

## The TD1000 Series Ultra High Resolution Digital Measurement, General Purpose, Pressure Transducer

**SERIES: TD1000**

### FEATURES

- Totally digital proprietary design
- Innovative redundant sensing elements
- 24V digital output for pressure or temp switch point
- Voltage and current outputs
- Vacuum and compound pressure ranges available
- Custom pressure Ranges and outputs available
- More standard pressure ranges, Industry First
- 0.25% and 0.15% accuracy available
- Optional 4x or 10x over pressure (on most ranges)
- ASIC technology, no zero/span potentiometers
- All stainless steel welded housing
- IP-69K rated seal available (high pressure wash down)
- Innovative low current consumption, ideal for custom wireless solutions
- Programable systems available for OEM/systems integrators for in-house configuring of outputs, ranges and set points to reduce inventory and lead times
- Calibration Certificates available (contact customer service)

### DESCRIPTION

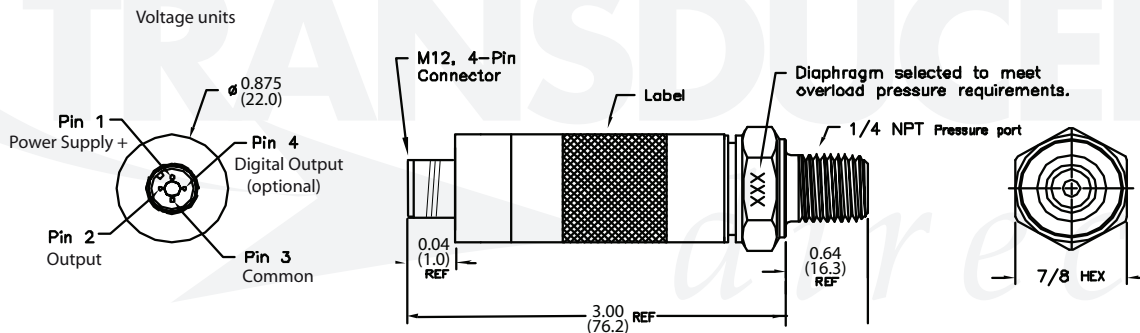
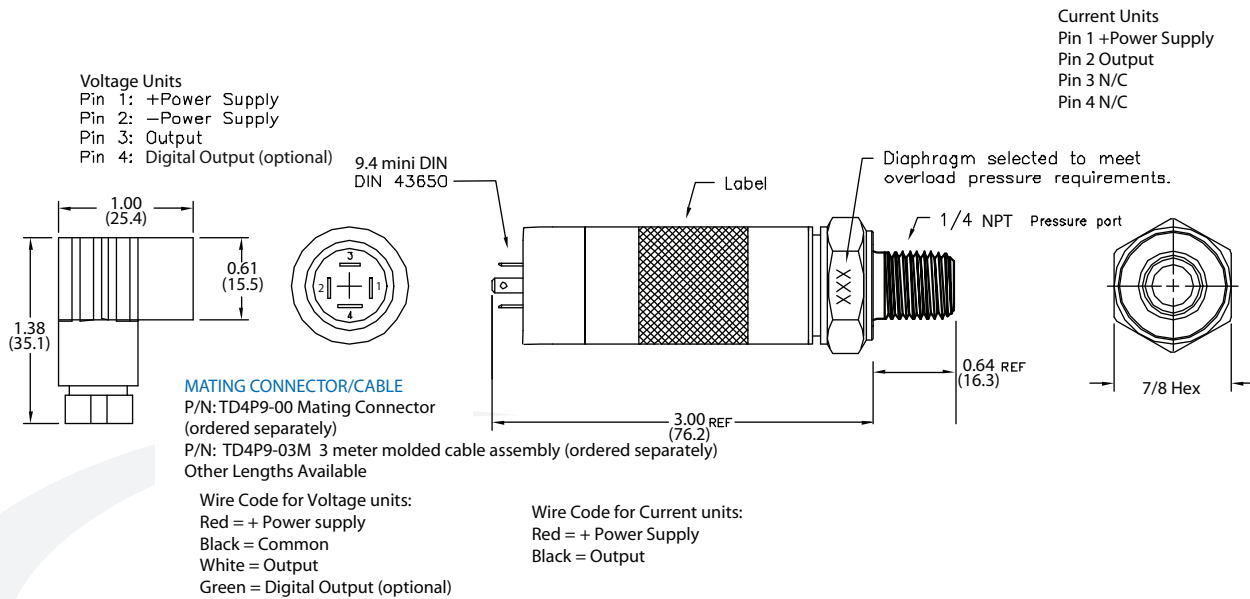
The TD1000 Series digital/configurable (an industry first) industrial pressure transducer features stability and accuracy over a wide temperature range at lower cost than competitive units typically not found in older analog designs yet is plug and play with most lower grade competitive units.

With its proprietary digital/ASIC technology, the TD1000 Series features field proven redundant sensing elements without the need for solder in resistors or trim pots that can drift over time. This provides years of excellent performance and reliability even in the harshest/demanding applications. This combined with optional 4x or 10x over pressure and the optional integrated temperature or pressure digital switch feature, makes the TD1000 Series truly an industry first and second to none.

