Operating and maintenance instruction

VIMAR idea

Electronic chronothermostat for ambient air control

Art. 16577 - 16577.B

Electronic chronothermostat for the ambient air temperature control

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1. Description

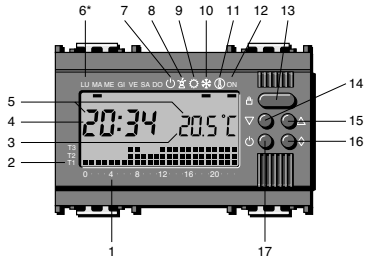
The electronic chronothermostat for the ambient air temperature control art. 16577 is one among the 200 functions of the **idea** series for flush installation.

The equipment controls the ambient air temperature acting on the supply circuit of the burner or of the water circulation pump (heating), or on the air-conditioner supply circuit (air-conditioning) and it guarantees an ideal ambient air temperature every day, during the whole week.

Thanks to its various functions, it allows to choose between a factory preset program that can be changed at one's will, and an own, easy to obtain, program setting.
Its wide data display indicates at any time the selected program or the operating state of the installation.
The hysteresis, the maximum gap between the ambient air temperature and the assigned value, can also be set between ±0.1 °C and ±0.9 °C.

The chronothermostat is supplied through 3 1.5 V LR03 AAA alkaline batteries (not delivered), lasting approximately 1 year.
A 2 minutes power reserve is granted to allow the batteries replacement without losing the set regulations.

2. Data display and external controls



6*: Days of the week
LU Monday
MA Tuesday
ME Wednesday
GI Thursday
VE Friday
SA Saturday
DO Sunday

Data display

1 0 · · · 24 Time scale of the daily program diagram
The blinking point in the diagram matches the time displayed

2 T1 ÷ T3 Temperature levels

3 20.5°C Digital thermometer

4 20:34 Digital clock

Data display

5 When the figures of the present time and temperature blink, the batteries capacity is no longer sufficient

6 LU ÷ DO Day of the week

7 Exclusion of the installation

8 JOLLY program

9 AIR-CONDITIONING program ☼

10 HEATING program ❄

11 ANTIFREEZE function

12 ON Installation in operation

Controls

13 Selection of the MANUAL or AUTOMATIC operating mode of the equipment

14 ▽ Decrease (temperature, hour, day, etc.)

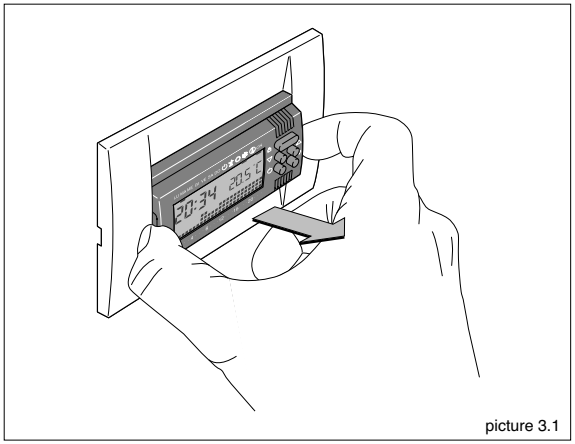
15 △ Increase (temperature, hour, day, etc.)

16 ◇ Multifunction

17 Exclusion of the installation

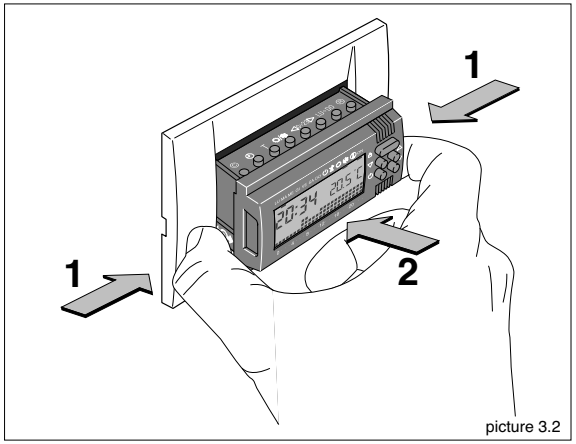
3. Internal controls

To access to the internal controls panel, seize the equipment by both sides (picture 3.1) and take it out to the stop.

