

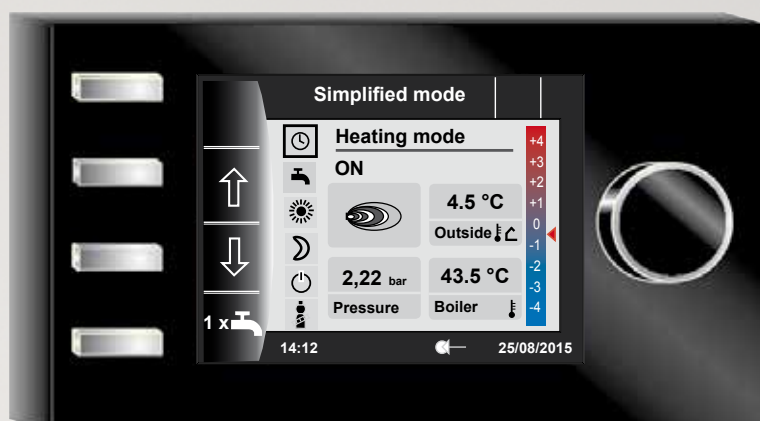
## Operating instructions for users

### BM-2 programming unit

From FW 2.00





#### Operating option - simplified mode



#### Operating option - extended mode



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## 1 Appliance description

### ► Intended use

The Wolf BM-2 programming unit is for use exclusively in conjunction with Wolf heating appliances and Wolf accessories.

The Wolf BM-2 programming unit is used to control the entire heating system and to set specific heating parameters.

Intended use also includes observing the operating instructions and all other applicable documents.

Please note:

- The BM-2 programming unit can also be installed as a remote control, which requires the integration of an AM display module in the heating appliance.

### ► Incorrect use

Any use other than the intended use is not permissible. Any other use or changes to the product at any time including during fitting and installation invalidate all warranty claims. The user has sole liability for such use.

This appliance is not designed to be operated by persons (including children) with restricted physical, sensory or mental capacities or who lack the necessary experience and/or knowledge, unless they are supervised by a person responsible for their safety or have received instructions on how to use the appliance from this person.



## **2 Safety and regulations**

The general safety instructions must be observed.

### **2.1 General safety instructions**

The BM-2 programming unit must be installed and commissioned by a qualified contractor.

- ▶ Before installing the BM-2, disconnect the power supply from the heating appliance and all connected components.
- ▶ Be aware that there is mains power to the electrics, even when the heating appliance mains isolator is off.
- ▶ Only replace damaged or faulty components with original Wolf spare parts.
- ▶ Do not remove, bypass or disable any safety and monitoring equipment.
- ▶ Only run the system when it is in perfect technical condition.
- ▶ Immediately rectify any faults and damage that impair safety.
- ▶ If the domestic hot water temperature is set above 60 °C, install a thermostatic water mixer.
- ▶ Route mains power cables with a voltage of 230 V in a physically separate place to the eBUS cables.
- ▶ Electronic assemblies can be damaged by an electrical discharge. Touch earthed objects, e.g. heating or water pipes, before carrying out any work, in order to discharge the static charge.

### **2.2 Standards / directives**

The appliance and control accessories comply with the following regulations:

#### **EC Directives**

- ▶ 2006/95/EC Low Voltage Directive
- ▶ 2004/108/EC EMC Directive

#### **EN Standards**

- ▶ EN 55014-1 Emission
- ▶ EN 55014-2 Immunity
- ▶ EN 60335-2-102
- ▶ EN 60529

### **2.3 Installation / commissioning**

- ▶ According to EN 50110-1, only qualified electricians may carry out the installation and commissioning of the heating control unit and connected accessories.
- ▶ Observe all local and electrical regulations.
- ▶ Observe all regulations regarding the installation of HV systems up to 1000 V.
- ▶ Observe all local regulations regarding the installation of electrical systems.

### **2.4 CE designation**



With the CE designation, we as the manufacturer confirm that the BM-2 programming unit conforms to the basic requirements of the Electromagnetic Compatibility Directive (Council Directive 2004/108/EEC). The BM-2 programming unit fulfils the basic requirements of the Low Voltage Directive (Council Directive 2006/95/EEC).

## 2.5 Symbols and warnings



Symbol for additional information

- Symbol for a necessary action

Warnings in the text warn you of possible risks before the start of an instruction. The warnings provide you with information on the possible severity of the risk using a pictogram and a keyword.

Pictogram	Keyword	Explanation
	<b>Danger!</b>	Risk to life or risk of serious injury
	<b>Danger!</b>	Risk to life or risk of serious injury through electrocution
	<b>Warning</b>	Slight risk of injury
	<b>Caution</b>	Possible material damage

Table 2.1 Meaning of warnings

### 2.5.1 Layout of warnings

You will recognise warnings in these instructions by pictograms and a line above and below the warning section. These warnings are laid out as follows:



#### Keyword

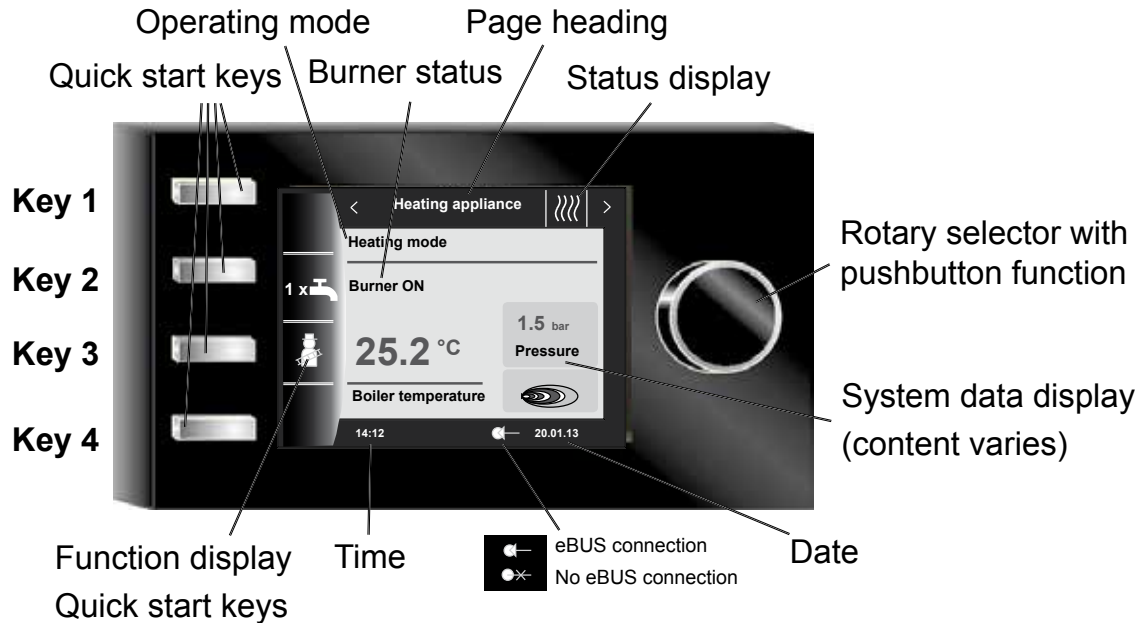
#### Type and source of risk.

Explanation of the risk.

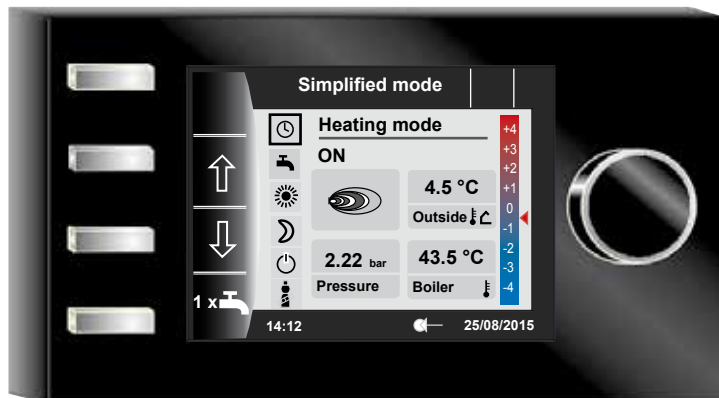
- Instruction to prevent the risk.

## 3 Overview of the BM-2 programming unit

### Operating option - extended mode (EM)



### Operating option - simplified mode (SM)



After switching on the heating appliance, the software loads, and a progress bar and the Wolf logo appear. You are then taken to the start page (home page).

During commissioning, the commissioning assistant is displayed (see chapter 36).

An automatic restart of all BM-2 units in the WRS is also performed after the following actions

- Change to a system configuration (heating appliance / extension module)
- Change to a function in the BM-2 (contractor – system)





## 4 Quick start keys/rotary selector

The **4 quick start keys** and the **rotary selector** are used to program the BM-2.



The following settings can be configured using the quick start keys:

- Key 1 – without function display, no function
- Key 2 – variable functions (e.g. once-only DHW heating)
- Key 3 – variable functions (e.g. enabling emissions test)
- Key 4 – home key



**Turn** the rotary selector to switch between the individual status pages.

- Heating appliances
- DHW
- Heating circuit
- Mixer
- Solar yield
- Ventilation unit
- Messages

The main menu of the display, default settings, time programs and contractor level are enabled by **pressing** the rotary selector; the navigation is explained in the following chapter.

### Activation and operation in the main menu / submenu / menu item

Operating procedure:



Press the rotary selector to access the main menu page. Press the again to access the submenu, and once more to access the menu item.  
The following actions are possible:



**Clockwise rotation**      Cursor moves down through the menu  
Selected value is increased  
Selected parameter is increased



**Anti-clockwise rotation**      Cursor moves up through the menu  
Selected value is decreased  
Selected parameter is decreased



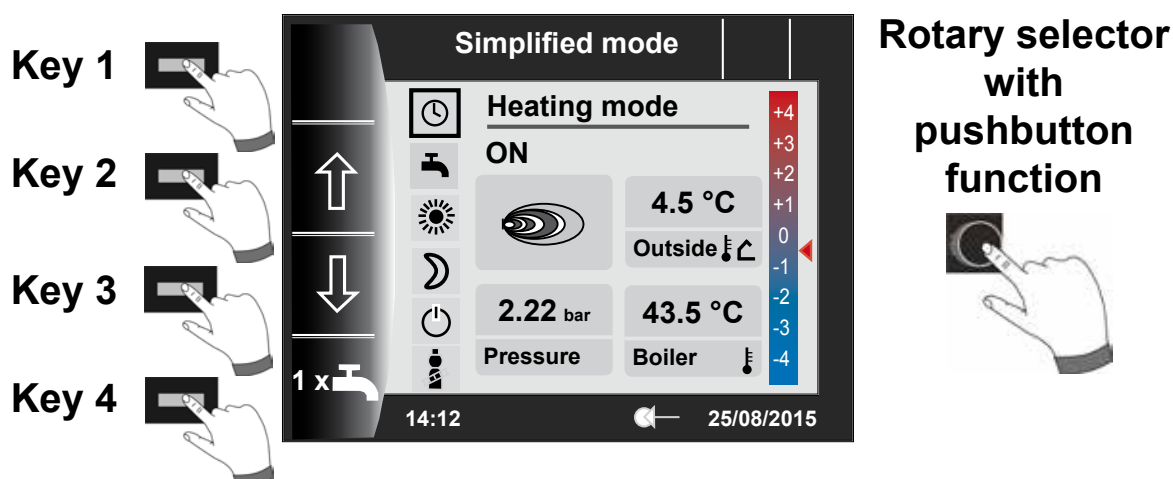
**Press rotary selector**      Menu selection is confirmed or enabled  
Selected value is confirmed or enabled  
Selected parameter is confirmed or enabled  
Selected function is executed or enabled

For visual orientation, a cursor is displayed that shows the current position in the display. Press the rotary selector once to highlight the currently selected item for editing. Turn the rotary selector to change the value, parameter or function. Press the selector again to confirm the value.

