

T5000

P/I Transducers

Description

The Type 5000 series is a compact, rugged and reliable family of two-wire pressure transmitters designed for industrial field service. These instruments convert a signal pressure input into a precise 4-20 or 10-50mA output. The lightweight transmitter housing includes a 1/4 NPT pressure port and a 1/2 NPT conduit port for field wiring. Connections are easily accessible simply by removing the top cover. Zero and span adjustments are available within the field wiring compartment for fine, on-site calibration adjustment.

The Type 5000 uses a unique, temperature compensated piezo resistive sensor suitable for gauge pressure measurement of non-corrosive liquids and gases. The sensor has excellent dynamic response and is virtually

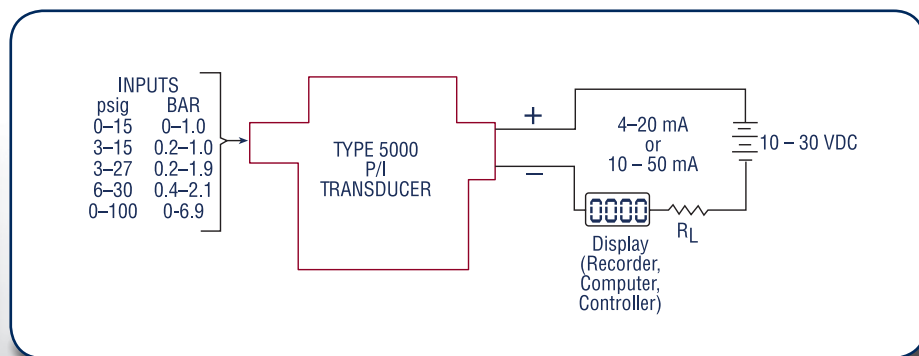
insensitive to mounting orientation and ordinary industrial vibration. Mounting holes on the transmitter housing are arranged to permit direct pipe (2") mounting for minimum installed cost.

Features

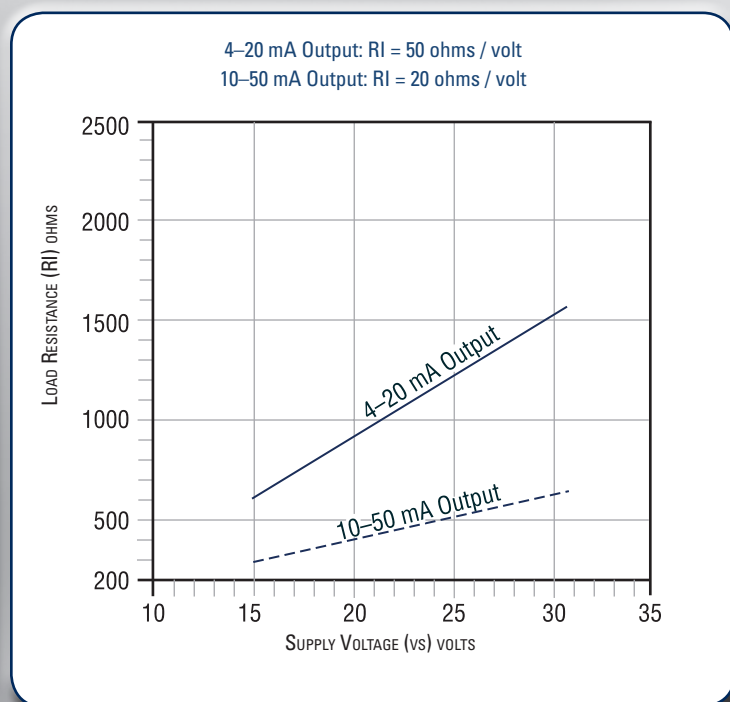
- 0.1% accuracy typical
- Piezo resistive pressure sensor resists vibration
- Mounts at any angle
- Easily accessible zero and span adjustments
- NEMA 4X housing approved for explosion proof service



Type 5000 Functional Diagram



TYPE 5000: Max Load Resistance VS. Supply Voltage



Agency Approval Notes

Factory Mutual

T-5000 P/I Transducers NEMA 4X

Explosion Proof: Class I, Division 1, Groups B, C, & D, T6

Dust-Ignition Proof: Classes II & III, Division 1, Groups E, F, & G, T6,

Type 4X NEMA 4X

Canadian Standards Association

T-5000 P/I Transducers

Hazardous Locations:

