USER MANUAL AND SET INSTRUCTIONS

CTRL-DPH

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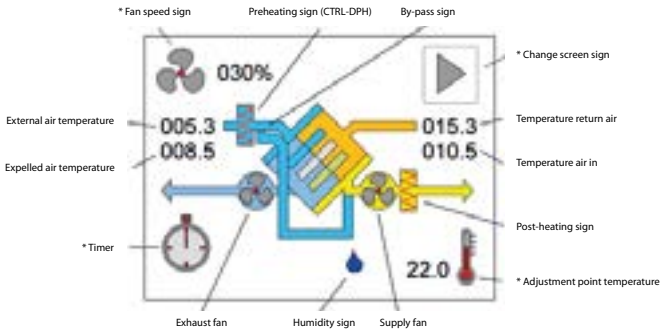
INDEX

VISUALIZATION MAIN SCREEN

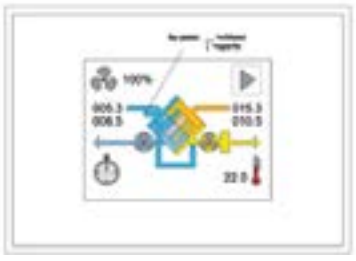
The touch screen control panel has been designed to manage units of Mechanically Controlled Ventilation with Heat Recovery (VMC-RC) in a simple and intuitive way. The user manages the control by means of the icons of the graphic screen making a slight pressure on them; The direction buttons, which appear after the pressure in a modifiable parameter, allow the user to interact with the unit by going through menu items and modifying values. Pressing the OK button confirms the modifications or selections made. The color change (green) of an icon after a press indicates that the parameter represented by that icon can be changed. When an element of the submenus is highlighted, it appears in background color on a blue background, pressing OK the title changes to green and modifications can be made with the direction buttons.



***= Modifiable parameter**

The main window is a detailed graphic representation of the state of the machine from which all available functions can be activated. To change the window and access the other menus, you have to press the icon to change the menu window. From the other windows you can return to the previous one by selecting the mentioned icon and pressing OK. To save energy the control is placed in standby mode (paid screen) after a minute of inactivity, pressing at any point on the screen is automatically reactivated. In the presence of alarms, on the other hand, the screen lights up for half a second approximately every ten.

Unit **without** bypass



Unit **with** bypass

MANAGEMENT OF FAN SPEED, FLOW OR CONSTANT PRESSURE

To modify this parameter, the icon at the top right of the synoptic table must be selected by clicking on it (it will turn green and the direction buttons will appear). Then press the icon of the address button up to increase or down direction to decrease the value located next to it; Once the desired one is located, press the OK button to confirm the selection. At first it is possible to turn off the machine directly by pressing the central button, it disappears automatically by pressing the direction buttons. The variation can be expressed as a percentage for variable speed machines, with a simple 1-2-3 for machines with 3 speeds, in flow (m³ \ h) for machines with constant flow or pressure (Pa) for machines with constant expression (equipped with the corresponding supplementary kit, see page 29). For these last two models, once the desired value has been selected, the speed of the fans will automatically vary to keep the flow or the set pressure constant. For machines with a sensor mounted different from the cop / cav kit, but always with constant pressure or flow rate, enter the percentage value of the pressure or flow scale of the unit. The regulation it will be carried out in the same way. This also applies to the settings of the weekly programming menu (Program). In addition to the scale value, the timer element will appear and, if selected, will start the default weekly time program (see Program menu). If an air quality, relative humidity sensor is present in the unit or if the analog input (0-10V) is activated, we will also have the automatic selection that allows the automatic regulation of the fan speed in function of CO2, Humidity measured or by an external signal.

Speed fan controller (%)


Airflow control


Pressure control

In detail the possible selections are:

- **off:** with this selection, the fans are stopped. Be careful because in any case the unit is electrically powered; this value is obtained by descending below the minimum adjustable speed.

-xxx%: if the unit has modulating fans it is possible to adjust a percentage value of the speed, flow rate or full-scale pressure (for units not equipped with the corresponding kit but always in a cop / cav version with a different sensor), starting from a minimum (factory adjusted) to 100% with steps of 5% (1% on request).

-1, 2 or 3: if the unit is equipped with 3-speed fans, it is possible to select one of the available ones: speed 1, speed 2 or speed 3.

-watch: with this selection the speed of the fans is controlled according to what is established by the weekly chronoprogram (see Program menu), this indication is obtained by selecting a value higher than the maximum speed (100% or 3).

- **auto:** this mode is available only if a sensor (CO2, CO2-COV, relative humidity HR) or an external signal (0-10V) is present. It is obtained by selecting a value higher than clock.

- **xxx m³ \ h:** if the unit is a constant flow (CAV) version with a kit, the desired value can be set in m3 \ h of flow. The fans will be regulated automatically to keep it constant depending on the changes in the load.

