

## INDEX

## ENGLISH

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### Performance data of the chronothermostat:

- 3 Levels of temperature that can be adjusted and limited (Comfort, Working and Economy) + 1 anti-freeze level set at 5 °C (excludable).
- operating mode: **Winter °C** (heating) or **Summer °C** mode (air-conditioning-cooling).
- 4 factory-set programs according to average European use: 1 daily and 3 weekly.
- 1 **P 05** program that can be set according to defined personal requirements (minimum setting time is ½ h).
- **P 06** "HOLIDAY" program for the current program to be suspended for a set period of time (max. 999 hours).
- the set Comfort, Working and Economy temperature can be modified at any time.
- optional manual mode (temporary or permanent).
- possibility of stopping the boiler / air conditioner for cleaning purposes (max 3 hours).
- possibility of changing the current hour, minutes and day.
- optional intelligent mode with a maximum of 2 hours before the system goes on.
- possibility of viewing the current time or room temperature.
- possibility of limiting the set temperature values.
- possibility to connect to a telephone programmer for remote control.
- displayed hours of operation (daily and total).
- adjustable temperature in differential mode ON/OFF (can be modified).
- possibility to activate the pump for 2 minutes every day (anti-scale cycle).
- possibility to turn the thermoregulation off completely (OFF).
- reset command to cancel saved data.
- system troubleshooting indicator (e.g. boiler or air-conditioner blockage).
- error indicators: out of range temperature, failed probe, malfunctioning system.

## 1 - TECHNICAL SPECIFICATIONS

Power supply:	2 <b>alkaline</b> batteries 1.5 V - mod. LR03 (AAA) 1.5 V 1050 mA/h DURACELL or ENERGIZER batteries are recommended
Autonomous operation time:	approx. 12 months
Time remaining from when "Battery Low" symbol appears:	approx. 1 month
Type of action, disconnection and device:	1 / B / U / Electronic relay with single-pole changeover contact, voltage free, COM / NO / NC - 8(2)A / 250 V~
Type of output:	Class A
Software:	4 kV
Nominal pulse voltage:	for NO contact, zero potential
Telephone programmer input:	min. 0,75 mm <sup>2</sup> ÷ max. 1,5 mm <sup>2</sup>
Cross-section of wires to terminals:	Class II <input type="checkbox"/>
Insulation:	IP 30 / wall mounted
Protection degree:	Normal
Pollution rating:	-5 °C ÷ + 39 °C
Room temperature display range:	-5 °C ÷ + 55 °C
Operating temperature limits:	-10 °C ÷ + 65 °C
Storing temperature limits:	from +5 °C to +39 °C
Temperature adjusting range:	0,5 °C
Setting temperature resolution:	0,1 °C
Displaying temperature resolution:	max 1 °K/15 min.
Thermal gradient:	Δ adjustable T from 0.2 °C to 2 °C (factory-set at 0.6 °C)
Differential operation:	Once every 60 seconds
Updating temperature display:	LVD EN60730-2-7 EN60730-2-9 EMC EN60730-2-7 EN60730-2-9
Reference standard for CE mark:	

**Note:** when the room temperature blinks, display range (-5 °C or +39 °C) has been exceeded.

**Err** indicates that heat control activity has been suspended due to probe error.

## 2 - INSTALLATION

### 2.1 - CAUTION!

- Carefully read the instruction manual before using the product as it provides important guidelines regarding safety, installation and use. The instruction manual must be preserved with care for future reference.
- Installation and electrical connections of the chronothermostat must be carried out by skilled personnel and in compliance with current regulations.
- Ensure the product is intact once it is removed from its packaging.
- Only alkaline 1.5 V AAA (LR03) batteries are to be used as unsuitable batteries may lead to loss of programmed data.  
N.B.: the product has been tested and its characteristics are guaranteed when alkaline DURACELL or ENERGIZER batteries are used.
- If necessary, clean the chronothermostat with a slightly damp cloth.

### Installing the device: free-standing - fixed

Install the chronothermostat preferably at a height of 1.50 to 1.60 m from the floor, far from sources of heat, air inlets, doors or windows and anything that may alter its operation (fig. 1 - fig. 2).

### 2.2 - Examples of installation

Examples of installation in heating systems with a chronothermostat that controls: (fig. 3 - 4)

- A)** Wall mounted boiler
- B)** Burner or Circulation pump
- C)** Solenoid valve

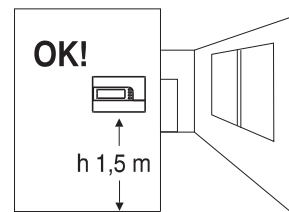


Fig. 1

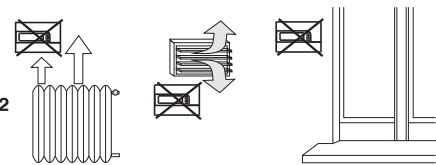


Fig. 2

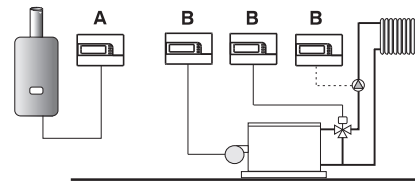


Fig. 3

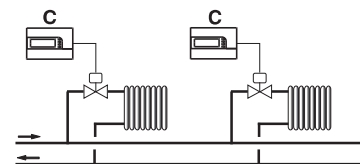


Fig. 4

### 2.3 - Chronothermostat installation

- Disconnect the power supply from the device
- Fasten the base of the chronothermostat to the recessed box (or to the wall) via the paired holes (fig. 5):

**A-A** for a round box (60 mm diameter) with clips

**B-B** for a round or square box with screws

**C-C** for a rectangular box (3 places) with screws

**N.B.:** fig.5, "D" = removable areas for wires to be inserted (only flexible ones)

- Implement the electrical connections as shown in the relative paragraph, whilst paying particular attention when mounting on a wall without a recessed box as the wiring must be placed properly for it to not interfere when the body is closed.
- Apply the chronothermostat body to the base as shown in fig. 6.
- Press slightly until you hear the fastening teeth click into place.
- To remove the chronothermostat from the base, use a small screwdriver to lever the fastening teeth (fig. 7).

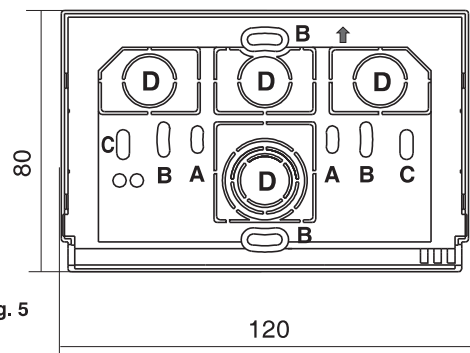


Fig. 5

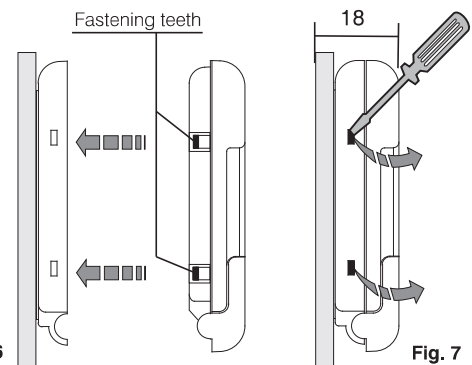


Fig. 6

Fig. 7

## 2.4 - Electrical connections

Disconnect the power supply from the device.  
Connect the wires of the device that is to be controlled to the terminal block on the back part of the chronothermostat body (fig. 8 or 9).

