



# STRAP ON

## Non-Intrusive Pipe Mount, Platinum RTD

The ACI Platinum Strap-On Series features a 1.5" square copper plate with the sensor encapsulated to the back side of the copper plate to improve the thermal conductivity between the pipe and sensor. Each sensor has Etched Teflon colored lead wires to differentiate the different sensor types. The three-wire "-3W" option should be ordered when using with a 3-Wire temperature transmitter or sensor configuration on your building management system or PLC (Programmable Logic Controller). The purpose of the 3rd wire is to compensate for any external lead wire resistance that will affect your sensors output signal. ACI recommends the use of 18 AWG lead wires to reduce the external lead wire resistance when using a Platinum RTD sensor. Sensors in this series are manufactured using ACI's proven double encapsulation

process to eliminate the effects of moisture on the sensor as well as to improve thermal response times with our high quality, thermally conductive epoxy. Strap-On sensors can be used to monitor pipe sizes from 1 1/4" to 10" in diameter. ACI recommends to clean the pipe before applying thermal grease and installing the sensor before finally insulating the sensor from the effects of the ambient air. Optional Weather Proof enclosures and NIST Certificates are available as referenced on the back of the Product Data Sheet.

**Applications:** Cold Water Systems, Hot Water Systems, Retrofit applications, Hydronic Heating Systems, Chillers

### PRODUCT SPECIFICATIONS

<b>Sensor Type   Sensor Curve:</b>	Platinum RTD   PTC (Positive Temperature Coefficient)
<b>Number Sensing Points:</b>	One
<b>Number Wires:</b>	<b>A/100-2W-S Series and A/1K-2W-S Series:</b> Two (Non-Polarity Sensitive) <b>A/100-3W-S Series and A/1K-3W-S Series:</b> Three (Polarity Sensitive)
<b>Sensor Output @0°C (32°F):</b>	<b>A/100-xW-S Series:</b> 100 Ohms nominal   <b>A/1K-xW-S Series:</b> 1000 Ohms nominal
<b>Sensor Accuracy @ 0°C (32°F):</b>	+/- 0.06% Class A ( <b>Tolerance Formula:</b> +/- °C = (0.15°C + (0.002 *  t )) where  t  is the absolute value of Temperature above or below 0°C in °C) <b>-40°C (-40°F):</b> +/- 0.23°C (+/- 0.41°F)   <b>0°C (32°F):</b> +/- 0.15°C (+/- 0.27°F) <b>93°C (200°F):</b> +/- 0.34°C (+/- 0.61°F)
<b>Din Standard   Temperature Coefficient:</b>	DIN EN 60751 (IEC 751)   3850 ppm / °C
<b>Sensor Stability:</b>	+/- 0.03% after 1000 Hours @ 300°C (572°F)
<b>Response Time (63% Step Change):</b>	30 Seconds nominal
<b>Self-Heating   Maximum Operating Current:</b>	<b>100 Ohm RTD:</b> 7 mW/°C (Still Air)   5 mA   <b>1K Ohm RTD:</b> 4mW/°C (Still Air)   3 mA
<b>Pipe Mount Sensor Enclosure Material:</b>	Copper
<b>Enclosure Specifications (Operating Temperature Range, Flammability, NEMA/IP Rating):</b>	<b>A/100/1K-S-GD:</b> Galvanized Steel, -40 to 93°C (-40 to 200°F), NEMA 1 (IP 10) <b>A/100/1K-PB:</b> ABS Plastic, -30 to 85°C (-22 to 185°F), UL94-HB, Plenum Rated <b>A/100/1K-S-4X:</b> Polystyrene Plastic, -40 to 70°C (-40 to 158°F), UL94-V2, NEMA 4X (IP 66)
<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>Acceptable Pipe Size:</b>	<b>A/100/1K-S-XX:</b> 1 1/4" (32mm) to 4" (100mm)   <b>A/100/1K-S10-XX:</b> 2" (50mm) to 10" (250mm)
<b>Foam Material   Flammability Rating</b>	Neoprene/EPDM/SBR Polymer   UL94-HF1; MIL-R-6130C; FMVSS-302
<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 Drawing on Back of Data Sheet
<b>Product Weight:</b>	<b>A/100/1K-XX-GD:</b> 0.81 lbs. (0.37kg)   <b>A/100/1K-XX-PB:</b> 0.41 lbs. (0.19kg); <b>A/100/1K-XX-4X:</b> 0.56 lbs. (0.25kg)
<b>Agency Approvals:</b>	CE, RoHS2, WEEE





