

THERMOMATIC EC HOME®

Installation and User Guide, version 3.0

Table of contents:

- 1. Overview, dimensions, choice of control functions, extras, pages 2-3**
- 2. Delivery scope, page 4**
- 3. Start Guide, pages 5-7**
 - 3.1 Installation of motor on mixing valve
 - 3.2 Installation of Connection Centre (CC)
 - 3.3 Installation of flow sensors on pipes
 - 3.4 Cabling
 - 3.5 Connection of the CC
 - 3.6 Connection of the Control Panel (CP)
 - 3.7 Installation of the CP
- 4. Manoeuvring, page 7**
- 5. Basic settings at first start-up, page 7**
- 6. User guide for Room sensor control (R), pages 8-14**
- 7. Trouble shooting, page 15**
- 8. User guide for Supply flow control (S), pages 16-21**
- 9. User guide for Room sensor control with Outdoor sensor (ROr), pages 22-29**
- 10. User guide for Outdoor sensor control with Room sensor (ROo), pages 30-37**
- 11. User guide for Outdoor sensor control (O), pages 38-44**
- 12. User guide for connection of a second heating system, pages 45-46**



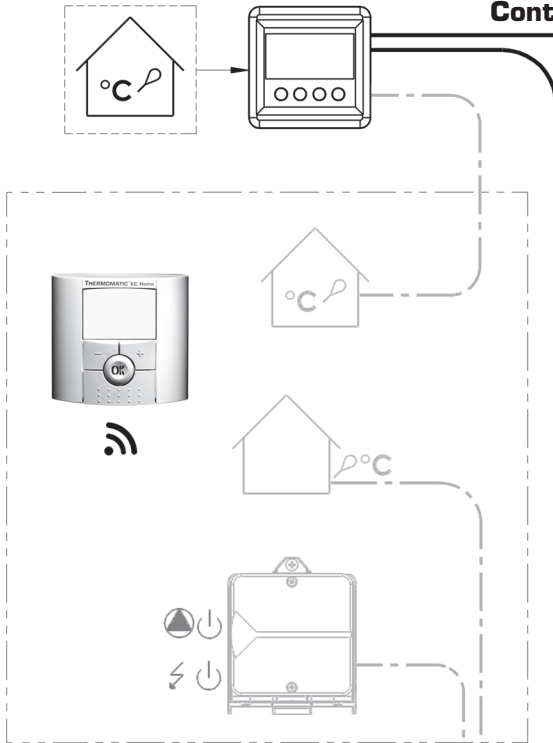
THERMOMATIC®

Termoventiler AB

1. List of included components and extras

System 1

Control panel/room sensor (CP)



System 2 (Extra)

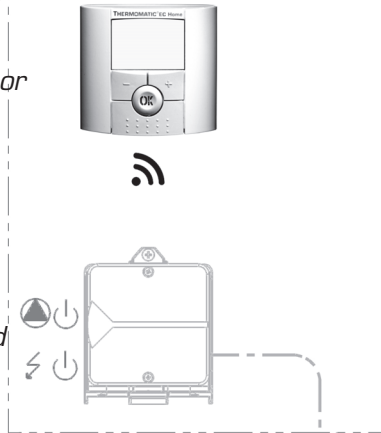
Connected with 2 conductor cable to CP.
See pages 45-46.

Extra:
Passive room sensor

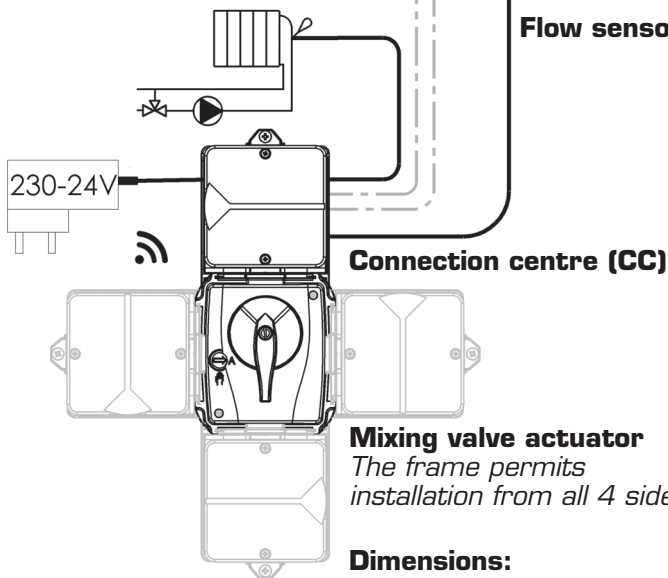
Extra:
Wireless room sensor

Extra:
Outdoor sensor

Extra:
Relay box for
circulation pump and
heating booster



Flow sensor



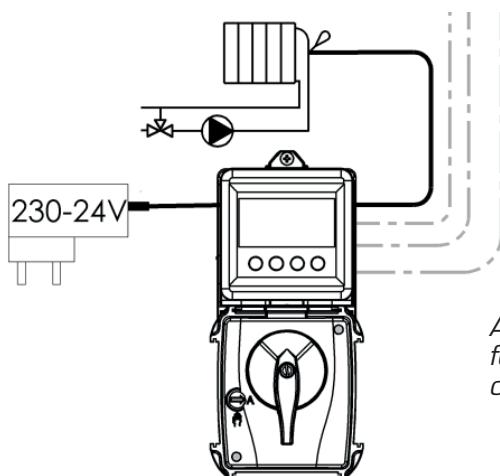
Mixing valve actuator
The frame permits
installation from all 4 sides

Dimensions:

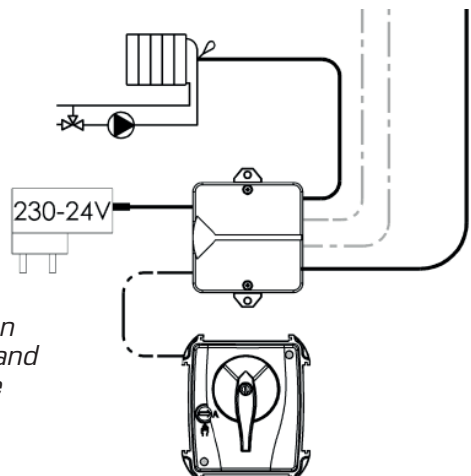
Motor: B = 91 mm, L = 80 mm, H = 85 mm

CC: B = 78 mm, L = 78 mm, H = 50 mm

CP: B = 78 mm, L = 78 mm, H = 35 mm

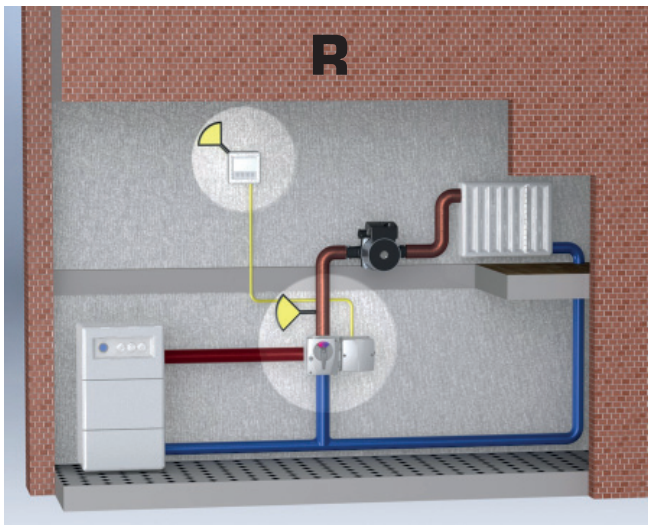


Alternative location
for control panel and
connection centre



5 different control options

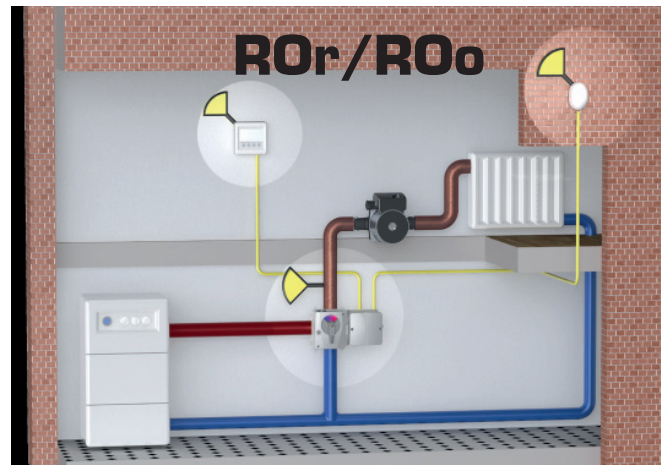
EC Home is easy to optimise to the needs of your building.



Room control

This gives the most efficient and easiest control function in a single family dwelling or premises with uniform heating needs. Easy installation/operation and optimum heating economy. Save up to 24%.

All of the settings for R are described on pages 8-14.



With Room and Outdoor sensor

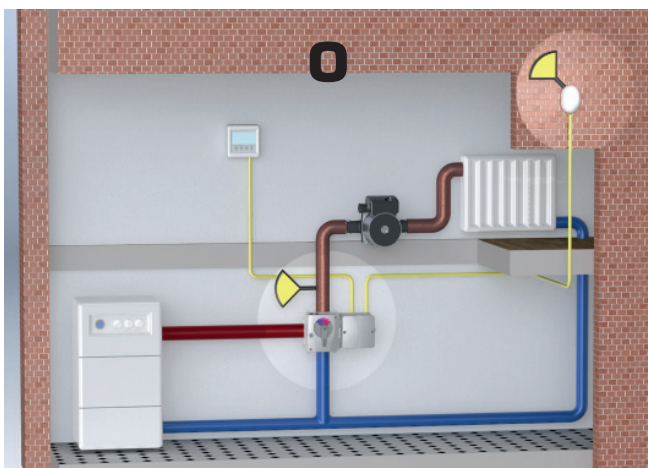
(see also in menu 7.3)

ROr in a family house or premises with uniform heating needs. Higher heating comfort is achieved with outdoor sensor-controlled maximum and minimum limits.

ROo for regulation in multi-occupancy buildings. The outdoor sensor normally controls the heating according to the set control curve. The room sensor prevents unnecessary overheating.

All of the settings for ROr are described on pages 22-29.

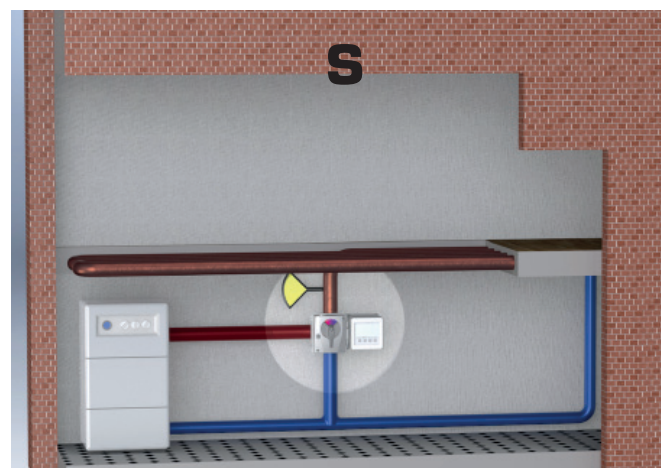
All of the settings for ROo are described on pages 30-37.



Outdoor control

For control in multi-occupancy buildings. The outdoor sensor control the heating according to the set control curve.

All of the settings for O are described on pages 38-44.



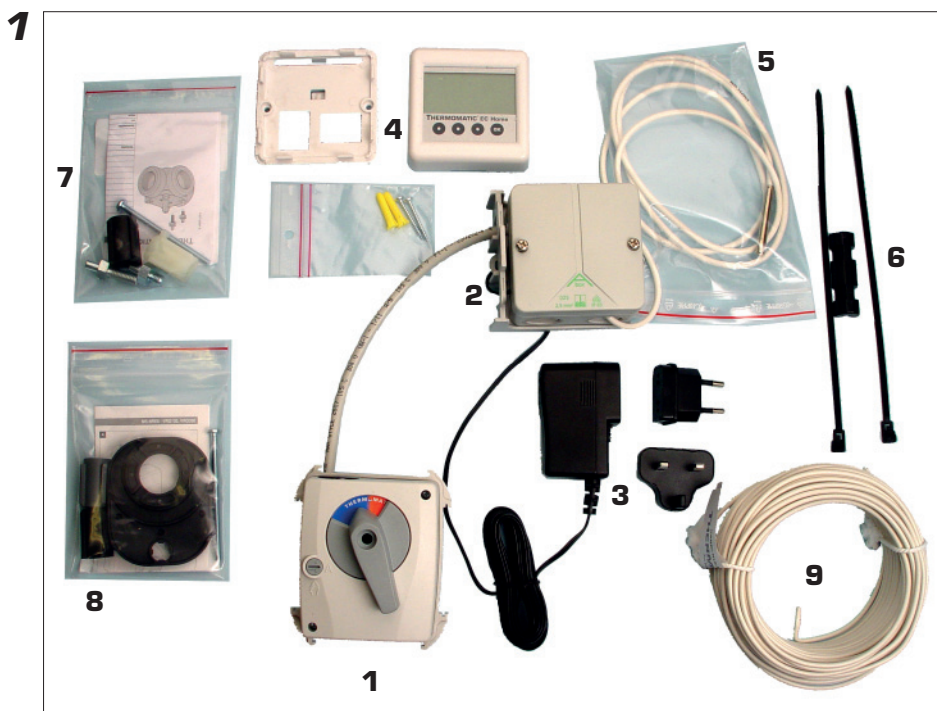
Supply flow control

To maintain the supply flow temperature constant.

All of the settings for S are described on pages 16-21.

2. Delivery scope and extras (Photo 1)

1. Mixing valve motor, 24 V DC, 0-10 V, 90°, 10 Nm (connected to CC when delivered)
2. Connection centre (CC, with bracket for fitting motor. The click lock is inside the CC on delivery (photo 2, overleaf)
3. Power supply 24 V DC (connected to the CC on delivery). With universal adapters EU/UK, 5 m cable.
4. Room sensor/control panel (CP) with installation kit for wall fitting.
5. Flow sensor (connected to CC on delivery)
6. Installation kit for supply pipe sensor
7. Installation kit M6-NRETV, for motor on mixing valves type Termoventiler or similar
8. Installation kit M6-NRE6, for motor on mixing valve type Esbe VRG/VRB
9. 4 conductor cable, for room sensor/control panel



Abbreviations found in the text

CC = Connection centre

CP = Control panel

R = Room sensor control

O = Outdoor sensor control

ROr = Room sensor control with Outdoor sensor curve as max limiter

ROo = Outdoor sensor control with Room sensor as max limiter

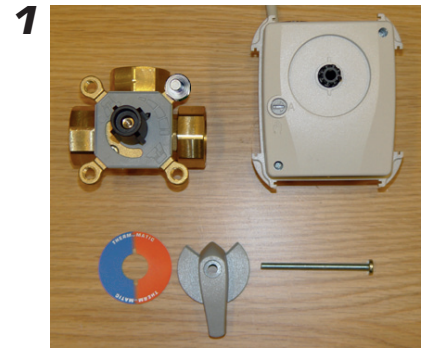
S – Supply pipe sensor

3 Start Guide

NB! When using wireless room sensors, several steps are factory-set.

3.1 Fitting the motor to a mixing valve

Fit the motor to the mixing valve according to the instructions on the respective installation kit (example shown in photos 1 and 2). Which installation kit is to be used depends on the mixing valve, see the table and instructions in the installation kit.



Fit the plate (blue/red) for the mixing valve's position indicator on the motor and fix the handle according to photo 3. **NB!** The motor is always delivered in the centre position and the handle only fits in the position that the motor is in. Insert and tighten the screw in the centre of the motor.

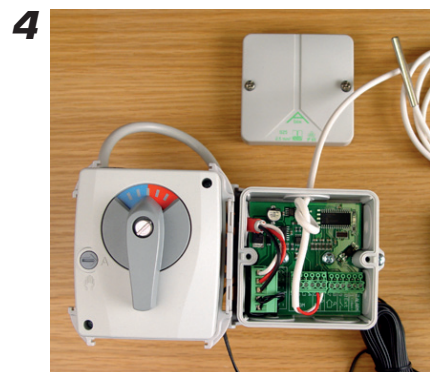


Turn the motor to manual position (photo 3). **NB:** The handle must only be turned. If the handle is depressed it may stick in the manual position.

Check that the mixing valve's working area agrees with the position of the handle.

3.2 Installation of the CC

Install the CC with the motor frame bracket as shown in photo 4. **NB!** The bracket can be located on either side of the motor and is pressed into place from behind. The click lock is pressed into the slot until it says "Click" (photo 5). You can use e.g. a small screwdriver to remove the click lock.



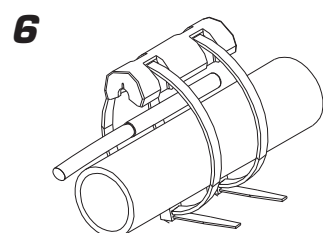
The click lock is loose inside the CC on delivery when the CP is not fitted to the CC. If not, it is in the cardboard box.

The CC can also be fitted separately, e.g. on a wall. The box size is adapted for exterior fitting on a 70 mm electrical box (e.g. wall socket).



3.3 Installing the supply sensor

Attach the sensor with the enclosed installation kit on the supply pipe (photo 6) as close to the mixing valve as possible. Ensure that there is good contact. Insulate.



3.4 Cabling

Installing the 4 conductor cable:

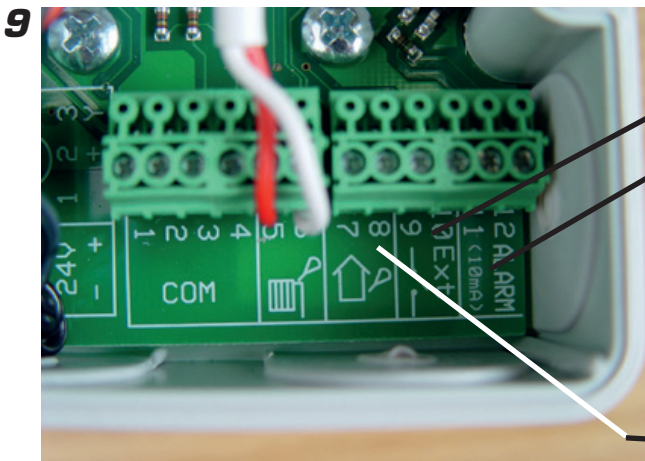
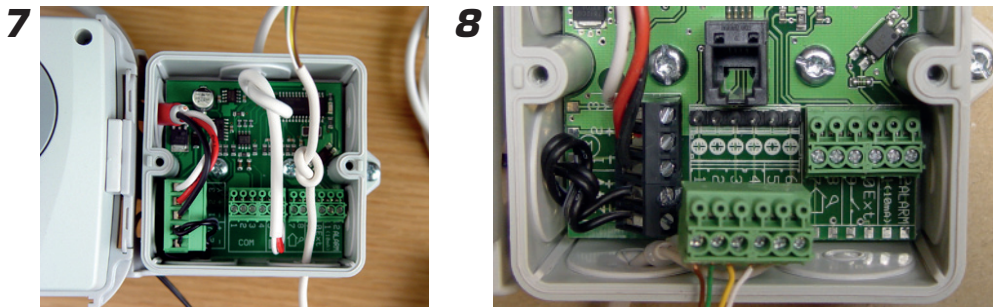
Lay the whole cable between the CC and the CP before connecting to the respective units.

3.5 Connection of the CC

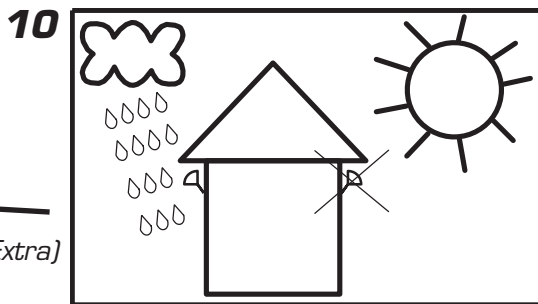
Insert the cable through the cable entry. We recommend that you knot the cable as a cable grip (photo 7).

The terminal block can be removed (photo 8) and is pushed into place on the stud after the cables are connected. Connect the 4-way multi-cable to the CC's terminals 1-4. **NB!** The colour combination on the CC terminal block must be repeated when connecting to the CP.

Photo 9 shows the CC's various terminal blocks and their function with numbers and symbols.



Terminals 9-10: Incoming from external control.
 Terminals 11-12: Outgoing Alarm signal.
NB! Polarity! Terminal 11 = "+".



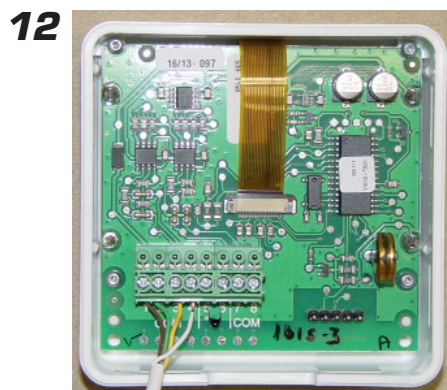
Outdoor sensor (Extra)
 Terminal 7-8

3.6 Connecting the CP

The CP is delivered with the wall fitting/adaptor loose. The CP can later be removed simply with a screwdriver according to photo 11.



