

pressure transmitter with piezoresistive sensor, accuracy 0,35%



PED 2014/68/EU
EMC 2014/30/EU



Compliant to directives
EMC EMC 2014/30/EU - PED 2014/68/EU - RoHS 2002/95/EU

The ST2 model is a compact electronic transmitter provided with piezoresistive sensor with excellent linearity output signal, suitable for air, industrial and technical gases, water, oil and process media compatible with AISI 316. It is also available with a range of 0/0,06 bar suitable for the medical industry.

8.ST2

Measuring ranges: 0...0,06/0...1000⁽¹⁾ bar, relative; -1...0/-1...+24 bar, relative; 0...1/0...25 bar, absolute.

Output signals: 4...20 mA, 0...5 Vcc, 0...10 Vcc, 1...5 Vcc, 0,5...4,5 Ratiometric Vcc.

Accuracy: $\leq \pm 0,35\%$ of the range ⁽²⁾.

Non-linearity (BFSL): $\leq \pm 0,175\%$ ⁽³⁾ of the range, according to IEC 61298-2.

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

Thermal drift: between 0 and 80°C, 1% of span; 2,5% of span, max ⁽⁴⁾.

Long term drift: $\leq 0,1\%$ of span.

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

Ambient temperature: -25...+85 °C ⁽⁵⁾.

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 ⁽⁶⁾.

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

Weight: 0,14 kg

(1) max 600 bar for MET (UL/CSA) version

(2) max measuring error according to IEC 61298-2, including non-linearity and hysteresis (limit-point calibration and reference conditions according to IEC 61298-1); $\leq \pm 0,5\%$ for range 0,06 bar and MET (UL/CSA) version

(3) $\leq \pm 0,25\%$ for range 0,06 bar and MET (UL/CSA) version

(4) + 0,5% of span for measuring range \leq 0,6 bar, +1% of span for ranges < 0,1 bar. For standard execution

(5) -25...+75°C with cable output suitable for MET (UL/CSA) version

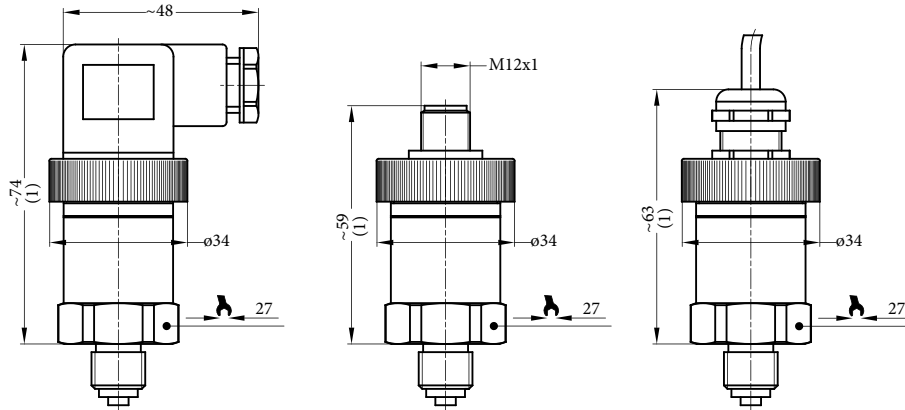
(6) with properly assembled electric connection

Ranges bar, relative	Overpressure bar, relative	Overpressure MET (UL/CSA) bar, relative
0...0,1	0,3	0,3
0...0,16	0,48	0,48
0...0,25	0,75	0,75
0...0,4	1,2	1,2
0...0,6	1,8	1,8
0...1	2	3
0...1,6	3,2	4,8
0...2,5	5	7,5
0...4	8	12
0...6	12	18
0...10	20	30
0...16	32	48
0...25	50	75
0...40	80	120
0...60	120	180
0...100	200	300
0...160	320	375
0...250	380	500
0...400	600	800
0...600	900	1200
0...1000 ⁽¹⁾	1500	

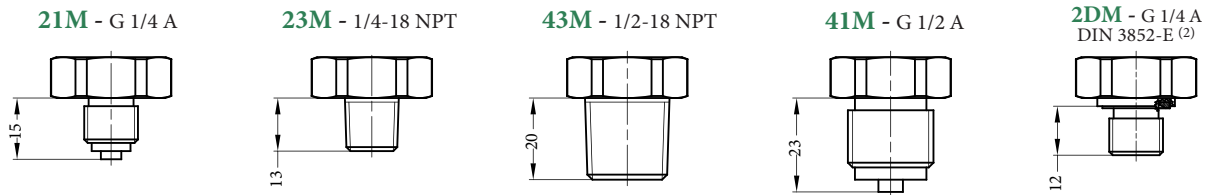
Other ranges available on demand. Units of measurement available also in psi, MPa, kPa.

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ST2



Dimensions: mm; (1) for pressures ≥ 160 bar add 5 mm



Torque 20...30 Nm; (2) process connection DIN 3852-E for pressures ≤ 600 bar

	4...20 mA	0...5 Vdc	0...10 Vdc	1...5 Vdc	0,5...4,5 Vdc ratiometric - R
Output signals	1	4	5	8	
N. of wires	2	3	3	3	3
Load max (Ohm)	$R_L \leq (U_b - 8)/0,02$	$R_L \geq 5 \text{ K}\Omega$	$R_L \geq 10 \text{ K}\Omega$	$R_L \geq 5 \text{ K}\Omega$	$R_L \geq 4,5 \text{ K}\Omega$
Supply: +Ub (Vdc)	8...30	8...30	14...30	8...30	5 \pm 10%
Absorbed current (mA)	< 25	< 10	< 10	< 10	< 10

Other output signals available on demand. All output signals are provided with protection against short circuit and polarity inversion. Insulation tension 500 Vdc.
(1) Not available for range 0,06 bar.

WIRING

	EN 175301-803 A		M12 x 1		Cable exit	
Cod.	12G	123	132	134	MBG	MBV
N. of wires	2	3	2	3	2	3
Supply connection: Ub	1	1	1	1	brown	brown
Negative connection: 0V	2	2	3	3	white	green
Signal: S +	-	3	-	4	-	white
Ground	GND	GND	2	2	grey	grey

OPTIONS

--- Electric connection EN 175301-803 A	EPD - EPDM gasket for sensor
M12 - Connector M12 x 1, 4 poles	NBR - NBR (nitrile) gasket for sensor ⁽¹⁾
PVC - Cable output, with 1 mt PVC cable	C01 - Calibration report
FPM - FPM gasket for sensor ⁽¹⁾	A02 - Accuracy $\pm 0,25\%$ of the range ⁽²⁾
CRP - CR gasket for sensor	VS3 - Restrictor $\varnothing 0,3$ mm for pressure range 60 bar
	CUS - MET execution complying with UL/CSA

(1) Available mixtures for process connection DIN 3852-E.

(2) Linearity (BFSL) $\leq \pm 0,125\%$ of span; for measuring ranges ≤ 60 bar. Not available for range 0,06bar and MET (UL/CSA) version.

“HOW TO ORDER” SEQUENCE

Section / Model / Version / Range / Process connection / Output signal / Electric connection / Wiring / Gasket / Options
8 ST2 --- 21M 1 --- 12G...134 FPM C01...VS3
CUS 2DM 4 M12 MBG.MBV CRP
23M 5 PVC EPD
41M 8 NBR
43M R



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