

Redashe

THERMOPAIN T BOX

Sistema di climatizzazione per box vernici

This user manual is an integral part of the product and should be available to be referenced throughout the lifespan of the heater ensuring the units functionality.

Please read this manual carefully before
PROCEDURE FOR ANY INTERVENTION ON THE EQUIPMENT
Manual code: T CM 6 0150BI
last review dated 25.10.06

The manufacturer reserves the right to make changes to the product and the manual, without reference to previous units or manuals.

THERMOPAIN T è un prodotto:
CADIF srl - Via Monte Cervino, 2 - 37057 San Giovanni
Lupatoto -
VERONA (Italia) Tel. +39 045 8750786 - Fax +39 045
9250581
info@cadif.it - www.cadif.it

Redashe Ltd, Unit 8, The Brook Trading Estate,
Deadbrook Lane, Aldershot, Hampshire, GU12 4XB
Tel +44 (0) 1252 785010 Fax +44 (0) 1252 329328
Email info@redashe.com
website www.redashe.com

GENERAL INFORMATION

Read the cautions contained in this booklet carefully as they provide important information regarding safe installation, use and maintenance.

Symbols

Below are a series of symbols used in the drafting of this manual.



DANGER. Indicates a situation that can lead to injury, including death, or serious injury indicated in bold – cursive text.



ATTENTION. Indicating a situation that could cause harm, directly, to people, objects and or the environment which may also be of an economic nature this is in bold text.



WARNING. Indicates that it is necessary to follow the instructions carefully. in bold italic text.

NOTE. The manufacturer reserves the right to change or adapt the equipment to meet specific needs of production, installation and or positioning, this may happen without prior notice. Therefore, some of the illustrations in this manual differ slightly from the equipment you have received, the safety and indications on it remain the same.

Manufactures identification Plate.

Plate located on the rear surface of the panel near the electrical connection.

Must remain intact.

Manufacturer			Part Code
CE Mark			Electrical data
Serial number			

INFORMATION ON TECHNICAL SERVICE AND MAINTENANCE

For technical assistance please contact:

Redashe Ltd, Unit 8, The Brook Trading Estate, Deadbrook Lane, Aldershot, Hampshire, GU12 4XB
Tel +44 (0) 1252 785010 Fax +44 (0) 1252 329328
Email info@redashe.co.uk

To maintain the duration of the warranty, the user must follow the instructions indicated in this manual. we cannot be held not responsible for any issues or problems of operation with the equipment if they are not followed (carefully read the warranty attached to the manual).

FEATURES AND TECHNICAL INFORMATION

General description



Panel Heater mod. IFCWM1000



Thermostat

THERMOPAINT is an innovative self-install kit for air warming paint mixing rooms. Based on the patented technology, it consists of a medium temperature radiant panel (approx. 90°C) and high efficiency designed to warm paint mixing rooms. THERMOPAINT consists of a radiant panel to be installed on the ceiling using the appropriate brackets. A connection cable, supplied in the kit, allows you to connect the radiant panel to the control unit (installed externally) on which it is possible to set the temperature using a seven-day timer to reach the desired room temperature quickly and easily. A thermometer probe is incorporated into the control unit which will monitor the temperature automatically inside the room.

TECHNICAL DATA SHEET

Part no.	Colour	Weight (KG)	Dimensions	Power (W)	Voltage + - 10%	Current (A)	Temperature superficial
IFCWM1000	RAL9010	8	60x150x6	800	230V	3,47	100 **

**The surface temperature refers to a base ambient temperature of 20°. The technical data contained in this document are indicative and can be changed without notice.

INSTALLATION INSTRUCTIONS

Preliminary operations and warnings



Read the use and maintenance instruction manual carefully before proceeding to use the equipment.



Before installation, carefully remove the packaging and check the unit for damage. IF DEFECTS OR DAMAGE ARE EVIDENT, DO NOT INSTALL OR TRY TO REPAIR the equipment should be returned to the distributor.



Do not leave any packaging within reach of children and dispose of the packaging properly after ensuring the unit works correctly.



A box has been placed inside the packaging containing the accessories required for assembly two mounting brackets & 4 Bolts to attach them to the heater.



Before connecting the panel, make sure that the data on the plate correspond to those of the electricity distribution network (the plate is located behind the panel).