## 5 Simplified mode

### Overview:

Quick start keys and rotary selector with pushbutton function in simplified mode









### Description of keys 1-4 in simplified mode

Key 1		No function
Key 2		Program selection - scrolls up the operating mode list
Key 3		Program selection - scrolls down the operating mode list
Key 4		The special function 1x DHW bypasses the programmed switching times and heats up all DHW cylinders once, for one hour, to the set DHW temperature. Press key 4 again to disable once-only DHW heating.

### Description of rotary selector with pushbutton function in simplified mode

 <b>Rotary selector with pushbutton function</b>	Turn clockwise	Corrects temperature upwards; see description in chapter 30.2
	Turn anti-clockwise	Corrects temperature downwards; see description in chapter 30.2
	Press	Opens the main menu

## Six operating modes are available:

	<b>Automatic timer mode:</b> Heating mode in programmed times DHW heating in programmed times DHW circulation pump in programmed times
	<b>Summer mode:</b> Heating system not in operation DHW heating in programmed times Frost protection active Anti-seizing function active
	<b>Continuous operation:</b> Heating mode 24 hours DHW heating in programmed times DHW circulation pump in programmed times
	<b>Setback mode:</b> Heating mode with low temperature DHW heating in programmed times DHW circulation pump in programmed times
	<b>Standby mode:</b> Heating system not in operation DHW heating not in operation Frost protection active Anti-seizing function active
	Press the emissions test key to access emissions test mode Emissions test mode is only necessary for the flue gas test.

### Notes:

Simplified mode cannot be selected if a CWL or an ISM7/8 is connected to the WRS.

To exit simplified mode, press the rotary selector with pushbutton function (main menu). Turn and press to select the default settings, call up the user interface and select "extended mode".

For extended mode (EM), see chapter "Overview of status pages".







In simplified mode, some setting options are not available

- Party function (temporary heating mode)
- Setback mode (date and time-controlled setback mode)

## 6 Overview of status pages - extended mode



Turn the rotary selector to display the different status pages. This enables the installed heating appliances and extension modules with the associated configurations.

<b>9 - Heating appliance</b>  	Setting options	Info regarding system data
	- Once-only DHW heating	- Operating mode
	- Emissions test mode (BM-2 in heating appliance)	- Burner status
	- Call up home page	- Heating appliance temp.
		- System pressure
		- Burner output
<b>10 - DHW</b>  	Setting options	Info regarding system data
	- Change set DHW temperature	- Selected DHW temperature
	- Change operating mode	- Selected operating mode
	- Call up home page	- DHW temp.
		- Set DHW temperature
<b>11 - Heating circuit</b>  	Setting options	Info regarding system data
	- Change set heating circuit temperature	- Selected temperature
	- Change operating mode	- Selected operating mode
	- Call up home page	- Room temperature (BM-2 as remote control)
		- Outside temperature (with outside temp. sensor in WRS)
		- Flow temperature
<b>12 - Mixer</b>  	Setting options	Info regarding system data
	- Change set mixer circuit temperature	- Selected temperature
	- Change operating mode	- Selected operating mode
	- Call up home page	- Room temperature
		- Outside temperature
		- Flow temperature
<b>13 - Solar</b>  	Display	Info regarding system data
	- Monthly yield	- Collector temperatures
	- Annual yield	- Cylinder temperatures
<b>14 - Ventilation unit</b>  	Setting options	Info regarding system data
	- Change operating mode	- Selected operating mode
	- Call up home page	- Air flow rate / extract air temp.
<b>15 - Messages</b>	Setting options	Info regarding system data
	- Acknowledging faults for users	- Current faults
	- Acknowledging faults for contractors (locking faults)	



Only values from connected modules and heating appliances are displayed.

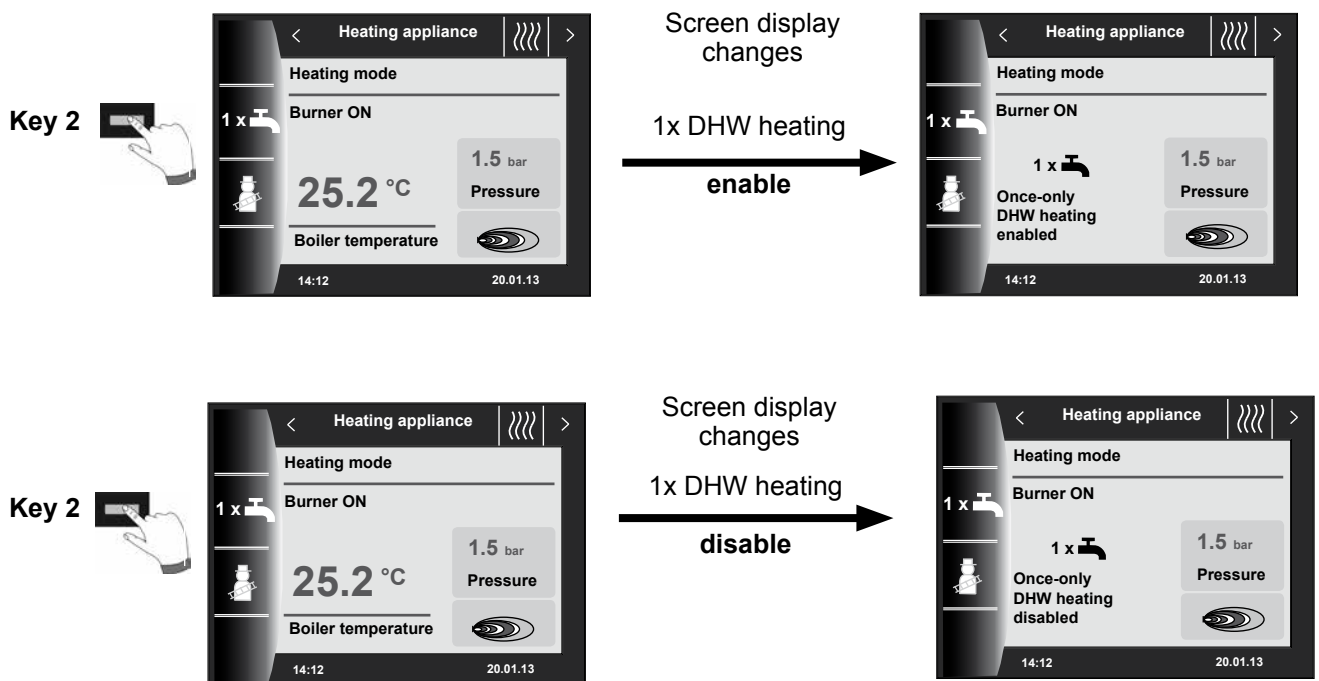
## 7 Heating appliance status page

If a KM module is integrated in the Wolf control system (WRS), then up to 4 heating appliances can also be connected. Each heating appliance is then displayed with its own status page.

### 7.1 Using the key for 1x DHW heating

The special function 1x DHW bypasses the programmed switching times and heats up the DHW cylinder once, for one hour, to the set DHW temperature.

- Once-only DHW heating (displayed for all heating appliances)
- All connected DHW cylinders are heated
- Press key 2 again to disable once-only DHW heating
- You are taken back to the home page after 5 seconds



### 7.2 Using the key for emissions test mode

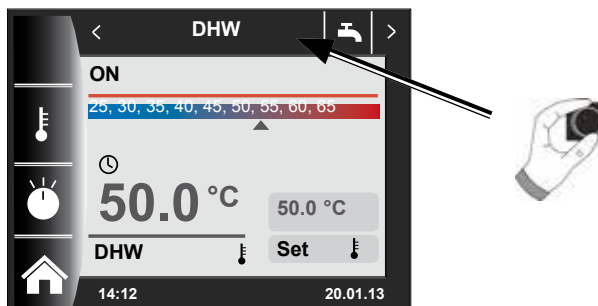
- Variable functions (e.g. enabling emissions test).
- Emissions testing is only displayed if the BM-2 is installed in the heating appliance.

Once the emissions test function (key 3) has been enabled, the burner runs for 15 minutes and the time counts down on the display. The time can be extended back to 15 minutes by pressing key 3 again.

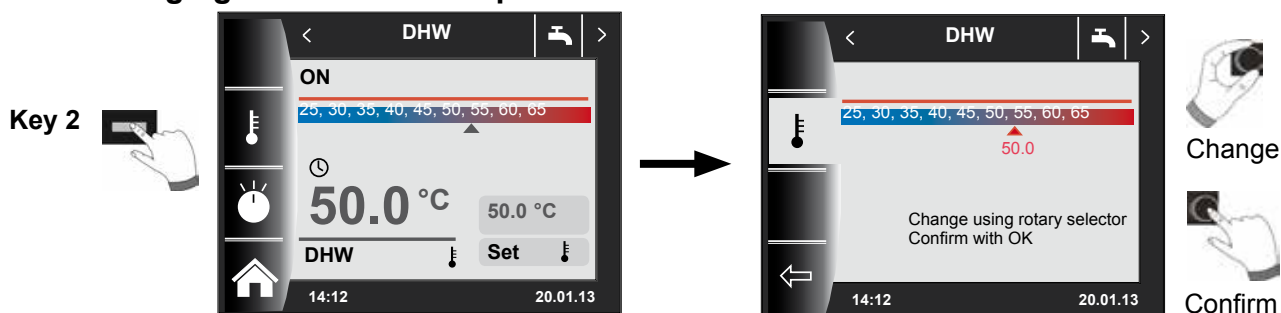


### 8 DHW status page

Up to 8 cylinders can be connected to the WRS. DHW heating for each cylinder is controlled by its own status page.

