

HIGH-ACCURACY PRESSURE TRANSDUCER

MODEL 241 / 341



Model 241 / 341
High-Accuracy Pressure Transducer

FEATURES:

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

Model 241/341 from GP:50 is our most accurate pressure transducer. Designed specifically for aerospace and automotive test stand applications, 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 reliability. The compact, corrosion-resistant, all-welded stainless steel design of the Model 241/341 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

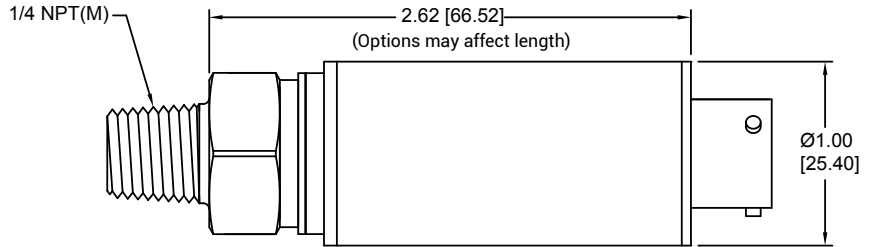
MODEL 241 / 341

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
B/2/GRN	+SIG	B/2/BLK	-EXC/SIG
C/3/-	N/C	C/3/-	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

ELECTRICAL	MECHANICAL
<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 (Model 341) 4-20 mA • Load Resistance: (Model 241) 100K Ω min. (Model 341) 1150 Ω max. at 32 Vdc • Circuit Protection: Reverse polarity protected Output may be grounded indefinitely Over voltage protection to 1kV for <1ms • Response Time: <4 msec typical • Connection: PTIH-10-6P 	<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
MATERIALS OF CONSTRUCTION	PRESSURE RANGES
<ul style="list-style-type: none"> • Wetted Parts: \leq2,000 PSI: 316L SST w/silicon oil fill (Other fill available), Hastelloy optional $>$2,000 PSI: 17-4 PH SST, Inconel 718, 316L SS optional • Housing: 300 series SST 	<ul style="list-style-type: none"> • 0-30" WC thru 8K PSI (552 BAR) Gauge, Vacuum, Absolute, Sealed Gauge (both hermetic and non-hermetic)
STATIC ACCURACY (NON-LINEARITY @ +70 °F (BFSL))	THERMAL SPECIFICATIONS
<ul style="list-style-type: none"> • \pm0.10% and \pm0.05% FSO • Zero Balance and FSO: \pm0.5% FSO @ 70 °F 	<ul style="list-style-type: none"> • Compensated: 0 °F to +180 °F (-18 °C to +82 °C) • Effect on Zero/Span: \pm0.5% FSO/100 °F standard (\pm1.0% FSO/100 °F from -40 to 185 °F / (-40 °C to +85 °C)) • Operating Temp: -40 °F to +250 °F (-40 °C to +121 °C) • Storage Temp: -40 °F to +250 °F (-40 °C to +121 °C) <p>Improved performance options:</p> <ul style="list-style-type: none"> • Expanded Ranges: -40 °F to +250 °F (-40 °C to +121 °C) • Improved Performance: \pm0.20% FSO/100 °F (-40 °F to +250 °F (-40 °C to +121 °C))