HTC SERIES

Dual Voltage
Enabled Controller ®

HTC-43S

3 HEAT/3 COOL TEMPERATURE CONTROLLER

*The **HTC-43S** temperature controller is primarily designed for the control of 3 Heat and 3 Cool air-conditioning HEAT PUMP units only.*

The third relay stage is set to energise 3 oC above setpoint and 3 oC below setpoint.

*The **HTC-43S** controller is ideally suited for DIN rail mounting in a switchboard, or directly inside the A/C unit if required.*

Features

- ☐ Australian made and designed.
- ☐ Power Supply can be either 24v or 240v A.C ®
- ☐ 10 AMP (resistive) Potential free relay contacts.
- ☐ L.E.D Indication of all outputs.
- ☐ Various remote sensor options available.
- ☐ Mounts in most M.C.B enclosures.
- ☐ Third relay stage for Triple Compressor HEAT PUMPS.

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HTC-43S

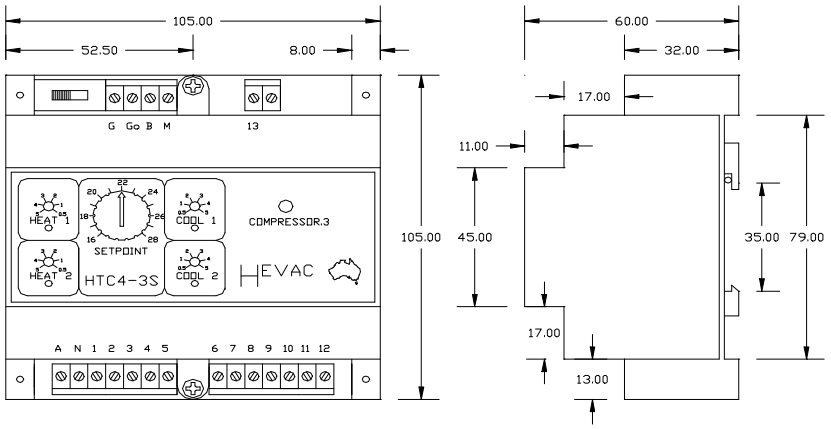
HEVAC CONTROLS

HTC-43S Technical Specifications

Power supply	*24VAC or 240VAC*
Power consumption 240 volts	*7 VA*
Power consumption 24 volts	*1 VA*
Heating and Cooling relay outputs	*240VAC 10 amp resistive,3 amp inductive*
Temperature range (Factory Set to 22oC)	*16 to 28 Degrees Centigrade*
Switching differential for STAGE 1	*0.3 Degrees Centigrade (NON-Adjustable)*
Switching differential for STAGE 2	*0.7 Degrees Centigrade (NON-Adjustable)*
Switching differential for STAGE 3	*1.0 Degrees Centigrade (NON-Adjustable)*
STAGE 1 & 2 start point adjustment range	*0.5 to 5.0 Degrees Centigrade*
Third Compressor Stage start point	*3.0 Degrees above and below Setpoint*
Output indication	*Green LED for Cooling* *Red LED for Heating*
(Located on the right hand side of control fascia)	*Yellow LED for Third Compressor Stage*
Mounting method	*35mm DIN rail (Not supplied)*

Dimensions

ALL DIMENSIONS IN MILLIMETRES



Terminal Designations

G	24 VOLT AC SUPPLY ACTIVE	**4**	(HEATING STAGE 1 & R/V FOR COOL) COMMON
Go	24 VOLT AC SUPPLY GROUND REFERENCE	**5**	REVERSING VALVE FOR COOLING OUTPUT
B	SENSOR INPUT	**6**	COOLING STAGE 1 OUTPUT
M	SENSOR INPUT COMMON	**7**	(COOLING STAGE 1 & R/V FOR HEAT) COMMON
13	Y SIGNAL OUTPUT	**8**	REVERSING VALVE FOR HEATING OUTPUT
A & N	240 VOLT AC SUPPLY	**9**	COOLING STAGE 2 COMMON
1	HEAT STAGE 2 COMMON	**10**	COOLING STAGE 2 OUTPUT
2	HEATING STAGE 2 OUTPUT	**11**	COMPRESSOR STAGE 3 COMMON
3	HEATING STAGE 1 OUTPUT	**12**	COMPRESSOR STAGE 3 OUTPUT

