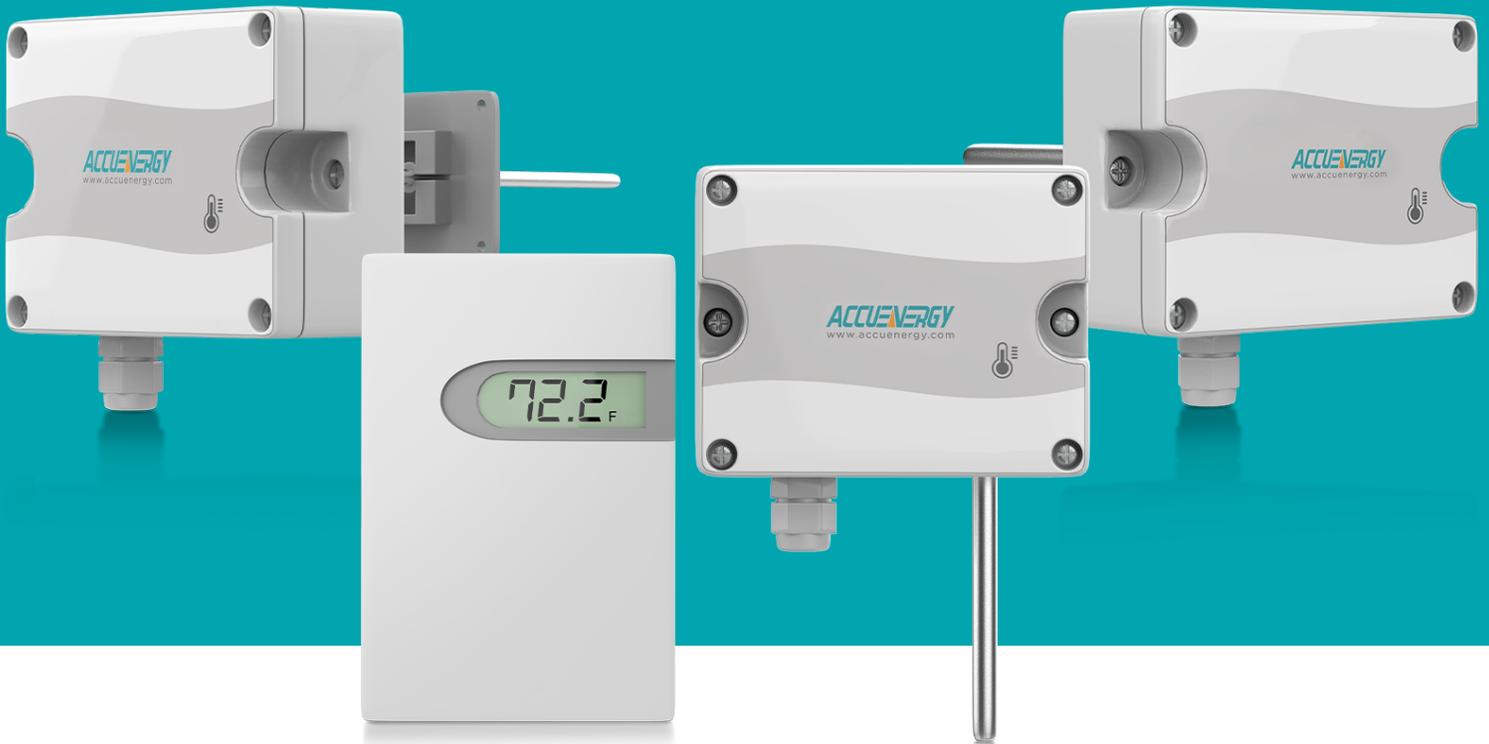


ACCUEnergy

AcuTEMS™ Series

Temperature Sensors



D A T A S H E E T

AcuTEMS™ DM Series

Duct Mount Temperature Sensor Datasheet



The AcuTEMS DM series duct mount temperature sensor is the ideal solution for monitoring air temperature within ductwork. The sensor features multiple RTD, thermistor, and transmitter output options with different probe lengths, making it compatible with a variety of HVAC systems and BAS controllers to ensure the desired temperature is maintained. The temperature probe is secured with a 4-screw mounting flange with set screw, providing the flexibility of an adjustable probe depth when needed. The AcuTEMS DM comes with an IP65 enclosure providing superior moisture and dust protection.

