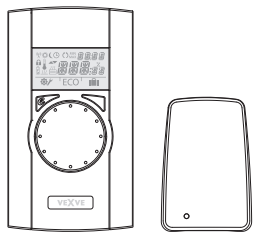


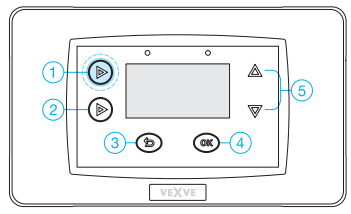
Adding a Wireless Room Unit



Wireless Room Unit for the AM40 ECU:
 product nr. 1140041: Pack A, Wireless room Unit & Transmitter

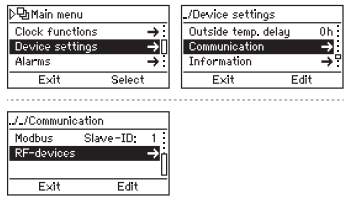
Mechanical assembly:
 Connect RF-antenna unit to RF-connector in ECU, place antenna as high as possible. Antenna can be extended for better RF-reception with ready coupled wire.

(10 meter extension cord Vexve nro. 1920096)
 Remove the protective plastic from the batteries in Room Unit and check that "RU" appears on the screen



After mechanical assembly press button 1 two times to reach the Main menu.

Main menu >> go to Device settings >> go to Communication menu using up&down buttons (5)



In Communication menu >> go to RF-devices where You find RF-devices section

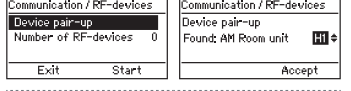
Room unit must be powered and word RU must be on the screen!

(If there is something else on the screen You must press the commissioning button D on the room unit with tip of a pen. Select DEfa from the commissioning menu and select Yes for that.

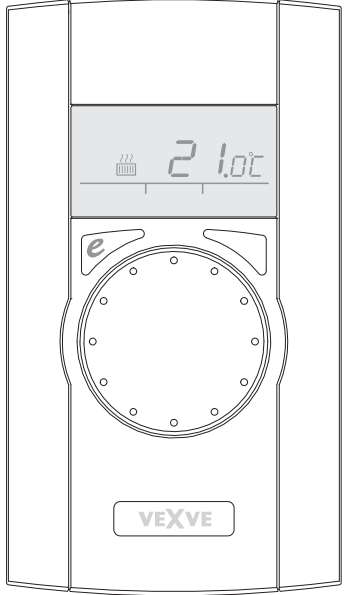
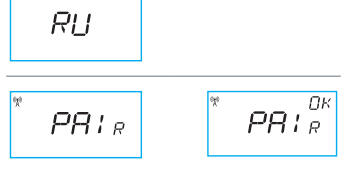
Pairing starts in AM40 ECU when OK button is pushed. Immediately after that Right button in room unit must be pressed too. Now LCD-screens show the texts "Pair" / "Device pair-up"

After few seconds "Found AM Room Unit" & "Pair ok" appears on the screens. Now You must choose the right heating circuit which room unit controls (H1 default / H2) and after that all basic data is copied from AM40 ECU to room unit memory..

You can leave Room Unit menu by pressing button B (ECO-button)



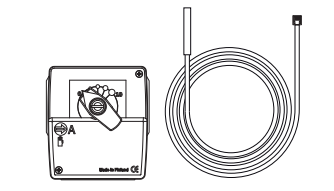
Room unit menus >>



VEXVE
 Pajakatu 11
 38200 Sastamala, Finland
 Tel. +358 10 7340 700
 Fax. +358 18 44 52 316
 vexve.controls@vexve.fi
 www.vexve.fi.

VEXVE
 Vexve AM40 heating controller
 instruction manual

Adding second heating circuit



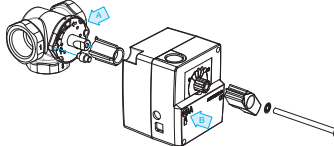
For controlling second heating circuit with AM40 You need second valve motor and supply water temperature sensor

Product nr. 1140042: Pack B, heating circuit 2 motor package includes all necessary parts

Mechanical assembly:
 Mechanical assembly is same as in heating circuit 1 except:

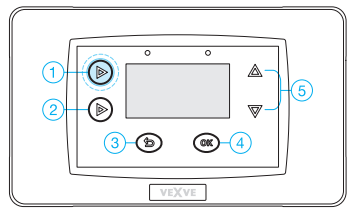
Motor Unit connected to M2 connector.

