

HIGH ACCURACY DUCT Duct Sensor, Thermistor

The ACI High Accuracy Thermistor Duct Series features a 1/4" diameter stainless steel probe with two, 24 inch 22 AWG Etched Teflon colored lead wires to differentiate the sensor types. The sensors in this series are manufactured using ACI's proven double encapsulation process to eliminate the effects of moisture on the sensors as well as increased thermal response times from our high quality, thermally conductive epoxy. The duct style sensor is a single point sensor designed to be used in smaller duct applications and includes an insulation pad for properly sealing your duct and to dampen vibration. For best results, the sensor length should be determined by the actual width or diameter of your duct such that the tip of the probe is in the approximate center. Our standard enclosure options are the galvanized single gang junction box "-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 in the ordering grid on the back of the product data sheet.

Applications: Data Centers, Labs, Hospitals, Clean Rooms, Roof Top Units, Air Handlers, Monitoring Supply/Discharge/Return/Mixed Air

The ACI High Accuracy 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:	One
Number Wires:	Two (Non-Polarity Sensitive)
Sensor Output @ 25°C (77°F) (Lead Wire Colors):	A/O.1AN Series (Type III): 10KΩ nominal (White/Black) A/O.1CP Series (Type II): 10KΩ nominal (Green/Gray)
Accuracy from 0-70°C (32-158°F) 1:	+/- 0.1°C (+/- 0.18°F)
Power Dissipation Constant:	A/O.1AN Series: 2 mW/°C nominal A/O.1CP Series: 1 mW/°C nominal
Stability 2:	A/O.1AN Series (5 Years): +/- 0.127°C (0.228°F) @ 100°C (212°F) A/O.1CP Series (5 Years): +/- 0.12°C (0.216°F) @ 25°C (77°F) (10 Years): +/- 0.60°C (1.08°F) @ 25°C (77°F)
Response Time (63% Step Change):	10 Seconds nominal
Sensor Operating Temperature Range 2:	0 to 70°C (32 to 158°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), NEMA 3R (IP 14) "-4X" Enclosure: Polystyrene Plastic, UL94-V2, -40 to 70°C (-40 to 158°F), NEMA 4X (IP 66)
Storage Temperature Range 1:	0 to 70°C (32 to 158°F)
Operating Humidity Range:	10 to 95% RH, non-condensing
NIST Certification:	3 Point NIST Certificate available
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:	12" (30.5cm) 22 AWG (0.65mm)
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

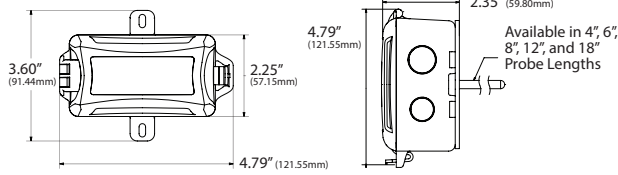
Note 1: For best accuracy and long term stability the sensor should be used in applications where the operating temperatures remain within the specified operating temperature range of 0 to 70°C (32 to 158°F) | **Note 2:** The sensor will operate over an extended operating temperature range of -40 to 150°C (-40 to 302°F) without damaging the sensor but the accuracy and long term stability will not meet the specifications above





DIMENSIONAL DRAWING, WEIGHTS

Plastic Box Enclosure [PB]

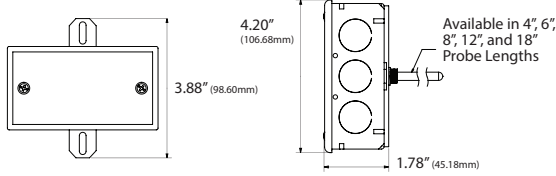


xx = Sensor Type | yy = Insertion Length

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)	

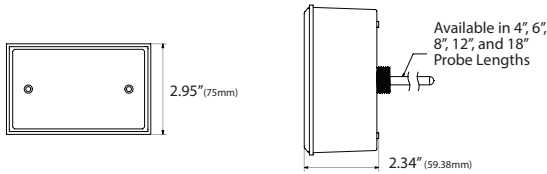
Galvanized Enclosure [GD]



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)	

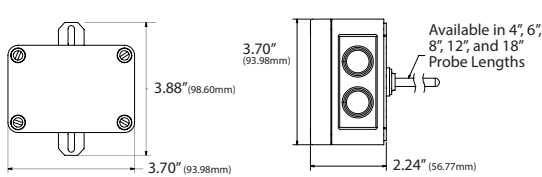
Bell Box Enclosure [BB]



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/ 0.1AN D 8" GD NIST
A. B. C. D. E. F.

A. Sensor Series No Selection Required	A/ _____ →
B. Model Series Select One (1)	0.1AN = 10K (Type III) 0.1CP = 10K (Type II)
C. Configuration No Selection Required	D = Duct _____ →
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)

MODEL #

A/
D

