

EBECO 

EB-Therm 500



SE	MANUAL
EN	MANUAL
NO	BRUKSANVISNING
FI	KÄYTTÖOHJE
DE	HANDBUCH

Thank you for choosing Ebeco. Good luck with the use of your EB-Therm 500 and floor heating unit. We hope you will enjoy it for a long time to come.

For the guarantee to apply, the product must be installed and used as described in this manual. It is therefore important that you read the manual. This applies both to those who install the EB-Therm 500 and those who use it. You'll also find troubleshooting information and technical data.

Warranty

Ebeco AB provides a 5-year product warranty for material defects for the EB-Therm 500. For more detailed warranty terms, see ebeco.com.



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Important!

The underfloor heating system is a main voltage installation and must therefore be installed by an authorised electrician in accordance with the current national regulations.

This is EB-Therm 500

EB-Therm 500 is a thermostat that is equipped with a 1.8" TFT colour display and capacitive touch screen for easy and clear navigation.

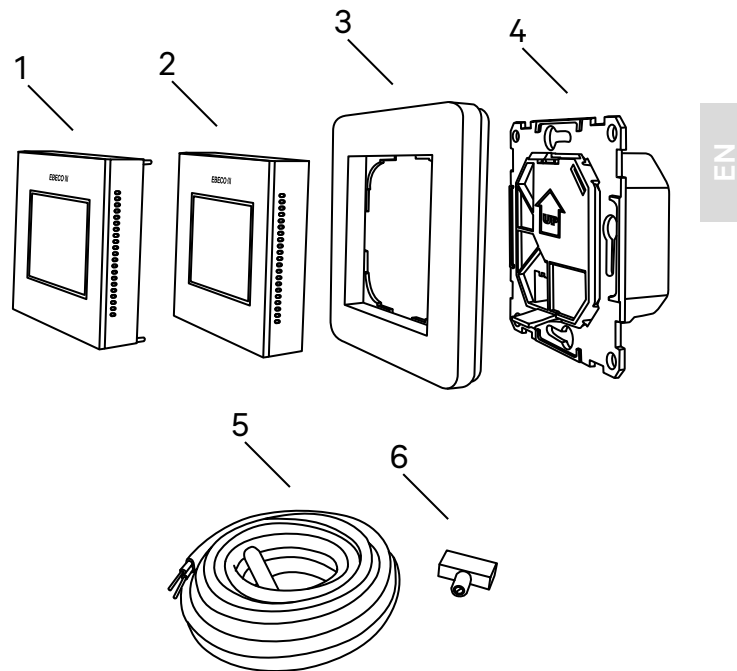
The EB-Therm 500 has several energy saving programmes with individually adjustable times and temperatures. The adaptive function means that the thermostat collects data from the time it is started up and uses this to calculate when to turn on. A PI controller keeps temperature fluctuations to a minimum, which gives an even heat.

The EB-Therm includes a ventilation function that turns the heat off for 15 minutes if it detects that the temperature drops by more than three degrees in less than one minute.

EB-Therm 500 is wifi-ready. By purchasing the EB-Connect WiFi accessory, you can easily control the heat with our Ebeco Connect app or the open API. The WiFi module is available at your nearest retailer. The app can be downloaded from Google Play and App Store.



Included in the package



- 1 *Front for ELKO Plus/RS*
 - 2 *Front for Schneider Exxact*
 - 3 *Frame*
 - 4 *Thermostat*
 - 5 *Foor sensor*
 - 6 *Connection clamp*
- Manual*

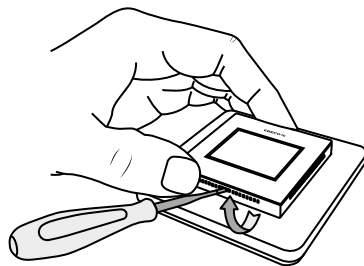
Fitting the EB-Therm 500

EB-Therm 500 should not be placed so it is exposed to direct sunlight and draughts because these can affect the thermostat functions. Take into account the thermostat IP class when fitting.

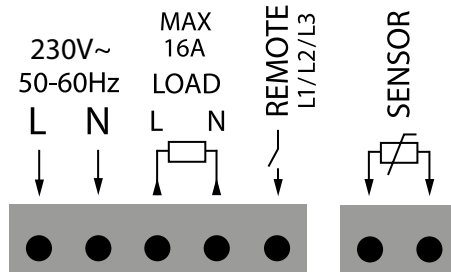
The floor sensor is fitted in a spiral tube placed at the height of the floor surface. The end of the hose must be sealed in order to simplify replacement of the floor sensor.

Fit the EB-Therm in a 65 mm junction box. Ensure the box is flush with the wall or alternatively the tiles.

