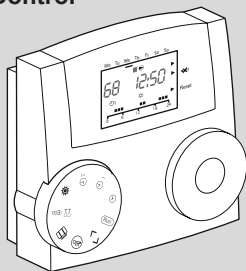# Operation and Installation Instructions

Digital Remote Control

Original language is English.

Safety

Please read and keep in a safe place

Please read through these instructions carefully before installing or operating. Following the installation, pass the instructions on to the operator.

Liability
We will not be held liable for damages resulting from non-observance of the instructions and non-compliant use.

Safety instructions
Information that is relevant for safety is indicated in the instructions as follows:

⚠ DANGER
Indicates potentially fatal situations.

⚠ WARNING
Indicates possible danger to life and limb.

! CAUTION
Indicates possible material damage.

Electrical interventions may only be carried out by a qualified electrician. The heating system must be disconnected from the power supply before any electrical work is carried out on the unit.

Conversion
All technical changes are prohibited.

Storage
Store the product in a dry place. Ambient temperature: see Technical data (page 16).

Table of Contents

About the unit

Digital remote control with integral room temperature sensor for connecting a boiler control. The remote control allows various operating functions, including heating based on heating program, setting of individual room and hot water temperature and monitoring of boiler data in the living area. It uses the weather or room-based control function to transmit the desired boiler value to the boiler controller via the weather and/or room guided control function to make sure that the gas boiler delivers the required heat volume at optimum efficiency. When used with boiler controllers supporting smart function, the display of the remote control is illuminated only within the specified limits, see page 16 (Technical data). Any other use will be deemed improper use.

Part designations
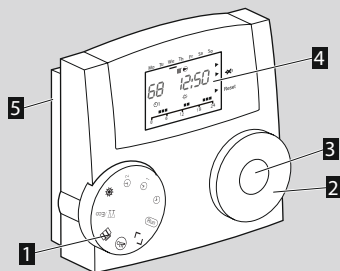
1 Selector switch
2 Rotary knob for changing the set values and displaying temperatures
3 OK button
for displaying desired temperatures and confirming settings
4 Display
5 Base

Selector switch

Run	Standard
‹ ›	Operating mode selection
	Desired daytime room temperature
⏱	Desired night-time room temperature (reduced temperature)
	Desired hot water temperature
⊞	Holiday setting/holiday duration
⅄⅄ /Eco	Heating time setting/Change duration
☼	Parameter setting for User and Expert
⏲1	Heating program 1
⏲2	Heating program 2
⏲	Setting the time and the day of the week

Display
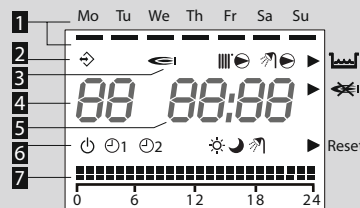
1 Days, Monday–Sunday underlined
2 Communication with boiler

3 Status indications:
  ⇥ Burner
  ⫼⊕ Heatcircuit pump
  ⚡⊕ Domestic water heating pump
  ⊡ Water pressure too low
  ⇥∣ no flame
  Reset Reset is needed
4 Room temperature
5 Time
6 Operating modes
7 Display of the heating times

User settings

Set time and day of the week

1 Turn selector switch to ⊕
▷ Minute display flashes.

2 Use the rotary knob to set the minutes.
3 Press the OK button to confirm.
▷ Hour display flashes.
4 Use the rotary knob to set the hours.
5 Press the OK button to confirm.
6 Use the rotary knob to set the week day.
7 Press the OK button to confirm.
▷ The new time and the day the week is displayed.
▷ The clock continues to run for at least 10 min. without a power
  supply.
8 Turn selector switch back to Run .

