



# OUTSIDE AIR

## Weatherproof Outside Air, Thermistors

The ACI Thermistor Outside Air Series features a weather proof European Style Plastic enclosure with twist off cover and water tight cord grip fitting. The sensing element contains two, 14 inch 22 AWG Etched Teflon colored lead wires to differentiate the many different sensor types. All 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 to increase the thermal response time using our high quality, thermally conductive epoxy. The outside air sensor is a single point sensor designed to be mounted under an eave or on the North side of a building in a shaded location. The sensing tube pointed must be pointed downward to prevent any water or ice from settling in the sensing tube. Optional NEMA 4X "4X" or NEMA 3R rated "-BB" cast

Aluminum enclosure and NIST Certificates are available as specified in the ordering grid on the back of the product data sheet. For Applications in which the sensor must be mounted in direct sunlight, please see the Sun Shield data sheet which will allow you to order a Temperature or Temperature/Humidity Combination sensor.

**Applications:** Outside Air Temperature Sensing, Cold Storage Facilities, High Dew Point/Condensing Environments

**The ACI Thermistor Outside Air 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](http://www.workaci.com).**

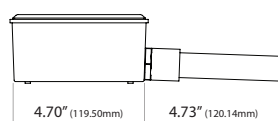
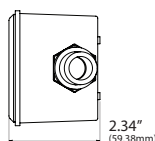
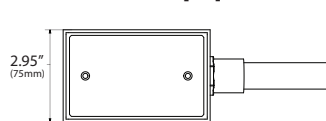
### PRODUCT SPECIFICATIONS

|                                                                                         |                                                                                                                    |                                               |
|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| <b>Sensor Type   Sensor Curve:</b>                                                      | Thermistor   Non-Linear, NTC (Negative Temperature Coefficient)                                                    |                                               |
| <b>Number Sensing Points:</b>                                                           | One                                                                                                                |                                               |
| <b>Number Wires:</b>                                                                    | Two (Non-Polarity Sensitive)                                                                                       |                                               |
| <b>Sensor Output @25°C (77°F)  </b>                                                     | <b>A/1.8K:</b> 1.8KΩ nominal   (Red/Yellow)                                                                        | <b>A/10KS:</b> 10KΩ nominal   (White/Blue)    |
| <b>(Lead Wire Colors):</b>                                                              | <b>A/3K:</b> 3KΩ nominal   (White/Brown)                                                                           | <b>A/10K-E1:</b> 10KΩ nominal   (Gray/Orange) |
|                                                                                         | <b>A/AN (Type III):</b> 10KΩ nominal   (White/White)                                                               | <b>A/20K:</b> 20KΩ nominal   (Brown/Blue)     |
|                                                                                         | <b>A/AN-BC:</b> 5.238KΩ nominal   (White/Yellow)                                                                   | <b>A/50K:</b> 50KΩ nominal   (Brown/Yellow)   |
|                                                                                         | <b>A/CP (Type II):</b> 10KΩ nominal   (White/Green)                                                                | <b>A/100KS:</b> 100KΩ   (Black/Yellow)        |
|                                                                                         | <b>A/CSI:</b> 10KΩ nominal   (Green/Yellow)                                                                        |                                               |
| <b>Accuracy 0-70°C (32-158°F):</b>                                                      | +/-0.2°C (+/-0.36°F) except <b>A/10K-E1 Series:</b> +/-0.3°C (+/-0.54°F)                                           |                                               |
|                                                                                         | <b>A/1.8K Series:</b> +/-0.5°C @ 25°C (77°F) and (+/-1.0°C) (+/-1.8°F)                                             |                                               |
| <b>Power Dissipation Constant:</b>                                                      | 3 mW/°C except <b>A/1.8K Series:</b> 1 mW/°C   <b>A/10K-E1 Series:</b> 2 mW/°C                                     |                                               |
| <b>Stability:</b>                                                                       | Sensor Dependent; Contact ACI for more information on the sensor in question.                                      |                                               |
| <b>Response Time (63% Step Change):</b>                                                 | 25 Seconds nominal                                                                                                 |                                               |
| <b>Enclosure Specifications (Temperature, Material, Flammability, NEMA/IP Ratings):</b> | <b>"-EH" Enclosure:</b> PC/ASA Plastic w/ UV Protectant; -40 to 88°C (-40 to 190°F); UL94-V0                       |                                               |
|                                                                                         | <b>"-4X" Enclosure:</b> Polystyrene Plastic, -40 to 70°C (-40 to 158°F), UL94-V2, NEMA 4X (IP 66)                  |                                               |
|                                                                                         | <b>"-BB" Enclosure:</b> Aluminum, -40 to 121°C (-40 to 250°F), NEMA 3R                                             |                                               |
| <b>Operating Temperature Range:</b>                                                     | -40 to 70°C (-22 to 158°F)                                                                                         |                                               |
| <b>Storage Temperature Range:</b>                                                       | -40 to 70°C (-22 to 158°F)                                                                                         |                                               |
| <b>Operating Humidity Range:</b>                                                        | 0 to 100% RH                                                                                                       |                                               |
| <b>Lead Length   Conductor Size:</b>                                                    | 14" (35.6cm)   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>Product Dimensions:</b>                                                              | See Drawings on back of Data Sheet                                                                                 |                                               |
| <b>Product Weight:</b>                                                                  | <b>A/XX-O-EH:</b> 0.46 lbs. (0.21kg)   <b>A/XX-O-4X:</b> 0.38 lbs. (0.17kg)   <b>A/XX-O-BB:</b> 0.76 lbs. (0.35kg) |                                               |
| <b>Agency Approvals:</b>                                                                | CE, RoHS2, WEEE                                                                                                    |                                               |



