

Manufacturer	Default direction to close
Titus	Counterclockwise
Tuttle and Bailey	Counterclockwise

Table 1: Quickfill defaults

Box Duct Size	Area	Pickup gain				
		ETI with a 45° Rotation	ETI with a 90° Rotation	Krueger	Tuttle and Bailey	Titus
4	0.09	1.71	1.63	2.32	2.80	1.63
5	0.14	1.69	1.66	2.31	3.00	1.95
6	0.20	1.67	2.90	2.32	2.90	3.07
7	0.27	N/A	N/A	2.32	3.00	2.57
8	0.35	1.61	2.52	2.33	2.90	2.39
9	0.44	N/A	N/A	2.33	N/A	2.30
10	0.55	1.63	2.41	2.32	3.00	2.31
12	0.79	1.61	2.38	2.32	3.00	2.76
14	1.07	1.59	2.29	2.33	3.00	2.02
16	1.40	1.61	2.29	2.33	3.00	2.12
18	N/A	1.59	2.43	N/A	3.00	N/A
19	N/A	N/A	2.92	N/A	N/A	N/A
20	0.78	1.61	N/A	N/A	N/A	2.19
22	0.78	1.60	2.65	2.33	3.00	2.19
24	N/A	N/A	N/A	N/A	N/A	N/A
26	1.00	N/A	N/A	N/A	N/A	2.57
30	N/A	N/A	N/A	N/A	3.00	N/A
40	2.67	N/A	N/A	N/A	N/A	2.22

Additional information

Refer to the *Verasys System Operation Overview Technical Bulletin (LIT-12012370)* for more information about the control parameters and their various sequences.

For additional information about Verasys, use the QR code or visit www.verasyscontrols.com.



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24-10143-01779 Rev. —

(barcode for factory use only)



ZEC510 VAV Controller QUICK START GUIDE



Part No. 24-10143-01779, Rev.—
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LC-ZEC510-x



GETTING STARTED

This guide provides you with the minimum configuration requirements that you need to quickly bring the system communication and controls online with the Smart Building Hub (SBH).

Setting the control application type

To set the control application type, complete the following steps:

1. Log in to the SBH.
2. Navigate to the **Devices** tab.
3. Select the **ZEC510** from the device list.
4. Navigate to the **Control Setup** tab.
5. Click **Control Application Type**.
6. From the drop-down list, select one of the following according to your needs:
 - **Incremental**
 - **Staged**
 - **Proportional SCR**

Equipment setup menu

To set the **Equipment Setup** parameters, complete the following steps:

1. Login to the SBH.
2. Navigate to the **Devices** tab.
3. Select the **ZEC510** from the device list.
4. Navigate to the **Equipment Setup** tab and adjust the following parameters:
 - **Damper Polarity:** Sets the direction to close the zone damper. You can adjust this clockwise or counterclockwise. Check which direction closes the dampers and use the **Damper Polarity** parameter to set that position.
 - **Box Heating Installed:** When set to **True**, the controller uses the outputs to control the heat in the VAV box.

Note: The type of box heating used is dependent on the **Control Application Type:** either **Incremental**, **Staged**, or **Proportional SCR**.

- **Supplemental Heating Installed:** When set to **True**, the controller uses the outputs to control the supplemental heat in the space.

Commissioning menu - flow

To set the flow parameters, complete the following steps:

1. Log in to the SBH.
2. Navigate to the **Devices** tab.
3. Select the **ZEC510** from the device list.
4. Navigate to the **Commissioning** 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.

- **Supply Area:** The supply inlet area used to calculate the supply flow. Adjustable: 0 sq ft to 8.0 sq ft.
- **Pickup Gain:** Shows the K factor for the box. This parameter calibrates the flow. Adjustable: 0 to 9.
- **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.

Setpoints menu

1. Log in to the SBH.
2. Navigate to the **Devices** tab.
3. Select the **ZEC510** from the device list.
4. Navigate to the **Setpoints** 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.

Manufacturer damper data

Manufacturer	Default direction to close
ETI	Clockwise
Krueger	Counterclockwise

Refer to the *Verasys ZEC510 VAV Installation Instructions (Part No. 24-10143-01760)* for important product application information.