

Mercury 6-5 5 Channel Thermostat Installation Guide



For Product: -

PR0091



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this product

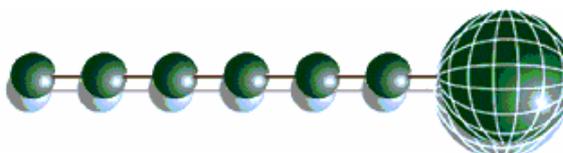
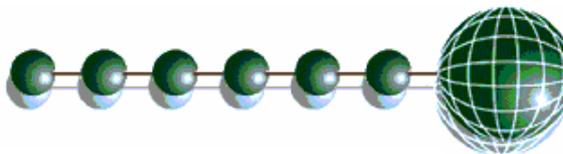


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The Mercury Range

From Resource Data Management

This documentation refers to the Mercury 6-5 - 5 Channel Thermostat

Description

The Mercury 5 Channel Thermostat has 5 thermostat functions. They can be configured for independent use, where each function is controlled by an individual probe or the controller can be configured to operate selected thermostats from one temperature probe. Each channel can be individually configured for heating or cooling applications with a selection of parameters. There is a 7-day timer with two on and off's. Included in the controller is a frost detect parameter. This over-rides the timer function, when the timer is off, to begin heating should the channel probe reach the frost detect value. The controller has the ability to use any of the channels to operate as a timer. Each input can also accept over-ride commands as detailed later in the user guide. **Note:-** the over-ride commands work only on channels selected as a thermostat, it has no effect if a channel is set to operate as a timer.

The 5 Channel Thermostat can operate stand-alone or it can be networked through either an "IP" network module or a Mercury IP Hub. The 5 Channel Thermostat supports PT1000 or NTC2000 or NTC2k25 temperature probes (note all 6 inputs are either PT1000 or NTC2000 or NTC2k25)

Configuration

There is one type of controller within the 5 Channel Thermostat (Type 1)

Display value	Type M
1	5 Channel Thermostat

Network

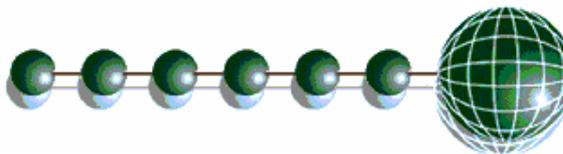
The controllers are capable of connecting to a TCP/IP local area network or controlling in standalone mode with no network output.

To connect to a network you must add the correct communications module.

- IP Futura module - (Part No PR0016)
- Mercury IP Hub - (Part No PR0018)

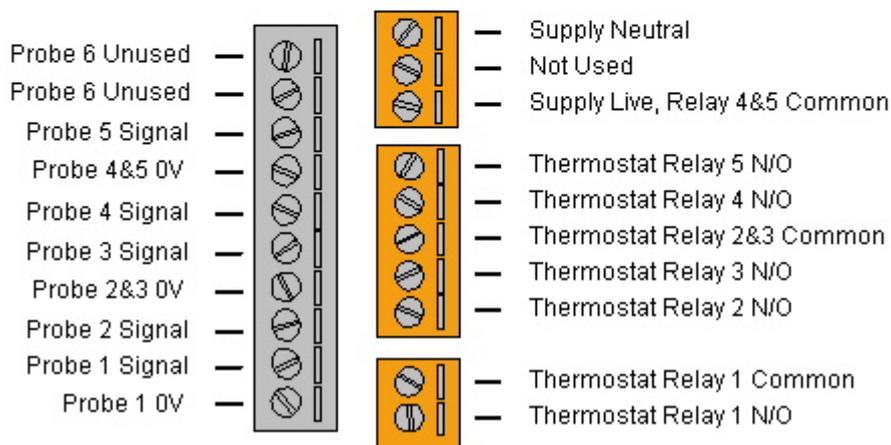
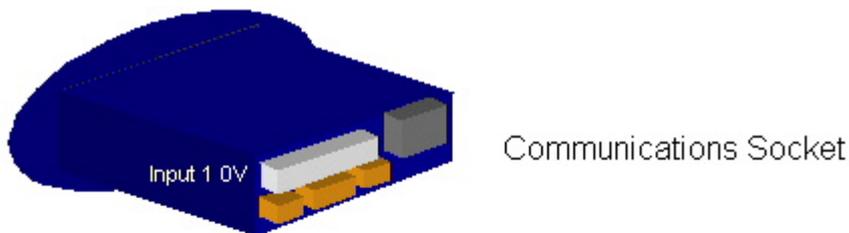


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Connections

All connections are made to the back of the controller. The diagram below shows the connection detail. Inputs and outputs are assigned according to the chosen configuration. See [Specification](#) for further details on connections.



Do not connect an earth.

Input/Output Allocation Tables

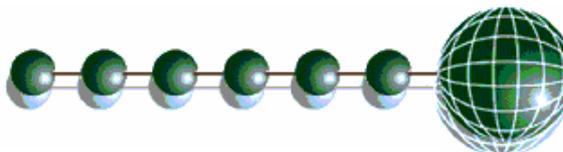
An over-ride can be achieved by switching in a fixed value resistor in parallel with the probe inputs as shown in the table below.

5 Ch Thermostat	Description	Alarm Action	(Switched Resistor)*
Input 1	Probe 1 and Over-ride 1	Yes	Over-ride signal 1
Input 2	Probe 2 and Over-ride 2	Yes	Over-ride signal 2
Input 3	Probe 3 and Over-ride 3	Yes	Over-ride signal 3
Input 4	Probe 4 and Over-ride 4	Yes	Over-ride signal 4
Input 5	Probe 5 and Over-ride 5	Yes	Over-ride signal 5
Relay 1	Thermostat Channel 1	N/A	
Relay 2	Thermostat Channel 2	N/A	
Relay 3	Thermostat Channel 3	N/A	
Relay 4	Thermostat Channel 4	N/A	
Relay 5	Thermostat Channel 5	N/A	

* For PT1000 probes use 820 Ohm
For NTC2000 and NTC2k25 probes use 590 Ohm



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Setting up the controller

Access to the controller can be achieved several ways

- Through the front mounted buttons
- Direct access by PC or palm top into the rear comms port. This requires a software package available on the RDM website
- Through the RDM Data Director or Data Manager.

