

DOWNHOLE, +500°F HIGH TEMPERATURE, PRESSURE TRANSDUCERS



Designed to survive high temperature while providing exceptional pressure performance, accuracy, long term stability, reliability and repeatability. These **small form factor** pressure transducers can withstand continuous operating temperatures up to **+500°F (+260°C)** and are well suited for End User and OEM applications in Energy Exploration, Production, Geothermal, Power Generation and more....

The **211-50-070** transducers are available in pressure ranges up to **+50,000 PSIA**. Featuring 2.8mV/V nominal output with a total error band including thermal effects of .150% or better as referenced to a 2nd order polynomial. With a hermetically sealed, welded all Inconel 718®™ construction for environmental protection, these units are well suited for the toughest applications. The **211-50-070** transducer is also available in custom designs to meet your specific application or environment.



211-50-070-XX*
0-5,000 to 0-50,000 PSIA

Specifications:

Typical Performance: The following parameters are established from production units.
Calibration Data: Calibration Certificates are supplied with each unit.

Performance: *

Non-Linearity and Hysteresis Combined: ± 0.150% Full Scale Output (F.S.O.) maximum (Best Straight Line Method).

Total Error (Non-Linearity, Hysteresis and Thermal Effects) Bounds: Shall be ± 0.150% F.S.O. as compared to the serial number specific polynomial model P(T, mV) for all input pressures and temperatures over the calibrated range.

Operating Temperature Range: +75°F to +500°F (23°C to +260°C)

Calibrated Temperature Range: +75°F to +500°F (23°C to +260°C)

Mechanical: *

Pressure Range: 0- 5,000 to 0-50,000 PSIA.

Proof Pressure: 125% to 150% of rated range (depending on part option).

Burst Pressure: 200% to 44,000 PSI of rated range (depending on part option).

Pressure Media: Any compatible with alloy N07718 Rockwell C 40 maximum.

Electrical Connections: High temperature solderable connections.

Pressure Port: Per MS33656-E3.

Weight: 2.0 ounces nominal (.056 kg).

Installation Information: Manifold mount on port using Paine Electronics annealed Inconel 600 replaceable seal. Thermal coefficient of the manifold expansion should not exceed 8.3×10^{-6} in/in °F for operation above 100°C.

Recommended Installation Torque: 125 to 150 in-lb (14-17 Nm).

Electrical: *

Excitation: 1 to 20 VDC (10 VDC nominal).

Input Resistance: 1500 ± 300 Ω.

Output Resistance: 1500 ± 150 Ω.

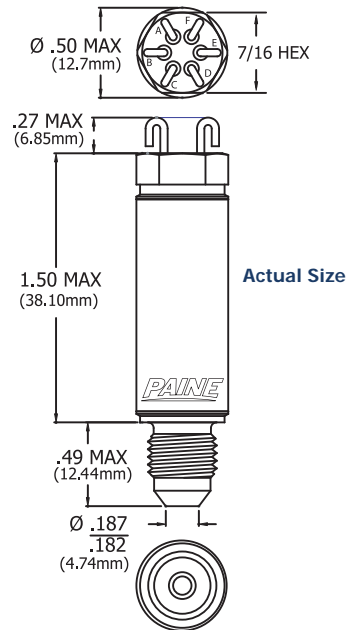
Output At Zero Pressure Over The Calibrated Pressure Range: 0 to 0.1 mV/V.

Output At Rated Pressure Over The Calibrated Pressure Range: 2.8mV/V nominal.

Platinum Resistance Temperature Detector (RTD): 0°C, 1000 Ω ± .06% IEC 751, Class A
Alpha = .00385 nominal.

Insulation Resistance: All conductors together to case: 10GΩ minimum at 50 VDC and +77°F.

Electrical Connections: A= + Excitation, B= + Signal, C= - Signal, D= - Excitation, E= RTD, F= RTD.



Actual Size



Paine Electronics, LLC is a proud ISO-9001/AS9100 registered company

Datasheet P/N: 211-50-070-DS_REV-E

* Contact us or your authorized Paine Electronics representative for other standard and/or custom configurations or options.

** Information is referenced to a 2nd order polynomial.

All specifications are subject to change or modification without notice.

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Call or email us today for more information!

509-881-2100

moreinfo@paineelectronics.com

Paine Electronics, LLC
5545 Nelpar Drive, East Wenatchee WA 98802
Tel: (509) 881-2100 | Fax: (509) 881-2115

Visit us on the web at:
www.paineelectronics.com