67347 02-15 (HKT)

Installation Quick Guide

REH BA3
REH FC-BMS3

REH TA3

REH TD3

REH DT3

WLCT3

REHAU®
Unlimited Polymer Solutions

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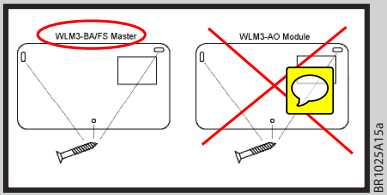
QUICK GUIDE

INSTALLATION QUICK GUIDE

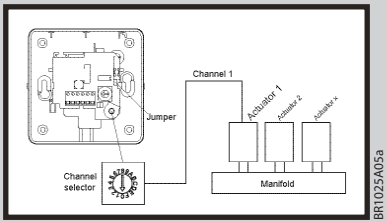
This Quick Guide is for reference only and is not suitable for networked installations.
For full installation details, please refer to the full Installation Manual.



We recommend that the zone chart on the back page of the user manual be filled in before commencing installation. This will identify the piping circuits to specific rooms and enable the correct allocation of channel numbers in the REH BA3/REH FC-BMS3 system.

A

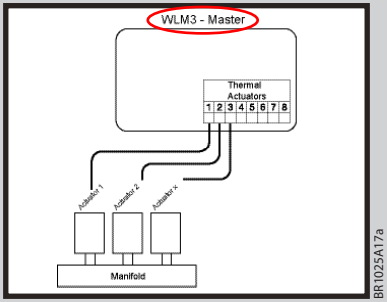
Mount the master



B

Mount the room sensors/controllers in the rooms, and set their channel selectors to correspond to the number of the actuator controlling the room concerned.
With hardwired room sensors/controllers, connect the 2-wire bus to the master, maintaining continuity of positive (+) and negative (-) connections.

NB: For room sensors/controllers with floor temperature limitation sensors, please refer to the separate instructions included with the unit.



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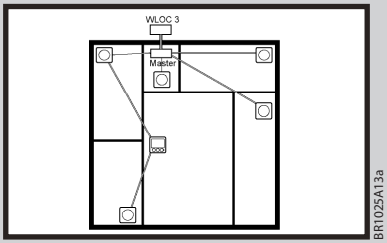
C

Connect the actuators to the channel outputs on the master in accordance with the pipe manifold layout (see the zone chart).
Connect actuator no. 1 on the manifold to output no. 1 on the master.
Connect actuator no. 2 on the manifold to output no. 2 on the master.
etc.



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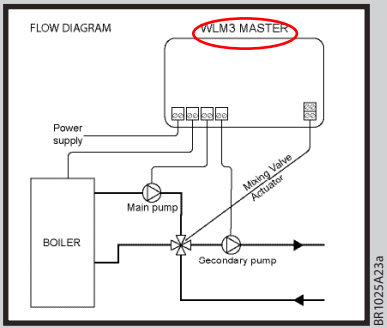
D

Outdoor compensation module WLOC3 (REH FC-BMS3 masters only)
Install on wall facing away from direct sunlight.
Connect to 2-wire room sensor bus or direct to master, maintaining continuity of positive (+) and negative (-) connections.



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E

Connect 230V AC power supply, UFH circulating pump and boiler in accordance with electrical regulations. (With REH FC-BMS3 masters, connect the mixing valve and supply water temperature sensor.)

SETTING UP THE SYSTEM

1. Turn on the power and perform a full reset of the master by pressing the OK button for 16 seconds until all the area LEDs flash alternately (the unit must be in DAY temperature mode - sun symbol).

2. Set the clock on any REH CT3 room controller.
   2.1. If the hour digit is not flashing, press the small pinhole button beside the clock symbol.
   2.2. Adjust the hours and press OK.
   2.3. Adjust the minutes and press OK.
   2.4. Adjust the day number (1 = Monday) and press OK.

3. In addition to the settings for its own room, the REH CT3 room controller can be used to set the operating times and temperatures of other room sensors (channels). To achieve this, do the following on the REH CT3 room controller:
   3.1. If "CH 1" is already shown on the display of the REH CT3 room controller, proceed directly to step "3.4".
   3.2. Press the UP and DOWN buttons simultaneously for 4 seconds to enter the "InFo" menu.
   3.3. Press the UP and Down Buttons to locate the "ArEA" menu and then press OK.
   3.4. The display now shows "CH 1" (channel 1).
      - Press the OK (√) button.
      - Select "On" if this channel (room sensor) is to be controlled by the REH CT3 room controller by pressing the 'DOWN' button, otherwise select "OFF".
      - Now press the OK button to go to the next channel (CH 2) and repeat this step until all the required channels have been set.
   3.5. After all channels have been set, select the "ESC" menu entry and press OK.

NB: If different times and temperatures are required for other channels (room sensors) within the system, more than one REH CT3 room controller can be used. Care must be taken to ensure that a channel is not set to "On" on more than one REH CT3 room controller.

TESTING THE SYSTEM:

1. Switch on DIP-3 to activate learning mode. - the power LED will flash quickly
2. Each red channel LED on the master should now be lit if a room sensor/controller is present on that channel.
3. Switch off DIP-3 to deactivate learning mode again – the power LED will stop flashing.
4. Set the setpoint on all adjustable room sensors/controllers to minimum.
5. Switch on DIP-1 on the master to activate install mode. Install mode will remain active for 2 hours. Pumps, boiler, mixing valve and actuators should now be OFF.

