

TRANSMITTER FOR PRESSURE & TEMPERATURE ATM/T



26

Features

- Accuracy: $\leq \pm 0.1$ % FS
- Pressure ranges from 1 to 8,500 psi
- Temperature ranges from -40 to 300°F
- Temperature Accuracy: $\pm 4^\circ\text{F}$
- High overload: 3 x FS minimum
- 0/4-20 mA or 0-5/10 VDC Output

Product overview and applications

The ATM/T series 26 is a precision transmitter based on the STS well proven ATM 23 series but incorporating a PT100 measuring element to provide a dual output of either 4-20 mA or 0-5/10 VDC. Modular construction and the 20 year proven history of STS piezoresistive sensor technology provide manufacturing flexibility and fast delivery for all pressure ranges.

Examples of applications include:

- Machine installations
- Industrial process monitoring and control
- Heating and ventilation
- Hydraulics
- Test and calibration system

Specification

Pressure Measurement

Pressure ranges

Any range from 1 to 8,500 psi FS available, in any engineering units such as psi, Pa, in H₂O, bar.

Absolute from 0 - 2 to 0 - 360 psia FS

Gauge from 0 - 1 to 0 - 360 psig FS

Sealed from 0 - 150 to 0 - 8,500 psig FS*

Compound ranges from -15 to 360 psig FS**

Neg. ranges from 0 to -1 to 0 to -15 psig FS**

* Consult factory for higher pressure ranges

** Consult factory

Proof pressure

FS up to 15 psi: 45 psi

FS > 15 psi up to 4000 psi: 3 x FS

FS > 4000 psi up to 8500 psi: 12,000 psi

Consult factory for higher proof pressure

Burst pressure

FS up to 350 psi: > 3000 psi

FS up to 8500 psi: > 12,000 psi

Consult factory for higher burst pressure

Operating temperature range

-25 to 185°F (ambient)

-40 to 212°F (process media, Fig. 1)

-40 to 300°F (process media with cooling ext., Fig. 2)

Compensated temperature range

32 to 160°F (standard)

-15 to 185°F (option)

-40 to 185°F (option)

Temperature effects

±1.5% total for 32 to 160°F

±2% total for 32 to 160°F, 7 to 30 psi

±2% total for -10 to 185°F

±2.5% total for -10 to 185°F, 7 to 30 psi

Temperature Measurement

Temperature measuring range

Any range between -40 to 300°F with a minimum temperature span of 50°F

Performance

Accuracy for pressure

Combined linearity, hysteresis, repeatability, Zero and Span set

≤ ±0.1% FS (≥ 7 psi FS),

≤ ±0.25% FS available

Accuracy for temperature

Accuracy: typical ± 4.0°F

Specification continued

Long term stability

0.1% FS/yr for pressure ranges > 30 psi

Prorated for ranges below 30 psi

Under standard conditions

Supply voltage

15 - 30 VDC

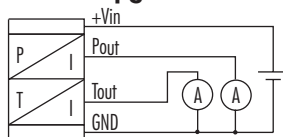
Influence of supply voltage < 0.1% FS

Output signals for pressure & temp.

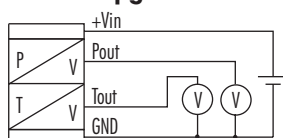
Dual 4 - 20 mA, 0 - 20 mA, 0 - 5 VDC or

0 - 10 VDC

Circuit diagram for current outputs:



Circuit diagram for voltage outputs:



Load resistance

Current output: $RL \leq (V_{supply} - 5V) / 0.02A$

Voltage output: $RL > 10k\Omega$

Influence of load resistance < 0.1% FS

Insulation resistance

> 50 megohms @ 500 VDC (@ 68°F)

Response time

< 1ms, 10 to 90% FS

Construction

Pressure media compatibility

Stainless steel 316L

Pressure connection

7/8"-14 UNF male frontal or flush diaphragm

Using a regular pressure connection will position the temperature sensor approximately 3/4" back from the process flowline.

Consult factory for other connections

Electrical connection

DIN 43650 (Fig. 3)

6-pin bayonet per MIL-C-26482 (10-6) (Fig. 4)

Polyurethane cable (Fig. 5)

Demountable versions/other types available

Specification continued

Weight

5 oz approximate (not including cable)

Vibration

10 g, 10 to 2000 Hz

Mechanical shock

100 g / 6 ms

Ordering information

Please specify the following:

- 1) Model number - ATM/T 26
- 2) Electrical connection
01 - DIN 43650
06 - 6 pin bayonet (mating connector extra)
15 - Polyurethane cable
- 3) Pressure range, including eng. units, type
- 4) Temperature measuring range
- 5) Accuracy (pressure)
- 6) Output signal (must be the same for P&T)
- 7) Cable length
- 8) Any special features

Example ordering format:

ATM 26 - 06 - 100 psig - 20 to 120°F - 0.1% - 4 to 20mA

Options

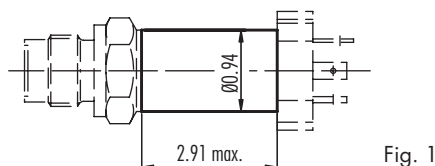
STS offers a wide range of options for these and other similar transmitters. Please consult the factory for any special requirements.

Examples include:

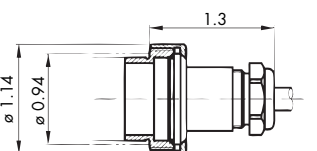
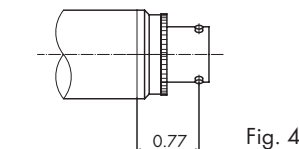
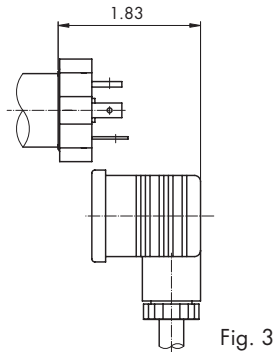
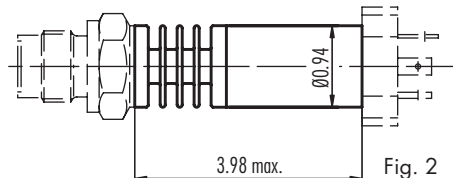
- Alternate electrical configurations
i.e. 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA
RS 485, CANopen
- Lightning protection
- Intrinsic safety certification
- Cooling extension
- Explosion proof certification
- Pressure snubber
- Special oil filling for food application etc.
- Alternate construction i.e. titanium, hastelloy
- Alternate seals i.e. EPDM, Kalrez
- Wide range of pressure connectors
- Wide range of electrical connectors
- Datalogging

Dimensions (inches)

Version for medium temperature up to 212°F



Version for medium temperature up to 300°F



Specifications may change without notice.

STS is registered ISO 9001-2000

10.00.0231B - 711



Process Measurement & Controls, Inc.
STS Sensors
11 Old Sugar Hollow Road
Danbury, CT 06810 U.S.A

Tel: 203-792-8686
Fax: 203-743-2051
e-mail: salesUS@sts-sensors.com
Internet: www.sts-sensors.com

Represented by: