"Pressure Instrumentation For the Toughest Applications"

Downhole, High Precision, Absolute, Pressure Transducers

The **310-38-520 Series** is designed for **high precision pressure and temperature measurement** typically seen in downhole oil and gas pressure monitoring, process controls, test stands, OEM's and end user pressure and temperature measurement applications.

The **310-38-520 Series** provides long term stability at temperatures ranging from **-40°F** to **+425°F** (-40°C to +218°C) in pressure ranges of **0-5,000** to **0-30,000 PSIA** and features **2.6mV/V** nominal output with a total error band of **±0.02%**.

With the added benefit of it's small size, near real time pressure and temperature measurements and the ability to perform in highly corrosive environments, the **310-38-520 Series** is constructed of all welded Inconel 718®™ and can be installed with Paine's replaceable Inconel 600 seal for virtually maintenance-free, permanent installations.

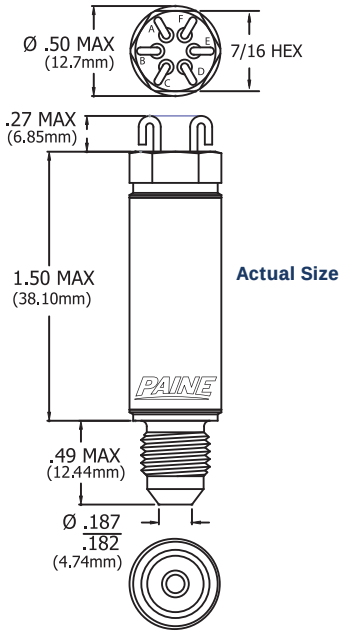
310-38-520-XX*
0-5,000 to 0-30,000 PSIA

Specifications:

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

Performance: *

Total Error Band (Non-Linearity, Hysteresis & Thermal Effects): Shall not be greater than ±0.02% of the Full Scale Sensitivity (F.S.S.) as compared to the serial number specific polynominal model P(T,mV) for all input pressures and temperatures over the calibrated range.
Output at Zero Pressure Over The Calibrated Temperature Range: 0 ± 2.0% full scale.
Full Scale Sensitivity: 2.6 mV/V nominal.
Operating Temperature Range: -40°F to +425°F (-40°C to +218°C).
Calibrated Temperature Range: +75°F to +350°F (+23°C to +176°C).



Mechanical: *

Pressure Range: 0-5,000 to 0-30,000 PSIA.
Proof Pressure: 125% to 150% of rated range (depending on part option).
Burst Pressure: 130% to 200% of rated range (depending on part option).
Pressure Media: Any compatible with alloy UNS NO7718 solution annealed and aged to a minimum hardness of 40HRC.
Environmental: Error due to combined effect of shock, vibration and acceleration shall be less than 0.01% of full scale per G , 20G maximum.
External Case Pressure: Up to 20,000 PSI.
Electrical Connections: High temperature solderable connections.
Pressure Port: Per MS33656-E3.
Weight: 2.0 ounces maximum (.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 x 10ˆ - 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.
Insulation Resistance: All conductors together to case, 10GΩ minimum at 50 VDC and +77°F.
Platinum Resistance Temperature Detector (RTD): 0ºC, 1000 Ω ± .06% to IEC 751, Class A, Alpha = .00385 nominal
Electrical Connections: A= + Excitation, B= + Signal, C= - Signal, D= - Excitation, E= RTD, F= RTD

TÜV USA Member of the TÜV NORD Group
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Paine Electronics, LLC is a ISO-9001:2000/AS9100 Registered Company

Datasheet P/N: 310-38-520-DS_REV-F

* 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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