MM-2, MM-3 MASTERTROL® MINI-ZONE™ 2 and 3 Zones

TROL-A-TEMP®

PRODUCT DATA

- **Economical Two and Three Zone Control Panel**
- **Changeover Control Conveniently on Zone 1 Thermostat Subbase**
- **Normally Open and Normally Closed Damper Control Settings**
- **Dependable Plug-In Relays and Printed Circuit Design**
- **Easy to Wire Terminal Blocks**
- **Hinged Snap on Cover**
- **Simplified Wiring**

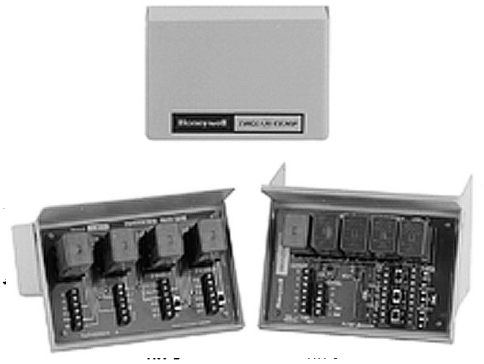
The Mastertrol® Mini-Zone™ Control Panel is the leading zone control panel in the industry. The low cost design and simplified wiring makes the Mini-Zone 2 and 3 Zone panels the answer for providing a low cost zoning system for any typical single stage heating and cooling system.

The Mastertrol® Mini-Zone™ is the first panel to incorporate the use of the Zone 1 Thermostat's switching subbase to conveniently provide the single point changeover for all zones. Each zone thermostat can then call for the mode set on the Zone 1 Subbase, therefore eliminating opposite calls from each zone thermostat.

When the Zone 1 Subbase is in either the HEAT or COOL mode, any zone thermostat can then call for that mode. When a zone calls for conditioned air the panel will open the calling zone's damper(s), close the damper(s) to the zones that are satisfied and activate the HVAC Unit to provide conditioned air to the zone. When a zone calls, all dampers to the zones that are satisfied will close and those that are calling will be open. When all thermostats are satisfied, all dampers will return to their normal position. This is set by the Open/Closed switch for each zone on the panel. Keeping these switches in the Open position allows for optional Continuous Air Circulation (CAC) when all zones are satisfied.

OPERATION - OFF MODE

When the Zone 1 Thermostat's Subbase is in the OFF position, the Mini-Zone™ System is off. The thermostats cannot call for conditioned air and the zone dampers will go to the position set on their respective Normally Open/Closed Switch. The Fan is turned off by setting the fan switch to the AUTO position.



CONTINUOUS AIR CIRCULATION (CAC)

Setting the Fan Switch to the ON position will activate the fan and allow air to be circulated into the zones where the dampers are open. This can be in either the HEAT, OFF or COOL modes. The fan will run continuously until the Fan switch is set to AUTO. During the HEAT and COOL modes, a call for conditioning will override the damper positions. Calling zones will open and satisfied zones will close. Once all thermostats satisfy all dampers return to their normal position, as set on the Open/Closed switch for each zone.

HEAT MODE

The HEAT mode is set by placing the Zone 1 subbase to the HEAT position. This requires a "B" signal from the subbase to the panel. This allows any zone to call for heating and activate the furnace. When a zone calls for heating, the thermostat energizes the zone relay on the panel. This in turn opens the damper to the calling zone, closes the dampers to the zones that are satisfied and closes the R(H) and W terminals to activate the heating control. When all zones are satisfied all zone dampers return to their normal position. The MM-3 has an additional terminal marked Gh. The Gh terminal is used for electric furnaces, Hydro-Air coils, single stage heat pumps, or anytime the fan is to come on with a call for heating. The Gh terminal is jumpered to the G terminal to provide this function.

