AC500 SERIES ROOM THERMOSTATS

For Low Voltage and Line Voltage Control Of Valve,
Relays and Fan Motors In Fan Coil and Heat Pump Units

AC500

Features:

* Attractive contemporary styling
* High quality bellow-type sensor provides constant and close temperature differential over the whole temperature range
* No heat anticipators required
* System "OFF" position breaks all circuits
* All slide switches for ease of operation
* Easy wire termination
* Optional set point range limit stops available to conserve energy

Introduction:

AC500 Series room Thermostats are available in 6 basic models for low voltage and line voltage control of valves,
relays and / or fan motors in fan coil, heat pump and packaged units for commercial, industrial and residential installations.
The Thermostat operates an on/off valve to provide control at the desired setpoint temperature.
The fan can also be controlled from the Thermostat. In some models, it is wired to run continuously and can be switched off with the
system switch in the off position, while with other models there is a choice of running the fan continuously or automatically with the Thermos

Specifications:

Model Number		See figure 5: AC500 Series Model Number Designation
Nominal Operating Differential		Approximately 1K
Range		10-30 ^{o}C
Sensing Element		Bellow type
Body Material		Self extinguishing molded ABS
Finish		Bone-White Color
Electrical Rating	Thermostat	6(1)A Cooling, 6(1.5)A Heating, 24 to 277V 50/60Hz
	Switches*	6A resistive, 4A inductive, 24 to 277V 50/60 Hz
Ambient/Storage Temperature		0 to 50 ^{o}C / -30 to 50 ^{o}C
Wire connections		Screw-down Connectors. Wire size 1mm or 18 AWG solid copper recommended
Agency Approval		CE Mark Compliant
Shipping Weight		0.24kg (0.53lb)
Dimensions		See Figure 3: Dimensions in mm

*The specifications above are nominal and conform to generally acceptable industry standards.

Our control are not responsible for damages resulting from misapplication or misuse of the products.

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Figure 1 : Accessories

Description	Part No
Adapter Wallplate	WP500
Setpoint Limit Stop Adapter and Pins	PIN500
Setpoint Calibration Kit	CAL500
Auto Seasonal Changeover Switch	680-243
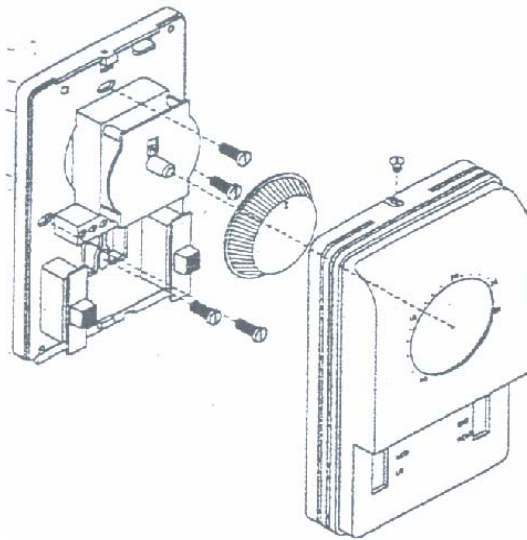
Mounting