Terminal No. **1** = **common**

Terminal No. **2** = **normally open contact**

Terminal No. **3** = **normally closed contact**

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With heavy inductive loads (pumps and solenoid valves) it is recommended to connect an RC filter in parallel to the load.

A telephone programmer can be connected to terminals **4** and **5** to activate the chronothermostat from a distance.

## 2.5 - Inserting and replacing batteries

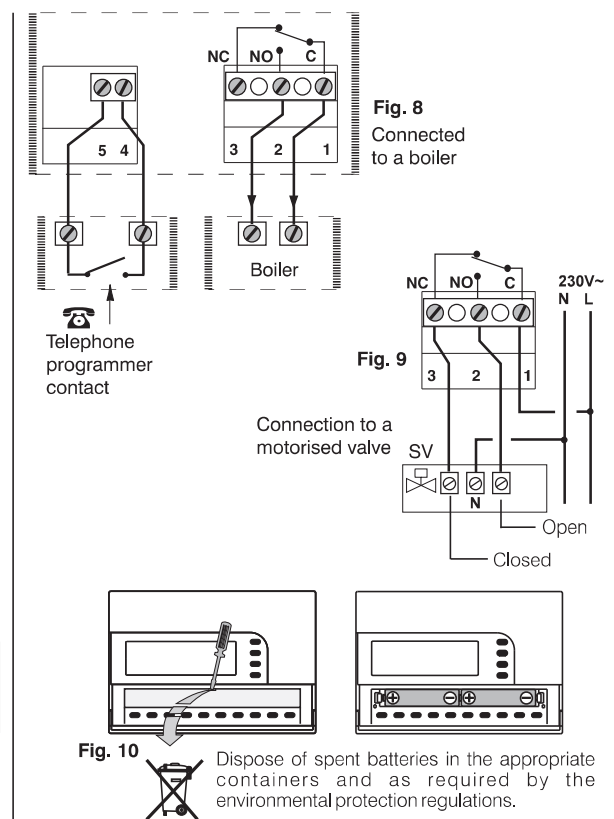
- Open the key cover (fig. 10).
- Remove the battery cover.
- Insert or replace with two Ministilo **alkaline** 1.5 V AAA batteries LR03 ensuring to place the poles correctly.

**ONLY USE GOOD QUALITY ALKALINE BATTERIES**  
(Duracell or Energizer are recommended)


**Attention:** approximately 1 minute is given to replace the batteries without losing any settings. Once this time is exceeded, the chronothermostat must be reset.

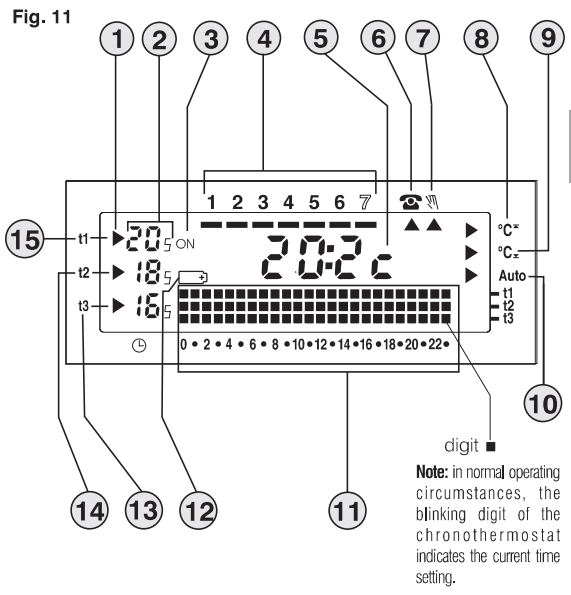
**Important:** Battery life may be more than 1 year.

However, it is recommended to replace them at least every 12 months to avoid them discharging when you are away (e.g. Christmas holidays, etc.)

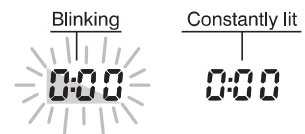


### 3 - DISPLAY INDICATORS LEGEND

- 1) Reference temperature indicator
- 2) Displays the set temperature (in grades of 0.5 °C)
- 3) Connected device is on (e.g. Boiler)
- 4) Days of the week (e.g. 3 = Wednesday)
- 5) Current time or temperature
- 6) Activated via telephone programmer
- 7) Manual mode 
- 8) WINTER mode °C\* (heating)
- 9) Summer mode °C- (air-conditioning-cooling)
- 10) Intelligent mode indicator
- 11) 24-hour temperature range:
  - upper digits = t1: Comfort temperature
  - intermediate digits = t2: Working temperature (pre-comfort)
  - lower digits = t3: Economy temperature (energy saving)
  - no digits = t\*: Anti-freeze temperature 5 °C
 2 digits (one above the other) are equivalent to HALF-HOUR (½ h) operation for each type of temperature denoted by the two digits.
- 12) Low battery indicator (replace the batteries within 30 days)
- 13) Economy t3 temperature setting (energy saving)
- 14) Working t2 temperature setting (precomfort)
- 15) Comfort t1 temperature setting



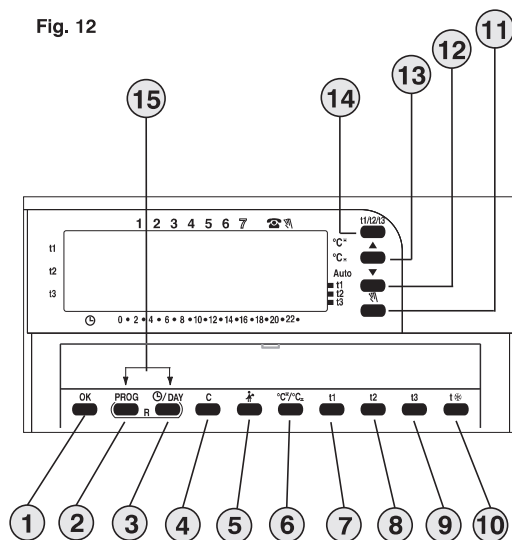
**N.B.:** the following convection has been used in the instruction illustrations:



## 4 - KEY FUNCTION LEGEND

- 1) **OK** button to confirm (hour, minutes, day, program and all operations that require confirmation)
  - 2) Button to select/display programs **P 01 to P 06**
  - 3) Button to change: current hour - minutes - day / Button to display time or room temperature
  - 4) Button to display hours of operation
  - 5) Button to suspend the current program to implement cleaning
  - 6) Button to select WINTER °C<sup>+</sup> mode (heating) or SUMMER °C<sup>-</sup> mode (air-conditioning-cooling)
  - 7) Button to set **t1** Comfort temperature
  - 8) Button to set **t2** Working temperature (pre-comfort)
  - 9) Button to set **t3** Economy temperature (energy saving)
  - 10) Button to set **t\*** Anti-freeze temperature
  - 11) Button to select manual mode and deactivate the chronothermostat (OFF disconnects the connected system)
  - 12) Button to decrease ▼ the set temperature
  - 13) Button to increase ▲ the set temperature
- Note:** buttons ▲ and ▼ are also used for many other functions, purposely designed to facilitate setting and using the chronothermostat (e.g. setting the hour, minutes and day, etc.)
- 14) Button to select the temperature setting:  
Comfort **t1**, Working **t2**, Economy **t3**; adjustable from +5 °C to +39 °C
  - 15) Key combination to **Reset**  
(Press **PROG** **OK** **DAY** simultaneously for 2 seconds)

Fig. 12



**N.B.:** more particular key functions are described in the specific paragraphs.

## 5 - PROGRAMMING

**IMPORTANT: all settings must be confirmed by pressing OK, otherwise the chronothermostat returns to the previous settings after 2 minutes and any changes made will not be saved.**

After inserting the batteries or after resetting (RESET: press **PROG** and **DAY** simultaneously for 2 seconds) all sections that are on will appear on the display, after which, the blinking digits relative to the hour and minutes will appear, as shown in figure 13. **For the chronothermostat to work you must set the following: current hour, minutes, day and weekly program.**

### 5.1/A) SETTING THE CURRENT TIME: HOUR - MINUTES

Use **▲▼**, to set the current time. Pressing repeatedly increases or decreases the time by one minute and keeping the key pressed activates the rapid scroll. Once the time is set press **OK** to confirm.

### 5.1/B) SETTING THE CURRENT DAY OF THE WEEK

After having set the time, the dash pertaining to the day of the week will blink beneath number **1** (Monday) on the display (fig. 14). Select the current day (e.g. 3 = Wednesday) by pressing **▲▼** and press **OK** to confirm.

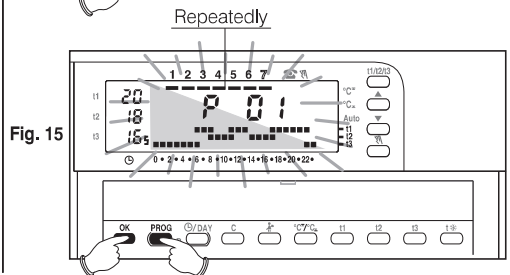
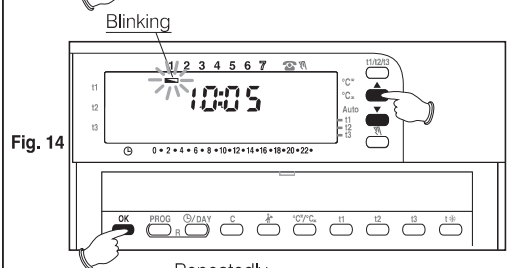
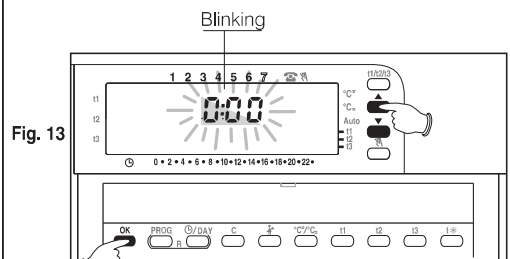
**P 01** will blink on the display (fig. 15).

### 5.1/C) SELECTING THE PROGRAM

**The chronothermostat has 4 fixed programs (see Chapter 9 - pag. 108/109).**

If one of these programs (P 01 to P 04) is suitable, press **PROG** repeatedly until the display shows the particular program, then press **OK**. The following will appear on the display: the dash pertaining to the current day beneath the corresponding number, the room temperature and the 24-hour temperature range as set with the current hour digit blinking; **the chronothermostat is working.**

If **none** of the programs happens to be suitable, press **PROG** repeatedly until program repeatedly until program **P 05** appears, then proceed as described in paragraph 5.2.



## 5.2 - Customized program P 05

Program **P 05** can be programmed for every hour of the day at four different temperatures (**t1**, **t2**, **t3**, **t\***) and differently for every day of the week.

Press **PROG** until **P05** appears on the display.

Confirm your selection of **P05** by pressing **OK** (fig. 16).

The following will blink on the display: the three digits pertaining to the time **0:00** and the dash pertaining to the day beneath number **1** (Monday).

Press the relative button (**t1**, **t2**, **t3**, **t\*** - fig. 17) to set the temperature for the time that blinks.

**N.B.:** press **PROG** to exit from **P 05** without saving.

### Setting the temperatures for Monday.

Confirm the type of temperature you wish for each hour of the day: (Comfort, Working, Economy, Anti-freeze) by pressing **t1**, **t2**, **t3**, **t\*** (confirmation occurs every time the button is pressed, the digit moves to the subsequent time and the corresponding time appears on the display) until the daily 24-hr chart pertaining to Monday is completed (example in fig. 18).

**N.B.:** Buttons **t1**, **t2**, **t3**, **t\*** can be pressed repeatedly to advance 1-hr each time or kept pressed until the desired hour is reached, moving forward by 1-hr every time the digit blinks.

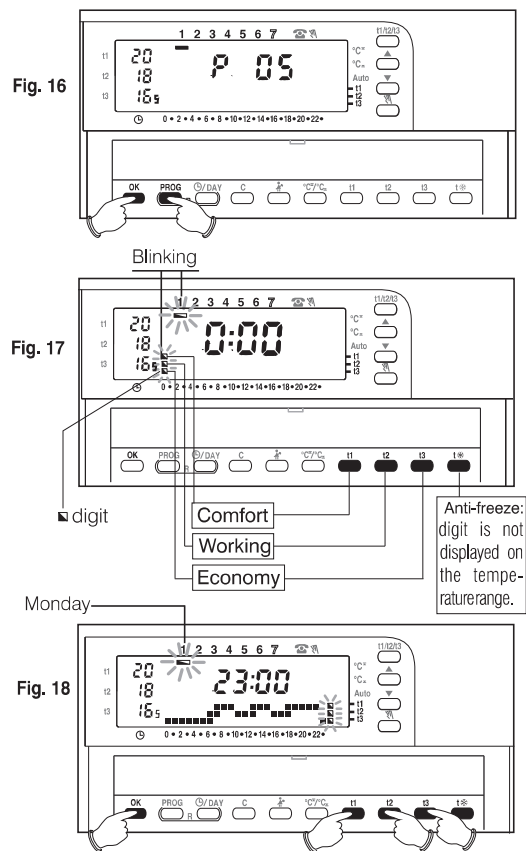
**Note:** the digit is not displayed on the 24-hour temperature range when **t\*** (Anti-freeze).