Set-up Mode

Set-up through front buttons



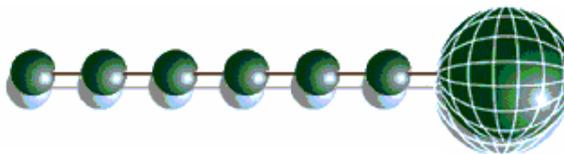
To enter set-up mode, hold the Enter and Down buttons together for approximately 3 seconds until the message “Ent” appears on the display. Now press the Enter button again to enter the function menu. IO will be displayed. Scroll up or down to go through the list.

Set-up Function Menu

Display	Option	Explained in Paragraph
IO	View Input/Output States	View Input/Output States
PArA	Set/view Parameters	Set/view parameters
Unit	Set Probe type and units (°C or °F)	Set/view units
TyPE	Set/View Controller Type	Set/view product type
rtc	Set/view Clock (rtc = Real Time Clock)	Real Time Clock
nEt	Set/view network configuration	Network Configuration
SoFt	View software version	
OFSt	Probe offset	Probe Offset
ESC	Escape back to normal operation	



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Recommended set-up method

If you are not connecting to a network and want to set up the controller through the buttons we recommend you use the following order from the function menu.

rtc. Real time clock (This will automatically synchronise on network systems)

- a. Use the up or down buttons to scroll through the display until the display reads “rtc”
- b. Press enter. The display will show “t-1”. press enter again
- c. Scroll hours up or down (0 – 23) press enter
- d. Use up button to select “t-2”, press enter
- e. Scroll minutes up or down (0 – 59) press enter
- f. Repeat for t-3 (seconds 0 – 59)
- g. Repeat for t -4 (Days up to 31)
- h. Repeat for t -5 (months up to 12)
- i. Repeat for t -6 (Year up to 99)
- j. Use up button to display “ESC”, press enter to display “rtc”

Time clock is now set

type. view controller type

The controller Type is preset at the factory and cannot be changed.

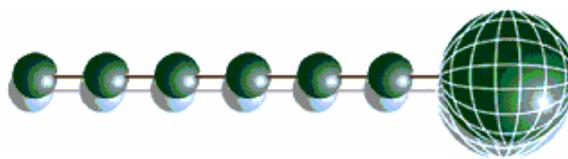
- a. From the function menu scroll to select type, press enter
- b. View the type number 1
- c. Press enter.
- d. Scroll to select “ESC”
- e. Press enter

PArA. Set/view parameters (This can be achieved at the network front end)

- a. From the function menu scroll to select PArA
- b. Pressing Enter while PArA is displayed will enter the parameter menu. The first parameter option will be displayed as P-01. Pressing the Up or Down button will present the other parameter options P-02, P-03 etc. See the parameter list below to find what parameter number corresponds to which actual parameter. Pressing the Enter button will show the current value of the selected parameter. Press Up or Down to modify the value and press Enter again to save the value. The parameter list number will be displayed again. Two other options are present in the parameter menu – dFLt and ESC. Selecting ESC will exit setup mode. Selecting dFLt will reset all parameters back to the default values for the current type of controller.



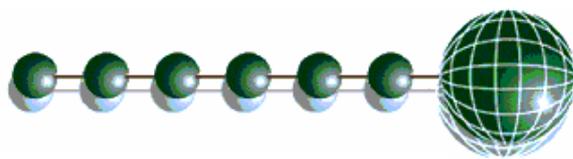
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**Parameter Tables:****Parameter table for 5 Channel Thermostat**

Number	Parameter	Range °C (°F)	Step	Units	Default
P-01	Stat1 Temp Cut-In	-49 to 30°C (-56.2 to 86)	0.1	Deg	15.0
P-02	Stat1 Diff	0 to 10°C (32 to 50)	0.1	Deg	5.0
P-03	Stat1 Select	0 = Off 1 = Timer 2 = Probe 1 3 = Probe 2 4 = Probe 3 5 = Probe 4 6 = Probe 5	1		2
P-04	Stat1 Type	0 = Cooling 1 = Heating	1		1
P-06	Stat1 Frost Detect	-42 to 128°C (-43 to 262)	0.1	Deg	0.0
P-07	Stat1 High Temp Alarm	-42 to 128°C (-43 to 262)	0.1	Deg	25.0
P-08	Stat1 Low Temp Alarm	-42 to 128°C (-43 to 262)	0.1	Deg	0.0
P-09	Stat1 Alm Delay	00:00 to 99:00	01:00	mm:ss	20:00
P-10	Stat1 Rly Inv	0 = Off 1 = On	1		0
P-11	Stat2 Temp Cut-In	-49 to 30°C (-56.2 to 86)	0.1	Deg	15.0
P-12	Stat2 Diff	0 to 10°C (32 to 50)	0.1	Deg	5.0
P-13	Stat2 Select	0 = Off 1 = Timer 2 = Probe 1 3 = Probe 2 4 = Probe 3 5 = Probe 4 6 = Probe 5	1		3
P-14	Stat2 Type	0 = Cooling 1 = Heating	1		1
P-16	Stat2 Frost Detect	-42 to 128°C (-43 to 262)	0.1	Deg	0.0
P-17	Stat2 High Temp Alarm	-42 to 128°C (-43 to 262)	0.1	Deg	25.0
P-18	Stat2 Low Temp Alarm	-42 to 128°C (-43 to 262)	0.1	Deg	0.0
P-19	Stat2 Alm Delay	00:00 to 99:00	01:00	mm:ss	20:00
P-20	Stat2 Rly Inv	0 = Off 1 = On	1		0
P-21	Stat3 Temp Cut-In	-49 to 30°C (-56.2 to 86)	0.1	Deg	15.0
P-22	Stat3 Diff	0 to 10°C (32 to 50)	0.1	Deg	5.0
P-23	Stat3 Select	0 = Off 1 = Timer 2 = Probe 1 3 = Probe 2 4 = Probe 3 5 = Probe 4 6 = Probe 5	1		4
P-24	Stat3 Type	0 = Cooling 1 = Heating	1		1
P-26	Stat3 Frost Detect	-42 to 128°C (-43 to 262)	0.1	Deg	0.0
P-27	Stat3 High Temp Alarm	-42 to 128°C (-43 to 262)	0.1	Deg	25.0
P-28	Stat3 Low Temp Alarm	-42 to 128°C (-43 to 262)	0.1	Deg	0.0
P-29	Stat3 Alm Delay	00:00 to 99:00	01:00	mm:ss	20:00
P-30	Stat3 Rly Inv	0 = Off 1 = On	1		0