Features

- Engineered for ductwork mounting with adjustable probe depth.
- Quick installation with push-in button terminal and quick-release enclosure screws.
- IP65 enclosure provides superior protection against dust and moisture ingress.
- 100Ω Platinum, 1KΩ Platinum/Nickel RTDs, and 10KΩ Type II/Type III, 20KΩ thermistors available.
- Three wire terminals provide flexibility for 2-wire or 3-wire installation for resistance temperature output.
- <10s response time delivering quick and reliable temperature measurement.
- 4-20mA and 0-10VDC output options for different BAS controllers and applications.



Specifications

ELECTRICAL

Transmitter Voltage Power	19.2~28.8 VAC or VDC
Transmitter Current Power	19.2~28.8 VDC (RL=500Ω); 8.5~35 VDC (RL=0Ω)
Transmitter Output	4~20mA (2 Wires) or 0~10VDC (3 Wires)
Output Load	≤500Ω (Current), ≥2KΩ (Voltage)

TEMPERATURE PERFORMANCE

Temperature Sensor Type	RTD or Thermistor, See Ordering Information
Transmitter Accuracy (If Applicable)	<±0.3°C @ 0~70°C (<±0.54°F @ 32~158°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) or 0-100°C (32-212°F)
Response Time	<10s

ENVIRONMENTAL

Operating Temperature Range	-40~70°C (-40~158°F) @ 0~95%RH (Non-Condensing)
Storage Temperature	-30~80°C (-22~176°F)

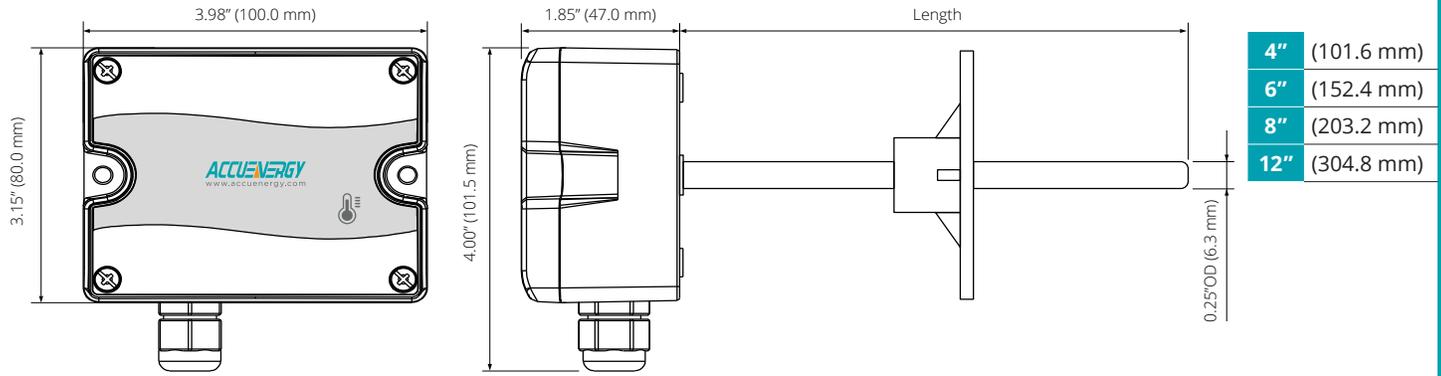
MECHANICAL

Mounting	4-Screw Duct Mount Flange with Adjustable Probe and Set Screw
Wiring Connection	Push Button Terminal Blocks (2 Wire or 3 Wire)
Weight	330g (0.73lbs)

CERTIFICATIONS/WARRANTY

Enclosure Material	Fire Retardant Polycarbonate (UL94V-0)
Protection	IP65
Agency Approvals	CE
Warranty	5 Years

