# **Operating Instructions**

Heating controller/
Room station RS-OT



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Heating controller/Room station RS-OT	The heating controller RS-OT does not only serve for the remote control of your heating but also mea sures the temperature in the living room if required		
Important addresses and telephone numbers	Heating installer		
	Heating plumber		
	Electrical installer		
System data (to be completed by the heating installer)	Information for the plant user:		
(to be completed by the floating installer)	Adjusted heating curve value		
	Heating circuit DC =		

Release switching time programme P2, P3:

yes 🗌

no 🗌

# What is the function of the heating controller

# TopTronic® T/RS-OT

The boiler controller is, in conjunction with the temperature sensor connected to it, so to speak, the brain of the heating system. Its main functions are:

- maintaining the desired room temperature independently of the outdoor temperature
- heating the living space only when required (when you are at home)
- produce warm water (e.g. for showering) only when required
- displaying information

#### further functions:

- Input of desired temperatures
- Turn the burner ON/OFF
- Temperature monitoring

The correct settings for the heating system have already been applied by Hoval, or the installer, during commissioning. Any changes to those settings should only be carried out if you go on a journey or if your home is too cold or too warm. An overview of the most frequent questions/answers can be found on pages 6 and 11 of these instructions.

#### How to save energy

### For your benefit and for the environment

Using energy more efficiently by avoiding unnecessary losses: With little effort you can optimise the operation of your system and make it worth while.

- You can save money. Enough money to pay your oil or gas bill every sixth year
- Every year, you can save the energy equivalent of a bathtub full or heating oil

# In autumn, it is worth while turning the heating off again on warm days

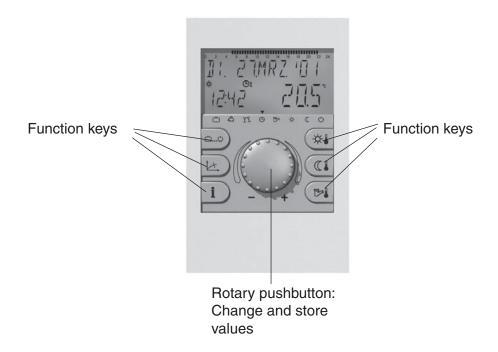
This prevents the heating system from producing unnecessary heat in the morning, due to low outdoor temperatures, and overheating the house. Turning the heating on or off depending on the weather conditions is one of the most effective energy saving measures. If you want to save yourself going down the basement, you may want to consider acquiring a "remote control" from Hoval, which will allow you to operate and control the heating comfortably from your living room.

#### **Basic display**

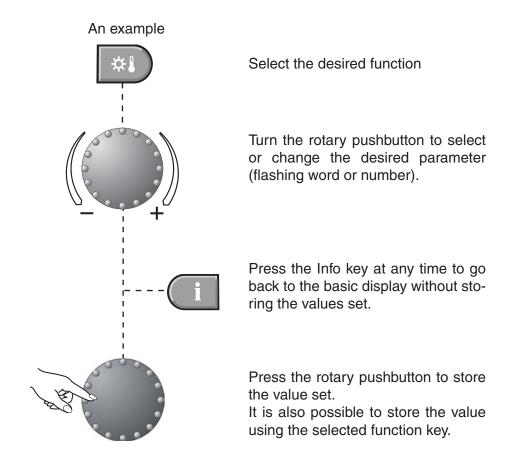
The basic display shows the day of the week, date and time of the day, as well as the current boiler temperature and room temperature (room station)

#### Function of the operating elements

The central rotary pushbutton and the labelled keys are designed for easy and straightforward operation.



# Basic procedure for changing settings

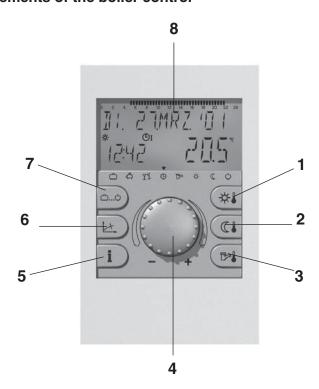


# What to do if...

The following information can be used as a first level support in frequently occurring situations.