1. Lift the front panel and frame by pushing a screwdriver into the groove on the underside, see picture. Lift the front panel upwards until you hear a "click".

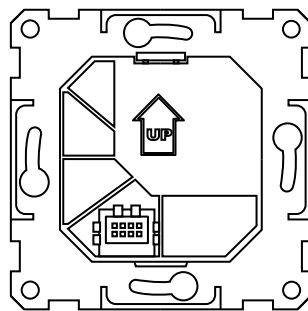


2. Connect according to the instructions on the back of the thermostat. The protective conductor for incoming supply and heating cable is connected using a connection clamp in the box.

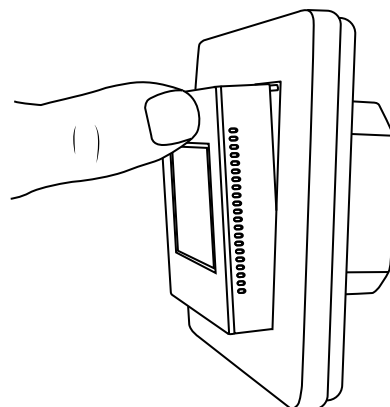


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3. Fit the thermostat in the box, with the arrow pointing upwards. Insert the thermostat in the junction box and fasten with existing screws.

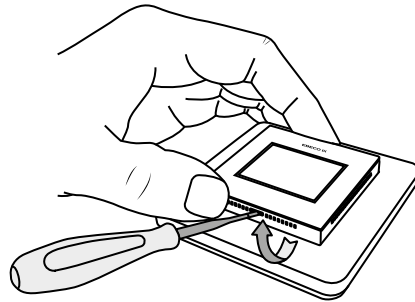


4. Replace the front panel by first hooking it into the lower part, see picture. Then push in the upper part of the front with your thumb until you hear a "click".

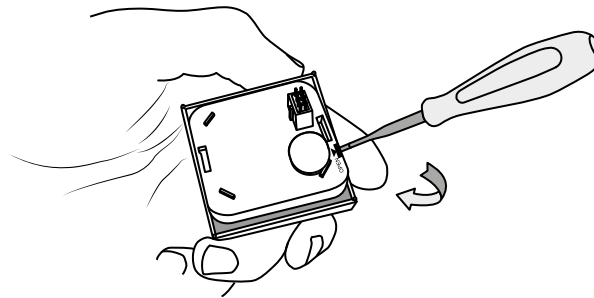


Changing the front cover

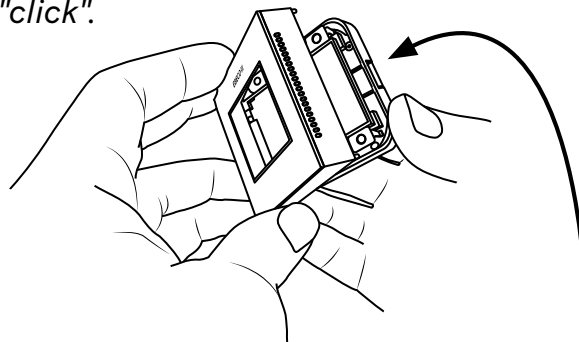
1. Lift the front panel and frame by pushing a screwdriver into the groove on the underside, see picture. Lift the front panel upwards until you hear a "click".



2. Use a screwdriver to gently loosen the front panel.



3. Fit a new front and push until you hear a "click".



Did you buy the wifi module?
This is where you insert the card into the thermostat.

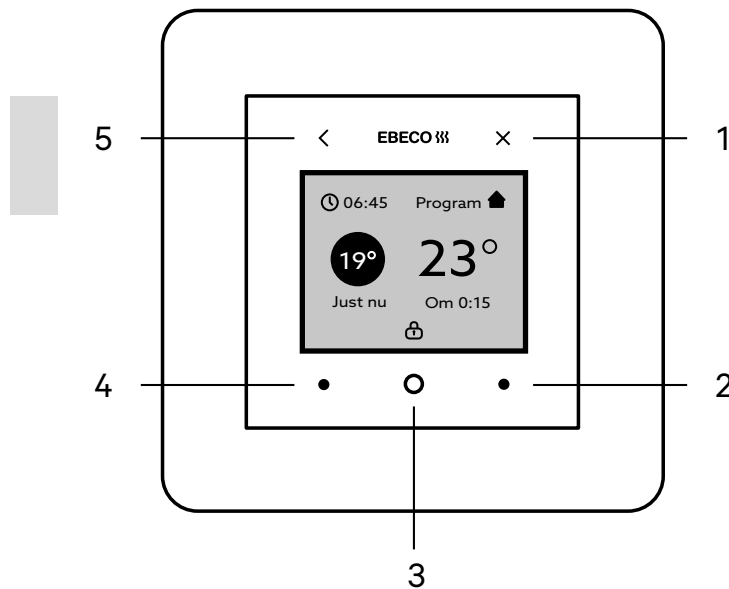
Getting started

The EB-Therm 500 has a built-in start-up guide that takes you through each step in a simple way. When energizing the thermostat for the first time, the system will guide you through the most common and important settings that are required.

