Cronoumidostato Digitale

TUO Wi-Fi RF

Manuale d'Uso

User Manual
DIGITAL CHRONOTHERMOSTAT WITH HUMIDISTAT

Vemer SPA

PDF

Index

Wi-Fi RF weekly programming electronic chronothermostat with humidistat function designed for temperature and humidity control. It has 3 independent radiofrequency communication channels to control an air conditioner (or a boiler), a dehumidifier and a controlled mechanical ventilation unit (MEV).

The activation of the air conditioner (or boiler), dehumidifier and fan unit takes place by means of as many remote actuators (to be purchased separately), controlled by sending radiofrequency signals, therefore without the need for any wiring. It is possible to control the air conditioner (or boiler) also via cable thanks to the relay on the device.

The integrated Wi-Fi module allows the remote control of the device via your smartphone or tablet. It's necessary to connect the device and then install the appropriate app on your smartphone or tablet available free for iOS and Android devices.

The colour of the display backlighting can be chosen by the user among the 48 selectable shades. You can even set the backlighting to be variable according to the difference between the measured temperature and the set one. The backlighting can be always switched off if the device is installed for example in bedrooms.

The device connects to the Vemer cloud to check if there are changes to the configuration and programming created using the app, and if so, regulates the temperature and/or humidity according to the new configuration.
This operation takes place approximately once a minute.

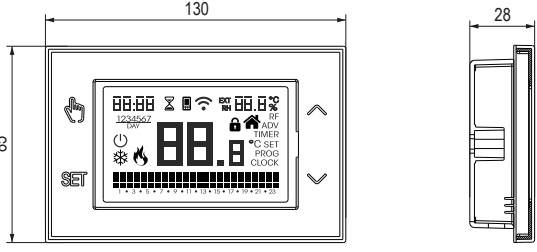
Code	Model	Description
VE773600	Tuo Wi-Fi RF Bianco	Weekly chronothermostat whith white humidistat
VE773700	Tuo Wi-Fi RF Nero	Weekly chronothermostat whith black humidistat

SAFETY WARNINGS

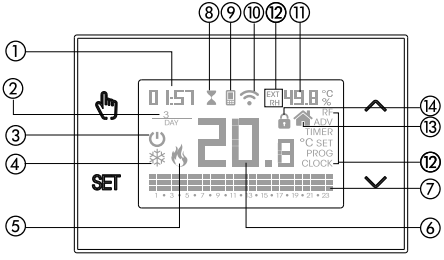
■ **During installation and operation of the product, it is necessary to comply with the following instructions:**

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 device 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



DEVICE DESCRIPTION



① Clock
② Day of the week
③ Off operation
④ Active load (conditioning mode)
⑤ Active load (heating mode)
⑥ Measured temperature
⑦ Running daily program divided into 24 histograms, one for each hour of the day. Each hour is associated with one of the 3 temperatures:

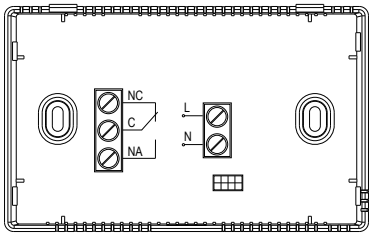
■ Temperature **T1** ■ Temperature **T2** ■ Temperature **T3**

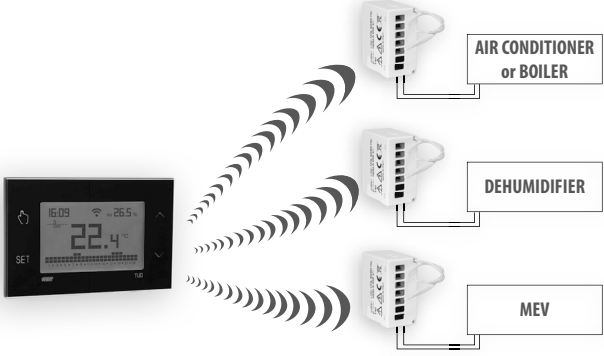
⑧ Active timed operation
⑨ Synchronization with settings on the Vemer Cloud in progress
⑩ Connection to the active Wi-Fi network
⑪ Measured relative humidity
⑫ Configuration menu:

RF radiofrequency connection configuration with actuator
ADV advanced parameters of the device
TIMER timings
RH% humidity threshold
EXT MEV operating programs
SET automatic operating temperatures T1, T2, T3
PROG automatic operating programs
CLOCK date and time

⑬ Local active operation. In this state the device is disconnected from the Cloud Vemer and any change in operation must be made using the keys on the chronothermostat. Local operation can be disabled by the app (see page 58)
⑭ Active keypad lock

CONNECTION DIAGRAM



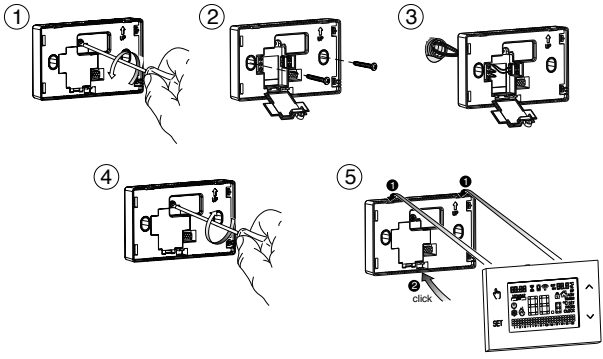


Note: the boiler or air conditioner can also be controlled via the relay.