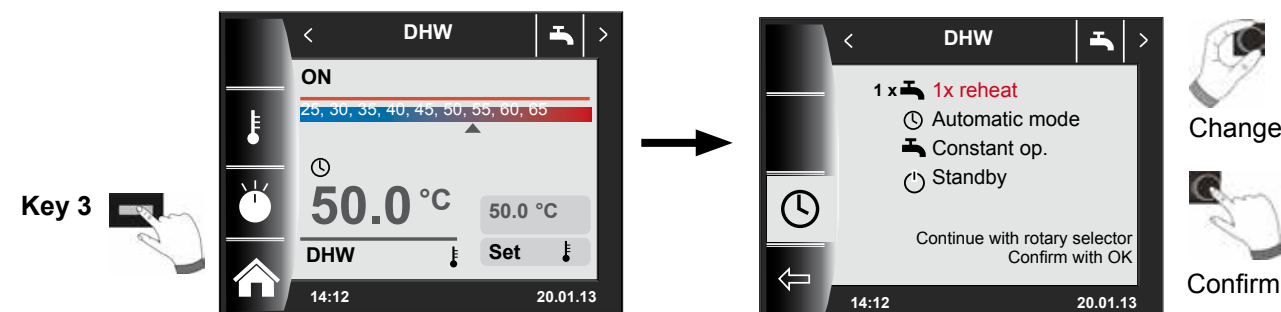


#### 8.1 Changing the set DHW temperature

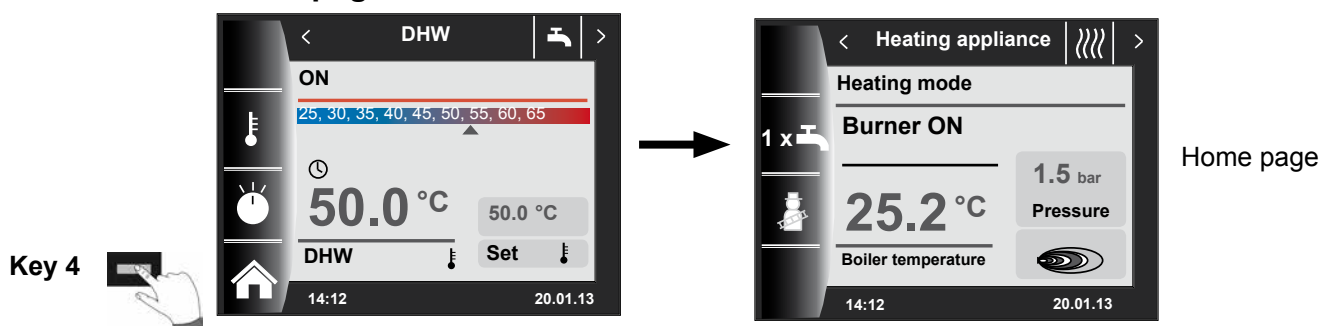


#### 8.2 Changing the DHW operating mode

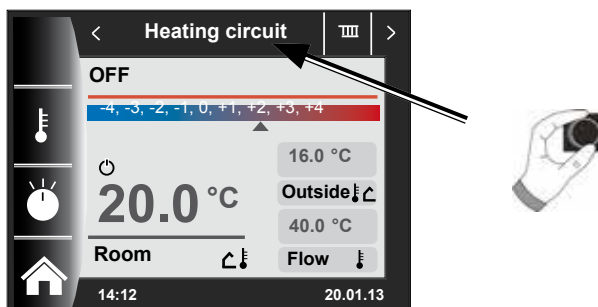
(For description of operating modes, see chapter)



#### Return to the home page

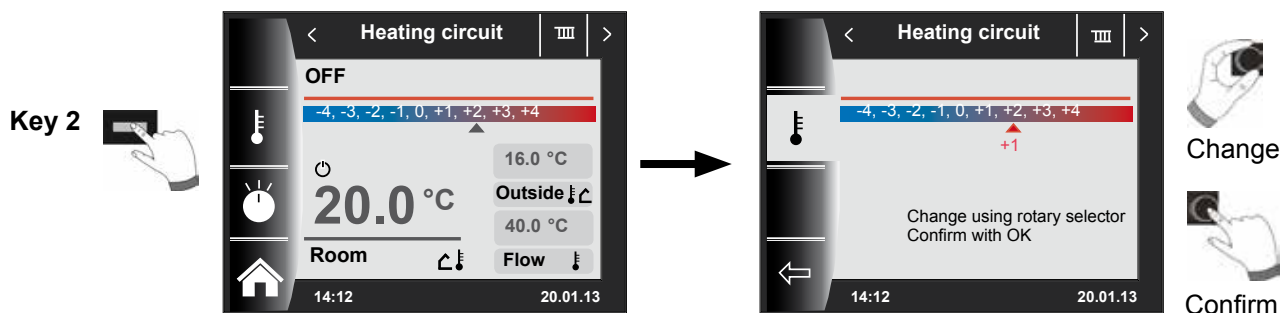


### 9 Heating circuit status page



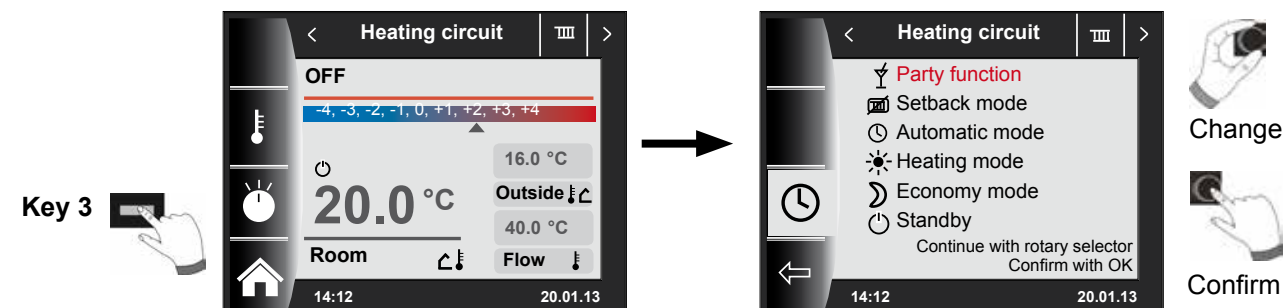
#### 9.1 Changing the set heating circuit temperature

(For description of temperature selection, see chapter)

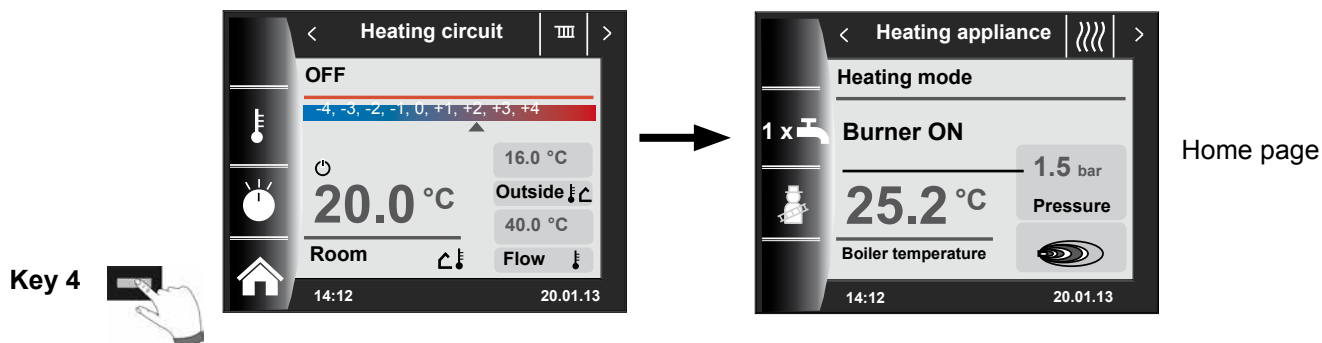


#### 9.2 Changing the heating circuit operating mode

(For description of operating modes, see chapter)



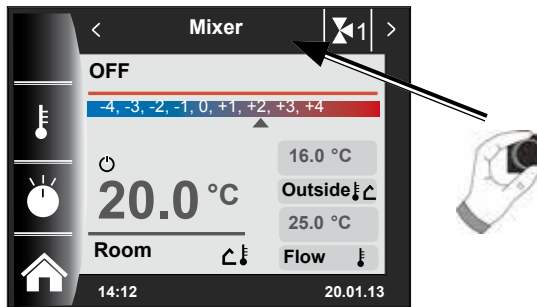
#### Return to the home page





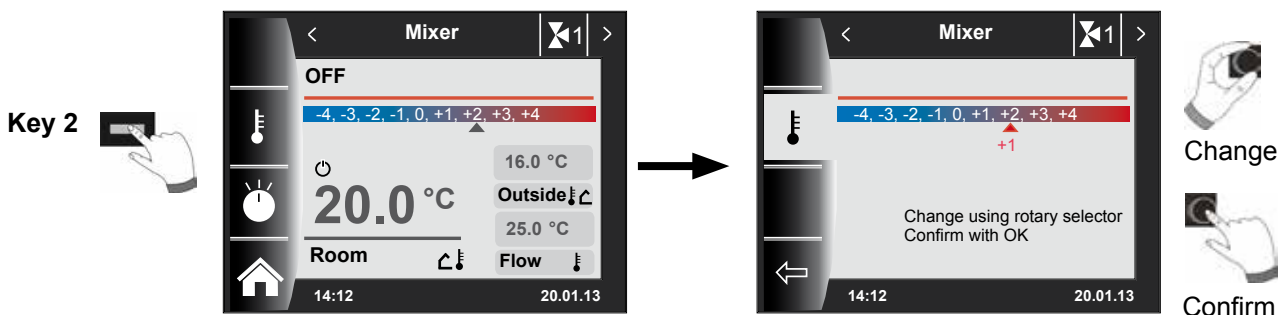
### 10 Mixer status page

Up to 7 mixer modules can be connected to the WRS and operated via the BM-2. Each mixer module is controlled via its own status page.



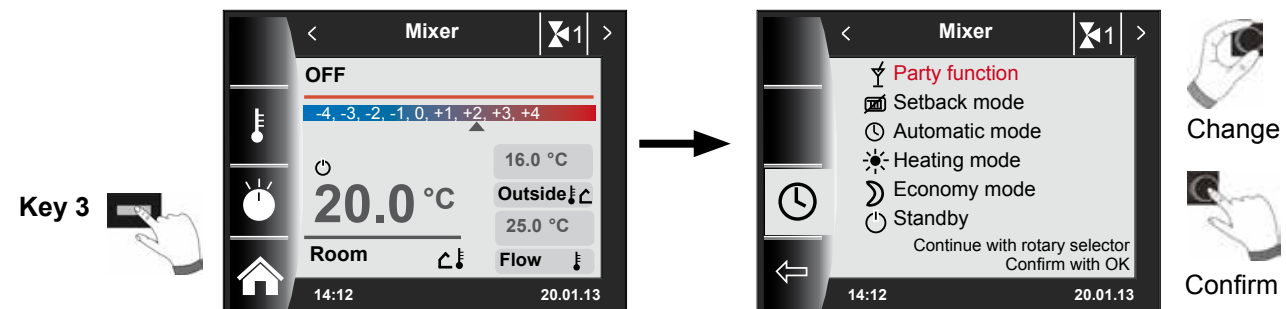
#### 10.1 Changing the set mixer circuit temperature

(For description of temperature selection, see chapter)