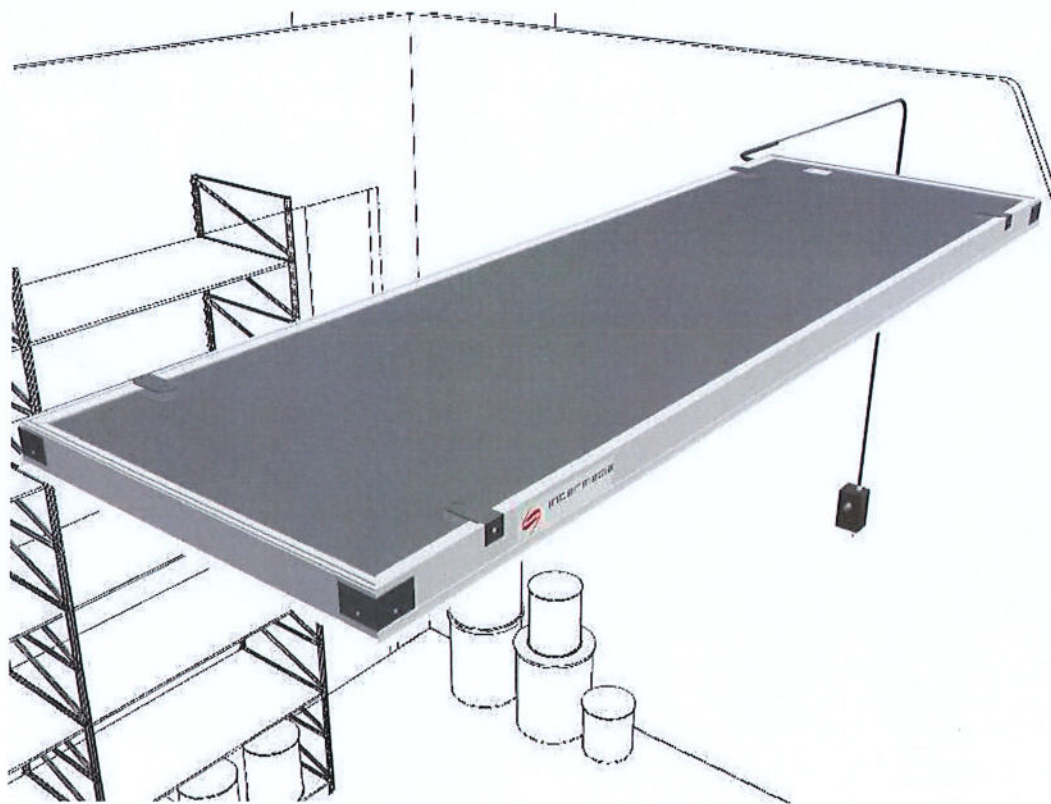
Do not place the cable with a bend radius less than 50 mm. The electrical socket must be located outside the mixing room to be heated



Do not touch the appliance with wet or damp hands or feet, or pull the power cord.



The front radiating surface of the panel must be free and not obstructed by objects or paper, this will make the panel ineffective, & potentially could damage it irreparably and create a fire risk.



Ceiling Installation:



The panels must be installed with the appropriate fixings supplied, in order to leave a slight space behind the panel itself.

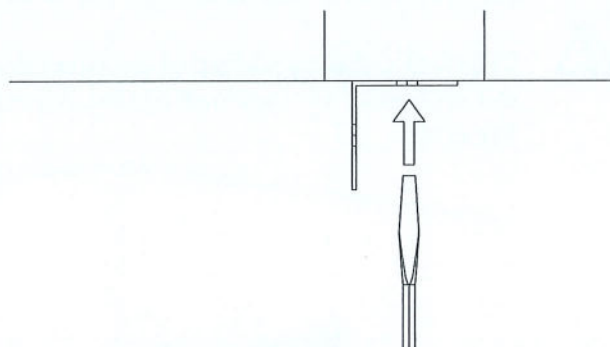


Mount the panel according to the drilling template. (Not to scale)

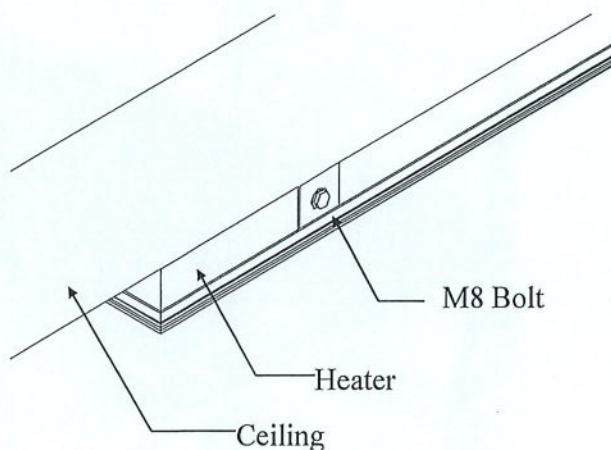
Tabella di foratura per fissaggio a soffitto

Model	A	B	C	
IFCWM1000	15	120		

Table 1
Fix the 2 brackets supplied to the heater & mark the position on the ceiling, remove the brackets and fix them to the ceiling,



Remount the heater to the brackets.



INSTALLATION OF THERMOSTAT (for the digital thermostat see separate instructions)

Control Boxes Should be Installed Externally of the Mixing Room



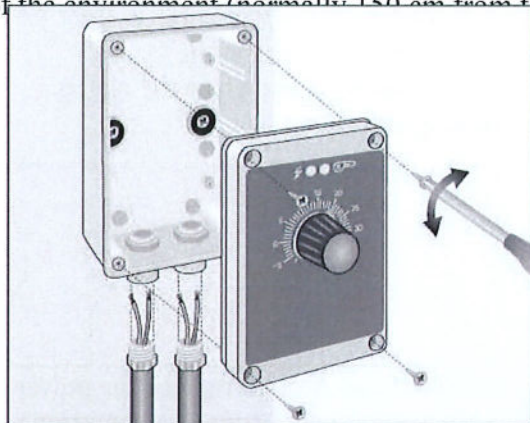
Before connecting, make sure that the power supply voltage is disconnected and matches to that shown on the plate data.



Place the thermostat bulb (sensor) away from heat sources, doors, windows, etc., in a position that reflects the average temperature of the environment (normally 150 cm from the floor).