BOOSTER FUNCTION

By selecting the icon on the lower left you access the booster function. Through this you can select a time interval (from a minimum of 1 minute to a maximum of 4 hours) in which to operate the unit at maximum power. The booster function is a priority with respect to other modes of fan speed management.

After the selection a digital chronometer (hours.minutos.seconds) predetermined to a value of 10 minutes can be modified with the direction buttons on the right of the screen: up to increase the booster time and down to decrease this time. Pressing the OK button starts the function: the remaining time for the end of the process is shown on the screen.

When the value 00.00.00 is reached, the fans are controlled again in the previous way. If it is desired to stop the process, it is sufficient to repeat the adjustment operations of the booster by selecting a time of 0 minutes and pressing OK.

MANAGEMENT OF AIR POSTGRADING

The control is capable of managing an air after-treatment system with both water coil and electrical resistance.

The first is regulated by the control of a 3-point solenoid valve 230V or 24AC-DC \ 0-10V, while the resistance through the corresponding relay.

If after-treatment management is established, the main screen is modified: an icon - thermometer with a temperature value appears in the lower right corner. On its side and on the flow of the driving air, a picture of post-heating / cooling appears.

Active post-heating

Postheating off

Selecting the icon in the bottom right corner establishes the desired temperature set point (TS) inside: the user can increase the value of TS with the direction arrow up or, on the contrary, decrease it with the Direction arrow below. Once the desired value has been reached, the selection is confirmed by pressing the OK button. With the central button, which appears at first, the post-treatment can be switched off directly. TS can assume values between 05.0 ° C and 30.0 ° C with steps of 0.1 ° C; if the user selects a TS value lower than 05.0 ° C, the control considers the post-heating deactivated and the display appears next to the corresponding icon on the screen. It is possible to combine electric after-heating for winter and water cooling in summer, or under the same conditions, control two separate cold-hot coil (cold only with 0-10V valve). TS becomes the reference for heating or cooling depending on whether or not these are enabled in the corresponding station of the installer menu (exclusive to each other) and depending on the one selected in the parameter menu. The post-heating status is shown in the main window: It is also possible to manage a dehumidification system made by the two separate coil (hot-cold) or by a cold coils with an electrical resistance underneath.

PREHEATING MANAGEMENT

In addition to the post-heating, the CTRL-DPH control is able to manage an electric preheating system (operated by a PWM signal or on-off) to prevent the formation of ice inside the heat exchanger. The control automatically activates the anti-frost procedure when the temperature measured by the expulsion probe (Tx) drops below the value of 3 °C. Here the heater is powered at the minimum power. If the temperature Tx continues to decrease and falls below 1 °C, the feed of the preheater is progressively increased until it reaches 100%. When Tx returns above 3 °C the procedure is interrupted. The temperature values 3C° and 1C° are set at the factory and can be modified on request. The preheating status is shown in the main window.

Active post-heating

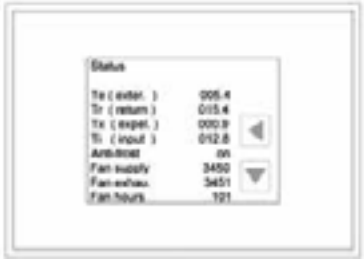
Postheating off

MENU SELECTION

From the main window you access the menu window by touching the corresponding icon (window change icon). You have to scroll with the up arrow key and then press OK on the desired item. When selecting, you access the diverse detailed information about the installation. When the last menu item is reached, the arrow below disappears.

On the other hand, when you go beyond the first one, the window change icon appears with the arrow to the left. To return to the previous menu, click on the latter.

Menu selection window



Central window change icon

In the menu window you can access the following functions:

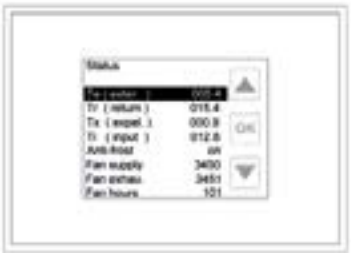
- Status
- Program
- Clock
- Alarms
- Installer
- Factory (protected by password, accessible only by factory).

From the Menu window, you access the main window by pressing the up arrow button until the window change icon appears and pressing OK.

STATUS MENU: OPERATING STATUS

If the remote control panel is used to manage several units (master-slave mode), a screen with the list of available machines (max 4) will appear in the menu:

Selection of unit to control configuration menu status



Display menu status

To view the status of an individual unit, select it (move with the arrows and confirm the selection with OK). If the control is configured to manage an individual unit, when accessing this menu, the status of the unit is displayed directly, displaying the values taken by the parameters that characterize it; using the direction buttons (up-down) it is possible to scroll through all of them. The pressure, flow parameters refer to machines with cop / cav kit (see instructions):

