

Logamatic 4323

For users

Read carefully before use

1	Introduction	4
2	What you should know about your heating system.	5
3	Tips on energy-efficient heating	10
4	Safety	11
4.1	Regarding these instructions	11
4.2	Correct use	11
4.3	Standards and guidelines/directives.	11
4.4	Symbol key	11
4.5	Observe this information.	11
4.6	Cleaning the control unit	12
4.7	Disposal	12
5	Controls and MEC2 programming unit	13
5.1	Control unit controls.	13
5.2	MEC2 programming unit.	14
5.3	Switching on the control unit	16
5.4	Switching off the control unit	16
6	Standard functions	17
6.1	Simple operation.	17
6.2	Permanent display	18
6.3	Selecting the operating mode.	19
6.4	Setting the room temperature.	22
6.5	Heating domestic hot water	24
7	Extended functions	27
7.1	Keys for extended functions	27
7.2	Controlling the extended functions.	28
7.3	Displaying operating values.	28
7.4	Changing the permanent display.	29
7.5	Setting the date and time	30
7.6	Selecting a heating circuit	31
7.7	Adjusting the room temperature for another heating circuit.	32
7.8	Heating circuits with MEC2 programming unit.	34
7.9	Selecting and modifying a heating program	35
7.10	Selecting a standard program	37
7.11	Summary of standard programs	38
7.12	Modifying the standard program by moving switching points	39
7.13	Setting the summer/wintertime changeover	41
7.14	Setting the DHW operating mode	43
7.15	Setting the operating mode for DHW circulation	44
7.16	Setting the holiday function	45

7.17	Interrupting and continuing the holiday function	47
7.18	Setting the party function	48
7.19	Setting the pause function	48
7.20	Room temperature matching.	49
7.21	Automatic maintenance message.	50
8	Additional programming options	51
8.1	Modifying the standard program by inserting/deleting switching points	51
8.2	Creating a new heating program	60
8.3	Creating a new DHW program.	63
8.4	Creating a new DHW circulation pump program.	64
9	Modules and their functions	65
9.1	ZM433 central module (standard equipment level)	66
9.2	FM441 function module (accessory)	68
9.3	FM442 function module (accessory)	70
10	Troubleshooting	71
10.1	Simple troubleshooting	72
10.2	Troubleshooting.	73
11	Operation in the event of a fault	74
11.1	Emergency mode.	74
11.2	Heating with manual override	75
12	Setup report	77
13	Index	78

1 Introduction

With your purchase of this Logamatic control unit you have acquired a product that promises you easy control over your heating system. It offers you optimum heating convenience and minimum energy consumption.

The control unit enables you to operate your heating system so, that you can combine your economical and ecological aspirations. However, your personal comfort is always priority.

The control unit, which is regulated by the MEC2 programming unit, is set up at the factory for immediate use. Naturally, you or your installer can modify these default settings and adapt them to your individual requirements.

The MEC2 programming unit is the central control unit.

Some functions which you may need are located behind a flap. The keys behind this flap enable you to make various adjustments.

**The control concept is:
"Push and turn"**

"This control unit speaks your language".

Your heating system offers a wealth of further useful functions. Some examples of these are:

- the automatic summer/wintertime changeover
- the party/pause function
- the holiday function
- DHW heating at the push of a button

2 What you should know about your heating system

Why should you become more familiar with your heating system?

Modern heating systems offer you many functions for saving energy without sacrificing comfort. Getting to know this heating technology may appear daunting at first, but after a short while you will recognise the advantages you can gain from a heating system that is set up to meet your personal requirements. The more you are aware of the options offered by your heating system, the greater the benefit you will be able to draw from it.

How does your heating system work?

Your heating system comprises the boiler with burner, heating control unit, pipework and radiators. A cylinder holds the domestic hot water (DHW) or an instantaneous water heater heats the water required for shower, bath or hand washing. Subject to the way your heating system has been installed, it can operate either purely as a central heating system or together with a DHW cylinder. What is important, is that the various components match each other. The burner consumes fuel (e.g. gas or oil) and heats the water inside the boiler. Using pumps, this hot water is transported through the domestic pipework to the consumers (radiators, underfloor heating system, etc.).

Fig. 1 shows the heating circuit of a pumped central heating system: The burner [2] heats the water inside the boiler [1]. This heating water is transported by the pump [3] through the flow line [4] to the radiators [6]. The heating water flows through the radiators, and in doing so, gives off some of its heat. The heating water flows back to the boiler via the return line [7], where the cycle starts again.

The room temperature can be adjusted to your personal requirements using the thermostatic radiator valves [5]. All radiators are supplied with the same flow temperature. The heat transferred to the room depends on the radiator surface and the heating water throughput. Therefore, the heat transfer can be manipulated via the thermostatic radiator valves.

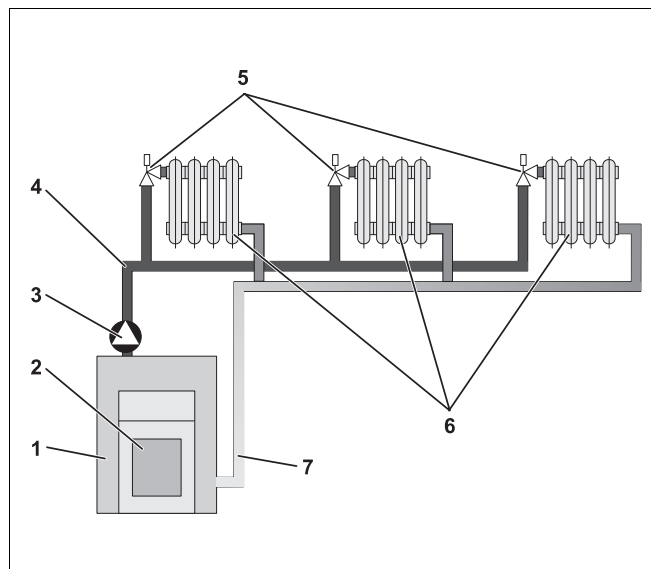


Fig. 1 Pumped central heating design

- 1 Boiler
- 2 Burner
- 3 Pump
- 4 Flow line
- 5 Thermostatic radiator valves
- 6 Radiators
- 7 Return line

What determines the heat demand of a room?

The heat demand of a room largely depends on the following factors:

- the outside temperature
- the required room temperature
- the type of construction/insulation of the building
- the wind chill
- radiant energy from the sun
- the internal heat sources (open fireplace, occupants, lamps, etc.)
- closed or open windows

Take these factors into consideration to achieve a comfortable room temperature.

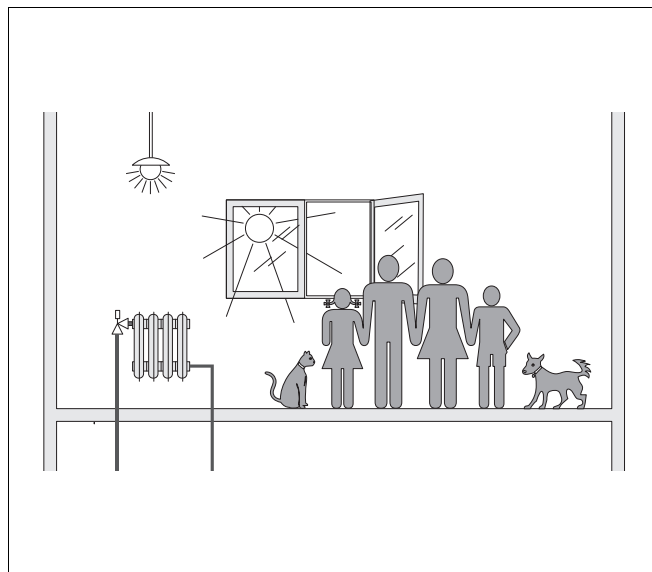


Fig. 2 Influences on the room climate

Why do you need a heating control unit?

The heating control unit ensures convenient heat and economical consumption of fuel and electrical energy. The control unit starts the heat source (boiler and burner) and pumps when heat or DHW is required.

Also, your heating control unit monitors different variables that influence the room temperature and compensates for these variables.

What does the control unit calculate?

Advanced control units calculate the temperature required within the boiler (the so-called flow temperature) subject to the outside temperature. The relationship between the outside temperature and the flow temperature is described as the heating curve. The lower the outside temperature, the higher the flow temperature.

The control unit can operate in three control modes:

- weather-compensated control
- room temperature-dependent control
- weather-compensated control with room temperature hook-up

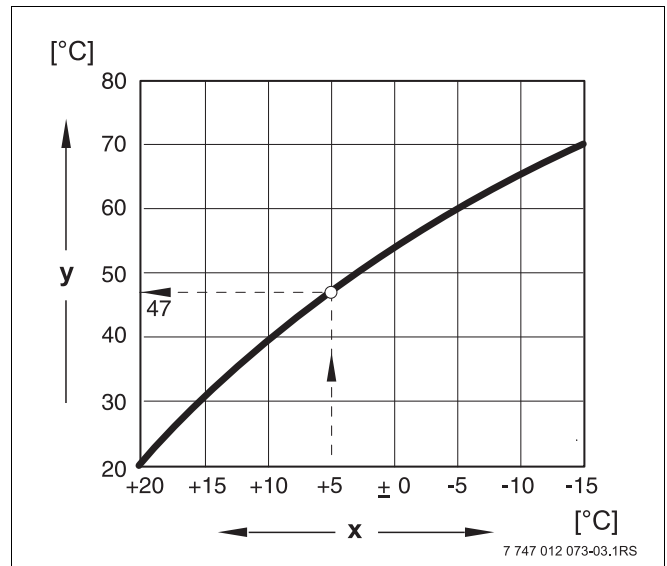


Fig. 3 Heating circuit curve (example)

x Outside temperature

y Flow temperature

Weather-compensated control

With weather-compensated control, only the outside temperature captured by the outside temperature sensor is decisive for the flow temperature level. Room temperature fluctuations through the sun's radiant energy, occupants, open fireplaces or similar external heat sources are then ignored.

If you utilise this type of control, adjust the thermostatic radiator valves so that the required room temperature is achieved in the different rooms.

Room temperature-dependent control

Another possible heating control method is room temperature-dependent control. The control unit calculates the flow temperature based on the set and the actual room temperature.

To be able to utilise room temperature-dependent control, you need a room that is representative of your whole home. All factors influencing the temperature in this "reference room" – where the programming unit is located – will also apply to all other rooms. Not every home has a room that meets these requirements. Pure room temperature-dependent control has, in such cases, certain limitations.

Should you, for example, open a window in the room where the room temperature is measured, the control unit will "think" that you have opened the windows in every room in your house and will begin to heat vigorously.

Or the reverse might apply: You measure the temperature in a south-facing room with different heat sources (solar or other heat sources, e.g. an open fireplace). Now the control unit "thinks" that it is as hot in every room as in the reference room; consequently the boiler output will be severely reduced so that, for example, the north-facing rooms will become too cold.

With this kind of control you should not fit thermostatic radiator valves in the reference room.

Weather-compensated control with room temperature hook-up

Weather-compensated control with room temperature hook-up combines the advantages of the first two control modes. The required flow temperature, that is mainly subject to the outside temperature, can be adjusted by the room temperature only to a limited degree. This achieves improved maintenance of the room temperature within the room containing the programming unit, without completely ignoring the other rooms.

With this kind of control you also must not fit thermostatic radiator valves in the reference room.

Why not fit thermostatic valves?

If, for example, you want to reduce the room temperature in the reference room, and you therefore turn the thermostatic valve down, the flow rate through the radiator will be reduced, and therefore less heat is transferred to the room. This reduces the room temperature. The control unit will endeavour to counteract the falling room temperature by raising the flow temperature. However, raising the flow temperature will not raise the room temperature, as the thermostatic valve will continue to limit the room temperature.

An excessive flow temperature will result in unnecessary heat losses in boiler and pipework. At the same time, the temperature in any room without thermostatic valves increases due to the higher boiler water temperature.

Why do I need a time switch?

Advanced heating systems are equipped with a time switch to save energy. With a time switch you can set up an automatic changeover between two different room temperatures, subject to time. This enables you to set a reduced room temperature at night or other times, when a reduced temperature is sufficient, whilst operating your heating system with the standard room temperature during the day.

You have four options to reduce the room temperature via the control unit. Upon request, your installer will select and set up one of these options:

- total shutdown (no room temperature regulation)
- reduced room temperature (a reduced room temperature will be regulated)
- change between total shutdown and reduced heating subject to room temperature
- change between total shutdown and reduced heating subject to outside temperature

With **total shutdown** of the heating system, no pumps or other system components are controlled. Heating only recommences if the heating system is subject to a risk of frost.

Heating with reduced room temperature (night mode) only differs from the standard heating mode (day mode) through a lower flow temperature.

When **changing from total shutdown to reduced heating**, the total shutdown will be activated subject to **room temperature** when the actual room temperature exceeds the set room temperature. This function is only possible if a room temperature is being captured.

When **changing from total shutdown to reduced heating**, the total shutdown will be activated subject to **outside temperature** when the actual outside temperature exceeds the set outside temperature.

What are heating circuits?

A heating circuit describes the circuit taken by the heating water from the boiler via the radiators and back again (→ Fig. 1, page 6). A simple heating circuit comprises a heat source, a flow line, a radiator and a return line. A pump installed in the flow line circulates the heating water.

Several heating circuits may be connected to one boiler, for example, one heating circuit for supplying radiators and a further circuit for supplying an underfloor heating system. In this case, the radiators are supplied at a higher flow temperature than the underfloor heating system.

The supply of different flow temperatures to different heating circuits can be achieved by e.g. installing a three-way valve between the boiler and the underfloor heating circuit.

Using an additional temperature sensor in the flow of the heating circuit to be supplied, sufficient cold return water is mixed via a three-way valve into the hot flow water, to achieve the required lower temperature. It is important to note that heating circuits with three-way valves require an additional pump. This pump enables the second heating circuit to be operated independently of the first heating circuit.

3 Tips on energy-efficient heating

Here are a few tips on how to heat economically, without sacrificing convenience:

- Only heat if you need warmth. Utilise the preset heating programs (standard programs) or those that have been tailored to your individual requirements.
- Air rooms correctly during the heating season:
Open windows three to four times a day for approx. 5 minutes. Having the window slightly open all the time does not provide an air change and wastes valuable energy.
- Close the thermostatic valves whilst ventilating.
- Windows and doors are places where a lot of heat is lost. Therefore, check whether the doors and windows are correctly sealed. Shut your roller shutters (if installed) at night.
- Never position large objects such as a sofa or a desk immediately in front of radiators (maintain a clearance of at least 50 cm). Otherwise, the heated air cannot circulate and heat the room adequately.
- In rooms you occupy during the day, you can, for example, set a room temperature of 21 °C, whilst 17 °C may be sufficient at night. To achieve this, use the standard heating mode (day mode) and the setback mode (night mode) (→ Chapter 6).
- Never overheat rooms; overheated rooms are unhealthy, plus they waste money and energy. If you reduce the day room temperature, for example from 21 °C to 20 °C, you will save approx. six percent of your heating bill.
- Also heat in an energy-conscious manner in spring and autumn, and utilise the summer/wintertime changeover (→ Chapter 7).
- A pleasant ambience not only depends on the room temperature, but also on the relative humidity. The drier the air, the cooler a room feels. You can optimise the relative humidity with house plants.
- You can also save money when heating DHW: Only operate the DHW circulation pump via a time switch. Research has shown that it is generally sufficient if the DHW circulation pump is started every 30 minutes for three minutes.
- Arrange for your installer to service your heating system annually.

4 Safety

4.1 Regarding these instructions

These operating instructions contain important information regarding the safe and correct operation of the Logamatic 4323 control unit.

4.2 Correct use

The Logamatic 4323 control unit is designed to control and monitor heating systems with different types of boiler in apartment buildings, residential developments and buildings with medium to large heat demand.

4.3 Standards and guidelines/directives



The design and operation of this product conform to European Directives and the supplementary national requirements. Its conformity is demonstrated by the CE designation.

You can view the Declaration of Conformity on the internet at www.buderus.de/konfo or request a copy from your local Buderus sales office.

4.4 Symbol key

Two levels of danger are identified and signalled by the following terms:



WARNING!

RISK TO LIFE

Identifies possible risks associated with a product that might lead to serious injury or death if appropriate care is not taken.



CAUTION!

RISK OF INJURY/ SYSTEM DAMAGE

Indicates a potentially dangerous situation that could lead to minor or moderately serious injuries or to material losses.



USER NOTE

User tips for the optimum utilisation and adjustment of the appliance plus other useful information.

4.5 Observe this information

- Only operate the control unit as intended and if it is in perfect working order.
- Let your installer instruct you thoroughly in the operation of this system.
- Read these operating instructions carefully.
- Only enter or change the operating values detailed in these instructions. Other entries alter the control programs of the heating system and can lead to incorrect system functions.
- Maintenance and repairs as well as troubleshooting should only be carried out by authorised and qualified personnel.



WARNING!

RISK TO LIFE

from electric shock.

