

HERZ ETKF+

Energy saving thermostatic head with receiver and accessories

Data sheet for **8251**, Issue 0816

Dimension in mm



Mounting dimension (W x H x D): 60 x 65 x 100

Version

- 1 **8251 01** energy saving thermostatic head ETKF+ -
The energy saving thermostatic head ETKF+ is built with programmable temperature, time control and wireless receiver.

Technical data

Setting range:	5 °C to 30 °C
Differential:	0,5 K
Batteries:	2 X 1,5 V AA, LR6 battery included, typical life approx. 2 years
Receiver frequency:	868,3 MHz
Current consumption:	Max. 100 mA
Ambient temperature:	5 °C to 50 °C
Linear stroke:	4,2 mm
Thread connection:	M28 x 1,5

Field of application

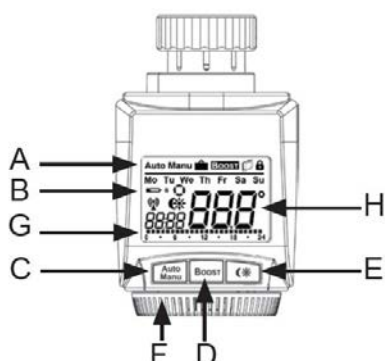
The energy saving thermostatic head ETKF+ can be installed on all HERZ-TRVs with M28 x 1,5. With adapters (available separately), it is possible to mount on the ETKF+ on valves from other manufactures.

Function

Energy saving thermostatic head ETKF+ is use to control each radiator and can be also used to control the room temperature. When airing the room, ETKF+ regulates the temperature

automatically to save heating costs. The communication of ETKF+ components to each other is bidirectional. This ensures that information transmitted to reach the receiver.

☑ Device Overview



- A Automatic mode (**Auto**), manual mode (**Manu**), holiday mode (☀️), boost function (**Boost**), open window function (🪟), operating lock (🔒)
- B Weekday, replace batteries of radiator thermostat (🔋), replace batteries of connected device (e.g. window sensor) (🔋 S), antenna symbol (radio synchronicity) (📶), reduction/comfort temperature (📉), time/date, activity symbol (🕒)
- C Auto/Manu button: Switch between automatic and manual operation, exit the holiday function
- D Boost button: Activate the boost function, confirm, start teach-in procedure
- E Switch between set-back and comfort temperature
- F Handwheel: Make (temperature) settings, select and set menu items
- G Bar chart of the programmed heating phases of the current day
- H Temperature display, current setpoint temperature

☑ Installation

Step 1: Inserting (replacing) the batteries

To insert the batteries into the energy saving thermostatic head ETKF+, please proceed as follows:

- Remove the battery compartment cover by pushing it forwards
- Insert two LR6/ mignon/ AA batteries in the battery compartment, making sure they are the right way round
- Reattach the battery compartment cover and latch it into place

After inserting batteries, the radiator thermostat has to be mounted on the radiator. The radiator thermostat starts an adapting run afterwards.

A battery symbol (🔋) indicates that the batteries need to be replaced. After removing the batteries, you should wait approx. 1 minute before inserting the new ones. The service life of new alkaline batteries is approximately two years.



This device does not support operation with rechargeable batteries.



Never recharge standard batteries. Doing so will present a risk of explosion. Do not throw the batteries into a fire! Do not short-circuit batteries.



Used batteries should not be disposed of with regular domestic waste! Instead, take them to your local battery disposal point.

Step 2: Setting the date and time of day

If batteries are inserted or replaced, the date and time is automatically requested after a brief display of the firmware version number:


- Set the year, month, day, hour and minute with the handwheel and confirm with the Boost button. The motor moves the control pin backwards during the setting of date and time.
- If "InS" and the rotating activity symbol "🕒" are displayed, the motor still reverses. When only "InS" is shown in the display, the energy saving thermostatic head ETKF+ can be installed on the valve.

The ETKF+ can be configured already before installation. Press the Auto/ Menu button for this, while „InS“ is shown in the display. After the programming has been completed, „InS“ is shown again in the display and installation can take place.

Step 3: Installation of energy saving thermostatic head ETKF+


The ETKF+ is easy to install and can be done without draining heating water or intervening in the heating system. No special tools are required, nor does the heating have to be switched off. The brass union nut M28 x 1,5 attached to the ETKF+ can be used with HERZ thermostatic valves and

thermostatic inserts with a M28 x 1,5 connection.

