

BEDIENUNG UND INSTALLATION OPERATING AND INSTALLATION

KOMFORT-FUNK-FERNBEDIENUNG FÜR DURCHLAUFERHITZER
COMFORT RADIO REMOTE CONTROL FOR INSTANTANEOUS WATER HEATER

- » FFB 1 SL ELECTRONIC COMFORT
- » FFB 2 SL ELECTRONIC COMFORT



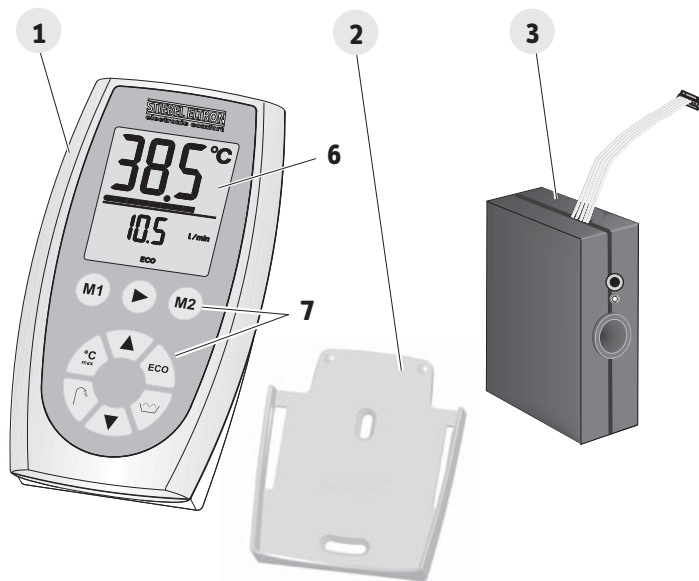
STIEBEL ELTRON

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A

FFB 1 SL



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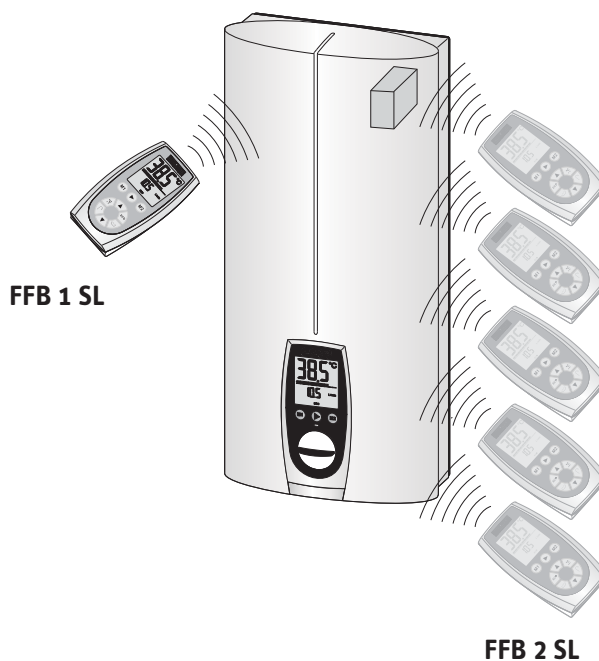
B

FFB 2 SL



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1. Operation for the user and qualified installer

1.1 Description

FFB 1 SL and **FFB 2 SL** allow remote control of the DHE...SL (i) electronic comfort instantaneous water heater via a line-of-sight radio link. The instantaneous water heater can be operated both from the remote control and from the control unit on the heater and data can be transmitted in both directions (see also 1.2 Operation).

Included in FFB 1 SL A

- Radio remote control unit **1**
- Wall mount with adhesive pad **2**
- Transceiver module **3**

Included in FFB 2 SL B

- Radio remote control **1**
- Wall mount with adhesive pad **2**

The FFB 2 SL only works in conjunction with the transceiver module belonging to the FFB 1 SL

The remote control unit is watertight (IPX7) and can therefore even be used while taking a shower or bath. It has a range of approximately 25 m within the building.

In addition to the remote control unit belonging to the **FFB 1 SL**, another 5 **FFB 2 SL** radio remote control units can communicate with the transceiver module in the instantaneous water heater.

The main information in brief



Temperature selection – between 20 °C and 60 °C in increments of 0.5 °C

M1 **Memory push-buttons** – 2 reference temperatures can be stored and called up by the user

Battery change recommended

1.2 Operation

The radio remote control unit is normally in power save mode (display switched off). Briefly pressing any button **(7)** activates the control unit; the backlighting comes on immediately and the display appears after approx. 3 seconds. Whenever a button is pressed the lighting comes on for 8 seconds. If no other button is pressed within 30 seconds the unit automatically switches back to power save mode.