COOL MODE

The COOL mode is set by placing the Zone 1 Subbase to the COOL position. This requires an "O" signal from the subbase to the panel. This allows any zone to call for cooling and activate the fan and compressor. When a zone calls for cooling, the thermostat energizes the zone relay on the panel. This in turn opens the damper to the calling zone, closes the dampers to the zones that

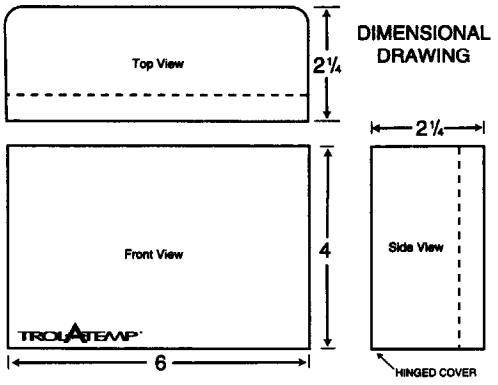
are satisfied and closes the R(C), G and Y terminals to activate the fan and cooling controls. When all zones are satisfied all zone dampers return to their normal positions.

HYDRONIC HEATING SYSTEMS

The Mastertrol® Mini-Zone™ Panels can also be used when zoned cooling is being combined with hydronic heating. Typically the two most common applications are a Hydro-Air System and Zoned Hydronic Baseboard.

The Hydro-Air System uses a hot water coil in the air handler as the source of heat. Using the Mini-Zone™ for this is similar to controlling a warm air furnace except a zone valve or circulator is wired to the W heating terminal on the panel. The MM-3 Zone panel is recommended with a Hydro-Air System, even when only using 2 zones. The MM-3 has a Gh terminal that activates the fan with a call for heat. If the MM-2 zone panel is used an Aquastat would be required to activate the fan.

When zoned hot water baseboard heating is used the Mini-Zone™ Panel is used as a cooling only panel. The hot water baseboard being a totally separate system supplying the heating and the Mini-Zone™ will control the zone dampers and cooling equipment. It is recommended that thermostats with isolated RC-RH terminals be used. The RH and W would directly control the zone valve or circulator and the RC and Y would wire to the Mini-Zone™ Panel. These thermostats would be obtained locally.



THERMOSTATS

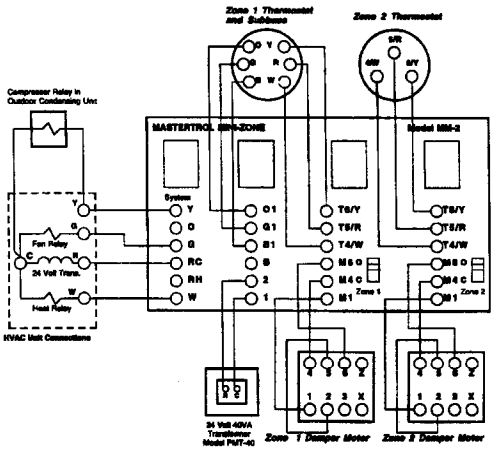
Trol-A-Temp® offers a complete line of single stage thermostats for the Mastertrol® Mini-Zone™ Panels. When choosing zone thermostats remember that the Zone 1 thermostat requires HEAT-OFF-COOL and Fan, ON-AUTO switching. The thermostats used for Zone 2 and 3, which are referred to as the Zone Other thermostat, meaning zones other than Zone 1, do not require switching subbases. Many of the Zone Other thermostats are specific to Trol-A-Temp®. Most thermostats are offered in both beige and white. Below are listed the recommended thermostats and their application.

MODEL	ZONE ONE	ZONE OTHER
Mechanical	TRT and MCRS	TRT
	TRT-W and MCRS-W*	TRT-W*
Mechanical Setback	T8090T1003*	T8090T1011*
Electronic Setback	T8601C1054*	T8603D1001*
	T8601C1062	T8603D1019
	T8602C1061*	T8602D1010*
	T8602C1079	T8602D1028

*Thermostats are White

INSTALLATION

To install the Mini-Zone™ Panel, remove the hinged cover by lifting up from the bottom and pulling out on one side. To mount the case the circuit board must be removed from the case. To remove the circuit board, insert a small screwdriver in the side holes of the case and gently lifting up removing the circuit board from the standoffs. With two screws mount the circuit board to any flat surface. Be certain to use screws with small heads as not to interfere with circuit board. Once the case is mounted the circuit board is snapped back on to the standoffs. Wire the panel as appropriate and replace the cover.



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