



Wall Hung Boiler Room Thermostat

OR80 OT Thermostat



BOSCH

Operating Instruction

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1 Symbols and safety precautions

1.1 Key to symbols

Warnings



Warnings in this document are identified by a warning triangle printed against a grey background. Keywords at the start of a warning indicate the type and seriousness of the ensuing risk if measures to prevent the risk are not taken.

The following keywords are defined and can be used in this document:

- **NOTICE** indicates a situation that could result in damage to property or equipment.
- **CAUTION** indicates a situation that could result in minor to medium injury.
- **WARNING** indicates a situation that could result in severe injury or death.
- **DANGER** indicates a situation that will result in severe injury or death.

Important information



This symbol indicates important information where there is no risk to people or property.

Additional symbols

Symbol	Explanation
▶	Step in an action sequence
→	Cross-reference to another part of the document
•	List entry
–	List entry (second level)

Table 1

1.2 Safety instructions

General safety instructions

Thanks for using our room thermostat, please read the following content before using:

- ▶ Please operate this product according to the instruction.
- ▶ Follow the manual to ensure complete functionality.
- ▶ Install and use heaters and other accessories according to the manual.
- ▶ Accessories only can be installed by authorized installer.
- ▶ Before installing the accessories:
Interrupt power supply of heaters and other members of bus (220~240V AC).
- ▶ Please inform the working way of the accessories, and guide customers to operate.
- ▶ Heater is switched on when freezing danger occurs, and comply with anti-freezing tips.
- ▶ The accessories must not be connected to power supply of 220~240V.
- ▶ Users should learn the product default setting (refer to “ 2.2 electric parameters”). Don't change default setting if not necessary.
- ▶ Mount the thermostat refer to “ 5.1 mounting position”
- ▶ HRT-196WT is powered by OT 3.3V low voltage.
- ▶ If the product breaks down within 12 months, we will fix it free of charge.
- ▶ There will be an extra charge under the follow situation even if it is within the warranty expires:
 - The fault is caused due to misuse or not follow the instruction;
 - The destruction due to flood, fire, lighting strike;
 - The damage caused during product dismantling and modification by the user or mountainer not authorized by our company;
 - Immersion in water, damp, collisions, extrusion which destroy the product.
- ▶ If you have any questions, please contact our manufacturer and agents.

Damage caused by operational errors

Operational errors may cause personal injury and/or property damage.

- ▶ Ensure that children should not operate and/or play with the equipment under unattended circumstances.
- ▶ Ensure that the equipment only can be touched by personnel who can operate the equipment correctly.

2 Product instruction

OR80 room thermostat has the advantages of easy operation and practicality.

2.1 Proper use

Please carefully read this manual before using, and operate according to requirements specified in the manual.



When communication between OT controller and wall-hung boiler is abnormal, hint "Error E1" will appear, and other failures please refer to error code introduction of wall hung boiler.

2.2 Electric parameters

Temperature setting range	5~35 °C
Measurement precision	0.1 °C
Hysteresis temperature	± 1 °C
Display	LCD Dot matrix
Temperature sensor	NTC
Power supply	OT low voltage

Table. 2

2.3 Main functions and features

- 24H Custom program function
- Recycle control temperature from Sunday to Monday
- Setting temperature in multi period per day
- Menu operation mode
- Temperature calibration
- 128*64 dot matrix display screen
- Display current temperature/time/week/working condition
- 1 user program function, 7 fixed modes
- Program preview
- Fault display function
- Reset, quit operation function

2.4 Cleaner

- ▶ Use wet cleaning cloth to wipe the housing of controller. Must not use irritant or corrosive detergent.