The AC500 Series thermostats Can Be Surface Mounted or Secured To A Standard American 2" x 4" or A Standard European 75x75x35mm Electrical Box.
See Fig.2: Mounting Details.Mounting Screws Are Included.
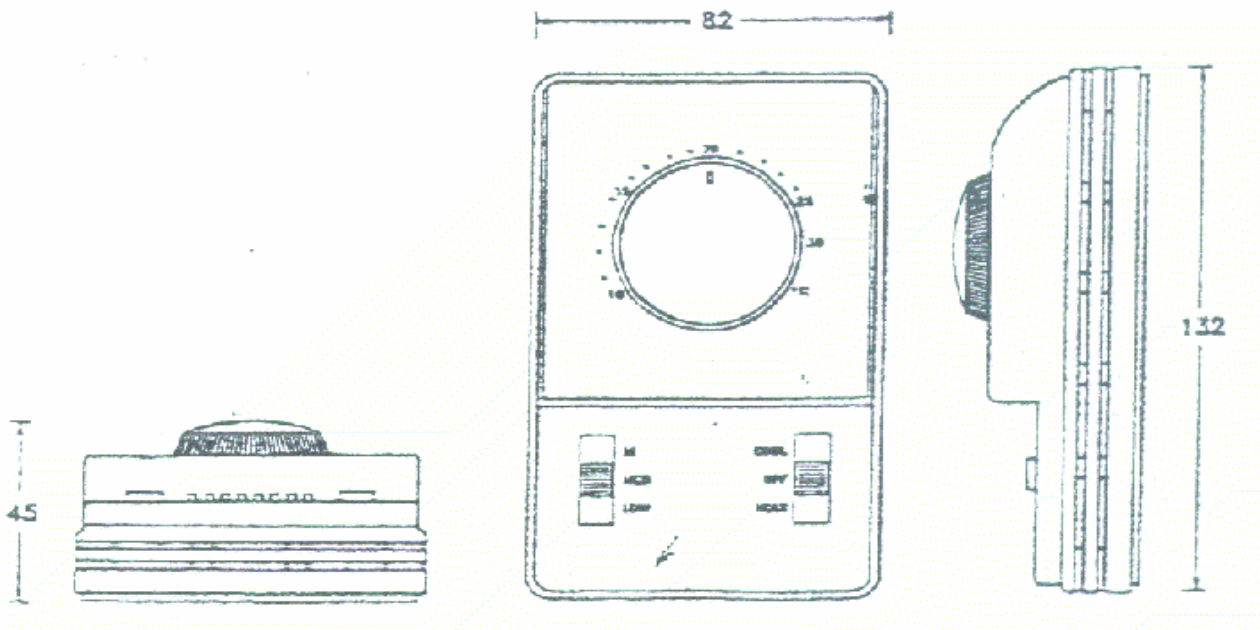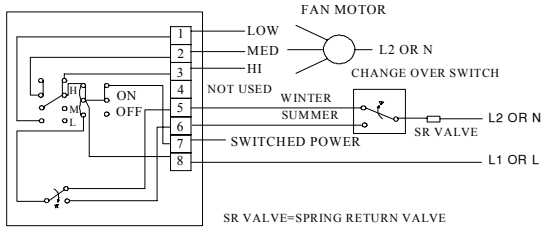
Figure 2 : Mounting Details
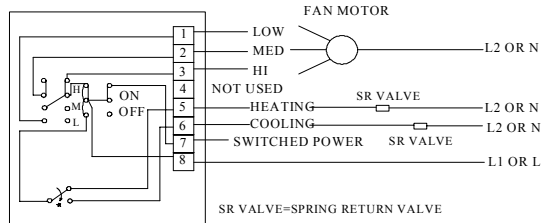

Figure 3 : Dimensions In MM.

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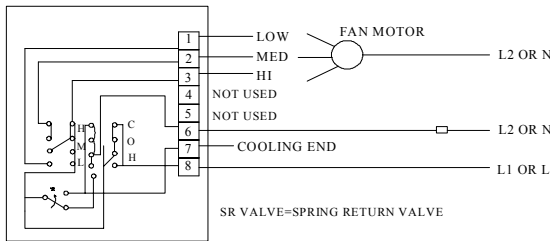## Figure 4 : Typical Application Wiring Diagrams

AC511
HEATING/COOLING 2-PIPE SYSTEM
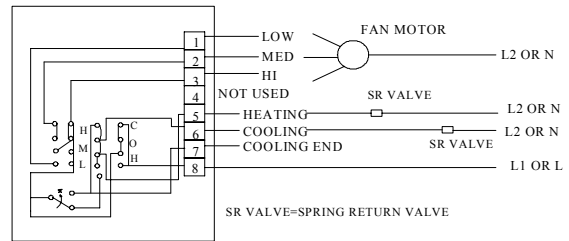WITH AUTOMATIC CHANGEOVER
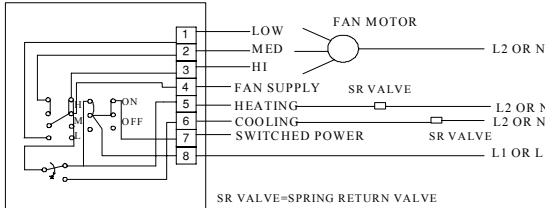

AC511
HEATING ONLY OR COOLING ONLY
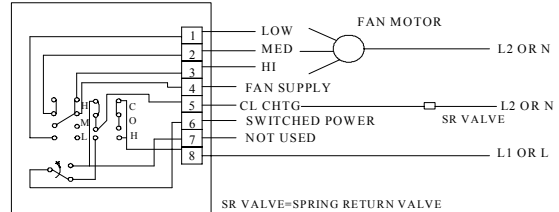2-PIPE SYSTEM

