

Constant Volume Controller—Electronic Output

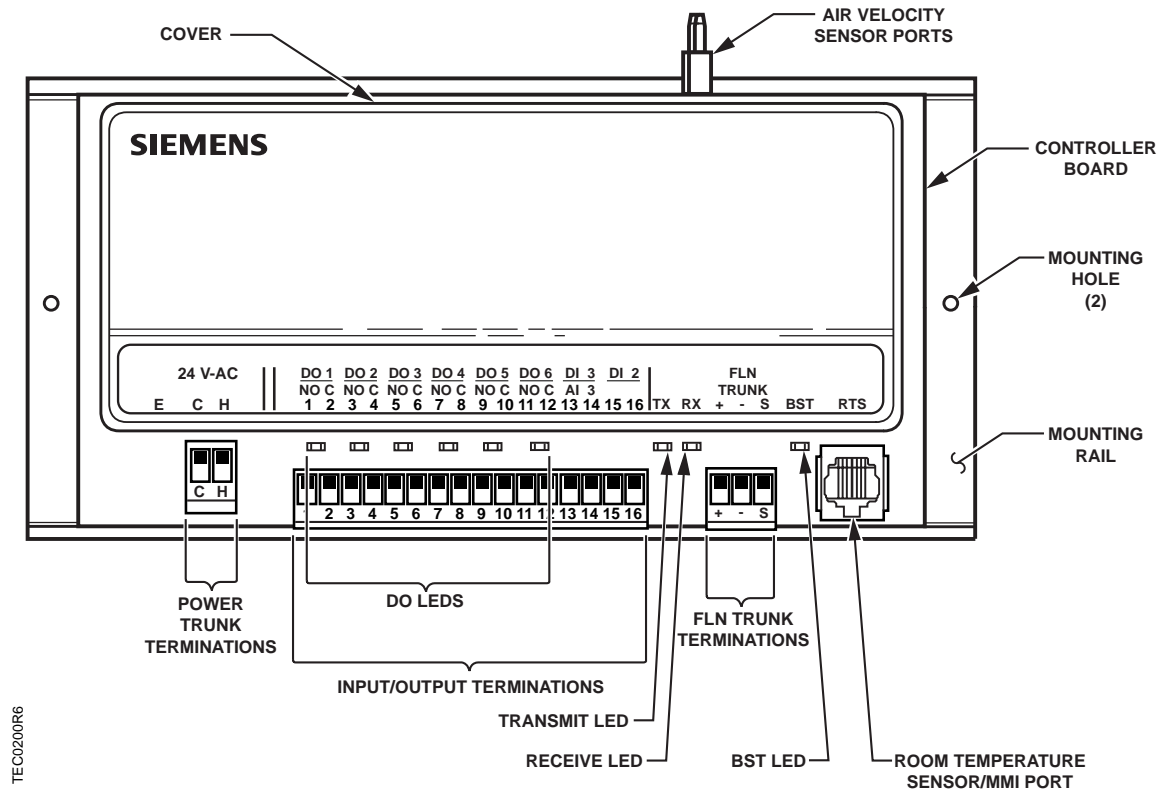


Figure 1. Constant Volume Controller—Electronic Output.

Control Applications

2030, 2032, 2033

2130, 2132, 2133 (Secure Mode Applications)

Product Description

These instructions explain how to field install or replace a Constant Volume Controller—Electronic Output with or without Secure Mode or optional Autozero Module.

Shipping carton includes a controller assembly (controller board and cover), a mounting rail, Autozero Module and bracket (optional), and two self-tapping screws.

Product Numbers

540-103 Constant Volume Controller—Electronic Output

540-104 Constant Volume Controller—Electronic Output with Autozero Module

540-803 Constant Volume Controller—Electronic Output for Trane

...continued on next page

540-804	Constant Volume Controller—Electronic Output with Autozero Module for Trane
540-103C	Constant Volume Controller—Electronic Output with Secure Mode
540-104C	Constant Volume Controller—Electronic Output with Autozero Module and Secure Mode



CAUTION:

Keep the unit in its static-proof bag until installation.