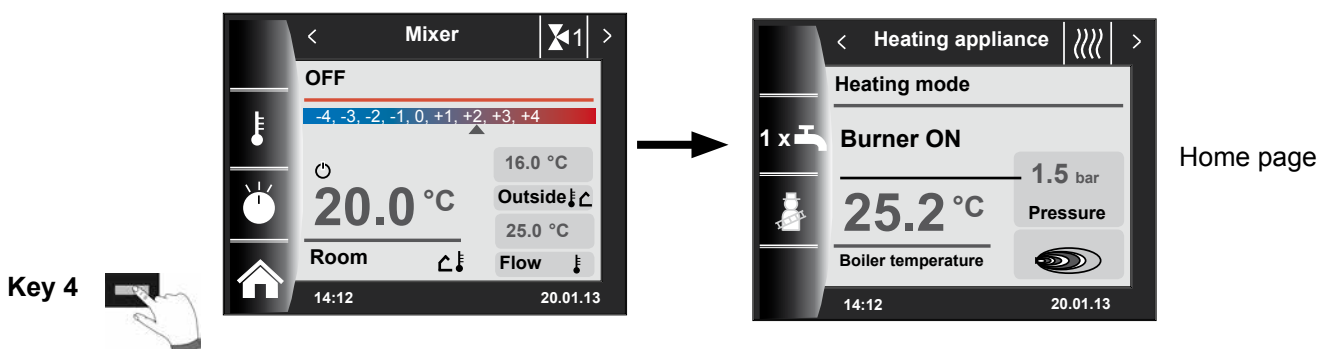


#### 10.2 Changing the mixer circuit operating mode

(For description of operating modes, see chapter)



#### Return to the home page

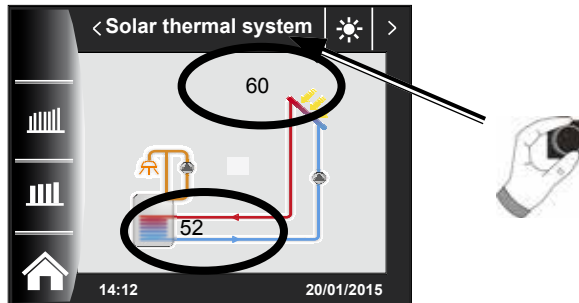


## 11 Solar thermal system status page

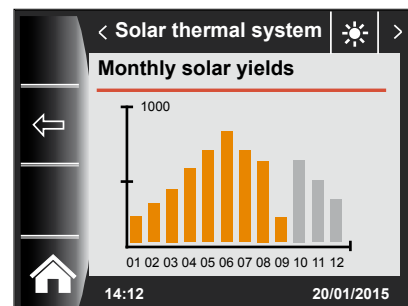
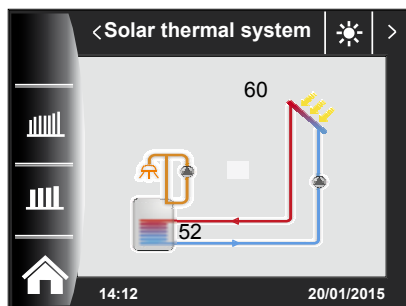
The solar thermal system settings are only displayed if a solar module has been recognised.

### Actual collector temperature / actual cylinder temperature

(The solar thermal system diagram is dependent on the configuration set in parameter SOL12)

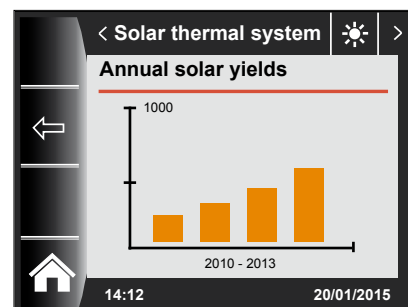
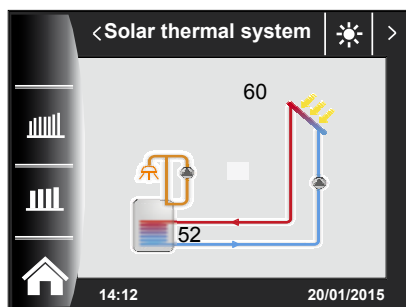


### Monthly yield



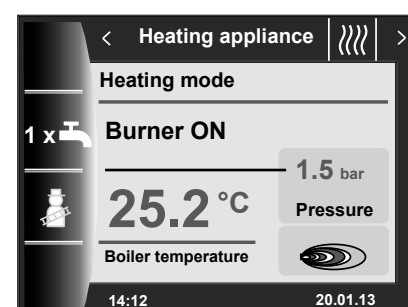
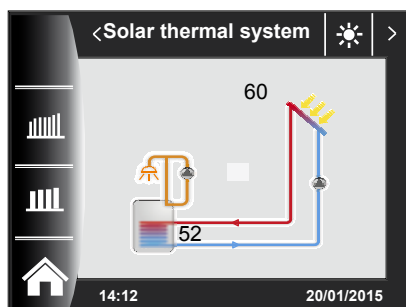
Display

### Annual yield



Display

### Return to the home page

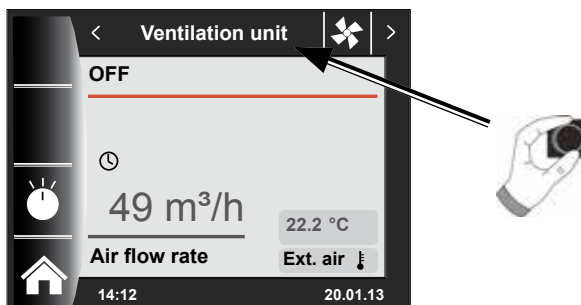


Home page

## 12 Ventilation unit status page

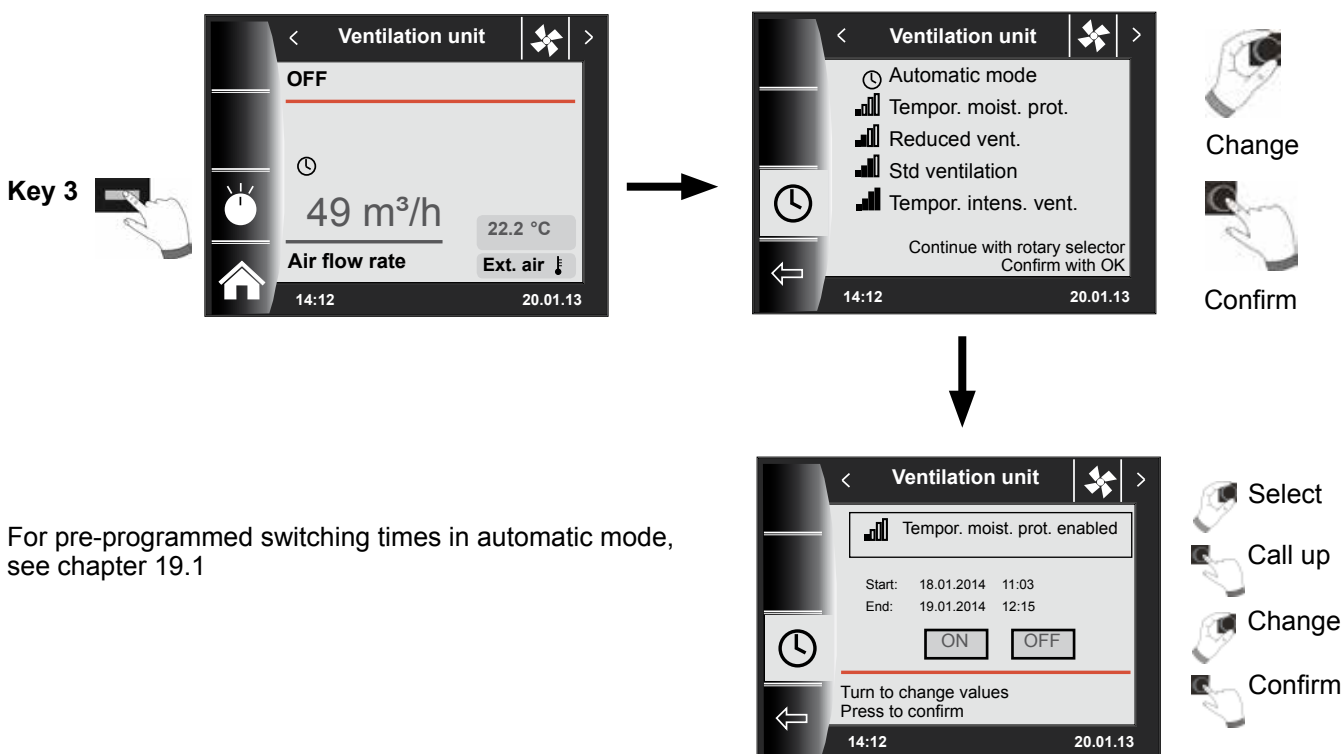
The ventilation unit status page is only displayed if a CWL Excellent is connected to the WRS.

**Please note:** Parallel operation in conjunction with a BML is not possible.



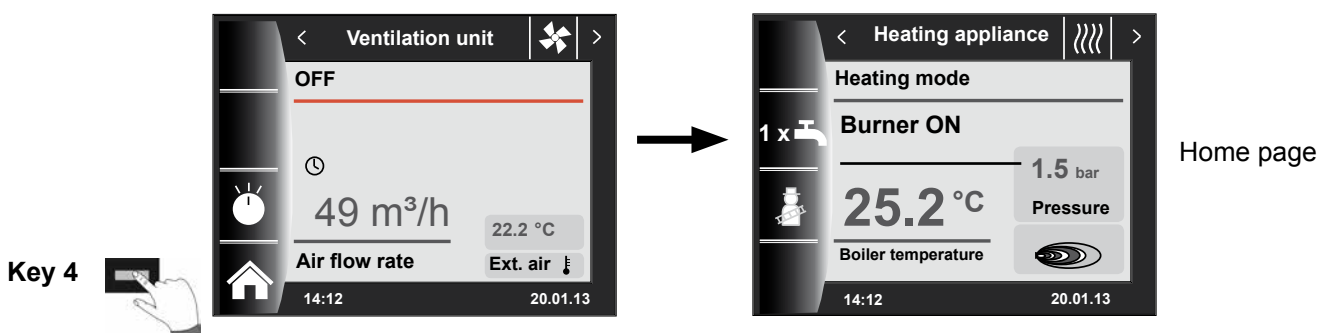
### 12.1 Changing the operating mode / Start - End / ON - OFF

(For description, see chapter)



For pre-programmed switching times in automatic mode, see chapter 19.1

### Return to the home page



## 13 Messages status page

### 13.1 Procedure for faults

- Read fault message
- Possible causes for the fault and remedies can be found in the "Faults" chapter
- Determine and remedy the cause of the fault



A fault can be cleared on the fault message status page by pressing key 4. BM-2 installed in the heating appliance.