Supplywater sensor connect to IN2 connector.



(A) Check the valve operational direction before installation.

(B) In manual mode check that valve/motor combination turn 90-degrees with reasonable torque!

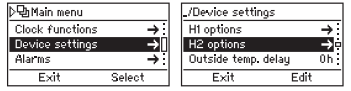


After mechanical assembly press button 1 two times to reach the Main menu

Up/down buttons (5) are used for moving in menus OK button (4) is for enter / accepting values.

button is for undo/exit.

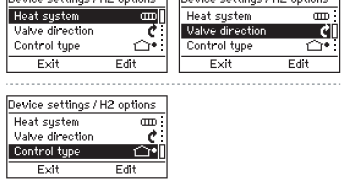
Main menu >> go to Device settings >> go to H2 options



For second Heating Circuit there are three different heating types:

- Radiator heating
- Floor heating
- Constant temperature heating mode to maintain supply water in adjusted value.

Next You choose the operational direction of valve and last Control type. Notice that Control type Room Controlled can be used when RF Room Unit is in use.



Control type info

Outdoor temperature controlled system using curves

- curve adjustment is always needed
- even when room compensation is in use with RF-Room Unit You must roughly adjust right curve (+/- 5 degrees)

Indoor temperature controlled system à AM20-W patented indoor regulation algorithm that don't need heating curve settings at all.

- you can use this control program when RF-room unit is in use
- no curve settings at all

When You have made the choices press exit button (3) to enter basic screen.

From now on You find Circuit 1 and Circuit 2 basic screens behind the button number 1.

Measured values and Main menu are also found behind that button.

Vexve AM40 Instruction Manual

Vexve AM40 Heating Controller delivery includes:

AM40 ECU, motor unit, connection adapters for Vexve AM & Termomix type valves. Power Supply 230 VAC/18 VAC.

External temperature sensor (NTC) with 15 meter wire and wall mount box.

Supply water temperature sensor (KTY) with 3 meter wire & pipe attachment ties.



Accessories:

Wireless Room Unit and transmitter, motor package for second heating circuit, additional Room Unit for second circuit. Adapters for various type of valves.

Pack A, wireless room unit and transmitter part

Product no. 1140041 // EAN 6415843670558

- Wireless room unit
- Alkaline AA batteries 3 pcs included (lifetime over two years)
- antenna unit for the central unit AM40 with 1.5-m cable

Pack B, heating circuit 2 motor package

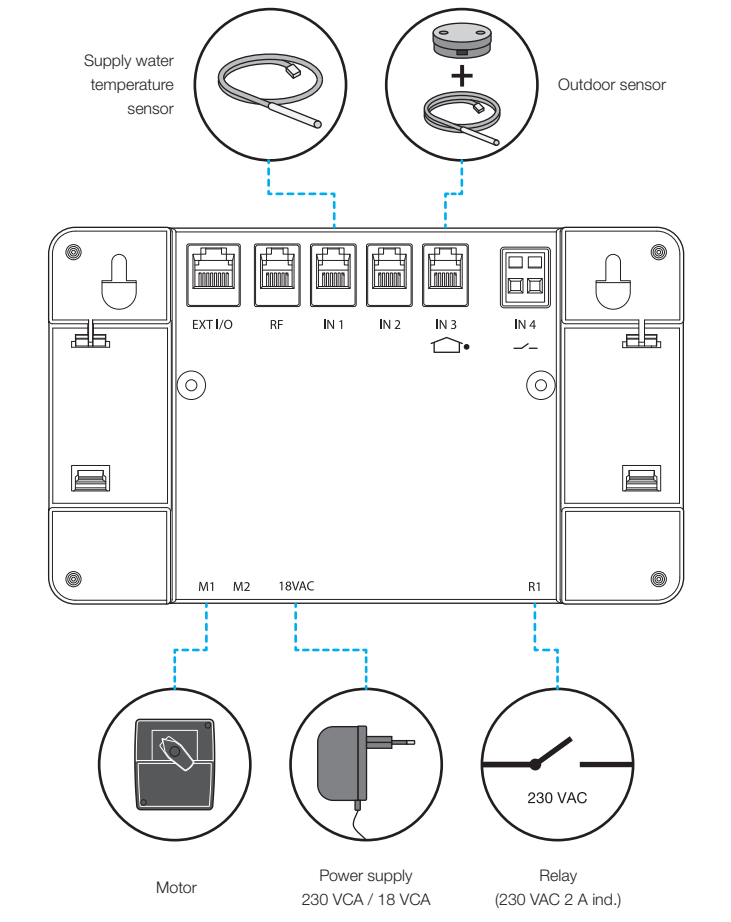
Product no. 1140042 // EAN 6415843670565

- valve motor 24 VAC with 1.5-metre cable and quick connector
- return water sensor with 3-metre cable and quick connector
- connection equipment for Vexve AMV and Automix type valves

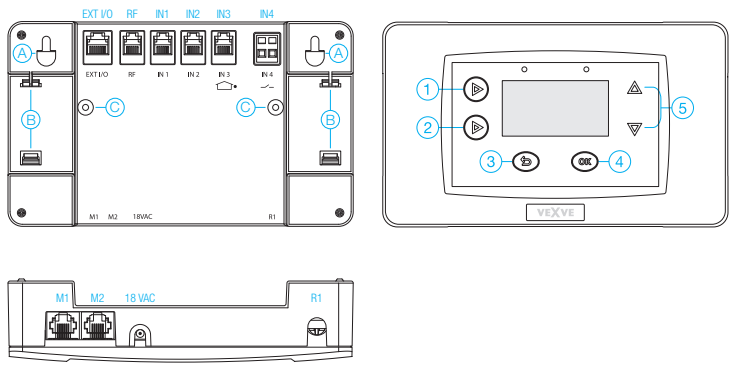
Pack C, additional room unit

Product no. 1140043 // EAN 6415843670572

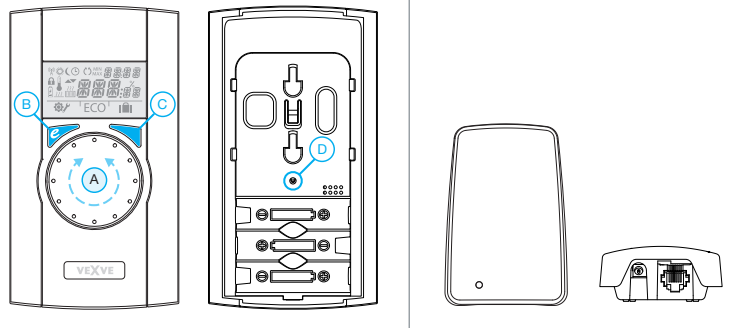
- wireless room unit for second circuit
- Alkaline AA batteries 3 pcs included



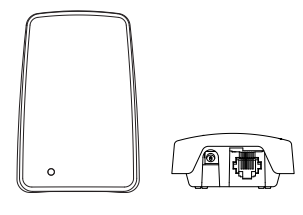
1



2



3



Buttons and connections

AM40 buttons, picture 1

Basic screen	In menus
1 basic screen circuit 1 and circuit 2, measured values	main menu
2 fast Eco functions	
3 easy checking ECO mode & Week program values	Cancel
4 fast editing Circuit values	OK
5 Up&Down keys for fast Room temperature finetuning (parallel displacement) in basic screen	moving in menus

WRU buttons, picture 2

Basic screen	In menus
A For adjusting the temperature	selecting menu functions
B One push: ECO mode on A long push (over 3 seconds): Away mode on	Cancel
C One push: accept selection A long push (over 3 seconds): go to user menu	OK
D One push: go to installation menu	

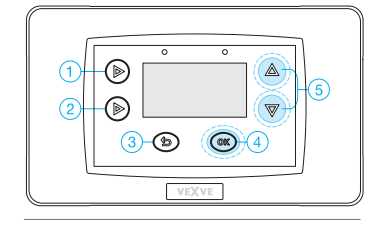
Connectors in the backside of ECU, picture 1

