

T2 Pressure Transducer

FEATURES

- Numerous ranges, process connections/electrical terminations, and outputs available (STD.)
- All Stainless steel wetted parts
- Proven polysilicon film sensor
- All welded construction

TYPICAL USES

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



T2
Pressure Transmitter



PERFORMANCE SPECIFICATIONS

Reference Temperature:	72°F (22°C)
Accuracy Class (BFSL):	±0.25% of span
Total Error Band Accuracy (TEB):	±1% of Span: From -20 to 85°C (-4 to 185°F) ±1.5% of Span: From -40 to -20°C (-40 to -4°F) ±1.5% of Span: From 85 to 125°C (185 to 257°F) Includes the combined effects of non-linearity (Terminal Point Method), hysteresis, non-repeatability, temperature and zero offset and span setting errors
Durability:	50 million cycles
Stability:	≤±0.25% span/year at reference conditions

ENVIRONMENTAL SPECIFICATIONS

Temperature Limits:	Storage: -40°F to 257°F (-40°C to 125°C) Operating: -40°F to 257°F (-40°C to 125°C) Compensated: -40°F to 257°F (-40°C to 125°C)
Humidity Effects:	No performance effects from 0-100% R.H.

KEY BENEFITS

- Broad temperature capability
- High EMI/RFI immunity ratings
- High performance ASIC based electronics
- Superior long-term stability and repeatability

FUNCTIONAL SPECIFICATIONS

Response Time:	<1 ms														
Pressure Ranges:	Compound and gauge pressure, 30 to 20,000 psi														
Shock:	100 gs, 6 ms														
Vibration:	Random vibration (20g) over temperature range -40°F to 257°F (-40°C to 125°C). Exceeds typical MIL. (STD.) requirements														
Position Effect:	<±0.01% span, typical														
Overpressure:	<table border="0"> <tr> <td>Proof:</td> <td>Burst:</td> </tr> <tr> <td>≤750 psi</td> <td>2 X Range</td> <td>10 X Range</td> </tr> <tr> <td>≥1,000 to ≤4,000 psi</td> <td>2 X Range</td> <td>5 X Range</td> </tr> <tr> <td>>5,000 to ≤7,500 psi</td> <td>1.2 X Range</td> <td>5 X Range</td> </tr> <tr> <td>≥10,000 to ≤20,000 psi</td> <td>1.2 X Range</td> <td>2.4 X Range</td> </tr> </table>	Proof:	Burst:	≤750 psi	2 X Range	10 X Range	≥1,000 to ≤4,000 psi	2 X Range	5 X Range	>5,000 to ≤7,500 psi	1.2 X Range	5 X Range	≥10,000 to ≤20,000 psi	1.2 X Range	2.4 X Range
Proof:	Burst:														
≤750 psi	2 X Range	10 X Range													
≥1,000 to ≤4,000 psi	2 X Range	5 X Range													
>5,000 to ≤7,500 psi	1.2 X Range	5 X Range													
≥10,000 to ≤20,000 psi	1.2 X Range	2.4 X Range													
Drop Test:	Withstands 1 meter on concrete 3 axis														
Warm-up Time:	<500 msec, typical														