Set the desired temperature

Adjust Daytime room temperature, night time room tempera-
ture and domestic hot water set temperatures.
▷ Factory settings:
  Desired daytime room temperature   : 20 °C
  Desired night-time room temperature   : 10 °C
  Desired hot water room temperature   : 60 °C
▷ The desired daytime room temperature can not be lower
  than the desired night-time room temperature.
▷ The desired night-time room temperature cannot be greater
  than the desired daytime room temperature.
1 Turn selector switch to ⊞ .
▷ Desired temperature selection is displayed, ☼ flashes.
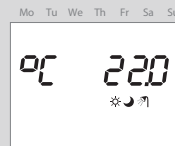
2 Press the OK button.
▷ The desired day-time room temperature flashes.
3 Use the rotary knob to select the desired daytime room
  temperature.
▷ The temperature can be set in 0.5 °C increments.
4 Press the OK button to confirm.
▷ The new desired temperature is displayed.
5 Turn the rotary knob clockwise.
▷ The desired temperature selection is displayed, ☾ flashes.
6 Press the OK button.
▷ The desired night-time room temperature flashes.

7 Use the rotary knob to select the desired night-time temperature.
▷ The temperature can be set in 0.5 °C increments.
8 Press the OK button to confirm.
▷ The new desired temperature is displayed.
9 Turn the rotary knob clockwise.
▷ The desired hot water temperature is displayed, 🖑 flashes.
10 Press the OK button.
▷ The warm water value flashes.
11 Use the rotary knob to set hot water value.
▷ The temperature can be set in 1 °C increments.
12 Press the OK button to confirm.
▷ The new hot water temperature is displayed.
13 Finally, turn the selector switch back to (Run) .

Displaying actual temperatures

1 Turn selector switch to (Run)
2 Use the rotary knob to display one of the following temperature values;

AF	Outside temperature
⊜|	Heat source temperature
⊪	Flow temperature
🖑	Hot water temperature

* The relevant desired temperature is displayed when the OK button is pressed.

▷ If a sensor is not connected, the display will show -- --.
▷ The display reverts to the standard indication after a few seconds without action.

Set operating mode

The operating mode determines how the heating controller works. Whether the heating system is to be controlled automatically or manually, during a party for example. Or how should the heating system be controlled during longer periods of absence such as holidays?

You can set the following operating modes

⏻ Standby/OFF
Central heating and domestic hot water heating are deactivated. Only the protection functions remain active.

⏲1 Automatic mode 1
Central heating according to heating program 1. Two different schedules for weekdays (Monday–Friday) and weekend (Saturday–Sunday). Domestic hot water according to parameter 04, see page 12.

⏲2 Automatic mode 2
Central heating according to heating program 2. Different schedule for each day. Domestic hot water according to parameter 04.

☀ Day mode
24 hour central heating according to desired daytime room temperature, see page 3 (Set the desired temperature). Domestic hot water according to parameter 04.

☾ Night mode (reduced mode)
24 hour central heating according to night (reduced) room temperature. Domestic hot water according to parameter 04.
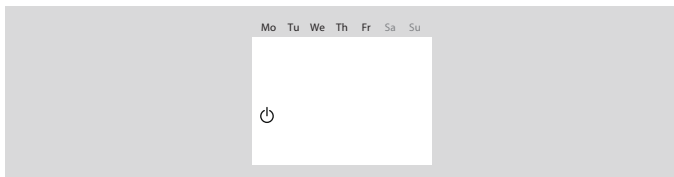
⚟ Summer mode

Central heating is disabled. Domestic hot water according to parameter 04

Select mode

1 Turn selector switch to < >.
▷ The new operating mode is displayed and flashes.

Mo Tu We Th Fr Sa Su
⏻

2 Select an operating mode using the rotary knob.
3 Press the OK button to confirm.
▷ The new operating mode is displayed.
▷ After you press the OK button, the current symbol is shown for 3 seconds before it starts flashing again.
4 Turn selector switch back to (Run) .

Set heating program 1 (⏲1)

Heating program 1 is assigned to ⏲1. It is used to define the heating times for the weekdays (Mon–Fri) and the weekend (Sat–Sun). You can set three heating times per day.
▷ During heating times the controller heats to desired daytime room temperature, between heating times to night time temperature.