### Half-hours ( $\frac{1}{2}$ h) can be set as shown in paragraph 5.3.

If an error is made after having set the temperature for Monday, reset (you can use  $\blacktriangle$   $\blacktriangledown$  to quickly move to the time that is to be reset on the temperature range: the corresponding time is displayed) or press **OK** to confirm the program setting.



Programming continues on the subsequent page



When **OK** is pressed (fig. 18) to confirm, the program set for Monday is saved in the memory and the dash beneath **Tuesday (2)** will blink together with the digits pertaining to the time **0:00**, above the temperature range for the previous day (fig. 19).

**Setting the temperatures for Tuesday.**

Press **OK** (fig. 19) to apply the same temperature range as for Monday: the same range will be set for Tuesday and the dash pertaining to **Wednesday** will blink together with the digits corresponding to the time **0:00**.

If the same temperature range is **NOT** required, proceed by pressing **t1, t2, t3, t\*** as described for Monday.

*Note: the keys ▲ ▼ can be used to move rapidly to the subsequent or previous time that is to be reset on the temperature range; the corresponding time is shown on the display).*

Having set the temperature settings for Tuesday press **OK** to confirm. **You must complete the daily profile for each day of the week otherwise the setting cannot be saved.**

Once the temperature profile is set for Sunday (7) press, **OK** (fig. 20) to save and return to Monday's (1) settings, **then press OK once again for 4 seconds** (fig. 21); **this operation saves the complete weekly program.**

The following will appear on the display: the dash pertaining to the current day beneath the corresponding number, the room temperature and the 24-hr temperature range programmed with the current time digit blinking.

**The chronothermostat is working.**

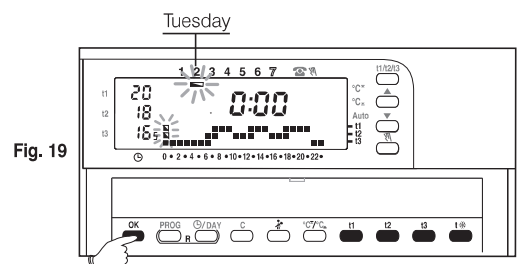


Fig. 19

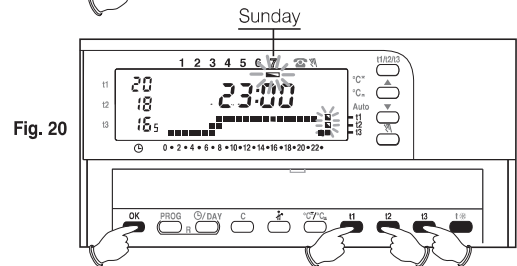


Fig. 20

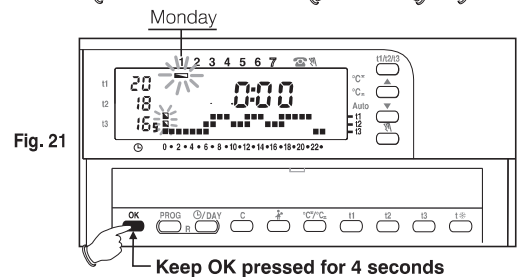


Fig. 21

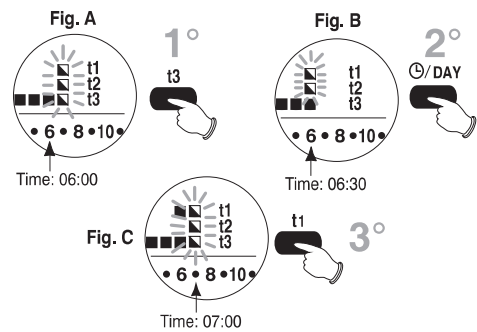
G  
B

### 5.3 - Programming half-hours (1/2 h)

For example, P05 setting, to program:

- from h 06:00 to h 06:30 with t3 (economy) temperature
- from h 06:30 to h 07:00 with t1 (comfort) temperature

- 1° Set temperature t3 at h 06:00:** press t3 until the three blinking digits are set an hour later (h 07:00) as in fig. A.
- 2° Press ⏪/DAY to return to the previous hour setting (h 6,30),** and the two digits corresponding to t1 and t2 will blink (fig. B).
- 3° Press t1 to set the t1 temperature for the second half hour.** In line with h 06:00, the two digits pertaining to t1 and t3 remain lit, whereas the three digits for the subsequent hour (h 07:00) will blink (fig. C).



### 5.4 - Editing program P05 (previously saved)

To change the previously saved settings of program P 05, press PROG for P 05 to be displayed (Fig. 22) and press OK to access the settings (Fig. 23). If the day that is to be modified is not Monday, press OK once or more times until the particular day is selected.

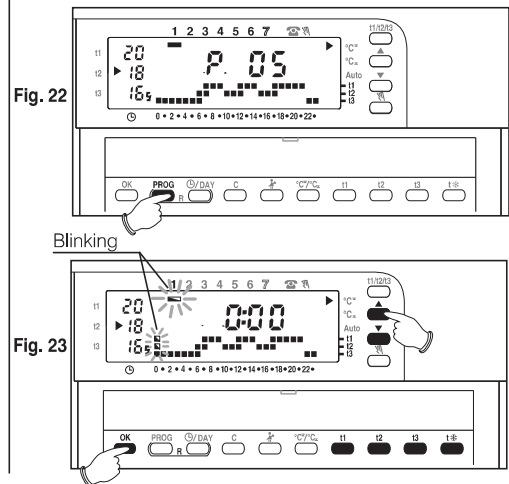
Use t1, t2, t3, t\* to edit the daily profile, as previously described in paragraph 5.2.

*Note: Use ▲ ▼ to move to the desired hour and this will be displayed. When the key ▲ is pressed at h 23:00, the time advances to 0:00.*

Press OK to save the daily profile, then move on to another day's profile or **keep the OK button pressed for 4 seconds to save the new weekly program.**

**IMPORTANT: Editing the profile of one day will not affect the following day and will only be saved for the day in question.**

**N.B.:** press PROG to exit from P 05 without saving.



## 5.5 - SUMMER °C<sub>x</sub> -WINTER °C<sub>x</sub> programs

Your chronothermostat is factory-set as "Winter" and displayed as: ▶|°C<sub>x</sub>

In these conditions, the device (boiler) will be connected as described in the example below:

Example: Temperature setting:

<b>Comfort temperature</b>	<b>t1</b> 20 °C	Boiler operates at:	Room temperature <b>lower</b> than 20 °C
<b>Working temperature</b>	<b>t2</b> 18 °C		Room temperature <b>lower</b> than 18 °C
<b>Economy temperature</b>	<b>t3</b> 16,5 °C		Room temperature <b>lower</b> than 16,5 °C
<b>Anti-freeze temperature</b>	<b>t*</b> 5 °C		Room temperature <b>lower</b> than 5 °C

If the appliance is an air conditioner:

Press °C<sub>x</sub>/°C<sub>x</sub> to set the "Summer" mode, displayed as: ▶|°C<sub>x</sub>

the appliance (air conditioner) will be connected as described in the example below:

Example: Temperature setting:

<b>Comfort temperature</b>	<b>t1</b> 20 °C	Air conditioner operates at:	Room temperature <b>greater</b> than 20 °C
<b>Working temperature</b>	<b>t2</b> 22 °C		Room temperature <b>greater</b> than 22 °C
<b>Economy temperature</b>	<b>t3</b> 23,5 °C		Room temperature <b>greater</b> than 23,5 °C

**N.B.:** if the anti-freeze setting is set within the 24 hr temperature range (digit non visible), the chronothermostat will not turn the air conditioner on at the set time.

