

Cronotermostato/Programmatore T+H Easy - da incasso

► **Timed thermostat / Programmer T+H Easy - flush-mounting**

Thermostat programmable / Programmeur T+H Easy - à encastrer

Cronotermostato/Programador T+H Easy - de empotrar

Chronothermostat/Programmierer T+H Easy - für den Unterputz



GW 10 764H

GW 12 764H

GW 14 764H

MANUALE DI PROGRAMMAZIONE

PROGRAMMING MANUAL - MANUEL DE PROGRAMMATION

MANUAL DE PROGRAMACIÓN - PROGRAMMIERHANDBUCH

GENERAL DESCRIPTION

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Briefly

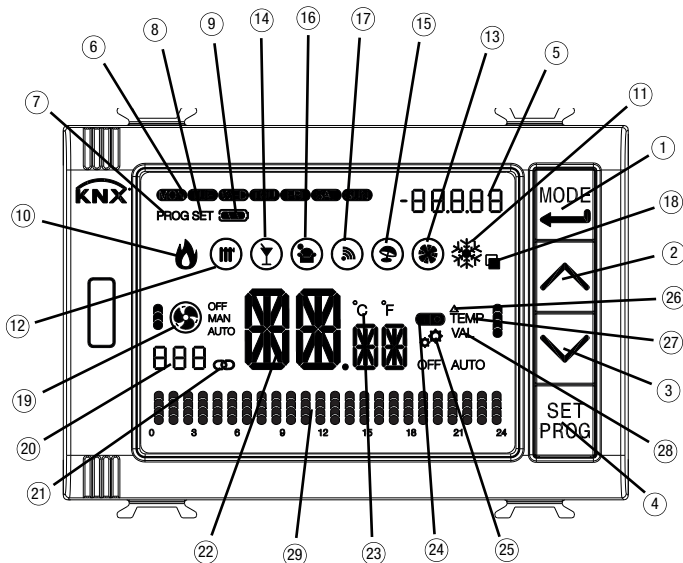
This manual explains the steps for setting the timed thermostat parameters. All the information concerning the technical data of the product, the connection diagrams, the descriptions of the commands, and the instructions for correct assembly are contained in the installation manual supplied with the product and which can also be downloaded from the website www.gewiss.com.

More information about the programming of the timed thermostat with the Easy Configurator is given in the Programming Manual of Easy devices with Easy Controller (which can be downloaded from the website www.gewiss.com).

GENERAL DESCRIPTION

Position of the commands

The timed thermostat is equipped with a backlit LCD display and four command push-buttons that can always be accessed.



ATTENTION!

If the display backlighting is enabled, only the screen will light up when any one of the 4 front button keys is pressed for the first time; press the keys again to implement the required command.

Description of the commands

COMMAND PUSH-BUTTONS

- ① Select operating mode / Confirm
- ② Adjust temperature (+) / Visualise pages
- ③ Adjust temperature (-) / Visualise pages
- ④ Parameter setting

Symbol



GENERAL DESCRIPTION

INFORMATION ON THE DISPLAY

- ⑤ Time of day / Variable value of the hourly profile / Value shown on the humidity page
(Hr = relative humidity; HA = specific humidity; tr = dew point temperature)
- ⑥ Day of the week
- ⑦ Programming mode
- ⑧ Settings menu
- ⑨ Battery charge level
if the profile flashes: device powered from batteries alone (no BUS)
- ⑩ Heating activation
if it flashes: no/incorrect reception of heating solenoid valve alert
- ⑪ Cooling activation
if it flashes: no/incorrect reception of cooling solenoid valve alert
- ⑫ Type of operation: heating (winter)
if it flashes: floor temperature alarm in progress
- ⑬ Type of operation: cooling (summer)
- ⑭ Party function
- ⑮ Holiday function
- ⑯ Non-workday program
- ⑰ Remote command enabling
if it flashes: operation on basis of a remote command
- ⑱ Selection of display page to be viewed
- ⑲ Fan coil operating mode
- speed OFF
- speed 1 (automatic / manual)
- speed 2 (automatic / manual)
- speed 3 (automatic / manual)
if the fan flashes: no/incorrect reception of fan coil speed alert
if the segments flash: the speed set (manually or by algorithm) is waiting to be activated
- ⑳ Hourly profile visualised (for hourly timer only)
- ㉑ Timed thermostat in "Master" mode
- ㉒ Temperature measured / Time of day / Relative humidity value measured / Specific humidity value / Dew point temperature value
if it flashes: manual forcing of the setpoint, or end of humidity probe monitoring time
- ㉓ Temperature measurement unit
- ㉔ Indication of auxiliary input status (1 = contact closed, 0 = contact open)
- ㉕ Thermal gradient self-learning function
- ㉖ Thermal residual current device
- ㉗ Timed thermostat mode
- Economy (in heating mode) - Comfort (in cooling mode)
- Pre-comfort (in heating mode and cooling mode)
- Comfort (in heating mode) - Economy (in cooling mode)
- Anti-freeze/High temperature protection (OFF) or Automatic (AUTO)
if the segments flash: the setpoint is temporarily forced
- ㉘ Hourly timer mode
- Variable value 1 of hourly profile
- Variable value 2 of hourly profile
- Variable value 3 of hourly profile
- Variable value 4 of hourly profile
- ㉙ Visualise hourly program

Symbol

-88.888



PROG

SET



Control modes


The timed thermostat can be set with 2 different control modes:

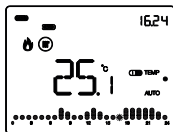
- **Master:** the timed thermostat sets the type, operating mode or setpoint of the devices configured as Slaves (e.g. the Easy flush-mounting thermostats GW1x765H). In the first case (mode), the thermostats use the setpoints set locally. The fixed temperature setpoint can be temporarily forced (max. variation $\pm 3^{\circ}\text{C}$), but the operating mode cannot be altered. The forced setpoint will remain valid until the master device sends a new operating mode. In the second case (set-points), the thermostats use the setpoint received from the Master device (which can always be altered locally with a max. variation of $\pm 3^{\circ}\text{C}$).
- **Autonomous:** the timed thermostat type and operating mode can be set locally. Operation is not dependent on any other device. In the autonomous control mode, you can alter the setpoint as you wish, and enable the timed thermostat to receive remote commands to modify the mode setpoint (OFF/Economy/Pre-comfort/Comfort) and set the type (Heating/Cooling) received from other devices such as a push-button or the Easy GSM remote control.

Operating modes

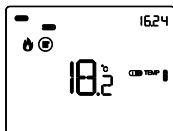
The timed thermostat has 5 different operating modes:




- AUTOMATIC
- ECONOMY
- PRE-COMFORT
- COMFORT
- OFF - ANTIFREEZE/HIGH TEMPERATURE PROTECTION

In any control mode (autonomous or master), to switch from one HVAC mode (economy, pre-comfort, comfort, off) to another, use the  button key: each time it is pressed, the corresponding setpoint is shown (flashing) for a moment.






