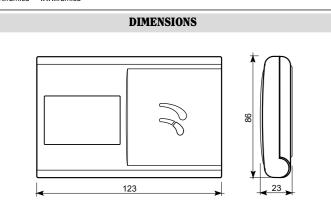
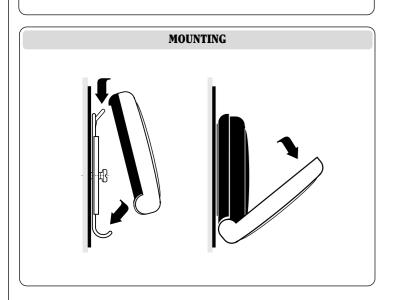
R.B.M. spa COMPONENTI E SISTEMI PER IMPIANTI IDROTERMICI

Via S. Giuseppe,1 - 25075 Nave (BS) - Italy Tel. +39 030 2537211 ric. aut. - Fax +39 030 2531799





CONNECTION DIAGRAM



User manual **DIGITAL CHRONOTHERMOSTAT** Read all instructions carefully

■ Wall-mounting weekly chronothermostat that performs 1B type actions and is suitable in environments with pollution degree 2 and overvoltage category III (EN 60730-1).

SAFETY WARNINGS

During installation and operation of the product, it is necessary to comply with the llowing instructions:

- 1) The instrument must be installed by a qualified person, in strict compliance with the connection diagrams.
- 2) Do not power on or connect the instrument if any part of it is damaged.
- 3) After installation, inaccessibility to the connection terminals without appropriate tools must be quaranteed. 4) The instrument must be installed and activated in compliance with current electric
- systems standards.
 5) Before accessing the connection terminals, verify that the leads are not live.

Code	Description	Colour
2726.00.12	Wall-mounting weekly chronothermostat	White

TECHNICAL SPECIFICATIONS

- Power supply: 3 x 1.5V type AAA batteries (alkaline only)
- · Autonomous operation: Approximately 12 months • Power reserve: 1 minute (for battery replacement)
- · Low battery indication
- Output: Bistable relay with 5 A changeover contact (250 VAC)
- 4 settable temperatures: T *, T, T (, T *, T *)
- Winter temperature range (heating):
 - -**T** * : 2.0 °C ÷ 50.0 °C (default = 5.0 °C)
- T : 2.0 °C ÷ 50.0 °C (default = 15.0 °C)
- **T *** : 2.0 °C ÷ 50.0 °C (default = 18.0 °C) - **T 2** : 2.0 °C ÷ 50.0 °C (default = 20.0 °C)
- with the condition: $T \circledast \leq T \circlearrowleft \leq T *$.
- Summer temperature range (air conditioning):
- **T** \bigcirc : 10.0 °C ÷ 50.0 °C (default = 23.0 °C)
- **T *** : 10.0 °C ÷ 50.0 °C (default = 25.0 °C)
- **T** ★ system off (--.- °C)
- **T** $\frac{1}{2}$ variation range: 10.0 °C ÷ 50.0 °C (default = 24.0 °C) with the condition: $\mathbf{T} \circlearrowleft \leq \mathbf{T} \circledast$.
- · Type of adjustment:
- on/off with settable differential: 0.1 ÷ 1°C
- proportional P8 with 0.8 °C band (-0.3 ÷ +0.5 °C) and 8 minutes period
- proportional P15 with 1.5 °C band (-0.7 ÷ +0.8 °C) and 15 minutes period

WINTER PROGRAM

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

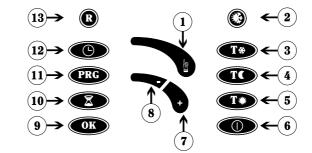
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

- · Daily Resolution: 1 hour
- Range of measured temperatures: 0.0°C ÷ 50.0°C
- Temperature resolution: 0.1°C
- · Measurement refresh: every 30 seconds
- Operating temperature: 0°C ÷ 50°C • Storage temperature: -10°C ÷ 65°C
- Degree of protection: IPXXD
- Automatic summertime/wintertime changeover (default=enabled)
- Kevboard lock via password (default=disabled)
- Measurement accuracy: ± 0.5 °C
- Unit of measurement of temperature: °C/°F



