



# Pressure, Level & Temperature Transmitters & Transducers

2770 Long Road, Grand Island, NY 14072 USA

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## FIELD RANGEABLE PROCESS PRESSURE TRANSMITTER

### Model 1171

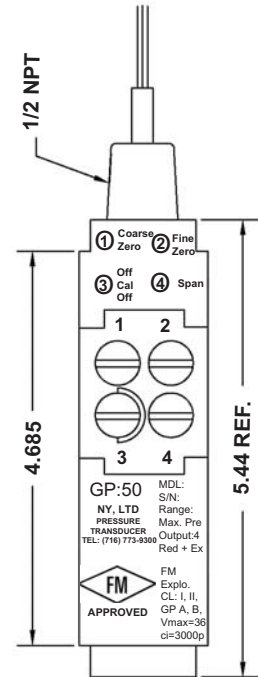


#### FEATURES:

- 50 Through 100,000 PSIS, PSIA & PSIV
- 4-20 mA Loop Powered
- 5:1 Ranging
- Magnetically Coupled Adjust
- FM & CSA Intrinsically Safe & Explosion Proof approvals.

#### APPLICATIONS:

- Off Shore Rigs and Pumping Platforms
- Pipelines and Processing
- Shipboard and Marine Applications
- Plastics and Paper - All Processes



This rugged, harsh-environment transmitter is small in size and designed to solve your worst weather nightmare.

Completely sealed, it can be submersed to 100 Ft with submersible conduit. The all welded construction and 15-5 and 316 SST used in the pressure cavity make the Model 1171 watertight and strong against corrosion. The unit is designed without an "O"-ring and insures reliability.

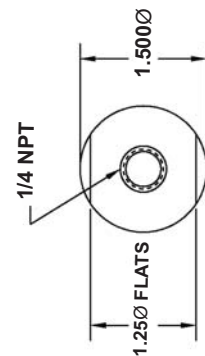
The external zero, span, and calibration controls are hermetically sealed and easily adjusted with the help of a magnetically-coupled drive system. This unit allows for 5:1 ranging of the transmitter's standard pressure range.

Pressure ranges include 5 through 75,000 PSI and are available in sealed gauge, absolute and sealed vacuum.

Featuring a calibration circuit that permits setup and ranging, there is no need for calibrated pressure source.

Model 1171 is FM explosion proof, Intrinsically Safe, and CE Approved.

#### Approvals



Some options will affect dimensions. Consult factory if important.



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**Ordering:** Specify model, and pressure range and indicate modifications or accessories required.

\*Measured fluid temperature in excess of the compensated temperature limits may be acceptable depending on ambient temperature conditions.

**Full Scale Pressure Range (FSPR):**

0-5, 10, 15 PSISG, A, SV and 3-15 PSISG 0-20, 25, 30, 50, 75, 100, 150, 200, 300, 400, 500, 750, 1000, 1500, 2000, 3000, 4000, 5000, 7500, 10,000, 15,000, 20,000, 25,000, 30,000, 40,000, 50,000, 75,000, 100,000 PSISG, PSIA

**Supply Voltage:** 9-36 Vdc

**Regulations:** Less than 0.02% FSO/V over supply voltage range.

**Output Signal:** 4-20 mA, 2 wire loop Powered

**Load Impedance:** 1350 ohms a 36 Vdc

**Accuracy:** Greater than 0.25% of calibrated span including errors due to linearity, hysteresis and repeatability, RSS

**Combined Zero & Span Temperature Effects on Accuracy:**  
Less than 1.0% per 100°F

**Combined Zero & Span Temperature Effects on Accuracy at 5:1 Ranging:**  
Less than 3.5% FSPR per 100°F

**Compensated Temperature Limits: \***  
0 thru +170°F based on actual operating temperature.

**Operating Temperature Limits:** -10 to +176°F

**Range Adjustments:** 5:1

**Range Calibration Signal:** 20% and 100%, calibration signals provided by maintain-contact switch.

**Range Calibration Signal Accuracy:** Greater than 1.0%. Exact pressure to output correlation data provided.

**Zero Balance:** Fine and Coarse adjustable

**Interaction Between Zero & Span Range:** Zero Adjustment does not affect range. Span adjustment effect on zero is less than 0.5%

**Circuit Protection:** Reverse polarity protected Units are protected against voltage transients above 45V to 20A at 0.02 milliseconds.

**Insulation Resistance:** Better than 10 megohms at 50V DC

**Proof Pressure:** 5 to 50 PSI, 100 PSI / 75 to 15,000 2xFSPR or 20,000 PSI, whichever is less. - 20,000 to 100,000 PSI 1.2 x FSPR or 125,000 PSI which ever is less.

**NOTE:**

Specifications reflect standard product, improved performance / mechanical options available.

Modifications may alter specs, consult factory for more information.

**Burst Pressure:**

- 0-5 thru 0-50 PSISG, A, SV and 3-15 PSISG 250 PSI  
- 0-75 thru 0-15,000 PSIG, A-5 times full scale pressure range or 22,500 PSIG, whichever is less.  
- 0-20,000 thru 0-100,000 PSIG, A-1.5 times full scale pressure range or 125,000 PSIG, whichever is less.

**Long-Term Stability:** Greater than 0.25% FSPR over six months.

**Resolution:** Infinite

**Response Time:** Approximately 5 milliseconds

**Shock & Vibration Without Change:** 100 g's PK to PK

**Enclosure Materials:** 15-5 SS and 316 SS

**Sensor (Diaphragm):** 17-4 SS

**Measured Fluids:** Any gas or liquid compatible with 17-4 SST. Inconel X750 optional.

**Standard Process Pressure Connection:**

- 0-5 thru 0-15,000 PSI -1/4" Female Connection.  
- 0-20,000 thru 0-50,000 PSI - 9/16"-18 gland thread, pressure relieved. 1/4" OD high pressure tube, 60° cone. Conforms to Autoclave type F- 250-C.  
- 0-61,00 thru 0-75,000 PSI - 5/8" -18 gland thread pressure relieved. 5/16" OD high pressure tube, 60° cone. Conforms to Autoclave type F-312-C150.

**Electrical Connection:** 1/2" NPT male

**Enclosure Classification:** NEMA 3, 4

**Weight:** Less than 28 oz.

**Hazardous Location FM/CSA Explosion Proof:**

Class I, II, III Division I / Groups A, B, C, D, E, F, G  
(FM Standard / CSA requires P option code)

**FM/CSA Intrinsically Safe:**

Class I, II, III Division I / Groups A, B, C, D, E, F, G Ta= 80°C, T4

**CE Compliant:**

EMC 89/336/EEC  
PED 97/23/EC

**Accessories:**

Mounting Bracket, Conduit connection box, Loop powered digital indicator.