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
- -65 °F to +250 °F compensation options
- 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:

Model BR241/341 from Blue Ribbon Corp 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. More than 25 years of field expertise went into the design of our pressure transducer for exceptional realiability. 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.

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DIMENSIONAL DRAWING

All dimensions are in inches (mm)

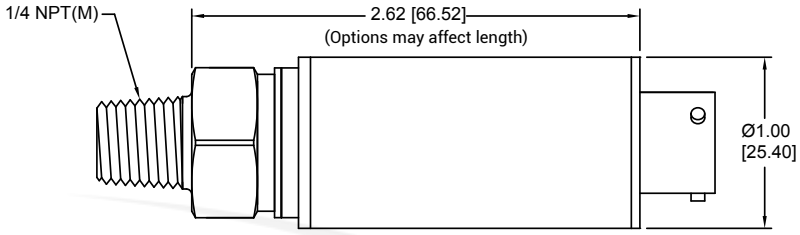
MODEL 241 WIRING

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 341 WIRING

PIN/WIRE	DESCRIPTION
A/1/RED	+EXC/SIG
B/2/BLK	-EXC/SIG
C/3/WHT	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 voltge protection to 1kV fo <1ms
- **Response Time:** 1 mSec Typ
- **Connection:** PTIH-10-6P

MATERIALS OF CONSTRUCTION

- **Wetted Parts:**
  ≤1,000 PSI: 316L SST, Hastelloy optional
  >1,000 PSI: 17-4 PH SST (Inconel 718, 316L SS optional)
- **Housing:** 300 series stainless steel
- **Internal Fill:** Fomblin oil Fill (May contain Silicone oil fill)

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

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

MECHANICAL

- **Process Connection:** ¼" 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 (227 gms)

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:**
  All Ranges:
  -40 °F to +250 °F (-40 °C to +121 °C)
  (Consult Factory):
  -65 °F to +250 °F (-54 °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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