



SETTING THE CLOCK

- Proceed as follows to set the clock:
- Press **Reg**: the time display will start blinking.
 - Set the hour using the buttons **-h** and **+h**.
 - Confirm by pressing **Reg**.
 - Set the minutes using the buttons **-h** and **+h**.
 - Confirm by pressing **Reg**.
 - Set the year "A: xx" using the buttons **-h** and **+h**.
 - Confirm by pressing **Reg**.
 - Set the month "M: xx" using the buttons **-h** and **+h**.
 - Confirm by pressing **Reg**.
 - Set the day "d: xx" using the buttons **-h** and **+h**.
 - Confirm by pressing **Reg**.
 - The square indicating the day of the week will be automatically set, according to the values entered in the former steps.
 - In order to quit this programming phase either press **Esc** or wait for 10 seconds without pressing any key.

SETTING SUMMER/WINTER

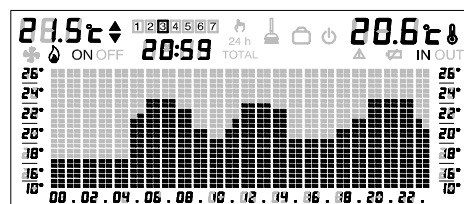
This setting allows you to change the operating mode of the relay depending on whether the chronostat is connected to a heating or to a cooling device.

In winter mode (symbol ) the relay will be energised when the measured room temperature is lower than the set temperature. The message **ON** will appear to indicate this condition.

Conversely in summer mode (symbol ) the relay will be energised when the measured room temperature is higher than the set temperature. The message **ON** will appear to indicate this condition.

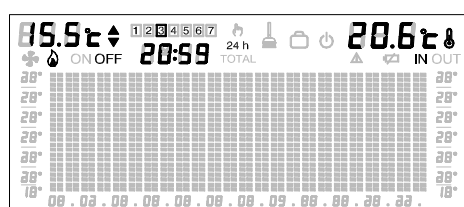
Setting mode:

Press **h** to switch from heating or cooling mode and vice-versa. The temperature range and the symbols shown in the following sketch will appear on the display when the chronostat is in heating mode.



Note: The chronostat will automatically switch to summer time and vice-versa. Change the position of the specific switch on the back of the chronostat as shown in the "Additional functions" paragraph if the automatic function is not required. Furthermore the chronostat is automatically set to include February 20th on leap years.

- Repeat the operation from step 1 to copy the program to another day.
- Either press **Esc** or wait for 10 seconds to go back to the current day.



MANUAL OPERATION

The chronostat can be set to operate independently from the set program by means of the button **h**.

Repeatedly press **h** to switch modes from Automatic to Manual 24 Hours, from Manual 24 Hours to Manual Total and from Manual Total back to Automatic.

Only the room temperature, relay state, time and day, manual symbol (**h** 24 h or **h** TOTAL according to whether 24 Hour or Total mode is selected), heating or cooling symbol and the set temperature will appear in manual mode; the bar chart will not appear.

Press **h** once to start the Manual 24 Hour mode: the chronostat will remain in Manual mode until 23:59 after which it will switch back to Automatic mode.


Press **h** once again to override Total Manual mode: the chronostat will remain in Manual mode until button **h** is pressed again.

The temperature can be increased or decreased by pressing buttons **+°C** and **-°C** when the chronostat is in Manual mode.

VACATION OPERATING MODE

You can use Vacation Mode when you plan to be away from your home for hours or days.

This allows you to suspend the active operating mode for the number of hours (from 1 to 99) or days (from 1 to 99) desired.

At the end of the number of hours or days selected, the chronostat will return to the operating mode which was active before activation of the vacation function; the antifreeze function remains active during the switch-off period, the symbol  will appear on the display along with the countdown of the time remaining until the program is ended.

OVERVIEW

The Vision Chronostat implements state-of-the-art construction technology. A microprocessor is used to guarantee high reliability and precision. Despite its advanced design the device is easy to use. Complete functions are offered for the best results in terms of comfort (Advanced Time, Stop & Go) and energy saving (Vacation and Household Cleaning programs).