You should wait four weeks after applying filler before the floor heating is turned on. This gives the filler time to dry properly. The thermostat will automatically count down and turn on the floor heating when four weeks have passed.

If you have any questions regarding the usage of EB-Therm 500, please contact us at Ebeco at any time. Call +031-707 75 50 or send an e-mail to support@ebeco.se.

The touch surfaces



The EB-Therm 500 has a number of touch surfaces on the front of the thermostat. These surfaces are illuminated and are outside the screen itself.

- 1. On/off/to home screen*
- 2. Scroll up/to the right*
- 3. Menu/confirm*
- 4. Scroll down/to the left*
- 5. Go back one step*

The menus

The thermostat's menus and features are listed below, along with explanations.

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Main menu: Program

Not selected	<i>If no program is selected, the thermostat provides constant heat.</i>	<i>Preset to 22 °C. Adjustable 5–35 °C.</i>
Week	<i>Preset times and temperatures. Individually adjustable.</i>	<i>Mon–Fri Wake up 06:00, 22 °C Leave 08:00, 17 °C Return 15:00, 22 °C Sleep 23:00, 17 °C. Sat–Sun Wake up 07:00, 22 °C Sleep 23:00, 17 °C</i>
Office	<i>Preset times and temperatures. Individually adjustable.</i>	<i>Mon–Fri 08:00, 22 °C 17:00, 17 °C</i>
Timer	<i>Active</i>	<i>Preset to 22 °C. Adjustable 5–35 °C.</i>
	<i>Standby (can be deactivated)</i>	<i>Preset to 17 °C Adjustable (Off) 5–35 °C</i>
	<i>Operating time</i>	<i>Preset to 4 h Adjustable 0–99 h</i>
Remote control (requires remote control on, see menu for installers on page 29)	<i>Active</i>	<i>Preset to 22 °C. Adjustable 20–35 °C.</i>
	<i>Standby (can be deactivated)</i>	<i>Preset to 17 °C. Adjustable (Off) 5–35 °C.</i>
	<i>After-heating</i>	<i>Preset to 0 h Adjustable 0–12 h</i>
Resetting	<i>Software reset</i>	

Main menu: Energy consumption

Week Time & kWh	<i>Shows the week, kWh and number of hours.</i>	
Month Time & kWh	<i>Shows the month, kWh and number of hours.</i>	
Year Time & kWh	<i>Shows the year, kWh and number of hours.</i>	
Operation (14 days)	<i>Displayed as a bar graph.</i>	<i>The bars indicate the operating period per day.</i>

Main menu: Settings

WiFi	<i>Select network.</i>	<i>Displays the selected network and connection status.</i>
	<i>WPS</i>	<i>Wireless Protected Setup</i>
	<i>Reset account</i>	<i>Restoring connection to app.</i>
Time & date	<i>Set the time and date</i>	<i>WiFi: set the time zone.</i>
Language	<i>Set the desired language.</i>	<i>Swedish English Norwegian Finnish German</i>
Screen saver	<i>Screen saver with three different styles.</i>	<i>Preset Time & temp. Adjustable Time & date No (off)</i>
Keypad lock	<i>On/Off</i>	<i>Preset to Off</i>
Summer time	<i>On/Off</i>	<i>Preset to On Adjusts clock automatically for summer time.</i>

Main menu: Installer

System info	<i>Displays the settings and calibrations.</i>
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Main menu: Installer (continued)

Applications	<p><i>Hotel</i></p>	<p><i>Active</i> Preset to 25 °C Adjustable 20–27 °C</p> <p><i>Standby</i> Preset to 15 °C Adjustable (Off) 5–20 °C</p> <p><i>After-heating</i> Preset to 2 h Adjustable 0–4 h</p> <p><i>Interval</i> Min. Preset to 22 °C Adjustable 20–23 °C Max. Preset to 27 °C Adjustable 22–30 °C</p> <p><i>Automatic lock function</i> Activated remote control access locks the thermostat.</p> <p><i>Screen saver Temp. & time</i></p>
	<p><i>Remote control</i></p>	<p><i>On/Off</i> If the remote control is turned on Remote control is displayed below the menu "Programme". Requires a 230 V signal on remote access (see page 23).</p>
	<p><i>Comfort heating (low output heat)</i></p>	<p><i>On/Off</i> Preset to 25/20 °C Adjustable 5–27 °C See program "Residence" for periods and other temperatures.</p>
	<p><i>Power control</i></p>	<p><i>Displayed as a %</i></p> <p><i>Pause/running time</i> 20 min (in cycles).</p> <p><i>The current temperature is shown in the display.</i></p>
	<p><i>Ground heating</i></p>	<p><i>On/Off</i> Preset to 8 °C/Off See program "Timer". The current outdoor temperature is shown in the display.</p>

