Pressure transmitter

piezoresistive sensor element for robust use in universal applications

Characteristics

- **Gauge, absolute or sealed gauge types**
- **Ranges from 0 ... 0,1 bar to 0 ... 1000 bar**
- **Output current or voltage**
- **Medium contact parts and case of stainless steel (CrNi)**
- **Degree of protection IP 65 (special types up to IP 68)**
- **Accuracy up to 0,1 % of end-scale value**
- **⟨Ex⟩- protection intrinsically safe**
- **Process connection G ½ A, G ¼ A, ½ NPT, ¼ NPT**

Description

These pressure transmitters were designed for use in the most of universal applications in the reach of pressure technics. The piezo-technology makes it possible to obtain excellent values in thermal behaviour and long-time stability. The pressure transmitters are compensated and linearized about large temperature ranges by computer controlled calibrating systems. The special merits of these transmitters are the high accuracy, robust and compact construction and flexibility at the adjustment of different measuring feeds.

The pressure transmitters can be supplied with unregulated direct voltage from 11...33 V and deliver optionally all of the regular output signals of the measuring methods such as the standarized current signals 4...20 mA 2-wire, 0...20 mA 3-wire or the voltage signals 0 ... 5 V, 0 ... 10 V or 0 ... 100 mV. At most, transmitters with 2-wire electronic and output 4...20 mA will be used at the moment. All of the medium contact parts and the case were made of stainless steel (CrNi) and they were bonded completely.

For use in the food industry special sensors have been designed. They have front flushed membranes which will not produce clearance volumes and consequently are easy to clean. The process connection will be by standardized milk tube fittings or clamp connections. For use in hazardous areas EEx-sensors have been designed. These transmitters are approved with an electronic according to EEx ia IIC T4 (zone 1) and consequently usable in connection with qualified feed devices in these problematic zones. According to the connection by feed isolator or Zener barrier different safety maximums will be observed. Additional to the standard model special types with cable box or free cable end are available.

Technical Data

Input	Range:	Gauge, absolute or sealed gauge types 0 - 0,1 bar to 0 - 1000 bar
	Overload capacity:	Ranges up to 2 bar - 3 bar Ranges more than 2 bar - triple
Outputs	Analog output:	0 - 5 VDC, Load min. 10 KOhm 0 - 10 VDC, Load min. 10 KOhm 0 - 20 mA, Load max. 250 Ohm 4 - 20 mA, Load max. 500 Ohm 4 - 20 mA, NAMUR 4 - 20 mA, EEX ib IIC T4 4 - 20 mA, Surge protection 0 - 100 mV
	Relay outputs:	max. 2 potential-free changeover-contacts (230 VAC/2 A)
Accuracy	Linearity:	+/- 0,5 % of end-scale value -optionally 0,25 %; 0,1 % of end-scale value
	Hysteresis:	+/- 0,1 % of end-scale value
	Temp.-Coeff.:	+/- 0,015 % of end-scale value
	Long-time stability:	+/- 0,2 % per year typ.
Power Supply	Supply voltage:	11 - 33 VDC (current output) 18 - 33 VDC (voltage output)
	Power consumption:	< 1 W
Ambient Conditions	Operating temperature:	0 to +70 °C comp. -optionally -25 to +85 °C comp.
	Storing temperature:	-25 to +85 °C
	Medium temperature:	0 to +80 °C -optionally -25 to +150 °C
	Medium contact parts:	Stainless steel CrNi 1.4301/1.4571
Dimensions	Process connection:	RP ¼" inside thread G ¼" G ¼" manometer (DIN 16 288) G ½" G ½" manometer (DIN 16 288) G ½" front flushed membrane G ½" frontal membrane ¼" NPT ½" NPT Diving probe
	Case material:	Stainless steel CrNi 1.4301/1.4571
	Degree of protection:	IP 65 (special types up to IP 68)
	Weight:	0,2 kg
	Terminals:	Connector DIN 43 650 Connector Lumberg RSF 50 Connector Binder 723, 5-channel Connector Lumberg RSF 4 PUR-cable (2 m) PUR-cable with antikink (2 m) Teflon-cable (2 m) Connector MIL C 26482 (10-6)

Mechanical and electrical connections

Process connections

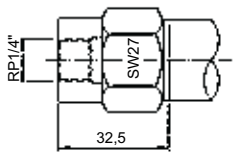

Figure 1: RP ¼" inside thread

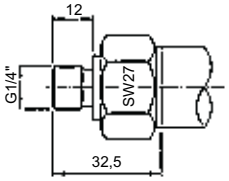

Figure 2: G ¼"

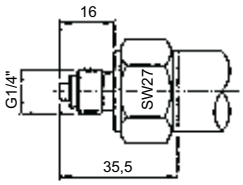

Figure 3: G ¼" manometer

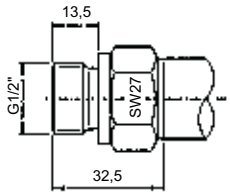

Figure 4: G ½"

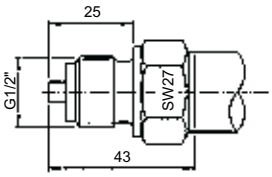

Figure 5: G ½" manometer

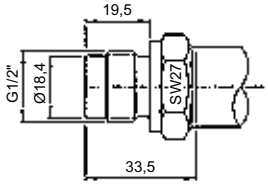

Figure 6: G ½" front flushed membrane

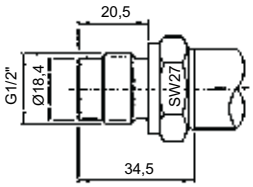

Figure 7: G ½" frontal membrane

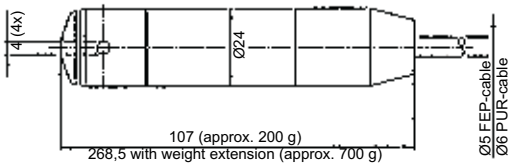

Figure 8: Diving probe

Electrical connections

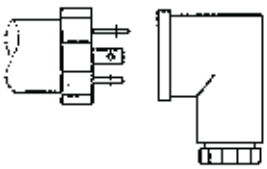

Figure 20: Connector DIN 43 650

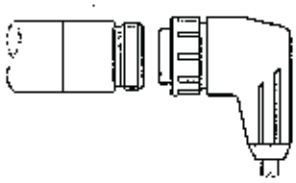

Figure 21: Connector Lumberg RSF 50

Figure22: Connector Binder 723, 5-polig

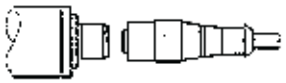

Figure 23: Connector Lumberg RSF 4

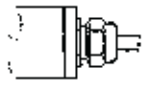

Figure 24: PUR-cable (2 m)

Figure 25: PUR-cable with antikink (2 m)

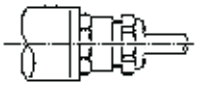

Figure 26: Teflon-cable (2 m)

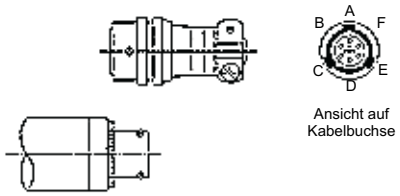

Figure 27: Connector MIL C 26482 (10-6)