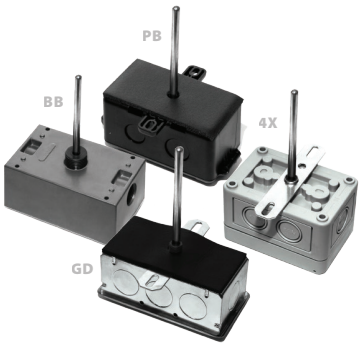

DUCT

Duct Sensor, Thermistor

The ACI Thermistor Duct Series features a stainless steel probe with two, 22 AWG Etched Teflon colored lead wires to differentiate the different sensor types. The sensors in this series are manufactured using ACI's proved double encapsulation process to eliminate the effects of moisture on the sensors and increased response times from our high quality, thermally conductive epoxy. The duct sensor is designed to be used in smaller duct applications and includes an insulation pad for sealing your duct and dampening vibration. The sensor length should be determined by the width or diameter of your duct such that the tip of the probe reaches the approximate center of the duct. Our standard enclosure options are the galvanized enclosure "-GD" or plastic duct enclosure with hinged cover "-PB". On larger ducts, you may want to refer to our Rigid or Bendable Copper Averaging sensor for increased sensing points and better temperature control. This series can be ordered with optional NEMA/IP rated weather proof enclosures and NIST certificates as referenced on the back of the product data sheet.

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

The ACI Thermistor Duct 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.

PRODUCT SPECIFICATIONS

Sensor Type | Sensor Curve:	Thermistor | Non-Linear, NTC (Negative Temperature Coefficient)	
Number Sensing Points | Number Wires:	One | Two (Non-Polarity Sensitive)	
Sensor Output @ 25°C (77°F) |	**A/1.8K:** 1.8KΩ nominal | (Red/Yellow)	**A/10KS:** 10KΩ nominal | (White/Blue)
(Lead Wire Colors):	**A/3K:** 3KΩ nominal | (White/Brown)	**A/10K-E1:** 10KΩ nominal | (Gray/Orange)
	A/AN (Type III): 10KΩ nominal | (White/White)	**A/20K:** 20KΩ nominal | (Brown/Blue)
	A/AN-BC: 5.238KΩ nominal | (White/Yellow)	**A/50K:** 50KΩ nominal | (Brown/Yellow)
	A/CP (Type II): 10KΩ nominal | (White/Green)	**A/100KS:** 100KΩ nominal | (Black/Yellow)
	A/CSI: 10KΩ nominal | (Green/Yellow)	
Sensor Accuracy 0-70°C (32-158°F):	+/-0.2°C (+/-0.36°F) except **A/10K-E1 Series:** +/-0.3°C (+/-0.54°F)	
	A/1.8K Series: +/- 0.5°C @ 25°C (77°F) and (+/-1.0°C) (+/-1.8°F)	
Power Dissipation Constant:	3 mW/°C except **A/1.8K Series:** 1 mW/°C | **A/10K-E1 Series:** 2 mW/°C	
Stability:	Sensor Dependent; Contact ACI for more information on specific sensor	
Response Time (63% Step Change):	10 Seconds nominal	
Sensor Operating Temperature Range:	-40°C (-40°F) to 150°C (302°F)	
Enclosure Specifications (Temperature,	**"-GD" Enclosure:** Galvanized Steel, -40 to 115°C (-40 to 239°F), NEMA 1 (IP10)	
Material, Flammability, NEMA/IP Ratings):	**"-PB" Enclosure:** ABS Plastic, UL94-HB, -30 to 90°C (-22 to 194°F), Plenum Rated	
	"-BB" Enclosure: Aluminum, -40 to 121°C (-40 to 250°F), Plenum Rated, NEMA 3R	
	"-4X" Enclosure: Polystyrene Plastic, UL94-V2, -40 to 70°C (-40 to 158°F), NEMA 4X (IP 66)	
Storage Temperature Range:	-40 to 85°C (-40 to 185°F)	
Operating Humidity Range:	10 to 95% RH, non-condensing	
Probe Material | Probe Diameter:	304 Stainless Steel | 0.250" (6.35mm)	
Fitting Material | Flammability Rating:	Polyamide 66 (High Performance Nylon) | UL94-HB	
Foam Pad Material | Flammability Rating:	Neoprene/EPDM/SBR Polymer | UL94-HBF; FMVSS-302; MIL-R-6130C	
Lead Length | Conductor Size:	4", 6" and 8" Probes: 14" (35.6 cm) | 12" and 18" Probes: 24" (61 cm) | 22 AWG (0.65 mm)	
Lead Wire Insulation | Wire Rating:	Etched Teflon (PTFE) Colored Leads | Mil Spec 16878/4 Type E)	
Conductor Material:	Silver Plated Copper	
Product Dimensions | Product Weight:	See table on back of Product Data sheet	
Agency Approvals:	CE, RoHS2, WEEE	