Observation	Remedy		
It is too cold	Set a higher value for the room temperature with the rotary pushbutton (see page 9).		
It is too warm	Set a lower value for the room temperature with the rotary pushbutton or set the operating mode to (page 10,14)		
From now on, equal day and night temperatures should be maintained continuously	Set the operating mode with to 🌣 "HEATING" (page 14)		
This evening, the heating should remain on for longer	Set the operating mode with to The desired time (page 12)		
A larger amount of hot water is required	Press for 3 seconds and set the additional loading time (page 22)		
From now on, hot water but no heating is required	Set operating mode with to "SUMMER" (heating off, hot water only) (page 14).		
Suddenly, there is no heating or hot water; it is cold.	Check the control unit for alarm messages and consult a heating engineer, if necessary.		
The room temperature setpoint requires frequent adjustments because it is too cold or too hot	Change the adjusted heating curve (page 20)		
Today, I will be absent for several hours during the day	Set the operating mode with to \$\frac{1}{12}\$ to \$\frac{1}{12}\$ "ABSENT TIL" and set the return time (page 12)		
I am travelling for a short period of time (e.g. 3 days)	Set the operating mode with to "HOLIDAY TIL" and set the return time (page 12)		
I will be travelling for an inde- finite period of time	Set the operating mode with to TRED. HEATING".  When returning, set the operating mode with to to "AUTOMATIC" (page 13)		
In summer, it is too cold or too warm.	indicates that the summer disconnection is active. If it is too cold, set the operating mode with (page 13).		

# Control elements of the boiler control

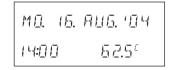


Ke	y	Designation	Function
1	*	Daytime room temperature	Set the daytime room temperature. Page 9
2	CI	Reduced room temperature	Set the night time room temperature (reduced heating). Page 10
3	PI	DHW temperature	Set the domestic hot water temperature. Manual DHW reloading. Page 22
4		Rotary pushbutton	Change the values by turning. Confirm the values by pressing. Function selection by pressing and turning.
5	i	Information key	Show the operating data on the display. Return to the basic display without saving the values. Page 29
6	( <u>tx</u> )	Setting the heating curve	Setting the heating curve Page 20-21

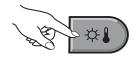
Key	/	Design	nation	Function		
7	(i)	Operating mode selection key		Select the operating modes		
		å	Holiday	Turn off the heating system during the holi protection)	days (frost Page 12	
		8	Absent	Temporarily switch off heating	Page 12	
		77	Party	Extended heating	Page 12	
		<b>(</b>	Automatic	Automatic heating according to the pres times	et heating Page 13	
			Summer	only DHW; heating off	Page 13	
		*	Heating	Constant heating mode	Page 13	
			Red. heating	Constant reduced heating mode	Page 13	
		Q	Standby	System switched off - Frost protection activated	Page 13	
8	11. 27MRZ 10 1 1242 205	Display		The basic display shows the day of the vand time of the day, as well as the current perature and room temperature (room station)	boiler tem-	
				2 ->	<b>←</b> 6 <b>←</b> 7	
				Possible readouts: 1 Active heating time 24h 2 Weekday display 3 Display of the active operating mode and programme 4 Time of the day 5 Selected operating mode 6 Date / Day / Month / Year 7 Room temperature (if activated)	d the clock	

## **Main settings**

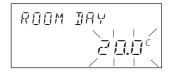
# Changing the room temperature Setting the daytime room temperature



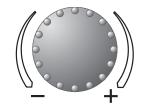
Basic display



Tap the "Daytime room temperature" key.

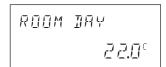


The daytime room temperature setpoint flashes.

