

Installation- and Operation Instructions

Digital - Operation module FB 5210



Windhager
Zentralheizung

02/01 023482/01

Operating instructions Operating module FB 5210

Dear reader,

This operation module is a modern with numerous functions for operating a heating system at maximum efficiency.

All adjustments have influence on the existing settings on the heating circuit module of the corresponding heating circuit.

The first part of the booklet contains all the information needed to operate the module. You will soon see just how simple and logical it is to use.

The second, longer part has a margin bar marked "**For installation personnel only**". It contains comprehensive information required by heating system installation specialists.

 **First of all, please read the "Safety notice" on page 5.**

Contents

1	Safety notice	5
2	Your operation module	6
2.1	What your operation module does	6
2.2	User adjustments	6
2.3	User controls and displays	6
2.4	Display overview	7
3	User Adjustments	8
3.1	Adjusting the desired room temperature.	8
3.1.1	Daytime room temperature	8
3.1.2	Night reduction room temperature	8
3.2	Adjusting the displayed room temperature to the measured	9
3.3	Select operation mode	10
3.4	Switching on the "party" function	11
3.5	Switching on the domestic hot water	11
3.6	Adjusting the hot water temperature	12
3.7	Adjusting the time and day of the week.	12
3.7.1	Summer/winter time adjustment.	13
3.8	Set holiday program	13
4	Checking temperatures, displaying controller outputs	14
4.1	Checking temperatures	14
4.2	Controller output display	14
4.3	Check set value	15
4.4	Display collector temperature and solar earnings.	15
5	Automatic programmes	16
5.1	What you should know	16
5.2	Relevant keys and displays	16
5.3	Standard programmes	17
5.4	Selecting and customising automatic programmes	18
5.4.1	Selecting standard programmes	18
5.4.2	Customising automatic programmes	19
5.4.3	Checking/verifying automatic programmes	21
5.5	Adjustment examples.	22
5.5.1	Selecting another standrad programme	22
5.5.2	Earlier heating one day a week	22
5.6	Custom automatic programme (with table)	24

Operating instructions

Operation module FB 5210

6	The heating controller does not work as expected	25
6.1	Checking the control function	25
6.1.1	Testing of the controller	26
6.1.2	Testing the sensors as well as the controller requirements (Set and actual values)	26
6.1.3	Standard values switching on and off	26
6.1.4	Error messages	26
7	General	27
7.1	Installation information and preparation for Initial Operation	27
8	Explanation of terms	27
9	Technical data	27
10	Assembly and Installation information	28
10.1	Definition of the reference room	28
10.2	Definition of where to place the operation module	28
10.3	Dimensions	28
10.4	Fitting instructions	29
10.5	Wiring information	30
10.6	Addressing (allocation) of the operation module	31

1 Safety notice

Intendend use

This operation module is a modern electronic device.



The operation module complies with the following EU guidelines:

- 73/23/EWG "Low Voltage Guidelines"
- 89/336/EWG "EMV Guidelines", including amendment guideline 92/31/EWG

Das Bedienmodul ist für den Einsatz zusammen mit einem Heizkreismodul entsprechend den Spezifikationen des Herstellers bestimmt.
Anderweitige Verwendung des Bedienmodules ist nicht zulässig.

Safety

This device uses the latest technology and complies with safety regulations.



Danger

The operation module is electrically operated. Improper installation or attempt repair can result in a life threatening electric shock hazard. Installation and commissioning must be performed only by adequately qualified specialist. It is forbidden to open the device or ancillary components. Repairs are to be carried out only by the manufacturer.

Instructions in the text that are marked by a warning symbol must be observed under all circumstances.



Warning: Do not switch on the power before all wiring work on the boiler (corresponds to the heating circuit module) are finished and the operation module is plugged onto the socket (Intialising the electronic).

Please wait until the temperature indication on the operation module shows the proper value, to start with the settings. The duration of the initialisation lasts max. 2 minutes.

2 Your operation module

2.1 What your operation module does

When correctly programmed and used in conjunction with an appropriate heating system the heating circuit module ensures heating to the desired temperatures during the programmed times.

The operating module is constantly exchanging data with heating circuit module. Changes on one of the two appliances are active in short period of time.

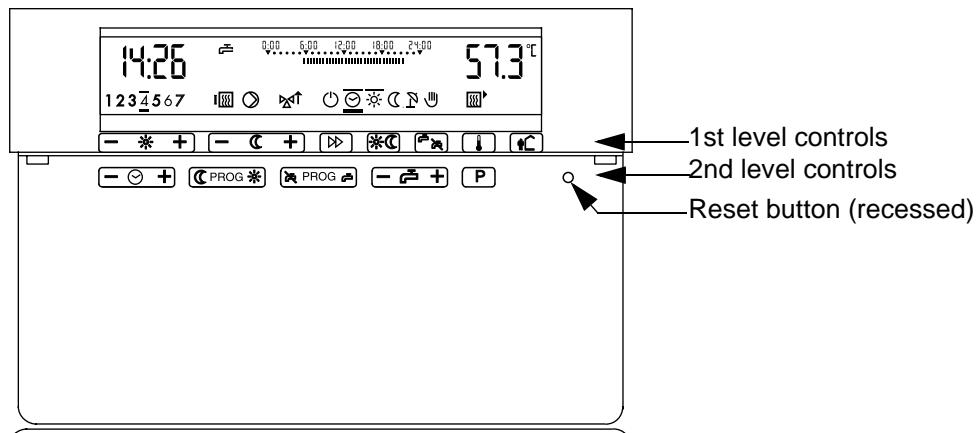
The data exchange can in between lead to a reset of the display. The input value will be showed correctly in a very short time.

