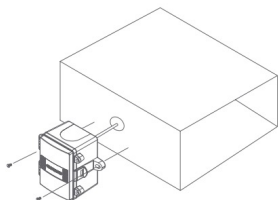# AIRZOE™

AZ-HSDT
DUCT HUMIDITY TRANSMITTER

DESCRIPTION

The duct humidity transmitter uses a highly accurate and reliable Thermoset Polymer based capacitance humidity sensor and state-of the-art digital linearization and temperature compensated circuitry to monitor humidity levels. The sensor is encapsulated in a 230 mm (9") long by 12.7 mm (0.5") diameter 304 S/S probe and is field replaceable. A 60 micron HDPE filter protects the sensor for contaminants. An optional integrated temperature sensor is available.
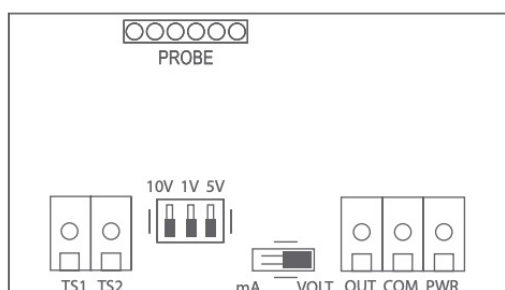
TYPICAL INSTALLATION

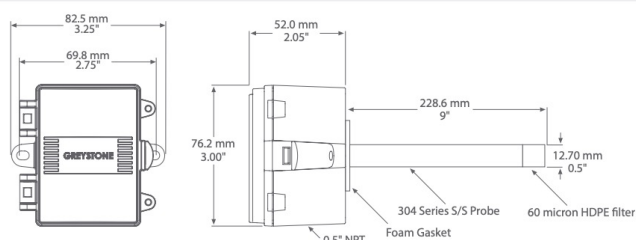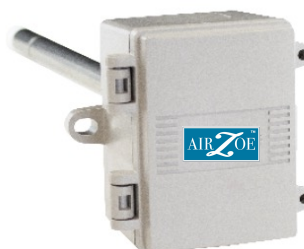**For complete installation and wiring details, please refer to the product installation instructions.**

The duct type probes are installed through a hole in the side of the duct to monitor a single point humidity within the duct. Install the probe in a straight section of duct at a suitable distance downstream from any heating, cooling or humidification devices. Mounting tabs on the outside of the enclosure for ease of installation. A terminal block connection is provided. for connection to the Building Automation System.

WIRING INFORMATION

TERMINAL	FUNCTION
PWR	24 Vac/dc of controller or power supply
COM	COM GND or COMMON
OUT	Analog Output
TS1	Resistance Output
TS2	Resistance Output

SPECIFICATIONS	
SENSOR	Thermoset polymer based capacitive
SENSOR ACCURACY	±2, 3, or 5 %RH (5 to 95 %RH)
MEASUREMENT RANGE	0 to 100 %RH non-condensing
RESOLUTION	±0.01 %RH
HYSTERESIS	±0.8 %RH @ 25°C (77°F)
RESPONSE TIME	8 seconds
STABILITY	<0.25% RH/year
AMBIENT OPERATING RANGE	-40 to 50°C (-4 to 122°F)
POWER SUPPLY	24 Vac/dc ~ ±10% typical
CONSUMPTION	22 mA maximum @24Vdc, 70mA @24Vac
OUTPUT SIGNAL	4-20 mA current loop, 0-5 Vdc, 0-10 Vdc, or 0-1 Vdc (field selectable)
OUTPUT DRIVE @ 24 VDC	Current: 550 Ω maximum Voltage: 10 KΩ minimum
OPTIONAL TEMPERATURE SENSOR	Various RTD's and thermistors available as 2 wire resistance output
ENCLOSURE	A: ABS, UL94-V0, IP65 (NEMA 4X) E: Same as A, with thread adapter (1/2" NPT to M16) and cable gland fitting
PROBE	230mm (9") length x 12.7mm (1/2") diameter s/s with porous filter
TERMINATION	Screw terminal block (14 to 22 AWG)
COUNTRY OF ORIGIN	Canada

AZ-HSDT
DUCT HUMIDITY TRANSMITTER

ORDERING				PART NUMBER
PRODUCT	HRC	Room Humidity Transmitter		**HSDT**
ENCLOSURE	A E	ABS with hinged and gasketed cover Same as A, with thread adapter and cable gland fitting		
RH ACCURACY	2 3 5	2% 3% 5%		
OPTIONAL TEMPERATURE SENSOR	00 02 05 06 06 08 12 13 14 20 24 59	No Temperature Sensor Option 100Ω Platinum, IEC 751, 385 Alpha, thin film, 3 wire 1801Ω NTC Thermistor, ±0.2°C 3000Ω NTC Thermistor, ±0.2°C 10,000Ω Type 3, NTC Thermistor, ±0.2°C 2.252KΩ NTC Thermistor, ±0.2°C 1000Ω Platinum, IEC 751, 385 Alpha, thin film 1000Ω Nickel, Class B, DIN 43760 10,000Ω Type 3, NTC Thermistor, ±0.2°C c/w 11K shunt resistor 20,000Ω NTC Thermistor, ±0.2°C 10,000Ω Type 2, NTC Thermistor, ±0.2°C 10,000Ω 25°C, ±%, B = 3435 ±1% (25/85)		

ORDERING – REPLACEMENT SENSOR MODULE				PART NUMBER
PRODUCT	HRMPB	B Replacement Humidity Sensor Module - Probe		**HRMPB**
RH ACCURACY	2 3 5	2% 3% 5%		
OPTIONAL TEMPERATURE SENSOR	00 02 05 06 06 08 12 13 14 20 24 59	No Temperature Sensor Option 100Ω Platinum, IEC 751, 385 Alpha, thin film, 3 wire 1801Ω NTC Thermistor, ±0.2°C 3000Ω NTC Thermistor, ±0.2°C 10,000Ω Type 3, NTC Thermistor, ±0.2°C 2.252KΩ NTC Thermistor, ±0.2°C 1000Ω Platinum, IEC 751, 385 Alpha, thin film 1000Ω Nickel, Class B, DIN 43760 10,000Ω Type 3, NTC Thermistor, ±0.2°C c/w 11K shunt resistor 20,000Ω NTC Thermistor, ±0.2°C 10,000Ω Type 2, NTC Thermistor, ±0.2°C 10,000Ω 25°C, ±%, B = 3435 ±1% (25/85)		

D-VAC
Commercial Corp.
HVAC Manufacturer's Representative