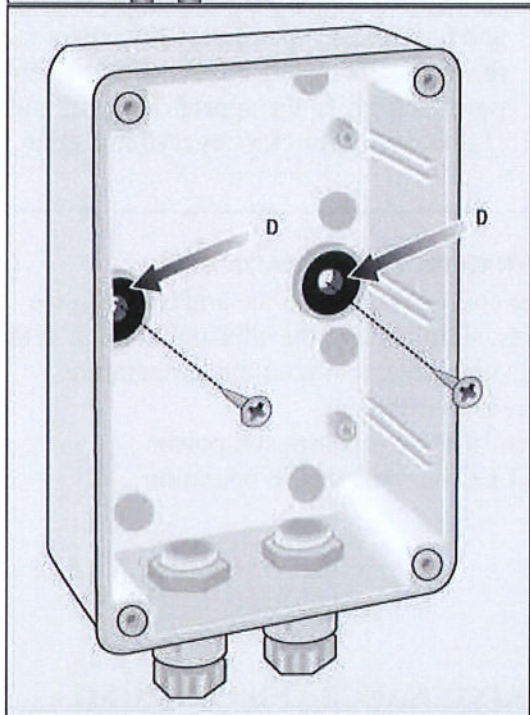
PHASE 1

The watertight thermostat is supplied pre-wired and complete with cable glands and temperature probe. To install the thermostat, separate the base from the front part by unscrewing the 4 screws.



PHASE 2

Drill the base itself at the appropriate slots (D-D) and fix it to the wall via 2 screws so that the 2 cable glands are positioned facing downwards.



PHASE 3



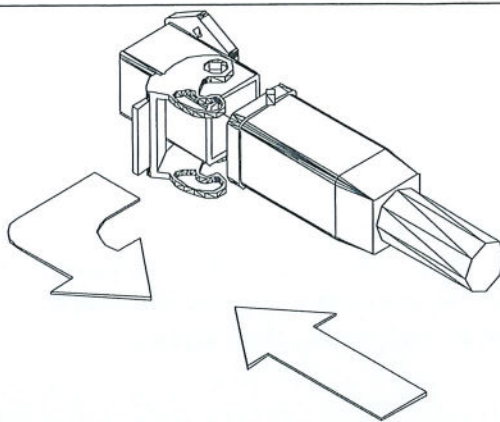
To obtain correct function of the thermostat it is necessary to pay attention to any ingress of water and or humidity. Before closing the thermostat make sure all gaskets are positioned correctly.

ELECTRICAL CONNECTION

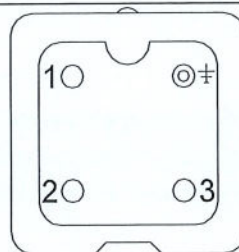
The THERMOPAINT BOX kit is supplied with a pre-wired 2 x 1.5 + T power cable, of a length of 400 cm.

PHASE 1

After installing the thermostat correctly proceed to connect the power cable to the IFCWM1000 radiator. Connect the clamp to the appropriate base and close the clamp. As in the diagram



NOTE: if you need to replace the power cable open the plug (unscrew the screw and remove the wires) pass the power cord through cable gland and connect the cable power supply to the appropriate terminals (1,2 and T), then close everything again.)

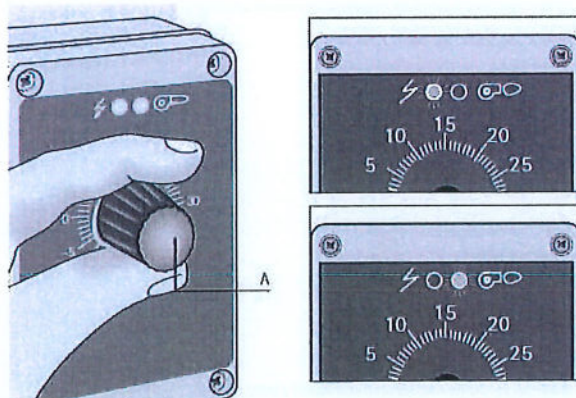


THERMOSTAT OPERATION

After connecting the device and resetting the power, simply move the adjustment knob at the graduated scale, to obtain the temperature desired environment.

Green LED on = thermostat power

Red LED on = heating in operation



MAINTENANCE AND CLEANING



Carry out cleaning operations with the equipment disconnected from the mains power.

To clean the radiant panel, the use of petrol, thinners, corrosive additives or other aggressive solvents is prohibited, if necessary use a damp cloth.

DECOMMISSIONING AND DISPOSAL

In the event of even temporary decommissioning, it is advisable to keep the equipment together one place dry and dust-free.

In the case of dismantling, the components of the equipment should be disposed of in compliance with current legislation.

TAG02M

DIGITAL WEEKLY PROGRAMMABLE THERMOSTAT FOR GREENHOUSES, WITH TWO STAGES AND FAN OUTPUT



Via del Commercio, 9/11. 36065 Mussolente (VI) ITALY
Tel.: +39.0424.567842 - Fax.: +39.0424.567849
http://www.seitron.com - e-mail: info@seitron.it

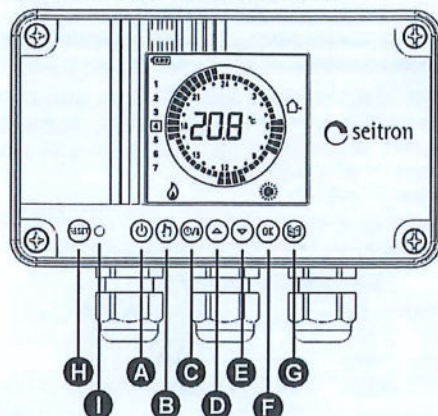
GENERALITIES

This device is a weekly digital programmable thermostat powered with 230V~, for room temperature control on three stages (Comfort, Economy or Off/Antifrost) which allows to manage, on full automatic mode, double-power version devices, double-stage and one-stage, with the possibility to activate the second stage at the same time with the first one for a maximum of 200 seconds. A third relay output is available and managed only in cooling mode, for the activation of a fan. Furthermore this device is featured with a reset circuit for burners with block signaling and reset button, electrically separated from the programmable thermostat. This device can be used either on heating and cooling systems. The programmable thermostat is featured with a wide backlit display in order to view all the operational conditions, the hourly set program, room temperature detected by the external sensor or, if chosen, the current time. It offers the possibility to set up to 7 different programs, one for each week day, with minimum intervention time of 1/2 hour within 24 hours.