2.2 User adjustments

You, the user can make the following controller adjustments:

- Adjust desired room temperature (normal and night reduction temperatures)
- Select the operating mode
- Switch on the "party" function
- Turn on the domestic hot water production
- Adjust the desired domestic hot water temperature
- Adjust the time and day of the week (summer/winter time adjustment)
- Select and modify automatic programmes
- Set holiday programme

2.3 User control and displays



This view shows the controller with its cover removed

Operating instructions

Operation module FB 5210

1st level controls

-  Desired daytime room temperature
-  Desired night reduction temperature
-  Mode selection
-  "Party" function activation
-  Domestic hot water
-  Temperature check
-  Holiday programme

2nd level controls (accessible after removing cover)

-  Time of day adjustment
-  Programming key for room heating/night reduction times
-  Programming key for hot water times
-  Desired hot water temperature
-  Select among 4 pre-set programme cycles

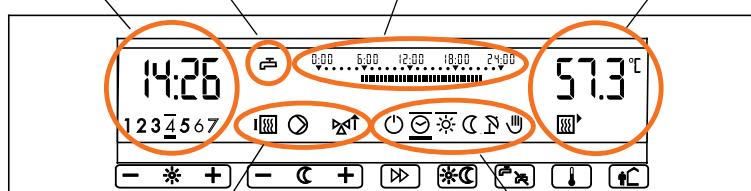
2.4 Display overview

Time and day of week

Hot water enabled/
disabled

Time/temperature cycle
for the indicated day

Measured temperatures



Controller output indicators

Selected operation mode

3 User Adjustments

3.1 Adjusting the desired room temperature

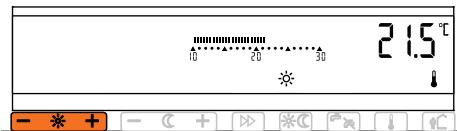
3.1.1 Daytime room temperature

1. Press the key once

- The regular room temperature adjustment appears on the right of the display.

2. Press the "-" or "+" side of the key to set a lower or higher temperature.

You can adjust the temperature in 0,5-°C-increments, i.e. to change the temperature from 20.5 to 21.5°C you would press the "+"-side of the key twice. Press and hold down the key to change the temperature at a faster rate.



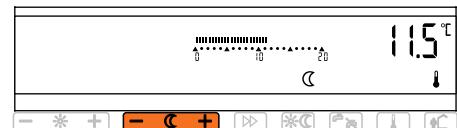
The change takes effect immediately. The display returns to normal after 1 minute, or you can press the key to restore the normal display right away.

3.1.2 Night reduction room temperature

1. Press the key once

- The current night reduction temperature appears on the right of the display.

2. Press the "-" or "+" side of the key to set a lower or higher temperature. You can adjust the temperature in 0,5-°C increments by pressing the "-" or "+" side of the key. Press and hold down the key to change the temperature at a faster rate.



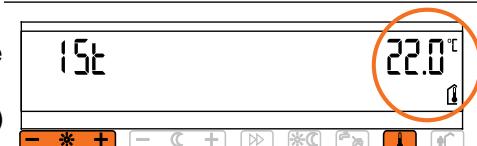
The change takes effect immediately. The display returns to normal after 1 minute, or you can press the key to restore the normal display right away.

3.2 Adjust displayed room temperature to the measured

It is possible that the temperature displayed on the operation module differs from the measured (with a room thermometer) temperature.

1. Keep  button pressed until actual value of the room temperature is shown (see "Checking temperatures, displaying controller outputs" starting from page 14).

2. Press the "-" or "+" side of the key    the displayed value on the operation module with the measured value on the room temperature thermostat.



Due to pressing the button  you store your input and go back to the standard display.

If the measured room temperature (actual value) deviates from the set value, through the heating curve on the heating circuit module this can be adjusted (see operation module heating circuit module).

3.3 Select operation mode

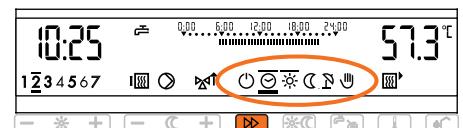
The current mode of operation is indicated by a thick line below and a thin line above the symbol.

For example, during automatic operation: 

Symbol	Function	Recommended setting for
	Heating "OFF"	Heating and domestic hot water "OFF", Frost protection active
	Automatic operation	Heating and warm water according to programmed automatic cycle
	Heating operation	Room heating on continuously, domestic hot water according to programmed automatic cycle
	Night reduction operation	Lower heating temperature, domestic hot water disabled
	Summer operation	Heating "OFF", frost protection active, domestic hot water according programmed auto. cycle
	Manual operation	Setting only on the heating circuit module

 The manual  (emergency) operation can only be set on the heating circuit module not on the operation module.

1. To change the operation mode , press the  key several times in succession.
 - Each key-press moves the marker one position to the right.

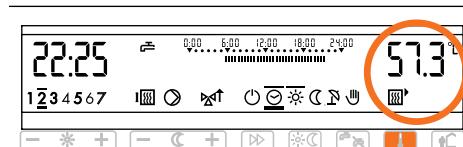


3.4 Switching on the "Party function"

The "party function" overrides the normal program by switching from night reduction to regular daytime heating, or vice versa. The override stays in effect until the next programmed event, unless it is switched off manually before.