Connect the 4-way multi-cable to the CC's terminals 1-4, as shown in photo 12. **NB!** The same colour combination on the terminals as in the CC. Do not forget to pull the cable through the wall fitting.



The CP is then pushed in place on the bottom plate with the click lock. Insert the lower edge first, then press in the upper part.

3.7 Installing the CP or separate room sensor

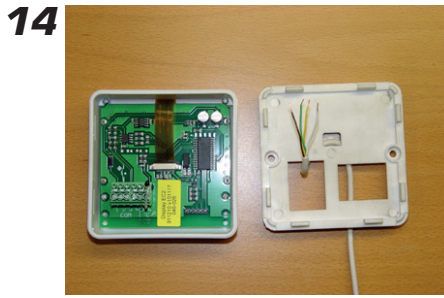
The CP can be fitted on the CC or on the wall using the enclosed installation kit (plug and screw).

In its standard design, the CP has an integrated temperature sensor that is used as the room sensor. The position of the CP is therefore decisive for correct operation when using the room sensor function.

The CP should be located centrally in the house, in a hall, stairway or similar space which is linked to as much of the rest of the house as possible. Avoid rooms with a lot of supplementary heat sources, such as a kitchen, south-facing living room or upstairs in a two storey house. Position the sensor away from direct sunlight. Avoid placing on an external wall or near an external door. Make sure the sensor is not positioned closer than 1 m from the nearest radiator and around 1.5 m from the floor.

When using passive room sensor, wireless room sensor, only outdoor sensor or only supply sensor, the position of the CP is unimportant.

For installation on the CC, see photo 13. The cover screws are then used to fix the CP wall fitting directly to the CC. The multi-cable is always pulled through the wall fitting as shown in photo 14. Photo 15 shows installation with the CP on the CC.



Using the CP

One press on any of the buttons starts the display. The second press on any button opens the first available menu.

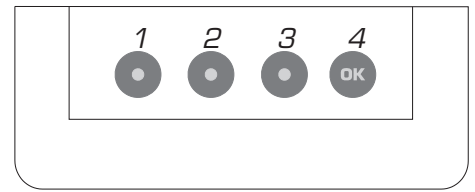
The buttons' function is then displayed above the respective buttons. Button 1 =

Move down/right or reduce value

Button 2 = Move up/left or increase value

Button 3 = Return/escape

Button 4 = OK/activate menu



1 Change

None of the values can be changed "by mistake". In all of the modes where it is possible to change a value, you will be prompted whether you are sure you want to make the change before the value is actually changed.

Change wanted?

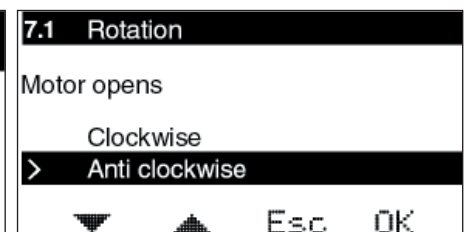
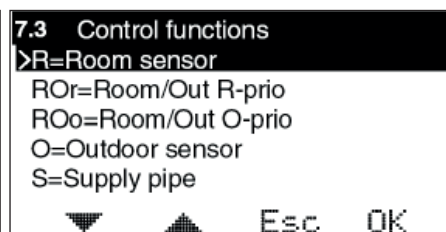
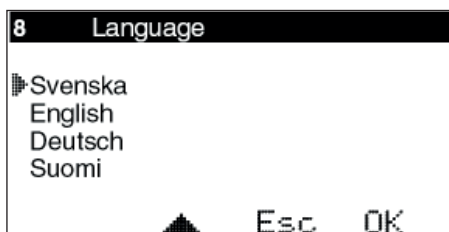
No OK

Basic settings on first start-up

At the first start-up, after the first press on OK, you will be guided through the quick start process (see photos below), first System 1 and then System 2 (if System 2 is connected):

Initiation of wireless room sensor is only shown if the antenna is connected. See separate instruction.

When using two systems, a common menu is shown as first picture. See pages 45-46.



Other basic settings

The maximum limit is set from 0-90 °C. Factory setting is 60 °C.

The setting is made in menu 7.4.

The minimum limit is set from 0-60 °C. Factory setting is 10 °C.

The setting is made in menu 7.4.

For more advanced settings, such as setting of night reduction etc. - see the relevant chapters for the control function you have selected.

6. USER GUIDE - R

In this section, each menu is described in detail.

Menu 0 – Basic menu

The basic menu only shows basic information.

The **actual room temperature**, the **room temperature set point**, **locking** (if the Security code has been activated) and **time and day of the week** (if the clock function has been activated).

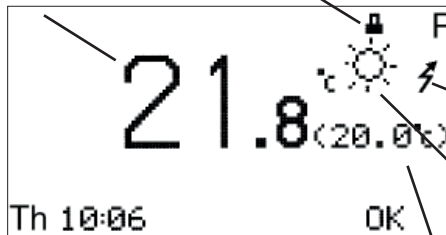
In menu 7.5.4 you can select that only the set point should be displayed.

It also shows which control mode is applying and which control function has been selected.

Current room temperature

The padlock shows that the menu lock has been activated.

Control function R = Room sensor



A flashing lightning is shown when Additional heating is active.

Control mode

Th 10:06

OK

Current day and time.
NOTE! Only displayed if the clock function is used.

Temperature set point

Menus 1 and 2 – Adjustment of set point for room sensor

Depending on which control mode has been selected in menu 3, a sun or a moon is displayed before the set point.

The selectable value is from 5-30°C for day, and 1-30°C for night, with 0,1°C intervals.

In order to access the night setting, the clock or night temperature must be activated in menu 3.

HINT: By activating locking of display and/or menu changes in menus 7.5.2 and 7.5.3, you can limit access by unauthorised persons to view/change settings.

Set point setting

Shows that you are changing day temperature.

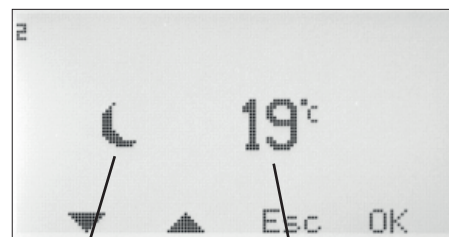


The figure in the left corner tells you which menu you are in.



Shows that you are changing night temperature.

Set point setting

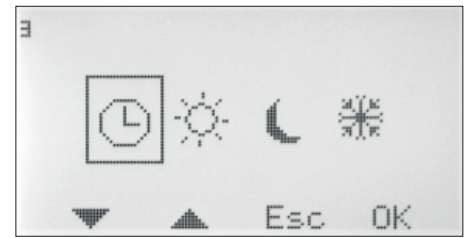


Menu 3 – Setting control mode

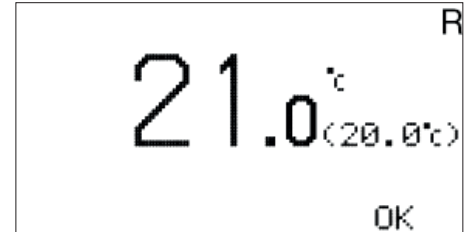
In this menu you can activate the clock function, constant day, constant night or if you want to shut down the control.

Depending on what is selected in menu 3, the basic menu, menu 0, will display different information.

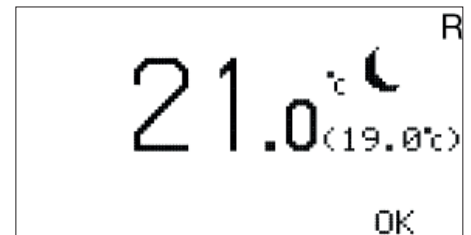
Current day and time are displayed in menu 0 only when the clock function is activated.



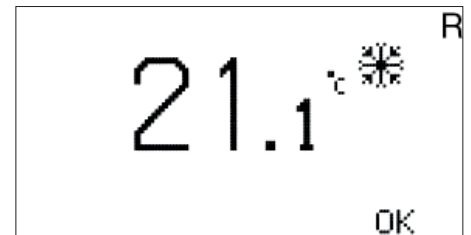
Sun = Day temperature active. Menu 0 only displays the sun when the clock is active.



Moon = Night temperature active.



Snowflake = Shut down. The set point for the Supply flow temperature is set automatically at 10°C.



Menu 4 – Time settings for Night/Saving time

NOTE! Only displayed if the clock function is activated.

Night temperature times can be set for every day of the week.

Use the up and down arrows to go to the day you want to set. The arrow along the left edge shows which day has been selected. Press OK again to activate the selected day.

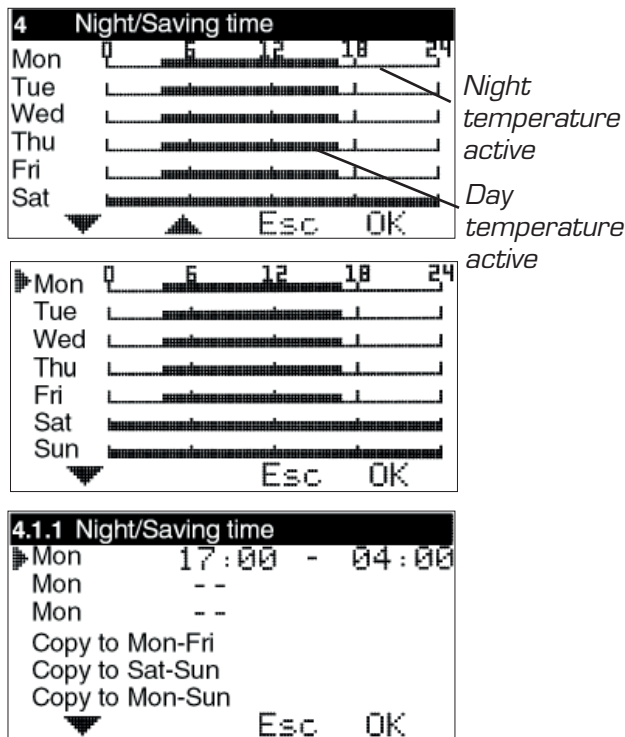
4.1.1 Time setting

3 different times can be set for each day. The settable range is 00-24.

NOTE! Setting 17:00 – 04:00 means that a decrease takes place from 17:00 – 00:00 and 00:00 – 04:00 for the selected day, not the following day.

If you want the same decrease to apply to several days, you can use “Copy to...”, to copy the decrease Monday to Friday, Saturday to Sunday, or the entire week.

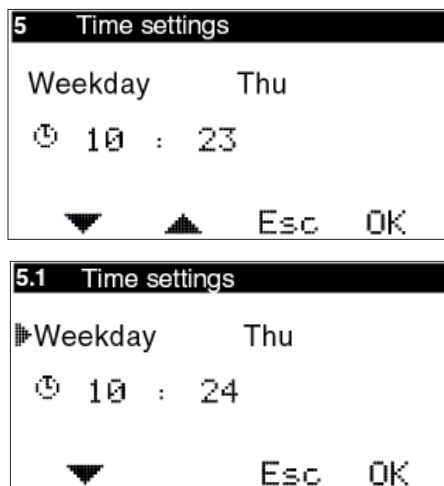
Return to menu 4 to view the selected settings.



Menu 5 – Time settings

NOTE! Only displayed if the clock function is activated.

Setting of current weekday and time. Hours and minutes are set individually.



Menu 6 - List

Shows all relevant temperatures and settings as below.

Values that are displayed change back and forth automatically.

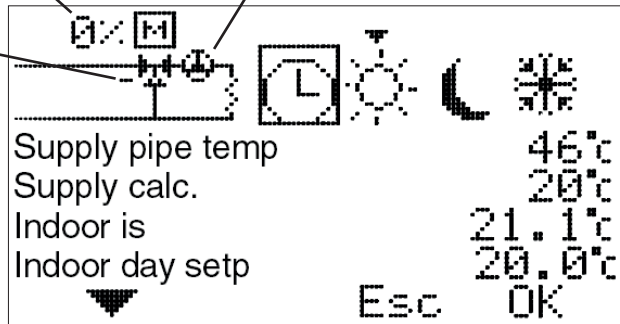
Click OK to stop the changes and then the up and down arrows to browse them.

NOTE!

The set point for the room temperature day/night/ext is shown, even when the clock function or external setting are not used.

0% shows that the motor is completely closed. 100% means fully open. +/- indicates opening/closing

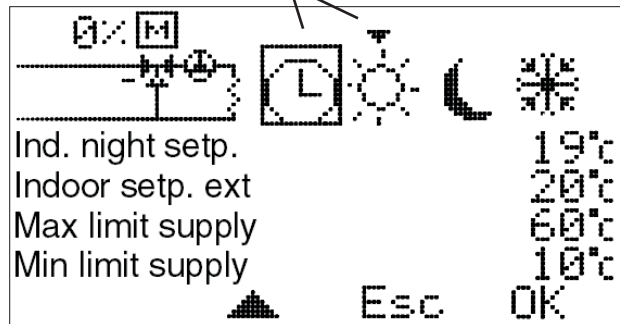
Shows that the circulation pump is active. If the pump stop function is not being used, the symbol turns constantly.



Control mode

Clock = day/night function activated

Arrow over the sun shows the day temperature is currently active.



Menu 7 - Service

The following options are available in this menu. The arrow along the left edge shows which menu has been selected.

7.1 Rotation – Setting for the direction of rotation – clockwise or anti-clockwise opening.

7.2 Manual test – Manual running of the mixing valve motor.

7.3 Control functions – Selection of control function; Room sensor (R), Room+Outdoor sensor with Room priority (ROr), Outdoor+Room sensor with Outdoor priority (ROo), Outdoor sensor (O), and only Supply flow sensor (S).

7.4 Max/Min//Rem Contr – Setting of max. and min. limits for supply temperature and desired room temperature under external control.

7.5 Display Menu - Setting the menus to be shown/changed.

7.6 Statistics – Shows the history for temperatures for the various sensors.

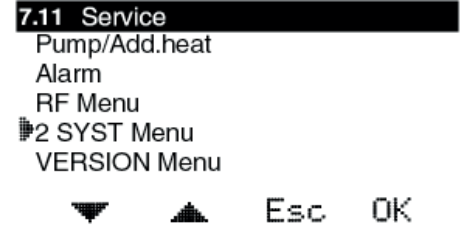
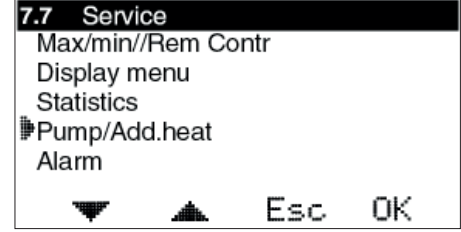
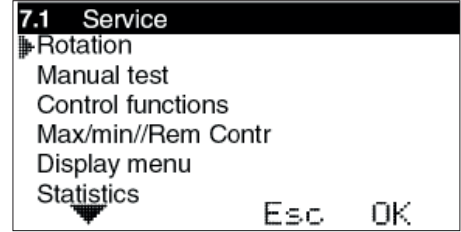
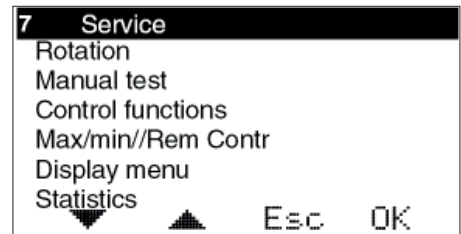
7.7 Pump/Add.heat – Used in combination with the relay box to start/stop the circulation pump, heating booster etc. *Only shown if relay box is connected*

7.8 Alarm – Used to send an alarm, e.g. an SMS if the GSM control is connected, if a specific sensor temperature is exceeded or not reached.

7.10 RF Menu – Used to activate wireless room sensor (WL)

7.11 2 SYST Menu – Used to activate System 2.

7.12 VERSION Menu – Shows software version for the CP.



7.1 Rotation

To select clockwise or anticlockwise motor opening.

7.2 Manual test

Used to test various connected functions manually.

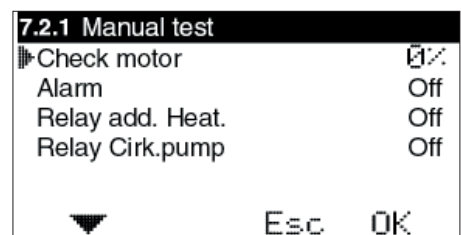
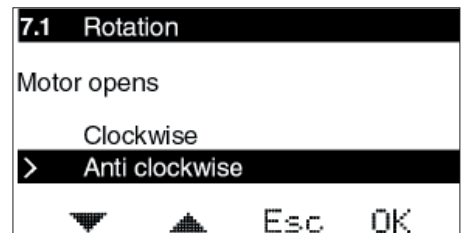
Motor check – Press OK to open or close the motor using the up and down arrows. If the motor goes the wrong way, the direction of rotation must be changed in menu 7.1.

Alarm – Press OK to change on or off using the up and down arrows.

Used to send a signal if something is wrong. The setting is carried out in menu 7.8. In the case of an alarm, connection is made on terminal block 11-12, marked "Alarm" in the CC.

Relay add. Heat. – Press OK to change on or off using the up and down arrows. Used with the relay box to start/stop booster heating. Also see 7.7.1.

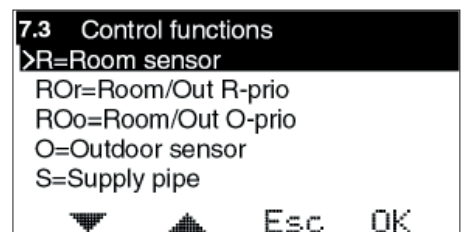
Relay Circ.pump – Press OK to change on or off using the up and down arrows. Used with the relay box to start/stop the circulation pump. Also see 7.7.1.



7.3 Control functions

Description of the various control functions can be found in "List", page 3.

Outdoor sensor is not included in the basic package.



7.4 Max/Min//Rem Contr

Max = Maximum permitted supply flow temperature. Settable from 0-90°C.

Min = Minimum permitted supply temperature. Especially suitable for underfloor heating systems. Settable from 0-60°C.

Room temp Remote switch = Desired room temperature when the external contact has closed, e.g. via GSM-control. Settable 10-30°C. Remote switch is connected to terminals 9-10, marked "Ext" in the CC.

When External contact is closed, the Moon+E is shown in menu 0:



7.5 Display Menu

7.5.1 Security code

This is where you can specify if you want to be able to lock EC Home's buttons and menus. This occurs when 20 seconds have passed and no buttons have been pressed. The code that has been chosen is used to unlock them. When the Security code is used, the selected buttons must be pressed and held for 5 seconds to enable unlocking.

Menus 7.5.2 and 7.5.3 are displayed only when the Security code has been selected. When the menus are locked, a padlock is shown in menu 0.

7.5.2 Display menus

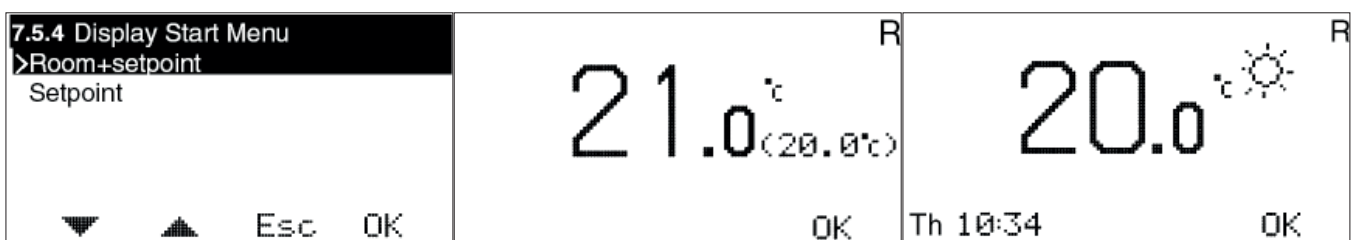
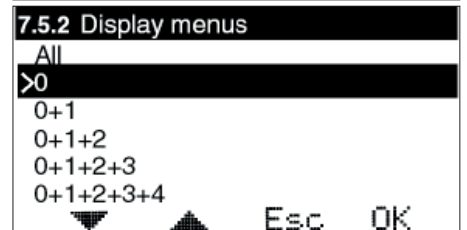
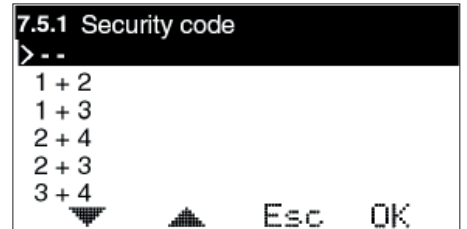
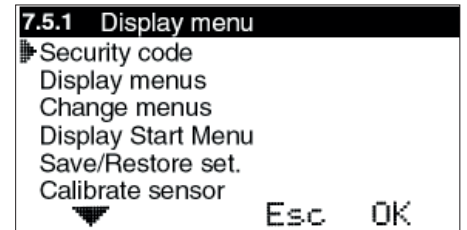
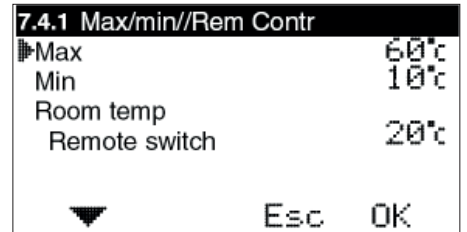
This is where you can select which menus are shown when the Security code is activated.