After inserting batteries, the ETKF+ has to be mounted on the radiator. The ETKF+ starts an adapting run afterwards, during the adapting it would be show "Ins" and symbol () on the display. After the symbol is shine on the display the ETKF+ can be mounted on the radiator.

After an adjustment run ("AdA") is carried out to adapt to the valve.

- Set the ETKF+ on the valve
- Tighten nut tight firmly.
- Press the Boost button when the display reads "InS".

The ETKF+ performs adjustment run. Here "AdA" and the type icon () appear on the display, at this time no operation is possible. If the adjustment run initiated before mounting or an error message (F1, F2, F3), press the Boost button and the motor back to the position "InS".



The "Teaching-In" can also activate during the "InS" on the display

Step 4: Configuration

The settings of the energy saving thermostatic head ETKF+ can be changed individually via the configuration menu. Further information about changing the settings of the ETKF+ can be found in the detailed operating manual available online for download on the HERZ Homepage.

Teaching-In


In order to be able to use the energy saving thermostatic head ETKF+ in your installation, you must teach it in to the other devices first. Further information about "Teaching-In" the ETKF+ can be found in the detailed operating manual available online for download on the HERZ homepage.



Restore factory settings

The factory settings of the energy saving thermostatic head ETKF+ can be restored manually. Restoring the factory settings deletes all settings and information about taught-in devices.

- First remove the batteries from the battery compartment of the ETKF+
- Wait 60 seconds
- Press and hold down the three buttons (Auto/ Manu, Boost, (*)) while inserting the batteries
- Once the factory settings have been restored successfully, "rES" is displayed

Flashing Sequences

Error code on the display	Problem	Solution
Empty battery symbol ()	Battery voltage too low	Replace batteries
F1	Valve drive sluggish	Check the installation; check whether the pin on the heating valve is stuck
F2	Actuating range too wide	Check the fastening of the radiator thermostat
F3	Adjustment range too small	Check the heating valve; check whether the valve pin is jammed
F4	Device already taught-in to a wall thermostat+	Make sure the device is no longer taught-in to a wall thermostat+ and restore the factory settings Then you can teach-In the device again.
F5	Temperature sensor defective	Device defective - please contact your specialist manufacturer.
F6	Battery voltage too low,	Valve moved to error Position Replace the batteries of the radiator thermostat
Slowly flashing	Connection to taught-in	Check the power supply and

antenna symbol 	ETKF+ components lost	the batteries of taught-in ETKF+ components.
Quickly flashing Antenna symbol 	"Duty cycle" limit reached	The device can resume radio communication after a waiting time of approx. one hour
CAL	Routine descaling is active	Automatic function

Information about radio operation

Radio transmission is performed on a non-exclusive transmission path, which means that there is a possibility of interference occurring. Interference can also be caused by switching operations, electrical motors or defective electrical devices.



The range of transmission within buildings can differ greatly from that available in the open air. Besides the transmitting power and the reception characteristics of the receiver, environmental factors such as humidity in the vicinity have an important role to play, as do on-site structural, screening conditions.

Disposal and Safty instructions



Do not dispose of the device with regular domestic waste!
Electronic equipment must be disposed of at local collection points for waste electronic equipment in compliance with local directives governing waste electrical and electronic equipment.



The CE sign is a free trade sign addressed exclusively to the authorities and does not warrant any properties.



For technical support please contact our service agency.



The devices concerned are not intended for children and must not be used as toys.
Do not leave packaging material lying around, as children might be tempted to play with it, which is extremely dangerous.



Do not open the device: it does not contain any components that need to be serviced by the user. In the event of an error, please return the device to our service department.



Using the device for any purpose other than that described in this brief instruction does not fall within the scope of intended use and shall invalidate any warranty or liability. This also applies to any conversion or modification work. The device is intended for private use only.