Dimensions



Ordering Information

Model	Temperature Output	Temperature Sensor	Probe Length	Enclosure
AcuTEMS-DM	A: Resistive Thermistor or RTD	01: 10KΩ, Type III Thermistor	A: 4" (101.6mm)	1: NEMA 4 Plastic (IP65)
		02: 10KΩ, Type II Thermistor	B: 6" (152.4mm)	
		03: 20KΩ Thermistor	C: 8" (203.2mm)	
		04: 1KΩ Platinum RTD	D: 12" (304.8mm)	
		05: 100Ω Platinum RTD	E: Special Order Length †	
		06: 1K Ni Ω Nickel RTD		
	B: 4-20 mA Transmitter	07: Transmitter, 1KΩ Platinum RTD 0-50°C (32-122°F)	A: 4" (101.6mm)	1: NEMA 4 Plastic (IP65)
	C: 0-10 VDC Transmitter	08: Transmitter, 1KΩ Platinum RTD 0-100°C (32-212°F)	B: 6" (152.4mm)	
		09: Transmitter, 1KΩ Platinum RTD Special Order †	C: 8" (203.2mm)	
			D: 12" (304.8mm)	
			E: Special Order Length †	

Ordering Example: AcuTEMS-DM-B-08-C-1

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

Note: Selecting the "09 Transmitter, 1KΩ Platinum RTD Other Span" option allows the transmitter to be calibrated within a -40°C to +100°C (-40°F to 212°F) measurement range. The custom range must be specified at the time of ordering.



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AcuTEMS™ IM Series

Immersion Temperature Sensor Datasheet



The AcuTEMS IM series immersion temperature sensor is designed to monitor liquid temperature in chilled water lines, boiler piping, and other low-flow and low-pressure applications. The immersion sensor comes in several probe lengths with multiple RTD, thermistor, and transmitter output options suitable for various BAS controllers. The IP65 enclosure also prevents dust and moisture ingress. The 2-piece welded 304 stainless steel thermowell with pre-applied heat transfer paste enables accurate temperature measurement while protecting the sensor probe from corrosive substances and high pressure.

Features

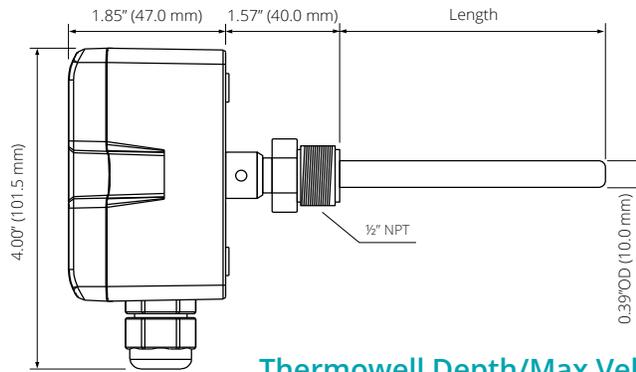
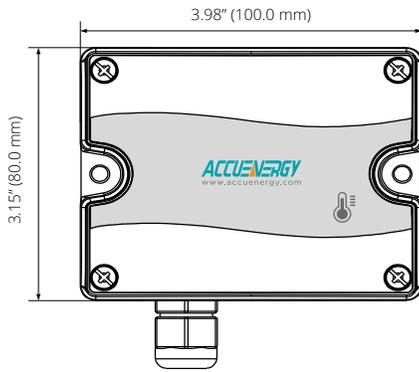
- 304 stainless steel thermowell with ½" NPT connection and set screw to secure the probe.
- Thermal paste pre-applied on temperature probe for better heat transfer.
- Convenient installation with push-in button terminal and quick release enclosure screws.
- IP65 enclosure provides superior protection against dust and moisture.
- 100Ω Platinum, 1KΩ Platinum/Nickel RTDs, and 10KΩ Type II/Type III, 20KΩ thermistors available.
- Three wire terminals provide flexibility for 2-wire or 3-wire installation for resistive temperature output.
- Optimized for building automation systems, delivering rapid response time of <10s.
- 4-20mA and 0-10VDC output options compatible with different BAS controllers.



