SMT-150™

DIN Mounted Multistage Commercial HVAC Controller

Making Life Comfortable

General Description

Install in Moments

Smart Temp is pleased to provide you with the SMT-150 Digital Multistage HVAC Controller that is so amazingly simple to set up and use that even a 1st year could do it. Simply connect the Heat/ Cool or Heat Pump system to the SMT-150 equipment outputs, apply power (24V or 240V) then use the Up/Down button to adjust the set point. It is that simple.

Factory defaults in the SMT-150 are preset to be perfect for 99.5% of projects, but like all Smart Temp products we provide the installer with the ability to allow the fine tuning of various control functions.

Precise Control With Inbuilt Safety

The SMT-150 permits the set point to be digitally adjusted and controlled to 0.1°C increments. The span settings (compressor turn on points) can also be digitally adjusted to within 0.1°C steps (from 0.3°C to 5.0°C per stage). This provides unsurpassed control precision that is simply unobtainable with an analogue system.

Anti-cycle timers prevent rapid cycling of compressors and timed upstaging reduces building peak load demands by preventing multiple compressors all starting simultaneously (even when multiple SMT-150s control multiple systems). The SMT-150 will even permit you to control how fast it will respond to room temperature changes. This helps to prevent temperature overshoot or unnecessary calls caused by opening doors or drafts.

Feature Rich Performance

Smart Temp believe that it's much simpler and more cost effective to manufacture a single device with all the bells and whistles included as standard rather than building a range of very similar devices each with separate functions or an additional output. Building and stocking multiple devices costs more time and money and makes product selection complicated and prone to error for the installer.

At Smart Temp we build the best we can, providing all the options in a single product with functions that can be turned on or off as needed to suit the project at the time. We then pass the savings of a simpler manufacturing and inventorying process on to our customers. The net result is a better product at a lower cost.

Features

Up to 3 Stage Compressor Control

Digitally Accurate, Digitally Precise

Movement Detector (PIR) Input

Integrated 0-10V Economy Function

Integrated After Hours Timer

Full Keyboard Lock

Smart 2 Wire Sensors with Multiple Functions

     - Averaging

     - After Hours Run Function

     - On/Off Function

     - High/Low Select

Digital Input with Library of Functions

Setpoint and Span Settings Adjusted in 0.1°C

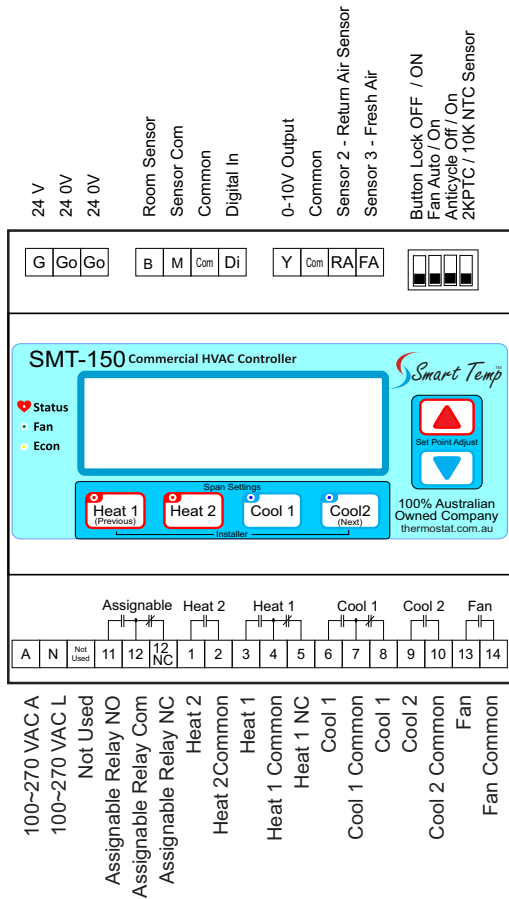**0-10V Heating and Cooling Valve Control**

24V or 240V AC Powered

Volt Free Relay Outputs - 240V 10A Max (Fan)