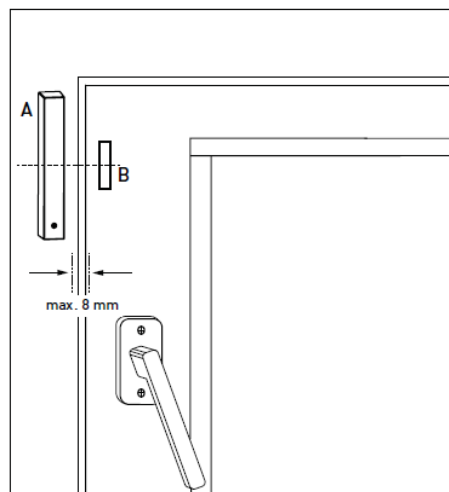
Accessories

- 1 **8251 02** window sensor+ contact for energy saving thermostatic head ETKF+
- 1 **8251 03** wall thermostat+ for energy saving thermostatic head ETKF+
- 1 **6350 03** Thermostats Adapter Ring for T&A Thermostatic Valves (threaded connection M28 x 1,5)
- 1 **6357 11** Thermostats Adapter Ring „H“ (threaded connection M30 x 1,5)
- 1 **6351 01** Thermostats Adapter Ring for Caleffi Thermostatic Valves (threaded connection M30 x 1,5)
- 1 **6362 00** Thermostats Adapter Ring „D“ for Danfoss Valvs (Ø 23)
- 1 **6362 01** Thermostats Adapter Ring „D“ for Danfoss screw valvs (threaded connection M20 x 1 old version)
- 1 **6362 11** Thermostats Adapter Ring „D“ for Danfoss screw valvs (threaded connection M23,5 x 1,5 current version)

- The magnet (B) can be mounted on other side of the electronic unit (A).
- The window sensor+ can be attached either vertically or horizontally and can be positioned on the side or at the top/ bottom of the window.

distance:

- Installation must be in parallel with a maximum spacing of 8 mm.
- The magnet (B) must be centre-aligned with the electronic unit (A).
- The magnet (B) and electronic unit (A) must be attached at the same level (or as close to the same level as possible) within the designated area.



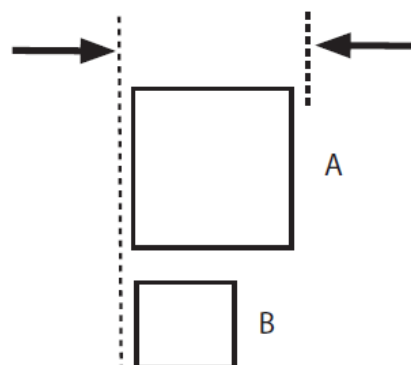
Mounting:

Each of the elements can be fastened in two ways:

Adhesive strip mounting:

The surface on which you are mounting the element must be clean and free of grease.

- Stick the adhesive strips supplied on the back of the electronic unit (A) and on the back of the bracket for the magnet (B).
- Then press the electronic unit (A) and the bracket onto the frame and window.

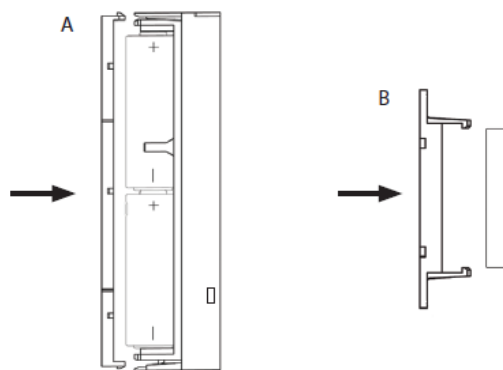


Screw mounting:



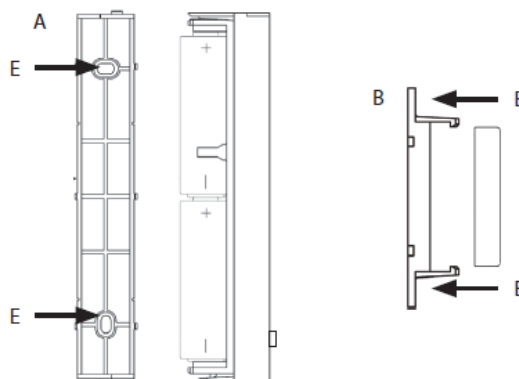
Screw fastening damages the window frame. For those living in rented accommodation, this could lead to a landlord making claim for compensation or holding back a tenant's deposit.

- Use a pen to mark the borehole positions (E) of the electronic unit (A) and the magnet holder (B) on the window frame and casement.
- If you are working with a hard surface, you should pre-drill the holes marked (E) using a 1.5 mm drill.
- Use the countersunk head screws supplied to fasten the wall brackets for the electronic unit (A) and magnet (B).



If you are using the 14.5 mm high spacer, you must first fasten it with two 2.2 x 16 mm screws and then attach the magnet unit (B) to it with another two screws. The flatter spacers are simply fastened together with the magnet using two 2.2 x 16 mm screws.