7.5.3 Edit menus

This is where you can select which menus can be edited when the Security code is activated.

7.5.4 Display Start Menu

This is where you can select whether Menu 0, which shows the temperature, shows the current temperature + the set point or just the set point.



7.5.5 Save/Restore set.

Here, you can select "Save settings" to save the settings you have made.

In this way, you can use "Restore prev" to go back to the correct settings if you, or anyone else, has changed the settings by mistake.

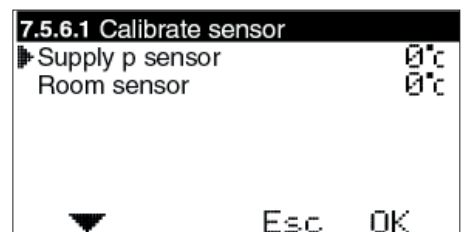
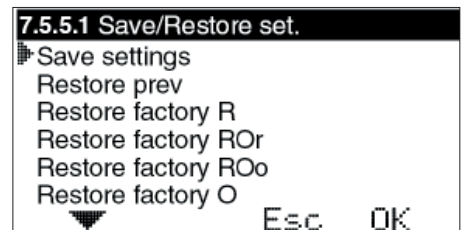
"Restore factory R/R0r/ROo/O/S" can be used to return all of the basic settings to the factory settings.



"Restore factory" resets EVERYTHING to factory settings. No settings is saved. When using two systems, both systems are reset to factory.

7.5.6 Calibrate sensor

This is where you can select to adjust the value of the supply flow sensor or room sensor if you do not think that the value shown on EC Home is correct. Settable from +5 to -5°C.



7.6 Statistics

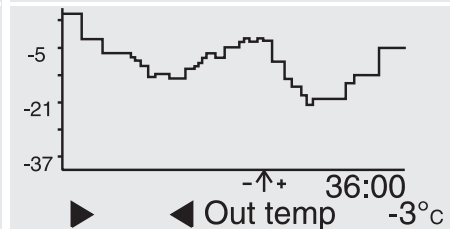
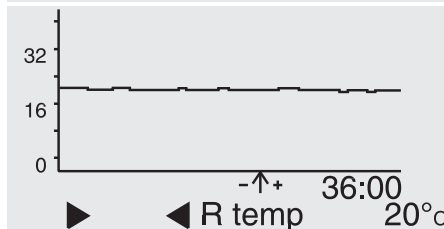
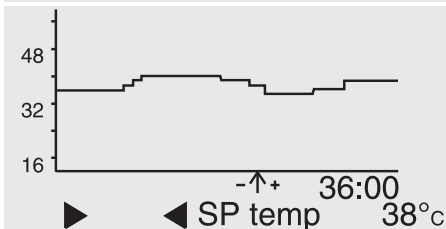
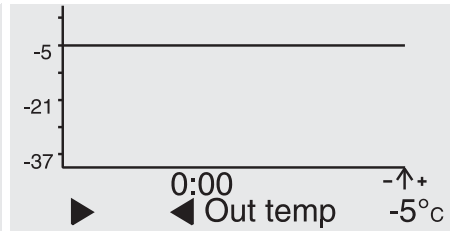
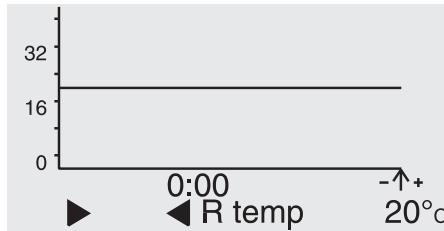
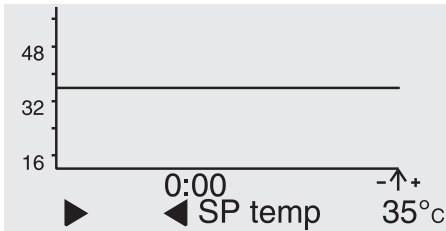
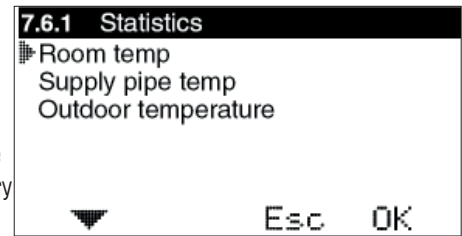
This is where you see what the Supply pipe temperature, Room temperature and Outdoor temperature (if outdoor sensor is being used) have been over the last few hours.

The supply sensor shows the last 200 minutes, every second minute. The values for the other sensors change much more slowly, and here you can see the last 200 hours, every second hour.

Use the up and down arrows to mark the sensor you want to view the statistics for, and press OK to view a temperature graph. You then use the left or right arrows to move the cursor at the bottom right of the graph to read the value for a specific minute or hour.

HINT: By pressing on the right arrow straight away you can jump to the oldest value.

Click Esc to return to the Statistics menu.



7.7 Pump/Add.heat

This is where you set whether you will use the function for start/stop of the circulation pump to the heating system, booster heating etc. **NOTE!** An extra box is required.

Pump stop Room sensor cont On/Off – If this function is activated the pump will stop when the control motor has been fully closed for 20 minutes. Thereafter, the pump is run for 5 minutes at noon every day

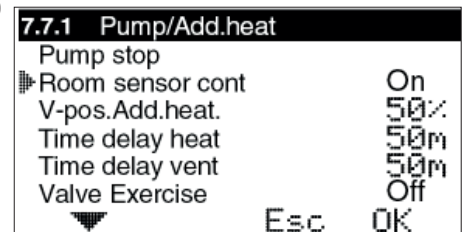
NOTE! The time is retrieved from the set time. If not time is set, noon is regarded as being 12 hours after system start-up. When the room sensor wants heating, the pump restarts immediately.

V-pos.Add.heat – If you want booster heating to start when the valve is in a specific position, you can set that here. 0 means that the motor is completely closed, 100 that the motor is completely open.

Time delay heat – How long it must take after the above valve position is achieved before the booster heating starts. Settable 0–254 min, >254 = ∞ (off).

Time delay vent – How long it must take from the booster heating starts until the motor opens more. Settable 0–254 min.

Valve exercise. On/Off - When the Pump Stop is activated, you can select exercise of the mixing valve. The pump is then stopped and the motor runs until it is completely open and back again to closed position before it is controlled normally again. This takes place at 12 noon every Monday.



7.8 Alarm switch

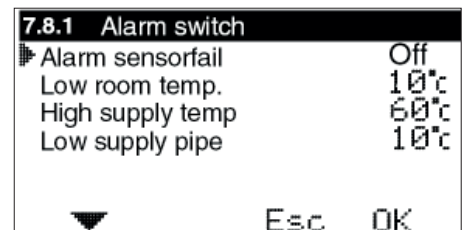
Is used to send an alarm, e.g. SMS, if a specific temperature is exceeded/not reached by a sensor. **NOTE!** Requires special equipment.

In the case of an alarm, connection is made on terminal block 11-12, marked "Alarm" in the CC. **Terminal 11 = "+".**

Settable values are 0-90°C.

Alarms can be transmitted for: Sensor fault, Low room temperature, High supply temperature or Low supply temperature.

Menu 8 - Language



Trouble shooting

In the case of a fault on a sensor or its cable, or an incorrect connection, EC Home will show an error message on the display. If there is a sensor fault, menu 6 will be automatically displayed and the value for the faulty sensor will flash. A value is shown, and this value may indicate the cause of the fault.

For room sensor, 0° will be displayed for an open circuit, 99.9° for a short circuit.

For supply sensor, 0° will be displayed for an open circuit, 99° for a short circuit.

For outdoor sensor, -40° will be displayed for an open circuit, 65° for a short circuit.

EC Home will perform the following, depending on the fault:

Fault on supply sensor – Open the mixing valve to 25%

Fault on room sensor during R regulation – Send a maximum of 30°C on the supply line

Fault on outdoor sensor during O regulation - Regulated according to the curve's value at outdoor temperature 0°C (applies whatever the break point)

Fault on outdoor sensor during RO_r regulation – Regulates according to the set room temperature

Fault on room sensor during RO_r regulation – Regulates according to the set curve

Fault on outdoor sensor during RO_o regulation – Regulates to maintain room temperature at 20°C

Fault on room sensor during RO_o regulation – Regulates according to the set curve

Fault on room sensor during R regulation – Send a maximum of 30°C on the supply line

Fault on connection or cable between CC and CP:

In the case of a fault on the cables connected to terminals 1 or 2, the CP does not receive power.

In the case of a fault on the cables connected to terminals 3 or 4, an error message – “Fault comm CC/CP” – will be displayed.

Whichever fault is present, the motor sets to 25% open.

Problem solving

Problem: EC Home shows wrong temperature compared to my thermometer.

Solution: Calibrate the sensor value in menu 7.5.6 Calibrate sensor.

Problem: I have a new EC Home and it doesn't regulate the temperature as it should.

Solution: Wait a few hours and see if it changes. Different houses and systems has different thermal inertia and some systems needs several hours to be adjusted. The same may happen in case of larger changes in room temperature.

Problem: The actuator/supply temperature is oscillating up and down.

Solution:

1. Check that the supply pipe sensor is in the correct place and that it has good contact with the pipe.
2. Check that the room sensor is placed next to a heating source.
3. Check that the Kvs value of the mixing valve is correct. A too high Kvs value compared to system needs can lead to problems with the regulation.

Problem: I can't get System 2 to show in the menu.

Solution: Check that the 2 conductor cable between terminal 7-8 in the CP and terminal 3-4 in the CC is correctly connected.

8. USER GUIDE S

In this section, each menu is described in detail.

Menu 0 – Basic menu

The Basic menu shows information about:

Current supply flow temperature, set supply flow temperature, set night reduction, set external reduction, lock (if the Security code has been activated) **and time and weekday** (if the clock function has been activated).

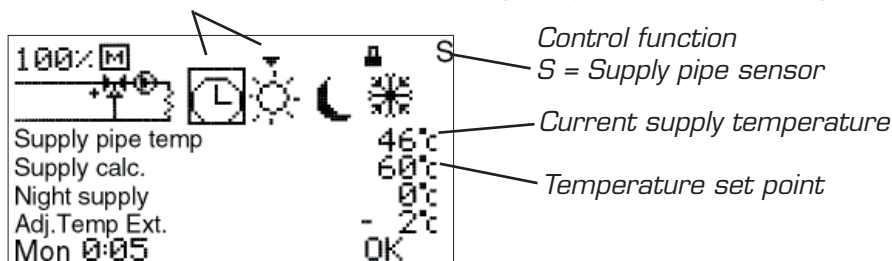
It also shows which control mode is applying and which control function has been selected.

NOTE!

The set value for Night reduction and External reduction are displayed, even if the clock function or external change are not used.

HINT: By activating locking of display and/or menu changes in menus 7.5.2 and 7.5.3, you can limit access by unauthorised persons to view/change settings.

Control mode
 Clock = day/night function activated
 Arrow over the sun shows the day temperature is currently active.

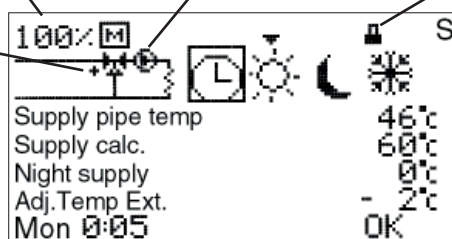


Current day and time
NOTE! Only displayed if the clock function is activated.

0% shows that the motor is completely closed. 100% means fully open.
 +/- indicates opening/closing

Shows that the circulation pump is active. If the pump stop function is not being used, the symbol turns constantly.

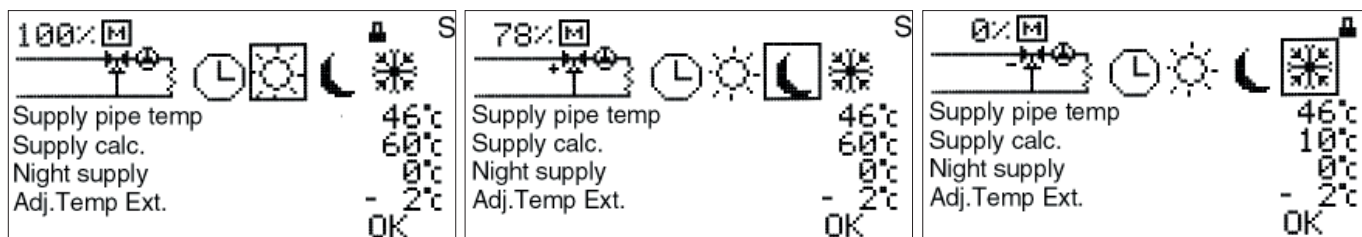
The padlock shows that the menu lock has been activated.



Control mode
 Sun = Day temperature

Control mode
 Moon = Night temperature

Control mode
 Snowflake = Shut down



Menus 1 and 2 – Adjustment of set point and night reduction of supply temperature

You set the set point for the supply temperature in menu 1c.

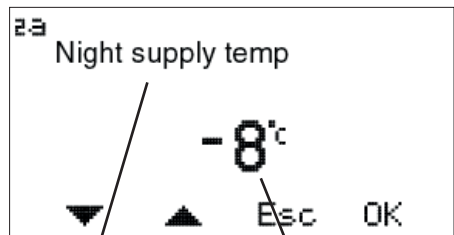
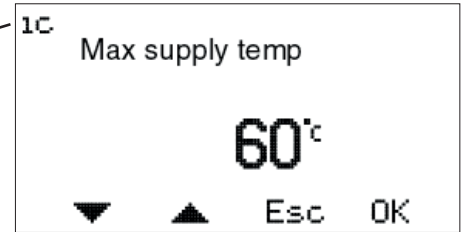
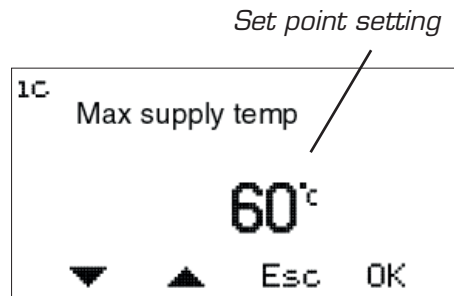
Settable values are 0 - 90°C*.

Night reduction takes place in menu 2a. In order to set the night reduction the night alternative or clock must be activated in menu 3.

Settable values are 0 to -40°C.

*See Menu 7.4 Max/min//Rem Contr on page 20.

The figure in the left corner tells you which menu you are in.



Shows that you are changing the night temperature set point

Set point setting

Menu 3 – Setting control mode

In this menu you can activate the clock function, constant day, constant night or if you want to shut down the control.

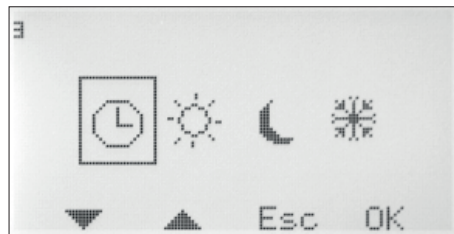
Depending on what is selected in menu 3, the basic menu, menu 0, will display different information.

Current day and time are only displayed when the clock function is activated.

Sun = Day temperature active

Moon = Night temperature active.

Snowflake = Shut down. The set point for the Supply flow temperature is set automatically at 10°C.



Menu 4 – Time settings for Night/Saving time

NOTE! Only displayed if the clock function is activated.

Night temperature times can be set for every day of the week.

Use the up and down arrows to go to the day you want to set. The arrow along the left edge shows which day has been selected. Press OK again to activate the selected day.

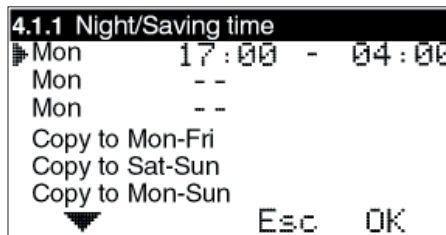
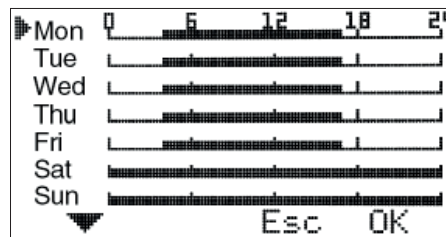
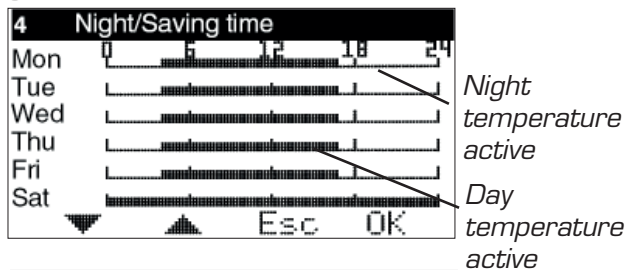
4.1.1 Time setting

3 different times can be set for each day. The settable range is 00-24.

NOTE! Setting 17:00 – 04:00 means that a decrease takes place from 17:00 – 00:00 and 00:00 – 04:00 for the selected day, not the following day.

If you want the same decrease to apply to several days, you can use “Copy to...”, to copy the decrease Monday to Friday, Saturday to Sunday, or the entire week.

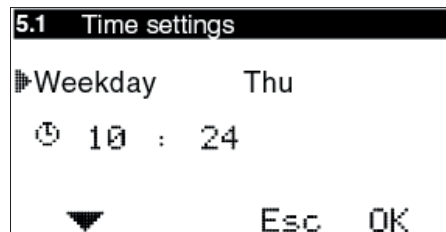
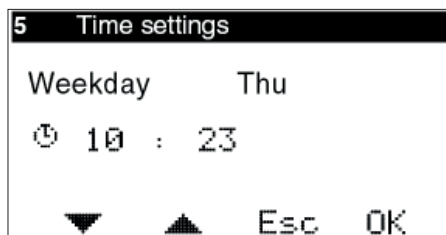
Return to menu 4 to view the selected settings.



Menu 5 – Time settings

NOTE! Only displayed if the clock function is activated.

Setting of current weekday and time. Hours and minutes are set individually.



Menu 7 - Service

The following options are available in this menu. The arrow along the left edge shows which menu has been selected.

7.1 Rotation – Setting for the direction of rotation – clockwise or anti-clockwise opening.

7.2 Manual test – Manual running of the mixing valve motor

7.3 Control functions – Selection of control function; Room sensor (R), Room+Outdoor sensor with Room priority (ROr), Outdoor+Room sensor with Outdoor priority (ROo), Outdoor sensor (O), and only Supply flow sensor (S).

7.4 Max/min//Rem Contr – Setting the desired supply temperature and reduction of supply temperature by external control

7.5 Display Menu - Setting the menus to be shown/changed.

7.6 Statistics – Shows the history for temperatures for the various sensors.

7.8 Alarm – Used to send an alarm, e.g. an SMS if the GSM control is connected, if a specific sensor temperature is exceeded or not reached.

7.10 RF Menu – Used to activate wireless room sensor (WL)

7.11 2 SYST Menu – Used to activate System 2.

7.12 VERSION Menu – Shows software version for the CP.

7.1 Rotation

To select clockwise or anticlockwise motor opening.

7.2 Manual test

Used to test various functions manually.

Motor check – Press OK to open or close the motor using the up and down arrows. If the motor goes the wrong way, the direction of rotation must be changed in menu 7.1.

Alarm – Press OK to change on or off using the up and down arrows. Used to send a signal if something is wrong. The setting is carried out in menu 7.8. In the case of an alarm, connection is made on terminal block 11-12, marked "Alarm" in the CC.

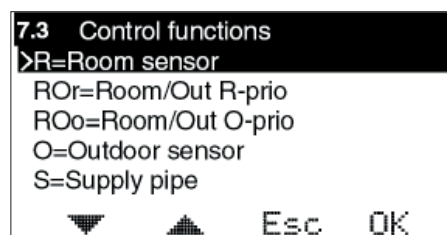
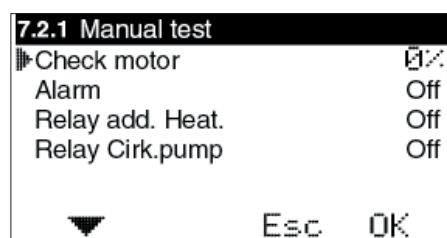
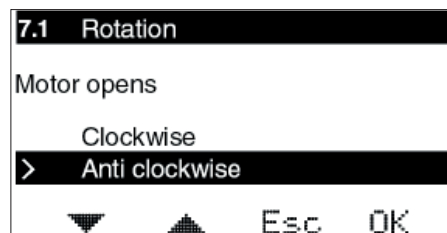
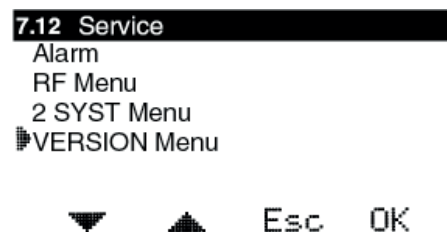
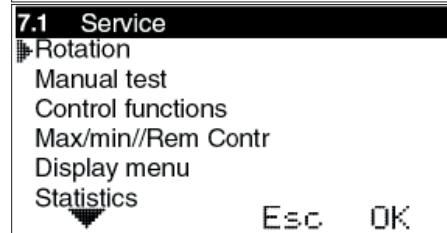
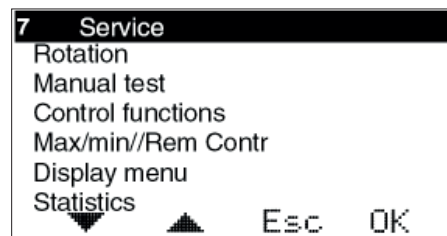
Relay add. Heat. – Press OK to change on or off using the up and down arrows. Used with the relay box to start/stop booster heating. Also see 7.7.1.

