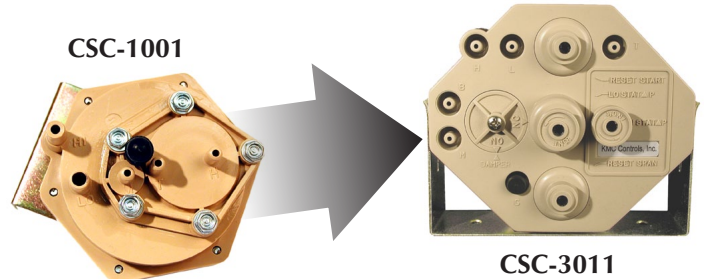


Application Guide

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Overview

CSC-1001 Constant Volume Controllers have been discontinued. However, they can be replaced with a CSC-2001/2003/3011 controller and (for VAV applications) an RCC-1008/1108 relay.

For more information about a particular device, see the respective device data sheet, installation guide, and/or application guide.

Important Notices

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CSC-1001 Function

The CSC-1001 is designed for use with normally open dampers in either of the following applications:

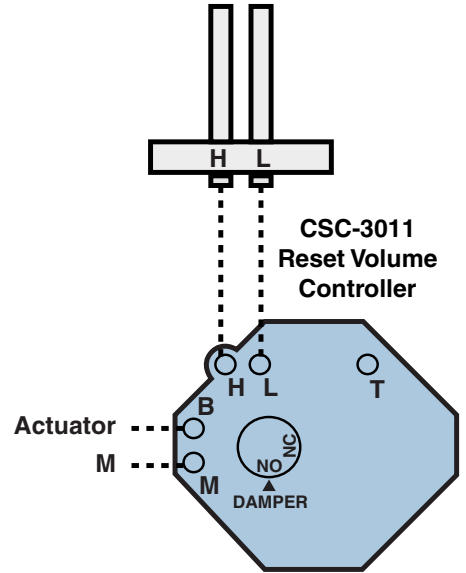
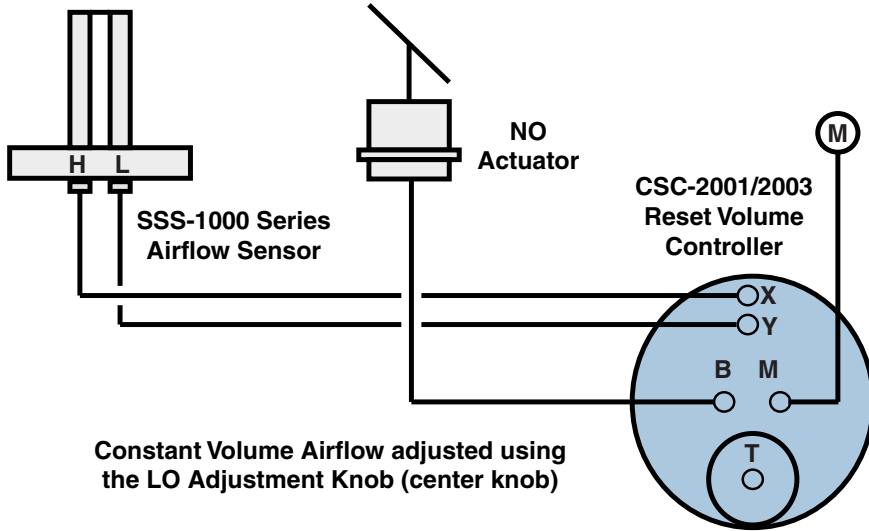
- Constant air volume (CAV) terminals
- Variable air volume (VAV) terminals with maximum flow limiting

CAV operation is configured by connecting a normally open actuator to the C port on the controller (or the H port if the T port is open) and adjusting the setpoint screw to the desired flow setpoint. Airflow is measured by an SSS-1000 series sensor connected between the HI and LO ports. Adjusting the setpoint screw clockwise will increase the flow setpoint; adjusting the screw counter-clockwise will decrease the flow setpoint. The T port may be exhausted to atmosphere during constant volume operation.