- Never open the control unit.
- In an emergency, switch off the control unit (e.g. with the heating system emergency stop) or isolate the heating system from the mains supply by removing the fuse.
- Arrange for your installer to rectify any heating system faults immediately.



CAUTION!

RISK OF INJURY/ SYSTEM DAMAGE

from operator error.

Operator errors can result in injury and/or material losses.

- Ensure that only adults able to operate the appliance correctly have access to it.

**WARNING!****RISK OF SCALDING**

For thermal disinfection, the entire DHW system is set at the factory to heat up to 70 °C (start time: Tuesday night at 01:00).

- If required (e.g. shift work), your installer can alter the start time.
- Never open any hot water tap without mixing in cold water if the DHW circuit of your heating system is not equipped with a thermostatic mixer.
- As there is a risk of scalding at temperatures above approx. 60 °C, ask your installer about the set DHW temperature.

**CAUTION!****SYSTEM DAMAGE**

from frost

Your heating system can suffer from frost damage, if it is switched off.

- Drain your heating system and DHW pipe work at the lowest point to prevent frost damage.

4.6 Cleaning the control unit

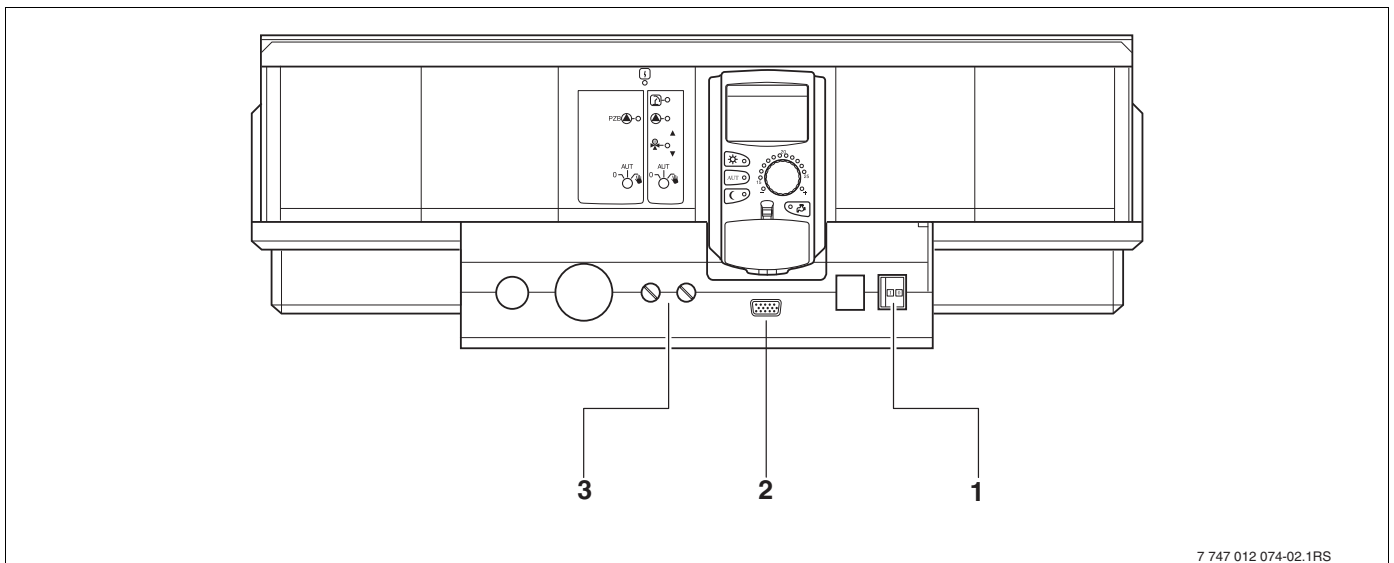
- Only clean the control unit with a damp cloth.

4.7 Disposal

- Dispose of the control unit packaging in an environmentally responsible manner.
- The lithium battery in the CM431 module may only be replaced by your installer.

5 Controls and MEC2 programming unit

5.1 Control unit controls



7 747 012 074-02.1RS

Fig. 4 Controls (standard equipment level)

- 1 ON/OFF switch
- 2 Connection for external service equipment
- 3 F1, F2 fuses

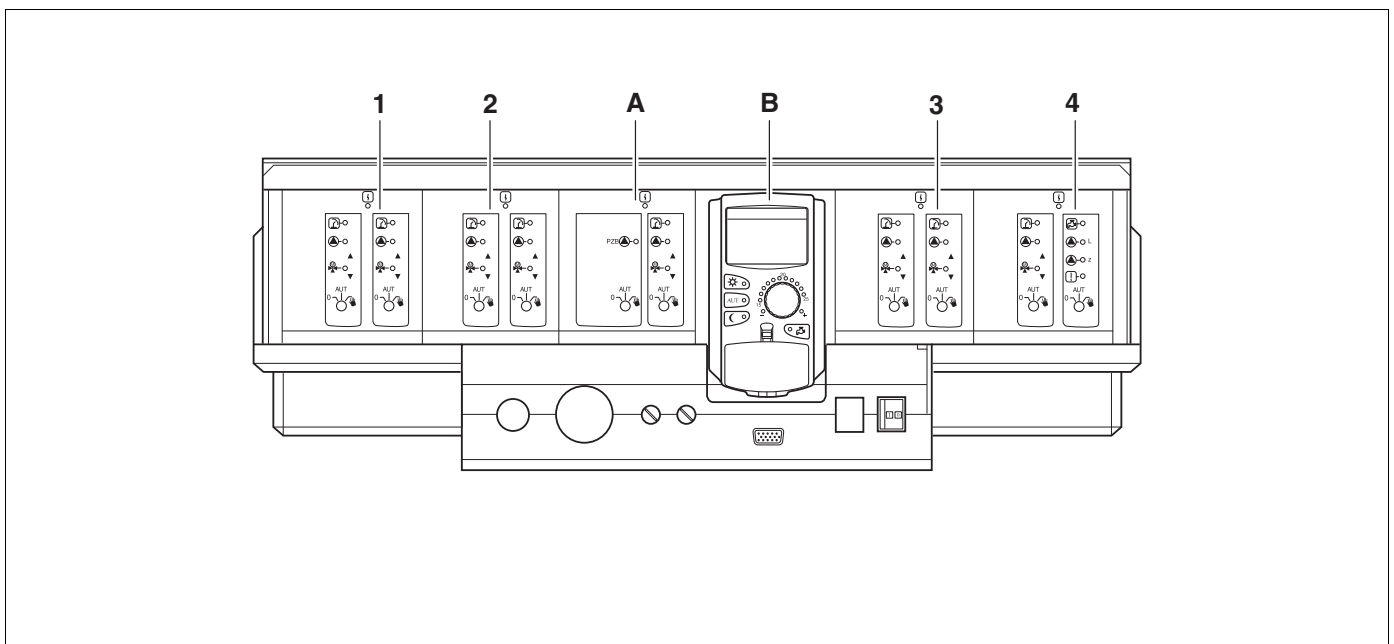


Fig. 5 Fitted modules (possible full complement)

- 1 Slot 1: e.g. FM442 – heating circuit 1, heating circuit 2
- 2 Slot 2: e.g. FM442 – heating circuit 3, heating circuit 4
- A Slot A: ZM433 – feed for external heat sources, heating circuit 0
- B Slot B: MEC2 (CM431) – MEC2 programming unit
- 3 Slot 3: e.g. FM442 – heating circuit 5, heating circuit 6
- 4 Slot 4: e.g. FM441 – heating circuit 7 DHW/DHW circulation pump or heating circuit 7, heating circuit 8 (with module FM442 in slot 4)

5.2 MEC2 programming unit

The MEC2 programming unit is the central element, with which you operate your Logamatic 4323 control unit.

Display

The display (→ Fig. 6, [4]) indicates functions and operating values, e.g. the actual room temperature.

Rotary selector

The rotary selector (→ Fig. 6, [5]) is used to set new values and to scroll through the menus.

Keys

You control the functions via the keys, and the corresponding displays will appear. If you hold a key down, you can change a value using the rotary selector.

The new value will be accepted and stored after you release the key.

You can reach certain functions, such as day room temperature, night room temperature, and possibly the DHW temperature or the automatic heating mode, directly via the corresponding keys (→ Fig. 6, [1] to [3] and [6]).

Behind a flap (→ Fig. 6, [7]) other keys are available for additional settings, e.g. for entering days or setting the time.

The unit automatically returns to the standard display if no entry is detected for some time.

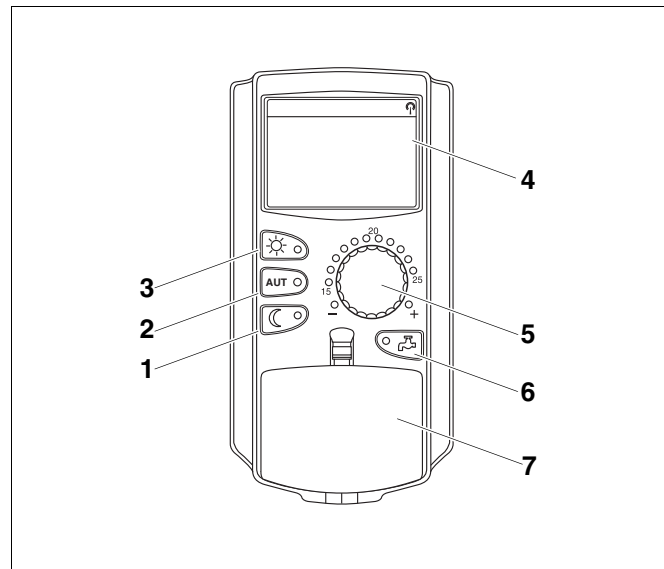
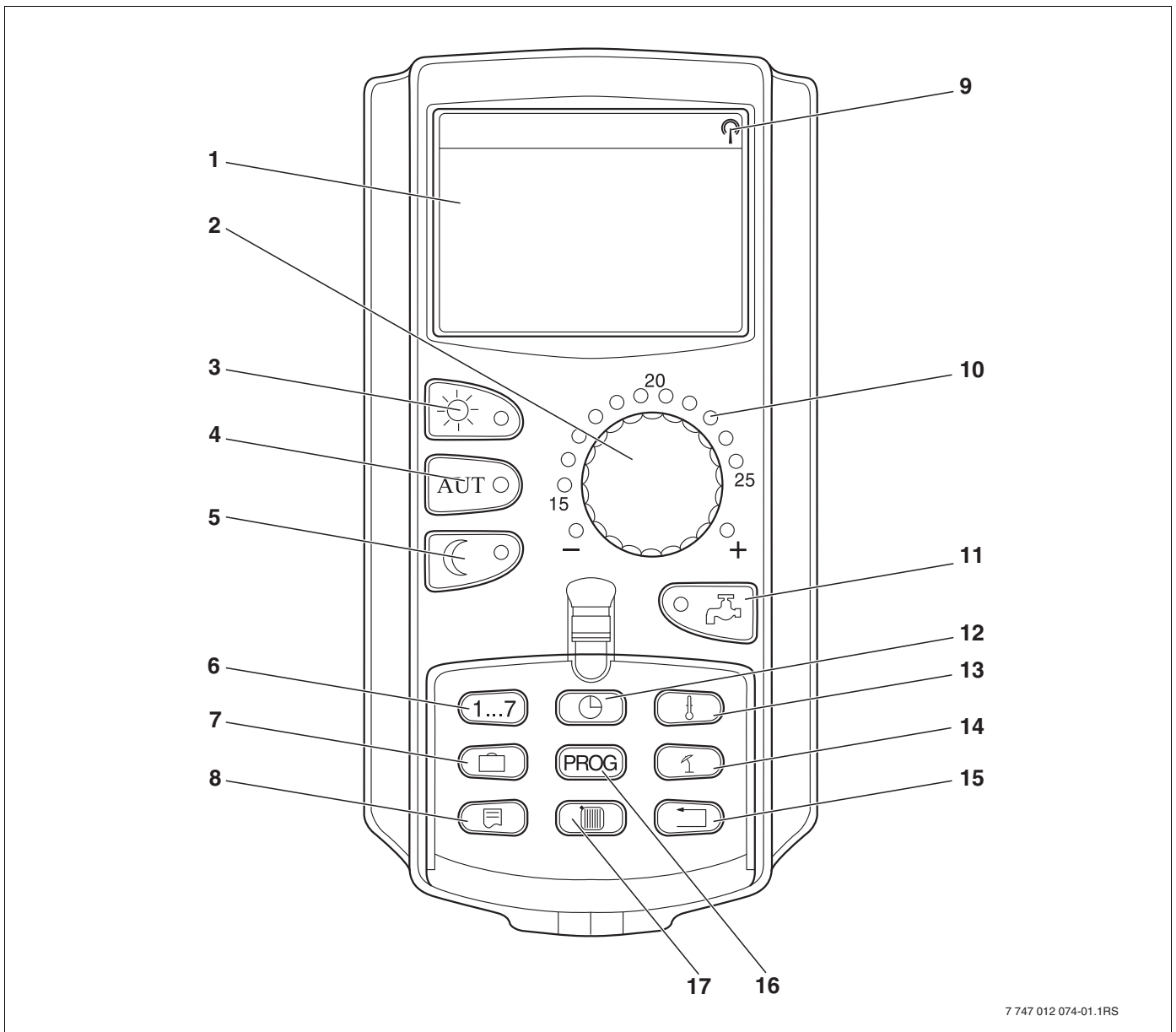


Fig. 6 MEC2 programming unit

- 1 Constant setback mode
- 2 Automatic heating mode in acc. with a time switch
- 3 Constant heating mode
- 4 Display
- 5 Rotary selector
- 6 Enter DHW temperature/reheating
- 7 Flap for the keypad of control level 2

The central MEC2 programming unit



7 747 012 074-01.1RS

Fig. 7 MEC2 programming unit

- | | |
|---|--|
| 1 Display | 9 Radio clock signal (disable in the UK) |
| 2 Rotary selector | 10 Display for set room temperature |
| 3 Constant heating mode | 11 Enter DHW temperature/reheating |
| 4 Automatic heating mode in acc. with a time switch | 12 Set the time |
| 5 Constant setback mode | 13 Change temperature values |
| 6 Enter the day of the week | 14 Summer/wintertime changeover |
| 7 Enter holidays | 15 Back to the standard display |
| 8 Select standard display | 16 Select a time switch program |
| | 17 Select heating circuits/DHW circuit |

5.3 Switching on the control unit

- Check that the control unit ON/OFF switch (→ Fig. 8, [1]) and the manual switches on the fitted modules (→ Fig. 8, [2]) are set to "I" and "AUT".
- Switch the control unit on by setting the ON/OFF switch to "I" (→ Fig. 8, [1]).

After approximately two minutes all modules fitted to the control unit are recognised, and the standard display is shown.

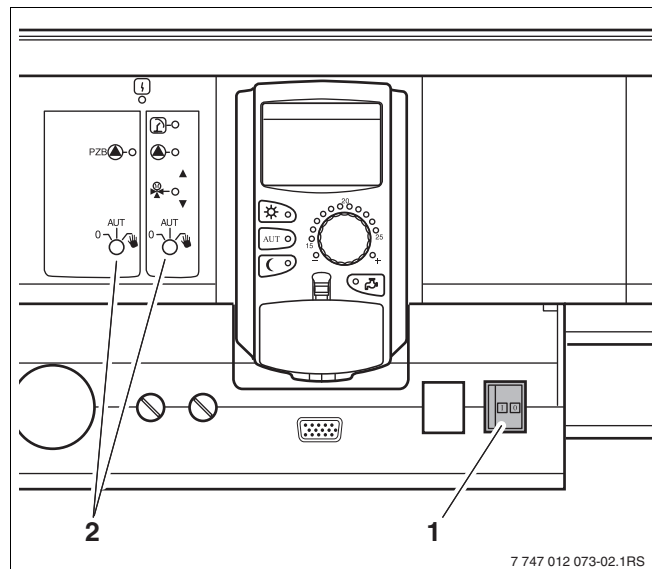


Fig. 8 ON/OFF switch

- 1 ON/OFF switch
- 2 Manual switch on the module

5.4 Switching off the control unit

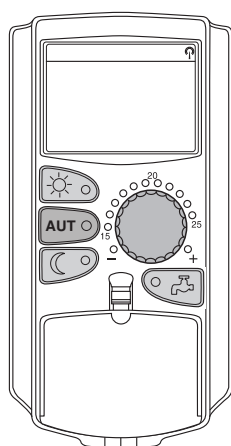
- Switch the control unit off by setting the ON/OFF switch to "0" (→ Fig. 8, [1]).
- When there is a risk: Isolate the heating system from the mains supply with the emergency stop upstream of the boiler room or by removing the fuse.

6 Standard functions

In this chapter you will find information about the standard functions of the MEC2 programming unit and their use. The standard functions are:

- Selecting the operating mode
- Setting the room temperature
- Setting the DHW temperature
- Heating DHW once

6.1 Simple operation



The standard functions are controlled by pressing one of the keys on the "Standard function" keypad or by turning the rotary selector.