Relay Circ.pump – Press OK to change on or off using the up and down arrows. Used with the relay box to start/stop the circulation pump. Also see 7.7.1.

7.3 Control functions

Description of the various control functions can be found in "List", page 3.

Outdoor sensor is not included in the basic package.



7.4 Max/min//Rem Contr

Max = Desired supply temperature. Settable from 0-90°C.

Min = Limits the settable supply temperature. Settable 0-60°C

Lower supply temp Remote switch =

The number of degrees that the supply temperature should be reduced when the external contact is closed, e.g. via GSM control.

Settable values are 0 to -40°C.

External control is connected to terminals 9-10, marked "Ext" in the CC.

When External contact is closed, the Moon+E is shown in menu 0:



7.5 Display Menu

7.5.1 Security code

This is where you can specify if you want to be able to lock EC Home's buttons and menus. This occurs when 20 seconds have passed and no buttons have been pressed. The code that has been chosen is used to unlock them. When the Security code is used, the selected buttons must be pressed and held for 5 seconds to enable unlocking.

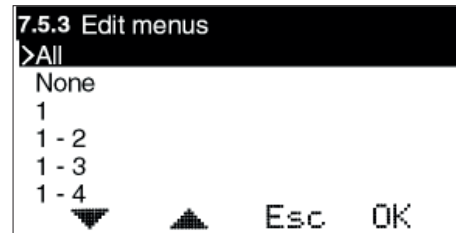
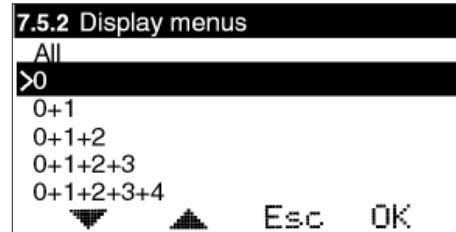
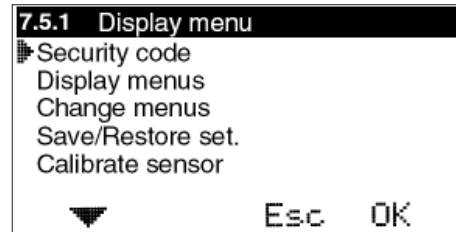
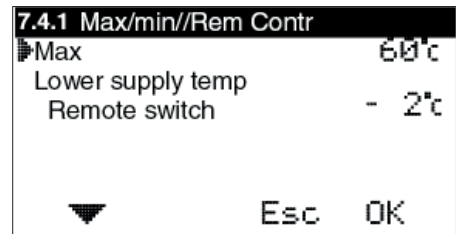
Menus 7.5.2 and 7.5.3 are displayed only when the Security code has been selected. When the menus are locked, a padlock is shown in menu 0.

7.5.2 Display menus

This is where you can select which menus are shown when the Security code is activated.

7.5.3 Edit menus

This is where you can select which menus can be edited when the Security code is activated.



7.5.5 Save/Restore set.

Here, you can select "Save settings" to save the settings you have made.

In this way, you can use "Restore prev" to go back to the correct settings if you, or anyone else, has changed the settings by mistake.

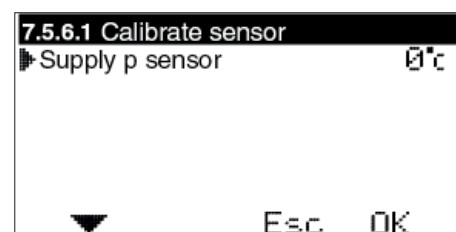
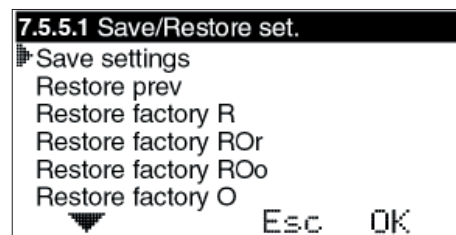
"Restore factory R/ROr/ROo/O/S" can be used to return all of the basic settings to the factory settings.



"Restore factory" resets EVERYTHING to factory settings. No settings is saved. When using two systems, both systems are reset to factory.

7.5.6 Calibrate sensor

This is where you can select to adjust the value of the supply flow sensor if you do not think that the value shown on EC Home is correct. Settable from +5 to -5°C.



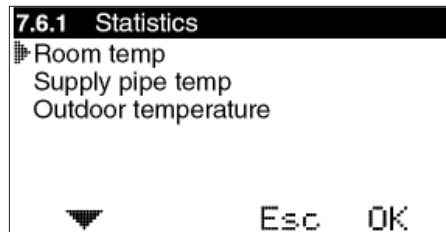
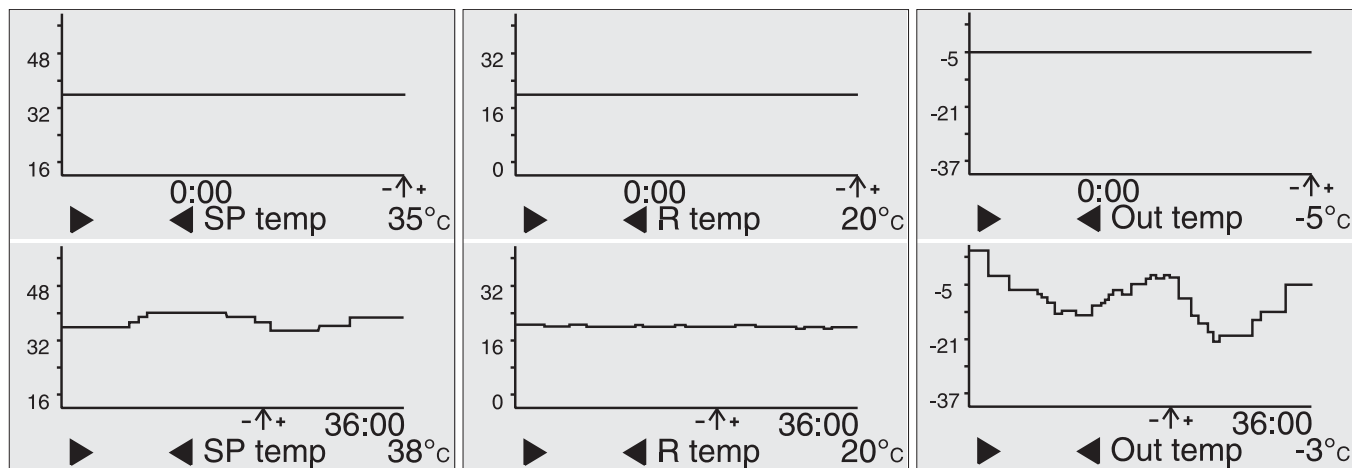
7.6 Statistics

This is where you see what the Supply pipe temperature, Room temperature and Outdoor temperature (if outdoor sensor is being used) have been over the last few hours.

The supply sensor shows the last 200 minutes, every second minute. The values for the other sensors change much more slowly, and here you can see the last 200 hours, every second hour.

Use the up and down arrows to mark the sensor you want to view the statistics for, and press OK to view a temperature graph. You then use the left or right arrows to move the cursor at the bottom right of the graph to read the value for a specific minute or hour. **HINT:** By pressing on the right arrow straight away you can jump to the oldest value.

Click Esc to return to the Statistics menu.



7.8 Alarm switch

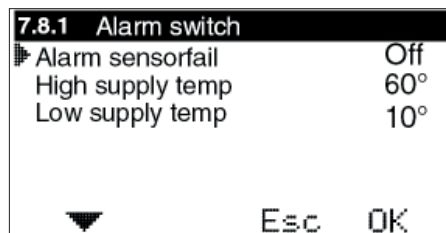
Is used to send an alarm, e.g. SMS, if a specific temperature is exceeded/not reached by a sensor. **NOTE!** Requires special equipment.

In the case of an alarm, connection is made on terminal block 11-12, marked "Alarm" in the CC. **Terminal 11 = "+"**.

Settable values are 0-90°C.

Alarms can be transmitted for: Sensor faults, High supply temperature or Low supply temperature.

Menu 8 - Language



9. USER GUIDE ROr

In this section, each menu is described in detail.

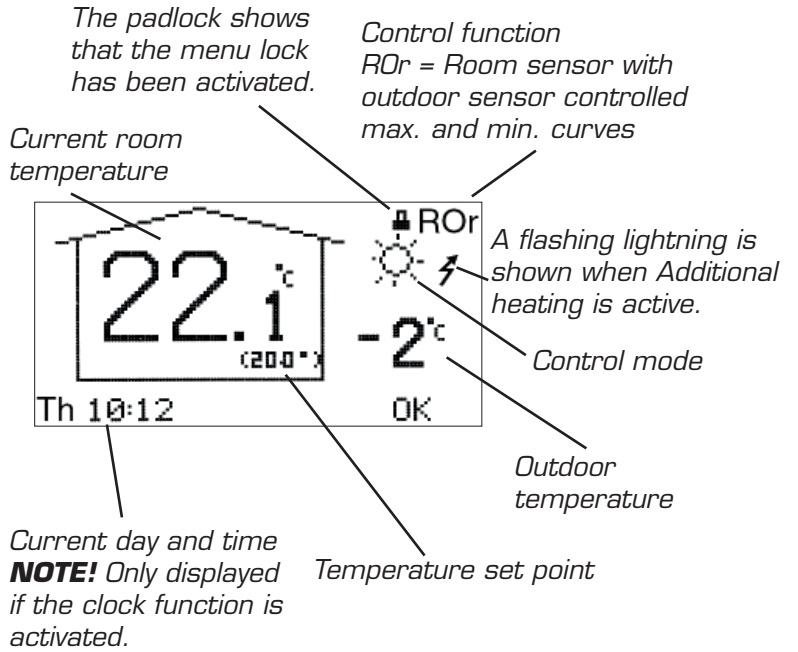
Menu 0 – Basic menu

The basic menu only shows basic information.

The current room temperature, set point for room temperature, outdoor temperature, locking (if the Security code has been activated) **and time and weekday** (if the clock function has been activated).

In menu 7.5.4 you can select that only the set point should be displayed.

It also shows which control mode is applying and which control function has been selected.



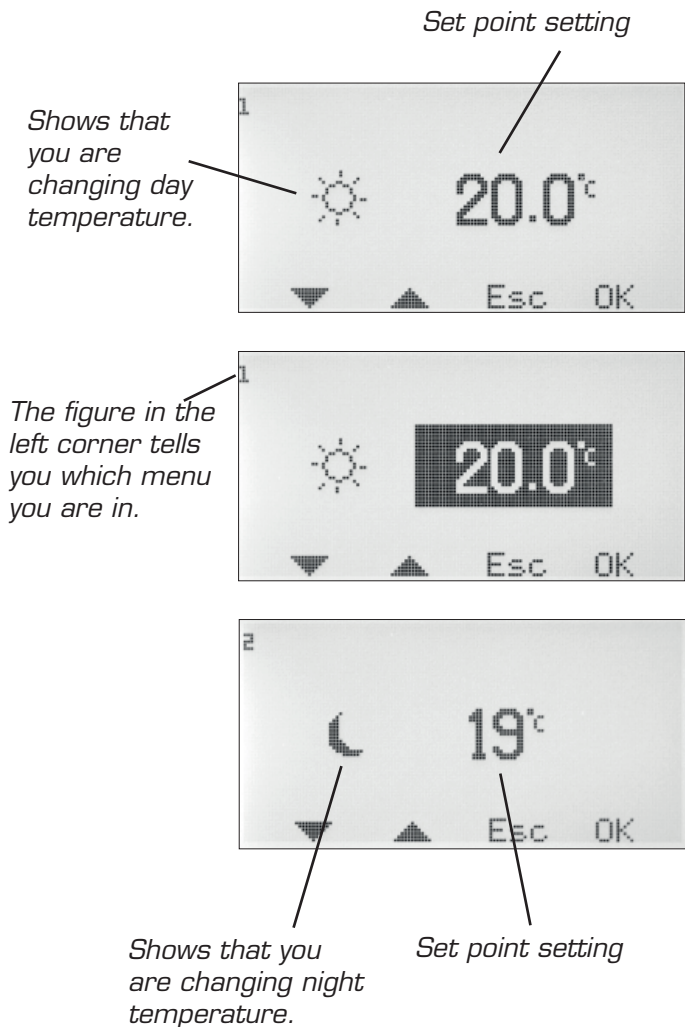
Menus 1 and 2 – Adjustment of set point for room sensor

Depending on which control mode has been selected in menu 3, a sun or a moon is displayed before the set point.

The selectable value is from 5-30°C for day and 1-30°C for night, with 0,1°C intervals.

In order to access the night setting, the clock or night temperature must be activated in menu 3.

HINT: By activating locking of display and/or menu changes in menus 7.5.2 and 7.5.3, you can limit access by unauthorised persons to view/change settings.

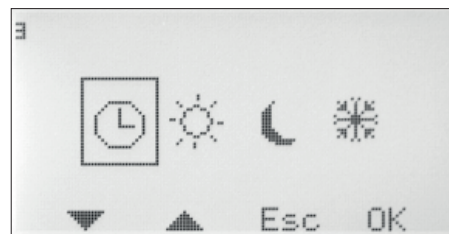


Menu 3 – Setting control mode

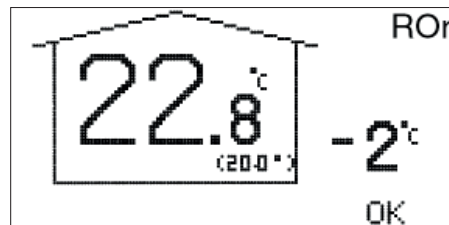
In this menu you can activate the clock function, constant day, constant night or if you want to shut down the control.

Depending on what is selected in menu 3, the basic menu, menu 0, will display different information.

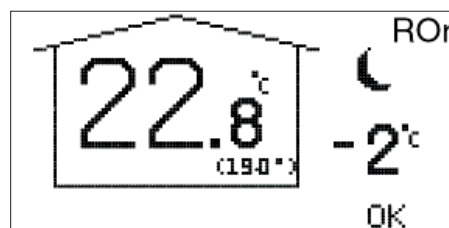
Current day and time are only displayed when the clock function is activated.



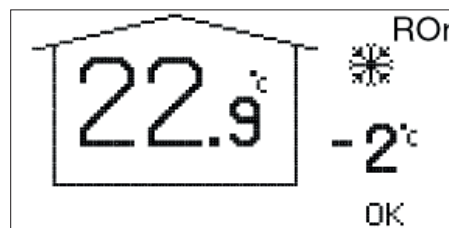
Sun = Day temperature active. Menu 0 only displays the sun when the clock is active.



Moon = Night temperature active.



Snowflake = Shut down. The set point for the Supply flow temperature is set automatically at 10°C.



Menu 4 – Time settings for Night/Saving time

NOTE! Only displayed if the clock function is activated.

Night temperature times can be set for every day of the week.

Use the up and down arrows to go to the day you want to set. The arrow along the left edge shows which day has been selected. Press OK again to activate the selected day.

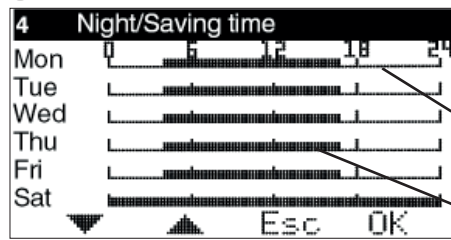
4.1.1 Time setting

3 different times can be set for each day. The settable range is 00-24.

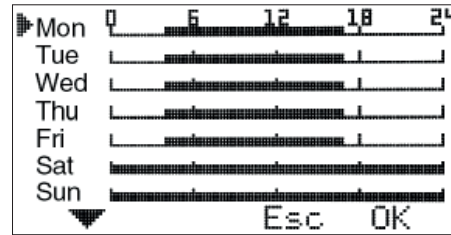
NOTE! Setting 17:00 – 04:00 means that a decrease takes place from 17:00 – 00:00 and 00:00 – 04:00 for the selected day, not the following day.

If you want the same decrease to apply to several days, you can use “Copy to...”, to copy the decrease Monday to Friday, Saturday to Sunday, or the entire week.

Return to menu 4 to view the selected settings.



Night temperature active
Day temperature active



Menu 5 – Time settings

NOTE! Only displayed if the clock function is activated.

Setting of current weekday and time. Hours and minutes are set individually.

Menu 6 - List

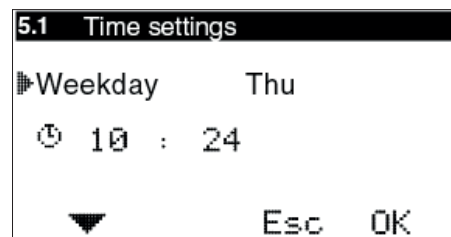
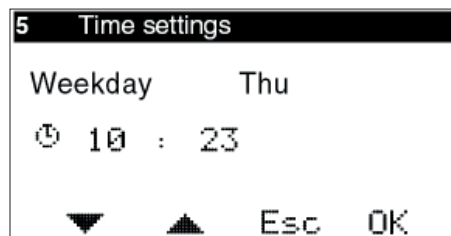
Shows all relevant temperatures and settings as below.

Values that are displayed change back and forth automatically.

Click OK to stop the changes and then the up and down arrows to browse them.

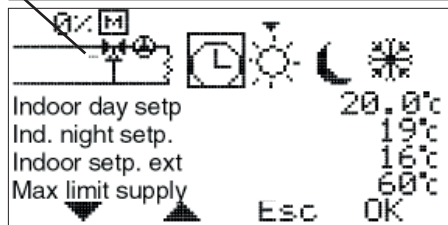
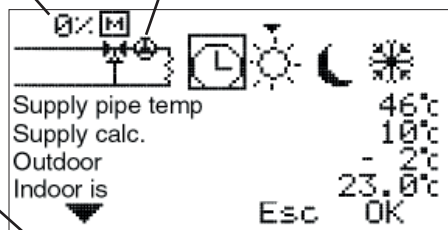
NOTE!

The set point for the room temperature day/night/ext is shown, even when the clock function or external setting are not used.



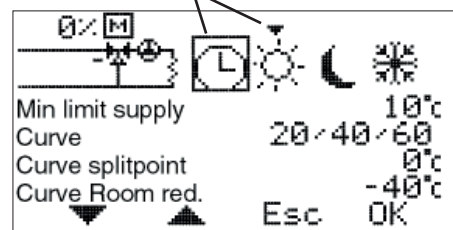
0% shows that the motor is completely closed. 100% means fully open.
+/- indicates opening/closing

Shows that the circulation pump is active. If the pump stop function is not being used, the symbol turns constantly.



Control mode

Clock = day/night function activated
Arrow over the sun shows the day temperature is currently active.



Menu 7 - Service

The following options are available in this menu. The arrow along the left edge shows which menu has been selected.

7.1 Rotation – Setting for the direction of rotation – clockwise or anti-clockwise opening.

7.2 Manual test – Manual running of the mixing valve motor

7.3 Control functions – Selection of control function; Room sensor (R), Room+Outdoor sensor with Room priority (ROr), Outdoor+Room sensor with Outdoor priority (ROo), Outdoor sensor (O), and only Supply flow sensor (S).

7.4 Max/Min//Rem Contr – Setting of max. and min. limits for supply temperature and desired room temperature under external control.

7.5 Display Menu - Setting the menus to be shown/changed.

7.6 Statistics – Shows the history for temperatures for the various sensors.

7.7 Pump/Add.heat – Used in combination with the relay box to start/stop the circulation pump, heating booster etc. *Only shown if relay box is connected.*

7.8 Alarm – Used to send an alarm, e.g. an SMS if the GSM control is connected, if a specific sensor temperature is exceeded or not reached.

7.9 Curve setting – Setting the outdoor sensor's curve for max. and min. limitation of supply temperature

7.10 RF Menu – Used to activate wireless room sensor (WL)

7.11 2 SYST Menu – Used to activate System 2.

7.12 VERSION Menu – Shows software version for the CP.

7.1 Rotation

To select clockwise or anticlockwise motor opening.

7.2 Manual test

Used to test various connected functions manually.

Motor check – Press OK to open or close the motor using the up and down arrows. If the motor goes the wrong way, the direction of rotation must be changed in menu 7.1.

Alarm – Press OK to change on or off using the up and down arrows. Used to send a signal if something is wrong. The setting is carried out in menu 7.8. In the case of an alarm, connection is made on terminal block 11-12, marked "Alarm" in the CC.