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Main menu: Installer (continued)

Sensors	Sensor selection	Floor sensor	Tile/stone
		Room sensor	Tile/stone
		Room sensor + limited floor Max. (overheating) Preset to 30 °C Adjustable 27–35 °C Min. (comfort) Preset to 5 °C Adjustable (Off) 5–25 °C	Wood/laminate/ vinyl
		Floor sensor + limit. room Max (room restriction) Preset to 25 °C Adjustable 20–27 °C	Tile/stone wood/laminate/ vinyl
	Sensor type	NTC 2 kΩ NTC 10 kΩ NTC 12 kΩ NTC 15 kΩ NTC 22 kΩ NTC 33 kΩ NTC 47 kΩ NTC 100 kΩ	As a guide, the current temperature for each sensor type is displayed.
	Calibration	Floor sensor Room sensor	If required the respective sensors can be calibrated.

Important!

In rooms exposed to solar radiation (large windows), we recommend the function "room and floor thermostat".

In rooms with wooden floors the function "room and floor thermostat" must always be used.

Main menu: Installer (continued)

Installed effect	<i>Preset to 500 W. Adjustable.</i>	<i>Required to display energy consumption.</i>
Features	<i>Adaptive function</i>	<i>On/Off (preset On) Read more on page 20.</i>
	<i>Ventilation function</i>	<i>On/Off (preset On) Read more on page 20.</i>
	<i>Delayed start</i>	<i>Should heating be started in 4 weeks time? OK/No</i>
	<i>Operating time limitation</i>	<i>The underfloor heating is turned off for x minutes per hour. Preset to Off Adjustable 1–15 min</i>
Reset	<i>Reset all</i>	
	<i>Save data</i>	<i>Saving energy consumption. Other settings will be reset.</i>

Operating information

The thermostat display shows the operating information under the setpoint.

Operating information

Right now	<i>Display of the current temp. and sensors.</i>	
After X: XX (time in hours until setpoint is reached)	<i>Set</i>	<i>Set point reached.</i>
	<i>Limited</i>	<i>Maximum or minimum limitation is activated. The function is activated under Sensor selection. Read more on page 30.</i>
	<i>Ventilation</i>	<i>The ventilation function turns the heat off for 15 minutes if it detects that the temperature drops by more than three degrees in less than one minute.</i>

Troubleshooting

When a fault occurs, the EB-Therm 500 turns the heating off. The display then shows an error code.

E1 Short circuit room sensor.

E2 Interruption room sensor.

E3 Short circuit floor sensor.

E4 Interruption floor sensor.

E5 Internal sensor fault.

E6 Internal over temperature

Please note that the floor heating system is a high voltage system and any faults must therefore be rectified by an authorised electrician.

Test values for floor sensors

For control measurement of the floor sensor, the following values for Ebeco standard sensor NTC 10 k Ω apply.

Temperature	Resistance
10 °C	18.0 k Ω
15 °C	14.7 k Ω
20 °C	12.1 k Ω
25 °C	10.0 k Ω
30 °C	8.3 k Ω

Technical facts

<i>Connection voltage</i>	230 VAC \pm 10% 50–60 Hz
<i>Air temp. range</i>	+5 °C to +35 °C
<i>Floor temp. range</i>	+5 °C to +35 °C
<i>Temp. limiter</i>	+5 °C to +35 °C
<i>Breaking capacity</i>	3680 W/16 A/230 VAC
<i>Connection cable</i>	max 2.5 mm ²
<i>Load</i>	Cos φ = 1
<i>Conn. difference</i>	\pm 0.3 °C
<i>Power reserve</i>	36 h
<i>Sensor cable</i>	3 m, NTC 10 k Ω
<i>Maximum length</i>	
<i>sensor cable</i>	50 m, 2 x 1.5 mm ²
<i>Display dim.</i>	36 x 29 mm
<i>Thermostat dim.</i>	87 x 87 x 39 mm
<i>For frame system</i>	Schneider Exxact, ELKO Plus/RS
<i>Colour</i>	White
<i>Enclosure class</i>	IP21
<i>Approval</i>	CE, S
<i>Protection class</i>	Class II, reinforced insulation (EN 60730)