INNOTECH®

DS 2.89

August 2013

Models:

PS2020 PS4020
PS2002 PS4002
PS2011 PS4011

Picostat
Wall Mounted Thermostat

Specifications

Power Supply

Voltage: 24VAC ±10% @ 50/60Hz **OR**
240VAC ±10% @ 50/60Hz
Power Consumption: 1VA Max.

Input

10kΩ Thermistor temperature sensor - 0°C to 50°C range

Outputs

Stage 1 & 2	Voltage free relay contacts:
Normally Open:	16A resistive
	6A inductive
Fan	Voltage free relay contacts:
Normally Open:	5A resistive
	2A inductive

Sensor Lead Identification

Black	Sensor
Black/White	Sensor

Output Lead Identification

White	Stage 1 NO
Brown	Stage 1 & Fan Common
Grey	Stage 2 NO
Brown	Stage 2 Common
Blue	Fan NO

Input Lead Identification for 24VAC

Orange	24V~
Yellow	0V⊥
Green/Yellow	Safety Earth

Input Lead Identification for 240VAC

Red	L
Black	N
Green/Yellow	Safety Earth

Temperature Ratings

Storage:	0-50°C non-condensing
Operating:	0-40°C non-condensing

Enclosure

The Innotech Picostat is housed in a standard single gang wall plate made from white flame resistant Cycoloy C2950HF.

Application

The Innotech Picostat is a wall mounted Thermostat designed to control temperature in air conditioning systems. It is a digital controller that regulates temperature of a conditioned space by switching heating and/or cooling systems as required.

A knob on the front panel sets the desired temperature. The unit is wall mounted and has flying leads for all external connections.

Features

- The Picostat fits standard electrical wall plates
- Available in 3 factory preset configurations (2 cool, 2 heat or as 1 heat 1 cool)
- Can be configured for reverse cycle
- LED indication of On/Off status

Installation

1. The Picostat is an open frame design, live parts may be accessible to the installer. To ensure safety, power must be switched off before connecting wires.

The Picostat must remain wall mounted at all times when powered.

2. Mount in a dry and reasonable clean location free of excessive vibration. Installation on stud brackets is recommended.
3. There are no serviceable parts within the Picostat and attempting any repairs will void the manufacturer warranty.
4. Wire in accordance with INNOTECH connection diagrams and local bylaws or refer to your local distributor.

This product should only be installed by qualified personnel.

Wiring

Ensure that power is OFF before connecting any wires to the Picostat.

1. Connect EARTH to the correct lead.
2. Connect the AC supply to the correct leads on the Picostat, observing the correct polarity of the connections.
3. DO NO connect 24V or 240VAC to the "Sensor" leads.
4. Ensure C-Clip or stud brackets are well clear from the electronic circuitry to avoid damage when mounting the Picostat to the wall.
5. When powered by 24VAC, the operating voltage must meet the requirements of the safe extra low voltage (SELV) to EN60730.

Adjustable Parameters

The Picostat will not start if an invalid jumper setting has been detected. See the Error Indication section for details.

Jumper #1 (JP1 Rev)
This jumper is used to select Electric Heat or Reverse Cycle operation. When the link is open, the heat and cool relays operate independently of each other. When the link is closed, the cool relay controls the compressor in both heating and cooling operations. The heat relay operates the reversing valve.

Jumper #2 (JP2 H/C)
This jumper is used to select whether the reversing valve is energised for cooling or heating.
When the link is closed, the heat relay will close during cooling.
When the link is open, the heat relay will close during heating.

This function is only effective if Jumper #1 is set for Reverse Cycle Operation.

Jumper #3 (JP3 Fan)
This jumper is used to select continuous fan operation or fan cycles with heating.
When the link is closed, the fan runs continuously on cooling and cycles with heating.
Jumper valid only in Heat/Cool mode and 2 stage Heating Modes or operation.

