



# DUCT WITHOUT BOX

## Flange Mounted Duct Sensor, Nickel RTD

The ACI Nickel Duct without Box series features a 1/4" diameter stainless steel probe with etched teflon lead wires. The sensors in this series are manufactured using ACI's proven double encapsulation process to eliminate the effects of moisture upon the sensors as well as increased thermal response times using 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 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. This series can be ordered with optional plenum rated cable in standard lead lengths.

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

**ACI's Nickel Duct Without Box 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](http://www.workaci.com).**

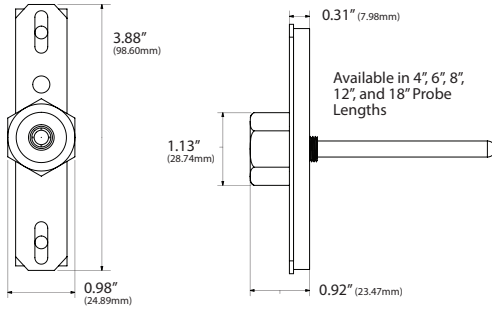
### PRODUCT SPECIFICATIONS

<b>Sensor Type   Sensor Curve:</b>	Nickel RTD   PTC (Positive Temperature Coefficient)
<b>Number Sensing Points:</b>	One
<b>Number Wires:</b>	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>-40°C (-40°F):</b> +/- 1.52°C (+/- 2.73°F) <b>0°C (32°F):</b> +/- 0.4°C (+/- 0.72°F) <b>21.1°C (70°F):</b> +/- 0.17°C (+/- 0.34°F) <b>54.4°C (130°F):</b> +/- 0.56°C (1.00°F) <b>121°C (250°F):</b> +/- 1.25°C (+/- 2.25°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>	8 Seconds nominal
<b>Operating Temperature Range:</b>	-40 to 115°C (-40 to 239°F)
<b>Storage Temperature Range:</b>	-40 to 85°C (-40 to 185°F)
<b>Operating Humidity Range:</b>	10 to 95% RH, non-condensing
<b>Probe Material   Flange Material:</b>	304 Stainless Steel   Galvanized Steel
<b>Fitting Material   Flammability Rating:</b>	Polyamide 66 (High Performance Nylon)   UL94-HB
<b>Foam Pad Material   Flammability Rating:</b>	Neoprene/EPDM/SBR Polymer   UL94-HBF; FMVSS-302; MIL-R-6130C
<b>Lead Length   Conductor Size:</b>	<b>4", 6" &amp; 8" Probes:</b> 14" (35.6 cm)   <b>12" &amp; 18" Probes:</b> 24" (61cm)   22 AWG (0.65mm)
<b>Lead Wire Insulation   Wire Rating:</b>	Etched Teflon (PTFE) Colored Leads   MIL-W-16878/4 (Type E)
<b>Conductor Material:</b>	Silver Plated Copper
<b>Probe Diameter:</b>	0.250" (6.35mm)
<b>Product Dimensions   Product Weight:</b>	See table on back of Product Data sheet
<b>Agency Approvals:</b>	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)	0.12 lbs. (0.054 kg)
A/xx-DO-yy-6'-CL2P	0.15 lbs. (0.068 kg)	0.16 lbs. (0.073 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	0.14 lbs. (0.064 kg)	0.16 lbs. (0.073 kg)
A/xx-DO-yy-6'-CL2P	0.20 lbs. (0.091 kg)	0.22 lbs. (0.100 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

**STANDARD ORDERING**

Model # Example: A/1K-NI-DO-4" -OR- 120510

Model #	Item #	Description
A/1K-NI-DO-4"	120510	1K Nickel, Duct 4" without Box, Flange Only, 14" Leads
A/1K-NI-DO-6"	133239	1K Nickel, Duct 6" without Box, Flange Only, 14" Leads
A/1K-NI-DO-8"	120512	1K Nickel, Duct 8" without Box, Flange Only, 14" Leads
A/1K-NI-DO-12"	120507	1K Nickel, Duct 12" without Box, Flange Only, 24" Leads
A/1K-NI-DO-18"	120508	1K Nickel, Duct 18" without Box, Flange Only, 24" Leads

**CUSTOM ORDERING**

Model # Example: A/ 1K-NI DO 6" 6'CL2P NIST

**MODEL #**

<b>A. Sensor Series</b> No Selection Required	A/	A/
<b>B. Model Series</b> No Selection Required	1K-NI	1K-NI
<b>C. Configuration</b> No Selection Required	DO = Duct without Box (Mounting Flange Only)	DO
<b>D. Probe Length</b> Select One (1)	4" = 4" Probe   6" = 6" Probe   8" = 8" Probe   12" = 12" Probe   18" = 18" Probe	
<b>E. Lead Wire Options</b> Select One (1)	---- = Standard 14 or 24" Etched PTFE Colored Leads 6'CL2P = 6 ft (1.83m), 2 Conductor Plenum Rated Cable 10'CL2P = 10 ft (3.05m), 2 Conductor Plenum Rated Cable 20'CL2P = 20 ft (6.10m), 2 Conductor Plenum Rated Cable	
<b>F. NIST</b> Select One (1)	---- = No NIST Certificate   NIST = NIST Certificate (3 Points)	

