

Dual Zone Controller – Electronic Output

This section presents start-up procedures for the Dual Zone Controller – Electronic Output. Refer to Figure 1.

NOTE: Update each controller at the field panel immediately after you complete the controller start-up procedures, and have made all other changes to the controller's point database (including balancing, tuning, etc.).

Verify power to controller

Verify that the Dual Zone Controller – Electronic Output is powered up. Check that the BST LED on the controller is flashing. If the BST LED does not flash on/off once per second, then refer to the *System 600 Maintenance and Troubleshooting Manual* (125-1855) for troubleshooting information.

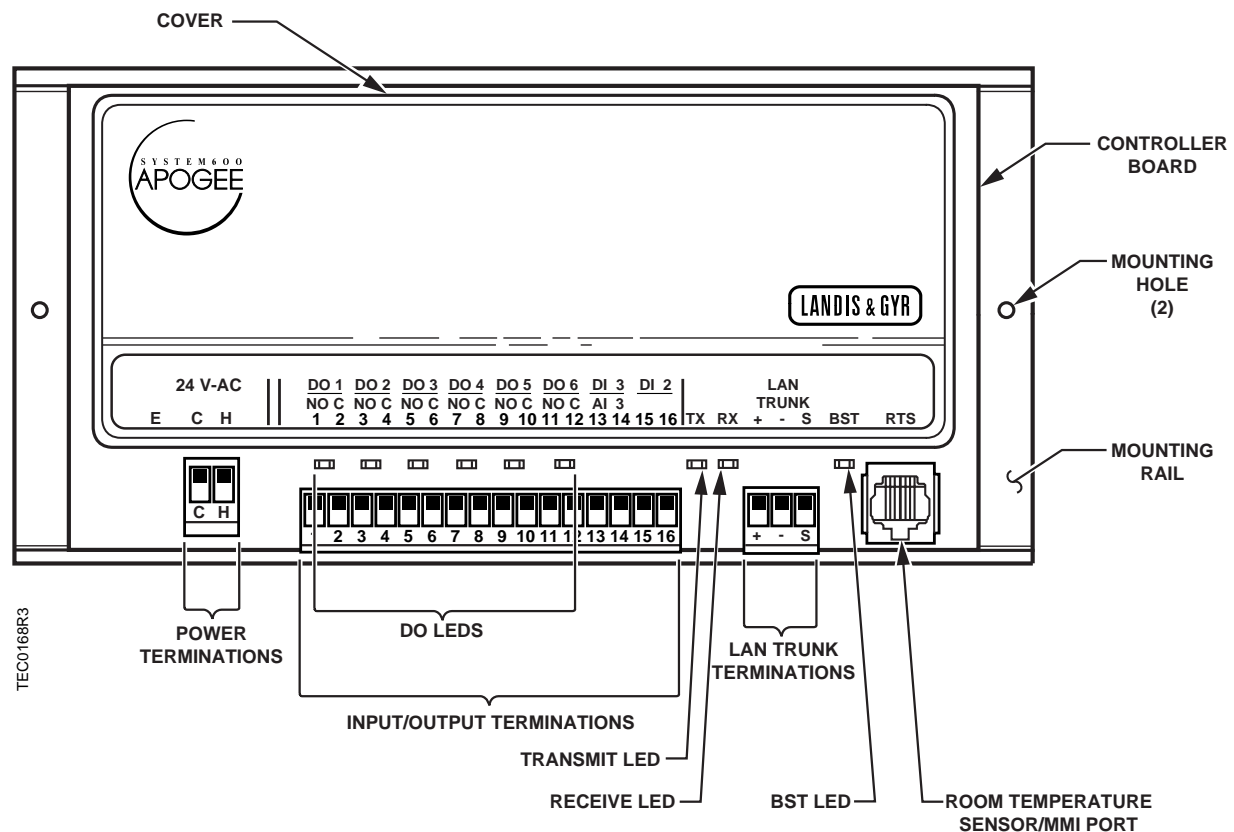
NOTE: The Controller Interface Software (CIS) used with the Dual Zone Controller – Electronic Output firmware revision FY10 or higher must be Rev. 2.0 or greater. Voyager's point database may also be used for start-up.

Verify slave mode application number

1. Verify that the point APPLICATION (number 2) is set to 2090 (slave mode).
2. Display the STARTUP report.

Enable actuators

Enable the actuators by setting the points for motor setup, motor timing, and actuator setup verification as follows:



*Set MTR SETUP***Figure 1. Dual Zone Controller – Electronic Output.**

The point MTR SETUP (number 58) determines which actuators will be controlled by the application and whether they are direct or reverse acting.

Refer to Table 1. Select the value that represents the actuators used on Motor 1 and Motor 2. Set MTR SETUP to this value.

Table 1. Motor Enable/Reverse Values for MTR SETUP (number 58).

