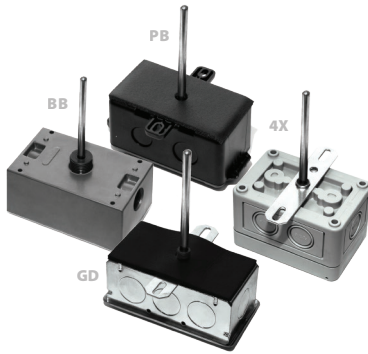




# RIGID AVERAGING

## Continuous Averaging, Platinum RTD

The ACI Platinum Rigid Averaging features a stainless steel probe with Etched Teflon colored lead wires to differentiate the different sensor types. The three-wire “-3W” option should be ordered when 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 external lead wire resistance that affects the accuracy of your sensor output. ACI recommends the use of 18 AWG lead wires to reduce external lead wire resistance when using a Platinum RTD. The rigid averaging sensors include a continuous sensing element, which covers the entire length of the probe. This allows for a better average temperature over the entire length of the sensor when compared to that of a single point duct sensor or multi-point averaging sensor. These sensors are hermetically sealed with epoxy to ensure that moisture and other contaminants can’t affect the sensing element. The Rigid Averaging sensor

also includes a foam pad to seal the duct and dampen vibrations once installed. The sensor length should be determined by the width or diameter of your duct such that the sensor covers most of the internal width or height of the duct. Our standard enclosure options include the “-GD” galvanized or “-PB” plastic duct enclosure with hinged cover. On larger ducts, our Platinum bendable copper averaging sensor can be used for larger ducts and increased coverage area. This series can be ordered with optional NEMA/IP rated weather proof enclosures and NIST Certificates as referenced in the ordering grid.

**Applications:** Roof Top Units, Air Handlers, Monitoring Duct Supply/Discharge/Return/Mixed Air Temperatures

**The ACI Platinum Rigid Averaging 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, [www.workaci.com](http://www.workaci.com).**

## PRODUCT SPECIFICATIONS

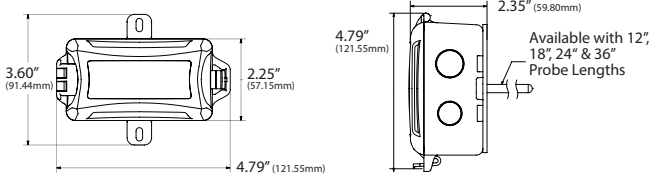
|                                                                      |                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sensor Type   Sensor Curve:</b>                                   | Platinum RTD   PTC (Positive Temperature Coefficient)                                                                                                                                                                                                                         |
| <b>Number Sensing Points:</b>                                        | Continuous                                                                                                                                                                                                                                                                    |
| <b>Number Wires:</b>                                                 | <b>A/1K-2W-RA-xx”:</b> Two (Non-Polarity Sensitive)   <b>A/1K-3W-RA-xx”:</b> Three (Polarity Sensitive)                                                                                                                                                                       |
| <b>Sensor Output @ 0°C (32°F):</b>                                   | 1000 Ohms nominal                                                                                                                                                                                                                                                             |
| <b>Sensor Accuracy:</b>                                              | +/- 0.1% @ 0°C (32°F)   +/- 0.25% @ 21°C (70°F)   +/- 1.0% @ 130°C (266°F)                                                                                                                                                                                                    |
| <b>Temperature Coefficient:</b>                                      | 3850 ppm / °C                                                                                                                                                                                                                                                                 |
| <b>Response Time (63% Step Change):</b>                              | 15 Seconds nominal                                                                                                                                                                                                                                                            |
| <b>Sensor Operating Temperature Range:</b>                           | -40 to 135°C (-40 to 275°F)                                                                                                                                                                                                                                                   |
| <b>Enclosure Specifications (Temperature Range, “-GD” Enclosure:</b> | -40 to 115°C (-40 to 239°F); Galvanized Steel; NEMA 1 (IP10)                                                                                                                                                                                                                  |
| <b>Material, Flammability, NEMA/IP Ratings):</b>                     | <b>“-PB” Enclosure:</b> -30 to 90°C (-22 to 194°F); ABS Plastic; UL94-HB; Plenum Rated<br><b>“-BB” Enclosure:</b> -40 to 115°C (-40 to 239°F); Aluminum; NEMA 3R (IP 14)<br><b>“-4X” Enclosure:</b> -40 to 70°C (-40 to 158°F); Polystyrene Plastic; UL94-V2; NEMA 4X (IP 66) |
| <b>Storage Temperature Range:</b>                                    | -40 to 85°C (-40 to 185°F)                                                                                                                                                                                                                                                    |
| <b>Operating Humidity Range:</b>                                     | 10 to 95% RH, non-condensing                                                                                                                                                                                                                                                  |
| <b>Probe Material:</b>                                               | 304 Series Stainless Steel                                                                                                                                                                                                                                                    |
| <b>Probe Diameter:</b>                                               | 0.250” (6.35mm)                                                                                                                                                                                                                                                               |
| <b>Fitting Material   Flammability Rating:</b>                       | Polyamide 66 (High Performance Nylon)   UL94-HB                                                                                                                                                                                                                               |
| <b>Foam Pad Material   Flammability Rating:</b>                      | Neoprene/EPDM/SBR Polymer   UL94-HBF; FMVSS-302; MIL-R-6130C                                                                                                                                                                                                                  |
| <b>Lead Length   Conductor Size:</b>                                 | 12” (30.5cm)   22 AWG (0.65mm)                                                                                                                                                                                                                                                |
| <b>Lead Wire Insulation   Wire Rating:</b>                           | Etched Teflon (PTFE) Colored Leads   Mil Spec 16878/4 Type E)                                                                                                                                                                                                                 |
| <b>Conductor Material:</b>                                           | Silver Plated Copper                                                                                                                                                                                                                                                          |
| <b>Product Dimensions   Product Weight:</b>                          | See table on back of Product Data Sheet                                                                                                                                                                                                                                       |
| <b>Agency Approvals:</b>                                             | CE, RoHS2, WEEE                                                                                                                                                                                                                                                               |