WARNING!

The product is not featured with an internal temperature sensor so it is necessary to connect a remote temperature sensor (not provided, for further details see paragraph "Accessories and spare parts").

DESCRIPTION OF CONTROLS



LEGEND

- A** Double function button:
 - In normal operation: turns on and off the programmable thermostat.
 - In schedule programming: sets the regulation temperature into Off / Antifreeze mode.
- B** Double function button:
 - In normal operation: activates the function 24 hours Manual / Permanent Manual / Automatic.
 - In schedule programming: sets the regulation temperature into Economy mode.
- C** Triple function button:
 - In normal operation: displays current time or temperature.
 - In schedule programming: sets the regulation temperature on Comfort mode.
 - In 'Set-Point temperature settings', shows either the Comfort or the Economy temperature.
- D** Forward/setting button (by increasing the value) for the set point temperature.
- E** Back/setting button (by decreasing the value) for the set point temperature.
- F** OK button (confirm).
- G** Programming button: enters the programming menu.
- H** Reset button.
- I** LED.

OPERATION

STARTING UP

When first operating:

- Perform the electrical connections as explained on the wiring diagram proposed on the chapter "Electrical wirings".
- Power on the device.
- Set time and day of the current week.
- Set the operating mode of the programmable thermostat (user parameter 'C-H'): Heating (factory default) or Cooling.

SETTING THE CURRENT TIME AND DAY

To set the clock of the programmable thermostat carry out the following steps:

1. Keep the 'OK' button pressed for at least 3 seconds; the hour digits will start flashing.
2. Set the hour using buttons '▲' and '▼'.
3. Confirm by pressing 'OK'; the minute digits will start flashing.
4. Set the minutes using buttons '▲' and '▼'.
5. Confirm with 'OK'; the display shows alternatively the writing 'Mth' and the number related to the month.
6. Set the current month with buttons '▲' and '▼'.
7. Confirm with 'OK'; the display shows alternatively the writing 'day' and the number related to the current day.
8. Set the current day with the buttons '▲' and '▼'.
9. Confirm with 'OK'; the display shows alternatively the writing 'year' and the number related to the current year.
10. Set the current year with buttons '▲' and '▼'.
11. Confirm by pressing 'OK'; the output of the time and day setting is automatic.

COMFORT AND ECONOMY TEMPERATURES ADJUSTMENT

During normal operation, the display shows the measured room temperature and the icon for the current setting mode '●' or '○'.

In order to display the relevant set-point temperature, press once the button '▲' or '▼': the display shows the set-point temperature, the icon 'SET °C' (meaning that the setpoint temperature is being displayed) and icon '●' or '○' depending on whether the programmable thermostat is regulating in comfort mode or economy mode.

By pressing the '▲' and '▼' buttons, the displayed setpoint temperature can be changed.

By pressing the 'A' button while the display is showing the 'Comfort' setpoint temperature, the display changes to show the 'Economy' temperature. Vice versa, if the display was showing the 'Economy' set point, by pressing the 'A' button, the display changes to show the 'Comfort' set point.

By pressing the 'OK' or after a few seconds of inactivity, the display returns to show the room temperature.

Note: Usually, in order to get a temperature reduction in night time, the economy temperature should have a value lower than the comfort one.

The programmable thermostat will then adjust the temperature in comfort mode or economy mode according to the set time schedule (see 'SET USER PARAMETERS').

SETTING THE LIMITS TO REGULATE THE SET POINT TEMPERATURE

In order to modify the limits of the set-point temperature setting proceed as follows:

1. Turn off the programmable thermostat by pressing the button 'H'.
2. Cut off the power voltage and wait a few seconds.
3. Power on the programmable thermostat and when the display shows the writing OFF, press at the same time (within 30 seconds) the buttons 'A' and '▼'.
4. The display shows the icon 'SET °C' which is the first data to modify.

5. By pressing multiple times the 'OK' button it is possible to scroll down the following list:

DATA	DETAIL	RANGE	DEFAULT
HIGH ☼	Heating mode upper limit setting - Comfort	5°C .. 85°C	85°C
LOW ☼	Heating mode lower limit setting - Comfort	5°C .. 85°C	5°C
HIGH ☼	Heating mode upper limit setting - Economy	5°C .. 85°C	85°C
LOW ☼	Heating mode lower limit setting - Economy	5°C .. 85°C	5°C
HIGH ☼	Cooling mode upper limit setting - Comfort	5°C .. 85°C	85°C
LOW ☼	Cooling mode lower limit setting - Comfort	5°C .. 85°C	5°C
HIGH ☼	Cooling mode upper limit setting - Economy	5°C .. 85°C	85°C
LOW ☼	Cooling mode lower limit setting - Economy	5°C .. 85°C	5°C

6. For each shown data, by pressing the buttons '▲' and '▼' it is possible to modify the set limits within the desired range; to exit push the button '☼' or wait 20 seconds.

