CDTP2 Room Thermostat Hardwired

Operating Instructions

Contents

CAUTION!

Before commencing any work on the electrical connections, you must first disconnect the thermostat from the mains. None of the 230V connections must be live until the installation has been completed and the housing is closed. Only qualified electricians or authorised service staff are permitted to open the thermostat.

There are parts that may carry mains voltage behind the cover. The thermostat must not be left unsupervised when open. (Prevent non specialists and especially children from gaining access to it.)

Important: Keep this document

Prior to setting the thermostat, it is neccessary to complete all required settings described in this section.

1. Factory default settings

Contacts:	Volt Free
Temperature indicator:	°C
Switching differential:	0.4°C
In built frost protection:	5°C
Blue backlight activated :	for 10 secs after any button is pressed
Clock:	24 hours
Keypad lock:	Off
Operating mode:	5/2 day

2. Specifications & wiring

Power supply:	230Vac 50Hz
Power consumption:	8 VA
Temp. control range:	5 ... 35°C
Ambient temperature:	0 ... 50°C
Contact rating:	8A 230Vac
Dimensions:	84 x 84 x 30mm
Temperature sensor:	NTC 10K Ohm @ 25°C
Switching differential:	Adjustable from 0.2/0.4/0.6/0.8/1.0˚C
Frost protection:	Only operational in stand by mode

3. Mounting

The mounting height should be 1.5 meters above the floor level.

The thermostat should be wall mounted in the room where the heating is to be controlled.

The place of installation should be chosen so that the sensor can measure the room temperature as accurately as possible.

Choose the mounting location to prevent direct exposure to sunlight or other heating / cooling sources when mounted.

The unit can be fitted to:

1. Recessed conduit boxes
2. Surface mounting boxes
3. Directly on walls.

4. Installation

Slacken the fastening screw on the bottom of the thermostat with a philips head screwdriver.

The thermostat is hinged and can be opened 180 degrees.

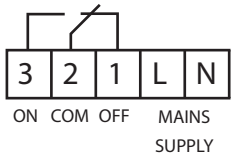
Mount the unit as described in section 3.

Wire the thermostat according to the wiring diagram.

Close the thermostat and tighten the fastening screw.

5. Wiring diagram

INTERNAL WIRING DIAGRAM CDTP2



If mains voltage output is required, terminals L & 2 must be electrically linked.

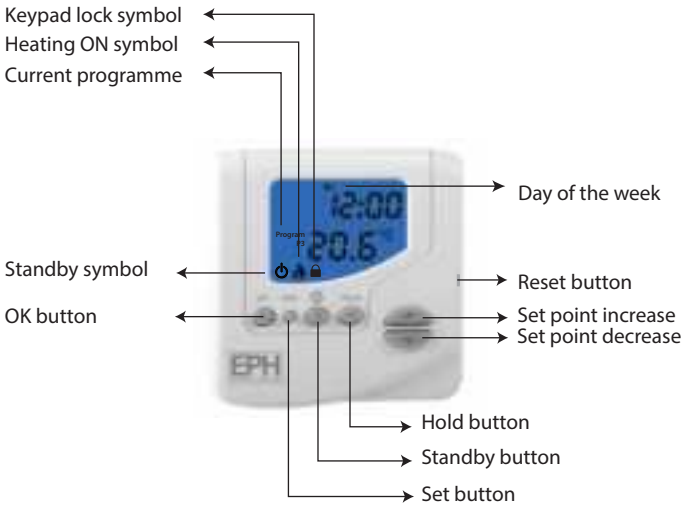
6. Frost protection

5°C

Frost protection is built into this thermostat, it is pre fixed at 5°C and is not adjustable.

It will only be activated when the thermostat is in the stand by mode and the room temperature falls below 5°C.

7. Button / Symbol description



8. Resetting the thermostat

It is necessary to reset the thermostat prior to initial programming.

Press the RESET button on the side of the thermostat.

'NO' will appear on the screen.

Press the button.

'YES' will appear on the screen.

Press the 'OK' button to return to normal operation.

9. Keypad lock and unlock

OFF

To lock the keypad, press and hold the and buttons for 5 seconds.

will appear on the screen. The keypad is now locked.

To unlock the keypad, press and hold the and buttons for 5 seconds.

will disappear from the screen. The keypad is now unlocked.

EPH Controls Ireland

technical@ephcontrols.com www.ephcontrols.com

EPH Controls UK

technical@ephcontrols.co.uk www.ephcontrols.co.uk

Operating Instructions

10. Setting the date, time and operating mode

Press the Set button once. 'Set Date Year' will appear on the screen.
Press the ▲ or ▼ buttons to adjust the year. Press the 'OK' button.
Press the ▲ or ▼ buttons to adjust the month. Press the 'OK' button.
Press the ▲ or ▼ buttons to adjust the day. Press the 'OK' button.
Press the ▲ or ▼ buttons to adjust the hour. Press the 'OK' button.
Press the ▲ or ▼ buttons to adjust the minute. Press the 'OK' button.
Press the ▲ or ▼ buttons to adjust from 5/2d to 7d or 24h mode.
Press the ⏻ button or wait 10 seconds and the thermostat will return to normal operation.

