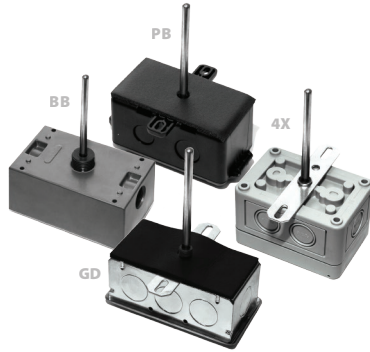




# RIGID AVERAGING

## Four Point Averaging, Thermistor



The ACI Thermistor Rigid Averaging Series features a 1/4" Diameter stainless steel sensing element with two, 12 inch, 22 AWG Etched Teflon colored lead wires to differentiate the different sensor types. The sensors in this series are manufactured with 4 sensing points in lengths from 12" to 48". The rigid averaging sensors will provide a better average temperature of the air inside the duct when compared to a single point sensing element. Each of the elements is hermetically sealed to prevent any moisture intrusion and includes an integrated foam pad to properly seal the duct and dampen vibrations when installed. The benefits of using the rigid averaging sensor is that it mounts like a standard single point duct sensor but includes three additional sensing points for better control. The sensor length should be determined by the size of your duct. Our standard enclosures include the galvanized junction box "GD" or plastic duct enclosure "PB" with the hinged cover depending on your preference.

This series can be ordered with optional NEMA/IP rated weather proof enclosures as referenced in the ordering grid.

**Applications:** Air Handlers, Roof Top Units, Mixed Air/Discharge/Supply/Return Air Temperature Monitoring, Data Centers, Hospitals

### PRODUCT SPECIFICATIONS

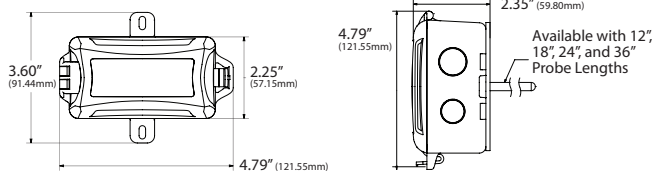
<b>Sensor Type   Sensor Curve:</b>	Thermistor   Non-Linear, NTC (Negative Temperature Coefficient)	
<b>Number Sensing Points:</b>	Four	
<b>Number Wires:</b>	Two (Non-Polarity Sensitive)	
<b>Sensor Output @ 25°C (77°F)</b>	<b>A/1.8K:</b> 1.8KΩ nominal   (Red/Yellow)	<b>A/CSI:</b> 10KΩ nominal   (Green/Yellow)
<b>(Lead Wire Colors):</b>	<b>A/3K:</b> 3KΩ nominal   (White/Brown)	<b>A/10KS:</b> 10KΩ nominal   (White/Blue)
	<b>A/AN (Type III):</b> 10KΩ nominal   (White/White)	<b>A/10K-E1:</b> 10KΩ nominal   (Gray/Orange)
	<b>A/AN-BC:</b> 5.238KΩ nominal   (White/Yellow)	<b>A/20K:</b> 20KΩ nominal   (Brown/Blue)
	<b>A/CP (Type II):</b> 10KΩ nominal   (White/Green)	<b>A/100KS:</b> 100KΩ nominal   (Black/Yellow)
<b>Accuracy 0-70°C (32-158°F):</b>	+/-0.20°C (+/-0.36°F)	
<b>Stability:</b>	Sensor Dependent; Contact ACI for more information on the sensor in question.	
<b>Response Time (63% Step Change):</b>	10 Seconds nominal	
<b>Power Dissipation Constant:</b>	4 mW/°C except A/1.8K Series = 2 mW; A/100KS Series: 6 mW	
<b>Enclosure Temperature Range:</b>	<b>"GD" Enclosure:</b> -40 to 115°C (-40 to 239°F), Galvanized Steel, NEMA 1 (IP10) <b>"PB" Enclosure:</b> -30 to 90°C (-22 to 194°F), ABS Plastic, UL94-HB, Plenum Rated <b>"BB" Enclosure:</b> -40 to 115°C (-40 to 239°F), Aluminum, NEMA 3R (IP14) <b>"4X" Enclosure:</b> -40 to 70°C (-40 to 158°F), Polystyrene Plastic, NEMA 4X (IP66)	
<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 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-W-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]**

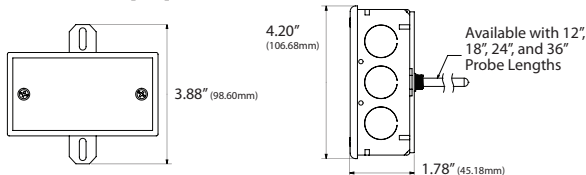


xx = Sensor Type | yy = Insertion Length

**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)

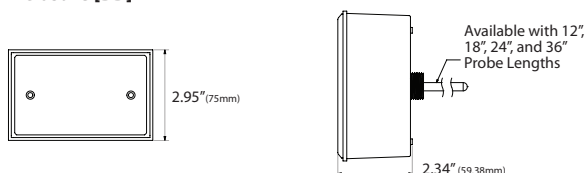
**Galvanized Enclosure [GD]**



**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)

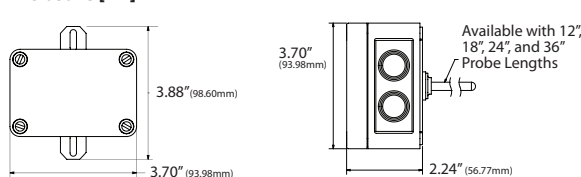
**Bell Box Enclosure [BB]**



**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 [4X] 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/ 1.8K RA 18" GD NIST

**MODEL #**

<b>A. Sensor Series</b> No Selection Required	A/	<b>A/</b>
<b>B. Model Series</b> Select One (1)	1.8K   3K   AN   AN-BC   CP   CSI   10KS   10K-E1   20K   100KS	
<b>C. Configuration</b> No Selection Required	RA = Rigid Averaging	<b>RA</b>
<b>D. Probe Length</b> Select One (1)	12" = 12" Probe   18" = 18" Probe   24" = 24" Probe   36" = 36" Probe	
<b>E. Enclosure</b> Select One (1)	GD = Galvanized   PB = Plastic   BB = Aluminum, NEMA 3R   4X = NEMA 4X	
<b>F. NIST</b> Select One (1)	---- = No NIST Certificate   NIST = NIST Certificate (Must Specify 1, 3 or 5 Points)	

