

Model T2 Pressure Transducer



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APPLICATIONS

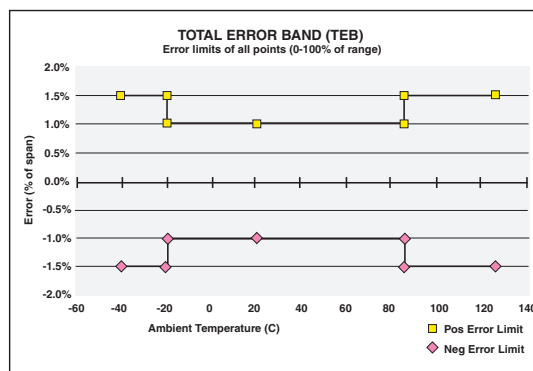
An affordable digitally compensated instrument for general industrial applications.

- Process Automation
- Compressor Control
- Hydraulic Systems
- Engine Monitoring
- Pump Control
- Pneumatics
- Refrigeration Equipment
- Presses
- Machine Tools
- Other General Industrial Applications

FEATURES

- 0.25% accuracy class
- Ranges 30 psi through 20,000 psi
- -40 to +125°C temperature capability
- All welded pressure construction
- Proven polysilicon thin film sensor
- Precision ASIC based electronics
- High EM/RFI immunity rating
- Highly configurable
- Voltage and current outputs
- Choice of electrical connections

The T2 employs a polysilicon thin film sensor with a proven long term stability. The sensor is electron beam welded to a stainless steel pressure fitting to ensure high overpressure ratings and integrity in high shock, vibration and pressure cycling applications. Through the use of a high performance ASIC and modern digital compensation techniques the T2 provides extraordinary performance over temperature. The graph that follows depicts the performance over temperature on a Total Error Band basis – the Total Error Band includes not only temperature effects but also non-linearity, hysteresis and non-repeatability.



PERFORMANCE SPECIFICATIONS

Ref. Temperature, 21°C ±1°C (70°F, ±2°F)

Accuracy:

Static Accuracy Class: ±0.25% of span (BFSL Method) including non-linearity, hysteresis, non-repeatability at reference temperature

Temperature Effect:

-20°C to 85°C <±1% of Span – Total Error Band
-40°C to -20°C <±1.5% of Span – Total Error Band
-85°C to 125°C <±1% of Span – Total Error Band
Total Error Band includes the combined effects of non-linearity (Terminal Point Method), hysteresis, non-repeatability, temperature and zero offset and span setting errors. For higher performance availability consult factory

Stability: Less than ±0.25% span/year

Durability: Tested to 50 million cycles

ENVIRONMENTAL SPECIFICATIONS

Temperature:

Compensated -40 to 125°C (-40 to 257°F)
Operating -40 to 125°C (-40 to 257°F)
Storage -40 to 125°C (-40 to 257°F)

Humidity: 0 to 100% R.H., no effect

FUNCTIONAL SPECIFICATIONS

Select from over 25 pressure ranges starting at 30 psi and running through 20,000 psi. Compound (vacuum & pressure) ranges are also available, see below.

Overpressure (F.S.):	Proof	Burst
750 psi & below	200% FS	1000% FS
1500 psi	200% FS	500% FS
3000 psi	200% FS	500% FS
5000 psi	150% FS	500% FS
7500 psi	120% FS	500% FS
10,000 psi	120% FS	240% FS
20,000 psi	120% FS	240% FS

Vibration: Random vibration (20 g) over temperature range (-40° to 125°C). Exceeds typical MIL-STD. requirements

Shock: 100gs, 6 ms

Drop Test: Withstands 1 meter on concrete 3 axis

Response Time: Less than 1 msec

Warm-up Time: Less than 500 msec typical

Position Effect: Less than ±0.01% span, typical

ELECTRICAL SPECIFICATIONS

Output Signals Available:

Voltage Output	Excitation	Supply Current
0-5 Vdc, 3 wire	9-36 Vdc	5mA
0-10 Vdc, 3 wire	14-36 Vdc	5mA
1-5 Vdc, 3 wire	9-36 Vdc	4mA
1-6 Vdc, 3 wire	9-36 Vdc	4mA

Ratiometric Output

0.5-4.5 Vdc, 3 wire 5 Vdc ±0.5 Vdc 3.5mA

Current Output

4-20mA, 2 wire 9-36 Vdc

Reverse Polarity & Miswired Protected: Yes

Insulation Breakdown Voltage: 100 Vac

Insulation Resistance: Greater than 100 megohms at 100 Vdc

CE Compliance: Per EN 61326: 1997+ A1: 1998 + A2: 2001, Annex A (Heavy Industrial)

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PHYSICAL SPECIFICATIONS

Pressure Connection: 304 stainless steel

Sensor Material: 17-4PH SS

Housing: 20% Glass Reinforced Nylon,
Fire retardant to UL94 V1

Available Process Connections (Male):

