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

FEATURES
• Totally digital proprietary design
• Innovative redundant sensing elements
• 24V digital output for pressure or temp switch point
• Voltage and current outputs
• Spike Monitoring Technology™
• 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.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use. While we provide application assistance personally, through our literature and the Transducers Direct web site, it is up to the customer to determine the suitability of the product in the application.
ELECTRICAL CONNECTIONS

**MATING CONNECTOR/CABLE**
- P/N: TD4P9-00 Mating Connector (ordered separately)
- P/N: TD4P9-03M 3 meter molded cable assembly (ordered separately)

Other Lengths Available
- Wire Code for Voltage units:
  - Red = + Power supply
  - Black = Common
  - White = Output
  - Green = Digital Output (optional)

- Wire Code for Current units:
  - Red = + Power Supply
  - White = Output
  - Blue = Common
  - Black = Digital Output (optional)

**M12 MATING CABLE ASSEMBLIES**

**VOLTAGE OUTPUT TRANSDUCERS ONLY**
- M12 with 2 LEDs (green and yellow) Green shows power, Yellow shows digital output
- P/N: TDM12-4F69-CR2L-01M 1 meter molded cable assembly
  - for voltage outputs only

**CURRENT OUTPUT TRANSDUCERS ONLY**
- M12 with no LEDs
- P/N: TDM12-4F69-CR-01M 1 meter molded cable assembly
  - for 4-20mA outputs (no digital output available with 4-20mA outputs)

Other Lengths Available
- Wire Code for voltage units:
  - Brown = + Power Supply
  - White = Output
  - Blue = Common
  - Black = Digital Output (optional)

- Wire Code for Current units:
  - Brown = + Power Supply
  - Blue = Output
Performance @ 25°C (77 °F)
Accuracy 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
Output Impedance <100 Ohms, Nominal
Current Consumption <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

Series
<table>
<thead>
<tr>
<th>Output</th>
<th>Pressure Type</th>
<th>Pressure Range</th>
<th>Pressure Connection</th>
<th>Electrical Connection</th>
<th>Accuracy</th>
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<tbody>
<tr>
<td>TD1000</td>
<td>B8</td>
<td>G = Gauge</td>
<td>V000 0300</td>
<td>Q00= IP69K M12</td>
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<td></td>
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<td>03= 1/4” NPT Male</td>
<td>D00= 4 pin **</td>
<td>2 = 0.25%</td>
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<td>03= 7/16” x 20</td>
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<td>1 = 0.15%</td>
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<td>03= 9/16” x 20</td>
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<td>3 = 0.5%</td>
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<td>03= 11/16” x 20</td>
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<td>TD1004</td>
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<td>CC= 0-5 vdc</td>
<td>V015 0400</td>
<td>9.4 Mini DIN</td>
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<td>DD= 0-10 vdc</td>
<td>V045 0500</td>
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<td>HH= 1-5 vdc</td>
<td>V085 0600</td>
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<td>JJ= 1-6 vdc</td>
<td>V135 0700</td>
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<td>TD1010</td>
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<td>GG= 0.5-5.5 vdc</td>
<td>V185 0800</td>
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<td>WW= 0.5-4.5 vdc</td>
<td>V285 0900</td>
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 consult factory for further options.

Ordering: Consult factory for quick ship versions.

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