

USER MANUAL

freetime evo



Daily/Weekly programmable thermostat



PROGRAMMABLE THERMOSTAT freetime evo

Wall-mounted and battery powered daily/weekly programmable electronic thermostat, it allows to set the room temperature easily and precisely. The thermostat is suitable for controlling Heating and Cooling systems through a relay output with changeover contacts (C, NC, NO).

The regulation of the room temperature occurs on two levels: Comfort and Economy (according to the set time program).

The minimum settable temperature is +0,5°C (anti-frost temperature): this allows to protect your heating system from any damage due to freezing, if freetime evo is turned off.

Featured with an input for the remote sensor connection, the device offers the possibility to regulate the Offset on the internal sensor or on the remote sensor. This parameter enables to correct any systematic reading errors due to the placement of freetime evo or the remote sensor, in areas which are not suitable for room temperature detection.

TECHNICAL FEATURES

Power supply:		2 x 1,5V alkaline (Type AA)	
Battery life:			>3 years
Regulation fiel	d: c	comfort:	5°C40°C
	e	economy:	5°C40°C
Type of interna	al sensor:		NTC 10K 0hm ±1% @ 25°C
	Rang	e:	-9,9°C +50,0°C
	Preci	sion:	±1,0°C
	Reso	lution:	0.1°C. (0.0°C 50.0°C)
			0.2°C. (-9.9°C0.1°C)
Type of remot	e sensor (opti	ional):	NTC 10K 0hm ±1% @ 25°C
	Rang	е:	-9,9°C +50,0°C
	Preci	sion:	±1,0°C
	Reso	lution:	0.1°C. (0.0°C 50.0°C)
			0.2°C. (-9.9°C0.1°C)
Max. remote s	ensor wires l	ength:	15 m
Differential:			0.0°C 5.0°C
Anti-frost:			0.5°C 25.0°C
Internal sensor	Offset:		±10.0°C. (Default 0.0°C)
Remote sensor	Offset:		±10.0°C. (Default 0.0°C)
Contact rating	:		5(1)A 250V ~ SPDT
Protection gra	de:		IP 30
Type of action	:		1
Overvoltage ca	ategory:		II
Pollution degree	e:		2
Tracking index (PTI):			175
Class of prote	ction against		
electric shock:			
Rated impulse	voltage:		2500V
Number of ma	nual cycles:		1.000
Number of aut	omatic cycles	s:	100.000
Software class	s:		Α
EMC test voltage:		3V	
EMC test current:		38mA	
Distances tolerances fault			
mode 'short' exclusion:		±0,15mm	
Ball pressure test temperature:		75°C	
Operating temperature:		0°C+40°C	
Storage temperature:		-10°C+50°C	
Humidity limits:		$20\% \mathrel{..} 80\%$ RH non condensing	
Case:	Material:		ABS+PC VO self-extinguishing
	Color:		White

CLASSIFICATION UNDER REG. 2013.811.CE

Class:	IV
Contribution to energy efficiency:	2%



DIMENSIONS



TURNING ON / OFF WITH ANTI-FREEZE MODE ACTIVATED

In order to deactivate or activate freetime evo, press the key " 🕑 ". The device will be in OFF condition and the display will show the writing "OFF" and the symbol " (1) ".

If the programmable thermostat in set on winter operation mode (see user parameter PAR6.0 H C) and the anti-freeze mode is activated, the display shows the related symbol " 🞯 " and the set anti-freeze setpoint temperature (see user parameter PAR1.0 AFr); in this case the room temperature is regulated according to the set value for the anti-freeze parameter.

OPERATION LOGIC

On "Heating" mode, when the detected room temperature, by the internal sensor or alternatively by the remote sensor, is lower than the set one (manually or by program), freetime evo will turn on the relay to start the boiler and the symbol " 🍐 " appears on the display. On "Cooling mode", when the detected room temperature, by the internal sensor or alternatively by the remote sensor, is higher than the set one

(manually or by program), freetime evo will turn on the relay to start the cooling system and the symbol " 💥 " appears on the display.

The switch from Heating mode to Cooling mode and vice-versa is not automatic, it has to be manually set using the user parameter "H C" (see chapter "USER PARAMETERS SETTINGS").

REMOTE ROOM SENSOR

The Freetime Evo has an input for connecting a remote probe.