Specifications

ELECTRICAL	
Transmitter Voltage Power	19.2~28.8 VAC or VDC
Transmitter Current Power	19.2~28.8 VDC (RL=500Ω); 8.5~35 VDC (RL=0Ω)
Transmitter Output	4~20mA (2 Wires) or 0~10VDC (3 Wires)
Output Load	≤500Ω (Current), ≥2KΩ (Voltage)
TEMPERATURE PERFORMANCE	
Temperature Sensor Type	RTD or Thermistor, See Ordering Information
Transmitter Accuracy (If Applicable)	<±0.3°C @ 0~70°C (<±0.54°F @ 32~158°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	0-100°C (32-212°F)
Response Time	<10s
ENVIRONMENTAL	
Operating Temperature Range	-40~70°C (-40~158°F) @ 0~95%RH (Non-Condensing)
Storage Temperature	-30~80°C (-22~176°F)
MECHANICAL	
Thermowell Connection	½" National Pipe Thread (NPT) for Process Connection
Thermowell Material	304SS (Stainless Steel, 2-Piece Welded)
Sensor Mounting	Directly Inserted into Thermowell and Secured with Set Screw
Wiring Connection	Push Button Terminal Blocks (2 Wire or 3 Wire)
Weight	510g (1.12lbs)
CERTIFICATIONS/WARRANTY	
Enclosure Material	Fire Retardant Polycarbonate (UL94V-0)
Protection	IP65
Agency Approvals	CE
Warranty	5 Years

Dimensions



Thermowell Depth/Max Velocity

Material	Media	2" (50.8mm)	4" (101.6mm)	6" (152.4mm)
304SS	Water	<115ft/s (35m/s)	<40ft/s (12m/s)	<23ft/s (7m/s)

Note: Any application with excessive flow rates, pressure, or temperatures may require a specialized thermowell designed for those specific conditions.

Ordering Information

Model	Temperature Output	Temperature Sensor	Probe Length	Enclosure
AcuTEMS-IM	A: Resistive Output (Thermistor or RTD)	01: 10KΩ, Type III Thermistor	A: 2" (50.8mm)	1: NEMA 4 Plastic (IP65)
		02: 10KΩ, Type II Thermistor	B: 4" (101.6mm)	
		03: 20KΩ Thermistor	C: 6" (152.4mm)	
		04: 1KΩ Platinum RTD, 2 Wires	D: Special Order Length †	
		05: 100Ω Platinum RTD, 2 Wires		
		06: 1KΩ Nickel RTD, 2 Wires		
	B: 4-20 mA Transmitter	07: Transmitter, 1KΩ Platinum RTD 0-100°C (32-212°F)	A: 2" (50.8mm)	1: NEMA 4 Plastic (IP65)
	C: 0-10 VDC Transmitter	08: Transmitter, 1KΩ Platinum RTD Special Order †	B: 4" (101.6mm)	
		C: 6" (152.4mm)		
		D: Special Order Length †		

Ordering Example: AcuTEMS-IM-B-07-B-1

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

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



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AcuTEMS™ OA Series

Outside Air Temperature Sensor Datasheet



The AcuTEMS OA series sensor measures outdoor ambient air temperature with up to $\pm 0.2^{\circ}\text{C}$ accuracy. Designed to be mounted on a vertical surface outdoors in a shaded location, the sensor comes with an IP65 enclosure for protection against outdoor elements. The AcuTEMS OA features multiple RTD, thermistor, and transmitter output options, and it is ideal for HVAC systems to maintain comfort and ensure efficient equipment operation. For applications under direct sunlight, install the AcuHUM OAW instead, which comes with a six-layered weather shield for extra UV protection, boosted ventilation and improved accuracy.

Features

- Push-in button terminal blocks and quick release enclosure screws enable swift and convenient installation.
- IP65 enclosure provides superior protection against dust and moisture ingress.
- 100 Ω Platinum, 1K Ω Platinum/Nickel RTDs, and 10K Ω Type II/Type III, 20K Ω thermistors available for different BAS controller requirements.
- Three wire terminals provide flexibility for 2-wire or 3-wire installation.
- 4-20mA and 0-10VDC output options for different BAS controllers and applications.



