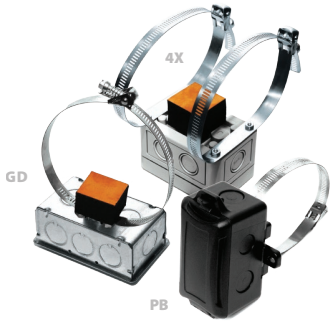

STRAP ON

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 ¼" 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

The ACI Platinum Strap-On 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.

PRODUCT SPECIFICATIONS

Sensor Type | Sensor Curve:	Platinum RTD | PTC (Positive Temperature Coefficient)
Number Sensing Points:	One
Number Wires:	**A/100-2W-S Series** and **A/1K-2W-S Series**: Two (Non-Polarity Sensitive) **A/100-3W-S Series** and **A/1K-3W-S Series:** Three (Polarity Sensitive)
Sensor Output @ 0°C (32°F):	**A/100-xW-S Series:** 100 Ohms nominal | **A/1K-xW-S Series:** 1000 Ohms nominal
Sensor Accuracy @ 0°C (32°F):	+/- 0.06% Class A (**Tolerance Formula:** +/- °C = (0.15°C + (0.002 * |t|)) where |t| is the absolute value of Temperature above or below 0°C in °C) **-40°C (-40°F):** +/- 0.23°C (+/- 0.41°F) | **0°C (32°F):** +/- 0.15°C (+/- 0.27°F) **93°C (200°F):** +/- 0.34°C (+/- 0.61°F)
Din Standard | Temperature Coefficient:	DIN EN 60751 (IEC 751) | 3850 ppm / °C
Sensor Stability:	+/- 0.03% after 1000 Hours @ 300°C (572°F)
Response Time (63% Step Change):	30 Seconds nominal
Self-Heating | Maximum Operating Current:	**100 Ohm RTD:** 7 mW/°C (Still Air) | 5 mA | **1K Ohm RTD:** 4mW/°C (Still Air) | 3 mA
Enclosure Specifications (Operating Temperature Range, Flammability, NEMA/IP Rating):	**A/100/1K-S-GD:** Galvanized Steel, -40 to 93°C (-40 to 200°F), NEMA 1 (IP 10) **A/100/1K-PB:** ABS Plastic, -30 to 85°C (-22 to 185°F), UL94-HB, Plenum Rated **A/100/1K-S-4X:** Polystyrene Plastic, -40 to 70°C (-40 to 158°F), UL94-V2, NEMA 4X (IP 66)
Storage Temperature Range:	-40 to 85°C (-40 to 185°F)
Operating Humidity Range:	10 to 95% RH, non-condensing
Acceptable Pipe Size:	**A/100/1K-S-XX:** 1 1/4" (32mm) to 4" (100mm) | **A/100/1K-S10-XX:** 2" (50mm) to 10" (250mm)
Foam Material | Flammability Rating:	Neoprene/EPDM/SBR Polymer | UL94-HF1; MIL-R-6130C; FMVSS-302
Lead Length | Conductor Size:	14" (35.6cm) | 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:	See Drawing on Back of Data Sheet
Product Weight:	**A/100/1K-XX-GD:** 0.81 lbs. (0.37kg) | **A/100/1K-XX-PB:** 0.41 lbs. (0.19kg); **A/100/1K-XX-4X:** 0.56 lbs. (0.25kg)
Agency Approvals:	CE, RoHS2, WEEE

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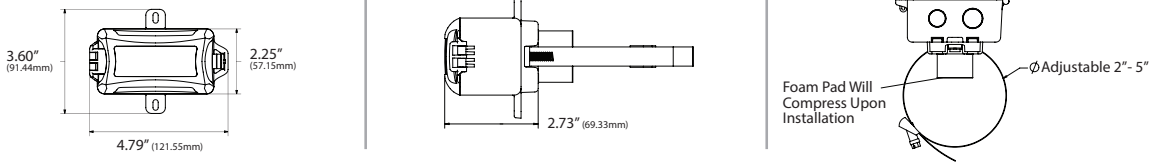
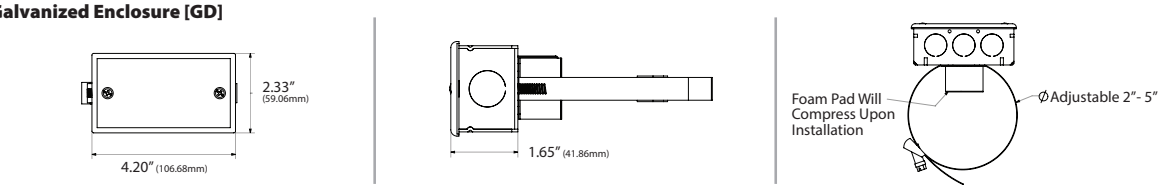
DIMENSIONAL DRAWING