- Check that the system is functioning correctly

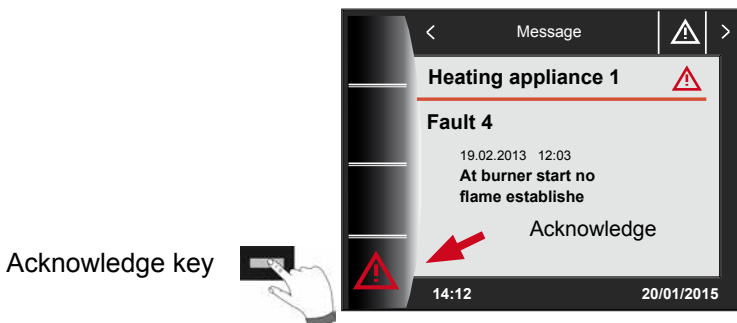
### 13.2 Procedure for warnings

- Read warning message
- Possible causes for the warning and remedies can be found in the "Faults" chapter
- Determine and remedy the cause of the warning message
- With warnings there is no need to acknowledge the fault
- Check that the system is functioning correctly

### 13.3 Acknowledging faults for users

In case of a fault, the current fault is displayed along with the fault code, date and time.

The fault can be cleared by pressing the "acknowledge" key.

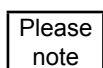


#### General information

Never remove, bypass or otherwise disable any safety or monitoring equipment. Only operate the heating appliance when it is in perfect technical condition. Any faults or damage which impact or might impact upon safety must be remedied immediately by a qualified contractor. Only replace faulty components and equipment with original Wolf spare parts.

Faults and warnings are shown in plain text on the display of the control accessories – AM display module or BM-2 programming unit – and correspond to the messages listed in the following tables.

A warning/fault symbol on the display (symbol: triangle with exclamation mark) indicates an active warning or fault message. Fault history is listed at contractor level.



Warning messages do not need to be acknowledged and do not lead directly to the boiler being switched off. However, the causes of the warnings can lead to malfunctions of the boiler / system or to faults and should therefore be repaired by a qualified contractor.



The control unit automatically acknowledges faults such as faulty temperature sensors or other sensors if the part concerned has been replaced and the test values have been supplied.



**Danger**  
**Risk of scalding from hot water!**

Hot water temperatures in excess of 65 °C can result in scalding.

- Do not set the DHW temperature above 65 °C.

## 14 Main menu overview

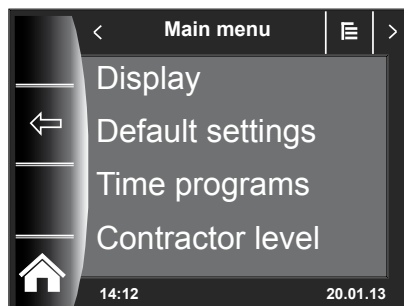


You can open the main menu on a status page (heating appliance, heating circuit, mixer, solar thermal system ...) by **pressing** the rotary selector.

This opens

- Display
- Default settings
- Time programs
- Contractor level

in the main menu.



### 14.1 Display of set / actual temperatures (chapter 15)

All set and actual temperatures are displayed (however, these cannot be changed).

### 14.2 Default settings (chapter 16)

- Heating appliance
- Heating circuit
- Mixer 1-7
- Language
- Time
- Date
- Winter/summertime
- Min. backlighting
- Screensaver
- Key lock
- User interface (extended mode)

In order to fully commission the controller, you should set the default settings in consultation with the user. The user can then adjust these default settings later to meet their requirements.

### 14.3 Time programs (chapter 17)

Time programs are available for all connected appliances. This allows the switching times to be adjusted for the heating circuit, mixer circuit, DHW heating, DHW circulation and ventilation unit, according to the configurations and appliances which are connected.

### 14.4 Contractor level (chapter 18)

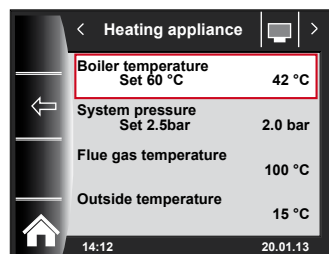
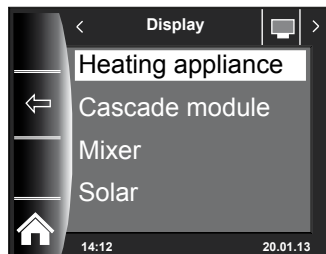
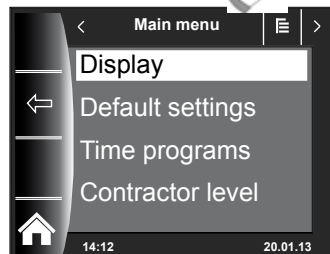
The heating contractor can use the contractor level to set system-specific and appliance-specific parameters. This menu level must only be used by the contractor.

## 15 Set / actual temperature display

All values are displayed for heating appliances and modules that are connected (mixer module MM, cascade module KM, solar module SM).

Displays vary depending on configuration and which modules are connected.

Entry



Overview of menu level displays			
Heating appliance 1		displayed if heating appliance is installed	
Heating appliance 2-4		displayed in conjunction with cascade module and if heating appliance 2-4 installed	
Cascade module		displayed if cascade module is installed	
Mixer 1		displayed if mixer module 1 (MM) or cascade module (KM) is installed	
Mixer 2-7		displayed if mixer module 2-7 (MM) is installed	
Solar (SM1/SM2)		displayed if solar module SM1 or SM2 is installed	
Ventilation unit		displayed if ventilation unit is installed	
Average outside temperature		displayed if outside sensor is installed	
Non-average outside temperature		displayed if outside sensor is installed	

Displays, heating appliance 1-4	ACT.	Displays, mixer module 1-7	ACT.
Boiler temperature in °C		Flow temperature in °C	
System pressure in bar		DHW temperature in °C	
Current flue gas temperature in °C		Buffer temperature in °C	
Outside temperature in °C		Return temperature in °C	
Return temperature in °C		Header temperature in °C	
DHW temperature in °C			
DHW flow rate in °C			
DHW DFL (flow rate) in l/min			
Input E1			
Modulation level in %			
Actual I/O value			
ZHP speed			
Burner starts			
Burner hours run			
Mains hours			
Power ON count			
HCM2 FW			

Displays, cascade module	ACT.	Displays, solar	ACT.
Flow temperature in °C		Temperature, collector 1 °C	
DHW temperature in °C		Temperature, collector 2 °C	
Buffer temperature in °C		Temperature, solar cylinder 1 °C	
Return temperature in °C		Temperature, solar cylinder 2 °C	
Header temperature in °C		Temperature, solar cylinder 3 °C	
		Temperature, buffer sensor °C	
		Temperature, return sensor °C	
		Hours run, pump 1	
		Hours run, pump 2	
		Hours run, pump 3	
		Current output	
		Total yield	
		Yield today	
		Yield this month	
		Yield this year	

Displays, ventilation	ACT.
Extract air in °C	
Outside temp. in °C	
Air flow rate m³/h	
Bypass	
Preheater coil	

## 16 Default settings overview

A list of all default settings can be found below:

Parameter	Setting range	Factory setting	Chapter
Heating appliance – DHW mode	ECO / Comfort	ECO	16.1.1
Heating circuit			16.2
Mixer 1 - 7			16.2
Language		Deutsch	16.3
Time	00:00 - 24:00 h		16.4
Date	01/01/2011 - 31/12/2099		16.5
Winter/summertime	Auto/manual	Auto	16.6
Min. backlighting	5 % - 15 %	10 %	16.7
Screensaver	ON / OFF	OFF	16.8
Key lock	ON / OFF	OFF	16.9
User interface	Extended / Simplified	Extended	16.10

The following is a list of all default settings for heating circuit and mixer circuit 1-7

Economy factor in economy mode	0 - 10	4	16.2.1
Winter/summer changeover	0 °C - 40 °C	20 °C	16.2.2
ECO / ABS	-10 °C - 40 °C	10 °C	16.2.3
Day temperature (BM-2 in wall mounting base and room influence enabled)	5 °C - 30 °C	20 °C	16.2.4
Room influence (BM-2 in wall mounting base)	ON / OFF	OFF	16.2.5

### 16.1 Heating appliance

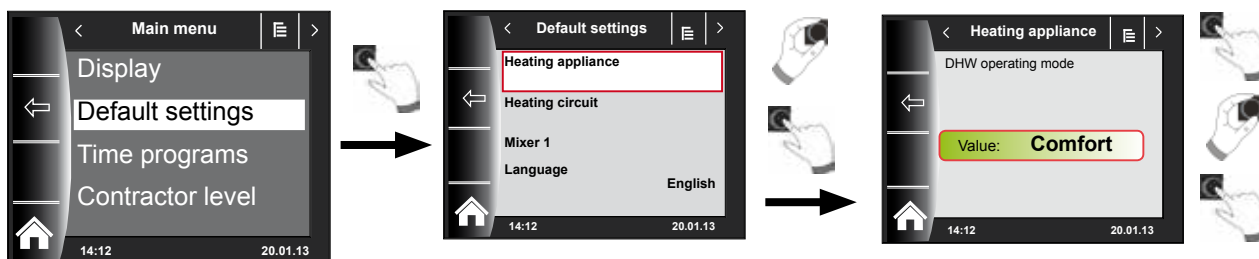
#### 16.1.1 DHW operating mode

**Setting range:** ECO / Comfort

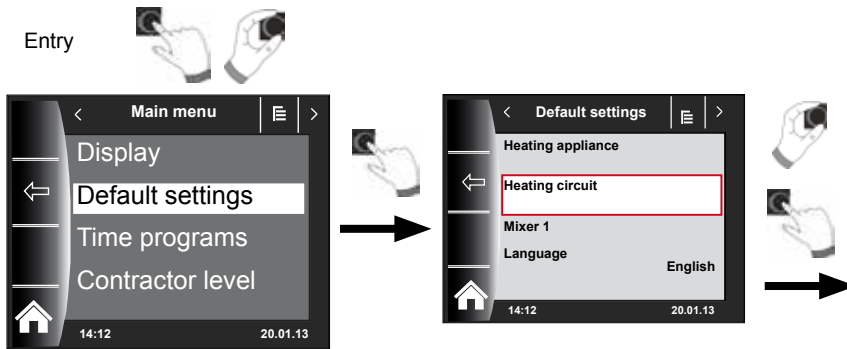
**Factory setting:** ECO

The DHW operating mode function only applies to combi boilers. The Comfort setting activates a DHW quick start and keeps the heating appliance at the right temperature to ensure rapid DHW heating. In the ECO setting, the heating appliance is not brought up to temperature until the tap is opened.

Entry



### 16.2 Heating circuit / mixer circuits 1-7



The following is a list of all default settings for the heating circuit and mixer circuits 1-7:

- Economy factor in economy mode
- Winter / summer changeover
- ECO ABS
- Day temperature (BM-2 in wall mounting base and room influence enabled)
- Room influence (BM-2 in wall mounting base)

#### 16.2.1 Setting economy factor in economy mode

**Setting range: 0...10**

**Factory setting: 4**

For a detailed description see the "Heating curve / Economy mode" chapter

The economy factor describes by how much the heating curve sets back the heating circuit or the mixer circuit when in economy mode. This factor has the same effect as the -4...+4 setting, but is only used in the time program during the setback phase or in setback mode.

Example of economy factor setting (setting procedure is always the same).





### 16.2.2 Setting winter/summer changeover

**Setting range: 0 °C to 40 °C**

**Factory setting: 20 °C**

The **winter/summer changeover** function is only enabled if an outside sensor is connected.