1.2.1 Dynamic anti-scald protection

To reduce the risk of scalding, the radio remote control is fitted with dynamic anti-scald protection.

Function

The first control unit that is activated (the radio remote control unit or the control unit on the heater) is given priority for the next tap procedure, i.e. the selected temperature can be lowered or increased to a maximum of 43 °C from other control units.

Activation

To activate the dynamic anti-scald protection, either a temperature must be selected by activating a control on the DHE...SL (i) for the particular water tap, or a temperature must be selected on a radio remote control unit by pressing any button to “wake up” the unit. The remote control unit display then shows the set temperature selected, which can still be adjusted if required.

If a tap procedure is started within the next 2 minutes, the dynamic anti-scald protection is retained while the tap is running and for up to 2 minutes after it has stopped.

1.2.2 Important information



• There is a risk of scalding at outlet temperatures in excess of 43 °C!

• If children or people with restricted physical, sensory or mental capacities use the heater, make sure that they only do so under supervision or after appropriate instruction by a person who is responsible for their safety.

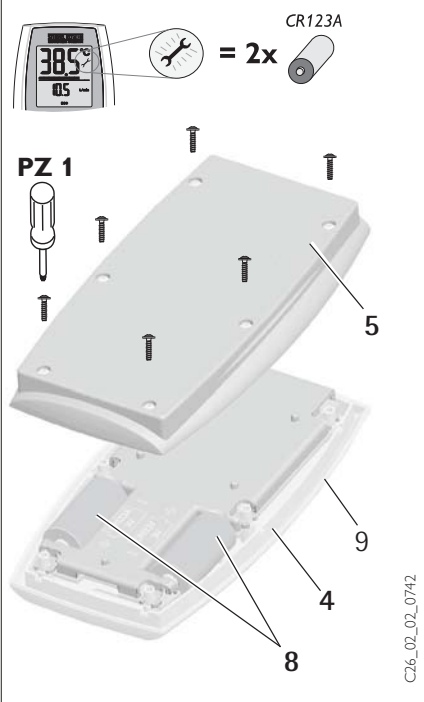
Children should be supervised to ensure that they do not play with the heater.

Risk of scalding!

If it cannot be avoided, we recommend permanently limiting the temperature with the “Child safety control” (see comfort functions setting). Further “anti-scald protection” can be activated by the qualified installer (in service mode on the DHE...SL (i) control unit).

All information in these operating and installation instructions must be followed carefully. They contain important information regarding the safety and operation of the radio remote control system.

D



1.2.3 Battery change D

The radio remote control unit is powered by 2 lithium cells (type CR123A). When the symbol appears on the display a battery change is recommended. Otherwise change the batteries when the display becomes weaker or is no longer visible.



Always take out used batteries. No liability can be accepted for damage caused by dead batteries!

To change the batteries, unscrew the back of the casing **(5)** and replace both batteries **(8)**. Note the correct position of the battery poles. Always use the same type of battery and replace them in pairs.



Batteries must not be disposed of with domestic rubbish. Used batteries must be taken back to the shop or a collection point for special substances!

When replacing the back of the casing, make sure that the seal **(9)** is placed correctly in the front of the casing **(4)** so that the control unit remains sealed.

1.2.4 Information on the line-of-sight radio link



Special conditions in buildings may weaken the propagation of the radio waves. In these cases the range of the remote control may be reduced. If the FFB...SL cannot establish a connection with the heater, “CON” will appear on the display.

Because the 868 MHz frequency range used is also freely available for other applications (radio controlled thermostats, weather stations with radio transmission, radio head-sets, etc.),

simultaneous transmission may cause a fault in the line-of-sight radio link to the instantaneous water heater. No risk is involved, i.e. the set temperature cannot be changed unintentionally, but the set temperature transmitted will not be recognized by the receiver. In these cases the temperature setting will have to be repeated.

1.3 Wall mount

If required by the user, the wall mount supplied can be fitted in any location to hold the radio remote control unit. It can be fitted with the adhesive pad supplied or with screws.

1.4 Care

A damp cloth is all that is needed to care for the parts. Do not use any abrasive or solvent-type cleaning agents.