## 5.6 - Changing the hour, minutes, day of the week (E.g. Standard Time/Daylight Saving Time)

Keep Ⓞ/DAY pressed for at least 4 seconds until the hour and minutes blink on the display.

- If necessary, use ▲▼ to edit the hour and minutes.
- In any case, press OK to confirm: the numbers of the hour and minutes will remain lit and the dash pertaining to the day will blink.
- If necessary, use ▲▼ to select the day of the week.
- In any case, press OK to confirm.

The chronothermostat returns to the current program.

Fig. 24

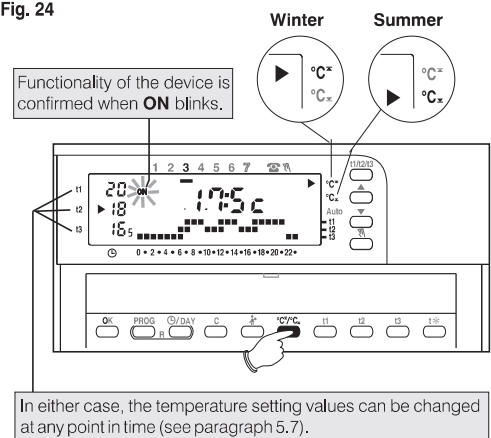
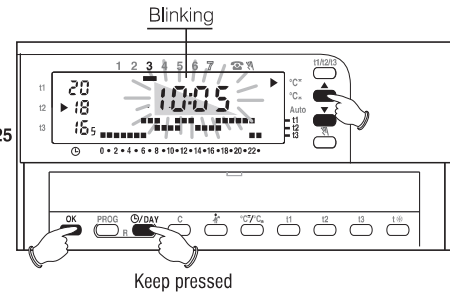


Fig. 25



### 5.7 - Changing the temperature settings: Comfort, Working and Economy

If the factory-set temperatures:

**t1** = 20,0 °C, **t2** = 18,0 °C, **t3** = 16,5 °C (for winter)

**t1** = 20,0 °C, **t2** = 22,0 °C, **t3** = 23,5 °C (for summer)

do not happen to be suitable, they can be changed accordingly from +5 °C to +39 °C, by pressing the relative buttons.

- Press **t1, t2 or t3** repeatedly to select the temperature setting that needs to be changed and the indicator blinks.
- Modify the selected temperature by pressing repeatedly: ▼ (to increase) ▲ (to decrease); the value changes by 0.5 °C every time the button is pressed.

The new temperatures selected in this way will be the new temperature settings (for all programs).

Once you finish programming, the indicator automatically returns to the setting pertaining to the current time after approx. 8 seconds after the last button is released.

**Note:** the chronothermostat will accept temperature values that satisfy the following conditions:

**Winter:** **t1** greater than or equal to **t2** greater than or equal to **t3**

**Summer:** **t3** greater than or equal to **t2** greater than or equal to **t1**

### 5.8 - Intelligent operation (Auto)

When in "Intelligent Mode" the chronothermostat automatically anticipates activation so that the desired temperature is reached at a given time: anticipation (2 hours max.) adjusts automatically according to the characteristics of the system. When the system goes on automatically, the arrow ► **Auto** and **ON** (device enabled) will blink.

- Keep **t2** pressed for at least 4 seconds to activate "Intelligent Mode". The arrow corresponding with Auto appears on the display to indicate its activation (► Auto).
- Keep **t2**; pressed for 4 seconds to disable this function. The arrow corresponding to **Auto** will disappear.

**This function is only active in "Winter" mode.**

During operation in "Summer" mode, the function is disabled and will be automatically reactivated when next switched to "Winter" mode.

Fig. 26

Selected temperature setting indicator (blinking)

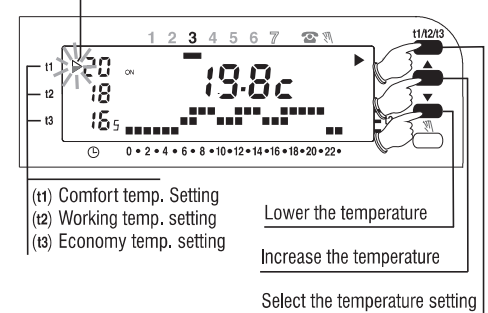
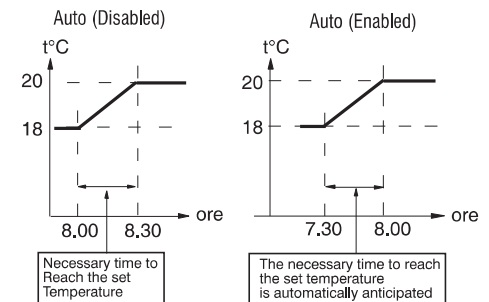


Fig. 27 Example: Winter mode (heating)

- the chronothermostat is set to go on at h 8:00
- the comfort temperature is set at 20 °C



## 5.9 - Reading the programs

Press **PROG**: the program in use will appear on the display as shown in the example (Fig. 28). If the program is one of the four fixed programs (**P 01 to P 04**), the settings per day will appear automatically on the display one after the other (Fig. 28-29).

After reading the program, press **OK** to reactivate it (if this is not possible, the chronothermostat reactivates the program set initially after 2 minutes).

If **P 05** has been used, the scrolling of the settings of each day will occur automatically.

After 2 minutes, program **P 05** will be automatically reactivated, otherwise, keep **OK** pressed for at least 4 seconds.

**Note: press PROG to switch from one program to another when reading programs.**

When reading programs you can replace the current program and/or modify program **P 05**:

- **To replace the current program**, select the new program (**P 01 to P 04**) via **PROG** and confirm the new selection by pressing **OK**. If on the other hand, the new program to set is **P 05**, press **OK** and follow the procedure as explained in paragraph 5.2. Alternatively, if program **P 05** has been previously set, confirm by pressing **OK** for at least 4 seconds.

- **To modify program P 05** follow the instructions explained in paragraph 5.4.

