

# HAZARDOUS Room, Duct & Immersion Platinum RTD

The ACI Hazardous Platinum RTD Series features a 1/2" NPT Process threaded fitting and 1/4" diameter stainless steel probe with 22 AWG Etched Teflon colored 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 and to increase response times using our high quality, thermally conductive epoxy. The Hazardous sensors come standard with a heavy duty Feraloy® Iron or Aluminum Connection Head depending on the configuration ordered. These sensors can be used in Wall Mounted (Room), Duct, and Immersion style configurations and include an O-Ring Seal, Ground Screw, and weather resistant finish. The "INW" Immersion sensor without thermowell can be used with an existing thermowell or paired with any of the Machined thermowells (See Accessories) when higher flow rates, temperatures, pressure rating or corrosion resistance is required. NIST Certificates are also available as shown on the back of the product data sheet. This product should be installed by a trained professional with knowledge of local codes and regulations.

**Applications:** Hazardous Atmospheres, Industrial Sensor Applications, Process control, Exhaust Systems

**The ACI Hazardous Platinum RTD 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).**

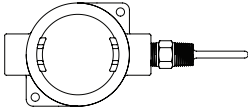
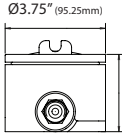
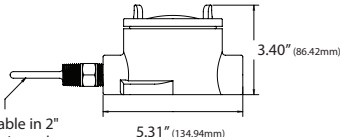
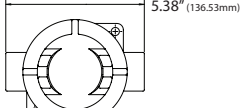
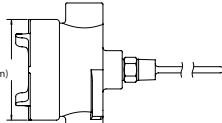
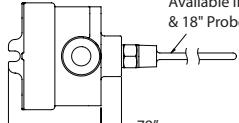
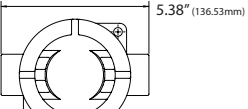
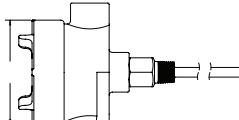
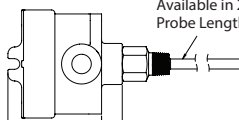
## PRODUCT SPECIFICATIONS

<b>Sensor Type   Sensor Curve:</b>	Platinum RTD   PTC (Positive Temperature Coefficient)
<b>Number Sensing Points:</b>	One
<b>Number Wires:</b>	<b>A/100-2W-EXPL</b> and <b>A/1K-2W-EXPL:</b> Two (Non-Polarity Sensitive) <b>A/100-3W-EXPL</b> and <b>A/1K-3W-EXPL:</b> Three (Polarity Sensitive)
<b>Sensor Output @ 0°C (32°F):</b>	<b>A/100-xW-EXPL Series:</b> 100 Ohms nominal   <b>A/1K-xW-EXPL Series:</b> 1000 Ohms nominal
<b>Sensor Tolerance Class   Accuracy:</b>	+/- 0.06% Class A   <b>(Tolerance Formula: +/- °C = (0.15°C + (0.002 *  t ))</b> where  t  is the absolute value of Temperature above or below 0°C in °C <b>-40°C (-40°F):</b> +/- 0.23°C (+/- 0.414°F)   <b>0°C (32°F):</b> +/- 0.15°C (+/- 0.27°F) <b>200°C (392°F) =</b> +/- 0.55°C (+/- 1.00°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>	8 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> 4 mW/°C (Still Air)   3 mA
<b>Enclosure Specifications (Material, Operating Temperature, NEMA Ratings):</b>	<b>"D" Enclosure:</b> Feraloy® Iron Alloy, -50 to 60°C (-58 to 140°F), NEMA 3, 4, 7ABCD, 9EFG <b>"I or -INW" Enclosure:</b> Feraloy® Iron Alloy, -50 to 60°C (-58 to 140°F), NEMA 3, 4, 7ABCD, 9EFG <b>"R" Enclosure:</b> Copper-Free Aluminum, -50 to 60°C (-58 to 140°F), NEMA 3, 4, 7ABCD, 9EFG
<b>Enclosure Explosion Proof Rating:</b>	CL. I, Div. 1 & 2, Groups A, B, C, D
<b>Enclosure Dust-Ignition Proof Rating:</b>	CL. II, Div. 1, Groups E, F, G
<b>Enclosure Raintight Rating:</b>	CL. II, Div. 2, Groups F, G
<b>Enclosure Wet Locations Rating:</b>	CL. III
<b>Enclosure UL   CSA Standards:</b>	UL 1203   CSA C22.2 No. 30
<b>Sensor Operating Temperature Range:</b>	-40 to 200°C (-40 to 392°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>Enclosure Hubs   Hub Size:</b>	Two   1/2" NPT Female Hubs
<b>Probe Diameter   Sensor Threads:</b>	0.250" (6.35mm)   1/2" NPT (National Pipe Tapered) Thread
<b>Probe Material:</b>	304 Stainless Steel
<b>Thermowell Material   Thermowell Bore Diameter:</b>	304 Stainless Steel   0.260"
<b>Thermowell Instrument Thread   Process Thread:</b>	1/2" NPS (National Pipe Straight) Female Thread   1/2" NPT (National Pipe Tapered) Male Thread
<b>Lead Length   Conductor Size:</b>	14" (35.6 cm) or 24" (61 cm)   22 AWG (0.65mm)
<b>Lead Wire Insulation   Wire Rating:</b>	Etched Teflon (PTFE) Colored Leads   Mil Spec 16878/4 Type E)
<b>Conductor Material:</b>	Silver Plated Copper
<b>Product Dimensions   Product Weight:</b>	See table on back of Product Data sheet   <b>Room:</b> 1.8 lbs, <b>Duct:</b> 4.4 lbs, <b>Immersion:</b> 4.75 lbs
<b>Agency Approvals:</b>	CE, RoHS2, WEEE