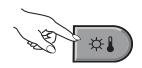


Set the desired room temperature by turning the "rotary pushbutton".

- Setting range 5.....30°C (factory setting 20°C)



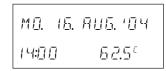
The new "Daytime room temperature" setpoint appears on the display.



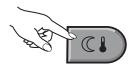
Tap the "Daytime room temperature" key to confirm the temperature setpoint.

Heating system control 4 205 542 / 00

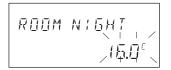
# Setting the reduced (night time) temperature



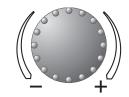
Basic display



Tap the "Reduced room temperature" key.



The night time room temperature setpoint flashes.

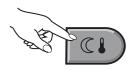


Set the desired room temperature by turning the "rotary pushbutton".

- Setting range 5.....30°C (factory setting 16°C)



The new "Reduced room temperature" setpoint appears on the display.



Tap the "Daytime room temperature" key to confirm the temperature setpoint.

## Holiday, absent, constant reduced heating

Depending on the duration of your absence and what your requirements are in regard to comfort, there are different operating modes available for interrupting or reducing the heating. In any case you will be able to save a lot of energy and money if the rooms are not heated or less heated during your absence.

The following table is intended as a guide for finding the best operating mode for each particular case:

Application	Operating mode	Function
You go on holiday for e.g. 1 week and you know the return date.	Heating system off during holidays.  "HOLIDAY TIL"	<ul> <li>- Heating system OFF / Calorifier frost protected (5°C)</li> <li>- Room temperature set to minimum (10°C)</li> <li>Setting range: current date + 250 days</li> <li>End of holiday = Return date 0:00 h</li> <li>Early return:</li> <li>Press for 3 sec. to return to "AUTOMATIC" mode</li> </ul>
You leave home in the morning and come back late in the evening.	Heating interrupted temporarily "ABSENT TIL"	Heating temporarily interrupted until set time. Setting range: 0.524h
You are travelling for an indefinite period of time and want the living area to be at the set reduced temperature on return.	Constant reduced heating mode "RED. HEATING"	Continuous reduced heating and DHW mode around the clock.
You are away for an indefinite period of time during spring or autumn and you don't mind if your home is cool on return.	System switched off - Frost protection activated "STANDBY"	The entire heating system is switched off and frost protected.  DHW mode not activated!

See following pages for a detailed description on how to set the operating modes.

You can return to the "AUTOMATIC" function (normal heating mode) at any time by "pressing" for 3 sec.

Heating system control 4 205 542 / 00

#### Changing the operating mode

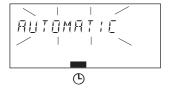
Procedure for activating the operating modes "HOLIDAY TIL", "ABSENT TIL" or "PARTY TIL"



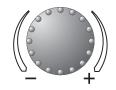
Tap the "Operating mode" key.



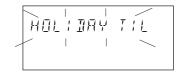
The note "OP. MODE" is displayed for a short time.



The currently active operating mode is then shown flashing on the display and a black rectangle at the lower part of the display points to the corresponding symbol



Set the desired operating mode by turning the "rotary pushbutton": "HOLIDAY TIL" or "ABSENT TIL" or "PARTY TIL"



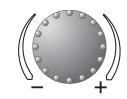
The selected operating mode is shown flashing on the display.



Tap the "rotary pushbutton" to confirm the selected operating mode.



Today's date ("HOLIDAY TIL") or the current time ("ABSENT TIL", "PARTY TIL") is shown flashing on the display.



Turn the "rotary pushbutton" and select:

- for "HOLIDAY TIL", the date of return from holiday.
- for "ABSENT TIL", the expected return time (within max. 24h).
- for "PARTY TIL", the time the party is expected to end.

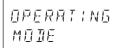


Tap the "rotary pushbutton" to confirm the setting.

