Room Series | Platinum RTD

Wall Mount Enclosures, Platinum RTD

The ACI Platinum Room Series combines flexibility with attractive styling in our "-R2" or "-R" style enclosures which include four-way air flow design to minimize self-heating to the sensor. These enclosures are offered in a White "-R2" or Beige "-R" color depending on enclosure style and designed to be mounted over a single gang junction box or hole in the wall using drywall anchors. An optional LCD Display is available in the Beige "-R" style enclosure. Screw terminal blocks are provided for making connections to your building management system. An optional 3.175 mm (1/8 in) Black foam pad with pressure sensitive adhesive is available to insulate the sensor from thermal drafts within the wall or wall surface temperature. A 1/16 in Hex driver can be used to secure the cover from being easily removed. The "LCD" option uses two temperature sensors to monitor the ambient air temperature in the space and is factory calibrated at a single point.

R-LCD

R

R2

Applications

Space Temperature Sensing, Office Buildings, Schools, Colleges, Commercial Buildings, OEM Opportunities

Warranty

The ACI Platinum Room 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, workaci.com.

Specifications

Sensor Type: Platinum RTD

Sensor Curve: PTC (Positive Temperature Coefficient)

Number Sensing Points: One

Number Sensor Terminals
    A/100-2W Series and **A/1K-2W Series:** Two (Non-Polarity Sensitive)
    A/100-3W Series and **A/1K-3W Series:** Three (Polarity Sensitive)

Sensor Output @ 0 °C (32 °F)
    A-100-xW Series: 100 Ω nominal
    A/1K-xW Series: 1000 Ω 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
    0 °C (32 °F): ± 0.15 °C (± 0.27 °F)
    50 °C (122 °F): ± 0.25 °C (± 0.45 °F)

Din Standard: DIN EN 60751 (IEC 751)

Temperature Coefficient: 3850 ppm / °C

Sensor Stability: ± 0.03 % after 1000 Hours at 300 °C (572 °F)

Response Time (63 % Step Change): 8 seconds nominal

Self-Heating | Maximum Operating Current
    100 Ω RTD: 7 mW / °C (Still Air) | 5 mA
    1 kΩ RTD: 4 mW / °C (Still Air) | 3 mA

LCD Display Supply Voltage: 9 V DC to 35 V DC / 24 V AC (50 Hz to 60 Hz)

LCD Display Supply Current/VA: < 4 mA / 0.12 V A

LCD Display Accuracy: ±2 °F or ±2 °C at 21.5 °C (71 °F) typical

LCD Display Descriptor: °F (Fahrenheit) or °C (Celsius)

Number of Digits: 3 1/2 Segment Display

LCD Display Life Expectancy: 50,000 hours minimum

Set Point Specifications | Set Point Indication: See Ordering Grid options on back of Product Data Sheet

Set Point Tolerance: ±10 % of range

Override Options: Short Thermistor (Default); Field (Jumper) Selectable "Dry Contact" Closure (Separate Input); Short Set Point available upon request

Operating Range: 1.5 °C to 50 °C (35 °F to 122 °F)

Storage Temperature Range
    Non-LCD: -40 °C to 65 °C (-40 °F to 149 °F)
    LCD Display: -10 °C to 65 °C (14 °F to 149 °F)

Operating Humidity Range: 10 % to 95 % RH, non-condensing

Connections: Screw Terminal Blocks (non-polarity sensitive)

Wire Size: 1.31 mm² (16 AWG) to 0.129 mm² (26 AWG)

Terminal Block Torque Rating: 0.5 Nm minimum; 0.6 Nm maximum

Enclosure Material | Flammability Rating | Color:
    "-R2" Enclosure: ABS Plastic, UL94-HB, White
    "-R" Enclosure: ABS Plastic, UL94-HB, Beige

Product Dimensions: See dimension drawing on this product data sheet

Product Weight:
    A/1K-2W/3W-R/RS/RO Series: 63.5 g (0.14 lb)
    A/1K-2W/3W-RSO Series: 81.6 g (0.18 lb)
    A/1K-2W/3W-R2/R2S/R2O Series: 72.6 g (0.16 lb)
    A/1K-2W/3W-R2SO Series: 90.7 g (0.20 lb)
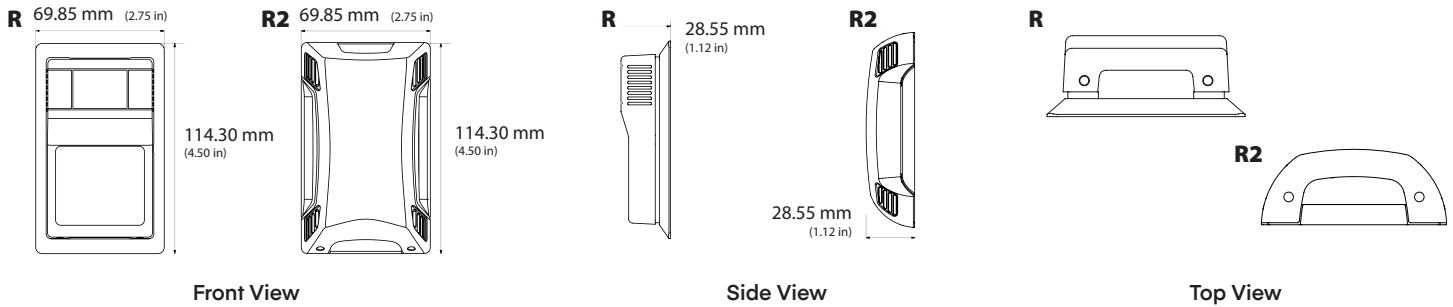   **A/1K-2W/3W-RSO-RJ6-LCD Series:** 81.6 g (0.18 lb)
    All LCD Display Units: 81.6 g (0.18 lb)