1. Press  the key.

- A blinking line above the corresponding symbol indicates that the normal operating schedule has been overridden (in example on the right, heating is running at full power, although it would normally be in night reduction mode at this time).



To turn off the "Party function", press the  key again.

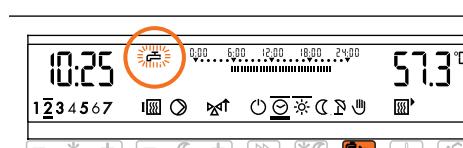
3.5 Switching on domestic hot water

You can enable domestic hot water, even when it has been turned off by the regular program.

The symbol to the right of the clock indicates whether the domestic hot water is switched on or off:

-  domestic hot water on
-  domestic hot water off

1. To turn on the domestic hot water, press the  key
- A blinking symbol indicates the domestic hot water override.



As soon as the hot water production is finished the following symbol is displayed. 

3.6 Adjusting the hot water temperature

If the controller manages the domestic hot water supply, the water temperature may be set from the controller.

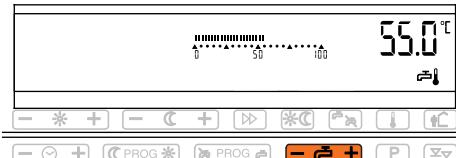
 **Consult a specialist before altering the domestic hot water temperature!**

1. Open the cover and press the

 key once.

- The current domestic hot water temperature setting appears at the right of the display.

2. Press the "-" or "+" side of this key to increase or decrease the temperature. The temperature changes in 1°C increments. Press and hold down the key to change the temperature at a faster rate.



The change take effect immediately. The display returns to normal after 1 minute, or you can press the  key to restore the normal display right away.

3.7 Adjusting the time and day of the week

1. Open the cover and press the

 key once.

2. Set the time forwards or backwards by pressing the "+" or "-" side of this key. The time changes in 1 minute increments. Press and hold down the key to change the time at a faster rate.

3. Set the day of week using  the key. 1 = Monday, 2 = Tuesday, 3 = Wednesday, etc. A bar in the display indicates the weekday.



The display returns to normal after 1 minute, or you can press the  key to restore the normal display right away.

3.7.1 Summer/winter time adjustment

Set the time by following the procedure in the previous section.

- Summer to winter time:
set the clock back 1 hour (press the "–" side     

3.8 How to program the holiday programme

For an absence duration of up to 29 days a holiday programme can be entered. During the entered holiday days the heating system is heated at outside temperatures under the night reduction set value on the heating circuit module for the setnight reduction temperature. The hot water preparation is during this time inhibited.

If you choose the holiday programme during the heating season and would like minimum temperature in the room (Indoor plants), you guarantee, that:

- the reduction temperature is set (see "Reduction temperature on page 8),
- the heating boundary on the heating circuit module is set on a high level.

The holiday programme begins immediately after the attitude, this day depends thus as a first holiday day.

The holiday programme ends after the calm holiday day number around midnight; with that the normal heating and hot water time programme is again acting.

The day to the return more should not be counted than holiday day so that the plant can heat up on operating temperature.

1. Press  button
 - The display shows on the left "0", the holiday programme can now be set.



In this example (see above) 21 holiday days appear.

Operating instructions

Operation module FB 5210

2. Through repeated pressing of the button  the desired number of holiday days (incl. the contemporary day) set; a maximum of 29 holiday days can be tuned. The attitude rate speeds up lasting pressing.

- If by mistake too many holiday days have been set, keep on pressing the  button. After "29" the display begins again by "0".

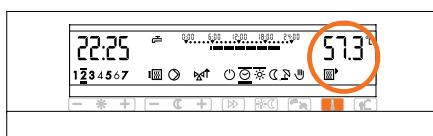
Through pressing the  button the holiday programme becomes active. This is announced by the flashing symbol. 

In order to interrupt the holiday programme earlier, press  the button. The controller works now again according to the programme set.

4 Checking temperatures, displaying controller outputs

4.1 Checking temperatures

Press the key  one or more times
All the temperatures measured by the controller can be shown in the display.
This could be at the maximum:

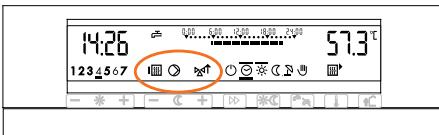


  Boiler temperature	  Domestic hot water temperature
  Boiler return temperature	  Outside temperature
  Heating flow temperature	  Room temperature

4.2 Controller output display

This could be at the maximum:

  = Boiler stage 1. or 2.	ON
 = Circulation pump	ON
 = Domestic hot water supply	ON
 = Mixing valve	OPEN
 = Mixing valve	CLOSED



4.3 Checking set values

Pressing key  permanently. The operation module announces after each other the measured temperature levels.

If all measured values are passed, additional  appears, however instead of the main image, the required values in the display.



Release key . Through individual keystroke reach the set- and actual values (measured values) to the display. They could be at a maximum:

 Boiler temperature	set
 Room temperature	set
 Heating forward temperature	set
 Domestic hot water temperature	set

Pressing the button  once returns the basic display into the display. This comes about also automatically if no button is not pressed for a minute.