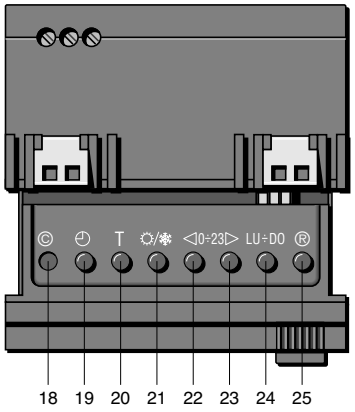


picture 3.1

To insert the equipment again, press the two side lugs (1) on the symbol ⇹ and push it thoroughly (2), until it comes to the stop (picture 3.2).



picture 3.2

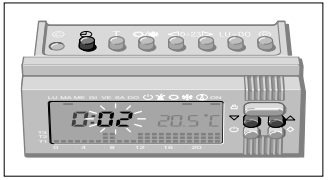


Controls

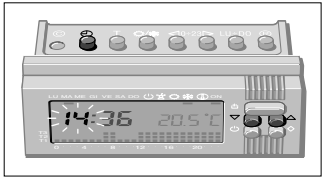
18	©	Restart
19	◴	Setting the present time and day
20	T	Setting and displaying of the temperature levels T1-T2-T3 Setting the hysteresis (the maximum gap between the ambient air temperature and the assigned value)
21	☼/❄	Selection of the HEATING ❄ or AIR-CONDITIONING program ☼
22	◁0÷23	Time decrease on the daily program diagram
23	0÷23▷	Time increase on the daily program diagram
24	LU÷DO	Selection of the day of the week
25	®	Copy of the program

4. Setting of the present time and day

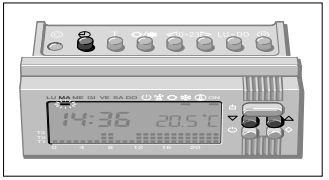
Take out the body of the equipment.



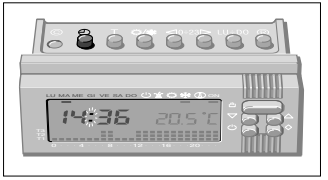
4.1
Press the pushbutton ◴ : the minutes figures blink. Press the pushbutton ▽ or △ to set the minutes value



4.2
Press the pushbutton ◴ : the hour figures blink.
Press the pushbutton ▽ or △ to set the hour value.



4.3
Press the pushbutton ◴ : the indicator of the day of the week blinks. Press the pushbutton ▽ or △ to set the day of the week.



4.4
To end the operation, press the pushbuttone ◴ : the two points between the hour and the minutes figures blink. 60 seconds after the last setting, the equipment automatically ends the operation, confirming the last settings.

Insert again the body of the equipment.

Note
The figures displayed increase or decrease in single units at every pression on the pushbutton ▽ or △ .
To increase the speed of the display, keep the pushbutton ▽ or △ pressed.

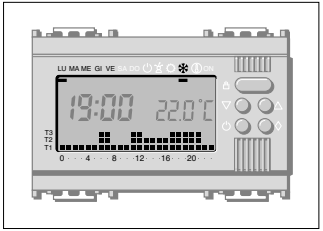
5. Preset standard programs

The chronothermostat is provided with two preset standard programs, one for HEATING ❄ and one for AIR-CONDITIONING ☼ .

To select the desired program, press the pushbutton ☼/❄ .

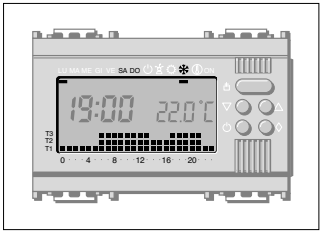
5.1 HEATING Program ❄

The HEATING program ❄ provides two different daily thermic cycles, one from Monday to Friday (picture § 5.1.1), and one for Saturday and Sunday (picture § 5.1.2).



5.1.1
HEATING program ❄ : thermic cycle from Monday to Friday.

Temperature levels:
T1 16 °C
T2 18 °C
T3 20 °C

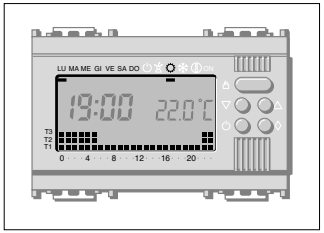


5.1.2
HEATING program ❄ : thermic cycle for Saturday and Sunday.

Temperature levels:
T1 16 °C
T2 18 °C
T3 20 °C

5.2 AIR-CONDITIONING program ☼

The AIR-CONDITIONING program ☼ provides a single thermic cycle for the whole week.



