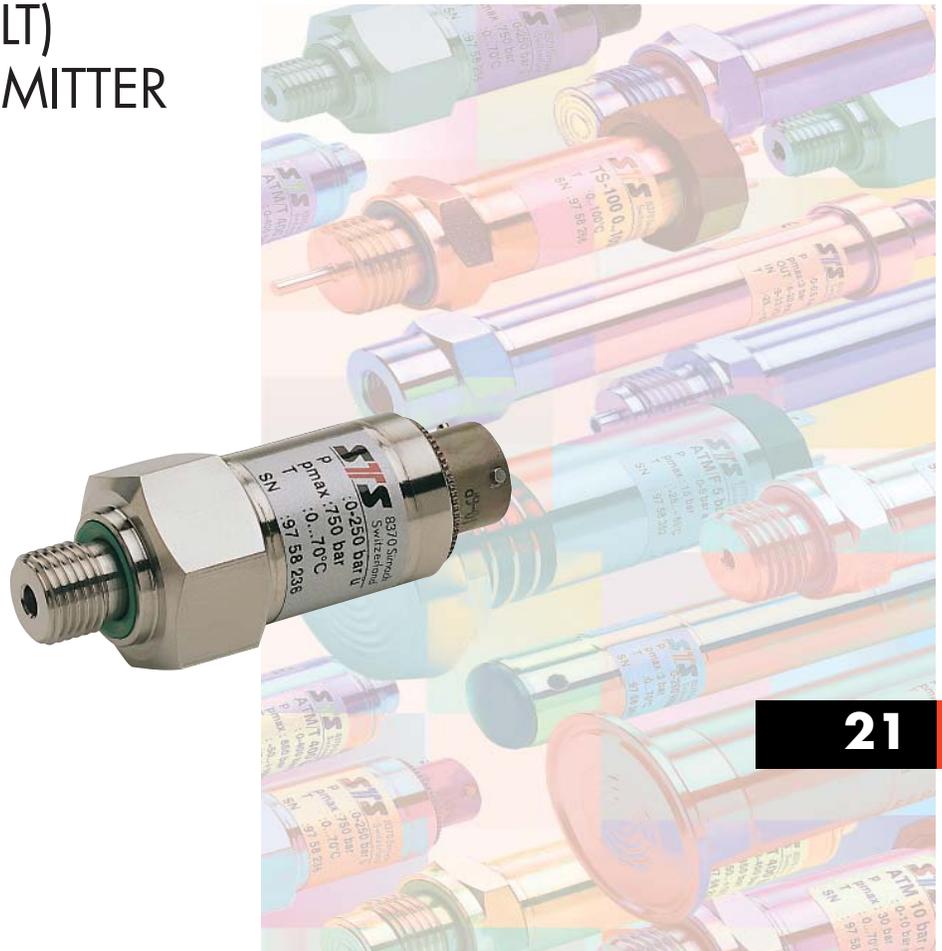


# PASSIVE (MILLIVOLT) PRESSURE TRANSMITTER TM



21

## Features

- Full scale ranges from 1 to 15,000 psi
- Gauge, absolute or sealed gauge
- High overload: 3 x full scale
- Operating temperature: -40 to 300°F
- Typical annual stability of 0.1%

## Product overview and applications

The TM series 21 is a precision passive pressure transducer offering high performance and rugged flexible design for a wide range of industrial and OEM applications. The transducer is based on STS piezoresistive sensor technology with 20 years proven history. Low current consumption and pulsed operation make this an ideal pressure transducer for remote applications for long term operation and where limited power is available. The TM is ideal for the OEM looking for good price/performance and customer/technical support.