3 Product description

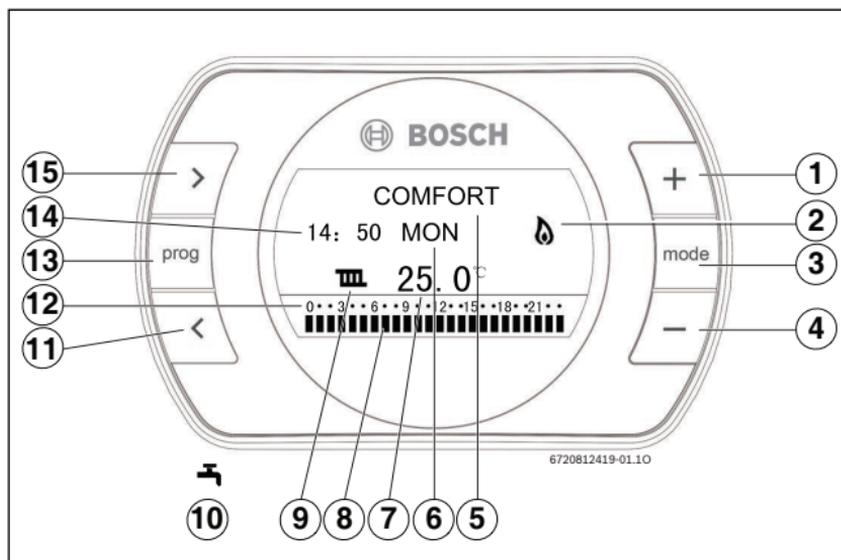


Fig. 1

- [1] + (increase)/ Up key
- [2] Boiler working condition
- [3] Mode/Return key
- [4] – (decrease)/ Down key
- [5] Current mode
- [6] Week date
- [7] Current room temperature
- [8] Program preview
- [9] Heating working condition
- [10] DHW water working condition
- [11] Left key

- [12] 24H Display
- [13] Main menu/confirm/set key
- [14] Current time
- [15] Right key

4 Product appearance dimensions

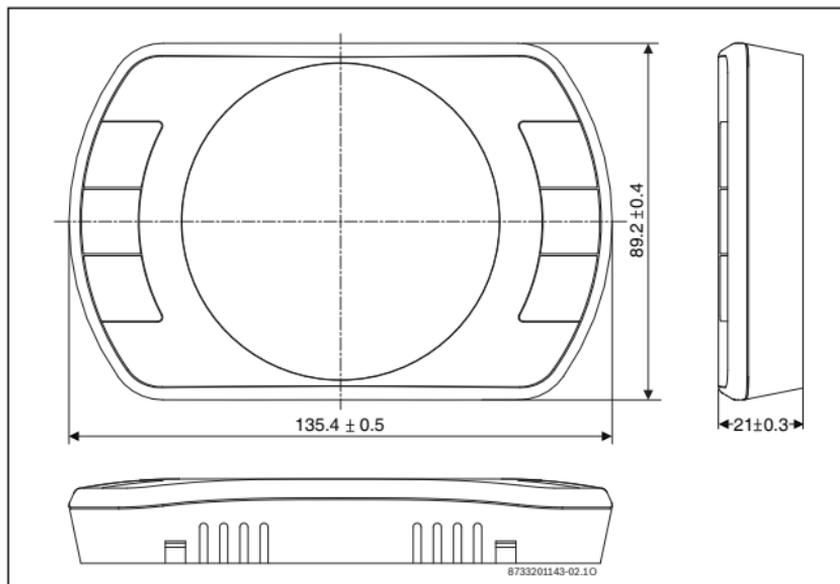


Fig. 2

The back plate of room thermostat is a standard 86*86 design and can be mounted in standard junction box or fixed on the wall.

5 Installation

5.1 Mounting position

Avoid installing the thermostat close to fridge, radiator, kitchen, computer, window, doorway or other over-cooling, over-heating and temperature changed frequently areas. The best position to install the thermostat is a dry place which can precisely reflect room temperature, and has low interference.

5.2 Installation steps

- ▶ Plug flathead screwdriver into recesses at product bottom, and move up to open back cover, as shown in Fig. 3.

