

# PRESSURE & TEMPERATURE DEPTH/LEVEL TRANSMITTER ATM/N/T



31

## Features

- Fully submersible, 1" diameter
- Titanium or 316L SS construction
- Accuracy:  $\leq \pm 0.1\%$  FS or  $\leq \pm 0.25\%$  FS
- Ranges 40" WC to 360 psi
- Temperature Accuracy:  $\pm 1^\circ\text{F}$  typical
- Temperature Range 25 to 125°F
- 4-20mA or 0-5/10 VDC outputs

## Product overview and applications

The ATM/N/T series 31 is part of a comprehensive range of transmitters specifically designed for the long term monitoring of ground water, wastewater and tank level measurement. The series 31 provides a conventional 4-20mA, 2-wire configuration or 0-5/10 VDC, 3-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 1 to 360 psi FS available, in any engineering units such as psi, Pa, inches H<sub>2</sub>O, 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 125°F (process media)

**Compensated temperature range**

25 to 125°F

**Temperature effects**

±1.5% total for 25 to 125°F

±2% total for 25 to 125°F, 7 to 30 psi FS

**Temperature Measurement**

Temperature measuring range: 25 to 125°F

Minimum temperature span: 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 ± 1.0°F, max. ± 2.0°F

**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

**Specification continued**

**Load resistance**

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

Voltage output:  $RL > 10k\Omega$

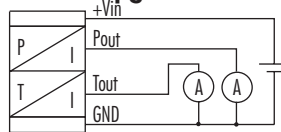
Influence of load resistance < 0.1% FS

**Output signals for pressure & temp.**

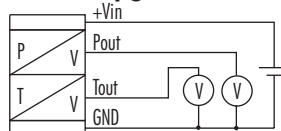
Dual 4 - 20 mA, 0 - 20 mA, 0 - 5 VDC or

0 - 10 VDC

**Circuit diagram for current outputs:**



**Circuit diagram for voltage outputs:**



**Insulation resistance**

> 50 megohms @ 500 VDC (@ 68°F)

**Response time**

< 1ms, 10 to 90% FS

**Construction**

**Pressure media compatibility**

Stainless steel 316L, Viton seals

Other seal materials available

Titanium version available

**Pressure connection**

Closed (Fig. 1) POM nose cone

(supplied as standard)

Open (Fig. 2) POM nose cone with ø0.59"

opening available as option

Other connections available

**Electrical connection**

Polyurethane, polyethylene or teflon cable

Fixed or field replaceable version (Fig. 3)

available

**Specification continued**

**Weight**

6 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/N/T 31

2) Electrical connection

15 - Polyurethane cable

13 - Polyethylene cable

21 - Teflon 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/N/T 31 - 15 - 20 psig - 0.1% - 4-20mA -

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.

**Examples include:**

- Alternate electrical configurations

i.e. 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA

- Lightning protection

- Intrinsic safety certification

- Special oil filling for food application etc.

- Alternate construction i.e titanium

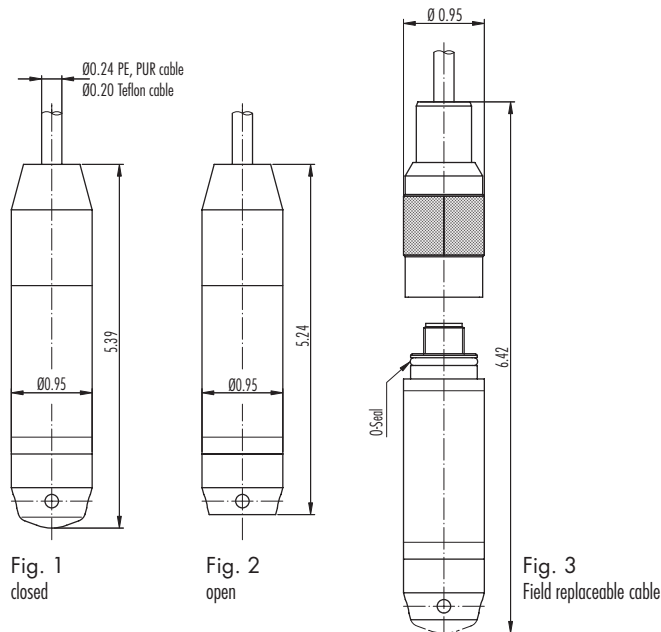
- Alternate seals i.e. EPDM, Kalrez

- Wide range of pressure connectors

- Wide range of electrical connectors

- Datalogging

**Dimensions (inches)**



Specifications may change without notice.

STS is registered ISO 9001-2000

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