

## pressure transmitter with piezoresistive sensor, accuracy 0,35%



**CE** Compliance to requirements of directives:  
EMC 2004/108/EC - PED 97/23/EC - RoHS 2011/65/EC

The ST9 model is an electronic transmitter with piezoresistive sensor with excellent linearity, with adjustable zero and span, for air, industrial and technical gases, water, oil and process media compatible with AISI 316. When assembled to diaphragm seals, it measures the pressure of corrosive, highly viscous and hot fluids.

### 8.S09

**Measuring ranges:** 0...0,1/0...1000 bar, relative; -1...0/-1...+24 bar, relative; 0...1/0...25 bar, absolute.

**Output signal:** 4...20 mA.

**Non-linearity (BFSL):**  $\leq \pm 0,175$  % of the range, according to IEC 61298-2.

**Non-repeatability:**  $\leq 0,1$  % of the range, according to IEC 61298-2.

**Accuracy:**  $\leq \pm 0,35$ % of the range <sup>(1)</sup>.

**Zero and span adjustment:**  $\pm 10$  % span typical.

**Thermal drift:** between 0 and 80°C, 1% of span; 2,5% of span, max <sup>(2)</sup>.

**Long term drift:**  $\leq 0,2$  % of span.

**Process fluid temperature:** -25...+100 °C.

**Ambient temperature:** -25...+85 °C.

**Stocking temperature:** -30...+85 °C.

**Response time:** <4 ms (measuring); <150 ms (switching on).

**Emission and immunity:** according to EN 61326, (group 1 - class B; industrial applications).

**Vibration resistance:** 20g (10...2000 Hz, according to IEC 60068-2-6).

**Shock resistance:** 40g (6 ms, according to IEC 60068-2-27).

**Sensor:** piezoresistive, silicon oil.

**Case:** in AISI 316L, vented up to 16 bar.

**Protection degree:** IP 65 according to IEC 60529 <sup>(3)</sup>.

**Process connection:** in AISI 316L, hole  $\varnothing$  2,5 mm (with restrictor  $\varnothing$  0,7 mm for measuring ranges  $\geq 60$  bar).

**Weight:** 0,23kg

(1) max measuring error according to IEC 61298-2, including non-linearity and hysteresis (limit-point calibration and reference conditions according to IEC 61298-1).

(2) + 0,5% of span for measuring range  $\leq 0,6$  bar

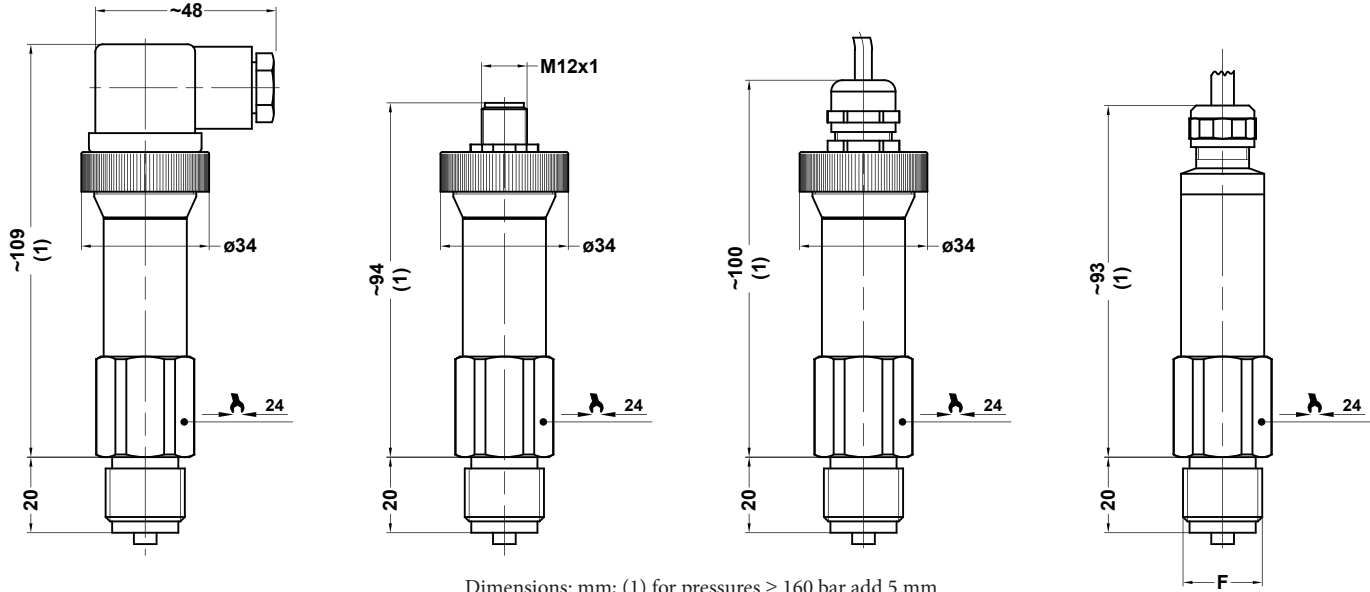
(3) with properly assembled electric connection