DIMENSIONAL DRAWING, WEIGHTS

Plastic Box Enclosure [PB]

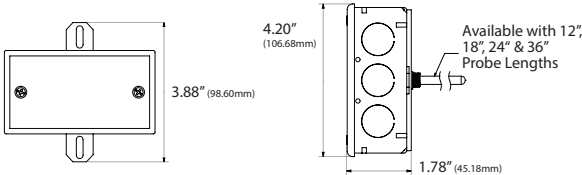


xx = Sensor Type | yy = Insertion Length

Plastic Box Enclosure [PB] Weights

| ACI Model #   | 12" (Probe Length)   | 18" (Probe Length)   |
|---------------|----------------------|----------------------|
| A/xx-RA-yy-PB | 0.28 lbs. (0.127 kg) | 0.30 lbs. (0.136 kg) |
| ACI Model #   | 24" (Probe Length)   | 36" (Probe Length)   |
| A/xx-RA-yy-PB | 0.32 lbs. (0.145 kg) | 0.36 lbs. (0.163 kg) |

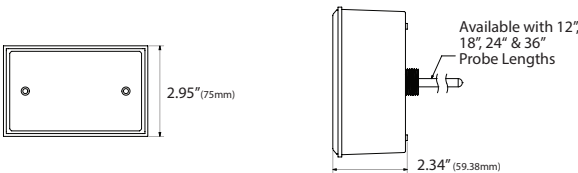
Galvanized Enclosure [GD]



Galvanized Enclosure [GD] Weights

| ACI Model #   | 12" (Probe Length)   | 18" (Probe Length)   |
|---------------|----------------------|----------------------|
| A/xx-RA-yy-GD | 0.70 lbs. (0.317 kg) | 0.74 lbs. (0.336 kg) |
| ACI Model #   | 24" (Probe Length)   | 36" (Probe Length)   |
| A/xx-RA-yy-GD | 0.78 lbs. (0.354 kg) | 0.82 lbs. (0.372 kg) |

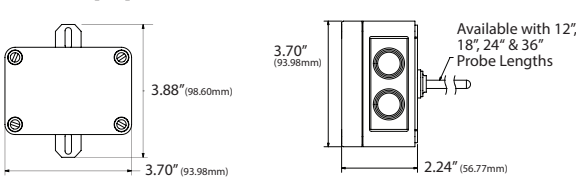
Bell Box Enclosure [BB]



Bell Box Enclosure [BB] Weights

| ACI Model #   | 12" (Probe Length)   | 18" (Probe Length)   |
|---------------|----------------------|----------------------|
| A/xx-RA-yy-BB | 0.74 lbs. (0.336 kg) | 0.78 lbs. (0.354 kg) |
| ACI Model #   | 24" (Probe Length)   | 36" (Probe Length)   |
| A/xx-RA-yy-BB | 0.78 lbs. (0.354 kg) | 0.84 lbs. (0.381 kg) |

NEMA 4X Enclosure [4X]



NEMA 4X Enclosure [PB] Weights

| ACI Model #   | 12" (Probe Length)   | 18" (Probe Length)   |
|---------------|----------------------|----------------------|
| A/xx-RA-yy-4X | 0.38 lbs. (0.172 kg) | 0.40 lbs. (0.181 kg) |
| ACI Model #   | 24" (Probe Length)   | 36" (Probe Length)   |
| A/xx-RA-yy-4X | 0.44 lbs. (0.200 kg) | 0.50 lbs. (0.227 kg) |

Standard Views

Product Weights

CUSTOM ORDERING

Model # Example: A/ 1K 2W RA 36" GD NIST

|                                               |                                                                                                                |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| <b>A. Sensor Series</b> No Selection Required | A/                                                                                                             |
| <b>B. Model Series</b> No Selection Required  | 1K = 1K Ohm Platinum RTD                                                                                       |
| <b>C. Number of Wires</b> Select One (1)      | 2W = Two Wires   3W = Three Wires                                                                              |
| <b>D. Configuration</b> No Selection Required | RA = Rigid Averaging Sensors                                                                                   |
| <b>E. Probe Length</b> Select One (1)         | 12" = 12" (30.5 cm) Probe   18" = 18" (45.72 cm) Probe   24" = 24" (61 cm) Probe<br>36" = 36" (91.45 cm) Probe |
| <b>F. Enclosure</b> Select One (1)            | GD = Galvanized   PB = Plastic   BB = Aluminum, NEMA 3R   4X = NEMA 4X                                         |
| <b>G. NIST</b> Select One (1)                 | ---- = No NIST Certificate   NIST = NIST Certificate (Must Specify 1, 3 or 5 Points)                           |

MODEL #

A/

1K

RA