INSTALLATION

To ensure maximum comfort, the chronostat requires reliable information as it measures and transmits all the variations which occur around its location.

It must therefore be installed in the reference room and in a position where it can carry out a real measurement of the temperature without being influenced by external factors such as heat generated by occasional sources such as irons, television sets or cookers, or by sources of cold such as external walls.

For proper operation the chronostat must be installed on an internal wall opposite to the heating devices and at a height of about 1.5 meters from the ground and it is preferable not to install it near shelving or recesses, doors or windows, on the internal side of outer walls exposed to solar radiation or cold air streams or on indoor walls through which hot water or central heating pipes pass.

After selecting the position of the thermostat proceed as follows to install it:

- Detach the bracket as shown in the drawing (see fig. 1).
- Remove the terminal protection cover (see fig. 2).
- Fix the support bracket on a flush mounting box (3 modules or 2

- modules) or directly on the wall (by means of two plugs) and pass the connection wires through the slit.
- Make the connections as shown in the diagram (see fig. 3).
- Insert the terminal protection cover and fasten it by pressing it firmly.
- Insert the batteries respecting the polarity shown.
- Fasten the chronostat to the two upper pins and push the lower part to clip the device onto the bracket.


FITTING AND CHANGING THE BATTERIES

The chronostat runs on two 1.5V batteries, type LR6 (IEC) AA. For correct operation you must only use alkaline batteries which guarantee about one year autonomy.

Proceed as follows to fit the batteries:

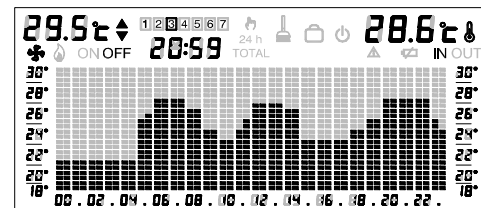
- Remove the chronostat from the bracket (see fig. 4).
- Put in the batteries following the polarity shown inside the housing.
- Fasten the chronostat to the two upper pins and push the lower part to clip the device onto the bracket.

If necessary, reset and/or adjust the clock.

You must replace the batteries when the symbol  blinks on the display. To do this follow the instructions given above, making sure you insert the new batteries.

- The batteries are a cause of pollution, and must not be thrown away. Dispose of them in the appropriate battery collection bins.

The temperature range and the symbols shown in the sketch below will appear on the display when the chronostat is in cooling mode.



AUTOMATIC DAILY TEMPERATURE PROGRAMMING PROCEDURE

The bar chart usually shows the programmed temperature for the current time on the display. The squares on the top of the respective column will blink.

Press **+°C** or **-°C** to adjust the temperature in the appropriate range according to whether the chronostat is set to heating or cooling mode. Only the uppermost square will blink during programming mode.

The square will move either upwards or downwards whenever the buttons are pressed according to whether the temperature is increased or decreased.

The temperature is also shown as a numeric value in the top left corner of the display. Press **+h** or **-h** to go to the next or previous half hour. The entire corresponding bar will start blinking.

The selected time will appear on the display and the programmed temperature will blink.

- Press **Day** to change the day of the week.
- The square around number 1, 2, or 3, etc. will blink indicating the day of the week to which the programming refers. (1=Monday, 2=Tuesday, 3=Wednesday, ... 7=Sunday).

Programming:

- Press **+°C** or **-°C** to adjust the temperature in the current range.
- Press **+h** or **-h** to adjust the next or previous half hour.
- Press **+°C** or **-°C** to adjust the temperature in the selected range.

Proceed as shown above to program all 48 ranges.

- Press **Day** to go to the next day of the week.
- Program the required temperatures for the selected range of the day as shown above.


Press **Esc** to go back to the current day and time after programming the various days and the respective ranges.