The winter/summer changeover function optimises the times when the system operates in heating mode. If the average outside temperature is above the set winter/summer temperature, the heating system switches to standby mode.

If the average outside temperature is below the set winter/summer temperature, the heating system switches to automatic timer mode.

The period used to calculate the average outside temperature is set via the A04 system parameter.

### 16.2.3 Setting ECO ABS

**Setting range: -10 °C to 40 °C**

**Factory setting: 10 °C**

The **ECO ABS** function is only enabled if an outside sensor is connected.

If the average outside temperature is above the ECO ABS temperature when in economy mode, the heating/mixer circuit switches to standby mode.

If the average outside temperature is below the ECO ABS temperature, the control unit switches back to economy mode.

You should only change the ECO ABS setting after consulting your contractor.

### 16.2.4 Setting day temperature (room temperature)

**Setting range: 5 °C to 30 °C**

**Factory setting: 20 °C**

Day temperature is only enabled for this heating/mixer circuit when the room influence is enabled and the BM-2 is installed in the wall mounting base.

Use the day temperature to set the required room temperature in heating mode, party function mode and the heating phases during automatic mode. In setback mode, economy mode and during the setback phase in automatic mode, the room temperature is only set to the day temperature less the economy factor (see point 18.3.1).

### 16.2.5 Setting room influence

**Setting range: ON / OFF**

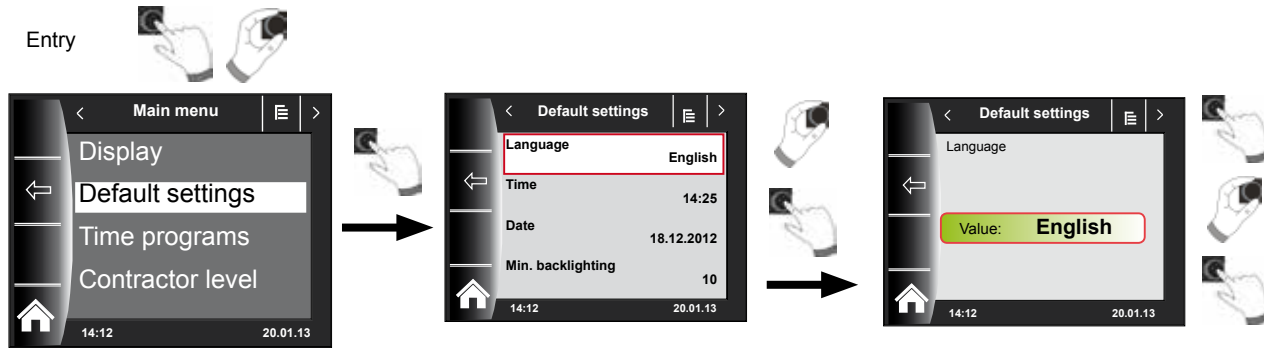
**Factory setting: OFF**

**Room influence** is only active if the BM-2 programming unit is installed as a remote control.

Room influence can be used to compensate for fluctuations in room temperature due to external sources of heat and cold (e.g. insolation, woodburning stoves or open windows).

ON            = Room influence enabled  
OFF          = Room influence disabled

### 16.3 Language



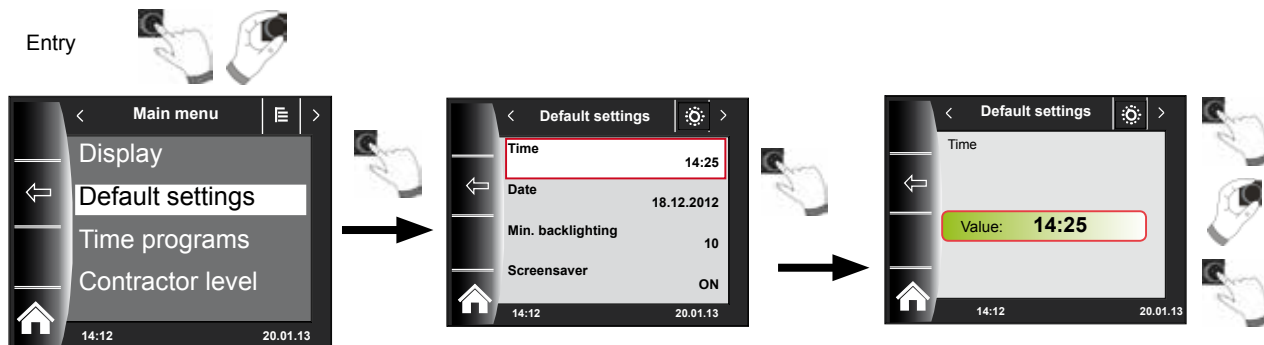
In the Language submenu, 25 different languages can be selected

#### Setting range:

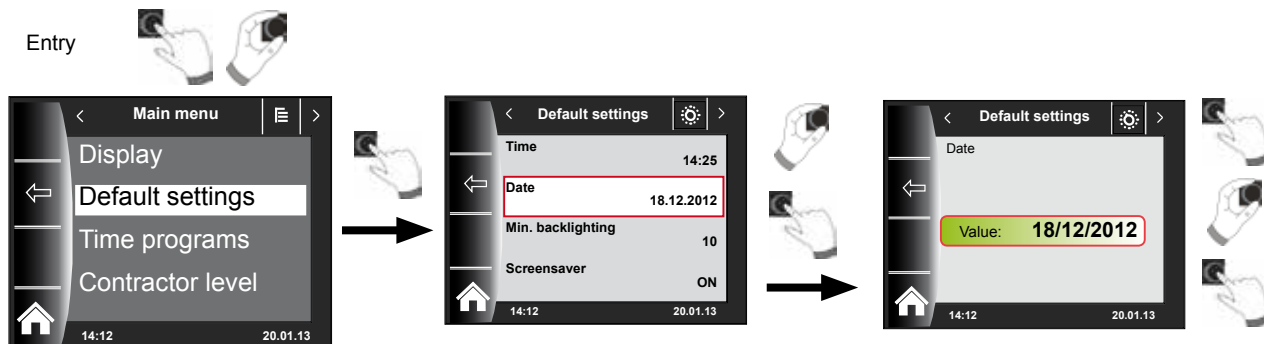
German, English, French, Dutch, Spanish, Portuguese, Italian, Czech, Polish, Slovak, Hungarian, Russian, Greek, Turkish, Bulgarian, Croatian, Latvian, Lithuanian, Norwegian, Romanian, Swedish, Serbian, Slovenian, Danish, Estonian

**Factory setting: English**

### 16.4 Time



### 16.5 Date



## 16.6 Winter/summertime

**Setting range: Auto/manual**

**Factory setting: Auto**

The BM-2 has an integral perpetual calendar. This means that, when set to Auto, the BM-2 switches automatically from summertime to standard time (wintertime) and vice versa.

The changeover from standard time to summertime takes place on the last Sunday in March at 01:00 UTC. In the Central European Time Zone, therefore, the clock is put forward one hour from 02:00 CET to 03:00 CEST.

The changeover from summertime to standard time takes place on the last Sunday in October at 01:00 UTC. In the Central European Time Zone, therefore, the clock is put back one hour from 03:00 CEST to 02:00 CET.

If the BM-2 is being used in areas that do not follow these changeover rules (e.g. Russia), the winter/summertime standard setting can be changed to "Manual" in the default settings. With this setting, there is no automatic time changeover.

## 16.7 Minimum backlighting

**Setting range: 5 % – 15 %**

**Factory setting: 10 %**

The display will revert to minimum backlighting level if no further settings are made on the BM-2 for one minute.

## 16.8 Screensaver

You can enable a screensaver. The display reverts to minimum backlighting after one minute and the following values are shown:

- ▶ Time
- ▶ Outside temperature (outside sensor connected)
- ▶ Room temperature (BM-2 installed in wall mounting base)

## 16.9 Key lock

The key lock prevents a unintentional adjustment of the heating system (e.g. by children or when dusting). When the key lock is on, it is automatically enabled one minute after the last setting is made.

ON = Key lock on  
OFF = Key lock off

- ▶ To temporarily override the key lock, press and hold the right rotary selector for 3 seconds.

## 16.10 User interface

**Setting range: Extended / Simplified**

**Factory setting: Extended**

### **Simplified mode:**

Fewer setting options. Temperature correction and program selection is only possible for all circuits together. System parameter A24 (program selector assignment) is not displayed in simplified mode. There is only one status page displaying all the data. There is no party function or temporary setback mode. In addition, simplified mode CANNOT be used in conjunction with a CWL and the ISM7/8 i/e.

### **Extended mode:**

All functions are available.

## 17 Time programs

The switching time parameters for all connected WRS components can be set in the main menu.



3 different freely programmable time programs are available for each function. This menu item is also used to display and select the active time program. A maximum of 3 switching times can be defined for each day.















For pre-programmed times and setting options, see the installation instructions for contactors – chapter “Time program”.

Freely programmed switching times can be entered below.











Time program	Day	Switching time	HC		Mixer		DHW		DHW circulation		Ventilation	
			ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
Freely programmed time program	Mo	1										
		2										
		3										
	Tu	1										
		2										
		3										
	We	1										
		2										
		3										
	Th	1										
		2										
		3										
	Fr	1										
		2										
		3										
	Sa	1										
		2										
		3										
	Su	1										
		2										
		3										







## 19. Overview of symbols

### 17.1 Symbols for the quick start keys













Symbol	Function
	The thermometer allows modification of the set temperature
	The rotary selector allows modification of the operating mode
	Press the home key to return to the start page
	Press the arrow key to go back one step
	<p>Press the emissions test key to access emissions test mode</p> <p>Emissions test mode is only necessary for the flue gas test.</p> <p>The heating appliance provides maximum heating output in emissions test mode (full load operation). In full load operation, the heating system is heated up to the maximum set temperature and the DHW cylinder is heated up to the set DHW temperature.</p> <p>When the heating appliance is in full load operation, the flue gas inspector can carry out the necessary flue gas tests.</p> <p>Emissions test mode terminates automatically either after 15 minutes or if the maximum flow temperature has been exceeded.</p> <p>You can only enable emissions test mode using the BM-2 programming unit if it is installed in the heating appliance.</p>
	Emissions test mode can be switched from upper output (100 %) to lower output (20 %).
	The special function 1x DHW bypasses the programmed switching times and heats up the DHW cylinder once, for one hour, to the set DHW temperature.
	Call up the annual solar yield
	Call up the monthly solar yield
	In time programs, copy a selected day to other days
	Acknowledge fault key in the case of faults
	Confirmation of screed drying
	Reset the filter warning (only for the CWL Excellent)
	Recycle bin, fault history is deleted