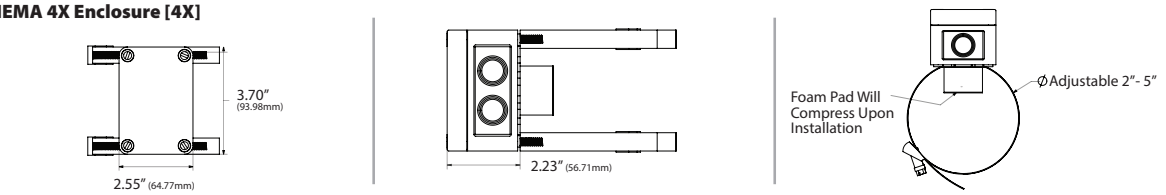
Plastic Box Enclosure [PB]



Galvanized Enclosure [GD]



NEMA 4X Enclosure [4X]



Front View | **Right View** | **Top View**

STANDARD ORDERING

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

Model #	Item #	Description
A/100-2W-S-GD	119447	100 Ohm RTD, 2-Wire, Strap-On, 1 ¼" to 4" Pipe, Galvanized Enclosure, 14" Brown/Brown Leads
A/100-2W-S-PB	135211	100 Ohm RTD, 2-Wire, Strap-On, 1 ¼" to 4" Pipe, Plastic Enclosure, 14" Brown/Brown Leads
A/100-3W-S-GD	119468	100 Ohm RTD, 3-Wire, Strap-On, 1 ¼" to 4" Pipe, Galvanized Enclosure, 14" Brown/Brown/Black Leads
A/100-3W-S-PB	124218	100 Ohm RTD, 3-Wire, Strap-On, 1 ¼" to 4" Pipe, Plastic Enclosure, 14" Brown/Brown/Black Leads
A/1K-2W-S-GD	119549	1K Ohm RTD, 2-Wire, Strap-On, 1 ¼" to 4" Pipe, Galvanized Enclosure, 14" Black/Black Leads
A/1K-2W-S-PB	124202	1K Ohm RTD, 2-Wire, Strap-On, 1 ¼" to 4" Pipe, Plastic Enclosure, 14" Black/Black Leads
A/1K-3W-S-GD	119571	1K Ohm RTD, 3-Wire, Strap-On, 1 ¼" to 4" Pipe, Galvanized Enclosure, 14" Black/Black/White Leads
A/1K-3W-S-PB	142480	1K Ohm RTD, 3-Wire, Strap-On, 1 ¼" to 4" Pipe, Plastic Enclosure, 14" Black/Black/White Leads

CUSTOM ORDERING

Model # Example: A/ (A.) | 100 (B.) | 2W (C.) | S (D.) | PB (E.) | NIST (F.)

		MODEL #
A. Sensor Series *No Selection Required*	**A/** →	**A/**
B. Model Series *Select One (1)*	**100** = 100 Ohm Platinum RTD | **1K** = 1K Ohm Platinum RTD	
C. Number of Wires *Select One (1)*	**2W** = Two Wires | **3W** = Three Wires	
D. Configuration *Select One (1)*	**S** = Strap-On (1.25" to 4" Pipe Size) | **S10** = Strap-On (2" to 10" pipe size)	
E. Enclosure *Select One (1)*	**GD** = Galvanized | **PB** = Plastic | **4X** = NEMA 4X Weather Proof	
F. NIST *Select One (1)*	**----** = No NIST Certificate | **NIST** = NIST Certificate (3 Points)	

ACCESSORIES ORDERING

Model # Example: A/HOSE CLAMP-2-12" -OR- 142631

Model #	Item #	Description
A/HOSE CLAMP-2-5"	142630	Hardware, 2-5" Hose Clamp, Quick Release Worm Gear, 201/301 Stainless Steel
A/HOSE CLAMP-2-12"	142631	Hardware, 2-12" Hose Clamp, Quick Release Worm Gear, 201/301 Stainless Steel
NSG HEAT TRANSFER PASTE 2OZ	102595	Thermal Grease, 2 oz. Tube, Silicone Free, -40 to 320ºF (-40 to 160ºC)
NSG HEAT TRANSFER PASTE 16OZ	140574	Thermal Grease, 16 oz. Jar, Silicone Free, -40 to 390ºF (-40 to 198ºC)

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