Digital chronothermostat

KIROS

User manual

vemer SPA

PDF

Index

English

Flush-mounting chronothermostat powered by mains (230 V~), suitable for the control of heating and air-conditioning systems.

The device, through the relay, acts on the control circuit of the burner or the circulation pump (heating), or on the control circuit of the air conditioner (conditioning), in order to guarantee the desired temperature.

The blue backlighting of the display can be switched off if the device is installed in bedrooms, for example.

The device is supplied with white and anthracite frames and with adapters that allow it to be installed with the plates of the main civil series.

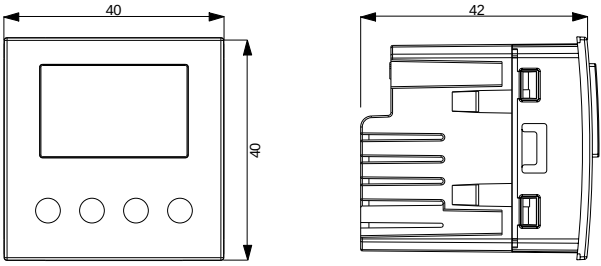
Code	Model	Description
VE780000	Kiros	Weekly chronothermostat with interchangeable front cover
VE780001	Kiros-INT	Weekly chronothermostat with interchangeable front cover

SAFETY WARNINGS

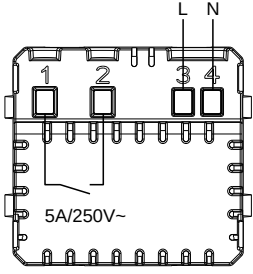
■ **During installation and operation of the product, it is necessary to comply with the following instructions:**

1) **The device must be installed by a skilled person, in strict compliance with the connection diagrams.**
2) **Do not power on or connect the device if any part of it is damaged.**
3) **After installation, inaccessibility to the connection terminals without appropriate tools must be guaranteed.**
4) **The device must be installed and activated in compliance with current electric systems standards.**
5) **Before accessing the connection terminals, verify that the leads are not live.**
6) **In the electrical system of the building where the chronothermostat must be installed, a protection device from the overcurrents must be present.**
7) **The device performs actions of 1B type and is suitable for environments with pollution degree 2 and overvoltage category III (EN 60730-1).**

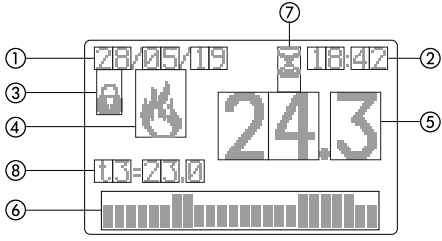
DIMENSIONS



CONNECTION DIAGRAM



DEVICE DESCRIPTION



① Date
② Hour
③ Active keypad lock
④ Operation off
Active load (conditioning mode)
Active load (heating mode)
⑤ Measured temperature
⑥ Running daily program divided into 24 histograms, one for each hour of the day. Each hour is associated with one of the 3 temperatures:

■ Temperature **T1** ■ Temperature **T2** ■ Temperature **T3**

⑦ Active timed operation
⑧ Active temperature: t1, t2 or t3 and relative value in C°