In **automatic operation mode**, the timed thermostat uses a program that can be differentiated for each day of the week. The display shows the word AUTO, the detected room temperature, and the symbol of the setpoint for the current quarter hour period. In the hourly profile, the column relating to the current hour flashes, showing the current setpoint.

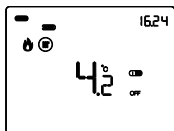


In the **economy, pre-comfort and comfort operating modes**, the timed thermostat always uses the corresponding temperature set-points. The display shows the detected room temperature and the ,  or  symbol.

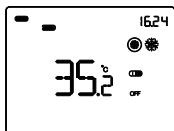
GENERAL DESCRIPTION

MEANING OF TEMP  TEMP  TEMP 

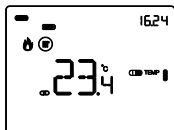
Symbol	Heating		Cooling	
	Setpoint	Operating mode	Setpoint	Operating mode
TEMP 	T _{ECONOMY}	Economy	T _{COMFORT}	Comfort
TEMP 	T _{PRE-COMFORT}	Pre-comfort	T _{PRE-COMFORT}	Pre-comfort
TEMP 	T _{COMFORT}	Comfort	T _{ECONOMY}	Economy




The **anti-freeze function** is only active in heating mode, when the temperature adjustment system is switched OFF. In this case, the timed thermostat uses the fixed anti-freeze temperature setpoint, only reactivating the heating system if the room temperature falls below T_{ANTI-FREEZE} (Tanti-freeze). The display shows the word OFF, along with the detected room temperature.

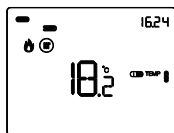


The **high temperature protection function** is only active in cooling mode, when the temperature adjustment system is switched OFF. In this case, the timed thermostat uses the fixed high temperature protection setpoint, only reactivating the cooling system if the room temperature exceeds T_{HIGH TEMPERATURE PROTECTION}. The display shows the word OFF, along with the detected room temperature.





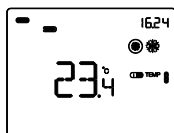
In the Master control mode, the display shows the temperature and the  symbol. The slave devices use the operating mode or the setpoint value received from the timed thermostat (master device) via the BUS.

During operation, the activation of the heating or cooling mode is indicated in the following way:





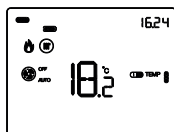
Heating

The  symbol indicates that the activation command has been sent to the command actuator of the boiler or area solenoid valve. If the timed thermostat does not receive confirmation of effective implementation from the actuator, the  symbol will begin to flash. Subsequently, the timed thermostat sends the activation command every 60 seconds until it receives confirmation.




Cooling

The  symbol indicates that the activation command has been sent to the command actuator of the air-conditioner or area solenoid valve. If the timed thermostat does not receive confirmation of effective implementation from the actuator, the  symbol will begin to flash. Subsequently, the timed thermostat sends the activation command every 60 seconds until it receives confirmation.




Operation with active fan coil control

If the fan coil control function has been activated, the display will show the  symbol. In addition, you will be offered the page on which you can manually alter the fan coil speed or set the AUTO mode (whereby the fan coil speed is automatically adjusted on the basis of the difference between the setpoint fixed on the device and the detected temperature).

▶ Timed thermostat operation statuses

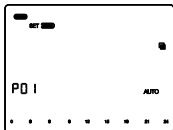
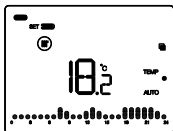
The timed thermostat has four distinct operation statuses:

- Normal operation
- Parameter setting
- Hourly profile programming
- Easy channel localisation mode



When it is switched on, the timed thermostat goes into “normal operation” status. Using the  button key, you can switch from one status to another. The switchover from “parameter setting” status, “hourly profile programming” status” or “Easy channel localisation mode” to “normal operation” status also comes about automatically, 30 seconds after the last pressure on the button keys.




Normal operation

In normal operating conditions, the pages containing information about the timed thermostat are visualised. If the sections relating to the hourly timer and humidity were enabled during programming, the relative pages will also be shown.

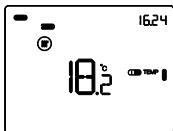


Choosing the page you want to see




To access the screen listing the pages that can be viewed (relating to the timed thermostat, hourly timer and humidity), press the  button key and keep it pressed until the  symbol appears.


Use the  or  button key to scroll through the sequence (if there are no hourly profiles - P01, P02, P03, etc. - and no humidity section, the main timed thermostat page will be displayed). To confirm a page, press the  button key or wait for the 30-second time-out period to elapse.

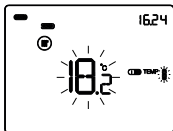
Pages relating to the timed thermostat









Choosing the HVAC mode (auto, pre-comfort, comfort, economy or OFF)

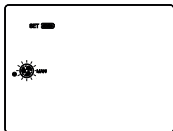
If the visible page relates to the timed thermostat, press the  button key to select the required HVAC mode (Auto, ,  or OFF).

Each time the  button key is pressed, the setpoint of the selected HVAC mode is shown for a moment.



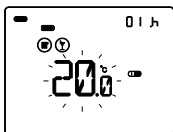
Forcing the setpoint manually

If the displayed page relates to the timed thermostat and any HVAC mode other than OFF is active, press the  or  button key to temporarily modify the setpoint of the active HVAC mode, then confirm with the  button key or wait for the 5-second time-out period to elapse. The use of the forcing option is indicated by the flashing of the , ,  symbols. It remains active until the active HVAC mode is modified or until the profile is altered (if the mode is Auto).



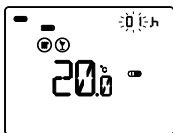
Choosing the fan coil speed

If the displayed page relates to the timed thermostat and any HVAC mode other than OFF is active, press or simultaneously to access the selection page (the control algorithm of the heating/cooling function must be set on "fan coil"). Use the or button key to select the required fan coil setting (or) , then confirm with the button key or wait for the 30-second time-out period to elapse.

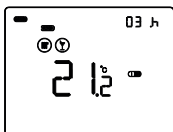


Party function

In the Auto, Economy, Pre-comfort and Comfort modes, the Party function allows you to temporarily exclude the set operating mode and activate the Comfort mode with an adjustable setpoint, for a period of time between 1 and 23 hours. This function can be used, for instance, to obtain a more appropriate temperature during a dinner, party, etc.

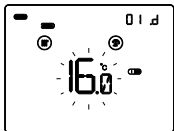


If the visible page relates to the timed thermostat and any HVAC mode other than OFF is active, keep the button key pressed to activate the Party function. The display will show the symbol, and the Tcomfort value will flash for a few seconds. Press the and button keys to set the required temperature then, while the setpoint values are flashing, press the button key and then the and button keys to set the number of hours you want the Party function to remain active (1-23). Confirm with the button key or wait for the 5-second time-out period to elapse.