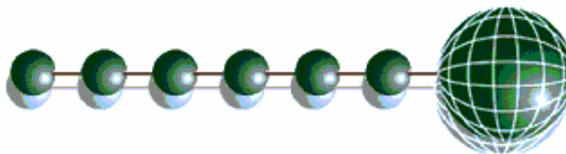
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**Parameter table for 5 Channel Thermostat Continued.....**

Number	Parameter	Range °C (°F)	Step	Units	Default
P-31	Stat4 Temp Cut-In	-49 to 30°C (-56.2 to 86)	0.1	Deg	15.0
P-32	Stat4 Diff	0 to 10°C (32 to 50)	0.1	Deg	5.0
P-33	Stat4 Select	0 = Off 1 = Timer 2 = Probe 1 3 = Probe 2 4 = Probe 3 5 = Probe 4 6 = Probe 5	1		5
P-34	Stat4 Type	0 = Cooling 1 = Heating	1		1
P-36	Stat4 Frost Detect	-42 to 128°C (-43 to 262)	0.1	Deg	0.0
P-37	Stat4 High Temp Alarm	-42 to 128°C (-43 to 262)	0.1	Deg	25.0
P-38	Stat4 Low Temp Alarm	-42 to 128°C (-43 to 262)	0.1	Deg	0.0
P-39	Stat4 Alm Delay	00:00 to 99:00	01:00	mm:ss	20:00
P-40	Stat4 Rly Inv	0 = Off 1 = On	1		0
P-41	Stat5 Temp Cut-In	-49 to 30°C (-56.2 to 86)	0.1	Deg	15.0
P-42	Stat5 Diff	0 to 10°C (32 to 50)	0.1	Deg	5.0
P-43	Stat5 Select	0 = Off 1 = Timer 2 = Probe 1 3 = Probe 2 4 = Probe 3 5 = Probe 4 6 = Probe 5	1		1
P-44	Stat5 Type	0 = Cooling 1 = Heating	1		1
P-46	Stat5 Frost Detect	-42 to 128°C (-43 to 262)	0.1	Deg	0.0
P-47	Stat5 High Temp Alarm	-42 to 128°C (-43 to 262)	0.1	Deg	25.0
P-48	Stat5 Low Temp Alarm	-42 to 128°C (-43 to 262)	0.1	Deg	0.0
P-49	Stat5 Alm Delay	00:00 to 99:00	01:00	mm:ss	20:00
P-50	Stat5 Rly Inv	0 = Off 1 = On	1		0
P-70	Timer Mode	0 = Local 1 = Remote	1		0
P71	Sunday On Time 1	00:00 to 23:59	00:01	hh:mm	08:00
P72	Sunday Off Time 1	00:00 to 23:59	00:01	hh:mm	20:00
P73	Sunday On Time 2	00:00 to 23:59	00:01	hh:mm	08:00
P74	Sunday Off Time 2	00:00 to 23:59	00:01	hh:mm	20:00
P75	Monday On Time 1	00:00 to 23:59	00:01	hh:mm	08:00
P76	Monday Off Time 1	00:00 to 23:59	00:01	hh:mm	20:00
P77	Monday On Time 2	00:00 to 23:59	00:01	hh:mm	08:00
P78	Monday Off Time 2	00:00 to 23:59	00:01	hh:mm	20:00



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Parameter table for 5 Channel Thermostat Continued.....

Number	Parameter	Range	Step	Units	Default
P79	Tuesday On Time 1	00:00 to 23:59	00:01	hh:mm	08:00
P80	Tuesday Off Time 1	00:00 to 23:59	00:01	hh:mm	20:00
P81	Tuesday On Time 2	00:00 to 23:59	00:01	hh:mm	08:00
P82	Tuesday Off Time 2	00:00 to 23:59	00:01	hh:mm	20:00
P83	Wednesday On Time 1	00:00 to 23:59	00:01	hh:mm	08:00
P84	Wednesday Off Time 1	00:00 to 23:59	00:01	hh:mm	20:00
P85	Wednesday On Time 2	00:00 to 23:59	00:01	hh:mm	08:00
P86	Wednesday Off Time 2	00:00 to 23:59	00:01	hh:mm	20:00
P87	Thursday On Time 1	00:00 to 23:59	00:01	hh:mm	08:00
P88	Thursday Off Time 1	00:00 to 23:59	00:01	hh:mm	20:00
P89	Thursday On Time 2	00:00 to 23:59	00:01	hh:mm	08:00
P90	Thursday Off Time 2	00:00 to 23:59	00:01	hh:mm	20:00
P91	Friday On Time 1	00:00 to 23:59	00:01	hh:mm	08:00
P92	Friday Off Time 1	00:00 to 23:59	00:01	hh:mm	20:00
P93	Friday On Time 2	00:00 to 23:59	00:01	hh:mm	08:00
P94	Friday Off Time 2	00:00 to 23:59	00:01	hh:mm	20:00
P95	Saturday On Time 1	00:00 to 23:59	00:01	hh:mm	08:00
P96	Saturday Off Time 1	00:00 to 23:59	00:01	hh:mm	20:00
P97	Saturday On Time 2	00:00 to 23:59	00:01	hh:mm	08:00
P98	Saturday Off Time 2	00:00 to 23:59	00:01	hh:mm	20:00
dFLt	Factory Defaults				

