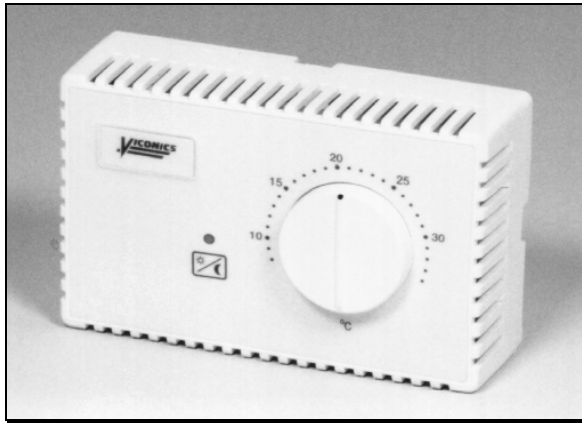




Micro-STAT®

# T500 T550



### APPLICATIONS

- VAV box control
- Proportional room electric heating control
- Proportional room hot water heating control
- Air conditioning control

### ADVANCED DESIGN AND PI CONTROL

Advanced microcomputer electronics and PI control algorithms provides precise temperature control and eliminates wasted heating energy caused by the typical On-Off cycling in conventional thermostats. As a result the room occupant is able to reduce the setpoint or desired temperature to the lowest comfortable setting. The result is energy savings ranges from 5% to 10%.

### DAY-NIGHT MODE

A night mode, initiated by a remote timer or computer contact, provides energy savings during unoccupied periods of up to 10 %, without sacrificing comfort in occupied rooms. A flashing LED indicator warns a person in an occupied room that the thermostat is in Night mode. The occupant may override this condition locally for 4 hours by pressing the switch on the thermostat.

### HIGH COOLING SIGNAL OUTPUT

A optional 0 to 10 Vdc cooling voltage output can be wired to other thermostats and used as a signal to a voltage relay to initiate cooling demand.

### REPROGRAMMABLE

Each thermostat is computer calibrated and factory programmed to the ordered specification. However, over 10 control parameters ( such as heating/cooling mode, stage differential, night set-back etc. ) may be changed in the field with programming tool without having to remove the thermostat cover. The C263 also doubles as a diagnostic tool and indicates the status of all the inputs and outputs to each stat, and will reduce troubleshooting time by quickly identifying the specific problem.

### COVERS

The thermostats are available with 4 covers options in either °C and °F. Thermostat cover plugs in to base for easy wiring and service. The base fits onto a standard electrical box. The User adjustable front models feature internally selectable minimum and maximum setpoint knob stops.

### ELECTRONIC THERMOSTAT:

- TRI-STATE FLOATING DAMPER MOTOR OUTPUT
- TWO MORE STAGES
- DAMPER CHANGEOVER INPUT
- DAY-NIGHT MODE ( T550 ONLY )

The model T500 and T550 are part of Viconics' Micro-Stat Series low voltage RHVAC room temperature and humidity controls line.

### DAMPER CHANGEOVER INPUT

When the damper operation is selected for cooling mode, a closed contact to the changeover input will reverse the operation of the damper motor to heating mode. In the automatic mode a duct sensor (S60 or S70) must be installed just before the VAV box. When duct temperature is higher than room heating set point, the damper operates in heating mode. When duct temperature is lower than room cooling set point the damper operate in cooling mode. With the recirculation mode selected, when the supply temperature is in the dead zone between the heating and cooling set point, the damper goes fully open to allow full ventilation. This feature improves air quality and reduces temperature variations across the room.

### CONTROL OUTPUTS FOR ALL APPLICATIONS

The thermostats are available with various outputs to drive:

- Relays
- Contactors
- Solenoids
- Valves
- Motors
- SSR's
- SCR Power Controllers
- Three position motor

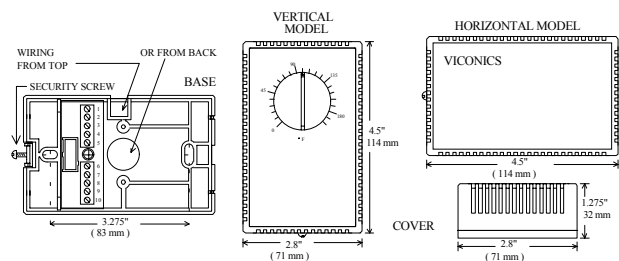
### SENSORS

Each thermostat can be either room or duct mounted with local or remote sensors, and can be selected by an internal jumper.

### SPECIFICATIONS

- Operating Conditions: 0 °C to 50 °C ( 32 °F to 122 °F )  
0% to 95% R.H. non-condensing
- Sensor: Local 47 K NTC thermistor
- Resolution: ± 0.1 °C ( ± 0.2 °F )
- Control accuracy: ± 0.2 °C ( ± 0.4 °F ) for low ranges  
( calibrated ) ± 0.9 °C ( ± 1.8 °F ) for high ranges
- Ranges: 10 °C to 32 °C ( 50 °F to 90 °F )  
-18 °C to 82 °C ( 0 °F to 180 °F )
- Outputs: Isolated Triac: 30 Vac at ½ A max.  
0 to 10 Vdc into 2KΩ resistance min.  
0 / 5 Vdc at 20 mA max. for both outputs.
- Power: 24 Vac -15%, +10% 50/60 Hz; 2 VA

### DIMENSIONS



Specifications and equipment are subject to change without prior notice.