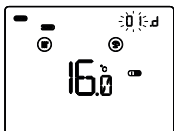
When this function is active, the values of the setpoint and activation period can be modified by means of the and button keys. The hour count is decreased during this period. The Party function remains active until the end of the set period, after which it deactivates automatically and the timed thermostat returns to the former operating mode.










To deactivate the Party function in advance, press the button key and keep it pressed until the unit has returned to normal operation.

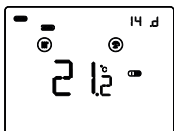




Holiday function


In the Auto, Economy, Pre-comfort and Comfort modes, the Holiday function allows you to temporarily exclude the set operating mode and activate the Economy mode with an adjustable setpoint, for a period of time between 1 and 99 days. This function can be used, for instance, to set the economic operation of the temperature adjustment system during a holiday or a long period of absence, being sure of having the required temperature on the day you return home.

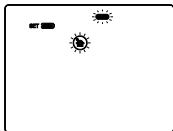


If the visible page relates to the timed thermostat and any HVAC mode other than OFF is active, keep the  button key pressed to activate the Party function. Press the  button key again briefly to activate the Holiday function. The display will show the  symbol, and the Economy value will flash for a few seconds. Press the  and  button keys to set the required temperature then, while the setpoint values are flashing, press the  button key and then the  and  button keys to set the number of days you want the Holiday function to remain active (1-99). Confirm with the  button key or wait for the 5-second time-out period to elapse.











When this function is active, the values of the setpoint and activation period can be modified by means of the  and  button keys.

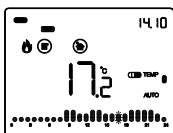
The day count is decreased during this period. The Holiday function remains active until the end of the set period, which ends at midnight. When calculating the days, always include the current day. For example, if you want to set the Holiday function on Friday evening, so it ends at midnight on Sunday, you must set 3 days (Friday, Saturday and Sunday). The Holiday function remains active until the end of the set period, after which it deactivates automatically and the timed thermostat returns to the former operating mode. To deactivate the Holiday function in advance, press the  button key to return to normal operation.








Copying the holiday program

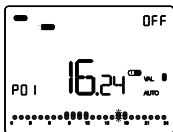
In Auto mode, you can copy the profile of the holiday day  onto any day of the week. This function can be activated up to 6 days ahead of the chosen day. It is especially useful when a holiday day falls during the week.

Press the  and  button keys simultaneously to copy the profile of the holiday day: on the display, the  symbol and the bar of the holiday day  will flash. Use the  or  button key to select the day of the week onto which you want to copy the profile, then confirm with the  button key.





During the set day, the  symbol will be lit up with a fixed light. This function is temporary: at midnight on the selected day, the unit returns to its programmed weekly profile. If you want to deactivate the function (or modify the day of the week), press the  and  button keys then select the holiday day  (or the new day of the week). Press  to confirm the new setting.

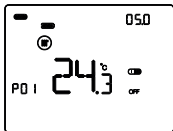
Pages relating to the hourly timer



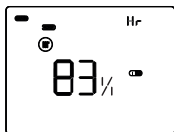
Viewing the hourly profiles

NB: the hourly profiles of the timer are only active and visible on the display when their respective channels are included in a function with the relative actuator channel, during programming with Easy Controller.

If the visible page relates to an hourly profile, press the  button key to activate (Auto) or deactivate (OFF) the profile. If an hourly profile is set (via the Easy configurator) in order to manage an Easy probe, keep the  button key pressed to temporarily visualise the input data (type of operation, HVAC mode, active setpoint and temperature measured) from the device controlled by the profile.





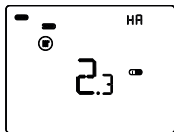
Pages relating to the humidity section







View the humidity parameters

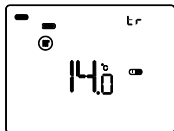
NB: the pages relating to humidity are only active and visible on the display when the relative channel is included in a function with the channel of a humidity sensor (e.g. GW1x762H), during programming with Easy Controller.

If the page displayed relates to the humidity section, press the  or  button key to view the relative humidity value Hr, specific humidity HA and dew point temperature tr.





To return to the screen listing the pages that can be viewed, keep the  button key pressed.

Use the  or  button key to scroll through the sequence. To confirm a page, press the  button key or wait for the 30-second time-out period to elapse.



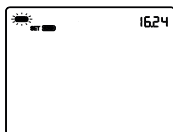
▶ Parameter setting

To set the operating parameters of the device, bring up the main timed thermostat page or the general hourly timer profile or the humidity page on the screen, then press the  button key.

To quit the parameter setting procedure without saving the modifications made on the current page, just press the  button key again or wait 30 seconds from the last pressure on the button keys. The parameters that can be modified will depend on the page you are viewing in normal operation status: if the visible page relates to the timed thermostat, the Set menu concerning the timed thermostat will be shown; if the visible page is that of a general hourly timer profile, the Set menu concerning the selected profile will be shown; if the visible page relates to the humidity section, the Set menu concerning the selected humidity threshold will be shown.

The parameters relating to the timed thermostat / hourly timer / humidity are collected into three functional groups: general parameters, operating parameters, and control parameters.

General parameters



Setting the day

Access to the Set menu is indicated by the word SET on the display, and by the flashing of the day of the week. Set the day by means of the button keys (MON, TUE, WED, THU, FRI, SAT, SUN).

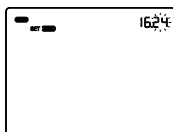
To confirm your choice and move on to the next parameter, press the button key within 30 seconds.



Setting the hour

When the hour figures are flashing, set the hour using the button keys.

To confirm the set value and move on to the next parameter, press the button key within 30 seconds.



Setting the minutes

When the minute figures are flashing, set the minutes using the button keys.

To confirm the set value and move on to the next parameter, press the button key within 30 seconds.



Setting the temperature measurement unit

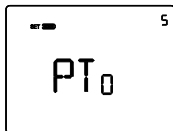
When the °C or °F temperature symbol begins flashing, select the temperature measurement unit by means of the button keys. To confirm your choice and move on to the next parameter, press the button key within 30 seconds.



Returning to the main page




Use the or button key to set the main page that the device must automatically visualise at the end of a period of inactivity by the user (OFF = function disabled; TIMED THERMOSTAT = main page of the timed thermostat; PRO01, PRO02 ... PRO07 = pages relating to hourly profiles, if enabled; Hr = pages relating to humidity, if enabled).

If this function is enabled, press the button key to access the page for setting the duration of the inactivity period. Use the or button key to set the gap (5 - 120 seconds). To confirm your choice and move on to the next parameter, press the button key within 30 seconds.








Back-lighting colour

Use the  or  button key to modify the colour of the display back-lighting. To confirm your choice and move on to the next parameter, press the  button key within 30 seconds.

NB: if red/blue is chosen, the timed thermostat background will be white during the idle phase (heating and cooling valves deactivated) of normal operation, turning red when the heating system is activated or blue when the cooling system is activated.