Designed and Built by Smart Temp Australia
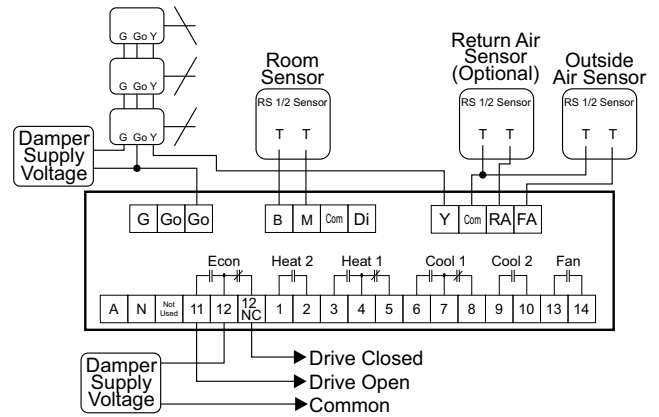
3 Year Piece of Mind Warranty RTB

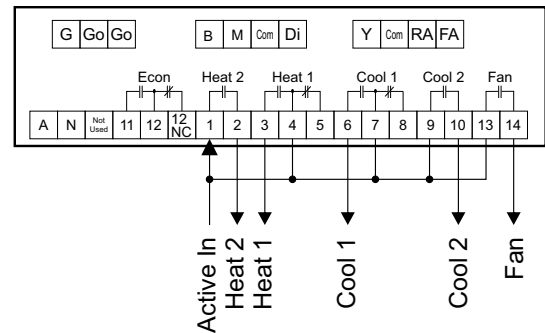*Smart Temp*

Board Layout

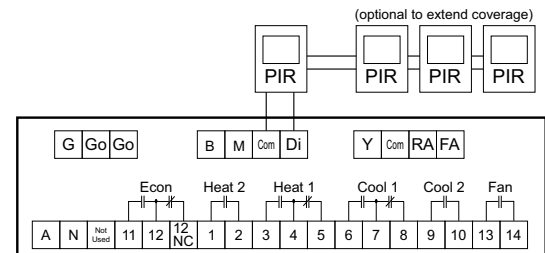# Wiring Examples

Typical Economy Cycle

This drawing shows the SMT-150 Economy Cycle wiring needed for both open closed or 0-10V modulating dampers. Typically only one type is used.
Equipment wiring is not shown here. (See example below)

Typical 2 Heat & 2 Cool (With Fan)

The SMT-150 is capable of controlling a huge variety of systems. This example shows a simple 2 stage Heat, 2 stage Cool system. To further expand this capability Modulating Heat and Cool Valves, Digital Capacity Control or Economy Cooling can also be added to the above drawing.

No Time Clock? No Worries

With an inbuilt count down timer, the user can simply press a button on the sensor to start the HVAC system for the day knowing it will automatically turn off again at the end of the day. If that's too hard then simply purchase a PIR sensor (or sensors) and have the SMT-150 turn on when movement is first detected and off again automatically 30 minutes after movement stops. Perfect for schools or training facilities.

Specifications

Input Voltage	24 / 240 VAC+/- 15% 50/60 Htz
Operating Temperature	0 - 50°C (32°F to 122°F)
Operating RH	0 - 95% (Non Condensing)
Storage Temperature	0 - 65°C (32°F to 150°F)
Size	110 x 110 x 65mm
	110 x 180 x 65mm with Terminal Covers Fitted
Control Range	-10°C to 50°C in 0.1°C Increments
Span Adjustment	0.3°C to 5°C Per Stage in 0.1°C Increments
Sensor Speed of Response	4°C Per Second to 4°C in 5 Minutes (Adjustable)
Overshoot Protection	+0.3°C Added to Opposite Call
Maximum Equipment Stages	3 Compressors (HC Mode = 2 Heat, 2 Cool + 1)
Anti-Cycle Timer	Off or 5 Minutes (Installer Adjustable)
After Hours Timer	Off to 12 Hours (Installer Adjustable)
Deadband	0 to 5.0°C
Minimum Run Timer	90 Seconds
Auto Upstage Timer	30 Minutes Per Stage
Auto Downstage Timer	0.2°C Per Stage
Memory Type	Non Volatile 64K (1.5k Ram)
LCD	FTN White Backlight
Relays	Fan 10A 240V Max - Volt Free
	All Others 5A 240Vac Max - Volt Free
0-10V Output	10mA Max Each
Room, Return & Outside Air Sensor	10K NTC (B3950) or 2kPTC (2 Wire Screened)
Warranty	36 Months RTB

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