Te (exter.)	Renewal air temperature in °C
Tr (return)	Return air temperature in °C
Tx (expelled)	Expelled air temperature in °C
Ti (input)	Air temperature introduced in °C
Tw(water)	It is active if the after-heating is present by means of a water coil, it indicates the temperature of the water flowing out of the coil, it is expressed in ° C
Wat.nofrost	It is active when the after-heating is established by a water coil and indicates whether the anti-freeze / no-frost mode is in progress. The no-frost function relative to the coil is activated when the temperature measured by the Tw probe falls below 3 ° C and then deactivates when it returns above 5 ° C (3 + 2). When a temperature below 3 ° is detected, the control valve (hot water) is completely opened in order to prevent the formation of ice inside the elements. If Tw falls below 1C ° the fans stop and at the same time an alarm is signaled (see ALARMS menu). The two temperature values of 3 ° C and 1 ° C can be changed (menu FACTORY -factory-).
Anti-frost	Antifrost function (antifreeze) exchanger. It is activated when the temperature measured by the Tx probe falls below 1 ° C and then deactivated when it returns above 3 ° C. The purpose is to avoid the formation of ice inside the exchanger. It can be managed by a preheating resistor, by unbalancing the air flow rates or by regulating the by-pass.
Fan supply	Admission fan speed, this value is expressed in: - Revolutions per minute (RPM) if fans with tachometer signal are installed. - Percentage if variable speed fans are installed without tachometer signal (Off with fan off). - Off, 1, 2 or 3 for three-speed fans.
Fans. remote	Only Evo-d. If on, it indicates the independent regulation of the drive fan from Modbus.
Flow supply	Only for units of constant flow with control over two flows. Value in m³ \ h of flow of the driving fan.

Dp Supply	Only for units of constant pressure with control over two flows. Pressure value in pascals below the driving fan.
Fan exhau.	Exhaust fan speed, see vent. Entr.
FanE. Remote	Only Evo-d. If on, it indicates the independent regulation of the return fan from Modbus.
FlowExhau.	Only for units of constant flow with control over two flows or with flow sensors. Value in m³ \ h of the return flow.

DpExhau	Only for units of constant pressure with control over the two flows. Pressure value in pascals above the return fan.
Flow	Only for units of constant flow with control over a flow. Value in m3 \ h of flow of the fan of impulsion.
Dp	Only for units of constant pressure with control over a flow. Pressure value in pascals below the driving fan.
Fan hours	Hours of operation of the unit.
Bypass	It is active if the bypass is configured: - On open bypass. - Off bypass closed. - Bypass Mod Modulation (if set from the factory menu).
Heating/Cooling/On\ Off	It is active if air or water after-treatment is configured: - Heat On \ Off active afterheating \ inactive. - Refriger. On \ Off after cooling active inactive.
CO_2 /VOC ppm	It is active if a CO2 or VOC / VOC probe is present: it indicates the concentration of CO2 or CO2 / VOC in parts per million (ppm) measured by the air quality probe, it can take values between 0 and 2000.
Humidity %	It is active if a relative humidity probe is present: it indicates the relative humidity value in percentage measured by the probe, it can take values between 0 and 100.
Auto est .%	It is active if the automatic operation of the fans is configured by an external 0-10V signal. Indicates the percentage value of the external signal (10V corresponds to 100%).
Remote	It is active if a digital input (DI) is configured as remote (parameter adjustable in the factory): - On if DI closed (the fans operate at the speed set on the remote panel). - Off if DI open (fans stopped).
Boost	It is active if a digital input (DI) is configured as a booster (parameter adjustable in the factory): - end DI open and a time exceeding Boost min. since the last impulse, therefore inactive booster (fans at the speed established by the control). - Max. the time has not yet elapsed Boost min. (1 -> 240 minutes) since the DI has received the impulse, active booster (fans at maximum speed).
PIR	It is active if a digital input (DI) is configured as PIR (parameter adjustable in the factory). - min Open DI (fans at minimum speed). - max. DI closed (fans at maximum speed) and the minimum PIR time has not yet elapsed. (1 -> 240 minutes) fixed in the installer menu. - off DI closed (fans at the speed set by the user in the control) and has after the time PIR min. from the moment of closing the DI entry.
Summer	It is active if a remote digital input (factory default) is set as summer / summer. - Yes / yes DI open, the summer station is established. - No DI closed, the winter season is established.
Humidity	It is active if a remote digital input (factory default) is set as humidity / humidity. - Yes / yes DI open, the humidity threshold of the humidistat has been exceeded. - No DI closed, the humidity threshold of the humidistat has not been exceeded
Fire	It is active if a remote digital input (factory) is configured as fire / fire. - Yes / yes DI open (exhaust fan at maximum speed and blower fan off). - No DI closed (fans at the speed set by the control).
PFanSupply	It is active if the fan alarm is set to 2Press (factory default). - off open alarm contact, drive fan stopped or broken - on closed alarm contact, running fan in operation.
PFanExhau	It is active if the fan alarm is set to 2Press (factory default). - off contact of open alarm, return fan stopped or faulty - on closed alarm contact, return fan in operation.
Recircul.Req. Off/On	It is active if it is set to Recircul. one of the digital inputs (at the factory, when recirculation gates are installed). - open contact off, standard recirculation management. - on closed contact, maximum active recirculation.