Units and Probe Type

Change the probe type to: -

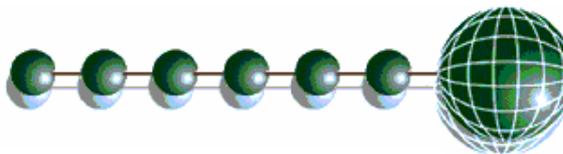
- | | |
|----------------|-------------------------|
| 0 = PTC1000 °C | Range -42 °C to +128 °C |
| 1 = PTC1000 °F | Range -43 °F to +262 °F |
| 2 = NTC2000 °C | Range -37 °C to +54 °C |
| 3 = NTC2000 °F | Range -34°F to +129°F |
| 4 = NTC2k25 °C | Range -37 °C to +54 °C |
| 5 = NTC2k25 °F | Range -34°F to +129°F |

Probe Fault

If a probe fault occurs then the controller will pulse its associated relay(s) on for 5 minutes then off for 5 minutes.



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Network Configuration

The final section to set-up is the network address. In all instances, this must be done before the controller is plugged into the site network. The controllers have an auto-initialise function, which will automatically log the device onto the site network. If the wrong address has been entered onto the network, you will have to reset the controller address by setting the address to 00-0, and then re-enter the correct address. (You may have to deregister the wrong address from the home system as well).

To set the controller onto a network you must first connect the controller to a communications module. This is either a: -

- IP Futura or
- Mercury Hub

IP Futura module

In an IP system there are two options

- IP-L
- IP-r

IP-L allows you to fix an IP address into the controller, which you would use when you are connecting the controllers onto a customer's local area network. This would allow the customer to view each controller using Internet Explorer

IP-r allows you to give each controller on the system a unique number. This number is then allocated a dynamic IP address by the system DHCP server (such as the RDM Data Director)

IP-L

To configure the communication module for IP-L, set all three rotary switches to zero. The module should then be connected to the controller.

1. nEt. From the function menu you can now select nEt
 - Press enter and the display will show "IP-L", press enter
 - You can now set the address using the table below

Display	Option
IP-1	IP Address byte 1
IP-2	IP Address byte 2
IP-3	IP Address byte 3
IP-4	IP Address byte 4
nL	Network Mask Length
gt-1	Gateway Address byte 1
gt-2	Gateway Address byte 2
gt-3	Gateway Address byte 3
gt-4	Gateway Address byte 4
ESC	Exit network menu. N.B. this option must be selected to save any changes made in this menu

IP-r

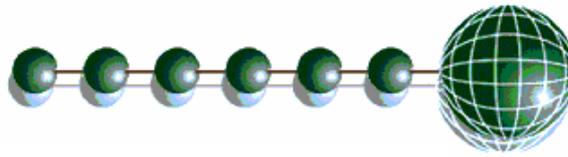
To configure the communication module for IP-r, set the three rotary switches to give each controller a unique identifier. The module should then be connected to the controller and the network.

The green network LED on the controller will flash until it has been logged on to the network. The Green network LED will remain permanently on while it is on-line.

Please refer to the Mercury Hub user guide, which can be obtained from the RDM website, for information regarding connecting a controller to a network.



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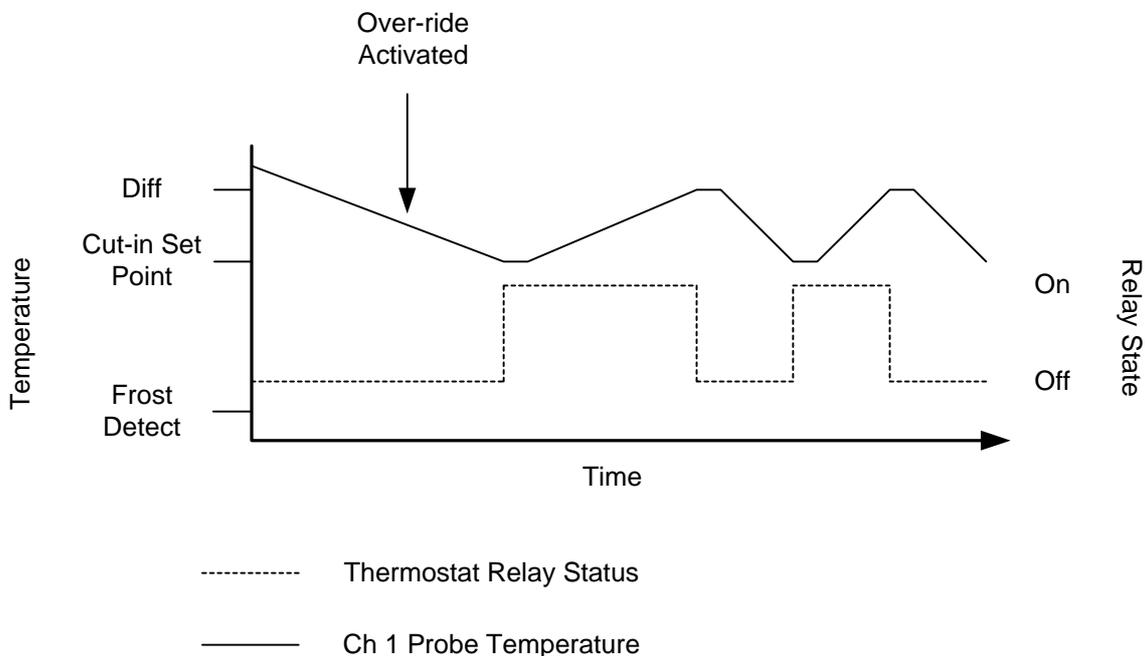