Factory Set Default Settings

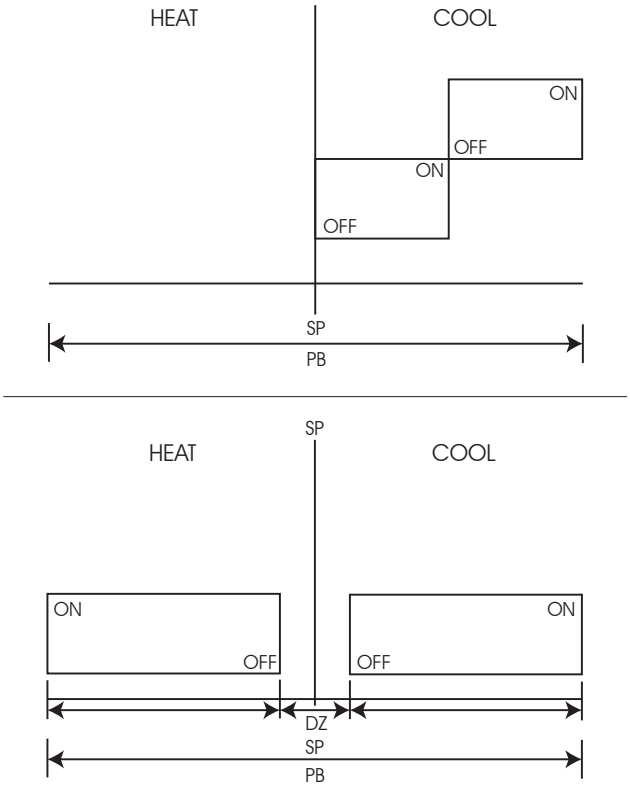
- Setpoint 15°C to 30°C
- Compressor Minimum On Time 0 Minutes
- Fan Run On Time 30 Seconds
- Compressor Minimum Off Time 4 Minutes

- 30 Second Delay between stages
  This is the time delay between turning on the first and second stages when both are required to be on.

- 30 Second Compressor/Heater delay for fan to start
  This is the time delay between the fan starting and the heater or compressor starting.

- Dead Band (on either side of the setpoint)
  0.5°C - in a single stage heat or cool mode
  0.0°C - in 2 stage heat or cool mode.

- Proportional Band (evenly distributed across the set point)
  2.0°C in single stage heat or cool mode
  3.0°C in 2 stage heat or cool mode



Operational Mode Indication

When the Picostat is turned on, it will flash the On/Off LED to indicate the operational mode it has been configured for before turning on the On/Off LED fully.

- 1 Flash Single stage Heat and Cool Operation
- 2 Flashes 2 Stage Heat Operation
- 3 Flashes 2 Stage Cool Operation

Error Indication

Errors are indicated in normal operation by the flashing of the On/Off LED. While the relays and the On/Off button are deactivated, the On/Off LED will flash a number of times to indicate the error type followed by a break of a few seconds and then repeating. When the problem has been resolved, the Picostat must be turned off and then on using the On/Off button.
The error indications are as follows:

- 1 Flash Invalid combination of links fitted
- 2 Flashes Thermistor is disconnected or faulty
- 3 Flashes Internal Fault - Return unit for repair