	Motor 1 Not Used	Motor 1 Enabled	Motor 1 Enabled and Reversed
Motor 2 Not Used	0	1	3
Motor 2 Enabled	4	5	7
Motor 2 Enabled and Reversed	12	13	15

Set motor timing

The run time of each actuator is indicated by the points VLV 1 TIMING (number 51) and VLV 2 TIMING (number 55).

Use Table 2 to select the values of VLV 1 TIMING and VLV 2 TIMING:

Table 2. Valve Actuator Run Time.

Valve Actuator	Setting (seconds)	
	50 Hz	60 Hz
SQS 82	155	130
Powers VE 339 series actuator with a 1/2 in. (13 mm) stroke (used with Powertop valves)	25	21
Powers VE 339 series actuator with a 3/4 in. (19 mm) stroke ¹	38	32

¹ Settings given are for Johnson and Honeywell valves with a 3/4" stroke. Stroke may be from 1/2" to 3/4", depending on the model. Consult the manufacturer's valve literature for actual stroke and calculate the setting accordingly.

Verify actuator setup

Verify that all actuators close and remain closed when commanded closed as follows:

- If Motor 1 is enabled and the actuator on Motor 1 does not close, then reverse the action of that actuator by adding the value 2 to the point MTR SETUP (number 58).
- If Motor 1 is enabled and reversed and the actuator on Motor 1 does not close, then reverse the action of that actuator by subtracting the value 2 from the MTR SETUP.
- If Motor 2 is enabled and the actuator on Motor 2 does not close, then reverse the action of that actuator by adding the value 8 to the MTR SETUP.
- If Motor 2 is enabled and reversed and the actuator on Motor 2 does not close, then reverse the action of that actuator by subtracting the value 8 from the MTR SETUP.

If any of the actuators still do not close completely, then the actuators have been installed or set up incorrectly. Refer to the actuator installation instructions, set up information, Table 1, or the *System 600 Maintenance and Troubleshooting Manual* (125-1855) for more information.

Set application

NOTE: If you are going to enter an LCTLR point at the field panel, then keep track of the application, override time, and controller address you enter at the portable operator's terminal. You will be required to enter these values again at the field panel.

Set the point APPLICATION (number 2) to the appropriate Dual Zone Controller – Electronic Output application. Refer to Table 3 for application names and numbers.

Table 3. Dual Zone Controller – Electronic Output Applications.

Application	Revision FY10 or higher
Two-Pipe Dual Zone Unit Cooling or Heating	2339
Slave Mode	2090

After you set the application, the controller will go through a shut-down/load sequence as it switches from slave mode to the application selected. After the application loads and the OVERVIEW report appears, continue with the following procedures.

Set CAL TIMER

Set the point CAL TIMER (number 96) to the time interval that will trigger calibration of the valves. The default value for CAL TIMER is 12 hours.

Set room temperature set points

Follow these steps to set the room temperature set points:

1. Display the SETPOINTS report.
2. If the room temperature sensor has a set point dial, and if the point RM STPT DIAL (number 13) is to be used by the controller to control zone 1, then set the point STPT DIAL (number 14) to YES; otherwise, set STPT DIAL to NO.

NOTE: If STPT DIAL is set to YES, then the points DAY CLG STPT (number 6) and DAY HTG STPT (number 7) will not be used. The value of RM STPT DIAL will be used for zone 1 only.

3. If the room temperature sensor has a set point dial and the set point dial is to be used for zone 1, then set the points RM STPT MIN (number 11) and RM STPT MAX (number 12) for the minimum and the maximum allowable room temperature set point values, respectively. Valid values range from 55° to 95°F (13° to 35°C). Common values for these points are 65°F (18°C) for RM STPT MIN and 80°F (27°C) for RM STPT MAX.
4. If there is no set point dial on the room temperature sensor, then verify that STPT DIAL is set to NO.

Set the following points to the appropriate values for zone 1:

- DAY CLG STPT (number 6)
- DAY HTG STPT (number 7)
- NGT CLG STPT (number 8)
- NGT HTG STPT (number 9)

5. Set the following points to the appropriate values for zone 2:

- DAY CLG STP2 (number 31)
- DAY HTG STP2 (number 32)
- NGT CLG STP2 (number 33)
- NGT HTG STP2 (number 34)

Set override time

Follow these steps to set the override time:

1. Display the STARTUP report.
2. If using night override, then set the point OVRD TIME (number 20) to the number of whole hours that an override should last. If set at zero (the default), then night override is disabled.

Enable wall switch

If a wall switch is used for day/night control, then enable it by setting the point WALL SWITCH (number 18) to YES.

Set controller address

Set the controller address by setting the point CTLR ADDRESS (number 1) to the appropriate number.

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Dual Zone Controller – Electronic Output start-up is complete.