

SDCR Slave Damper Control Relay

TROL-A-TEMP®

PRODUCT DATA

The Slave Damper Control Relay, Model SDCR, is a relay control panel used when three or more dampers need to be controlled by a single switch or thermostat. The SDCR can control up to four dampers. Each motor is controlled individually by a separate set of contacts in the plug-in relay. The SDCR can be wired to open and close all damper motors simultaneously. By reversing the M4 and M6 wires on any motor, these dampers can be made to operate in reverse of the other dampers, such as in a face and by-pass operation.

Each SDCR can control up to four individual damper motors. When more than four damper motors need to be controlled, multiple SDCR relay panels can be wired together to control as many dampers as necessary. Each SDCR requires an individual 24 Volt, A.C., 40 VA Transformer to power each set of damper motors. All of the SDCR relays can be wired together to be controlled by one set of switch contacts. The C and C terminals are the SDCR's relay coil.

The SDCR can also be powered from any zone of any Mastertrol® panel. The C and C terminals wire to the M1 and M4 terminals on the Mastertrol®. On older Mastertrol® panels that have five motor terminals, M1-M2-M4-M5-M6, a jumper is required between terminals M2 and M5.

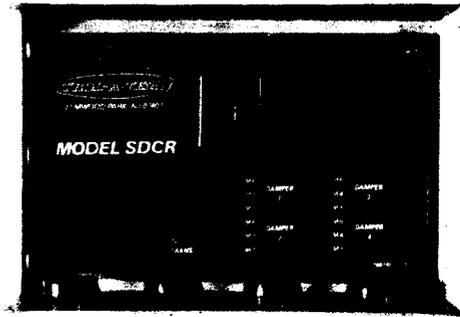
OPERATION

When the SDCR is de-energized, each motor contact will have power between the M1 and M6 terminals. This will typically drive the damper closed. When the SDCR is energized with 24V. at the C and C terminals, each motor contacts will have power on the M1 and M4 terminals. These typically power the damper open.

WIRING

The SDCR requires its own 24 Volts, A.C., 40 VA Transformer. This is wired to the 1 and 2 terminals.

The Trol-A-Temp Opposed Blade Dampers are power open and power closed motors. These



require three wires to the SDCR from each motor. Terminals M1-M4-M6 wire to each motor's 1-4-6 respectively. Each motor requires a field installed jumper across terminals 2 and 5 on the motor.

The Trol-A-Temp Automatic Round Damper, Model ARD, requires only two wires to the SDCR. The ARD can be configured as a Power Open and Spring Return Closed Damper or a Power Closed Spring Return Open Damper. When wiring a Power Open damper the damper motor wires to terminals M1 and M4. When wiring a Power Closed damper, the motor wires go to terminals M1 and M6.

Other style dampers can also be wired to the SDCR provided their requirements are 24V. power open and/power closed.

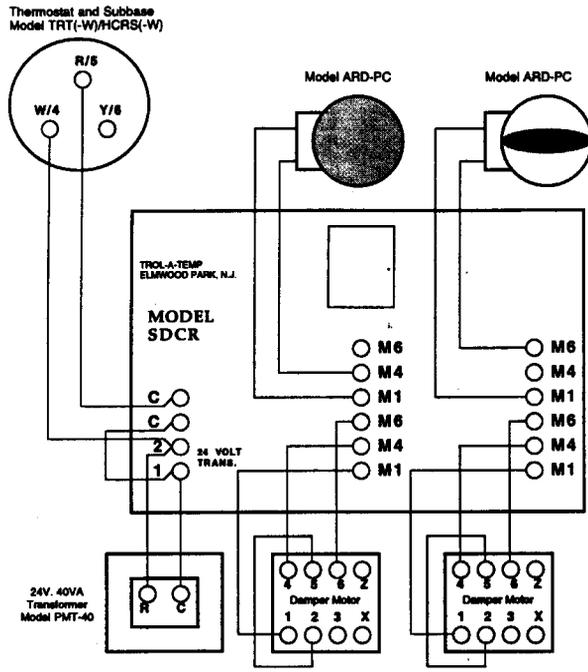
INSTALLATION

The SDCR is shipped in a sturdy metal enclosure and the circuit board is snapped on to standoffs in the case. The cover can easily be removed for wiring by swinging up and pulling away one side of the cover from the case.