5.2.1
AIR CONDITIONING program ☼ : thermic cycle for the whole week.

Temperature levels:
T1 24 °C
T2 26 °C
T3 28 °C

Note

If these preset standard programs meet your requirements, the chronothermostat is ready for use, without any further operation.
If this is not the case, follow the instructions of the next paragraphs.

6. MANUAL operation

Use the MANUAL operation if you wish a temperature different from the preset one, without any other change of the program in use.

6.1 MANUAL operation
Press the pushbutton ✋ : the diagram of the program in use disappears from the display and, in its place, the preset temperature is displayed (the equipment is delivered with a preset temperature of 20 °C).
Set the desired temperature (from 2 °C to 35 °C) with the pushbutton ▽ or △ .

The new temperature value will be kept until a new temperature or a new operating mode is selected.
The ambient air temperature will be displayed about 5 seconds after the last setting.
To verify, at any moment, the set temperature value, press twice the pushbutton ✋ .

7. TIME-DELAY MANUAL operation

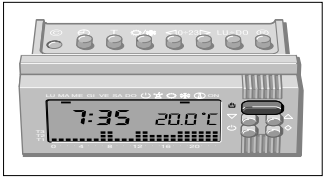
If you wish to keep the manual temperature for a certain time (hours or days), you can use the TIME-DELAY MANUAL operation: once the desired time has been set, the equipment starts a countdown and after that the AUTOMATIC operating mode is restored.

7.1 Programming by hours

Make sure the MANUAL operating mode is in use and set the desired temperature (see paragraph 6).

7.1.1
Press once the pushbutton ◊ : **h01** is displayed.
Set the desired number of hours pressing the pushbutton ▽ or △ from 1 to 99 hours).

Note
The hour in which the setting is done is included in the countdown and is considered a whole hour.



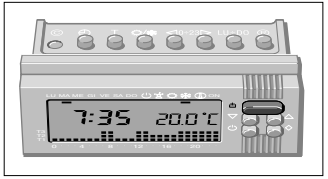
7.1.2
Press the pushbutton ✋ if you wish to restore the AUTOMATIC operating mode before the end of the countdown.

7.2 Programming by days

Make sure the MANUAL operating mode is in use and set the desired temperature (see paragraph 6).

7.2.1
Press twice the pushbutton ◊ : **d01** is displayed.
Set the desired number of days pressing the pushbutton ▽ or △ (from 1 to 99 days).

Note
The day in which the setting is done is included in the countdown and is considered a whole day.



7.2.2
Press the pushbutton ☝ if you wish to restore the AUTOMATIC operating mode before the end of the countdown.

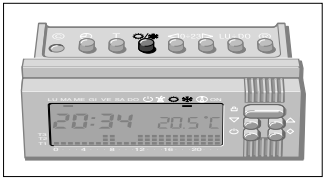
8. Own setting of the TEMPERATURE LEVELS VALUES

It is possible to change the value of the preset temperature levels, both for the HEATING ❄ and for the AIR-CONDITIONING ☼ program.
Each T value may be selected as follows:
T1: from 2 °C to T2-0.1 °C
T2: from T1+0.1 °C to T3-0.1 °C
T3: from T2+0.1 °C to 35 °C

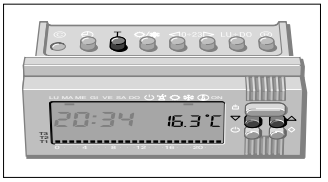
Example
If the level of T1 corresponds to 15 °C and the level of T3 to 22 °C, the level of T2 can be varied from 15.1 °C to 21.9 °C.

8.1 HEATING program ❄

Take out the body of the equipment.



8.1.1
Press the pushbutton ☼/❄ and select the HEATING program ❄ .



8.1.2
Press the pushbutton T : the range of temperatures of T1 and the temperature value to be changed are displayed. Set the desired temperature value pressing the pushbutton ▽ or △ .
Press the pushbutton T to confirm the operation and to proceed with the next temperature value.

