

Bullet Probe | Platinum RTD

Bullet Probe, Platinum



Automation Components
a DwyerOmega brand

The ACI Platinum Bullet Probe Series features a one inch stainless steel probe with two or three, 61 cm (24 in), 0.65 mm (22 AWG) Etched Teflon colored lead wires to differentiate the different sensor types. Note that the three-wire “-3W” option should be ordered if using with a 3-Wire temperature transmitter or sensor configuration on your building management system or PLC (Programmable Logic Controller). The purpose of the 3rd wire is to compensate for any external lead wire resistance that will affect the accuracy of your sensors output signal. For best results, ACI recommends the use of 1.02 mm (18 AWG) lead wires to reduce the external lead wire resistance when using a Platinum RTD. The sensors in this series are manufactured using ACI’s proven double encapsulation process to eliminate the effects of moisture upon the sensors and to increase the response time using our high quality, thermally conductive epoxy. The bullet style sensor is designed to be used to monitor air temperatures and should not be fully submerged in water. This series can be ordered with different wire options and NIST Certification as referenced in the Ordering Grid on the back of the product data sheet.

Applications

Roof Top Units, Air Handlers, Discharge Air/Supply/Return/Mixed Air Duct Temperature, Remote Temperature Sensing, Hydronic Systems

Warranty

The ACI Platinum Bullet Probe Series is covered by ACI’s Five (5) Year Limited Warranty. The warranty can be found in the front of ACI’s Sensors & Transmitters catalog, as well as on ACI’s website, workaci.com.

Specifications

Sensor Type: Platinum RTD

Sensor Curve: PTC (Positive Temperature Coefficient)

Number Sensing Points: One

Number Sensor Terminals

A/100-2W-BP Series and A/1K-2W-BP Series: Two (Non-Polarity Sensitive)

A/100-3W-BP Series and A/1K-3W-BP Series: Three (Polarity Sensitive)

Sensor Output @ 0 °C (32 °F)

A-100-xW-BP Series: 100 Ω nominal

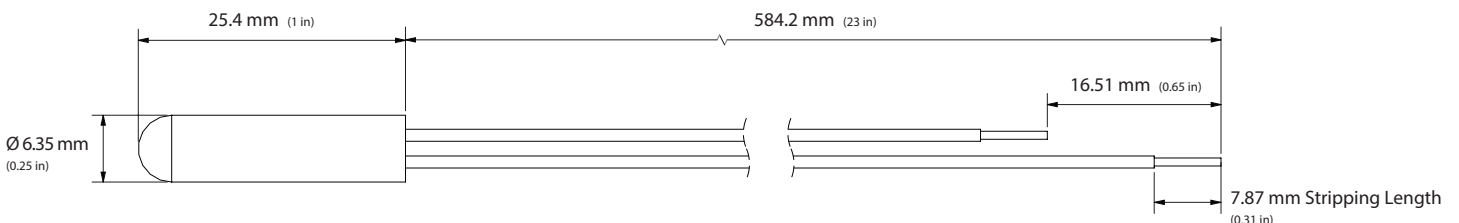
A/1K-xW-BP Series: 1000 Ω nominal

Sensor Accuracy @ 0 °C (32 °F)

± 0.06 % Class A (Tolerance Formula: $\pm \text{ }^\circ\text{C} = (0.15 \text{ }^\circ\text{C} + (0.002 * |t|))$)

where |t| is the absolute value of Temperature above or below 0 °C in °C

Dimensions



-40 °C (-40 °F): ± 0.23 °C (± 0.414 °F)

0 °C (32 °F): ± 0.15 °C (± 0.27 °F)

200 °C (392 °F): ± 0.55 °C (± 0.99 °F)

DIN Standard: DIN EN 60751 (IEC 751)

Temperature Coefficient: 3850 ppm / °C

Sensor Stability: ± 0.03 % after 1000 Hours at 300 °C (572 °F)

Response Time (63 % Step Change): 8 seconds nominal

Self-Heating | Maximum Operating Current

100 Ω RTD: 7 mW / °C (Still Air) | 5 mA

1 kΩ RTD: 4 mW / °C (Still Air) | 3 mA

Operating Temperature Range: -40 °C to 200 °C (-40 °F to 392 °F)

Storage Temperature Range: -40 °C to 85 °C (-40 °F to 185 °F)

Operating Humidity Range: 10 % to 95 % RH, non-condensing

Lead Length: 61 cm (24 in)

Conductor Size: 0.65 mm (22 AWG)

Lead Wire Insulation | Wire Rating: Etched Teflon Colored Leads | MIL-W-16878/4 (Type E)

Conductor Material: Silver Plated Copper

Probe Material: 304 Stainless Steel

Product Dimensions (Length x Diameter): 25.4 mm (1 in) x 6.35 mm (0.25 in)

Product Weight: 9.07 g (0.02 lb)

Agency Approvals: CE, UKCA, RoHS2, WEEE



Standard Ordering

Model #	Item #	Description
A/100-2W-BP	119937	100 Ω RTD, 2 Wire, Bullet Probe, 61.0 cm (24 in) Leads, 25.4 mm (1 in) Probe, Brown/Brown Lead Wires
A/100-3W-BP	119993	100 Ω RTD, 3 Wire, Bullet Probe, 61.0 cm (24 in) Leads, 25.4 mm (1 in) Probe, Brown/Brown/Black Lead Wires
A/1K-2W-BP	120262	1000 Ω RTD, 2 Wire, Bullet Probe, 61.0 cm (24 in) Leads, 25.4 mm (1 in) Probe, Black/Black Lead Wires
A/1K-3W-BP	120389	1000 Ω RTD, 3 Wire, Bullet Probe, 61.0 cm (24 in) Leads, 25.4 mm (1 in) Probe, Black/Black/White Lead Wires

Model # Example: **A/100-2W-BP** or **119937**

Optional Sensor Ordering

Options and Descriptions		Model #
A. Sensor Series <i>No Selection Required</i>	A/	A/
B. Model Series <i>Select One (1)</i>	100 = 100 Ω Platinum RTD 1K = 1000 Ω Platinum RTD	
C. Number of Wires <i>Select One (1)</i>	2W = Two Wires 3W = Three Wires	
D. Configuration <i>No Selection Required</i>	BP = 25.4 mm (1 in) Stainless Steel Probe	BP
E. Lead Wire Type <i>Select One (1)</i>	6'CL2P = 1.83 m (6 ft), 2 Conductor Plenum Rated Cable 10'CL2P = 3.05 m (10 ft, 2 Conductor Plenum Rated Cable 20'CL2P = 6.10 m (20 ft), 2 Conductor Plenum Rated Cable	
F. NIST <i>Select One (1)</i>	---- = No NIST Certificate NIST = NIST Certificate (3 Points)	

Model # Example:

A/	100	3W	BP	6'CL2P	NIST
A.	B.	C.	D.	E.	F.

Accessories Ordering

Model #	Item #	Description	Galvanized Metal	Plastic w/ Adhesive
A/MOUNTING CLIP-1/4"	143351	Hardware, 6.35 mm (¼ in) Mounting Clip	•	
A/MOUNTING U-CLIP-1/4"	143352	Hardware, 6.35 mm (¼ in) U-Mounting Clip Adhesive		•

Model # Example: **A/MOUNTING U-CLIP-1/4"** or **143352**

