INDUSTRIAL GRADE PRESSURE TRANSDUCER



Model BR111 / BR211 / BR311
Industrial Grade Pressure Transducer

MODELS BR111, BR211, BR311

FEATURES:

- Available ranges from 0-30" WC thru 0-15K PSI (75 MBAR to 1,034 BAR)
- Choice of mV/V, Vdc, & 4-20 mA output
- Rugged, welded, stainless steel construction
- High proof pressure
- Economically priced

APPLICATIONS:

- Hydraulic & pneumatic controls
- Die casting
- Rolling & steel mills
- Compression skids
- Irrigation pumps pressure
- Oilfield truck pressures
- Skidded process systems

PRODUCT OVERVIEW:

The Model BR111/211/311 from Blue Ribbon Corp is a family of industrial grade pressure transducers. These strain gauge-based sensors are expressly designed to withstand the shock, vibration and pressure spikes common to most hydraulic and pneumatic control systems. The highly rugged, all-welded stainless steel design of the Model BR111/211/311 offers high corrosion resistance, making the sensors an ideal choice for demanding oil & gas, steelworks, rolling mills and process control applications. Units are also available with optional 10X proof pressure for extended worry-free service life within challenging environments.

FIELD OPTIONS:

- Zero and span adjustments
- 80% and 100% shunt calibration
- Alternate connectors and pressure ports
- For Intrinsically Safe and Explosion Proof approvals, see specially designated datasheet for Models BR311 I/GI/AI and BR111/211/311XP

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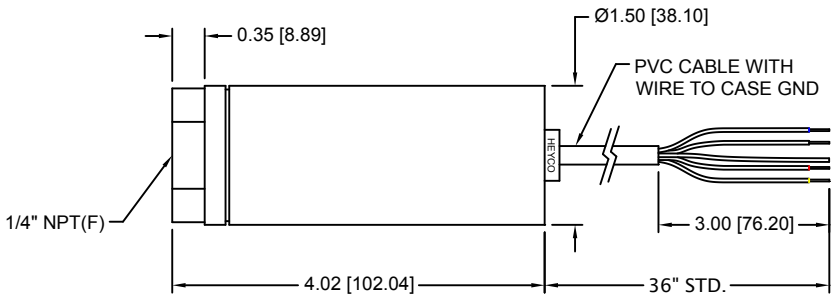
DIMENSIONAL DRAWING

All dimensions are in inches (mm)

STANDARD WIRING

PIN OR WIRE COLOR	MODEL 111	MODEL 211	MODEL 311
1/A/RED	+EXC	+EXC	+EXC/SIG
2/B/GRN	+SIG	+SIG	N/C
3/C/WHT	-SIG	N/C	N/C
4/D/BLK	-EXC	-EXC/SIG	-EXC/SIG
5/E/BLU	+SHUNT (OPT)	+SHUNT (OPT)	+SHUNT (OPT)
6/F/BRN	-SHUNT (OPT)	-SHUNT (OPT)	-SHUNT (OPT)



REFERENCE SPECIFICATIONS

ELECTRICAL

- **Excitation Voltage:**
  (Model 111) 3.5 to 15 Vdc
  (Model 211) 9.0 to 36 Vdc
  (Optional outputs may affect excitation)
  (Model 311) 9.0 to 36 Vdc
- **Output Signal:**
  (Model 111)
  0-1 thru 0-2000 PSI: to 3.0 mV/V
  (Optional 5 to 10 mV/V)
  >2,000 - 15,000 PSI: 1.0 to 3 mV/V
  >15K PSI: from 1.0 to 2.5 mV/V
  (Model 211) 0 to 5 Vdc, 0 to 10 Vdc (other outputs available)
  (Model 311) 4-20 mA
- **Bridge Resistance (values vary):**
  Silicone Sensor: 3 to 5KΩ
  Strain Gage: 5KΩ (350Ω Option) (Some mV/V options are amplified, changes bridge resistance, consult factory)
- **Input Impedance:** (Model 111) ~4K to 6K Ω Amplified Output
- **Circuit Protection:**
  (Model 211/311) RFI, EMI & Reverse polarity protected
- **Response Time:** (211/311): <3 ms 10% to 90%
  (111) Unamplified: 2-5 kHz
- **Connection:** 36" long PVC Jacketed cable, 4-conductor

MATERIALS OF CONSTRUCTION

- **Wetted Parts:**
  ≤1000 PSI: 316L SST w/silicone oil fill
  >1000 PSI: 17-4 PH SST
  (Other materials available, consult factory)
- **Housing:** 300 series stainless steel
- **Internal Fill:** Fomblin oil fill (May contain Silicone Oil)

STATIC ACCURACY (BFSL): NON-LINEARITY @ +70 °F)

- **Standard:** ±0.5% FSO
- **Improved:** ±0.2% FSO or ±0.1% FSO
- **Zero & Span Balance:** ±1% FSO at +70 °F for each

MECHANICAL

- **Process Connection:** 1/4" NPT (F) standard (options available)
- **Proof Pressure:** 2X FSO or 22.5K PSI (1,551 BAR), whichever is less
- **Burst Pressure:** 5X FSO or 23K PSI (1,586 BAR), whichever is less, Vacuum 5X FSO in gauge pressure
- **Approximate weight:** 10 oz. (0.3 kg) nominal (options may increase weight)

PRESSURE RANGES

- 0 to 30" WC thru 0 to 15K PSI (0 to 1,034 BAR)
  PSIG, PSIS, PSIA, PSIV & compound ranges available.

THERMAL SPECIFICATIONS

- **Compensated:** 0 °F to +180 °F (-17.7 °C to +82 °C)
- **Operating:** -40 °F to +250 °F (-40 °C to +121 °C)
- **Storage:** -65 °F to +250 °F (-53 °C to +121 °C)
- **Effect on Zero/Span:** ±1.0% FSO/100 °F
  Improved or expanded temperature compensation available

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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