Over-ride Operation

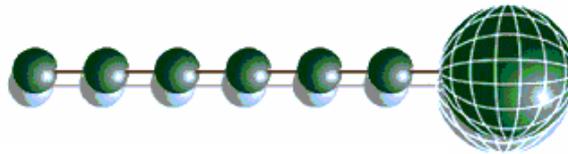
The 5 Channel Thermostat can operate either from its internal channel time settings or from a network Data Manager GP Timer channel (P70 sets the mode either local or remote). If the 5 Channel Thermostat is set up to use the remote timing channels it reverts to local mode if network communications are lost for more than 5 minutes. An over-ride occurs when a resistor is switched in across the input which has to be overridden, however when the over-ride signal is removed the channel returns too normal operation.

Thermostat Over-ride: -

When a channel is configured for thermostat operation the following will occur when an over-ride is present on the channel input. In the example below channel 1 is set as a thermostat in a heating application, the relay inverse feature is disabled, the controller timer is set to local operation and is off. When the timer is in the off period the channel will not be enabled for heating and the thermostat relay remains off, providing the probe temperature is not below the frost detect set point. As shown in the diagram an over-ride is applied to channel 1, this will enable the channel. The thermostat relay does not immediately turn on, it only does so when the temperature drops below the cut-in set point. The controller will continue normal temperature control until the over-ride is removed or the next scheduled off occurs in the local timer schedule. When the timer is in the on period, the over-ride has no effect. Note:- An over-ride should be removed as soon as it is not required on an input.



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Normal Operation

During normal operation, the controller will display "on". If the 5 Channel Thermostat is on a network and on-line, the green network LED will be on. If any alarms are generated the red LED will light. The yellow LED has no function and will not light.



Frost Detect

The frost detect parameter is used to provide heating in an instance where the timer status is off. Each thermostat channel has its own frost detect value that can be configured. Once the temperature drops below the frost detect value the controller channel will heat to the frost detect value plus the channels diff parameter. For example the 5 Channel Thermostat is used to heat a room, the channel configured has a diff of 5°C, a frost detect value of 0°C and the timer is off. The channel will switch its associated relay on when the temperature drops below 0°C. The room will begin to heat and the relay is on, it will stay on until the temperature rises above 5°C. At this point the relay will be turned off. The relay will be turned on again if the room temperature drops below 0°C.

Invert

The 5 Channel Thermostat has a channel setting to invert the output, if this option is used, the output is off when the timer is on and the output is on when the timer is off.

Network

The Network green LED flashes if the controller goes off-line.

Probe Offset

Each probe can be offset by up to ± 10 °C to compensate for long cable runs.

Channel Off

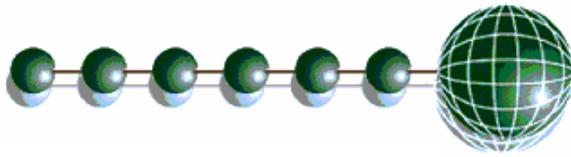
It is possible to turn channels off if they are not in use.

Channel Timer

It is possible to use each channel as a timer. The channel will follow the controller's internal timer schedule or a remote GP timer for on and off times.



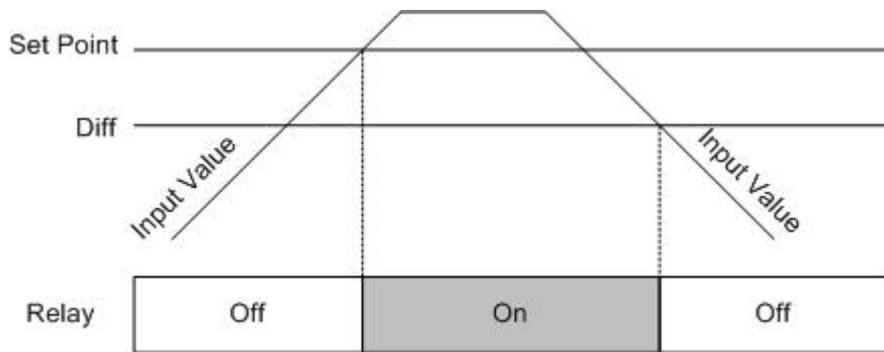
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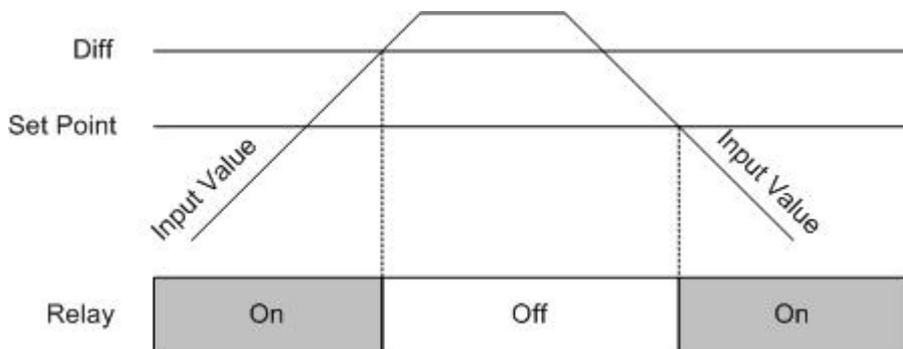
Thermostat Cooling/Heating Operation

The diagrams below outline the operation of a channel when it is configured for heating or cooling applications. In this instance the 5 Channel Thermostat's local timer is on.

