



DUCT WITHOUT BOX

Flange Mounted Duct Sensor, Thermistor

The ACI Thermistor Duct without Box 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 proven double encapsulation process to eliminate the effects of moisture upon the sensors and increased response times using our high quality, thermally conductive epoxy. The duct style sensor is designed to be used in smaller duct applications and includes an insulation pad for sealing your duct as well as 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 of the duct. On larger ducts, you may want to refer to our Rigid or Bendable Copper Averaging sensor for

increased sensing points and better temperature control. The Duct without Box Series can be ordered with optional plenum rated cables and NIST Certificates. Please contact ACI for more information regarding this sensor or to discuss your application in further detail. Other options may be available upon request.

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

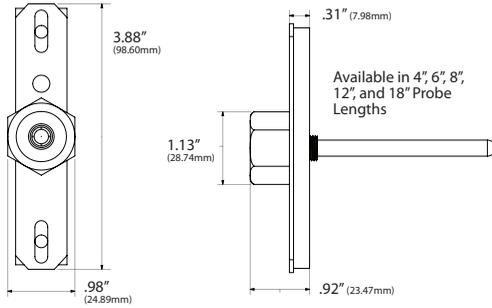
PRODUCT SPECIFICATIONS

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/CSI: 10KΩ nominal (Green/Yellow)
	A/3K: 3KΩ nominal (White/Brown)	A/10KS: 10KΩ nominal (White/Blue)
	A/AN (Type III): 10KΩ nominal (White/White)	A/10K-E1: 10KΩ nominal (Gray/Orange)
	A/AN-BC: 5.238KΩ nominal (White/Yellow)	A/20K: 20KΩ nominal (Brown/Blue)
	A/CP (Type II): 10KΩ nominal (White/Green)	A/100KS: 100KΩ nominal (Black/Yellow)
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)	
Stability:	Sensor Dependent; Contact ACI for more information on the sensor in question.	
Response Time (63% Step Change):	10 Seconds nominal	
Power Dissipation Constant:	3 mW/°C except A/1.8K Series: 1 mW/°C A/10K-E1 Series: 2 mW/°C	
Operating Storage Temperature Range:	-40 to 115°C (-40 to 239°F) -40 to 85°C (-40 to 185°F)	
Operating Humidity Range:	10 to 95% RH, non-condensing	
Probe Material Flange Material:	304 Stainless Steel Galvanized Steel	
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 (0.65mm)	
Lead Wire Insulation Wire Rating:	Etched Teflon (PTFE) Colored Leads MIL-W-16878/4 (Type E)	
Conductor Material:	Silver Plated Copper	
Product Dimensions Probe Diameter:	See table on back of Product Data sheet 0.250" (6.35mm)	
Product Weight:	See table on back of Product Data sheet	
Agency Approvals:	CE, RoHS2, WEEE	





DIMENSIONAL DRAWING, WEIGHTS



xx = Sensor Type | yy = Insertion Length

Duct Without Box [DO] Weights

ACI Model #	4" (Probe Length)	6" (Probe Length)	8" (Insertion Length)
A/xx-DO-yy	0.10 lbs. (0.045 kg)	0.11 lbs. (0.050 kg)	0.17 lbs. (0.077 kg)
A/xx-DO-yy-10'-CL2P	0.20 lbs. (0.091 kg)	0.21 lbs. (0.095 kg)	0.22 lbs. (0.100 kg)
A/xx-DO-yy-20'-CL2P	0.27 lbs. (0.122 kg)	0.28 lbs. (0.127 kg)	0.29 lbs. (0.132 kg)

ACI Model #	12" (Insertion Length)	18" (Insertion Length)
A/xx-DO-yy	0.19 lbs. (0.086 kg)	0.21 lbs. (0.095 kg)
A/xx-DO-yy-10'-CL2P	0.24 lbs. (0.108 kg)	0.27 lbs. (0.122 kg)
A/xx-DO-yy-20'-CL2P	0.31 lbs. (0.141 kg)	0.34 lbs. (0.154 kg)

Standard Views

Product Weights

CUSTOM ORDERING

Model # Example: A/ 1.8K DO 4" NIST

MODEL #

A. Sensor Series <i>No Selection Required</i>	A/	A/
B. Model Series <i>Select One (1)</i>	1.8K 3K AN AN-BC CP CSI 10KS 10K-E1 20K 100KS	
C. Configuration <i>No Selection Required</i>	DO = Duct without Box (Mounting Flange Only)	DO
D. Probe Length <i>Select One (1)</i>	4" = 4" Probe 6" = 6" Probe 8" = 8" Probe 12" = 12" Probe 18" = 18" Probe	
E. Lead Length <i>Select One (1)</i>	---- = Standard 14" or 24" Lead Length 10' = 10 Feet (3.05m) 20' = 20 Feet* (6.10m)	
F. Lead Wire Type <i>Select One (1)</i>	---- = Standard Etched PTFE Colored Leads CL2P = 2 Conductor Plenum Rated Cable	
G. NIST <i>Select One (1)</i>	---- = No NIST Certificate NIST = NIST Certificate (Must Specify 1, 3 or 5 Points)	

Note*: All 20' Sensors are not CE compliant, but are RoHS2 compliant

