DuroZone®

INSTALLATION INSTRUCTIONS

Model RCD Round Diffuser Damper

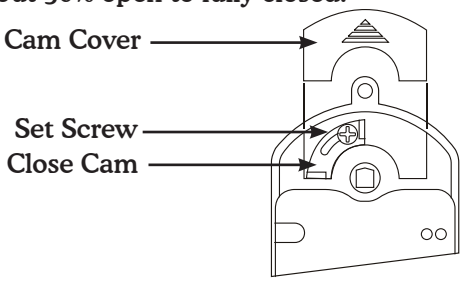
About the RCD Damper

The RCD damper is a variable position damper that is controlled by an OSL Occupancy Sensor or the MWC Manual Wall Control. It has under-sized diameter to enable it to slip into the collar of a ceiling diffuser or grill. The RCD can increase comfort by regulating airflow into a given area to eliminate over-cooling and over-heating or it can save energy by reducing airflow to vacant spaces.

1. Adjust the Minimum Flow

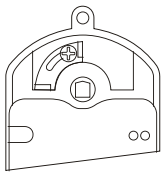
Damper Bypass

The RCD damper motor has a Minimum Flow Position Limit that can be used to ensure some air passage when the RCD damper is closed. The Minimum Flow Position can be set from about 50% open to fully closed.

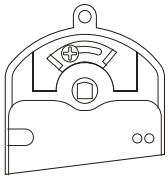


Adjusting the Minimum Flow Position Limit

Set the damper to the fully open position by applying 24VAC across the COM and 24VAC damper motor terminals. The damper will cycle open-close-open to calibrate itself. Loosen the set screw and rotate the Minimum Flow Cam clockwise to increase the airflow for the damper when it is closed. The fully clockwise position is 50% open and the fully counterclockwise is 0% open (fully closed).



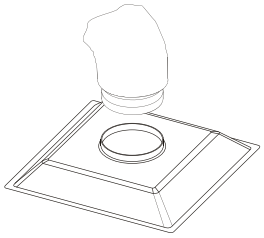
Cam set to fully closed position.



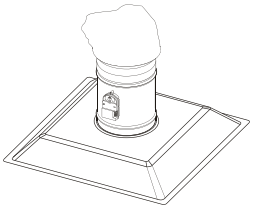
Cam set to 50% close position.

2. Install the damper in the ductwork

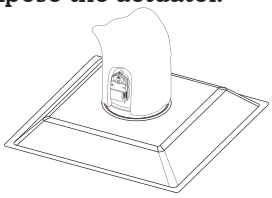
Remove the flex-duct from the ceiling register or diffuser collar.



Insert the damper into the collar and secure it with sheet metal screws. Attach the flex-duct to the damper and secure the inner sleeve to the damper using the cable tie provided.

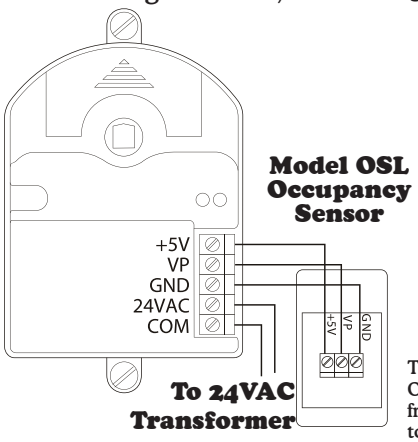


Alternately you can shorten the inner sleeve by the length of the damper and slide the outer insulation over the damper and secure it with duct tape. Cut a slot in the insulation to fully expose the actuator.



3A. Wiring the OSL Occupancy Sensor

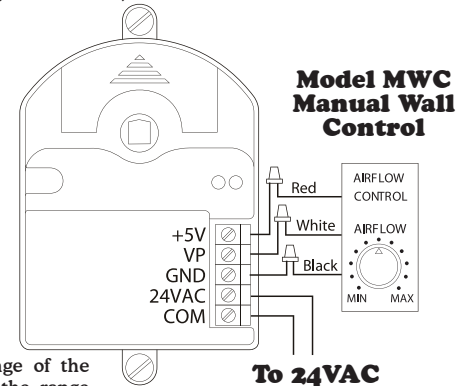
A RCD damper and OSL Occupancy Sensor are connected using the GND, VP and +5V terminals.



The MIN to MAX range of the OSL corresponds to the range from the minimum flow position to fully open.

3B. Wiring the MWC Manual Wall Control

A RCD damper and MWC Manual Wall Control are connected using the GND, VP and +5V terminals.



The MIN to MAX range of the MWC corresponds to the range from the minimum flow position to fully open.

