310-38-520 Series

Downhole, Absolute, High Precision, Pressure & Temperature

PAINE

310-38-520 Series is our rugged **high accuracy pressure** and **temperature** transducer featuring **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 well suited downhole oil and gas pressure monitoring, process controls, test stands, OEM's and many other industries **pressure** and **temperature** measurement applications,

Features:

- Pressure Range: 0-5,000 to 0-35,000 PSIA.
- Operating Temperature: -40°F to +425°F (-40°C to +218°C).
- Total Error Band of **± 0.02%** of Full Scale per °F.
- **Pressure & Temperature Measurement.**
- Media Compatibility: Any compatible with alloy UNS NO7718 solution annealed and aged to a minimum hardness of 40HRC.
- Each transducer is provided with coefficients to load into your electronics for temperature and non-linearity compensation.

Applications:

- Oil & Gas Exploration & Production.
- MWD, PWD & LWD tools.
- Wellhead & Pump Station Monitoring.
- Geothermal & Power Generation.
- OEM & End-User Applications.

Options:

- Electrical connections.
- Pressure Ports.

Proudly Represented By:

310-38-520 Series Specifications:

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

Performance:

Full Scale (F.S.) Sensitivity: 2.6 mV/V ± 0.2%.

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.

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

Environmental:

Environmental: Error due to combined effect of shock, vibration and acceleration shall be less than 0.01 % of F.S. per G, 20G maximum.
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 (Standard Products): * 310-38-520-08 is calibrated to 30,000

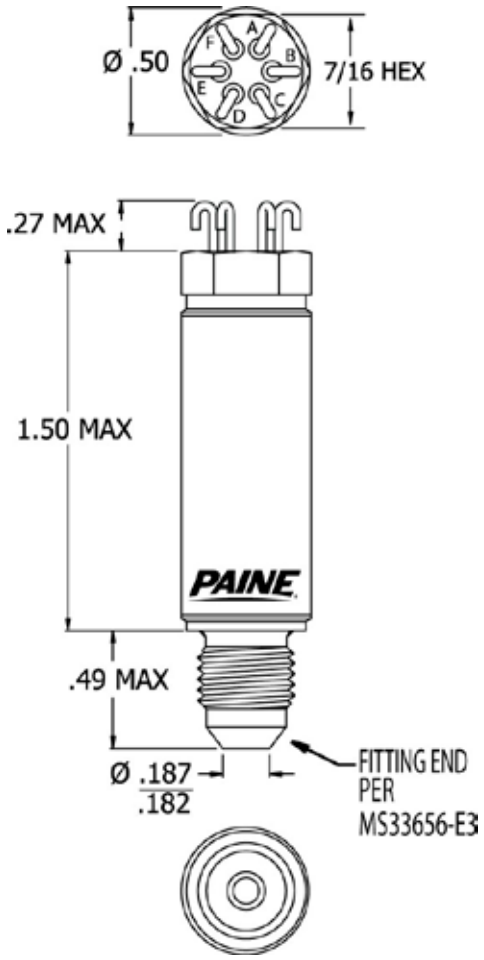
PRESSURE TABLE				
Paine Part Number:	Pressure Range PSIA	Proof Pressure PSIA	Burst Pressure PSIA	Paine Electronics Replaceable Seal Part Number
310-38-520-01	0-5,000	7,500	10,000	247-99-250-01
310-38-520-02	0-10,000	15,000	20,000	247-99-250-01
310-38-520-03	0-15,000	18,750	22,500	247-99-250-01
310-38-520-04	0-20,000	25,000	30,000	247-99-250-01
310-38-520-05	0-22,500	28,125	30,000	247-99-250-01
310-38-520-06	0-25,000	31,325	33,000	247-99-250-01
310-38-520-07	0-30,000	37,500	40,000	247-99-250-02
310-38-520-08*	0-35,000	40,000	48,000	247-99-250-02

External Case Pressure: Up to 20,000 PSI.
Pressure Media: Any compatible with alloy UNS NO7718 solution annealed and aged to a minimum hardness of 40HRC.
Pressure Fitting: Per MS33656-E3.
Installation Information: Mount on port using Paine Electronics annealed Inconel® 600 Replaceable Seal. Thermal coefficient of the mounting 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 .
Electrical Connections: High temperature solderable connections.

Dimensions (inches)



CAD & model information is available on our web site or by request.

Connections

PIN	FUNCTION
A	+ EXCITATION
B	+ SIGNAL
C	- SIGNAL
D	- EXCITATION
E	R.T.D.
F	R.T.D.

Contact us or your authorized Paine Electronics representative for many more standard and/or custom configurations or options. All specifications are subject to change, modification or improvement without notice. Visit our web site for the latest specifications. All sales are subject to Paine Electronics standard terms and conditions. PAINE ® is a registered trademark of Paine Electronics, LLC. Copyright © Paine Electronics, LLC. All Rights Reserved. Product, company names, logo's and trademarks used herein are the property of their respective owners.

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