T500 - AB - CD - EF - GH ( without day-night mode )  
 T550 - AB - CD - EF - GH ( with day-night mode )

**COVERS ALL YOUR THERMOSTATS NEEDS...**

A	Output no. 1 ( controlled device )	Type
0	Not installed	
5	"SSR" with 3-32 Vdc input	Pulsed 0/5 Vdc
6	0 to 10 Vdc actuator, voltage relay or "SCR" *	0 to 10 Vdc
7	0 to 10 Vdc high cooling signal for Vdc relay	Higher signal

B	Output no. 2 ( controlled device )	Type
0	Not installed	
1	Relay, thermal relay, two position motor	Isolated Triac
2	Normally open thermal valve	Isolated Triac
3	Normally close thermal valve	Isolated Triac
4	"SSR" with 24 Vac input	Isolated Triac
5	"SSR" with 3-32 Vdc input	Pulsed 0/5 Vdc

C	Output no. 1 and 2 control mode	
1	Heating, reverse acting, ( RA )	* Standard
2	Cooling, direct acting, ( DA )	
3	Heating, RA ( no. 1 ) and cooling, DA ( no. 2 )	
4	Cooling, DA ( no. 1 ) and heating, RA ( no. 2 )	

D	Main control sensor location	
1	Room, inside thermostat, or ( duct return air**)	* Standard
2	Duct supply air **	

\*\* Order with S60 or S70 sensor

E	Setpoint adjustment	
1	User adjustable	* Standard
2	Blind cover	

F	Scale	
1	10 °C to 32 °C	* Standard
2	50 °F to 90 °F	

G	Output no. 3	Damper changeover input
1	Normally cooling, ( DA )	Common dry contact for all thermostats
2	Normally heating, ( RA )	Common dry contact for all thermostats
3	Automatic	Duct supply sensor **
4	Automatic with recirculation	Duct supply sensor **

\*\* Order with S60 or S70 sensor

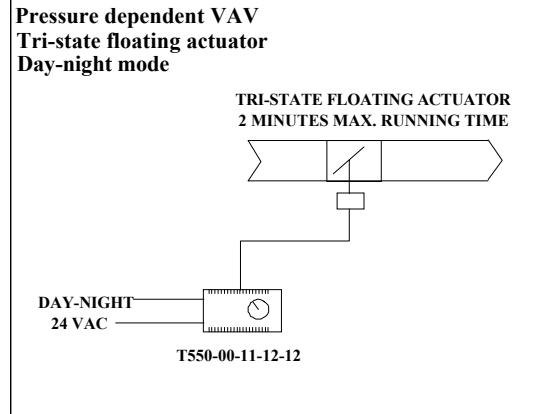
H	Maximum running time of tri-state floating actuator
1	1 minute
2	2 minutes
...	etc.
9	9 minutes

Example: T550 - 75 - 41 - 12 - 12  
 One higher signal cooling output and one "SSR" 3-32 volts heating output.  
 Main sensor located inside the room. Setpoint adjustable by user.  
 Scale 50 °F to 90 °F. The output no. 3 is a damper with a travel time of 2 minutes used in cooling mode.  
 Note: Order remote sensor separately.

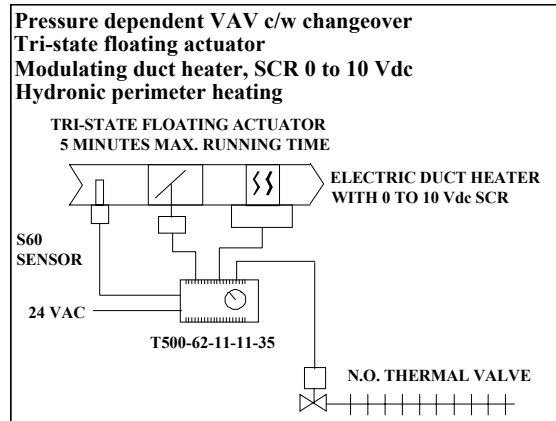
**WIRING** \_\_\_\_\_

For complete technical information on wiring, commissioning and servicing, please refer to the T500 / T550 service manual.

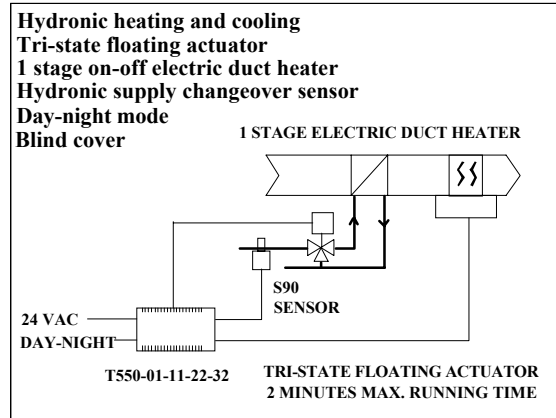
**From simple...**



**To more complicated...**



**To sophisticated applications !**



**Represented by:**