Procedure for activating the operating modes "AUTOMATIC", "SUMMER 1", "HEATING", "RED.HEATING" and "STANDBY"



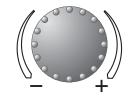
Tap the "Operating mode" key.



The note "OP. MODE" is displayed for a short time.



The currently active operating mode is then shown flashing on the display



Set the desired operating mode by turning the "rotary pushbutton"



e.g. "RED. HEATING"



Tap the "rotary pushbutton" to confirm the setting.

<sup>&</sup>lt;sup>1</sup>Operating mode "Summer" can not be selected if each heating circuit is adjusted separately.

Operating mode	Function	
AUTOMATIC  (L)	Automatic heating mode according to the he time program Factory setting: Heating 06.00 - 22.00 Reduced heating 22.00 - 06.00 Domestic hot water: 05.00 - 22.00	eating times set in the 1. switching
SUMMER	DHW mode only DHW is produced at the times set in the swite (for showering, etc.) Factory setting for domestic hot water: 05.00 - 22.00 Frost protection active	ching time program  Info: Operating mode "Summer" can not be selected if each heating circuit is set up separately.
HEATING	Constant heating mode The room temperature is not reduced during DHW is produced at the times set in the time	•
RED. HEATING	Continuous reduced heating mode The rooms are continuously heated at the "ROOM NIGHT" temperature setting.	
STANDBY ()	No heating mode Heating system is switched off There is no heating and no domestic hot wat active.	ter is produced. Frost protection is

## Changing the switching times (heating times)

In this menu the switching time programs can be set individually for the heating and domestic hot water modes. After selecting the respective heating circuit, the factory-set standard program (P1) is loaded and can then be edited individually.

The standard heating times preset by the manufacturer are:

Circuit	Day	Heating from
Heating circuit (DC)	Mo-Su	06.00 - 22.00
Hot water circuit (DHW)	Mo-Su	05.00 - 22.00

Table for recording individual switching times

	Switching times program for living area(DC)					
Day	Cycle 1		Cycle 2		Cycle 3	
	from	to	from	to	from	to
Мо						
Tu						
We						
Th						
Fri						
Sa						
Su						

Switching times program for calorifier (DHW)						
Day	Cycle 1		Cycle 2		Cycle 3	
	from	to	from	to	from	to
Мо						
Tu						
We						
Th						
Fri						
Sa						
Su						

Further standard programs can be - or could have been - set-up or enabled for programming by the installer (P1-P3) see page 17

A maximum of 3 heating times per day are possible, e.g.:



1 heating cycle per day

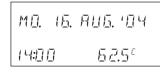


2 heating cycles per day

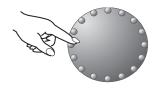


3 heating cycles per day

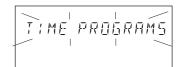
Heating system control 4 205 542 / 00



Basic display



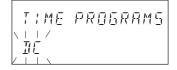
Press the "rotary pushbutton" for at least 3 sec.



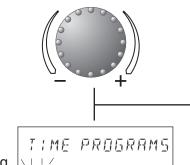
The note "TIME PROGRAMS" appears flashing on the display.



Tap the "rotary pushbutton" to confirm



The note "DC" also appears flashing on the display



Select the heating circuit by turning the "rotary pushbutton".



Select switching times program P1, P2 or P3, if required - see page 17



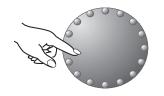
Tap the "rotary pushbutton" to confirm the selected heating circuit.

Use the "rotary pushbutton" to select the day for which the heating time has to be modified.

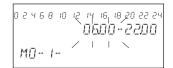
Note: The 3rd heating cycle is omitted if the 2nd heating cycle does not contain any switching times.

#### Change - Exit:

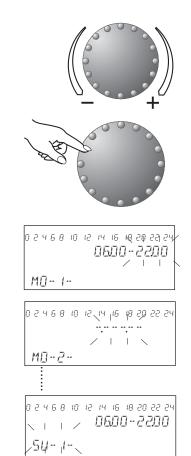
Every flashing setting can be corrected using the rotary button, if required, and accepted by tapping. Use the key to go back one step. Use the key or wait for approx. 60 sec. to go back to the basic display.