T2 Pressure Transducer

ELECTRICAL SPECIFICATIONS

Output: Supply Voltage Supply Current

0-5 Vdc (3 Wire) 9 Vdc to 36 Vdc 5 mA

0-10 Vdc (3 Wire) 14 Vdc to 36 Vdc 5 mA

1-5 Vdc, 1-6 & 0.5-4.5 Vdc (3 Wire) 9 Vdc to 36 Vdc 4 mA

0.5-4.5 Vdc, 3 Wire (Ratiometric) 5 Vdc ±0.5 Vdc 3.5 mA

4-20 mA (2 Wire) 9 Vdc to 36 Vdc

Insulation Breakdown Voltage: >100 MΩ @ 100 Vdc

Circuit Protection: Reverse polarity and mis-wire protected

Insulation Resistance: 100 MΩ @ 30 Vdc

PHYSICAL SPECIFICATIONS

Environmental Rating: Ingress rating NEMA 4X, IP65

WETTED MATERIAL

Diaphragm 17-4PH Stainless Steel

Process Connection 304 Stainless Steel

NON-WETTED

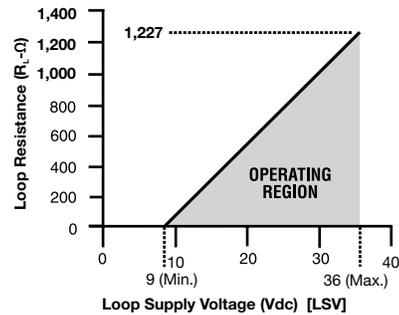
Housing 20% Glass Reinforced Nylon, Fire retardant to UL94 V1

OPTIONAL FEATURES

Calibration Report: 9 pt. traceable calibration report

Consult factory for: Throttle plugs and Cleaned for Oxygen services

LOAD LIMITATIONS 4-20 mA OUTPUT ONLY



To Determine Min. loop supply voltage: $LSV_{min} = 9(V) + [0.022(A) * R_L]$

Where:

LSV= Loop Supply Voltage (Vdc)

$R_L = R_S + R_W$ (ohms)

R_L = Loop Resistance (ohms)

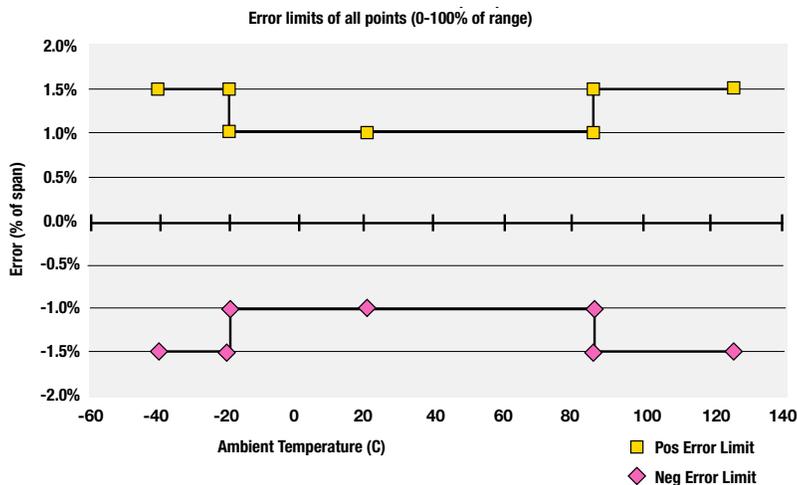
R_S = Sense Resistance (ohms) [Measuring Instrument]

R_W = Wiring Resistance (ohms)

T2 Pressure Transducer

ORDERING CODE	Example:	T2	7	M01	42	DN	60#	G	XTU
Model									
T27 - T2 Series, 1.0% Total Error Band (-20°C/85°C), 1.5% Total Error Band (-40°C/-20°C), (85°C/125°C)		T2	7						
Pressure Connection Size									
M01 - 1/8 NPT Male				M01					
M02 - 1/4 NPT Male									
MEK - 7/16 20 SAE #4 Male, not UL recognized over 10,000 psi range									
MEV - 9/16-18 SAE #6 Male w/Buna-N O-ring, not UL recognized over 10,000 psi range									
MS2 - 1/4-19 bsp Male, not UL recognized over 10,000 psi range									
MG2- G 1/4 B Male									
Output Signal									
5 - 0-5 Vdc									
10 - 0-10 Vdc									
15 - 1-5 Vdc									
16 - 1-6 Vdc									
42 - 4-20 mA					42				
RM - 0.5-4.5 Vdc Ratiometric to 5 Vdc supply									
Electrical Termination									
EN 175301-803, Form A (DIN 43650 Form A - Mates to Hirschmann® GDM 3009 or similar)									
EN 170 mating connector						DN			
D0 - W/mating connector, no cable									
D2 - W/mating connector, 3 feet of shielded cable									
Electrical Connection									
M12 (4-Pin) - Mates to Hirschman 933-172-100 or similar									
EW - No mating connector									
EO - W/mating connector, no cable									
E2 - W/mating connector, 3 feet of shielded cable									
Circular 4 Pin - Mates to Bendix® PT06A-8-4S-SR or similar									
B4 - No mating connector									
H1 - W/mating connector, no cable									
L1 - W/mating connector, 3 feet of shielded cable									
Pigtail - Shielded cable with PVC jacket and 24 AWG leads									
F2 - W/3 feet cable length									
F3 - W/10 feet of cable length									
P1 - Customer specified length									
Pressure Range (see range table on page 4)									
60# - 60 psi							60#		
Measurement Type									
G - Gauge								G	
Option (if including an option(s) must include an "X")									X
TU - Throttle Plug									TU
6B - Cleaned for oxygen service									
RH - Traceable 9 point calibration report									

