



## Young Regulator Co.

7100 Krick Rd • Walton Hills, OH 44146

P: 440-232-9700 • F: 440-232-8266

[www.youngregulator.com](http://www.youngregulator.com)

Submit T-511 – 1-10

## Model T-511

Digital Display Thermostat

For 2 Position Dampers

### Application and Design

The Young Regulator model T-511 is a microprocessor based deadband-type thermostat with digital display for two position automatic changeover dampers. This multi-functional zone control thermostat comes pre-programmed by the factory to work with Young Regulator automatic changeover damper models 2010 / 2100 round dampers and models 2050 / 2500 rectangular dampers. This model features a contemporary design, easy to read display and soft touch keys.

Other features include:

- Deadband type thermostat for two position damper control
- Microprocessor based digital display thermostat
- Powered by 24Vac (transformer required) with battery backup for display
- Accurate to  $\pm 1$  °F
- Easy temperature setting
- Temperature range of 40 – 90 °F (heating) and 50-99° F (cooling), adjustable range limits
- Backlit display that simultaneously shows room temperature and temperature settings
- Heat and cool indicators
- Precise leveling not required
- Mercury free
- 5 year warranty from manufacturer

When used with the Young Regulator Automatic Changeover round damper models 2010 and 2100 or the rectangular damper models 2050 and 2500, you have an easy to use, easy to install stand-alone zone control kit.

### SEQUENCE OF OPERATION FOR MODULATING DAMPERS

The automatic changeover duct sensor on the damper senses whether there is warm or cool air in the branch supply duct. If the zone thermostat is calling for cooling and the duct sensor determines there is cool air in the duct, the damper will open; otherwise it stays closed. If the zone damper is calling for heat and the duct sensor determines there is warm air in the duct, the damper will open; otherwise the damper will remain closed. An illuminated green LED on the relay board shows that the damper is in the open position.

#### OPTIONS:

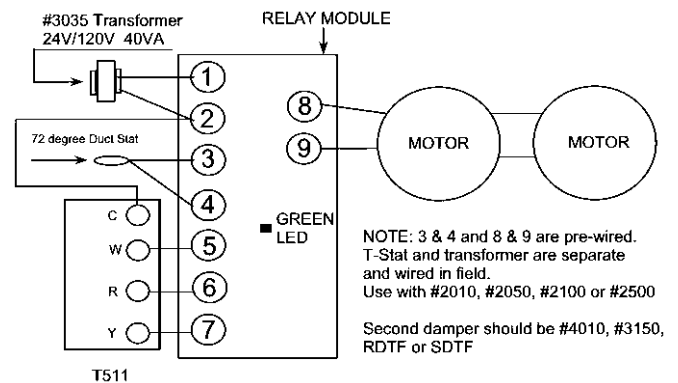
- T-511 can be programmed for cool only – consult the factory

#### OPTIONAL SETTINGS

- Celsius display
- Hidden adjustable range stops



Wiring Schematic for 2 Position Auto Changeover



MASTER	DRONE MODEL	MAXIMUM DAMPERS CONTROLLED BY ONE THERMOSTAT
2010, 2050	4010, 3150	2
2100, 2500	RDTF, SDTF	3

#### WARNING:

IF THIS PRODUCT IS USED TO REPLACE A DEVICE CONTAINING MERCURY, THE PURCHASER OR CONSUMER MUST ENSURE THAT THE MERCURY IS PROPERLY MANAGED TO COMPLY WITH STATE AND FEDERAL REGULATIONS. THE MERCURY MUST NOT BECOME PART OF SOLID WASTE OR WASTE WATER. CONTACT YOUR LOCAL WASTE MANAGEMENT AUTHORITY FOR INSTRUCTIONS REGARDING RECYCLING AND PROPER DISPOSAL OF THE OLD THERMOSTAT.



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### Thermostat Operating Instructions

The T511 thermostat is factory programmed to automatically recognize the state of your HVAC system and to control damper operation for cooling or heating needs. The digital display thermostat has a minimum fixed deadband of 3 degrees. For the most comfort, keep the heating temperature 3 degrees lower than the cooling temperature.

When changing the temperature settings, **RAISE** the heating setpoint or **LOWER** the cooling setpoint so that the thermostat automatically maintains the 3-degree deadband.

If your thermostat is installed with backup batteries for the display, a **LOW BATTERY WARNING** will flash alerting you to change the (2) AAA batteries about two months before the batteries are depleted. Replace with new alkaline batteries. All thermostat settings are stored in permanent memory and do not require battery power for retention.

To access the batteries, press down on the top right hand corner of the thermostat and pull the battery pack out the side. Reverse the procedure to install the battery pack.

To change temperature settings, push the **UP** or **DOWN** arrow twice (first push activates the backlight and second push gives you the option of changing the heat setting or the cool setting. Use the bottom right hand button to toggle between the heat or cool setting. The flashing display at the top right hand corner of the display indicates which temperature setting can be adjusted. Always check the heat and cool temperature settings to maintain a tight deadband.

Note: Remember to **RAISE** the heating setpoint or **LOWER** the cooling setpoint to automatically maintain the 3° deadband.

#### Optional settings

##### Procedure to set the thermostat to CELSIUS DISPLAY

Press and hold the **UP** and **FAN** buttons at the same time for approximately 5 seconds. Release the buttons when the screen changes.

Using the lower right hand button identified as **NEXT**, step through the setup numbers appearing on the left until setup number 14. Make changes with the **UP** and **DOWN** arrow buttons.

Setup Number	Setting	
14	0 (factory setting)	Fahrenheit display
	1	Celsius display

Press the lower left hand button identified as **DONE** to exit the Setup program. The thermostat will now display **CELSIUS**.

### Procedure to set limits for heating and cooling temperatures

Press and hold the **UP** and **FAN** buttons at the same time for approximately 5 seconds. Release the buttons when the screen changes.

Using the lower right hand button identified as **NEXT**, step through the setup numbers appearing on the left until setup number 27 to set the heating limit. Make changes with the **UP** and **DOWN** arrow buttons.

Setup Number	Setting	Option
27	90 (factory setting)	40 – 99 °F

Use the lower right hand button labeled **NEXT** to step to setup number 28 to set the cooling limit. Make changes with the **UP** and **DOWN** arrow buttons.

Setup Number	Setting	Option
28	50 (factory setting)	51 – 99 °F

Press the lower left hand button identified as **DONE** to exit the Setup program. The thermostat now has fixed range stops.