The external probe can be used to detect the ambient temperature in case the thermostat needs to be installed in a position not suitable for detecting room temperature. For installation with a remote probe, the user will need to purchase the optional kit and install a 10 KOhm NTC type probe at 25°C, connecting it to terminals 4 and 5 as shown in the connection diagrams in the "Connections" chapter. Subsequently, it will be necessary to set the user parameter "PAR4.0 rEG" to "EHt" (external) to activate the external detection function. If in doubt about which type of probe to connect, please consult the manufacturer. The temperature displayed on the device, relating to the external probe, will be indicated by the lighting of the 🗥 " symbol on the display.

The remote probe and terminal are not included with the product and must be purchased separately.

TIME / TEMPERATURE DISPLAY

By pushing the knob, the current time or the detected room temperature can be alternatively displayed.

If a remote sensor is connected, by pushing the knob it is possible to show on the display, alternatively, the current time, the room temperature detected by the internal sensor and the temperature detected by the external sensor. If a remote sensor is connected, freetime evo also shows the icon 🟠 " indicating that the displayed temperature is the one from the internal sensor, or it shows the icon " 🏠 " indicating that the shown temperature is the one detected by the remote sensor. The temperature detected are shown corrected by the set Offset value (see user parameters PAR2.0 OFS1 and/or PAR3.0 OFS2).

WARNING:

The programmable thermostat, aiming to optimize the battery life, detects the room temperature every 3 minutes and, consequently, decides the activation or deactivation of the relay.

DISPLAY BACKLIGHT

The display backlight is turned on if a key is pressed or when the knob is rotated. The backlight is turned off automatically 20 seconds after a key has been pushed or the knob has been rotated or pushed.



INSTALLATION



 To properly set the room temperature, install the programmable thermostat far from heat sources, airstreams or particularly cold walls (thermal bridges).

If a remote sensor is used, the note is applied to the sensor and not to the programmable thermostat.

- In order to connect the external probe use cables with minimum section of 1,5 mm² and with a maximum length of 15 m. Do not
 pass the cables through the pipes where the power lines run.
- If the load controlled by the relay of the programmable thermostat operates with mains voltage, the connection must be made via an omnipolar switch complying with current standards and with a contact opening of at least 3 mm in each pole.
- Installation and electrical wirings of this appliance must be made by qualified technicians and in compliance with the current standards.

CONNECTIONS





····: Reinforced insulation.

If the product does not include the terminal for the remote probe, follow the instructions in the figure below. Note: The remote probe and terminal are not included with the product, but must be purchased separately.





PELLET STOVE CONTROL

The programmable thermostat can be set to regulate the room temperature for turning on and off a pellet stove. The relay output must be connected to the input for the activation/deactivation of the pellet stove.

Aiming to limit the on/off switches number of the stove, set the parameters as shown below:

- HYSt: Room temperature regulation hysteresis at 1,0°C
- tMIn: Minimum relay activation time at 30 minutes

INSERTING / REPLACING THE BATTERIES

In order to insert / replace the batteries, proceed as follows:

- 1. Open the plastic slider placed on the front of the product, which gives access to the battery compartment, sliding it to the left.
- 2. Extract the batteries, levering with a tool if needed.
- 3. Insert the new batteries, respecting the polarities indicated. The batteries must be alkaline at 1.5V type AA.
- 4. Check the clock accuracy and, if necessary, adjust it.



- If the batteries need to be replaced, dispose them in the special containers for recycling.
- Replace the batteries within about 5 minutes in order not to lose the set time; keep in mind that the clock stops at the moment when the batteries are removed and so it must be eventually updated.

BATTERY LEVEL

The display always shows the battery life status with the symbol " .

The battery life is full if all 3 indicators are on inside the battery symbol.

On the contrary, the batteries are low and must be replaced if the display shows the symbol " **I** " (with only one bar left).

- If the display shows the blinking writing "bAtt" and the symbol " - + " (completely empty), it means that the battery power is too low to allow the device to work properly and the output will always be off.

In this case freetime evo won't regulate the temperature and the time schedule; the time and the detected room temperature won't be displayed.



KEYS AND KNOB FUNCTIONS

Double function key:

- Access the setting of the Comfort temperature (Set-Point).
- Setting the regulation in Comfort mode, when in "Time program setting".