Dehumidif.On/Off	It is active if the control is configured to manage the dehumidification system - on dehumidification enabled - off dehumidification disabled.
DWat. NoFrost Off\On	It is active if the control is configured to manage the dehumidification system Air temperature after the cold coil in ° C. It is active if after treatment is established by water coil. Indicates whether anti-freeze / - nofrost mode measured by on-off thermostat (directed at 1 ° C and connected to a digital input) is in progress. In this case, the control valve opens completely and both fans stop. At the same moment an alarm appears in the corresponding menu.
Td(Dehum.)	It is active if the control is configured to manage the dehumidification system Air temperature after the cold coil in ° C.

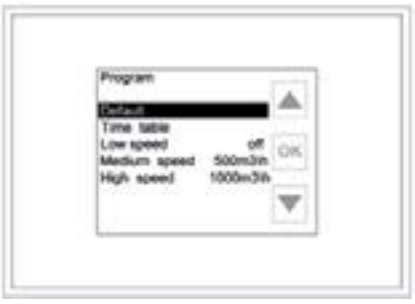
The digital inputs / outputs can be programmed from the factory menu by asking the manufacturer for passwords and instructions on the available functions.

PROGRAM MENU: WEEKLY PROGRAMMING MANAGEMENT

This menu allows to manage the speed of the fans (in three levels) that are expressed in percentage for machines of variable speed, in pascals for machines of constant pressure and in m3 / h for machines of constant flow. It is also possible to enable / inhibit air after-treatment (if present) in a different way for each day of the week.

Everything can be adjusted for different time slots (from 1 to 8 definable by the user with a resolution of 30 minutes). To access the programming management functions, select Program with the direction buttons pointing to it and press OK.

Program menu display with fan speed



Program menu display with air low

Program menu display with pressure

DEFAULT

By selecting this menu item and pressing the OK button, the parameters for the management of the unit are automatically assigned the preset values:

Program valid from Monday to Friday:

TIME TABLE			
Time table		Speed fans/ air flow/ pressure	Air after-treatment condition: (ON enabled, OFF inhibited)
C1	00:00 -> 06:29	medium	OFF
C2	06:30 -> 07:59	medium	ON
C3	08:00 -> 11:29	low	ON
C4	11:30 -> 12:59	High	ON
C5	13:00 -> 17:59	low	ON
C6	18:00 -> 21:59	high	ON
C7	22:00 -> 00:00	medium	OFF
C8	not used	-	-

Program valid from Saturday to Sunday:

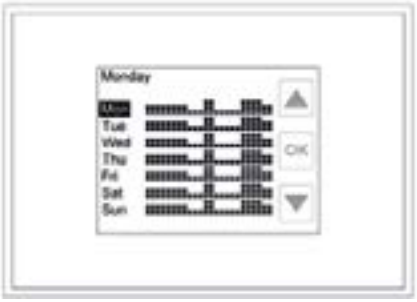
TIME TABLE			
Time table		Speed fans/ air flow/ pressure	Air after-treatment condition: (ON enabled, OFF inhibited)
C1	00:00 -> 07:29	medium	OFF
C2	07:30 -> 07:59	medium	ON
C3	08:00 -> 11:29	medium	ON
C4	11:30 -> 12:59	high	ON
C5	13:00 -> 17:59	medium	ON
C6	18:00 -> 21:59	high	ON
C7	22:00 -> 00:00	medium	OFF
C8	not used	-	-

SPEED LEVELS	
Low: Medium sp.	OFF
Medium sp.:	**030%** if the unit is equipped with adjustable speed fans; 1 if the unit is equipped with three-speed fans; auto if the unit has a CO2 sensor, relative humidity or if it is managed by an external 0-10V signal. **0200m s\h** if the unit is of constant flow with cop \ cav kit. This value also depends on the factory menu settings based on the performance of the unit. **010Pa** if the unit is constant pressure with cop \ cav kit. This value also depends on the factory menu settings based on the performance of the unit.
High speed:	**065%** if the unit is equipped with adjustable speed fans; 2 if the unit is equipped with three-speed fans; auto if the unit has a CO2 sensor, relative humidity or if it is managed by an external 0-10V signal. **20000m s\h** if the unit is of constant flow with kit cop\ cav. This value also depends on the factory menu settings based on the performance of the unit.

TIMETABLE

By selecting this menu item and pressing the OK button you access the summary display of each day of the week, divided into 24 hours.

Time table : summary display



Time table : detail of one day a week

To change the settings of each day, simply select it, in the summary display screen, and press the OK button; At this moment the detail screen of the selected day will be shown, in which the list of the eight possible time slots (C1-C8) appears, the day of the week in which it is being operated is shown in the upper left part of the screen.

