

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



SERIES: TDEPD

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 when 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

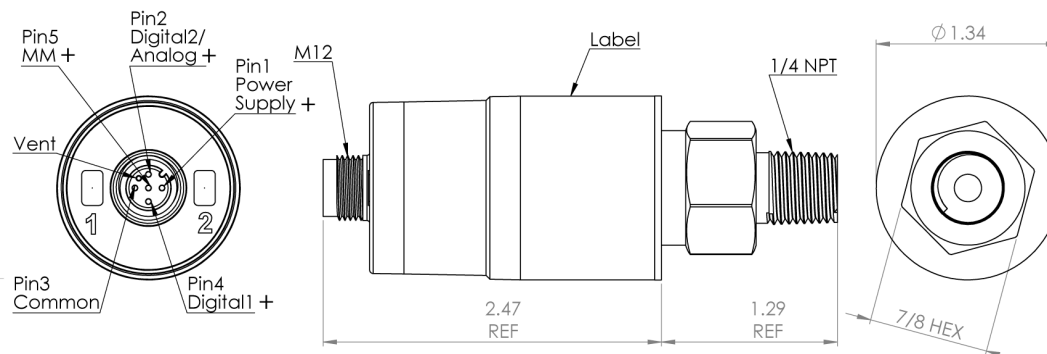
- Maintenance Mode (redundant sensing notification)
- Power supply: 10.5 VDC to 28 VDC
- 4-digit, bi-color display (red or green)
- Display: 360° scrolling or lock in location
- Pressure port: 1/4-inch NPT, 7/16-20 UNF, G 1/4
- Digital outputs : 250 mA max (PNP) or 200 mA max (NPN), and/or optional analog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

Series	Version	Pressure Range	Pressure Port	Electrical Connection	Overpressure Protection
TDEP	D1	0050	03	Q9	
	D1 = 1 digital output with display	0015 1000 0025 2000	03= 1/4" NPT Male 09= 7/16-20 UNF	Q9 = M12 (5-pin)	[blank] = 2x (standard) 4x = 4x (5000 psi max)
	D2 = 2 digital outputs with display	0050 3000 0100 4000	13= G1/4		
	D3 = 1 analog output, 1 digital output with display	0250 5000 0500 6000 0750 010K			

**= 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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