Multi-functions knob:

· On normal operation:

- By pushing the knob, shows the time of the detected room temperature.
- If the backlight is off, by rotating the knob it activates the display backlight.
- On "Comfort / Economy temperature setting" (when the keys " 💌 " or " 👟 " are pressed) by rotating the knob it is possible to set the temperature of the selected mode.
- On "Hourly Program Setting", by rotating the knob towards right/left, shifts the hour-cursor through the 24 hours.
- By pushing the knob for 10 seconds, it enters the mode "Setting User Parameters" and then:
- Rotating the knob, the display shows all the advanced parameters of freetime evo.
- When a "User Parameter" is selected, pushing the knob it enters edit mode of the selected parameter:
 - By rotating the knob, it is possible to set the desired value/data.
 - By pushing the knob again the chosen setting is confirmed.

- On mode "Manual 24 hours" / "Manual Permanent" by rotating the knob it is possible to set the desired temperature (Set-Point) on "manual" mode.

* Valid only if the programmable thermostat has been set to "weekly mode".





Symbols

On the table below, are shown the symbols which can appear on the display and their meaning:

	Battery life.
۲	Comfort mode temperature setting (Set-Point).
C	Economy mode temperature setting (Set-Point).
	Shows that the regulation temperature (Set-Point) is on edit mode.
8	Anti-freeze mode activated, the display also shows the writing OFF (programmable thermostat off).
۵	Activation in heating mode (relay activated).
₩	Activation in cooling mode (relay activated).
24h	Room temperature regulation on Comfort mode for 24 hours.
	Room temperature regulation on Comfort mode permanently.
Ĭ	The programmable thermostat is on "User parameters setting" or freetime evo shows a fault condition.
Ċ	Programmable thermostat off.
11	Regulation interrupted (Pause mode) for less than 96 hours; when the time is finished the programmable thermostat automatically restarts.
Û	Regulation interrupted (Vacation mode) for more than 96 hours (4 days); when the time is finished the programmable thermostat automatically restarts.
£	The displayed room temperature is the one detected by the internal sensor. This symbol is only visible if a remote sensor is connected to freetime evo. On the contrary the symbol will not be displayed because the only temperature shown is the one detected by the internal sensor.
	The displayed room temperature is the one detected by the remote sensor connected to terminals 4 and 5.

^{*} Valid only if the programmable thermostat has been set to "weekly mode".



DAILY - WEEKLY PROGRAM SETTING

The programmable thermostat is set to daily mode by factory default.

To set the daily or weekly programming mode of the programmable thermostat, perform the following operations:

1. The display of the programmable thermostat shows the normal operation mode:



WARNING!

The access to the program setting mode IS NOT allowed on the following operations modes: Off, Pause, Holiday, Manual 24h, Permanent manual.

- 2. Open the flap, gaining the access to the buttons.
- 3. Keep the "[mos]" button pressed for at least 5 seconds; the programmable thermostat, depending on the initial programming mode, switches from daily mode to weekly mode or vice versa.

If the programmable thermostat is set on weekly program mode, the display shows the weekday number, placed between the segments strip and the clock / room temperature indicator.

Programmable thermostat set to weekly progrm mode



Programmable thermostat set to daily program mode



Weekday number

WARNING!

The first time that the programmable thermostat is set to weekly program mode, it asks to set the clock and the current day of the week (see chapter "Time - current day regulation").

TIME · CURRENT DAY REGULATION

In order to set the clock of the programmable thermostats, follow instructions below:

- 1. Open the flap which gives access to the buttons.
- 2. Push for at least 2 seconds the button " 🞯 "; the display shows "Set CLO" and the hour digits blink.
- 3. Set the hours by rotating the knob (right = Increase / left = Decrease).
- 4. Confirm with " 🞯 " or by pushing the knob; the minutes digits blink.
- 5. Set the minutes by rotating the knob (right = Increase / left = Decrease).
- 6. Confirm with " () " or by pushing the knob; the weekday is blinking.
- 7. Set the day of the week by turning the knob (to the right = Increase / to the left = Decrease); the selected day of the week flashes (1 Monday ... 7 Sunday).
- 8. Confirm with " (or pressing the knob.

WARNING!

- Setting the day of the week is only possible if the programmable thermostat was previously set to weekly programming.
- If the programmable thermostat has been set in daily programming, it will only be possible to adjust the hour and minutes.

HEATING / COOLING SETTING

Refer to the parameter "H C" on the section "SETTING USER PARAMETERS".