## 17.2 Symbols for possible changes using the rotary selector

Symbol	Function
	The automatic timer switches the <b>heating circuit</b> on and off at the programmed switching times. Within the switching times, the heating circuit heats up to the set room temperature (day temperature) with the enabled room influence or in accordance with the set heating curve.
	The automatic timer switches the <b>mixer circuit</b> on and off at the programmed switching times. Within the switching times, the mixer circuit heats up to the set room temperature (day temperature) at the enabled room influence or in accordance with the set heating curve.
	The <b>DHW cylinder</b> is heated up to the set DHW temperature within the switching times.
	The <b>DHW circulation pump</b> (if installed) is only switched on within the switching times.
	In automatic mode with the <b>CWL Excellent</b> , the system only switches between "Std ventilation" within the switching time and "reduced ventilation" outside the switching time.
	Party mode In party mode, the time and date are entered at which the heating system goes into continuous heating mode. The time and date at which the heating system returns to the previously selected operating mode are also entered. (see chapters "Heating circuit status page" and "Mixer status page", section "Changing the mixer circuit operating mode")
	Setback mode In setback mode, the time and date are entered at which the heating system goes into continuous economy mode. The time and date at which the heating system returns to the previously selected operating mode are also entered. (see chapters "Heating circuit status page" and "Mixer status page", section "Changing the mixer circuit operating mode")
	Permanent heating mode In permanent heating mode, the heating system is continuously on. The heating system heats up to the set room temperature (day temperature) or in accordance with the settings of the heating curve.
	In economy mode, the heating system heats up to the set economy temperature.
	In standby mode, the heating system and DHW heating are switched off. The DHW circulation pump (if installed) is switched off. The frost protection function is enabled. The heating system pumps are switched on at regular intervals to prevent the equipment from seizing up.
Mo Su	Weekdays





Symbol	Function
	DHW mode In DHW mode, the BM-2 programming unit keeps DHW heating switched on continuously.
	The special function 1x DHW bypasses the programmed switching times and heats up the DHW cylinder once, for one hour, to the set DHW temperature.
	The system targets the set air volume of parameter CWL1. Temporary moisture protection can only be enabled by entering the start and end times. Once this time has elapsed, the program switches back to the previously selected operating mode.
	During "reduced ventilation", the ventilation unit runs permanently in accordance with the settings in parameter CWL2.
	During "Std ventilation", the ventilation unit runs permanently in accordance with the settings in parameter CWL3.
	The system targets the set air volume of parameter CWL4. Temporary intensive ventilation can only be enabled by entering the start and end times. Once this time has elapsed, the program switches back to the previously selected operating mode.

## 17.3 Symbols in the status display


Symbol	Function
	Heating appliances
	DHW
	Heating circuit
	Mixer circuit 1
	Solar
	Message
	Ventilation unit
	Main menu
	Display
	Default settings
	Modification mode or contractor level
	Time programs



**17.4 Symbols in the time programs submenu**

Symbol	Function
	Use this submenu to change switching times
	Use this submenu to add switching times
	Use this submenu to delete switching times
	Use this quick start key to copy settings for the selected day

**Burner stage symbol in the heating appliance**

Symbol	Function
	This displays the current burner stage in steps of 20 %

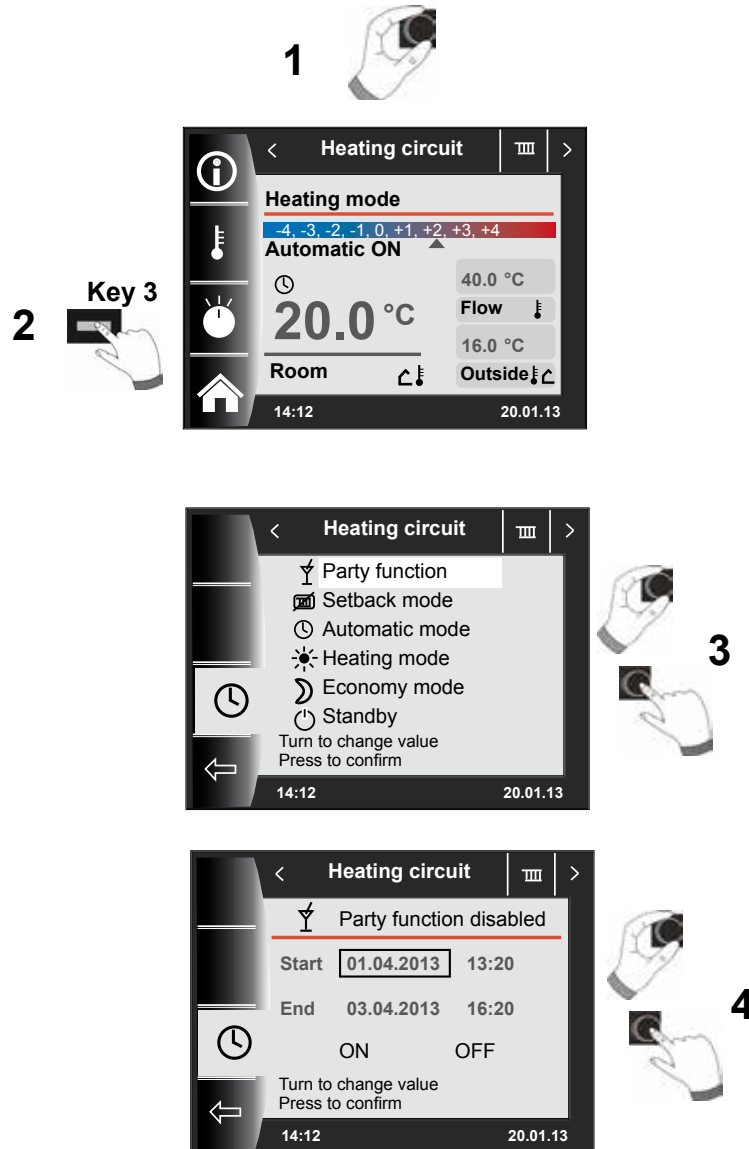
### 18 Party key



#### Party mode

In party mode, the time and date are entered at which the heating system goes into continuous heating mode. The time and date at which the heating system returns to the previously selected operating mode are also entered.

Select the heating circuit or mixer circuit by turning the rotary selector. Then press key 3 and turn the selector to select and access the party function. Enter the start and end dates, then enable or disable via ON or OFF.



With the Party function you can:

- Set start date and time.
- Set end date and time.
- The Party function is enabled by selecting and pressing ON.
- The Party function is disabled by selecting and pressing OFF.

Note: The factory setting always adds 3 hours to the start time to determine the end time.

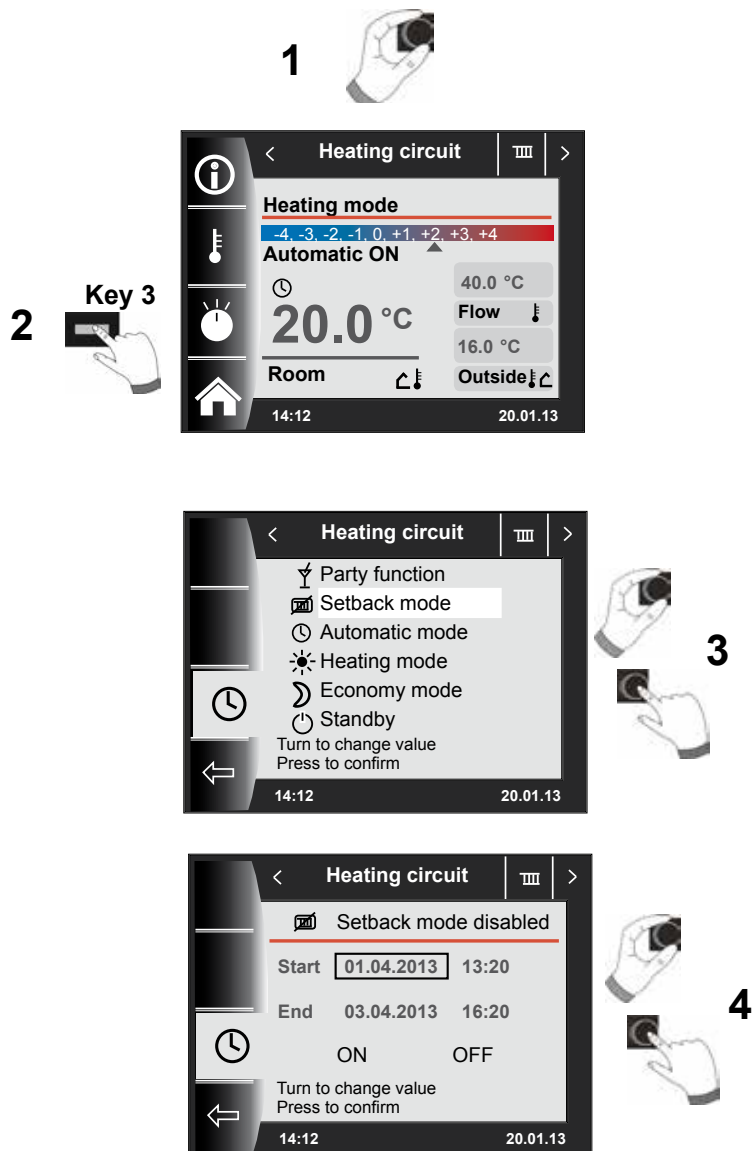
## 19 Temporary setback mode



### Setback mode

In setback mode, the time and date are entered at which the heating system goes into continuous economy mode. The time and date at which the heating system returns to the previously selected operating mode are also entered.

Select the heating circuit or mixer circuit by turning the rotary selector. Then press key 3 and turn the selector to select and access setback mode. Enter the start and end dates, then enable or disable via ON or OFF.



In setback mode you can:

- Set start date and time.
- Set end date and time.
- Setback mode is enabled by selecting and pressing ON.
- Setback mode is disabled by selecting and pressing OFF.

Note: The factory setting always adds 3 hours to the start time to determine the end time.