## 5.10 - Reset

To clear set data or if the chronothermostat shows abnormal messages on the display or malfunctions, press **PROG** **OK** simultaneously for 2 seconds:

All sections that are on will appear on the display.

Afterwards, the display will appear as in figure 13 in paragraph 5.1/A and the chronothermostat will be ready to be programmed again.

With this operation, all program settings are lost as the chronothermostat resets the factory settings.

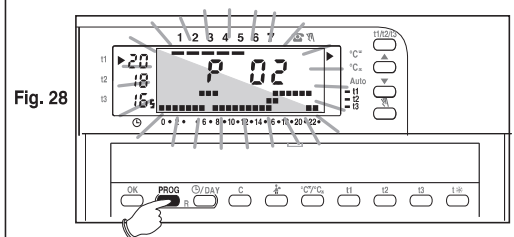


Fig. 28

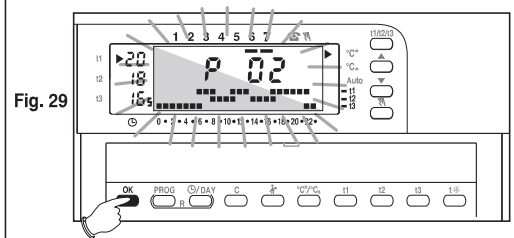


Fig. 29

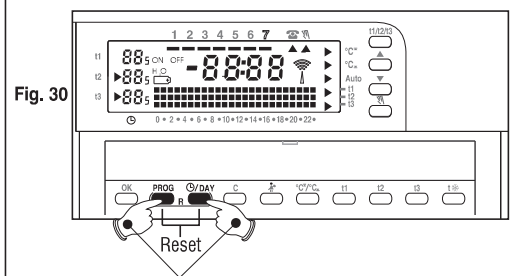


Fig. 30

## 6 - ENERGY SAVING FUNCTIONS

### 6.1 - Limiting the temperature setting values

In some particular installations, for instance in public offices, hotels, etc., it may be useful to limit the maximum and/or minimum temperature settings to avoid incorrect settings being entered by unauthorised personnel.

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The following temperature settings of the chronothermostat can be limited: maximum (t1 comfort), minimum (t3 economy), or both.

Such limits can be applied to both the Winter and Summer modes.

The operation can only be executed with the program activated (**P 01 to P 05**).

**Example: WINTER mode: maximum temperature setting (t1) = 19 °C, minimum temperature setting (t3) = 15 °C;**

#### Setting a maximum limit for temperature t1

Press **t1/t2/t3** once or more times to select the **t1** setting (the indicator corresponding to **t1** blinks) fig. 31. Use ▲ ▼ to set the limit value of the desired temperature. Press **t1** and **OK** simultaneously **within 8 seconds**; the **t1** indicator and the set value will blink (fig. 32). After a few seconds, the chronothermostat will return to the previously set program.

#### Setting a minimum limit for temperature t3

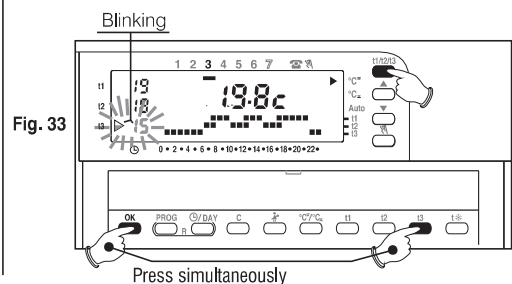
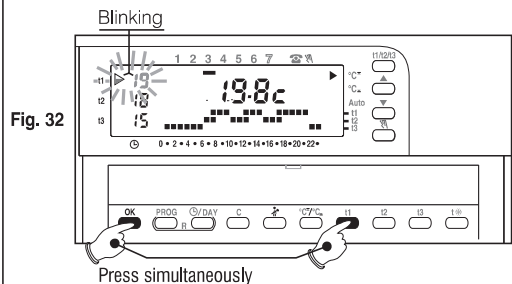
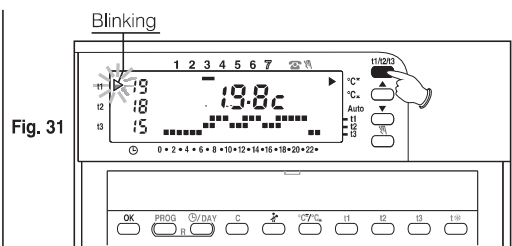
Press **t1/t2/t3** one or more times to select the **t3** setting.

Use ▲ ▼ to set the limit value of the desired temperature. Press **t3** and **OK** simultaneously **within 8 seconds**; the **t3** indicator and the set value will blink (fig. 33). After a few seconds, the chronothermostat will return to the previously set program.

#### Unblocking the temperature limits

Press **t1/t2/t3** to select the value that is to be unblocked (**t1** or **t3**) and the indicator together with the value of the set temperature will blink.




Press **OK** and the **t** key that corresponds to the selected value (**t1** or **t3**) simultaneously **within 8 seconds**. Once confirmation is given, the temperature stops blinking and after a few seconds the chronothermostat will return to the previously set program.




## 6.2 - MANUAL mode -

There are 2 manual modes. While the current program is stopped:




### a) Temporary manual operation.

- Briefly press  and the indicator  will blink beneath  and the current temperature level will be applied to the remaining hours of the day (fig. 34).
- Select the desired temperature level, Comfort, Working, Economy or Anti-Freeze by pressing **t1, t2, t3, t\*** respectively.

**The temporary manual mode will automatically terminate at midnight of the current day.**


To exit manual mode and return to automatic mode (the set program) press : once again: the temperature range entered for the current day will appear on the display, according to the program in operation before the temporary manual mode was activated.

### B) Permanent manual operation.

- Press  for approx. 4 seconds until the indicator , beneath , will remain lit and the current temperature level will be applied to the 24 hours (fig. 35).
- Select the desired temperature level by pressing **t1, t2, t3** or **t\***.


**Permanent manual operation remains active indefinitely;** to disable it and return to automatic mode (the set program) press .

## 6.3 - Suspending the program for cleaning -

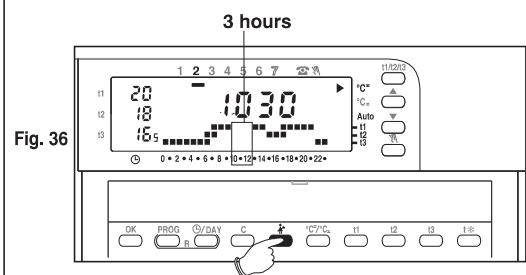
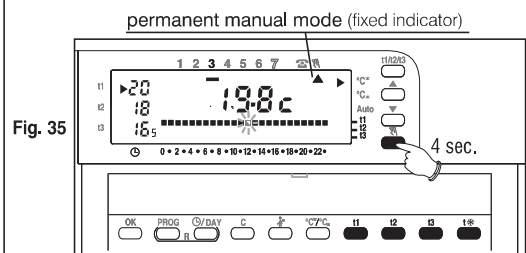
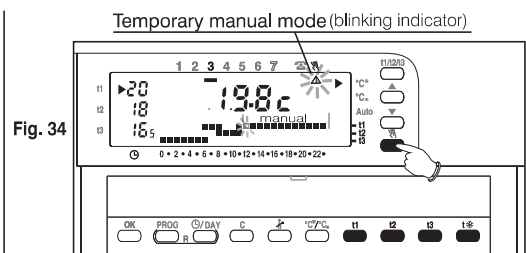
When operating with programs **P01 to P05**, the connected appliance can be deactivated for 3 hours, by pressing  and during this time, the chronothermostat will switch to anti-freeze mode (fig. 36).