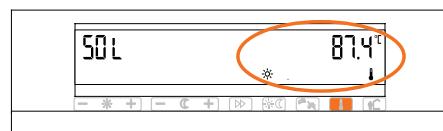
4.4 Display of collector temperature and solar profits

If in a system there is a solar module installed, the collector temperature and the solar profits can be asked so.

Pressing the button  permanently.

The operation module shows all measured temperature values after each other.

If all measured values are passed, additional  appears, however instead of the main image, the required values in the display.



Release key . Through individual keystroke reach the set- and actual values (measured values) to the display.

Pressing the button  once returns the basic display into the display. This comes about also automatically if no button is not pressed for a minute.

 Sol*	Solar profits	kWh
 Sol*	Collector temperature	°C

5 Automatic programmes

5.1 What should you know

Automatic programmes give you separate control of heating and domestic hot water, according to your needs and lifestyle. The programme sets the times when the room or water temperature should be maintained at their desired settings. At other times, the system operates at reduced temperature, or the water heater is turned off.

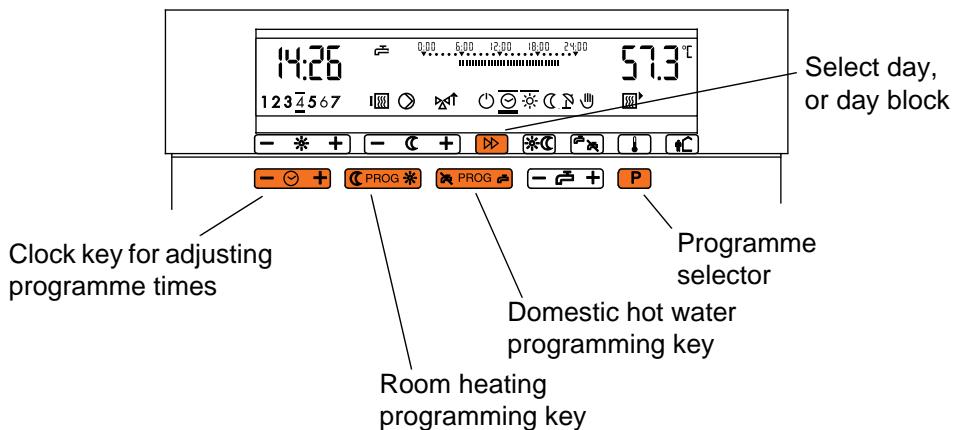
The times set in the automatic programme are the times when the heating system switches on and off, or release and off times for the hot water production are active.

4 standard programmes have been pre-set at the factory.

Note: These 4 programmes can not be changed!

If one of these suits your needs, you can select it as the current programme. You can also modify this programme according to your own wishes, and create a custom programme (one for every day of the week, if you want).

5.2 Relevant keys and displays



Operating instructions

Operation module FB 5210

5.3 Standard programmes

P1 = Programme 1, normal domestic programme

Day groups		Room heating		Hot water	
Day of week	Marked days	On 	Reduced 	Turn on 	Turn off 
Mo-Fr	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>	06.00	22.00	05.00	22.00
Sa-So	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>	07.00	23.00	06.00	23.00

P2 = Programme 2, domestic comfort programme

Day group		Room heating		Hot water	
Day of week	Marked days	On 	Reduced 	Turn on 	Turn off 
Mon-Thu	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>	06.00	22.00	05.00	22.00
Fri	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>	06.00	23.00	05.00	23.00
Sat	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>	07.00	23.00	06.00	23.00
Sun	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>	07.00	22.00	06.00	22.00

P3 = Programme 3, domestic programme with reduced temperature

Day groups		Room heating		Hot water	
Day of week	Marked days	On 	Reduced 	Turn on 	Turn off 
Mon-Thu	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>	06.00	08.00	05.00	08.00
		15.30	22.00	14.30	22.00
Fri	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>	06.00	08.00	05.00	23.00
		15.30	23.00	14.30	23.00
Sat	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>	07.00	23.00	06.00	23.00
Sun	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>	07.00	22.00	06.00	22.00

P4 = Programme 4, commercial and industrial premises

Day groups		Room heating		Hot water	
Day of week	Marked days	On 	Reduced 	Turn on 	Turn off 
Mon-Fri	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>	06.00	19.00	05.00	19.00
Sat-Sun	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u>	Off	Off	Off	Off

5.4 Selecting and customising automatic programmes

If one of the standard programmes described earlier meet your needs, you can select and use it "as is" - see "Selecting the standard programme" on page 18. You can select separate programmes for room heating and domestic hot water and modify each one independently.

You can modify the selected programme according to your needs, see "Custom-automatic programmes" on page 19.

Important: When customising a heating programme, always use one of the standard programmes as a starting point, not one that has already been modified.

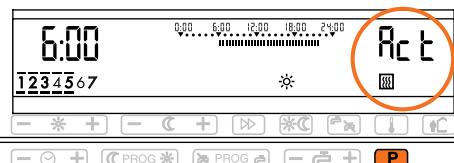
The "Adjustment examples" on page 22 provides step-by-step explanation of how to customise the standard programmes.

5.4.1 Selecting the standard programme

The standard programme for room heating and the standard programme for domestic hot water must be selected in separate, successive steps.

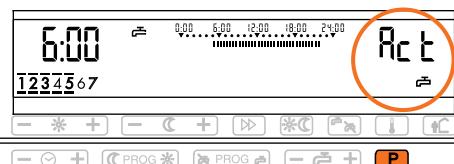
1. Press the **P** key.

- "Act" appears on the right for the current **room heating programme**.