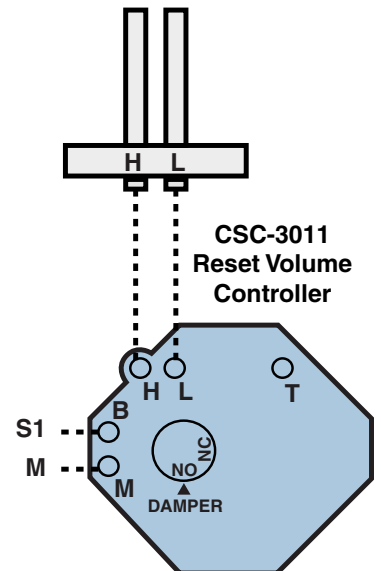
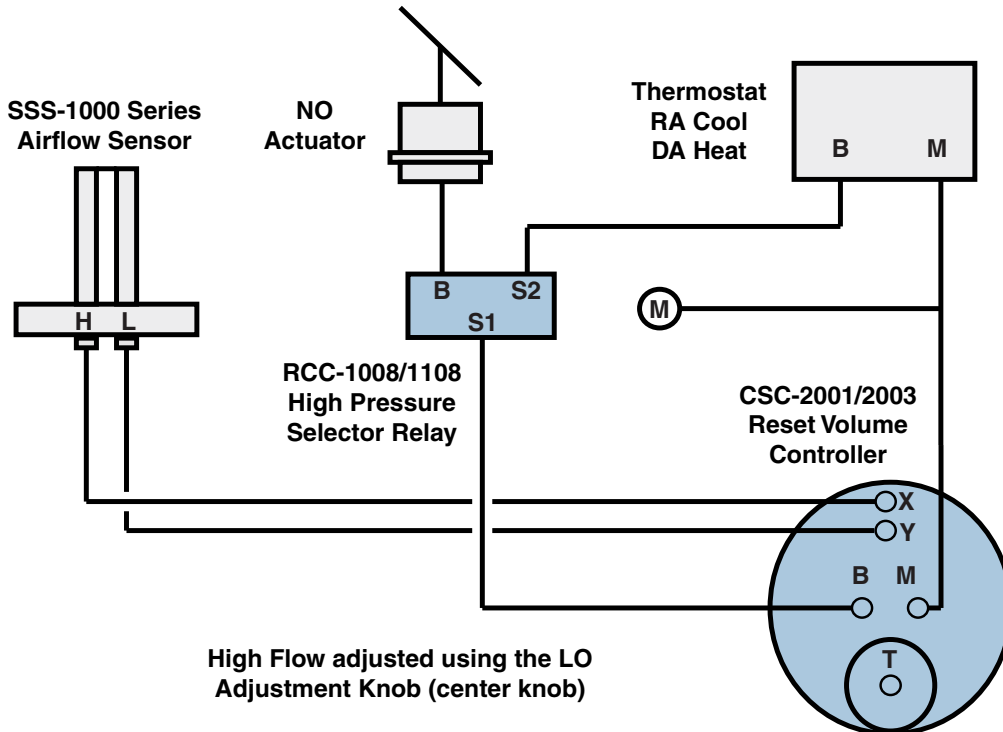
When used in VAV applications where a high flow limit is necessary, the controller should have a normally open damper connected to the H port, a reverse acting thermostat connected to the T port, and an SSS-1000 series flow pickup between HI and LO. The C port should be capped (as installed from the factory). With the T port exhausted, or at a low pressure, the setpoint screw can be adjusted for the maximum flow limit. The controller will supply the H port with the higher of either the thermostat signal or the configured maximum flow limit pressure, thus limiting the maximum airflow once the thermostat signal falls below the maximum flow setpoint.

Sample Applications

Constant Volume Application



VAV Application with a High Flow Limit



NOTE: On the CSC-3011, ensure the Damper Action Selection Dial is set properly (Normally Open in these examples).

Replacement by CSC-2001/2003

CSC-2000 Series Reset Volume Controllers may be used to obtain the same functionality of CSC-1001 Constant Volume Controllers. For **constant volume applications**, a CSC-2001/2003 should be used in conjunction with a normally open actuator (connected to the B port) and an SSS-1000 series flow pickup (connected between X and Y). The T port should be exhausted. The LO adjustment knob (center knob on the front) may be set to maintain the desired constant volume airflow. (See the Constant Volume Application illustration on the previous page.)

VAV applications requiring a high limit can be replaced with a CSC-2001/2003 and an RCC-1008/1108 High Selector Relay. The normally open actuator should be connected to the B port of the RCC. The S1 and S2 ports of the RCC should be supplied from the B ports of the CSC-2001/2003 and a reverse acting thermostat. The high flow limit can be adjusted using the LO adjustment knob on the CSC-2001/2003. An SSS-1000 series flow pickup should be connected between the X and Y ports of the CSC-2001/2003, and the T port should be exhausted. (See the VAV Application with a High Flow Limit illustration on the previous page.)

For CSC-2001/2003 adjustment and other information, see the [CSC-2000 series Application Guide](#).



Replacement by CSC-3011

A CSC-3011 “universal” Reset Volume Controller may also be used to obtain the same functionality of CSC-1001 Constant Volume Controllers. For **constant volume applications**, a CSC-3011 should be used in conjunction with a normally open actuator (connected to the B port) and an SSS-1000 series flow pickup (connected between H and L). The T port should be exhausted. The LO Stat (“low thermostat differential pressure”) adjustment knob (center knob) may be set to maintain the desired constant volume airflow. (See the Constant Volume Application illustration on the previous page.)

Ensure the Damper Action Selection Dial is set properly (Normally Open in these examples).

VAV applications requiring a high limit should be replaced with a CSC-3011 and an RCC-1008/1108 High Selector Relay. The normally open actuator should be connected to the B port of the RCC. The S1 and S2 ports of the RCC should be supplied from the B ports of the CSC-3011 and a reverse acting thermostat. The high flow limit can be adjusted using the LO Stat adjustment knob on the CSC-3011. An SSS-1000 series flow pickup should be connected between the H and L ports of the CSC-3011, and the T port should be exhausted. (See the VAV Application with a High Flow Limit illustration on the previous page.)

For CSC-3011 adjustment and other information, see the [CSC-3000 series Application Guide](#).



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