When this function is activated, the digits corresponding to the 3 hours will disappear starting from the current hour.

Once the 3 hours have elapsed, the chronothermostat will revert to the program previously interrupted.

To reactivate the previously interrupted program before the 3 hours elapse, press : the suspended digits will appear once again.

**Attention:** if the anti-freeze temperature is deselected permanently (see paragraph 7.3) or in "Summer" mode, the connected device will remain disabled for 3 hours.



### 6.4 - HOLIDAY Program - P 06

If you will be away from home for a few days select **P 06 Holiday**

- Press **PROG** repeatedly until **P 06**, appears on the display, then press **OK** to confirm (fig. 37).
- The following will appear on the display: the day of the week, the symbol **c**, the word **HOLIDAY** (fixed) and the digits **000** (blinking).
- Set the number of hours you will be away for (example: **168** hours = 7 days). The maximum number of hours you can enter in Holiday mode is **999**.
- Set the duration of your absence by pressing **▲ ▼**, repeatedly to increase or decrease by one hour or keep either key pressed to activate the rapid scroll.
- Press **OK** to confirm (fig. 38).

From this moment onwards, the chronothermostat will begin a countdown and the Holiday program will maintain the set anti-freeze temperature (5 °C) until the countdown reaches zero (fig. 39).

Once the countdown ends, the Holiday program will activate your usual program (P01, P02, P03, P04, P05), in order for you to find your home at the desired temperature when you return.

**Note:** you can exit the HOLIDAY program earlier anyway by pressing **PROG** then **OK**; Use **▲ ▼** to reset the hours left for your return to **c000** then press **OK** to confirm and return to your usual program.

**Attention:** if the anti-freeze temperature is deselected permanently (see paragraph 7.3) or in "Summer" mode, the Holiday program will keep the controlled load disabled for the set duration.

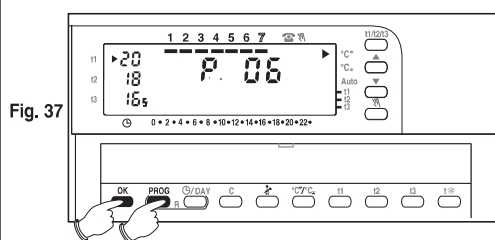


Fig. 37

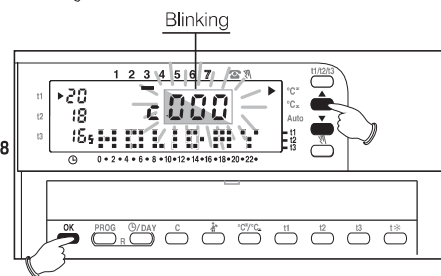


Fig. 38

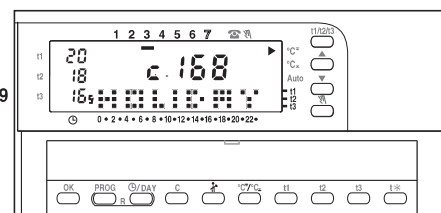


Fig. 39

## 6.5 - Displaying consumption via the number of operating hours


The chronothermostat calculates and memorises the hours of operating of the boiler (and/or air conditioner) during the 24 hours of the previous day and from the start of the season (total hours of operating). This information is useful for calculating the energy consumption of the system (for indicative purposes).

Total consumption can be calculated in litres (fuel oil) or cubic metres (natural gas) by simply multiplying the hourly consumption value (from the data plates of the boilers and burners) by the number of hours of operating.

- **To display the operating time during the 24 hours of the previous day:** press **C** and the requested number of hours will appear on the display (Fig. 40).
- **To display the total hours of operating from the beginning of the season:** press **C** pressed for at least 4 seconds and the total hours of operating will appear (Fig. 41).
- **To reset the total hours of operating from the beginning of the season:** keep **C** pressed for at least 8 seconds until the 24 hr temperature range goes off, then press **OK** simultaneously (Fig. 42). **0000** will appear on the display (the counter that counts the boiler's total hours of operating is reset). Release **C** and **OK**.

Following the reset, the chronothermostat begins a new count of the total hours of operating.

## 6.6 - Disconnecting the chronothermostat (OFF)

Keep  appears on the display **OFF** appears on the display, - this indicates that the chronothermostat is deactivated (fig. 43).

In this instance, all functions of the chronothermostat are disabled; only the current time continues to be displayed.

Pressing  again will take you back to the previously set program.

*Note: in this instance, the chronothermostat disables the anti-freeze function too.*

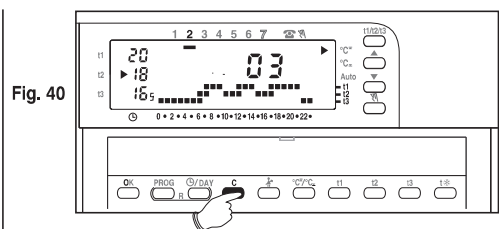


Fig. 40

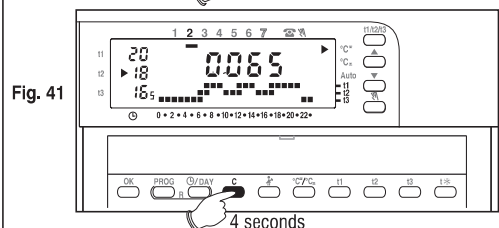


Fig. 41

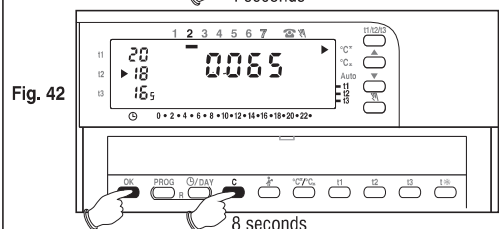


Fig. 42

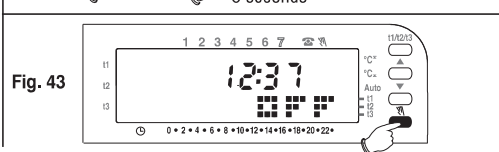


Fig. 43

## 6.7 - System troubleshooting indicator

(e.g.: Blocked boiler or air-conditioner is malfunctioning)

**In Winter:** if during normal operation (**ON** indicator blinks), the chronothermostat does not detect a significant increase in temperature within 2 hours, the display will indicate that the heating system is not working **hOFF** (e.g. blocked boiler).