2. Press the **P** key again.

- "Act" for the actual, current **domestic hot water programme**. Programme 1 is the factory setting.

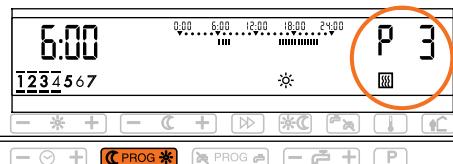


3. Press the **P** key repeatedly until the desired programme number appears.

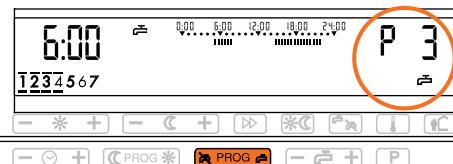
- Programmes are displayed in the following sequence
 - "P1" and 
 - "P1" and 
 - "P2" and 
 - "P2" and 

Operating instructions Operation module FB 5210

4. To select the standard **room heating** programme, press the  key when the desired programme is showing in the display. (The example on the right shows standard programme 3 for heating.)



To select the standard **domestic hot water** programme, press the  key  when the desired programme number is showing in the display. (The example on the right shows standard programme 3 for domestic hot water).



The programme comes into effect immediately.

 **Note:** The original programme will be overwritten and erased.

The display returns to normal after 1 minute, or you can press the  key to restore the normal display right away.

5.4.2 Customising automatic programmes

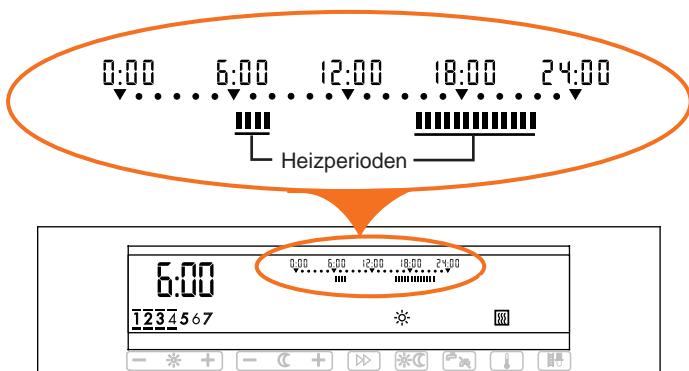
As explained previously, you can select any standard programme as the current programme, then customise it to your needs. Begin by identifying the standard programme that is closest to your desired settings.

Important: When customising a heating programme, always use one of the standard programmes as a starting point, not one that has already been modified.

Operating instructions

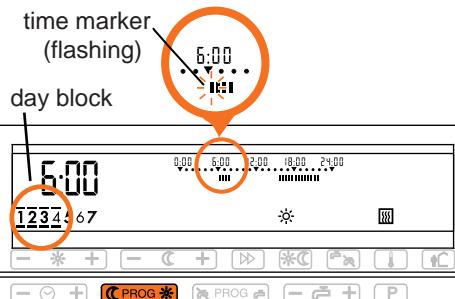
Operation module FB 5210

Heating intervals are shown as dark segments on the time-line. You can modify heating intervals any way you wish by adding or removing segments.

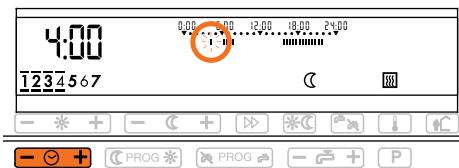


The instructions here show how to adapt a room heating programme. The procedure for domestic hot water is identical, simply press the **PROG *** key instead of the **PROG** key.

1. Press the **PROG *** key once.
• The setting for the first day or day block appear in the display. (the example shows standard programme 3). The time marker is positioned at the start of the first heating period.



2. If necessary move the time marker to desired point (4.00 a.m. in the example) using the **- ⌂ +** key (press the "-" or "+" sides). The marker moves in 15-minute increments.



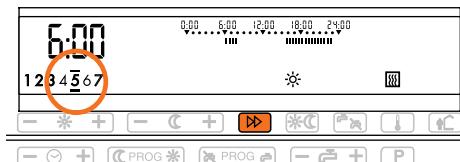
3. Press the **PROG *** key to add or remove heating periods ("overwrite" the segments).
 - Pressing the **⌂** side adds extra segments to the time-line (=daytime heating).
 - Pressing the **⌚** side removes existing dark segments from the time-line (= night reduction).

Operating instructions

Operation module FB 5210

The shortest interval for heating or night reduction is 1 hour. This can be increased in 15-minute increments.

4. To change to another week day or day block, press  button one or more times.



5. Follow this procedure to customise the programme for every day block, or each individual day. Modifying the programme for a single day within a day block removes that day from the day block.

Programme changes are stored immediately. The display returns to normal after 1 minute, or you can press  key to restore the normal display right away. können Sie auch sofort zur Normalanzeige zurückschalten.

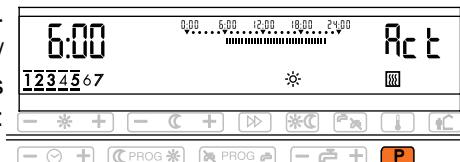
5.4.3 Checking/verifying automatic programmes

You can check all the switching times for the current programme, and the standard programmes.

1. Press the  key repeatedly to display the program you want to check/verify. (The example on the right shows the current room heating programme:

"Act" and  appear in the display).