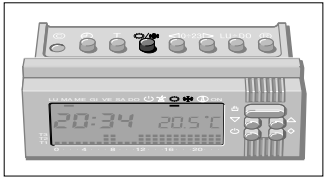
To change the value of T2 and T3, repeat the instructions indicated in paragraph 8.1.2.

At the end of the settings of the temperature levels, the daily program diagram will be displayed again.
About 10 seconds after the last setting, the equipment automatically ends the operation, storing all the settings.

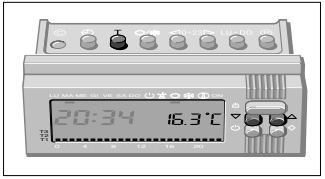
Insert again the body of the equipment.

8.2 AIR-CONDITIONING program ☼

Take out the body of the equipment.



8.2.1
Press the pushbutton ☼/❄ and select the AIR-CONDITIONING program ☼.



8.2.2
Press the pushbutton T : the range of temperatures of T1 and the temperature value to be changed are displayed. Set the desired temperature value pressing the pushbutton ▽ or △ .
Press the pushbutton T to confirm the operation and to proceed with the next temperature value.

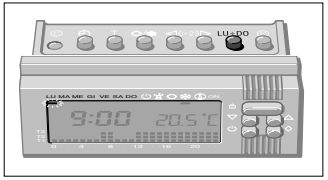
To change the value of T2 and T3, repeat the instructions indicated in paragraph 8.2.2.

At the end of the settings of the temperature levels, the daily program diagram will be displayed again.
About 10 seconds after the last setting, the equipment automatically ends the operation, storing all the settings.

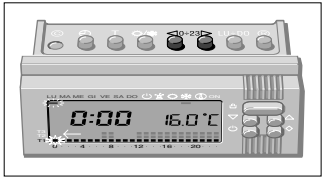
Insert again the body of the equipment.

9. Own setting of the DAILY PROGRAM

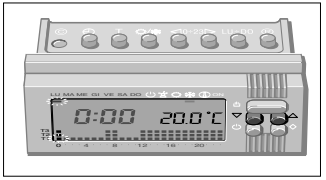
Take out the body of the equipment.



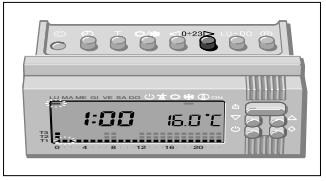
9.1
Press the pushbutton LU÷DO and put the day indicator of the display on the LU position (Monday).



9.2
Press the pushbuttons ◁0÷23▷ until the blinking point in the daily program diagram matches with 0 o'clock: 0 o'clock will be displayed; the two points between the hour and the minutes figures become still; the temperature displayed takes the value of the level selected at the time indicated by the blinking point of the diagram.

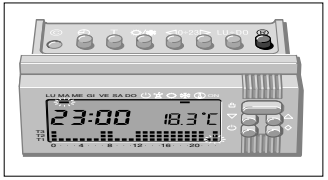


9.3
Select the desired temperature level pressing the pushbutton ▽ or △ .

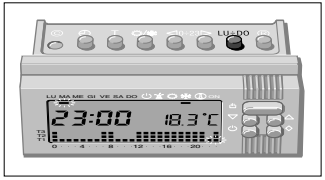


9.4
Progress to the next hour pressing the pushbutton 0÷23▷ .

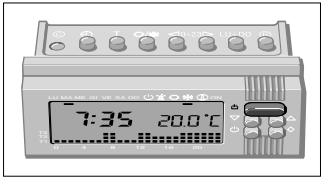
Repeat the operations indicated in paragraphs 9.3 and 9.4 until 23 o'clock.
The program setting for Monday is now ended.



9.5
If the set program is also suitable for the next days, press the pushbutton Ⓡ .



9.6
If you wish a different program for the next days, press the pushbutton LU÷DO and repeat the operations indicated in paragraphs 9.3 and 9.4.



9.7
At the end of the settings, press the pushbutton ✋ : the present time and day will be displayed.
About 10 seconds after the last setting, the equipment automatically ends the operation, storing all the settings.

Insert again the body of the equipment.

Note
At any moment it is possible to make any program setting. Every user's own setting will be saved, even after a supply interruption or after pressing the pushbutton Ⓒ .

