



Synco™ 700
Heating Controller RMH760B
Boiler Sequence Controller RMK770
Operating Instructions

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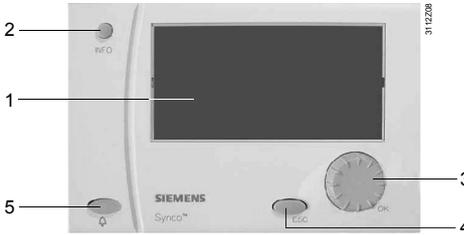
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Note that these Operating Instructions cover all settings and readings of the RMH760B heating controller and the RMK770 boiler sequence controller accessible by the user. However, depending on the type of plant, not all functions are necessarily active. In case of doubt, please contact your heating engineer.

The operating elements



Plug-in type operator unit



Detached operator unit

1 Display

2 INFO button

Function 1: Display of key plant data

Function 2: Display of information about the individual data points on the current menu

3 OK select-and-press knob

Turn: Selection of menu option or adjustment of value

Press: Confirmation of menu option or setting

4 ESC button

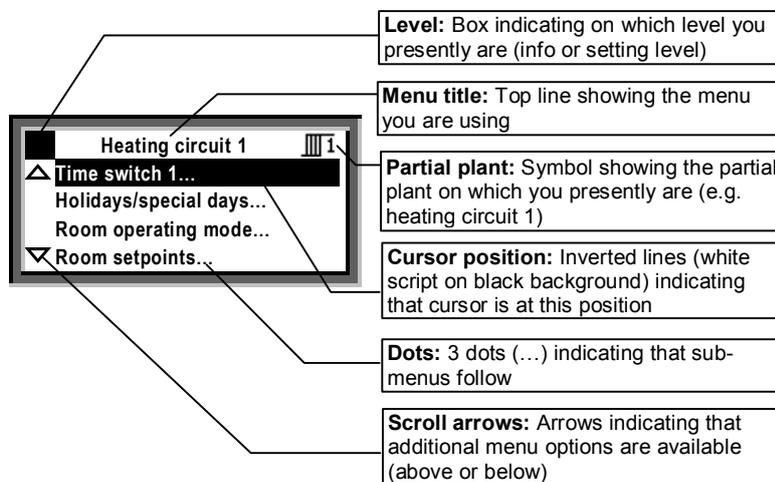
Returning to the previous menu

5 Fault button with LED

LED lit / flashes: Indication of fault

Press: Acknowledgement of fault or reset

The display



The display offers a number of presentation choices. The example given here shows a menu.

Other displays:

- Start display (welcome picture)
- Help displays
- Pop-up window (for settings)

The symbols appearing on the display

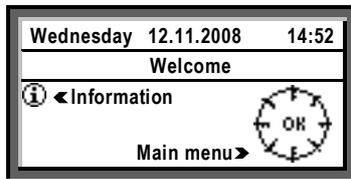
Symbol	Meaning	Symbol	Meaning
	Virtual operating mode selector (dot indicates the current operating mode)		Boiler (= boiler 1, etc., up to boiler 6)
	Automatic operation according to the time program		Protection for DHW
	Room operating mode Comfort		Time switch for DHW heating
	Room operating mode Precomfort		Time switch for the circulating pump
	Room operating mode Economy		Fault
	Protection (frost protection)		Info level – display of key values
	Heating circuit (= heating circuit 1, etc.)		Setting level – display and adjustments
	Time switch		Holidays
	Primary controller		Special day
	Main controller		Trend 1
	DHW heating		Meter 1
	DHW heating to the normal setpoint		Please wait – controller is working
	DHW heating to the reduced setpoint		Adjusted value
	Boiler sequence		Help display – information about the selected data point

Navigating through the menu

Introduction

These Operating Instructions assist you in operating the controller in all standard situations (Do you want ..., etc.). The Operating Instructions always give you the **Path** you need to follow the menu in order to reach the relevant function – from start display to the adjustable value.

