

# SMART RANGEABLE PRESSURE TRANSMITTER

Model 471



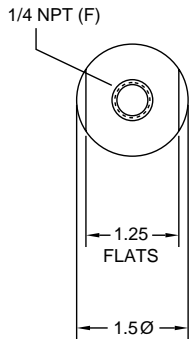
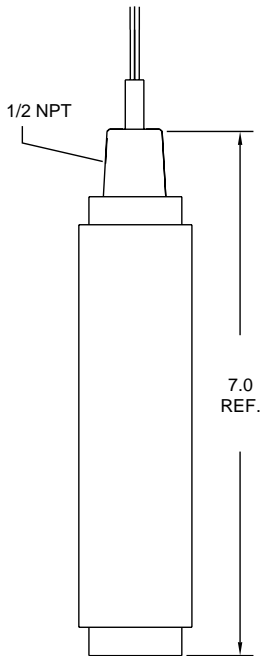
PETROLEUM & PROCESS

## FEATURES:

- HART Communication
- 0 Through 100,000 PSI Ranges in PSISG, PSIA, Vacuum Options
- 4-20 mA Loop Powered
- 30:1 Ranging
- Waterproof
- 316 SS
- CE Approved
- FM Explosion Proof, and Intrinsically Safe approved
- CSA Intrinsically Safe approved
- 9-40 Vdc Excitation
- Secondary Containment

## FOR:

- 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. GP:50 Model 471 features HART communications protocol and microprocessor based electronics in a small, rugged package. HART communication allows simpler system commissioning and start up, while digital compensation provides enhanced accuracy and rangeability.

Because HART allows simultaneous analog and digital communication, this instrument is fully compatible with existing analog systems. Communication is most commonly done with a HART hand-held communicator, but can also be done with commercially available PC-based software. All-welded and hermetically sealed, it can be submerged to 100 feet with submersible conduit. The all-welded construction and 15-5 and 316 stainless steels used in the pressure cavity make the 471 watertight and strong against corrosion. The unit is designed without an "O"-ring and insures reliability. For sour gas and other corrosive media, the 471 is available with 316 stainless steel, Inconel or Hastelloy wetted parts.

Pressure ranges include 0 through 100,000 PSI and are available in sealed gage, absolute and sealed vacuum.

# SPECIFICATIONS

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	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
Supply Voltage	9-40 Vdc	Long-Term Stability	Greater than 0.25% FSPR over six months
Regulations	Less than 0.02% FSO/V over supply voltage range	Resolution	12 bit
Output Signal	Two wire 4-20 mA. Digital process signal superimposed on a 4-20 mA signal, available to any host computer system conforming to HART protocol.	Frequency Response	Analog output response to a step change in pressure will be from 0.070 sec minimum to 40 sec maximum for one time constant and is adjustable through software.
Load Impedance	1350 ohms @ 40 Vdc	Shock & Vibration Without Change	100 g's PK to PK
Accuracy	Greater than 0.25% of calibrated span including errors due to linearity, hysteresis and repeatability, RSS	Enclosure Materials	316 SS
Combined Zero & Span Temperature Effects on Accuracy	Less than 0.1% FSO per 50°F	Measured Fluids	Any gas or liquid compatible with 15-5 PH, 316 SS, Inconel X750, Hastelloy C-276 optional
Combined Zero & Span Temperature Effects on Accuracy	At < 5:1 is less than 0.25% FSO per 50°F At > 5:1 is less than 0.5% FSO per 50°F	Standard Process Pressure Connection	0-5 thru 0-15,000 PSI - 1/4" Female Connection 0-20,00 thru 0-50,000 PSI - 9/16" - 18 gland thread, pressure relieved. 1/4" OD high pressure tube, 60 degree cone. Conforms to Autoclave type F-250-C 0-61,00 thru 0-100,000 PSI - 5/8" - 18 gland thread, pressure relieved. 5/16" OD high pressure tube, 60 degree cone. Conforms to Autoclave type F-312-C150
Compensated Temperature Limits*	0-+170°F based on actual operating temperature	Electrical Connection	1/2" NPT male, 3 Conductor, 18 AWG, 72" L
Operating Temperature Limits	-40 to +185°F	Enclosure Classification	NEMA 3, 4
Range Adjustments	30:1	Weight	Less than 24 oz.
Circuit Protection	Reverse polarity protected Units are protected against voltage transients above 45V to 20A at 0.02 milliseconds.	Hazardous Location FM Explosion Proof	Class I, II, III Division I Groups A, B, C, D, E, F, G
RFI/EMI Suppression	Negligible effect to 500 Mhz at 5 watts direct contact	FM Intrinsically Safe	Class I, II, III Division I Groups A, B, C, D, E, F, G Ta = 80°C, T4
Insulation Resistance	Better than 10 megohms @ 50V DC	CE	Approved
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 whichever is less	Accessories	Mounting Bracket, Conduit connection box, HART Communicator

**INTERTECHNOLOGY**  
INC.

1 Scarsdale Road, Don Mills, ON M3B 2R2

Tel: 416-445-5500, Fax: 416-445-1170

**TOLL FREE: 1-800-465-1600**

E-Mail: [sales@intertechnology.ca](mailto:sales@intertechnology.ca)

Website: [www.intertechnology.com](http://www.intertechnology.com)