INSTALLATION AND INITIAL CONFIGURATION

Device installation

The device can be installed on the wall or to cover the 3-module flush-mounting box (type 503).
We recommend positioning at a height of 1.5 meters from the floor, in an area that respects as much as possible the average temperature conditions of the entire environment. Make sure that the distance between the Access Point and the device is such as to guarantee stable communication.
Avoid installation near doors or windows, in niches, behind doors and curtains or in positions with excess or total lack of ventilation, to avoid that the reading of the temperature measured by the probe is in some way offset.



Connection and association with radiofrequency actuators

a. Power up the device following the connection sheet on page 49.
b. Verify that the device is operating correctly:
heating (factory setting) if it is to control a boiler, air conditioning in the case of an air conditioner. To change the operating mode, see page 70.
c. Configure the radiofrequency connection with the remote actuators.
The device allows independent regulation of the temperature, humidity (in dehumidification mode) and the ventilation unit, by means of as many remote actuators.
For details on the configuration of the remote actuators see page 77.

Preliminary operations

If you intend to use the device with remote control, before proceeding with the installation and configuration make sure you have a Vemer account available.

To create a Vemer account, do the following:

1. Install and start the Clima Wi-Fi app on your smartphone (or tablet)

2. Choose “Register” and fill in the “e-mail” and “password” fields

   Note: for security reasons it is recommended to choose a password different from the one used to access your e-mail box

3. Check your e-mail box: confirm the activation of the account by clicking on the link contained in the e-mail sent by the system

4. Log in by entering the e-mail address and password chosen in the registration process

Configuring the remote control device (for Android)

1. Install and connect the device according to the connection diagrams shown in this manual.

2. On Tuo Wi-Fi RF, hold down the ☝ and SET keys simultaneously until the display shows " conF nEt " and the Wi-Fi icon starts flashing (wait for it to become steady before proceeding with the next point).

3. Start the app, choose **"New Thermostat"**, select the **TUO** model among those available and press **"Next"**.

4. Connect to the **"iwm..."** network generated by the device following the instructions on the App. Wait for the device display to show the 📱 icon to indicate the successful connection between the app and the device.

5. Now choose the Wi-Fi network to connect the device to and enter the password, be careful to digit faithfully all characters (uppercase, lowercase, spaces, digits) that compose them. Confirm to continue.

   Important: before proceeding make sure that the 📱 icon on the device display is still on. Otherwise, access the Wi-Fi settings of the smartphone to manually reconnect to the "iwm ..." network.

6. Enter a name that identifies the Tuo Wi-Fi RF, the PIN (4 digits shown on the display of Tuo Wi-Fi RF) and choose an icon to help identify the device from those proposed and confirm.

   The configuration procedure is finished. At this point:

   the app displays the list of devices associated with your account among which also the newly associated device must appear.

   Tuo Wi-Fi RF displays the main screen.
   Check that the icon Wi-Fi is steady and the time shown at the top left is correct.

Configuring the remote control device (for iOS)

1. Install and connect the device according to the connection diagrams shown in this manual.

2. On Tuo Wi-Fi RF, hold down the [☝] and [SET] keys simultaneously until the display shows " conF nEt" and the icon starts flashing (wait for it to become steady before proceeding with the next point).

3. Start the app, choose **"New Thermostat"**, select the **TUO** model among those available and press **"Next"**.

4. Connect to the **"iwm..."** network generated by the device by following the instructions on the App. Check that the device display shows the icon and wait for the icon to appear on the iPhone display to indicate successful connection between the app and the device.

5. Now enter the complete name of the Wi-Fi network where connect the device and enter the password, be careful to digit faithfully all characters (uppercase, lowercase, spaces, digits) that compose them. Confirm to continue.

*** Important: before proceeding make sure that the icon on the device display is still on. Otherwise, access the Wi-Fi settings of the smartphone to manually reconnect to the "iwm ..."**

6. Enter a name that identifies the Tuo Wi-Fi RF, the PIN (4 digits shown on the display of Tuo Wi-Fi RF) and choose an icon to help identify the device from those proposed and confirm.

   The configuration procedure is finished. At this point:

   the app visualizza displays the list of devices associated with your account among which also the newly associated device must appear.

   Tuo Wi-Fi RF displays the main screen.
   Check that the icon is steady and the time shown at the top left is correct.

English

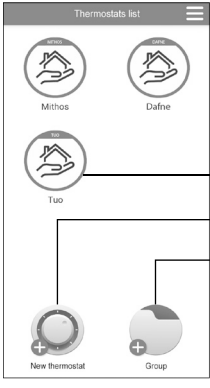
APP DESCRIPTION

Thanks to the app you can control your TUO Wi-Fi RF device remotely, easily and intuitively.

Page “Login”

Access using the access credentials (email, password) chosen during registration phase of your account.

Page “Devices list”



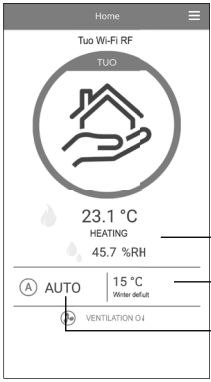
identifies a device or created group

allows you to record a new device

allows you to group several devices

Main page

This screen shows the “TUO Wi-Fi RF” status:



indicates the measured temperature and humidity (23.1°C - 45.7% RH),
the operating mode (Heating),
the system status:
(❄) red = on
(❄) gray = off

indicates the set temperature
and running program name:
touch this area to access the program list

indicates operating mode:
touch this area to change the operating mode (heating/cooling) and mode (automatic/manual/off).