Start display:

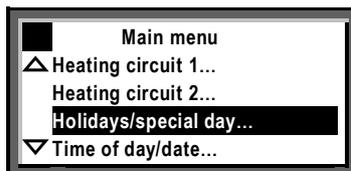


Start display

When not operated, the display always shows the start display – unless a fault has occurred.

1. **Press** the OK knob:
The list of menus appears.

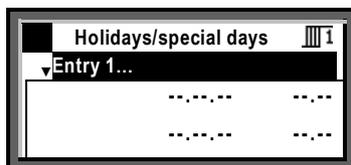
Main menu:



Main menu

2. **Turn** the OK knob: The cursor advances from one line to the next.
3. The selected line appears with a black background and inverse text.
4. Select the required line.
5. Confirm your choice by **pressing** the OK knob.

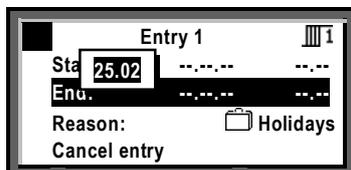
Submenu:



Submenu

6. Now, you are on the submenus.
7. The 3 dots (...) after the text indicate that additional submenus follow.
8. Follow the indicated path by turning the OK knob to find the option, then push the knob to confirm.
9. At the end of the path you will reach the adjustable value.

Setting the numerical value:



Setting the numerical value

10. The numerical value appears as a pop-up window.
11. Adjust the value by turning the OK knob.
12. Then, confirm by pressing the knob.
13. The cursor now advances to the next value to be adjusted, or returns to the data point if there is no other value to be adjusted.
14. By pressing the ESC button, you return to the entry box or menu choice you have previously quit.
15. Pressing the ESC button several times takes you back to the start display.

*With the majority of menus, you can display information about the option currently selected.
For that, press the INFO button.*

Do you want to start heating your rooms now?

Prerequisites

Prerequisites for switching the heating on for the first time are commissioning of the plant by your heating engineer, power (mains switch on), and availability of fuel.

Then, the plant will be ready to operate. Now, from submenu **Preselection**, select room operating mode **Auto**.

If your plant includes several heating circuits, you can select room operating mode **Auto** for every heating circuit separately.

Room operating mode **Auto**

In **Auto** mode, your controller automatically maintains the required room temperature during every phase of the 24-hour heating program. It operates according to the selected heating program, gives consideration to the holidays and special days entered and controls the heating such that heat will be delivered only when required.

Path: Main menu > Heating circuit ... > Room operating mode > Preselection

Do you want to heat according to the heating program?

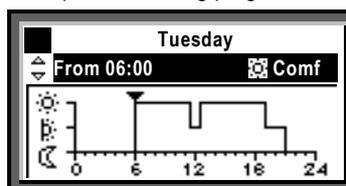
In room operating mode , the controller operates according to the selected heating program.

Heating program

The heating program contains the start time and the associated room operating mode (room setpoint) for all phases of the 24-hour heating program. The heating program has been entered for you. If you wish, you can change the entries made to satisfy your personal needs.

If your plant comprises several heating circuits, you can select the heating program for every heating circuit separately (e.g. path: ... > **Heating circuit 2** > ...).

Example of a heating program:



From 06:00: Comfort mode
From 11:30: Precomfort mode
From 12:30: Comfort mode
From 19:00: Precomfort mode
From 21:00: Economy mode

Please note that the heating program does not contain switching times but periods of time for the required temperature levels. The switching times are calculated by the controller's optimization function!

Do you want to change the daily heating periods?

General information about the heating program

In the heating program, you can set the daily heating periods to suit your individual needs. Each day can accommodate a maximum of 6 switching points; a room setpoint must be assigned to each heating period.

In addition to the weekdays (Monday through Sunday), you can program a special day, that is, a special 24-hour heating program.

The special day will be activated when you make an entry on the **Holidays/special days** menu ( page 9).

If your plant comprises several heating circuits, you can set the heating program for every heating circuit separately (e.g. path: ... > **Time switch 2** > ...).

Changes on the controller can be made only if the heating program is predefined by the time switch in the controller. Otherwise, it is an external operator station.