| Ranges<br>bar, relative | Overpressure<br>bar, relative |
|-------------------------|-------------------------------|
| 0...0,1                 | 0,3                           |
| 0...0,16                | 0,5                           |
| 0...0,25                | 0,8                           |
| 0...0,4                 | 1,2                           |
| 0...0,6                 | 1,8                           |
| 0...1                   | 2                             |
| 0...1,6                 | 3,2                           |
| 0...2,5                 | 5                             |
| 0...4                   | 8                             |
| 0...6                   | 12                            |
| 0...10                  | 20                            |
| 0...16                  | 32                            |
| 0...25                  | 50                            |
| 0...40                  | 80                            |
| 0...60                  | 120                           |
| 0...100                 | 200                           |
| 0...160                 | 320                           |
| 0...250                 | 380                           |
| 0...400                 | 600                           |
| 0...600                 | 900                           |
| 0...1000                | 1500                          |

Other ranges available on demand. Units of measurement available in psi, MPa, kPa too.

|                      |                              |
|----------------------|------------------------------|
| <b>Output signal</b> | <b>4...20 mA</b><br><b>1</b> |
| N. wires             | 2                            |
| Load (Ohm)           | $R_L \leq (U_b - 10)/0,02$   |
| Supply: +Ub          | 10...30                      |

Other output signals available on demand. All output signals are provided of protection against short circuit and polarity inversion. Insulation tension 500 Vdc.



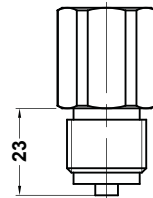
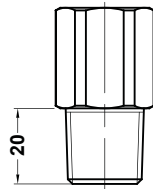
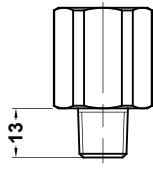
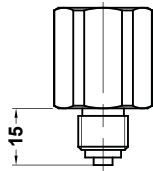
Dimensions: mm; (1) for pressures  $\geq 160$  bar add 5 mm

21M - G 1/4 A

23M - 1/4-18 NPT

43M - 1/2-18 NPT

41M - G 1/2 A



Torque 20...30 Nm

## WIRING

|                          | DIN 175301-803 A | M12 x 1 | Cable exit |
|--------------------------|------------------|---------|------------|
| N. of wires              | 2                | 2       | 2          |
| Supply connection: Ub+   | 1                | 1       | brown      |
| Negative connection; 0V- | 2                | 3       | white      |
| Output signal: S+        | -                | -       | -          |
| Ground                   | GND              | 2       | grey       |

## OPTIONS

|  |   |
|--|---|
| <b>M12</b> - Connector M12 x 1, 4 poles                    | <b>EPD</b> - EPDM gasket for sensor                                 |
| <b>PVC</b> - Cable exit, with 1 mt PVC cable               | <b>NBR</b> - NBR gasket for sensor                                  |
| <b>U68</b> - Cable exit IP68, with 1 mt polyurethane cable | <b>C01</b> - Calibration certificate                                |
| <b>FPM</b> - VITON gasket for sensor                       | <b>A02</b> - Accuracy $\leq \pm 0,25\%$ of the range <sup>(1)</sup> |
| <b>CRP</b> - CR gasket for sensor                          | <b>VS3</b> - Restrictor $\phi 0,3$ mm                               |

(1) Non-Linearity (BFSL)  $\leq \pm 0,125\%$  of span; for measuring ranges  $\leq 60$  bar

## “HOW TO ORDER” SEQUENCE

Section / Model / Range / Process connection / Output signal / Electric connection / Gasket / Options  
**8 S09 41M 1 --- FPM C01...VS3**  
**21M M12 CRP**  
**PVC EPD**  
**U 68 NBR**