Selection of the time slot to be modified

Modifiable parameters in the selected time slot

By selecting a time slot and pressing the OK button you can modify its content, in the time zone modification screen, in addition to the indication of the day in which you are operating (top left), the graphic summary of the programming valid for the whole day. The parameters that can be modified are:

- Change / Change X: selecting this line and pressing OK you can change the time zone in which you are operating without returning to the previous page: using the arrows, you can scroll through the different time zones (1-8), once the desired just press OK.

- Time / Hour hh.mm: selecting this line and pressing OK adjusts the start time of the current time slot: using the arrows increases (arrow up) or decreases (arrow down) the schedule in 30 minute sections; Once you have located the desired value, press OK. This parameter can take a value between the beginning of the previous time slot and the start of the next time slot.

- Fan speed / Speed. vent xxx: selecting this line and pressing OK adjusts the fan speed (or pressure / full-scale flow rate for machines without cop / cav kit). The flow for units with constant flow or pressure for constant pressure units with kit cop / cav required for the current time slot: using the arrows the three low, medium and high possible values are selected; located the desired value, press OK. These values correspond to what is established according to the following section (Adjustment of speed levels).

- Post-heating / Poscalent. on / off: the parameter is visible only if the control is configured to manage an air after-treatment device; By selecting this line and pressing OK, it is possible to enable (on) or inhibit (off) the air after-treatment device. Using the arrows, the two possible values, on and off, are selected. Once the desired value is found, press OK. When the timer mode is selected, it is visible on the screen if the ON / OFF timeout is enabled.

Disabled heating

Post-heating enabled

After carrying out the personalization of a day of the week according to your own needs (for example, Monday), you can copy the programming made on another day without having to repeat the whole procedure described above. In the summary display window of time slots, select the day in which you want to copy the previously made programming (for example, Tuesday) and press OK. At this point the detail window of the time slots of the selected day is displayed. Using the down arrow, go through all the time slots until you reach the line Copy day (it will appear after the last time slot C8): point to this line and press the OK button.

Copy day function selection

Copy day: selection of the day to copy

After accessing the Copy day page (indication visible in the upper left part of the screen), it is possible to select the day from which you want to copy the programming. Once the election is selected (Monday in our example), press the OK button to confirm the copy and automatically go to the simplified display of the slots (in our case we will have copied the programming on Monday in the day of Tuesday). This operation can be repeated for other days of the week.

ADJUSTING SPEED LEVELS

To modify the default values for the three levels (low, medium and high) used for the weekly programming, it is necessary to access the main page of the Program menu, with the arrows indicate the level to be modified (for example Low speed) and press the OK button. Using the arrows you can go through the different possible values and, once you have located the desired value, confirm the selection by pressing the OK button. The possible values for these three parameters are:

- **off:** stopped fans, accessed by keeping the down arrow pressed for a few seconds (off is below the minimum adjustable speed value).
- **xxx%:** for units with variable speed fans (or pressure / flow for machines without cop / cav kit) you can select a percentage value between the minimum (set at the factory) and 100%.
- **1, 2 or 3:** for units with three-speed fans you can choose between speeds 1, 2 or 3.
- **auto:** for units equipped with air quality probe, relative humidity or guided by an external 0-10V signal, the fan speed will be automatically managed by one of these devices. It is accessed by holding the arrow up for a few seconds (auto is above the maximum adjustable speed value).
- **xxx m³ \ h:** if the unit is in the constant flow version with the cav mounted kit, the desired value can be set in m³ / h of flow.
- **xxx Pa:** if the unit is in constant pressure version with the cop kit mounted, the desired value can be set in pressure pascals.

CLOCK MENU: CLOCK SETUP

This menu allows adjusting the day of the week and the current schedule for a correct management of the weekly schedule

Visualización menú Clock/Reloj

Configuration of the day

Select the day / day line and press the OK button, the current day set will turn green; Scroll with the direction buttons to locate the desired day. Press the OK button to confirm the selection, the day will change from green to blue.

Setting the time

Select the hours / hour line and press the OK button, the current time set will turn green; Scroll with the direction buttons to locate the desired time. Press the OK button to confirm the selection, the time will change from green to blue.

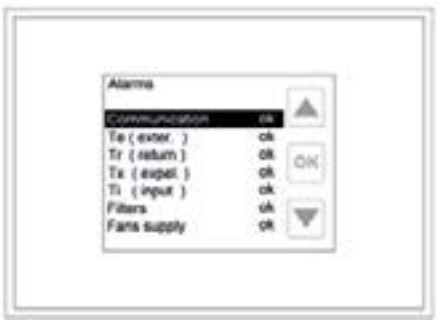
Setting the minutes

Select the minutes line and press the OK button, Minutes will turn green; Scroll with the direction buttons to locate the desired minutes. Press the OK button to confirm the selection, the word minutes will change from green to blue.