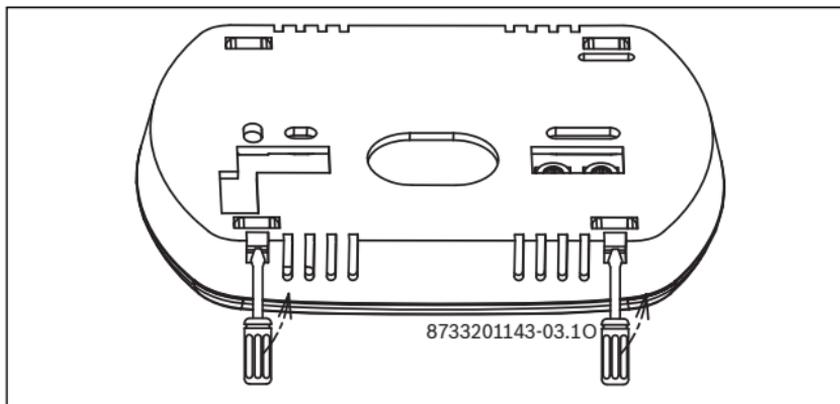


Fig. 3

- ▶ Drill two holes from cable entries on the wall (space between hole centers is 60~80mm), fill the fitting expansion pipes, and then use fitting screws (PA4*30mm) to fix the back cover, (→see Fig. 4).

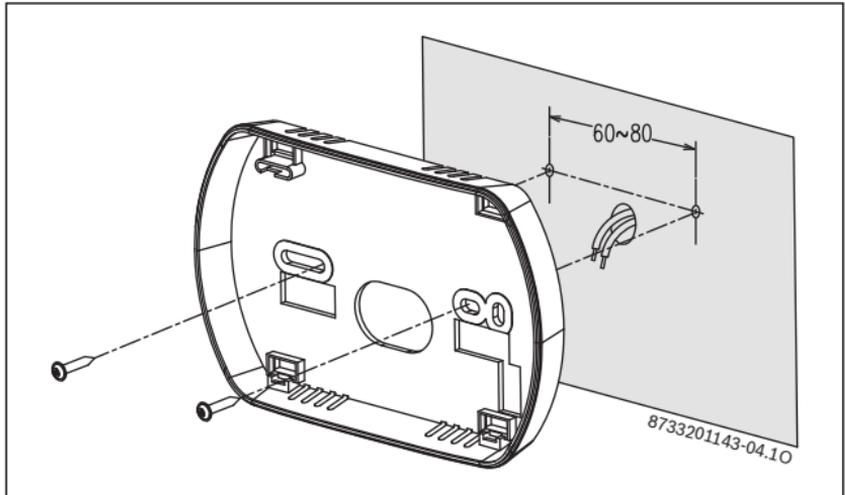


Fig. 4

- ▶ Connect wire to wire holder of PCB, and align four positioning buckles with four square holes, then fix product onto the back cover, as shown in Fig. 5.

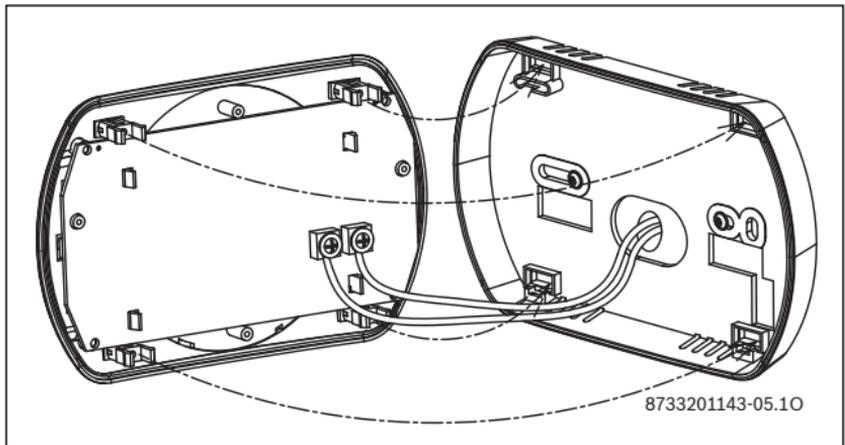


Fig. 5

6 Operation instruction

There are 6 function keys on OR80 OT room thermostat. Press the Prog key to enter into main menu, press “+” and “-” key to choose function, and press “Prog” key to set this function.

6.1 Temperature setting

The item “temperature setting” in main menu is used for setting temperature in three modes: “+” and “-” key is for adjusting temperature, LEFT and RIGHT key is for moving operation point position, and “Prog” key is used to save setting and return to last menu.

Default setting	
Defrost temperature	5 °C
Economy temperature	17 °C
Comfortable temperature	20 °C

Table. 3

Main Menu	
Setting Temp	0 3 6 9 12 15 18 21
Time/Week	Sunday Daily job
User prog	Monday Daily job
Sys setting	Tuesday Daily job
Weekly prog	Wednesday Daily job
Holiday mode	Thursday Daily job
Boiler Info	Friday Daily job
Exit	Saturday Daily job

Fig.6 Temperature setting

6.2 Time setting

Set current time and week under “Time/week”.

Main menu	
Setting temp.	
Time/week	Set time/week
User prog.	Hour
Sys settings	12 : 00 MON
Weekly prog.	
Holiday mode	
Boiler Info	
Exit	

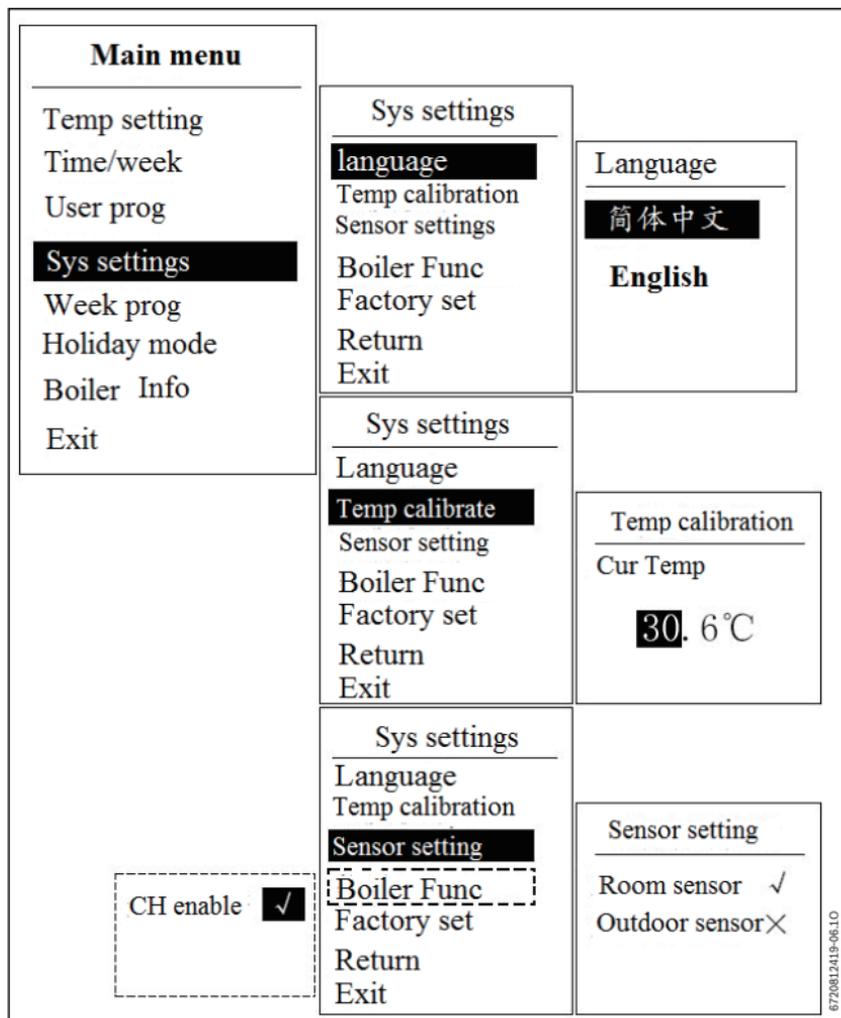
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Fig. 7 Time setting

6.3 Function setting

“System Set” includes “Language”, “Temperature calibration”, “Sensor setting”, “Boiler function” and “Restore factory defaults”.

- “Language” option includes CHINESE and ENG LISH;
- “Temperature calibration” is for correcting temperature;
- “Sensor setting” option is for selecting indoor temperature sensor and outside temperature sensor;
- “Boiler function” option is used for setting “CH” and “DWH” working condition;
- “Restore factory defaults” can restore all temperatures and functions to default values.



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Fig. 8 Function setting

6.4 Weekly program

This function is used for setting temperature mode.

