05 MPa
Factory setting		SP1 = 25.0 bar	rP1 = 23.0 bar

Accuracy / deviations

Switch point accuracy [% of the span]	< ± 0,5
Repeatability [% of the span]	< ± 0,1; (with temperature fluctuations < 10 K)
Characteristics deviation [% of the span]	< ± 0,25 (BFSL) / < ± 0,5 (LS); (BFSL = Best Fit Straight Line; LS = limit value setting)
Hysteresis deviation [% of the span]	< ± 0,25
Long-term stability [% of the span]	< ± 0,05; (per 6 months)
Temperature coefficient zero point [% of the span / 10 K]	0,2; (-20...80 °C)
Temperature coefficient span	0,2; (-20...80 °C)

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[% of the span / 10 K]

Response times

Delay time programmable dS, dr

0; 0,2...50

Max. response time analogue output

3

Software / programming

Parameter setting options

hysteresis / window; normally open / normally closed; switch-on/switch-off delay; Damping; Display unit; current/voltage output

Operating conditions

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)

MTTF [years]

213

Mechanical data

Weight [g]

261

Materials

stainless steel (304/1.4301); stainless steel (316L/1.4404); PC; PBT; PEI; FKM

Materials (wetted parts)

stainless steel (303/1.4305); ceramics; FKM

Min. pressure cycles

100 million

Process connection

threaded connection G 1/4 internal thread

Displays / operating elements

Display

Display unit

3 x LED, green

switching status

LED, yellow

function display

alphanumeric display, 4-digit

measured values

alphanumeric display, 4-digit

Remarks

Pack quantity

1 pcs.

Electrical connection

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



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Connection