Proceed as shown below after programming the first day to assign the same program to two different days of the week:

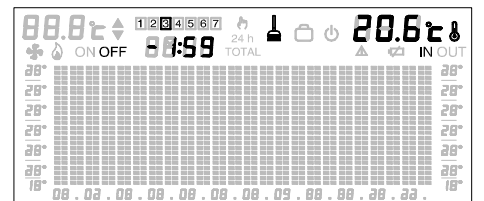
- Press the **Copy** button: the entire bar chart will blink.
- Press **Day** to select the day of the week where to copy the selected program (the square indicating the day will blink).
- Press the **Copy** button: the bar chart display will stop blinking to indicate that the program has been copied.

HOUSEHOLD CLEANING PROGRAM


This program is particularly useful during household cleaning when the windows are opened and heating is therefore unnecessary. In these conditions, the relay is blocked in the off position for up to two hours.

Press **h** to start the program: icon  will appear on the display and the countdown showing the remaining time will appear instead of the clock.

The previous operating mode will be restored either after two hours or when **h** is pressed again.



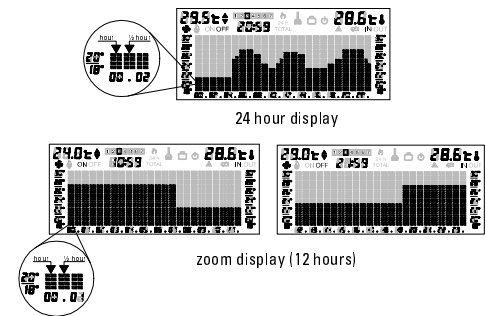
To start the program:

- Press **h**: the symbol  will appear on the display and "h 00" instead of the time will start blinking indicating time programming; alternatively press the button once again to show "d 00" indicating day programming (press the button repeatedly to switch between time and day programming).
- Press **+h** or **-h** to select the required number of hours or days.
- The set values will be permanently shown on the display ten seconds after programming (if no other buttons are pressed).
- Press **h** during the countdown to return to programming mode and cancel the previous operation.
- Press **Esc** at any time to cancel programming mode and go back to the operating mode prior to the countdown (automatic or manual TOTAL).

Attention: The count of the hours and days also includes those at the moment programming is carried out.

ZOOM FUNCTION

Press **Q** to go from 24 hour to 12 hour display and vice-versa.

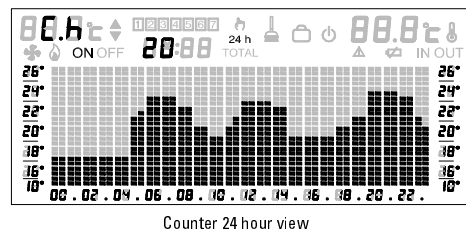


The day is split into two periods: the first period goes from 00:00 (midnight) to 11:59 a.m. (at 12:00 noon the clock switches to the next 12 hour period); the second period goes from 12:00 noon to 11:59 p.m. (at 00:00 midnight the clock switches to the next 12 hour period). The current time will appear on the display when switching from 24 Hours to 12 Hours (e.g. at 10 a.m. programming from 00:00 midnight to 11:59 a.m. will appear; at 11 p.m. programming from 12:00 noon to 11:59 p.m.). Both in 24 Hour and 12 Hour mode, the bar chart usually shows the programmed temperature for the current time on the display. The squares on the top of the respective column will blink.

Press **+** and **-** to change bar: the respective bar will blink. Either press **Esc** or wait for 10 seconds without pressing any buttons to automatically go back to the current time.

VIEWING COUNTERS AND TEMPERATURE LOG

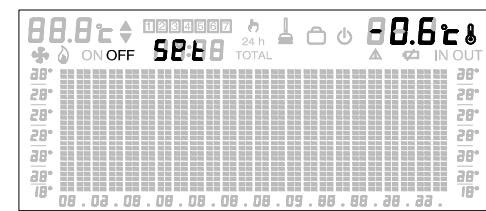
Press **h**: the number of hours of operation of the relay during the previous 24 hour period will appear on the display instead of the current time. The temperature trend measured over the past 24 hours will appear on the bar chart. Press **h** again: the display will view the total number of hours of operation of the relay during the solar year. Press **Day** and then **h** while displaying the total count to manually reset the counter. Either press **Esc** or wait for 10 seconds without pressing any buttons to automatically quit counter display.