SETTING THE USER PARAMETERS

To enter the mode for setting the programmable thermostat parameters, proceed as follows:

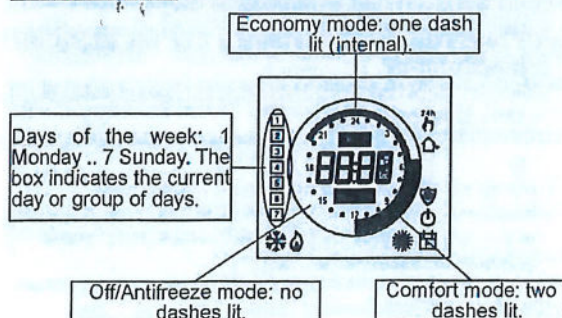
- Press the '☼' button; the display will show the '☼' icon (bottom right) and the word 'PROG'.
- Press the '☼' button repeatedly to scroll through the user parameters:

Schedule Programming	'PrOG'
Antifreeze Setting	'AFr'
Setting the Differential for the first stage	'd1'
Setting the Differential for the second stage	'd2'
Setting the Differential between first and second stage	'd12'
Setting Timer of the first and second stage	'tMr2'
Remote sensor Offset setting	'OFS1'
Heating/Cooling function Setting	'H-C'
Summer time setting	'StM'
Reset to default data	'dFLt'
- Press the 'OK' button to modify the selected parameter; the '☼' icon flashes.
- Configure the data associated with each individual parameter as illustrated below.
- To quit from the user parameters setting, press key '☼' or wait 10 seconds without pressing any key.

'PROG': SCHEDULE PROGRAMMING

Usually the circular band of dashes in the display shows the operating mode (Comfort, Economy, Off / antifrost) of the programmable thermostat, while the vertical strip on the left shows the current day of the week (1=Monday .. 7=Sunday) highlighted with a square around the number to which it relates programming.

To facilitate the programming operation it is sufficient to remember this rule:



To set the program schedule proceed as described below:

Note: You will exit the programming mode without memorizing the programmed schedule if more than 10 seconds elapse and you do not press any button; or else you can confirm the settings in sequence by pressing the 'OK' button without making any changes.

- Select parameter 'PrOG' and press button 'OK': the display shows the word 'dAy', icon '☼' and the square symbols corresponding to the current day or group of flashes.
- Press buttons '▲' and '▼' to set the combination of days to be programmed.

In the following the four available combinations are listed:

	(Mo)	(To)	(We)	(Th)	(Fr)	(Sa)	(Su)
1st combination of days	1	2	3	4	5	6	7
2nd combination of days	1	2	3	4	5	6	7
3rd combination of days	1	2	3	4	5	6	7
4th combination of days	1	2	3	4	5	6	7
(Schedule Day by Day)							

Note: For each day combination, the time schedule set will be the same for all days within each single group.

- Press the 'OK' button to confirm the setting made; the display will show the schedule previously programmed for the set day or group of days and the time 00.00 (cursor flashing on the interval between 00.00 and 00.30).
- Set the operating mode.

To facilitate the programming operation, the programmable thermostat is factory preset with the following time intervals:

TIME INTERVALS PRESET

Comfort mode	Economy mode
6.00 .. 8.00	8.00 .. 11.00
11.00 .. 13.00	13.00 .. 17.00
17.00 .. 23.00	23.00 .. 6.00

Alternatively, if the preset time interval doesn't fit the required needs, you can change it manually as follows:

- For every time interval (each dash corresponds to a half hour) set the operating mode by pressing one of the following buttons:

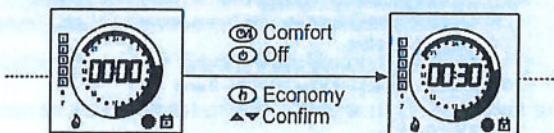
Comfort mode: Press the '☼' button.

Off / Antifreeze: Press the '☼' button.

Economy mode: Press the '☼' button.

Moving the time cursor: Press button '▲' or '▼'.

Each time the button which sets the regulation mode is depressed, the time cursor automatically jumps into the next half hour.



- After programming the schedule for the day or group of days selected, press the 'OK' button. The display will show the program schedule for the next day or groups of days until the whole week is covered.
- After programming the schedule for the entire week, press the 'OK' button. The programmable thermostat will

memorize the schedule set and the word 'MEMO' will appear on the display; the device will automatically exit the schedule programming mode.

WARNING

- If you want to reset the time intervals to factory settings, please reach the user parameter 'dFLt' (the default data); In this case, all user parameters will be reset to factory settings.
- If you exit the time programming without pressing the 'OK' button, or you do not save the settings, the time program will NOT be saved in memory and the previous program will be restored.
Changes are stored in memory only when the if you enable this operation with the phase characterized by the word 'MEMO'.

'AFr' ANTIFREEZE SETTING

The Antifreeze function 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 device leaves the factory with the Antifreeze function set on 3°C.

IMPORTANT: the function is active only when the device has been set in the heating mode.

To set the Antifreeze temperature, carry out the following steps:

1. Select the parameter 'AFr' and press the 'OK' button.
2. The display shows the Antifrost temperature previously set and the '■' icon flashes.
3. Press buttons '▲' and '▼' to change the setting (between OFF, 0.5°C..25°C); every change will be automatically memorized.
4. To return to the list of user parameters, press the 'OK' button.
5. To exit the user parameters setting and resume normal operation, press the 'Φ' button or wait 10 seconds without pressing any key.

