



# FLEXIBLE AVERAGING

## Multipoint Averaging Sensors, Nickel RTD

The ACI Nickel Flexible Averaging Series features an 18 AWG Plenum Rated cable sensing element with two, 12 inch 22 AWG Etched Teflon colored lead wires to differentiate the different sensor types. All sensors are manufactured with 4 or 9 sensing points determined by the length of the sensing element. Averaging sensors provide a better average temperature of the air inside larger ducts when compared to a single point sensor. The flexible averaging sensors are limited to applications where operating temperatures are limited to 0 to 75°C (32 to 158°F) or high humidity, chemical resistance and UV Light Air Treatment Systems aren't required. Each of the sensing elements is sealed using a dual wall adhesive lined heat shrink tubing to provide a level of moisture protection to each of the sensing elements. The sensor

length should be determined by the dimensional size of your duct. Our standard enclosure options include a galvanized junction box "-GD" or plastic duct enclosure with hinged cover "-PB". Each unit includes nylon wire ties and mounts for standard mounting. Optional copper capillary or universal plastic mounting clips, NEMA/IP Rated weather proof enclosures and NIST Certificates are available as referenced in the ordering grid.

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

### PRODUCT SPECIFICATIONS

<b>Sensor Type   Sensor Curve:</b>	Nickel RTD   PTC (Positive Temperature Coefficient)
<b>Number Sensing Points   Number Wires:</b>	<b>8' and 12' Lengths:</b> Four   <b>24' and 50' Lengths:</b> Nine   Two (Non-Polarity Sensitive)
<b>Sensor Output @ 21.1°C (70°F)   Lead Wire Colors:</b>	1000 Ohms nominal   (Red/Red)
<b>Sensor Accuracy:</b>	<b>8' and 12' Models:</b> +/- 0.23°C (+/- 0.40°F) @ 21.1°C (70°F) +/- 1.59°C (+/- 1.06°F) @ 54.4°C (130°F) <b>24' and 50' Models:</b> +/- 0.24°C (+/- 0.42°F) @ 21.1°C (70°F) +/- 0.61°C (+/- 1.09°F) @ 54.4°C (130°F)
<b>Din Standard   Temperature Coefficient (0-100°C):</b>	Din 43760   6370 ppm/°C
<b>Sensor Stability:</b>	+/- 0.05% after 1000 Hours @ 150°C (302°F)
<b>Response Time (63% Step Change):</b>	15 Seconds nominal
<b>Self-Heating   Maximum Operating Current:</b>	0.3°C/mW (Still Air)   5 mA
<b>Operating Temperature Range:</b>	0 to 75°C (32 to 167°F)
<b>Storage Temperature Range:</b>	-20 to 75°C (-4 to 167°F)
<b>Operating Humidity Range:</b>	10 to 90% RH, non-condensing
<b>Enclosure Specifications (Material, Flammability, NEMA   IP Ratings):</b>	<b>"-GD" Enclosure:</b> Galvanized Steel; NEMA 1 (IP10); <b>"-PB" Enclosure:</b> ABS Plastic, UL94-HB; Plenum Rated <b>"-BB" Enclosure:</b> Aluminum; NEMA 3R (IP 14) <b>"-4X" Enclosure:</b> Polystyrene Plastic; UL94-V2; NEMA 4X (IP 66)
<b>Sensor Jacket Material   Cable Ratings:</b>	Low Smoke PVC   CL2P or CMP Plenum Rated Cable
<b>Sensor Cable Diameter:</b>	0.170" (4.32mm) nominal
<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>Lead Wire Conductor Material:</b>	Silver Plated Copper
<b>Product Dimensions   Product Weight:</b>	See table on back of Product Data sheet
<b>Agency Approvals:</b>	RoHS2, WEEE





### DIMENSIONAL DRAWING

<p><b>Plastic Box Enclosure [PB]</b></p>		
<p><b>Galvanized Enclosure [GD]</b></p>		
<p><b>Bell Box Enclosure [BB]</b></p>		
<p><b>NEMA 4X Enclosure [4X]</b></p>		
<b>Front View</b>	<b>Right View</b>	<b>Top View</b>

CUSTOM ORDERING		Model # Example: A/ 1K-NI FA 24' GD NIST	MODEL #
A. Sensor Series No Selection Required	B. Model Series No Selection Required	C. Configuration No Selection Required	D. Probe Length Select One (1)
A/	1K-NI	FA = Flexible Plenum Rated Cable Averaging Sensor	8' = 8' Sensor   12' = 12' Sensor   24' = 24' Sensor   50' = 50' Sensor
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 (Must Specify 1, 3 or 5 Points)		

ACCESSORIES ORDERING		Model # Example: A/CAPILLARY CLIP QTY: 1 -OR- 130525
Model #	Item #	Description
A/CAPILLARY CLIP QTY: 1	130525	Capillary Mounting Clip, Copper, Quantity: 1
A/CAPILLARY CLIP QTY: 50/BAG	142410	Capillary Mounting Clip, Copper, Quantity: 50/Bag
UNIVERSAL CLIP	128248	Universal Mounting Clip, Plastic, Quantity: 50/Bag