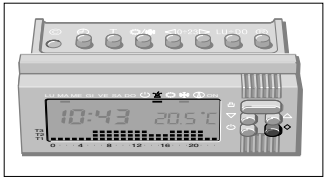
10. JOLLY Program

The equipment is provided with a JOLLY program, suitable for holidays or festivities during the week, etc. This program can be started at any moment of the day and kept in operation till the end of that day, or else it can be scheduled for any day of the week.

The preset thermic cycle is the cycle provided for Saturday and Sunday (see paragraph 5), but it is also possible to obtain an own setting, following the instructions indicated in paragraphs 8 and 9 (excluding 9.5 and 9.6).

To start the JOLLY program, act as follows:

Make sure the AUTOMATIC operating mode is in use.



10.1
Press the pushbutton ◊ : a dash is displayed under the symbol to confirm that the JOLLY program has been started.

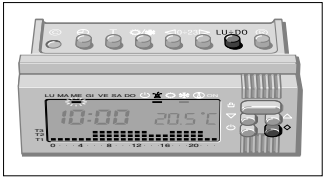
Proceed, if you wish, with the own settings, as indicated in paragraphs 8 and 9 (excluding 9.5 and 9.6).

At midnight the AUTOMATIC operating mode is restored.

To end the JOLLY program, press the pushbutton ◊ again.

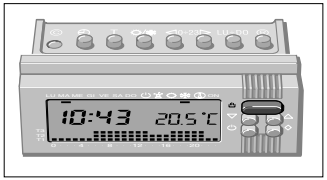
If you wish to make the JOLLY program start in a day different from the present day, act as follows:

Take out the body of the equipment and make sure the AUTOMATIC operating mode is in use.



10.2
Press the pushbutton LU÷DO and put the day indicator on the desired day. Press the pushbutton ◊ : a dash is displayed under the symbol to confirm the JOLLY program is set for the desired day.

Proceed, if you wish, with the own setting of the Jolly program, as indicated in paragraphs 8 and 9 (excluding 9.5 and 9.6).



10.3
Press the pushbutton ✋ to restore the AUTOMATIC operating mode.
The JOLLY program will start at 0 o'clock of the selected day.

The JOLLY program may be cancelled either pressing twice the pushbutton ◊ or putting the day indicator on the desired day using the pushbutton LU÷DO and pressing once the pushbutton ◊ .

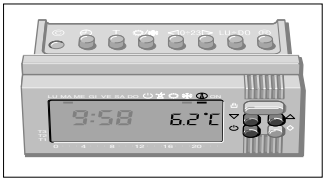
Press the pushbutton ✋ to restore the AUTOMATIC operating mode and to return to the present day. In any case, it is automatically done by the equipment about 10 seconds after the last setting.

The JOLLY program ends at the end of the day.

Insert again the body of the equipment.

11. ANTIFREEZE program

The ANTIFREEZE operating mode ⏇ is used either to maintain a temperature level that prevents the water mains from damages, or not to let the temperature arrive under a security level.



11.1
Press once the pushbutton ⏻ : a dash is displayed under the symbol ⏻ to confirm that the program is on.
Instead of the daily program diagram, the preset antifreeze temperature is displayed: to change it, press the pushbutton ▽ or △ .
It is possible to select a temperature value between 2 °C and 35 °C, which will be kept until a new temperature or a new operating mode is selected.

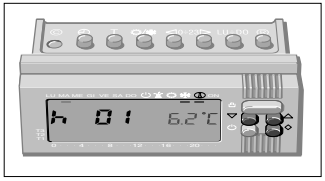
The ambient air temperature will be displayed about 5 seconds after the setting of the antifreeze temperature.

12. TIME-DELAY ANTIFREEZE operation

The time-delay antifreeze operation is used to maintain a safety temperature for a certain time (hours or days): once the desired time has been set, the equipment starts a countdown and after that the AUTOMATIC operating mode is restored.

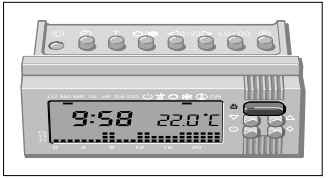
12.1 Programming by hours

Make sure the ANTIFREEZE operating mode ⏀ is in use and set the desired temperature (see paragraph 11).