CONTROL ELEMENTS/ INDICATIONS ON THE DISPLAY

■ Control elements

manual operation

1) Key " 2": 2) Key " * ": winter operation (default) HEATING or summer operation COOLING (the key

can only be reached with a tip) 3) Key "T*": select the maintained temperature (winter)

and system off (summer)

4) Key "T(": select the saving (winter) and cooling (summer) temperature

5) Key "T*****": select the comfort (winter) and saving (summer) temperature 6) Key " ① ": activating and switching off the chronothermostat

7) Key "+": increases the selected field or maximum daily temperature display

8) Key "-": decreases the selected field or minimum daily temperature display 9) Key "OK": confirms the data set

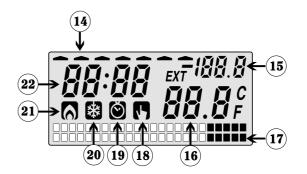
10) Key "∑": 11) Key "PRG": setting a timing or a start delay

program setting or advanced programming

12) Key " 🕒 ":

clock setting

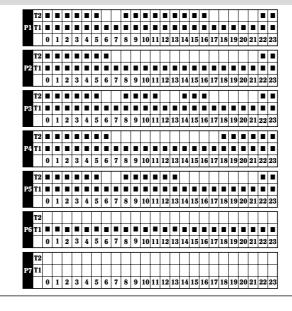
13) Key "R": deletes the date and time but not the set programming (for this, see the dedicated section); the key can only be reached with a tip



■ Indications on the display

- 14) "Day of the week" field
- 15) "Programming information" field
- 16) "Surrounding ambient temperature" field
- 17) "Programme set" key
- 18) "Manual operation activation" key
- 19) "Timer active key"
- 20) "Cooling activation" field ON summer mode
- 21) "Heating activation" field ON winter mode

SUMMER PROGRAM



FIRST START-UP / RESET / DEFAULT

remains visible with 00:00 flashing until the clock is set.

Insert the batteries and press the reset key (13) with a tip: this operation does not delete the programming made but only the date and time. All display segments are switched on for a few seconds, after which only the clock field (22)

Attention

if the clock is not set, the chronothermostat does not carry out any adjustment; it starts adjusting only after the time has been set.

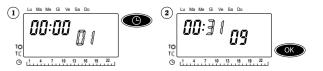
After setting the time, the thermostat starts working as follows: automatic winter operation with temperatures defined by the default programme for the current day.

Resetting default parameters

Simply pressing the "R" key does not cause a total reset of the instrument. To do this and allow the default values to be loaded, press the "R" key and then within 3 seconds the "OK" key. The display will show the word "dEF".

SETTING THE CLOCK

Press the " " wey: the seconds flash in field (16).



Use the "+" and "-" keys to set the values and the "OK" key to confirm and move on to the next parameter.

The parameters to be entered are:

seconds (only synchronisation to 00), minutes, hours, year, month, day,

Once all values have been set, press the " O" key to exit and return to normal operation (the instrument exits the date and time setting also if you do not press any key for at least 20

When this procedure is exited, the room temperature display returns to field (16).

AUTOMATIC SUMMERTIME - WINTERTIME CHANGEOVER

The chronothermostat automatically switches from winter to summer time at 02:00 on the last Sunday in March and from summer to winter time at 03:00 on the last Sunday in October. This function can be disabled, or it is possible to change the date and time of the time change. Lu Ma Me Gi Ve Sa Do

For the winter - summer time change,

press " ()" for about 3 seconds (If "[hAnge OFF" appears, press "+" or "-"

set it to "fin")

and press "OK" to confirm.