- Once you have fastened the wall bracket for the magnet (B), insert the magnet. Then place the cap on the magnet.
- Once you have fastened the wall bracket for the electronic unit (A), attach the electronic unit. Complete the mounting procedure by placing the cap on the electronic unit (A). White and brown

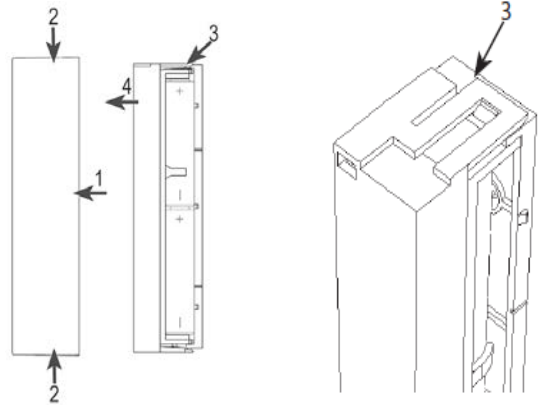


caps are supplied with the device.

✖ Inserting (replacing) batteries

The window sensor+ is operated with two LR03/ micro/ AAA batteries.

- Remove the cap of the electronic unit (A) by pulling it forward and off the device (1). To release the cap, squeeze it gently from above and below with your thumb and index finger (2).
- Carefully lift the release clip (3) from the side.
- Pull the electronic unit (A) forward (4) and off the bracket.
- After removing the old batteries, please wait approx. 60 seconds.
- Insert two new LR03/ micro/ AAA batteries in the battery compartment (making sure that you insert them the right way round).
- Place the electronic unit (A) back onto the bracket, allowing it to latch into place.
- Put the cap back to the electronic unit (A). Make sure that the LED opening on the cap is positioned over the LED on the electronic unit (A).



Never recharge standard batteries. Do not throw the batteries into a fire. Do not expose batteries to excessive heat. Do not short-circuit batteries. Doing so will present a risk of explosion.



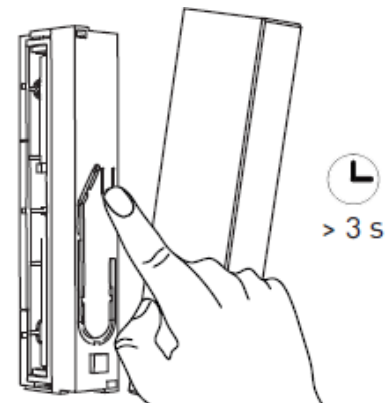
Used batteries should not be disposed of with regular domestic waste! Instead, take them to your local battery disposal point.

✖ Teaching-In

In order to be able to use the window sensor+ in your installation, you must teach it in to your system first.

You can teach in the window sensor+ directly to the wall thermostat+ (Room solution) or the energy saving thermostatic head ETKF+ (Radiator solution).

- Put the device to be taught (e.g. wall thermostat+) into "Teaching-In" mode (according to the corresponding operating manual).
- To activate "Teaching-In" mode of the window sensor+, press and hold down the "Teaching-In" button (C) on the electronic unit (A) for at least 3 s. The device LED (D) starts to flash.
- Successful "Teaching-In" of the window sensor+ is confirmed by the LED (D) lighting up once.
- Place the cap on the electronic unit (A).



To initialise the window sensor+, once open and close the window to which the window sensor+ is mounted.



The window sensor+ can be taught-in to one wall thermostat+/ energy saving thermostatic head ETKF+ only.

Exception: synchronous solution (max. 2 energy saving thermostatic head ETKF+ and max. Three window sensor) vide page 14 room solution



✖ Restore factory settings

The factory settings of the window sensor+ can be restored manually. Restoring the factory settings deletes all settings and information about taught-in devices.

- First remove the batteries from the electronic unit.
- Wait 60 seconds.
- Hold down the "Teaching-In" button (C) and at the same time re-insert the batteries.
- Press and hold down the "Teaching-In" button (C) until the LED (D) starts to flash.
- Release the "Teaching-In" button (C); the factory settings are restored.