**In Summer:** if during normal operation (**ON** indicator blinks), the chronothermostat does not detect a significant decrease in temperature within 2 hours, the display will indicate that the cooling system is not working **cOFF** (e.g. air-conditioner malfunctions).

The signal disappears automatically as soon as a significant increase (Winter) or decrease (Summer) in temperature is detected.

**Note:** in both cases, the relay remains ON (device is enabled).

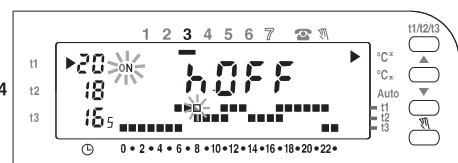


Fig. 44

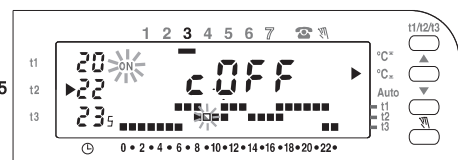


Fig. 45

## 7 - PROGRAMMABLE FUNCTIONS FOR DIFFERENT SYSTEMS

### 7.1 - Temperature differential

The chronothermostat is factory-set to work in differential mode (ON/OFF) with a preset differential temperature value of 0.6°C. The differential value must be set according to the system's thermal inertia; a low value is recommended for systems with radiators made of e.g. cast iron and a high value for systems with fan coils.

The differential value may be displayed and changed as follows:

- Keep **t1** pressed until the existing differential value blinks on the display, e.g. **0.6c**.
- Modify the value (from 0.2 °C to 2 °C) via the ▲ keys and/or ▼ with a variation of 0.1 °C. Once the desired value is reached, press **OK** to confirm and return to the set program.

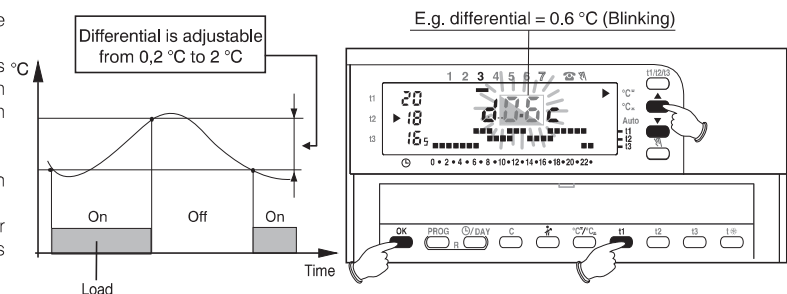


Fig. 46

E.g. differential = 0.6 °C (Blinking)

## 7.2 - Anti-scale cycle

When this function is selected, the chronothermostat relay will intervene every day at 12:00 and activate the connected device (pump, valve) for 2 minutes in order to prevent scale from forming and prevent seizure that could be caused by prolonged inactivity.

**N.B.:** this function is factory-set to "Disabled".

To set this function press **OK** until **OFF PU --** appears on the display (disabled function) or **ON PU --** (enabled function).

To activate the function, press **▲** : **ON PU --**

To deactivate the function, press **▼** : **OFF PU --**

Press **OK** to confirm and return to the set program.

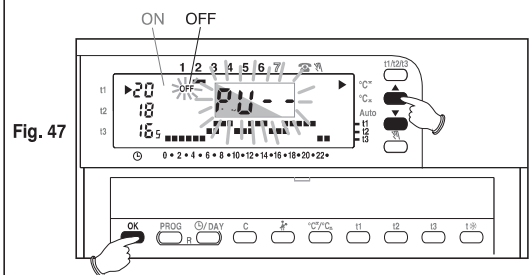


Fig. 47

## 7.3 - Total disconnection of the Anti-freeze temperature

This function allows the thermoregulation to be deactivated when operating with the anti-freeze temperature  $t^*$  selected.

**Enabled function:** when utilising the anti-freeze temperature  $t^*$ , the thermoregulation is enabled with a fixed temperature setting of **+5 °C**.

**Disabled function:** when utilising the anti-freeze temperature  $t^*$ , the thermoregulation is disabled (use only for systems filled with anti-freeze fluid in circuit).

**N.B.:** this function is factory-set to "enabled" and can only be deactivated when in heating mode (Winter).

To set this function press  $t^*$  until **ON 5.0c** appears on the display (enabled function) or **OFF 5.0c** (disabled function).

To deactivate the function, press **▼** : **OFF 5.0c**

To activate the function press **▲** : **ON 5.0c**

Press **OK** to confirm and return to the set program.

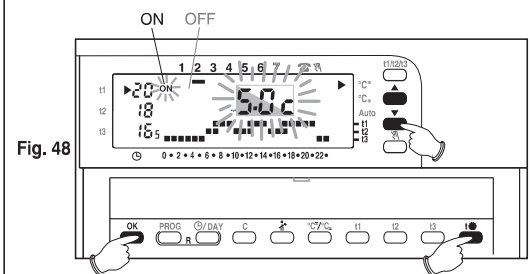


Fig. 48



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## 8 - ACTIVATION VIA TELEPHONE PROGRAMMER

### 8.1 - Telephone programmer operating mode

The telephone programmer allows you to control the chronothermostat from a distance via the contact connected to terminals **4** and **5** di quest'ultimo (see paragraph 2.4 - Electrical connections).

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Telephone programmer	Chronothermostat function
 <b>closed contact</b>	in permanent manual mode with <b>t1 comfort</b> temperature
 <b>open contact</b>	return to previously set program

When the chronothermostat receives the activation signal from the telephone programmer (closed contact) whilst functioning in temporary manual mode, permanent manual mode or **P 06** Holiday, it is activated in “**permanent manual mode**” with the **comfort temperature** (fig. 49).

The indicators pertaining to the permanent manual mode and **telephone programmer activation** appear on the display.

**Disabling the telephone programmer activation:**

Open the contact of the programmer (see the programmer instructions) that brings the chronothermostat back to the previous operating mode when it was activated.

**N.B.:** the activating and deactivating commands are effective within 1 minute.

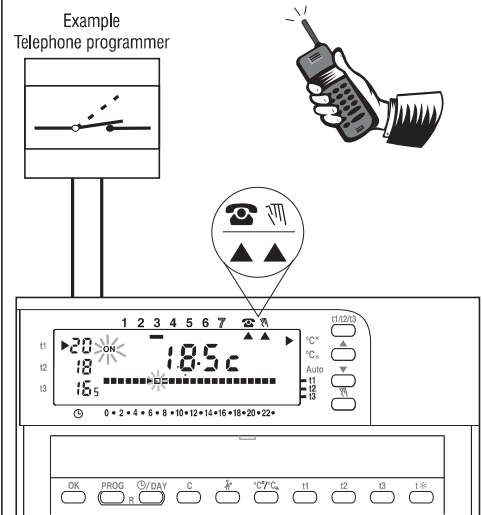


Fig. 49