▷ Factory setting:
  Mon–Fri: 6:00 to 22:00
  Sat–Sun: 7:00 to 23:00

1 Turn selector switch to " ⏲1 "
▷ Heating program for the weekdays are displayed (Mon-Fri).
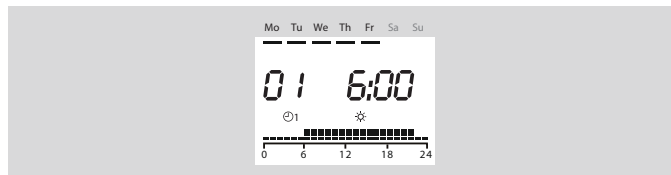
Mo Tu We Th Fr Sa Su
01   6:00
⏲1   ☀
0   6   12   18   24

2 Press the OK button.
▷ The start time of the first heating time flashes.
3 Use the rotary knob to select the start time.
▷ The heating time can be set in 15 minute increments.
4 Press the OK button to confirm.
▷ The new start time is displayed.
5 Turn the rotary knob clockwise.
6 Press the OK button.
▷ The end of the first heating time flashes.
7 Use the rotary knob to select the end time.
8 Press the OK button to confirm.
▷ The new end time is displayed.
9 Turn the rotary knob clockwise.
10 Press the OK button.
▷ The start time of the second heating time flashes.
11 Continue with step 3 to set the second and third heating time.
12 Turn the rotary knob clockwise.
▷ This displays the heating program for the weekend (Sat-Sun).

Mo Tu We Th Fr **Sa Su**

01 7:00

🕐1 ☀

0 6 12 18 24
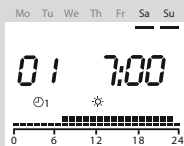
13 Continue with step 2 to set the three heating times for the weekend in the same order.
▷ If you want to delete an existing heating time, use the rotary knob to set the start or end time to "----".
14 Finally, turn the selector switch back to (Run) .
▷ The heating program 1 has been set. In order to apply it, set the operating mode to " 🕐1", see page 6 (Set operating mode).

Example: Display of the heating times for heating program 1

Heating takes place from Monday to Friday between 6:00 and 8:00 in the morning, from 11:00 to 13:00 at lunchtime and from 18:00 to 22:00 in the evening.

Mo Tu We Th Fr Sa Su

03 22:00

🕐1 ☾

0 6 12 18 24

Set heating program 2 (🕐2)

Heating program 2 is assigned to 🕐2. It is used to define the heating times for each individual day.

▷ During heating times the controller heats to desired daytime room temperature, between heating times to night time temperature.
▷ Factory setting:
Mon–Fri: 6:00 to 8:00, 16:00 to 22:00
Sat–Sun: 7:00 to 23:00
1 Turn selector switch to " 🕐2 ".
▷ The heating program for Monday is displayed.

Mo Tu We Th Fr Sa Su

01 6:00

🕐2 ☀

0 6 12 18 24

2 Press the OK button. The start time of the first heating time flashes.
3 Use the rotary knob to select the start time.
▷ The heating time can be set in 15 minute increments.
4 Press the OK button to confirm.
▷ The new start time is displayed.
5 Turn the rotary knob clockwise.
6 Press the OK button.
▷ The end of the first heating time flashes.
7 Use the rotary knob to select the end time.
8 Press the OK button to confirm.
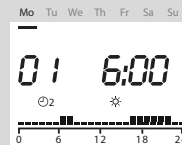▷ The new end time is displayed.
9 Turn the rotary knob clockwise.
10 Press the OK button.
▷ The start time of the second heating time flashes.
11 Continue with step 3 to set the second and third heating time for Monday.

12 Turn the rotary knob clockwise.
▷ The heating program for Tuesday is displayed.
13 Continue with step 2 to set the three heating times for each working day.
▷ If you want to delete an existing heating time, use the rotary knob to set the start or end time to "----".
Example: see page 6 (Set heating program 1).
14 Finally, turn the selector switch back to (Run).
▷ The heating program 2 has been set. In order to apply it, set the operating mode to " ⏱2 ", see page 6 (Set operating mode).