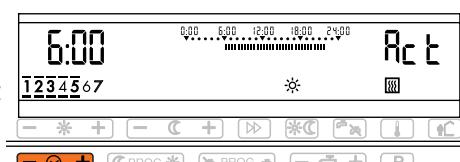
- The display shows the settings for the first day, or the first day block; the time marker is at the start of the first heating period.



2. Use the    key to step through the programmed switching times.

(Press the "-" or "+" side.) You cannot make any changes here.

If you want to modify the switching times, see "Customising automatic programmes on page 19.



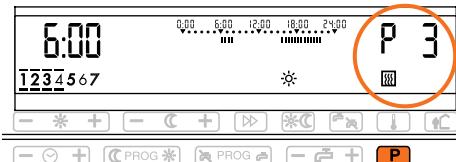
The display returns to normal after 1 minute, or you can press the  key to restore the normal display right away.

5.5 Adjustment examples

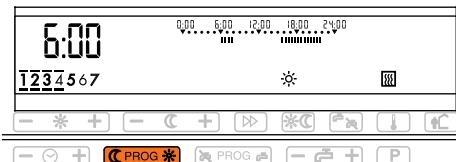
5.5.1 Selecting another standard programme

Example: You want to set programme no. 3 for room heating.

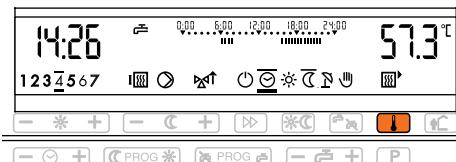
1. Repeatedly press the **P** key until the display appears as shown:



2. Press the **PROG *** key once.
 - Programme 3 is now the room heating programme



3. Press the **thermometer** key.
 - The normal display returns. (The normal display will also return automatically after 1 minute.)



Your changes are saved and come into effect immediately.

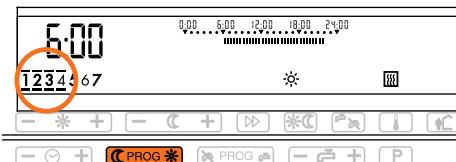
5.5.2 Earlier heating one day a week

Example: Standard programme 2 largely meets your needs. However, on Saturdays you would like a warm house at 5.30 a.m.

Choose programme no. 2 as described above.

1. Press the **PROG *** key

- The display shows the settings for the first day block (Monday - Thursday).

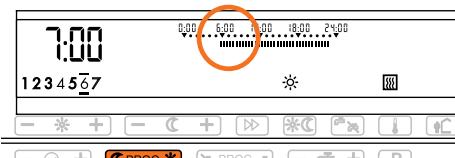
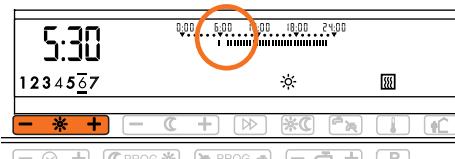
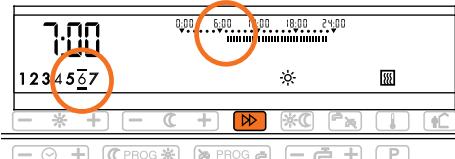


Operating instructions

Operation module FB 5210

2. Press the  key twice.
 - The display shows the settings for Saturday. The time marker and clock show the start of the first heating period.
3. Move the time marker to 5.30 using the    key (press the "-" side 6 times).
4. Use the  key to add heating periods (press the  side to fill the intervening segments).

Your changes are saved and come into effect immediately. The display returns to normal after 1 minute, or you can press the  key to restore the normal display right away.



5.6 Custom automatic programme (with table)

You want set up a programme that is fully customised to your requirements.

1. First enter your custom programming times in the following table.

2. Compare your desired programme with the four standard programmes on page 18.
3. Select the standard programme that is closest to your desired programme (see "Selecting the standard programme" on page 18).
4. Adjust this standard programme to match your desired programme (see "Customising automatic programmes" on page 20).

6 The heating control does not work as expected

If the settings do not give you the required comfort, check if

- the automatic programme is programmed right (see from page 16),
- the temperature is set right (see from page 8),
- heating operation due to the outside temperature is requested.

Consider the references in the operating manual to the heating controller.

6.1 Checking the controller functions

If the connection to the firing automate is working perfect, after initialising the main image is shown in the display. If this is not the case the following explanation could be of use:

Determination	Possible cause	Relief
Nothing is shown in the display	• Boiler is not switched on	• Check fuses, push the button. Is the function display available?
	• Data bus connections exchanged	• Correction of the wiring
	• Module is not activated	• If reasonable check with second controller
Error-Display	• Faulty communication	• Test wiring. Are the installation instructions kept?
	• Malfunction on the firing automate	• Procedure in accordance with operating manual to the firing automate.

In order to guarantee that the automatic controller and the pertinent devices are in functional state, following activities on the operation module can be carried out after switching on of the boiler.

6.1.1 Checking the controller

To make sure the the controller and the pertinent device are in function, the following actions can be taken:

- Press reset-button
The module will be initialised.

If the controller will go back to the standard display the internal function test was sucessful.

Note: The Reset-function starts the module, but it does not change the set values or the time marker.

6.1.2 Checking the functions of the sensors and the controller (Set- and actual values)

In accordance with procedure "4.3 set points scan", from page 15.

If all necessary measured values (sensors) are displayed, and these are valid, is to test through the set values if the controller needs a requiremend.

