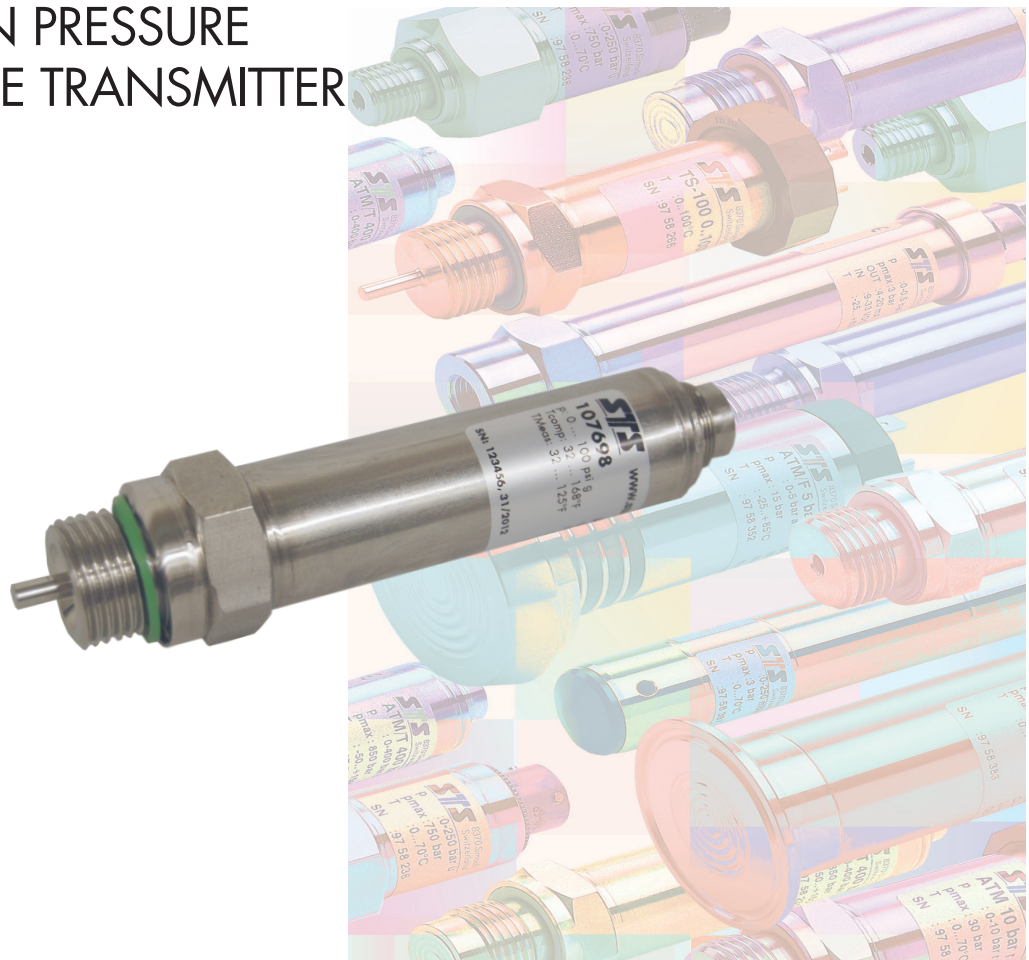


# COMBINATION PRESSURE & TEMPERATURE TRANSMITTER ATM.1ST/T



## Features

- Dual 4-20mA, 3 or 4 wire configuration
- 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 1 to 360 psi  
*Ranges up to 15,000 psi consult factory*
- Temperature Accuracy:  $\pm 0.8^\circ\text{F}$  typical
- Temperature Range  $-58$  to  $300^\circ\text{F}$
- High overload: 3 x FS minimum

## Product overview and applications

The ATM.1ST/T is a precision transmitter based on the STS well proven ATM series but incorporating a PT1000 measuring element to provide a dual 4-20mA output in either 3 or 4 wire configuration. Modular construction, backed by the 25 year proven history of STS piezoresistive sensor technology, provide manufacturing flexibility and fast delivery for all ranges.

Examples of applications include:

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

**Specification**

**Pressure Measurement**

**Pressure ranges**

Any range from 1 to 360 psi FS available  
 Any engineering units such as psi, Pa, inches H<sub>2</sub>O, bar etc. available  
 Absolute from 0 - 2 to 0 - 360 psia FS  
 Gauge from 0 - 1 to 0 - 360 psig FS  
 Ranges up to 15,000 psi consult factory

**Proof pressure**

FS up to 15 psi: 45 psi  
 FS > 15 psi up to 360 psi: 3 x FS  
 Consult factory for higher proof pressure

**Operating temperature range**

-40 to 255°F (process media)

**Compensated temperature range**

32 to 160°F (standard)  
 -15 to 212°F (optional)  
 -40 to 212°F (optional)