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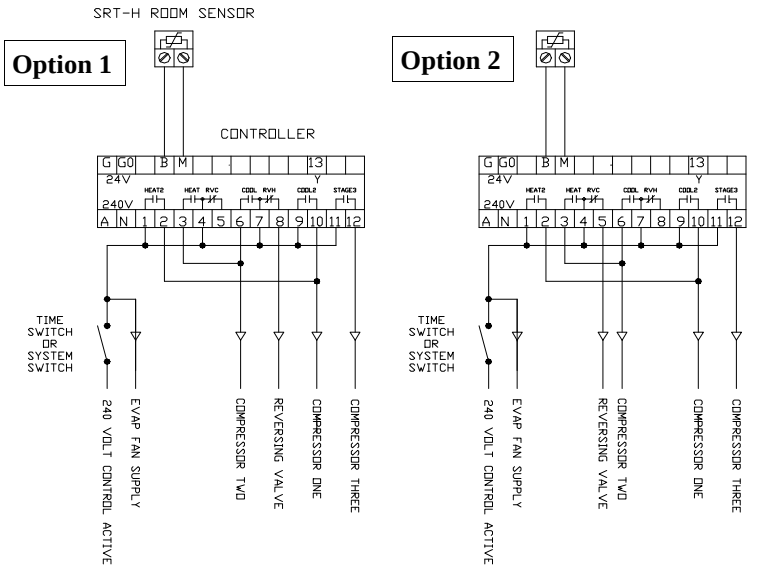
HEVAC CONTROLS

HTC-43S Electrical Schematics for Compressor Reversing Valve Type A/C Units



TECHNICAL NOTES

Select the option that suits the specific requirements of the Air Conditioning Unit.

Option 1

Reversing Valve Energises on a HEATING CALL.

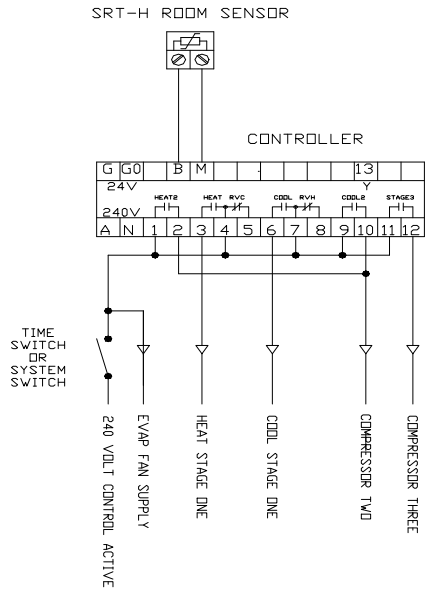
Option 2

Reversing Valve Energises on a COOLING CALL.

Supply Voltage

The Controller requires either a 240 Volt AC **or** 24 Volt AC Supply.
(Use **ONE** Supply Voltage Only)

Electrical Schematic for Heat / Cool Type A/C Units



TECHNICAL NOTES

Typical for A/C Units Labeled HEAT / COOL / COMPRESSOR Such as APAC Units.

Supply Voltage

The Controller requires either a 240 Volt AC **or** 24 Volt AC Supply.
(Use **ONE** Supply Voltage Only)

Quick Test Information

All HEVAC Controllers are Factory Calibrated and Pre-set to Industry Standard Defaults prior to dispatch.
If you require further information on these Settings please Refer to the Technical Specifications Page.

To quickly confirm that a controller is wired to the correct sensor and to TEST for Heating & Cooling Changeover the following procedure can be carried out.

