SMART RANGEABLE HAZARDOUS LOCATION PRESSURE TRANSMITTER



Model BR411, 411XP
Smart Rangeable Pressure Transmitter

MODEL BR411, 411XP

FEATURES:

- 4-20 mA with digital HART protocol
- 0-15 PSI thru 0-100K PSI (0-1 thru 6,895 BAR)
- 5:1 turndown ratio
- Secondary containment for oil services
- Submersible version
- FM, CSA explosion-proof versions

APPLICATIONS:

- Offshore rigs and pumping platforms
- Oil and gas/chemical pipeline and processing
- Marine and shipboard service
- Submersible level

PRODUCT OVERVIEW:

GP:50 Model 411, 411X/P for Blue Ribbon Corporation is a SMART rangeable pressure transmitter incorporating a 4-20 mA output with digital HART protocol. Units are offered with both CSA and FM approval options, as well as a variety of process and electrical connections. Improved accuracy provides for a stable measurement throughout the total compensated temperature range.

FIELD OPTIONS:

- 5:1 turndown ratio for most ranges
- Multiple pressure and temperature outputs
- Exotic wetted materials
- Submersible level option
- Alternate process connections
- Optional 4-20 mA temperature output

BR5SL-TX-018
REV-C

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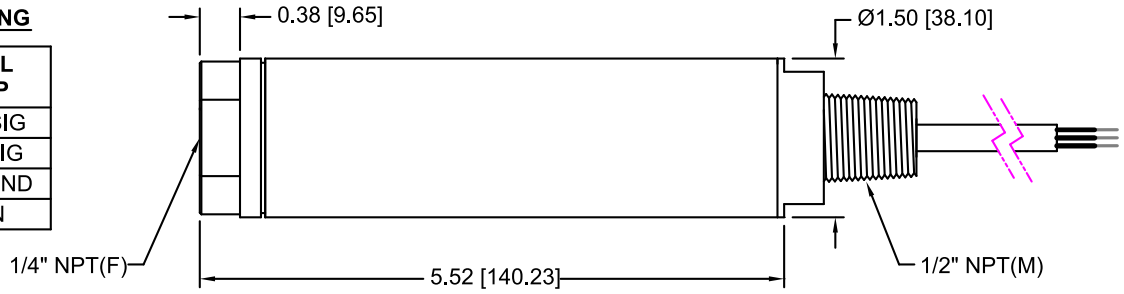
DIMENSIONAL DRAWING

All dimensions are in inches (mm)

STANDARD WIRING

WIRE	MODEL 411X/P
RED	+EXC/SIG
BLK	-EXC/SIG
GRN	CASE GND
SHIELD	OPEN



REFERENCE SPECIFICATIONS

ELECTRICAL

- **Supply Voltage:** 12-36 Vdc
- **Output Signal:** Two wire 4-20 mA with digital HART protocol (optional 4-20 mA temperature output)
- **Temperature Output:** Optional 4-20mA
- **Input Impedance:** 250 Ω at 17 Vdc
- **Insulation Resistance:** >10 MΩ @ 50 Vdc
- **Circuit Protection:** RFI, EMI & Reverse polarity protected (voltage transients above 45 V to 20 A at 0.02 milliseconds)
- **Resolution:** 12-bit
- **Frequency Response:** From 0.07 to 40 sec (software adjustable)
- **Connection:** ½" NPT M conduit with 6-ft 18 AWG multi-conductor cable

MATERIALS OF CONSTRUCTION

- **Wetted Parts:** 17-4 PH stainless steel (Optional Inconel 718, K12X, or 13-8 Monel)
- **Housing:** 316 stainless steel

STATIC ACCURACY (BFSL): Non-Linearity @ +70 °F

Standard: ±0.25% FSO

Improved: ±0.1% FSO

Zero Balance and FSO: ±0.5% FSO at +70 °F

PRESSURE RANGES

- 0-15 PSI thru 0-100K PSIS, PSIA, PSIV, PSIG (1 BAR V thru 6,895 BAR)
- **Range Adjustments:** 5:1 for ranges 0-5 PSI thru 0-100K PSI (0.3 BAR thru 6,895 BAR)

MECHANICAL

- **Process Connection:**
  0-5 thru 0-15K PSI (0-0.3 thru 0-1,035 BAR), PSIV:1/4" NPT (F)
  0-20K thru 0-50K PSI (0-1,380 thru 0-3,450 BAR): Autoclave type F-250-C
  0-60K thru 0-75K PSI (0-4,135 thru 0-5,170 BAR): Autoclave type F-312-C150
- **Proof Pressure:**
  0-15K (1,035 BAR) PSI 1.5X FSO
  20K-100K (6,894 BAR) PSIG 1.2X FSO
- **Burst Pressure:**
  0-15K 3X FSO
  20K-100K (6,894 BAR) PSIG 1.5X FSO or 125K PSIG (8,618 BAR), whichever is less
- **Long-term Stability:** 0.25% FSPR over six months
- **Approximate Weight:** <24 oz (0.7 kg)
- **Enclosure:** IP67

THERMAL SPECIFICATIONS

- **Compensated Range:** 0 to +170 °F (-18 °C to +77 °C)
- **Operating Range:** -40 °F to +185 °F (-40 °C to +85 °C)
- **Storage Ambient:** -65 °F to +250 °F (-53 °C to +121 °C)
- **Effect on Zero/Span:**
  (1:1): ±0.25% FSO/100 °F
  (5:1): ±0.50% FSO/100 °F

All specifications are for reference purposes only. In the interests of continuous product improvement, all specifications are subject to change without notice. Please contact Blue Ribbon Corporation for assistance with your application.

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