Counter 24 hour view

TEMPERATURE OFFSET CORRECTION

The temperature read by the chronostat can be corrected by +/- 2°C. This is useful when the chronostat is arranged in a point where it cannot effectively read ambient temperature (e.g. near a window or near a source of heat) and the remote sensor cannot be used. Press **INOUT** for 5 seconds to correct the offset the temperature offset will appear on the display instead of the ambient temperature; the message "OFF Set" will blink. Press **+°C** and **-°C** to adjust the temperature offset from -2°C to +2°C in 0.1°C steps. Press **Esc** to wait for 10 seconds without pressing any buttons to quit programming mode.



The chronostat is set to an offset of 0.0 °C by default.

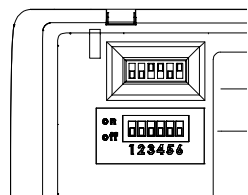
the relevant functions in this mode please refer to the paragraph "Additional Functions" (microswitch 6).

TECHNICAL SPECIFICATION

Power Supply:	2 x 1,5V batteries type IEC LR6 size AA (alkaline)
Autonomy:	about 1 year
Relay contact capacity:	5(1) A at 250Vac with exchange contact
Temperature measurement frequency:	about every 3 minutes
Temperature settings:	48 (in 1/2 hour steps)
Temperature adjustment range:	
Automatic heating:	+10°C .. +26 °C
Manual heating:	+5°C .. +26 °C
Automatic cooling:	+18°C .. +30 °C
Manual cooling:	+18°C .. +30 °C
Antifreeze temperature:	+5°C .. +26°C.
Thermal intervention differential:	0,2° C asymmetrical (-0,2 for heating, +0,2 for cooling)
Clock accuracy:	± 1 second a day
Protection grade:	IP30
Humidity limits:	20% .. 80% non condensing
Operating temperature:	0°C .. +40°C
Storage temperature:	-10° C ~ 50° C
Case: Material:	ABS self extinguishing V0
Color:	Signal white (RAL 9003)
Size:	142 x 99 x 34,5 mm (W x H x D)
Weight:	~ 310 gr.

ADDITIONAL FUNCTIONS

There is a slit in the bottom of the chronostat which allows you to access 6 microswitches so that you can modify the operation of the chronostat itself.



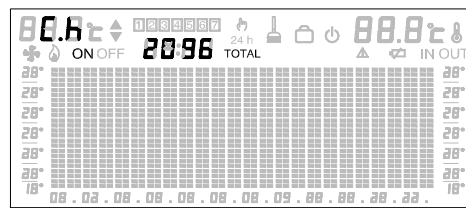
Microswitch functions:

- Microswitch 1 (Default OFF): Indoor/remote probe selection.**
If positioned down (OFF), the chronostat will use the internal probe, while if it is up (ON), the remote probe will be used (only shift this microswitch if the remote probe is installed).
- Microswitch 2 (Default OFF): Advanced Time Function (optimisation).**
The Advanced Time (position on ON) function makes it possible to activate heating or cooling in advance with respect to the programmed time so as to obtain the set temperature at the programmed time. In this way, the chronostat calculates the time

WARNING

- To adjust properly room temperature, install the thermostat far from heat sources, airstreams or particularly cold walls (thermal bridges). When the remote sensor is used in conjunction with the thermostat, then this note is to be applied to the remote sensor itself.
- For remote version all wirings must be made using wires with 1,5 mm² minimum cross section and no longer than 25 m. Do not use same duct for signal wires and mains.
- Installation and electrical wirings of this appliance must be made by qualified technicians and in compliance with the current standards.
- Before wiring the appliance be sure to turn the mains power off.

In the view of a constant development of their products, the manufacturer reserves the right for changing technical data and features without prior notice. The consumer is guaranteed against any lack of conformity for 24 months from the time of delivery, according to the European Directive 1999/44/EC. The full text of guarantee is available on request from the seller.