Prior to making entries, please observe

- First, always enter the start time of the heating period, then the room operating mode of that period
- You have room operating modes , , and  to choose from. Adjust the associated setpoints on the **Room setpoints** menu ( page 7)
- You can copy any 24-hour heating program to other days

Changing and canceling times and setpoints

1. Select the required day.
2. In the diagram, advance pointer  to the point in time to be changed.
3. Set the required time.
Canceling the time: Reset the time via 00:00 until -- :-- appears.
4. Select the required setpoint.
5. If required, set additional times and select additional setpoints.

Path: **Main menu** > **Heating circuit ...** > **Time switch ...**

Entering additional heating periods

1. Select the required day.
2. In the diagram, advance pointer  to the **last** point in time of the current program.
3. Turn the OK knob by one notch; --:-- ----- appears.
4. Set the required start time.
5. Select the required room operating mode.

Copying a 24-hour heating program

1. Select the day to be copied.
2. Turn the OK knob in clockwise direction until **Copy to:** appears.
3. Press the OK knob.
4. The menu with the selection of days (week section, individual weekdays, special day) appears.
5. Select the required weekday or week section.
6. Copy (press the OK knob).

New 24-hour program

The controller is supplied with a 24-hour program for every day (including the special day). This means that you will never have to create a new 24-hour program, but only change an existing program.

Power off – heating program lost?

In the event of a power failure, the 24-hour programs entered will be maintained, independent of the duration of the power failure.

First, prepare a 7-day schedule for the daily heating periods and setpoints – this will facilitate entry into the controller!

You don't want to heat according to the heating program

Other room operating modes

If you do not want to heat according to the heating program, select one of the following room operating modes from menu option **Preselection**:

	Comfort	Continuously heating to the Comfort setpoint
	Precomfort	Continuously heating to the Precomfort setpoint
	Economy	Continuously heating to the Economy setpoint
	Protection	No heating, unless there is risk of frost

Setpoints

The setpoints assigned to the room operating modes use the same symbols and designations.

Impact of continuous operation

In continuous operation, demand-dependent control of the heating (automatic heating limit) and the holidays and special days entered are inactive!

If your plant comprises several heating circuits, you can select the heating program for every heating circuit separately (e.g. path: ... > **Heating circuit 2** > ...).

Path: **Main menu > Heating circuit ... > Room operating mode > Preselection**

*If you only want to heat temporarily in one of the continuous operating modes, don't forget to return to **AUTO** mode in due time.*

What room temperature can you set?

Your heating controller offers 4 room operating modes. A room setpoint is assigned to each room operating mode. Each setpoint is adjustable. Your controller changes the setpoints according to a time schedule (heating program,  page 6), or provides continuous heating operation to the setpoint of the selected room operating mode.

If your plant comprises several heating circuits, you can adjust the setpoints for every heating circuit separately (e.g. path: ... > **Heating circuit 2** > ...).

The following setpoints are available. The default values represent the recommended setpoints.

Symbol	Setpoint	Impact on the room?	Guide value
	Comfort	This is the setpoint for the occupied space. It ensures comfortable conditions	21 °C
	Precomfort	This is the energy saving setpoint for the space to ensure that comfortable conditions will be reached quickly when changing to Comfort mode	19 °C
	Economy	This is the energy saving setpoint for the space for longer periods of time (e.g. during the night) when no Comfort setpoint is required	16 °C
	Protection	A minimum room temperature is ensured to protect the space against damage due to frost	10 °C

Path: **Main menu > Heating circuit ... > Room setpoints**

Is the room temperature too high or too low?

Before you make readjustments...

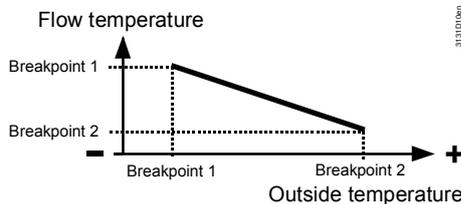
If the current room temperature is too high or too low, check the room operating mode. Temporary deviations can always occur, depending on the current operating state. Check to find out if the room temperature varies depending on the outside temperature or if it is always too high or too low.

Does the room temperature vary depending on the outside temperature?