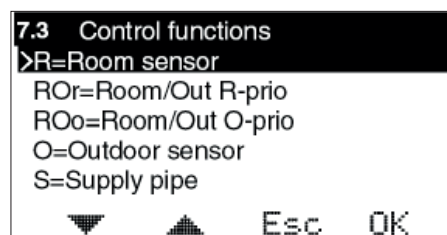
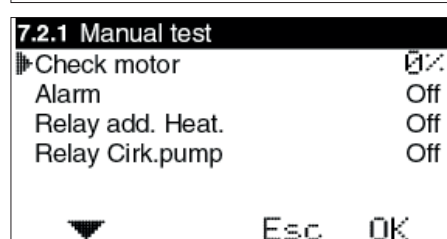
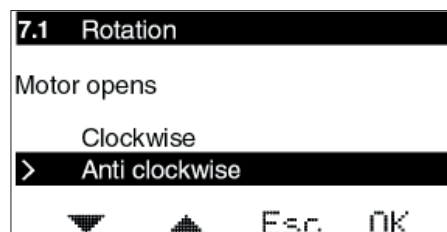
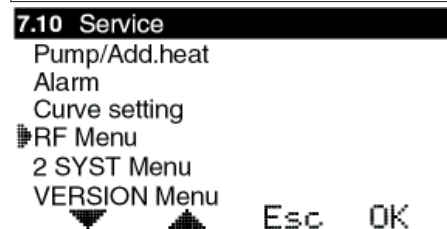
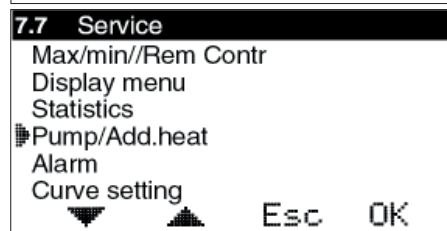
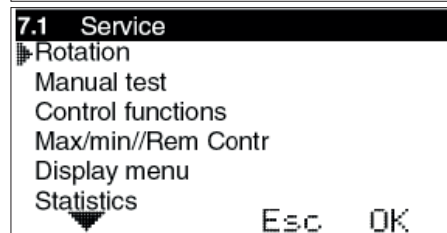
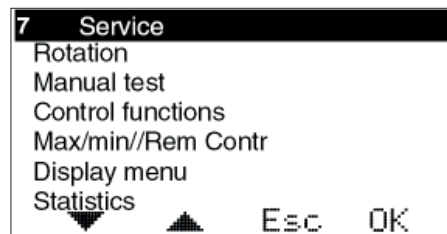
Relay add. Heat. – Press OK to change on or off using the up and down arrows. Used with the relay box to start/stop booster heating. Also see 7.7.1.

Relay Circ.pump – Press OK to change on or off using the up and down arrows. Used with the relay box to start/stop the circulation pump. Also see 7.7.1.

7.3 Control functions

Description of the various control functions can be found in "List", page 3.

Outdoor sensor is not included in the basic package.



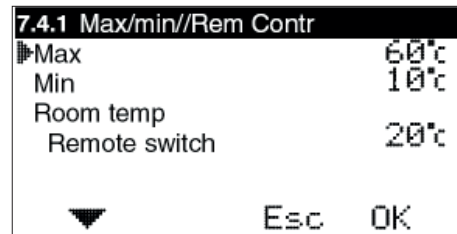
7.4 Max/Min//Rem Contr

Max = Maximum permitted supply flow temperature. Settable from 0-90°C.

Min = Minimum permitted supply temperature. Especially suitable for underfloor heating systems. Settable from 0-60°C.

Room temp Remote switch = Desired room temperature when the external contract has closed, e.g. via GSM-control. Settable 10-30°C. External control is connected to terminals 9-10, marked "Ext" in the CC.

When External contact is closed, the Moon+E is shown in menu 0:



7.5 Display Menu

7.5.1 Security code

This is where you can specify if you want to be able to lock EC Home's buttons and menus. This occurs when 20 seconds have passed and no buttons have been pressed. The code that has been chosen is used to unlock them. When the Security code is used, the selected buttons must be pressed and held for 5 seconds to enable unlocking.

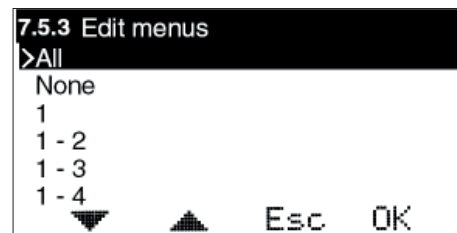
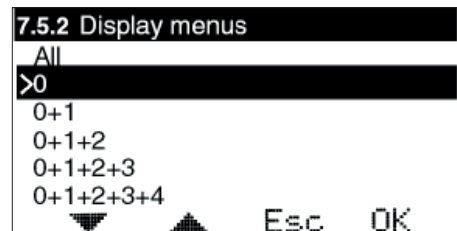
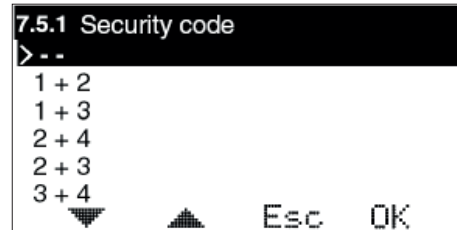
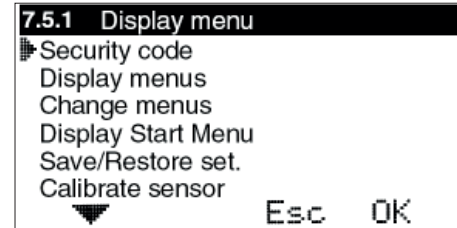
Menus 7.5.2 and 7.5.3 are displayed only when the Security code has been selected. When the menus are locked, a padlock is shown in menu 0.

7.5.2 Display menus

This is where you can select which menus are shown when the Security code is activated.

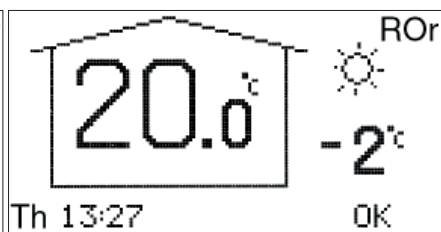
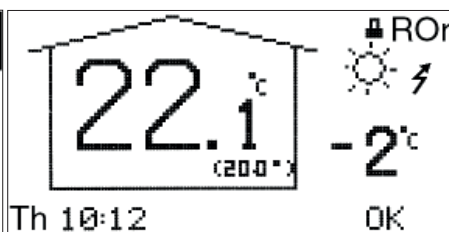
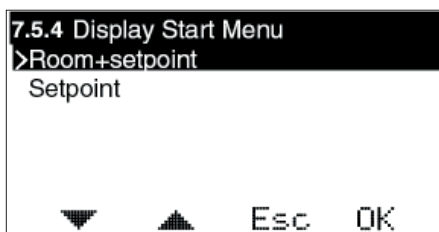
7.5.3 Edit menus

This is where you can select which menus can be edited when the Security code is activated.



7.5.4 Display Start Menu

This is where you can select whether Menu 0, which shows the temperature, shows the current temperature + the set point or just the set point.



7.5.5 Save/Restore set.

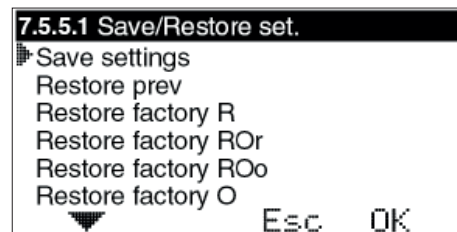
Here, you can select "Save settings" to save the settings you have made.

In this way, you can use "Restore prev" to go back to the correct settings if you, or anyone else, has changed the settings by mistake.

"Restore factory R/ROr/ROo/O/S" can be used to return all of the basic settings to the factory settings.

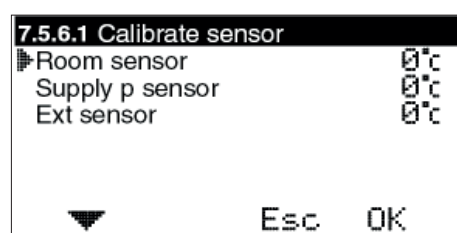


"Restore factory" resets EVERYTHING to factory settings. No settings is saved. When using two systems, both systems are reset to factory.



7.5.6 Calibrate sensor

This is where you can select to adjust the value of the supply flow sensor, room sensor or outdoor sensor if you do not think that the value shown on EC Home is correct. Settable from +5 to -5°C.



7.6 Statistics

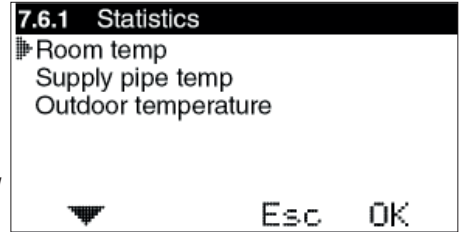
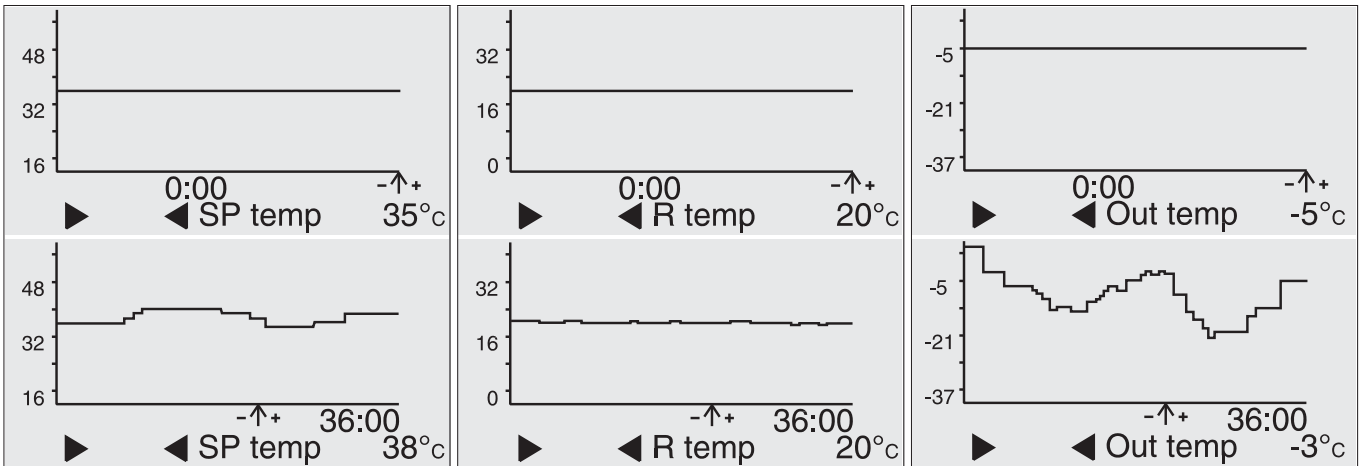
This is where you see what the Supply pipe temperature, Room temperature and Outdoor temperature have been over the last few hours.

The supply sensor shows the last 200 minutes, every second minute. The values for the other sensors change much more slowly, and here you can see the last 200 hours, every second hour.

Use the up and down arrows to mark the sensor you want to view the statistics for, and press OK to view a temperature graph. You then use the left or right arrows to move the cursor at the bottom right of the graph to read the value for a specific minute or hour.

HINT: By pressing on the right arrow straight away you can jump to the oldest value.

Click Esc to return to the Statistics menu.



7.7 Pump/Add.heat

This is where you set whether you will use the function for start/stop of the circulation pump to the heating system, booster heating etc. **NOTE!** An extra box is required.

Pump stop Room sensor cont On/Off – If this function is activated the pump will stop when the control motor has been fully closed for 20 minutes. Thereafter, the pump is run for 5 minutes at noon every day

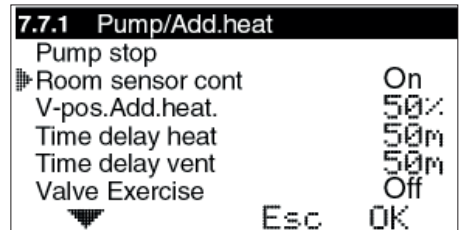
NOTE! The time is retrieved from the set time. If not time is set, noon is regarded as being 12 hours after system start-up. When the room sensor wants heating, the pump restarts immediately.

V-pos.Add.heat – If you want booster heating to start when the valve is in a specific position, you can set that here. 0 means that the motor is completely closed, 100 that the motor is completely open.

Time delay heat – How long it must take after the above valve position is achieved before the booster heating starts. Settable 0–254 min, >254 = ∞ (off).

Time delay vent – How long it must take from the booster heating starts until the motor opens more. Settable 0–254 min.

Valve exercise. On/Off - When the Pump Stop is activated, you can select exercise of the mixing valve. The pump is then stopped and the motor runs until it is completely open and back again to closed position before it is controlled normally again. This takes place at 12 noon every Monday.



7.8 Alarm switch

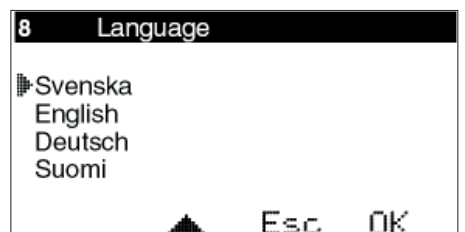
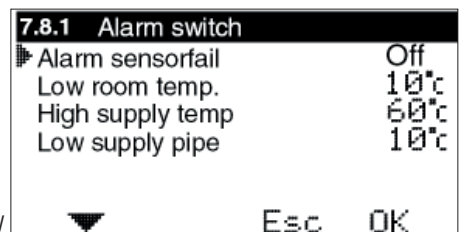
Is used to send an alarm, e.g. SMS, if a specific temperature is exceeded/not reached by a sensor. **NOTE!** Requires special equipment.

In the case of an alarm, connection is made on terminal block 11-12, marked "Alarm" in the CC. **Terminal 11 = "+"**.

Settable values are 0-90°C.

Alarms can be transmitted for: Sensor fault, Low room temperature, High supply temperature or Low supply temperature.

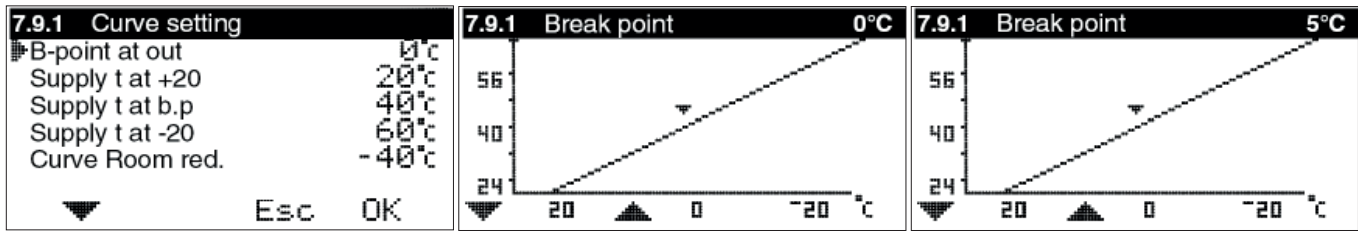
Menu 8 - Language



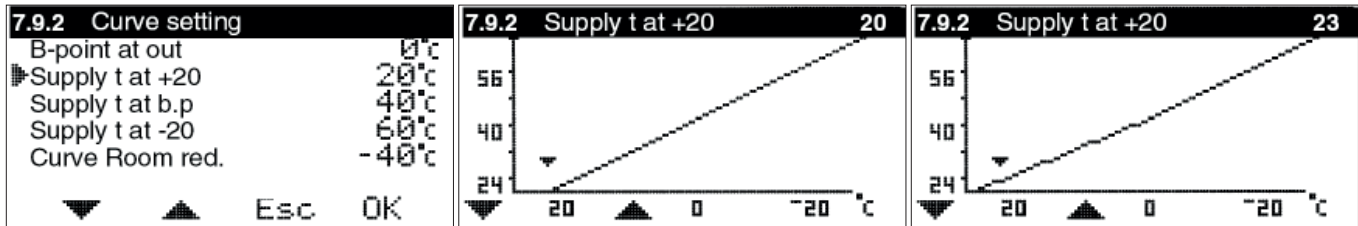
7.9 Curve setting

When control is run in ROr mode, this setting is used for the supply temperature and also for the minimum limit if Curve Room reduction is used.

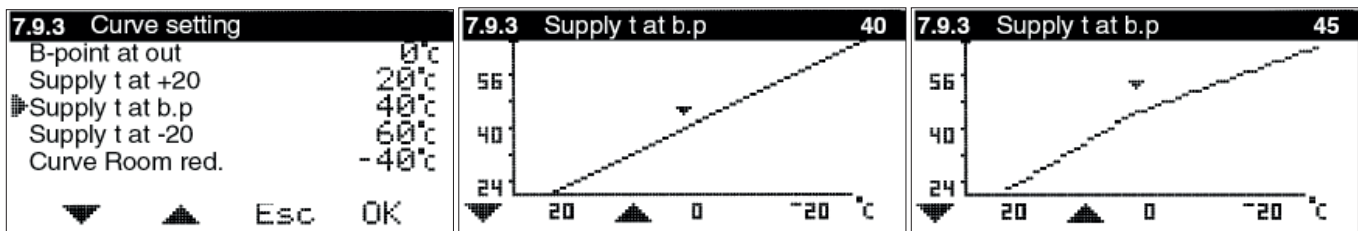
7.9.1 B-point at out – This setting allows you to break the curve at a selected outdoor temperature.



7.9.2/7.9.4 Supply t at +20 / -20 – What the supply temperature shall be at +20 and -20°C outdoors, respectively.

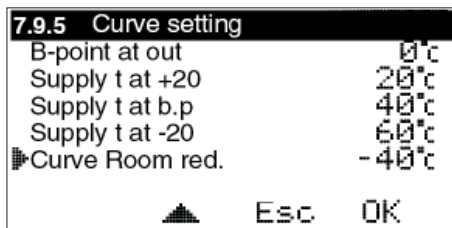


7.9.3 Supply t at b.p – What the supply temperature must be at the set break point.



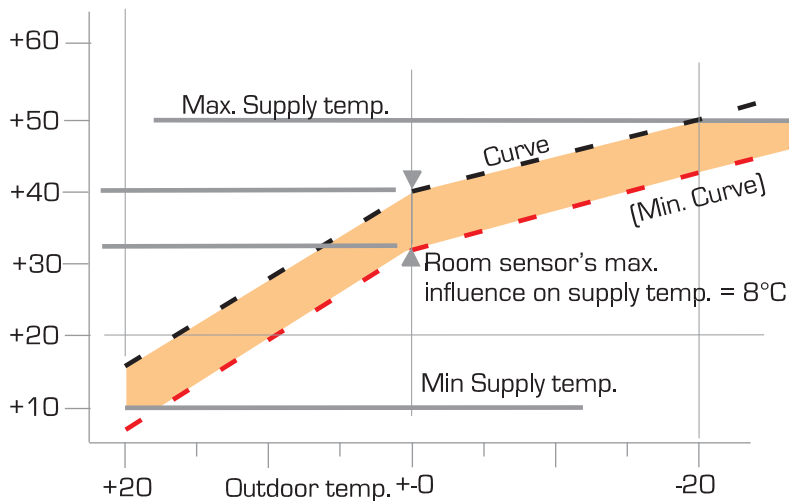
7.9.5 Curve Room red. – Limit the maximum number of degrees the supply temperature can be reduced below the set curve.

For examples and hints about settings, see next page.



Settings in control option ROr

Supply temp.

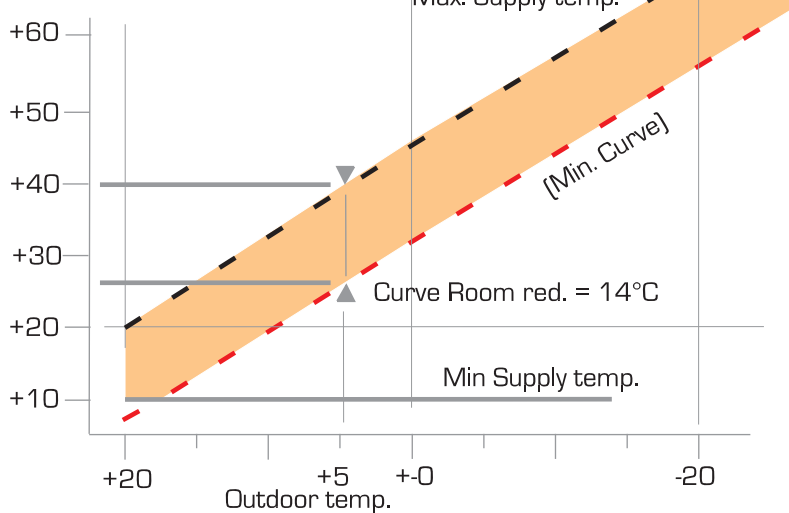


Examples of settings for “low temp.” radiator circuits:

Curve: Supply 16 at outdoor +20
 Supply 40 at break point outdoor +0
 Supply 50 at outdoor -20

Max. / Min. limit: +50 / +10
 Curve Room red. / Min. curve : 8

Supply temp.



Curve setting

Limits maximum supply temperature according to outdoor temperature.

Advantages:

1. Limits power when the heat source can deliver unlimited power in relation to the heating needs, e.g. with stored wood burning.
2. Settable break point on the curve means that it can be adapted for windy and bitterly cold weather.
3. Creates preconditions for R reduction of the curve.