12.1.1
Press once the pushbutton ◊ : **h01** is displayed.
Set the desired number of hours pressing the pushbutton ▽ or △ (from 1 to 99 hours).

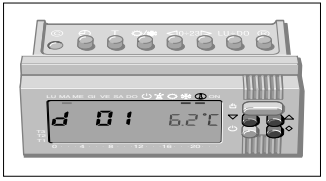
Note
The hour in which the setting is done is included in the countdown and is considered a whole hour.



12.1.2
Press the pushbutton ✋ if you wish to restore the AUTOMATIC operating mode before the end of the countdown.

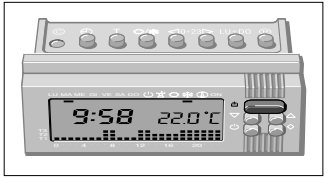
12.2 Programming by days

Make sure the ANTIFREEZE operation ⏀ is in use and set the desired temperature (see paragraph 11).



12.2.1
Press twice the pushbutton ◊ : **d01** is displayed.
Set the desired number of days pressing the pushbutton ▽ or △ (from 1 to 99 days).

Note
The day in which the setting is done is included in the countdown and is considered a whole day.



12.2.2
Press the pushbutton ✋ if you wish to restore the AUTOMATIC operating mode before the end of the countdown.

13. Installation working time

The equipment is provided with a timer to count the installation working hours (till 9,999 hours).

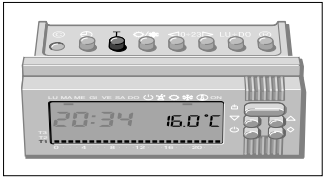
13.1
Press the pushbutton ✋ to select the MANUAL operating mode.
Take out the body of the equipment.
Press the pushbutton Ⓡ : the installation working time is displayed for about 5 seconds.

13.2
To reset the timer and start a new count, press the pushbutton ⏻ while the figures of the installation working time are still displayed.

Insert again the body of the equipment.

14. Display of the temperature levels

Take out the body of the equipment.



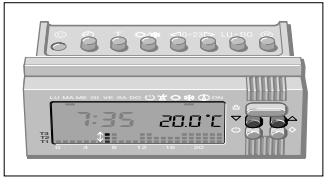
14.1
Press the pushbutton T : the temperature range of T1 and the value assigned to it are displayed.

Repeat the operation indicated in paragraph 14.1 to display the levels values of T2 and T3.

Press the pushbutton T to end the operation.

Insert again the body of the equipment.

It is also possible to operate as follows: make sure the AUTOMATIC operating mode is in use.

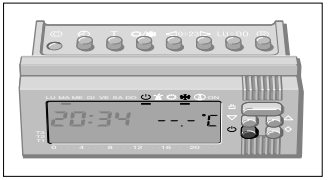


14.2
Press the pushbutton ▽ or △ the temperature values assigned to each level are diplayed.
If necessary, restore the temperature level of the present hour.

15. Exclusion of the installation

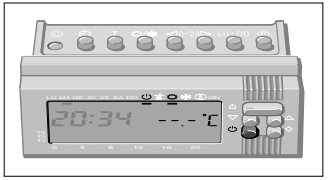
The chronothermostat can also be used only as a thermometer and a clock, excluding any control on the heating or on the air-conditioning installation. This operating mode is particularly useful in case the equipment is not in use for a long period, in case of maintenance or of a long absence, etc.

15.1 Exclusion of the installation during the HEATING program



15.1.1
Press twice the pushbutton ⏻ : s instead of the daily program diagram, the indicator under the symbol ⏻ is displayed, confirming the exclusion of the temperature control.
The ambient air temperature disappears for about 5 seconds and the symbol --.-°C is displayed.

15.2 Exclusion of the installation during the AIR-CONDITIONING program



15.2.1
Press once the pushbutton ⏻ : instead of the daily program diagram, the indicator under the symbol ⏻ is displayed, confirming the exclusion of the temperature control.
The ambient air temperature disappears for about 5 seconds and the symbol --.-°C is displayed

Press the pushbuttons ⏻ or ✋ to restore the AUTOMATIC operating mode.