If that is the case, proceed as follows:

1. Find out in which climatic conditions the room temperature is not right.
2. On the **Heating curve** submenu, readjust the setting to the relevant situation in accordance with the adjacent table.
3. After the readjustment, wait 1 to 2 days, allowing the control to settle.
4. Another readjustment may be required.

The room temperature...	Readjust as follows:
... is too high in cold weather	Lower the value [Breakpoint 1] flow temp
... is too low in cold weather	Raise the value [Breakpoint 1] flow temp
... is too high in mild weather	Lower the value [Breakpoint 2] flow temp
... is too low in mild weather	Raise the value [Breakpoint 2] flow temp



Path: **Main menu > Heating circuit ... > Heating curve**

Do you want to display the current operating state of the heating circuit?

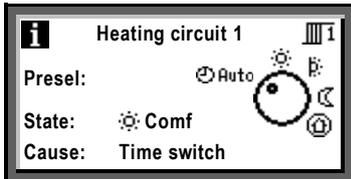
If, during automatic heating operation, you want to know your plant's current operating state (the room operating mode), go to the Info level:

1. Return to the start display by pressing the ESC button.
2. Press the INFO button.
3. Turn the OK knob until the required page appears.

If your plant comprises several heating circuits, you can have your plant's operating state displayed for every heating circuit (turn the OK knob until the desired heating circuit appears).

In the same way, you can have the DHW circuit displayed (if present), as well as other data.

The room operating state is displayed as follows:



Meaning:

Preselection

This is the selected room operating mode.

In the example shown, the virtual operating mode selector is set to Auto.

State

This is the current state.

In the example shown, the Comfort setpoint is maintained.

Cause

Here, the cause for the current state is given. Possible reasons:

- Operating mode contact (manual changeover)
- Operating mode selector (manual changeover)
- Special day
- Holidays
- Time switch of the time program (in the example shown)

Do you want to start DHW heating?

(Only with RMH760B)

Prerequisites

The heating plant must be commissioned by the heating engineer.

When the preconditions are met, DHW heating is ready to be started. Select menu option **Preselection** and then select operating mode Auto. This is the recommended and energy-saving operating mode.

The following choices are available:

Symbol	Operating mode	Impact on the DHW circuit?	Guide value
	Automatic	The DHW temperature changes according to the DHW time program, from normal temperature to reduced temperature, or vice versa	
	Normal	The DHW is maintained at the normal temperature	55 °C
	Reduced	The DHW is maintained at the reduced temperature	40 °C
	Protection	No DHW heating: The plant remains protected against frost however	5 °C

Path: **Main menu > DHW > DHW optg mode > Preselection**

Is the DHW too hot or too cold?

(Only with RMH760B)

For the DHW temperature, you have 3 setpoint choices:

- Normal setpoint to ensure the high temperature level required for washing, bathing and showering
- Reduced setpoint to save energy
- Frost protection setpoint at a minimum temperature level to prevent freeze up of plant

Adjust the required setpoint on the **Setpoints** submenu.

When making the settings, observe that ...

- extremely hot DHW can lead to scalding!
- extremely hot DHW produces scale on the storage tank and / or the heat exchanger, the thermostat, the piping and the valves!

For this reason, make certain that the normal DHW temperature will not exceed 55 °C.

Path for plant **without** consumer control: **Main menu > DHW > Setpoints**

Path for plant **with** consumer control: **Main menu > DHW > Setpoints consumers**

To kill legionella viruses, the DHW can be periodically heated up. This takes place automatically and there is no need for you to make specific settings.

All that is required is that your heating engineer has activated the function.

Do you want to change the DHW time program?

(Only with RMH760B)

Time program of DHW heating

Similar to space heating, the DHW is heated according to a certain time schedule. The change between normal and reduced temperature takes place automatically.

You can adopt the factory-set time program, but here too, individual settings can be made.

The DHW time program can be changed the same way as the space heating program:

From the **DHW time switch** submenu, select the weekday, then the start time of the heating period, and then the assigned setpoint.

Here too, it is possible to copy a 24-hour program to other days.

Time program of the circulating pump

The same way – if you wish – you can change the time program for activating the circulating pump.