“Programs List” page

From the “Program List” screen, it is possible to:

to create a new program

to select, to modify, to delete or
to rename an existing program

Note: the padlock to the left of the name INVERNO DEFAULT indicates that the program can not be modified or canceled

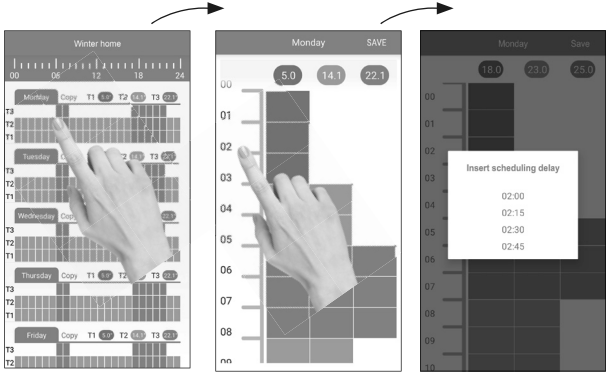
Modify a program

To modify an existing program, select the profile program of the day to be modified. On the screen that opens, assign at any time of day one of the three available temperature T1, T2 and T3 (marked by blue, green and red colours).

Created a program for a day, it's possible to copy it to any other day of the week ("Copy" function).

It is also possible to set a switching delay by tapping on the desired time.

Note: the image refers to the version of the app for smartphone.
On the tablet the whole weekly programming is visible on a single screen.

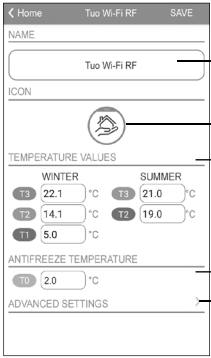


Configuration menu

Touch the symbol ☰ on the upper right to access the advanced configuration.

NOTE: the chronothermostat is compatible with *Google Home* and *Amazon Echo*. By the association with *Google* or *Amazon* account is possible to interact with the device by giving voice commands by speaking to the *Voice Assistant* via the voice activated speaker.

"Tuo Wi-Fi RF settings



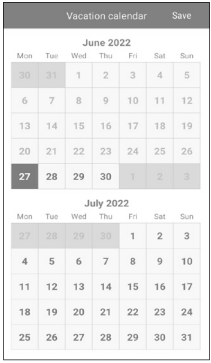
set the name of "Tuo Wi-Fi RF"

modify the icon that identifies it

set the themperature values T0, T1, T2 and T3

access to the setting screen

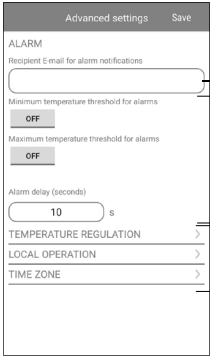
Set a holiday period



Set vacation days in which the regulation is turned off by selecting them on the calendar.

During the holiday period the operation filed shows VAC

Advanced settings



enter the user email who will receive the alarm

set themperature thresholds and delay to trigger the alarm

access the screen for setting the temperature, blocking local operation, choosing the time zone

NOTE: LOCAL OPERATION

When the chronothermostat keyboard is operated, the device activates local operation. In this way the device does not check if there are new settings on the cloud and adjusts the temperature according to the settings entered from the keyboard (the programming and configuration on the cloud are not changed).

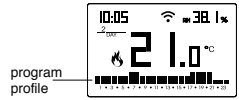
Local operation is indicated both on the device display by the icon and on the app. Local operation can be stoped and/or disabled at any time from the app (but not from the device). If local operation is disabled (useful if you want to have control of the device only from the app), the icon will appear on the display and when you try to access the configuration menu using the device keyboard, will not be possible to make changes.

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.

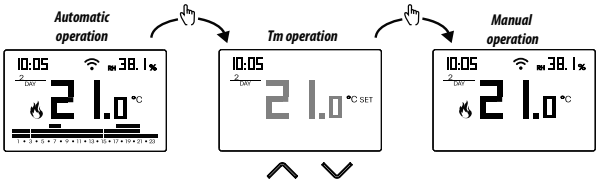
Manual mode

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

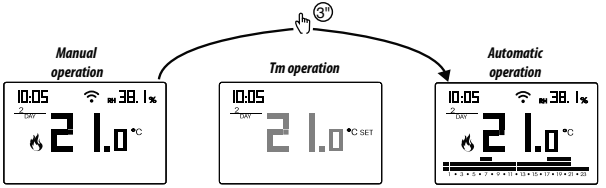
Off mode

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.

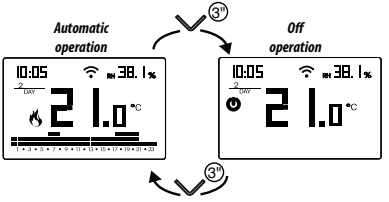
To switch from automatic to manual operation



To switch from manual to automatic operation



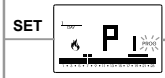
To switch from automatic operation (or manual) to the one switched off and vice versa



CONFIGURATION MENU DESCRIPTION

The parameters setting of the CLOCK, PROG, SET, RH%, EXT, TIMER and ADV menus (excluding the ADJ and LOOK menus) must be done via the App. Any modification of these parameters from the keyboard would be overwritten. Change the parameters from the keyboard only when the device is not connected to the Cloud.

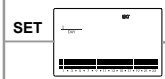
The CLOCK menu allows you to set date and time. It also allows the configuration of the daylight saving time change.