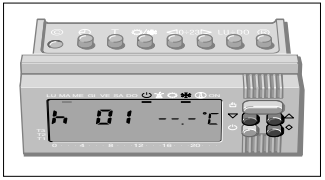
16. Time-delay exclusion of the installation

The time-delay exclusion operation is used to exclude the installation for a certain time (hours or days): once the desired time has been set, the equipment starts a countdown and after that the AUTOMATIC operating mode is restored.

16.1 Time-delay exclusion of the HEATING PROGRAM ❄

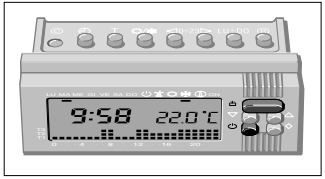
Exclude the heating installation as indicated in paragraph 15.1.

16.1.1 Programming by hours



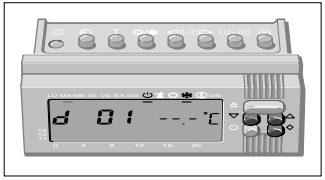
16.1.1.1
Press once the pushbutton ◊ : **h01** is displayed.
Set the desired number of hours pressing the pushbutton ▽ or △ (from 1 to 99 hours).

Note
The hour in which the setting is done is included in the countdown and is considered a whole hour.



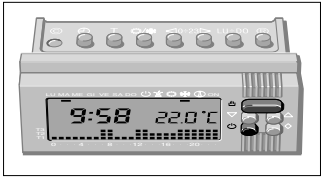
16.1.1.2
Press the pushbutton ✋ or ⏻ to restore the AUTOMATIC operating mode before the end of the countdown.

16.1.2 Programmazione in giorni



16.1.2.1
Press twice the pushbutton ◊ : **d01** is displayed.
Set the desired number of days pressing the pushbuttons ▽ or △ (from 1 to 99 days).

Note
The day in which the setting is done is included in the countdown and is considered a whole day.



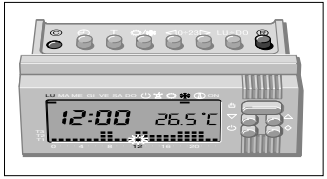
16.1.2.2
Press the pushbutton ◊ or ⏻ to restore the AUTOMATIC operating mode before the end of the countdown.

16.2 Time-delay exclusion of the AIR-CONDITIONING program ☼
Exclude the air-conditioning installation following in sequence the instructions indicated in paragraph 15.2 and in paragraph 16.1.1 (programming by hours) and/or in paragraph 16.1.2 (programming by days).

17. Cancellation of the own programs

If you wish to restore the equipment to its starting set of data and programs, act as follows:

Take out the body of the equipment.



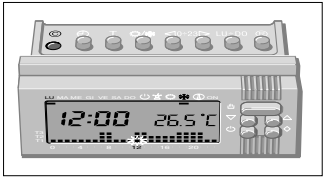
17.1
Press the pushbutton © and, at the same time, the pushbutton ® .
Stop first the pressure on the pushbutton © and, after the pushbutton ® .

Insert again the body of the equipment.

18. Restart

Anomalies in the operation maintenance or technical troubles may require the restart of the microprocessor. To restart, act as follows:

Take out the body of the equipment.



18.1
Press the pushbutton © .

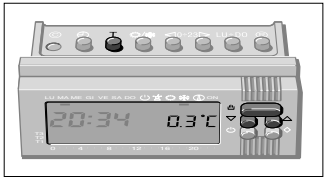
Insert again the body of the equipment.

Note
After each restart, the clock of the chronothermostat must be set again.

19. Hysteresis

The hysteresis, the maximum gap between the ambient air temperature and the assigned value, can be set between ±0.1 °C and ±0.9 °C.
The equipment is delivered with a factory preset hysteresis of ± 0.2 °C, suitable for high-inertia equipments, as, for instance, in case of installations with cast iron radiators.
To change the preset hysteresis, act as follows:

Take out the body of the equipment



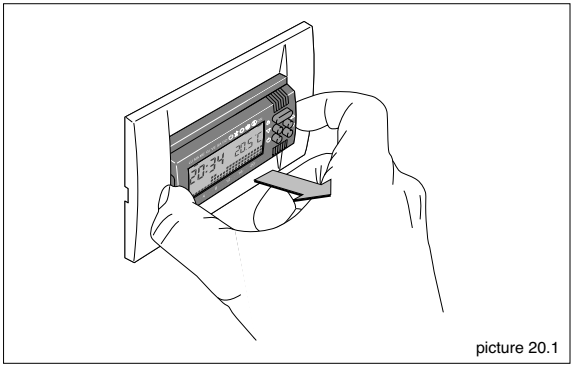
19.1
Press the pushbutton ✋ to set the MANUAL operating mode.
Press the pushbutton ⊤ : the hysteresis value is displayed.
Press the pushbutton ▽ or △ to set the desired value.