ALARMS MENU: VISUALIZATION OF THE STATE OF ALARMS

If the control detects an anomaly, the latter is indicated in the main screen of the control with the intermittent display of a specific icon and a red message at the top of the screen (Call service or Dirty Filters). If the alarm is detected when the screen is in standby mode, the screen flashes intermittently (every 10 seconds approx.). Alarms in the pressure sensors are only available for machines with cav / cop kit.

twinkle of an alarm: outdoor air temperature probe



Alarm menu

If the twinkle of an alarm is in progress, you can directly access the corresponding menu by touching the screen; otherwise, select Alarms on the menu selection page and press OK. If the control is subjected to several units (master / slave mode), the unit to be monitored must be selected (see Status menu); otherwise, the detail page of the alarms is accessed directly.

ALARM LIST

Parameter	Val	State
Configuration	ok	The configuration is correct.
	ko	The configuration of the digital inputs or hardware is incorrect. Check the ext. Inputs in the factory menu. (eg if the same function is configured for several inputs) or Hardware (Hw evo-compact-> el.water).
Communication	ok	The communication between the cards in the machine and the remote control panel works correctly.
	ko	Problem in the communication between the cards and the remote panel: 1) check the electrical connections between the electronic board and the remote panel (see electrical diagram). 2) If the problem persists, check electrical connections between the two cards (see electrical diagram). 3) If the problem persists, check the position of the dip switch on both cards. For a unit: X540 only 1 = on; X531 only 2 = ON; X541 all off. 4) If the problem persists, replace the electronic card. 5) Check that the parameter Hw (factory menu) is correctly configured for the unit in use. Outdoor air temperature sensor works correctly.
Te (external)	ok	Problem in the outdoor air temperature sensor:
	ko	1) check the electrical connections of the temperature probe (see electrical diagrams). 2) If the problem persists, replace the temperature probe. 3) If the problem persists, replace the electronic card.
Tr (return)	ok	Return air temperature sensor works correctly.
	ko	Problem in the return air temperature sensor: 1) check the electrical connections of the temperature probe (see electrical diagrams). 2) If the problem persists, replace the temperature probe. 3) If the problem persists, replace the electronic card.
Tx (expelled)	ok	Expelled air temperature sensor works correctly.
	ko	Problem in the expelled air temperature sensor: 1) check the electrical connections of the temperature probe (see electrical diagrams). 2) If the problem persists, replace the temperature probe. 3) If the problem persists, replace the electronic card.
Ti (input)	ok	Introduced air temperature sensor works correctly.
	ko	Problem in the air temperature sensor introduced 1) check the electrical connections of the temperature probe (see electrical diagrams). 2) If the problem persists, replace the temperature probe. 3) If the problem persists, replace the electronic card. It is present only if the air after-treatment management is configured with water coil (Factory menu).
Tw (water)	ok	Temperature sensor in the water coil works correctly.
	ko	Problem in the air temperature sensor entered: 1) check the electrical connections of the temperature probe (see electrical diagrams). 2) If the problem persists, replace the temperature probe. 3) If the problem persists, replace the electronic card.

Tw (water low)	ok	It is present only if the air after-treatment management is configured with water coil (Factory menu). The temperature of the water leaving the coil is higher than a safety threshold; there is no risk of freezing the water in the coil.
	ko	Risk of freezing the liquid in the water coil. It is present only if the filter status alarm is configured with differential pressure switch or depending on the hours of operation of the machine (Factory menu).
Filters	ok	Clean filters.
	ko	It is only present if the fan status alarm is configured with differential pressure switches, with tachometer signal from the fans or with DO of the fans (Factory menu).
Fans/	ok	Fans OK.
	ko	Possible failure in a fan. It is only present if the automatic speed management of the fans with CO2 or CO2 sensor is configured -VOC2 (Installer menu).
CO_2VOC	ok	Probe OK.
	ko	Possible failure of the probe or the connection. It is only present if the automatic speed management of the fans with relative humidity sensor (Installer menu) is configured.
RH senso	ok	Probe OK.
	ko	Possible failure of the probe or the connection. It is only present if the fan speed management is configured with analog 0-10V external signal (Installer menu).
Ext.signal	ok	External signal source works correctly.
	ko	External signal not present (voltage at terminals equal to 0V): 1) check the electrical connections of the external source (see electrical diagrams). 2) if the problem persists, check the presence of the external signal (tester) with values higher than 0V. 3) If the problem persists, replace the electronic card. It is only present if the machine is in a constant flow version with control over the two flows.
FlowSupply	ok	The pres sensor of drive works correctly.
	ko	Possible anomaly in the pres sensor of drive.
FlowExhaust	ok	It is only present if the machine is in a constant flow version with control over the two flows.
	ko	The pres sensor return function works correctly Possible anomaly in the pres. sensor return.
Flow	ok	It is present only if the machine is in a constant flow version with control over a flow.
	ko	The pressure sensor works correctly Possible anomaly in the pressure sensor.
DpSupply	ok	It is present only if the machine is in a constant pressure version with control over the two flows.
	ko	The pres. sensor of impulsion works correctly Possible anomaly in the pres. sensor of drive.
DpExhaust	ok	It is only present if the machine is in a constant flow version with control over the two flows.
	ko	The pres. sensor return function works correctly Possible anomaly in the pres. sensor return.
Dp	ok	It is present only if the machine is in a constant pressure version with control over a flow.
	ko	The pressure sensor works correctly . Possible anomaly in the pressure sensor.