1.5 Important note

The CE marking on the **FFB..SL** radio remote control registers compliance with the basic requirements

- according to the law on radio systems and telecommunication equipment (FTEG) and Directive 1999/5/EG (R&TTE);
- according to the Low Voltage Directive 2006/95/EG;
- according to the EMC Directive 2004/108/EG.



Keep these instructions safe and if the water heater changes hands give to the new owner. If any servicing work is performed, the instructions should be given to the qualified installer to read.

Installation of the transceiver module and/or first start-up of the **FFB 1 SL** must be performed by a qualified installer in accordance with these installation instructions.

To establish a connection between the instantaneous water heater and the radio remote control unit **1**, the **FFB 1 SL**'s transceiver module **3** must be installed first.

If the instantaneous water heater is to be operated from several radio remote control units, up to 5 further **FFB 2 SL** radio remote control units can be logged into the transceiver module installed.



2. Installation for the qualified installer

2.1 Legend A - E

- | | | |
|---------------------------------|------------|------------|
| 1 Radio remote control unit | } FFB 2 SL | } FFB 1 SL |
| 2 Wall mount | | |
| 3 Transceiver module | | |
| 4 Housing top | | |
| 5 Housing bottom | | |
| 6 Display | | |
| 7 Buttons | | |
| 8 Batteries | | |
| 9 Seal | | |
| 10 Transceiver module connector | | |
| 11 Transceiver module button | | |
| 12 Transceiver module LED | | |

2.2 Technical data

| Radio remote control | FFB 1 SL FFB 2 SL |
|-----------------------------|----------------------|
| Dimensions (H / W / D) | 152 / 85 / 22 mm |
| Weight excluding wall mount | 190 g |
| Line-of-sight radio link | Two-way |
| Radio frequency | 868.3 MHz |
| Range inside the building | Approx. 25 m |
| Temperature setting range | 20 – 60 °C |
| Battery | CR123A (2x) |
| Protection class | IPX5 / IPX7 |

Table 1

2.3 Requirements and conditions

- The operating and installation instructions for the instantaneous water heater should be followed for installation and operation.
- All electrical connection and installation work should be performed in accordance with VDE specifications (0100), the requirements of the relevant electricity companies and corresponding national and regional requirements.

2.4 Installation of the FFB..SL

To install the radio remote control, also follow the operating and installation instructions for the DHE..SL (i).

2.4.1 FFB 1 SL

To start-up the **FFB 1 SL**, install the transceiver module in the instantaneous water heater:

- ⇒ Disconnect the water heater from the electricity supply;
- ⇒ Remove the heater's cover as described in the heater installation instructions;
- ⇒ Insert the module's connector **E (10)** into the "Adapter" socket on the heater (DHE..SL (i)). Place the module in the top right of the heater's back wall.
- ⇒ Fit the water heater cover and connect the water heater to a voltage supply (Follow the installation instructions for the instantaneous water heater).

No first start-up work is required for **FFB 1 SL** as this radio remote control is operational as soon as the transceiver module has been fitted.

2.4.2 FFB 2 SL

To activate an **FFB 2 SL** radio remote control, its transmission ID must be sent once to the transceiver module so that it can be started up for the first time.



When starting-up FFB 2 SL remote control units for the first time the instantaneous water heater must be ready for operation. The following work must be performed while it is connected to the electricity supply. Beware of live parts when opening the heater cover.

First start-up

- ⇒ Remove the cover from the instantaneous water heater (see installation instructions for DHE..SL (i))
- ⇒ Activate radio remote control by pressing any button. "CON" will appear on the display.
- ⇒ Activate learning mode by pressing the button **(11)** on the transceiver module **(3)** (learning mode active is shown by the LED **(12)** on the transceiver module lighting). After 30 seconds without receiving, the transceiver module automatically leaves

learning mode (LED goes out).

- ⇒ The remaining learning mode time is shown by the bar, running backwards, on the remote control unit's display. While in learning mode, again press any key on the new radio remote control unit.
- ⇒ The values set for the instantaneous water heater are shown on the radio remote control unit's display. The LED flashes briefly to confirm the learning process.
- ⇒ Put the cover back on the instantaneous water heater (follow the installation instructions for the heater).

Other radio remote control units are commissioned in the same way.

If several radio remote control units are logged in one after the other, the button **(11)** should be pressed again for each radio remote control unit to activate learning mode in the transceiver module.