For the winter--> summer time change

1) Press "PRG" to change the settings:

"L5E" will start flashing

2) Press "+" or "-" to select the week of the month in which to change from Winter --> to Summer time (" 15L" first, "2nd" second, "3rd" third, "4Lh" fourth,

"L5E" last)

3) Press "OK" to confirm: the segment corresponding to Sunday starts flashing 4) Press "+" or "-" to select the day of the week

5) Press **"OK"** to confirm: "### starts flashing

6) Press "+" or "-" to select the month 7) Press "OK" to confirm: "02:00 starts flashing

8) Press "+" or "-" to select the time 9) Press "OK" to confirm: all segments are steady

For the Summer --> Winter time change

1) Press "OK" 2) Repeat the instructions from point 1) to 8) 3) Press "OK" to confirm and exit the settings



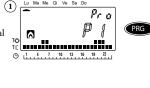
Th An LE

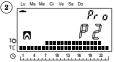
u Ma Me Gi Ve Sa D

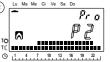
PROGRAMME SETTINGS

Pressing the "PRG" key in field (14) shows the indication for Monday; in field (16), the selected programme starts flashing (in the example P1); in field (15) "Pro" appears; in field (17) the graphical progression of the relevant programme appears and symbol (20) or (21) is activated, depending on the set operation (summer or winter). If the highlighted programme is the desired one, move on to the next day by pressing the "OK"key.

If the highlighted programme is not the right one for that day, you can search for another one using the "+" and "-" keys that modify the "Px" value contained in field (16); when the program changes, the content of field (17) relating to the chosen programme also changes.







Default programmes are shown in the "winter programmes" and "summer programmes" boxes. Once the desired programme has been selected, move on to the next day by pressing the "OK" key.

If no program meets the user's needs, choose any program and press the "PRG" key again.

- the field segment (17) for the current time starts flashing.
- field (22) shows the time corresponding to the current time (corresponding to the programming time flashing in the graphics field).
- field (15) shows the currently selected temperature level.

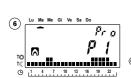
The **T ♣**, **T** ⓐ and **T ***keys can be used to change the selected temperature for that hour and to move to the next hour at the same time. Use the "+" and "-" keys to move between hours without changing the set temperature.

Press the "OK" key to confirm the modified programme and return to the state with "Px" flashing in field (16).

Press the "OK" key to confirm the programme for that day and to move on to the next day until it reaches Sunday, after which it returns to normal operation.

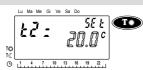






TEMPERATURE SETTING

In any of the operating modes, when the T *, T C and **T ***keys are pressed, the wording for the temperature being modified appears in field (22), (for T # "ED=", for T ("E !=", and for T * "E2="); the value of the above temperature flashes in field (16).



18.0

1:06

11:05

Use the "+" and "-" keys to change the value and the "OK" key to confirm the change and return to normal operation.

The setting limits for the sets are shown in the technical characteristics

MANUAL OPERATION

summer

In automatic mode, when the " 🖢 " key is pressed, the system operates as a normal thermostat with Tm operating temperature.

Field (22) will show the current time . Field (14) will show the current date.

The word "SEt" RPPER-5 in FIELd (15). The symbol (18) appears. Field (17) disappears. The set manual temperature

value flashes in field (16). Use the "+" and "-" keys to change the value from 2.0 °C to 50 °C in winter, from 10 °C to 50 °C in

By pressing the "OK" key or after 20 seconds from the last operation, the room temperature value will

reappear in field (16). The set temperature can be checked at any time by pressing the "+" key or the "-"key once; press again one of the 2 keys to change the temperature setting.

To switch between manual and automatic mode, just press and hold the " &" key for at least 3 seconds.

SUMMER / WINTER OPERATION

To switch from winter to summer mode (or vice versa), press the " *" key (2) with a tip. Field (15) will show the word "5EŁ", whereas field



The flashing symbol " 6 " (or " 🗟 ") will be shown. Use the "+" and "-" keys to select one of the two

The potential for summer operation is the same as that for winter operation. All parameters can therefore be set using the procedures described in this manual.

ON-OFF CONTROL

The On-Off control (" ey) allows activating or 1 deactivating the normal operation of the thermostat, switching between automatic/manual



SETTING A TIMING

This menu allows setting a time, expressed in hours or days, for the current operating mode.

TIMERS: WHAT ARE THEY?

Timers allow the current operation (automatic, manual, off) to be maintained for a specified period (hours or days) from the time of setting.