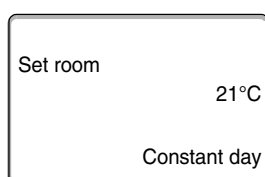
Example: Adjusting the room temperature for day mode



Press "Day mode" to select the standard heating mode (day mode). The LED of the "Day mode" key illuminates; day mode is enabled.



Set the required room temperature by turning the rotary selector. (NOTE: For this, the programming unit flap must be closed.)



The display shows the set value.

**USER NOTE**

If your heating system is equipped with several heating circuits, you must first select the correct heating circuit (→ Chapter 7.6). Only then can you select the operating mode and the room temperature.

**USER NOTE**

The following MEC2 displays only describe the possible displays:

- of module ZM433 (standard equipment level).
- of the most frequently used FM441 and FM442 modules (auxiliary equipment).

Subject to the way your installer has configured your system, it may be that one or more MEC2 displays will not appear, although the above modules are fitted in your control unit.

Detailed descriptions of MEC2 displays for other modules are included in the corresponding module documentation.

6.2 Permanent display

There are two different permanent displays. One of the factory-set permanent displays is shown, subject to whether the MEC2 is fitted in a control unit or is installed as a wall mounted unit.

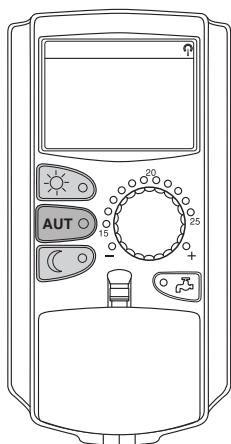
Factory-set permanent display, if the MEC2 is fitted in the control unit.

Common flow	45°C
Outside temp.	21°C

Factory-set permanent display, if the MEC2 is installed as a wall mounted unit.

Actual room	19.5°C
Outside temp.	0°C

6.3 Selecting the operating mode



You may operate the MEC2 programming unit in two ways:

- in automatic mode
- in manual mode

Automatic mode

Generally, homes are heated less at night than during the day. With the MEC2 programming unit you don't need to adjust the thermostatic radiator valves before bedtime or in the morning. The automatic changeover of the MEC2 programming unit will do that for you. It changes over between the day mode (standard mode) and the night mode (setback mode).

The times at which the heating system changes from day mode to night mode – and vice-versa – are factory-set via standard programs (→ Chapter 7.10). However, you or your installer can modify these settings (→ Chapter 7.12).

Manual mode

For example, if you want to heat longer late in the evening or not quite as early in the morning, you can set the day and night mode manually (→ Chapter 6.3.2). You can also use manual mode to heat on cooler days when the system is operating in summer mode.

6.3.1 Selecting automatic mode

In automatic mode your heating system will operate with the time switch program, i.e. DHW and central heating at preset times (→ "Why do I need a time switch?", page 9).

Example: Enabling automatic mode

Press "AUT".

The "AUT" LED illuminates; automatic mode is active.

In addition, either the "Day mode" or the "Night mode" LED will illuminate. This is subject to the set times for day and night mode.

Automatic day and night mode

At fixed times, central heating is provided or the room temperature is set back.

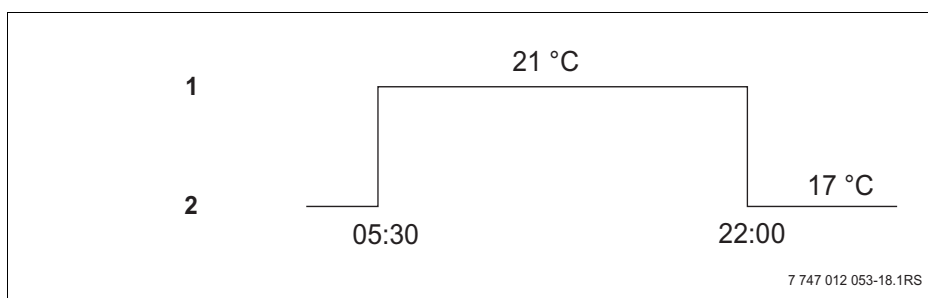
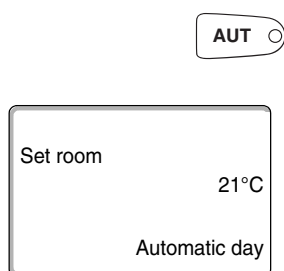


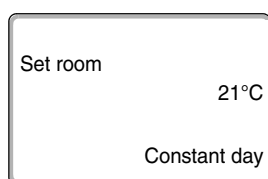
Fig. 9 Changeover from day and night mode at fixed times (example)

- 1 Day mode
- 2 Night mode

6.3.2 Selecting manual mode

Press either "Day mode" or "Night mode" to change to manual mode.

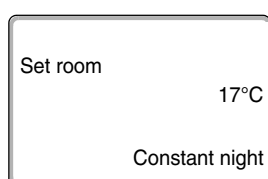
Press "Day mode".



The "Day mode" LED illuminates. Now your heating system is in constant day mode (standard mode).



Press "Night mode".



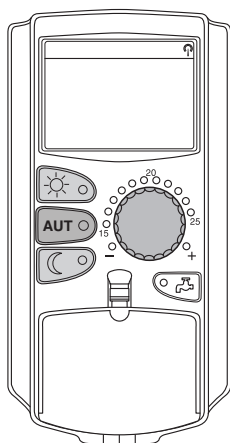
The "Night mode" LED illuminates. Your heating system is now in constant night mode (setback mode), and operates at a lower room temperature.



USER NOTE

If you have selected manual mode, other automatic controls will also be switched off, e.g. the summer/wintertime changeover (→ Chapter 7.13).

6.4 Setting the room temperature



With the flap closed you can adjust the room temperature with the rotary selector. With the flap open, you can also press "Day mode" or "Night mode".

With the rotary selector, you may select the room temperature in degree steps between 11 °C (day), or 2 °C (night) and 30 °C. The set temperature is displayed via an LED next to the rotary selector. For temperatures below 15 °C or above 25 °C, the "-" or "+" LED illuminates.

The factory setting for the day room temperature is 21 °C.

The factory setting for the night room temperature is 17 °C.

Any adjustment applies to all heating circuits allocated to the MEC2 programming unit (→ Chapter 7.7).



USER NOTE

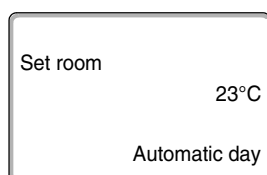
The set room temperature applies to the currently active heating mode, i.e. day or night mode. You will recognise whether the currently active heating mode is on because the green LED will be illuminated.

6.4.1 For the current operating mode

You are currently in automatic "Day mode" and would like to alter the room temperature.

(Condition: For this, the programming unit flap must be closed.)

Turn the rotary selector to the required day room temperature (here: "23°C").



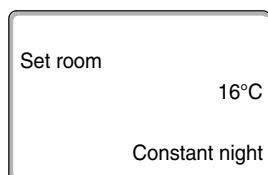
The day room temperature is now adjusted to 23 °C. The selected permanent display will then appear again.

6.4.2 For the operating mode not currently active

You may also adjust the room temperature for an operating mode that is currently inactive.

For example, you are currently in automatic day mode and would like to alter the set night temperature.

Hold down "Night mode", and select the required night room temperature with the rotary selector (here: "16°C").



Release the "Night mode" key.

The selected night temperature is now set to 16 °C. The selected permanent display will then appear again.

Press "AUT".

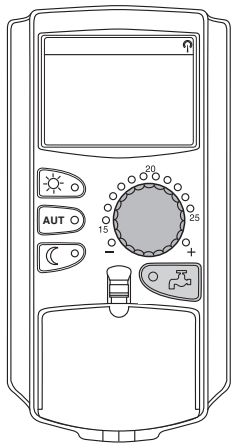
The "AUT" LED illuminates; automatic mode is active again.



USER NOTE

If you are currently in automatic night mode, and you wish to adjust the day mode, proceed as described above, but instead hold down the "Day mode" key.

6.5 Heating domestic hot water



The programming unit also offers you the option of heating DHW in an energy-conscious manner. For this purpose, DHW heating can be selected via a time switch. You may select between the set values for DHW and "OFF", to switch DHW heating off.

To save energy, DHW heating will be switched off outside the programmed times, i.e. DHW is not heated in night mode.

DHW heating is factory-set to 60 °C in automatic mode.

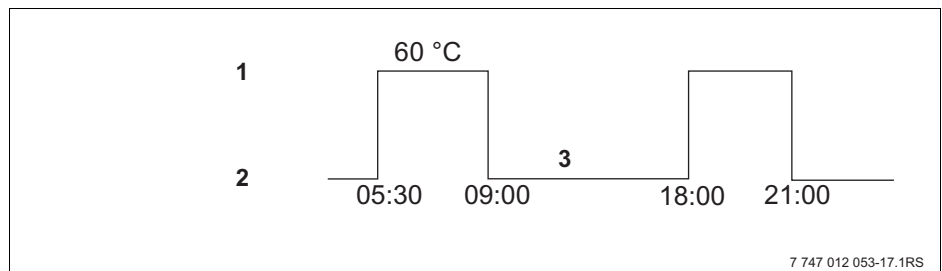


Fig. 10 Example: DHW heating

- 1 Day mode
- 2 Night mode
- 3 OFF

We recommend heating the DHW cylinder once in the morning before central heating begins, and reheating once in the evening if necessary (→ Fig. 10).



USER NOTE

The DHW temperature will have fallen below the set value if the green DHW LED illuminates.

6.5.1 Setting the DHW temperature



WARNING!

RISK OF SCALDING

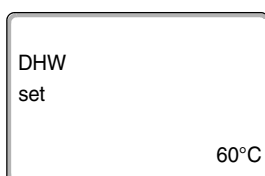
The DHW cylinder temperature is preset to 60 °C. There is a risk of scalding from hot water if your installer has set the DHW temperature higher or has activated the "Therm. disinfect" function, and the heating water circuit of your heating system is not equipped with a thermostatically controlled mixer. Please note that fittings too can get very hot.

- In such cases, only ever draw off mixed water (hot and cold).

You can change the DHW temperature as follows:



Hold down the "DHW" key, and select the required DHW temperature with the rotary selector.



Release the "DHW" key. The newly selected DHW temperature is saved within approx. 2 seconds. The permanent display will then appear again.



USER NOTE

For thermal disinfection, the DHW will be heated to at least 60 °C once or twice per week to kill off possible bacteria (e.g. legionella).

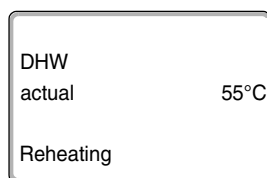
6.5.2 Heating DHW once

Only a limited amount of hot water remains in the DHW cylinder if the "DHW" LED illuminates. Should you require a larger amount of DHW, proceed as follows:

Press "DHW".

The "DHW" LED flashes, and heating DHW once commences.

Subject to the size of the DHW cylinder and the boiler output, DHW will be available after approx. 10 to 30 minutes. With instantaneous water heaters or combination boilers, DHW is available almost immediately.



7 Extended functions

The extended functions are explained in this chapter. You need the extended functions to be able to change the factory settings of your heating system. You can use the following functions:

- Display the current operating values of your heating system
- Set the time
- Set date
- Set heating circuits
- Select a heating program
- Set the room temperature for additional heating circuits

The keys for the extended functions are located behind the flap of the MEC2 programming unit.

7.1 Keys for extended functions

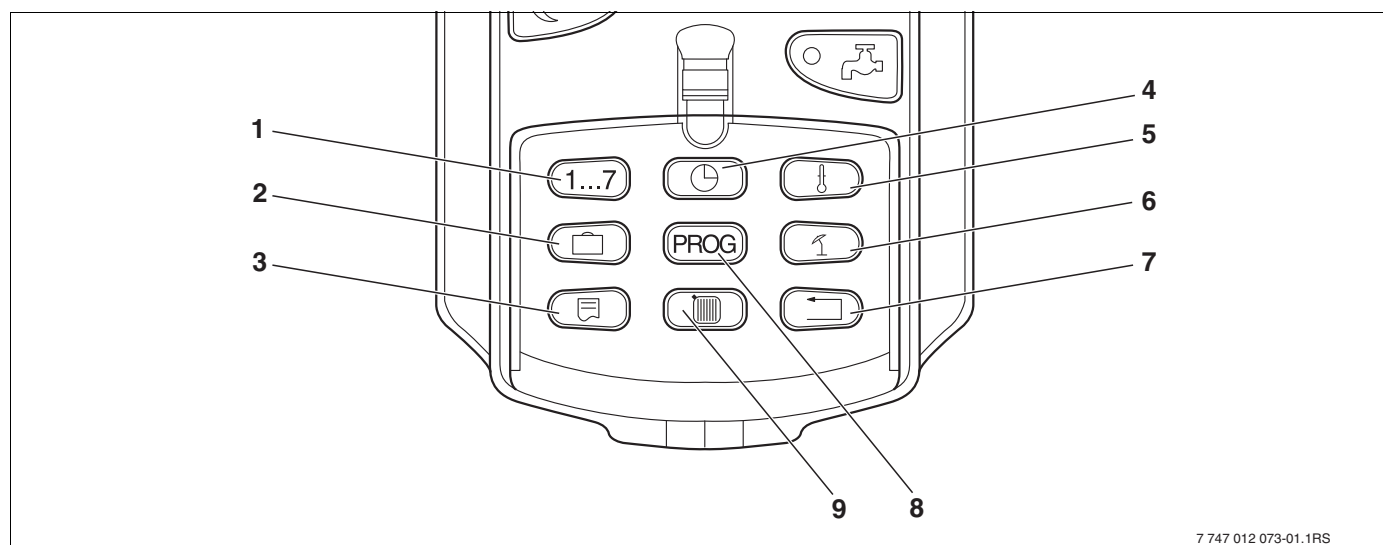


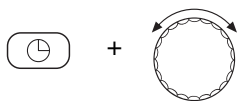
Fig. 11 Keys for the extended functions

- 1 Enter the day of the week
- 2 Enter holidays
- 3 Select standard display
- 4 Set the time
- 5 Change temperature values
- 6 Summer/wintertime changeover
- 7 Return to the standard display
- 8 Select a time switch program
- 9 Select heating circuits/DHW circuit

7.2 Controlling the extended functions

The extended functions provide access to a further control level. At this level, proceed according to the "Push and turn" principle. The control procedure is always similar:

- Open flap.



Hold the required key down, e.g. the "Time" key, and simultaneously turn the rotary selector.

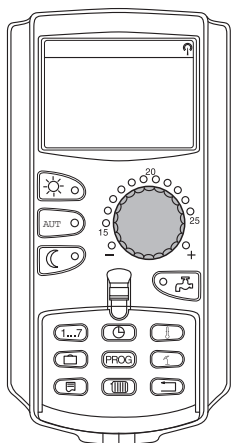
By turning the rotary selector you modify the values that flash on the display.

Release key. Modified values are saved.



"Back" key = Exit menu.

7.3 Displaying operating values



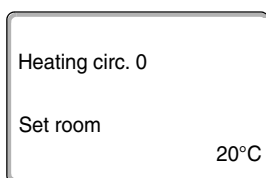
You can display and control the various operating values of the boiler, the selected heating circuit and the system.

Only the operating values of the selected heating circuit, e.g. heating circuit 0, are displayed (→ Chapter 7.6).

- Open flap.



Turn the rotary selector clockwise without pressing any other key.

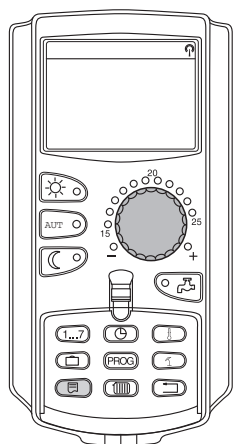


Subject to the modules, various of the following operating displays can be called up:

- Burner and hours run
- Actual heating circuit room temperature
- Set heating circuit room temperature
- Heating circuit operating state
- Actual heating circuit flow temperature
- Actual DHW temperature*
- Set DHW temperature*
- DHW operating mode*
- DHW circulation pump and cylinder primary pump operating state*

** Only if a DHW module has been installed.*

7.4 Changing the permanent display

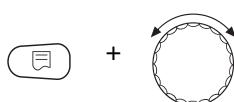


You can determine the permanent display of the programming unit.

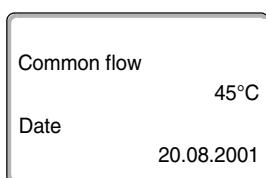
The following permanent displays are available:

- Common flow (if MEC2 is installed in the wall bracket)
- Outside temp.
- Domestic hot water*
- Time
- Date

** Only if a DHW module has been installed.*



Hold the "Display" key down, and select the required permanent display with the rotary selector (here: "Date").



