



PRESSURE/TEMPERATURE, COMBINATION, 311-38-540 SERIES TRANSDUCERS

Paine Electronics' new **311-38-540 Pressure & Temperature Combination Series** is offered in pressure ranges from **0-5,000** to **0-30,000 PSIA**, operates at temperatures from **-40°F** to **+425°F** and is well suited for applications requiring high shock, high external case pressures, vibration, humidity and critical temperature measurement in corrosive environments.

The **311-38-540 Series** incorporates Paine's proprietary sensor technology with innovative temperature sensing to introduce a new series of high pressure, high temperature combination transducers specifically designed for direct media stream immersion and the rapid detection of changes in **pressure and temperature**.

The **311-38-540 Series** can be provided with alternate port fittings and electrical connections to meet your specific requirements and provides the best solution to designers looking to reduce space, weight and components.

Typical Applications: Oilfield Drilling/Production, Harsh/Extreme Environments, Industrial/Plant Automation Monitoring & Controls, Heavy/Agricultural/Off-Road Equipment, Military Aircraft & Ground Vehicle Hydraulic Monitoring.

Specifications:

Typical Performance: The following parameters are established from production units.

Calibration Data: Calibration Certificates are supplied with each unit.

Performance: *

Full Scale (F.S.) Sensitivity: 2.6 mV/V nominal.

Total Error Band (Non-Linearity, Hysteresis & Thermal Effects): Shall not be greater than 0.02% of the F.S. as compared to the serial number specific polynomial model P(T,mV) for all input pressures and temperatures over the calibrated range.

Output at Zero Pressure: 0.12 ± 0.1 mV/V over calibrated temperature range.

Calibrated Temperature Range: +75°F to +350°F (+23°C to +176°C).

Operating Temperature Range: -40°F to +425°F (-40°C to +218°C).

Mechanical: *

Pressure Range: 0-5,000 to 0-30,000 PSIA.

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

Burst Pressure: Up to 40,000 PSI depending on part option.

Pressure Media: Any compatible with alloy UNS N07718 solution annealed and aged to a maximum hardness of 40 HRC, and Inconel 600 (Probe).

Pressure Fitting: 0.750-16 UNF-2A thread.

Electrical Connections: 6ea, high temperature solderable connections.

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

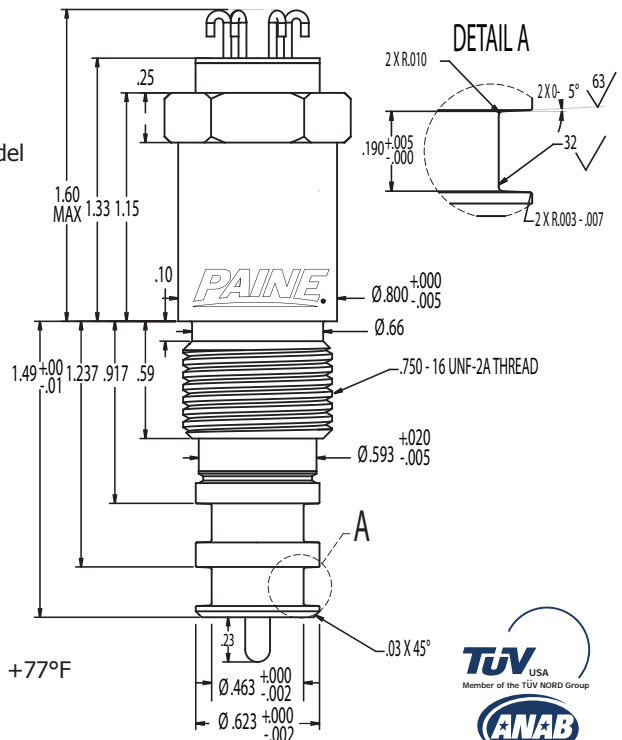
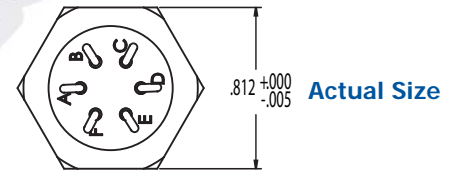
Platinum Resistance Temperature Detector (RTD): Class A, 1000 Ω @ 32°F (0°C)

to IEC 751, Class A, Alpha = .00385 nominal.

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



311-38-540-XX
0-5,000 to 0-30,000 PSIA



Datasheet P/N: 311-38-540-DS_REV-A

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

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