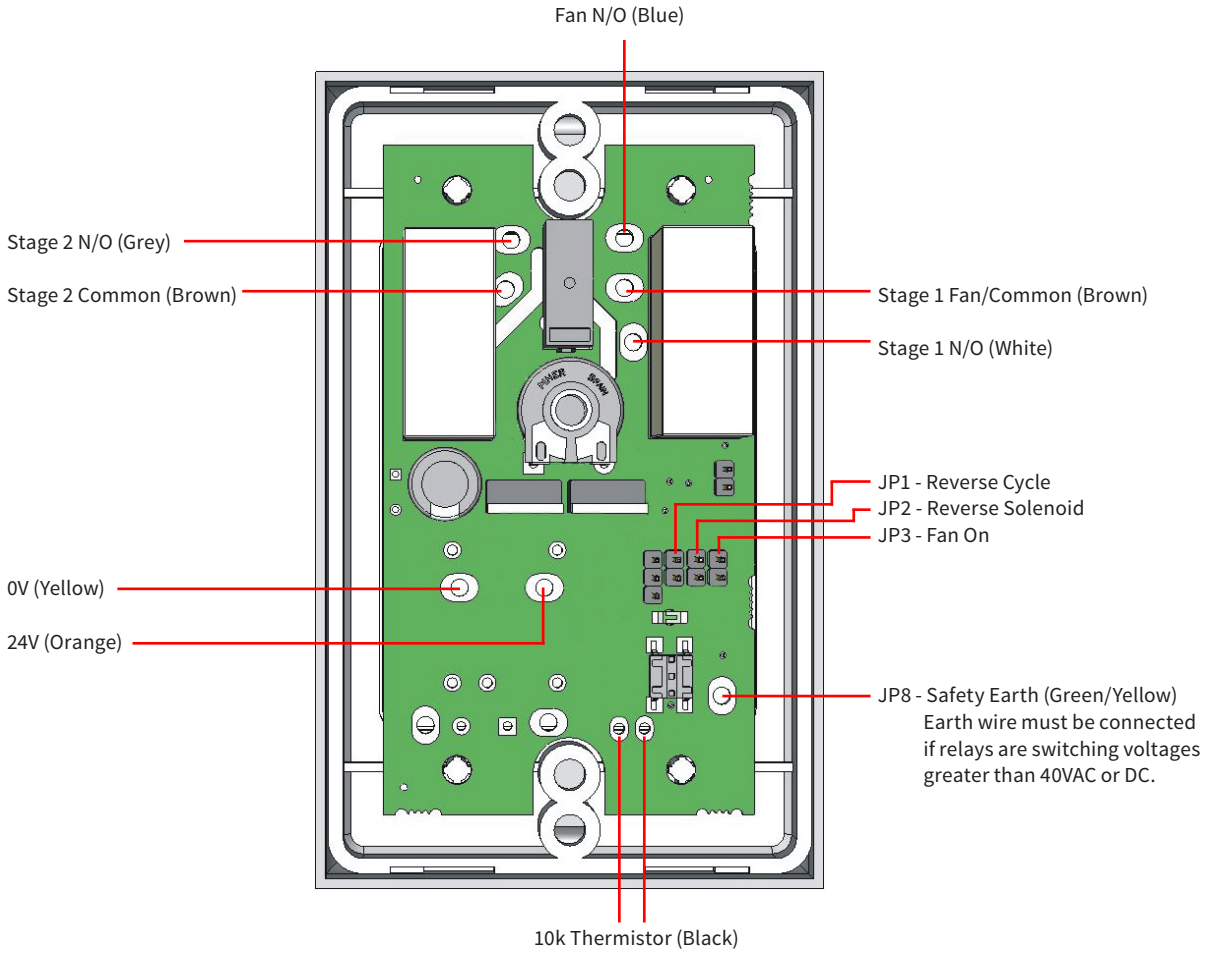
Approvals

The Innotech Programmable Wall Mounted Thermostat has the following approval: Australian / New Zealand standard AS/NZS CISPR 11:2004 for C-Tick.

	Terminal Identification		
	Stage 1	**Stage 2**	**Fan**
	White NO **Brown 1 Com**	**Grey NO** **Brown 2 Com**	**Blue NO** **Brown 1 Com**
240V Models	Stage 1	Stage 2	Fan
PS2020	Heat 1	Heat 2	Fan
PS2002	Cool 1	Cool 2	Fan
PS2011	Cool 1	Heat 1	Fan
24V Models	Stage 1	Stage 2	Fan
PS4020	Heat 1	Heat 2	Fan
PS4002	Cool 1	Cool 2	Fan
PS4011	Cool 1	Heat 1	Fan