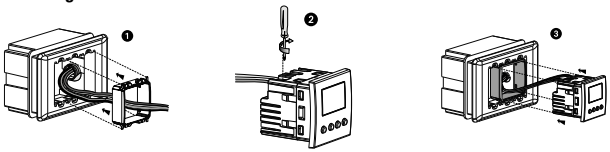
TECHNICAL CHARACTERISTICS

- Power supply: 230V AC ± 15% 50/60 Hz
- Power consumption: 0.3W (4.5VA)
- Charge reserve (in case of blackout): about 72 hours
- Output: bistable relay with changeover contact 5A / 250V AC
- Display LCD with backlighting (disactivable)
- Weekly programming with 3 settable temperatures: T1, T2, T3
- Daily resolution: 1h
- Switch-on delay settable between 15, 30 or 45 minutes (independent for each hour)
- Measured temperature scale: 0°C ÷ + 50°C
- Measured and displayed temperature resolution: 0.1°C
- Temperature regulation range: 2.0°C ÷ + 50°C
- Measurement update: every 30 seconds
- Measurement accuracy: ± 0.5 ° C
- Temperature regulation:
  – on/off with adjustable differential between 0.1°C and 1°C
  – proportional with settable band and regulation period
- Operating mode: heating (winter) or conditioning (summer)
- Automatic winter time/summer time change
- Keypad lock with password for installation in public places
- Flush-mounting installation on boxes with a height of 45 mm (space occupied: 2 modules)
- Terminal block for cables with section of 1.5 mm^2
- Operating temperature: 0°C ÷ +50°C
- Operating humidity: 20% ÷ 90% non condensing
- Storage temperature: -20°C ÷ +65°C
- Degree of protection: IP XXD

INSTALLATION KIROS (code VE780000)

- Install the chronothermostat at a height of about 1.5 m from the floor, away from direct radiation, away from doors, windows, heat sources, locations with excess or total lack of ventilation.
- Mount the white or anthracite grey frame according to your preferences by hooking it to the special teeth on the device.

Mounting



① Mount the appropriate adapter for the supplied plate (see table below).
② Make connections respecting the diagram shown on page 3 in this user manual
③ Insert the device into the adapter

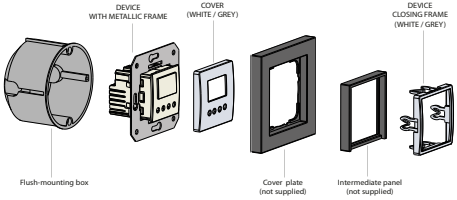
Adapter	Plates
AM	ABB series: Mylos
A4	AVE series: S44
BA	BTICINO series: Axolute, Axolute AIR
BL	BTICINO series: Light, Living International, LivingLight, LivingLight AIR
GC	GEWISS series: Chorus
VE	VIMAR series: Arké, Eikon, Eikon Evo
VP	VIMAR serie: Plana

For information on the possibility of adapting the thermostat with plates different from those shown, contact the Technical Assistance Service.

INSTALLATION KIROS-INT (code VE780001)

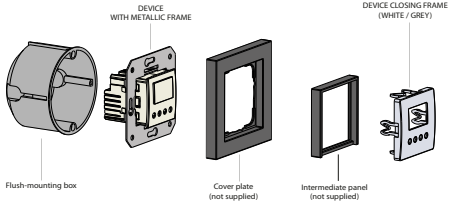
- Install the chronothermostat at a height of about 1.5 m from the floor, away from direct radiation, away from doors, windows, heat sources, locations with excess or total lack of ventilation.
- The device can be adapted to the cover plates of Berker, Busch-Jaeger, Gira, Jung and Merten, using one of the two assembly sequences illustrated below. The complete list of compatible cover plates is available on the website www.vemer.it on the product page.

Assembly sequence 1



① Connect the load and power supply (see connection diagram)
② Fasten the device with the metal frame to the flush mounting box and mount the cover of the device (colour white / grey)
③ Apply the cover plate and the 50x50mm intermediate panel
④ Finally insert the closing frame (colour white / grey)

Assembly sequence 2

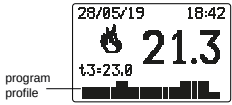


① Connect the load and power supply (see connection diagram)
② Fasten the device with the metal frame to the flush-mounting box
③ Apply the cover plate and the 50x50mm intermediate panel
④ Finally insert the closing frame

OPERATING MODE

The device can operate according to the following 3 modes:

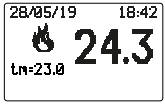
Automatic mode



It allows you to use the device
as a chronothermostat and the
temperature regulation follows the "profile"
of the set program. The program profile
assigns one of the 3 temperatures T1, T2 or T3
to each hour of the day.
It is possible to assign a different program to each day of the week.

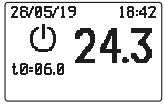
In the example, the device adjusts the temperature based on the value of:
T2 from 00:00 to 6:00 and from 8:00 to 17:00
T3 from 6:00 to 8:00 and from 17:00 to 21:00
T1 from 21:00 to 24:00
The values of T1, T2 and T3 can be set by the user.