11. Factory program setting 5 / 2d

	5/2D					
	P1	P2	P3	P4	P5	P6
Mon-Fri	06:30	08:00	12:00	14:00	17:30	22:00
	21°C	18°C	21°C	18°C	21°C	16°C
Sat-Sun	08:00	10:00	12:00	14:00	17:30	23:00
	21°C	18°C	21°C	18°C	21°C	16°C

	7D					
	P1	P2	P3	P4	P5	P6
Mon-Fri	06:30	08:00	12:00	14:00	17:30	22:00
	21°C	18°C	21°C	18°C	21°C	16°C
Sat-Sun	08:00	10:00	12:00	14:00	17:30	23:00
	21°C	18°C	21°C	18°C	21°C	16°C

	24H					
	P1	P2	P3	P4	P5	P6
Everyday	06:30	08:00	12:00	14:00	17:30	22:00
	21°C	18°C	21°C	18°C	21°C	16°C

12. Adjusting the program settings for 5/2d

Press the Set button twice.

Programming for Monday to Friday is now selected.
Press the ▲ and ▼ buttons to adjust the P1 time. Press the 'OK' button.
Press the ▲ and ▼ buttons to adjust the P1 temp. Press the 'OK' button.
Repeat this process to adjust P2 to P6 times and temperatures.
Press the Set button.

Programming for Saturday to Sunday is now selected.
Press the ▲ and ▼ buttons to adjust the P1 time. Press the 'OK' button.
Press the ▲ and ▼ buttons to adjust the P1 temp. Press the 'OK' button.
Repeat this process to adjust P2 to P6 times and temperatures.
Press the ⏻ button to return to automatic mode.

If 7 D mode is selected, you can program each day of the week with 6 individual times and temperatures.

If 24H mode is selected, you can only program each day of the week with the same 6 times and temperatures.

13. Temporary override (Manual)

Press the ▲ and ▼ buttons to adjust the temperature setpoint.
'Manual' will appear on the screen.
Press 'OK' or after 10 seconds the thermostat will operate in this temporary override.
Press the ⏻ button to return to automatic mode.

14. Permanent override (Hold)

Press the Hold button. 'Hold' will appear on the screen.
Press the ▲ and ▼ buttons to adjust the temperature setpoint.
Press 'OK' or after 10 seconds the thermostat will operate in this permanent override.
Press the ⏻ button to return to automatic mode.

15. Adjusting the switching differential 0.4°C

Press the 'OK' and 'Hold' buttons for 5 seconds.
'0.4°C' will appear on the screen.
Press the up or down buttons to adjust from 0.2, 0.4, 0.6, 0.8 or 1C.
Press the ⏻ button to return to normal operation.

16. Installer menu

To access the installer menu, you must hold **OK** and ⏻ for 5 seconds.
When in the installer menu, press ▲ or ▼ and **OK** to navigate and select.

▪ Normal Mode (Nor)

When the thermostat is in Normal mode, the thermostat will try to reach the target temperature after the program changes.

Example: Program 1 on the thermostat is 21°C for 06:30am and the room temperature is 18°C. The thermostat will start the heating at 06:30am and the room temperature will start to increase then.

To return to main menu, press **OK** to select **Nor**

▪ Optimum Start Mode (OS) BOILER PLUS

When the thermostat is in Optimum Start mode, the thermostat will try to reach the target temperature by the start time of the next switching time. This is done by setting the Ti (time interval) on the thermostat in this menu to 10, 15 or 20. This will allow the thermostat 10 mins, 15 mins or 20 mins to increase the room temperature by 1°C.

Ti can be set when OS is selected in the installer menu. 20°C

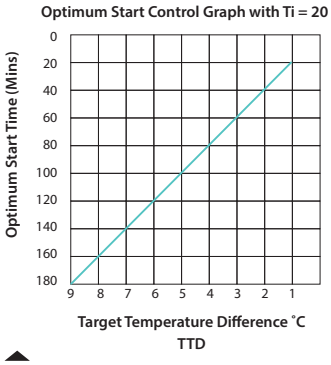
To return to main menu, press **OK** to select required **Ti**

To achieve the target temperature when the program starts, the thermostat will read:

1. The Room Temperature (RT)
2. The Setpoint Temperature (ST)
3. The Target Temperature Difference (TTD) is the difference between the setpoint temperature and the room temperature .

The time (in minutes) that it will take to overcome (TTD) is called Optimum Start Time (OST) and its maximum value is 3 hours = 180 mins. This is subtracted from the start time.

As the temperature increases the thermostat will recalculate the OST if the temperature is increasing too quickly.



Example when Ti = 20

Program 1 on the thermostat is 21°C for 06:30am and the room temperature is 18°C. The thermostat will start the heating at 05:30am to reach 21°C for 06:30am @ Ti=20.

Example when Ti = 10

Program 1 on the thermostat is 21°C for 06:30am and the room temperature is 18°C. The thermostat will start the heating at 06:00am to reach 21°C for 06:30am @ Ti=10.