Make the entries on submenu **Circ pump time switch**.

Here too, prerequisite is that your controller controls DHW heating autonomously. In interconnected plant, the time program can be preset from an external location.

Path: Main menu > DHW > DHW time switch

Path: Main menu > DHW > Circ pump time switch

Do you want to readjust the time of day or the date?

Time of day / date

All data of the yearly time switch in your controller were entered when your plant was commissioned.

If readjustments are required, use the **Time of day/date** menu.

Summer- and wintertime

The same is true if you need to readjust the dates for the start of summer- and wintertime.

Note: Do not enter the actual dates of changeover but the earliest possible dates for the start of summertime and wintertime in accordance with international standards!

The **Time of day/date** menu includes:

- Time of day (e.g. 09:53)
- Date (e.g. 25.07)
- Year (e.g. 2008)
- Summertime start (e.g. 25.03.)
- Wintertime start (e.g. 25.10.)

Path: Main menu > Time of day/date

The change from wintertime to summertime, or vice versa, is automatic!

Do you want to enter holiday periods?

You can enter a total of 16 holiday periods and special days (see next section). During a holiday period, there is no heating program active but only the same room operating mode.

Date

On submenus **Entry 1**, **Entry 2**, **Entry 3**, etc., you need to enter for each holiday period:

- Menu option **Start**: Date, year and time of day of the first day of the holiday period
- Menu option **End**: Date, year and time of day of the last day of the holiday period
- Menu option **Reason**: The holidays

Every entry can be deleted (menu option **Cancel entry**).

Room operating mode

Enter the required room operating mode with menu option **Holidays-room operating mode**. Available are Economy  or Protection . The entry will apply to all holiday periods.

DHW heating operating mode

If your controller also controls DHW heating, you need to enter the required operating mode. You find it with menu option **DHW optg mod holid**.

The following operating modes are available:  Auto Automatic,  Normal,  Reduced,  Protection.

Paths: Main menu > Heating circuit ... > Holidays/special days > Entry ...
Main menu > Heating circuit ... > Room operating mode > Rm optg mode holid

Paths for **RMH760B**: Main menu > DHW > Holidays/special days > Entry ...
Main menu > DHW > DHW operating mode > DHW optg mode holid

Do you want to enter special days?

You can enter a total of 16 special days and holiday periods. During special days, the normal heating program for space heating is not active, but a special program.

Date

On submenus **Entry 1**, **Entry 2**, **Entry 3**, etc., you need to enter for each special day:

- Menu option **Start**: Date, year and time of day of the special day
- Menu option **End**:
For 1 special day: Confirm the data that appear in the pop-up window.
For 2 or more successive special days: Date, year and time of day of the last special day
- Menu option **Reason**: Special day

Path: Main menu > Heating circuit ... > Holidays/special days > Entry ...

Path for **RMH760B**: Main menu > DHW > Holidays/special days > Entry ...

Every entry can be deleted (menu option **Cancel entry**).

Heating program

Enter the heating program for special days on the **Time switch 1** menu (☞ page 6). It will apply to all special days. If required, also set **Time switch 2** or 3.

DHW heating

If your controller also controls DHW heating, you can also enter the following:

- DHW time program for special days, on the **DHW time switch** menu (☞ page 9)
- Time program for circulating pump on special days; on the **Circ pump time switch** menu (☞ page 9)

Do you want to have current plant data displayed?

If you are on the start display (welcome picture), you only need to press the **INFO** button and you will be on the Info level **I**. Here, you find the key plant data listed.

Please note: The display depends on the type of plant.

You cannot change any values here!

Now, turn the OK knob. This will take you from one Info page to the next.

The **ESC** button will take you straight back to the start display.

Starting on page 12 of these Operating Instructions, you will find useful explanations and notes on different types of plant data (chapter **I** Info pages).

Menu Data acquisition

Data queries are explained on ☞ page 10 based on the function **Data acquisition > Trend channel**.

You find the following data via the following paths:

Trend

Main menu > Data acquisition > Trend channel 1...4

Display of trend recordings of characteristics.

