TRANSDUCERS direct®

"APPLYING TODAY'S TOOLS WITH YESTERDAY'S EXPERIENCE PROVIDING OUR CUSTOMERS THE SOLUTIONS OF TOMORROW."

NEW

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

PRELIMINARY

SERIES: TD1000

FEATURES

- Totally digital proprietary design
- Innovative redundant sensing elements
- 24V digital output for pressure or temp switch point
- Voltage and current outputs
- Custom pressure Ranges and outputs available
- More standard pressure ranges, Industry First
- Optional 4x or 10x over pressure (on most ranges)
- 0.25% (for higher accuracy see TD2000)
- 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
- Programmable systems available for OEM/systems integrators for in-house configuring of outputs, ranges and set points to reduce inventory and lead times

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.

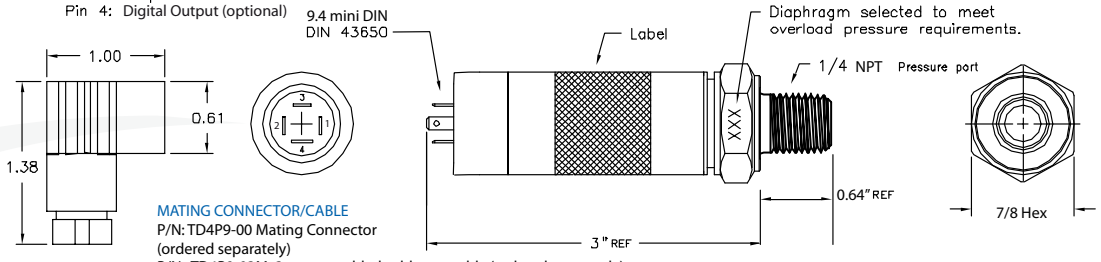
For extreme applications where power washers are used for wash down, the TD1000 Series optional IP69K seal, another industry first, makes it ideal no matter what the environment.

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

Voltage Units
Pin 1: +Power Supply
Pin 2: –Power Supply
Pin 3: Output
Pin 4: Digital Output (optional)

Current Units
Pin 1 +Power Supply
Pin 2 Output
Pin 3 N/C
Pin 4 N/C

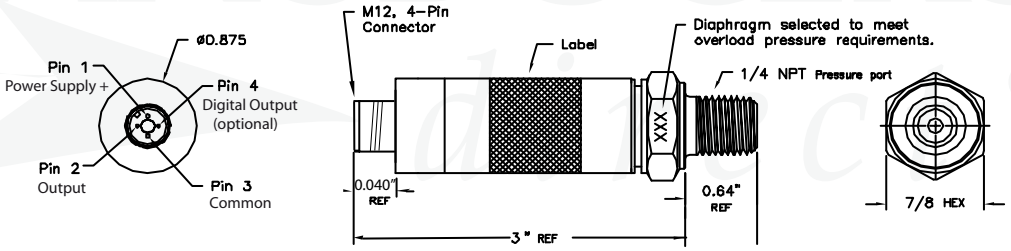


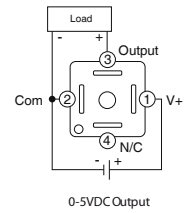
MATING CONNECTOR/CABLE
P/N: TD4P9-00 Mating Connector (ordered separately)
P/N: TD4P9-03M 3 meter molded cable assembly (ordered separately)
Other Lengths Available

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

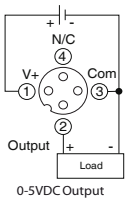
Wire Code for Current units:
Red = + Power Supply
Black = Output

Voltage units

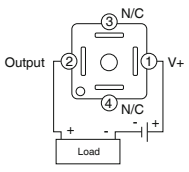




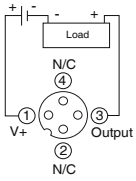
0-5VDC Output



0-5VDC Output



4-20mA Output



4-20mA Output

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

Current Units
Pin 1 + power Supply
Pin 2 N/C
Pin 3 Output
Pin 4 N/C

Dimensions In Inches And Are Reference Only.