Manual mode



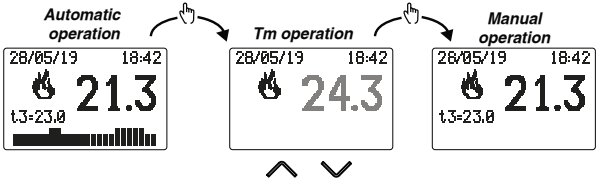
It allows you to use the device as
a thermostat and the regulation
is according to the temperature Tm.

Off mode

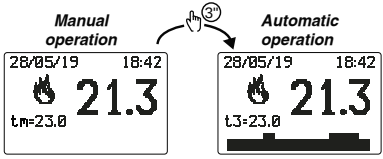


It is suitable when long periods of absence are expected.
In this mode the device does not perform any regulation,
however if it works in heating mode, it maintains a
minimum temperature (antifreeze temperature)
to prevent possible freezing of the system.

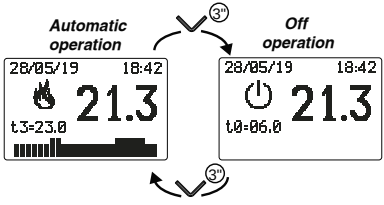
To switch from automatic to manual operation.



To switch from manual to automatic operation

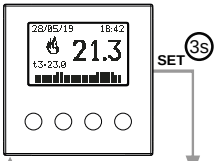


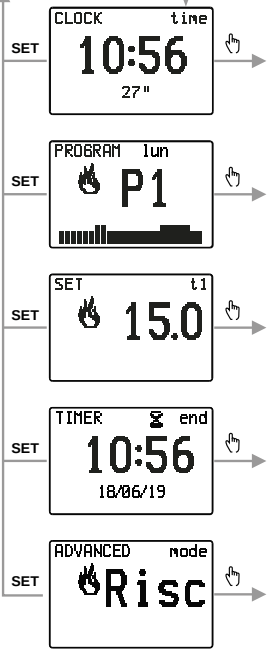
To switch from automatic operation (or manual) to the one switched off and vice versa



English

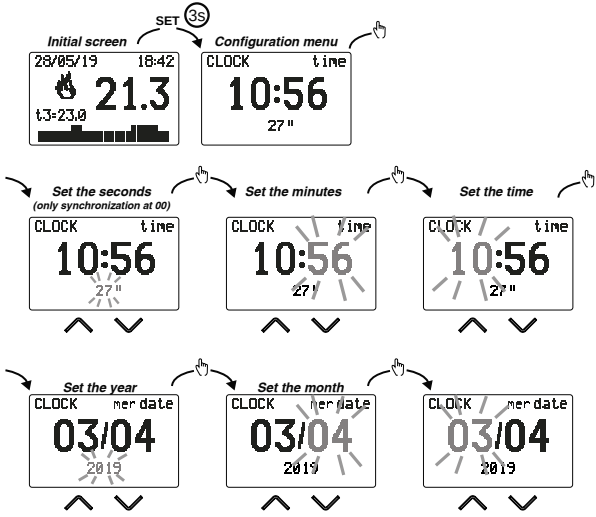
CONFIGURATION MENU DESCRIPTION





CLOCK MENU - DATE AND TIME SETTING

To set the date and time values, proceed as follows:



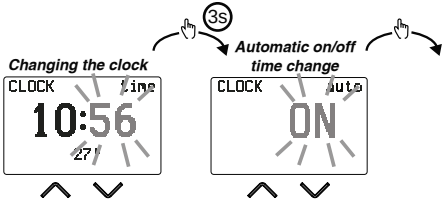
To exit the date and time setting:

- press the key SET once to return to the configuration menu
- press the key SET twice to exit the menu and return to the initial screen
- to change the settings of the summer/winter time change, press and hold for a long time the key (see "Configuration of the summer/winter time change")