Tap the "rotary pushbutton" to confirm the selected day.



The currently set heating start time is shown flashing on the display



Set the desired heating start time by turning the "rotary pushbutton"

Tap the "rotary pushbutton" to confirm the set start time Set the time setpoint for the end of the heating mode on the week day shown by turning the "rotary pushbutton".

The week day is shown flashing on the display. You can now set a second heating time (Mo -2) for this day by turning the "rotary push-button"

or

turn the button directly to Tuesday to set the desired heating time.

Instead of entering each day separately, you can also use the "copy" function - see page 18

This function allows you to copy the switching times from any days of the week to other days (Mo-Su) or to a whole week (1-7) or to day groups like working days (1-5) or weekends (6-7).



Once you have completed all the changes, tap the operating mode key to confirm the settings and open the basic display

If P1 is displayed, further standard heating times programs are already enabled. If not, P2 and P3 can be enabled by the heating technician.

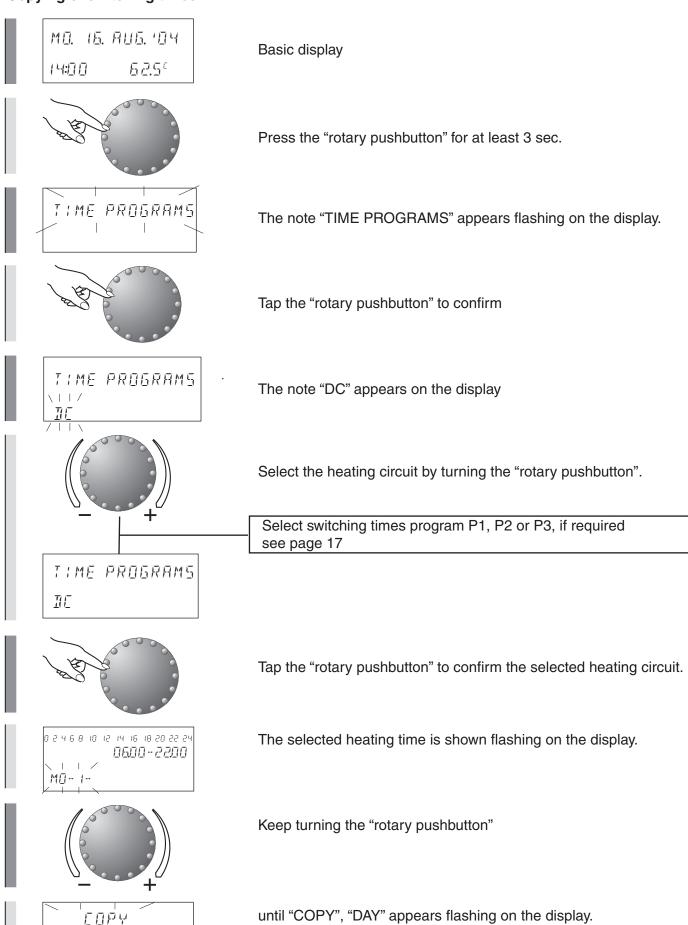
Factory setting: Switching times program P2

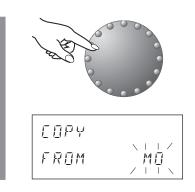
Circuit	Day	Heating from
Heating circuit (DC)	Mo-Th Fri Sa-Su	06.00-08.00 16.00-22.00 06.00-08.00 13.00-22.00 07.00-23.00
Hot water circuit (DHW)	Mo-Th Fri Sa-Su	05.00-08.00 15.30-22.00 05.00-08.00 12.30-22.00 06.00-23.00

Factory setting: Switching times program P3

Circuit	Day	Heating from
Heating circuit (DC)	Mo-Fri Sa-Su	07.00-18.00 reduced
Hot water circuit (DHW)	Mo-Fri Sa-Su	06.00-18.00 reduced

## Copying of switching times

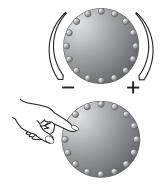




Tap the "rotary pushbutton" to confirm the setting.

