



Type T2 – High Performance Pressure Transducer for General Industrial Applications

APPLICATIONS:

A new Ashcroft pressure transducer to meet demanding requirements in general industrial applications:

- Process automation
- Compressor control
- Hydraulic systems
- Engine monitoring
- Pump control
- Pneumatics
- Refrigeration equipment
- Presses
- Machine Tools
- Other general industrial applications

Important features include:

- 0.25% accuracy class
- Ranges 30 psi through 20,000 psi
- Broad temperature capability
- All-welded pressure construction
- Proven polysilicon thin film sensor
- Precision ASIC based electronics
- High EMI/RFI immunity rating
- Highly configurable
- Voltage and current outputs
- Choice of electrical connections
- Optional panel meter digital display – see Ashcroft model 2269



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 <±1.5% 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)

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, G1/4 B, 7/16-20 UNF-2A

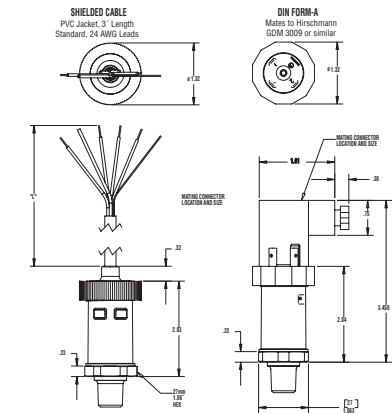
For other connections consult factory

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

DIMENSION DRAWINGS



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

TO ORDER THE T2 PRESSURE TRANSDUCER:

<div style="border: 1px solid black; padding: 2px; display: inline-block;">T 2</div> Type Configuration (T2)	<div style="border: 1px solid black; padding: 2px; display: inline-block;">7</div> Accuracy ±0.25% Static Accuracy Class (BFSL) ±1.00% Total Error Band -20°C to +85°C ±1.50% Total Error Band -40°C to -20°C, 85°C to 125°C	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div> 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	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div> Output Signal 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	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div> Electrical Connection 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 Jacket and 24 AWG leads F2 = w/3' cable length P1 = w/3' cable length F3 = w/6' cable length Consult factory for additional cable lengths	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div> Pressure Ranges 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	<div style="border: 1px solid black; padding: 2px; display: inline-block;">G</div> Measurement Type G = Gauge pressure, vented housing For sealed housing (PSI) consult factory	<div style="border: 1px solid black; padding: 2px; display: inline-block;">X</div> Optional X-Variations Consult factory for available options
				Compound Ranges 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	