

Installation Guide

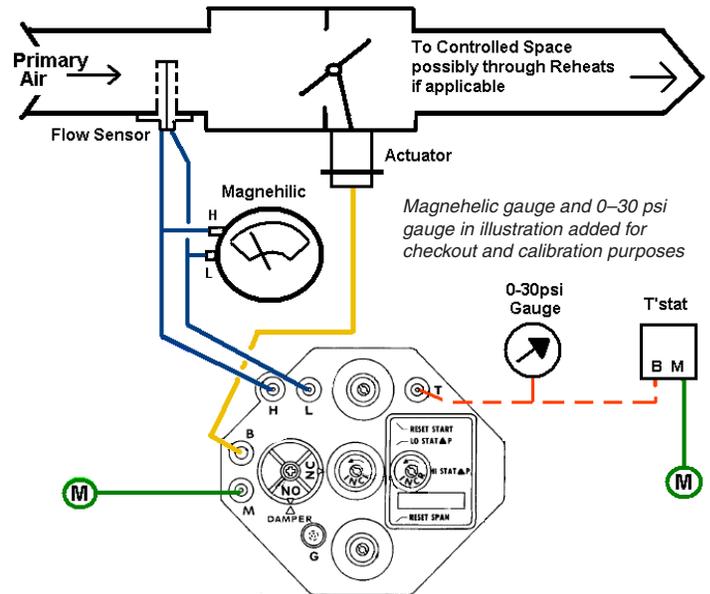
*(These instructions do **not** apply to the CSC-3014 or the CSC-3501/3505; see their separate Installation Guides.)

Mounting

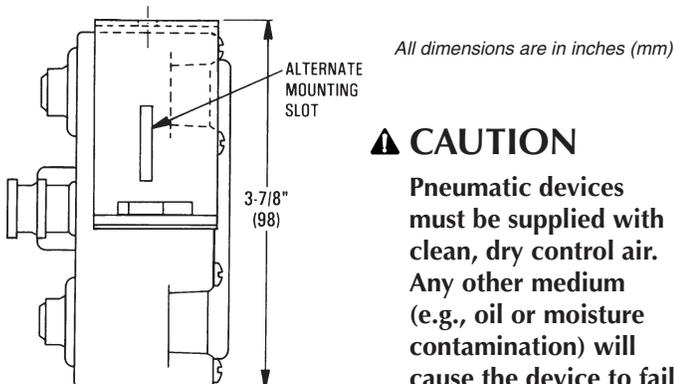
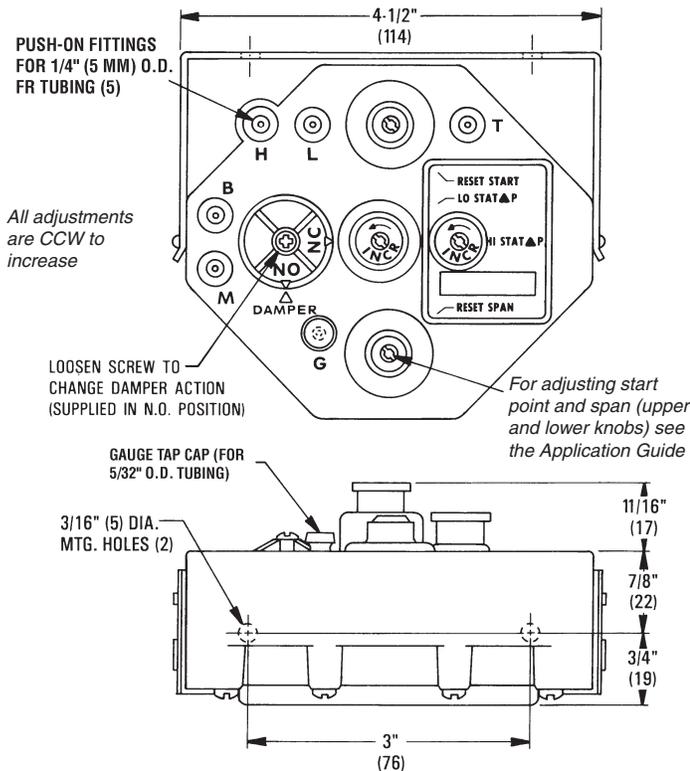
CSC-3000 series controllers are **position sensitive** and **must be mounted and calibrated in either the horizontal or vertical plane.**

1. As near to the flow sensor pickup as is feasible, connect the mounting bracket to the mounting surface with two self-threading screws in the two 3/16" (5 mm) mounting holes. Be sure to leave enough room to make connections.
2. Insert the controller, face down, up, right or left. The controller must be installed and adjusted in the same plane or readjustment will be necessary.

Connections



Typical CSC-3011 Application and Connections



For all models of the CSC-3000 series, use 1/4" (5 mm) O.D. "FR" tubing on the following push-on fittings:

1. Connect the clean, dry, oil-free main air supply to Port "M" (15 to 30 psi).
2. Connect the damper actuator to Port "B".
3. Connect the thermostat output to Port "T".
4. Connect the high pressure tap on the air flow sensor to Port "H".
5. Connect the low pressure tap on the air flow sensor to Port "L".
6. Check for proper connections. **Make sure all tubes are snug on their fittings.** If loose, trim the end of the tubing and reconnect it to ensure there are no leaks.