COMFORT TEMPERATURE SETTING

In order to set the Comfort temperature, follow this procedure:

- 1. Open the flap which gives access to the buttons.
- 2. Push the button " 💓 ".
- 3. Rotate the knob, to adjust the regulation temperature (Set-point).
- 4. Confirm the set value with " 💽 " or pushing the knob.



This is the room temperature value detected by the internal / remote sensor.

The arrow, placed near the comfort Set-point temperature, blinks indicating the edit mode.

ECONOMY TEMPERATURE SETTING

In order to set the Economy temperature, follow this procedure:

- 1. Open the flap which gives access to the buttons.
- 2. Push the button " 🕓 ".
- 3. Rotate the knob, to adjust the regulation temperature (Set-point).
- 4. Confirm the set value with " (or pushing the knob.

A WARNING

Normally, in order to get a temperature decrease, the Economy temperature must be set to a lower value than the Comfort temperature.

This is the room temperature value detected by the internal / remote sensor.

The arrow, placed near the economy Set-point temperature, blinks indicating the edit mode.

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DAILY TIME PROGRAM SETTING

During the normal operation, the upper and lower segments strip of the display show the regulation mode of freetime evo, which allows to customize the daily time program according to each proper need.

The upper segments strip shows the temperature regulation on Comfort mode, while the lower one shows the temperature regulation on Economy.

The default time program is shown below:



FACTORY SETTINGS (DEFAULT)		
TIME SLOT	REGULATION MODE	
00:00 06:00	Εςοποτηγ	
06:00 09:00	Comfort	
09:00 16:00	Εсопоту	
16:00 22:00	Comfort	
22:00 24:00	Εςοποτηγ	

TIME SCHEDULE EDITING - BRIEF DESCRIPTION





WEEKLY TIME PROGRAM SETTING

During the normal operation, the upper and lower segments strip of the display show the regulation mode of freetime evo, which allows to customize the daily time program according to each proper need.

The upper segments strip shows the temperature regulation on Comfort mode, while the lower one shows the temperature regulation on Economy.

The default time program is shown below:



FACTORY SETTINGS (DEFAULT)		
MONDAY FRIDAY		
TIME SLOT	REGULATION MODE	
00:00 06:00	Economy	
06:00 09:00	Comfort	
09:00 16:00	Εсопоту	
16:00 22:00	Comfort	
22:00 24:00	Εςοποτηγ	
SATURDAY SUNDAY		
TIME SLOT	REGULATION MODE	
00:00 08:00	Εςοποτηγ	
08:00 23:00	Comfort	
23:00 24:00	Εсопоту	

TIME SCHEDULE EDITING - BRIEF DESCRIPTION





or

Push the knob or the key " (*) " in order to confirm the settings made; on the contrary, press the key " (*) " to reset the last stored hourly schedule and exit from the "Time schedule" mode.

Warning: By pressing the knob or the key " 🞯 " the time schedule settings for the current day are confirmed.

The display shows the hourly program of the next day; repeat the procedure for the following days.

Once the program is set for the whole week, push the knob or the key " 🞯 " or " 🕐 " or wait 40 seconds without pushing any button in order to confirm the settings made.

Programming example Monday-Friday and Saturday-Sunday

If you want to set the same time program from Monday to Friday:

- 1. set the schedule for Monday, press the " (b) " button 4 times in order to copy the same program on every day until Friday, save Friday pressing the "OK" button.
- set Saturday, press the button " (b) " to copy the same program on Sunday, confirm Sunday pressing the button " (c) " or " (b) ".



PROGRAMMING EXAMPLE:

2.

3.

4.

1. luuuhu 0.05 6

뚶논 무급 0/8 (h)

0/1

(h)

im mi

During normal operation, push " (PROS) " to enter the time schedule edit mode.

The display shows:

- "SEt PrG" to indicate the access to the edit mode of the time schedule.
- Number 1 is blinking and it corresponds to Monday. Valid only if the programmable thermostat has been configured in "weekly programming".
- Hour 0:00.
- The blinking segment corresponds to hour 0:00.
- The symbol " (" to indicate the regulation mode which has been set.

The time schedule is set starting from hour 0:00 towards 24:00, with steps of 30 minutes.

By pressing the knob or the key " 🞯 " the selection of the day of the week is moved WITHOUT modifying the previously set time program.

Valid only if the programmable thermostat has been configured in "weekly programming".

The time cursor is moved by turning the knob, without modifying the previously set time schedule. The corresponding segment will blink at the selected half

hour.







