PRIGNITZ MIKROSYSTEMTECHNIK

SPT

Standard Pressure Transmitter

Standard design

High pressure design

Fields of application

- Hydraulics
- Air conditioning and heating
- Testing technology
- Industrial robots
- Process controlling
- Water technology
- Pneumatics

Measuring range (0 to ... bar) *)	-1 0,6 1 1,6 2,5 4 6 10 16 25 40 60 100 160 250 400 600 1000 1600 2000
Overload range *)	1.5 times 500 bar and more: 1.2 times
Bursting pressure *)	3 times 500 bar and more: 1.5 times
Pressure type	pressure in relation to outer atmosphere or seal reference
Pressure connection *)	standard: G 1/4 " form E high pressure: M18x1,5 optionally are various pressure connections available ➢ see data sheet *"Pressure connections"*
Materials used	
Material of parts with contact to measuring medium: Case:	CrNiCuNb 17-4 PH stainless steel, no O-ring, no silicone oil X5CrNi18-10
Sensor element	stainless steel membrane poly-Si on SiO_2 (thin film resistors)
Weight	90 g
Electrical parameters	

Output voltage	Operational voltage
➢ 4 ... 20 mA (2-wires)	12 ... 30 V a)
➢ 0 bzw. 4 ... 20 mA (3-wires)	9 ... 30 V b)
➢ 0 …10 V	12 ... 30 V c)
➢ 0 ... 5 V	8 … 30 V d)
➢ 0,5 … 4,5 V	8 … 30 V d)

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Recommended max. load resistance R_l	a) (U_b – 12 V) / 20 mA b) (U_b – 9 V) / 28 mA c) ≥ 5 kΩ d) ≥ 2,5 kΩ
Setting time (10 … 90 %) t_E	< 1 ms
Insulation resistance at 50 V	≥ 100 MΩ
Electrical connection *) Protection class acc. to DIN 40 050	➢ standard design device plug DIN EN 175301-803 BF C ➢ optionally other electrical connections are available *- see data sheet "Electrical connections"* ➢ IP 65 or acc. to plug system, resp.
Linearity error at room temperature (% FS) (BFSL) **)	± 0.5 max. ➢ optionally 0.25 ****)
Reproducibility % of range	< 0.1
Stability per year % of range	< 0.2 (on reference conditions)

Ambient values

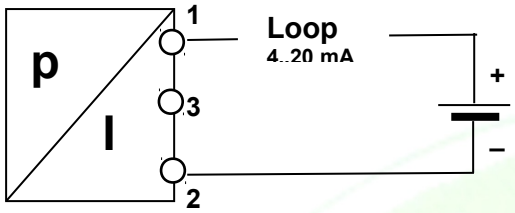
➢ Ambient temperature	-40 ... + 105 °C
➢ Temperature of the medium	-40 ... + 125 °C
➢ Storage temperature	-40 ... + 125 °C
➢ Compensated temperature range	-40 ... + 105 °C

Total error
max. ±
***)
****)

- 40 °C ... -20 °C	-20 °C ... +85 °C	+25 °C ± 5 °C	+30 °C ... +85 °C	+85 °C ... +105 °C
3.0 % typ. < 2.0 %	1.0 % typ. < 0.7 %	0.5 % typ. < 0.3 %	0.7 % typ. < 0.5 %	2.5 % typ. < 1.5 %

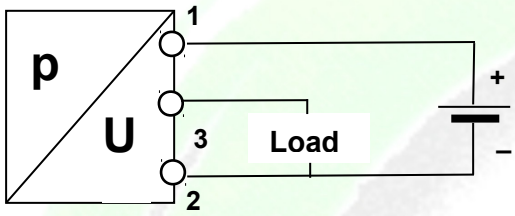
Electromagnetic compatibility ➢ Disturbing radiation acc. to DIN EN 55011 ➢ Persistency acc. to DIN EN 61000-4-3	< 30 dBµV/m 25 V / m
Resistance to shock, testing acc. to IEC 68-2-32	1 m (free fall onto a steel plate)
Vibration resistance, testing acc. to IEC 68-2-6 and IEC 68-2-36	20 g
Mixed signal ASIC	
Resistant to pressure peaks	
Insensitive to temperature shocks	

SPT I2 RI = (U_b – 12 V) / 20 mA



12… 30 V DC

SPT Ux



RI ≥ 5 kΩ 14… 30 V DC

Safety information

During installation, putting into service and operation of the pressure sensors, it is necessary to observe the relevant safety regulations that are in force in the country of the user (as for example, DIN VDE 0100).

Errors excepted; subject to alterations in the sense of technical improvement.

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