When the set time has elapsed, the thermostat changes mode as described below. The timed operations are:

Timed automatic operation

If a timer is set to automatic mode, it will remain in this mode until the set time has elapsed, at which point it will switch to off mode.

Timed manual mode

If a timer is set to manual mode, it will remain in this mode until the set time has elapsed, at which point it will switch to automatic mode.

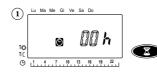
Timed operation off

If a timer is set during Off mode, this mode will be maintained until the set time has elapsed, at which point it will revert to the mode set before switching off (automatic or manual).

If a timer is set, the symbol "O"appears on the display.

TO SET A TIMER

Press the key "\mathbb{Z}": field (16) will flash and show "DD"



Use the "+" and "-" keys to set a value and the " \(\begin{array}{c} \text{ " key} \end{array} \) to set the unit of measurement (h = hours, d = days).



Finally, press the key Z" "to confirm and save or wait When a timer is active, field (19) " " is on.



To display the remaining time, press the " \(\bar{Z} \) " key and then press "OK" to return to the main page without making any changes.

ADVANCED PROGRAMMING

Press and hold the "PRG" key for more than 3 seconds to enter advanced programming. Field (22) will display the wording relating to the parameter.

The set value starts flashing in field (16) .

The parameters can be changed using the "+" and "-" keys; press the "OK" key to move on to the next parameter.

The advanced programming parameters (listed in order of appearance) are as follows:

TYPE OF ADJUSTMENT (~E5)

The type of adjustment depends on the characteristics of the system to be adjusted.

In most cases, ON/OFF control is recommended (default setting), whereas proportional control is preferable when there is a high thermal inertia and more precise control is required (large rooms, fan coils, cast iron radiators, etc.). Proportional control can only be selected for WINTER HEATING operation.

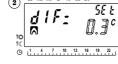


 $\Omega = \text{on/off with settable differential}$

PDB = proportional with 0.8 °C band and 8 minutes period P 15 = proportional with 1.5 °C band and 15 minutes period

PARAMETERS FOR ADJUSTMENT (d #)

In the case of on/off control, it is possible to select the differential value ("d 'F"), which can take values between 0.1 °C and 1 °C. Smaller differential values allow a more precise adjustment but also more frequent switching on and off of the system. The factory value is 0.3 °C.



ANTIFREEZE TEMPERATURE (GEE)

UNIT OF MEASUREMENT (&E5)

It is active only in WINTER-HEATING operation. Indicates the temperature that is maintained when the chronothermostat is off.

It can be set between 1.0 °C and 50 °C or be disabled by selecting "---". The factory value is 6.0 °C.

It allows selecting the unit of measurement between

degrees Celsius (C) and degrees Fahrenheit (F).

5E Ł



PASSWORD FOR "LOCK" SETTINGS (PR5)

This setting is very useful in situations where you want to allow only authorised persons to change settings (e.g. offices, public places, schools, etc.). A value from 000 to 999 can be selected

To activate the keypad lock, press and hold the **T***,T and C T keys for at least 3 seconds . Once the keypad is locked, press any key to display the word "bLoE". To unlock the keypad, press and hold the keys for at least 3 seconds the T ₩, T C and T % keys, enter the previously chosen password and confirm with the " & "key

TOTAL OPERATING HOURS (Lot)

The value indicates for how many hours the output relay was ON, i.e. with contact closed between COM and NO. The hour counter is reset by pressing and holding the Clock key (12) for at least 3 seconds.



BATTERY CHARGE STATUS (68E)

When the batteries are low, the device display starts flashing and the word "bRL" lights up In this condition, correct operation is no longer guaranteed and we recommend replacing the batteries (see 'Battery Replacement and Disposal').



TYPE OF ADJUSTMENT

The default setting is winter (r 15£), On-Off type (a), with switch off corresponding to SET and with adjustable differential in the $0.1 \div 1$ °C range (default 0.3 °C).