For extreme applications where power washers are used for wash down, the TD1000 Series optional IP69K seal, another industry first, makes it ideal no matter what the environment.

With its flexible low power design and lower manufacturing costs, the TD1000 Series offers outstanding value and makes it ideal for custom wireless applications.

## ELECTRICAL CONNECTIONS



## SPECIFICATIONS

### Performance

#### Accuracy

Performance @ 25°C (77 °F)

0.25% (optional 0.15%) BFSL - (vac to zero range with 4-20mA output, 0.5% BFSL), TD1010 units: 0.5% BFSL (includes non-linearity, hysteresis and non-repeatability)

#### Overrange Protection

2x Rated Pressure or optional 4x and 10x

#### Pressure Range

see ordering chart - up to 6000 psi (414 bar) (optional higher ranges available)

#### Burst Pressure

5x or 20,000 psi, whichever is less

#### Pressure Cycles

>100 million

#### Update Time

<=1msec

#### Digital Output

Optional digital output for pressure, maintenance or temp switch point (not available on 4-20mA output units), max load current 20mA

### Environmental Data

#### Temperature

#### Compensated Temperatures

-40° to 100° C (-40 to 212° F)

#### Operating Temperatures

-40° to 100° C (-40 to 212° F)

#### Storage

-40° to 125° C (-40° to 250° F)

#### TEB

0.9% FS

#### Long Term Drift

0.2% FS/year (non-cumulative)

#### Shock

100g, 11 ms, 1/2 sine

#### Vibration

20g, peak, 20 to 2400 Hz

#### EMI/FRI Protection

Yes

#### Rating

Up to IP-69K available (high pressure wash down)

#### Approvals

CE

### Mechanical Configuration

#### Pressure Connections

See ordering chart

#### Wetted Material

17-4PH stainless steel (for other materials consult factory)

#### Electrical Connection

Cable, 9.4 Din, IP-69K 4 pin M12 Connector

#### Case

(housing) 304 stainless steel

### Electrical Data

#### Excitation

4-28VDC, Typ (must be at least 0.3V above full output voltage), 7.5VDC min for 4-20mA

#### Output

See ordering chart. All voltage outputs are 3 wire, 4-20mA output is 2 wire.

#### Output Impedance

<100 Ohms, Nominal

#### Current Consumption

25mA max (current output), <5mA (voltage output)

#### Output Noise

<2mV RMS

#### Reverse Polarity Protection

Yes

#### Zero and Span Offset Tolerance

1%

#### Maintenance Mode

The maintenance mode digital output indicates 1/2 bridge failure and can be selected instead of pressure or temp set point with the designation "M".

#### Set Point for Pressure or Temp

For pressure, this is done by selecting a percentage of your transducer's full positive range (not vacuum) and this will be the set point (40% of a 1000 psi range will have the set point at 400psi) "P40".

For temperature, select your set point in degrees C such as 40° C (104° F) and this will be the set point "T40". When set point is reached and becomes active there is a digital output on pin 4.

#### Set Point Hysteresis/Reset

5% below pressure set point or 1° C below temp set point

## ORDERING

Series	Output	Pressure Type	Pressure Range	Pressure Connection	Electrical Connection	Accuracy	Pressure or Temp Set Point % (P or T), Maint Mode
TD1000	BB	G	0015	03	Q00	2	T40

TD1000

BB= 4-20mA

G = Gauge

V000 0300

03= 1/4" NPT Male

Q00= IP69K M12

2 = 0.25%

X = No set point

= 2x Over Pressure

CC= 0-5 vdc

V015 0400

09= 7/16" x 20

D00= 4 pin

1 = 0.15%

M = Maintenance Mode

TD1004

DD= 0-10 vdc

V045 0500

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9.4 Mini DIN

3 = 0.5%

P or T10= 10% of pressure range or 10° C

= 4x Over Pressure

HH= 1-5 vdc

V085 0600

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(TD1010)

P or T20= 20% of pressure range or 20° C

(up to 5000 psi)

JJ= 1-6 vdc

V135 0700

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P or T30= 30% of pressure range or 30° C

TD1010

GG= 0.5-5.5 vdc

V185 0800

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P or T40= 40% of pressure range or 40° C

= 10x Over Pressure

(nonratiometric)

V285 0900

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P or T50= 50% of pressure range or 50° C

(up to 2000 psi)

WW= 0.5-4.5 vdc

0015 2000

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P or T60= 60% of pressure range or 60° C

(nonratiometric)

0025 3000

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P or T70= 70% of pressure range or 70° C

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0050 4000

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P or T80= 80% of pressure range or 80° C

0100 5000

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P90= 90% of pressure range

0150 6000

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(P= % of the full pressure range selected)

0200 010K

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(full temp range is 10 to 80° C) \*\*

0250

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Pressure, maintenance and temp set points are available with voltage outputs only.

\*\*= Consult factory for further options.

Consult factory for quick ship versions.

Configured as normally-open.

All straight-thread o-rings are Viton. It is customer's responsibility to determine compatibility.

REV. 8.22