### DIMENSIONAL DRAWING

<p><b>Hazardous Room</b></p>  <p><b>Weight:</b> 1.8 lbs</p>	 <p>2.89" (75.34mm)</p>	 <p>3.40" (86.42mm) Available in 2" Probe Lengths</p>
<p><b>Hazardous Duct</b></p>  <p><b>Weight:</b> 4.4 lbs</p>	 <p>Ø4.05" (102.87mm)</p>	 <p>3.51" (89.15mm) 0.78" (19.69mm) Available in 4", 8", 12" &amp; 18" Probe Lengths</p>
<p><b>Hazardous Immersion</b></p>  <p><b>Weight:</b> 4.75 lbs</p>	 <p>Ø4.05" (102.87mm)</p>	 <p>3.51" (89.15mm) 0.78" (19.69mm) Available in 2.5", 4" &amp; 6" Probe Lengths</p>
<b>Front View</b>	<b>Right View</b>	<b>Top View</b>

HAZARDOUS ROOM ORDERING		Model # Example:	A/	100	2W	R	EXPL	NIST	MODEL #
			A.	B.	C.	D.	E.	F.	
<b>A. Sensor Series</b> <i>No Selection Required</i>	A/ _____ →								<b>A/</b>
<b>B. Model Series</b> <i>Select One (1)</i>	100 = 100 Ohm Platinum RTD   1K = 1K Ohm Platinum RTD								
<b>C. Number of Wires</b> <i>Select One (1)</i>	2W = Two Wires   3W = Three Wires								
<b>D. Configuration</b> <i>No Selection Required</i>	R = Room _____ →								<b>R</b>
<b>E. Sensor Model</b> <i>No Selection Required</i>	EXPL = Hazardous Sensor _____ →								<b>EXPL</b>
<b>F. NIST</b> <i>Select One (1)</i>	---- = No NIST Certificate   NIST = NIST Certificate (3 Points)								

HAZARDOUS DUCT ORDERING		Model # Example:	A/	100	2W	D	4"	EXPL	NIST	MODEL #
			A.	B.	C.	D.	E.	F.	G.	
<b>A. Sensor Series</b> <i>No Selection Required</i>	A/ _____ →									<b>A/</b>
<b>B. Model Series</b> <i>Select One (1)</i>	100 = 100 Ohm Platinum RTD   1K = 1K Ohm Platinum RTD									
<b>C. Number of Wires</b> <i>Select One (1)</i>	2W = Two Wires   3W = Three Wires									
<b>D. Configuration</b> <i>No Selection Required</i>	D = Duct _____ →									<b>D</b>
<b>E. Duct Probe Length</b> <i>Select One (1)</i>	4" = Duct 4"   8" = Duct 8"   12" = Duct 12"   18" = Duct 18"									
<b>F. Sensor Model</b> <i>No Selection Required</i>	EXPL = Hazardous Sensor _____ →									<b>EXPL</b>
<b>G. NIST</b> <i>Select One (1)</i>	---- = No NIST Certificate   NIST = NIST Certificate (3 Points)									

HAZARDOUS IMMERSION ORDERING		Model # Example:	A/	100	3W	I	4"	EXPL	NIST	MODEL #
			A.	B.	C.	D.	E.	F.	G.	
<b>A. Sensor Series</b> <i>No Selection Required</i>	A/ _____ →									<b>A/</b>
<b>B. Model Series</b> <i>Select One (1)</i>	100 = 100 Ohm Platinum RTD   1K = 1K Ohm Platinum RTD									
<b>C. Number of Wires</b> <i>Select One (1)</i>	2W = Two Wires   3W = Three Wires									
<b>D. Configuration</b> <i>Select One (1)</i>	I = Immersion with Welded Thermowell   INW = Immersion without Welded Thermowell									
<b>E. Immersion Length</b> <i>Select One (1)</i>	2.5" = Immersion 2.5"   4" = Immersion 4"   6" = Immersion 6"									
<b>F. Sensor Model</b> <i>No Selection Required</i>	EXPL = Hazardous Sensor _____ →									<b>EXPL</b>
<b>G. NIST</b> <i>Select One (1)</i>	---- = No NIST Certificate   NIST = NIST Certificate (3 Points)									