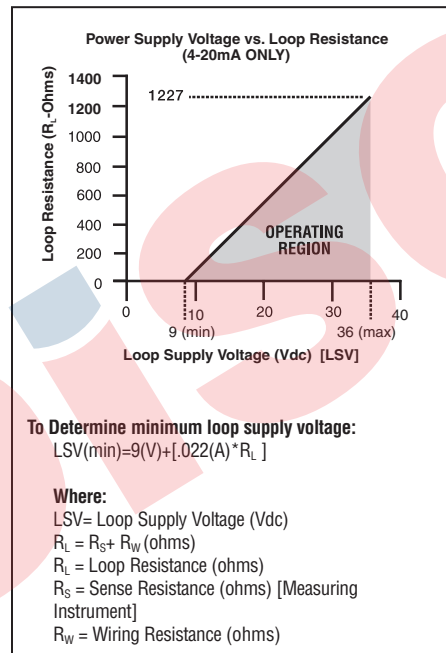
1/8 NPT, 1/4 BSP, 1/4 NPT, G 1/4 B, 7/16-20 UNF-2A

For other connections consult factory

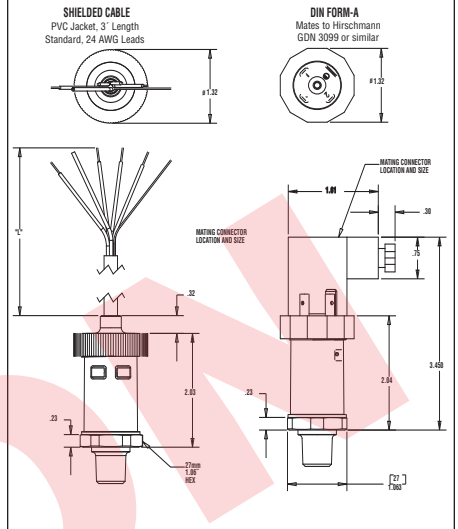
Ingress Rating: Enclosure meets NEMA 4X, IP65

ELECTRICAL TERMINATION

- Pigtail: 3 feet of shielded cable, PVC jacket, 24 AWG leads
- DIN 43 650-A
- Bendix style 4 pin, PTO 2A-8-4P or similar
- M12 x 1, 4 pin, Circular style



DIMENSIONS



M12 and Bendix style termination designs share similar dimensions to those shown above.

How To Order

T 2	7						G	X
Type Configuration (T2)		Output Signal	Electrical Termination	Pressure Ranges	Compound Ranges	Measurement Type	Optional X-Variations	
Accuracy $\pm 0.25\%$ Static Accuracy Class (BFSL) 1.0% Total Error Band $-20^\circ\text{C}/+85^\circ\text{C}$ 1.5% Total Error Band $-40^\circ\text{C}/-20^\circ\text{C}$, $85/125^\circ\text{C}$		05 = 0-5 Vdc 10 = 0-10 Vdc 15 = 1-5 Vdc 16 = 1-6 Vdc 42 = 4-20mA RM = 0.5-4.5 Vdc Ratio Metric to 5Vdc supply	DIN 43 650-A - Mates to Hirschmann GDM 3009 or similar DN = no mating conn. D0 = w/mating conn., no cable D2 = w/mating conn. 3' shielded cable M12 - Mates to Hirschmann 933 172-100 or similar EW = no mating conn. E0 = w/mating conn. no cable E2 = w/mating conn. & 3' shielded cable Circular 4 Pin - Mates to Amphenol Bendix PTO6A-8-4S-SR or similar B4 = no mating conn. H1 = w/mating conn., no cable L1 = w/mating conn. 3' shielded cable Pigtail - Shielded cable with PVC Jacket and 24 AWG leads F2 = w/3' cable length F1 = w/3' cable length F3 = w/6' cable length Consult factory for additional cable lengths	psi Ranges 30# = 30 psi 50# = 50 psi 60# = 60 psi 100# = 100 psi 150# = 150 psi 200# = 200 psi 300# = 300 psi 500# = 500 psi 750# = 750 psi 1000# = 1000 psi 1500# = 1500 psi 2000# = 2000 psi 3000# = 3000 psi 5000# = 5000 psi 7500# = 7500 psi 10000# = 10000 psi 20000# = 20000 psi	30#&vac = 30 psi/-14.7 psi 45#&vac = 45 psi/-14.7 psi 60#&vac = 60 psi/-14.7 psi 85#&vac = 85 psi/-14.7 psi 100#&vac = 100 psi/-14.7 psi 150#&vac = 150 psi/-14.7 psi 200#&vac = 200 psi/-14.7 psi 300#&vac = 300 psi/-14.7 psi Ranges in bar, kPa and mPa are also available	G = Gauge Pressure, Vented Housing For sealed housing (PSIS) consult factory	Consult Factory for Available Options	
Pressure Connection M01 1/8 NPT-male M02 1/4 NPT-male MEK 7/16-20 SAE-male MS2 1/4-19 bsp male MG2 G 1/4 B male		Consult Factory Other Connections						