Total counter view

VIEWING OUTDOOR TEMPERATURE

Press **INOUT** to read the outdoor temperature if an optional outdoor sensor is fitted: the temperature will appear in the top right of the display along with the message **OUT**; the message **- -** will appear if the sensor is either not connected or faulty. You can decide whether to use the indoor or remote sensor for adjusting the temperature by means of the specific switch on the back of the chronostat. See "Additional functional" for how to proceed. Either press **INOUT** or wait for 10 seconds to go back to ambient temperature reading.

ANOMALOUS OPERATION INDICATOR

Anomalous conditions may occur in certain circumstances, e.g. when a window or door is left open, when the climate control system is started after a long period of inactivity, if the chronostat has been

needed to reach the desired temperature and, as a result, brings the programmed start forward by enough time to reach this aim. The advance is calculated on the basis of the average gradient in the last 24 hours with a maximum advance of 60 minutes.

Microswitch 3 (Default OFF):

Stop & Go Function (proportional time).

The Stop & Go function (in the ON position) controls switching on and off according to thermal inertia of the system and the environment to keep the ambient temperature as close as possible to the original setting.

Microswitch 4 (Default ON):

Pump anti-locking function.

The boiler pump anti-locking function (in the ON position) energises the relay for three minutes every day from 12:00 to 12:03 noon, regardless of the state of the chronostat at the time.

Microswitch 5 (Default ON):

Automatic summer/winter switchover.

Set to off position to prevent automatically switching to summer time and vice-versa.

Microswitch 6 (Default OFF):

Selecting telephone interface control type.

Switch to OFF for tone telephone interface controls:
Chronostat on control = closed
Chronostat off control = open

installed in a position where it cannot measure temperature changes in a timely fashion or if the circulation pump, the solenoid valve or the burner is broken, etc.

Vision is capable of detecting these situations thanks to a special measurement system. Icon **Δ** will blink whenever the temperature does not vary by at least 0.5°C after the system has been running for at least 30 minutes (ON icon lit up).

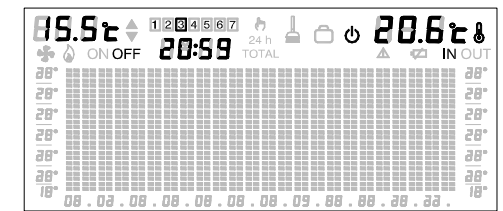
TURNING OFF AND ANTIFREEZE FUNCTION

Press **Esc** for approximately 3 seconds: the chronostat will either be switched on if it is off or off if it is on.

The chronostat switches to heating mode with antifreeze function on when it is switched off (also if it is set to cooling mode).

Press **+°C** and **-°C** to increase or decrease the anti-freeze temperature between +5°C and +26°C.

The chronostat will resume the prior condition when it is switched back on (i.e. heating, cooling, automatic or Total manual).



Switch to ON for pulse telephone interface controls:

Chronostat off control = 800 ms
Chronostat on control = 1600 ms

CONNECTION OF AN OPTIONAL REMOTE PROBE

It is possible to connect an external temperature probe to the chronostat as an option instead of the internal one.

The probe must be of the following type: **NTC 100KΩ ±2% a 25°C**.

Wire the remote probe at terminal 3 and terminal 4 then move the microswitch 1 upwards.

NOTE: if you install the remote probe and do not activate it, it is possible to use the chronostat as a thermometer to display the outdoor temperature. To display it, see the paragraph "TIME/OUTDOOR TEMPERATURE INDICATION"

REMOTE ACTIVATION

The chronostat can be activated even when the user is not at home, taking advantage of a dedicated input for an external voltage free contact (typically the output contact of a relay) which must be wired to terminals 1 and 2.

Whenever this contact is closed the chronostat will be activated, i.e. will be switched into the operating mode it had before it was turned off (automatic or manual mode), thus performing the regulation according to the temperature set-point formerly set.

This operating mode (chronostat remotely activated) is highlighted on the display with the flashing of the 'Φ' symbol.

For additional informations about the activation mode of the relay and