

Start-up Procedures for Project WAS-092297-1 VAV with Static Pressure Control

TEC 0526.11

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Overview

This section presents start-up procedures for the VAV with Static Pressure Controller. 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 VAV with Static Pressure Controller 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, refer to the *APOGEE Automation Service Procedures Manual* (125-3013) for troubleshooting information.

NOTE: The Controller Interface Software (CIS) used with the Small Point Controller firmware revision VS10 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 **2299** (slave mode).
2. Display the STARTUP report.

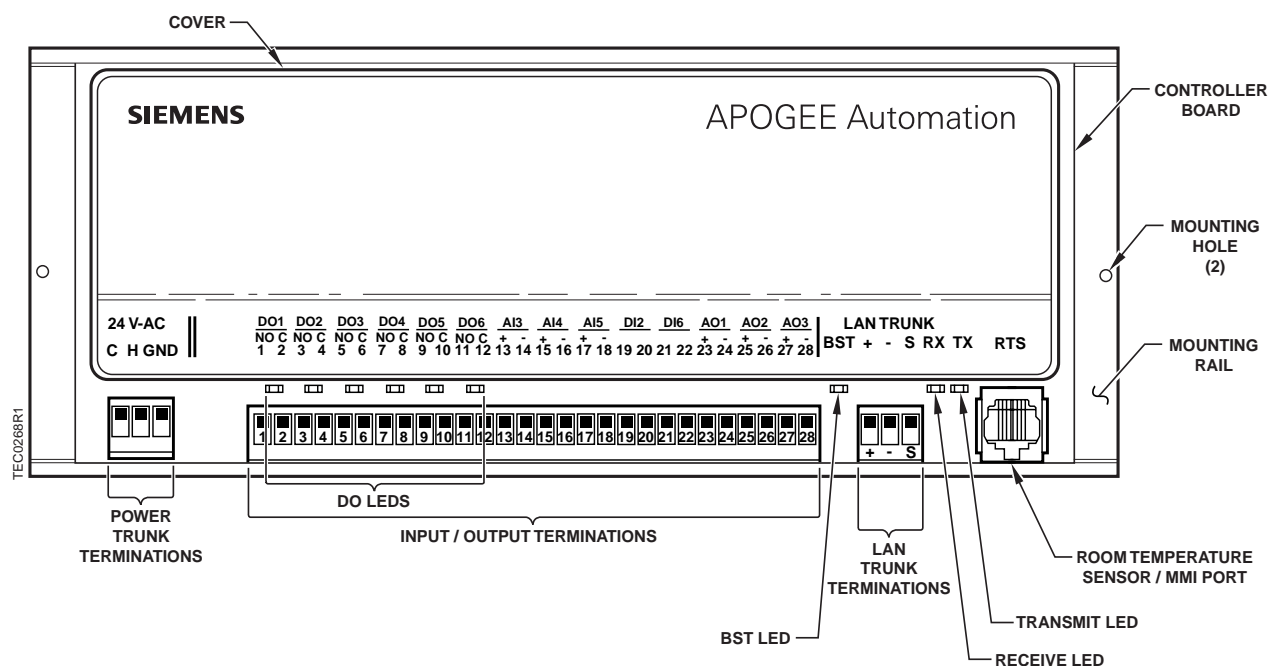


Figure 1. VAV with Static Pressure Controller.

Set DO DIR.REV

If the normal (de-energized) state of all of the devices controlled by DOs is OFF, then leave the point DO DIR.REV (number 59) at its default value of 0. Otherwise, reverse the action of the devices as follows:

1. Add the values in Table 1 for each DO you wish to make reverse acting.
2. Set DO DIR.REV to this value.

Table 1. DO DIR.REV Values.

Reverse-Acting DO	Value
DO1	32
DO2	16
DO3	8
DO4	4
DO5	2
DO6	1

Set controller address

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

Set the controller address by setting the point CTRLR ADDRESS (number 1) to the appropriate number (00-31 if an LCTLR point will be defined for this controller).

Set application

Set the point APPLICATION (number 2) to application number **2337**.

After you set the application, the controller will go through a Shutdown/load sequence as it switches from slave mode to the application selected. After the application loads, the Overview report appears. As soon as the overview report has finished loading, change to the STAT P W. CLG report and continue with the start up procedure.

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**.

Enable DI 6 safety

If DI 6 is being used as a general purpose safety, then enable it by setting the point DI6 SAFETY (number 88) to **YES**.

Set override time

If using night override, then set the point OVRD TIME (number 20) to the number of whole hours that the override will last. Otherwise, set OVRD TIME to **0**.

Set start and span of voltages for 0-10V actuators

Depending on the actuators you are using, set the points listed in Table 2 to their appropriate starting voltage positions and voltage ranges.

NOTE: The maximum voltage output for the AOs is 10V. Therefore, starting voltages and voltage ranges **must not** exceed 10V. The controller **will not** control the valve or damper actuator beyond 10V.

Table 2. Start and Span Voltages for Actuators.

Descriptor	Point Number	Siemens Business Technologies P/N SQB 61.1	Barber-Coleman P/N MP5433
		Voltage Range	
AOV1 SPAN AOV2 SPAN AOV3 SPAN	31 33 35	10 (default)	3
		Starting Voltage	
AOV1 START AOV2 START AOV3 START	32 34 36	0 (default)	6

Setting AO DIR.REV

If the normal (de-energized) state of all of the devices controlled by AOs is closed, then leave the point AO DIR.REV (number 37) at its default value of 0. Otherwise, reverse the action of the appropriate AO, or combination of AOs, as follows:

1. Add the values in Table 3 for each AO you wish to make reverse acting.
2. Set AO DIR.REV to this value.

Table 3. AO DIR.REV Values.

Reverse-Acting AO	Value
AO1	1
AO2	2
AO3	4

Set static pressure sensor range

Set the point SP RANGE (number 97) to the high limit of the static pressure sensor being used. (The sensor's range must be 0 to SP RANGE.)

Set static pressure set point

Set the static pressure set point, SP STP (number 05), to the desired value.

Set cooling supply air temperature set point

Set the cooling supply air temperature set point, CLG SAT STP (number 03), to the desired value.

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.).

The start-up of the VAV with Static Pressure Controller is complete.