Accessories

540-628P25 (pack of 25)	Low cost temporary temperature sensor that enables space control if the permanent room or duct sensor is not installed.
-------------------------	---

Parts for CE Compliance:

550-705	Clamp-on ferrite filter (10 pack)
588-100 series	Approved 2-RJ11 RTS cable in 25', 50', or 100' (7.6-m, 15.2-m, 30.48-m).
540-155	Metal Small Equipment Controller Enclosure
550-002	Large Equipment Controller Enclosure

Warning/Caution Notations



CAUTION:

Equipment damage or loss of data may occur if you do not follow the procedures as specified.

Expected Installation Times

10 minutes.

Required Tools and Materials

- Flat-blade screwdriver (1/8-inch blade width).

- Small flat-blade screwdriver
- Cabling and connectors. See the section.
- Cordless drill/driver set

Prerequisites

- MBC or RBC enclosure mounted with at least one open slot on the C-BUS and AC power connected.
- CE Compliance requirements met, if needed.
- Termination blocks installed, if any.
- Authorized modem installed if connection to a public telephone network is required.
- One 115V or 230V receptacle (depending on device) to power the Trunk Interface II.



If the controller is being installed on a box with 1 or more stages of electric heat, the 550-809 MOV with pre-terminated spade connectors must be installed across the manufacturer-supplied airflow switch. MOV's can be installed at the time the controller is factory mounted; coordinate with the box manufacturer prior to order placement. For field installation, see Metal Oxide Varistor Kit Installation Instructions (540-986).

Instructions



All wiring must conform to NEC and local codes and regulations.

1. Secure the mounting rail (Figure 1) in the controller's desired location.
2. Place the ESD wrist strap on your wrist and attach it to a good earth ground.
3. Remove the controller from the static proof bag and snap it into place on the mounting rail.
4. Connect the FLN (Figure 2).

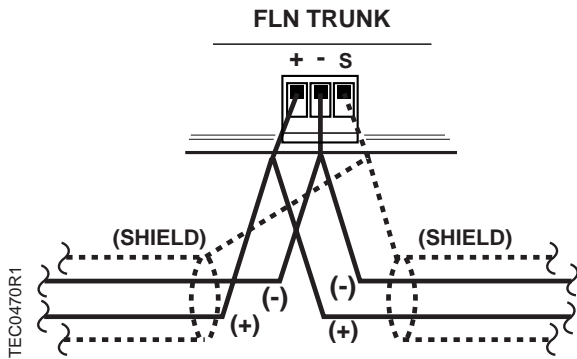


Figure 2. FLN Wiring.



CAUTION:

Do not ground the shield.

5. Connect the point wiring (see Wiring Diagrams).
6. **540-104 and 540-104C:** Install the Autozero Module and connect the wires to DO6 (Figure 5). See installation instructions 540-199.
7. Plug the room temperature sensor cable into the RTS port (Figure 1).
8. Connect the power trunk (Figure 3). **DO NOT** apply power to the controller.

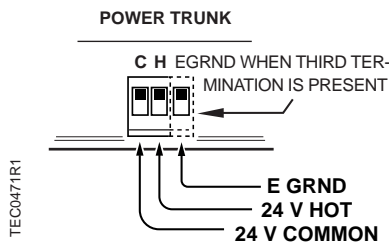


Figure 3. Power Trunk Wiring.



As a standard grounding procedure, ensure that 3"-5" ground wire is connected directly on the common terminal on the secondary side of the 24 Vac transformer.

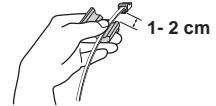
9. Connect the tubing from the air velocity sensor pickups to the ports on the controller or Autozero Module (Figure 5). Connect HI to HI and LO to LO.

The installation is complete.