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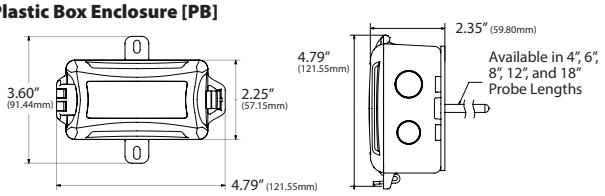
DIMENSIONAL DRAWING, WEIGHTS

Plastic Box Enclosure [PB]



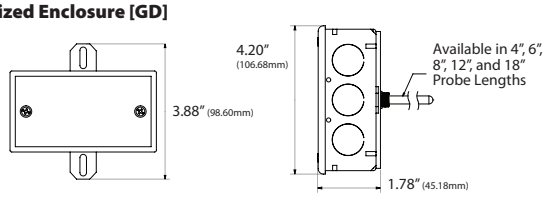
xx = Sensor Type | **yy** = Insertion Length

Plastic Box Enclosure [PB] Weights

ACI Model #	4" (Probe Length)	6" (Probe Length)	8" (Insertion Length)
A/xx-D-yy-PB	0.24 lbs. (0.109 kg)	0.25 lbs. (0.113 kg)	0.26 lbs. (0.117 kg)

ACI Model #	12" (Probe Length)	18" (Probe Length)
A/xx-D-yy-PB	0.28 lbs. (0.127 kg)	0.30 lbs. (0.136 kg)

Galvanized Enclosure [GD]

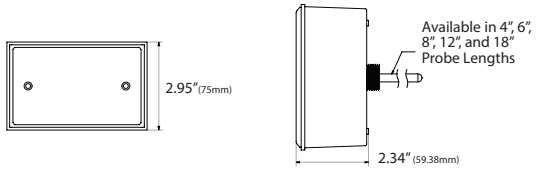


Galvanized Enclosure [GD] Weights

ACI Model #	4" (Probe Length)	6" (Probe Length)	8" (Insertion Length)
A/xx-D-yy-GD	0.66 lbs. (0.299 kg)	0.67 lbs. (0.303 kg)	0.68 lbs. (0.308 kg)

ACI Model #	12" (Probe Length)	18" (Probe Length)
A/xx-D-yy-GD	0.70 lbs. (0.317 kg)	0.74 lbs. (0.336 kg)

Bell Box Enclosure [BB]

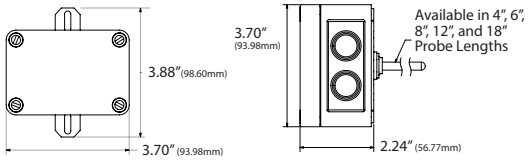


Bell Box Enclosure [BB] Weights

ACI Model #	4" (Probe Length)	6" (Probe Length)	8" (Insertion Length)
A/xx-D-yy-BB	0.70 lbs. (0.317 kg)	0.71 lbs. (0.322 kg)	0.72 lbs. (0.326 kg)

ACI Model #	12" (Probe Length)	18" (Probe Length)
A/xx-D-yy-BB	0.74 lbs. (0.336 kg)	0.78 lbs. (0.354 kg)

NEMA 4X Enclosure [4X]



NEMA 4X Enclosure [4X] Weights

ACI Model #	4" (Probe Length)	6" (Probe Length)	8" (Insertion Length)
A/xx-D-yy-4X	0.34 lbs. (0.154 kg)	0.35 lbs. (0.159 kg)	0.36 lbs. (0.163 kg)

ACI Model #	12" (Probe Length)	18" (Probe Length)
A/xx-D-yy-4X	0.38 lbs. (0.172 kg)	0.40 lbs. (0.181 kg)

Standard Views | **Product Weights**

CUSTOM ORDERING

Model # Example: A/ (A.) | 1.8K (B.) | D (C.) | 8" (D.) | GD (E.) | NIST (F.)

		MODEL #
A. Sensor Series *No Selection Required*	**A/** →	A/
B. Model Series *Select One (1)*	**1.8K** | **3K** | **AN** | **AN-BC** | **CP** | **CSI** | **10KS** | **10K-E1** | **20K** | **50K** | **100KS**	
C. Configuration *No Selection Required*	**D** = Duct →	D
D. Probe Length *Select One (1)*	**4"** = 4" Probe | **6"** = 6" Probe | **8"** = 8" Probe | **12"** = 12" Probe | **18"** = 18" Probe	
E. Enclosure *Select One (1)*	**GD** = Galvanized | **PB** = Plastic | **BB** = Aluminum, NEMA 3R | **4X** = NEMA 4X	
F. NIST *Select One (1)*	**----** = No NIST Certificate | **NIST** = NIST Certificate (3 Points)	

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