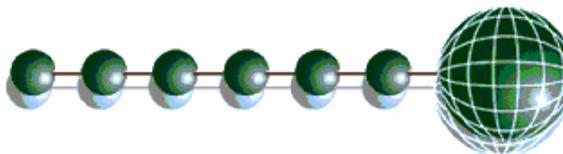
Cooling Thermostat graph



Heating Thermostat graph



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Viewing

Apart from setting up the controller, you can also view the status of the inputs and outputs.

1. IO. View Inputs / Outputs and States
 - a. From the function menu, select “IO”, press enter
 - b. You can now scroll through the IO tables as set out below. The tables you view will depend on the controller type configuration.

Input/Output table for 5 Channel Thermostat

Number	IO	Range	Step	Units
I-01	Probe 1	-42 to 128 °C	0.1	Deg
I-02	Probe 2	-42 to 128 °C	0.1	Deg
I-03	Probe 3	-42 to 128 °C	0.1	Deg
I-04	Probe 4	-42 to 128 °C	0.1	Deg
I-05	Probe 5	-42 to 128 °C	0.1	Deg
I-06	Over-ride 1	0 (Off), 1 (On)		
I-07	Over-ride 2	0 (Off), 1 (On)		
I-08	Over-ride 3	0 (Off), 1 (On)		
I-09	Over-ride 4	0 (Off), 1 (On)		
I-10	Over-ride 5	0 (Off), 1 (On)		
O-01	Relay 1	0 (Off), 1 (On)		
O-02	Relay 2	0 (Off), 1 (On)		
O-03	Relay 3	0 (Off), 1 (On)		
O-04	Relay 4	0 (Off), 1 (On)		
O-05	Relay 5	0 (Off), 1 (On)		
O-06	Timer	0 (Off), 1 (On)		

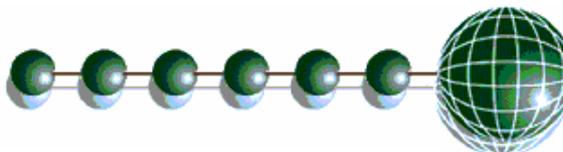
Display Messages

The following messages can appear on the Mercury display.

Display	System status
on	Controller On



Ensure that all power is switched off before installing or maintaining this product



Network Alarms

The table below shows the text and associated type number that is sent to the system "front end". The type number is normally used to provide different alarm actions.

Alarm text	Type
Probe 1 Faulty	6
Probe 2 Faulty	6
Probe 3 Faulty	6
Probe 4 Faulty	6
Probe 5 Faulty	6
Channel 1 Over Temperature	4
Channel 2 Over Temperature	4
Channel 3 Over Temperature	4
Channel 4 Over Temperature	4
Channel 5 Over Temperature	4
Channel 1 Under Temperature	5
Channel 2 Under Temperature	5
Channel 3 Under Temperature	5
Channel 4 Under Temperature	5
Channel 5 Under Temperature	5
Channel 1 Over-ride	16
Channel 2 Over-ride	16
Channel 3 Over-ride	16
Channel 4 Over-ride	16
Channel 5 Over-ride	16

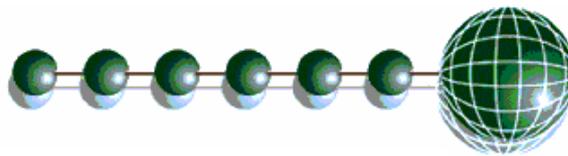
GP Timer Set-up

It is possible to set the 5 Channel Thermostat for remote operation (P70 = 1). A GP Timer must be set up to control the timer on/off periods of the 5 Channel Thermostat. For GP Timer set up please refer to the Data Manager user guide found on the RDM website. The following settings should be followed in the GP setup.

- Output Type – This should be set to "General".
- Output Mask – This should match the "Controller Name".
- Output Channel – This should be set to "5". This will allow the GP Timer to control the state of the timer.



Ensure that all power is switched off before installing or maintaining this product



Specification

General

Power requirements:

Supply Voltage Range:	100 - 240 Vac \pm 10%
Supply Frequency:	50 - 60 Hz \pm 10%
Maximum supply current:	<1 Amp (With no relay loads)
Typical supply current:	<0.5 Amp
Operating temperature range:	+5°C to +50°C
Operating Humidity:	80% maximum
Storage temperature range:	-20°C to +65°C
Environmental:	Indoor use at altitudes up to 2000m, Pollution Degree 1, Installation Category II.
Size:	Voltage fluctuations not to exceed \pm 10% of nominal voltage 110mm (W) x 60mm (H) x 100mm (D)
Weight:	150 Grams
Safety:	EN61010
EMC:	EN61326; 1997 +Amdt. A1; 1998
Ventilation:	There is no requirement for forced cooling ventilation
Class 2 Insulation:	No protective Earth is required and none should be fitted.

The host equipment must provide a suitable external over-current protection device such as: -

Fuse:	6.3A 240 Vac Antisurge (T) HRC conforming to IEC 60127
Or MCB:	8A, 240 VAC Type C conforming to BS EN 60898

The host equipment must provide adequate protection against contact to hazardous live parts.