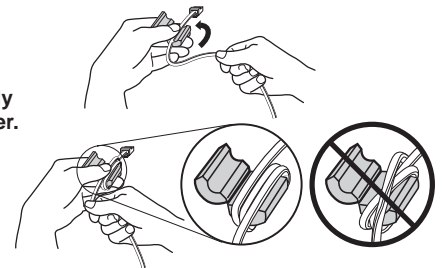
CE Compliance

If CE compliance is required, the Equipment Controller must be mounted in a grounded metal enclosure and a ferrite filter must be placed approximately 1 cm from the end of the cable being shielded (RTS cable and point wiring for AI3) (Figure 4).

- 1 Place the filter 1-2 cm from the end of the cable or wiring to be shielded.



- 2 Wind the cable tightly twice around the filter.



- 3 Close the filter and wrap with a zip tie.

TEC0320R3

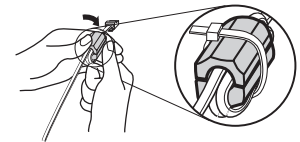


Figure 4. Ferrite filter(s) for CE Compliance.

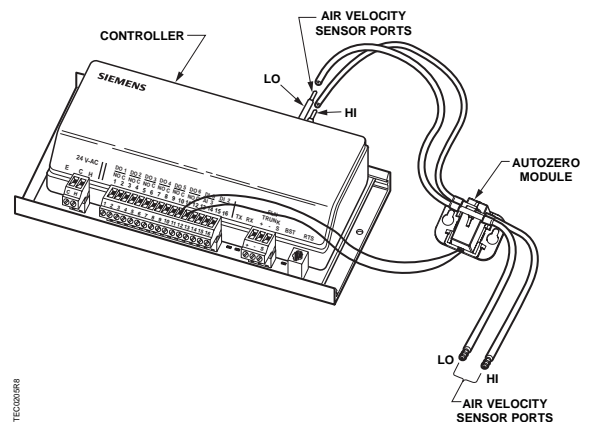


Figure 5. Constant Volume Controller—Electronic Output with Autozero Module.

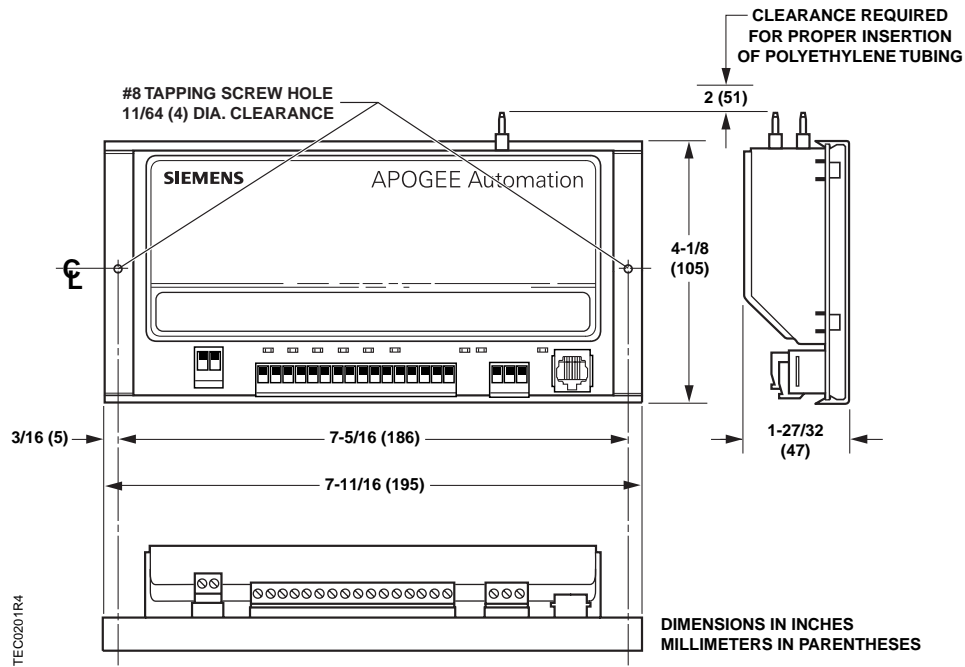


Figure 6. Dimensions.