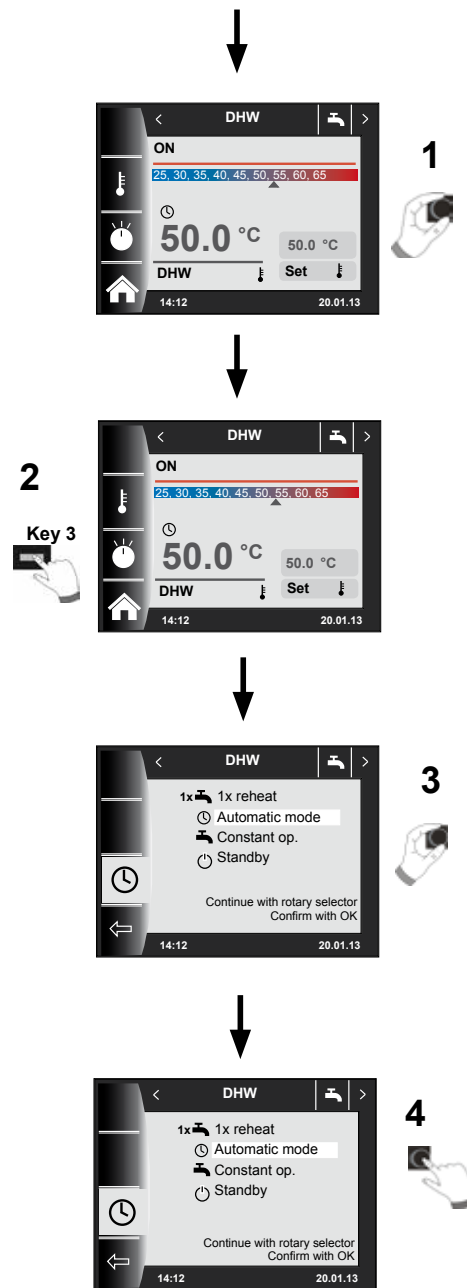
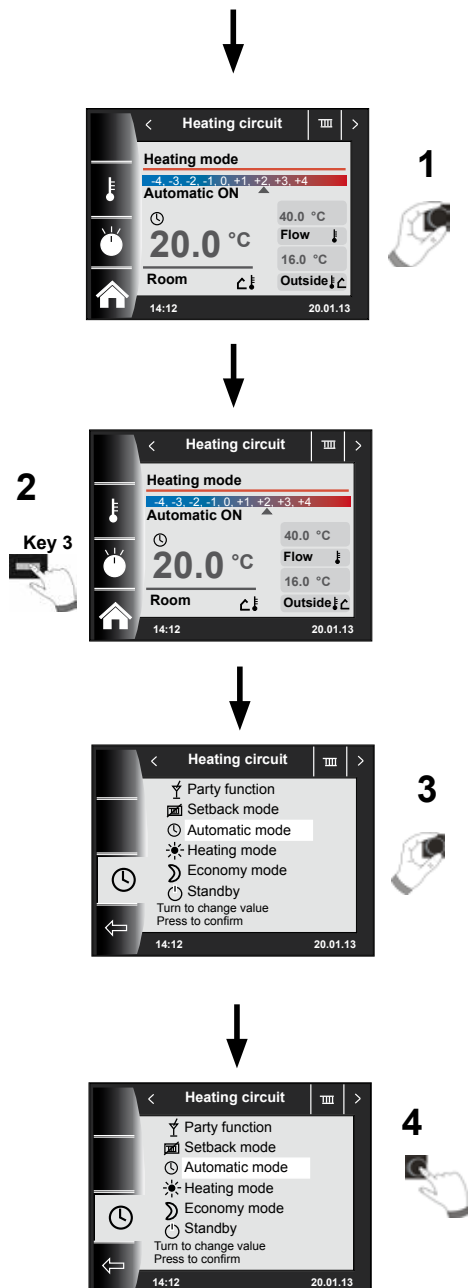
## 20 Winter mode setting (example)

### Heating circuit and mixer circuit (if installed) – automatic DHW heating according to time program – automatic

Modifying the operating mode in the heating circuit or mixer circuit will affect all heating circuits (heating/mixer circuits). The operating mode in DHW must be set separately.

Select heating circuit **or**  
mixer circuit (if installed)

Select DHW



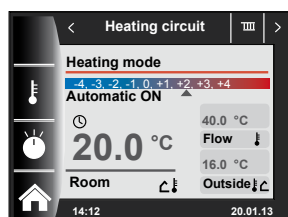
## 21 Summer mode setting (example)

### Heating circuit and mixer circuit (if installed) – standby DHW heating according to time program – automatic

Modifying the operating mode in the heating circuit or mixer circuit will affect all heating circuits (heating/mixer circuits).

The operating mode in DHW must be set separately.

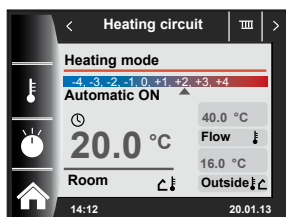
Select heating circuit or  
mixer circuit  
(if installed)



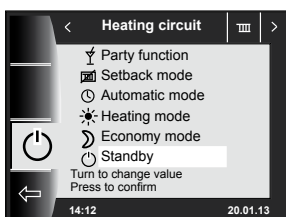
1



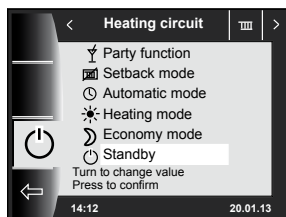
2



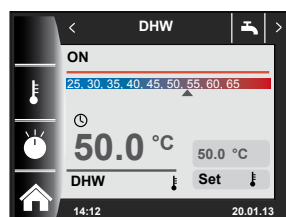
3



4



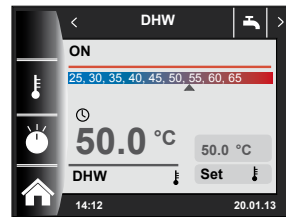
Select DHW



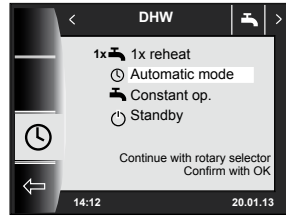
1



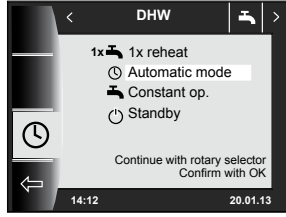
2



3



4



## **22 Energy saving tips**

### **Room temperature (day temperature)**

Set the room temperature high enough so that it feels pleasant.  
A room temperature that is one degree higher than necessary represents an additional energy consumption of approx. 6 %.  
Do not heat rarely used rooms or bedrooms continuously.

### **Efficient heating**

Heat all rooms in the house or apartment.  
A single heated room heats the adjoining rooms unchecked. Heat the rooms according to use. Maintain a minimum temperature in all rooms. In unheated rooms, moisture can form on the walls and damage the building structure.

### **Thermostatic valves**

Thermostatic valves maintain the set temperature. They open at low room temperature and close automatically when the temperature rises. Leave all thermostatic valves fully open in the room where the BM-2 programming unit is located, because otherwise the thermostatic valves and programming unit could influence each other.

### **Maintenance of the heating system**

Soot deposits in a boiler combustion chamber or a poorly adjusted burner can easily reduce a heating system's efficiency by 5 % or more. Regular heating system maintenance by your local heating contractor can therefore quickly pay off.

### **Easily accessible radiators**

Air must be able to circulate freely near the radiators, otherwise the heating system will lose effectiveness. Modern radiators emit some of their heat as radiant heat. Long curtains or poorly positioned furniture can swallow up to 20 % of energy.

### **Keep the heat inside the room – at night too!**

At night, closing blinds and drawing curtains noticeably reduces heat loss via the window areas. Thermally insulated radiator recesses and light coloured paintwork can save up to 4 % on your heating bills. Airtight joints at windows and doors also help to keep energy inside the room.

### **Ventilation**

Ventilate the rooms by turning the thermostatic valves down low and opening wide all the windows in the room, or preferably the whole house or apartment if possible: this is known as peak ventilation. Brief and effective ventilation replaces the air in the room, and the room quickly warms up again as the heat stored in the furniture and walls is emitted back into the cool air.

### **Bleeding radiators**

Regularly bleeding the radiators in all rooms, particularly on the upper floors of apartment buildings, ensures that radiators and thermostatic valves continue to operate smoothly. The radiator responds quickly to changing heat demands.

## **Setback mode, economy temperature**

Set the economy temperature to just 5 °C below the room temperature (day temperature). If you set the setback temperature lower, you lose the saving effect, because a lot of energy is then needed to reheat the rooms. It is only worth setting the setback temperature lower if you are going to be away for a long time, e.g. on holiday.

## **DHW circulation pump**

The DHW circulation pump circulates the DHW through the pipework. This ensures that hot water is always available for you at the draw-off points.

**23 Glossary****Cascade**

A cascade is a parallel connection of several heating appliances in order to achieve a higher total output.

**Contractor level**

The setting options in the contractor level are reserved for the heating contractor. This facility ensures your safety, since incorrect entries can cause injury, or damage to the heating system.

**Cylinder charging**

Cylinder charging refers to the heating of a DHW cylinder that has an internal indirect coil. To do this, a cylinder charging pump transports the boiler water and therefore the heating energy to the heat exchanger of the DHW cylinder.

**DHW heating**

The term DHW heating refers to the heating up of domestic hot water in a DHW cylinder. This could be an instantaneous water heater, a DHW cylinder, a DHW cylinder with internal indirect coil or a similar appliance.

**eBUS**

eBUS is a protocol for the networking of components in a heating system with the aim of facilitating central control of the entire system.

**ECO ABS**

The ECO ABS (eco setback) function causes the heating system to switch on/off automatically during setback mode if the average outside temperature exceeds or falls below a specified value, for example if there are high outside temperatures during the night.

**Economy temperature**

The economy temperature is the value that the set room temperature is reduced to during periods of low usage.

**Emissions test mode**

Emissions test mode is only necessary for the flue gas test. The heating appliance provides maximum heating output in emissions test mode (full load operation). Emissions test mode terminates automatically either after 15 minutes or if the maximum flow temperature has been exceeded.

**Flow temperature**

Flow temperature refers to the temperature of the heating water flowing to the radiator. It lies between 35 °C and 70 °C (depending on the outside temperature) in heating control units which are regulated by the outside temperature. In heating systems with pure surface heating, 25 °C to 40 °C is adequate. In heating systems with no mixer circuit, the flow temperature is the same as the temperature of the boiler water.

**Frost protection**

The contractor sets a temperature value on the BM-2 programming unit, below which the heating appliance goes into the frost protection function. The boiler circuit pump will start to operate continuously if the outside temperature falls below the selected value. If the boiler water temperature falls below 5 °C, the burner starts and heats the boiler up to the minimum boiler water temperature.



**Heating circuit**

A heating circuit is a sealed system for heat distribution. It consists of radiators or underfloor heating, the associated valves and pipes for the flow and return.

**Heating curve**

The heating curve describes the relationship between the outside temperature and the flow temperature that is required to achieve the required room temperature.

**Heating mode**

In heating mode the room temperature is maintained at around the day temperature value at times of high usage, e.g. during the day.

**Mixer circuit**

The mixer circuit is a heating circuit in which a mixer is fitted to control the temperature of the heating water. The mixer is fitted in the heating flow to regulate the flow temperature by mixing in cooler return water.

**Pasteurisation function**

Legionella are a type of bacteria which can cause serious illness. Legionella bacteria can form and multiply if tap water is exposed to long dwell times at temperatures between 25 °C and 50 °C. This can occur in DHW cylinders. The pasteurisation function can kill any bacteria in the hot water by short term heating to temperatures in excess of 65 °C.

**Setback mode**

In setback mode, the set room temperature is reduced to the economy temperature during times of low usage, e.g. during the night.

## **24 Documentation information**

### **24.1 Other applicable documents**

Installation instructions for contractors – BM-2 programming unit  
Operating instructions for users – BM-2 programming unit  
Heating appliance installation instructions

The instructions for all accessory modules and other accessories may also apply.

### **24.2 Safekeeping of these documents**

The system user or operator should ensure the safekeeping of all instruction manuals.

- Pass on these installation instructions as well as all other applicable manuals to the system user or operator.

### **24.3 Applicability of these instructions**

These installation instructions apply to the BM-2 programming unit.

### **24.4 Maintenance / cleaning**

The BM-2 programming unit is maintenance-free. Do not use a cleaning agent.  
Please just wipe clean with a damp cloth.



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Website: [www.wolf-heiztechnik.de](http://www.wolf-heiztechnik.de)

BM-2 installation instructions for users – 3064202\_201602      Subject to technical modifications