

High Accuracy Room Series I Thermistor

Wall Mount Enclosures, Thermistor



Automation Components
a DwyerOmega brand

The ACI High Accuracy Thermistor Room Series combines option flexibility with attractive styling in our “-R2” or “-R” style enclosures which both include Four-way air flow design to minimize the amount of self-heating to the sensor. Enclosures are offered in a White “-R2” or Beige “-R” color and are designed to be mounted over a single gang junction box or hole in the wall with the use of drywall anchors. Screw terminal blocks are available for making all connections to the temperature sensor, Set Point, “After Hours” Override, and Communication Jacks for easy access to your building management system (network). An optional 3.175 mm (1/8 in) Black foam pad with pressure sensitive adhesive are available to insulate the sensor from thermal drafts from within the wall or wall surface. The enclosure covers are secured using a 1/16 in Hex driver to secure the cover from being easily removed. An optional company logo is available for an additional charge and must be ordered as a separate line item underneath the Thermistor Room Series model number.

Applications

Space Temperature Sensing, Decorative Wall Applications, Office Buildings, Schools, Colleges, Commercial Buildings, OEM Opportunities

Warranty

The ACI High Accuracy Thermistor 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: Thermistor

Sensor Curve: Non-Linear, NTC (Negative Temperature Coefficient)

Number Temperature Sensing Points: One

Sensor Output at 25 °C (77 °F)

A/0.1AN Series (Type III): 10 kΩ nominal

A/0.1CP Series (Type II): 10 kΩ nominal

Accuracy 0 °C to 70 °C (32 °F to 158 °F)¹: ±0.1 °C (±0.18 °F)

Interchangeability 0 °C to 70 °C (32 °F to 158 °F)¹: ±0.1 °C (±0.18 °F)

Stability (5 Years)²

A/0.1AN Series: ±0.12 °C (0.216 °F) from 1.5 °C to 50 °C (35 °F to 122 °F)

A/0.1CP Series: ±0.06 °C (0.108 °F) from 1.5 °C to 50 °C (35 °F to 122 °F)

Response Time (63 % Step Change): 10 seconds nominal

Power Dissipation Constant: 2 mW / °C

Set Point Specifications / Set Point Indication: See Ordering Grid options on this product data sheet

Set Point Tolerance: ±10 % of the range

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

NIST Certification: 3 Point NIST Certificate (not available with Setpoint or Comm Jack options)



Operating Temperature Range²: 1.5 °C to 50 °C (35 °F to 122 °F)

Storage Temperature Range¹: 1.5 °C to 50 °C (35 °F to 122 °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 | Color:

“-R2” Enclosure: ABS; White

“-R” Enclosure: ABS; Beige

Enclosure Flammability Rating: UL94-HB

Product Dimensions: See dimension drawing on this product data sheet

Product Weight:

A/XXXX-R/RS/RO Series: 63.5 g (0.14 lb)

A/XXXX-RSO Series: 81.6 g (0.18 lb)

A/XXXX-R2/R2S/R2O Series: 72.6 g (0.16 lb)

A/XXXX-R2SO Series: 90.7 g (0.20 lb)