Wiring Diagrams



CAUTION:

The controller's DOs control 24 Vac loads only. The maximum rating is 12 VA for each DO. Use an interposing 24 Vac relay module (such as P/N such as P/N 550-054) for any of the following:

- VA requirements higher than 12 VA
- Separate transformers to power the load
- Direct current (DC) power requirements

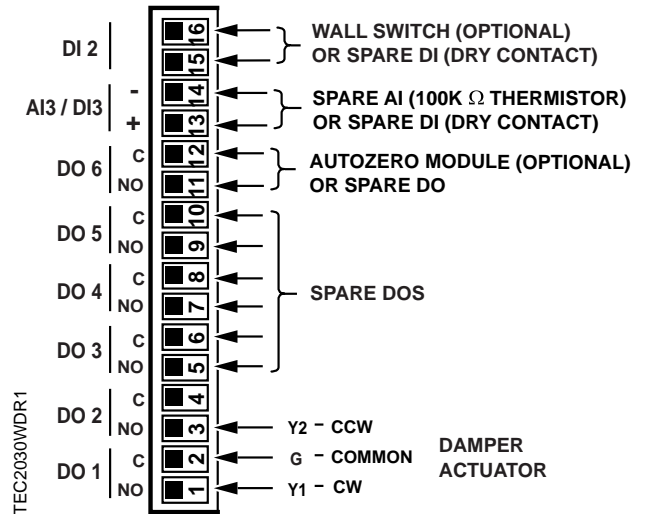


Figure 7. Application 2030 and 2130 (CV Cooling Only).

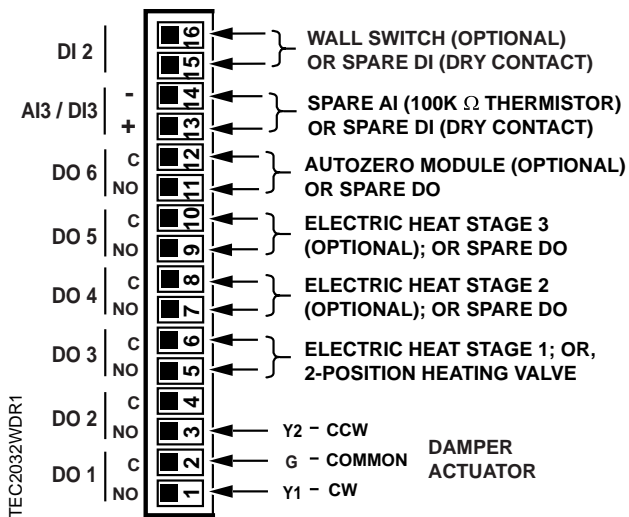


Figure 8. Application 2032 and 2132 (CV with Electric Reheat).

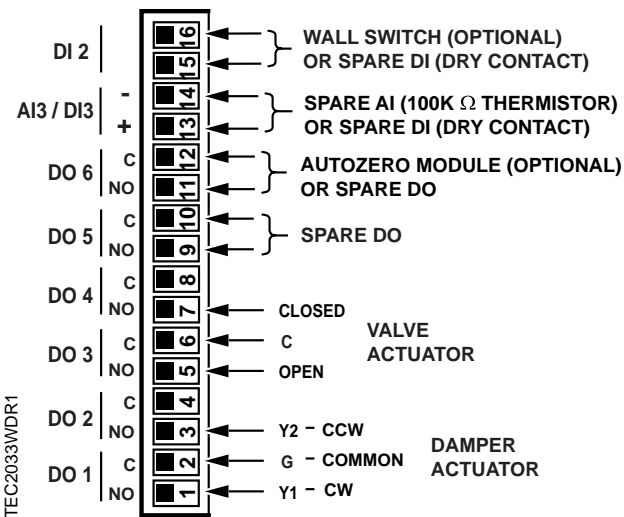


Figure 9. Application 2033 and 2133 (CV Hot Water Reheat).

Information in this document is based on specifications believed correct at the time of publication. The right is reserved to make changes as design improvements are introduced. Product or company names mentioned herein may be the trademarks of their respective owners.
© 2009 Siemens Building Technologies, Inc.