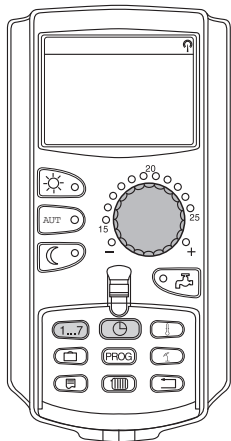
Release the "Display" key. The selected permanent display has now been saved.

7.5 Setting the date and time




USER NOTE

Date and time are preset at the factory. This function is backed up by battery power independent of the mains power supply.



The MEC2 contains a radio receiver that, under normal reception conditions, constantly monitors and corrects the programming unit time switch.

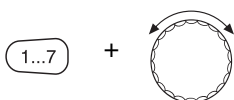
Reception of the radio clock signal is indicated by symbol  on the display.



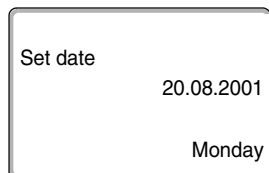
USER NOTE

We recommend leaving the radio clock receiver disabled outside Germany to prevent the reception of false signals (incorrect time setting).

Setting the date



Hold "Weekday" down, and select the required date with the rotary selector (here: "20").



The name of the day automatically changes (here: "Monday") if you set the date for the day using the rotary selector (here: "20").

Release "Weekday" to save your input.

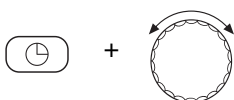


Press "Weekday" again to enter the month.

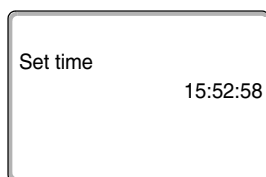
Press "Weekday" again to enter the year.

The respectively flashing item can be modified with the rotary selector.

Setting the time



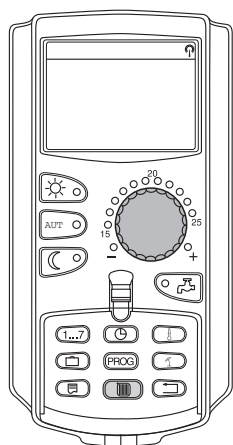
Hold down "Time", and select the required time with the rotary selector.



The time is set in one-minute steps.

Release "Time" to save your input.

7.6 Selecting a heating circuit

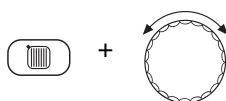


Your heating system may be equipped with several heating circuits. If you want to change a setting – e.g. the heating program – first select the heating circuit in which you want to change the setting.

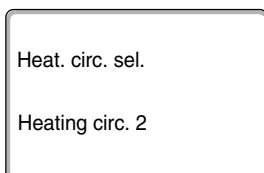
Subject to the equipment level of your heating system, the following heating circuits can be selected:

- MEC2 heating circuits (all heating circuits assigned to the MEC2, → Chapter 7.8)
- Heating circuit 0 – 8
- DHW
- DHW circulation

- Open flap.



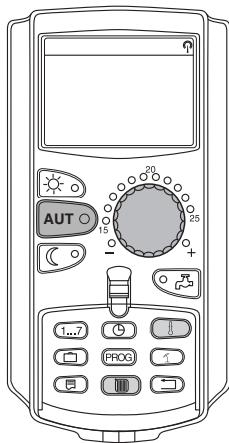
Hold down the "Heating circuit" key, and select the required heating circuit with the rotary selector (here: "Heating circ. 2").



Release the "Heating circuit" key. The displayed heating circuit is now selected.

As soon as heating circuit has been selected, the display returns to the permanent display.

7.7 Adjusting the room temperature for another heating circuit



Your heating system may be equipped with several heating circuits. If you want to change the room temperature for a different heating circuit than the one last selected, first select the required heating circuit.

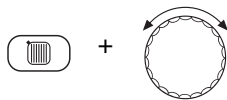
Subject to the equipment level of your heating system, the following heating circuits can be selected:

- MEC2 heating circuits (all heating circuits assigned to the MEC2, → Chapter 7.8)
- Heating circuit 0 – 8

If several heating circuits are assigned to the MEC2, the temperature for these heating circuits can only be adjusted for all. Otherwise a fault message "Setting Not possible. MEC heat. circ. select" will appear. In such cases select "MEC heat. circ.".

- Open flap.

Hold down the "Heating circuit" key, and select the required heating circuit with the rotary selector (here: "Heating circ. 2").



Heat. circ. sel.

Heating circ. 2

Release the "Heating circuit" key. The displayed heating circuit is now selected.

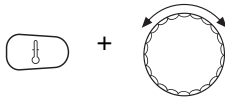
Actual room

19.5°C

Outside temp.

0°C

As soon as heating circuit has been selected, the display returns to the permanent display.

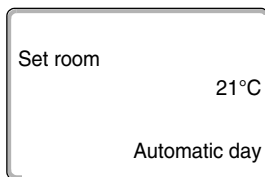


Press and hold down "Temperature". Initially the heating circuit will be displayed for which you want to adjust the temperature. After approximately two seconds, the display will show the currently selected temperature and the operating mode.

Adjust the temperature with the rotary selector (here: "21°C") for the heating circuit.

Release the key to save your input.

The day room temperature is now adjusted to 21 °C. The selected permanent display will then appear again.



USER NOTE

If you want to adjust the temperature for an operating mode that is not the current mode, first select the corresponding operating mode (e.g. with the "Night mode" key). After you have modified the temperature, reset the operating mode to the previous setting.



USER NOTE

For heating circuits with individual remote control units (e.g. BFU), you can adjust the room temperature only via this remote control (→ see the instructions for that remote control unit).

7.8 Heating circuits with MEC2 programming unit

During installation, your installer will determine which heating circuits should be controlled by the MEC2 programming unit. These heating circuits are referred to as "MEC heat. circ.".

MEC heat. circ.

The following adjustments made at the MEC2 apply all to "MEC heat. circ." simultaneously.

- Setting the room temperature
- Setting the summer/wintertime changeover
- Selecting the operating mode
- Setting the holiday function
- Setting the party or pause function

Setting
Not possible
MEC heat. circ.
select

If you have selected an individual heating circuit that is assigned to the MEC2, and you want to make one of the above adjustments, the fault message "Setting Not possible. MEC heat. circ. select" will appear.

Select "MEC heat. circ." to program these settings (→ Chapter 7.6).

Individual heating circuits

The following adjustments can only be implemented for each individual heating circuit separately:

- Selecting the standard program
- Modifying the standard program by moving switching points
- Inserting or deleting switching points
- Deleting or connecting heating phases
- Creating a heating, DHW or DHW circulation pump, program

Time switch
Not possible
Single heat circ
select

If you have selected "MEC heat. circ.", and you want to make one of the above adjustments, the fault message "Time switch Not possible. Single heat circ select" will appear.

Enter these settings for each heating circuit separately (→ Chapter 7.6).

7.9 Selecting and modifying a heating program

7.9.1 What is a heating program?

A heating program provides the automatic changeover of operating mode (day and night mode) at fixed times. This automatic changeover is effected via a time switch.

Before you utilise this option, consider the following:

- At what time in the morning should your home be warm? Is this time dependant on the day of the week?
- Are there days when heating is not required during the day?
- From what time in the evenings do you no longer need to heat? This may also depend on the day of the week.

The length of time your heating system takes to heat up individual rooms may vary. This will be subject to the outside temperature, the building insulation and the room temperature setback.

The "Optimisation" function of the programming unit calculates the various heat-up times. Ask your installer whether this function has been activated. If so, all you need to do is enter the times at which your home should be warm.

With the programming unit, Buderus offers eight different, preset heating programs as standard programs.

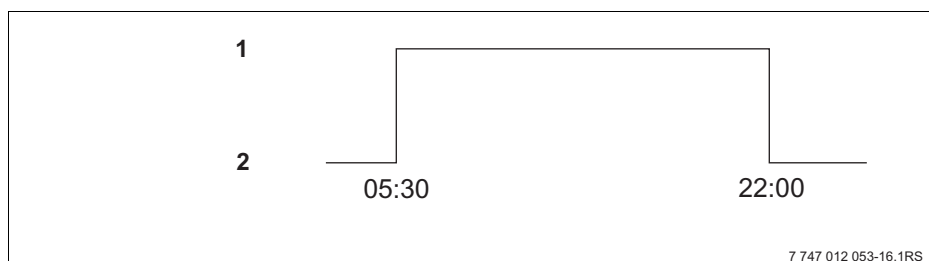


Fig. 12 Example for a standard program (here: "Family program" from Monday to Thursday)

- 1 Day mode
- 2 Night mode



USER NOTE

After commissioning, check whether the selected heating program suits your lifestyle. If not, several options are available for matching the heating program to your individual requirements.

7.9.2 Time switch program for DHW

You may enter your own heating program for DHW heating. This saves you energy.

Set the times so that DHW is only available when one heating circuit is in standard heating mode (day mode). DHW is then heated 30 minutes before day mode of the heating circuit to be heated first, to make it available at the selected time.

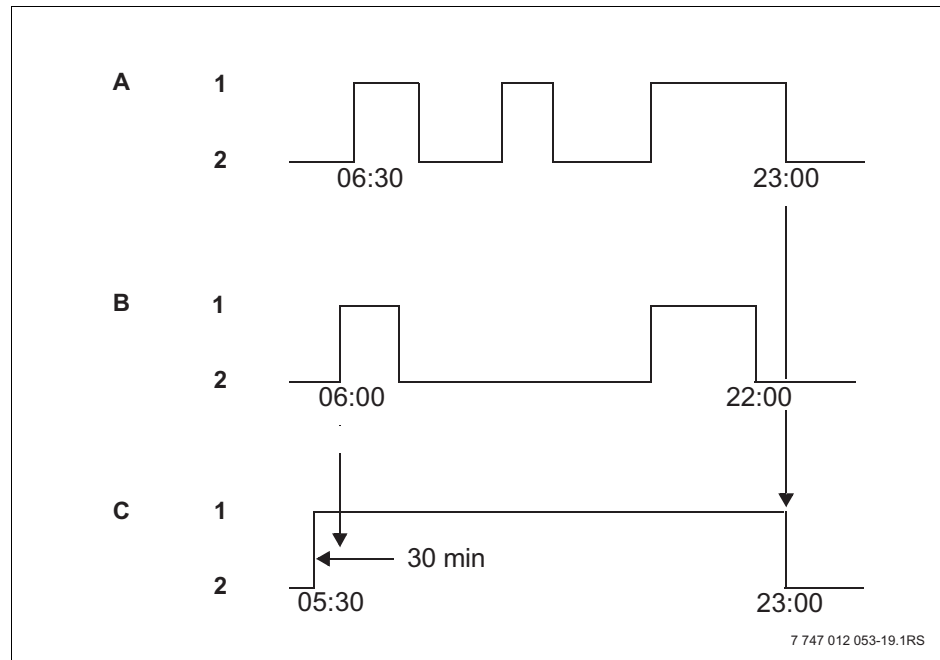


Fig. 13 DHW heating begins 30 minutes before the day mode of the first heating circuit, and ends with the beginning of night mode of the last heating circuit.

- A Heating circ. 1
- B Heating circ. 2
- C DHW
- 1 Day mode
- 2 Night mode

If you require additional hot water, you may, at short notice, heat DHW with the "DHW heating once" function (→ Chapter 6.5.2).



USER NOTE

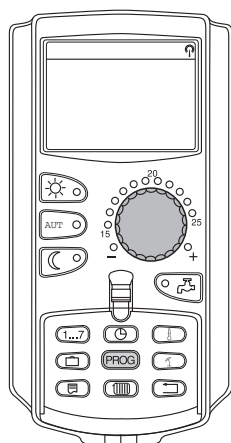
DHW will not be subject to a temperature setback if you operate one heating circuit in the "Constant day" mode, and DHW is being heated "by heat. circs".



USER NOTE

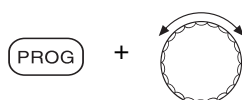
DHW will not be heated if you are operating **all** heating circuits in the "Constant night" mode and DHW is heated "by heat. circs".

7.10 Selecting a standard program



The MEC2 programming unit is equipped with eight different, preset heating programs that act as standard programs. See the following page for a summary of the preset times of the standard programs.

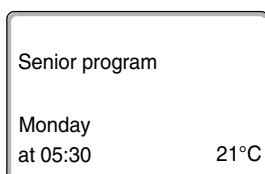
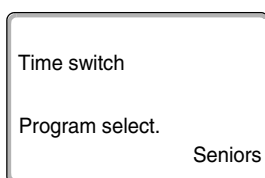
Please check which standard program best meets your requirements. First check the number of switching points and then the relevant times. The "Family" program is preset at the factory.



- Open flap.
- Select a heating circuit (→ Chapter 7.6).

Hold down "PROG". First, the heating circuit for which you want to select a standard program is displayed. Approximately two seconds later the designation of the currently selected standard program will appear.

Select the required standard program with the rotary selector (here: "Seniors"). Release the "PROG" key. The displayed program is now selected.



The display shows the program designation and the first switching point for the selected heating program (here: "Senior program").



Press "Back" to return to the permanent display.



USER NOTE

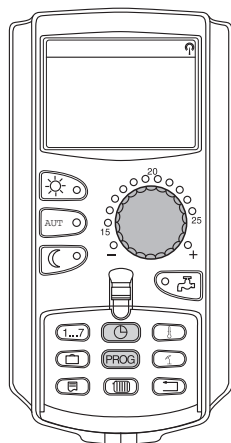
Switching programs are only effective in automatic mode (→ Chapter 6.3.1).

7.11 Summary of standard programs

Program designation	Weekday	ON	OFF	ON	OFF	ON	OFF
"Family" (factory setting)	Mo – Th Fr Sa Su	05:30 05:30 06:30 07:00	22:00 23:00 23:30 22:00				
"Early morning" Early shift	Mo – Th Fr Sa Su	04:30 04:30 06:30 07:00	22:00 23:00 23:30 22:00				
"Late evening" Late shift	Mo – Fr Sa Su	06:30 06:30 07:00	23:00 23:30 23:00				
"Morning" Part-time work in the morning	Mo – Th Fr Sa Su	05:30 05:30 06:30 07:00	08:30 08:30 23:30 22:00	12:00 12:00	22:00 23:00		
"Afternoon" Part-time work in the afternoon	Mo – Th Fr Sa Su	06:00 06:00 06:30 07:00	11:30 11:30 23:30 22:00	16:00 15:00	22:00 23:00		
"Noon" Noon at home	Mo – Th Fr Sa Su	06:00 06:00 06:00 07:00	08:00 08:00 23:00 22:00	11:30 11:30	13:00 23:00	17:00	22:00
"Single"	Mo – Th Fr Sa Su	06:00 06:00 07:00 08:00	08:00 08:00 23:30 22:00	16:00 15:00	22:00 23:00		
"Seniors"	Mo – Su	05:30	22:00				
"New"	You can enter your own individual program here:						
"Own 1"	If none of the standard programs suit you, you may alter them, have them changed by your installer or enter a new heating program (→ Chapter 8.2). This will be saved under "Own" and the number of the heating circuit.						

Tab. 1 Standard programs ("ON" = day mode, "OFF" = night mode)

7.12 Modifying the standard program by moving switching points



If the switching points, i.e. the times of a standard program at which the system changes over between day and night mode, only partially suit you, you may change them, or ask your installer to change them for you. The modified standard program is saved under "Own" and the number of the heating circuit. The heating program memory is available for this.

The example below shows how the switching points of the standard program "Family" can be changed for the days Monday to Thursday.

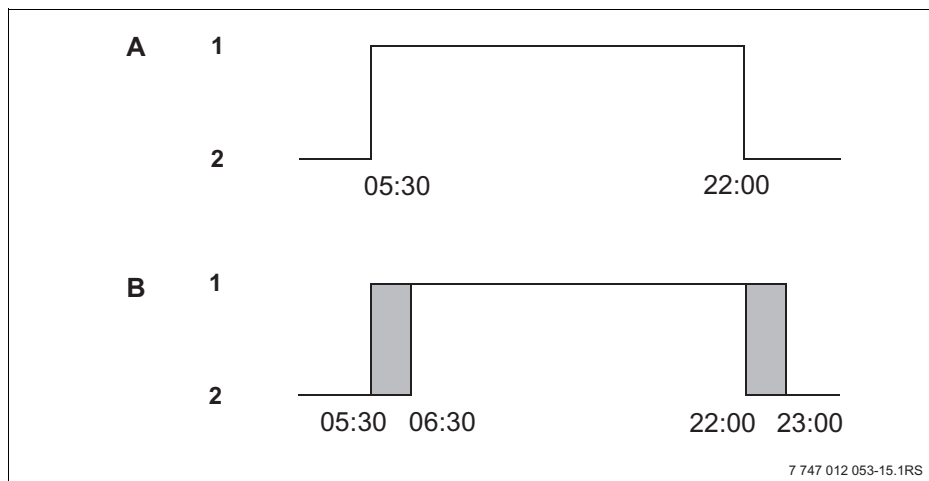


Fig. 14 Changing the switching points from 05:30 to 06:30 and from 22:00 to 23:00 (example)

A "Family program"

B New program "Own program 2"

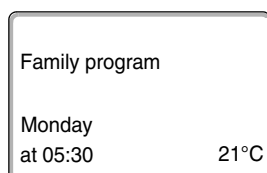
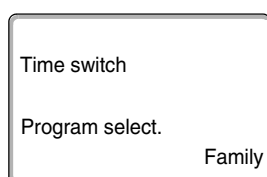
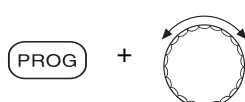
1 Day mode

2 Night mode

● Open flap.

