

AcuTEMS™ RM Series

Room Mount Temperature Sensor Datasheet



With a wall-mount design for indoor applications, the AcuTEMS RM features a four-way aspiration enclosure engineered to minimize self-heating and measure temperature accurately without disturbance. With multiple RTD, thermistor, and transmitter output options for various use cases. Optional LCD available when ordered with a transmitter option, providing temperature readings locally with unit indications.

Features

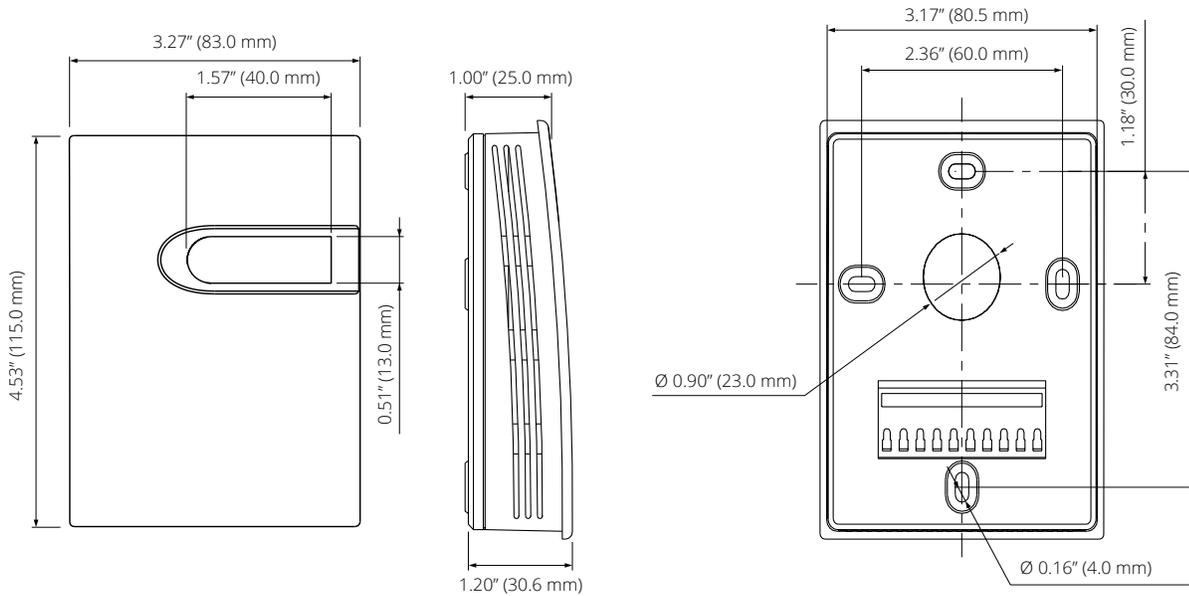
- Polycarbonate housing design for easy wall/surface mount or junction box.
- Protection against over-voltage, reverse polarity, and electromagnetic interference.
- 100Ω Platinum, 1KΩ Platinum/Nickel RTDs, and 10KΩ Type II/Type III, 20KΩ thermistors available.
- <10s response time ensuring swift feedback for building automation systems.
- Optional LCD with unit indication & 0.1°C (0.1°F) resolution.
- 4-20mA and 0-10VDC transmitters utilize high performance digital temperature sensor to ensure accurate measurement, fast response, and long-term stability.



Specifications

| ELECTRICAL | |
|---|---|
| Transmitter Power | 16~28 VAC or 16~35 VDC |
| Transmitter Output | 4~20mA (3 Wires) and 0~10VDC (3 Wires) |
| Output Load | ≤500Ω (Current), ≥2KΩ (Voltage) |
| TEMPERATURE PERFORMANCE | |
| Temperature Sensor Type | RTD or Thermistor, See Ordering Information |
| Temperature Transmitter Sensor Type | Digital |
| Transmitter Accuracy (If Applicable) | <±0.5°C @ 0~85°C (<±0.9°F @ 32~185°F) |
| Thermistor Accuracy (If Applicable) | 10KΩ, Type III - ±0.3°C @ 25°C (±0.54°F @ 77°F) 10KΩ, Type II - ±0.2°C @ 25°C (±0.36°F @ 77°F) 20KΩ - ±0.2°C @ 25°C (±0.36°F @ 77°F) |
| RTD Accuracy (If Applicable) | 1KΩ Platinum - ±0.2°C @ 25°C (±0.36°F @ 77°F) 100Ω Platinum - ±0.2°C @ 25°C (±0.36°F @ 77°F) 1KΩ Nickel - ±0.5°C @ 25°C (±0.9°F @ 77°F) |
| Temperature Transmitter Measurement Range | 0~50°C (32~122°F) |
| Response Time | <10s |
| ENVIRONMENTAL | |
| Sensor Operating Temperature Range | 0~70°C (32~158°F) @ 0~95%RH (Non-Condensing) |
| Transmitter Operating Temperature Range | 0~70°C (32~158°F) @ 0~95%RH (Non-Condensing) |
| Storage Temperature | -30~70°C (-22~158°F) |
| MECHANICAL | |
| Mounting | Single Gang Junction Box or Surface Mount |
| Wiring Connection | Screw Terminal Blocks |
| Weight | 165g (0.36lbs) |
| Display (Optional with Transmitter) | 3-Digit LCD with Unit Indication |
| Display Resolution | 0.1°C (0.1°F) |
| CERTIFICATIONS/WARRANTY | |
| Enclosure Material | Fire Retardant Polycarbonate (UL94V-0) |
| Protection | IP30 |
| Agency Approvals | CE |
| Warranty | 5 Years |

Dimensions



Ordering Information

| Model | Temperature Output | Temperature Sensor | Display (Transmitters Only) |
|------------|---|---|---|
| AcuTEMS-RM | A: Resistive Output (Thermistor or RTD) | 01: 10K Ω , Type III Thermistor | C: No Display |
| | | 02: 10K Ω , Type II Thermistor | |
| | | 03: 20K Ω Thermistor | |
| | | 04: 1K Ω Platinum RTD | |
| | | 05: 100 Ω Platinum RTD | |
| | | 06: 1K Ω Nickel RTD | |
| | B: 4-20 mA & 0-10 VDC Transmitter | 07: Transmitter, 1K Ω Platinum RTD 0-50 $^{\circ}$ C (32-122 $^{\circ}$ F) | A: With Display, Fahrenheit |
| | | 08: Transmitter, 1K Ω Platinum RTD Special Order [†] | B: With Display, Celsius C: No Display |

Ordering Example: AcuTEMS-RM-B-07-A

[†] **Important:** Special Order Span will increase lead times and may be subject to minimum order requirements.

Note: Selecting the "08 Transmitter, 1K Ω Platinum RTD Other Span" option allows the transmitter to be calibrated within a -40 $^{\circ}$ C to +100 $^{\circ}$ C (-40 $^{\circ}$ F to 212 $^{\circ}$ F) measurement range. The custom range must be specified at the time of ordering.



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