

# Paine 215-01-120 Series Temperature Sensor

Platinum RTD, Direct Media, High Temperature, +260 °C



The 215-01-120 Series direct media platinum RTD temperature sensors are designed for temperatures up to +500 °F (+260 °C). They are well suited for critical direct flow and in-flow temperature measurements of liquids and gases and provide rapid response times, long term reliability, repeatability and performance.

## Solutions

- Direct Measurement of High Pressure Fluids.
- Harsh/Extreme Environment Ready.
- Corrosion Resistance Probe.
- 0.732-in. Diameter Package.
- Fast Response Times.
- Customizable.

## Potential Applications

- Engine In-Line Fluid, Air or Gas Temperature Sensing.
- HVAC or Refrigeration Compressor Monitoring.
- Industrial Process Equipment.
- Heavy Equipment/Off-Road Vehicle Hydraulic.
- Well Bore Fluid Temperatures.
- Equipment Calibration.

## Features

- **Operating Temperature:** -25 °F to +500 °F (-31 °C to +260 °C).
- **Temperature Coefficient:** Alpha = 0.00385 per °C.
- **Platinum Resistance Temperature Detector (RTD):** Class A, Pt 1 kΩ ± 0.06% @ 32 °F (0 °C).
- **Material:** Inconel 718, UNSN07718, solution annealed and aged to Rockwell C40 maximum.
- **External Pressure Rating from Hex to Tip of RTD:** 30,000 psi (2068 bar) maximum.
- **Pressure Fitting:** 1/2–20 UNF 2A. Alternate options can be provided.

## Specifications

**Calibration:** Calibration Certificates are supplied with each unit and available on-line.

## Performance

**Temperature Coefficient:** Alpha = 0.00385 nominal per °C.

**Platinum Resistance Temperature Detector (RTD):** Class A, Pt 1 kΩ ± 0.06% @ 32 °F (0 °C).

## Environmental

**Operating Temperature Range:** -25 °F to +500 °F (-31 °C to +260 °C).

## Mechanical

**Material:** Inconel 718, UNSN07718, solution annealed and aged to maximum hardness of Rockwell C40 maximum.

**External Pressure Rating from Hex to Tip of RTD:** 30,000 psi (2068 bar) maximum.

**Pressure Fitting:** 1/2–20 UNF 2A. Alternate options can be provided.

**Weight:** 5 ounces nominal (0.14 kg).

**Installation Information:** Manifold/Direct Media in-flow mount.

## Electrical

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

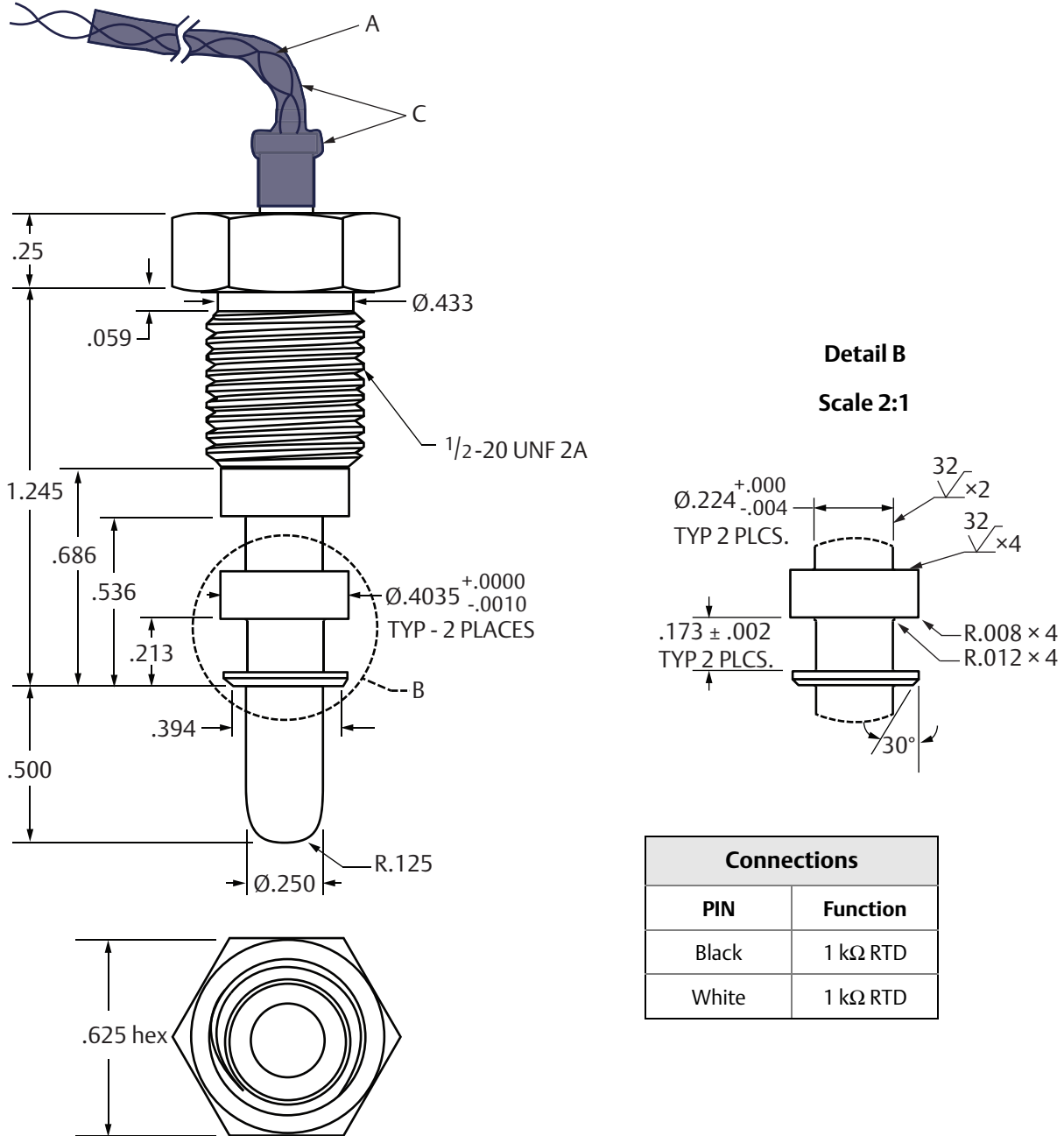
**Electrical Connections:** 12-in., 28 AWG Teflon insulated wire, nickel coated copper per MILW-16878/24 or MIL--W-16878/23.

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# Dimensional Drawings

Figure 1. 215-01-120 Series






A. 2 × 28 AWG, 600 VDC, Teflon insulated, Nickel-plated copper wires, 12.0 ± 1.0 long  
 C. High temperature heat shrinkable tubing

Dimensions are inches.

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