RF	antenna unit connector
IN1	supply water temperature sensor 1-circuit
IN2	supply water temperature sensor 2-circuit
IN3	external temperature sensor
IN4	contact info (away switch) /sensor
R1	potential free relay 2Amp inductive, screw contact (only for professional electrician) Cover must be opened to access R1 relay, see picture 1 section C
M1	motor unit 1-circuit
M2	motor unit 2-circuit
18 VCA	external power supply connector
EXT/O	external data connection
A	Wall mounts
B	DIN connectors

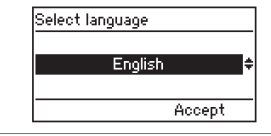
First start

When You turn on the Power for the first time to AM40

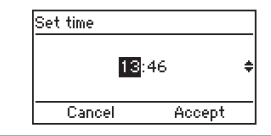
The device ask for basic information that You can change with arrow keys and accept the choices with OK key.



1. Select language



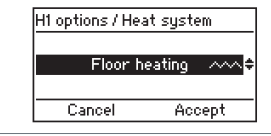
2. Set time



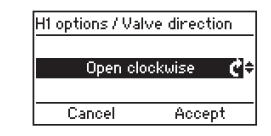
3. Set date



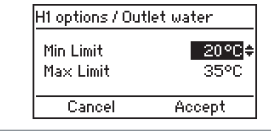
4. Set circuit 1 heating system type, underfloor heating or radiator heating



5. Set the valve operational direction, clockwise or counterclockwise

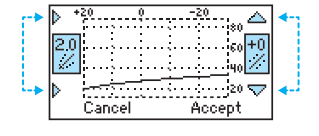


6. Set Your own supply water temp. limits or accept the factory default settings



7. Set Outdoor-controlled heating curve.

The Left-hand side buttons change the curve (buttons 1-2), Up&down buttons (5) are for parallel displacement (finetune of inner temperature)



AM40 has the following default curves:
Underfloor heating Curve 2
Radiator heating Curve 4

Type of building affect to curve selection as:
Old houses with bigger curves
New houses with smaller curves

Curves: 0.2 - 5.0 in 0.2 steps
5.0 - 9.5 in 0.5 steps

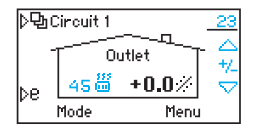
Parallel displacement is not advised to be used when You start AM40 for the first time.

For end user finetuning is very easy in basic display with up&down buttons (5) if there is constantly too high or low temp in living area.

When You use a wireless room unit it is natural to control living area temperature with RF-Room unit. In that case You can accept factory default curves in this step.

See outside temp vs. supply water temp. curve at the end of this manual!

8. After setting up above information You are in the basic display



Situation in the basic screen:

The outside temperature is displayed top right corner and the line below it shows that outside temperature control is in use, supply water temp is seen next to heating type symbol.

(above You can see outside controlled radiator heating where supply water is 45-degrees)

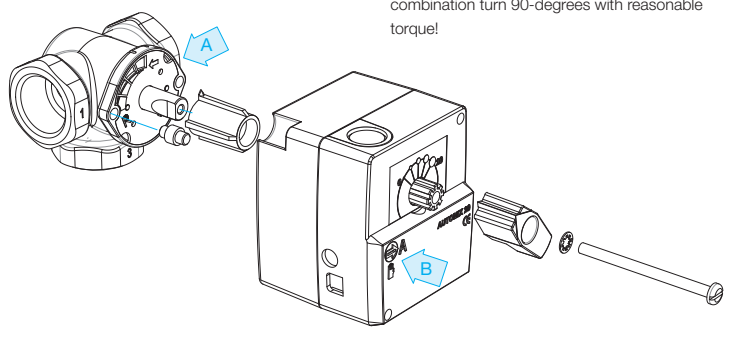
Fine adjustment to room temperature can be done with up&down buttons (5).

The expected change in room temperature, (+/-) degrees is showed on the screen with large digits

Valve assembly

Connect motor(s) to mixing valve with included connection adapters.

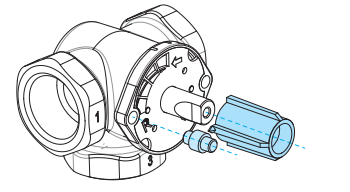
Motor units are suitable for valves like: MUT, ESBE (not VRG), LK, Belimo, Barberi, Vexve.