Curve Room red. (Min. curve)

Limits room sensors' possibility of reducing supply temperature when it is too hot in the house.

Benefits of the Curve Room red.

1. At low outdoor temperature you prevent cold shock on windows because the radiators are too cold.
2. Out of the way rooms do not get “too cold” even if the room sensor is, at the time, “too hot”.

Max.

In order to avoid unnecessarily high supply temperatures. Protect floors in underfloor heating systems from overheating.

Min.

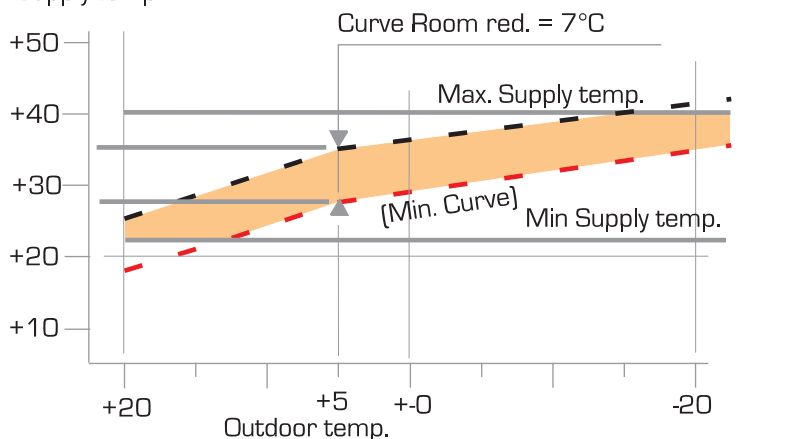
Floors do not get “icy cold”.
 “Frost protection” in the case of long-term reduction.

Example of setting for “High temp” radiator circuits:

Curve: Supply 20 at outdoor +20
 Supply 40 at break point outdoor +5
 Supply 70 at outdoor -20

Max. / Min. limit: +70 / +10
 Curve Room red.: 14

Supply temp.



Example of setting for underfloor heating circuit:

Curve: Supply 25 at outdoor +20
 Supply 35 at break point outdoor +5
 Supply 42 at outdoor -20

Max. / Min. limit: +40 / +22
 Curve Room red.: 7

10. USER GUIDE ROo

In this section, each menu is described in detail.

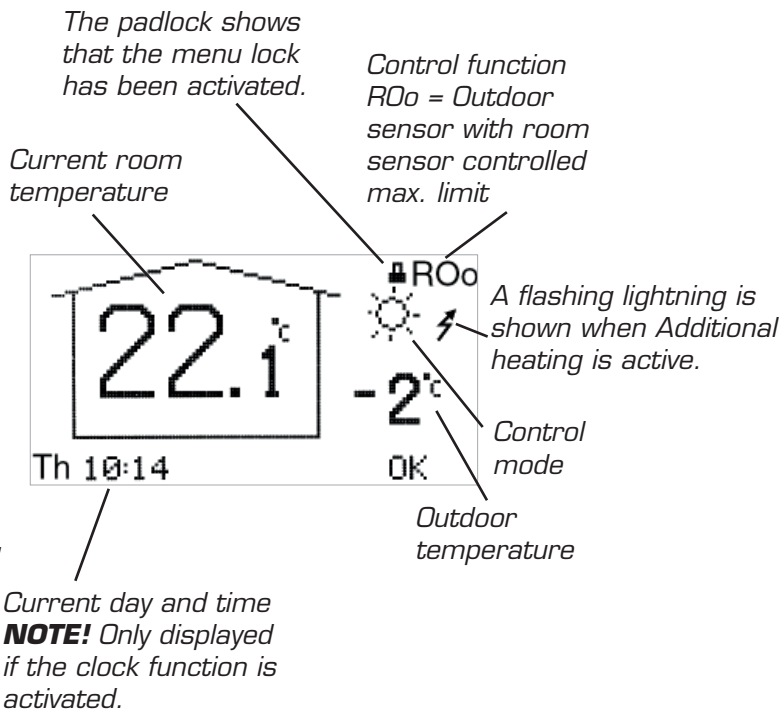
Menu 0 – Basic menu

The basic menu only shows basic information.

The current room temperature, set max. room temperature, outdoor temperature, locking (if the Security code has been activated) and time and weekday (if the clock function has been activated).

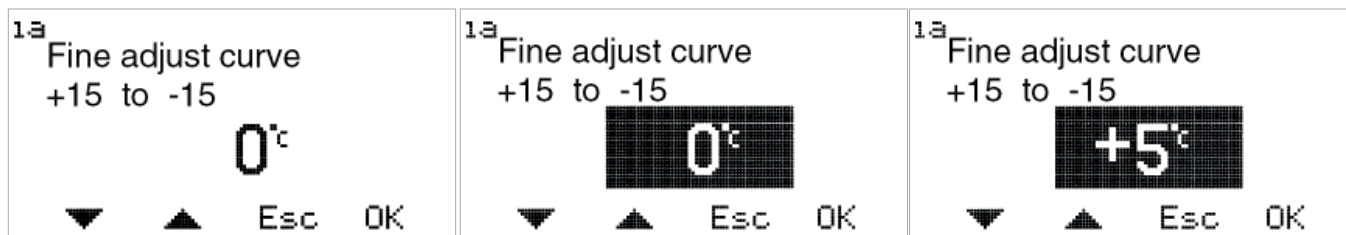
It also shows which control mode is applying and which control function has been selected.

HINT: By activating locking of display and/or menu changes in menus 7.5.2 and 7.5.3, you can limit access by unauthorised persons to view/change settings.

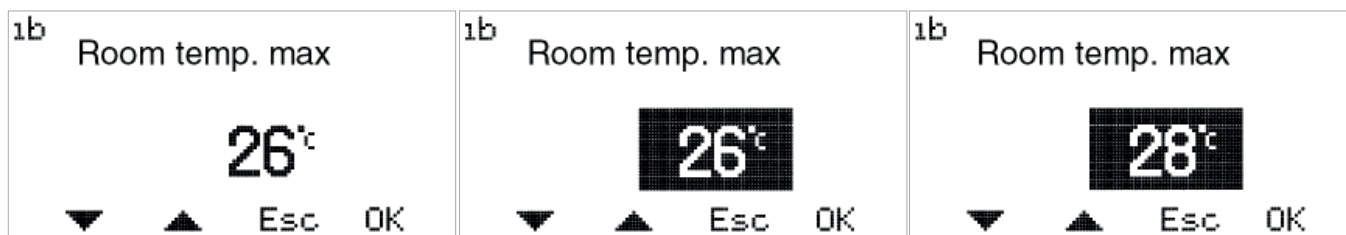


Menus 1 and 2 – Fine adjustment of curves, setting of max. value for room temperature and night reduction of supply temperature

Fine adjustment of the curve means that you raise or lower the number of degrees set on the temperature curve.



Room temp. max is the maximum permitted room temperature. If the room temperature exceeds the set value, EC Home closes the mixing valve, even if the curve is higher. Settable values are 10-30°C.



Night reduction of the curve means that you reduce the number of degrees set on the entire curve when night reduction is activated. Settable values are 0 to -40°C.

In order to access the night setting, the clock or night temperature must be activated in menu 3.



Menu 3 – Setting control mode

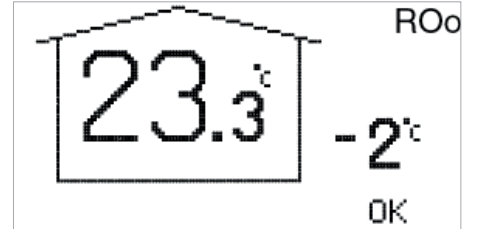
In this menu you can activate the clock function, constant day, constant night or if you want to shut down the control.

Depending on what is selected in menu 3, the basic menu, menu 0, will display different information.

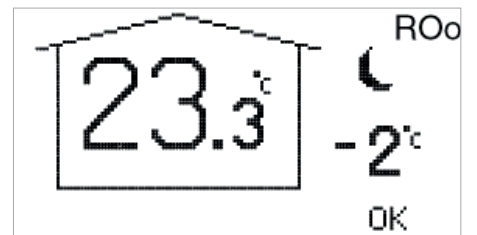
Current day and time are only displayed when the clock function is activated.



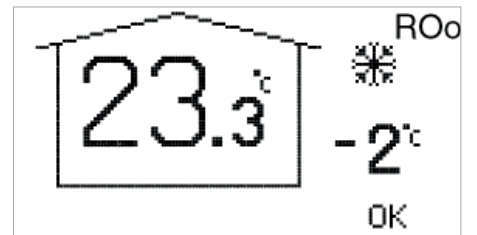
Sun = Day temperature active. Menu 0 only displays the sun when the clock is active.



Moon = Night temperature active.



Snowflake = Shut down. The set point for the Supply flow temperature is set automatically at 10°C.



Menu 4 – Time settings for Night/Saving time

NOTE! Only displayed if the clock function is activated.

Night temperature times can be set for every day of the week.

Use the up and down arrows to go to the day you want to set. The arrow along the left edge shows which day has been selected. Press OK again to activate the selected day.

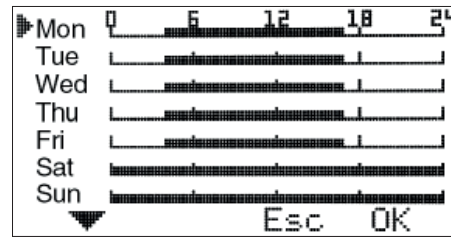
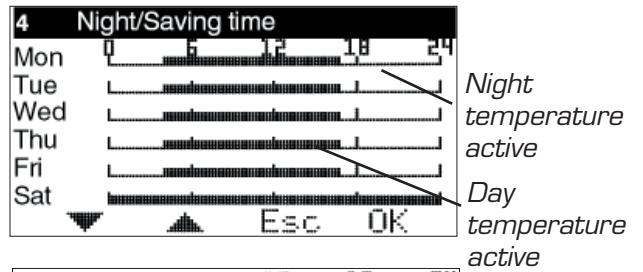
4.1.1 Time setting

3 different times can be set for each day. The settable range is 00-24.

NOTE! Setting 17:00 – 04:00 means that a decrease takes place from 17:00 – 00:00 and 00:00 – 04:00 for the selected day, not the following day.

If you want the same decrease to apply to several days, you can use “Copy to...”, to copy the decrease Monday to Friday, Saturday to Sunday, or the entire week.

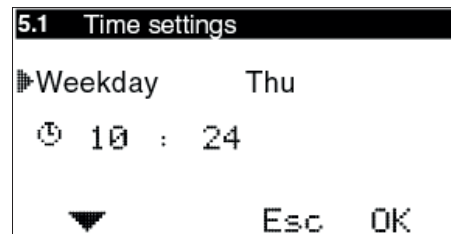
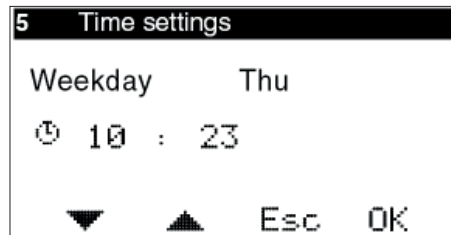
Return to menu 4 to view the selected settings.



Menu 5 – Time settings

NOTE! Only displayed if the clock function is activated.

Setting of current weekday and time. Hours and minutes are set individually.



Menu 6 - List

Displays current temperatures and functions as follows.

Values that are displayed change back and forth automatically.

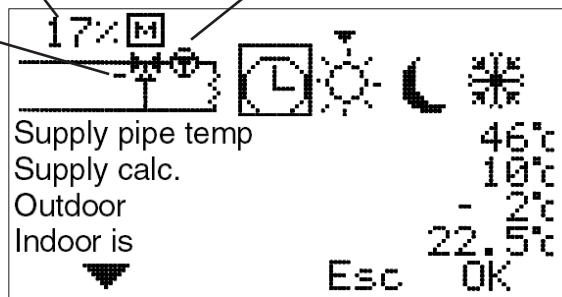
Click OK to stop the changes and then the up and down arrows to browse them.

NOTE!

The set value for Night reduction curve, External reduction of the curve are displayed, even if the clock function or external change are not used.

0% shows that the motor is completely closed. 100% means fully open.
+/- indicates opening/closing

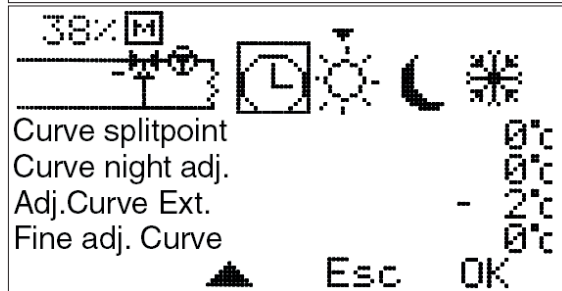
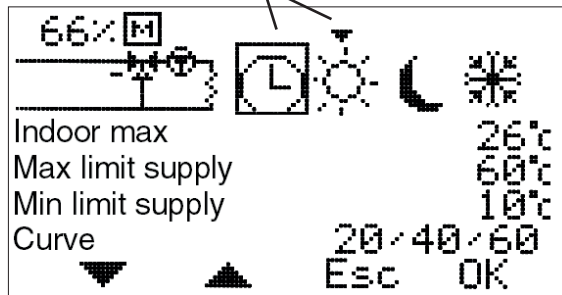
Shows that the circulation pump is active. If the pump stop function is not being used, the symbol turns constantly.



Control mode

Clock = day/night function activated

Arrow over the sun shows the day temperature is currently active.



Menu 7 - Service

The following options are available in this menu. The arrow along the left edge shows which menu has been selected.

7.1 Rotation – Setting for the direction of rotation – clockwise or anti-clockwise opening.

7.2 Manual test – Manual running of the mixing valve motor

7.3 Control functions – Selection of control function; Room sensor (R), Room+Outdoor sensor with Room priority (ROr), Outdoor+Room sensor with Outdoor priority (ROo), Outdoor sensor (O), and only Supply flow sensor (S).

7.4 Max/Min//Rem Contr – Setting of max. and min. limits for supply temperature and reduction of supply temperature under external control.

7.5 Display Menu - Setting the menus to be shown/changed.

7.6 Statistics – Shows the history for temperatures for the various sensors.

7.7 Pump/Add.heat – Used in combination with the relay box to start/stop the circulation pump, heating booster etc. *Only shown if relay box is connected.*

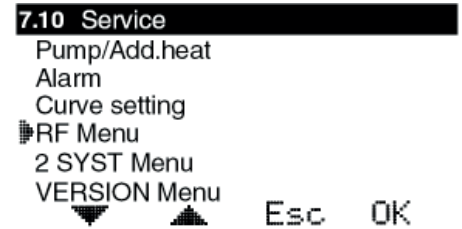
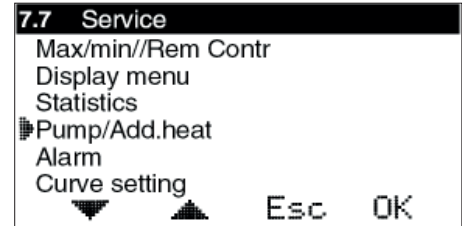
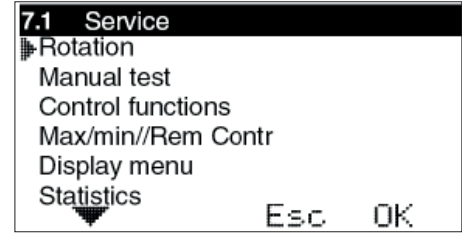
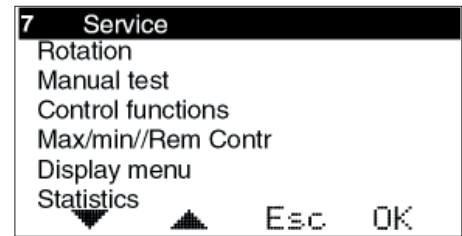
7.8 Alarm – Used to send an alarm, e.g. an SMS if the GSM control is connected, if a specific sensor temperature is exceeded or not reached.

7.9 Curve setting – Setting the outdoor sensor's curve for supply temperature.

7.10 RF Menu – Used to activate wireless room sensor (WL)

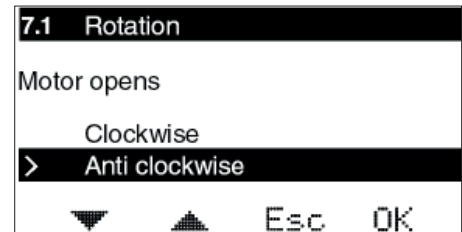
7.11 2 SYST Menu – Used to activate System 2.

7.12 VERSION Menu – Shows software version for the CP.



7.1 Rotation

To select clockwise or anticlockwise motor opening.



7.2 Manual test

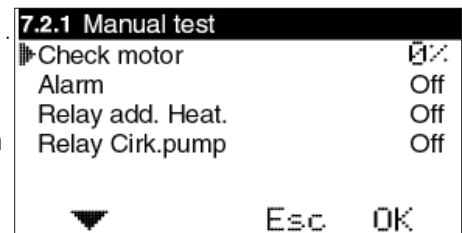
Used to test various connected functions manually.

Motor check – Press OK to open or close the motor using the up and down arrows. If the motor goes the wrong way, the direction of rotation must be changed in menu 7.1.

Alarm – Press OK to change on or off using the up and down arrows. Used to send a signal if something is wrong. The setting is carried out in menu 7.8. In the case of an alarm, connection is made on terminal block 11-12, marked "Alarm" in the CC.

Relay add. Heat. – Press OK to change on or off using the up and down arrows. Used with the relay box to start/stop booster heating. Also see 7.7.1.

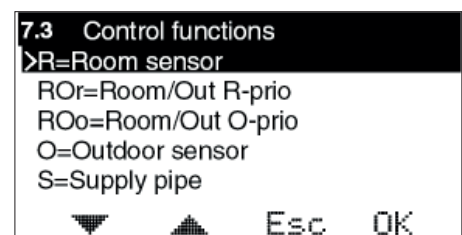
Relay Circ.pump – Press OK to change on or off using the up and down arrows. Used with the relay box to start/stop the circulation pump. Also see 7.7.1.



7.3 Control functions

Description of the various control functions can be found in "List", page 3.

Outdoor sensor is not included in the basic package.



7.4 Max/min//Rem Contr

Max = Maximum permitted supply flow temperature. Settable from 0-90°C.

Min = Minimum permitted supply temperature. Especially suitable for underfloor heating systems. Settable from 0-60°C.

Lower supply temp Remote switch = The number of degrees that the supply temperature should be reduced when the external contact is closed, e.g. via GSM control.

External control is connected to terminals 9-10, marked “Ext” in the CC.

When External contact is closed, the Moon+E is shown in menu 0:



7.5 Display Menu

7.5.1 Security code

This is where you can specify if you want to be able to lock EC Home’s buttons and menus. This occurs when 20 seconds have passed and no buttons have been pressed. The code that has been chosen is used to unlock them. When the Security code is used, the selected buttons must be pressed and held for 5 seconds to enable unlocking.

Menus 7.5.2 and 7.5.3 are displayed only when the Security code has been selected. When the menus are locked, a padlock is shown in menu 0.

7.5.2 Display menus

This is where you can select which menus are shown when the Security code is activated.

7.5.3 Edit menus

This is where you can select which menus can be edited when the Security code is activated.

7.5.5 Save/Restore set.

Here, you can select “Save settings” to save the settings you have made.

In this way, you can use “Restore prev” to go back to the correct settings if you, or anyone else, has changed the settings by mistake.

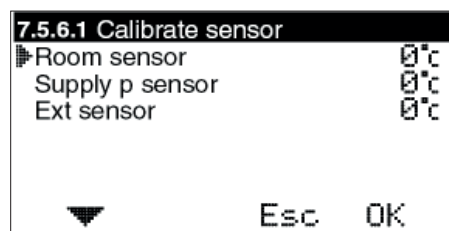
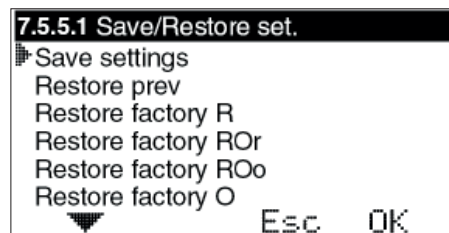
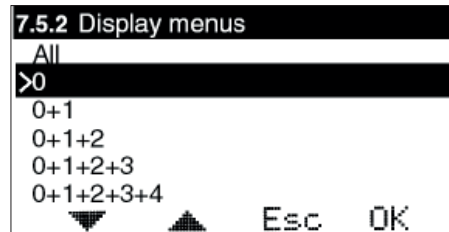
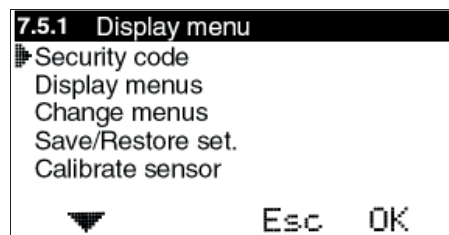
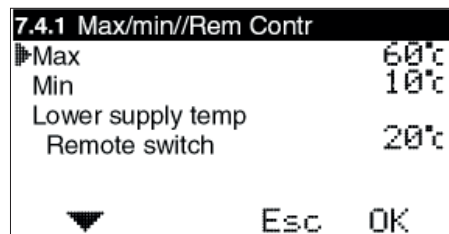
“Restore factory R/ROr/ROo/O/S” can be used to return all of the basic settings to the factory settings.