Configuration of the summer / winter time change

You can configure the device to independently manage the summer time update.
The factory setting includes:
- the passage winter time → summer time (+1h) the last Sunday of March at 2:00 o'clock
- the passage summer time → winter time (-1h) the last Sunday of October at 3:00 o'clock

To change the configuration of the summer/winter time change:
- when changing any of the clock parameters (seconds, minutes, hour, year, month or day), keep the key pressed for a long time until the display shows *Auto*



If the function is enabled (AUTO ON), for each change it is necessary to set:
- the day of the week (1= Monday...,7= Sunday)
- the week of the month (1st= first, 2nd= second,...LSt= last)
- the month of the year
- time

using the keys and to set the value and the key to confirm and move on to the next parameter.

To exit the summer/winter time change configuration:
- press the key SET once to return to the configuration menu
- press the key SET twice to exit the menu

Note: the winter time change → summer time is identified by the symbol ❄.
the summer time change → winter time is identified by the symbol 🔥.

For example, in Italy the summer time starts the last (LST) Sunday (7) of March (03) at 2:00 o' clock and the last (LST) Sunday (7) of October (10) at 3:00 o' clock.

PROG MENU - PROGRAMS SETTING

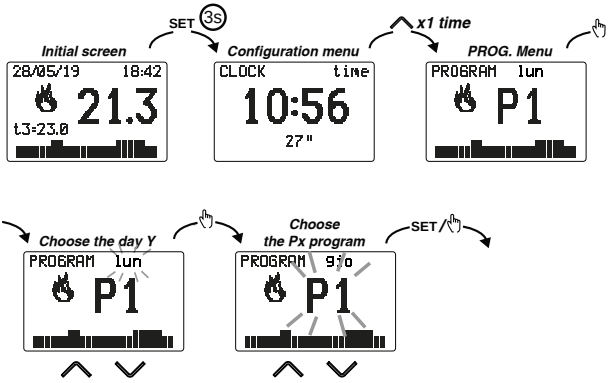
Access the PROG menu to change the programming of the automatic operation.
The factory setting includes:

- the P1 program from Monday to Friday
- the P2 program on Saturday and Sunday

If this program is not suitable for your needs, you can:

- assign a different program for one or more days of the week
- modify one or more existing programs by personalizing the profile, that is, assigning different temperature levels for one or more hours of the day.

How to choose a different program for the day Y



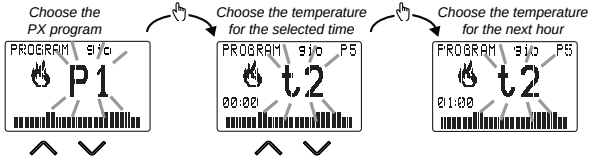
If the program meets the needs:

- press the key SET once to confirm and choose another day to which to assign a different program
- press the key SET twice to return to the configuration menu
- press the key SET three times to exit the menu and return to the initial screen

If no program meets the needs:

- choose the one that is closest to you and press the key to customize the profile (see "How to customize the profile of a Px program")

How to customize the profile of a Px program



- starting from midnight 00:00, press the keys ^ and v to assign to each hour of the day one of the 3 possible temperatures (T1, T2, T3) and the key ☝ to confirm and go to the next hour.

- to enter a switching delay for the selected hour, hold down the key ☝ for a long time. For more information about the switching delay, see "How the switching delay works"

When the program profile is suitable for your needs:

- press the key SET to exit the customization.

How the switching delay works

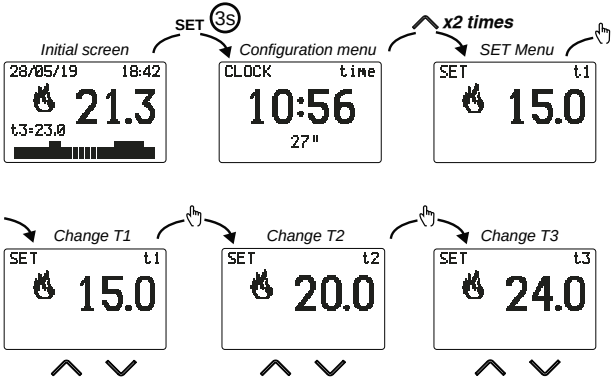
Set a switching delay for a specific hour to maintain, for the duration of the delay, the temperature value assigned to the previous hour.
For example, if the program includes:
T2 from 12 to 13
T3 from 13 to 14 with 30 minutes delay
the chronothermostat adjusts the temperature based on the value of
T2 from 12 to 13.30 and
T3 from 13.30 to 14.00
It is possible to set delays of 15, 30, 45 minutes, independent for every hour of the day.