#### Change - Exit:

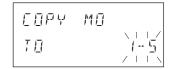
Every flashing setting can be corrected using the rotary button, if required, and accepted by tapping. Use the key to go back one step. Use the key or wait for approx. 60 sec. to go back to the basic display.



Select the day from which the heating time setting is to be copied by turning the "rotary pushbutton".

Note: The 3rd heating cycle is omitted if the 2nd heating cycle does not contain any switching times.

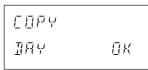
Tap the "rotary pushbutton" to confirm the selected day.



Select the target day(s): Days of the week (MO...SU), whole week (1-7) working days only (1-5), weekend only (6-7).



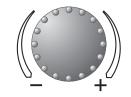
Tap the "rotary pushbutton" to confirm



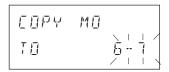
Confirmation for correct copying of day(s).



Target range for the next copy process is shown flashing on the display.

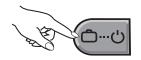


Select the next copy range by turning the "rotary pushbutton".



Target range for the copy process is shown again flashing on the display.

Follow the same procedure to create any additional copies.



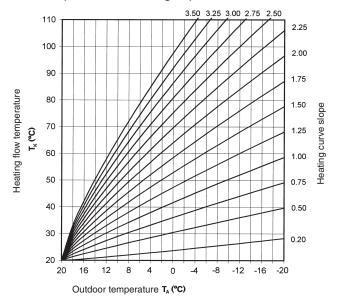
Once you have completed all the changes, tap the operating mode key to confirm the settings and open the basic display.

### **Heating curve (heating characteristic)**

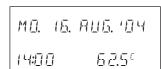
The heating curve is normally preset by the installer during commissioning of the heating system. The heating curve should only be changed in small steps and over longer periods of time.

Recommended settings

Floor heating: 0,3...1,0 Radiator heating: 1,2...2,0 Convector heating: 1,5...2,0



The slope of the heating characteristic curve generally describes the ratio between variations in the flow temperature and variations in the outdoor temperature.



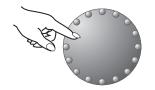
Basic display



Tap the "Heating curve" key



"Heating curve" display appears. "DC" flashes



Confirm



The slope of the heating characteristic curve is shown flashing on the display



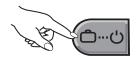
Select the desired value for the slope of the heating characteristic curve by turning the "rotary pushbutton".



The selected slope of the heating characteristic curve is shown on the display.

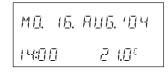


Tap to confirm

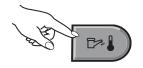


Once you have completed all the changes, tap the operating mode key to confirm the settings and open the basic display.

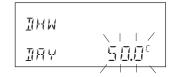
## Set the domestic hot water temperature



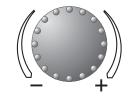
Basic display



Tap the "Domestic hot water temperature" key

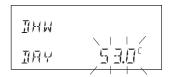


The current domestic hot water temperature setpoint is shown flashing on the display

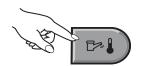


Set the desired hot water temperature by turning the "rotary pushbutton"

- Setting range 10(40).....65°C (Factory setting 50°C)



The selected hot water temperature is shown flashing on the display.



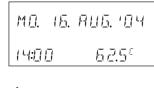
Tap the "Domestic hot water temperature" key to confirm the temperature setpoint.

Heating system control 4 205 542 / 00

#### Manual domestic hot water reloading

Outside the time periods during which the domestic hot water mode is available, the calorifier can be manually reloaded within the selected setting range.