Autominutes	ok	It is only present if the automatic speed management of the fans with CO or CO-VOC sensor (Installer menu) is configured or there is an excess of CO2 in the environment. The sensor works correctly.
	ko	Possible anomaly in the sensor.
Antifrost	ok	It is activated if the unit fails to exit the antifreeze mode of the exchanger within 2 minutes. The unit works correctly.
	ko	Two minutes have elapsed since the entry in antifreeze mode and the ejection temperature has not risen again above 3C °. For speed management, the control stops the drive fan and adjusts the return fan to the maximum speed. For resistance management, it stops both the impulsion fan and the resistance, the return flow goes to the speed set in the control panel. For by-pass management, it stops the flow fan and leaves the by-pass in the current position.

Bypass off:

The bypass will remain closed regardless of the internal and external temperatures.

Bypass on:

The bypass will remain open regardless of the internal and external temperatures.

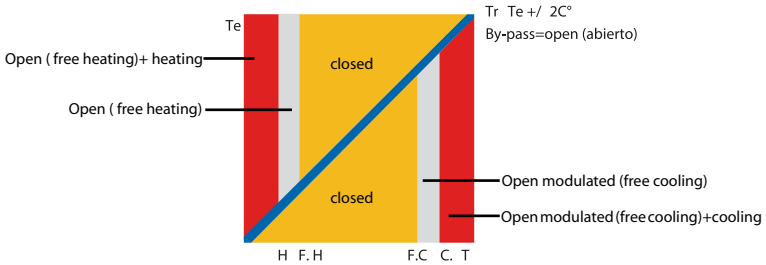
PARAM MENU: ADJUSTMENT OF USER PARAMETERS

The parameter menu is displayed only when the control detects that the conditions exist for which the current station should be selected. It may be due to the winter / summer settings in the installer menu (see) or the presence of a cold water coil. If it is not displayed, the control automatically proceeds to the management based on the outside temperature and return values. Modification of the values of the available parameters is done by selecting the desired one and pressing the OK key; at this point the current value of the parameter turns green, to go through the different possible values, use the arrows. If a dehumidification system is installed, the relative humidity threshold value can also be adjusted in this menu.

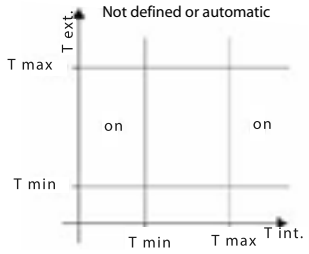
By-pass: summer

By-pass: winter

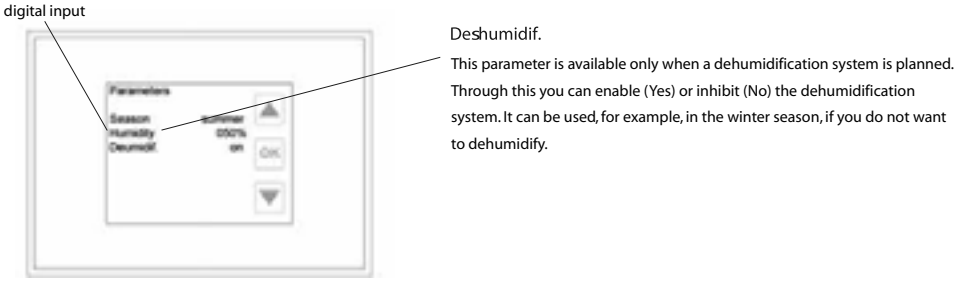
Bypass configured in "All Season \ All SeasonM" mode and / or management of an element enabled for air after-treatment (Factory menu). For the regulation, threshold values of the return temperature present in the installer menu are used (see Winter / Summer temperature) which are compared with the effective values of outdoor temperature \ ambient. If the conditions for free-heating/ cooling persist, the by-pass is adjusted accordingly according to the following diagram:



Bypass configured in universal mode (Factory menu), three values can be selected for the bypass parameter:
Automatic bypass:
A temperature range, comprised between TMIN and TMAX, is considered comfortable for the user; If the internal temperature (Tr) is within this range, the bypass will remain closed. When Tr is out of this range (Tr> TMAX or Tr <TMIN) the control will open the bypass in case the external temperature (Te) is within the comfort range (TMIN <Te <TMAX); otherwise, the bypass will remain closed.