The PROG menu allows you to change the programming of the automatic operating mode.

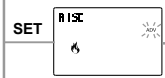
The SET menu allows you to modify the values of the 3 temperatures of the automatic operation (T1, T2, T3).

The RH% menu allows you to set the thresholds for the humidity regulation.

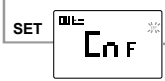


The EXT menu allows you to set the program activation of the controlled mechanical ventilation unit.

The TIMER menu allows setting of one of the 3 timed operations.



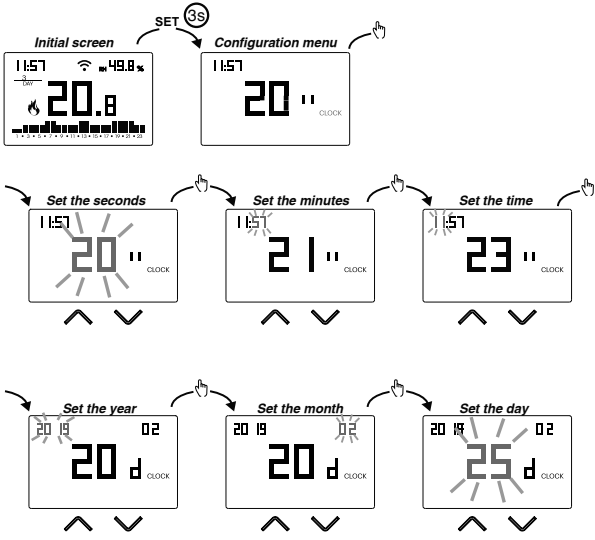
The ADV menu allows you to configure the general operating parameters of the device.



The RF menu allows configuration and the radiofrequency connection test between the device and the remote actuator.

CLOCK MENU - DATE AND TIME SETTING

When connected to the Wi-Fi network, the device acquires the date and time settings from the server and no settings are required.
However, if you need to manually 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")

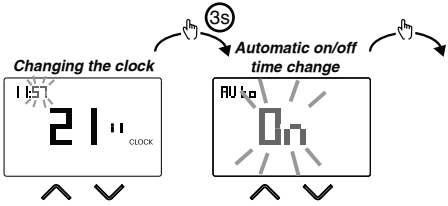
Configuration of the summer / winter time change

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:

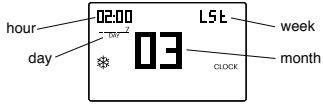
- when changing any of the clock parameters (seconds, minutes, hour, year, month or day), keep the key pressed for a long time until the display shows AUto



If the function is enabled (AUTO ON), 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 SETTINGS

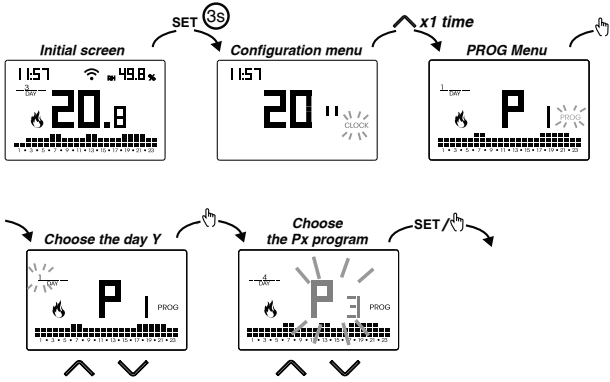
Access the PROG menu to change the programming of the automatic operation.
The factory setting includes:

- 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



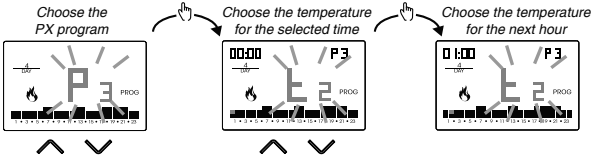
If the program meets the needs:

- 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 switching delay, see "How the switching delay works"

When the profile program 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 pm 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.

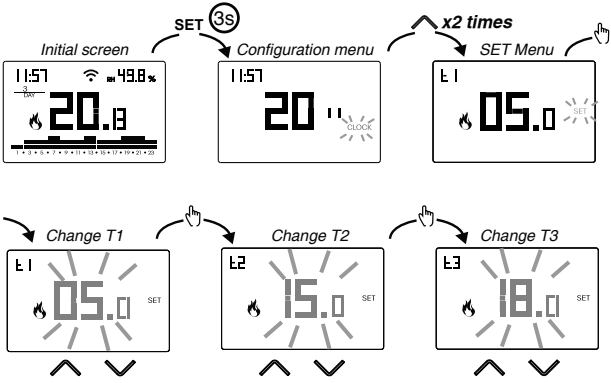
The switching delay for programming the MEV follows a similar behavior

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 = 5°C, T2 = 15°C, T3 = 18°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.

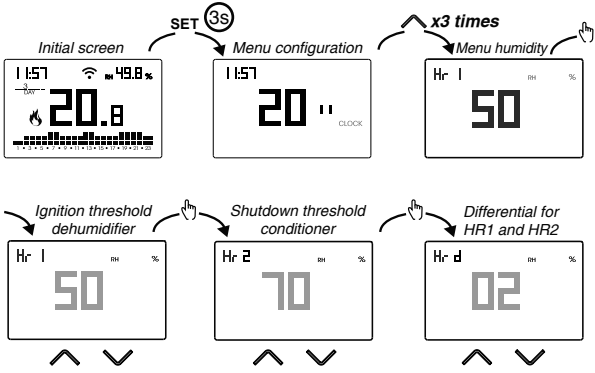
Note: the condition T1 ≤ T2 ≤ T3 must be respected.