'd1' SETTING FIRST STAGE DIFFERENTIAL

The setting of this parameter allows to define the value in °C which elapses between the power on and power off of the programmable thermostat first stage regarding the set room temperature (for further details see paragraph 'Operation of the first and second stage').

IMPORTANT: the function is active only when the device has been set in the heating mode.

To adjust the differential related to the first stage follow these instructions:

1. Select the parameter 'd1' and press the 'OK' button.
2. The display shows the previously set temperature and the blinking icon '■'.
3. Push the buttons '▲' and '▼' to modify the value (included in 0,1°C..d12); every update is stored automatically.
4. In order to go back to the user parameters list, push the 'OK' button.
5. To exit from the setting of the user parameters and reset the normal operation, push the button 'Φ' or wait 10 seconds without pushing any button.

'd2' SETTING SECOND STAGE DIFFERENTIAL

Setting this parameter allows to define the value in °C which elapses between the power on and the power off of the programmable thermostat second stage regarding the set room temperature, considering the parameters 'd1' and 'd12' (for further details see paragraph 'Operation of the first and second stage').

IMPORTANT: the function is active only when the device has been set in the heating mode.

To adjust the differential related to the second stage follow these instructions:

1. Select the parameter 'd2' and press the 'OK' button.
2. The display shows the previously set temperature and the blinking icon '■'.
3. Push the buttons '▲' and '▼' to modify the value (included in 0,1°C..15°C); every update is stored automatically.
4. In order to go back to the user parameters list, push the 'OK' button.
5. To exit from the setting of the user parameters and reset the normal operation, push the button 'Φ' or wait 10 seconds without pushing any button.

'd12' SETTING THE DIFFERENTIAL BETWEEN FIRST AND SECOND STAGE

The setting of this parameter allows to define the value in °C which elapses between the power off of the first stage and the power off of the second stage of the programmable thermostat (for further details see paragraph 'Operation of the first and second stage').

IMPORTANT: the function is active only when the device has been set in the heating mode.

To adjust the differential between the first and the second stage, follow these instructions:

1. Select the parameter 'd12' and press the 'OK' button.
2. The display shows the previously set temperature and the blinking icon '■'.
3. Push the buttons '▲' and '▼' to modify the value (included in d1..15°C); every update is stored automatically.
4. In order to go back to the user parameters list, push the 'OK' button.
5. To exit from the setting of the user parameters and reset the normal operation, push the button 'Φ' or wait 10 seconds without pushing any button.

'tMr2' FIRST AND SECOND STAGE TIMER SETTING

This parameter allows to define the activation time (in seconds) of the second stage if the first stage is previously activated.

IMPORTANT: the function is active only when the device has been set in the heating mode.

In order to adjust the timer perform the following operations:

1. Select the parameter 'tMr2' and press the 'OK' button.
2. The display shows the previously set time expressed in seconds and the blinking icon '■'.
3. Push the buttons '▲' and '▼' to modify the value (included in 0 .. 200 seconds); every update is stored automatically.
4. In order to go back to the user parameters list, push the 'OK' button.
5. To exit from the setting of the user parameters and reset the normal operation, push the button 'Φ' or wait 10 seconds without pushing any button.

'OFS1' REMOTE SENSOR OFFSET SETTING

With this parameter it is possible to correct the temperature reading of the remote sensor by ±5°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 at 0.0°C.

To adjust the Offset value for the remote sensor, carry out the following steps:

1. Select the 'OFS1' parameter and press the 'OK' button.
2. The display shows the Offset temperature previously set and the '■' icon flashes.
3. Press buttons '▲' and '▼' to modify the setting (range: -5.0°C .. +5.0°C); every change will be automatically stored in memory.
4. To return to the list of user parameters, press the 'OK' button.
5. To exit the user parameter settings and resume normal operation, press the 'Φ' button or wait 10 seconds without pressing any key.

'H-C': HEATING / COOLING SETTING

This setting is used to invert the operating logic of the relay

according to whether a heating or air conditioning unit is being controlled.

IMPORTANT: The programmable thermostat leaves the factory set in the heating mode.

To modify the operating logic, carry out the following procedure:

1. Select the parameter 'H-C' and press 'OK'; the display shows the current adjustment mode and the 'H' icon flashes.
2. Press the buttons '▲' and '▼' to select the desired adjustment; each change is automatically saved.
3. To return to the list of user parameters, press the 'OK' button.
4. To exit the user parameter settings and resume normal operation, press the 'Φ' button or wait 10 seconds without pressing any key.

During normal operation, if the heating mode is on, the 'H' icon will remain lit, whereas if the cooling mode is on, the 'C' will remain steadily lit.

'StM' SUMMER TIME SETTING

Setting this parameter allows the automatic update when switching from Winter Time to Summer Time and the other way around.

In order to adjust this parameter follow these instructions:

1. Select the parameter 'StM' and press the 'OK' button.
2. The display shows the previously set option and the blinking icon 'H'.
3. Push the buttons '▲' and '▼' to modify the value (included in EnA: parameter enabled .. dIS: parameter disabled); every update is stored automatically.
4. In order to go back to the user parameters list, push the 'OK' button.
5. To exit from the setting of the user parameters and reset the normal operation, push the button 'Φ' or wait 10 seconds without pushing any button.