The summer adjustment (Lond) is complementary: if for one the command is activation, for the other it is deactivation

In proportional mode (PDB = proportional with 0.8 °C band and 8-minute period

P 15 = proportional with 1.5 °C band and 15-minute period), if the reading is outside the band then the load is always on or off. If the reading is within the band, the adjustment is on an 8-minute or 15-minute basis (depending on whether P8 or P15 is selected). The following is an example of a P8 type adjustment:

Tmeas ≥ Tset + 0.5 °C	→	relay off
Tmeas = Tset + 0.4 °C	\rightarrow	1 minute ON; 7 minutes off
Tmeas = Tset + 0.3 °C	\rightarrow	2 minutes ON; 6 minutes off
Tmeas = Tset + 0.2 °C	\rightarrow	3 minutes ON; 5 minutes off
Tmeas = Tset + $0.1 ^{\circ}$ C	\rightarrow	4 minutes ON; 4 minutes off
Tmis = Tset	\rightarrow	5 minutes ON; 3 minutes off
Tmeas = Tset - 0.1 °C	\rightarrow	6 minutes ON; 2 minutes off
Tmeas = Tset - 0.2 °C	\rightarrow	7 minutes ON; 1 minutes off
Tmeas < Tset = 0.3 °C	→	relay ON

If the operating setpoint is changed, or if the room temperature reaches values outside the control band, control is in ON-OFF mode until Tset is reached for the first time, in order to reach the

VIEW DURING OPERATION

Below are the possible views on the display and the corresponding operation.

Automatic Mode:

weekly clock displaying the hours, minutes and day of the week; temperature graph (the column in the graph relating to the current time flashes); room temperature, symbol "C" (default) or "F"; symbol " A " (if the boiler is activated) or symbol " " (if the air conditioning is activated)



Off Mode:

daily clock displaying the hours and minutes; room temperature, symbol "C" (default) or "F".



■ Manual Mode as for automatic operation except that there is no

temperature graph, but there is the symbol " ". As soon as the " " "key is pressed, the word SEt" appears and instead of the ambient temperature, the manual temperature set "Tm" (flashing) appears, which can be modified using the "+" and "-" keys. 20 seconds after the last operation, or by pressing the "OK" key, the measured value will reappear in the temperature field.

as for previous operations with the addition of the " $\ensuremath{\mathfrak{O}}$ " symbol.



■ Maximum and minimum daily temperature

During automatic or off mode, it is possible to display the minimum and maximum values of the temperature measured throughout the day.

Press the "-" key for the Minimum or the "+"



key for the Maximum. On the display, the maximum value is indicated with "H !", while the minimum value with "Lo".

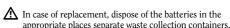
To reset the Minimum or Maximum value, simply press the "-" or " +" key for at least 3seconds until "---"appears.

BATTERY REPLACEMENT AND DISPOSAL

To avoid losing the date and time settings, replace the spent batteries with new ones within a maximum of one minute (power reserve). However, the programming carried out is retained in the memory even if this limit is exceeded.

Note: it may take up to 15 seconds for the display to come back on after the batteries have been replaced.

⚠ It is necessary to remove the batteries before the instrument is scrapped.





06-2024

REFERENCE STANDARDS

Compliance with Community Directives: 2014/35/EU (LVD)

is declared with reference to the following harmonized standards: EN 60730-2-7, EN 60730-2-9

information to users pursuant to art. 14 of the directive 2012/19 / EU of the european parliament and of the council of 4 july 2012 on waste electrical and electronic equipment (WE



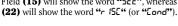
this means the product must not be included with other general waste at the end of its working life.

The user must take the worn product to a sorted waste center. or return it to the retailer when purchasing a new one

Products for disposal can be consigned free of charge (without any new purchase obligation) to retailers with a sales area of at least 400 m², if they measure less than 25 cm.

An efficient sorted waste collection for the environmentally friendly disposal of the used device, or its subsequent recycling, helps avoid the potential negative effects on the environment and people's health, and encourages the re-use and/or recycling of the construction materials.





operating modes.

The program will switch to the desired mode when the "OK" key is pressed or after 20 seconds from the last operation.

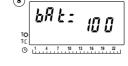
and off and vice versa.



Lu Ma Me Gi Ve Sa Do PR 5:



Indicates the charge level of the batteries as a percentage.



2014/30/EU (EMCD)