NOTE: Over time, the tube may stretch or develop microcracks. Trim the end of tube back to undamaged material and reconnect. Replace the tubing if it is brittle or discolored.

NOTE: You can easily test for leaks with a squeeze bulb to ensure there are no leaks at the actuator diaphragm or fittings.

7. Use a flow hood or "tee" a Magnehelic® (or equivalent) differential pressure gauge between the controller and the ΔP pick-up to determine flow rates.

Adjustments and Calibration

NOTE: Do NOT adjust start point and span (upper and lower knobs) without thoroughly reviewing the Application Guide. For information about direct vs. reverse reset, see the Application Guide.

Damper Action

The damper action is factory-set at Normally Open (NO). To change to Normally Closed (NC):

1. Loosen the damper selection screw.
2. Turn the selection dial clockwise until the "NC" arrow aligns with the "DAMPER" arrow.

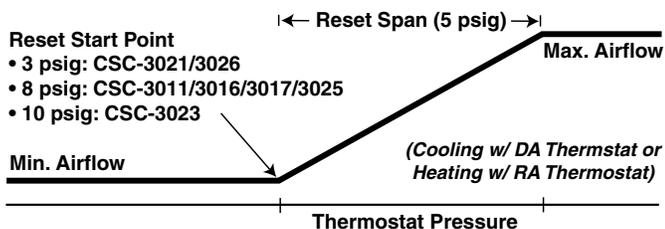
NOTE: Accuracy in the alignment of the arrows is very important. Make this adjustment as exact as possible.

3. Tighten the selection screw. **Be sure the screw is tight** (2 to 4 in-lbs. of torque), **but if overtightened, the plastic will strip out.**

Adjusting Minimums and Maximums

When adjusting the minimum and maximum flow settings, the output responds slowly to changes in the setpoint. Wait for the flow rate to stabilize after making an adjustment (usually 20 to 30 seconds) before making further adjustments. Also, if the damper position is all the way closed or open when starting this step, turn the adjustment one full turn, and then wait 20 to 30 seconds for a change in the flow reading of the Magnehelic gauge. If no change occurs after this time, repeat until the flow rate changes. (See the Application Guide for more tips.)

DIRECT Reset Minimum and Maximum

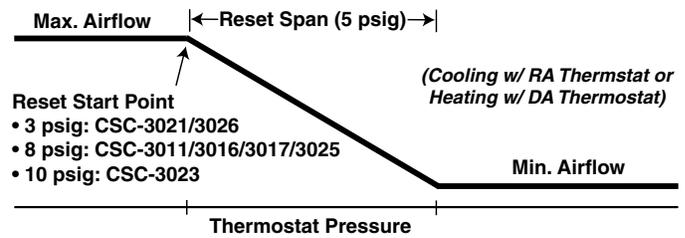


NOTE: The direct reset illustration above assumes no relays between the thermostat and "T" port.

For **Direct Reset (DA thermostat for cooling or RA thermostat for heating)**, perform the following steps:

1. Disconnect the "T" port. Temporarily plug the tubing. (Do NOT plug the port.)
2. Adjust the LO STAT ΔP (center dial) to the desired **Minimum** airflow.
3. Reconnect the tubing at "T" port.
4. Adjust thermostat to call for **full** airflow (15 psi or more at "T" port).
5. Adjust the HI STAT ΔP (dial on right) to the desired **Maximum** airflow.
6. Repeat Steps 1 through 5 to verify the settings.

REVERSE Reset Minimum and Maximum



NOTE: The reverse reset illustration above assumes no relays between the thermostat and "T" port.

For **Reverse Reset (RA thermostat for cooling or DA thermostat for heating)**, perform the following steps:

1. Disconnect the "T" port and leave it open. Temporarily plug the open tubing.
2. Adjust the LO STAT ΔP (center dial) to the desired **Maximum** airflow.
3. Reconnect the tubing at port "T".
4. Adjust the thermostat to call for **minimum** airflow (15 psi or more at "T" port).
5. Adjust the HI STAT ΔP (dial on the right) to the desired **Minimum** airflow.
6. Repeat Steps 1 through 5 to verify the settings.

More Information

For **specifications**, see the Data Sheet for these controllers. For **additional adjustments, calibration, troubleshooting, principles of operation, and sample applications**, see the [Application Guide](#) for these controllers. For support documents, see the CSC-3000 series [product page \(bit.ly/y0G2sI\)](#) on the [KMC Controls web site \(kmcccontrols.com\)](#).



This Installation Guide does **not** apply to the CSC-3014 (designed to work with CTC-2100 Thermostats) or the CSC-3501/3505 (Linear Volume Reset Controllers). See their separate Data Sheets and Installation Guides.

Important Notices

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