These modes include: office worker, comfort, economy, outing, morning shift, middle shift, night shift and user-defined. User-defined mode is a custom program mode (→see part 7), other modes are set as follows:

office worker	
Time period	Temperature
08:00-12:00	Frost temperature
12:00-13:30	Comfort temperature
13:30-17:30	Frost temperature
17:30-08:00	Comfort temperature

Table. 4

Comfort	
Time period	Temperature
00:00-00:00	Comfort temperature
Economy	
Time period	Temperature
00:00-00:00	Economy temperature
Outing	
Time period	Temperature
00:00-00:00	Frost temperature

Table. 5

Morning	
Time period	Temperature
07:30-16:00	Frost temperature
16:00-07:30	Comfort temperature
Middle shift	
15:30-00:00	Frost temperature
00:00-15:30	Comfort temperature
Night shift	
23:30-08:00	Frost temperature
08:00-23:00	Comfort temperature

Table. 6

Main Menu	
Setting Temp	
Time/Week	
User prog	
Sys setting	
Weekly prog	
Holiday mode	
Boiler Info	
Exit	

	0	3	6	9	12	15	18	21	
Sunday	■	■	■	■	■	■	■	■	Daily job
Monday	■	■	■	■	■	■	■	■	Daily job
Tuesday	■	■	■	■	■	■	■	■	Daily job
Wednesday	■	■	■	■	■	■	■	■	Daily job
Thursday	■	■	■	■	■	■	■	■	Daily job
Friday	■	■	■	■	■	■	■	■	Daily job
Saturday	■	■	■	■	■	■	■	■	Daily job

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Fig. 9 Weekly program

7 Program

There are as many as 48 programmable time zones per day of this thermostat, and user can set any temperature among the setting ranges in this 48 programmable time zone. Following is a 6 programmable time zone example:

Time period	Temperature setting
06: 00-11: 30	Economy temperature
11: 30-13: 00	Comfort temperature
13: 00-18: 00	Economy temperature
18: 00-23: 30	Comfort temperature
23: 30-03: 00	Economy temperature
03: 00-06: 00	Comfort temperature

Table. 7

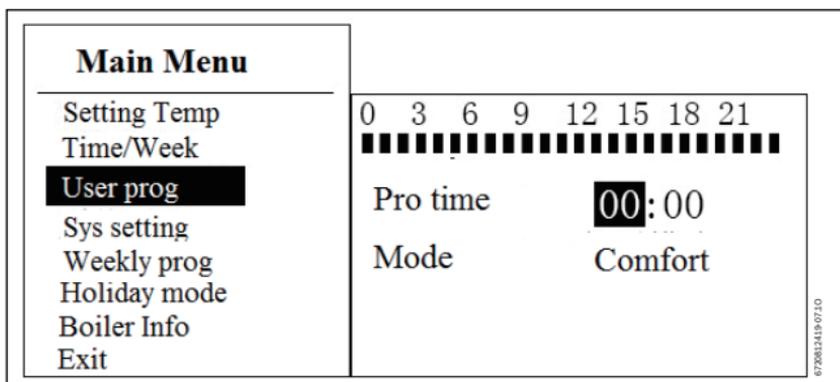


Fig. 10 Program

- ▶ Press “Prog” to enter main menu;
- ▶ Press (-) to select “User prog.” and press “Prog” to enter interface;

- ▶ When the cursor is at 00:00, setting start time to 06:00 with ">/<" key;
- ▶ Setting the time to 6:00 with "<" key.

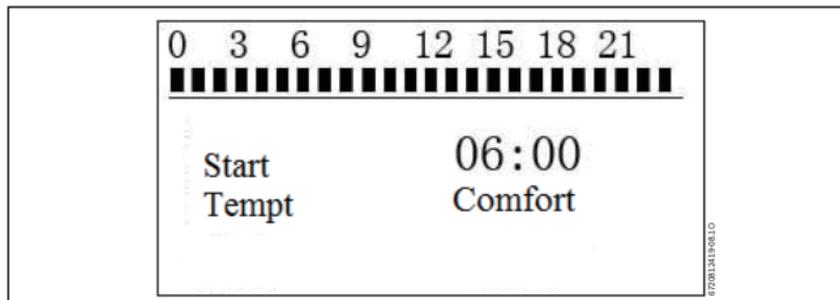


Fig. 11

- ▶ Press "Mode" key to move the cursor to "comfort temperature";
- ▶ Move the cursor to "start" -6:30 with ">", repeat the above two steps to set the temperature for the second time period as "comfort temperature";
- ▶ Repeat the above operation to set the temperature of other time periods.
- ▶ Press "+" and "-" key to copy the temperature mode of last 30 minutes, for instance: if the temperature mode of 06:00 and 06:30 are required the same, users can easy set by directly pressing "+".
- ▶ Save the last step and press "prog" to quit program. All program points will be automatically save in "User Prog";
- ▶ End programming.