STEP 1: Dial setpoint up or down until you do not have a Heating or Cooling call. (ie Deadband Position)
STEP 2: Open circuit the sensor wires at the Sensor. The controller should go into full COOLING Mode.
STEP 3: Short circuit the sensor wires at the Sensor. The controller should go into full HEATING Mode.

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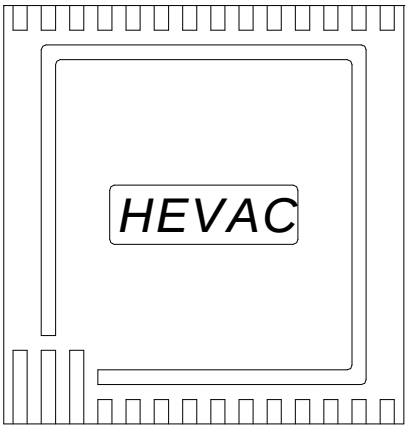
SRT-H

Wall Mount Room Temperature Sensor (Non-Adjustable)

HEVAC CONTROLS



*The **SRT-H** is a wall mount room temperature sensor. It is suitable for use with the HTC 2 **analogue** series temperature controller.*

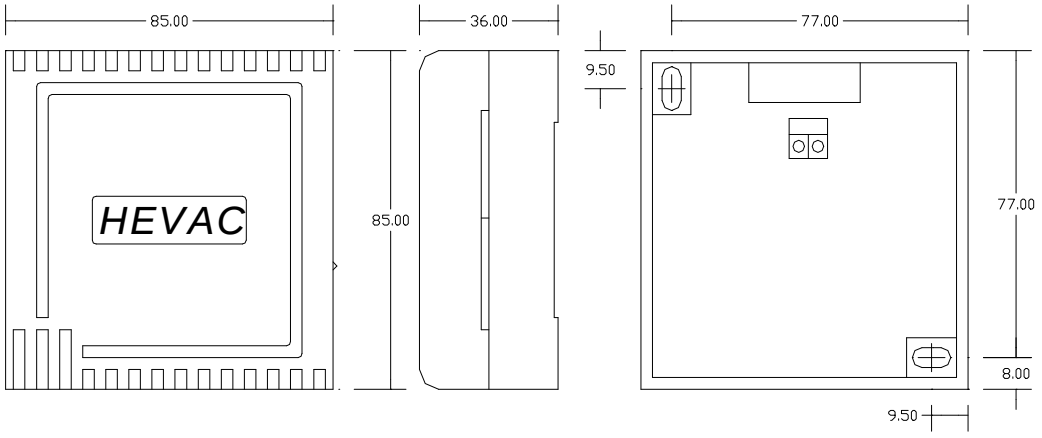
*Constructed from high impact ABS plastic, the housing is specifically designed with sensor sensitivity in mind making the **SRT-H** very responsive even in low airflow situations.*

Cable entry is from the rear with side knockouts for cable duct on three sides, allowing for easy electrical installation.

Technical Specifications

Control range	*16 to 28 Degrees Centigrade*
Time constant	*3 Minutes*
Thermistor characteristics	*PTC 2000 ohms at 25 Degrees Centigrade*
Wiring Considerations	*Screened cable is recommended, earthed at the controller end only*
Housing Colour	*Cream*
Enclosure	*IP 31*
Measuring Accuracy	*+/- One Degrees Centigrade*

Dimensions



Thermistor Resistance Characteristics

Temp	Ohms	Temp	Ohms	Temp	Ohms	Temp	Ohms	Temp	Ohms	Temp	Ohms
10.00	*1776*	14.00	*1834*	18.00	*1894*	21.00	*1939*	23.00	*1969*	26.00	*2015*
11.00	*1790*	15.00	*1849*	19.00	*1909*	21.50	*1946*	23.50	*1977*	27.00	*2031*
12.00	*1805*	16.00	*1864*	20.00	*1924*	22.00	*1954*	24.00	*1985*	28.00	*2047*
13.00	*1820*	17.00	*1879*	20.50	*1931*	22.50	*1962*	25.00	*2000*	29.00	*2062*

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