Relays

Max current relay 1:	6A (non inductive)	
Max Voltage relay 1:	260Vac (external supply)	
Exclusive common		
Max current relay 2:	4A (non inductive)	Relays 2 and 3 share a common supply line and the loads can have a combined total of 8A. Relay 2 or 3 can switch a maximum of 6A provided the other is at 2A or lower.
Max Voltage relay 2:	260Vac (external supply)	
Shared common with relay 3		
Max current relay 3:	4A (non inductive)	
Max Voltage relay 3:	260Vac (external supply)	
Shared common with relay 2		
Max current relay 4:	3A (non inductive)	
Max Voltage relay 4:	260Vac (Internal supply)	
Common connected to Input "live"		
Max current relay 5:	3A (non inductive)	
Max Voltage relay 5:	260Vac (Internal supply)	
Common connected to Input "live"		

For compliance with the LVD, relays 2 and 3 common must be at the same potential as the supply voltage.

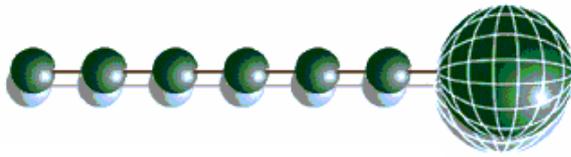


Warning:

Relays 4 and 5 outputs have hazardous voltages (Supply input voltage potential).



Ensure that all power is switched off before installing or maintaining this product

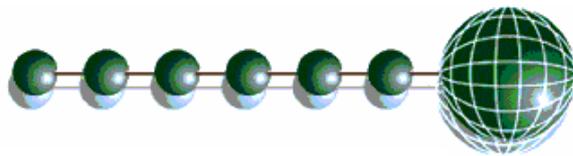


Inputs:

Input resistance:	3.01K Ohms (for PTC or NTC type probes)
Input type	PT1000 NTC2000 NTC2k25
Comms:	RS232 with flow control

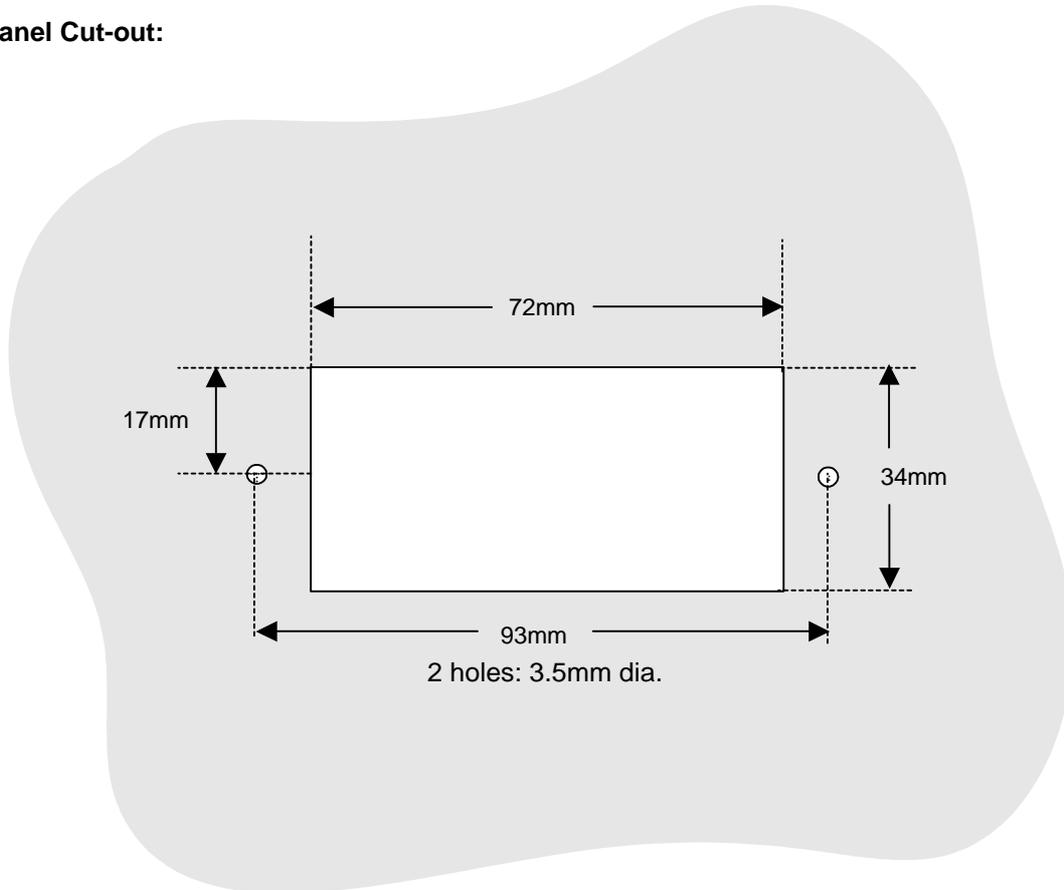


Ensure that all power is switched off before installing or maintaining this product



Installation:

Panel Cut-out:



Fixing:

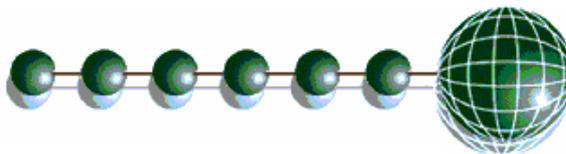
The controller can be fixed either by 2 X M3 screws from the rear or by the plastic retaining device (PR0329), obtainable from RDM.