Icons theme

Use the  or  button key to modify the colour themes for representing the various icons shown on the display (MONO = single-colour theme; TH1, TH2, TH3, TH4, TH5 = colour themes) when the backlighting is active. The screen is only visible if the back-lighting colour is white. To confirm your choice and move on to the next parameter, press the  button key within 30 seconds.






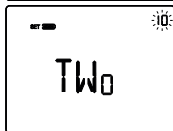
Single-colour theme for icon colour

Use the  or  button key to modify the colour of the icons within a single-colour theme. This parameter is only visible if the icon theme is single-colour and the back-lighting is active. To confirm your choice and move on to the next parameter, press the  button key within 30 seconds.



Back-lighting timing

Use the  or  button key to set the minimum duration of the inactivity time of the user before the back-lighting is automatically deactivated (the gap can be set from 10 to 180 seconds). This parameter is only visible if the back-lighting is active. To confirm your choice and move on to the next parameter, press the  button key within 30 seconds.



Back-lighting intensity

Use the or button key to choose how to manage the back-lighting intensity (MAN = fixed value; SENS = light sensitive sensor). This parameter is only visible if the back-lighting is active. If the type of management is MAN, use the or button key to choose the required percentage of light intensity (the gap can be set from 30 to 100%). If the type of management is SENS, use the or button key to increase (+10%), decrease (-10%) or leave unaltered (0%) the intensity value detected by the built-in light-sensitive sensor. To confirm your choice and move on to the next parameter, press the button key within 30 seconds.

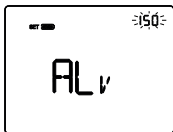
External temperature probe sensor

Use the or button key to set the function of the NTC temperature probe sensor connected to the timed thermostat (OFF = disabled; TEMP = enabled as temperature probe; FLO = enabled as underfloor probe). To confirm your choice and move on to the next parameter, press the button key within 30 seconds.

Impact of the external temperature probe sensor on the measured temperature calculation

Use the or button key to set the weight (%) of the external temperature probe sensor in the calculation of the temperature measured by the timed thermostat (the value can be set from 10% to 100%, in steps of 10). This parameter is only visible if the NTC temperature probe sensor connected to the timed thermostat has been enabled as a temperature probe on the previous screen. To confirm your choice and move on to the next parameter, press the button key within 30 seconds.

USER INSTRUCTIONS



Setting the alarm threshold temperature

Use the or button key to set the maximum floor-level temperature above which the timed thermostat suspends heating to prevent any possible damage (the value is expressed as tenths of °C, and can be set from 150 to 1000 in steps of 100). This parameter is only visible if the NTC temperature probe sensor connected to the timed thermostat has been enabled as a temperature probe (TEMP).

To confirm your choice and move on to the next parameter, press the button key within 30 seconds.



Setting the local relay

Use the or button key to set the operating mode of the relay on the timed thermostat (OFF = disabled, HEAT = management of heating valve, COOL = management of cooling valve, BOTH = management of heating+cooling valves).

To confirm your choice and move on to the next parameter, press the button key within 30 seconds.



Enabling the supplementary parameter pages

Use the or button key to enable/disable the three sets of functions that the device configuration parameters are divided into (G = General parameters, GF = General + Operating parameters, GFC = General + Operating + Control parameters). To confirm your choice and move on to the next parameter, press the button key within 30 seconds.

If the local modification function has been enabled from the “Enabling the supplementary parameter pages” menu for the General Parameters group only (option G), press the button key to return to the start of the parameter configuration menu. Otherwise, continue with the configuration of the next group of parameters.

Operating parameters



White balancing

Use the button keys or to set the weight of the red component (RED) in the backlighting of the display (value can be set between 1 and 63). The regulation only applies to the white colour of the screen.

To confirm the selection and continue with the next parameter, press the button key within 30 seconds.



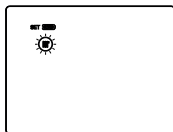
Use the button keys or to set the weight of the green component (GRE) in the backlighting of the display (value can be set between 1 and 63). The regulation only applies to the white colour of the screen.

To confirm the selection and continue with the next parameter, press the button key within 30 seconds.



Use the button keys or to set the weight of the blue component (BLU) in the backlighting of the display (value can be set between 1 and 63). The regulation only applies to the white colour of the screen.

To confirm the selection and continue with the next parameter, press the button key within 30 seconds.

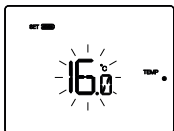


Heating / cooling selection

Use the or button key to select the operating type (= heating; = cooling). To confirm your choice and move on to the next parameter, press the button key within 30 seconds.

USER INSTRUCTIONS

If the displayed page relates to the timed thermostat
(type of operation: heating)

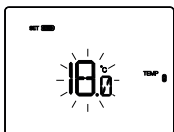


Setpoint setting $T_{TEMP 1}$

Used to modify the temperature value associated with the $T_{TEMP 1}$ setpoint.

Adjust the value of $T_{TEMP 1}$ (TECONOMY) with the aid of the button keys.

To confirm the set value and move on to the next parameter, press the button key within 30 seconds.

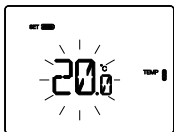


Setpoint setting $T_{TEMP 2}$

Used to modify the temperature value associated with the $T_{TEMP 2}$ setpoint.

Adjust the value of $T_{TEMP 2}$ (TPRE-COMFORT) with the aid of the button keys. To confirm the set value and move on to the next parameter, press the button key within 30 seconds.

To confirm the set value and move on to the next parameter, press the button key within 30 seconds.



Setpoint setting $T_{TEMP 3}$

Used to modify the temperature value associated with the $T_{TEMP 3}$ setpoint.

Adjust the value of $T_{TEMP 3}$ (TCOMFORT) with the aid of the button keys.

To confirm the set value and move on to the next parameter, press the button key within 30 seconds.



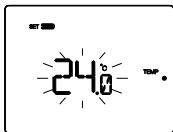
Setting the anti-freeze temperature value

Used to modify the temperature value associated with the (TOFF) setpoint.

Adjust the anti-freeze temperature value (T_{OFF}) using the button keys. To confirm the set value and move on to the next parameter, press the button key within 30 seconds.

To confirm the set value and move on to the next parameter, press the button key within 30 seconds.

If the displayed page relates to the timed thermostat (type of operation: cooling)



Setpoint setting $\text{TEMP} \bullet$

Used to modify the temperature value associated with the $\text{TEMP} \bullet$ setpoint.

Adjust the value of $\text{TEMP} \bullet$ (TCOMFORT) with the aid of the \uparrow \downarrow button keys.

To confirm the set value and move on to the next parameter, press the SET button key within 30 seconds.

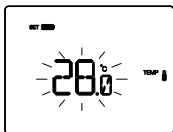


Setpoint setting $\text{TEMP} \bullet$

Used to modify the temperature value associated with the $\text{TEMP} \bullet$ setpoint.

