

ZEC controller “Quick Start Guide”

This guide provides you with the minimum configuration requirements that you need to quickly bring the system communication and controls online with the Mobile Access Portal (MAP) Gateway.

1. For units with **Electric Heat**: You **must field-install** the supply air Inlet, **Supply Air Temperature (inlet) sensor (See Figure 2)** in the inlet duct (with primary air), upstream of the VAV terminal unit, and **wire to terminals IN3 & ICOM3** on the ZEC controller. See Figure 1.0
 - a. Install SAT sensor in a good position for sensing inlet duct air temperature and at a recommended minimum distance of 1 to 1-1/2 duct diameters upstream of airflow probe.
2. For units where you will have an “optional” discharge air temperature, Discharge Air Temperature (DAT) sensor (See Figure 2) for purposes of monitoring of the discharge air temperature: Field install DAT temperature sensor in the discharge duct (outlet from VAV unit) and wire to terminals IN1 & ICOM1 on the ZEC controller. See Figure 1.0
 - a. Install DAT sensor in a good position for sensing discharge air temperature and at a recommended minimum distance of 1 to 1-1/2 duct diameters downstream of VAV discharge opening
3. Refer to below info on ZEC Startup and Commissioning for instructions to adjust airflow (cfm) or temperature (°F) setpoints with the Map Gateway User Tool

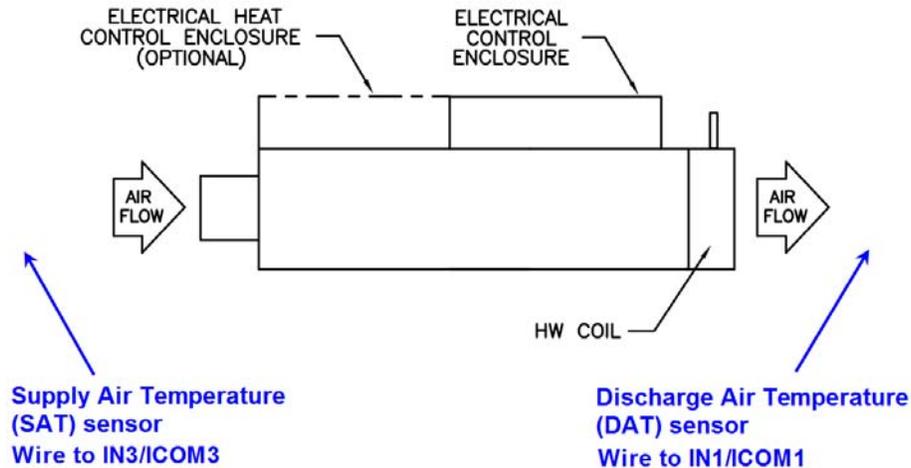


Figure 1 - Temperature Sensor Locations



Figure 2 - Temperature Sensor

Commissioning menu - flow

To set the flow parameters, complete the following steps:

1. Log in to the MAP.
2. Navigate to the **Device List** tab.
3. Select the **ZEC500/510** from the device list.
4. Navigate to the **Commissioning** section of the **Home Page** tab to set the following flow parameters:
 - **Cooling Max Flow:** Sets the maximum supply airflow of the VAV box when cooling. Adjustable: 0 cfm to 10,000 cfm.
 - **Occupied Cooling Min Flow:** Sets the minimum supply airflow of the VAV box when cooling. Adjustable: 0 cfm to 10,000 cfm.
 - **Occupied Heating Min Flow:** Sets the minimum supply airflow of the VAV box when heating. Adjustable: 0 cfm to 10,000 cfm. Note: When the zone is heating, the supply airflow is constant and there is no maximum heating air-flow.
 - **Unoccupied Cooling Min Flow:** Sets the minimum supply airflow of the VAV box when in unoccupied cooling and cooling mode. Adjustable: 0 cfm to 10,000 cfm.
 - **Unoccupied Heating Min Flow:** Sets the minimum supply airflow of the VAV box when in unoccupied • heating and heating mode. Adjustable: 0 cfm to 10,000 cfm.
 - **Warmup Min Flow:** Displays the minimum flow to the VAV box during morning warm-up. Adjustable: 0 cfm to 10,000 cfm.
 - **Staged Reheat Min Flow:** Sets the minimum heating flow for staged reheat control. Adjustable: 0 cfm to 10,000 cfm.