Holiday setting / holiday duration (⌂)

In holiday mode, there are two options. Choose "Present" holiday (⏱1) where you remain at home and an "Absent" holiday (☾) where you leave the home for between *1* and *99* days. The system automatically switches back to the previous mode at the end of the holiday.
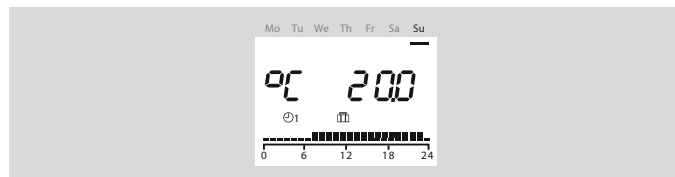
Factory setting:
Desired room temperature for present holiday: 20 °C,
Desired room temperature for absent holiday: 15 °C,
Duration of holiday: 0 days

1 Turn selector switch to ⌂ .
▷ Use the rotary knob to select between a "Present" (⏱1 ⌂) and an "Absent" (⌂ ☾) holiday.

Present holiday (⏱1 ⌂)

▷ This displays heating program 1 for the weekend (Su), the temperature display flashes.

2 Press the OK button.
▷ Holiday duration is displayed, number of days flashes.
3 Use the rotary knob to set the duration of the holiday in days.
4 Press the OK button to confirm.
5 Finally, turn the selector switch back to (Run) .
▷ The holiday function starts immediately. The display shows *H0* and the number of days of the holiday, *1* to *99*.
▷ The days are automatically counted down every 24 hours.

Absent holiday (⌂ ☾)

▷ During the holiday, the room is heated to 15 °C.

2 Press the OK button.
▷ Holiday duration is displayed, number of days flashes.
3 Use the rotary knob to set the duration of the holiday in days.
4 Press the OK button to confirm.
5 Finally, turn the selector switch back to (Run) .
▷ The holiday function starts immediately. The display shows *H0* and the number of days of the holiday, *1* to *99*.
▷ The days are automatically counted down every 24 hours.

Early end of holiday

If the holiday ends earlier than planned, holiday mode can be reset by setting the duration of the holiday to zero.

1 Turn selector switch to 🛄 .
▷ This relevant holiday mode (present or absent) is displayed, the temperature display flashes.
2 Press the OK button.
▷ The duration of the holiday remaining is displayed and flashes.
3 Use the rotary knob to set number of days holiday to 0 .
4 Press the OK button to confirm.
5 Finally, turn the selector switch back to (Run) .
▷ The last operating mode selected is displayed.

Heating time setting/Change duration (▯▯ / Eco)

The setting for this function depends on the current operating mode selected. It is used to heat or reduce (up to 24 h) outside the valid heating program without changing the operating mode.

Example extension of heating time.

The valid heating program ends at 22:00. The heating time can be extended, e.g. for a party. After the set time, the heating automatically reverts to the desired night-time room temperature.

1 Turn selector switch to ▯▯/ Eco.
2 Switch the rotary knob to "Heating" (☼).
▷ The current desired day-time temperature and the valid heating program are displayed, ☼ flashes.
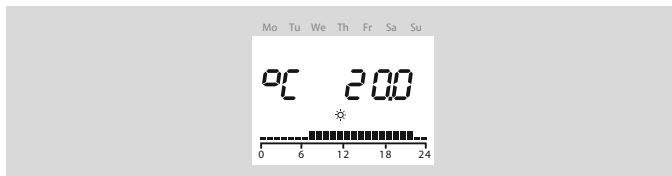
3 Press the OK button.
▷ Hour display flashes.
4 Use the rotary knob to select the heating time in hours.
5 Press the OK button to confirm.
▷ The heating time is extended immediately.
6 Finally, turn the selector switch back to (Run) .

Example interruption of heating time.

If you leave the house for a few hours, you can reduce the heating during an active heating program to save energy. Once the set time has ended, the system automatically reverts to the current heating program.