RH% MENU - SETTING OF HUMIDITY THRESHOLDS

Access the RH% menu to set the operating thresholds relating to humidity regulation. Humidity regulation is active only when the temperature regulation operation is set to air conditioning. The parameters to be set are HR1 (switch-on threshold of the dehumidifier), HR2 (switch-off threshold of the air conditioner), HRd (intervention differential, common for HR1 and HR2, centered on the threshold).
The condition is $20 \leq HR1 \leq HR2 \leq 80$.
When the dehumidifier is active, the RH indication is lit on the display.
The humidity and temperature regulation are linked to each other to meet the need to contain humidity while cooling and to avoid the dew point.
In particular:

- when the measured humidity is lower than the HR1 threshold, the dehumidifier is always off while the air conditioner is on if the measured temperature is above the setpoint
- when the measured humidity is between HR1 and HR2, the air conditioner and dehumidifier are switched on only when the measured temperature is above the setpoint, otherwise they are switched off
- when the measured humidity is higher than the HR2 threshold, the dehumidifier is switched on if the measured temperature is higher than the setpoint while the air conditioner is always off.

How to modify the humidity thresholds



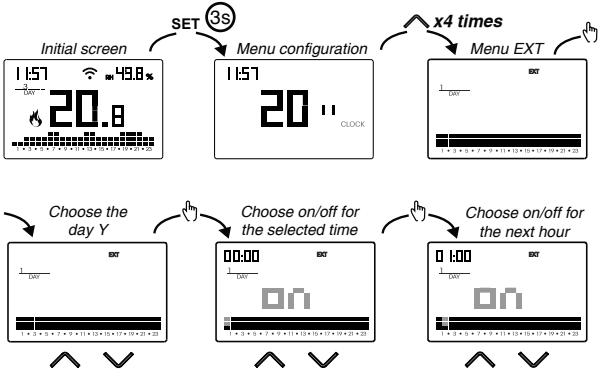
After completing the parameter setting:

- 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

EXT MENU - MEV ACTIVATION PROGRAM SETTING

Access the EXT menu to program the switching on times of the controlled mechanical ventilation unit. The programming is weekly, with a different program for each day. The resolution is one hour, with the possibility of delaying switching by 15, 30 or 45 minutes.
When MEV is active, EXT indication is lit on the display.
The factory setting requires that the MEV is always on.
It is possible to change this programming if it does not meet your needs.

How to change the MEV programming for day Y



After choosing day Y, press the key [hand] to customize the profile:

- starting from midnight 00:00, press the keys [^] or [v] to set the value on or oFF and the key [hand] to confirm and move to the next hour
- to introduce a switching delay for the selected time, hold down the key [hand] for a long time. For more information about the switching delay, see “How the switching delay works” on page 65

When the program profile meets your needs:

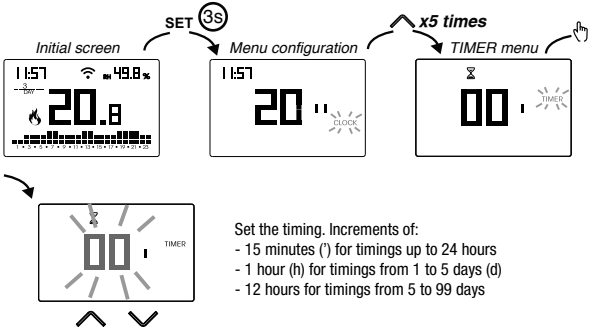
- press the key [SET] once to confirm and choose another day to modify
- press the key [SET] twice to return to the configuration menu
- press the key [SET] three times to exit the menu and return to the initial screen

TIMER MENU - TIMING SETTING

Set a timing for temperature regulation to prolong the current operation.
There are 3 timings available:

- **Timed manual:** set a time delay 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 timing. 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

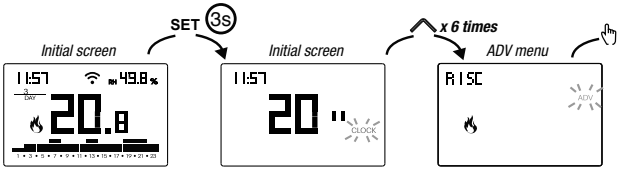
To exit the timing change:

- 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 timer, set 00'.
Note: the timing ends in the case of changes to the operating mode.

ADV MENU - ADVANCED PARAMETERS SETTING



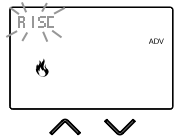
In the ADV menu, the parameters related to the advanced configuration of the device are proposed in sequence. Press:

- 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

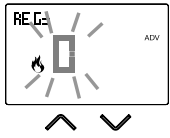
Setting up:
- r ISc if the device is connected to a heating system (winter operation)
- cond if the device is connected to an air conditioning system (summer operation)



Factory value: r ISc (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.
- tP to choose proportional regulation (to be used when the device is paired to a radiofrequency radiator valve type Thermopro RF)

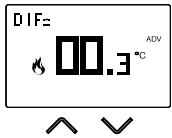
Factory value: 0 (on/off).

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 type" on page 81.

Parameters for the regulation type

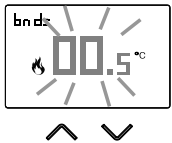
(this menu varies depending on the chosen regulation type)

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



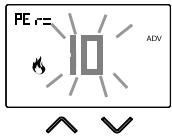
Factory value: 0.3 °C

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).