Agency Approvals: CE**, UKCA, RoHS2, WEEE

Note[1]: All LCD Display Units are not CE Compliant, but they are RoHS2 Compliant

Dimensions

R 69.85 mm (2.75 in)   **R2** 69.85 mm (2.75 in)

114.30 mm (4.50 in)   114.30 mm (4.50 in)

R 28.55 mm (1.12 in)   **R2** 28.55 mm (1.12 in)

R   **R2**

Front View   **Side View**   **Top View**

Standard Ordering

Model #	Item #	Description
A/100-2W-R	144136	100 Platinum RTD (2 Wire), "R" Version, Beige, No Options
A/100-2W-R2	144138	100 Platinum RTD (2 Wire), "R2" Version, White, No Options
A/100-3W-R	144137	100 Platinum RTD (3 Wire), "R" Version, Beige, No Options
A/100-3W-R2	144139	100 Platinum RTD (3 Wire), "R2" Version, White, No Options
A/1K-2W-R	144154	1000 Platinum RTD (2 Wire),"R" Version, Beige, No Options
A/1K-2W-R2	144156	1000 Platinum RTD (2 Wire), "R2" Version, White, No Options
A/1K-3W-R	144155	1000 Platinum RTD (3 Wire), "R" Version, Beige, No Options
A/1K-3W-R2	144157	1000 Platinum RTD (3 Wire), "R2" Version, White, No Options

Custom Ordering

		Options and Descriptions		Model #
A.	**Sensor Series**[1] *No Selection Required*	**A/** ———————————————————————————→		A/
B.	**Model Series** *Select One (1)*	**100** = 100 Ω Platinum RTD	**1K** = 1 kΩ Platinum RTD	
C.	**Configuration** *Select One (1)*	**R** = Room **RO** = Room with Override **RS** = Room with Set Point **RSO** = Room with Setpoint and Override **R2** = Room **R2O** = Room with Override **R2S** = Room with Set Point **R2SO** = Room with Set Point and Override		
D.	**Communication Jack** *Select One (1)*	**----** = **No Jack** **RJ4** = 4 Pin 4 Conductor RJ9, RJ10, or RJ22 Style Head Set Modular Connector **RJ6** = 6 Pin 6 Conductor RJ12 Modular Phone Connector **232** = 3.5 mm (1/8 in) Stereo Jack		
E.	**LCD Display**[2] *Select One (1)*	**----** = No LCD Display **LCD**[2] = With LCD Display (Only Available with "R" Style Enclosure)		

F.	LCD Display Descriptor *Select One (1)*	**F** = °F (Fahrenheit)			**C** = °C (Celsius)	
G.	NIST[3] *Select One (1)*	**----** = No NIST Certificate				
		NIST = NIST Certificate (3-Points)				

Setpoint Configuration Options *Select Options below if RS, RSO, R2S or R2SO was selected as a Configuration (C)*					
1.	Slidepots[4] *Select One (1)*	**Direct Acting**	**A01** = 0 Ω to 100 kΩ	**A02** = 0 Ω to 20 kΩ	**A03** = 0 Ω to 10 kΩ	**A08** = 1 kΩ to 11 kΩ
			A09 = 0 Ω to 2 kΩ	**A10** = 0 Ω to 1 kΩ	**A12** = 0 Ω to 400 Ω	**A16** = 0 Ω to 5 kΩ
			A28 = 806 Ω to 1206 Ω	**A32** = 900 Ω to 1300 Ω		
		Reverse Acting	**A14** = 10 kΩ to 0 Ω			
2.	Setpoint Indication *Select One (1)*	**A3** = 18 °C to 28 °C	**A4** = 20 °C to 30 °C	**B4** = 55 °F to 85 °F	**B7** = 60 °F to 90 °F
		C5 = COOL/WARM	**C6** = COOLER/WARMER	**D3** = WARM/COOL	**G5** = BLUE/RED (R2 Enclosure)

Note[1]: *A/ part numbers come without logo. For custom logo, replace A/ with Company abbreviation. Please contact ACI* | **Note[2]:** *LCD Display is not compatible with NIST* | **Note[3]:** *NIST is available in "R" and "R2" only configurations* | **Note[4]:** *Other Setpoint configurations are available. Please contact ACI* | **Note*:** *Short Sensor is factory default, but the Dry Contact option is field selectable with jumper shunts included.*

Accessories Ordering

Model #	Item #	Description
A/MOUNTING PLATE BEIGE R	106821	Wall Mounting Back Plate, Plastic, Beige ("R")
A/MOUNTING PLATE WHITE R	126386	Wall Mounting Back Plate, Plastic, White ("R")
A/MOUNTING PLATE WHITE R2	143369	Wall Mounting Back Plate, Plastic, White ("R2")
LOCKING COVER	107370	Clear Thermostat Guard, Locking Cover, Low Profile
A/ROOM-FOAM-PAD	125690	3.175 mm (1/8 in) Foam Insulation Pad with Adhesive, 76.2 mm (3 in) x 50.8 mm (2 in), Black