1 Turn selector switch to ▯▯/ Eco.
2 Switch the rotary knob to "Reduce" (☾).
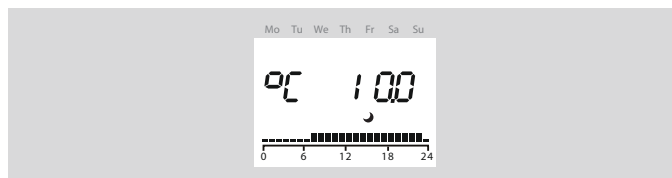▷ The current desired night-time temperature and the valid heating program are displayed, ☾ flashes.

3 Press the OK button.
▷ Hour display flashes.
4 Use the rotary knob to select the reduction time in hours.
5 Press the OK button to confirm.
▷ Reduction starts straight-away.
6 Finally, turn the selector switch back to (Run).

Early ending of heating time.

1 Turn selector switch to ⏝⏝/Eco.
2 Press the OK button.
▷ The run-time remaining is displayed and flashes.
3 Use the rotary knob to set number of hours to 0 .
4 Press the OK button to confirm.
5 Finally, turn the selector switch back to (Run) .

Load factory settings (Reset)

▷ All personal settings, switching times and the CODE-NO are reset to the factory defaults.
1 Take a note of all the settings you have made in these instructions, see page 11 (List of parameters P01 to P04).
2 Disconnect the device at the plug.
3 When switching the mains back on, keep the OK button pressed until *EE Pr* appears in the display.
▷ The factory settings have been loaded.

User - set parameters

You can change further parameters to adapt the heating system to your requirements.

1 Turn selector switch to ☼ (parameter setting).
▷ The display shows *PL* .
2 Turn the rotary knob clockwise until the parameter you want to change appears in the left-hand side of the display: 01 to 04.
3 Press the OK button.
▷ Display flashes.
4 Use the rotary knob to set the desired value.
5 Press the OK button to confirm.

6 After you have made the setting, continue with step 2 if you want to change further parameters, or turn the selector switch back to (Run) .
▷ The table - List of parameters P01 to P04 - shows the possible settings.
▷ Your remote control will only display those parameters for which there are sensors connected.

List of parameters P01 to P04

Par. no.	Parameter	Setting range	Factory setting
01	Heat slope	0.20–3.00	1.20
02	Room sensor influence	OFF, 0–20	10
03	Room sensor correction	-5 to +5 °K	0
04	Domestic hot water according to program	0 = Off 1 = "Heating program 1" 2 = "Heating program 2" 3 = 1 hour before heating 4 = 24 hours hot water	4

Explanation of the parameters

P01 Heat slope

Only applicable while outdoor sensor is connected. The heat slope specifies the number of °C by which the flow temperature changes when the outside temperature rises or drops. **Please note that outdoor sensor must be connected to boiler, not to remote control.**

▷ Before you select the heat slope, set the room temperature to the desired value.
▷ Ideally, the heat slope is set when the outside temperature is below 5 °C. Changes to the heat slope setting must be applied in small steps and long intervals (at least 5 - 6 hours between steps). The system must be allowed to adjust to the new value after each change to the heat slope.
▷ Select the heat slope so that the desired room temperature is achieved with the thermostat valves fully opened, doors and windows closed.
▷ Increase the heat slope if the desired room temperature is not reached in combination with low outside temperatures.
▷ If the desired room temperature is not reached in combination with high outside temperatures, increase the desired room temperature.
▷ Typical values:
Floor heating: 0.4 to 0.8
Radiators: 1.0 to 1.5

P02 Room sensor influence

It is possible to adjust the influence of the room sensor on the control process.
▷ The higher the set value the greater the influence of the room sensor on the calculated flow temperature.
P02 = OFF purely weather-guided control
P02 = 0: purely weather-guided control
P02 = 20 purely room temperature control

Within the range 0 - 20 the heatcircuit pump operates up to the next heating time if there is a heating requirement during the period of reduced temperature at night (e.g. frost protection of when the temperature drops below the night-time temperature). This prevents the rooms from becoming too cool.