“Restore factory” resets EVERYTHING to factory settings. No settings is saved. When using two systems, both systems are reset to factory.

7.5.6 Calibrate sensor

This is where you can select to adjust the value of the supply flow sensor or room sensor if you do not think that the value shown on EC Home is correct. Settable from +5 to -5°C.



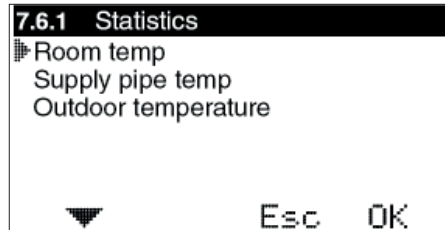
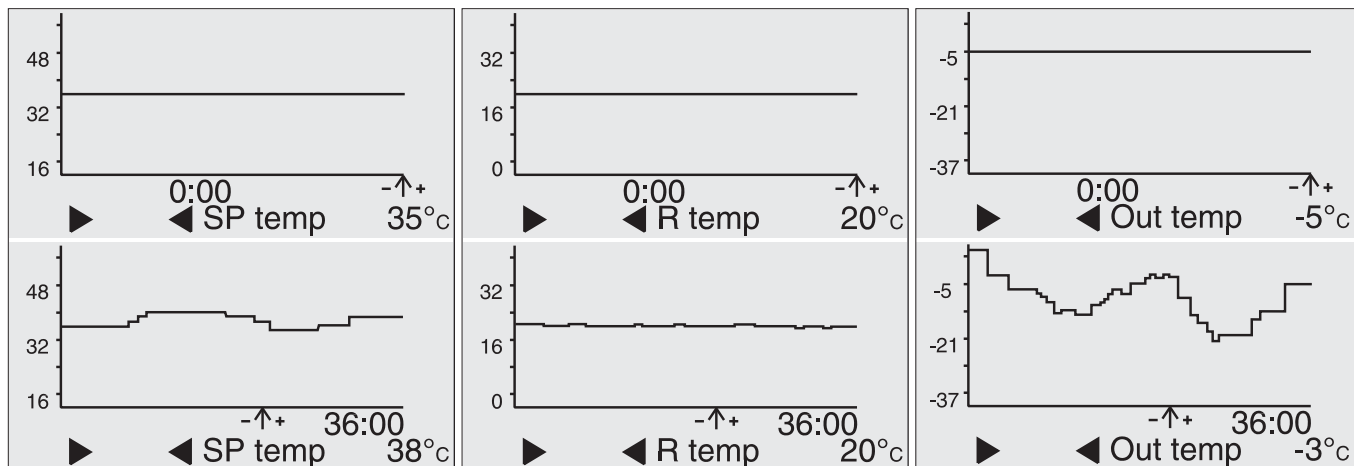
7.6 Statistics

This is where you see what the Supply pipe temperature, Room temperature and Outdoor temperature have been over the last few hours.

The supply sensor shows the last 200 minutes, every second minute. The values for the other sensors change much more slowly, and here you can see the last 200 hours, every second hour.

Use the up and down arrows to mark the sensor you want to view the statistics for, and press OK to view a temperature graph. You then use the left or right arrows to move the cursor at the bottom right of the graph to read the value for a specific minute or hour. **HINT:** By pressing on the right arrow straight away you can jump to the oldest value.

Click Esc to return to the Statistics menu.



7.7 Pump/Add.heat

This is where you set whether you will use the function for start/stop of the circulation pump to the heating system, booster heating etc. **NOTE!** An extra box is required.

Pump stop Outdoor controlled day/night – Used to stop the pump when a specific outdoor temperature is exceeded. This temperature can distinguish between day and night. Settable values are Off (function disabled) and 5-20°C. The pump is run for 5 minutes at noon every day. **NOTE!** The time is retrieved from the set time. If not time is set, noon is regarded as being 12 hours after system start-up.

V-pos.Add.heat – If you want booster heating to start when the valve is in a specific position, you can set that here. 0 means that the motor is completely closed, 100 that the motor is completely open.

Time delay heat – How long it must take after the above valve position is achieved before the booster heating starts. Settable 0–254 min, >254 = ∞ (off).

Time delay vent – How long it must take from the booster heating starts until the motor opens more. Settable 0–254 min.

Valve exercise. On/Off - When the Pump Stop is activated, you can select exercise of the mixing valve. The pump is then stopped and the motor runs until it is completely open and back again to closed position before it is controlled normally again. This takes place at 12 noon every Monday.

7.8 Alarm switch

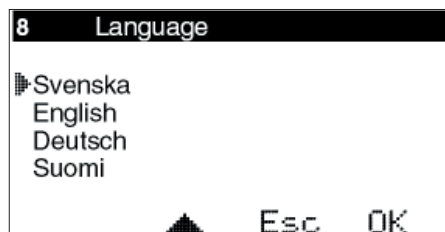
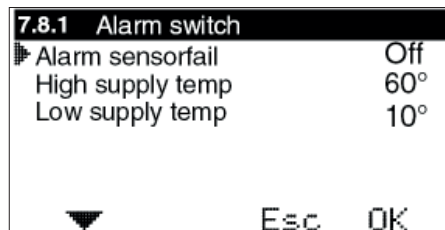
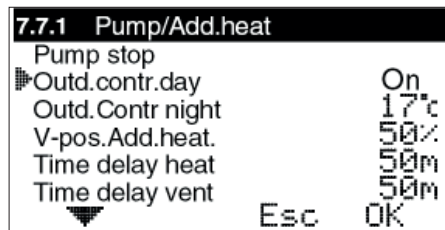
Is used to send an alarm, e.g. SMS, if a specific temperature is exceeded/not reached by a sensor. **NOTE!** Requires special equipment.

In the case of an alarm, connection is made on terminal block 11-12, marked "Alarm" in the CC. **Terminal 11 = "+"**.

Settable values are 0-90°C.

Alarms can be transmitted for: Sensor faults, High supply temperature or Low supply temperature.

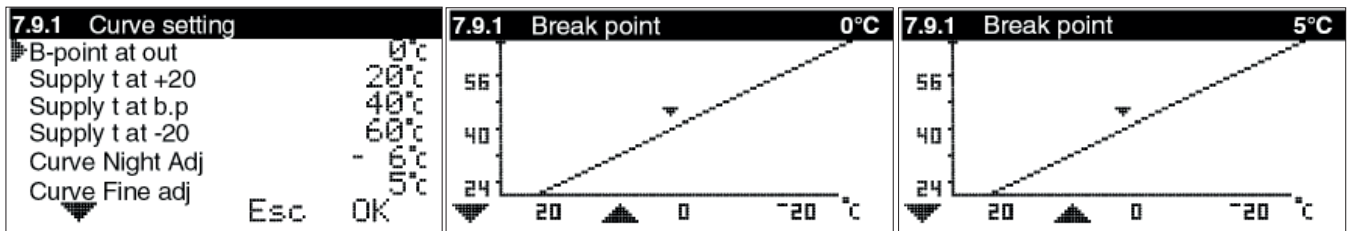
Menu 8 - Language



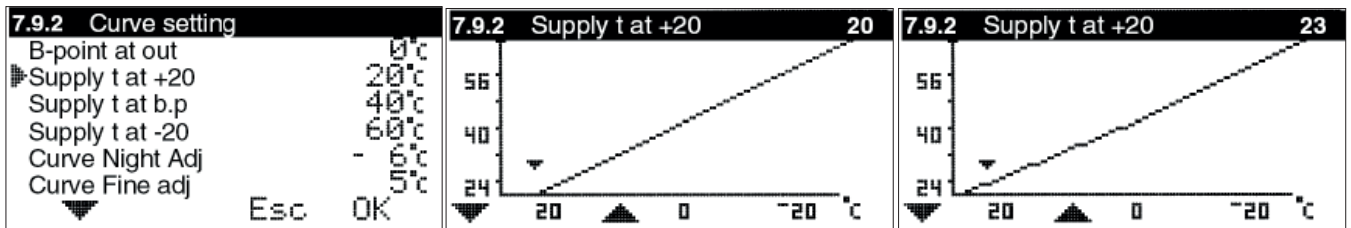
7.9 Curve setting

The supply temperature can be set for 2 fixed end positions and a settable intermediate point, the so-called break point.

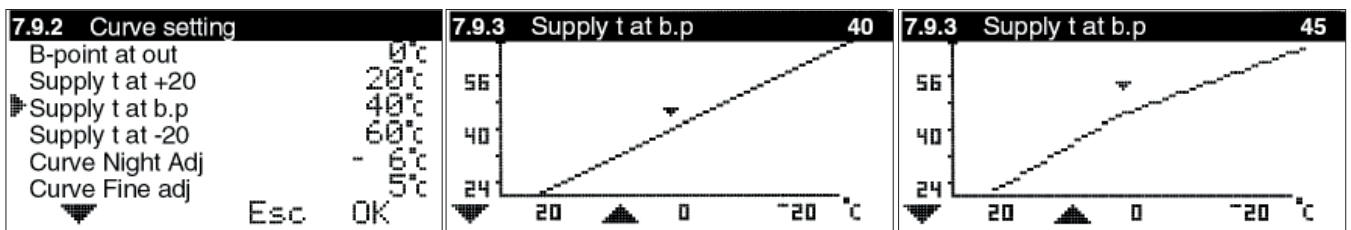
7.9.1 B-point at out – This setting allows you to break the curve at a selected outdoor temperature.



7.9.2/7.9.4 Supply t at +20 / -20 – What the supply temperature shall be at +20 and -20°C outdoors, respectively.



7.9.3 Supply t at b.p – What the supply temperature must be at the set break point.



7.9.5 Curve Night Adj – Means that the entire curve is displaced in parallel by the degrees below when the night reduction is activated.

7.9.6 Curve fine adj – Fine adjustment of the curve means that you increase or decrease the number of degrees set on the curve. Settable from +15 to -15°C.

11. USER GUIDE 0

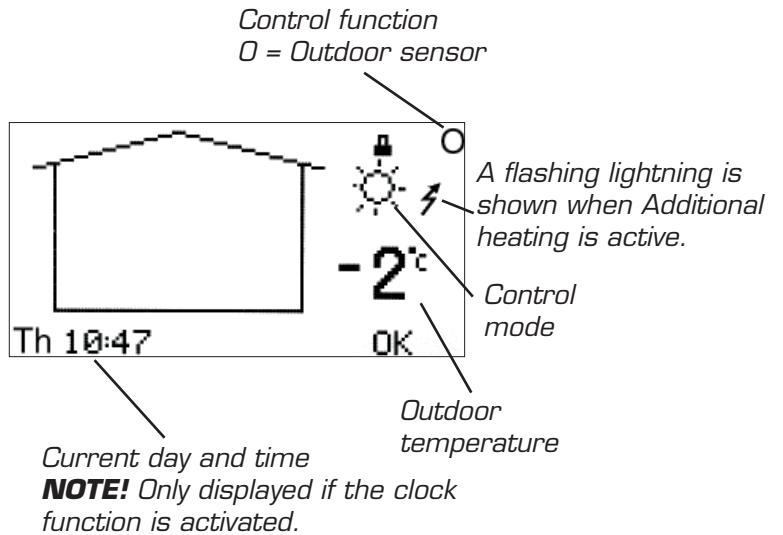
In this section, each menu is described in detail.

Menu 0 – Basic menu

The basic menu only shows basic information.

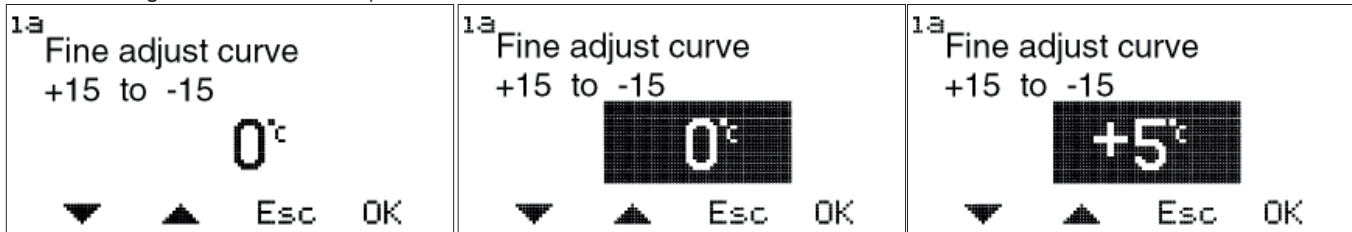
Current outdoor temperature, locking (if the Security code has been activated) **and time and day of the week** (if the clock function has been activated).

It also shows which control mode is applying and which control function has been selected.



Menu 1 – Fine adjustment of the curve

Fine adjustment of the curve means that you raise or lower the number of degrees set on the temperature curve.



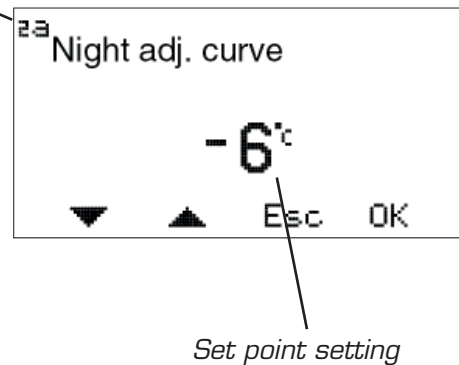
Menu 2 – Adjustment of night reduction of the supply temperature

Settable values are 0 to -40°C.

In order to access the night setting, the clock or night temperature must be activated in menu 3.

HINT: By activating locking of display and/or menu changes in menus 7.5.2 and 7.5.3, you can limit access by unauthorised persons to view/change settings.

The figure in the left corner tells you which menu you are in.



Menu 3 – Setting control mode

In this menu you can activate the clock function, constant day, constant night or if you want to shut down the control.

Depending on what is selected in menu 3, menus 0 and 6 will display different information.

Current day and time are only displayed when the clock function is activated.

Sun = Day temperature active

Moon = Night temperature active.

Snowflake = Shut down. The set point for the Supply flow temperature is set automatically at 10°C.



Menu 4 – Time settings for Night/Saving time

NOTE! Only displayed if the clock function is activated.

Night temperature times can be set for every day of the week.

Use the up and down arrows to go to the day you want to set. The arrow along the left edge shows which day has been selected. Press OK again to activate the selected day.

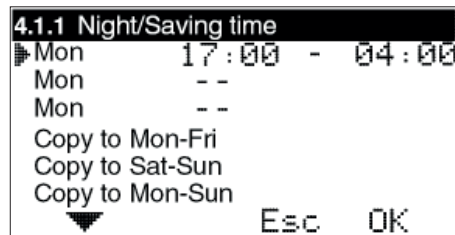
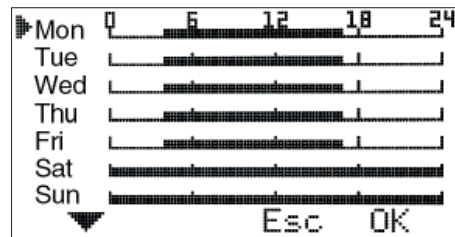
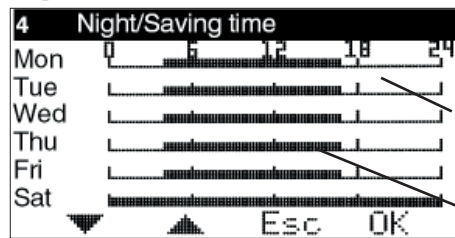
4.1.1 Time setting

3 different times can be set for each day. The settable range is 00-24.

NOTE! Setting 17:00 – 04:00 means that a decrease takes place from 17:00 – 00:00 and 00:00 – 04:00 for the selected day, not the following day.

If you want the same decrease to apply to several days, you can use “Copy to...”, to copy the decrease Monday to Friday, Saturday to Sunday, or the entire week.

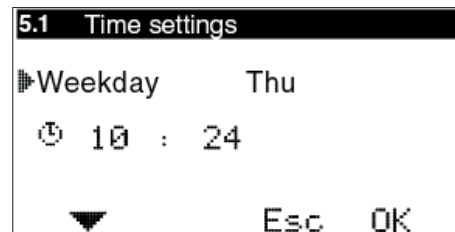
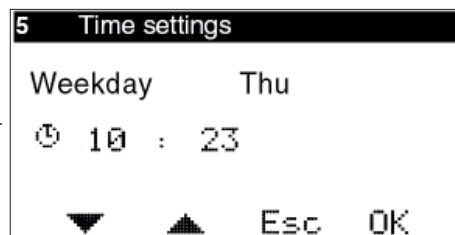
Return to menu 4 to view the selected settings.



Menu 5 – Time settings

NOTE! Only displayed if the clock function is activated.

Setting of current weekday and time. Hours and minutes are set individually.



Menu 6 - List

Displays current temperatures and functions as follows

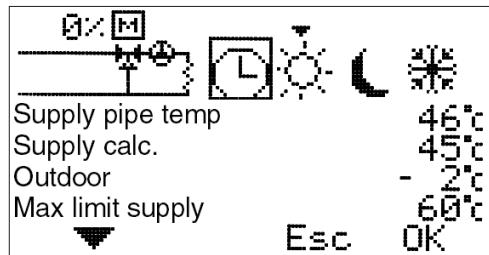
Values that are displayed change back and forth automatically. Click OK to stop the changes and then the up and down arrows to browse them.

The current supply temperature, calculated supply temperature, outdoor temperature, max. limit, min. limit, curve setting, curve break point, set night reduction for the curve, set external reduction of the curve, and fine adjustment of the curve.

It also shows which control mode is applying and which control function has been selected.

NOTE!

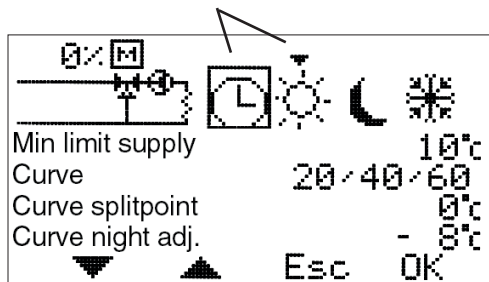
The set value for Night reduction of the curve and External reduction of the curve are displayed, even if the clock function or external change are not used.



Control mode

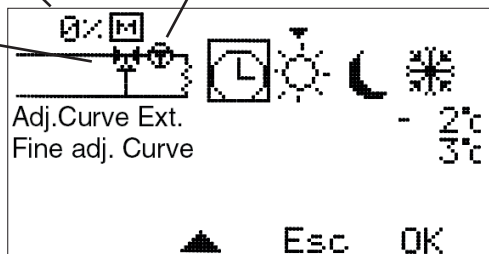
Clock = day/night function activated

Arrow over the sun shows the day temperature is currently active.



*0% shows that the motor is completely closed. 100% means fully open.
 +/- indicates opening/closing*

Shows that the circulation pump is active. If the pump stop function is not being used, the symbol turns constantly.



Menu 7 - Service

The following options are available in this menu. The arrow along the left edge shows which menu has been selected.

7.1 Rotation – Setting for the direction of rotation – clockwise or anti-clockwise opening.

7.2 Manual test – Manual running of the mixing valve motor

7.3 Control functions – Selection of control function; Room sensor (R), Room+Outdoor sensor with Room priority (ROr), Outdoor+Room sensor with Outdoor priority (ROo), Outdoor sensor (O), and only Supply flow sensor (S).

7.4 Max/Min//Rem Contr – Setting of max. and min. limits for supply temperature and reduction of supply temperature under external control.

7.5 Display Menu - Setting the menus to be shown/changed.

7.6 Statistics – Shows the history for temperatures for the various sensors.

7.7 Pump/Add.heat – Used in combination with the relay box to start/stop the circulation pump, heating booster etc. *Only shown if relay box is connected.*

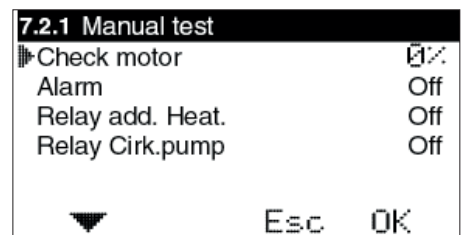
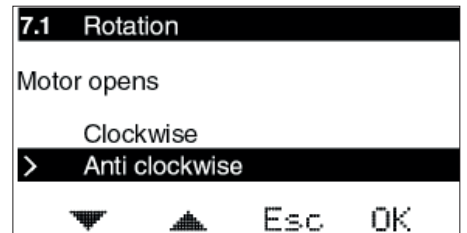
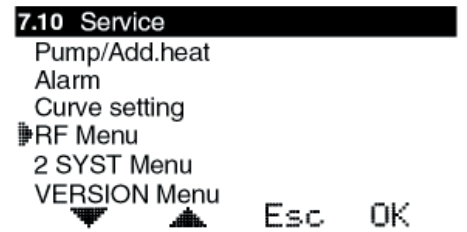
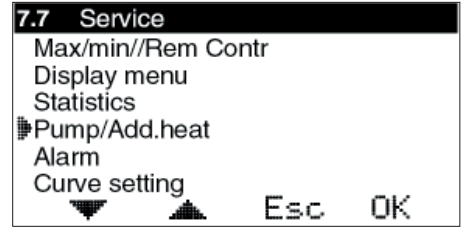
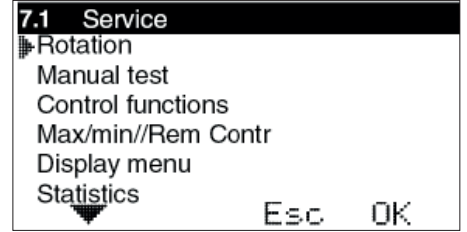
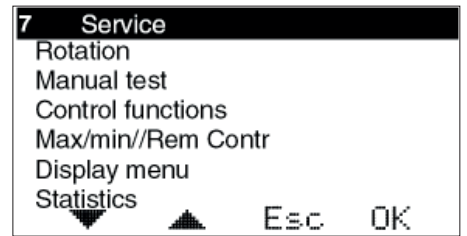
7.8 Alarm – Used to send an alarm, e.g. an SMS if the GSM control is connected, if a specific sensor temperature is exceeded or not reached.

