



## OEM PIEZORESISTIVE PRESSURE TRANSDUCER TD



## Global Sensor Excellence

### Features

- Fast Response  $\geq 0.1\text{ms}$
- 0-1 to 0-20,000 psi
- 316L/Titanium
- $\leq 0.005\%$  Achievable
- -40 to 300°F

### Applications

- Calibration Inst.
- Monitoring Inst.
- Oceanographic
- Gas Flow
- OEM

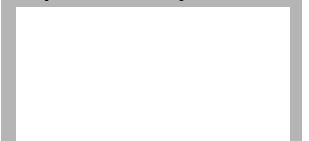
## PRODUCT OVERVIEW

The TD series 10 is a precision pressure transducer offering high performance for OEM users in a wide range of industrial applications. The transducer is based on STS piezoresistive sensor technology with over 30 years proven history. Extremely good hysteresis and repeatability of typically 0.005% provide the user with the opportunity of transducer compensation to a very high level of total accuracy.

### Contact

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Represented by:



## Specification

### Measurement

#### Pressure ranges

Any range from 0-1 to 0-15,000 psi FS available.

Absolute from 0-1 to 0-15,000 psia FS

Gauge from 0-1 to 0-1,000 psig FS

Sealed gauge from 0-150 to 0-15,000 psig FS

Barometric 18-32" Hg (others available)

Compound from ±0.5 to -14.7 to 1,000 psi\*

\*must specify exact range. Performance related to the span.

Ranges up to 20,000 psi available. Consult factory.

#### Proof Pressure

FS up to 15 psi: 45 psi

FS > 15 psi up to 4,000 psi: 3 x FS

FS > 4,000 psi up to 9,000 psi: 12,000 psi

FS > 9,000: 22,000 psi

Consult factory for higher proof pressure

#### Burst Pressure

FS up to 350 psi: >3,000 psi

FS up to 9,000 psi: >12,000 psi

FS > 9,000 psi: >22,000 psi

Consult factory for higher burst pressure

#### Process Temperature Range

-40 to 300°F (standard)

-65 to 300°F (option)

#### Compensated Temperature Range

32 to 160°F (standard)

-15 to 185°F (option)

-15 to 212°F (option)

-40 to 212°F (option)

#### Temperature Effects

±0.008% FS/°F for zero and span of ranges > 30 psi FS

Prorated for ranges < 30 psi FS

### Performance

#### Accuracy

Based on supplied component values to achieve ±0.25% or ±0.5%, ±0.1% on request. Typical hysteresis and repeatability is <0.005%

#### Typical Long Term Stability

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

Prorated for ranges below 30 psi FS

Under standard conditions

## Specification Continued

#### Process Media Compatibility

Stainless Steel 316L, Titanium or Hastelloy

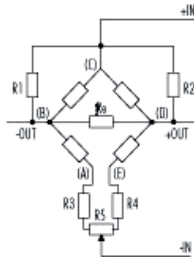
Viton seals (Other materials available)

#### Recommended Excitation

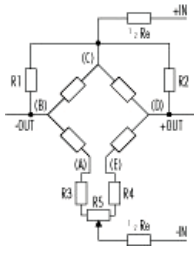
Current: 1 mA DC

Voltage: 10 VDC (range 1 to 15 VDC)

#### Current Excitation



#### Voltage Excitation



#### Compensation

##### Resistor R1, R2

Used for compensation of the zero temperature coefficient. Either R1 or R2 (not both) to be inserted into the circuit. An R1 or R2 value is provided.

##### Resistor R3, R4

Zero-compensation resistors. Either R3 or R4 is used (not both), with the other replaced by a jumper (0 Ohm resistor).

##### Resistor RE

Used for compensation of the temperature coefficient of the sensitivity. An RE value is provided.

##### Resistor R5

Potentiometer (if used) for the zero-adjustment (recommended value: 100 Ohm).

## Specification Continued

#### Output Signal

From 10 to 100 mV at nominal pressure, with 1 mA excitation

(FS signal depends on pressure range)

#### Bridge Resistance

3 Kohms typically

#### Insulation Resistance

> 50 Mohms @ 500 VDC (@ 68°F)

#### Frequency range

0 to ≥10 kHz

#### Vibration

>30g

#### Electrical Connection

5 gold plated pins

## Ordering Information

For ordering code go to:

[www.pmc1.com/orderTD](http://www.pmc1.com/orderTD) OR

Call the factory at: 203 792-8686

## Options

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

#### Example include:

Alternate electrical configurations

i.e. RS485, HART etc.

Lightning protection

Intrinsic safety certification

Pressure snubber

Special oil filling for food application etc.

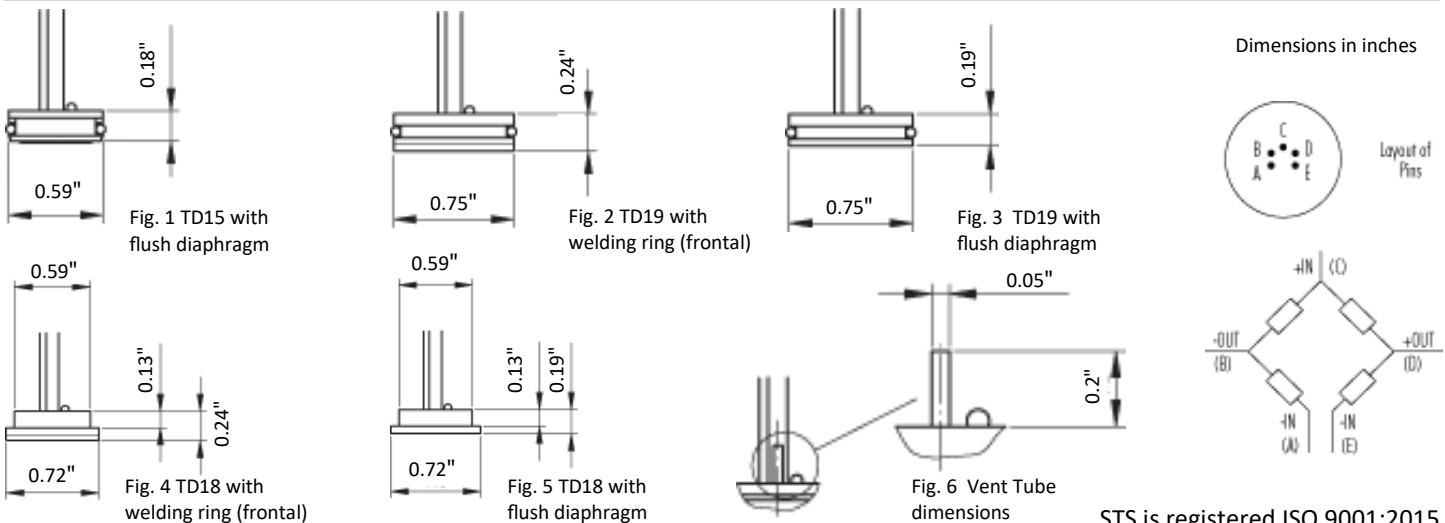
Alternate seals i.e. EPDM, Kalrez

Wide range of pressure connectors

Wide range of electrical connectors

PMC Engineering adopts a continuous development program which sometimes necessitates specification changes without notice

## MECHANICAL DETAILS



STS is registered ISO 9001:2015