   NOTE: During install mode, the boiler will not fire unless DIP-2 is also activated. This is designed to reduce energy consumption and boiler cycling during the testing process.

6. Set the knob on the adjustable room sensor/controller in room 1 to maximum. The red channel 1 LED should light up and the actuator on output 1 should activate.

   Important: If the room sensor/controller is of wireless type, a delay of up to 5 minutes may occur before the channel LED lights up. (Pressing the initialization button inside the room sensor/controller for 30 sec. speeds this up.)

7. With an FC BMS3 master, check that the UHF pump starts running and that the mixing valve opens.
8. Repeat step 6 for all rooms.
9. Boiler test function:
   Switch on DIP-2.
   This activates the boiler relay contacts for 1 minute.
10. To end system testing:
    - Switch off DIP-1 to deactivate install mode.
      Switch off DIP-2 to deactivate the boiler test.
    - Set all temperature knobs to default positions.

    Set REH TA3, REH TD3, REH TM3 and REH DT3 room sensors to zero (centre position /no offset).
    Set REH CT3 room controllers to 21°C (recommended).
    - Set all REH TM3, REH TD3 and REH DT3 room sensors to automatic mode (clock symbol).
11. The system will now operate automatically.

    Other important settings can be found in the User Manual.

TROUBLESHOOTING:

Problem	Possible cause & solution
Channel LED does not light up (when in learning mode)	Check that the power LED is flashing quickly. If it is not, switch DIP-3 to ON position.
	2-wire bus may be incorrectly connected. Voltage at each room sensor should be no lower than 4.0V (check for + & - continuity and short circuits).
	Check that the room sensor in the room has been set to the correct channel number.
	The channel selector on the room sensor may be slightly out of position, try rotating it and then set it again.
Channel LED does not light up (when in install mode after the room sensor has been activated (set to maximum))	The master itself has cancelled install mode. After 2 hours the master automatically de-activates install mode. Reset DIP-1.
	Check that the room sensor in the room has been set to the correct channel number (two room sensors might be interchanged).
The actuator on the manifold does not open after 3 minutes	Check that the red channel LED is lit (if not, see above).
	The actuator for the room is not connected to the correct output on the master.
	Bad electrical connection between actuator and terminals.
	The actuator may be faulty or manually locked.
UFH pump does not start in install mode	Bad electrical connection between pump and terminals.
	Install mode has not been activated. Move DIP-1 to the OFF position and then back to the ON position.
	The pump may be faulty.

Output relay for main pump, cooling, high-limit valve or other attached device not activated	Incorrect connection to device (X-OUTPUT relay has volt-free contacts, see master wiring diagram for correct connection). Bad electrical connection between attached device and terminals. Install mode not activated, set DIP-1 to OFF and then back to the ON position to commence install mode for 2 hours. The attached device may be faulty. Dip switches may be incorrectly set, see "Free Relay Function (X-OUTPUT)" in the Installation Manual for details.
Boiler does not fire (LED lit)	Incorrect connection to boiler (X-OUTPUT relay has volt-free contacts, see master wiring diagram for correct connection). Bad electrical connection between boiler and terminals. During install mode the boiler relay will not operate. The attached boiler may be faulty.
(LED not lit)	Timing sequence delay is activated. REH FC-BMS3 master only - mixing valve not open more than 20%. No heat demand from room sensors. Master is in cooling mode.
Mixing valve does not operate correctly (when in install mode)	Incorrect connection, see master wiring diagram for correct connection. Incorrect valve/actuator assembly. The actuator is faulty. Check what happens if the sensor and/or outdoor module are removed.
(valve cycles between open and closed in normal operating mode)	Valve may be oversized. Supply water sensor may be subject to heat migration. Upstream water temperature is excessively high. (These problems can be corrected by changing PI settings – please refer to the main installation manual). Incorrectly installed, see the installation instructions supplied with the actuator.

Room is too cold (after running for at least 48 hours)	The room sensor is placed in a position that does not represent the general temperature in the room. For example mounted on an external wall or near to an external heat source. If the room is controlled by a REH CT3 room sensor, check that the time and temperatures are set correctly. If the room sensor has a mode switch (REH TM3, REH TD3 or REH DT3), the switch may be set to "OFF" or "NIGHT" position. For rooms with floor sensors, the maximum floor limit setting could be preventing the room from reaching the desired temperature. The system may have insufficient heating capacity. Poor insulation may be causing large heat loss.
Room is too hot (after running for at least 48 hours)	This might be caused by draughts caused by internal wall cavities or open doors or windows which affect the temperature-measuring ability of the sensor. The room sensor is placed in a position that does not represent the general temperature in the room. If the room is controlled by a REH CT3 room sensor, check that the time and temperatures are set correctly. If the room sensor has a mode switch (REH TM3, REH TD3 or REH DT3), the switch may be set to the "DAY" position. For rooms with floor sensors, the minimum floor limit setting could be maintaining the room temperature above the desired setting. Solar gain or an external heat source.
Temperature is unstable	This could be caused by periodic solar gain or external heating. Try setting the master to simple ON/OFF control (DIP-10 set to ON).

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