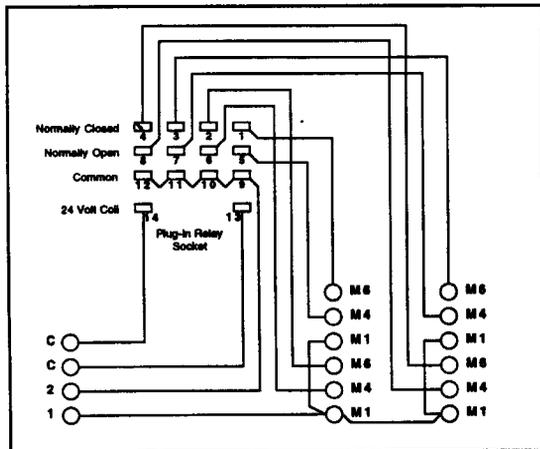
To remove the circuit board, insert a small screw driver in the hole on each corner of the case. Gently lift up each corner of the circuit board removing the circuit board from the standoffs. Using two screws and the mounting holes in the case, mount the case against any flat surface. Once the case is mounted, place the circuit board back on the standoffs and press each corner firmly until the board snaps into place. Wire the SDCR according to the wiring diagrams and place the cover back on to the case by aligning the top corner dimples into the indentations at the top of the case.



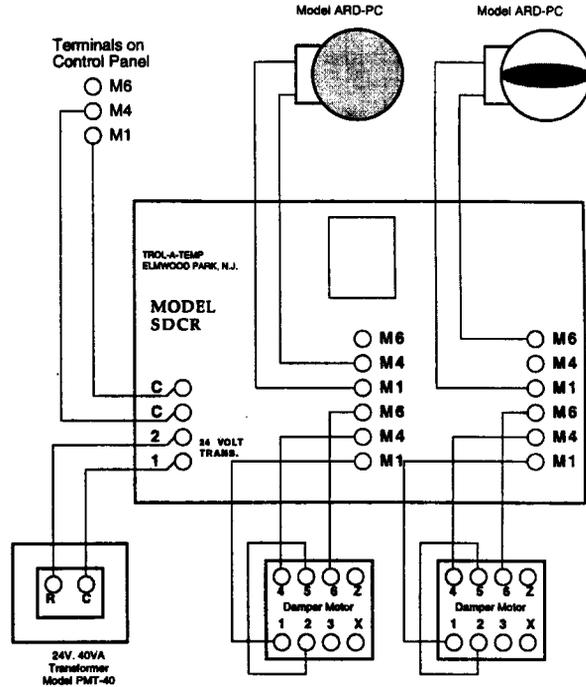
Wiring the SDCR to a Trol-A-Temp TRT Thermostat and HCRS Subbase.



INTERNAL WIRING DIAGRAM



Wiring the SDCR to any Trol-A-Temp Three Wire Control Panel.



CHECKOUT PROCEDURE

1. Check for 24 Volts, A.C. across terminals 1 and 2. If there is no voltage or less than 20 Volts A.C., check the transformer and power supply.
2. Check for 24 Volts A.C. across the C and C terminals. When there is no voltage present the SDCR is de-energized. This will provide 24V. to each set of M1 and M6 terminals. Typically, M1 and M6 are used to power the dampers Closed. If there is no voltage on any of the M1 and M6 terminals, remove and replace the plug-in relay. If there continues to be no power across these terminals, replace the panel.
3. When 24 Volts A.C. is present across the C and C terminals, the plug-in relay is energized. This switches 24V. power from the M1 and M6 terminals to M1 and M4, in order to power open the dampers. If the plug-in relay is not energized, remove the relay and replace firmly in the socket. The relay should click, indicating the relay has energized. If the relay is energized and there is no power at M1 and M4, replace the relay.
4. The SDCR can be checked with an Ohm Meter, by testing for continuity between the terminals and relay socket points, shown on the diagram below.

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