The calorifier is reloaded once according to the set daytime domestic hot water temperature. Reloading is limited by the set temperature for all other settings.



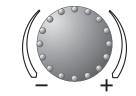
Basic display



Press and hold the "Domestic hot water temperature" key for 3 seconds.



The domestic hot water reloading time is displayed; the minute display flashes



Set the desired additional reloading time by turning the "rotary pushbutton".

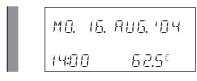
Setting range: 0....240 min



Tap to confirm

The active reloading process is displayed until the reloading process has been completed.

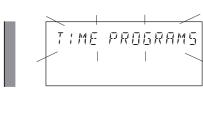
### Domestic hot water economy temperature (reduced temperature)



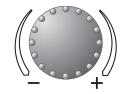
Basic display



Press and hold the "rotary pushbutton" for 3 seconds



The note "TIME PROGRAMS" appears on the display.



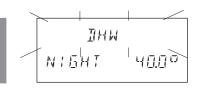
Keep turning the "rotary pushbutton"



until "DHW" appears flashing on the display



Tap to confirm

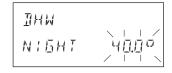


"DHW" flashes on the display.

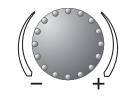
The temperature shown defines the desired domestic hot water temperature outside the time periods during which the domestic hot water mode is available.



Tap to confirm



The night-time domestic hot water temperature flashes



Set the desired temperature value by turning the "rotary pushbutton" and tap to confirm the setting



Once you have completed all the changes, tap the operating mode key to confirm the settings and open the basic display.

# Further settings Setting the time

Setting the time	
MO. 16. AUG. 104 1400 62.51	Basic display
	Press the "rotary pushbutton" for 3 sec.
TIME PROGRAMS	The note "TIME PROGRAMS" appears on the display.
	Turn the "rotary pushbutton"
TIME - JATE	until "Time-date" is shown flashing on the display.
AND BOOK OF THE PARTY OF THE PA	Tap to confirm
T I ME I (HI][]	"Time" flashes
REAL PROPERTY OF THE PROPERTY	Tap to confirm
TIME (41111	"Time" flashes
	Turn the "rotary pushbutton" to set the desired time and tap to confirm the setting Turn the "rotary pushbutton" for further adjustments.

## Setting the date



"Year" is shown flashing - confirm Turn to change the year setting - confirm



"Day...Month" is shown flashing - confirm Turn to change the Day...Month setting - confirm

# Changing between summer and winter time



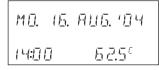
"Change" is shown flashing - confirm Turn to change SU-WI ON or OFF - confirm



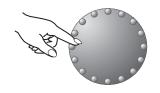
Once you have completed all the changes, tap the operating mode key to confirm the settings and open the basic display.

### Setting the language

You will be prompted for the desired language when switching on the control system for the first time. Changing the language is also possible during normal operation.



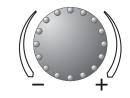
Basic display



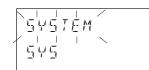
Press and hold the "rotary pushbutton" for 3 seconds



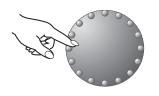
The note "TIME PROGRAMS" appears on the display.



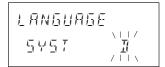
Turn the "rotary pushbutton"



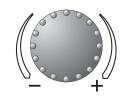
until "System" is shown on the display



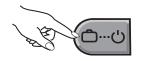
Tap to confirm



"Language" appears on the display. Abbreviations for the language are shown flashing D.....German / GB...English I.....Italian / F...French



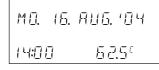
Turn to select the desired language and tap to confirm.



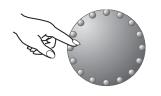
Once you have completed all the changes, tap the operating mode key to confirm the settings and open the basic display.