SPECIFICATIONS

Performance	Performance @ 25°C (77 °F)
Accuracy	0.25% BFSL(includes: Non-linearity, Hysteresis and Non-repeatability)
Overange Protection	2x Rated Pressure or optional 4x and 10x
Pressure Range	see ordering chart - up to 6000 psi (690 bar) (optional higher ranges available)
Burst Pressure	5x or 20,000 psi, whichever is less
Pressure Cycles	>100 million
Internal Update Time	<=1msec
Digital Output	Optional digital output for pressure or temp switch point (not available on 4-20mA output units)
Environmental Data	
Temperature	
Compensated Temperatures	-20° to 85° C (-4 to 185° F)
Operating Temperatures	-40° to 100° C (-40 to 212° F)
Storage	-40° to 125° C (-40° to 250° F)
Total Error Band (TEB)	0.9%
Stability	0.25% FS typical (1 year)
Shock	100g, 6ms, 1/2 sine per EN 60068-2-27, EN 60068-2-29
Vibration	12g peak, 10 to 2000 Hz per EN60068-2-6, EN60068-2-64
EMI/RFI Protection	Yes
Rating	Up to IP-69K available (high pressure wash down)
Mechanical Configuration	
Pressure Connections	See ordering chart
Wetted Material	17-4PH stainless steel (for other materials consult factory)
Electrical Connection	9.4 Din, IP-69K 4 pin M12 Connector
Case(housing)	304 stainless steel
Electrical Data	
Excitation	3.3-28VDC,Typ (must be at least 0.3V above full output voltage) (7.5VDC min for 4-20mA)
Output	see ordering chart
Output Load	0-800 Ohms @ 10-28VDC for current output 10K Ohms minimum for voltage outputs
Current Consumption	25mA max (current output), <5mA (voltage output) without digital output, <8mA with digital output
Output Noise	<2mV RMS
Reverse Polarity Protection	Yes
Zero Offset	1%
CE Approval	Yes (not tested with cable lengths over 30 meters) shield must be attached to connector housing
Set Point for Either Pressure or Temperature	For pressure, this is done by selecting a percentage of your transducer's full range and this will be the set point (40% of a 1000 psi range will have the set point at 400psi) "P40". For temperature, simply select in degrees C, where you want the set point to be (selecting 40° C will be represented by "T40" in the part number.

ORDERING

Series	Output	Type	Pressure Range	Pressure Port	Electrical Connection	Accuracy	Pressure or Temp Set Point (P or T) % of full pressure range (P) or degrees C (T)
TD1000	D	G	1000 (psi)	03	Q00	2	T40

Series	Output	Type	Pressure Range		Pressure Port	Electrical Connection	Accuracy	Pressure or Temp Set Point (P or T) % of full pressure range (P) or degrees C (T)
TD1000= 2X Over Pressure TD1004= 4X Over Pressure (up to 5000 psi) TD1010= 10X Over Pressure (up to 2000 psi)	B= 4-20mA C= 0-5 vdc D= 0-10 vdc H= 1-5 vdc J= 1-6 vdc G= 0.5-5.5 vdc (voltage outputs are 3 wire nonratiometric)	G= Gauge	0015 0025 0050 0100 0150 0200 0250 0300 0400 0500 0600 0700 0800	0900 1000 2000 3000 4000 5000 6000	03= 1/4" NPT Male 09= 7/16" x 20 **	Q00= IP69K M12 D00= 4 pinMini 9.4 DIN **	2= 0.25%	X= no SP P or T10= 10% of pressure range or 10° C P or T20= 20% of pressure range or 20° C P or T30= 30% of pressure range or 30° C P or T40= 40% of pressure range or 40° C P or T50= 50% of pressure range or 50° C P or T60= 60% of pressure range or 60° C P or T70= 70% of pressure range or 70° C P or T80= 80% of pressure range or 80° C P90= 90% of pressure range (P= % of the full pressure range selected) (full temp range is 10 to 80° C) ** Pressure and temp set points are available with voltage outputs only

**= Consult factory for further options

Consult factory for quick ship versions

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