RCD Damper Motor Terminals

+5V	+5VDC output. Connect to Occupancy Sensor or Manual Wall Control.
VP	0 to +5V control input. Connect to Occupancy Sensor or Manual Wall Control.
GND	Connect to Occupancy Sensor or Manual Wall Control.
24VAC	Connect to 24VAC transformer
COM	Connect to 24VAC transformer

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INSTALLATION INSTRUCTIONS

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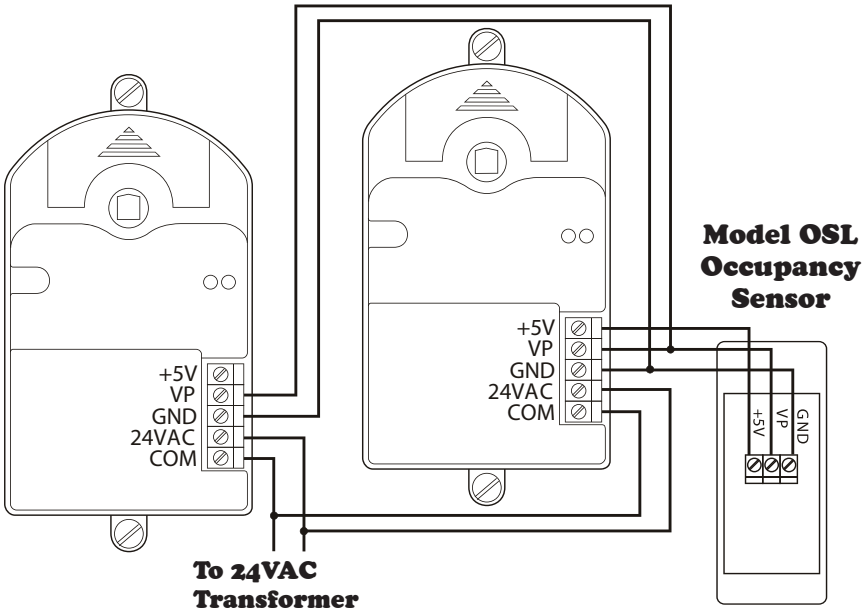
Wiring One OSL Occupancy Sensor to Control Multiple RCD Dampers

An Occupancy Sensor can control multiple RCD dampers using the VP and GND terminals. Up to six RCD dampers can be controlled by one OSL Occupancy Sensor. The MIN to MAX range of the OSL corresponds to the range from the minimum flow position to fully open.



IMPORTANT

Only the +5V terminal on one RCD damper is connected to the Occupancy Sensor.

When using one transformer to power multiple motors, wire all 24 VAC motor terminals to the same transformer terminal and all COM motor terminals to the other transformer terminal. Damper Motors are rated 3.5VA and 130 miliamps during operation; 2.25VA and 90 miliamps when idle.

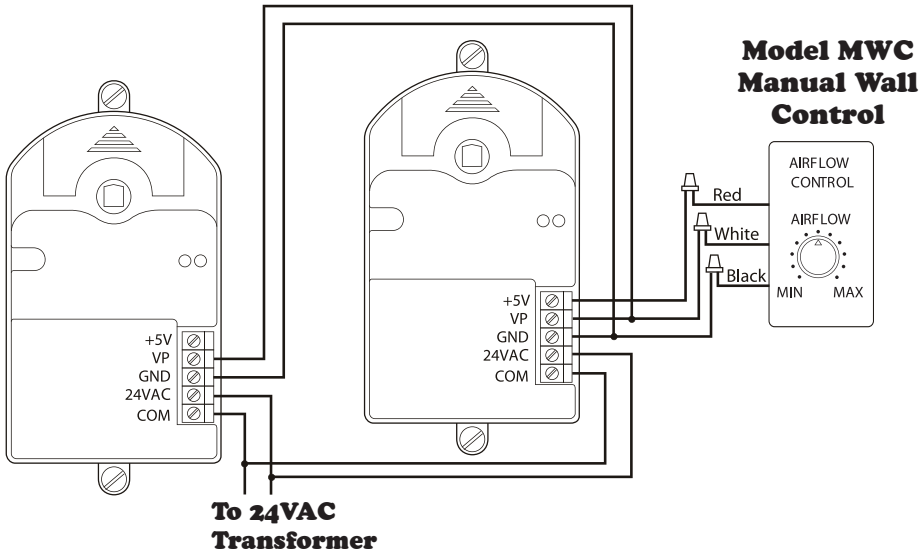
Wiring One MWC Manual Wall Control to operate Multiple RCD Dampers

A Manual Wall Control can control multiple RCD dampers using the VP and GND terminals. Up to six RCD dampers can be controlled by one MWC Manual Wall Control. The MIN to MAX range of the MWC corresponds to the range from the minimum flow position to fully open.

IMPORTANT!

Only the +5V terminal on one RCD damper is connected to the Manual Wall Control.

When using one transformer to power multiple motors, wire all 24 VAC motor terminals to the same transformer terminal and all COM motor terminals to the other transformer terminal. Damper Motors are rated 3.5VA and 130 miliamps during operation; 2.25VA and 90 miliamps when idle.



Install all devices in accordance with applicable electrical and mechanical codes.

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ALL DUROZONE DAMPERS FEATURE:

• 5 year limited warranty • Controlled bypass • Maintenance free operation • Quick install mounting clips (except Round Dampers) • 100% factory testing • Screwless terminals • Custom dampers and special controls are available on request.