Adjust the value of $\text{TEMP} \bullet$ (TPRE-COMFORT) with the aid of the \uparrow \downarrow button keys.

To confirm the set value and move on to the next parameter, press the SET button key within 30 seconds.



Setpoint setting $\text{TEMP} \text{ |}$

Used to modify the temperature value associated with the $\text{TEMP} \text{ |}$ setpoint.

Adjust the value of $\text{TEMP} \text{ |}$ (Teconomy) / with the aid of the \uparrow \downarrow button keys.

To confirm the set value and move on to the next parameter, press the SET button key within 30 seconds.



Setting the high temperature protection value

Used to modify the temperature value associated with the (TOFF) setpoint.

Adjust the high temperature protection value (TOFF) using the \uparrow \downarrow button keys.

To confirm the set value and move on to the next parameter, press the SET button key within 30 seconds.

ATTENTION!

The setpoint values are subject to the following limitations:

- HEATING

$$T_{\text{ANTIGELO}} (\text{Tanti-freeze}) \leq \text{TEMP} \bullet \leq \text{TEMP} \text{ |} \leq \text{TEMP} \text{ |}$$

- COOLING

$$\text{TEMP} \bullet \leq \text{TEMP} \text{ |} \leq \text{TEMP} \text{ |} \leq T_{\text{PROTEZIONE ALTE TEMPERATURE}} (\text{High temperature protection})$$

USER INSTRUCTIONS

If the displayed page relates to the hourly timer



Setting VAL ●

Used to modify Value 1 of the hourly profile associated with the VAL ● status, if the control variable is other than 1 bit.

Adjust the VAL ● value using the \uparrow \downarrow button keys.

To confirm the set value and move on to the next parameter, press the \rightarrow button key within 30 seconds.

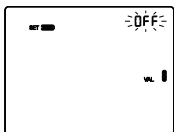


Setting VAL ▮

Used to modify Value 2 of the hourly profile associated with the VAL ▮ status, if the control variable is other than 1 bit.

Adjust the VAL ▮ value using the \uparrow \downarrow button keys.

To confirm the set value and move on to the next parameter, press the \rightarrow button key within 30 seconds.



Setting VAL ▮

Used to modify Value 3 of the hourly profile associated with the VAL ▮ status, if the control variable is other than 1 bit.

Adjust the VAL ▮ value using the \uparrow \downarrow button keys.

To confirm the set value and move on to the next parameter, press the \rightarrow button key within 30 seconds.



Setting VAL ▮

Used to modify Value 4 of the hourly profile associated with the VAL ▮ status, if the control variable is other than 1 bit.

Adjust the VAL ▮ value using the \uparrow \downarrow button keys.

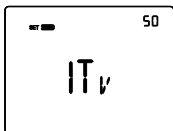
To confirm the set value and move on to the next parameter, press the \rightarrow button key within 30 seconds.



Setting the cyclical profile sending time

Used to set the frequency for sending the current hourly profile value on the BUS. This parameter is only effective when the timed thermostat / hourly timer is in Automatic mode. Use the button keys to modify the sending time (OFF = send only with hourly profile variation; 1M, 2M, 5M, 10M, 15M, 30M, 45M, 60M = values expressed in minutes). To confirm the set value, press the button key within 30 seconds.

If the displayed page relates to humidity



Humidity thresholds (from 1..5)

Use the button keys to modify the value of the relative humidity thresholds (up to 5, if enabled). The gap that can be set varies from 1% to 100%. To confirm the set value and move on to the next parameter, press the button key within 30 seconds.

If the local modification function has been enabled from the “Enabling the supplementary parameter pages” menu for the General + Operating Parameters group (option GF), press the button key to return to the start of the parameter configuration menu. Otherwise, continue with the configuration of the next group of parameters.

Control parameters

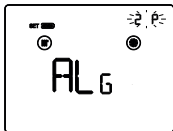


Control logic (2-way or 4-way)

Use the or button key to modify the type of control logic for the temperature adjustment system (2 = common logic; 4 = separate logic). The common control logic is associated with 2-way systems, with one single valve for heating and cooling.

The separate control logic is associated with 4-way systems, with two valves - one for heating and one for cooling. To confirm your choice and move on to the next parameter, press the button key within 30 seconds.

USER INSTRUCTIONS



Temperature adjustment control algorithm

Use the or button key to modify the control algorithm for heating , cooling , or both (2P = two points ON/OFF; PI = PWM proportional-integral; FAN = fan coil with speed control ON/OFF) depending on the type of operation and the control logic set on the previous screens. To confirm your choice and move on to the next parameter, press the button key within 30 seconds.

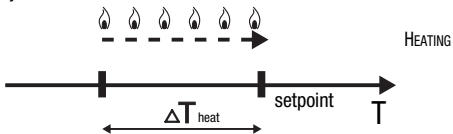
The screens that can be visualised will depend on the type of temperature adjustment control algorithm enabled on the previous screen:

- two points ON-OFF
- PWM proportional-integral
- fan coil with ON-OFF speed control

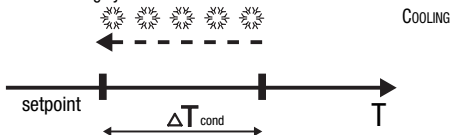
TWO POINTS ON-OFF

The operating principle manages the temperature adjustment system with two thresholds (hysteresis cycle), used to distinguish the ON or OFF status of the system.

In heating mode, when the detected temperature is lower than the “setpoint - ΔT_{heat} ” value, the device activates the heating system by sending the relative command to the actuator that manages it; when the detected temperature reaches the fixed setpoint value, the device deactivates the heating system.





In cooling mode, when the measured temperature is higher than the “setpoint + ΔT_{cond} ” value, the device activates the cooling system by sending the relative command to the actuator that manages it; when the measured temperature reaches the fixed setpoint value, the device deactivates the cooling system.




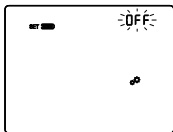
To avoid continuous solenoid valve switchovers, after an OFF-ON-OFF sequence the next ON command can only be sent after at least 2 minutes have elapsed.



Setting the adjustment differential




Use the   button keys to set the value of the adjustment differential of the two-point control algorithm (the gap can be set from 0.1°C to 2.0°C).

To confirm your choice and move on to the next parameter, press the  button key within 30 seconds.



Activating the self-learning function (heating mode only)

The self-learning function allows you to optimise the heating activation advance (max. 2 hours). The timed thermostat manages the advance automatically so as to guarantee the set temperature at the start of each programmed profile period. This function can only be activated in heating mode, in automatic operation.

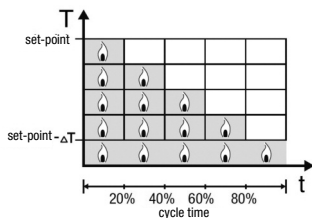
Use the  or  button key to activate (ON) or deactivate (OFF) the temperature degree self-learning function. To confirm your choice and move on to the next parameter, press the  button key within 30 seconds.