### DIMENSIONAL DRAWING

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

### STANDARD ORDERING

Model # Example: **A100-2W-S-GD** -OR- **119447**

Model #	Item #	Description
<b>A/100-2W-S-GD</b>	119447	100 Ohm RTD, 2-Wire, Strap-On, 1 1/4" to 4" Pipe, Galvanized Enclosure, 14" Brown/Brown Leads
<b>A/100-2W-S-PB</b>	135211	100 Ohm RTD, 2-Wire, Strap-On, 1 1/4" to 4" Pipe, Plastic Enclosure, 14" Brown/Brown Leads
<b>A/100-3W-S-GD</b>	119468	100 Ohm RTD, 3-Wire, Strap-On, 1 1/4" to 4" Pipe, Galvanized Enclosure, 14" Brown/Brown/Black Leads
<b>A/100-3W-S-PB</b>	124218	100 Ohm RTD, 3-Wire, Strap-On, 1 1/4" to 4" Pipe, Plastic Enclosure, 14" Brown/Brown/Black Leads
<b>A/1K-2W-S-GD</b>	119549	1K Ohm RTD, 2-Wire, Strap-On, 1 1/4" to 4" Pipe, Galvanized Enclosure, 14" Black/Black Leads
<b>A/1K-2W-S-PB</b>	124202	1K Ohm RTD, 2-Wire, Strap-On, 1 1/4" to 4" Pipe, Plastic Enclosure, 14" Black/Black Leads
<b>A/1K-3W-S-GD</b>	119571	1K Ohm RTD, 3-Wire, Strap-On, 1 1/4" to 4" Pipe, Galvanized Enclosure, 14" Black/Black/White Leads
<b>A/1K-3W-S-PB</b>	142480	1K Ohm RTD, 3-Wire, Strap-On, 1 1/4" to 4" Pipe, Plastic Enclosure, 14" Black/Black/White Leads

### CUSTOM ORDERING

Model # Example: **A/ 100 2W S PB NIST**

A. Sensor Series <i>No Selection Required</i>	MODEL #
<b>B. Model Series</b> <i>Select One (1)</i>	<b>A/</b> _____
<b>C. Number of Wires</b> <i>Select One (1)</i>	<b>A/</b> _____
<b>D. Configuration</b> <i>Select One (1)</i>	<b>A/</b> _____
<b>E. Enclosure</b> <i>Select One (1)</i>	<b>A/</b> _____
<b>F. NIST</b> <i>Select One (1)</i>	<b>A/</b> _____

**100** = 100 Ohm Platinum RTD | **1K** = 1K Ohm Platinum RTD  
**2W** = Two Wires | **3W** = Three Wires  
**S** = Strap-On (1.25" to 4" Pipe Size) | **S10\*** = Strap-On (2" to 10" pipe size)  
**GD** = Galvanized | **PB** = Plastic | **4X** = NEMA 4X Weather Proof  
**----** = No NIST Certificate | **NIST** = NIST Certificate (Must Specify 1, 3 or 5 Points)

Note\*: Not available in "NEMA 4X" style enclosure option

### ACCESSORIES ORDERING

Hardware, 2-5" HOSE CLAMP -OR- 100244

Model #	Item #	Description
<b>HARDWARE, 2-5" HOSE CLAMP</b>	100244	Hardware, 2-5" Hose Clamp, Quick Release Worm Gear, 201/301 Stainless Steel
<b>HARDWARE, 2-12.25" HOSE CLAMP</b>	142966	Hardware, 2-12" Hose Clamp, Quick Release Worm Gear, 201/301 Stainless Steel
<b>NSG HEAT TRANSFER PASTE 2OZ</b>	102595	Thermal Grease, 2 oz. Tube, Silicone Free, -40 to 320°F (-40 to 160°C)
<b>NSG HEAT TRANSFER PASTE 16OZ</b>	140574	Thermal Grease, 16 oz. Jar, Silicone Free, -40 to 390°F (-40 to 198°C)

