i-Vu® Building Automation System
ZS Duct Sensors

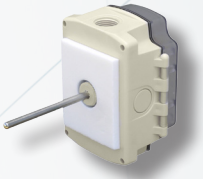
The i-Vu® Building Automation System provides everything you need to access, manage, and control your building, including the powerful i-Vu user interface, plug-and-play BACnet controllers, and state-of-the-art Carrier equipment.

The Carrier line of communicating ZS duct sensors are designed to measure the air temperature and/or humidity in ductwork. All duct sensors feature closed cell foam to seal the insertion hole and to absorb vibration. Mounting tabs allow for easy installation onto the wall of the duct. The units are built to withstand high humidity and condensation environments.

The ZS duct sensors connect directly to the dedicated sensor network (Rnet) of a Carrier i-Vu controller. This communicating sensor network supports up to 15 ZS sensors through a single port, eliminating the need to consume multiple inputs on the controller.

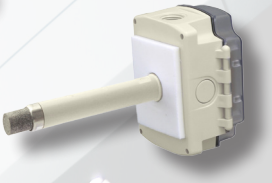
The communicating ZS duct sensors are available in different models, including temperature only, temperature plus humidity, and temperature averaging.

ZS Duct
Temperature Sensor

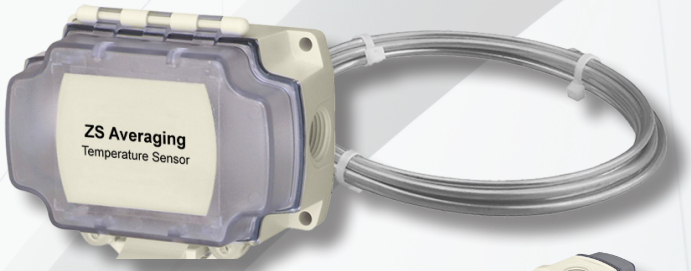


back mount

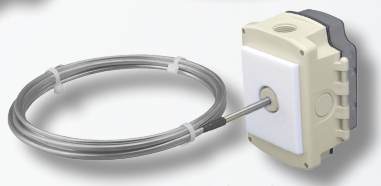
ZS Duct
Temp + Humidity Sensor



back mount



ZS Duct
Averaging Sensor



back mount

Part # (Back Mounting)	Part # (Bottom Mounting)	Description	Sensing	Probe Length
ZSD-B-4-6-B	ZSD-S-4-6-B	ZS Duct, Temp Only, 4” probe	Temp	4” (inches)
ZSD-B-8-6-B	ZSD-S-8-6-B	ZS Duct, Temp Only, 8” probe	Temp	8” (inches)
ZSD-BH-6-6-B	ZSD-SH-6-6-B	ZS Duct, Temp + Humidity	Temp/Humidity	6” standard
ZSA-B-8-6-B	ZSA-S-8-6-B	ZS Averaging, 8’ probe	Temp	8’ (feet)
ZSA-B-12-6-B	ZSA-S-12-6-B	ZS Averaging, 12’ probe	Temp	12’ (feet)
ZSA-B-24-6-B	ZSA-S-24-6-B	ZS Averaging, 24’ probe	Temp	24’ (feet)

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ZS Duct Sensors

Specifications

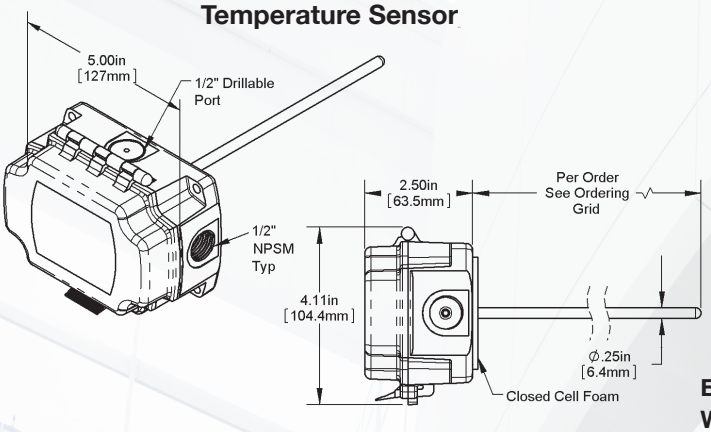
Sensing element			
	Temperature	Range	20° to 120°F (-5° to 50°C):
		Accuracy:	±0.36°F (0.2°C)
	Humidity	Range:	10% to 90%
		Accuracy:	Humidity is calibrated at 73°F (23°C) ±2.0% typical. Less than 0.5% drift per year.
Sensor			
	Temperature	Range:	20° to 120°F (-5° to 50°C)
		Accuracy:	±0.9°F (0.5°C)
	Humidity	Range:	10% to 90%
		Accuracy:	Humidity is calibrated at 73°F (23°C). ±2.0% typical. Less than 0.5% drift per year.
Enclosure material			Polycarbonate, UL94V-0
Enclosure rating			NEMA 4, IP66, UV rated
Enclosure dimensions		Width:	5 in. (12.7 cm)
		Height:	4.15 in. (10.54 cm)
		Depth:	2.5 in. (6.35 cm)

Probe

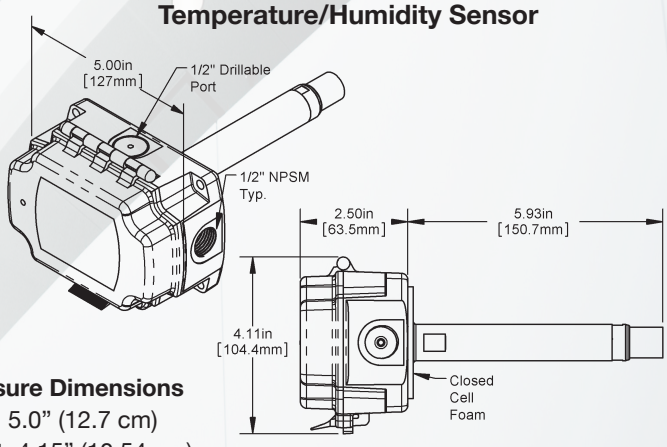
- Temperature sensor probe: 304 SS / 0.25 in. (0.64 cm) diameter / Length (4 or 8 in.) specified at time of order
- Temperature/humidity sensor probe: ABS with SS filter / 1.0 in. (2.5 cm) diameter / 6 in. (13.5 cm) length
- Averaging temperature sensor probe: Bendable aluminum / 3/16 in. diameter / Length of 8, 12, or 24 ft. specified at time of order

Power requirements	12 Vdc @ 6 mA
Power supply	The 4-conductor Rnet cable from a controller supplies +12 Vdc @ 210 mA. For additional power, use an external power supply. Use the above power requirements to calculate the size of the external power supply. The controller and the external power supply must share a common ground.
Communication	115 kbps
Environmental operating range	-40 to 158°F (-40 to 70°C)
Mounting	Duct mount with #8 sheet metal screws
Listed by	FCC Part 15-Subpart B-Class B, CE

Temperature Sensor



Temperature/Humidity Sensor



Enclosure Dimensions
Width: 5.0” (12.7 cm)
Height: 4.15” (10.54 cm)
Depth: 2.5” (6.35 cm)

Carrier
United Technologies

CONTROLS EXPERT

Tested. Certified. Factory Authorized.

For more information, contact your local Carrier Controls Expert.
Controls Expert Locator:
www.carrier.com/controls-experts

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