USER INSTRUCTIONS

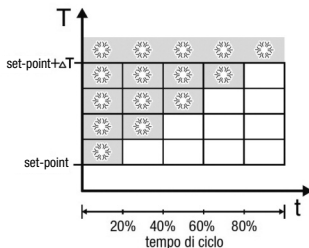
PWM PROPORTIONAL-INTEGRAL

The PWM control algorithm, used to control the temperature adjustment system, allows you to drastically reduce the times subject to thermal inertia and introduced by the two-point control. This type of control involves the modulation of the impulse duty-cycle, represented by the temperature adjustment system activation time, on the basis of the difference between the fixed setpoint and the temperature effectively detected. Two components are needed to calculate the output function: the proportional component and the integral component, used to improve the response in order to reach the temperature at the fixed setpoint. Once the proportional band has been defined (from setpoint to setpoint - ΔT for heating mode, from setpoint to setpoint + ΔT for cooling mode), its width determines the extent of the system response: if it is too narrow, the system will be more reactive but with swings; if it is too wide, the system will be slower. The ideal situation is one where the band is as narrow as possible, without swings. The integration time is the parameter that determines the action of the integral component. The longer the integration time, the slower the modification of the output and hence the slower the system response. If the time is too short, the threshold value will be exceeded, and the function will swing around the setpoint.

HEATING



AIR-CONDITIONING



The device keeps the temperature adjustment system switched on for a cycle time percentage that depends on the output function of the proportional-integral control; the device continually adjusts the system, modulating the system ON-OFF times with a duty-cycle that depends on the value of the output function (calculated at each time gap equal to the cycle time). The cycle time is reinitialised every time the reference setpoint is modified.

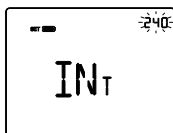
With this type of algorithm, there is no longer a hysteresis cycle on the heating/cooling element, so the inertia times introduced by the two-point control are eliminated. This produces energy savings because the system does not remain switched on when it is not needed and, once the required temperature has been reached, it continues to provide a limited contribution to compensate for the environmental heat dispersion.



Setting the proportional band

Use the button keys to set the value of the proportional band of the proportional-integral control algorithm (the gap can be set from 1°C to 10°C).

To confirm your choice and move on to the next parameter, press the button key within 30 seconds.



Setting the integration time

Use the button keys to set the value of the integration time of the proportional-integral control algorithm (the gap can be set from 1 to 250 seconds, OFF).

To confirm your choice and move on to the next parameter, press the button key within 30 seconds.



Setting the cycle time

Use the button keys to set the value of the cycle time for the proportional-integral control algorithm (the possible values are: 5, 10, 15, 20, 30, 40, 50, 60 minutes).

To confirm your choice and move on to the next parameter, press the button key within 30 seconds.

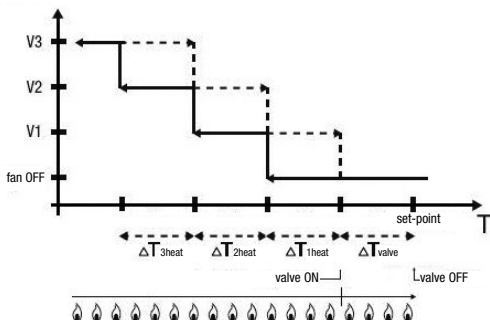
USER INSTRUCTIONS

FAN COIL WITH ON-OFF SPEED CONTROL

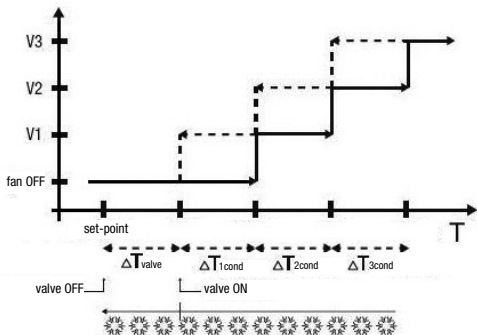
The operating principle involves activating/deactivating the fan coil speeds on the basis of the difference between the fixed setpoint and the detected temperature, using independent 1-bit communication objects to manage the individual speeds.

The figures below refer to the control of the speeds of a fan coil with three operating stages for heating and cooling. The charts show that each stage has a hysteresis cycle, and each speed is associated with two thresholds that determine its activation and deactivation.

HEATING



AIR-CONDITIONING



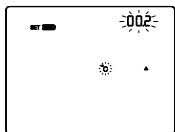
Speed V1 is activated when the temperature value is lower than the “setpoint - $\Delta T_{\text{valve}} - \Delta T_{1\text{heat}}$ ” value (in heating mode) or higher than the “setpoint + $\Delta T_{\text{valve}} + \Delta T_{1\text{cond}}$ ” value (in cooling mode), and deactivated when the temperature value reaches the “setpoint - ΔT_{valve} ” value (in heating mode) or the “setpoint + ΔT_{valve} ” value (in cooling mode). The first speed is also deactivated when a higher speed needs to be activated.

Speed V2 is activated when the temperature value is lower than the “setpoint - $\Delta T_{\text{valve}} - \Delta T_{1\text{heat}} - \Delta T_{2\text{heat}}$ ” value (in heating mode) or higher than the “setpoint + $\Delta T_{\text{valve}} + \Delta T_{1\text{cond}} + \Delta T_{2\text{cond}}$ ” value (in cooling mode), and deactivated when the temperature value reaches the “setpoint - $\Delta T_{\text{valve}} - \Delta T_{1\text{heat}}$ ” value (in heating mode) or the “setpoint + $\Delta T_{\text{valve}} + \Delta T_{1\text{cond}}$ ” value (in cooling mode). The second speed is also deactivated when a higher speed needs to be activated.

Speed V3 is activated when the temperature value is lower than the “setpoint - $\Delta T_{\text{valve}} - \Delta T_{1\text{heat}} - \Delta T_{2\text{heat}} - \Delta T_{3\text{heat}}$ ” value (in heating mode) or higher than the “setpoint + $\Delta T_{\text{valve}} + \Delta T_{1\text{cond}} + \Delta T_{2\text{cond}} + \Delta T_{3\text{cond}}$ ” value (in cooling mode), and deactivated when the temperature value reaches the “setpoint - $\Delta T_{\text{valve}} - \Delta T_{1\text{heat}} - \Delta T_{2\text{heat}}$ ” value (in heating mode) or the “setpoint + $\Delta T_{\text{valve}} + \Delta T_{1\text{cond}} + \Delta T_{2\text{cond}}$ ” value (in cooling mode).

With regards the heating (cooling) solenoid valve, you can see that once the detected temperature is lower (higher) than the “setpoint - ΔT_{valve} ” (“setpoint + ΔT_{valve} ”) value, the timed thermostat sends the activation command to the solenoid valve that manages the heating system; the solenoid valve is deactivated when the detected temperature reaches the fixed setpoint value. In this way, the heating (cooling) of the fan coil can also be exploited for irradiation, without any speed being activated.

