HIGH-ACCURACY PRESSURE TRANSDUCER

Model BR241 / 341
High-Accuracy Pressure Transducer

MODEL BR241 / 341

FEATURES:

- High accuracy to ±0.05% FSO
- High thermal stability ±0.20% FSO/100 °F
- -40 to +250 °F compensation
- Compact, lightweight, all stainless steel design
- Less than 4 millisecond response time
- Tightest thermal stability in its class

APPLICATIONS:

- Dynamometer testing
- Transmission testing
- Brake testing
- Hydraulic & Pneumatic valve testing
- Jet engine testing
- Emission test stands

PRODUCT OVERVIEW:

Blue Ribbon Model 241/341 is our most accurate pressure transducer. It is 5x tighter through temperature than standard industrial transmitters with a 0.20% FSO / 100 °F thermal stability. The compact, corrosion-resistant, all-welded stainless steel design of the Model BR241/341 offers ease of installation within space constrained environments. Static accuracy is available to ±0.05% FSO, with a total thermal error of 0.25% FSO over the compensated temperature range.

FIELD OPTIONS:

- Optional zero and span adjustment
- Shunt calibration for active line testing without a pressure source
- Comprehensive list of process and electrical connections for existing application retrofits

BR5SL-TX-020
REV-F

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HIGH-ACCURACY PRESSURE TRANSDUCER

DIMENSIONAL DRAWING

All dimensions are in inches (mm)

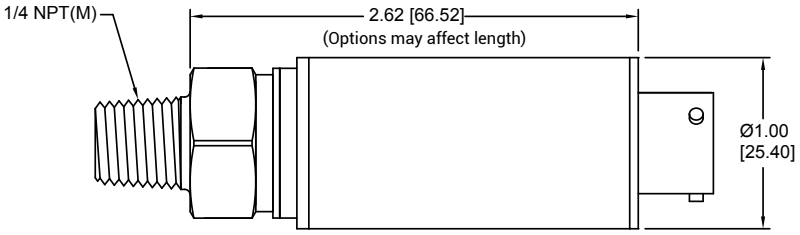
MODEL BR241 WIRING

PIN/WIRE	DESCRIPTION
A/1/RED	+EXC
B/2/GRN	+SIG
C/3/-	N/C
D/4/BLK	-EXC/SIG
E/5/BRN	N/C or SHUNT
F/6/ORG	PROGRAM*

MODEL BR341 WIRING

PIN/WIRE	DESCRIPTION
A/1/RED	+EXC
B/2/BLK	-EXC/SIG
C/3/-	N/C
D/4/BLU	PROGRAM GND*
E/5/BRN	N/C or SHUNT
F/6/ORG	PROGRAM*

*Do not connect to program pins.



REFERENCE SPECIFICATIONS

ELECTRICAL

- **Supply Voltage:** 9 to 32 Vdc (some options may affect this)
- **Output Signal:**
  (Model 241) 0 to 5 Vdc, 0-10 Vdc
  (Model 341) 4-20 mA
- **Circuit Protection:**
  Reverse polarity protected
  Output may be grounded indefinitely
  Over voltage protection to 1kV for <1ms
- **Response Time:** 1mSec (Typical)
- **Connection:** PTIH-10-6P

MATERIALS OF CONSTRUCTION

- **Wetted Parts:**
  ≤2,000 PSI: 316L SST, Hastelloy optional
  >2,000 PSI: 17-4 PH SST (Inconel 718, 316L SS optional)
- **Housing:** 300 series stainless steel
- **Internal Fill:** ≤2000 PSI Silicone oil fill (Other fill available)

STATIC ACCURACY (HYSTERESIS, NON-LINEARITY & REPEATABILITY @ +70 °F)

- **Standard:** ±0.10%
- **Improved:** ±0.05% FSO
- **Zero & Span Balance:** ±0.5% FSO @ +70 °F

(BFSL method used. Improved options available.)

MECHANICAL

- **Process Connection:** 1/4" NPT (M)
  (consult factory for complete list of options)
- **Proof Pressure:** 2X FSO
- **Burst Pressure:** 5X FSO or 22.5K PSI max. (1,551 BAR)
- **Random Vibration:** 25 G RMS (20 to 2000 Hz)
- **Shock:** 100G peak for 11 msec, ½ Sine
- **Approximate Weight:** <0.5 lb (227gms)

PRESSURE RANGES

- 0-30" WC thru 8K PSI (2.5 mBAR to 552 BAR) Gauge, Vacuum, Absolute, Sealed Gauge

THERMAL SPECIFICATIONS

- **Compensated Range:** 0 °F to +180 °F (-18 °C to +82 °C)
- **Operating Range:** -40 °F to +250 °F (-40 °C to +121 °C)
- **Expanded Range:** -40 °F to +250 °F (-40 °C to +121 °C)
- **Storage Ambient:** -40 °F to +250 °F (-40 °C to +121 °C)
- **Effect on Zero/Span:** ±0.5% FSO/100 °F standard
  (±1.0% FSO/100 °F from -40 to 185 °F / (-40 °C to +85 °C)
- **Improved Performance:** ±0.20% FSO/100 °F (-40 °F to +250 °F (-40 °C to +121 °C))

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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