The TDEPD
Field-Programmable Pressure Switch/Transducer with Integrated LED Display

**DESCRIPTION**

What makes the patented TDEPD Series stand apart is the unique LED display - which allows for 360° scrolling, or you can lock the display in one location. It also features field-programmable set points and hysteresis.

Because it is built on Transducers Direct’s TD1000 technology, the TDEPD Series incorporates redundant sensing elements, allowing for notification that the sensor needs to be replaced should one of the sensing elements fail (maintenance mode), eliminating operational downtime.

The TDEPD Series pressure switch/transducer comes standard with one digital output and optional analog output available. Unit operates from 10.5 to 28 VDC, and is IP67 certified.

**FEATURES**

- Maintenance Mode (redundant sensing notification)
- Power supply: 10.5 VDC to 28 VDC
- 4-digit, bi-color display (red or green)
- Display: 360° scrolling or lock in location
- Pressure port: ¼-inch NPT, 7/16-20 UNF, G 1/4
- Digital outputs: 250 mA max (PNP) or 200 mA max (NPN), and/or optional analog output: up to 10 VDC or up to 20 mA (field selectable)
- Spike Monitoring Technology™ (SMT)
- Wide variety of pressure ranges up to 10K psig

**ELECTRICAL CONNECTIONS & DIMENSIONS**

5-Pin M12

- Pin 1: Power supply: 10.5 VDC to 28 VDC
- Pin 2: Digital output #2 (optional) or analog output (optional)
- Pin 3: Power supply common
- Pin 4: Digital output #1
- Pin 5: Maintenance mode output

**Note:** The TDEPD3, 4-20mA analog output is 3 wire. You must use pins 1, 2 and 3, same as voltage output.

Dimensions are in inches and for reference only.
**SPECIFICATIONS**

**Performance**
- Performance @ 25°C (77 °F)

**Accuracy**
- 0.5% BFSL

**Overrange Protection**
- 2x Rated Pressure or optional 4x and 10x

**Pressure Range**
- see ordering chart - up to 10,000 psi (689 bar)

**Burst Pressure**
- 5x or 20,000 psi, whichever is less

**Pressure Cycles**
- >100 million

**Update Time**
- <=1msec

**Environmental Data**

**Temperature**
- Compensated Temperatures: -40° to 85° C (-40 to 185° F)
- Operating Temperatures: -40° to 100° C (-40° to 212° F)
- Storage: -40° to 125° C (-40° to 257° F)
- TEB: 01% BFSL (includes: Non-linearity, Hysteresis and Non-repeatability), analog output
- Long Term Drift: 0.2% FS/year (non-cumulative)
- Shock: 50g, 11 ms, 1/2 sine
- Vibration: 10g, peak, 20 to 2400 Hz
- EMI/FRI Protection: Yes
- Ingress Rating: Up to IP-65

**Mechanical Configuration**

**Pressure Connections**
- 1/4" NPT Male, 7/16-20 UNF, G1/4 Male

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

**Electrical Connection**
- M12 (5-pin)
- (housing) 304 stainless steel and high-impact polycarbonate (display)

**Electrical Data**

**Power Supply**
- 10.5-28 VDC

**Switch/Analog Output**
- 250 mA max (PNP) or 200 mA max (NPN) (digital output), Field-programmable: voltage up to 10 VDC or current up to 20mA (analog output)

**Output Impedance**
- <100 Ohms, Nominal

**Current Consumption**
- 30 mA @ 24 V / voltage output
- 40 mA @ 12 V / voltage output
- 50 mA @ 24 V / current output
- 60 mA @ 12 V / current output

**Output Noise**
- <2mV RMS

**Reverse Polarity Protection**
- Yes

**Set Points**
- No set points in vacuum range, 5 psi min set point with <100 psi range, 10% of configured pressure min set point with > 100 psi range

**Spike Counter**
- Press button # 1 for 10 seconds to view quantity of pressure spikes and the highest spike seen.

**Zero/Tare display**
- Press button #2 for 10 sec. If the pressure reading on the display is between -14.7 and 128 psi, the display will change to zero (0). If pressure is above 128 psi, display will not change.

For best performance use shielded cables.

Mating connectors and cable assemblies sold separately.

**ORDERING**

<table>
<thead>
<tr>
<th>Series</th>
<th>Version</th>
<th>Pressure Range</th>
<th>Pressure Port</th>
<th>Electrical Connection</th>
<th>Overpressure Protection</th>
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<tbody>
<tr>
<td>TEDP</td>
<td>D1</td>
<td>0050</td>
<td>03</td>
<td>Q9 = M12 (5-pin)</td>
<td>[blank] = 2x (standard)</td>
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<td></td>
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<td>0015 1000</td>
<td>03 = 1/4” NPT Male</td>
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<td>4x = 4x (5000 psi max)</td>
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<td>0025 2000</td>
<td>09 = 7/16-20 UNF</td>
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<td>0050 3000</td>
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<td>D2</td>
<td>2 digital outputs</td>
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<td>13= G1/4</td>
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<td>1 analog output, 1 digital output</td>
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**= Consult factory for further OEM options**

Pressure ranges and outputs listed above are quick ship versions

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.

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