Example: P02 = 5

With this setting the desired temperature of the heat source is increased by 5 °C when the room temperature drops below the desired room temperature by 1 °C.

P03 Room sensor correction

This setting can be used to correct measurement errors of the connected room sensor, e.g. when the room sensor is influenced by incorrect positioning.
Setting range: P03 = -5 to +5 °C:

Example: Room sensor correction

Your room sensor measures 20 °C. A reference thermometer, however, determines 22 °C. Now set parameter 03 = 2 so that the value 2 °C is added to the measured value.

P04 Hot water according to program

This parameter is used to define domestic hot water operation. This parameter is valid for storage type boilers. For combi boilers, P04 parameter can not be adjusted.
P04 = 0: Off (Domestic hot water operation disabled)
P04 = 1: Domestic hot water in line with heating program 1
P04 = 2: Domestic hot water in line with heating program 2
P04 = 3: 1 hour before the heating times of automatic mode 1 or 2. (The desired automatic mode is set via the operating mode.)
P04 = 4: 24 hours hot water

Example: P04 = 3

If "☉1" was selected as the operating mode, the heating controller will always switch on the hot water one hour before switching on the heating. If Holiday mode is activated, the hot water is not switched on.
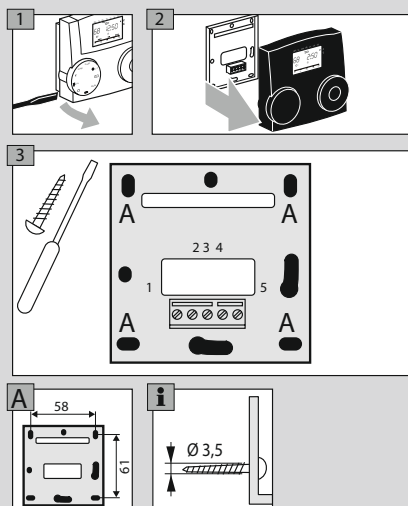
Expert - Installation

> **! CAUTION**
>
> The minimum distance from surrounding heat sources is to be chosen so that the permitted ambient temperature will not be exceeded during operation, see page 16 (Technical data).

▷ **Installation location:**
-In the reference or main living space of the heatcircuit, on an internal wall in the living room
-Not in the vicinity of radiators or other devices that give off heat
-Anywhere if room sensor influence is switched off.

Remove remote control holder and use the drill holes to fix it to an internal wall in the living area.

Expert - Electrical connections

> **⚠ WARNING**
>
> Possible life-endangering electrical shock! Switch the power off to electrical cables before working on power-carrying parts!

> **CAUTION**
>
> For fixed devices, an isolating mechanism must be installed for shutting off from the network, in accordance with the installation guidelines and EN 60335, e.g. with a switch.
> The insulation for line conductors is to protected against damage by overheating, e.g. insulating sleeve.

Electrical socket connection
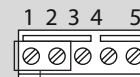
Bus communication

Expert - Set parameters

> ⚠️ **WARNING**
>
> Incorrect settings can cause malfunctions and damage the heating installation! Only a qualified technician may change the parameters from no. 06.

▷ A CODE-NO must be entered via parameter P05 to change parameters P06 and higher.

1 Turn selector switch to ☀ (parameter setting).

▷ The display shows *PL*.

2 Turn the rotary know until the parameter you want to change or retrieve appears on the left in the display: 06 to 12.

3 Press the OK button.

▷ Display jumps to 05 0000. The first digit flashes.

4 Enter code no. (factory setting is 0000), set each digit with the rotary knob and press the OK button.

▷ The display jumps back to the parameter to be changed.

▷ The display flashes if the code no. is correct. (If the code no. was not entered correctly, the display does not flash. Continue with step 3.)

5 Use the rotary knob to set the desired value.

▷ A number of parameters can only be displayed.

