



## HIGH-ACCURACY CAN BUS TRANSDUCER

### MODEL 541

#### FEATURES:

- CAN Bus protocol - J1939 or Can Open
- High accuracy  $\pm 0.05\%$  FSO
- High thermal stability  $\pm 0.25\%$  FSO/100 deg F
- -40 to +250 deg F compensation
- Compact, lightweight, all stainless steel design
- 1 millisecond response time
- Temperature output

#### APPLICATIONS:

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

#### PRODUCT OVERVIEW:

The Model 541 series is our most accurate CAN based pressure transducer. Designed specifically for test stand applications, the CAN Bus protocol provides high resolution, reduced noise and improved thermal performance. The compact, all-welded stainless steel design of the Model 541 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:

- Field adjustable zero
- Adjustable message addresses, bit rate and message streaming
- Optional extended CAN 2.0B 29-bit CAN identifiers



Model 541  
High-Accuracy CAN Bus Transducer

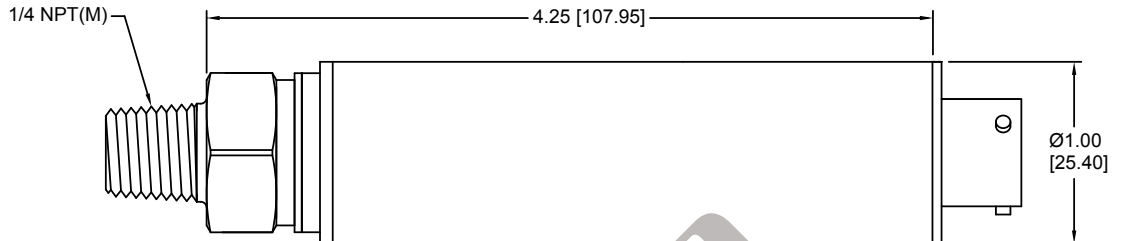
# GP:50 MODEL 541

## DIMENSIONAL DRAWING

All dimensions are in inches (mm)

### STANDARD WIRING

PIN	MODEL 541
A/1	+EXC
B/2	-EXC
C/3	CASE GND
D/4	CANBUS HI
E/5	CANBUS LOW
F/6	N/A



## REFERENCE SPECIFICATIONS

<b>ELECTRICAL</b> <ul style="list-style-type: none"><li>• <b>Supply Voltage:</b> Standard: 5.6 to 18 Vdc Optional Expanded: 9-36 Vdc</li><li>• <b>Output Signal:</b> CAN bus SAE J1939 and CAN Open</li><li>• <b>Current Draw:</b> 40 mA</li><li>• <b>Standard Resolution:</b> 18 Bit</li><li>• <b>Zero Balance:</b> +/-0.1% FSO @ 70 °F</li><li>• <b>Standard Messaging:</b> Pressure, temperature &amp; mV/V sensor (Up to four messages can be streamed)</li><li>• <b>Standard CAN Protocol:</b> 11 Bit CAN identifiers Optional Extended CAN 2.0B-29 Bit CAN identifiers</li><li>• <b>Connection:</b> 1/2" NPT (M) conduit with 36" cable leads or 6-Pin Bendix connector</li></ul>	<b>STATIC ACCURACY (BFSL)</b> (HYSTERESIS, NON-LINEARITY & REPEATABILITY @ +70 °F) <ul style="list-style-type: none"><li>• Standard: ±0.2% FSO ±0.10 % FSO and ±0.05% FSO available</li></ul>
<b>MATERIALS OF CONSTRUCTION</b> <ul style="list-style-type: none"><li>• <b>Wetted Parts:</b> 316 or 17-4 PH SST</li><li>• <b>Housing:</b> 300 series stainless steel</li></ul>	<b>MECHANICAL</b> <ul style="list-style-type: none"><li>• <b>Process connection:</b> 1/4" NPT (M)</li><li>• <b>Proof Pressure:</b> 2X FSO (optional 5X)</li><li>• <b>Burst Pressure:</b> 5X FSO</li></ul> <b>PRESSURE RANGES</b> <ul style="list-style-type: none"><li>• 0 to 1 thru 0 to 10,000 PSI (0.069 thru 690 BAR) gauge, sealed gauge, absolute</li></ul> <b>THERMAL SPECIFICATION</b> <ul style="list-style-type: none"><li>• <b>Compensated:</b> 0 °F to +180 °F (-18 °C to +82 °C)</li><li>• <b>Effect on zero/span:</b> ±0.5% FSO/100 °F each (±1.0% FSO/100 °F from -40 to 185 °F / (-40 °C to +85 °C))</li><li>• <b>Operating Temp:</b> -40 °F to +250 °F (-40 °C to +121 °C)</li></ul> <b>Improved Performance Options:</b> <ul style="list-style-type: none"><li>• <b>Expanded Ranges:</b> -40 °F to +250 °F (-40 °C to +121 °C)</li><li>• <b>Improved Temperature Performance:</b> ±0.25% FSO/100 °F (-40 °F to +250 °F (-40 °C to +121 °C))</li></ul>

**Standard configurations shown.  
Please consult factory for other options.**

All specifications are for reference purposes only. In the interests of continuous product improvement, all specifications are subject to change without notice. Please contact GP:50 for assistance with your application.