☑ Flashing sequences

The LED's (D) flashing sequences have different meanings:

Flashing sequence	Meaning
1x flash	Window open/ closed, radio command sent successfully
2x flashes	"Duty cycle" limit reached. The device will communicate again after max. one hour.
3x flashes	Error message: wireless command not sent successfully

☑ Technical characteristics:

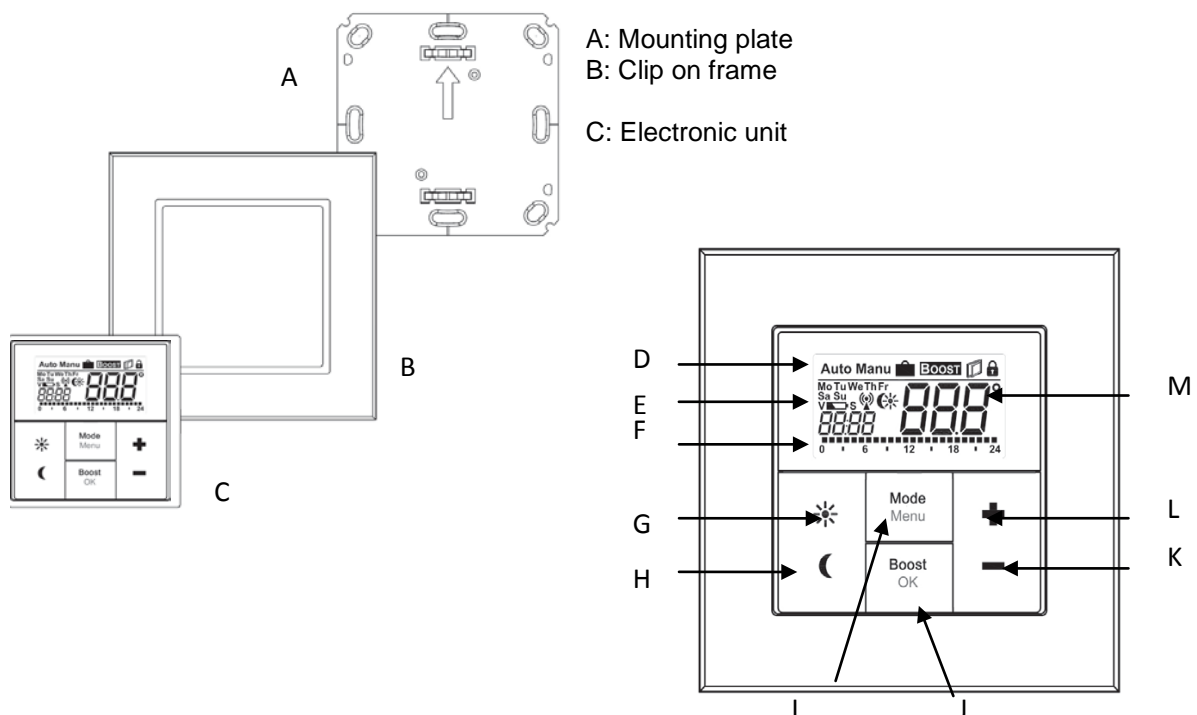
Supply voltage:	2x 1,5V AAA, Micro LR03 battery included, typical life approx 5 years
Current consumption:	Max. 50 mA
Degree of protection:	IP 20
Ambient temperature:	0 to 50 °C
Transmission frequency:	868,3 MHz
Receiver category:	SRD category 2
Range of transmission in open air:	100 m

☑ Wall Thermostat+ (1 8251 03)



Mounting dimension in mm (W x H x D): 86 x 86 x 21,5

☑ Device Overview:



(D) Automatic mode (Auto), manual modus (Manu), holiday function (🏠), boost-function (BOOST), open-window-function (🪟), operating lock (🔒)

(E) Weekday, empty battery symbol (🔋), radio synchronicity (📶), comfort-/reduction-temperature (☀️), time/date

(F) Bar chart of the programmed heating phases of the current day

(G) Confort temperature button (☀️): switching to confort temperature

(H) Reduction temperature button (🌙): switching to confort temperature

(I) Mode-/ Menu-button: change the operating modus and open the configuration menu; exit/ back in the menu

(J) Boost-/ OK-button: confirm settings and activate the boost-function

(K) (-) button: reduce the set point temperature, browse in the menu

(L) (+) button: increase the set point temperature, browse in the menu

(M) set point-/ actual-temperature

☑ Intended use:

The wall thermostat+ is responsible for regulating the room temperature within the system. With the wall thermostat+ up to 8 energy saving thermostatic heads ETKF+ can be comfortably regulated in a room. The wall thermostat+ has an internal sensor that measures the temperature in the room and cyclically transmits it to the ETKF+. Communication between the components is bidirectional. This ensures that the information sent reaches the recipient.

The device may only be operated indoors and must be protected from the effects of damp and dust, as well as solar or heat radiation.

Using the device for any purpose other than that described in this brief instruction does not fall within the scope of intended use and shall invalidate any warranty or liability. This also applies to any conversion or modification work. The device is intended for private use only.