5. After selecting the time from which you intend to modify the time schedule (in this case, from 5:00), proceed as follows:



Push " • to set the **comfort mode** (on the time histogram, a segment is shown on the upper strip).



- In order to set the economy mode push " 🕓 ".
- To set the "Pause" mode (temporary stand-by) press
- At every push of the button " (*) " or " (*) " or " (*) " the time cursor automatically shifts on the next half hour.

Push again " (**s**) " to set the **comfort mode** (on the time histogram, a segment is shown on the upper strip).



7.



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Continue with the setting as shown in this example (**points 4 and 5**), until the entire daily time slot is done. On the opposite case, go to the next step.

Otherwise, or at the end of the programming of the entire daily strip, go to the points:

- 9 If the programmable thermostat has been set on "Daily programming mode".
- 8 If the programmable thermostat has been set on "Weekly programming mode" and it is required to set the time schedule by copying the time schedule set for the selected day.
- 8a If the programmable thermostat has been set on "Weekly programming mode" and it is required to set the time schedule manually.

When the setting for the current day is over, press the button " (b) " in order to copy the program of the current day onto the next.

If the " (b) " key is pressed, it automatically stores the current day program and it goes directly to the next day program by copying the time schedule of the previous day.

There is one exception related to day 7 of the week (Sunday) and this exception is that the pressure of the " button, exits from the programming phase storing the settings made.

Valid only if the programmable thermostat has been configured in "weekly programming".





- If it is needed to restore the default time schedule, it is necessary to access the user parameter PAR 9.0 "dFLt" (set default data); in this case all the user parameters will be restored to factory values.
- The access to the time program setting IS NOT allowed on the following operational conditions: Off, Pause, Holiday, Manual 24h, Manual permanent
- When on time schedule setting, by pressing the knob or the button " 🞯 " or by waiting 40 seconds without pressing any button, all the changes made are stored.



MANUAL OPERATION MODE

With the button " (b) ", freetime evo can be forced to regulate the room temperature independently from the time program. On manual operation mode the temperature regulation (Set-Point) can be modified at any time by turning the knob and it is independent from the Comfort and Economy temperature of the time program.

By repeatedly pressing the button " (b) ", you can alterne between Automatic (normal operation) and Manual 24 hours, from Manual 24 hours to Manual Permanent, and from Manual Permanent it goes back to Automatic. During manual operation mode the display will not show the time schedule, instead it will only show the room temperature, the relay status (possible symbols " δ " or " \mathfrak{F} " are lit), the symbol " \mathfrak{F} " (manual 24h) or " \mathfrak{F} " (manual permanent) and the "Manual" Set-Point temperature.



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By pressing only once the button " (b) " Manual 24 hours mode is activated.

24h The display shows the symbol " 👌 " (manual 24h); freetime evo remains on manual until 23:59 of the current day, after which it returns to Automatic mode.

Note: If Manual 24h mode is active and the Vacation mode is activated, when the Vacation setting expires and if it is past the 23.59, the programmable thermostat will go back to Automatic operation following the set time schedule.

By pushing a second time the button " 🕭 " the operation is forced on Manual Permanent.

The display shows the symbol " (manual permanent); freetime evo regulates the temperature on manual mode until the button " 🖑 " is pushed again.

During manual operation (" (*) " or " (*) ") by turning the knob it is possible to set the desired "manual" Set-point temperature, inside the range 5.0 .. 40°C.

Pressing the button once again " (b) " freetime evo goes back to automatic operation mode (normal operation according to the set time schedule).





4.





OPEARATION MODE ON PAUSE / VACATION

By pressing the button " 🕕 ", freetime evo stops the room temperature regulation taking itself on "Pause" or "Vacation" mode depending on the time set rotating the knob:

Pause: time set less than 96 hours

Vacation: time set more than 4 days (96 hours)

This mode activates (by pushing the knob) a countdown time. When the countdown expires, freetime evo is reset to the previously set operation mode.

1.



O/8

(1)

Pause mode indicator.



Vacation mode indicator.

NOTE:

- Turn the knob to set the Pause (h) hours or the Vacation (d) days:
 - From 1 to 95 hours the display shows the symbol "[]" to indicate the "Pause" mode. From 4 to 99 days the display shows the symbol "[]" to indicate the "Vacation" mode.
- · The symbols blink indicating that the countdown is still to be confirmed.



3.



In order to start the "Pause" or "Vacation" mode, push the knob or the button " (* or wait 10 seconds. The symbols ") " or " (* are still lit and freetime evo starts the countdown.

