

COMBINATION DEPTH/LEVEL & TEMPERATURE TRANSMITTER ATM.1ST/N/T



Features

- Fully submersible, 1" diameter
- Titanium or 316L SS construction
- Accuracy: $\leq \pm 0.1\%$ FS or $\leq \pm 0.25\%$ FS
Includes linearity, hysteresis, repeatability AND zero and span settings
- Ranges 20" WC to 360 psi
- Temperature Accuracy: $\pm 0.5^\circ\text{F}$ typical
- Temperature Range 25 to 175°F
- Dual 4-20mA, 3 or 4 wire configuration

Product overview and applications

The ATM.ST/N/T series is part of a comprehensive range of transmitters specifically designed for the long term monitoring of ground water, wastewater and tank level measurement. It provides a dual 4-20mA, 3 or 4 wire configuration for both level and temperature. Features such as Kevlar strengthened cable, titanium, ballast weights, dataloggers, etc. broaden the installation opportunities.

Examples of applications include:

- Deep wells, lakes, dams and reservoirs
- Bore holes
- Surface water, irrigation canals and rivers
- Wastewater and sewage treatment plants
- Tank level measurement

Specification

Pressure Measurement

Pressure ranges

Any range from 20"WC to 360 psi FS available, in any engineering units such as psi, Pa, inches H₂O, bar. Absolute or gauge types available

Proof pressure

FS up to 15 psi: 45 psi
FS > 15 psi up to 360 psi: 3 x FS (max. 360 psi)

Consult factory for higher proof pressure

Operating temperature range

25 to 175°F (process media)

Compensated temperature range

25 to 175°F

Accuracy for pressure

≤ ±0.1% FS

≤ ±0.25% FS

Combined linearity, hysteresis, repeatability, zero and span set

Total Error Band (TEB)

typ. ±0.8% total for 25 to 125°F, ≤ 7.25 psi

typ. ±1.3% total for 25 to 175°F, ≤ 7.25 psi

typ. ±0.3% total for 25 to 125°F, > 7.25 psi

typ. ±0.75% total for 25 to 175°F, > 7.25 psi

TEB includes linearity, hysteresis, repeatability, zero and span settings and temperature effects at max. signal span (16mA)

Response time

< 1ms (10 to 90%FS)

Long term stability

0.1% FS/yr for pressure ranges > 30 psi

Prorated for ranges below 30 psi

Under standard conditions

Specification continued

Temperature Measurement

Temperature range

Temperature measuring range: 25 to 175°F

Minimum temperature span: 55°F

Consult factory for other temperature ranges

Accuracy for temperature

Accuracy: < ± 0.5°F

Response time

T 0.50 - 60s, T 0.63 - 75s, T 0.90 - 160s

Electrical

Supply voltage

9 - 30 VDC

Influence of supply voltage < 0.05% FS

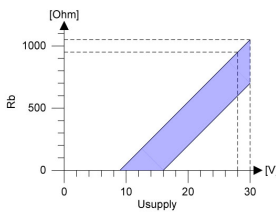
Output signals for pressure & temp.

Dual 4 - 20 mA, 3 or 4 wire configuration

Circuit diagram

3 and 4 wire configuration, see below

Load resistance



RL (max): (Vsupply - 9V)/0.02A

RL (min): (Vsupply - 15V)/0.02A

Influence of load resistance < 0.05% FS

Insulation resistance

> 50 megohms @ 500 VDC (@ 68°F)

Specification continued

Construction

Pressure media compatibility

Stainless steel 316L, Viton seals

Other seal materials, and titanium available

Pressure connection

Closed (Fig.1) POM nose cone (standard)

Open (Fig.2) POM nose cone with ø0.59" opening (option), other connections available

Electrical connection

Polyurethane, polyethylene or FEP cable

Fixed or field replaceable version (Fig.3)

Weight

6.5 oz approximate (not including cable)

Vibration / Mechanical shock

10 g, 10 to 2000 Hz / 100 g / 6 ms

Ordering information

Please specify the following:

- 1) Model number - ATM.1ST/N/T
- 2) Electrical connection
 - 15 - Polyurethane cable
 - 13 - Polyethylene cable
 - 21 - FEP cable
- 3) Pressure range, including eng. units, type
- 4) Temperature measuring range
- 5) Accuracy (pressure)
- 6) 3 or 4 wire configuration
- 7) Cable length

Example ordering format:

ATM.1ST/N/T - 15 - 20 psig - 0.1% -

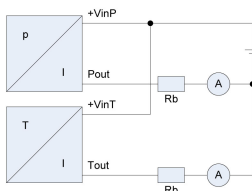
4-20mA (3 wire) - 20 feet cable

Options

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

Dimensions (inches)

Circuit diagram, 3-wire configuration



Circuit diagram, 4-wire configuration

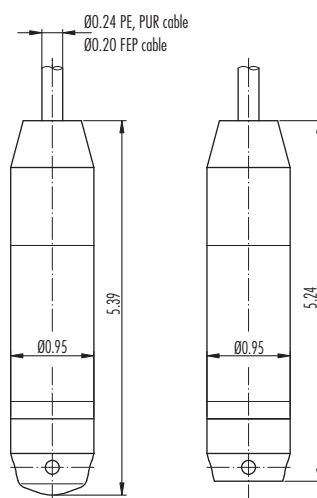
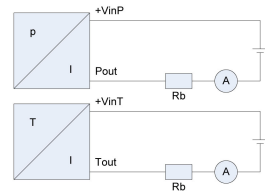


Fig. 1 closed

Fig. 2 open

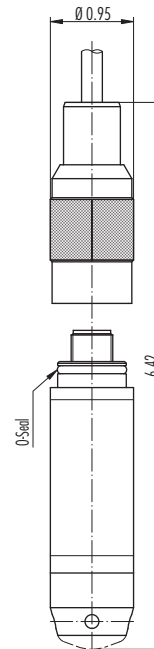


Fig. 3 Field replaceable cable

Specifications may change without notice.

STS is registered ISO 9001:2008

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PMC Engineering LLC
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: