WT-01

OT ELECTRONIC DEVICE WITH
USER INTERFACE FUNCTION FOR
BOILER CONTROL AND WEEKLY
ROOM CHRONO-THERMOSTAT

RC22

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INSTALLATION

The installation of the device must be carried out ONLY by qualified person.

Warning: disconnect the power to the boiler before carrying out installation

1. ***Choose the most appropriate place*** for installation in order to guarantee the correct device functioning. It is recommended to install the device at a height of approx. 150cm from the floor, in a place away from doors, windows or heat sources that could affect the room temperature

2. ***Remove the front*** of the Chronothermostat by prising with a screwdriver inside the hole below.
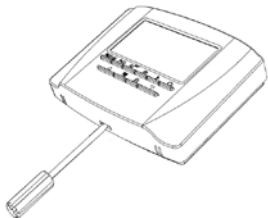
3. ***Fix*** the back of the Remote Control to the wall with the set of screws supplied.

4. ***Connect*** the device to the boiler with the **OT** (COM) terminal, for OT communication, as indicated on the label located inside the back, using a non-polarized bipolar cable <50m (Recommended section: 2 x 0.75mm2).


Note: AUX (IN) input can be connected to a free contact, with a non-polarized bipolar cable <10m, of auxiliary remote control devices (GSM, IoT, Home Automation, Zone, ...). Closing it allows the start of pre-established states, programs and sets that can be set via parameters.

5. ***Refit the front*** of the Chronothermostat making sure to centre it on the rear part

Once ended the above indicated procedure, it will be possible to connect the power to the boiler.

USER INTERFACE

Display with active symbols
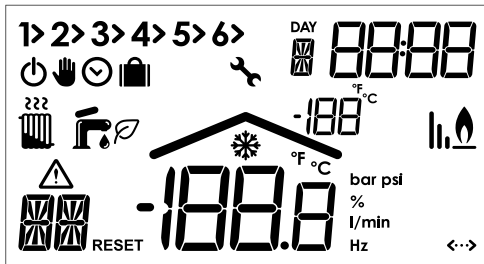

Meaning of the active symbols:

Symbol	Description
1> 2> 3> 4> 5> 6>	Heating time bands (The current one is followed by the arrow)
DAY	Day of the week (1 = Mon, ..., 7 = Sun)
8888	Time
▥ + ₂₂₂	Status= Winter + demand
▭ + ◦	Status= Summer + demand
∅	Economy function active for domestic hot water

⏻	Status e Program= Off
✋	Program= Manual
☉	Program= Automatic
🛍	Hollyday function active
▯◊	Flame presence and level
·188·	Room temperature
❄	Antifreeze function active
🔒	Presence of anomaly with code
⚲	Communication error (with boiler)
RESET	Boiler unlock request
⌂	External temperature
‹··›	Boiler communication present

Buttons

Meaning of the buttons:

Symbol	Description
▥ ▭ ®	OFF/winter/summer + RESET
✋☉	Automatic/Manual program
Ⓟ	Programming
☉ DAY	Time and day setting
▥	Heating temperature adjustment

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🚿	DHW temperature adjustment
🅿	User information/Settings
🏠	Holiday function/Copy
—	Value decrease
+	Value increase

DAY / TIME

1. Press the button ⏱ᴰᴬʸ to set the day. The number aside the word DAY will start flashing

2. With buttons **+** and **-** set the current day of the week (day 1= Monday, …, day 7= Sunday)

3. Press again button ⏱ᴰᴬʸ to confirm and set the hour

4. Modify the value with buttons **+** and **-**, press again ⏱ᴰᴬʸ to set minutes

5. After setting also the minutes using **+** and **-**, press again ⏱ᴰᴬʸ to confirm everything and exit

MODE

STATUS: OFF/WINTER/SUMMER

1. ***Off -*** To switch off the boiler, press the button 🚿® until the icon ⏻ is displayed. See also the Hollyday function to program the Off state for a specific period of time. In any case, if the room temperature decrese below 5°C, the heating is automatically switched on again for the Antifreeze function. The production of domestic hot water depends on the type of boiler connected.

2. ***Winter -*** To switch on heating, press the button 🚿® util icons 🔥 and 🚿 are displayed. Whatever boiler will deliver hot water.

