





ZEC | APPLICATION GUIDE

Overview:

<u>Controller</u>



The SE-ZEC Controllers are components of the SMART Equipment family. The VAV Zone controllers run a pre-engineered HVAC zoning sequence and provide the inputs and outputs required for this application. An easy-to-install one piece design, takes advantage of an integrated controller, sensor, actuator, and communication for all-in-one VAV control. This reduces the common failures seen with typical "add-on" style designs of multiple connected components.

The SE-ZEC can be used in standalone or network applications. The SE-ZEC Controller also uses plug and play technology to detect which network sensor types are connected. The SE-ZEC controller will be piped and wired at the factory for faster installation of the VAV box.

Use the Mobile Access Portal (MAP) Gateway to set up ZEC Controller and change the heat application type of the SE-ZEC Controller. The VAV controller commissioning is performed with either the MAP Gateway or the VAV Balancing Thermostat.

The ZEC controllers contain multiple features to ensure occupant comfort. The SE-ZEC runs occupied and unoccupied modes to better serve room comfort and energy saving.

The ZEC controllers have an optional occupancy sensing capability to switch from occupied mode to standby mode based on activity in the zone. Standby mode uses setpoints that are higher and lower than occupied mode setpoints to maximize energy savings.





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<u>Thermostat</u>



The NS Series Network Sensors function directly with Metasys system and are compatible with Verasys and Johnson Controls Smart Equipment.

The NS series Network Sensors monitor zone temperature, carbon dioxide (CO2), motion, and local temperature setpoint adjustments. The sensors transmits this data to a controller on the Sensor/Actuator (SA) bus.

Some NS Series Network Sensors models include an onboard passive infrared (PIR) occupancy sensor that detects motion to determine if a space is occupied. This feature maximizes up to 30% energy savings in high-energy usage environments such as schools, dormitories, offices, hospitals, and hotels by adjusting the temperature of the space based on the occupancy status. In addition, the PIR occupancy sensor facilitates trending of the floor space usage in these environments.

Display models of the NS Series Network Sensors are available with backlit LCD fixed segment display or a full color graphical LCD interface. These models allow the user to view zone temperature, CO2, and adjust the zone temperature setpoint. Graphical models provide a summary of sensor values at the base of the display. Fixed segment models have the capability to set the default display to temperature or temperature setpoint.

The user can also choose between degrees Fahrenheit (F) and degrees Celsius (C). To prevent tampering with the sensor, display models also include a screen lockout feature. The graphical display allows the user to choose between a light or dark color themes and to set the sleep mode to dim or turn off.





Interaction with the sensor sets the occupancy override function to signal to the controller that the zone is occupied and to override the schedule mode.

The LCD full color graphical models use the graphical user interface to set a unique BACnet address for applications that require multiple sensors.

Other models have DIP switches to set a unique address for applications that require multiple sensors. All models ship standard with modular phone jacks and screw terminals to terminate the wiring connecting the sensor to the controller.

Application:

Use For:

Single Duct:

- Cooling Only
- Hot Water
- Electric Heat (Staged and SCR)
- Occupancy Sensor
- CO² Sensor

Fan Box*:

- Cooling Only
- Hot Water
- Electric Heat (Staged and SCR)
- Occupancy Sensor
- CO² Sensor