**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 32 to 160°F, ≤ 7.25 psi  
 typ. ±1.3% total for -15 to 212°F, > 7.25 psi

typ. ±0.3% total for 32 to 160°F, > 7.25 psi  
 typ. ±0.75% total for -15 to 212°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**

Any range between -58 to 300°F with a minimum temperature span of 55°F

**Accuracy for temperature**

Accuracy: < ± 0.8°F

**Response time**

T 0.50 - 2s, T 0.63 - 3s, T 0.90 - 5s

**Electrical**

**Supply voltage**

9 - 30 VDC  
 Influence of supply voltage < 0.05% FS

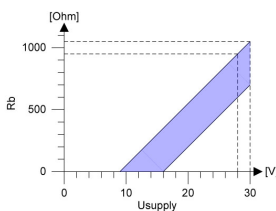
**Output signals for pressure & temp.**

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

**Pressure connection**

Standard:  
 1/2 NPT male with probe øT 0.16" x L 0.11"  
 Optional:  
 9/16"-18 UNF male  
 Optional probe lengths (L): 1/2", 1", 2", 3"  
 Consult factory for other options

**Electrical connection**

DIN 43650 (Fig. 3)  
 6-pin bayonet per MIL-C-26482 (10-6) (Fig. 4)  
 Polyurethane cable (Fig. 5)  
 Other connections on request

**Weight**

5.5 oz approximate (not including cable)

**Vibration / Mechanical shock**

4 g, 4 to 100 Hz / 100 g / 6 ms

**Ordering information**

Please specify the following:

- 1) Model number - ATM.1ST/T
- 2) Electrical connection
  - 01 - DIN 43650 (mating connector extra)
  - 06 - 6 pin bayonet (mating connector extra)
  - 15 - Polyethylene cable
- 3) Pressure range, including eng. units, type
- 4) Temperature measuring range
- 5) Accuracy (pressure)
- 6) 3 or 4 wire configuration
- 7) Cable length
- 8) Pressure connection and probe length

Example ordering format:

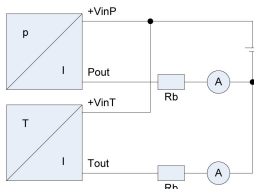
ATM.1ST/T - 06 - 100 psig - 0.1% - 4-20mA (3 wire), 1/2 NPT M, øT 0.16" x L 0.11"

**Options**

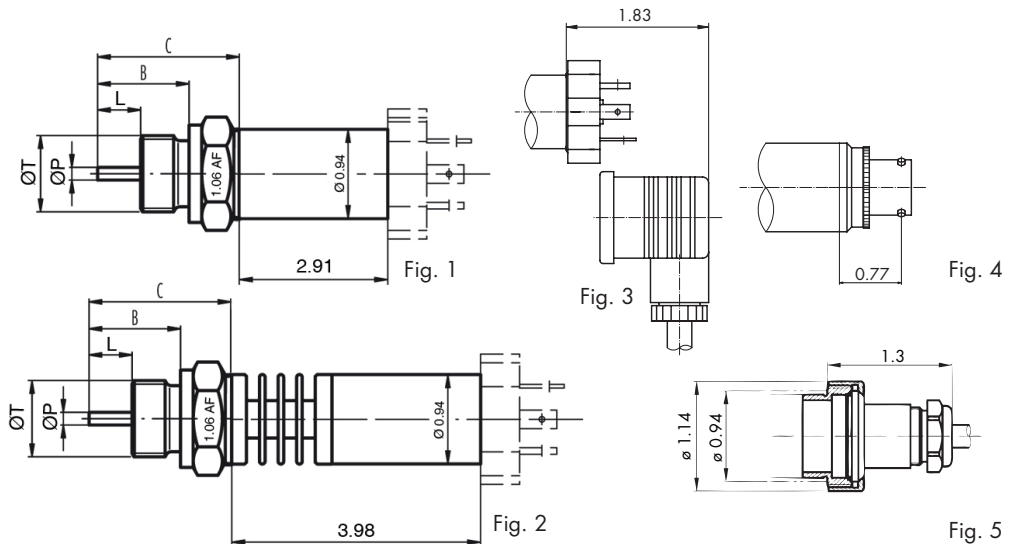
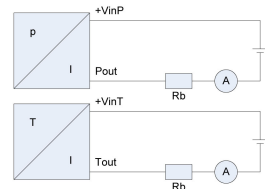
STS offers a wide range of options for these and other similar transmitters. Please consult the factory for any special requirements.

**Dimensions (inches)**

Circuit diagram, 3-wire configuration



Circuit diagram, 4-wire configuration



Dimensions (see pressure connection details above for options)  
 L B C øP (probe) øT (thread)  
 0.11 0.78 1.28 0.16 1/2 NPT male

Specifications may change without notice.

STS is registered ISO 9001:2008

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