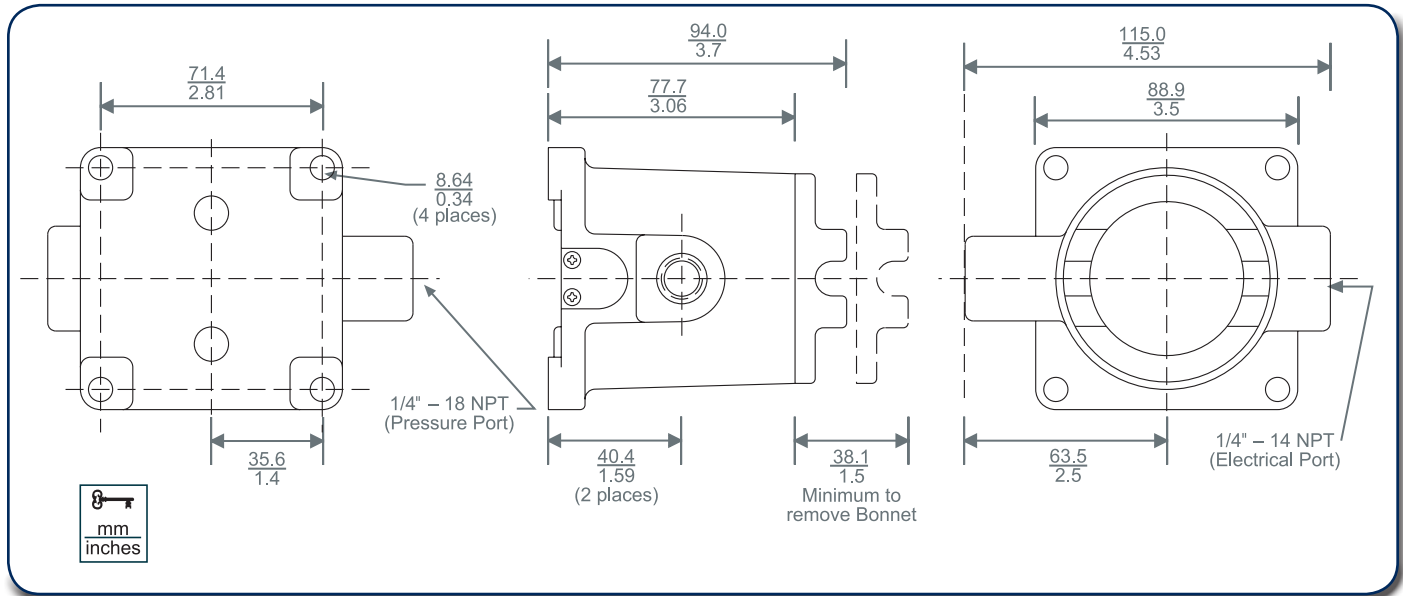
Class I, Groups B, C & D; Class II, Group E, F & G; Class III; Encl 4 NEMA 4:

P/I transmitter, rated output 4-20mA dc or 10-50mA dc, power supply 30V dc max.

The Bellofram T-5000 Transducers were tested and found to comply with Electromagnetic Compatibility Directive effective January 1, 1996. The relevant EMC specifications tested were the following: EN 50081-1 (1992) and EN 50082-1 (1992). A Technical Construction File, Serial #107 was written and Certificate of Conformity issued by a Competent Body



Type 5000 Dimensions



Type 5000 Specifications

Input signal	0–15 PSIG	0–1.0 BAR
	3–15 PSIG	0.2–1.0 BAR
	3–27 PSIG	0.2–1.9 BAR
	6–30 PSIG	0.4–2.1 BAR
	0.2–1.0 BAR	3–15 PSIG
	0–100 PSIG	0–6.9 BAR
Output Signal	4–20 mA DC, 2 wire	
	10–50 mA DC, 2 wire	
Output Protections	Reverse polarity protected	
Accuracy includes nonlinearity, hysteresis and non-repeatability	± 0.1% span typical; ± 0.25% span max.	
Overpressure	45 PSIG (3.1 BAR) without calibration shift 60 PSIG (4.1 BAR) without failure	
Allowable Loads	See Graph	
Response Time	Less than 10 msec for step change to 99% R	
Temperature Range-Operating	-40°F to +180°F (-40°C to +82°C)	
RFI Effect	Less than 1% R at 10V/meter per SAMA PMC 33.1, 2-abc	
Power Supply	12–30 VDC	
Power Supply Effect	Less than 0.005% per volt change at the input terminals within specified power supply limits	
Calibration Adjustments	Multi-turn Zero and Span potentiometers with ± 25% min. adjustment	
In-Process Output Monitoring	Via test jacks within enclosure without disturbing field wiring	
Connections	1/4 – 18 NPT female pressure input, 1/2 – 14 NPT female electrical output	
Mounting	Suitable bracket or optional 1/4–20 U-bolt pipe mounting kit (P/N 971-109-000)	

Type 5000 Ordering Information

9	6	4	1		
					Input
			0		0–15 PSIG (0–1.0 BAR)
			1		3–15 PSIG (0.2–1.0 BAR)
			2		3–27 PSIG (0.2–1.9 BAR)
			3		6–30 PSIG (0.4–2.1 BAR)
			4		0.2–1.0 BAR (3–15 PSIG)
			5		0–100 PSIG (0–6.9 BAR)
					Output
			0		4–20 mA
			1		10–50 mA
					Agency Approval
			1		X/P FM/CSA
					Options
				000	None
				001	Pipe Clamp Mounting Kit