2.5 Logging out radio remote control units

If a radio remote control unit is removed from an existing system (one instantaneous water heater with several radio remote control units), the following procedure is required for safety reasons:

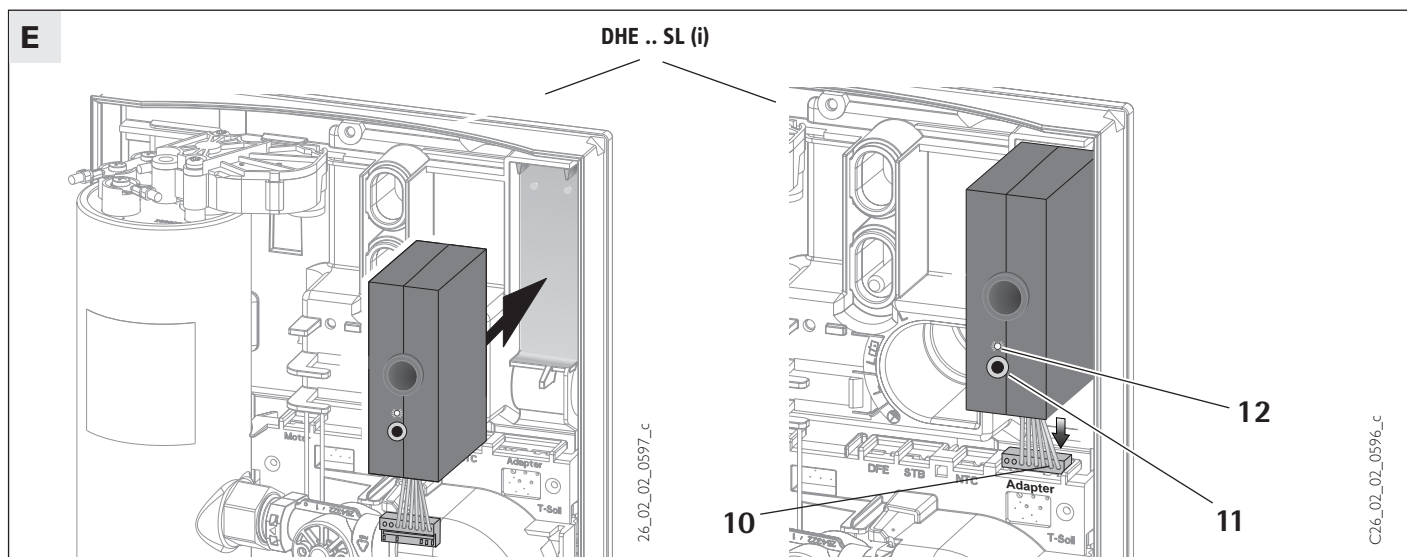
- ⇒ Keep the button **(11)** on the transceiver module pressed down for 5 seconds until the red LED flashes. This deletes all transmitter IDs from the memory;
- ⇒ **Log the remaining radio remote control units back in (see 2.4.2).**

2.6 Hand-over

Explain the device's functions to the user. In particular draw his attention to the safety instructions. Give the user the operating and installation instructions.

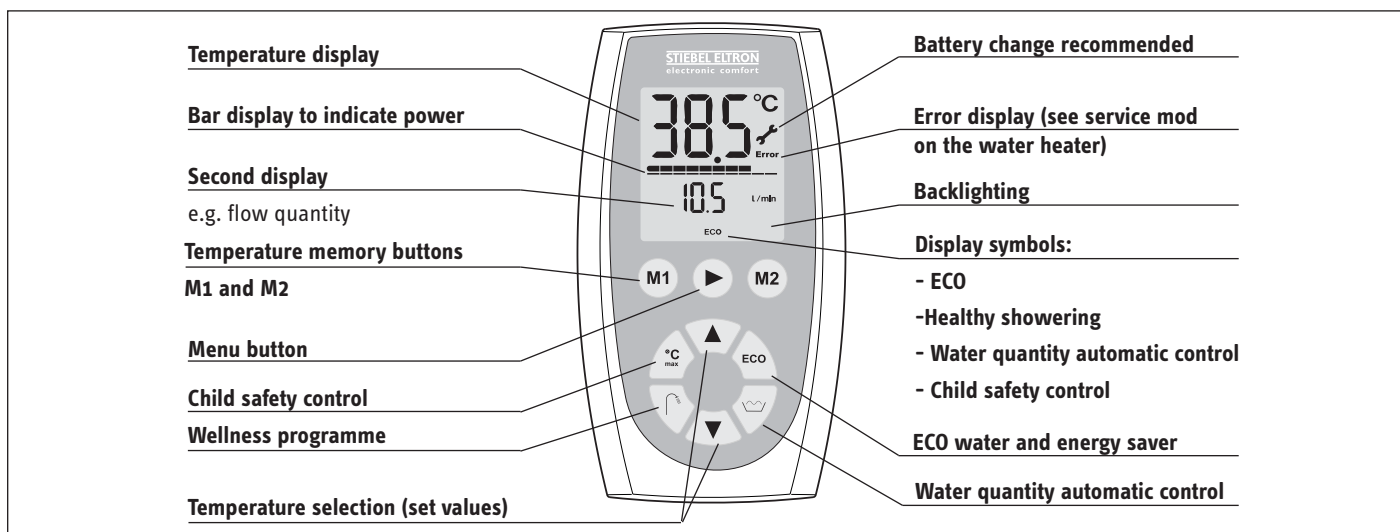
Information on:

