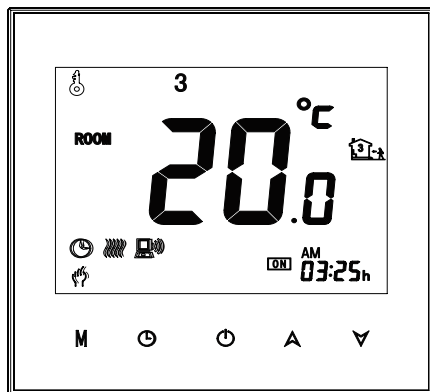


## Heating Room Thermostat User Guide

ORC-HC2-3A-RS485



Orcomm | Victor Way | Radlett Road | St Albans | AL2 2FL | www.orcomm.co.uk

## Your thermostat

The BHT-1000 range has been developed to control electric underfloor or water heating systems. These units are designed for use in commercial, industrial, civil and domestic properties.

### Features

- Simple installation
- Acrylic face plate
- Large, backlit display
- Sleek, contemporary design
- Elegant chrome frame
- Feather touch control panel
- 5+2 six period per day programming
- Simple, one-touch temperature control over-ride
- Pre-set temperatures maintained within +/- 1°C
- Internal and external sensors allow control of both air and/or floor temperatures
- Suitable for installation in a standard single pattress box or European 60mm round box
- RS485/MODBUS communication optional

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## Technical Data

- Sensor: NTC
- Accuracy: ±1°C
- Set Temp. Range: 0-50°C
- Room Temp. Range: 5-99°C
- Power Consumption: < 1.5W
- Timing Error: <1%
- Power Supply: 95 ~ 240VAC, 50 ~60Hz
- Current Load: Dry Contact (boiler heating)
- Shell material: PC+ABS (flame retardant)
- Dimension: 86x86x13.3mm
- Ambient Temp.: 0-45°C, 5-95%RH (Non-condensing)
- Storage Temp.: -5-55°C
- Installation Hole distance: 60mm

### Operation/programming

#### 1. Power on/off

Press to turn on/off.

#### 2. Adjusting/setting the temperature

Press to set the desired temperature.

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## Welcome

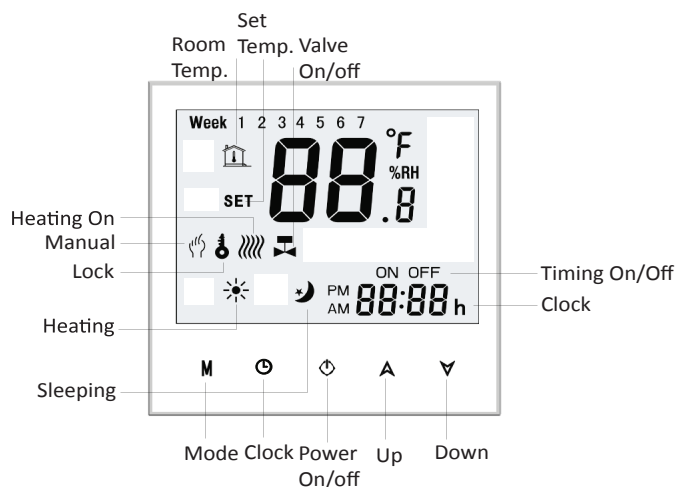
Thank you for your purchase. Your new thermostat will provide uniform and comfortable temperature control throughout every room in your property. We bring together technology, craftsmanship and the highest quality materials to provide you with a safe, reliable product combined with sleek, contemporary design. Please read this installation/programming manual for comprehensive instructions on installing and operating your thermostat. Please ensure a suitably qualified person installs your thermostat and complies with all local regulations.

## Contents

Thermostat	1pc
Screws	1pc
Installation/programming manual	1pc
Wall plate	1pc

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## Home screen quick reference:



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#### 3. Adjusting/Setting the clock

Touch the icon to set minute, hour and weekday (1 = Monday, 2 = Tuesday etc.) by using the arrows. Press once more to confirm and exit.

#### 4. Locking your thermostat

Press and hold the and arrows for 5 seconds to lock/unlock your thermostat.

#### 5. Adjusting/setting the program schedules

Your thermostat provides four scheduled heating periods each day – two Comfort periods - 1 & 3 (the temperature required when room is occupied) and two Economy periods – 2 & 4 (the temperature required when room is unoccupied). You can set both the time **and** temperature for each of these six daily periods. Adjusting/setting the schedules can only be carried out when in program mode; Touch M (mode) to change between manual mode and programme mode. In manual mode,

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☞ will show in the bottom left of the screen. Touch and hold the icon **M** until the weekday schedule settings appear (1 2 3 4 5 will show along the top of the screen). Use the **▲** and **▼** arrows to adjust the time for the 1st (Comfort) period. Press the icon **M** and use the **▲** and **▼** arrows to set the temperature for the 1st period. Repeat this process for periods 2 – 6. Press the icon **M** once more to enter the weekend schedule settings (6 & 7 will show along the top of the screen). Repeat the above process to set the weekend schedule. Press **M** once more to confirm and exit.