Meter

Main menu > Data acquisition > Meter 1...4

The meters are used to acquire consumption values. The current meter reading, the date and the reading of the last 15 months are displayed.

The names of the submenus used in these operating instructions may have been replaced by clear-text names as defined by your service engineer.

Do you want to display measured value trends

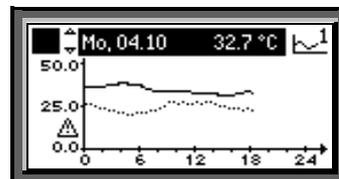
Data acquisition... allows you to display the progression of up to 4 measured values (**Trend channel 1...4**). This trend function shows measured value trends over the last 8 minutes, the last 8 hours, the last 24 hours or the last 6 days.

Display measured value trend:

1. Select the **Data acquisition...** menu.
2. Select the required **Trend channel 1...4** or the measured value in clear-text; the 24-hour view of the current day appears.

Navigate views:

1. Turn the OK knob counter clockwise to jump back the display by 1 day, and vice versa.
2. Starting with the current 24-hour view, you reach the view of the last 8 hours by turning the OK knob in clockwise direction. Turn the OK knob clockwise again and you reach the view of the last 8 minutes, turn counter clockwise to return.
3. Press the **ESC** button to go back to the previous menu. The measured value trend is presented as follows:



Path: Main menu > Data acquisition... > Trend channel 1...4

A fault has occurred

If a fault occurred in the plant, it will appear on the display; in addition, the LED inside the  button will flash or will be on. Proceed as follows:

LED flashes:

1. Press the  button to unlock.
2. If the LED keeps flashing, the fault still exists **or** the button must be pressed again to unlock.

LED lit:

1. Rectify the fault.
2. If the LED is still lit, the  button must be pressed again to unlock.
Unlocking is possible only after the cause of fault has been removed.

In the event of fault, refer to the tips given on page 11.
If you cannot rectify the fault, contact your heating engineer.

Additional information about the display of faults:

Menu Faults current

Here, you can see which faults are currently present. The following information about each fault is displayed:

- The cause (e.g. pump 1)
- The fault number (important for the heating engineer)
- Date and the time of day the fault first occurred

Menu Fault history

Here, each of the last 10 faults will be listed. The information given is the same as that provided with current faults.

Menu Fault status signal bus

If your plant includes several interconnected devices, faults of other controllers will be displayed on your controller.

Quick display of faults

If you keep the ESC button depressed for 2 seconds, the current fault will be displayed.

Path: **Main menu > Faults**

The following tips can help in the event problems occur

General

Before you call in your heating engineer, you should check the following:

- Is your plant switched on? Check main switch and all other switches
- Are all fuses of your plant in order?
- Is enough fuel in the tank?
- Have settings been changed by unauthorized persons? (Time of day, setpoints, etc.)
- Does a fault appear on the display?

The heating always maintains the same room temperature:

- Check the room operating mode (only  Auto lowers and raises the room temperature)
- Has the actuator been disconnected from the valve? Connect it!

The required room temperature is reached either too early or too late:

- Change the time program
- When the building is well insulated, it takes more time to cool down

The heat source does not operate any more:

- The burner has initiated lockout. Press the reset button!
- The heating circuit pump and / or the boiler pump does / do not operate. Check the fuses!
- The fuel tank is empty or the fuel pump does not operate

The heat source operates, but there is no supply of heat:

- Operate the heating valve manually

Saving energy without sacrificing comfort

- During the day, do not allow the room temperature to exceed 21 °C. Each additional degree increases heating costs by 6 to 7 %
- Guide values for room temperatures in living and working spaces:
 - During the day: Precomfort = 19 °C, Comfort = 20...22 °C
 - During the night: Economy = 14...18 °C
 - Longer nonoccupancy times, such as holiday periods: Protection = 10 °C.
Protect objects sensitive to low temperatures, such as plants!
- Air spaces for only short periods of time, with the windows fully open
- Set thermostatic radiator valves in unoccupied rooms to their frost protection position
- Closed shutters and blinds reduce heat losses

- Ensure that there are no curtains, furniture or other objects in front of the radiators. They reduce the emission of heat
- Check heat energy consumption at regular intervals

If your plant uses a room temperature sensor (or room unit), it should not be exposed to thermal disturbances since these have an impact on the control function. For this reason, following applies to the reference room where the sensor is located:

- Avoid drafts through open doors
- Avoid heat gains caused by people, machines, lighting, etc., near the sensor
- Ensure that air circulation near the sensor is not obstructed by curtains, furniture or other objects
- Set thermostatic radiator valves, if present, to their fully open position

Energy savings do not only conserve our natural resources, they also ensure active environmental protection!