SET MENU - TEMPERATURES T1, T2, T3 SETTING

Access the SET menu to change the values of the 3 temperatures used in automatic operation. The factory setting includes:

- T1 = 15°C, T2 = 18°C, T3 = 21°C (heating/winter operation 🔥)
- T1 = off, T2 = 23°C, T3 = 25°C (conditioning/summer operation ❄)

How to change the temperature values T1/ T2/ T3



To exit the temperature change:

- press the key SET once to return to the configuration menu
- press the key SET twice to exit the menu and return to the initial screen

Note: temperature values between LO (minimum value) and HI (maximum value) are allowed.
These factory values are: LO = 2°C, HI = 50°C but can be modified through the ADV menu.

Note: the condition T1 ≤ T2 ≤ T3 must be respected.

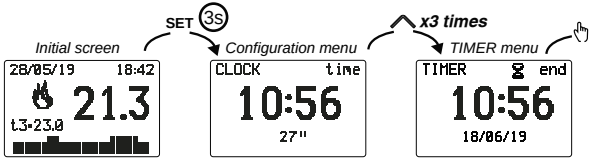
English

TIMER MENU - TIMING SETTING

Set a timing to prolong the current operation for the duration of the timing itself.
There are 3 timings available:

- **Timed manual:** set a timing during manual operation to maintain this operation until timing has elapsed. At the end of the timing, the device activates the automatic operation.
- **Timed automatic:** set a timing during the automatic operation to maintain this operation until the timing has elapsed.
  At the end of the timing, the device activates the off operation
- **Off timed:** set a timing during off operation to maintain this operation until timing has elapsed. At the end of the timing, the device activates automatic or manual operation, depending on which operation was active before switching off.

How to set a timing



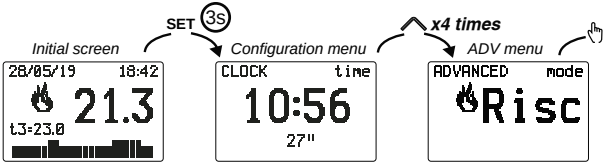
Set the date and time of timing end.
Increments of:
- 15 minutes (') for timings up to 24 hours
- 1 hour (h) for timings from 1 to 5 days (d)
- 12 hours for timings from 5 to 99 days

To exit the timing change:

- press the key SET once to return to the configuration menu
- press the key SET twice to exit the menu and return to the initial screen

When a timing is in progress, the symbol ⧖ is lit.
Note: to cancel a timing in progress or to exit without activating the timing, keep the key ⌄ pressed until the display shows the current time.
Note: the timing ends in the case of changes to the operating mode.

ADV MENU - ADVANCED PARAMETERS SETTING



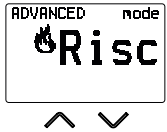
In the ADV menu, the parameters related to the advanced configuration of the device are proposed in sequence. Press:

- the keys ^ and v to change the value of the selected parameter
- the key ☞ to go to the next parameter
- the key SET to exit and confirm the changes

Note: the device exits the menu after about 40 seconds without any key being pressed.

Operating mode

Setting up:
- r 15c if the device is connected to a heating system (winter operation)
- cond if the device is connected to an air conditioning system (summer operation)



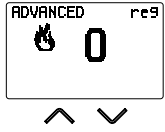
Factory value: r 15c (heating).

Regulation type

(this menu is active only if operating mode = heating)

Setting up:
- 0 to choose on/off regulation.
- P to choose proportional regulation.

Factory value: 0 (on/off).