4.

To exit the "Pause" or "Vacation" mode, push at any time the button "



When the countdown is over, freetime evo exits from the "Pause" or "Vacation" mode and resumes the previous operation mode.



USER PARAMETERS SETTING

On the menu "User parameters" it is possible to configure all freetime evo settings. Below, there is the sequence to enter the view and/or edit mode of user parameters.

I I I XUJUKUJUK I UKUK KUKU UK	
· [9.3	° 200° * 100°

From the normal operation screen, keep the knob pressed for more than 10 seconds.





The display shows the first user parameter.



Turning the knob scrolls through the nine available user parameters:		
AFr PAR 1.0	Anti-freeze setting	
OFS1 PAR 2.0	Internal sensor offset setting	
OFS2 PAR 3.0	Remote sensor offset setting	
rEG PAR 4.0	Regulation probe	
HYSt PAR 5.0	Differential setting (hysteresis)	
H_C PAR 6.0	Summer/Winter mode setting	
tPI PAR 7.0	PWM output setting	
tMIn PAR 8.0	Minimum output activation time (relay)	
DFLt PAR 9.0	Reset to default values (Default setting)	





· After 10 seconds of inactivity on the keys and/or on the knob, the programmable thermostat exits from user parameters setting mode and the display goes back to the normal operation screen. Every change is automatically stored even if the button " (()) " is pushed.



USER PARAMETERS DETAILS

Below, there is a detailed explanation on each single "User parameter".

"AFr PAr 1.0" ANTI-FREEZE SETTING

The Anti-freeze mode allows you to select a minimum temperature to be maintained when the programmable thermostat is off, so as to protect both the room and the equipment when the room temperature falls below the set value.

The parameter can be set in the range OFF, 0.5°C .. 25°C. It is possible to deactivate the anti-freeze operation setting it to the minimum until the writing "OFF" is displayed.

The device leaves the factory with the Anti-freeze mode set on $+6^{\circ}$ C.

WARNING

The mode is active only when the device has been set on heating mode.

"OFS1 PAr 2.0" INTERNAL SENSOR OFFSET SETTING

This parameter enables to correct the temperature reading of the internal sensor by $+1-10^{\circ}$ C, in order to correct any systematic reading error, due to the positioning of the remote sensor in areas which not suitable for room temperature measurement.

The device leaves the factory with the Offset set to 0.0°C.

"OFS2 PAr 3.0" REMOTE SENSOR OFFSET SETTING

With this parameter it is possible to correct the temperature reading of the remote sensor by $\pm 10^{\circ}$ C, in order to correct any systematic reading errors due to the positioning of the remote sensor in areas unsuitable for measuring the room temperature. The device leaves the factory with the Offset set to 0.0°C.

"reg Par 4.0" Regulation Sensor Choice Setting

This parameter sets whether the room temperature regulation is made based on the programmable thermostat internal sensor or the remote sensor, wired at terminals 4 and 5.

"Int": internal sensor

"EHt": remote sensor

"HYSt PAr 5.0" DIFFERENTIAL SETTING (Hysteresis)

This parameter sets the hysteresis, in °C, used in the temperature regulation.

The parameter can be set in the range 0,0°C ... 5°C. The device leaves the factory with the hysteresis set to 0,2°C.

WARNING

Setting this parameter must absolutely be made by gualified personnel because setting an inappropriate value might result in wrong operation of the whole regulation system.

"H C PAr 6.0" SETTING HEATING / COOLING

This setting allows to invert the relay operation logic depending whether a cooling or heating system is being used.

The parameter can be set between:

"HEAt": Heating

"COOL": Cooling

The programmable thermostat leaves the factory set on heating mode.

"tPI PAr 7.0" PWM OUTPUT REGULATION

This parameter allows to choose whether the relay output must be ON/OFF driven or PWM (Pulse Width Modulation) driven.

With ON/OFF regulation (parameter set to no) the programmable thermostat will regulate the output with customizable hysteresis on parameter "HYSt", while with PWM regulation (parameter set to YES) there will be a proportional regulation which is possible to adapt to different environments with the parameters "bP" (proportional band), "t int" (integrative time), "PCYC" (PWM time cycle), "PMIn" (minimum ON time of the PWM). The factory value of this parameter is **no**.

The following parameters will be displayed only if the "tPI" parameter has been set to "YES".