Info page boiler sequence

(Only with RMK770)

To go to the **Info** page:

1. Return to the start page by pressing the ESC button.
2. Press the INFO button.
3. Turn the OK knob until the required page appears.

The state of the boiler sequence is displayed as follows:

Boiler sequence						
Addr no	1	2	3	4	5	6
Release:	✓	-	✓	✓	✓	✓
Burner:	1	-	1	m	2	1
Faults:			🔔			

Boiler address number

The boilers are numbered (max. 6). The lead boiler is highlighted.

Release

- ✓ = boiler released; it is switched on / off depending on the demand for heat from plant
- = boiler locked

Burner

- 1 = burner or first burner stage on
- 2 = second burner stage on
- m = burner modulates
- = burner off

Faults

Boiler faults are indicated by the 🔔 symbol. For general information about faults, refer to page 11.

Info pages boiler sequence manager

(Only with RMK770)

To go to the **Info** page:

1. Return to the start page by pressing the ESC button.
2. Press the INFO button.
3. Turn the OK knob until the required page appears.

State

- On = heat generation on
- Off = heat generation off

Cause

Here, the reason for the state of heat generation is given. It should be considered that the boiler sequence may be deactivated while the main pump is still running, e.g. due to frost protection or overtemperature protection.

Main flow temperature

- Actual value below the setpoint:
If the actual boiler temperature is lower than the setpoint for a longer period of time, additional boilers will be released. The time of release depends especially on the differential of these 2 values.
- Actual value above the setpoint:
If the actual value remains above the setpoint for a longer period of time, released boilers will be locked.

Return temperature

This is the temperature of the water returning to the boiler from the consumers (heating circuit, DHW circuit).

Info pages boiler / primary controller / main controller

To go to the **Info** pages:

1. Return to the start page by pressing the ESC button.
2. Press the INFO button.
3. Turn the OK knob until the required page appears.

Boilers 1...6

(1...6: Several boilers only with RMK770)

For each boiler installed, the display shows:

- The actual value of the boiler temperature
This is the current boiler temperature
- The boiler temperature setpoint
This is the boiler temperature called for by the plant.
- State:
Enabled = heat generation released
Off = heat generation locked
- Cause:
Here, the reason for the boiler's state is given (e.g. protective boiler startup is active).

Primary controller or main controller

(Main controller only with RMH760B)

- Actual value of the flow temperature:
This is the current temperature delivered by the heat exchanger / heat source
- Flow temperature setpoint:
This is the temperature called for by the plant
- State:
On = heat generation on
Off = heat generation off
- Cause:
Here, the reason for the controller's state is given (e.g. the frost protection function is active).

■ Other Info pages

To go to the **■** Info pages:

1. Return to the start page by pressing the ESC button.
2. Press the INFO button.
3. Turn the OK knob until the required page appears.

Time switch

For description of the time switch and its settings, refer to page 6.

Heating circuit

For description of the heating circuit and its settings, refer to page 5...7. The info pages contain:

- The actual value of the flow temperature
- The flow temperature setpoint
- State
- Cause
- The actual value of the room temperature (only if a room sensor is used)
- The room temperature setpoint
- The outside temperature (the details given in the following section "Display values" also apply here!)

Display values (only with RMK770)

The actual outside temperature is displayed provided the measured value is delivered. Other displays are possible (depending on the design of your plant).

Fault inputs (only with RMK770)

Fault status messages at the fault inputs are displayed only if configured.