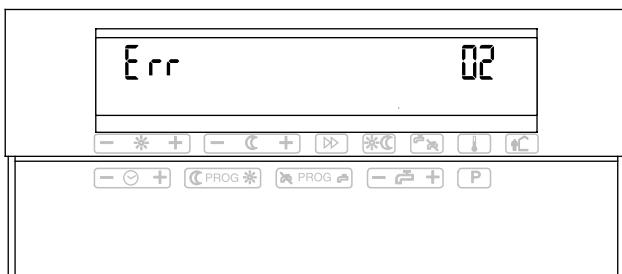
6.1.3 On and off of intial functions

See operation manual for the boiler switch board or heating circuit module.

6.1.4 Error messages

Error messages are recognised if the display shows "Err" (=Error) instead of the time and if there is an Error number instead of the temperature. It shows a defect on the heating device. If a failure message occurs further actions can be read in the operation manual of the boiler.

Siehe "6.1 Prüfung der Reglerfunktion", ab Seite 25.



7 General Information

7.1 Installation notes and preparing for operation

The power supply of the operation module is secured via a bus connection from the heating circuit module.

The main image is clear after the putting on of the voltage at the boiler and with that at the heating circuit module in the display of the operation module.

If the normal display fails to appear, press the recessed reset button to the right right of the 2nd-level controls. Then set the time and day of week, if necessary. The reset button starts the controller, without affecting existing settings or the clock-programme. Use a fine pointed object to operate the reset button.

If no main image appears please check the wiring.

8 Explanation of terms

Operational start	The operational start is the programmed start of the operational time set by the time-switch.
Operational time	The reservation time is the time frame during which the plant is heated on the standard temperature.
Specialist level	These setting levels are reserved for specialists. They include setting values for the adaption of the controller to the heating plant.
Measured value	Measured temperature.
Set point	Temperature defaulted by the end user or the specialist onto those the heating controller controls the actual value.

9 Technical data

Power supply:	over data highway (no batteries)
Seensor cable length cross-sectional area:	max. 100 m min. 0,75 mm ²
Bus interface:	2-wire-bus, not permutable
Ambient temperature in operation:	0 °C ... 50 °C
Certification:	The remote control is CE - compliant

10 Assembly and installation instructions

If the operation module is used to measure the room temperature (room temperature compensation), the instructions in the two following chapters have to be considered.

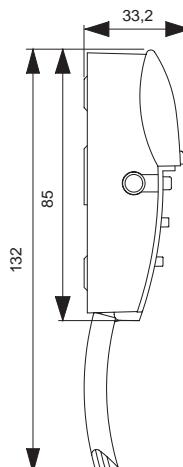
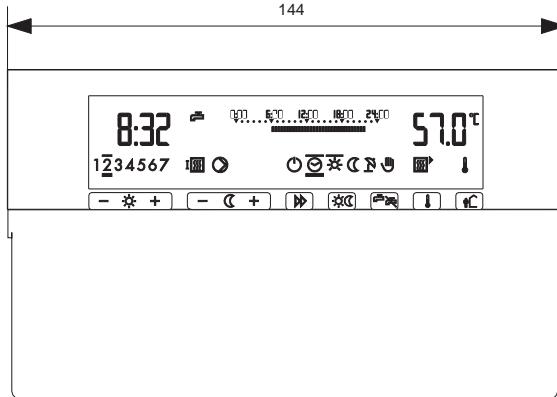
10.1 Definition of the reference room

- No external heating sources like tiled stoves or stoves should be installed in the reference room.
- Attention: The temperature measured in this room has influence on the control characteristic of the whole heating circuit.

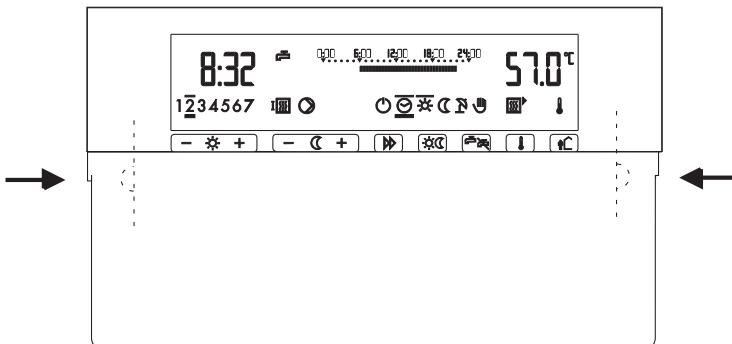
10.2 Definition of the installation site

- In the reference room on the inside wall to a normal heated adjacent room. No other control devices, e.g. thermostatic valves, should be active in this room.
- Approx. 150 cm distance from the floor.
- Air circulation has to be secured (not in niches or cupboards etc.).
- Do not install beside a heating source or in direct solar radiation.

10.3 Dimensions

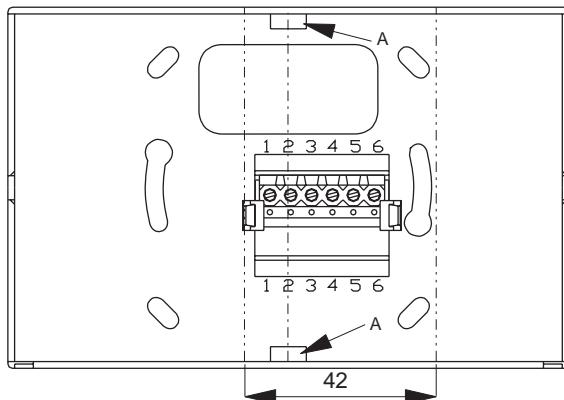


10.4 Fitting instructions



The operation module is furnished with a connection and assembly socket. In order to remove the operation module, you have to press the to under the front-plate hidden cams with your fingers.