Examples of applications include:

- Machine control
- Environmental monitoring
- Test and calibration system
- Remote monitoring applications

### Specification

#### Measurement

##### Pressure ranges

Any range from 1 to 15,000 psi FS available, in any engineering units such as psi, Pa, in H<sub>2</sub>O, 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 - 15,000 psig FS

Compound ranges from -15 to 360 psig FS\*

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

\*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 9000 psi: 12,000 psi

FS > 9000: 22,000 psi

Consult factory for higher proof pressure

##### Burst pressure

FS up to 350 psi: > 3000 psi

FS up to 9000 psi: > 12,000 psi

FS > 9000 psi: > 22,000 psi

Consult factory for higher burst pressure

##### Operating temperature range

-25 to 185°F (ambient)

-40 to 300°F (process media)

##### 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, > 30 psi FS

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

±2% total for -15 to 185°F, > 30 psi FS

±2.5% total for -15 to 185°F, 7 to 30 psi FS

#### Performance

##### Accuracy

≤ ±0.25% FS BSL which includes typical

hysteresis and repeatability of ±0.02%

≤ ±0.1% FS BSL on request

Also available with ≤ ±0.5% FS including combined linearity, hysteresis, repeatability and zero and span settings

### Specification continued

#### Common mode voltage

1/2 supply voltage ±10%

#### Long term stability

0.1% FS/yr for pressure ranges > 30 psi FS

Prorated for ranges below 30 psi FS

Under standard conditions

#### Supply voltage

10 VDC standard, will operate 1 - 15 VDC

#### Output signal

Output ratiometric with supply voltage

For 10 VDC supply full scale outputs are:

Ranges up to 4 psi 15 mV

Ranges above 4 psi up to 9 psi 25 mV

Ranges above 9 psi up to 15 psi 35 mV

Ranges above 15 psi 50 mV

Higher output signals on request

#### Input impedance

> 10k ohm

#### Bridge resistance

3k ohm typical

#### Insulation resistance

> 50 megohms @ 500 VDC (@ 68°F)

#### Response time

< 0.1ms/10 to 90% FS

#### Construction

Pressure media compatibility

Stainless steel 316L, Viton seals

Other seal materials available

Fully welded 316L version on request

#### Pressure connection

1/4" NPT male

Other connections available

#### Electrical connection

DIN 43650 (Fig. 2)

6-pin bayonet per MIL-C-26482 (10-6) (Fig. 3)

Polyurethane cable (Fig. 4)

Demountable versions and other types available

### Specification continued

All sensors carry the CE mark

#### Weight

3.5 oz approximate (not including cable)

### Ordering information

Please specify the following:

1) Model number - TM 21

2) Electrical connection

01 - DIN 43650

06 - 6 pin bayonet (mating connector extra)

15 - Polyurethane cable

3) Pressure range, including eng. units, type

4) Accuracy

5) Any special features

Example ordering format:

TM 21 - 15 - 100 psig - 0.25% - 30 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 5VDC, 0 to 10 VDC, 0 to 20 mA,

4 to 20 mA, RS485, CANopen

- Lightning protection

- Intrinsic safety certification (current output)

- Cooling extension

- Explosion proof certification

- Pressure snubber

- Special oil filling for food application etc.

- Alternate construction i.e. titanium, hastelloy

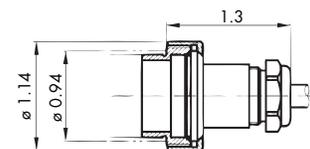
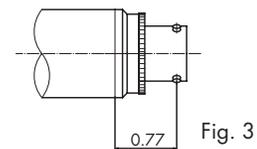
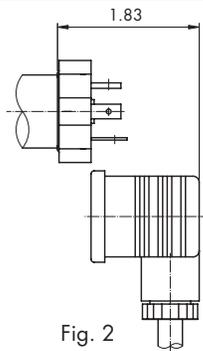
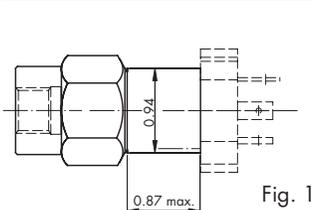
- Alternate seals i.e. EPDM, Kalrez

- Wide range of pressure connectors

- Wide range of electrical connectors

- Datalogging

### Dimensions (inches)



Specifications may change without notice.

STS is registered ISO 9001-2000

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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:**