"Environment, recycling, service and warranty" see the operating and installation instructions for the instantaneous water heater.



3. Menu guide for the user and qualified installer

3.1 At a glance



3.2 Setting the temperature



Stepless adjustable temperature selection

- 20 to 60 °C

- OFF ⇒ Heating is switched off

Temperature memory push-buttons

For rapid switching between two pre-selected temperatures



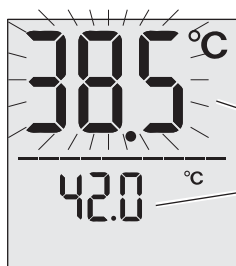
- Press for 2 seconds to save the required temperature:

Temperature display flashes once and is saved.



- Select stored temperature

3.3 Warning displays



Flashing warning light for excess temperature

When the inlet temperature is higher than the desired temperature, e.g. as a result of solar-heated water, the temperature display flashes and the second display shows the inlet temperature.

Temperature display flashes

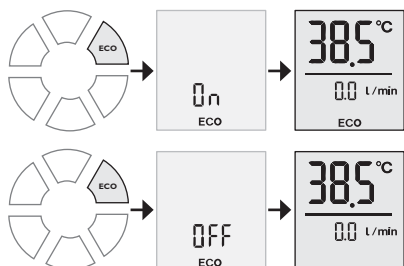
Second display – inlet temperature

3.4 ECO function

On/Off

ECO function for water and energy saving

The quantity of water flowing through is limited to a maximum value (factory setting 8 l/min, a different value can be set in the menu).



ECO on ⇒ Symbol in the display

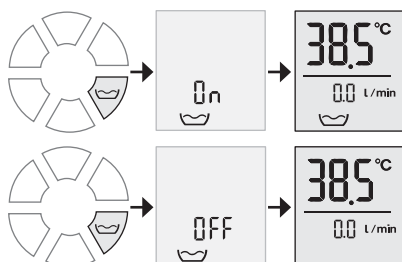
ECO off ⇒ Symbol disappears

3.5 Water quantity automatic control On/Off

Setting water quantity automatic control

When the pre-set quantity is reached the automatic unit reduces the flow quantity to approx. 4 l/min. Example: filling a bath 80 l.

When 80 l is reached the flow is reduced to approx. 4 l/min, only a little water continues to flow. The desired temperature remains constant. For changing the max. water quantity see point „4. Setting the comfort functions“.



Water quantity automatic control on ⇒ Symbol in the display

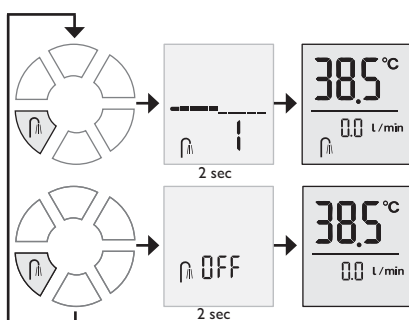
Water quantity automatic control off ⇒ No symbol in the display