'dFLt' SET DEFAULT DATA

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

Here below are the default parameters data:

PARAMETER	DEFAULT
PrOG	Monday-Friday TIME INTERVALS PRESET Comfort mode Economy mode 6.00 .. 8.00 8.00 .. 11.00 11.00 .. 13.00 13.00 .. 17.00 17.00 .. 23.00 23.00 .. 6.00 Saturday-Sunday TIME INTERVALS PRESET Comfort mode Economy mode 6.00 .. 8.00 8.00 .. 11.00 11.00 .. 13.00 13.00 .. 17.00 17.00 .. 23.00 23.00 .. 6.00
AFr	3.0°C
d1	0.2°C
d2	0.2°C
d12	3.0°C
tMr2	0 seconds
OFS1	±5°C
H-C	HEAt (heating)
StM	EnA (enabled)

WARNING

The Default Data setting does not modify the values previously set of Time and date, Set-Point and settable minimum and maximum limits of the SET-POINTS themselves.

Proceed as follows:

1. Select the parameter 'dFLt' and press 'OK'; the device automatically sets the default data and the display will show 'dF-' and the 'H' icon flashes.
2. To quit the user parameter settings press the 'OK' button or wait 10 seconds without pressing any key.
3. To reset the normal operation press the 'OFF' button.
4. The programmable thermostat is off; in order to activate it press the button 'Φ'.

WARNING!

Restoring the Default Data will reset all settings made by the user, such as Time Program, Heating/Cooling, Set-Points and all other programmable data.

OPERATION OF THE FIRST AND SECOND STAGE (only in heating mode)

1° Stage: Output 'STAGE I'

2° Stage: Output 'STAGE II'

Sp: Set-Point temperature

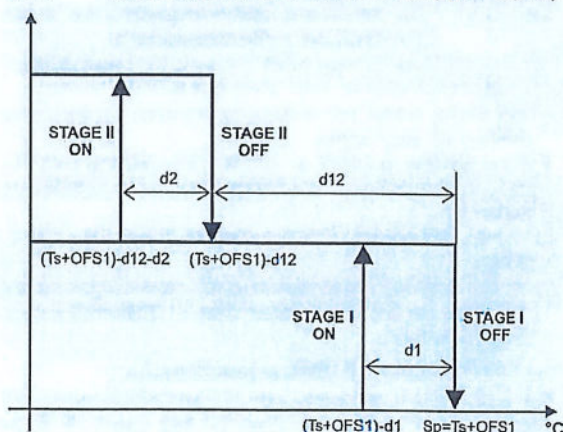
Ts: Temperature detected by the remote sensor

OFS1: Offset remote sensor (± 5,0°C)

d1: Differential of the 1° asymmetrical stage (0,1 .. 15,0°C)

d2: Differential of the 2° asymmetrical stage (0,1 .. 15,0°C)

d12: Differential between 1° and 2° stage (0,1 .. 15,0°C)



When the first stage relay is active on the display appears the icon 'H' in continuous mode; if also the second stage is activated the same icon blinks.

FAN OUTPUT

The output 'F', terminals 12 and 13, is activated / deactivated only in cooling mode.

BLOCK CIRCUIT AND RESET

The reset circuit is completely separated from the programmable thermostat and works with 230V~ voltage.

It is used primarily on gas heating systems where the burners send the "block" signal and use a button to re-initialize the starting sequence.

About the connection diagram refer to the burner instruction manual.

If the block circuit and reset of the burner is correctly connected, the device signals the blockage of the burner by lighting up the red LED (I of Fig. 1) and gives the possibility to reset the operation of the burner itself by pressing the button on the case front (H of Fig. 1).

In case of failure, this operation can be repeated 4-5 times after which it is needed to call a Technical Assistance Service.

SWITCHING OFF - ANTIFREEZE FUNCTION

To deactivate the programmable thermostat press the 'Φ' button.

The display will show the word 'OFF'.

If the programmable thermostat has been set in the heating mode, the Antifreeze function will be active and the 'H' icon

symbol will appear on the display; in such a case the room temperature will be controlled based on the value set for the Antifreeze temperature (see paragraph 'SETTING THE USER PARAMETERS').

AUTOMATIC OPERATION / 24H MANUAL / PERMANENT MANUAL OVERRIDE FUNCTION

With the key 'h', the programmable thermostat may be forced to adjust the room temperature according to the Comfort temperature setting, regardless of the time programming settings.

By pressing the 'h' button repeatedly you can switch from Automatic to 24 hour Manual, from 24 hour Manual to Permanent Manual and from Permanent Manual back to Automatic.

During manual operation the display doesn't show the time schedule, but only the room temperature, the state of relay (with possible symbols 'd' or 'e'), the symbol 'h' (24h manual) or 'h' (permanent manual) and the symbol 'e'.

Pressing the 'h' button once will activate the 24 hour Manual mode and the programmable thermostat will remain in this mode until the time 23:59 is reached, after which it will go back into the Automatic mode.

Pressing the 'h' button a second time will switch the programmable thermostat into the Permanent Manual mode and it will remain in this mode until you press the 'h' button again.

TEMPERATURE / TIME DISPLAY

By repeatedly pressing the key '0/1' the display cycles on showing the current time and the room temperature measured by the remote sensor.

The values of temperature displayed are shown adjusted with the set Offset value.

In case the remote sensor is not wired or is broken the display will show the words 'SEnS OPEN' or 'SEnS SHrt' with the blinking icon 'h'.

BACKLIGHTING

The display backlight turns on whenever and button is pressed. It turns off automatically 20 seconds after the last pressing of a button.