Consider during the arrangement, that the backside opening for the cables lies above the clamping block and the numbering in the casing base is readable normal (left 1, right 6).



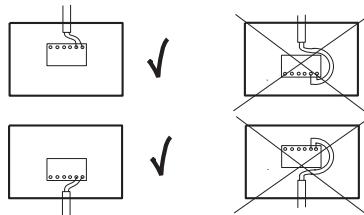
The cords are to be led into the cable compartment through the aperture in the ground or the break-away lead-in in the middle up or down. The base is attached now with at least 2 screws.

10.5 Notes on the wiring



Warning: Before starting to wire up the system, ensure that all the conductors are disconnected from electrical supply. Electricity must also be disconnected before plugging or unplugging the connectors. Never touch the controller wires or connections.

Due to the limited space you have to lead the wires inside the desired cable harness and not on the other side of the clamping block. The clamping block can be set in therefore through light side pressure from the catch and set in the other way. For the wiring always note the numbering on the base plate.



Warning: The connection cables from the operation to the heating circuit module (databus) have to be installed separate from the low voltage cables (230 V).

Note if you do not consider this it can cause malfunction of the heating control!

Please note the appropriate operation instruction and the connection scheme when connecting the connection cables of the operation module to the heating circuit module of the boiler.

Before putting on the operation module on the base plate take care that the programming switches (DIP-switch) of the plant are set (see the following chapter).

10.6 Addressing (assignment) of the operation module

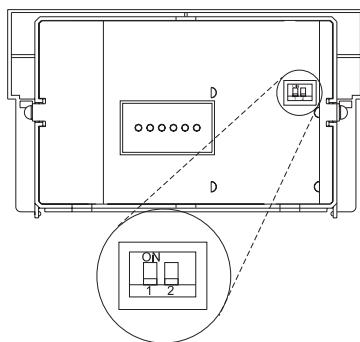
Due to addressing with the programming switch (DIP-switch) the operation module is assigned to the heating circuit module.

Only by the MES-module BUUL RT/UULLRT C1 required resp. possible.

The programm switches on the backside of the controller have to be set to the required function.

Function	DIP-switch		
	no. 1	no. 2	
Remote control	Heating circuit 1	OFF	OFF
	Heating circuit 2	ON	OFF

DIP-switch no. 2 is always on OFF.



Warning: Switch on the power supply on the boiler (and therefore on the heating circuit module) if all wiring work are done and the operation module is connected to the base plate (Initialising the electronics).

Wait until the display shows the right temperature on the operation module to start with the settings. The duration of the initialising takes max. 2 minutes.

Regional Customer Service Support**Salzburg (Head Office):**

Tel. 0 62 12/23 41-267
Fax 0 62 12/45 04

Vienna
Tel. 0 1/869 43 28-340
0 1/869 43 28-450
Fax 0 1/865 13 81

Upper Austria:
Tel. 0 62 12/23 41-266
Fax 0 62 12/45 04

Styria:
Tel. 0 1/869 43 28-670
Fax 0 1/865 13 81

Tyrol:
Tel. 0 62 12/23 41-263
Fax 0 62 12/45 04

Carinthia:
Tel. 0 62 12/23 41-269
Fax 0 62 12/45 04

Head Office Salzburg**A-5201 Seekirchen:**
Anton-Windhager-Str. 20

Tel. 0 62 12/23 41-0
Fax 0 62 12/42 28

Tel. 0 62 12/23 41-262
Fax 0 62 12/42 27

Planning Consultancy:
Tel. 0 62 12/23 41-264
Fax 0 62 12/42 27

Order acceptance,
Geräte / Zubehör
Tel. 0 62 12/23 41-265
Fax 0 62 12/42 27

Germany**Windhager Zentralheizung**
D-86105 Mettingen

Deutzring 2
Tel. 0 82 71/80 56-0
Fax 0 82 71/80 56-30

D-04502 Delitzsch
Heinrich-Rudolf-Hertz-Str. 2
Tel. 0 3 42 02/723-0
Fax 0 3 42 02/723-50

Windhager**Central Heating****Windhager**

Windhager Zentralheizung
CH-1162 St.-Prex
Zl. Au Glapin
Tel. 0 21/806 15 12
Fax 0 21/806 16 61
CH-6203 Sempach-Station
Industriestrasse 13
Tel. 041/469 469 0
Fax 041/469 469 9

Germany:**Windhager Zentralheizung**
D-86105 Mettingen

Deutzring 2
Tel. 0 82 71/80 56-0
Fax 0 82 71/80 56-30

D-04502 Delitzsch
Heinrich-Rudolf-Hertz-Str. 2
Tel. 0 3 42 02/723-0
Fax 0 3 42 02/723-50

Switzerland:**Windhager Zentralheizung**
CH-1162 St.-Prex

Zl. Au Glapin
Tel. 0 21/806 15 12
Fax 0 21/806 16 61

CH-6203 Sempach-Station
Industriestrasse 13
Tel. 041/469 469 0
Fax 041/469 469 9

Internet:

www.windhager.com

Windhager**Central Heating****Windhager**

Windhager
Zentralheizung

Technische Änderungen vorbehalten / AwÖ