3. ***Summer -*** To switch off the heating while maintaining the domestic hot water function, press the button 🚿® until icon 🚿 is displayed. In any case, if the room temperature decrese below 5°C, the heating is automatically switched on again for the Antifreeze function. The production of domestic hot water depends on the type of boiler connected.

PROGRAM: AUTO/MAN/TEMP. MANUAL

Press the button ✋☺ to change hetaing program from Automatic to Manual (only for Winter Status).

1. ***Automatic -*** When the display shows symbol ☺ the active programme is Automatic and the Chronothermostat will work according to the set weekly programme displaying the time bands in the upper part of the screen. Press the button ✋☺ to change the program from Automatic to Manual and vice versa.

2. ***Manual -*** When display shows symbol ✋ the set value is fix. Use the buttons **+** and **-** to change the value by increments of 0,1 °C. To increase/decrease

the set it is necessary to keep pressed **+** for increase and **-** for decrease.

3. *Temporary Manual -* When Automatic program is active, it is possible to change temporary the set of current time band simply pressing on buttons **+** and **-** , as indicated in the Manual program. The symbol ✋ will flash to indicate the new temporary situation which will end when the following time band starts.

HEATING - DOMESTIC HOT WATER TEMPERATURE ADJUSTMENT

Heating - Press the button 🌡: the display shows the current heating circuit water temperature setting, adjustable using the buttons **+** and **-,** in steps of 1°C.

DHW - Press the button 🚿: the display shows the current domestic hot water temperature setting, adjustable using the buttons **+** and **-,** in steps of 1°C.

Press any button to exit the menu.

AUTOMATIC PROGRAM

The automatic program allows you to set up to 6 time bands per day and the corresponding room set temperatures between 7.0 ° C and 32.5 ° C, in steps of 0,1°C, from 00:00 to 23:59 in steps of 10 min, from day 1 (Mon) to day 7 (Sun).

By default the device will follow the following preset program:

MONDAY-FRIDAY					
1	*2*	*3*	*4*	*5*	*6*
06:30	08:00	12:00	14:00	18:00	22:30
21°C	18°C	21°C	18°C	21°C	16°C

SATURDAY-SUNDAY					
1	*2*	*3*	*4*	*5*	*6*
08:00	10:00	12:00	14:00	18:00	23:00
21°C	21°C	21°C	21°C	21°C	16°C

Automatic preset program change

1.   Press the button ⓟ to enter in program change menu

Note: when the program is changed the device displays first the time band 1 of day 1. Use buttons **+** *and* **-** *to select one of the 6 time bands, use the button* ⊙^{DAY} *to change the days of the week.*

2.   Press the button to move between starting time, temperature set and time bands.

3.   Press buttons **+** and **-** to change start time by increments of 10 minutes

4.   Press the button to change temperature set

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5. Press buttons **+** and **-** to change the temperature by increments of 0,1°C

6. Press the button 🕃 to go back to time bands

7. Press buttons **+** and **-** to move to the next/previous time band (the selected time band is followed by the arrow)

8. Wait 60 seconds to exit or press any other button

After having set the program for one day of the week, it is possible to copy it on the next days:

9. Use button ☉ DAY to select the day of the week to copy

10. Press button 📋 to copy the settings of the selected day of the week to the next day

SPECIAL FUNCTIONS

*1. **HOLIDAY FUNCTION -** is used to switch off heating (the deactivation of the domestic hot water depends on the type of boiler connected) from 1 hour to 45 days, adjustable in steps of 1 hour. At the end of the function the previous settings are activated. If the room temperature decrese below 5°C, the heating is automatically switched on again for the Antifreeze function.*

***Activation and setting of Holiday function:***

1. Press button 📋 . The symbol 📋 starts flashing

and the hours and minutes become -00:01, which is the time remaining before the end of the Holiday function.

2. Press buttons **+** and **-** to extend the time remaining until the end of the Holiday function in 1 hour increments (-00:01 means 1 hour; -45:00 means 45 days). By keeping the button pressed the time and days will change rapidly.

3. During the Holiday function the display will continue to show the time remaining until the end of the function.

To turn off Holiday function press the button 📋.

USER PARAMETER EDITING

• Press the button 🕃 for 3 seconds to access user parameters menu

• Press any other button to exit

CU - SLIDING TEMPERATURE - COMPENSATION CURVE

Note: *default point set is 0*

Installing the external probe to the boiler the heating system temperature is adjusted according to the outside weather conditions. In particular, as the external temperature increases the system delivery temperature decreases according to a specific

compensation curve.
The compensation curve can be set from 1 to 10 according to the following graph:
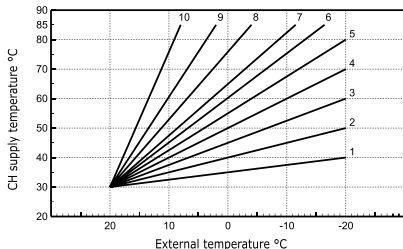
1.   Press the button ⫯ for 3 seconds until CU is showed

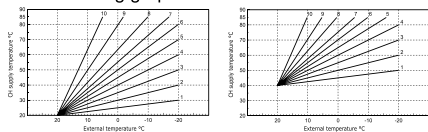2.   Press buttons **+** and **-** to change the value

Set the compensation curve to 0 to disable Sliding Temperature adjustment.

SLIDING TEMPERATURE - PARALLEL CURVE OFFSET

Note: default point set is 30°C

Once the Compensation curve has been set, parallel curve offset can be adjusted from 20 to 40 as shown in the following graphs:

1.   Press the button ⫯ for 3 seconds until CU is showed

2.   Press again ⫯ until OF is showed

3.   Press buttons **+** and **-** to change the value

P1 - ENABLE DHW PROGRAMMING
To set the weekly automatic programme proceed as described in the section "AUTOMATIC PROGRAM". During the COMFORT level, the boiler will maintain the domestic hot water set; during the ECO level, showed on the display by the symbol ⊘ , the production of domestic hot water depends on the type of boiler connected. Refer to the boiler instructions.

Attention: *Make sure the remote control is set to Winter mode with automatic operation.*

Note: *default point set is 0= Deactivated.*

Program setting:

1.   Press the button ⫯ for 3 seconds until CU is

showed

2. Push the button 🔥 2 times to switch on P1

3. Press buttons **+** and **-** to change the value
   0= Deactivated
   1= Auto

P2 - PRE-HEATING FUNCTION

Important: *this function is active only if heating automatic mode has been selected.*

When this function is enabled, the device makes the boiler starting before the set hour, in order to reach comfort temperature the soonest even from the very beginning of the time slot (not before 00:00). It is also possible to set a fixed pre-heating slope, in this way, the device considers as comfort temperature adding 3° to set temperature, thus the boiler does not switch off when the set is reached. During the pre-heating function the room temperature °C symbol flashes. The function ends when the difference between the programmed room temperature and the actual one is less than 0,5°C.

Note: *default point set is 0= Deactivated*

Function setting:

1. Press the button 🔥 for 3 seconds until CU is showed

2. Push the button 🔥 3 times to switch on P2

3. Press buttons **+** and **-** to change the value:
   0= Deactivated
   1= Automatic pre-heating
   2= Fixed pre-heating slope

P3 - NUMBER OF TIME BANDS

The Automatic programme manages 6 points, each of them associated to an hour and a temperature. Each point matches to the beginning of a new time band. If necessary they can be reduced to a minimum of 2.

Note: *default point is set to 6*

Function setting:

1. Push the button 🔥 for 3 seconds until CU is showed

2. Push the button 🔥 4 times to switch on P3

3. Press buttons **+** and **-** to change the value

P4 - HEATING MINIMUM TEMPERATURE

Setting the minimum heating circuit water temperature by step of 1°C:

1. Push the button 🔥 for 3 seconds until CU is showed

2. Push the button 🔥 5 times to switch on P4

3. Press buttons **+** and **-** to change the value

P5 - SYSTEM FILLING

This function manages the operation mode of the electric device for filling the water circuit in certain boiler models.

Attention: Set the boiler control to manual filling. In manual mode, if the sensor installed in the boiler detects insuffi cient pressure, the bar icon will fl ash on the display; press the button ▥▐̅ⓡ o activate the special solenoid valve. During manual or automatic system filling the bar icon will become fixed. Once the nominal pressure is restored, the remote control will return to the normal display.

Note: default point set is 0= Deactivated.

Function setting:

1. Push the button ⓘ̇ for 3 seconds until CU is showed

2. Push the button ⓘ̇ 6 times to switch on P5

3. Press buttons **+** and **-** to change the value:

P6 - EMPERATURE MEASUREMENT UNIT (°C/°F)

Note: default point is set to 0=°C.

Temperature setting:

1. Push the button ⓘ̇ for 3 seconds until CU is showed

2. Push the button ⓘ̇ 7 times to switch on P6

3. Press buttons **+** and **-** to change the value:
   0= °C
   1= °F

P7 - CORRECTION OF ROOM TEMPERATURE READING

It is possible to correct the room temperature reading between -2°C and +2°C by steps of 0,1°C.

Note: default point is set to 0.

Setting of reading correction:

1. Push the button ⓘ̇ for 3 seconds until CU is showed

2. Push the button ⓘ̇ 8 times to switch on P7

3. Press buttons **+** and **-** to change the value

P8, P9 - IPHONE CONTACT INPUT (GSM)

Normal Remote Control operation is ensured as long as the telephone contact remains open. The closing of this contact, indicated on the display with the symbols (), can be used to force the Remote Control to switch off heating or to set the room temperature to a preset fixed value.

P8 - note: default point is set to 0= Heating switched off

P9 - note: default point is set to 20°C

Function setting:

1. Push the button ⓘ̇ for 3 seconds until CU is

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showed

2. Push the button ⓟ 9 times to switch on P8

3. Press buttons **+** and **-** to change the value:
   0= to switch off heating when the contact is closed
   1= to adjust room temperature to a preset fixed value (by means of parameter P9) when the contact is closed.

4. Push the button ⓟ to switch on P9

5. Press buttons **+** and **-** to change the value (only if parameter P8 is set to 1)

OT - TYPE OF COMMUNICATION PROTOCOL OT
<u>Parameter reserved for qualified person.</u>

Parameter setting:

1. Press the button ⓟ for 3 seconds until CU is showed

2. Push the button ⓟ 11 times to switch on OT

3. Press buttons **+** and **-** to change the value:
   0 = Standard
   1 = OEM
   2 = B&P

GENERAL INFORMATIONS

The remote control can provide the user with information on boiler status. Each press of the button ⓟ allows the cyclic display of the following information:

T1 - Heating circuit delivery water temperature
T2 - Domestic hot water temperature
T3 - Heating circuit return water temperature (boilers with sensor only)
T4 - Delivery water temperature setpoint calculated by the remote control
P5 - Actual burner power
F6 - Actual fan speed (condensing boilers only)
F7 - Actual DHW flowrate (instant hot water boilers with fl owmeter only)
P8 - Actual system pressure (boilers with pressure sensor only)
M - Device model
V - Device software version

FAULTS

• **E91 =** communication error with the boiler

• **E92=** room temperature reading probe not working

• **E93=** external temperature reading probe not working

• **AXX =** anomaly XX of the boiler not unlockable

- **FXX =** anomaly XX of the unlockable boiler

RESTORING FACTORY SETTING

Important: with this procedure the device parameters will be restored to the factory set values, except for the time and day setting.

To reset user setting will be necessary to push the buttuns **+** and **-** together for 10 seconds (the message RE flashing is displayed).

TECHNICAL CHARACTERISTICS AND DEFAULT SETTINGS

Time	12:00
Day	1 (monday)
Mode	Auto
Heating manual temp	20°C
Antifreeze temperature	5°C

PRODUCT DATASHEET

According to 811/2013 Rule, the class of temparture controller is:

Class	Contribution to seasonal space heating energy efficiency in %	Description
V	+3%	Chronothermostat
VI	+4%	Chronothermostat combined with the external probe

The WT-01.xx (RC22.xx) remote controls are compliant with:

• *2014/30/UE*
(Electromagnetic Compatibility Directive)

WT-01 (RC22) must comply to the above mentioned Directive, so CE mark is printed on the user manual:

$C\epsilon$

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