Specifications

ELECTRICAL

Transmitter Voltage Power	19.2~28.8 VAC or VDC
Transmitter Current Power	19.2~28.8 VDC (RL=500 Ω); 8.5~35 VDC (RL=0 Ω)
Transmitter Output	4~20mA (2 Wires) or 0~10VDC (3 Wires)
Output Load	$\leq 500\Omega$ (Current), $\geq 2K\Omega$ (Voltage)

TEMPERATURE PERFORMANCE

Temperature Sensor Type	RTD or Thermistor, See Ordering Information
Transmitter Accuracy (If Applicable)	$< \pm 0.3^{\circ}\text{C}$ @ 0~70 $^{\circ}\text{C}$ ($< \pm 0.54^{\circ}\text{F}$ @ 32~158 $^{\circ}\text{F}$)
Thermistor Accuracy (If Applicable)	10K Ω , Type III - $\pm 0.3^{\circ}\text{C}$ @ 25 $^{\circ}\text{C}$ ($\pm 0.54^{\circ}\text{F}$ @ 77 $^{\circ}\text{F}$) 10K Ω , Type II - $\pm 0.2^{\circ}\text{C}$ @ 25 $^{\circ}\text{C}$ ($\pm 0.36^{\circ}\text{F}$ @ 77 $^{\circ}\text{F}$) 20K Ω - $\pm 0.2^{\circ}\text{C}$ @ 25 $^{\circ}\text{C}$ ($\pm 0.36^{\circ}\text{F}$ @ 77 $^{\circ}\text{F}$)
RTD Accuracy (If Applicable)	1K Ω Platinum - $\pm 0.2^{\circ}\text{C}$ @ 25 $^{\circ}\text{C}$ ($\pm 0.36^{\circ}\text{F}$ @ 77 $^{\circ}\text{F}$) 100 Ω Platinum - $\pm 0.2^{\circ}\text{C}$ @ 25 $^{\circ}\text{C}$ ($\pm 0.36^{\circ}\text{F}$ @ 77 $^{\circ}\text{F}$) 1K Ω Nickel - $\pm 0.5^{\circ}\text{C}$ @ 25 $^{\circ}\text{C}$ ($\pm 0.9^{\circ}\text{F}$ @ 77 $^{\circ}\text{F}$)
Temperature Transmitter Measurement Range	-40~60 $^{\circ}\text{C}$ (-40~140 $^{\circ}\text{F}$)
Response Time	<10s

ENVIRONMENTAL

Operating Temperature Range	-40~70 $^{\circ}\text{C}$ (-40~158 $^{\circ}\text{F}$) @ 0~95%RH (Non-Condensing)
Storage Temperature	-30~80 $^{\circ}\text{C}$ (-22~176 $^{\circ}\text{F}$)

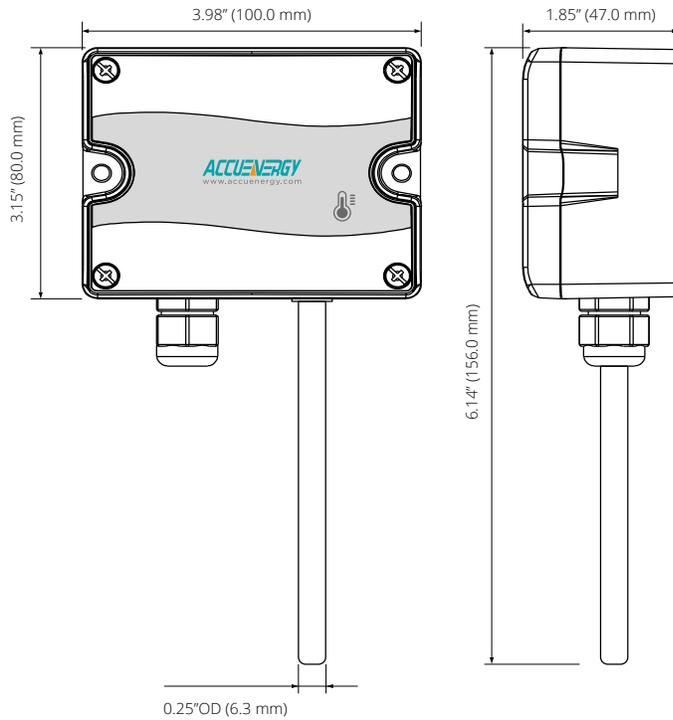
MECHANICAL

Mounting	Screw Surface Mount
Wiring Connection	Push Button Terminal Blocks (2 Wire or 3 Wire)
Weight	240g (0.53lbs)