To avoid continuous switchovers, the timed thermostat can wait up to 2 minutes before sending the activation command to the actuator that controls the temperature adjustment system, or to the actuator channels that command the fan coil speeds.



Setting the valve adjustment differential

Use the button keys to set the value of the adjustment differential of the fan coil valve control algorithm (the gap can be set from 0.1°C to 2.0°C). If the control logic is common, the parameter remains the same in both heating and cooling mode. To confirm your choice and move on to the next parameter, press the button key within 30 seconds.



Setting the adjustment differential for speed 1

Use the or button key to set the value of the adjustment differential of fan coil speed 1 (the gap can be set from 0°C to 2.0°C). If a value of 0°C is set, then when the solenoid valve is activated fan coil speed 1 will be activated as well. To confirm your choice and move on to the next parameter, press the button key within 30 seconds.



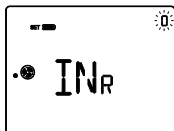
Setting the adjustment differential for speed 2

Use the or button key to set the value of the adjustment differential of fan coil speed 2 (the gap can be set from 0.1°C to 2.0°C). To confirm your choice and move on to the next parameter, press the button key within 30 seconds.



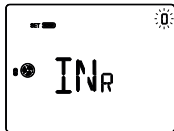
Setting the adjustment differential for speed 3

Use the or button key to set the value of the adjustment differential of fan coil speed 3 (the gap can be set from 0.1°C to 2.0°C). To confirm your choice and move on to the next parameter, press the button key within 30 seconds.



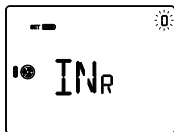
Setting the inertia for speed 1

Use the or button key to set the value of the inertia time for fan coil speed 1 (the gap can be set from 0 to 10 seconds). To confirm your choice and move on to the next parameter, press the button key within 30 seconds.



Setting the inertia for speed 2

Use the or button key to set the value of the inertia time for fan coil speed 2 (the gap can be set from 0 to 10 seconds). To confirm your choice and move on to the next parameter, press the button key within 30 seconds.





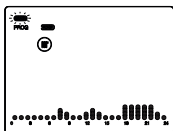
Setting the inertia for speed 3




Use the or button key to set the value of the inertia time for fan coil speed 3 (the gap can be set from 0 to 10 seconds). To confirm your choice and move on to the next parameter, press the button key within 30 seconds.

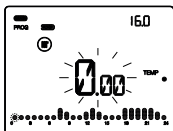
The setting of the timed thermostat parameters is now complete. Press the button key to return to normal operation.

Hourly profile programming

To personalise the hourly profile program of the device, call up the main page of the timed thermostat or the general hourly timer profile (make sure the profiles have been enabled with Easy controller), then press the  button key twice. You will see the word PROG on the screen. To quit the programming procedure without saving any modifications made to the current page, just press the  button key again or wait 30 seconds from the last pressure on the button keys. The parameters that can be modified will depend on the page you are viewing in normal operation status: if the visible page relates to the timed thermostat, the Prog menu concerning the timed thermostat will be shown; if the visible page is that of a general hourly timer profile, the Prog menu concerning the selected profile will be shown.



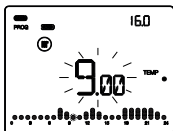
Access to the Prog menu is indicated by the word PROG on the display, and by the flashing of the day of the week. Set the day by means of the   button keys (MON, TUE, WED, THU, FRI, SAT, SUN). To confirm your choice and move on to the next parameter, press the  button key within 30 seconds.








After confirming the day, the display will show the current profile for that day. The time will start flashing.

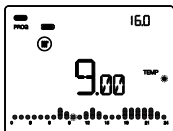
To customise the time setting, you must:

- select the temperature variation start time
- set the new temperature setpoint
- complete the customisation









Selecting the temperature variation start time

Use the  or  button key to modify the time band in which you want to vary the set profile: while you are selecting the hourly profile, the column relating to the selected time will flash. The time band is decreased/increased by 15-minute steps each time the  or  button key is pressed: you can therefore obtain up to 4 programming periods in each hour. To confirm your choice and move on to the next parameter, press the  button key within 30 seconds.



Setting the new setpoint (TEMP)/Value (VAL)

The value corresponding to the current setpoint/value will be shown on the display by flashing spots  ,  ,  (if the profile relates to the timed thermostat) or by VAL, VAL, VAL, VAL, VAL, VAL (if the profile relates to the hourly timer). Keep the  or  button key pressed to select the new setpoint/value (visible in the top right corner of the screen) that will be applied to the hourly profile until the next variation in the program. To confirm your choice and return to the time selection, press the  button key within 30 seconds.




USER INSTRUCTIONS



NB: if the hourly timer output object has a dimension of 1 bit, 3 values can be set:

- no action = no spots;
- action associated with value 0 = 1 spot;
- action associated with value 1 = 3 spots.

Completing the customisation

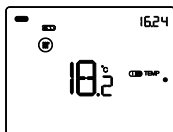
After repeating the above steps to obtain the required hourly profile, you can:


- copy the program onto the next day and confirm the programming by pressing the  and  button keys simultaneously within 30 seconds, or
- confirm the programming without copying it, by pressing the  button key within 30 seconds and keeping it pressed (you will move on automatically to the programming of the next day).

After completing the weekly programming, press the  button key to return to normal operation. To activate the program, select the Auto operating mode by pressing the  button key until the word Auto appears on the screen.

▶ Battery operation


The batteries maintain the data and time settings in the event of a voltage failure on the KNX BUS (all the other settings are maintained in the non-volatile memory) or if the front is removed. When the BUS voltage is present, operation is guaranteed even if there are no batteries installed.



The battery charge status is shown by the number of bars. When the  symbol appears, this means the batteries need replacing.

The device is pre-arranged to work in battery mode when it is in one of the following operating conditions:







- the front is inserted but there is no KNX BUS voltage
- the front has been removed.

In both cases, the device is powered by the battery alone: the  symbol begins flashing and the intensity of the back-lighting (if active) immediately falls to 60% and then deactivates after 15 seconds of inactivity.

During battery operation, the heating and cooling control algorithms are deactivated but you can access the Set and Prog and Easy channel localisation menus, modify the HVAC mode (in the timed thermostat section), activate/deactivate the hourly profile (in the hourly timer section). The timed thermostat shows a dotted line instead of the temperature value.

If the auxiliary output is enabled for the control of a solenoid valve, the relay only opens the NO contact (closes the NC contact) if the front is inserted; otherwise, the relay remains in the same condition it was in prior to the removal of the front.

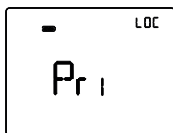
Easy channel localisation mode

To access the Easy channel localisation mode, start from the timed thermostat normal operation screen and press the  button key 3 times (the “Enabling supplementary parameter pages” menu must be set on GFC). In this way you can localise the channels implemented by the device, to insert them in the various functions created with the Easy configurator (Easy Controller). Use the  or  button key to select the channels you want to localise, then press the  button key to send the BUS command for localising the chosen channel: to confirm the sending operation, the  icon will light up temporarily. To quit the Easy channel localisation mode, just press the  button key again or wait 30 seconds from the last pressure on the button keys.