3.6 Healthy showering On/Off

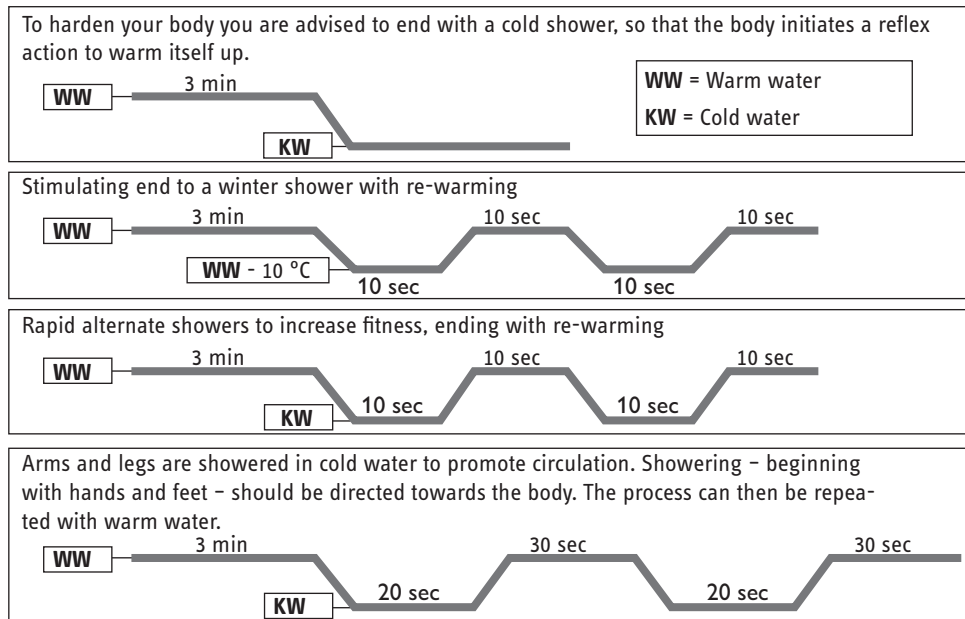
Selecting a wellness programme.

Healthy showering on ⇒ Symbol in the display
The shower programme is shown for 2 s.

Healthy showering off ⇒ No symbol in the display



4 different wellness shower programmes can be selected for alternate showering



Note: The last shower programme selected is automatically selected again the next time a button is pressed.

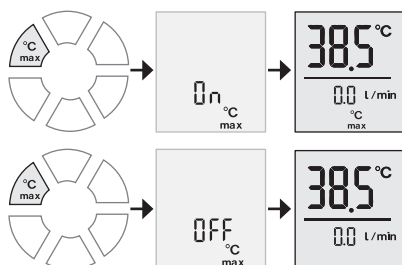
3.7 Child safety control On/Off

Setting the child safety control

The variable temperature is restricted to a maximum value. See point „4. Setting the comfort functions“ on changing the maximum value.


Child safety control on ⇒ Symbol in the display

Child safety control off ⇒ No symbol in the display



4. Setting the comfort functions for the user and the qualified installer

START

 Press for **2 seconds**

Energy and water saving 

8.0 L/min
ECO



4 - 15 l/min

Set the max. flow rate value, e.g. 8.0 l/min.



Child safety control 

36.0 °C
°C max



20 - 60 °C

Set the max. value to limit temperature, e.g. 36 °C for a baby's bath.



Water quantity automatic control 

80 l



5 - 200 l

Set the max. value for water quantity, e.g. 80 l.

Note:

The water quantity automatic control must be operated before filling the bath. Operation applies for one filling of the bath only.



Second display 

Flow rate

10.5 L/min



Energy consumption

10.45 kWh



Water quantity

3.0 m³



Time

12:00



Note:

In the "kWh" and "m³" menus, the meters can be reset to ZERO by pressing and holding down **M1** and **M2** together.



Setting the clock 

12:00



00:00 ... 23:59

Set the clock

Remark:

Re-set after a power cut affecting the DHE..SL (i)



Press for **2 seconds**

⇒ at any point

⇒ Automatically 10 seconds after the last setting



End

Note:

Press **M1** und **M2** for 2 seconds à return to factory settings

5. Troubleshooting on the radio remote control for the user and the qualified installer

| Fault | Cause | Remedy |
|---|--|---|
| Temperatures cannot be set > 43 °C | Dynamic anti-scald protection is on | Dynamic anti-scald protection goes off automatically 2 minutes after the end of drawing water |
| The instantaneous water heater is not responding, weak display on the radio remote control unit "CON" permanently displayed on the radio remote control unit | Low batteries | Change batteries in the radio remote control unit |
| | Radio remote control unit not logged into the heater | Qualified installer: Log in the radio remote control unit |
| | Remote control unit is out of the transceiver module's range | Reduce the distance between the radio remote control unit and the heater |
| | Transceiver module not correctly connected to the heater | Qualified installer: check the connection of the transceiver module to the heater |

Table 2



Notizen / Notes



Notizen / Notes

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STIEBEL ELTRON



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