AC512
HEATING/COOLING 2-PIPE SYSTEM

AC513
HEATING/COOLING 4-PIPE SYSTEM

AC511A
HEATING ONLY OR COOLING ONLY
2-PIPE SYSTEM

* a. FOR CONTINUOUS FAN RUNNING, JUMPER TERM 4 & 7
  b. FOR AUTO FAN RUNNING AND COOLING ONLY APPLICATION
     JUMPER TERM 4&5 (FACTORY SET)
  c. FOR AUTO FAN RUNNING AND HEATING ONLY APPLICATION,
     JUMPER TERM 4&5

AC512A
HEATING/COOLING 2-PIPE SYSTEM

* a. FOR CONTINUOUS FAN RUNNING, JUMPER TERM 4 & 6
  b. FOR AUTO FAN RUNNING, JUMPER TERM 4&5 (FACTORY SET)

AC542
HEATING/COOLING 2-PIPE SYSTEM
WITH SPRING RETURN VALVE

SR VALVE=SPRING RETURN VALVE

NSR VALVE=NON-SPRING RETURN 3-WIRE VALVE
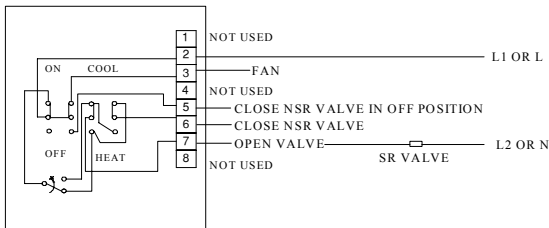
AC542
HEATING/COOLING 2-PIPE SYSTEM
WITH NON-SPRING RETURN VALVE
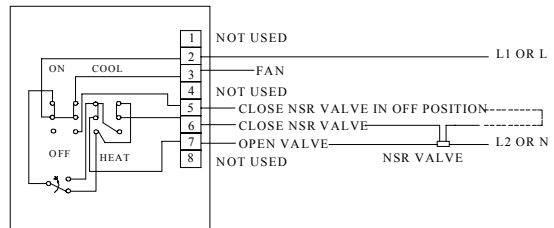
AC 500 SERIES ROOM THERMOSTATS
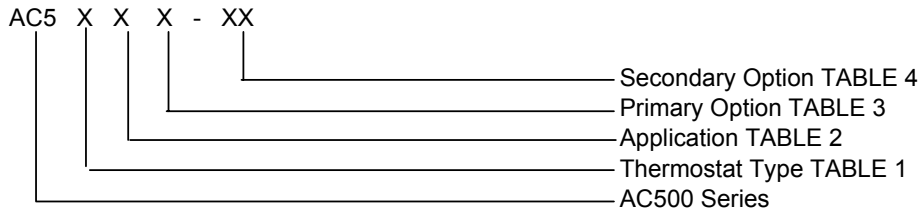
Figure 5 : AC500 Series Model Number Designation

```
AC5  X  X  X  -  XX
                  |_____ Secondary Option TABLE 4
               |_____ Primary Option TABLE 3
            |_____ Application TABLE 2
         |_____ Thermostat Type TABLE 1
      |_____ AC500 Series
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TABLE 1	1 =	Fan Coil
	2 =	Heat Pump
	4 =	General Purpose

| **TABLE 3** | F = | With Fahrenheit Temparature Scale |
| | A = | With Auto Fan Running |

| **TABLE 4** | NL = | No Logo |
| | | Omitted When Not Used |

TABLE 2

Model Number		AC511	AC511A	AC512	AC512A	AC513	AC542
Application	Ventilation		X		X		X
	2-Pipe Fan Coil	X	X	X	X		X
	4-Pipe Fan Coil					X	
	Heat Pump						
	Air Conditioner						
	General Purpose						X
Control Capability	Cool Only or Heat Only	X	X				
	Cool or Heat	X	X	X	X	X	X
	Change over (Auto / Manual)	A	A	M	M	M	M
	Fan Control (Auto / Cont)	Cont	A or Cont	Cont	A or Cont	Cont	A or Cont
	3-Speed Fan Control	X	X	X	X	X	
	1-Speed Fan Control						X
	On-Off System Switch	X	X				X
	Cool-Off-Heat System Switch			X	X	X	
	Valve Control	X	X	X	X	X	X
	Compressor Control						