Device state

Displays in the event of fault:

- Source of fault (e.g. **B1 pump**. B1 stands for boiler 1, B2 for boiler 2, etc.)
- Error code (important for the heating engineer)
- Date and time of day the fault occurred

Fault status message bus

If your plant includes several interconnected devices, your controller can also display faults of other controllers (depending on the configuration made).

■ Main menu boiler sequence manager

(Only with RMK770)

Menu Boiler sequence optg mode

- Preselection:
 - Auto** = automatic plant operation (normal situation)
 - Summer operation** = boilers will only be released for DHW heating
 - Off** = all boilers off; frost protection is ensured
- State:
 - On** = heat generation on
 - Off** = heat generation off
- Cause:

Here, the reason for the state of the boiler sequence is given.

Menu Inputs / setpoints

Displayed are the values acquired by the inputs and the associated setpoints and limit values.

Menu Outputs

Displayed are for each output the state and thus the operating state (on / off, open / closed) of the controlled plant component. If a plant component is not present, there will be no menu item either.

Menu Limitations

The current state of the limitations (**Active / Inactive**) is displayed (useful information for the heating engineer).

Path: Main menu > Boiler sequence manager

■ Main menu boilers (1...6)

(1...6: Several boilers only with RMK770)

Menu Flue gas measuring mode

Refer to page 14.

Menu Boiler operating mode

RMH760B:	RMK770:
Preselection: <ul style="list-style-type: none"> • Auto = automatic plant operation (normal situation) • Release DHW = boilers will only be released for DHW heating • Off = boiler locked; frost protection is ensured 	Preselection: <ul style="list-style-type: none"> • Auto = automatic plant operation (normal situation) • Off = boiler locked; frost protection is ensured
State: <ul style="list-style-type: none"> • Enabled = heat generation released • Off = heat generation locked 	
Cause: Here, the reason for the boiler's state is given	

Menu Inputs / setpoints

Displayed are the values acquired by the inputs and the associated setpoints and limit values. In addition, the hours run counter and the burner start counter can be read.

Menu Outputs

Displayed are for each output the state and thus the operating state (on / off, open / closed) of the controlled plant component. If a plant component is not present, there will be no menu item either.

Menu Limitations

The current state of the limitations (**Active / Inactive**) is displayed (useful information for the heating engineer).

Path: Main menu > Boiler ...

■ Main menu primary controller / main controller

(Main controller only with RMH760B)

Menu Plant operation

- Preselection:
 - On** = primary controller / main controller released
 - Off** = primary controller / main controller locked; valve closes; frost protection is ensured
- State:
 - On** = primary controller / main controller released; main flow temperature is controlled
 - Off** = primary controller / main controller locked; valve closes
- Cause:
 - Here, the reason for the controller's state is given

Menu Inputs / setpoints

Displayed are the values acquired by the inputs and the associated setpoints and limit values.

Menu Outputs

Displayed are for each output the state and thus the operating state (on / off, open / closed) of the controlled plant component. If a plant component is not present, there will be no menu item either.

Menu Limitations

The current state of the limitations (**Active / Inactive**) is displayed (useful information for the heating engineer).

Path: Main menu > Primary controller

Path: Main menu > Main controller

Flue gas measuring mode

To make a flue gas check, you can use the controller to switch the boiler to flue gas measuring mode, which includes:

Preselection

Switching on:

By selecting **On**, a setpoint of 90 °C or a maximum limit for the boiler is preset. The boiler pump or main pump runs.

Only with RMK770: The other boilers are switched off

Switching off:

By selecting **Off**, the flue gas measuring mode is terminated. Otherwise, it will automatically be deactivated after 30 minutes.

Flue gas measuring mode contact

If configured, the flue gas measuring mode can also be activated from a remote location.

The preselections are those described above.

Switching off:

Caution! Here, the flue gas measuring mode must be deactivated manually!

Release stage 2 / modulation

The 2nd stage or modulation can also be activated by entering **Yes**. The preselections are those described above.

Actual value of boiler temperature

During the flue gas measuring mode, the current boiler temperature is displayed.

Flue gas temperature

If configured, the current flue gas temperature is displayed.

Path: Main menu > Boiler... > Flue gas measuring mode