



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, www.workaci.com.

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) (Lead Wire Colors):	A/1.8K: 1.8KΩ nominal (Red/Yellow) A/10KS: 10KΩ nominal (White/Blue) 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, Material, Flammability, NEMA/IP Ratings):	"-GD" Enclosure: Galvanized Steel, -40 to 115°C (-40 to 239°F), NEMA 1 (IP10) "-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

TEMPERATURE | THERMISTORS | DUCT

DIMENSIONAL DRAWING, WEIGHTS															
<p>Plastic Box Enclosure [PB]</p> <p>Available in 4", 6", 8", 12", and 18" Probe Lengths</p>	<p>Plastic Box Enclosure [PB] Weights</p> <p>xx = Sensor Type yy = Insertion Length</p> <table border="1"> <thead> <tr> <th>ACI Model #</th> <th>4" (Probe Length)</th> <th>6" (Probe Length)</th> <th>8" (Insertion Length)</th> </tr> </thead> <tbody> <tr> <td>A/xx-D-yy-PB</td> <td>0.24 lbs. (0.109 kg)</td> <td>0.25 lbs. (0.113 kg)</td> <td>0.26 lbs. (0.117 kg)</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>ACI Model #</th> <th>12" (Probe Length)</th> <th>18" (Probe Length)</th> </tr> </thead> <tbody> <tr> <td>A/xx-D-yy-PB</td> <td>0.28 lbs. (0.127 kg)</td> <td>0.30 lbs. (0.136 kg)</td> </tr> </tbody> </table>	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)
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Standard Views	Product Weights														

CUSTOM ORDERING		Model # Example: A/ 1.8K D 8" GD NIST	MODEL #
		A. B. C. D. E. F.	
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)		