

pressure transmitter with ceramic sensor, accuracy 0,5%



PED 2014/68/UE
EMC 2014/30/UE
RoHs 2011/65/UE



UL, 61010-1
CSA, C22.2 No 61010-1
Authorization N. E114472



The ST18 model is an electronic transmitter with ceramic sensor, with adjustable zero and span, for air, industrial and technical gases, water and oil. When assembled with a diaphragm seal, it can measure the pressure of corrosive, highly viscous and hot fluids.

8.ST18

Measuring ranges: 0...1/0...600 ⁽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.

Non-linearity (BFSL): $\leq \pm 0,25$ % of the range, according to IEC 61298-2.

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

Accuracy: $\leq \pm 0,5\%$ of the range ⁽²⁾.

Thermal drift: between 0 and 80°C, 1% of span; 2,5% of span, max ⁽³⁾.

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

Zero and span adjustment: ± 10 % span typical.

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

Ambient temperature: -25...+85 °C ⁽⁴⁾.

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: ceramic in Al₂O₃.

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

Protection degree: IP 65 according to IEC 60529 ⁽⁵⁾.

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

Weight: 0,18 kg

(1) 400bar max for MET (UL/CSA) version

(2) max measuring error according to IEC 61298-2, non-linearity and hysteresis included

(limit-point calibration and reference conditions according to IEC 61298-1);

accuracy $\leq \pm 0,75\%$ of span for measuring ranges 0...1 bar and 0...600 bar.

(3) + 0,5% of span for measuring range 1 bar

(4) -25...+75°C with cable output for MET (UL/CSA) version

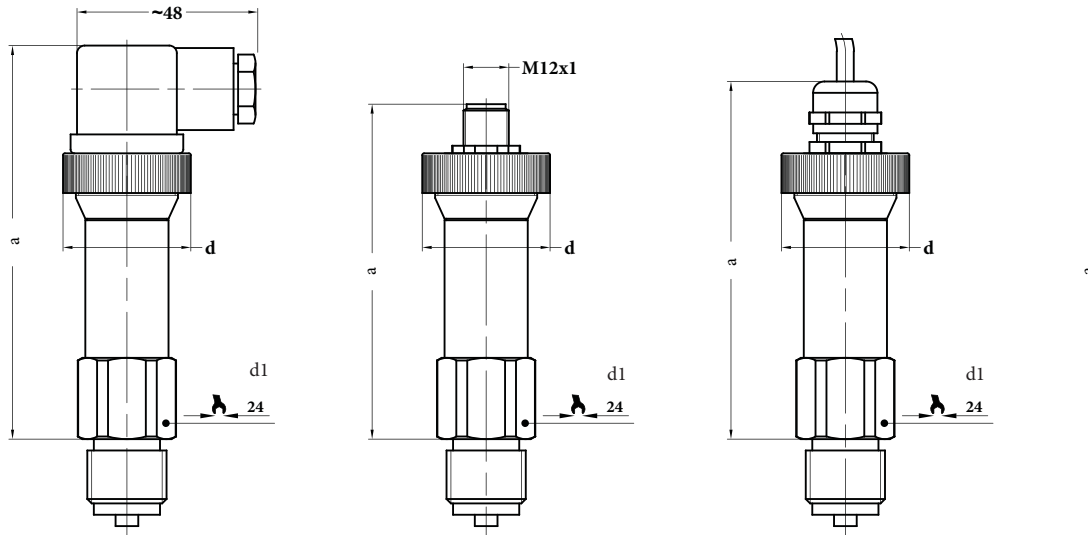
(5) with a properly assembled electrical connection

Ranges (Overpressure) bar, relative
0...1 (3)
0...1,6 (4)
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(500)
0...400 (600)
0...600 (800)

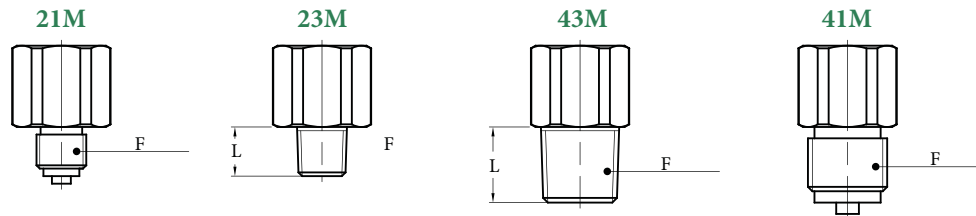
Ranges (Overpressure) psi, relative
0...15 (45)
0...30 (75)
0...50 (125)
0...60 (150)
0...100 (200)
0...150 (300)
0...200 (400)
0...300 (600)
0...500 (1000)
0...750 (1500)
0...1000 (2000)
0...1500 (3000)
0...2000 (4000)
0...3000 (4500)
0...5000 (7500)

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

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



Torque 20...30 Nm



Cod.	F	L
21M	G 1/4 A	(0.59") 13
23M	1/4-18 NPT	(0.51") 13
43M	1/2-18 NPT	(0.78") 20
41M	G 1/2 A	(0.90") 20

Electric connection	a	d	d ₁	Weight
---	(4.09") 104	(1.33") 34	(0.94") 24	(0.36 lbs) 166 g
M12	(3.50") 89	(1.33") 34	(0.94") 24	(0.36 lbs) 166 g
PVC	(3.74") 95	(1.33") 34	(0.94") 24	(0.36 lbs) 166 g
U68	(3.54") 90	(0.90") 23	(0.94") 24	(0.36 lbs) 166 g

All output signals are provided with protection against short circuit and polarity inversion. Insulation tension 500 Vdc.

WIRING

N. of wires	DIN 175301-803 A		M12 x 1		Cable exit	
	2	3	2	3	2	3
Supply connector: U+	1	1	1	1	brown	brown
Negative connector: U-	2	2	3	3	white	green
Signal: S +	-	3	-	4	-	white
Ground	GND	GND	2	2	grey	grey

OPTIONS

M12 - Connector M12 x 1, 4 poles	EPD - EPDM gasket for sensor
PVC - Cable exit, with 1 mt PVC cable	NBR - NBR gasket for sensor
U68 - Cable exit IP68, with 1 mt polyurethane cable	C01 - Calibration certificate
FPM - FPM gasket for sensor	VS3 - Restrictor ø 0,3 mm
CRP - CR gasket for sensor	

“HOW TO ORDER” SEQUENCE

Section / Model / Version / Process connection / Output signal / Gasket / Options
8 ST18 CUS 41M 1 FPM C01...VS3
43M 4 CRP
21M 5 EPD
23M NBR