

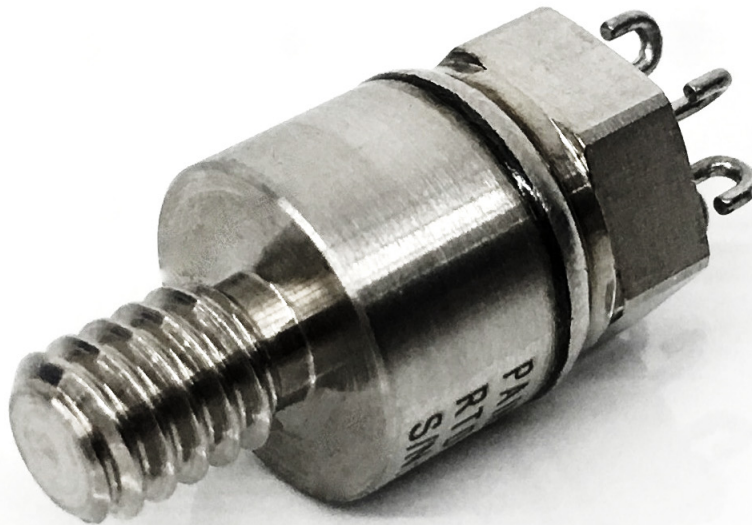


## PRODUCT DATASHEET

[www.high-accuracy.com](http://www.high-accuracy.com)

# Paine™ 215-01-080 Series Temperature Sensor

Platinum RTD, Surface, High Temperature, +250 °C



The Paine 215-01-080 Series, Surface, Temperature Sensor is a platinum resistance temperature detector (RTD) probe designed for high temperatures up to 482 °F (250 °C). Engineered as a compact and corrosion-resistant sensor, this RTD probe features long-term performance with reliability, stability, and repeatability. These sensors provide accuracy and rapid response times and are well suited for critical surface temperature measurements of machinery and process equipment.

## Solutions

- Platinum RTD
- Harsh/extreme environment ready
- 0.515-in. diameter package
- Fast response time
- Long term stability

## Potential applications

- Oil and gas thermal controls
- Exhaust gas and manifold analyzers
- HVAC temperature controls
- Industrial/production process equipment
- Heavy equipment/transportation
- Engine temperature monitoring
- Equipment calibration

## Features

- **Operating temperature:** -4 to +482 °F (-20 to +150 °C)
- **Temperature coefficient:** Alpha = 0.00385 per °C
- **Platinum resistance temperature detector (RTD):**  
Class A, Pt 1 kΩ ± 0.06% at 32 °F (0 °C)
- **Material:**
  - **Hex header:** Alloy X750
  - **Case:** Alloy 718, UNSN07718, solution annealed and aged to Rockwell C40 maximum
- **External pressure rating:** 20,000 psi (1378 bar) maximum
- **Vibration:** 20–2000 Hz, 10 g sinusoidal scan, 1 hour/axis

## Specifications

**Calibration:** Calibration certificates are supplied with each unit and available online.

## Performance

**Temperature coefficient:** Alpha = 0.00385 nominal per °C

**Platinum resistance temperature detector (RTD):**  
Class A, Pt 1 kΩ ± 0.06% at 32 °F (0 °C)

## Environmental

**Operating temperature range:** -4 °F to +482 °F  
(-20 °C to +250 °C)

## Mechanical

**Material:**

**Hex header:** Alloy X750

**Case:** Alloy 718, UNSN07718, solution annealed and aged to Rockwell C40 = maximum

**External pressure rating:** 20,000 psi (1,378 bar) maximum.

**Vibration:** 20–2000 Hz, 10 g sinusoidal scan, 1 hour/axis.

**Shock:** 75 G's peak, 3.5–5 milliseconds, six shocks each of six directions. (No pin is electrically connected to the case).

**Pressure fitting:** 1/4 × 20 UNC-2A.

**Weight:** 2 ounces maximum (0.05 kg).

**Installation information:** Manifold/flush mount.

## Electrical

**Insulation resistance:** 5,000 MΩ minimum at 50 VDC at 75 °F (23 °C) all pins to case

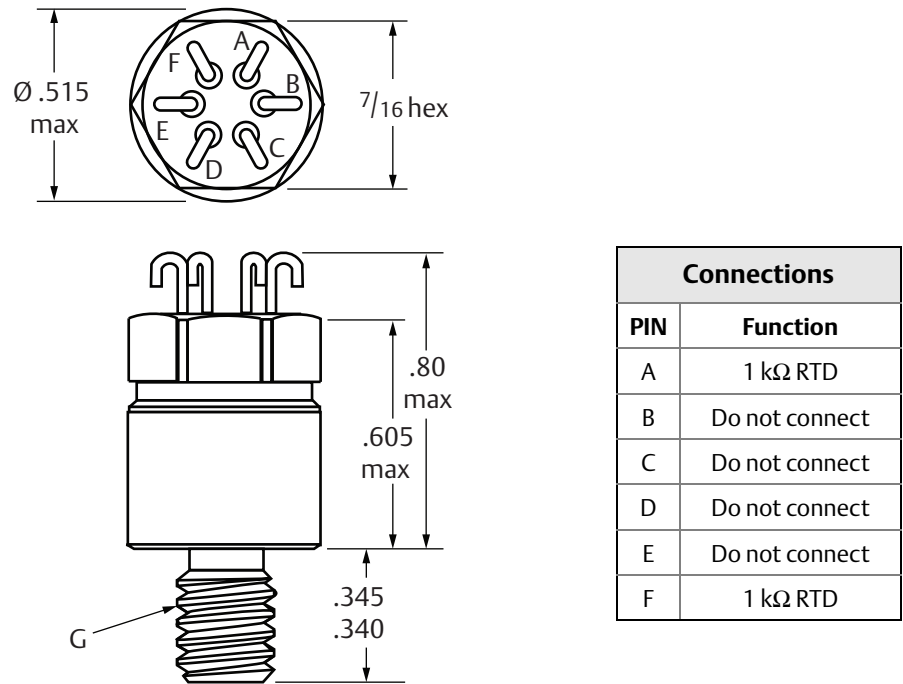
**Electrical connections:** Available with pin connectors, lead wires, and j-hooks.

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# Dimensional Drawings

Figure 1. Paine 215-01-080 Series


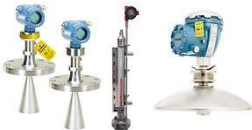












A–F. See Connections table  
G.  $\frac{1}{4} \times 20$  UNC-2A thread  
Dimensions are shown in inches.

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