## DIMENSIONAL DRAWING, WEIGHTS

## Bell Box Enclosure [BB]

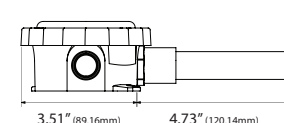
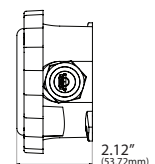
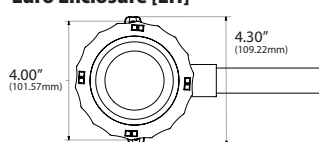


xx = Sensor Type

## Bell Box Enclosure [BB] Weight

| ACI Model # | Weight               |
|-------------|----------------------|
| A/xx-O-BB   | 0.76 lbs. (0.172 kg) |

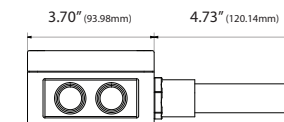
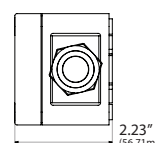
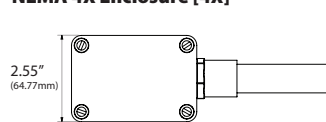
## Euro Enclosure [EH]



## Euro Enclosure [EH] Weight

| ACI Model # | Weight               |
|-------------|----------------------|
| A/xx-O-EH   | 0.46 lbs. (0.345 kg) |

## NEMA 4X Enclosure [4X]



## NEMA 4X Enclosure [4X] Weight

| ACI Model # | Weight               |
|-------------|----------------------|
| A/xx-O-4X   | 0.38 lbs. (0.209 kg) |

Front &amp; Right Views

Top View

Product Weight

## STANDARD ORDERING

Model # Example: A/CP-O-EH -OR- 125283

| Model #       | Item # | Description                                                       |
|---------------|--------|-------------------------------------------------------------------|
| A/1.8K-O-EH   | 125163 | 1.8K Outside Air Sensor, 14" Leads, Euro Housing                  |
| A/1.8K-O-BB   | 137419 | 1.8K Outside Air Sensor, 14" Leads, Aluminum Bell Box             |
| A/3K-O-EH     | 125241 | 3K Outside Air Sensor, 14" Leads, Euro Housing                    |
| A/3K-O-BB     | 121056 | 3K Outside Air Sensor, 14" Leads, Aluminum Bell Box               |
| A/AN-O-EH     | 125268 | AN Outside Air Sensor, 14" Leads, Euro Housing                    |
| A/AN-O-BB     | 121524 | AN Outside Air Sensor, 14" Leads, Aluminum Bell Box               |
| A/AN-BC-O-EH  | 125262 | AN-BC Outside Air Sensor, 14" Leads, 11K Shunt, Euro Housing      |
| A/AN-BC-O-BB  | 135315 | AN-BC Outside Air Sensor, 14" Leads, 11K Shunt, Aluminum Bell Box |
| A/CP-O-EH     | 125283 | CP Outside Air Sensor, 14" Leads, Euro Housing                    |
| A/CP-O-BB     | 122112 | CP Outside Air Sensor, 14" Leads, Aluminum Bell Box               |
| A/CSI-O-EH    | 125289 | CSI Outside Air Sensor, 14" Leads, Euro Housing                   |
| A/CSI-O-BB    | 139372 | CSI Outside Air Sensor, 14" Leads, Aluminum Bell Box              |
| A/10KS-O-EH   | 125197 | 10KS Outside Air Sensor, 14" Leads, Euro Housing                  |
| A/10KS-O-BB   | 142405 | 10KS Outside Air Sensor, 14" Leads, Aluminum Bell Box             |
| A/10K-E1-O-EH | 125609 | 10K-E1 Outside Air Sensor, 14" Leads, Euro Housing                |
| A/10K-E1-O-BB | 142406 | 10K-E1 Outside Air Sensor, 14" Leads, Aluminum Bell Box           |
| A/20K-O-EH    | 125226 | 20K Outside Air Sensor, 14" Leads, Euro Housing                   |
| A/20K-O-BB    | 120663 | 20K Outside Air Sensor, 14" Leads, Aluminum Bell Box              |
| A/100KS-O-EH  | 125176 | 100KS Outside Air Sensor, 14" Leads, Euro Housing                 |
| A/100KS-O-BB  | 142407 | 100KS Outside Air Sensor, 14" Leads, Aluminum Bell Box            |

## CUSTOM ORDERING

Model # Example: A/ 1.8K O-EH NIST  
A. B. C. D.

MODEL #

|                                        |                                                                           |    |
|----------------------------------------|---------------------------------------------------------------------------|----|
| 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 Select One (1)        | O-EH = Euro Housing   O-BB = Aluminum Bell Box   O-4X = NEMA 4X Enclosure |    |
| D. NIST Select One (1)                 | ---- = No NIST Certificate   NIST = NIST Certificate (3 Points)           |    |