6 Press the OK button to confirm.

7 After you have made your settings, continue with step 2 if you want to change further parameters (you do not need to enter the code no. again), or turn the selector switch back to (Run).

List of parameters P05 to P12

No	Parameter	Setting range	Factory settings
05	Code no. input	0000 - 9999	0000
06	Code no. change	0000 - 9999	-- --
07	Max. flow temperature	30 °C - 80 °C	80 °C
08	Min. flow temperature	10 °C - 80 °C	30 °C
09	Time master	0-1	0
10	Integral control section	3:00 h to 0:15 min.	-- --
11	Reserved, not in use		
12	SW. version and index		

Explanation of expert parameters

P05 Code no. input

Here the code no. defined via P06 is entered for adjustment of the Expert parameters.

▷ The default setting for the heating controller is 0000.

P06 Code no. change

Here you can specify your own code no. Remember this code well! The parameters 06–12 can not be changed without this code no. If you forget the code, factory settings must be reloaded.

P07 Maximum Central Heating Set temperature

The heating controller limits the maximum calculated desired temperature of the heatcircuit to P07.

P08 Minimum Central Heating Set temperature

The heating controller limits the minimum calculated desired temperature of the heatcircuit to P08.

P09 Time master

0 = Remote controller uses it's own real time clock time
1 = Remote controller reads time telegram from Boiler PCB / LAN - Adapter

P10 Integral control section

Integral component for the flow temperature. Enter a time here. If the room does not reach the required temperature in the time set (from the start of heating), the flow temperature is gradually increased until it is sufficient to reach the desired room temperature.

P10 = ----: Function deactivated.

P10 = 3:00 h – 0:15 min: Time to reach desired room temperature after start of heating time.

P12 Software version and index

P12 = XX.YY

XX = Software number

YY = Software Index

▷   If you have questions about your remote control, always specify the software version.

Expert - Checklist for commissioning

☐ Remote control properly wired? See page 13 (Electrical socket connection).

☐ User settings configured? Set at least time and day of the week, see page 4 (User settings).

☐ Expert parameters configured? See page 14 (Expert – Set parameters).

☐ Operating mode set? See page 6 (Set operating mode).

☐ Selector switch turned to (Run)?

Troubleshooting

? Fault ! Cause • Remedy

? The display shows error code E 133.
! Boiler error. If there is an arrow in the display pointing to "Reset", the error can be deleted using the remote control.
• Turning the rotary knob sends a reset telegram to the boiler. The boiler is automatically restarted if the cause disappears.
! If the arrow pointing to ⊔ (water pressure too low) is shown, it means the water pressure is low.
• Fill the system with water.
? The display shows error no. E 81.
! EEPROM error. An invalid parameter has been replaced by the default value.
• Check parameter values.
• Switch mains power off and then power on again after 3 seconds.
? The hot water stays cold during summer mode.
! Parameter 04 = 3 set (hot water 1 h before heating)
• Set P04 = 1, 2 or 4.
? The display shows error no. E 81.
! Internal room sensor error.
• Contact your heating engineer.

In case the actions described above fail to help, please contact your heating engineer.
▷ Please have ready the software version (parameter P12).

Technical data

Voltage supply via BUS 15–18 V DC
Protection class according to DIN EN 60529: IP 40
Protection class according to DIN EN 60730: III
Reserve power of clock: >10 h.
Permissible ambient temperature during operation: 0 to 50 °C
Permissible ambient temperature during storage: -20 to 60 °C
Permissible relative humidity, not condensing: 95 % r. H.

Declaration of conformity

$$C\!E$$

We, the manufacturer declare this product is conform with the fundamental requirements of the following directives and standards.

Directives:
– 2014/35/EU
– 2014/30/EU
Standards:
– EN 60730-1
– EN 60730-2-9

The manufacture is subject to the quality management system in accordance with DIN EN ISO 9001.

Contact

DAIKIN EUROPE N.V.

Zandvoordestraat 300, B-8400 Oostende, Belgium

VDE1807B