

# AURORA

*Aurora Universal Protocol Converter (UPC)*  
ZS Zone Sensors

User Guide



Aurora UPC ZS Zone Sensors User Guide



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## Using ZS Zone Sensors

ZS Sensors are thermistor-based temperature sensors that can optionally sense humidity, motion, and either CO<sub>2</sub> or VOC. ZS Sensors communicate with the HVAC system through the Rnet.

A ZS Sensor's functionality is determined by:

- The sensor model
- The sensor's sensing capabilities (temperature, humidity, motion, CO<sub>2</sub>, VOC)
- The control program that runs the associated equipment

See the referenced page below to learn what you can see and do with each of the ZS zone sensor models:

*ZS Standard* (page 2)

*ZS Plus* (page 3)

*ZS Pro* (page 5)

*ZS Pro-F* (page 9)

## ZS Standard Sensor



A ZS Standard sensor has no user controls.

## ZS Plus Sensor



A ZS Plus lets you:

- Make the zone warmer or cooler
- Override the schedule to put the zone in an occupied state
- Force the zone to an unoccupied state
- See that the zone is in an occupied state when the green LED is lit

### To make the zone warmer or cooler

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Move the sensor's slider up to make the zone warmer or down to make it cooler. The control program determines how much you can adjust the setpoint.



## ZS Plus Sensor

### To override the schedule

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#### Timed override to an occupied state

Press the  button one time to override the schedule and put the zone in an occupied state for a length of time specified in the control program's **Maximum Duration** field.

Press the  button again to cancel the override and return control to the schedule.

#### Force to an unoccupied state

If allowed by the control program, press and hold the  button for 3 seconds to force the zone to an unoccupied state.

Press the  button again to cancel the force to unoccupied and return control to the schedule.

## ZS Pro Sensor



A ZS Pro lets you:

- View information in the display such as zone temperature, setpoints, outside air temperature, and equipment status
  - Make the zone warmer or cooler
  - Override the schedule to put the zone in an occupied state
  - Edit information if allowed by the control program
  - Force the zone to an unoccupied state
  - See that the zone is in an occupied state when the green LED is lit
- NOTE** A ZS Pro with the optional motion sensor automatically goes into an occupied state when it senses motion.

## Navigating the sensor's screens

The control program determines what screens you see, what information is in each screen, and what you can adjust. The type of sensor also determines what you see. For example, if the sensor reads temperature, humidity, and CO<sub>2</sub>, the Home screen may cycle through the current values.

This screen...	Displays when...
Home	The sensor has had no user interaction for 5 seconds.
Setpoint adjustment	You press the ▲ or ▼ button. See <i>To make the zone warmer or cooler</i> (page 7).
Information	You press the <i>i</i> button. Tap the button to cycle through various information.
Diagnostic	You hold the <i>i</i> button for 3 seconds. Tap the button to cycle through various information to troubleshoot your system.

## ZS Pro Sensor

### Reading the display

Depending on the control program and the type of sensor, you may see any of the following items in the sensor's screens.

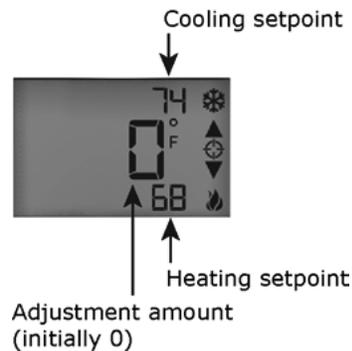
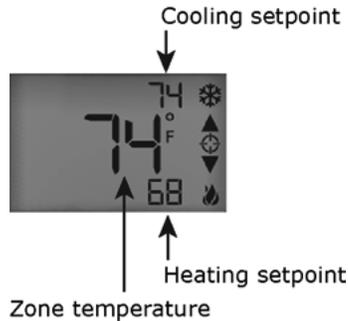
This Item...	Indicates...
	The temperature is Fahrenheit or Celsius.
	The value shown is percent relative humidity.
	The value shown is outside air temperature or humidity.
	Cooling
	Heating
	The zone's fan is running.
	The fan speed. See <i>To manually adjust the fan speed</i> (page 9).
	The value(s) in the display, typically setpoints, are editable using the  and  buttons. If the control program specifies that the value is not editable, you will see  without arrows. See: <i>To make the zone warmer or cooler</i> (page 7) <i>To edit displayed values</i> (page 8)
	The sensor is in a timed override. See <i>To override the schedule</i> (page 7).
	The equipment is running in an energy-saving mode defined in the control program.
	An alarm condition exists. If programmed, the Information screen or Diagnostic Screen may provide details on the alarm.
	A maintenance condition exists. If programmed, the Information screen or Diagnostic Screen may provide details on the maintenance condition.
	The sensor's buttons are locked either because the control program specifies it or because a user locked them at the sensor. See <i>To lock the sensor buttons</i> (page 8).
<b>OCC</b>	The displayed setpoint is an occupied setpoint.
<b>UnOCC</b>	The displayed setpoint is an unoccupied setpoint.
<b>CO2</b>	The value shown is CO <sub>2</sub> .
<b>UOC</b>	The value shown is VOC.
<b>EFF</b>	The value shown is the effective setpoint.
A number in the bottom left corner	A value in the control program that does not have an associated icon. For example, 304 represents the supply air temperature. See <i>Appendix: Rnet tag numbers</i> (page 11) for a list of all numbers and the values they represent.