Vexve AMV range:

The pin is already in the left-hand side of the valve. Only the Termomix adapter from the installation kit should be installed on the stem. The pin side may be changed if the engine position requires it.

Place valve and motor unit in zero position.



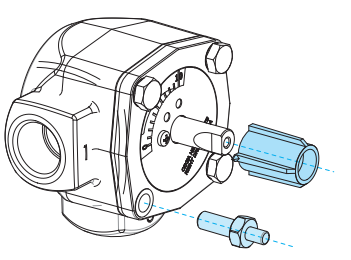
Esbe VRG serie valves has separate adapter part available (Vexve nr. 1920117)

(A) Check the valve operational direction before installation.

(B) In manual mode check that valve/motor combination turn 90-degrees with reasonable torque!

Termomix valves:

A suitable pin screw and adapter from the installation kit should be installed.

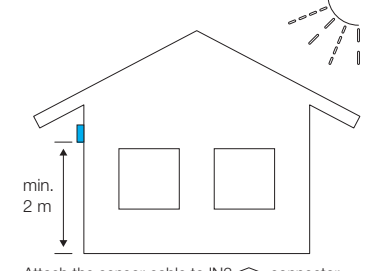


Connect motors to M1 & M2 connectors in AM40, M1 if only one circuit is in use.

Place Supply Water sensor 1 to pipeline 5-25 cm from mixing valve using pipe attachment ties. Attach the sensor cable to IN1 connector in AM40.

Do the same in circuit 2 if included, attach sensor cable to IN2 connector in AM40.

Attach the external temperature sensor using wall mount box to suitable place in outer wall. (Secure location, not direct sunlight or snow / rain to sensor box).



Attach the sensor cable to IN3 connector in AM40.

If necessary the sensor wire can be easily extended with ready to use 10 meter extension cord (Vexve nro. 1920096).

Cable lengthening must be located inside the building!

If AM40 consist also Wireless Room unit:

Connect RF-antenna unit to RF-connector in AM40, place antenna as high as possible. Antenna can be lengthened for better RF-reception with ready wire.

(10 meter extension cord Vexve nro. 1920096)

Relay control is used for example pump control, in that case 230 VAC wire must be connected to go thru R1 connector by opening the cover of AM40.

Notice 230 VAC connection needs professional electrician!!

Contact info connector IN4 connector can be a normal on/off switch. (Away switch as default set). It is also usable for future temp. sensor use.

Attach the AM40 Control Unit with convenient location with included assembly parts.

The device can be attached to the wall with the screws included.

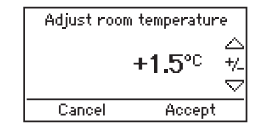
Also 35 mm DIN-rail connectors are ready in the back of the CPU.

Room Temperature Control

AM40 with Outdoor Temperature Control:

A. If Your house is constantly too cool or warm, press up/down keys (5):

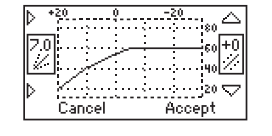
Adjust room temperature with up&down keys (5) and accept with OK key.



This control adjusts the room temperature with the assumed room degrees from the start situation

B. If Your house is too cool or too warm in cold period, press key (4) twice:

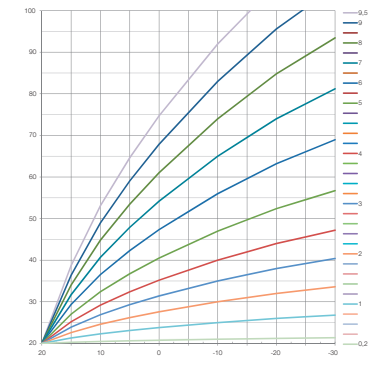
Select higher curve if it's too cool or lower curve if it's too warm.



Higher curve with key 1

Lower Curve with key 2

Curves from 0.2 up to 5.0 in 0.2 steps
from 5.0 up to 9.5 in 0.5 steps



In this chart You can see formula between outside temp and supply water temp with different curves

Example:
-10 °C outside temperature
Supply water +40 °C using curve 4
Supply water +30 °C using curve 2

Notice that min limit and max limit affect how hot/cool supply water can be!

To check those values press key(4) once when you are in the basic screen.

Modifying is also possible in same menu with OK button(4) and up&down buttons (5)

AM40 accessories