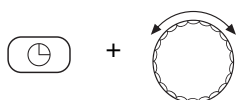
● Select a heating circuit (here: "Heating circ. 2", → Chapter 7.6).

Hold down "PROG" and select the required standard program with the rotary selector.



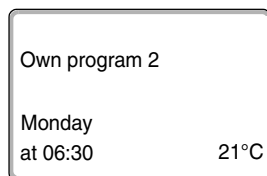
Release the "PROG" key.

The first switching point (Monday, 05:30) appears.



Hold down "Time", and select the required time with the rotary selector, e.g.: "06:30".

Release the "Time" key. The newly adjusted time for the "ON" switching point is now saved.

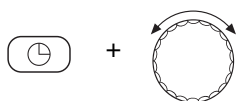


The modified switching point will be saved under the "Own" program and the number of the heating circuit (here: "2").



Continue to turn the rotary selector, until the next switching point that you want to change is displayed.

The "OFF" switching point for Monday appears. Now you can modify the time for the "OFF" switching point.



Hold down "Time", and select the required time with the rotary selector, e.g.: "23:00".

Release the "Time" key. The newly adjusted time for the "OFF" switching point is saved.

Next switching point



Continue to turn the rotary selector until the next switching point is displayed.

The next switching point (Tuesday, 05:30) appears.

Also change the following switching points to 06:30 and 23:00. The system will now heat from 06:30 to 23:00 Monday to Thursday.



Press "Back" to return to the permanent display.



USER NOTE

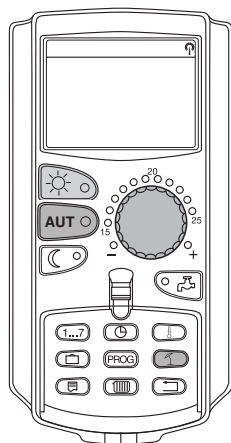
You can change the weekday if you press "Weekday" instead of "Time".

You can change the switching state ("ON"/"OFF") by pressing "Display" instead of "Weekday" or "Time". The operating mode determines the switching state: "ON" = day mode, "OFF" = night mode.

- Ensure that a stop point is associated with every start point.

The modified standard program is saved under "Own" and the number of the heating circuit.

7.13 Setting the summer/wintertime changeover



In addition to the outside temperature, your Logamatic 4323 control unit considers the ability of the building to store heat and its thermal insulation (and from this creates the "Adjusted outside temperature", → Fig. 15), and after a delay, automatically changes over between summer and winter mode.

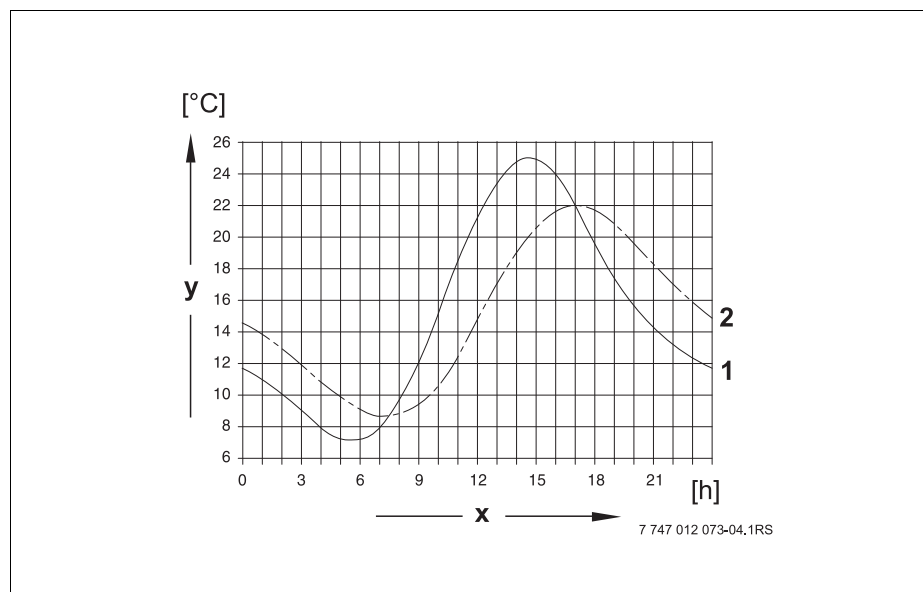



Fig. 15 Current and adjusted outside temperature in comparison

- 1 Current outside temperature
- 2 Adjusted outside temperature
- x Time
- y Outside temperature

Summer mode

The heating operation will be switched off with a delay that depends on the storage capability and the thermal insulation of the building, if the "Adjusted outdoor temperature" exceeds the factory-set changeover threshold of 17 °C. Summer mode is indicated on the display with symbol . DHW heating remains operational.

Press "Day mode" if you want to heat at short notice in summer mode.

The heating system returns to automatic summer mode if you press key "AUT".



Winter mode

DHW and central heating are operational if the "Adjusted outside temperature" falls below the factory-set changeover threshold of 17 °C.

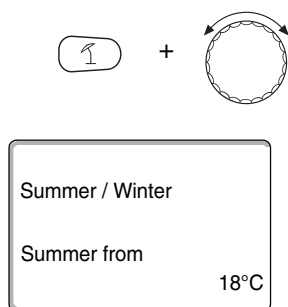
Setting the automatic summer/wintertime changeover

Select the required heating circuit before calling up the summer/wintertime changeover. You may select either an individual heating circuit or all circuits assigned to the MEC2.

- Select a heating circuit (→ Chapter 7.6).
Example: Heating circ. 2

Setting the changeover temperature

Hold down "Su/Wi". The display briefly shows the heating circuit. Then turn the rotary selector to the required changeover temperature, below which you want to heat (here: "18°C").



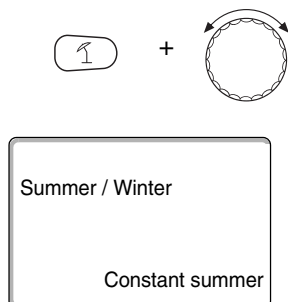
The display shows the set changeover temperature.

Release the "Su/Wi" key to save your input.

Setting up constant summer mode

- Select a heating circuit (→ Chapter 7.6).
Example: Heating circ. 2

Hold down "Su/Wi". The display briefly shows the heating circuit. Then turn the rotary selector to a changeover temperature below 10 °C.



The display shows "Constant summer".

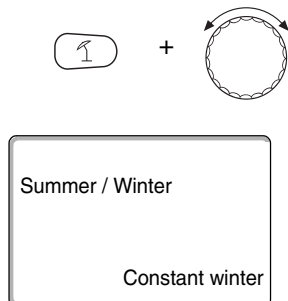
Release the "Su/Wi" key to save your input.

Your heating system will constantly operate in summer mode.

Setting up constant winter mode

- Select a heating circuit (→ Chapter 7.6).
Example: Heating circ. 2

Hold down "Su/Wi". The display briefly shows the heating circuit. Then turn the rotary selector to a changeover temperature above 30 °C.

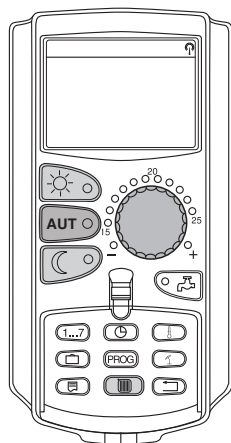


The display shows "Constant winter".

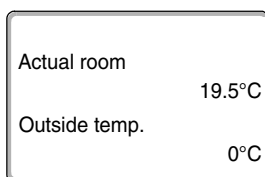
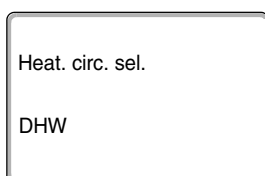
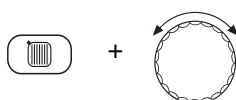
Release the "Su/Wi" key to save your input.

Your heating system will constantly operate in winter mode.

7.14 Setting the DHW operating mode



This allows you to change the DHW temperature in the DHW cylinder.



- Open flap.

Hold down "Heating circ." and select "DHW" with the rotary selector.

Release the "Heating circuit" key.

The permanent display will then appear again.

Select one of the following operating modes for DHW:

- "Constant operat."
The water inside the DHW cylinder is constantly maintained at the set temperature.



Press "Day mode" to select constant operation. After approx. three seconds, the permanent display will appear again.

- "Automatic"
30 minutes before the first heating circuit is switched on, the boiler will heat the DHW cylinder to the set temperature, and stop when the last heating circuit is switched off (factory setting). Alternatively, you can enter your own individual DHW program (→ Chapter 8.3).



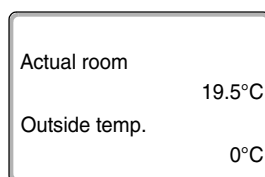
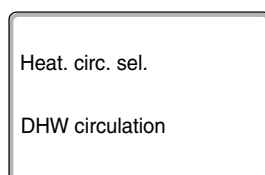
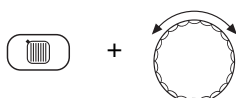
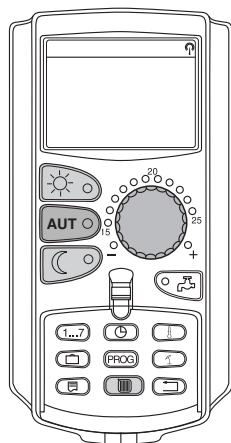
Press "Automatic" to select automatic mode. After approx. three seconds, the permanent display will appear again.

- "DHW OFF"
DHW heating is switched off. Pressing "DHW" switches heating on for the duration of DHW heating once.



Press "Night mode" to stop DHW heating. After approx. three seconds, the permanent display will appear again.

7.15 Setting the operating mode for DHW circulation



The DHW circulation pump provides an almost instantaneous supply of DHW to the draw-off points. For this, the DHW is circulated by a separate DHW circulation pump twice per hour for three minutes. Your installer can match this interval to requirements at the service level.

You can modify the operating mode of DHW circulation as follows:

- Open flap.

Hold down "Heating circ." and select "DHW circulation" with the rotary selector.

Release the "Heating circuit" key.

Then the permanent display will appear again.

Select one of the following operating modes for the DHW circulation pump:

- "Constant operat."
The DHW circulation pump will operate at the set interval, i.e. independent of the heating circuits.
- "Automatic"
30 minutes before the first heating circuit is switched on, the DHW circulation pump starts to run at the set interval, and stops when the last heating circuit is switched off (factory setting). Alternatively, you can enter your own individual DHW circulation pump program (→ Chapter 8.4).

Press "AUT" to select automatic mode. After approximately three seconds, the permanent display will appear again.

- "DHW circulation OFF"
The DHW circulation pump will not be controlled. Pressing "DHW" switches the DHW circulation pump on for the duration of DHW heating once.

Press "Night mode" to switch off DHW circulation. After approx. three seconds, the permanent display will appear again.

7.16 Setting the holiday function

If you are away for a long period, you can use the holiday function to heat at a lower room temperature.

Example:

You are on holiday for the next five days and want to heat less during that time, e.g. you want to operate heating circuit 2 with a reduced room temperature of 12 °C.

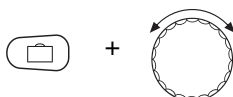
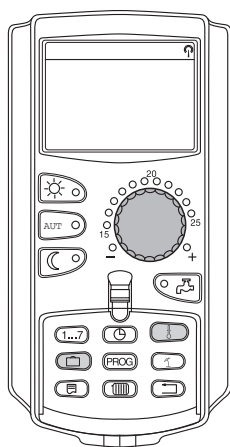


USER NOTE

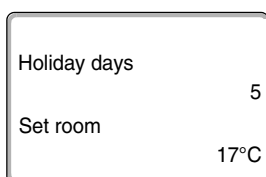
As the holiday function is active immediately after completing your entry, you should only enter this function on the day of your departure.

- Select a heating circuit (→ Chapter 7.6).
Example: Heating circ. 2

Enter holiday function:



Hold "Holiday" down, and select the required number of days with the rotary selector (here: "5").



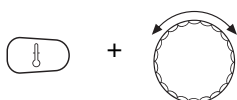
The display shows "5".

Release the "Holiday" key to save your input.

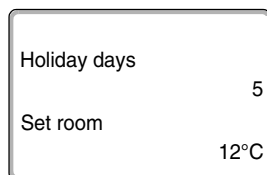


USER NOTE

The "Set room" display only appears if the holiday setback type "Hold room temp" or "Reduced" has been set by the installer.



Hold "Temp" down, and select the required temperature with the rotary selector (here: "12°C").



The display shows 12 °C.

Release the "Temp" key to save your input.

The holiday function becomes active immediately after entry.

You can cancel the holiday function any time by calling it up, as described above, and by setting the number of holiday days to "0".



USER NOTE

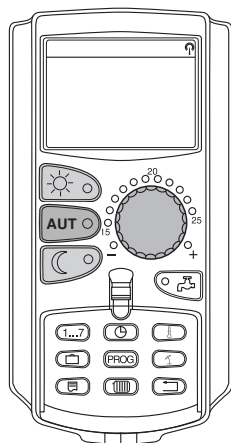
DHW heating and DHW circulation will be switched off automatically if DHW is heated subject to the heating circuits ("Program select. by heat. circs", → Chapter 8.3) and all heating circuits are set to holiday mode. You cannot enter a separate DHW holiday function.



USER NOTE

A separate DHW holiday function can be entered if DHW is heated according to a separate time program ("Program select. own DHW", → Chapter 8.3). The DHW circulation pump is switched off automatically during the DHW holiday function.

7.17 Interrupting and continuing the holiday function



You may interrupt your holiday program at any time and provide heat according to the set day and night temperatures.

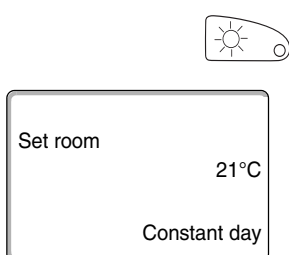
Only the "AUT" LED illuminates if a heating circuit is in holiday mode.

Interrupting the holiday function

Press "Day mode".

The display shows "Constant day".

You may interrupt the holiday function any time by pressing "Day mode". In this case the system heats according to the set room temperature (→ Chapter 6.4).



Continuing the holiday function

Press "AUT" to continue the interrupted holiday function.

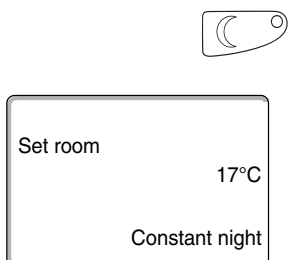


Interrupting the holiday function

Press "Night mode".

The display shows "Constant night".

You may interrupt the holiday function at any time by pressing "Night mode". In this case the system heats according to the set night temperature (→ Chapter 6.4).



Continuing the holiday function

Press "AUT" to continue the interrupted holiday function.



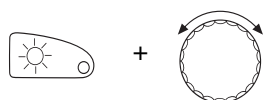
7.18 Setting the party function

This function only applies to heating circuits to which the MEC2 has been assigned as a remote control unit ("MEC heat. circ."). All heating circuits without an MEC2 continue to operate normally.

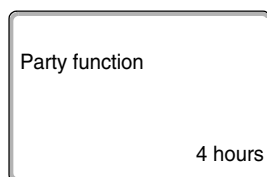
Enter the length of time the system should only heat to the preset room temperature.

Example:

You have a party and want to heat for the next four hours to the preset room temperature.



Hold down "Day mode", and **simultaneously open the flap of the MEC2**. The party function is activated. Continue to hold "Day mode" down, and turn the rotary selector until the required number of hours is displayed (here: "4").



The display shows the party function together with the set number of hours.

Release the "Day mode" key.

The party function starts immediately. After the set time has expired, the heating system returns to automatic heating mode.

If you want to cancel party function, call up party function as described above and turn the rotary selector to "0" hours.

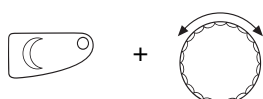
7.19 Setting the pause function

This function only applies to heating circuits to which the MEC2 has been assigned as a remote control unit ("MEC heat. circ."). All heating circuits without an MEC2 continue to operate normally.

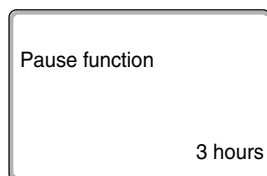
Enter the length of time the system should heat to the preset room temperature.

Example:

You are about to leave your home for three hours and would like to heat less whilst you are away.



Hold down "Night mode", and **simultaneously open the flap of the MEC2**. The pause function is activated. Continue to hold down "Night mode", and turn the rotary selector until the required number of hours is displayed (here: "3").