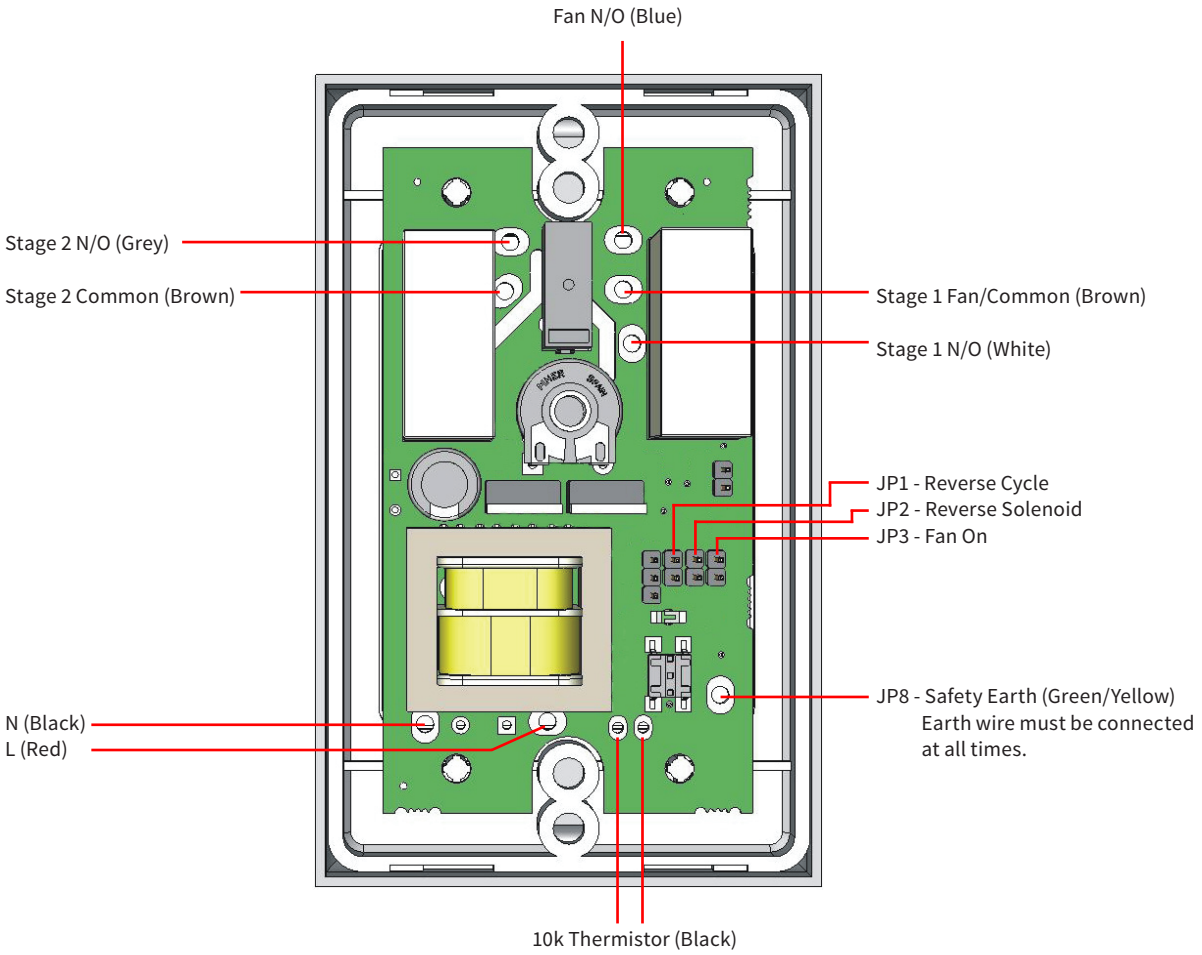
Connection Diagram 24VAC - PS40xx

It is recommended that 24VAC powered devices only switch 24VAC with relay contacts.



Rear View of 24V Version showing Jumper Positions

Connection Diagram 240VAC - PS20xx



Rear View of 240V Version showing Jumper Positions

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