**NOTE** If a number on the display flashes, this indicates that the sensor cannot display the correct value (for example, the value exceeds the maximum value that the sensor can show).

## ZS Pro Sensor

### To make the zone warmer or cooler

- 1 From the Home screen, press the ▲ or ▼ button to show the Setpoint Adjustment screen. This screen typically shows one of the following:



**NOTE** The control program may not show the cooling and heating setpoint on this screen.

- 2 Press the ▲ or ▼ button to adjust the zone temperature setpoint. The control program determines how much you can adjust the setpoint.
- 3 Wait a few seconds until the display returns to the home screen before you press any other buttons.

### To override the schedule

#### Timed override to an occupied state

- 1 Press the  button one time to override the schedule and put the zone in an occupied state for a length of time specified in the control program's **Increment** field.
- 2 Press the ▲ button to incrementally increase the time. The maximum length of time that you can override the schedule is specified in the control program's **Maximum Duration** field.
- 3 Wait a few seconds until the display returns to the home screen before you press any other buttons.

During the override, the bottom of the display shows the time (minutes) remaining in the override and an hourglass to indicate the override state.



#### NOTES

- If programmed, you can override the schedule for an indefinite amount of time. To do this, press the  button one time, then press the ▲ button until the display shows **999**. The override remains in effect until the schedule transitions to occupied or until you cancel it.
- To cancel an override and return control to the schedule, press the  button twice.

## ZS Pro Sensor

### Force to an unoccupied state

If allowed by the control program, press and hold the  button for 3 seconds to force the zone to an unoccupied state.

Press the  button again to cancel the force to unoccupied and return control to the schedule.

**NOTE** You may see the energy-saving icon  if the control program specifies it.

### To lock the sensor buttons

Simultaneously press and hold the 2 buttons shown below for 5 seconds to lock the sensor's buttons. The display shows a lock icon to indicate the locked state.



Press and hold the 2 buttons again for 5 seconds to unlock the buttons.

**NOTE** If you press the  button slightly before the  button, the sensor will go into an override state instead of locking the buttons. But, if you press the  button first, the buttons will lock.

### To edit displayed values



If the display shows a value other than a zone temperature setpoint with  to the right of it, the value is editable from the sensor.

- 1 Press the  or  button to adjust the value.
- 2 Wait until the display returns to the home screen before you press any other buttons.

**NOTE** If the control program specifies that the value is not editable, you will see  without arrows.

## ZS Pro-F Sensor



The ZS Pro-F lets you do everything you can do with the ZS Pro (page 5), plus:

- Manually turn on heating, cooling, or fan only (Not Used)
- Manually adjust the fan speed (Not Used)
- Press the F/C button on the side of the sensor to display temperatures as Fahrenheit or Celsius

### To manually turn on the fan, heating, or cooling (Not Used)

Tap the  button to cycle through the options of cooling, heating, fan only, or automatic control by the control program. The display indicates the option for each tap of the button.

### To manually adjust the fan speed

Tap the  button to display the current fan status and speed. Continue tapping until you see the fan speed option that you want.

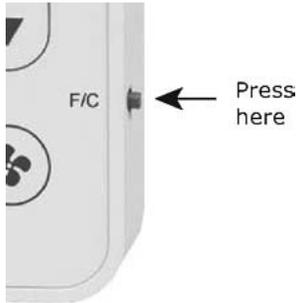
To set the fan to...	Look for this icon(s)...
Auto. The control program determines the speed.	
Low speed	
Medium speed	
High speed	

## ZS Pro-F Sensor

### To show the temperature as Fahrenheit or Celsius

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Tap the **F/C** button to change the zone temperature display from F° to C° and back.





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