To end the operation, press the pushbutton ⊤ (or wait about 10 seconds), then insert again the body of the equipment.

20. Batteries replacement

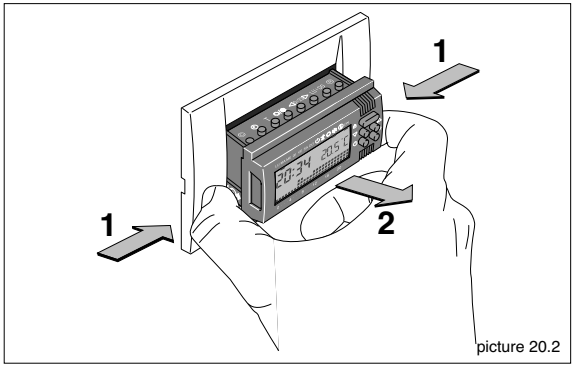
The blinking of the time and temperature figures indicates that the batteries capacity is no longer sufficient and they must be replaced.
To replace them, act as follows:

Seize the equipment by both sides and take it out to the stop (picture 20.1).



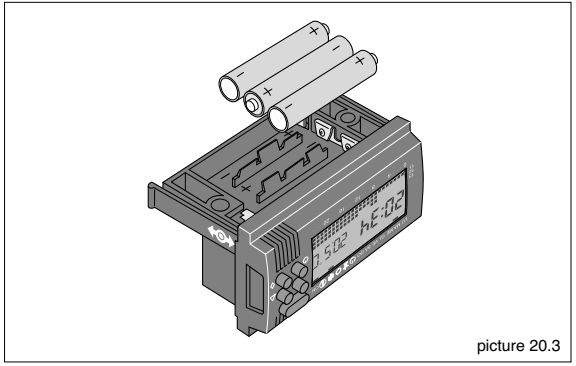
picture 20.1

Press the two sides lugs (1) on the symbol ◂⊙▸ and take the body of the equipment completely out (2) (picture 20.2).



picture 20.2

Take out the flat batteries and replace them with 3 1.5 V LR03 AAA alkaline batteries.
Insert them in their seat (picture 20.3), making sure the polarities are properly aligned, as indicated on the bottom of their lodgement. After a while all the datas will be displayed again.


picture 20.3

Insert again the body of the equipment.

ATTENTION
An incorrect insertion of the batteries will seriously damage the equipment.
The time to replace the batteries is about 2 minutes, after which the clock setting is lost and the count of the installation working timer is cancelled.

21. Technical characteristic

- Supply: through 3 1.5 V LR03 AAA alkaline batteries
- Batteries life: about 1 year
- Power reserve for the batteries replacement: about 2 minutes
- Operating modes: preset standard program, own program setting, exclusion of the installation, Jolly and antifreeze program
- Time-delay by hours or by days of the own program setting, of the exclusion of the installation and of the antifreeze program: from 1 to 99
- Selectable programs:
  - heating (working days and holidays),
  - air-conditioning
- 3 temperature levels programmable from +2 °C to +35 °C, with the possibility of assigning a different temperature level to each hour, every day of the week
- Antifreeze temperature: programmable between +2 °C and +35 °C
- Ambient air temperature detection: every 15 seconds
- Hysteresis: programmable from ±0.1 °C to ±0.9 °C
- Reading resolution: 0.1 °C
- Precision: ≤ ±0.3 °C
- Liquid crystals data display
- Installation working timer: from 1 to 9,999
- Output relay with contact without potential, max voltage 250 V~, max current 5 A with resistive load, 2 A with inductive load
- Self-extinguishing polycarbonate enclosure
- Screw terminals for the clamping of rigid or flexible conductors up to 1.5 mm^2

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