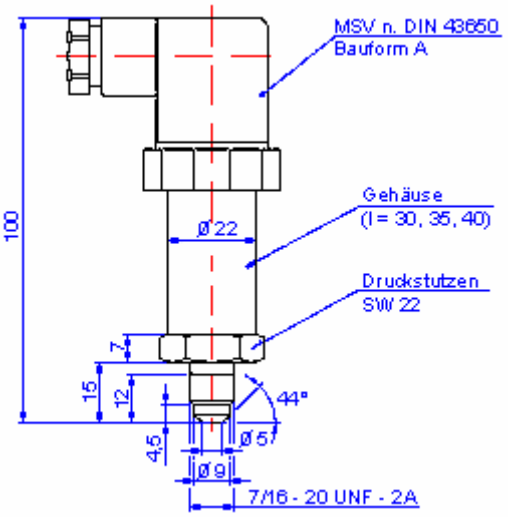
PT-EEXi

Pressure measuring transformer – self-proof



Total length depends on internal structure, thread length and type of sealing!

Fields of application

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

Description

The pressure transmitter consists of only a small number of active components, as the sensor component, a signal processing ASIC and an U/I-converter. The protective circuit of the transmitter results in pole-protection, overvoltage protection and limitation of power lost in case of errors.

Calibration is made electronically, thus, the pressure transmitters are characterized by relatively low total error and long-time stability. The hermetically welded thin-film measuring cell guarantees high tightness and stability over a long period. The ASIC represents a programmable precision CMOS-ASIC with EEPROM data storage and analogue signal path.

The stainless steel membrane is absolutely vacuum-tight, extremely fracture-proof and can be applied for all standard mediums in the fields of hydraulics, pneumatics, environmental technology, processing engineering, semiconductor technology and automobile industry, as far as those mediums are compatible with stainless steel. Thus, the application for standard purposes in the field of mobile hydraulics and other fields of application is covered. High accuracy and stable and compact construction guarantee a bride range of possibilities for application in industry.

A great variety of pressure transmitters can be offered as a result of combining several mechanical and electronic connections. A test certificate according to DIN ISO 9001 or DKD can be delivered on request.

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Technical data

Measuring range (0 bis … 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 closed reference
Pressure connection*)	Standard: G 1/4“ form E optionally various pressure connections are available ➢ *see data sheet “Pressure connections”*
verwendete Materialien	
Material of parts with contact to measuring medium: Case :	 parts are made from CrNiCuNb 17-4 PH stainless steel, no O-ring, no silicone oil X5CrNi18-10
Sensor element	medium-side: stainless steel membrane Poly-Si- auf SiO_2 (thin-film resistors)
Weight	90 g
Electrical parameters	
Insulation resistance at 50 V Insulation voltage U_{DC} U_{AC}	≥ 100 M Ω 750 V 500 V
Electrical connection *) Type of protection acc. to DIN 40 050	MVS DIN 43650 series A IP 65 or acc. to plug connection system
Supply **Power supply with Ex-approval** Output voltage max. 24 V DC Output current max. 50 mA R_i at 24V 510 Ohm	**Wiring diagramm** 
Linearity error at RT (% FS)(BFSL) **)	± **0,5 max.** ➢ **optionally 0,25 ****)**
Reproducibility % of range	**< 0.1**
Stability per year % of range	**< 0.2 (at reference conditions)**
Ambient values	
➢ operating temperature ➢ storage temperature ➢ compensated range of temperature	-40 ... + 85 °C -40 ... + 125 °C -40 ... + 85 °C

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Total error max. ± ***) ****)	-40 °C ... -20 °C 3.0 % typ. < 2.0 %	-20 °C ... +85 °C 1.0 % typ. < 0.7 %	+25 °C ± 5 °C 0.5 % typ. < 0.3 %
Electromagnetic compatibility disturbing radiation acc. to DIN EN 55011 stability acc. to DIN EN 61000-4-3	< 30 dBµV/m 25 V / m		
Resistance to shock, test acc. to IEC 68-2-32	1 m (free fall onto steel plate)		
Vibration resistance, test acc. to IEC 68-2-6 and IEC 68-2-36	20 g		
Ex-approval			
Type of ignition protection	II 2G EEx ia IIC T4 (IBExU 04 ATEX 1182)		
based on standards	EN 50014, EN 50020		
maximum values for connection	30 V, 50 mA, 1 W		
class of temperature	T4 (ambient temp. -40 … +85 °C)		

*) others on request
**) integral deviation of lineriaty (FS = Full Scale, BFSL = Best Fit Straight Line)
***) total error contains non-linearity, hysteresis, reproducibility and temperature influence
****) special versions with optionally higher accuracy on client's request

Safety information

During installation, putting into service and operation of the pressure switch, 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 part 410).

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

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