ACCESSORIES AND SPARE PARTS

Below are listed the types of remote sensors which is possible to connect to the device:

CODE	DESCRIPTION
STED01	Ext. remote probe NTC 10KOhm. Wall mounted.
STAD01	Int. remote probe NTC 10KOhm. Wall mounted.
STLD01	Liquid temp. remote sensor NTC 10KOhm. Length 200cm.
STBD01	Bulb sensor NTC 10KOhm. For radiant tubes.

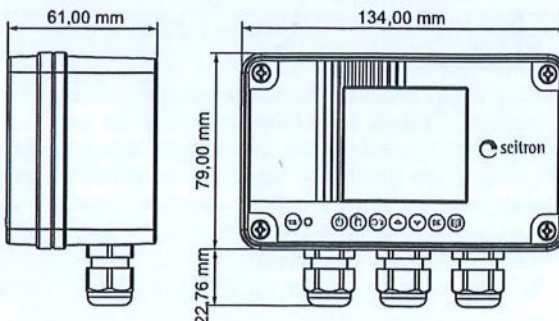
TECHNICAL CHARACTERISTICS

Power supply:	230V~ 50-60Hz
Max Absorption:	3,5VA
Back light switch off:	20 seconds if no button is pressed
Setting range:	Comfort: 5.0°C .. 85.0°C Economy: 5.0°C .. 85.0°C
Antifrost 'AFr':	Depending on the set limits Off/0.5°C..25.0°C (Default 3.0°C)
Differential:	
First stage 'd1':	0.1°C .. 15.0°C (Default 0.2°C)
Second stage 'd2':	0.1°C .. 15.0°C (Default 0.2°C)
Between first and second stage 'd12':	0.1°C .. 15.0°C (Default 3.0°C)
Remote sensor offset 'OFS1':	± 5.0°C (Default 0.0°C)
Time format:	HH : MM (Format 24 h)
Reading saturation:	Temp. sensor < -10.0°C (---). Temp. sensor >85.0°C (E E E)
Remote sensor:	NTC 10K Ohm ±1% @ 25°C Beta 3977
Precision:	± 1.0°C
Resolution:	0.1°C in range 0.5°C .. 85.0°C 0.2°C in range -9.9°C .. 0.5°C
Contact rating:	3 x 5(1)A 250V~ SPST
Protection rating:	IP 54
Type of action:	1
Overvoltage category:	II
Pollution degree:	2
Tracking Index (PTI):	175
Class of protection against electric shock:	II ☐
Rated impulse voltage:	2500V
Number of manual cycles:	1.000
Number of automatic cycles:	100.000
Software class:	A
EMC test voltage:	230V~ 50Hz
EMC test current:	15 mA
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:	10% .. 90% RH non-condensing
Enclosure: Material:	ABS V0 self-extinguishing

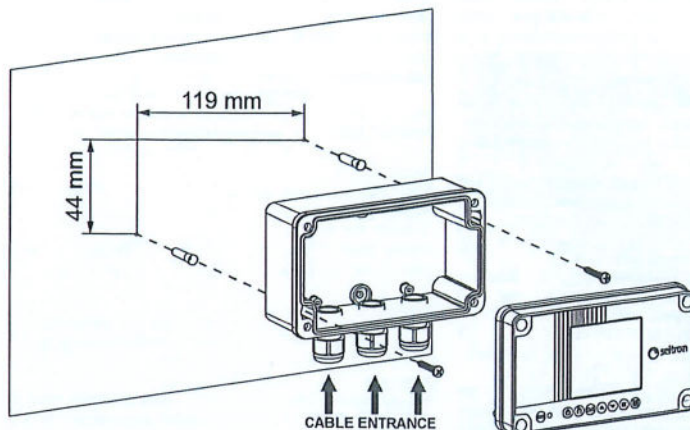
CLASSIFICATION UNDER REG. 2013.811.EC

Class:	I
Contribution to energy efficiency:	1%

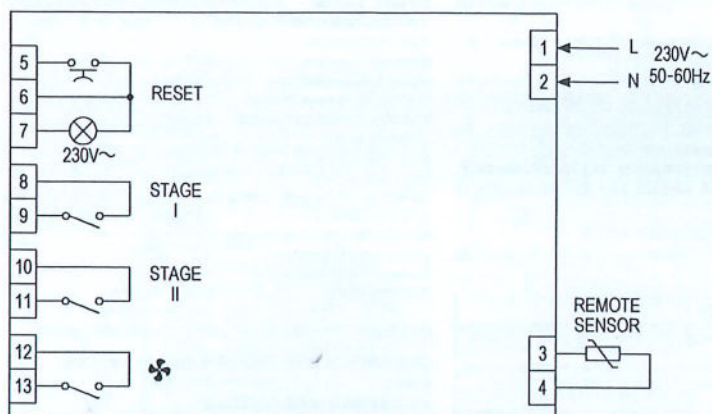
DIMENSIONS



INSTALLATION



ELECTRICAL CONNECTIONS



WARNING

- To adjust properly room temperature, install the remote sensor far from heat sources, airstreams or particularly cold walls (thermal bridges).
- The remote sensor must be installed at approximately 1,5 m above the floor.
- Connect the device to mains power with an omnipolar switch complying with the current standards and with contacts break distance 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.
- Before wiring the appliance be sure to turn the mains power off.

WARRANTY

In the view of a constant development of their products, the manufacturer reserves the right for changing technical data and features without prior notice.

The consumer is guaranteed against any lack of conformity according to the European Directive 1999/44/EC as well as to the manufacturer's document about the warranty policy.

The full text of warranty is available on request from the seller.