SMART RANGEABLE PRESSURE TRANSMITTER

Model 411, 411X/P

FM APPROVED

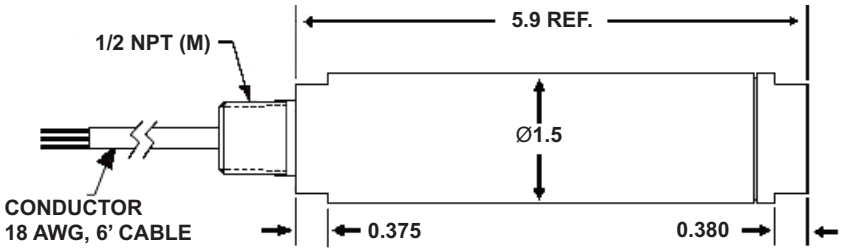
WE'VE GOT HART ABILITY

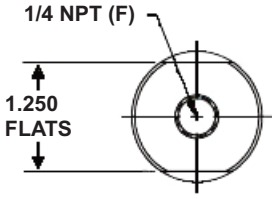
FEATURES:

- HART Communication
- 0 Through 100,000 PSI Ranges in PSISG, PSIA, Vacuum Options
- 4-20 mA Loop Powered
- 5:1 Ranging
- Waterproof
- 316 SS
- 12-36 Vdc Excitation
- Secondary Containment
- FM/CSA Approved Explosion Proof available (411X/411P), Class I, II, III, Division I, II, Groups A, B, C, D, E, F & G

APPLICATIONS:

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





WIRING CODE

RED = + EXCITATION/SIGNAL
BLACK = - EXCITATION/SIGNAL
GREEN = CASE GROUND
DRAIN WIRE

This rugged, harsh-environment transmitter is small in size and designed to solve your worst weather nightmare. GP:50 Model 411 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 submersed to 100 feet with submersible conduit. The all-welded construction and 17-4 and 316 stainless steels used in the pressure cavity make the 411 watertight and strong against corrosion. The unit is designed without and "O"-ring and insures reliability. For sour gas and other corrosive media, the 411 is available with 316 stainless steel, Inconel or Hastelloy wetted parts.

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

PETROLEUM & PROCESS

2770 Long Road, Grand Island, NY 14072 USA
Tel. (716) 773-9300 Fax (716) 773-5019 E-mail:sales@gp50.com website:www.gp50.com

GP:50 Pressure, Level & Temperature Transmitters & Transducers

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
Full Scale Temperature Range	0-170ºF, unless customer specified (only applies when ordered with QF option).
Supply Voltage	12-36 Vdc
Regulations	Less than 0.02% FSO/V over supply voltage range.
Output Signal	Two wire 4-20 mA. Digital process sig nal superimposed on a 4-20 mA signal, available to any host computer system conforming to HART protocol.
Load Impedance	250 ohms at 17 Vdc
Accuracy	Greater than 0.25% of calibrated span including errors due to linearity, hys teresis and repeatiblity, RSS
Combined Zero & Span Temperature Effects on Accuracy	At 1:1 is less than 0.25% FSO per 50ºF At 5:1 is less than 0.5% FSO per 50ºF
Compensated Temperature Limits*	0 thru +170ºF based on actual operat-ing temperature.
Operating Temperature Limits	-40 to +185ºF
Range Adjustments	5:1 (ranges 0-100 psi thru 1-15,000 psi only).
Circuit Protection	Reverse polarity protected Units are protected against voltage transients above 45V to 20A at 0.02 milliseconds.
RFI/EMI Suppression	Negligible effect to 500 Mhz at 5 watts direct contact.
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 1.2x FSPR or 125,000 PSI whichever is less
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	12 bit
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 & is adjustable through software.
Shock & Vibration Without Change	100 g's PK to PK
Enclosure Materials	316 SS
Measured Fluids	Any gas or liquid compatible with 17-4 PH, 316 SS, Inconel X750, Hastelloy C-276 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 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.
Electrical Connection	1/2" NPT male, 2 conductor w/Ground + Drain wire, 18 AWG, 72" L
Enclosure Classification	NEMA 3, 4
Weight	Less than 24 oz.
Accesories	Mounting Bracket, Conduit connection box, HART Communicator.
Approved Options	QF - Temperature output over second 4-20 mA loop.

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