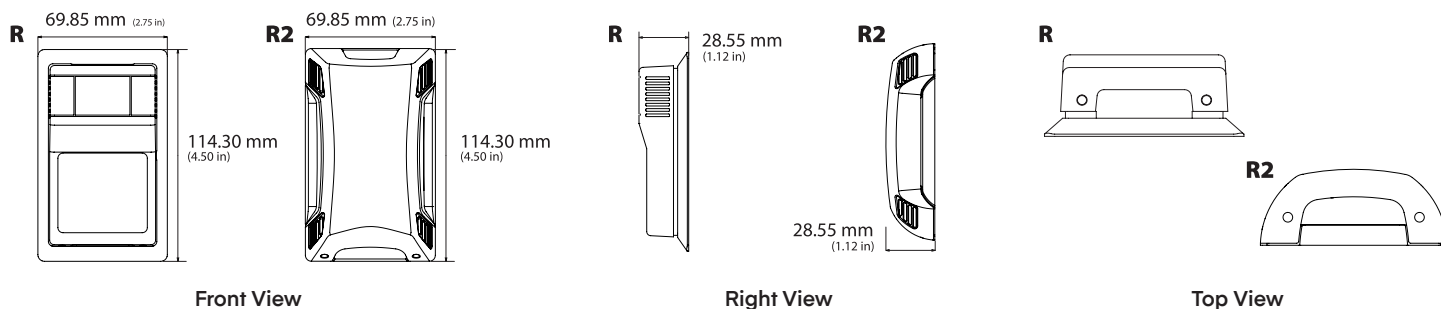
Agency Approvals: CE, UKCA, RoHS2, WEEE

Note¹: For best accuracy and long-term stability the sensor should be used in applications where the operating temperatures remain within the specified temperature range of 0 °C to 70 °C (32 °F to 158 °F)

Note²: The sensors will operate over an extended operating temperature range of -40 °C to 150 °C (-40 °F to 302 °F) without damaging the sensors but the accuracy and long-term stability will not meet the specifications above | Contact ACI for more information



Dimensions



Standard Ordering

Model #	Item #	Description
A/0.1AN-R2	146782	High Accuracy 10,000 ohm Thermistor (Type III), Room (R2)
A/0.1AN-R	146793	High Accuracy 10,000 ohm Thermistor (Type III), Room (R)
A/0.1CP-R2	137079	High Accuracy 10,000 ohm Thermistor (Type II), Room (R2)
A/0.1CP-R	127176	High Accuracy 10,000 ohm Thermistor (Type II), Room (R)

Accessories Ordering

Model #	Item #	Description
A/MOUNTING PLATE BEIGE R	106821	Wall Mounting Back Plate, Plastic, Beige ("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

Custom Ordering

Options and Descriptions				Model #
A. Sensor Series No Selection Required	A/			A/
B. Model Series Select One (1)	0.1 AN	0.1CP		
C. Configuration Select One (1)	R2 = Room (White)	R2O = Room w/ Override	R2S = Room w/ Set Point	R2SO = Room w/ Set Point & Override
	R = Room (Beige)	RO = Room w/ Override	RS = Room w/ Set Point	RSO = Room w/ Set Point & 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	RS232 = 3.5 mm (1/8 in) Stereo Jack

Setpoint Configuration Options Select Options on the next page if RS, RSO, R2S or R2SO was selected as a Configuration (C).



1.	Slidepots <i>Select One (1)</i>	Direct Acting	A01 = 0 Ω to 100 kΩ	A02 = 0 Ω to 20 kΩ	A03 = 0 Ω to 10 kΩ	A06 = 4.75 kΩ to 24.75 kΩ
			A07 = 10 Ω to 30 kΩ	A08 = 1 kΩ to 11 kΩ	A09 = 0 Ω to 2 kΩ	A10 = 0 Ω to 1K kΩ
			A11 = 2.05 Ω to 3.05 kΩ	A12 = 0 Ω to 400 Ω	A16 = 0 Ω to 5 kΩ	A18 = 10 Ωto 15 kΩ
			A29 = 7.87 Ω to 27.8 kΩ			
		Reverse Acting	A04 = 1051.1 Ω to 51.1 Ω	A14 = 10 kΩ to 0 Ω	A24 = 9.5 kΩ to 1 kΩ	
2.	Setpoint Stickers <i>Select One (1)</i>	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)
Model # Example: A/ 0.1CP R2S A01 C5						
A. B. C. D. 1. 2.						

Note: Short Sensor is our default but the Dry Contact option is field selectable with terminals included.

Custom Ordering with NIST

Options and Descriptions				Model #								
A.	Sensor Series <i>No Selection Required</i>	A/ 		A/								
B.	Model Series <i>Select One (1)</i>	0.1AN	0.1CP									
C.	Configuration <i>Select One (1)</i>											
		R2 = Room (White)	R2O = Room w/ Override									
		R = Room (Beige)	RO = Room w/ Override									
D.	NIST <i>Select One (1)</i>											
		--- = No NIST Certificate	NIST = NIST Certificate (3 Points)									
				Model # Example: <table><tr><td>A/</td><td>0.1CP</td><td>R2O</td><td>NIST</td></tr><tr><td>A.</td><td>B.</td><td>C.</td><td>D.</td></tr></table>	A/	0.1CP	R2O	NIST	A.	B.	C.	D.
A/	0.1CP	R2O	NIST									
A.	B.	C.	D.									

