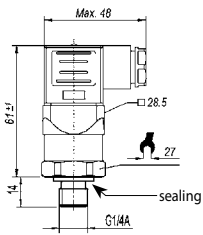


**PRESSURE TRANSMITTER**



**A 10**

Pressure transmitter (relative pressure, zero output at atmospheric pressure)

**Application:**  
Suitable for all applications in machine and systems engineering, automotive technology as well as cooling and air conditioning technology.

**Specifications:**

**Measuring range (MR), Overload limit (OL), Burst pressure (BP):**

<b>MB:</b>	1, 1.6, 2.5, 4, 6, 10, 16, 25, 40, 60, 100, 160, 250, 400, 600
<b>ÜL:</b>	2 3.2 5 8 12 20 32 50 80 120 200 320 500 800 1200
<b>BD:</b>	5 10 10 17 34 34 100 100 400 550 800 1000 1200 1700 2400

**Output signal:** 4 ... 20 mA, 2-wire,  $R_A [Ω] < (U_v [V] - 8V) / 0.02 A$   
0 ... 10 V, 3-wire,  $R_i > 10 kΩ$  (other output signals upon request)

**Auxiliary energy  $U_v$ :** 8 ... 30 V DC (for output 4 ... 20 mA)  
14 ... 30 V DC (for output 0 ... 10 V)

**Accuracy: \***  $\leq 1.0 \% FS$  (optional:  $\leq 0.5 \% FS$ )  
\* = including non-linearity, hysteresis, zero point and scale error. Corresponds to error of measurement per IEC 61298-2. Sensor adjusted in vertical mounting position with lower pressure connection.

**Non-Linearity:**  $\leq 0.5 \% FS$  (optional:  $\leq 0.25 \% FS$ )

**Zero Offset:**  $\leq 0.5 \% FS$  (typ.),  $\leq 0.8 \% FS$  (max.), (Optional:  $\leq 0.15 \% FS$  (typ.),  $\leq 0.4 \% FS$  (max.))

**Hysteresis:**  $\leq 0.16 \% FS$

**Repeatability:**  $\leq 0.1 \% FS$

**Long-term drift:**  $\leq 0.1 \% FS$  (according to IEC 61298-3)

**Response time:  $T_{90}$**   $\leq 4 ms$

**Permitted temperature of measurement media:** 0 ... +80 °C (optional: -30 ... +100 °C)

**Ambient temperature:** 0 ... +80 °C (optional: -20 ... +100 °C)

**Storage temperature:** -20 ... +80 °C

**Temperature compensated area:** 0 ... +80 °C

**Temperature error in compensated area:**  $\leq 1.0 \% FS$  (typ.),  $\leq 2.5 \% FS$  (max.)

**Material:** Parts coming into contact with pres. media

**Pressure connection:** 316 L

**Pressure sensor:** 316 L (as of 10 bar rel. 13 ... 8 PH)

**Housing:** 316 L

**Pressure connection:** G 1/4 A, DIN 3852-E with NBR sealing

**Protection rating:** IP65 or IP67 with cable

**Electric connection:** elbow-type plug acc. to EN 175301-803/A or connection cable, cable length 2 m

**Electric protections:** reverse voltage and short-circuit protection

**Weight:** approx. 80 g

**Options:**

**Absolute pressure**  
(0 ... 1 bar abs. to 0 ... 25 bar abs.)

**Under pressure**  
(-1.0 ... +1.5 bar, -1.0 ... +3.0 bar, -1.0 ... +9.0 bar)

**G2**  
Higher sensor accuracy (class 0.5)

**T2**  
Extended temperature range: -30 ... +100 °C

**V2**  
Output signal 0 ... 10 V

**Fixed connecting cable**  
2 m with bend protection (instead of elbow-type plug, protection rating: IP67)

**PRESSURE MEASURING TRANSDUCER FOR OVER/UNDER AND ABSOLUTE PRESSURE**



S 10



S 11



S 20



**S 10 REL**

Pressure measuring transducer (Standard, zero output at ambient pressure)

**S 11 REL**

Pressure measuring transducer (Flush, zero output at ambient pressure)

**S 20 REL**

Pressure measuring transducer (Standard, zero output at ambient pressure)

**S 10 ABS**

Pressure measuring transducer (Standard, absolute, zero output at vacuum)

**S 11 ABS**

Pressure measuring transducer (Flush, absolute, zero output at vacuum)

**S 20 ABS**

Pressure measuring transducer (Standard, absolute, zero output at vacuum)

**General:**

Piezoresistive pressure sensor with temperature compensation. Completely welded and stainless steel design, filled food safe (up to 16 bar), thin film strain (above 25 bar).

**Specifications:**

**Measuring ranges:** in bar (other values upon request)

**S 10 / S 11 REL:** 0,1, 0,16, 0,25,  
**S 11 / S 20 REL:** 0,4, 0,6, 1, 1,6, 2,5, 4, 6, 10, 16, 25, 40, 60, 100, 160, 250, 400, 600,  
**S 20 REL only:** 1000, 1600

**S 10 / S 11 ABS:** 0,25,

**S 11 / S 20 ABS:** 0,4, 0,6, 1, 1,6, 2,5, 4, 6, 10, 16, **S 20 ABS only:** 20, 40

**S 10 ABS:** 0,8 ... 1,2,

**Available overload pressure limits:** 3-fold at measuring range <10 bar (150 psi)  
2-fold at measuring range  $\geq 10$  bar (150 psi)

**Output signal:** 4 ... 20 mA (0 ... 10 V - refer to options; others upon request)

**Permissible impedance:**  $R_A [Ω] \leq (U_v [V] - 10 V) / 0.02 A$  (for output 4 ... 20 mA)

**Permissible load:**  $R_i > 10 kΩ$  (for output 0 ... 10 V)

**Auxiliary energy:** 10 ... 30 V DC (14 ... 30 V DC for output 0 ... 10 V)

**Accuracy:**

**deviation from parameter (% of Span):**  $\leq 0.5$  (setting of cut-off point)

**Repeatability (% of Span):**  $\leq 0.25$  (setting of tolerance band, BFSL)

**Stability/year (% of Span):**  $\leq 0.1$  %

**Hysteresis (% of Span):**  $\leq 0.1$

**Permissible temperature of media:** -30 ... +100 °C (refer to options)

**Operating temperature ambient:** -30 ... +100 °C

**Compensated temperature range:** 0 ... +80 °C

**Temperature coefficient:**  $\leq 0.02 \% FS / K$  (or  $\leq 0.04 \% FS$  for MB  $\leq 0.25$  bar)

**Housing:** stainless steel 1.4435 (IP65)

**Pressure connection:** (other upon request)

**Type S 10 / 20... :** G 1/2 B, other upon request

**Type S 11... :** G 1 B (up to 1.6 bar), G 1/2 B (from 2.5 ... 600 bar)

**Mounting position:** any

**Electric connection:** standard via elbow-type plug EN 175301-803/A

**Electric protections:** reverse voltage protection, over voltage and short-circuit

**Options:**

**Special measuring range**

**Media temperature: -40 ... +125 °C** (S 10 / 20 only)

**Media temperature: -30 ... +125 °C** (S 11 only)

**Media temperature: -20 ... +150 °C**

(S-11 only with cooling section)

**Output signal 0 ... 10 V**

(other upon request)

**Ex-protection**

upon request

H-Held INSTRUMENT DISPLAY/CONTROLLER TRANSMITTER LOGGER-/BUS SYSTEMS TEMPERATURE PROBE ALARM/PROTECTION, LEVEL