The display shows the pause function together with the set number of hours.

Release the "Night mode" key.

The pause function starts immediately. After the set time has expired, the heating system returns to automatic heating mode.

If you want to cancel the pause function, call up the pause function as described above and turn the rotary selector to "0" hours.

7.20 Room temperature matching



USER NOTE

This function is only available if the MEC2 is fitted within the living space. If the room temperature shown on the display varies from the actual temperature measured with a thermometer, the display value can be adjusted using "Calibration MEC".

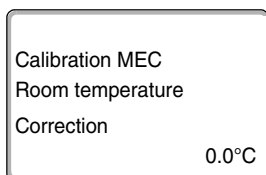
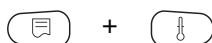
The factory setting is 0 °C. The possible correction range extends from +5 °C to –5 °C.

Example:

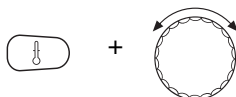
Displayed room temperature 22 °C, actual room temperature 22.5 °C

- Open flap.

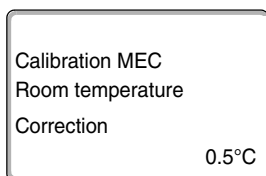
Simultaneously press and then release "Display" and "Temp".



The display shows "Calibration MEC".



Hold down "Temp" and turn the rotary selector to the required value (here: "0.5°C").



The display shows the set value.

Release the "Temp" key to save your input.



Press "Back" to return to the permanent display.

The display shows the corrected temperature (22.5 °C).

7.21 Automatic maintenance message

Note

maint. message



maint. after
Date
required

maint. after
Hours run
required

If your installer has (with your agreement) activated the "Automatic maint. message", the maintenance message "Note maint. message" is displayed at the predetermined time (on a particular date or after so many hours run).

- Open flap.

Turn the rotary selector.

You will see either "maint. after Date required" or "maint. after Hours run required".

- Notify your installer to schedule the inspection and maintenance work.

The Logamatic telecontrol system enables the maintenance message to be transmitted automatically to your mobile, email address or fax machine.



USER NOTE

The automatic maintenance message remains active until your installer resets it.

8 Additional programming options

This chapter is aimed at interested customers who would like to familiarise themselves further with the functions of their heating system.

The following pages explain how to change a standard program, if none of the preset standard programs (→ Chapter 7.11) match your lifestyle.

You will learn how to create a new heating program which accurately matches your personal circumstances.

8.1 Modifying the standard program by inserting/deleting switching points

8.1.1 Inserting switching points

You can interrupt heating phases by inserting switching points (details: weekday/time/temperature) into an existing heating program.

Example:

The standard "Family" program provides constant heating on Fridays from 05:30 until 23:00. Insert two new switching points if, for example, you do not want to heat on Fridays from 10:00 to 13:00.

Your modified program will be saved under the program name "Own" and the number of the heating circuit concerned.

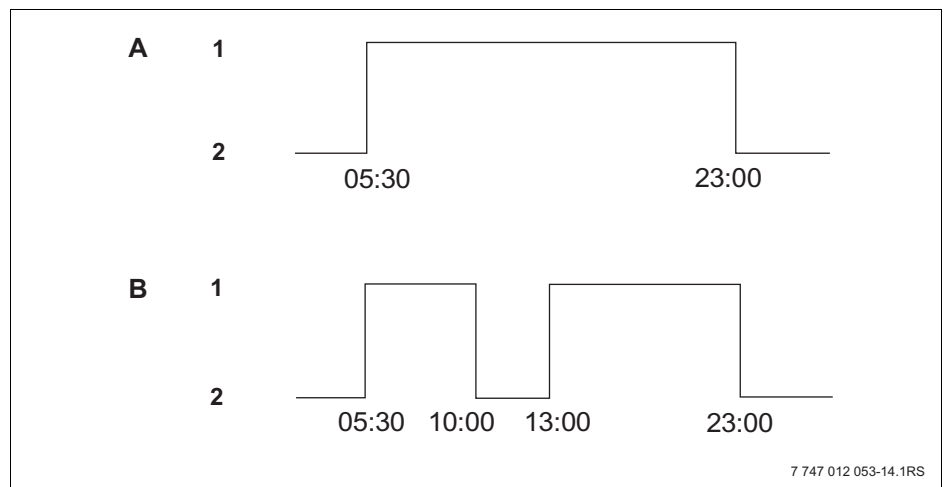
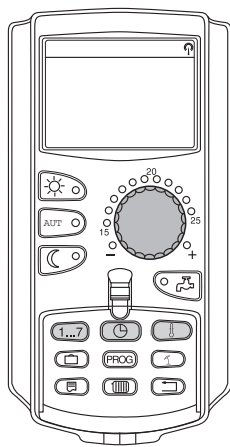


Fig. 16 Inserting switching points to interrupt a heating phase

A "Family program"

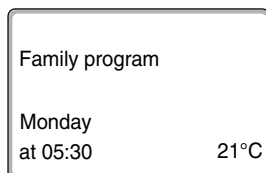
B New program "Own program 2"

1 Day mode

2 Night mode

- Select a heating circuit (→ Chapter 7.6).
Example: Heating circ. 2
- Select the standard program for the chosen heating circuit (→ Chapter 7.10).
(here: "Program select. Family")

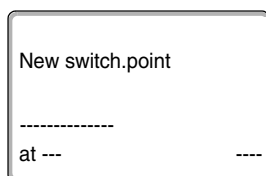
Release the "Prog" key to activate the selected standard program (here: "Family program").



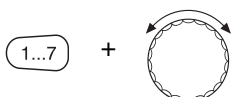
The display shows the selected standard program.



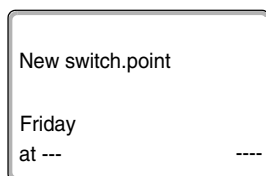
Turn the rotary selector once anti-clockwise, until "New switch.point" is displayed.



The display shows the blank mask "New switch.point" for the new switching point.



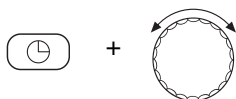
Hold down "Weekday" and turn the rotary selector to the required day (here: "Friday").



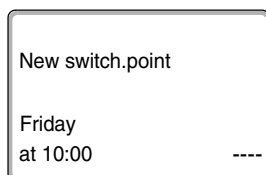
You can select days individually or in blocks:

- Monday – Thursday
- Monday – Friday
- Saturday – Sunday
- Monday – Sunday

Release the "Weekday" key to store your input.

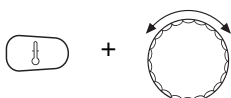


Hold "Time" down, and select the required time with the rotary selector (here: "10:00").

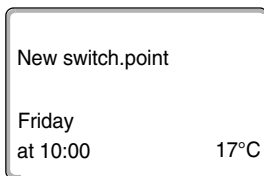


"Friday at 10:00" is now set as the new switching point.

Release "Time" to save your input.



Hold "Temp" down, and select the required temperature with the rotary selector (here: "17°C").



The display shows the set value.

Release the "Temp" key to save your input.



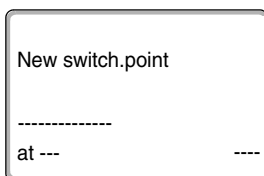
USER NOTE

You cannot just enter an arbitrary temperature here. The factory-set day and night setback temperatures are available, which can be modified (→ Chapter 6.4).



USER NOTE

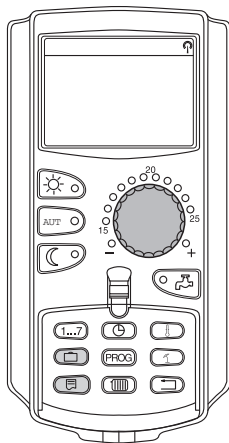
Only after all three details (day/time/temperature) have been defined for the new switching point will it be automatically saved under "Own program" and the heating circuit number (here: "2"). This saving is not shown on the display. The display shows the blank screen "New switch.point" for the next switching point.



To enter the next switching point (e. g. Friday, 13:00, 21 °C), repeat the procedure detailed above.



Press "Back" to return to the permanent display.



8.1.2 Deleting switching points

Example:

The switching point "Monday 22:00" is to be deleted from the "Family program" for heating circuit 2.

Your modified program will be saved under the program name "Own" with the number of the heating circuit concerned.

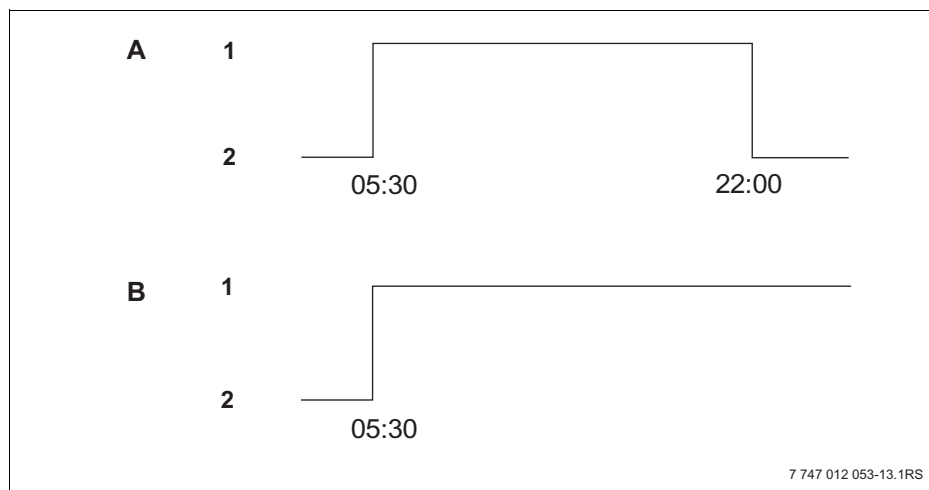


Fig. 17 Deleting a switching point

A "Family program"

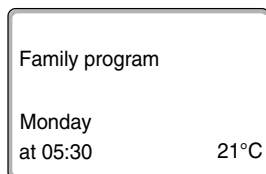
B New program "Own program 2"

1 Day mode

2 Night mode

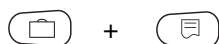
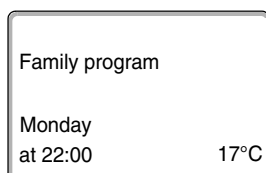
- Select a heating circuit (→ Chapter 7.6).
Example: Heating circ. 2
- Select the standard program for the chosen heating circuit (→ Chapter 7.10).
Example: Family program

The first switching point (start point): "Monday at 05:30" at "21°C" will be displayed.

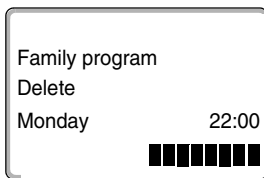


Turn the rotary selector to the switching point you want to delete (here: "22:00").

The switching point to be deleted is displayed.



Simultaneously press and hold "Display" and "Holiday".



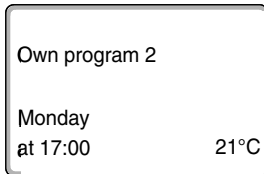
The bottom line shows eight blocks that are deleted from left to right in intervals of one second. The switching point has been deleted when all the blocks have been erased.

The deleting process is terminated if you release the keys before the blocks are erased.

Simultaneously release "Holiday" and "Display" to save your input.

The display shows the next switching point.

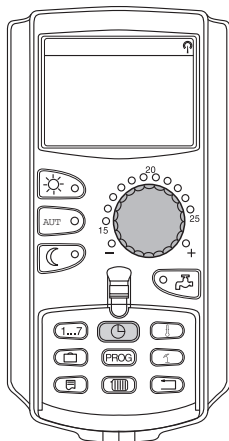
The new program that has been modified by the deletion will be saved under "Own program" and the relevant heating circuit number (here: "2").



You can call up your new program by pressing "Prog" and turning the rotary selector (→ Chapter 7.10).

Press "Back" to return to the permanent display.





8.1.3 Deleting a heating phase

A heating phase consists of two switching points: a start and a stop point. If you wish to delete a heating phase, both switching points must be deleted.

Example:

In the "Midday program", the heating phase on Monday from 11:30 to 13:00 is to be deleted for heating circuit 2, to create a heating pause between 08:00 and 17:00.

Your modified program will be saved under the program name "Own" and the number of the heating circuit concerned.

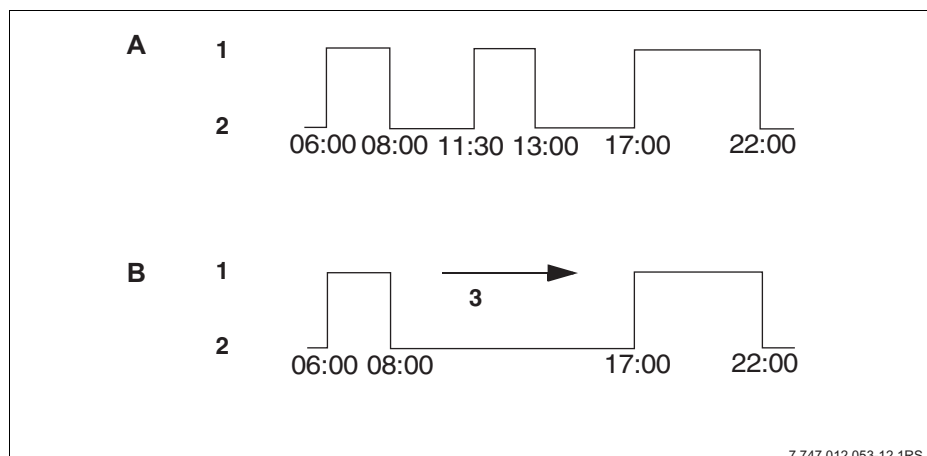


Fig. 18 Deleting a heating phase

A "Midday program"

B New program "Own program 2"

1 Day mode

2 Night mode

3 Delete

- Select a heating circuit (→ Chapter 7.6).

Example: "Heating circ. 2"

- Select the standard program for the chosen heating circuit (→ Chapter 7.10).

Example: "Midday program"

The first switching point (start point): "Monday at 06:00" at "21°C" will be displayed. The displayed temperature depends on the set room temperature.

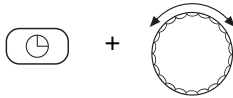
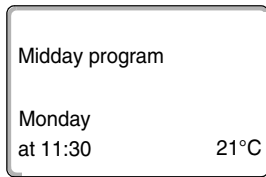
Midday program

Monday
at 06:00

21°C



Turn the rotary selector to the start point of the heating phase you want to delete (here: "11:30").



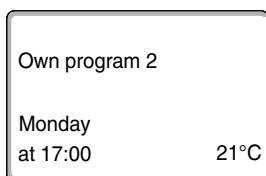
Hold down "Time" and turn the rotary selector to the stop point of the heating phase you want to delete (here: "13:00").



If you have selected the stop switching point of the heating phase you want to delete, the bottom line will show eight blocks that are deleted from left to right in intervals of one second. The heating phase will have been deleted when all the blocks have been erased.

The deleting process will be terminated if you release the "Time" key prematurely or turn the rotary selector back. In that case all switching points for the heating phase remain active.

Release "Time" to save your input.



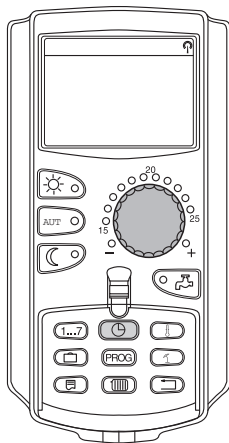
The display shows the next switching point.

The new program that has been modified by the deletion will be saved under "Own program" and the relevant heating circuit number (here: "2").

You can call up your new program by pressing "Prog" and turning the rotary selector (→ Chapter 7.10).



Press "Back" to return to the permanent display.



8.1.4 Connecting heating phases

A heating phase consists of two switching points: a start and a stop point. To connect two consecutive heating phases, place the stop point of the first heating phase on the start point of the next phase.

Example:

Starting from the standard "Midday program" for heating circuit 2, you want to join the Monday heating phase from 11:30 to 13:00 to the heating phase from 17:00 to 22:00. In other words you want to heat continually from 11:30 until 22:00.

Your modified program will be saved under the program name "Own" and the number of the heating circuit concerned.