☑ Inserting (replacing) batteries:

As-delivered condition:

When you are starting up the device for the first time, first remove the mounting plate (A) on the rear of the wall thermostat+.

- Hold the wall thermostat+ firmly in one hand and pull of themounting plate at one corner.

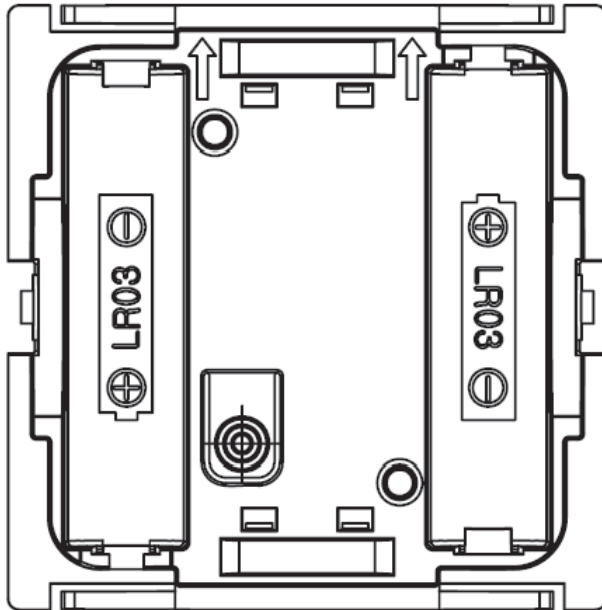
Mounted condition:


Once mounted, the wall Thermostat+ can easily be pulled of the mounting plate and out of the frame.

- Pull sideways at the frame to remove the electronic unit of the wall together with the frame.

Replacing batteries:

- Turn the wall thermostat+ over to remove or insert the batteries.
- After removing the old batteries, please wait approx. 60 seconds.
- Insert two LR03/ micro/ batteries in the battery compartments (making sure that you insert them the right way round).
- Put the electronic unit back into the frame (B).



The empty battery symbol () indicates that the batteries need to be changed. If, in addition, a "V" or "S" are displayed, the batteries of a taught-in ETKF+ (V) or window sensor+ (S) have to be replaced.



Never recharge standard batteries. Doing so will present a risk of explosion. Do not throw the batteries into a fire! Do not short-circuit batteries.



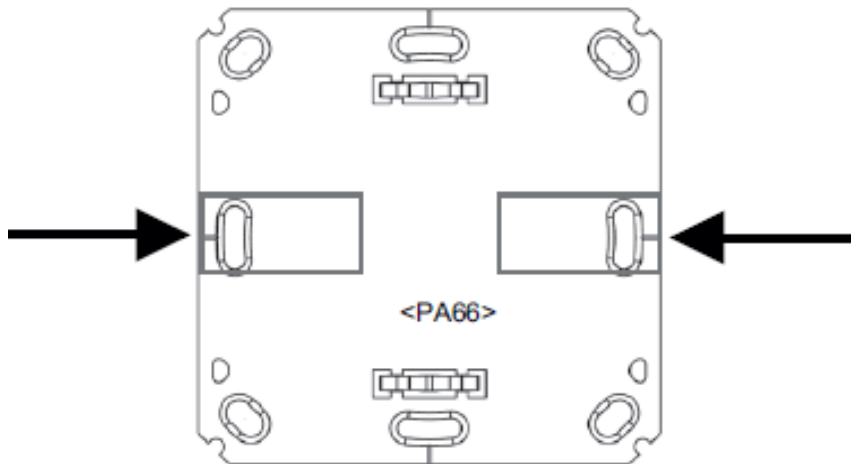
Used batteries should not be disposed of with regular domestic waste! Instead, take them to your local battery disposal point.

Mounting:

You can either use screws or adhesive strips to mount the wall thermostat+ to a wall in the frame supplied or integrate it into an existing switch.

Adhesive strip mounting:

- Choose a site for installation. The surface on which you are mounting the room thermostat must be clean, dry and free of grease.
- For mounting of the assembled wall thermostat+, attach the adhesive strips to the back side of the mounting plate (A). You should be able to read the letters on the back side (according to figure).
- Remove the protective film from the adhesive strips.
- Press the assembled wall thermostat+ with the back side to the wall in the position where it should subsequently be attached.