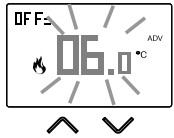
For more information on the parameters of the regulation logics, see "Regulation type" on page 81.



English

Antifreeze temperature

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



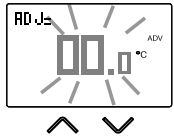
The antifreeze temperature avoids the risk of freezing of the system when on the chronothermostat is set the off operation ⏻.

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 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.

Wi-Fi connection configuration

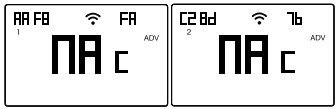
This sub-menu consists of 3 different screens and described below.
To switch from one screen to another, use the keys ⌃ and ⌄.

- the device PIN. It is a 4-digit number necessary to associate the device with your Vemer account.

This screen also shows:
- the status of the Wi-Fi connection:
  on fixed: device connected to the home network
  flashing: search for Wi-Fi network in progress

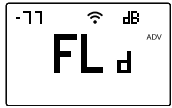
- the association between the device and Vemer account:
  on fixed: associated with a Vemer account
  flashing: not associated with any Vemer account
  Note: during the first 20 seconds or so of this screen viewing the icon is always flashing.

- The MAC address of the device is a sequence alphanumeric that uniquely identifies a device within a network of devices.
  Reading must be done from left to right by scrolling through the 2 dedicated pages using the arrows (in the example: AA-F8-FA-C2-8d-7b).



- the intensity of the signal between the device and the access point (*FLd*).

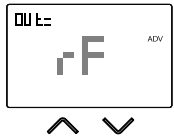
For values:
- higher than -60dB: excellent signal quality
- between -60dB and -90dB: good signal quality
- lower than -90dB: poor signal quality that could compromise communication between device and access point. In this case, bring the device closer to the access point.



System control mode (air conditioning/heating)

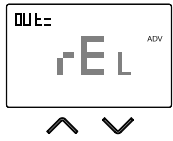
The device allows you to control the air conditioner (or the boiler) in two ways:

- through the relay (connection via wires)
- through a radiofrequency signal, therefore without making connections between the device and the air conditioner (or the boiler)



Setting up:

- rF to choose the radiofrequency control
- rEL to select the relay control



Factory value: rF (radiofrequency).

Note: the configuration and the test of the radiofrequency connection are carried out accessing the RF menu (see page 77). This menu is active only if the system control is set to rF, while it is not active if it is set to rEL.

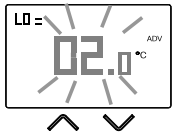
Note: the control of the dehumidifier and any controlled mechanical ventilation unit can only be done by means of radiofrequency signals.

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.

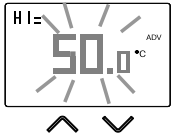
- LO is the lower limit

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



- HI is the upper limit

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

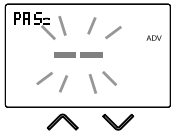


Password for key lock

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 word bLOc appears.
To find out how to unlock the keypad, see page 79.

Operating hour meter

It displays the operating hours of the system (relay contacts on C-NA or ON command to the remote actuator).

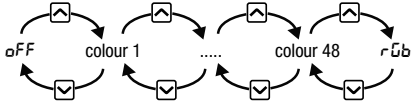
The device has two counters (5-digit) independent for heating operation and for the conditioning operation, but is displayed only the counter of the selected operation mode.

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.

Display backlighting

The display backlighting can be:

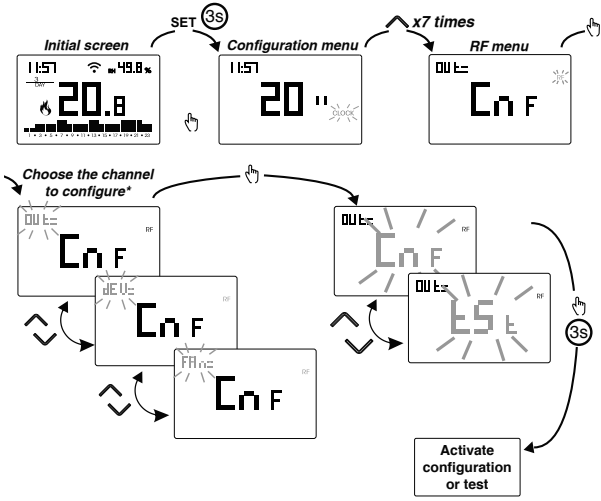
- off (blue after pressing a key)
- fixed of a colour that can be chosen among 48 variants
- variable based on the difference between the measured temperature and the set temperature:
  - blue when the measured temperature is lower than the set temperature of at least 0.5°C (and after pressing a key)
  - green when the difference between the measured temperature and the set one is lower than 0.5°C (and in case of operation off)
  - red when the measured temperature is higher than the set temperature of at least 0.5 ° C



The backlighting can also be activated/deactivated from the initial screen by keeping the key pressed for a long time.

RF MENU - CONNECTION CONFIGURATION WITH THE ACTUATORS

Access the RF menu to configure and test the radiofrequency connection between the device and the remote actuator used to control the air conditioning (or heating) system, the dehumidifier and the controlled mechanical ventilation unit.