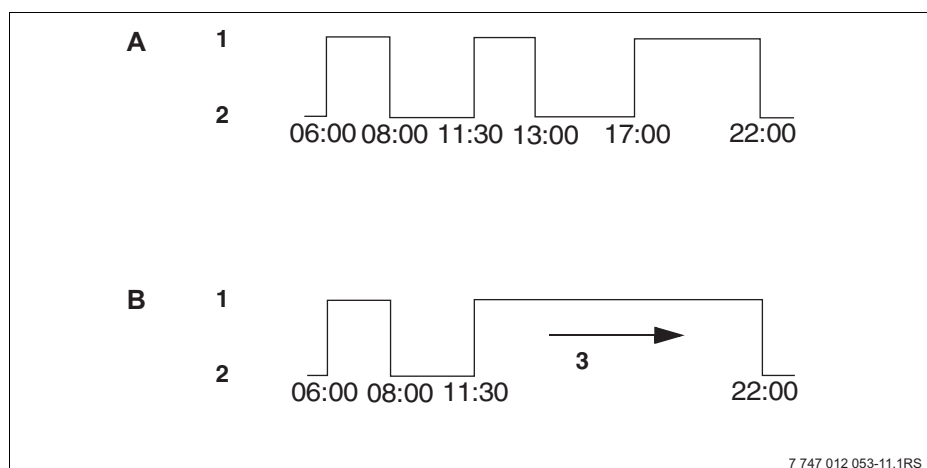


Fig. 19 Connecting two heating phases

A "Midday program"

B New program "Own program 2"

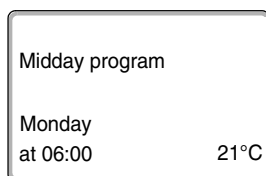
1 Day mode

2 Night mode

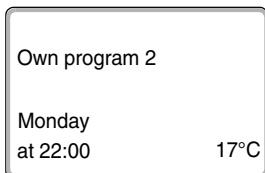
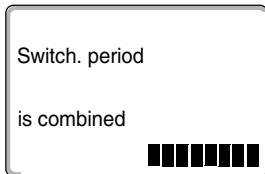
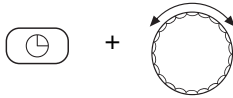
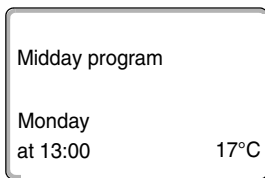
3 Turn from 13:00 to 17:00

- Select a heating circuit (→ Chapter 7.6).
Example: Heating circ. 2
- Select the standard program for the chosen heating circuit (→ Chapter 7.10).
(here: "Midday program")

The first switching point (start point): "Monday at 06:00" at "21°C" will be displayed.



Turn the rotary selector to the stop point of the first heating phase you want to connect with another (here: "13:00").



The display shows the stop point which should be connected.

Hold down "Time" and turn the rotary selector clockwise, until the start point of the second heating phase, i.e. the next consecutive heating phase, is displayed, which you wish to combine with the first heating phase (here: "17:00").

If you have selected the start time of the next consecutive heating phase, the bottom line will show eight blocks, which are deleted from left to right in intervals of one second. When all the blocks have been erased, both heating phases have been combined.

The deleting process will be terminated if you release the "Time" key prematurely or turn the rotary selector back. In that case all switching points for the heating phase remain active.

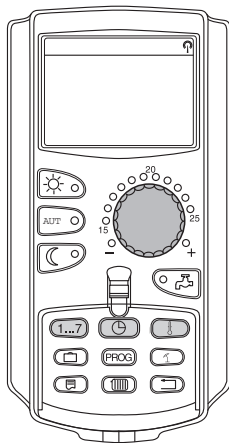
Release "Time" to save your input.

The new program that has been modified by the connection process will be saved under "Own program" and the relevant heating circuit number (here: "2").

You can call up your new program by pressing "Prog" and turning the rotary selector (→ Chapter 7.10).

Press "Back" to return to the permanent display.

8.2 Creating a new heating program



You may enter up to 42 switching points per week and heating circuit to create a new heating program. A single switching point comprises three details: weekday, time and temperature.

The newly created program will be saved under "Own program" and the appropriate heating circuit number.

Example:

Monday – Friday,
from 05:00 21 °C, from 21:00 17 °C

Saturday – Sunday,
from 09:30 21 °C, from 23:30 17 °C

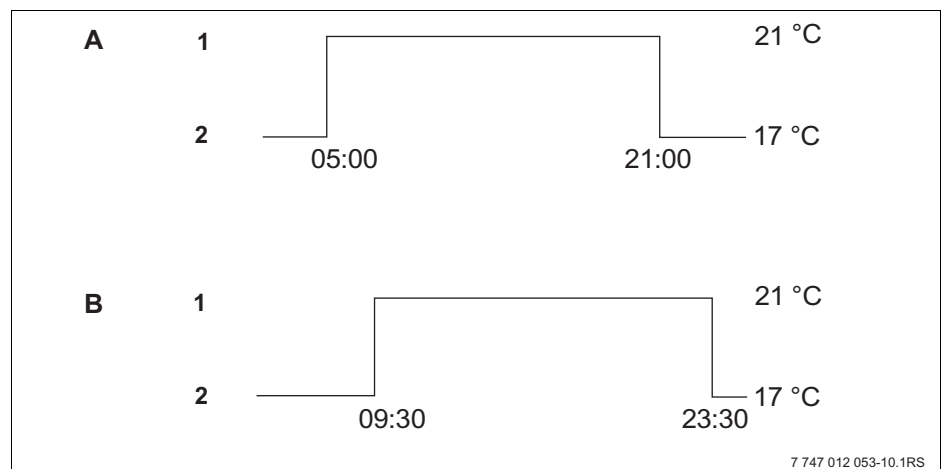


Fig. 20 New heating program

A New heating program "Own program 2"
Monday – Friday

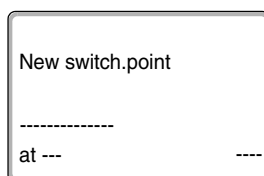
B Saturday – Sunday

1 Day mode

2 Night mode

- Select a heating circuit (→ Chapter 7.6).
Example: Heating circ. 2
- Select the standard program "Program select. new" for this heating circuit (→ Chapter 7.10).

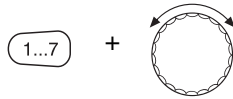
The display shows the blank mask "New switch.point".



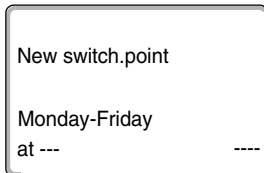
Entering the first switching point (Monday – Friday, 05:00, 21 °C)

You can select days individually or in blocks:

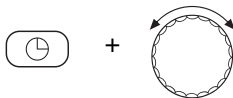
- Monday – Thursday
- Monday – Friday
- Saturday – Sunday
- Monday – Sunday



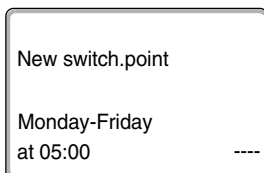
Hold down "Weekday" and select the required date or block with the rotary selector (here: "Monday-Friday").



Release "Weekday" to save your input.

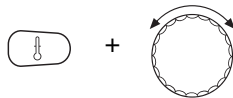


Hold "Time" down, and select the required time with the rotary selector (here: "05:00").

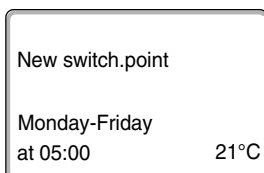


The display shows the new switching point.

Release "Time" to save your input.



Hold "Temp" down, and select the required temperature with the rotary selector (here: "21°C").



You cannot just enter an arbitrary temperature here. The factory-set day and night setback temperatures are available, which can be modified (→ Chapter 6.4).



Release the "Temp" key to save your input.



New switch.point

at --- ----

Only after all three details (day/time/temperature) have been set the new switching point will be automatically saved under "Own program" and the heating circuit number (here: "2"). The saving function is not visualised on the display. The display shows a blank screen "New switch.point" for the next switching point.

- Enter the second switching point (Monday – Friday, 21:00, 17 °C).
- Enter the third switching point (Saturday – Sunday, 09:30, 21 °C).
- Enter the fourth switching point (Saturday – Sunday, 23:30, 17 °C).

To enter the second to fourth switching points, you only need to repeat the previous steps.



Only after all switching points have been correctly entered, press "Back" to return to the permanent display.

Your heating program will now operate according to your "Own program". You can call up your new "Own program" by pressing "Prog" and turning the rotary selector.

8.3 Creating a new DHW program

You may operate DHW heating either according to the factory settings "Program select. by heat. circs" or according to your own new switching program "Program select. own DHW".



USER NOTE

With the factory setting "Program select. by heat. circs", DHW is heated 30 minutes prior to the first switching point of all heating circuits associated with this control unit, and ends when the last heating circuit is switched off.

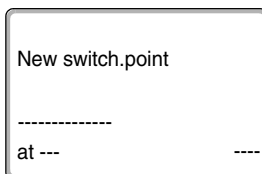
If your DHW is to be heated independently of the heating circuits, you can enter your own new DHW program as follows:

Example:

On all weekdays DHW should be heated from 06:30 until 09:00.

- Select a heating circuit (→ Chapter 7.6).
(here: "DHW")
- Select a program for the heating circuit "DHW" (→ Chapter 7.10).
(here: "Program select. new")

The display shows a blank screen "New switch.point" for the new switching point.



- Enter the switching points (→ Chapter 8.2).



USER NOTE

Only after all three details (day/time/temperature) have been defined the new switching point will be automatically saved under "Own program DHW" and the heating circuit selection "DHW". The saving function is not visualised on the display. The display shows a blank screen "New switch.point" for the next switching point. Repeat this process for all required switching points.

DHW heating will now operate according to your "Own program DHW". You can call up your new "Own program DHW" by pressing "Prog" and turning the rotary selector (→ Chapter 7.6).

8.4 Creating a new DHW circulation pump program

You may operate the DHW circulation pump either according to the factory settings "Program select. by heat. circs" or according to your own new switching program "Program select. own CP".



USER NOTE

With the factory setting "Program select. by heat. circs", the DHW circulation pump is run 30 minutes prior to the first switching point of all heating circuits associated with this control unit, and ends when the last heating circuit is switched off.

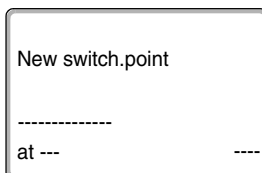
If your circulation pump is to work independently of the heating circuits, you can enter your own new DHW circulation pump program as follows:

Example:

The DHW circulation pump is to run on all weekdays from 06:30 to 09:00.

- Select a heating circuit (→ Chapter 7.6).
(here: "DHW circulation")
- Select a program for the heating circuit "DHW circulation" (→ Chapter 7.10).
(here: "Program select. new")

The display shows a blank screen "New switch.point" for the new switching point.



- Enter the switching points (→ Chapter 8.2).



USER NOTE

Only after all three details (day/time/temperature) have been defined the new switching point will be automatically saved under "Own program CP" and the heating circuit number "DHW circulation". The saving function is not visualised on the display. The display shows a blank screen "New switch.point" for the next switching point. Repeat this process for all required switching points.

Your DHW circulation pump will now operate according to your "Own program CP". You can call up your new "Own program CP" by pressing "Prog" and turning the rotary selector.

9 Modules and their functions

All modules are shown here that are or can be fitted in your Logamatic 4323 control unit.

		Control unit Logamatic 4323
Module	MEC2 programming unit	O
	CM431 controller module	O
	ZM433 central module Feed for external heat sources + heating circuit	O
	FM441 function module Heating circuit + DHW	X
	FM442 function module 2 heating circuits	X
	FM443 function module Solar circuit	X
	FM444 function module Alternative heat source	X
	FM445 function module LAP/LSP (primary system)	X
	FM446 function module EIB interface	X
	FM448 function module Central fault message	X
	FM456 function module Cascade - 2 wall mounted boilers	X ¹⁾
	FM457 function module Cascade - 4 wall mounted boilers	X ¹⁾
	FM458 function module Strategy module	X ¹⁾

Tab. 2 Standard equipment level and optional module equipment

¹⁾ May only be connected to the first control unit (address 0 or 1).

O = standard equipment level

X = Accessory

Along with the ZM433 central module, which is part of the standard equipment level of the Logamatic 4323 control unit, most function modules used, i.e. FM441 and FM442 function modules, will be described on the following pages.


The MEC2 preset menus in these operating instructions relate to these modules.

All other modules are explained in separate technical module documentation.

9.1 ZM433 central module (standard equipment level)

The ZM433 module regulates one feed pump to transfer heat, in the case of a heat demand, from external heat sources to the system. This module also controls one heating circuit with mixer.

The manual switches on the module are only provided for service and maintenance functions.

If the manual switches are not set to automatic, a corresponding message is displayed on the MEC2 programming unit, and the fault indicator  illuminates.



USER NOTE

Never use the manual switches to switch off the system when you have to temporarily leave the installation.

Use the holiday function for this purpose (→ Chapter 7.16).

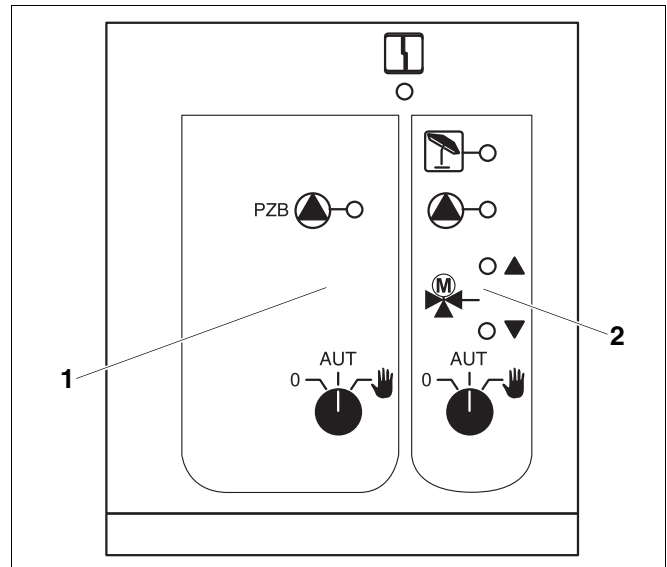







Fig. 21 ZM433 central module

1 Selecting a feed pump

2 Heating circuit with mixer

Display  General fault, e.g. on-site fault, sensor fault, external faults, wiring fault, internal module fault, manual mode. The fault messages are displayed as plain text on the MEC2 programming unit.

LEDs for the functions

Display		"Mixer opens" (hotter)
Display		"Mixer closes" (colder)
Display		Heating circuit in summer mode
Display		Feed or heating circuit pump runs


Feed function


Manual switch – feed pump
(→ Fig. 22, [1])




USER NOTE

The manual switch should normally be set to "AUT".

Positions **0** and  (manual mode) are special settings reserved for installers only.

- : The feed pump is switched on.
- AUT: The feed pump operates automatically.
- 0: The feed pump is switched off. The control functions continue to be active.


Heating circuit function


Manual heating circuit
switch for heating circuit 0  (→ Fig. 22, [2])



USER NOTE

The manual switch should normally be set to "AUT".

Positions **0** and  (manual mode) are special settings reserved for installers only.

- : The heating circuit pump is switched on. The mixer is switched volt-free and can be manually operated.
- AUT: The heating circuit operates in automatic mode.
- 0: The heating circuit pump is switched off. The mixer is switched volt-free. The control functions continue to be active.

Current functions are indicated by LEDs.

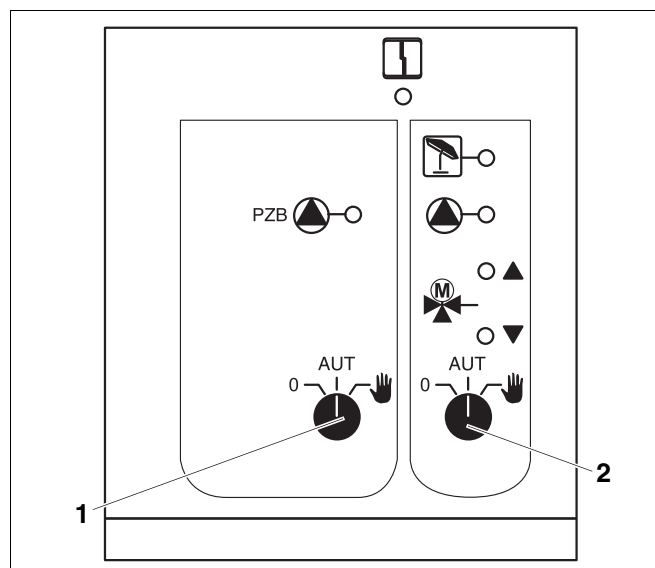



Fig. 22 ZM433 central module

- 1 Manual feed pump switch
- 2 Manual heating circuit switch

9.2 FM441 function module (accessory)

The FM441 module regulates one heating circuit and one DHW heating facility.

The manual switches on the module are only provided for service and maintenance functions.

If the manual switches are not set to automatic, a corresponding message is displayed on the MEC2 programming unit and the fault indicator  illuminates.



USER NOTE

Never use the manual switches to switch off the system when you have to temporarily leave the installation.

Use the holiday function for this purpose (→ Chapter 7.16).