### Default settings for program schedule

Time display	WEEKDAY (MON. – FRI.)		WEEKEND (SAT. – SUN.)	
	TIME	TEMP.	TIME	TEMP.
Period 1 (Comfort)	06.00 waken	20°C	06.00 waken	20°C
Period 2 (Economy)	08.00 leave	15°C	08.00 leave	20°C
Period 3 (Comfort)	11.30 home	15°C	11.30 home	20°C
Period 4 (Economy)	13.30 leave	15°C	13.30 leave	20°C
Period 5 (Comfort)	17.00 home	22°C	17.00 home	15°C
Period 6 (Economy)	22.00 bed	15°C	22.00 bed	15°C

Default settings above assume a 5+2 (day) weekly program.

### 6. System function settings

With power off, press and hold both **M** and **⌚** for 5 seconds to enter the System Functions. Press **M** to scroll through the available functions, and use the **▲** and **▼** arrows to change the available options. Your thermostat will automatically exit the System Functions settings after approximately 15 - 20 seconds of inactivity. All settings are automatically

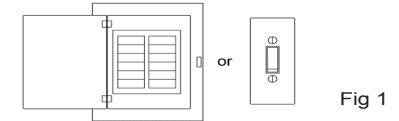
### Please note:

1. "Err" on your thermostat indicates a fault without the external (floor) sensor. Your thermostat will be inoperative until the error is rectified.
2. When sensor selection is "AL" (option 3 above) the room temperature will be displayed on your thermostat by default. The floor temperature can be displayed temporarily by pressing the **▼** button for three seconds. Your thermostat will revert to display the room temperature after several seconds.

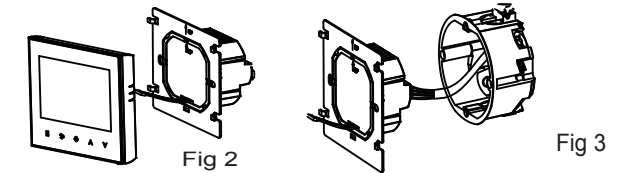
## Installing your thermostat

Your thermostat is suitable for installation within a standard 86mm pattress box or European 60mm round pattress box.

Step 1. Keep power off. See Fig 1.

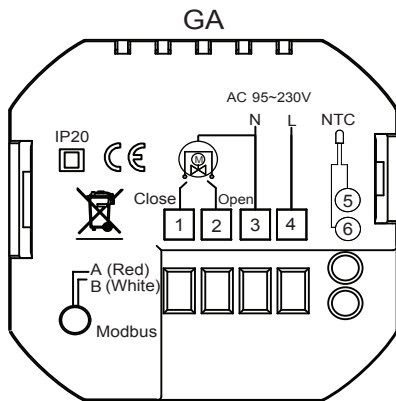


Step 2. Remove the mounting Plate. See Fig 2.



Step 3. Connect power supply, load and external (floor) sensor into the appropriate terminals if there is external sensor. (see "Wiring your thermostat" for details and Fig 3).

## Wiring your thermostat

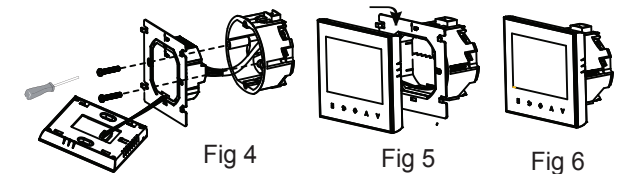


### Please note:

Do not over-tighten the terminals in your thermostat as damage may occur.

Code	Function	Setting and options	Default
1	Temperature compensation	-9 to +9°C (for internal sensor)	-2
2	IP Setting	01-OxFF	01
3	Button locking	00: All buttons are locked except power button. 01: All buttons are locked.	01
4	Sensor types	00: Internal Sensor (to control or limit the temperature) 01: Internal/ External Sensor( Internal sensor to control temperature, external sensor to limit temperature) Remark: Please make sure the right sensor. If choose the wrong or bad one, LCD will display Err. The thermostat will stop working until the failure is solved	01
5	Min. Set Temp.	5-15°C	10
6	Max. Set Temp.	25-35°C	30
7			
8	Display Mode	00: display both set temp. and room temp. 01: display set temp. only	00
9	High temperature protection setting.	20-70°C.	29
A	Low temperature protection setting.	2-20°C.	5
B	Return to factory setting	00: Normal Status 01: Return to factory setting	00

Step 4. Fix the mounting plate into the wall with screws in the box. See Fig 4



Step 5. Fasten body of thermostat and the mounting plate through the groove. See Fig 5.

Step 6. Installation complete. See Fig 6.

**RISK OF ELECTRICAL SHOCK.** Disconnect/isolate power supply prior to making electrical connections. Contact with high voltage components can cause electrical shock, severe injury or death.

## Warranty

Your thermostat carries an 24 month warranty from date of purchase. Service outwith the warranty period may incur a charge.