Clearances:

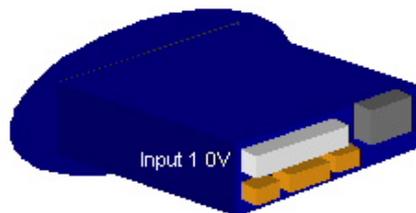
The controller must have 5mm clearance above the top and below bottom, and 25mm clearance from the sides. Clearance at the rear is dependant on the wiring.
There is no requirement for forced cooling ventilation



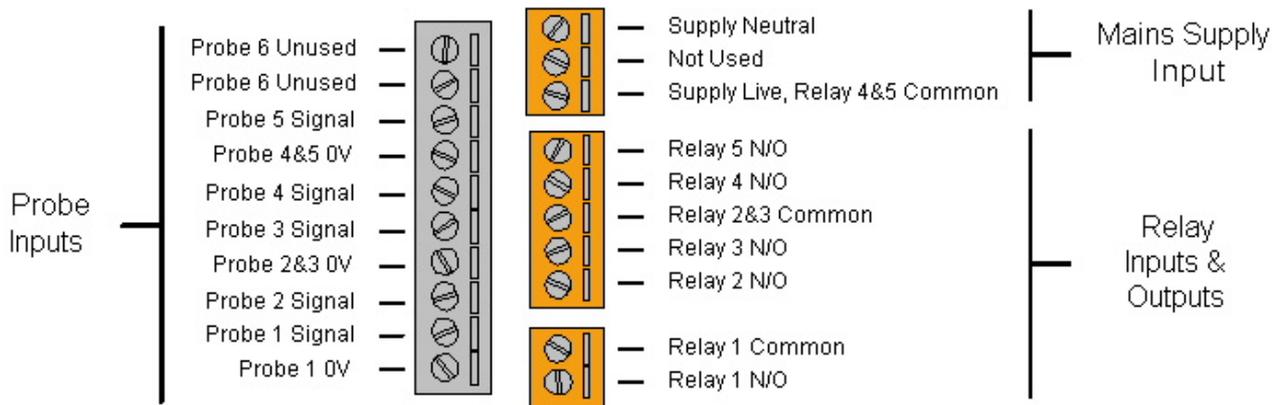
Ensure that all power is switched off before installing or maintaining this product



Wiring:



Communications Socket



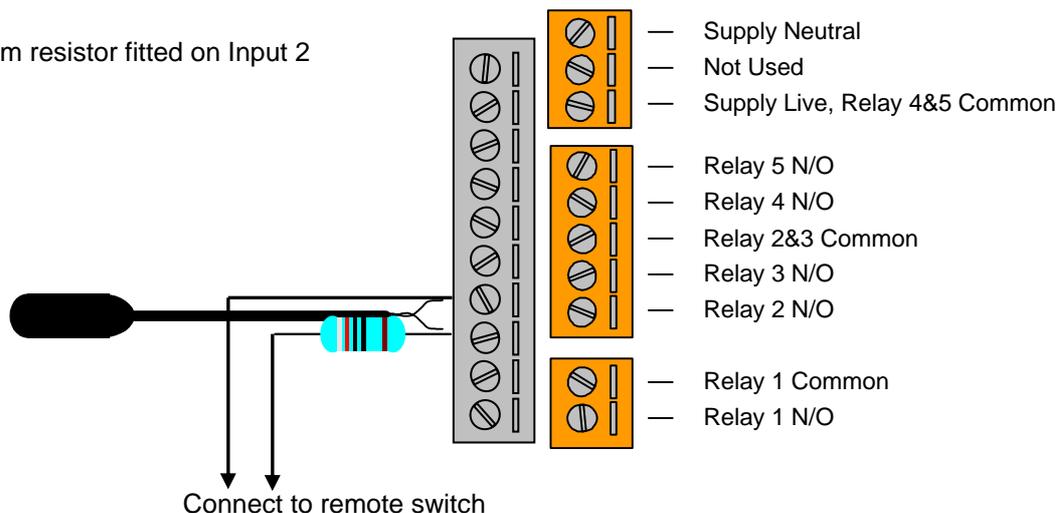
Relay 4 and 5 N/O are fed from the supply input

Note:

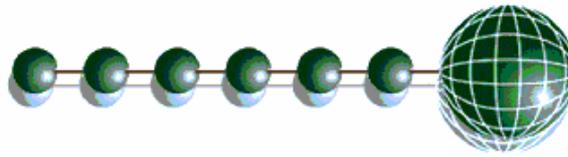
Suitable mechanical restraints on the wiring to the controller may be required; dependant on cable types, to prevent undue stress or distortion on the controller connectors.

Over-ride input Resistors:

Example of 820-Ohm resistor fitted on Input 2



Ensure that all power is switched off before installing or maintaining this product



Fuse:

The host equipment must provide a suitable external over-current protection device such as: -

Fuse: 6.3A, 240 Vac Antisurge (T) HRC conforming to IEC 60127 (Relay 4 & 5 fully loaded)

Or MCB: 8A, 240 Vac Type C conforming to BS EN 60898 (Relay 4 & 5 fully loaded)

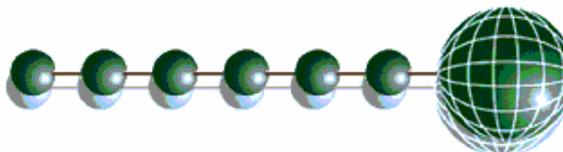
Cleaning:

Do not wet the controller when cleaning. Clean the front by wiping with slightly dampened lint free cloth.

Please note: The specifications of the product detailed on this set up guide may change without notice. RDM Ltd shall not be liable for errors or for incidental or consequential damages, directly or indirectly, in connection with the furnishing, performance or misuse of this product or document.



Ensure that all power is
switched off before
installing or maintaining
this product



Revision History

Revision	Date	Changes
1.0	27/10/2006	First Issue
1.1	01/03/2007	General Tidy Up
1.2	05/03/2007	Removal of over-ride description (for when a channel is configured as a timer).



Ensure that all power is switched off before installing or maintaining this product