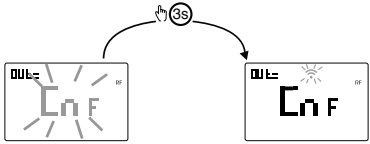
***** choose the channel to configure:

- **oUt** → actuator connected to the temperature regulation system boiler or air conditioner)
- **dEU** → actuator connected to the dehumidifier
- **FAn** → actuator connected to the MEV ventilation unit

Configuring the connection with the remote actuators

To configure the remote actuator:

1. activate the "network configuration" mode on the remote actuator (for the procedure, see the specification of the remote actuator). The actuator remains in configuration mode for about 30 seconds, the time within which the device TUO Wi-Fi RF must send the pairing code
2. choose the channel to configure (oUt, dEU or FRn) and go to the configuration page of Tuo Wi-Fi RF device
3. press the key for at least 3 seconds until the symbol lights up: the pairing code has been sent and the devices are paired.



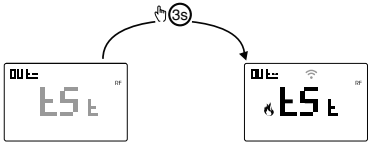
During normal operation, sending the commands to the actuators is indicated by the lighting of the RF message.
It is possible to repeat the procedure described above to combine multiple remote actuators to be used for simultaneous drives.

⚠ Resetting the device (page 80) modifies the pairing code used by the device itself to communicate with the actuator. For this reason, **after a reset of the device, it is necessary to reconfigure all the previously associated remote actuators.**

Remote actuator test

To take the test:

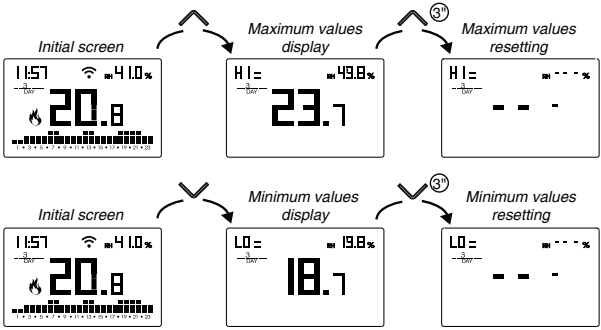
1. press the key or to display tSt.
2. press and hold the key until the symbol appears: the device sends a sequence of on-off commands of 10 seconds each to the remote actuator. Check during this phase the effective switching of the actuator relay
3. the test ends 15 minutes after activation or by pressing the key .



OTHER FUNCTIONS OF THE DEVICE

Display of minimum/maximum daily temperature

The device stores the values of the temperature and of the minimum and maximum humidity 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 writing "bLOc"
To unlock the keypad:

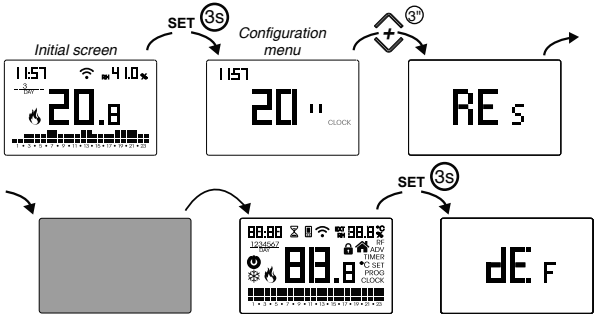
1. While displaying the writing "bLOc" hold down any of the 4 keys for a long time until the display shows "---".
2. Enter the correct password using the keys ^ and v and confirm with the key ☝.
   The keypad remains unlocked for about 45 seconds from the last press of a key, after which the keypad reactivates the lock. To remove the key lock, see page 75.

DEVICE RESET

Perform a reset to delete the settings entered and restore the device to the factory values (excluding the network settings for remote control which can be changed as described on pages 52-53).

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
Adjustment command	rF (via RF signal)
Antifreeze temperature OFF	6 °C
MEV	always active

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 TYPE

On/off regulation

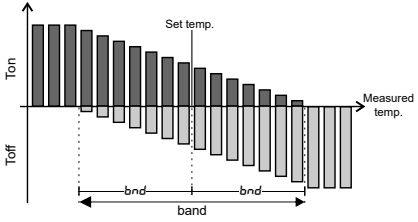
With the on/off regulation, the device activates the heating (air conditioner) until the measured temperature is lower (higher) than the set one.
In order to avoid the oscillation straddling the set temperature which would cause the system to switch on and off continuously, a differential (or hysteresis) 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 70).
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 adjustment 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 (fancoil)
- 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

tP Setting

Note. This regulation should be used only if you are controlling a valve for ThermoPro RF radiators

This type of regulation allows you to make the ThermoPro RF valve work by “opening modulation”.

In this way, the valve opens proportionally according to the difference between the set temperature (set point) and the detected temperature.

Selecting one of the other regulation types, the valve will not work proportionally, but it will be completely open or completely closed according to the difference between the set temperature and the detected temperature.

HOW TO DO IN CASE OF REPLACEMENT OF THE ACCESS POINT

In case of replacement of the router/access point of the home network, it is necessary to connect the device to the new wi-fi network. Proceed as follows:

1. On Tuo Wi-Fi RF:
   a. Hold down the keys ☜ and SET simultaneously until the display shows "conF nEt"
2. On the app:
   b. Choose **"New Thermostat"** → Tuo → "Next"
   c. Connect to the "**iwm**..." network generated by the device and follow the instructions shown on the App. Wait for the device display show the icon 📱 to indicate the successful connection between the app and the device.
   d. Now choose (with Android) or enter (with iOS) the complete name of the Wi-Fi network where connect the device and enter the password, be careful to digit faithfully all characters (uppercase, lowercase, spaces, digits) that compose them. Confirm to continue.
   e. Exit the app **without entering** the name and PIN serial number.