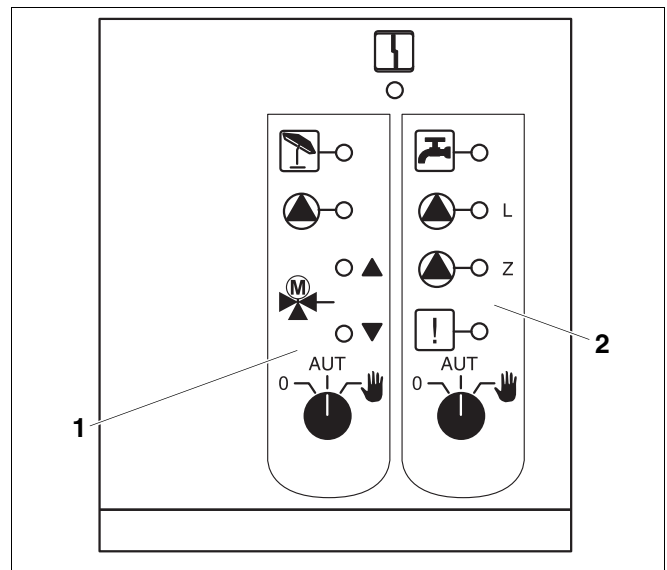











Fig. 23 FM441 function module

1 Heating circ.

2 DHW

Display  General fault, e.g. on-site fault, sensor fault, external faults, wiring fault, internal module fault, manual mode. The fault messages are displayed as plain text on the MEC2 programming unit.

LEDs for the following functions:

Display		"Mixer opens" (hotter)
Display		"Mixer closes" (colder)
Display		Heating circuit in summer mode
Display		DHW in night mode below the set temperature
Display		Heating circuit pump operational
Display	 – L	Cylinder primary pump active
Display	 – Z	DHW circulation pump active
Display		Thermal disinfection active

Heating circuit and DHW function

Manual heating circuit switch (→ Fig. 24, [1]) and DHW (→ Fig. 24, [2]):

for heating circuit:



for DHW supply:



USER NOTE

The manual switch should normally be set to "AUT".

Positions 0 and (manual) are special settings reserved for installers only.

- : The heating circuit pump or primary pump is switched on.
The mixer is switched volt-free and can be manually operated.
The DHW circulation pump is switched off.
- AUT: The heating circuit or the DHW circuit operates in automatic mode.
- 0: The heating circuit pump or the DHW cylinder primary pump as well as the DHW circulation pump are switched off.
The mixer is switched volt-free. The control functions continue to be active.

Current functions are indicated by LEDs.

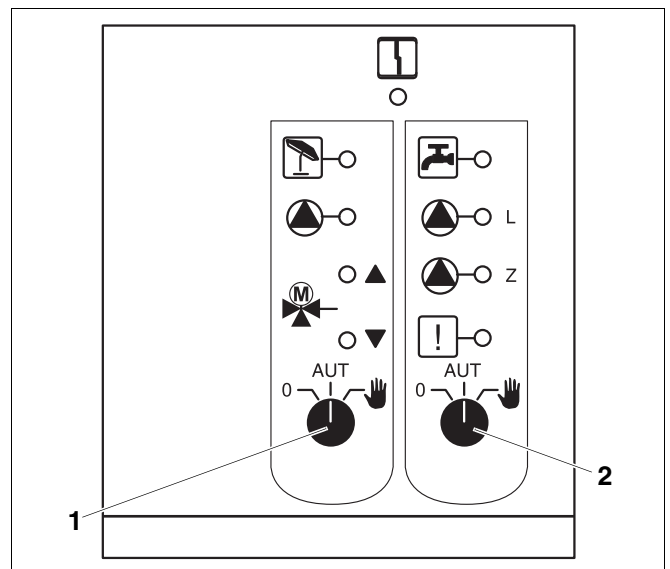


Fig. 24 FM441 function module


- 1 Manual heating circuit switch
- 2 Manual DHW switch

9.3 FM442 function module (accessory)

The FM442 module regulates two independent heating circuits with mixer.

Several FM442 modules can be utilised in your control unit.

The manual switches on the module are only provided for service and maintenance functions.

If the manual switches are not set to automatic, a corresponding message is displayed on the MEC2 programming unit, and the fault indicator  illuminates.




USER NOTE

Never use the manual switches to switch off the system when you have to temporarily leave the installation.

Use the holiday function for this purpose (→ Chapter 7.16).


Heating circuit function


Manual heating circuit switch  e.g. for heating circuit 1 or 2



USER NOTE

The manual switch should normally be set to "AUT".

Positions **0** and  (manual mode) are special settings reserved for installers only.

: The heating circuit pump is switched on. The mixer is switched volt-free and can be manually operated.

AUT: The heating circuit operates in automatic mode.

0: The heating circuit pump is switched off. The mixer is switched volt-free. The control functions continue to be active.

Current functions are indicated by LEDs.

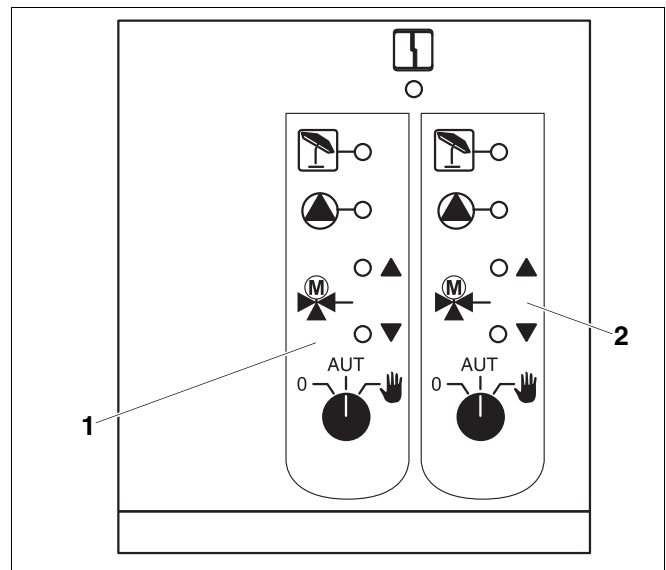


Fig. 25 FM442 function module

1 Heating circuit x

2 Heating circuit y

Display



General fault, e.g. on-site fault, sensor fault, external faults, wiring fault, internal module fault, manual mode. The fault messages are displayed as plain text on the MEC2 programming unit.

LEDs for the following functions:

Display



"Mixer opens" (hotter)

Display



"Mixer closes" (colder)

Display



Heating circuit in summer mode

Display



Heating circuit pump operational

10 Troubleshooting

Have your installer remedy all faults immediately.

All system faults are displayed on the MEC2 programming unit.

Report the fault by telephone to your installer.

Where necessary, set the module switches according to the instructions in Chapter 11.

Provided your control unit is equipped with the above modules, the following faults may be reported:

- Heating circuit x Flow sensor
- DHW DHW sensor
- DHW Stays cold
- DHW Thermal disinfection
- DHW DHW warning
- Heating circuit x Remote control
- Heating circuit x Communication
- Heating circuit x Fault mess. Pump
- Heating circuit x In manual mode
- BUS system ECO BUS has no reception
- BUS system No master
- BUS system Address conflict
- Address Conflict slot y
- Address Incorrect module slot y
- Address Unknown module slot y
- DHW Inert anode
- DHW Ext. fault input
- DHW In manual mode
- Substation Too little heat supply
- Substation Flow sensor

10.1 Simple troubleshooting

If no fault messages are displayed on the control unit in spite of cool rooms or cool DHW, there may be an incorrect setting.

Observation	Possible cause(s)	Remedy
Control unit is unilluminated or does not function	ON/OFF switch set to "OFF". No power supply.	ON/OFF switch set to "ON". Check main fuse. Heating system emergency stop switch set to "ON".
MEC2 unilluminated	MEC2 incorrectly plugged in (contact problems).	Plug in MEC2 correctly.
Room cool	The actual room temperature for the relevant heating circuit is incorrectly displayed.	Check the heating circuit assignment.
	The programming unit operates in setback mode.	Check time and heating program and modify if required.
	The set room temperature is too low.	Correct the set room temperature.
	The DHW supply runs too long.	Check DHW heating.
	Heat sources deliver insufficient heating energy or are shut down.	Check heat source.
	The room temperature sensor is incorrectly adjusted.	Sensor adjustment.
DHW cool	The DHW is set to the wrong temperature.	Correct the DHW temperature setting.
	The switching program is incorrectly set up.	Re-program the switching program.
DHW too cold (if DHW is heated by external heat source)	External heat sources supply insufficient heating energy.	Check heat source.

10.2 Troubleshooting

MEC2 message	Effect	Remedy
DHW stays cold	DHW is too cold.	Set DHW switch on module ZM424, FM441 or FM445 to manual. Notify your installer.
DHW stays cold (during DHW heating via Logamatic EMS)	DHW is too cold.	Notify your installer.
Remote control Fault	The programming unit works with the last values set on the MEC2 programming unit.	Notify your installer.
External sensor fault	The heating system may heat with higher temperatures to safeguard the DHW flow.	Notify your installer. Tell your installer which temperature sensor is faulty.
Flow sensor fault	It may get too hot.	If necessary, manually adjust the mixer. Notify your installer.
Heating circuit x communication Fault	No communication between the BFU of heating circuit x and the control unit.	Remote control may be faulty. Notify your installer.
DHW sensor fault	If the DHW sensor is faulty, water will not be heated for safety reasons.	Notify your installer.
Heating circuit x in manual mode	Depending on switch positions, pumps, servomotors etc. will be operated manually.	The switch was set to manual (for maintenance or troubleshooting). Return the manual switch to "AUT" after the fault has been remedied.
Substation flow sensor fault	Possible over or under supply.	Notify your installer.
Substation Too little heat supply Fault	Heating circuit x has insufficient supply. A DHW circuit is not being heated.	The external heat source must supply more or sufficient heat.

11 Operation in the event of a fault



RISK TO LIFE

from electric shock!

WARNING!

- Never open the control unit.
- In an emergency, switch off the control unit (e.g. with the heating system emergency stop) or isolate the heating system from the mains supply by removing the fuse.
- Arrange for your installer to rectify any heating system faults immediately.




SYSTEM DAMAGE

If an underfloor heating system is installed: Before operating your heating system manually, check the temperature settings of the temperature limiter on the boiler. If the temperature is set incorrectly, the underfloor heating system could overheat.

CAUTION!

Manual switches are provided for manual mode on the programming unit and on the modules.

Each pump is activated in position . The mixers remain volt-free and can be manually adjusted.

11.1 Emergency mode

If the electronics fail, the control unit can operate in emergency mode. In emergency mode, all pumps continue to run and the mixers are volt-free. Mixers can be manually set. In such cases, notify your installer.

11.2 Heating with manual override


In most cases, faults are displayed on the MEC2 if they concern the control unit.

Please notify your installer of the fault displayed on the MEC. Your installer can provide rapid assistance in remedying these faults using the information you provide.

If you cannot immediately contact your installer, you may choose to select manual mode using the manual switch.

Manual mode Logamatic 4323 (ZM433 central module)


Before making any adjustments for manual mode, check the settings on the various modules for possible incorrect settings. If the control system indicates a fault you may temporarily run your heating system manually.

- Switch on the control unit via the ON/OFF switch.
- Set feed circuit (→ Fig. 26, [1]) via selector to manual .



USER NOTE

To prevent insufficient supply, check that the external heat generator can deliver sufficient heating energy, before operating the feed pump manually.

- Set heating circuit (→ Fig. 26, [2]) at selector to manual .



USER NOTE

To ensure operational reliability, mixer circuits must not be fully closed.

In case of faults, immediately notify your installer who will provide a professional service. Inform your installer of the fault message displayed on the MEC2.

Manually de-couple the heating circuit mixer and position towards hotter or colder, until the required room temperature has been achieved.

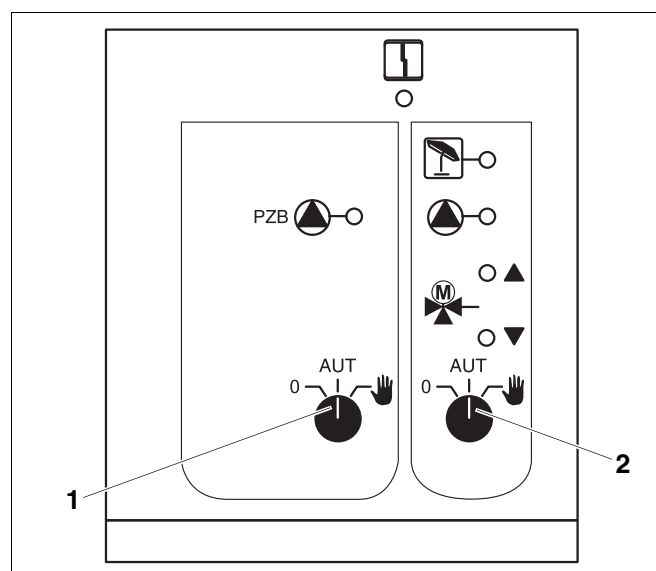



Fig. 26 ZM433 central module

- 1 Manual feed circuit switch
- 2 Manual switch – heating circuit 0

Manual mode FM441 and FM442 function modules (accessories)

As described on page 75 for the central module, you may also set the manual switches for DHW and/or heating circuits of these modules temporarily to  manual, should there be a fault.

For DHW observe the following: Before manually operating the primary pump on systems with external heat sources, ensure that the heat source can deliver sufficient heat, otherwise the DHW cylinder may cool down.


**RISK OF SCALDING**

from hot water!

WARNING!

- If water which is too hot is supplied by the primary pump to the DHW cylinder, never draw off DHW at the draw-off points without mixing in cold water.

Manual mode FM456 and FM457 function modules (accessories)

In case of a fault, you can switch off the heating circuit pump by setting the manual switch to , i.e. manual.

The boiler is switched to emergency mode, as described in the technical boiler documentation.

12 Setup report

Operating values	Input range	Factory setting	Setting
Program select.	Family Early Morning Late Evening Morning Afternoon Noon Single Seniors New	Family	
DHW	30 °C – 60 °C	60 °C	
Summer/wintertime changeover	10 °C – 30 °C constant summer constant winter	17 °C	
Day room temperature	11 °C – 30 °C	21 °C	
Night room temperature	2 °C – 29 °C	17 °C	
Holiday room temperature	10 °C – 30 °C	17 °C	
Thermal disinfection	Yes/No	No	

Assignment of heating circuits

As part of the commissioning process, your installer will assign the individual heating circuits of your heating system, e.g. heating circuit 1 = "l.h. side of ground floor".

Heating circ.	Allocation
Heating circ. 0	
Heating circ. 1	
Heating circ. 2	
Heating circ. 3	
Heating circ. 4	
Heating circ. 5	
Heating circ. 6	
Heating circ. 7	
Heating circ. 8	

13 Index

A

- Adjusted outside temperature 41
- Automatic 50
- Automatic mode 19, 20

B

- Boiler 5

C

- Central module 16, 66

D

- Day mode 9, 19, 21
- DHW circulation pump 44
- DHW cylinder 5
- Domestic hot water temperature 25

E

- Emergency mode 74

F

- Factory setting 63, 77
- Factory-set DHW temperature 24
- Fault displays 71
- Fault message "Setting not possible" 34
- Fault message "Time switch not possible" 34
- Fault messages 72
- Faults 71
- Feed function 67
- Feed pump 66
- Fitted modules 13
- Flow sensor 73
- FM441 68
- FM442 70
- Function modules 65

H

- Heating circuit 31, 32, 68
- Heating circuit and DHW function 69
- Heating circuit function 67
- Heating circuits, allocation 77
- Heating control 5
- Heating domestic hot water 24
- Heating phase 56
- Heating program 27, 35, 37
- Heating system emergency stop switch 16
- Holiday function 45
- Holiday mode 47
- Holiday program 45

I

- Instantaneous water heater 5

K

- Keypad 14

L

- Light emitting diodes 66, 68, 70

M

- Manual mode 19, 21, 75
- Manual switch 66
- Matching the room temperature 49
- Module equipment level 65
- Modules 65

N

- Night mode 9, 19, 21

O

- Operating values 28, 77
- Operation with faults 74

P

- Permanent display 18
- Pipework 5

R

- Radiators 5
- Radio clock receiver 30

S

- Set date 30
- Setting summer mode 42
- Setting the required room temperature 17, 22
- Setting the time 30
- Setting winter mode 42
- Setup report 77
- Standard program 37
- Standard settings 29
- Switching point 39

T

- Thermometer 49
- Thermostatic radiator valve 6
- Thermostatic valve 6
- Time switch 30, 35
- Troubleshooting 73

U

- Underfloor heating 74

Z

- ZM433 66

Buderus
Cotswold Way, Warndon, Worcester WR4 9SW
Customer service: 0870 421 5933
Technical support: 0870 421 5944
Fax: 01905 753130
www.buderus.co.uk

C & F Quadrant Ltd.
Unit L40 Cherry Orchard Industrial Estate
Cherry Orchard, Dublin 10
Tel.: 01.6305700
Fax.: 01.6305706 / 01.6305715
www.cfquadrant.ie
E-mail: sales@cfquadrant.ie

In the UK and IE, Buderus is a brand name of
Bosch Thermotechnology Ltd.

Bosch Thermotechnik GmbH
Sophienstrasse 30-32
D-35576 Wetzlar
www.buderus.de
info@buderus.de

Buderus