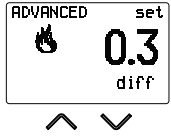
Note: the on/off regulation is suitable for most home situations.
Therefore it is advisable to modify this parameter only in case of real need.
For more information on the characteristics of the on/off and proportional regulation logic, see "Regulation types" on page 24.

Parameters for the regulation type

(this menu varies depending on the chosen regulation type)

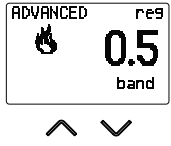
If the chosen regulation type is on/off, set the differential dIF. Allowed values: 0.1°C ÷ 1°C.

Factory value: 0.3 °C

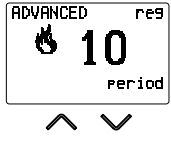


If the chosen regulation type is proportional, set the band bnd and the period PEr.
Allowed values: 0.5°C ÷ 5°C (band), 10, 20 or 30 minutes (period).

Factory value: 0.5 °C (band), 10 minutes (period).



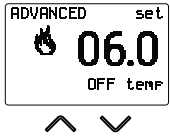
For more information on the parameters of the regulation logics, see "Regulation types" on page 24.



Antifreeze temperature

(this menu is active only if operating mode = heating)

The antifreeze temperature avoids the risk of freezing of the system when on the chronothermostat is set the off operation ⏻.



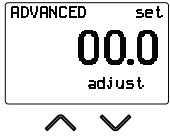
Allowed values: --- (excluded), 1°C ÷ 50°C .

Factory value: 6 °C.

Note: the "---" setting excludes the antifreeze function; in this case, when the device is off, no minimum temperature is guaranteed

Adjustment of the measured temperature

In particular installation conditions, it can happen that the temperature measured by the device deviates from the average temperature present in the room. In this case, introduce an adjustment of the temperature with the AdJ menu.



Allowed values: -5°C ÷ 5°C .

Factory value: 0 °C.

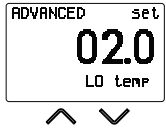
Note: the temperature value shown on the display during normal operation is inclusive of any adjustment introduced.

Minimum/Maximum settable temperature

Under particular installation conditions, for example in public buildings, hotels, etc., it may be useful to limit the range of values that the temperatures T1/T2/T3 and Tm can assume, in order to prevent incorrect settings by the user.

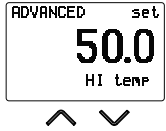
- LO is the lower limit

  Allowed values: 2°C ÷ HI
  Factory value: 2°C



- HI is the upper limit

  Allowed values: LO ÷ 50°C
  Factory value: 50°C

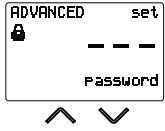


Password for key lock

Under particular installation conditions, for example in public buildings, hotels, etc., it may be necessary to lock the keypad to prevent changes to the settings by unauthorized persons.

To activate the keypad lock,
set a password between 001 and 999.

To deactivate the lock, keep the key ☑
pressed until you set "---".



When the keypad lock is active, the symbol 🔒 appears on the display and, after pressing a key, the password is requested.
To find out how to unlock the keypad, see page 22.

Operating hour meter

It displays the operating hours of the system (relay contacts on C-NA).

The device has two counters (5-digit) independent for heating operation and for the conditioning operation, but is displayed only the counter of the selected operation mode.

To reset the counter, keep the key pressed for a long time during the display. The maximum count is 65535h (about 7 years), when this digit is reached, the counter resumes the count from 0h.

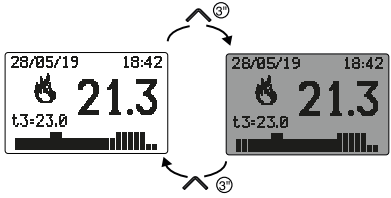
OTHER FUNCTIONS OF THE DEVICE

Backlighting management

The device has a blue backlighting which is normally on.

If the installation makes it necessary (for example in bedrooms) the backlighting can be turned off. In this condition the chronothermostat will continue to operate normally and the backlighting activates only when you enter setpoint modification, advanced programming, pin insertion menu.