8 Basic operation procedure

For initial operation, please take the following steps:

- ▶ Please connect the room thermostat according to “section 5.1”.
- ▶ After thermostat is connected, LCD display board is shown as below:

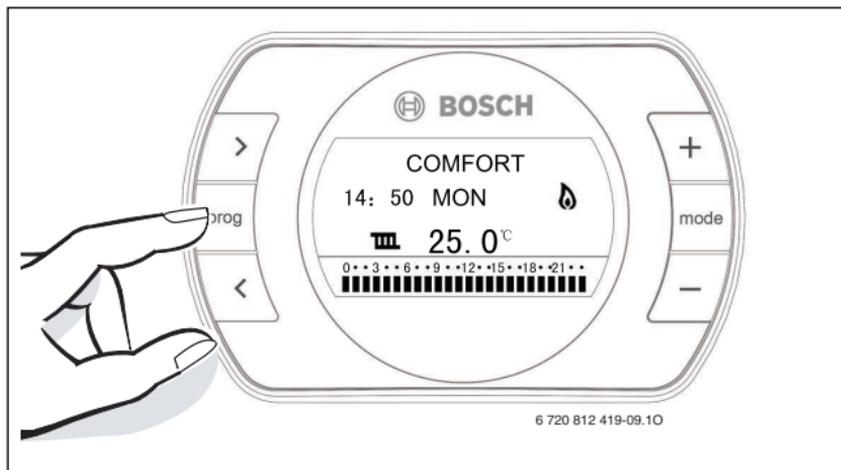


Fig. 12

Press “Prog” to enter main menu.

- ▶ Choose “Setting temp” and press “Prog” key to enter temperature setting. User can set temperature value for three modes: anti-frost mode, economy mode and comfort mode :
 - De-Frost temperature: This temperature is suitable for the situation when people stay out for a long time (such as: on vacation). And this mode will not only save energy but also can assure boiler’s and pipeline’s safety. Setting temperature range: 5-35 °C Default: 5 °C.
 - Economy temperature: this mode is suitable for the situation when user can come home in a short time (such as: working hours). Setting temperature range: 5-35 °C. Default point: 17 °C.
 - Comfort temperature: this temperature is suitable for the situation when people stay at home. Setting temperature range: 7-35 °C. Default point: 20 °C.

- ▶ Press “Prog” key to save settings and return to main menu.

Main menu	
Setting temp.	Setting temp.
Time/week	defrost 07.0°C
User prog.	economy 15.0°C
Sys settings	comfort 20.0°C
Weekly prog	
Holiday mode	
Boiler Info	
exit	

Fig. 13

- ▶ Press “-” key (P10) to start time & week setting, move cursor with “left” and “right” keys, and set current time and week with “up” and “down” key. Press “Prog” key to save settings, and return to main menu.

Main menu	
Setting temp.	
Time/week	Set time/week
User prog	Hour
Sys settings	12 : 00 MON
Weekly prog	
Holiday mode	
Boiler Info	
exit	

Fig. 14

- Choose “boiler function” item in “system setting” and press “Prog” key to enter CH and DWH function setting.

OR80 OT

CH allowed	Start up boiler's CH function
CH not allowed	Shut off boiler's CH function

Table. 8

Selecting “√/×” with “left” and “right” key, and “√” means startup boiler's CH function. Press “Prog” key to save settings and return main menu.