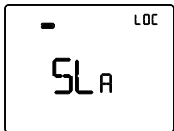
MAS (Master)

Used to send the type (heating/cooling) and HVAC operating mode to the area thermostats acting as “Slaves”.



PRx (Hourly profiles)

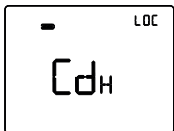
Independent hourly profiles (from 1 to 7), each of which can control up to 4 values of an independent variable.



SLA (Slave)

Used to set:

- from remote, with other Easy devices, the type (heating/cooling) and HVAC operating mode of the timed thermostat. Examples of devices that can be used: GSM Easy remote control, Easy command and visualisation panel, Easy 4-channel interface, etc.;
- the OFF mode of the timed thermostat, with priority over all other commands, if an open window is detected by a remote device. When a “closed window” is detected, the timed thermostat returns to the previous operating mode or to that of the last command received during the OFF forcing;
- the storage/reproduction of up to 8 scenes. The timed thermostat stores the type and HVAC operating mode.



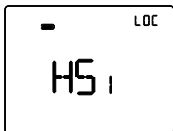
CDH (Heating command)

Used to send the ON/OFF command to the Easy actuators that control the solenoid valve of the heating or heating/cooling system.



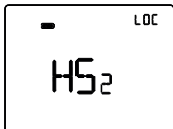
CDC (Cooling command)

Used to send the ON/OFF command to the Easy actuators that control the solenoid valve of the cooling system.



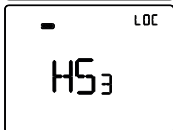
HS1 (Speed 1 of heating fan coil)

Used to send the ON/OFF command to the channel of the Easy actuator that controls speed 1 of the heating fan coil.



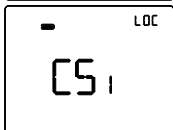
HS2 (Speed 2 of heating fan coil)

Used to send the ON/OFF command to the channel of the Easy actuator that controls speed 2 of the heating fan coil.



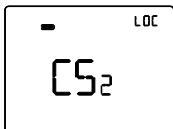
HS3 (Speed 3 of heating fan coil)

Used to send the ON/OFF command to the channel of the Easy actuator that controls speed 3 of the heating fan coil.



CS1 (Speed 1 of cooling fan coil)

Used to send the ON/OFF command to the channel of the Easy actuator that controls speed 1 of the cooling fan coil.



CS2 (Speed 2 of cooling fan coil)

Used to send the ON/OFF command to the channel of the Easy actuator that controls speed 2 of the cooling fan coil.



CS3 (Speed 3 of cooling fan coil)

Used to send the ON/OFF command to the channel of the Easy actuator that controls speed 3 of the cooling fan coil.



THx (Humidity threshold)

Channels relating to the relative humidity thresholds (from 1 to 5).

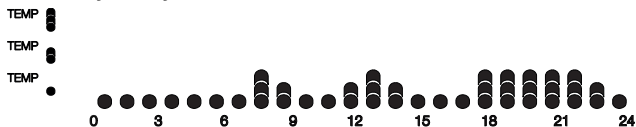


Pre-set programs

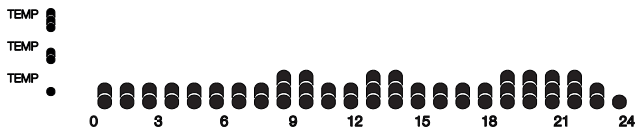
The timed thermostat has 2 pre-set programs, one for **heating** and the other for **cooling**.

HEATING PROGRAM

Monday - Friday

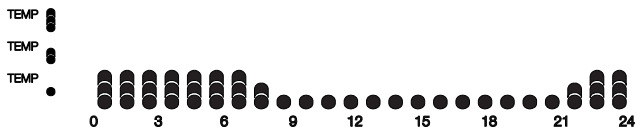


Saturday - Sunday



COOLING PROGRAM

Every day of the week



These pre-set programs can be modified and customised according to your own particular needs. To modify the pre-set parameters, follow the indications given in *Hourly profile programming*.

USER INSTRUCTIONS

Day of the week		Monday
Time		0.00
Heating temperature setpoint	T1	16 °C
	T2	18 °C
	T3	20 °C
	T_{ANTI-FREEZE}	5 °C
Cooling temperature setpoint	T1	24 °C
	T2	26 °C
	T3	28 °C
	T_{HIGH TEMPERATURE PROTECTION}	35 °C
Temperature measurement unit		°C
Common control		logic, 2 ON-OFF points
Adjustment differential control with 2 points		0.2°C
Control modes		Autonomous
Back-lighting colour		White
Icons theme		Monochrome
Icon colour		Black
Time-out for back-lighting deactivation		20 seconds
Light intensity adjustment		Manual (100% light intensity)

F.A.Q.

What does the temperature value on the display actually represent?


If no external temperature probe is enabled during programming, the value shown on the display is the temperature detected by the sensor in the timed thermostat.

If, however, an external temperature probe (of the Easy or NTC type) has been enabled, the timed thermostat shows the average of the values detected by the probe and the sensor, using a variable weight between 10% and 100% (which can be defined via Easy configurator).

The temperature shown on the display (measured by the internal sensor) does not vary, even in the face of heat variations. Why?

Following the intensive use of the device (e.g. during the programming phases) with the backlighting enabled, there may be slight alterations in the local temperature, so the device prevents the updating of the measurement for a few minutes in order to guarantee the accuracy of the measurement in these conditions too.

Can the temperature of an external Easy probe (e.g. temperature adjustment probe GW1x769, or the one on a 6-channel push-button panel GW1x753 or a 6-channel push-button touch panel GW10741) be visualised?

If one of the hourly profiles is configured during programming in order to manage an Easy probe, the temperature measured by that probe can be viewed on the display by pressing (and holding down) the  button key on the corresponding profile visualisation page, as explained in *Visualising the hourly profiles* on page 13.

How is the humidity value measured?

The timed thermostat does not have its own humidity sensor, so the relative humidity value must be supplied by an external KNX sensor (e.g. GW1x762H).

F.A.Q.

What happens to the time band set on the timed thermostat if the BUS power supply fails and is reset?

If the device is fitted with batteries, the time and date are maintained until the battery charge runs out.

Is it possible to understand whether the potential-free contact input is open or closed?

The timed thermostat display shows whether the contact is closed  or open .

Ai sensi dell'articolo 9 comma 2 della Direttiva Europea 2004/108/CE si informa che responsabile dell'immissione del prodotto sul mercato Comunitario è:
According to article 9 paragraph 2 of the European Directive 2004/108/EC, the responsible for placing the apparatus on the Community market is:
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