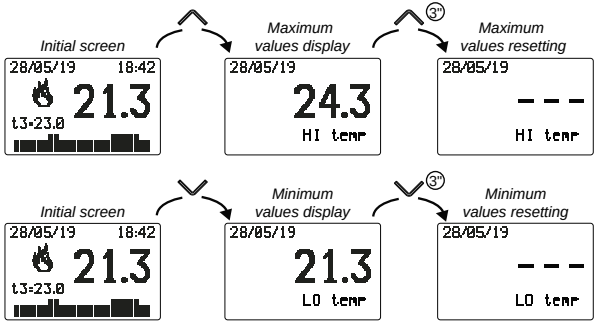
It's possible to turn off the backlighting by pressing the key for 3 seconds.



To reactivate the backlighting press the key for at least 3 seconds.

Display of minimum/maximum daily temperature

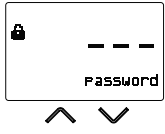
The device stores the values of the minimum and maximum temperature measured during the day.



Keypad unlock

When the key lock is active, the device adjusts the temperature using the set programming. In this condition, after pressing a key, the display shows the following screen.

To unlock the keyboard, enter the correct password with the keys ⌃ and ⌄ and confirm with the key ☝. The keypad remains unlocked for approximately 30 seconds from the last press of a key, after which the keyboard reactivates the lock.
To remove the keylock, see page 20.

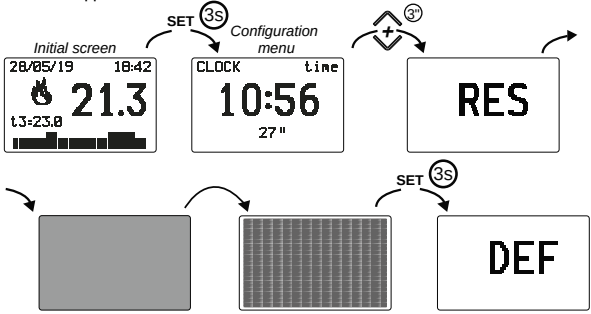


DEVICE RESET

Perform a reset to cancel the settings made and bring the device back to the conditions in which it appears as soon as it has been removed from the packaging.

To reset:

1. from the initial screen, press and hold the key SET to enter the configuration menu. The CLOCK indication flashes.
2. press and hold down the keys ∧ and ∨ simultaneously until "rES" appears on the display.
3. when the display shows all the segments, keep the key SET pressed until "dEF" appears



⚠ To reset if the key lock is active and you do not know the unlock password, you must remove and restore power and, when the display shows all the segments, keep the key SET pressed until "dEF" appears.

Operation mode	heating (winter)
Regulation type	on/off
Differential (on/off)	0.3 °C
Band (proportional)	0.5 °C
Period (proportional)	10 minutes
Antifreeze temperature OFF	6 °C

Adj. ADJ temperature	0 °C
Min. settable temperature	2 °C
Max. adjustable temperature	50 °C
Hour meter operation 🔥/❄	0 h
Automatic summer time change	active (according to EU rules)
Backlighting	active
Key lock password	disabled

REGULATION TYPES

On/off regulation

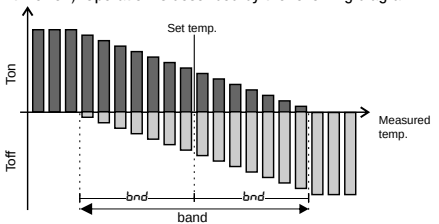
With the on/off regulation, the device activates the heating (air conditioner) until the measured temperature is lower (higher) than the set one.
In order to avoid the oscillation straddling the set temperature which would cause the system to switch on and off continuously, a differential (or hysteresis) is introduced.
In this way the system is switched on:

- in heating, when the ambient temperature drops below the value "set temperature-differential" and remains on until the set temperature is reached.
- in conditioning, when the ambient temperature exceeds the value "set temperature+differential" and remains on until the set temperature is reached.