Largo Factory Defaults:

Parameter Name	SDR/SDL	CFR/CFRQ/CFL	VFR/VFL
Cooling Maximum Flow	Max Primary CFM ¹	Max Primary CFM ¹	Max Primary CFM ¹
Occupied Cooling Min Flow	Min Primary CFM ¹	Min Primary CFM ¹	Min Primary CFM ¹
Occupied Heating Min Flow	Heat CFM ¹ Min Primary CFM for Cooling Only Units ¹	PAFH ¹ Min Primary CFM for Cooling Only Units ¹	PAFH ¹ Min Primary CFM for Cooling Only Units ¹
Unoccupied Cooling Min Flow Unoccupied Heating Min Flow	Occ. Determination Flow Setpoint ²	0	0
Warmup Min Flow	Min Primary CFM ¹	Min Primary CFM ¹	Min Primary CFM ¹
Staged Reheat Min Flow	70 cfm* EH kW	0	0

1. Value from WebSelect
2. Based on Inlet valve size

Setpoints menu

1. Log in to the MAP.
2. Navigate to the **Device List** tab.
3. Select the **ZEC500/510** from the device list.
4. Navigate to the **Setpoints** section of the **Home Page** tab to set the following parameters:
 - **Occupied Cooling Setpoint:** When occupied, the thermostat controls cooling to this level. Set above occupied heating setpoint. Adjustable: 46°F to 99°F.
 - **Occupied Heating Setpoint:** When occupied, the thermostat controls heating to this level. Set below occupied cooling setpoint. Adjustable: 45°F to 98°F.
 - **Unoccupied Cooling Setpoint:** When unoccupied, the thermostat controls cooling to this level. Adjustable: 46°F to 99°F.
 - **Unoccupied Heating Setpoint:** When unoccupied, the thermostat controls heating to this level. Adjustable: 45°F to 98°F.
 - **Warmer/Cooler Adjust Range:** This is the range that the warmer cooler adjustment on the thermostat can affect. Adjustable: 0°F to 5°F.

Largo Factory Defaults:

Parameter Name	SDR/SDL	CFR/CFRQ/CFL	VFR/VFL
Occupied Cooling Setpoint	72° F	72° F	72° F
Occupied Heating Setpoint	68° F	68° F	68° F
Unoccupied Cooling Setpoint	85° F	85° F	85° F
Unoccupied Heating Setpoint	55° F	55° F	55° F
Warmer/Cooler Adjust Range	3° F	3° F	3° F

Observing Controller Behavior

To set the flow parameters, complete the following steps:

1. Log in to the MAP.
2. Navigate to the **Device List** tab.
3. Select the **ZEC500/510** from the device list.
4. Navigate to the **Commissioning** section of the **Home Page** tab to view the following flow parameters:
 - **Supply Flow Setpoint:** Displays the flow setpoint being controlled (this will be based on the unit conditions (occupancy, temperature setpoint, morning warmup conditions, etc.)
 - **Supply Flow:** Shows the actual measured flow.
5. Navigate to the **Setpoints** section of the **Home Page** tab to view the following flow parameters:
 - **Effective Cooling Setpoint:** Effective Cooling Setpoint
 - **Effective Heating Setpoint:** Effective Heating Setpoint
6. Navigate to the **Inputs** tab to view the following flow parameters:
 - **Supply Air Temperature:** Displays supply air temperature (if included)
 - **Zone Temperature:** Displays temperature measured at thermostat
7. Navigate to the **Outputs** tab to view the following flow parameters:
 - **Heating Stage 1 Command:** Displays status of stage 1 heat (Application Control Type = Staged)
 - **Heating Stage 2 Command:** Displays status of stage 2 heat (Application Control Type = Staged)
 - **Heating Stage 3 Command:** Displays status of stage 3 heat (Application Control Type = Staged)
 - **Heating Command:** Displays the heat command (on/off) of the heat output to the proportional actuator or electric heat (Application Control Type = Staged)
 - **Heating Output:** Displays the heat command (0-100%) of the heat output to modulating actuator or proportional electric heat
 - **Supply Air Damper Output:** Displays damper position (0% = full closed, 100% = full open)
 - **Supply Fan Command:** Displays status of fan

Note: Application Type Changes

If the Application Type (Staged, Incremental, or Proportional SCR) is changed, many parameter values will be reset to their default values. Refer to the ZEC5x0 Parameters and Factory Defaults for factory configured values.