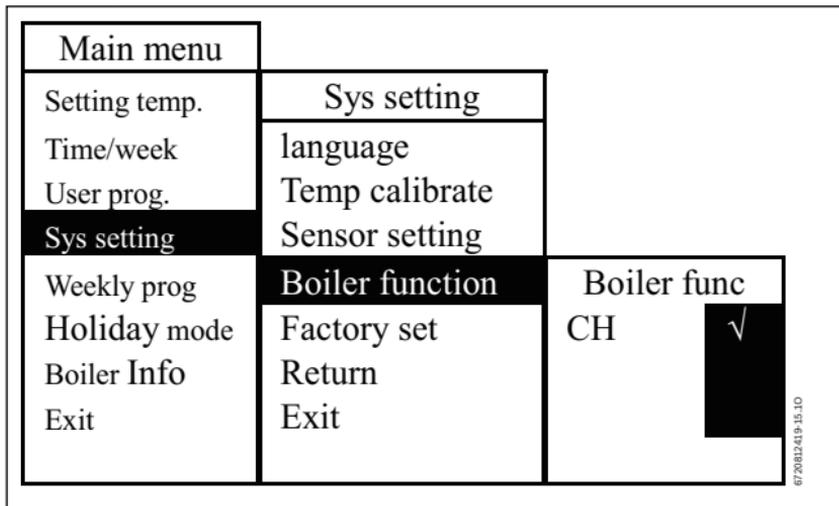


Fig. 15

- Choose “weekly program” and press “Prog” key to enter mode setting. Select week date from Monday to Sunday with “left” and “right” key, and choose different modes by pressing “mode” key. All setting periods can be previewed at the top of the LCD screen.

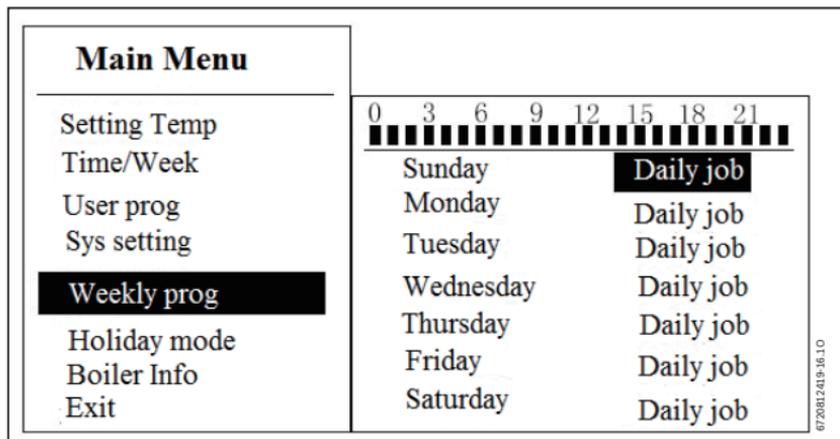


Fig. 16

- Press “Prog” key to return main display interface or automatically exit after 10 seconds.

10 Holiday mode

This mode is selected for the situation when people stay out for a long time (such as: on vacation).

Main menu	
Temp setting	Holiday length
Time/week	Time
User prog	
Sys setting	00 day00 hour
Weekly prog	
Holiday mode	
Boiler- Info	
Exit	

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Fig. 18

11 Boiler information

Main menu		Set Temp
Temp setting	Boiler Info	Tmax 85.0°C
Time/week		Tmin 05.0 °C
User prog	View temp	
Sys setting	return	
Weekly prog	Exit	View temp
Holiday- mode Boiler- Info		DWH 00.0°C
Exit		CH 00.0°C
		Outdoor 00.0°C

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Fig. 19

12 Safety instructions

This room thermostat is driven by low voltage, please be free.

13 Applicable models

Boiler mode	Boiler No.	Serials
Eurosmart MINI	L1P18 (WBN6000-16C)	7716482002
	N1P17 (WBN6000-15S)	7716482003
"New" Eurostar	L1P20-WBN6000 -18CRN S5500	0T1010044700023338
	N1P20-WBN6000 -18HRN S5500	0T1010044700023332
	L1P27-WBN6000 -24CRN S5500	0T1010044700023339
	N1P27-WBN6000 -24HRN S5500	0T1010044700023333
	L1P31-WBN6000 -28CRN S5500	0T1010044700023340
	N1P31-WBN6000 -28HRN S5500	0T1010044700023334

Table. 9

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