CERTIFICATIONS/WARRANTY

Enclosure Material	Fire Retardant Polycarbonate (UL94V-0)
Protection	IP65
Agency Approvals	CE
Warranty	5 Years

Dimensions



Ordering Information

Model	Temperature Output	Temperature Sensor	Enclosure
AcuTEMS-OA	A: Resistive Output (Thermistor or RTD)	01: 10KΩ, Type III Thermistor	1: NEMA 4 Plastic (IP65)
		02: 10KΩ, Type II Thermistor	
		03: 20KΩ Thermistor	
		04: 1KΩ Platinum RTD	
		05: 100Ω Platinum RTD	
		06: 1KΩ Nickel RTD	
	B: 4-20 mA Transmitter	07: Transmitter, 1KΩ Platinum RTD -30~70°C (-40~140°F)	1: NEMA 4 Plastic (IP65)
C: 0-10 VDC Transmitter	08: Transmitter, 1KΩ Platinum RTD Special Order †		

Ordering Example: AcuTEMS-OA-A-02-1

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

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



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 Specs Subject To Change Without Notice.

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

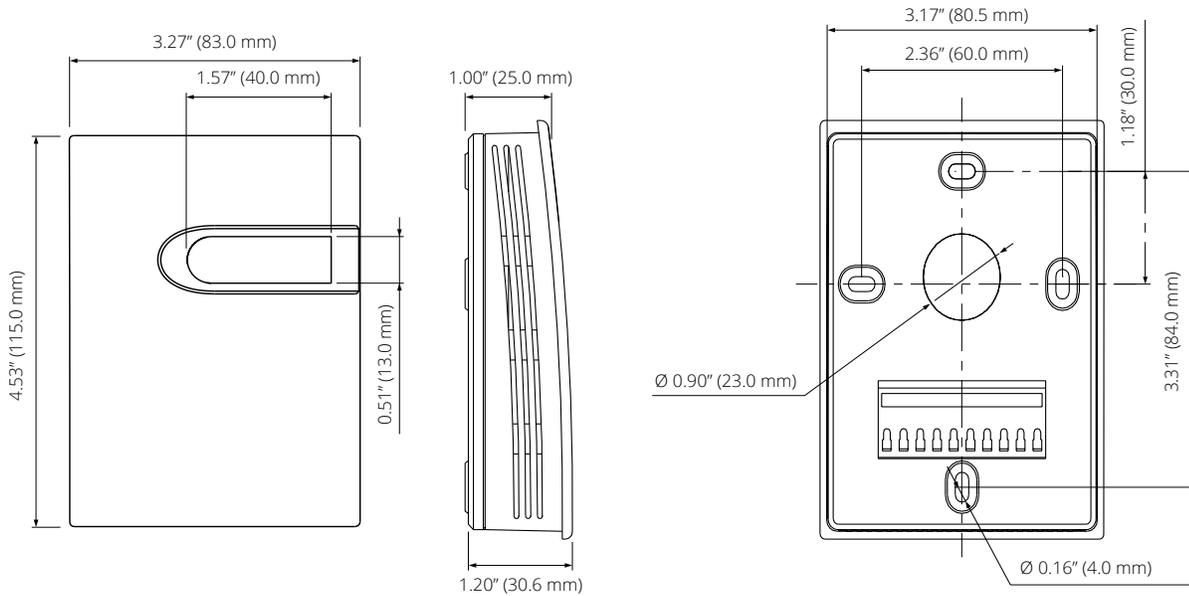
- Polycarbonate housing design for easy wall/surface mount or junction box.
- Protection against over-voltage, reverse polarity, and electromagnetic interference.
- 100Ω Platinum, 1KΩ Platinum/Nickel RTDs, and 10KΩ Type II/Type III, 20KΩ thermistors available.
- <10s response time ensuring swift feedback 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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AcuTEMS™ WP Series

Wall Plate Temperature Sensor Datasheet



The AcuTEMS WP series wall plate temperature sensor is designed to be flush mounted on a single gang junction box and provide accurate measurement readings for various applications. The decorative brushed stainless steel is a corrosion resistant wall plate that can be installed for wash-down environments like a lab, tamper-proof applications like schools and hospitals, or projects where a low-profile non-visible enclosure is preferred. The sensor features multiple RTD and thermistor output options suitable for common BAS controllers.