"hP PAr 7.1" **PWM PROPORTIONAL BAND**

This parameter allows to customize the proportional band in the range 1.0°C .. +8.0°C. The device leaves the factory with parameter set to $+2^{\circ}$ C.

"t Int PAr 7.2" INTEGRATIVE TIME

This parameter allows to customize the integral time of the proportional regulation in the range OFF / 5 .. 180 minutes, by 5 minutes steps, When set to OFF, no integral action will be done. The device leaves the factory with parameter set on OFF.

"PCYC PAr 7.3" PWM CYCLE TIME

This parameter defines the duration of each PWM cycle in minutes, i.e. how often (in minutes) the variable width pulse is repeated. The parameter can be set in the range 15 .. 60 minutes.

The device leaves the factory with parameter set on 30 minutes.

"PMIn PAr 7.4" MINIMUM TIME PWM ON

This parameter defines the minimum PWM pulse width i.e. the minimum output switch on time.

When an electro-thermal actuator is wired to the output, this parameter must be set with the actuator's travel time, otherwise 'on' pulses of a lower TCD02B2001SE 043315 040424



time respect to the travel time would generate useless output actions.

The parameter can be set in the range 3 .. 15 minutes.

The default factory value of this parameter is 3 minutes.

"tMIn PAr 8.0" OUTPUT MINIMUM ACTIVATION TIME (relay)

The following parameter will only be visible if the parameter "tPI" has been set to "no".

This parameter allows to reduce the number of the output activation and deactivation cycles, which is useful if the programmable thermostat controls a pellet stove because it can't be turned on and off on quick intervals.

When the relay output is turned on, because it is needed to warm up (or cool down) the environment, it won't turn off until the set "Minimum time" has expired.

This parameter can be set in the range no/10 .. 90 minutes, with 10 minutes steps.

The device has been set by default with this parameter on "**no**" (option deactivated).

"dFLt PAr 9.0" SET DEFAULT DATA

With this parameter it is possible to reset user parameters in order to bring back all the parameters to the factory default. Proceed as follows:

- 1. Select the parameter "dFLt" and push the knob or the button " () "; the display shows the blinking writing "-dF-", indicating that the operation must be confirmed.
- 2. Push again the knob or the button " 🞯 "; the device automatically sets the default data.
- On the contrary, wait 10 seconds without pushing any button; in this case the operation is cancelled.
- 3. The display shows the writing "OFF".
- 4. The programmable thermostat is deactivated; in order to activate the programmable thermostat press the button " 💩 ".

WARNING!

By resetting the default data, the user parameters and the hourly program of freetime evo will be restored to factory values.

TROUBLESHOOTING

PROBLEM	LIKELY CAUSES AND REMEDIES
The display shows the icon """ and the following writings: SnIn alternated to Shrt or Open	The regulation of the room temperature is performed through the internal sensor (user parameter "rEG_PAr 4.0" is set to "Int") and the internal sensor is faulty. It is necessary to send the device to the assistance center.
The display shows the icon """ and the following writings: SnEh alternated to Shrt or Open	The regulation of the room temperature is performed through the remote sensor (user parameter "rEG PAr 4.0" is set to "EHt"), but this latter is not connected or it is faulty. Freetime evo does not regulate the temperature and the output is set to normally closed. Check the connections of the remote sensor or replace it with a new one.
The temperature of the remote sensor is not shown on the display.	The regulation of the room temperature is performed through the internal sensor (user parameter "rEG_PAr 4.0" is set to "Int") and the remote sensor has not been connected.
The display shows "Err".	The regulation of the room temperature is performed through the remote sensor (user parameter "rEG_PAr 4.0" is set to "EHt"), but the internal sensor is faulty. It is necessary to send the device to the assistance center.
The display shows the blinking writing "bAtt" and the symbol "	The batteries are too low to allow freetime evo to operate. Replace the batteries.
The display shows the symbol " 🗱 ".	Freetime evo operation mode is cooling. In order to resume the Heating mode, set the user parameter "H_C" to HEAt (see chapter "USER PARAMETERS SETTINGS").

WARNING

If an anomaly of the control probe occurs, the only action allowed is to entry the user parameters settings.

WARRANTY

The user is guaranteed against the product's defects of conformity according to European Directive 2019/771 as well as the Seitron warranty terms, available online on the website www.seitron.com.

We invite the user to visit our website and check the latest version of technical documents, manuals and catalogs.

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