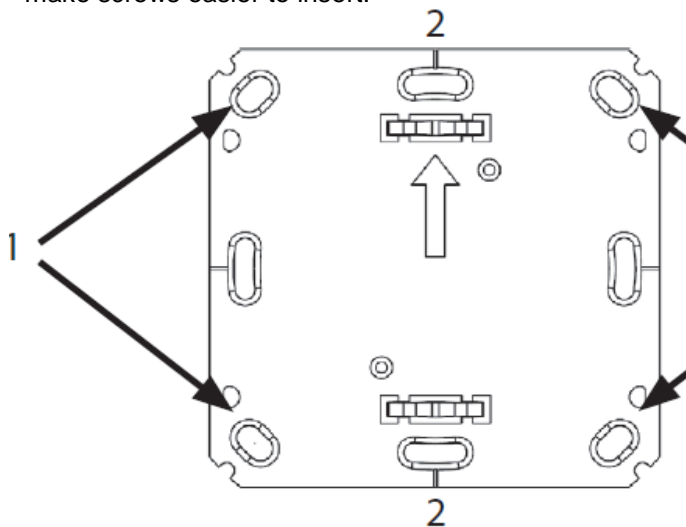
Screw mounting:

- Choose a site for installation.

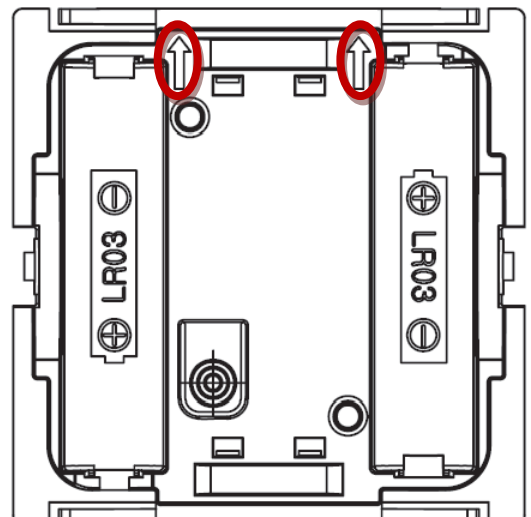


Make sure that no electricity or similar lines run in the wall at this location.

- Position the mounting plate on the desired site on the wall. Make sure that the arrow on the mounting plate is pointing upwards.
- Use a pen to mark the positions of 2 bore holes (1) (diagonally opposite) in the mounting plate on the wall. The bore holes (2) can be used for installation with a flush mounting box.
- Now drill the bore holes. If you are working with a stone wall, drill the marked two 5 mm holes and insert the plugs supplied. If you are working with a wooden wall, you can pre-drill 1.5 mm holes to make screws easier to insert.



- Now drill the bore holes. If you are working with a stone wall, drill the marked two 5 mm holes and insert the plugs supplied. (If you are working with a wooden wall, you can pre-drill 1.5 mm holes to make screws easier to insert).
- Use the screws and plugs supplied to fasten the mounting plate to the wall.
- Attach the electronic unit with the frame on the mounting plate. Make sure that the arrows on the back side of the electronic unit point upwards and that the clips on the mounting plate latch into the openings on the electronic unit.

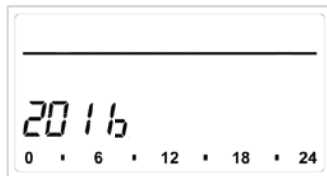


☑ **Setting data and time:**

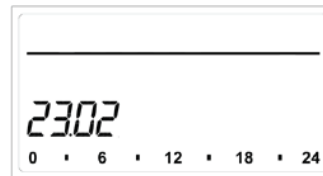
After inserting or replacing batteries the firmware version number will be shown briefly. Accordingly, date and time will be requested automatically. Settings can be changed with the (+) and (-) buttons and confirmed with the Boost/ OK button.

- Set the year, month and date and confirm each setting with the Boost/ OK button.

Year:

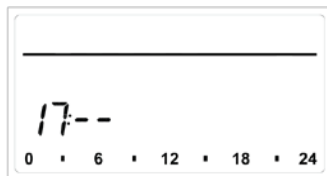


Month and day:

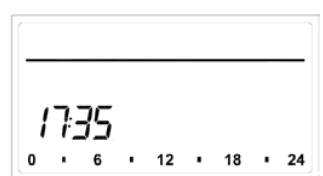


- Set the time and confirm your settings with the Boost/ OK button.

Hours:



Minutes:



Once the time and date were entered, the wall thermostat+ changes back to normal operating mode.