Features

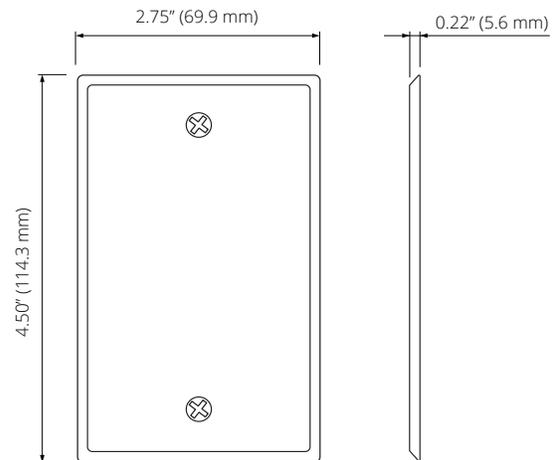
- Durable grade 304SS wall plate cover, excellent chemical and moisture resistance.
- Foam backing insulates sensing elements from temperature infiltration and provides watertight installation.
- 100Ω Platinum, 1KΩ Platinum/Nickel RTDs, and 10KΩ Type II/Type III, 20KΩ thermistors available.
- High accuracy $\pm 0.2^{\circ}\text{C}$ @ 25°C ($\pm 0.36^{\circ}\text{F}$ @ 77°F) for applicable models



Specifications

TEMPERATURE PERFORMANCE	
Temperature Sensor Type	RTD or Thermistor, See Ordering Information
Thermistor Accuracy (If Applicable)	10KΩ, Type III - $\pm 0.3^{\circ}\text{C}$ @ 25°C ($\pm 0.54^{\circ}\text{F}$ @ 77°F) 10KΩ, Type II - $\pm 0.2^{\circ}\text{C}$ @ 25°C ($\pm 0.36^{\circ}\text{F}$ @ 77°F) 20KΩ - $\pm 0.2^{\circ}\text{C}$ @ 25°C ($\pm 0.36^{\circ}\text{F}$ @ 77°F)
RTD Accuracy (If Applicable)	1KΩ Platinum - $\pm 0.2^{\circ}\text{C}$ @ 25°C ($\pm 0.36^{\circ}\text{F}$ @ 77°F) 100Ω Platinum - $\pm 0.2^{\circ}\text{C}$ @ 25°C ($\pm 0.36^{\circ}\text{F}$ @ 77°F) 1KΩ Nickel - $\pm 0.5^{\circ}\text{C}$ @ 25°C ($\pm 0.9^{\circ}\text{F}$ @ 77°F)
Response Time (T63)	150-350 seconds
ENVIRONMENTAL	
Operating Temperature Range	$-30\sim 70^{\circ}\text{C}$ ($-22\sim 158^{\circ}\text{F}$) @ 0~95%RH (Non-Condensing)
Storage Temperature	$-30\sim 70^{\circ}\text{C}$ ($-22\sim 158^{\circ}\text{F}$)
MECHANICAL	
Mounting	Single Gang Junction Box or Surface Mount
Wiring Connection	200mm (7.87") Flying Leads
Weight	85g (0.19lbs)
CERTIFICATIONS/WARRANTY	
Enclosure Material	304 Stainless Steel
Protection	IP30
Agency Approvals	CE
Warranty	5 Years

Dimensions



Ordering Information

Model	- Temperature Output	- Temperature Sensor
AcuTEMS-WP	A: Resistive Thermistor or RTD	01: 10KΩ, Type III Thermistor
		02: 10KΩ, Type II Thermistor
		03: 20KΩ Thermistor
		04: 1KΩ Platinum RTD
		05: 100Ω Platinum RTD
		06: 1KΩ Nickel RTD

Ordering Example: AcuTEMS-WP-A-03



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