



HIGH-ACCURACY PRESSURE TRANSDUCER

MODEL BR241 / 341



Model BR241 / 341
High-Accuracy Pressure Transducer

FEATURES:

- High accuracy to $\pm 0.05\%$ FSO
- High thermal stability $\pm 0.20\%$ 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:

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 $\pm 0.05\%$ 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-H

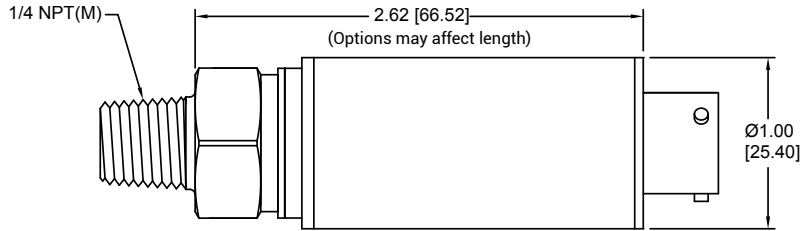
HIGH-ACCURACY PRESSURE TRANSDUCER

DIMENSIONAL DRAWING

All dimensions are in inches (mm)

MODEL 241 WIRING		MODEL 341 WIRING	
PIN/WIRE	DESCRIPTION	PIN/WIRE	DESCRIPTION
A/1/RED	+EXC	A/1/RED	+EXC/SIG
B/2/GRN	+SIG	B/2/BLK	-EXC/SIG
C/3/-	N/C	C/3/WHT	N/C
D/4/BLK	-EXC/SIG	D/4/BLU	PROGRAM GND*
E/5/BRN	N/C or SHUNT	E/5/BRN	N/C or SHUNT
F/6/ORG	PROGRAM*	F/6/ORG	PROGRAM*

*Do not connect to program pins.



REFERENCE SPECIFICATIONS

<p>ELECTRICAL</p> <ul style="list-style-type: none"> • 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 	<p>MECHANICAL</p> <ul style="list-style-type: none"> • 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, 1/2 Sine • Approximate Weight: <0.5 lb (227gms)
<p>MATERIALS OF CONSTRUCTION</p> <ul style="list-style-type: none"> • 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) 	<p>PRESSURE RANGES</p> <ul style="list-style-type: none"> • 0-30" WC thru 8K PSI (2.5 mBAR to 552 BAR) Gauge, Vacuum, Absolute, Sealed Gauge
<p>STATIC ACCURACY (HYSTERESIS, NON-LINEARITY & REPEATABILITY @ +70 °F)</p> <ul style="list-style-type: none"> • Standard: ±0.10% • Improved: ±0.05% FSO • Zero & Span Balance: ±0.5% FSO @ +70 °F 	<p>THERMAL SPECIFICATIONS</p> <ul style="list-style-type: none"> • 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))

(BFSL method used. Improved options 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.

