

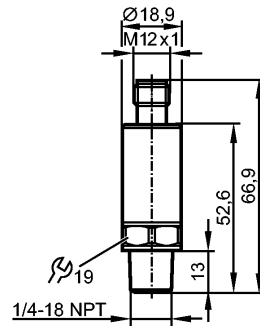


# PT2443

PT-050PSEN14-A-ZVG/US/ IW



Pressure sensors



## Product characteristics

Electronic pressure sensor

for industrial applications

Process connection: 1/4-18 NPT

Analog output

Measuring range: 0...500 psi

## Application

Application

Type of pressure: relative pressure  
Group 2 fluids according to the Pressure Equipment Directive (PED),  
group 1 fluids on request

Pressure rating [psi]

1450 (static)

Bursting pressure min. [psi]

11600

Vacuum resistance [psi]

-14.5

Medium temperature [°C]

-40...90

## Electrical data

Electrical design

DC

Operating voltage [V]

8.5...36 DC

Insulation resistance [MΩ]

> 100 (500 V DC)

Protection class

III

Reverse polarity protection

yes

## Outputs

Output

Analog output

Output function

4...20 mA analog

Short-circuit proof

yes

Overload protection

yes

Analog output

4...20 mA

Max. load [Ω]

$(U_b - 8.5 \text{ V}) / 21.5 \text{ mA}$ ; 720 at  $U_b = 24 \text{ V}$

## Measuring / setting range

Measuring range [psi]

0...500

## Accuracy / deviations

Accuracy / deviations  
(in % of the span)

Characteristics deviation \*)

< ± 0.5

Linearity

< ± 0.1 (BFSL) / < ± 0.2 (LS)

Hysteresis

< ± 0.2



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Repeatability **)	< ± 0.05
Long-term stability ***)	< ± 0.1
Temperature coefficients (TEMPCO) in the temperature range -40...90° C (in % of the span per 10 K)	
Greatest TEMPCO of the zero point + span	< 0.1 (-25...90 °C) / < 0.2 (-40...-25 °C)

## Reaction times

Step response time analogue output [ms]	1
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## Environment

Ambient temperature [°C]	-40...90
Storage temperature [°C]	-40...100
Protection	IP 67 / IP 69K

## Tests / approvals

Pressure equipment directive	sound engineering practice
EMC	DIN EN 61000-6-2 DIN EN 61000-6-3
Shock resistance	DIN EN 60068-2-27 50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6 20 g (10...2000 Hz)
MTTF [Years]	784

## Mechanical data

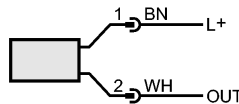
Process connection	1/4-18 NPT
Materials (wetted parts)	1.4542 (17-4 PH / 630) <sup>2</sup>
Housing materials	1.4542 (17-4 PH / 630) <sup>2</sup> ; stainless steel (316L / 1.4404); PEI
Min. pressure cycles	60 millions in the course of the lifetime (at 1.2 times the nominal pressure)
Tightening torque [Nm]	≤ 50 (recommended tightening torque <sup>1</sup> )
Restrictor element integrated	no (can be retrofitted)
Weight [kg]	0.056

## Electrical connection

Connection	M12 connector
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### Wiring

Core colors  
 BN brown  
 WH white



OUT: 4...20 mA  
 Colours to DIN EN 60947-5-2

## Remarks

Remarks	<p>*) incl. drift when overtightened, zero point and span error, non-linearity, hysteresis          **) with temperature fluctuations &lt; 10 K          ***) in% of the span / 6 months          1) Depends on lubrication, seal and pressure rating          2) Characteristics similar to stainless steel (e.g. 304/1.4301) but higher strength.          BFSL = Best Fit Straight Line / LS = Limit Value Setting</p>
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Pack quantity [piece]	1
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