7.9 Curve setting – Setting the outdoor sensor's curve for supply temperature.

7.10 RF Menu – Used to activate wireless room sensor (WL)

7.11 2 SYST Menu – Used to activate System 2.

7.12 VERSION Menu – Shows software version for the CP.



7.1 Rotation

To select clockwise or anticlockwise motor opening.

7.2 Manual test

Used to test various connected functions manually.

Motor check – Press OK to open or close the motor using the up and down arrows. If the motor goes the wrong way, the direction of rotation must be changed in menu 7.1.

Alarm – Press OK to change on or off using the up and down arrows. Used to send a signal if something is wrong. The setting is carried out in menu 7.8. In the case of an alarm, connection is made on terminal block 11-12, marked "Alarm" in the CC.

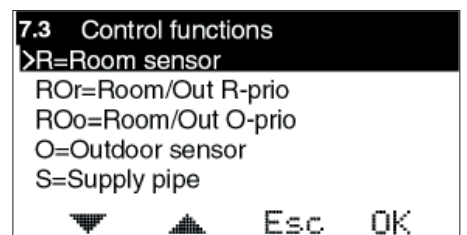
Relay add. Heat. – Press OK to change on or off using the up and down arrows. Used with the relay box to start/stop booster heating. Also see 7.7.1.

Relay Circ.pump – Press OK to change on or off using the up and down arrows. Used with the relay box to start/stop the circulation pump. Also see 7.7.1.

7.3 Control functions

Description of the various control functions can be found in "List", page 3.

Outdoor sensor is not included in the basic package.



7.4 Max/Min//Rem Contr

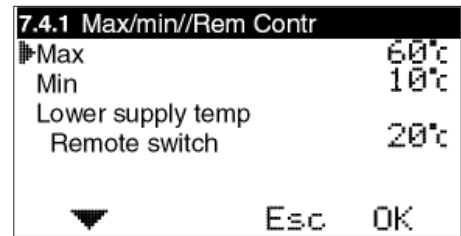
Max = Maximum permitted supply flow temperature. Settable from 0-90°C.

Min = Minimum permitted supply temperature. Especially suitable for underfloor heating systems. Settable from 0-60°C.

Lower supply temp Remote switch =

The number of degrees that the supply temperature should be reduced when the external contact is closed, e.g. via GSM control. External control is connected to terminals 9-10, marked "Ext" in the CC.

When External contact is closed, the Moon+E is shown in menu 0:



7.5 Display Menu

7.5.1 Security code

This is where you can specify if you want to be able to lock EC Home's buttons and menus. This occurs when 20 seconds have passed and no buttons have been pressed. The code that has been chosen is used to unlock them. When the Security code is used, the selected buttons must be pressed and held for 5 seconds to enable unlocking.

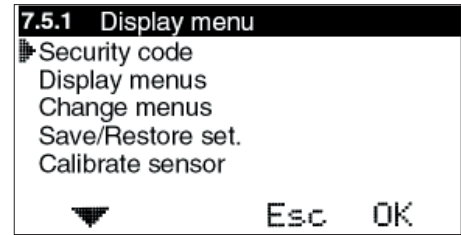
Menus 7.5.2 and 7.5.3 are displayed only when the Security code has been selected. When the menus are locked, a padlock is shown in menu 0.

7.5.2 Display menus

This is where you can select which menus are shown when the Security code is activated.

7.5.3 Edit menus

This is where you can select which menus can be edited when the Security code is activated.



7.5.5 Save/Restore set.

Here, you can select "Save settings" to save the settings you have made.

In this way, you can use "Restore prev" to go back to the correct settings if you, or anyone else, has changed the settings by mistake.

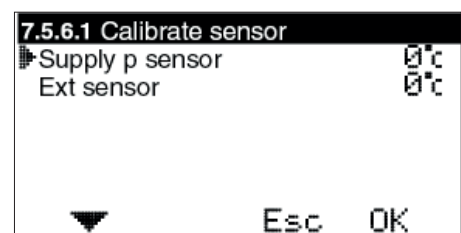
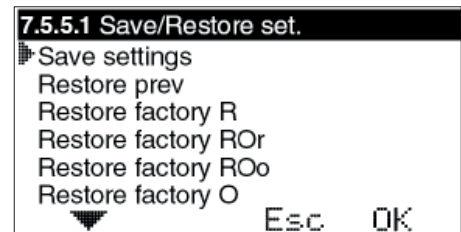
"Restore factory R/ROr/ROo/O/S" can be used to return all of the basic settings to the factory settings.



"Restore factory" resets EVERYTHING to factory settings. No settings is saved. When using two systems, both systems are reset to factory.

7.5.6 Calibrate sensor

This is where you can select to adjust the value of the supply flow sensor or outdoor sensor if you do not think that the value shown on EC Home is correct. Settable from +5 to -5°C.



7.6 Statistics

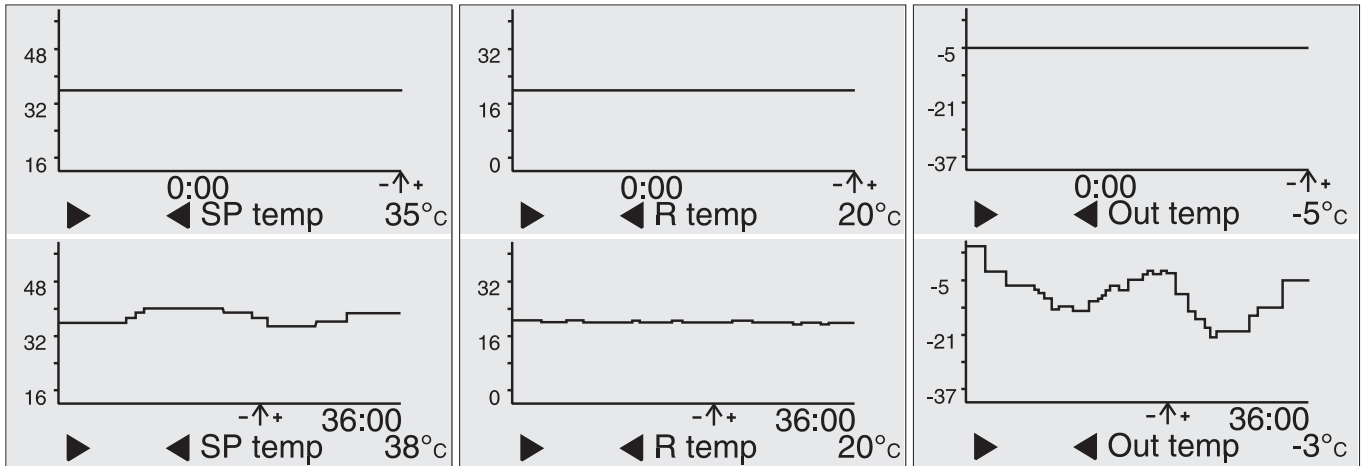
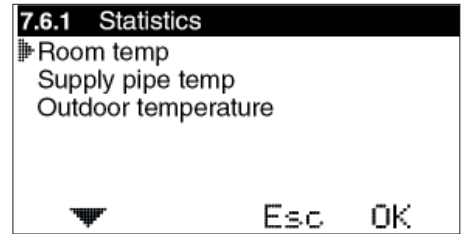
This is where you see what the Supply pipe temperature, Room temperature and Outdoor temperature (if outdoor sensor is being used) have been over the last few hours.

The supply sensor shows the last 200 minutes, every second minute. The values for the other sensors change much more slowly, and here you can see the last 200 hours, every second hour.

Use the up and down arrows to mark the sensor you want to view the statistics for, and press OK to view a temperature graph. You then use the left or right arrows to move the cursor at the bottom right of the graph to read the value for a specific minute or hour.

HINT: By pressing on the right arrow straight away you can jump to the oldest value.

Click Esc to return to the Statistics menu.



7.7 Pump/Add.heat

This is where you set whether you will use the function for start/stop of the circulation pump to the heating system, booster heating etc. **NOTE!** An extra box is required.

Pump stop Outdoor controlled day/night –

Used to stop the pump when a specific outdoor temperature is exceeded. This temperature can distinguish between day and night. Settable values are Off (function disabled) and 5-20°C. The pump is turned for 5 minutes at noon every day.

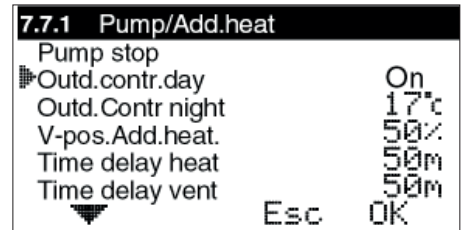
NOTE! The time is retrieved from the set time. If not time is set, noon is regarded as being 12 hours after system start-up.

V-pos.Add.heat – If you want booster heating to start when the valve is in a specific position, you can set that here. 0 means that the motor is completely closed, 100 that the motor is completely open.

Time delay heat – How long it must take after the above valve position is achieved before the booster heating starts. Settable 0–254 min, >254 = ∞ (off).

Time delay vent – How long it must take from the booster heating starts until the motor opens more. Settable 0–254 min.

Valve exercise. On/Off - When the Pump Stop is activated, you can select exercise of the mixing valve. The pump is then stopped and the motor runs until it is completely open and back again to closed position before it is controlled normally again. This takes place at 12 noon every Monday.



7.8 Alarm switch

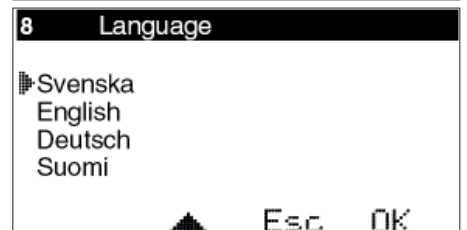
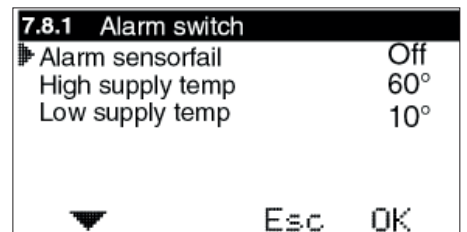
Is used to send an alarm, e.g. SMS, if a specific temperature is exceeded/not reached by a sensor. **NOTE!** Requires special equipment.

In the case of an alarm, connection is made on terminal block 11-12, marked "Alarm" in the CC. **Terminal 11 = "+"**.

Settable values are 0-90°C.

Alarms can be transmitted for: Sensor faults, High supply temperature or Low supply temperature.

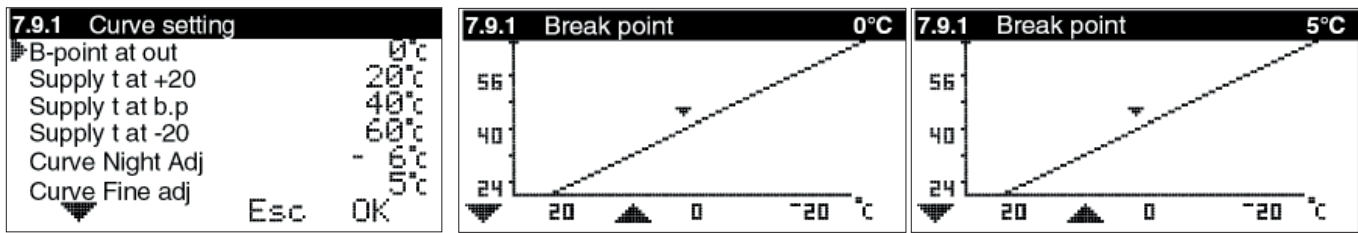
Menu 8 - Language



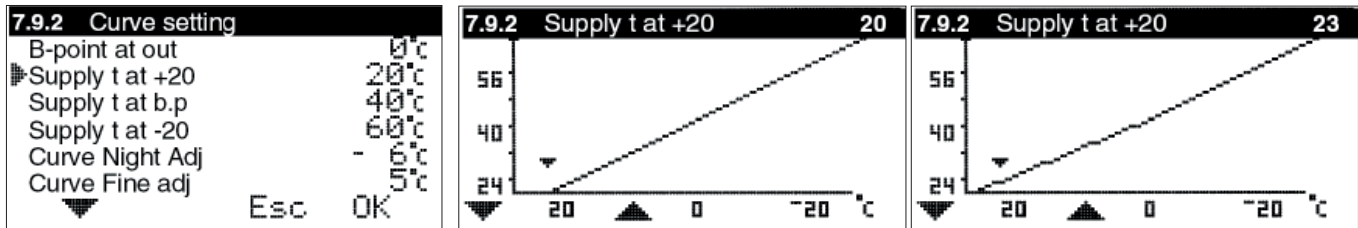
7.9 Curve setting

The supply temperature can be set for 2 fixed end positions and a settable intermediate point, the so-called break point.

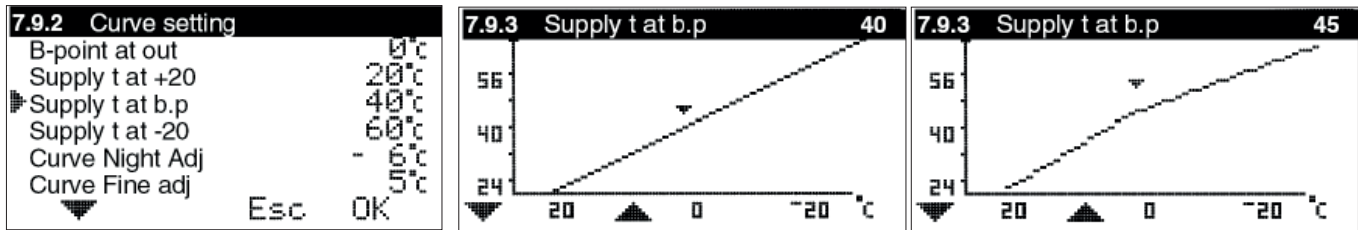
7.9.1 B-point at out – This setting allows you to break the curve at a selected outdoor temperature.



7.9.2/7.9.4 Supply t at +20 / -20 – What the supply temperature shall be at +20 and -20°C outdoors, respectively.



7.9.3 Supply t at b.p – What the supply temperature must be at the set break point.



7.9.5 Curve Night Adj – Means that the entire curve is displaced in parallel by the degrees below when the night reduction is activated.

7.9.6 Curve fine adj – Fine adjustment of the curve means that you increase or decrease the number of degrees set on the curve. Settable from +15 to -15°C.

THERMOMATIC EC HOME® 2K

Connection and user guide for control of 2 separate heating systems

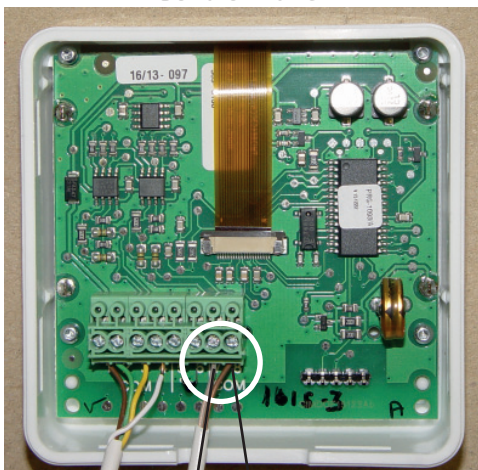
When controlling two systems, only one Control Panel is used.
The CP is connected to the first system as usual.



Connecting System 2

Connection of System 2 is made by connecting a 2 conductor cable from terminal 7-8 in the CP, to terminal 3-4 in the CC for System 2.

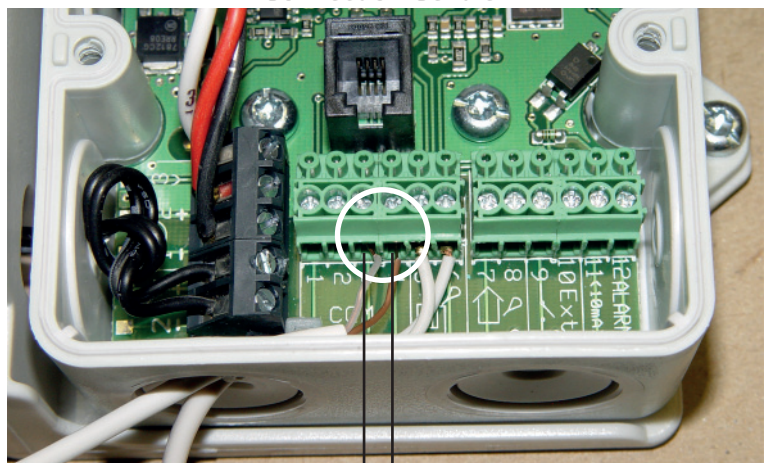
Control Panel



To terminal 3
in CC

To terminal 4
in CC

Connection Centre



To terminal 7
in CP

To terminal 8
in CP

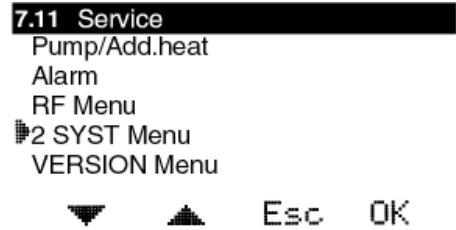
Activation of System 2 when completing an EC Home

When completing with a second system, this is activated in menu **7.11 2 SYST Menu**.

For next step, see "Settings System 2" below.

First start-up with 2 systems

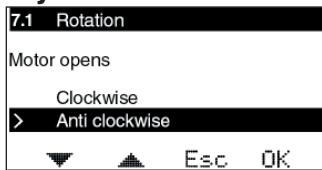
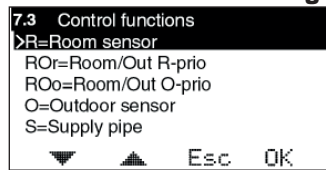
See instruction below.



First start-up

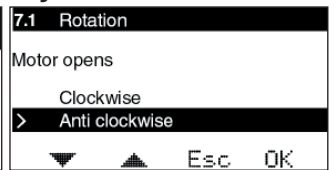
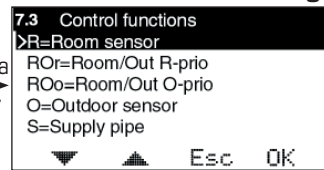


Settings System 1

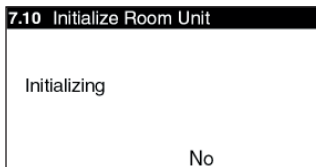
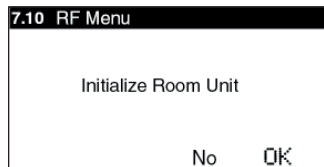


No antenna

Settings System 2



With antenna connected, question for initialization of wireless room sensor is shown after Rotation.
 NOTE one common **wired** room sensor can be used for both systems, but for wireless each system needs it's own room sensor.



Common Basic menu

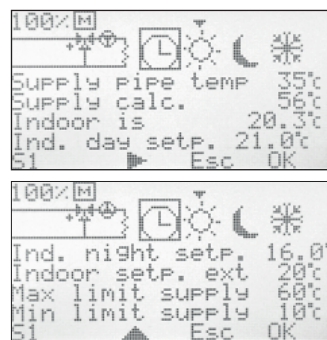


Pushing arrow down for either system will jump directly to the Basic Menu for the chosen system.
 Settings for System 1 and 2 is explained in the complete manual for Thermomatic EC Home and are exactly the same as when running only 1 system.
 Holding Esc for 1 second will always take you back to the Common Basic Menu.

Push Esc to get to Overview / Hold Esc for 1 second to get back to the Common Basic menu

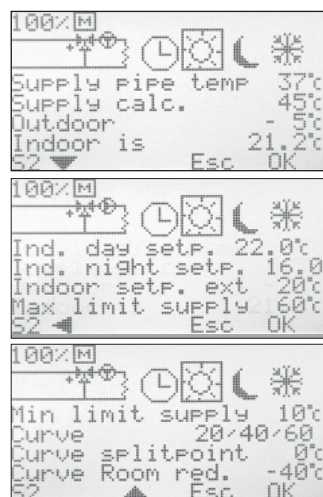
Overview System 1

Example showing overview for control func. "R"



Overview System 2

Example showing overview for control func. "ROr"



Browse left/right

Push OK to stop the automatic browsing and then up/down to change page.
 Push Esc to get back.