☑ **Teaching-In:**

In order to be able to use the wall thermostat+ in your installation, you must teach it in to the other devices first. Further information about "Teaching-In" the wall thermostat+ can be found in the detailed operating manual available online for download on www.herz.eu.

☑ **Configuration of the System:**

If you use the wall thermostat+ in the Room solution, you can individually change all settings of your system (e.g. configuration of week programs) directly via the device. Further information about changing the settings of the wall thermostat+ can be found in the detailed operating manual available online for download on www.herz.eu

☑ **Restore factory settings:**

The factory settings of the wall thermostat+ can be restored manually, e. g. if you want to re-install an incorrectly operating system. Restoring the factory settings deletes all settings and information about "Teaching-In" devices.






In the Room solution the factory settings of the wall thermostat+ can be restored as follows:

- Press the Mode/Menu button for at least 3 seconds.
- Select the "rES" menu item with the (+) and (-) buttons.
- Confirm your selection using the Boost/ OK button.
- "ACC" will be displayed. Confirm the factory reset with the Boost/ OK button.

You can still restore the factory settings as follows:

- Remove a battery and wait for 60 seconds.
- Press and hold down the reduction ((☾)), Ok and the (-) button simultaneously and insert the battery at the same time.
- When "rES" appears on the display, the reset was performed and the buttons can be released.

❑ Flashing Sequences and Maintenance:

Errorcode	Problem	Solution
Batterysymbol()	Battery voltage to low	Replace battery
F5	Temperature sensor defect	Replace device
Slowly flashing antenna symbol ()	Connection on to taught-in components lost	Check the power supply and the batteries of taught-in components
Quickly flashing antenna symbol ()	“DutyCycle” limit reached	The device can resume radio communication after a waiting time of approx. one hour

The product is out of maintenance. Repairs are only by specialist. Clean the product with a soft, clean, dry cloth. To remove heavier dirt, use a cloth which is slightly moistened with lukewarm water. Do not use solvent-based cleaning agent, the plastic housing and the labels can be attacked.

❑ Information about radio operation

Radio transmission is performed on a non-exclusive transmission path, which means that there is a possibility of interference occurring. Interference can also be caused by switching operations, electrical motors or defective electrical devices.



The range of transmission within buildings can differ greatly from that available in the open air. Besides the transmitting power and the reception characteristics of the receiver, environmental factors such as humidity in the vicinity have an important role to play, as do on-site structural/ screening conditions.

❑ Technical Characteristics

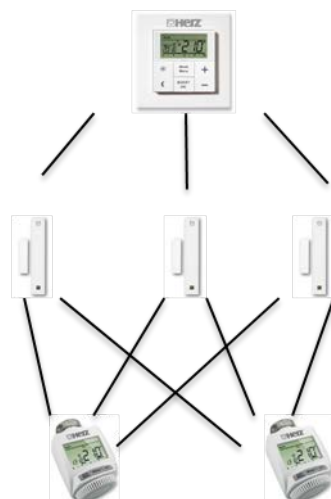
Supply voltage:	2x 1.5 V AAA, LR03 micro battery included, typical life approx 2 years
Current consumption:	Max. 30 mA
Degree of protection:	IP 20
Ambient temperature:	5 to 50 °C
Radio frequency:	868.3 MHz
Receiver category:	SRD category 2
Typ. open area RF range:	100 m

❑ Wireless solution for energy saving thermostatic head ETKF+

Room solution:



max. 1 wall thermostat+
 max. 8 energy saving thermostatic heads ETKF+
 max. 8 window sensor+

Room synchronous solution:

max. 2 energy saving thermostatic heads ETKF+
max. 3 window sensor+

Safety and disposal Instruction:

The device is not a toy; do not allow children to play with it. Do not leave packaging material lying around, as it can be dangerous in the hands of a child.



Do not open the device: it does not contain any components that need to be serviced by the user. In the event of an error, please return the device to the service department.



The device may only be operated indoors and must be protected from the effects of damp and dust, as well as solar or heat radiation.



Using the device for any purpose other than that described in this brief instruction does not fall within the scope of intended use and shall invalidate any warranty or liability. This also applies to any conversion or modification work. The device is intended for private use only.



Do not dispose of the device with regular domestic waste.
Electronic equipment must be disposed of at local collection points for waste electronic equipment in compliance with the Waste Electrical and Electronic Equipment Directive.



The CE sign is a free trading sign addressed exclusively to the authorities and does not include any warranty of any properties.



For technical support please contact your service agency.