### Reloading the standard switching time program - Deleting the own time program

With this function you can reload all the factory settings.



Basic display



Press and hold the "rotary pushbutton" for 3 seconds



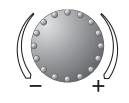
""TIME PROGRAMS" appears flashing on the display



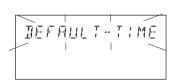
Tap to confirm



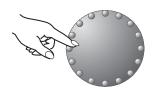
The note "DC" appears on the display



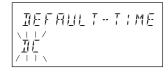
Keep turning until "DEFAULT-TIME" appears



"DEFAULT-TIME" is shown flashing on the display.



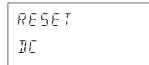
Tap to confirm



The note "DC" appears on the display Select the heating circuit by turning the "rotary pushbutton".



Tap to confirm



"RESET" appears on the display



Press and hold the "rotary pushbutton" for 3 seconds



"RESET" OK is displayed to confirm



Once you have completed all the changes, tap the operating mode key to confirm the settings and open the basic display.

## Alarm messages

FLIIW

ERROR 12-0

Example for sensor alarm messages (short circuit or interruption)
Error code 10...20 and index 0 or 1

HERT BENER.

ERROR 30-2

Example for heat generator alarm messages (switching status)
Error code 30....40 and index 2...5

IHW

ERROR 30-2

Example for logical alarm messages (control functions)
Error code 50....60 and index 2.....4

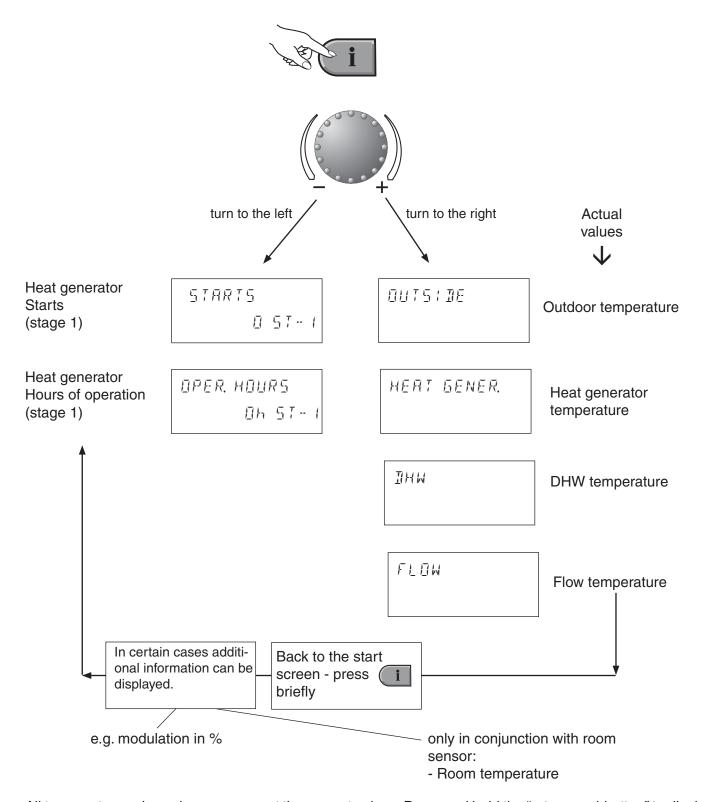
BU 5

ERROR 70-1

Example for data bus alarm messages (address errors on data bus)
Error code 70 and index 0 or 1

The controller comprises a comprehensive alarm logic which displays the fault type by means of the corresponding error code.

# System information Information key for system temperatures and heating circuit information



All temperature values shown represent the current values. Press and hold the "rotary pushbutton" to display the individual setpoints.

# Special symbols

MO, 16. AUG, 104 \* 14:00 62.51

Ice crystal symbol: Frost protection activated

MQ. 15. AU5. 104 2 14:00 62.51 Umbrella symbol: Summer disconnection active (heating switched off, DHW according to program).

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