The differential can be set from the ADV menu (see page 17).
Keep in mind that a low differential (0.1°C - 0.2°C) leads as a consequence more frequent ignitions of the system but the temperature will be more uniform than a high value (0.9°C - 1°C).

Proportional regulation (only for operation = heating)

The proportional regulation allows to keep the ambient temperature more constant and is based on the concept of band and period.
The regulation band is the temperature range (centered on the setpoint) in which the proportional regulation is implemented
The regulation period is the duration of the adjustment cycle (Switch-on time Ton +Switch-off time Toff). Operation is described by the following diagram:



How to choose the period:

- 10 minutes for low thermal inertia systems (fan-coil)
- 20 minutes for medium thermal inertia systems (aluminum radiators)
- 30 minutes for high thermal inertia systems (cast iron radiators)

How to choose the band:

- narrow band (0.5 °C) for systems with low thermal inertia
- narrow band (5 °C) for systems with high thermal inertia

REFERENCE STANDARDS

Compliance with Community Directives
2014/35/EU (LVD)
2014/30/EU (EMCD)
is declared with reference to the following harmonized standards:
EN 60730-2-7, EN 60730-2-9

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

If the crossed-out bin symbol appears on the equipment or packaging, this means the product must not be included with other general waste at the end of its working life.

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

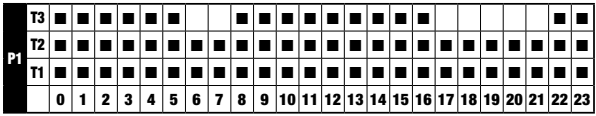
Products for disposal can be consigned free of charge (without any new purchase obligation) to retailers with a sales area of at least 400 m^2, if they measure less than 25 cm.

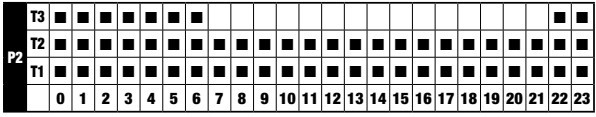
An efficient sorted waste collection for the environmentally friendly disposal of the used device, or its subsequent recycling, helps avoid the potential negative effects on the environment and people's health, and encourages the re-use and/or recycling of the construction materials.

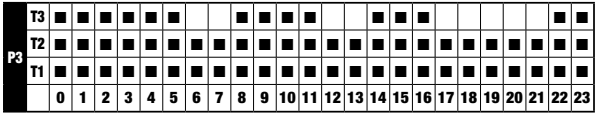
WINTER PROGRAMS

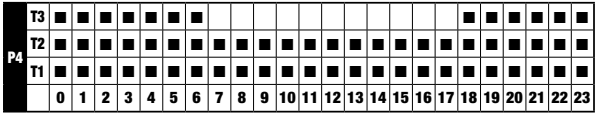
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
P1	T3							■	■										■	■	■	■	■		
	T2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	T1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P2	T3								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
	T2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	T1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3	T3							■	■					■	■				■	■	■	■	■		
	T2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	T1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P4	T3								■	■	■	■	■	■	■	■	■	■	■						
	T2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	T1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P5	T3							■	■						■	■	■	■	■	■	■	■	■		
	T2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	T1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P6	T3																								
	T2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	T1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P7	T3																								
	T2																								
	T1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23

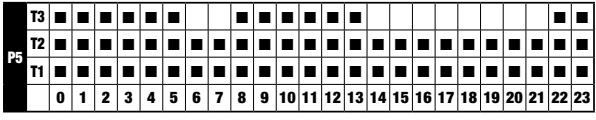
SUMMER PROGRAMS

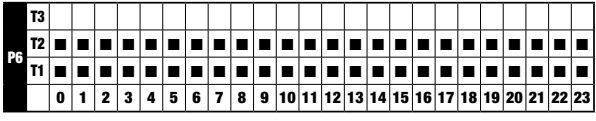


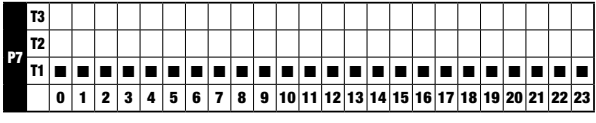












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08-2022