TOTAL ERROR BAND (TEB)



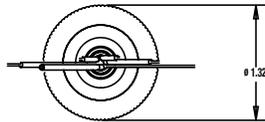
T2 Pressure Transducer

DIMENSIONS in [] are millimeters

For reference only, consult Ashcroft for specific dimensional drawings

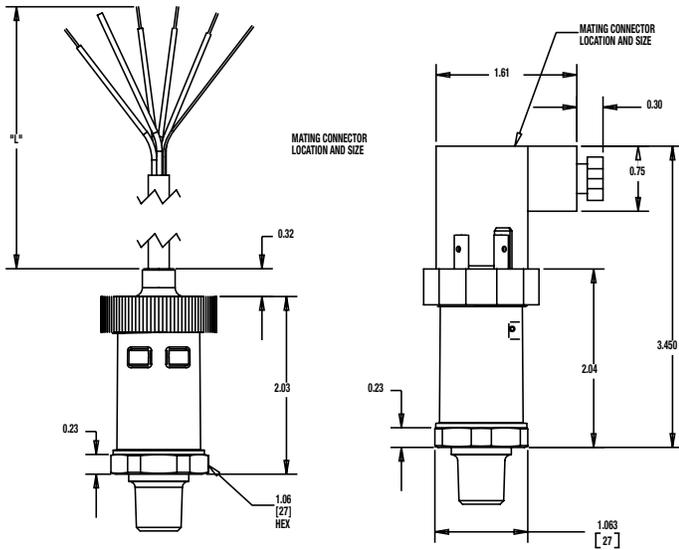
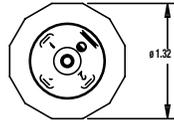
Shielded Cable

PVC Jacket, 3' Length
Standard, 24 AWG Leads



Din Form-A

Mates to Hirschmann
GDM 3009 or similar



		RANGE TABLE		
		Range	Code	Notes
Compound		30 psi/-14.7 psi	30#&vac	
		45 psi/-14.7 psi	45#&vac	
		60 psi/-14.7 psi	60#&vac	
		85 psi/-14.7 psi	85#&vac	
		100 psi/-14.7 psi	100#&vac	
		150 psi/-14.7 psi	150#&vac	
		200 psi/-14.7 psi	200#&vac	
	300 psi/-14.7 psi	300#&vac		
Positive Pressure		30 psi	30#	
		50 psi	50#	
		60 psi	60#	
		100 psi	100#	
		150 psi	150#	
		200 psi	200#	
		250 psi	250#	
		300 psi	300#	
		400 psi	400#	
		500 psi	500#	
		750 psi	750#	
		1,000 psi	1000#	
		1,500 psi	1500#	
		2,000 psi	2000#	
		3,000 psi	3000#	
	5,000 psi	5000#		
	6,000 psi	6000#		
	7,500 psi	7500#		
	10,000 psi	10000#		
	15,000 psi	15000#	Only available with M01, M02, MG2, process connections	
	20,000 psi	20000#	Only available with M01, M02, MG2, process connections	
		bar, kPa, and mPa ranges also available		