HOW TO TRANSFER CONTROL OF THE DEVICE FROM ONE ACCOUNT (USER) TO ANOTHER

If it is necessary to assign control of the device to another user (typical situation for example when the device is installed in a rented house and the tenants change), proceed as follows:

1. Disconnect the device from the old user (via one of the following two alternative ways):
   a. Access the ADV menu → PIN and hold down the keys ∧ and ∨ simultaneously and until the display shows "dEL".
   b. On the old user's app, access the "Device list" page and hold down the icon of the device to be deleted until the deletion confirmation request appears. At the end of one of the two operations of deleting the device from your account, the 📱 icon will start flashing on the chronothermostat display

2. On the app of the new tenant:
   - If you already have a personal Vemer account:
     c. Choose "**New Thermostat**" → Tuo → "Already configured"
     d. Enter the name, device pin (see page 73 for the pin of your device) and an icon to help identify the device. Choose "Save"
   - If you do not have a personal Vemer account yet:
     c. Follow the "Device configuration" procedure on pages 52-53.

TECHNICAL CHARACTERISTICS

- Power supply: 230V AC ± 10% 50/60 Hz
- Output: bistable relay with changeover contact 5A / 250V AC
- Weekly programming with 3 settable temperatures: T1, T2, T3
- Daily resolution: 1h
- Switch-on delay set between 15, 30 or 45 minutes (independent for each hour)
- Measured temperature scale: 0°C ÷ + 50°C with accuracy ± 0.5 ° C
- Measured and displayed temperature resolution: 0.1°C
- Temperature regulation range: 2.0°C ÷ + 50°C
- Temperature regulation:
  – on/off with adjustable differential between 0.1°C and 1°C
  – proportional with settable band and regulation period
- Humidity regulation: 20% ÷ 80% RH with settable differential (1 ÷ 10% RH) centered on the setpoint
- Operating mode: heating (winter) or conditioning (summer)
- Configurable display backlighting
- Automatic winter time/summer time
- Keypad lock with password for installation in public places
- Wall installation (or covering the box 503)
- Terminal block for cables with section of 1.5 mm^2
- Wi-Fi module
  – Operating frequency band: 2.4 GHz IEEE 802.11 b/g/n
  – Maximum power of transmitted radiofrequency: 18.3 dBm
- Radiofrequency module:
  – Operating frequency band: 433.92 MHz
  – Maximum power of radiofrequency transmitted to the frequency bands in which the radio equipment operates: 10 dBm max
- Maximum distance between chronotemostat and RF actuator: 50mt in free field
- Operating temperature: 0°C ÷ +50°C
- Operating humidity: 20% ÷ 90% non condensing
- Storage temperature: -20°C ÷ +65°C
- Degree of protection: IP: XXD
- Insulation: reinforced between accessible parts (front) and all other terminals

REFERENCE STANDARDS

EU CONFORMITY DECLARATION
Vemer declares that the device complies with the Communitary Directive 2014/53/EU (RED) with reference to the following standards:
ETSI EN 300 328, ETSI EN 300 220-1, ETSI EN 300 220-2 , ETSI EN 301 489-1, ESTI EN 301 489-17, ETSI EN 301 489-3
The full text of the EU Conformity Declaration is available at www.vemer.it address.

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

P1

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

P2

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

P3

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

P4

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

P5

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

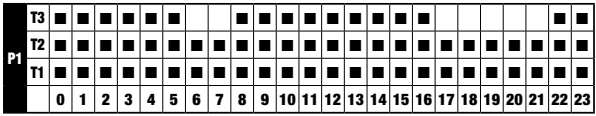
P6

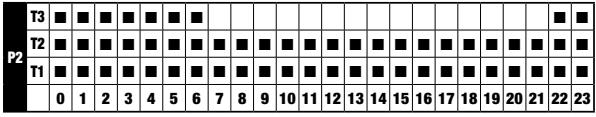
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
T3																								
T2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
T1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

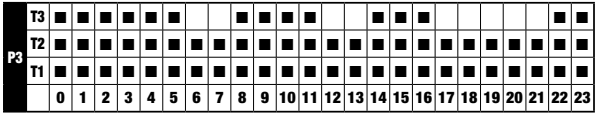
P7

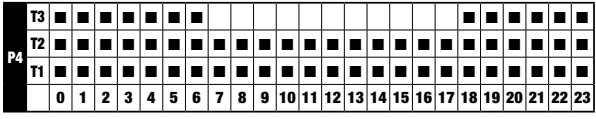
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
T3																								
T2																								
T1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

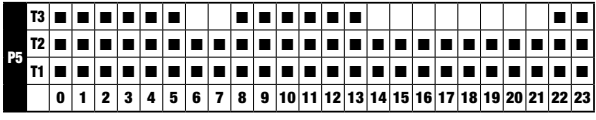
SUMMER PROGRAMS

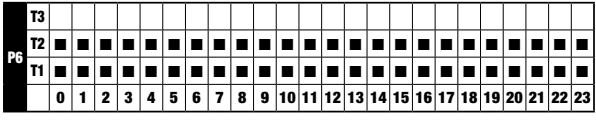


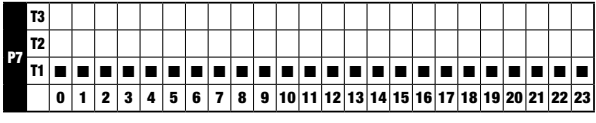












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