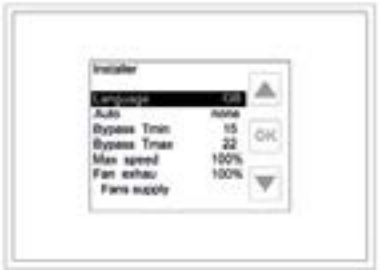
Humidity (%)
This parameter is available only when a dehumidification system is planned. Represents the threshold value above which dehumidification is enabled. The default value is 50%. Dehumidification can also be forced by a digital input.



INSTALLER MENU: CONFIGURATION OF INSTALLATION PARAMETERS

To access this menu, you need to enter a password (5678) to avoid inadvertent modification by non-expert users of parameters that could compromise the correct operation of the installation.


insert password


Installer menu

To enter the password, press the down arrow so that the corresponding line is indicated, press the OK button and enter the first digit. Select the desired value using the up / down arrows and press OK when you reach it.
Repeat the operation for the three remaining figures. If the password has been entered correctly, the installer menu is displayed; otherwise, you return to the introduction page. To modify the parameters of this menu, select the desired one (scrolling with the up/ down arrows) and press the OK button. The currently established value is shown in green, at this point it is possible to modify it using the arrows and pressing OK to confirm the selection. The parameters related to the coefficients and flow/ pressure values are available only for machines with kit, the display or not of such parameters is linked to the settings in the factory menu.

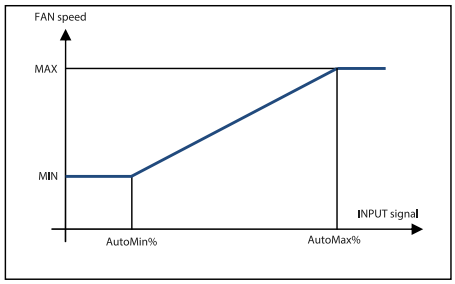
PARAMETERS AVAILABLE IN THE INSTALLER MENU

Language

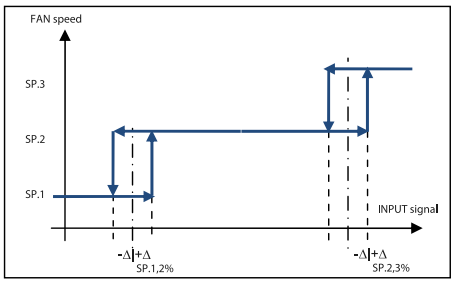
With this parameter you can select the language in which all the menus will be displayed (with the exception of the Factory menu, which will always be displayed in English).

GB English display (default value)
FR Display in French
ES Display in Spanish
IT Display in italian
NL Display in Dutch
DE Display in German
HU Display in Hungarian
DK Display in Danish
PT Display in Portuguese
SI Display in Slovenian
Auto

With this parameter you can configure a device to regulate the fan speed automatically. For the connection of the device see the electrical diagram.
ex signal The speed of the fans will be regulated by an external 0-10V analog signal (default value); if the external signal assumes a value equal to 0V; the control will signal a problem of the external signal source. For units equipped with variable speed fans:



AutoMin% corresponds to the percentage of the input signal by which the fans must operate at the minimum speed.
AutoMax% corresponds to the percentage of the input signal by which the fans must operate at maximum speed.
For units equipped with three-speed fans:



The values of SP.1.2% SP.2.3% and A depend on the values of the two parameters AutoMin% and AutoMax% according to the following:

$$SP.\,1,2\% = \frac{Automax\% - AutoMin\%}{5} + AutoMin\%$$

$$SP.\,2,3\% = \frac{7}{10} \times (AutoMax\% - AutoMin\%) + AutoMin\%$$

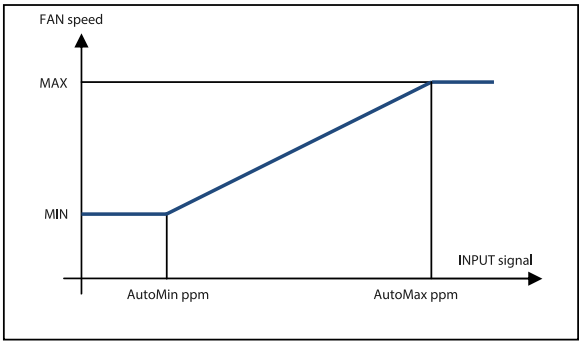
$$\Delta = \frac{Automax\% - AutoMin\%}{12}$$

HR Sensor

The speed of the fans will be regulated by a relative humidity (RH) sensor with 0-10V output and linear characteristic between 0 and 100% RH (0V correspond to 0% RH and 10V correspond to 100% RH); If the external signal from the HR sensor assumes a value equal to 0V, the control will signal an alarm. See graphs of the signal parameter ext. In this case AutoMin% corresponds to the relative humidity value for which it is considered optimal air quality, AutoMax% corresponds to the value of relative humidity for which the air quality is considered bad. A possible dehumidification system can be managed by this sensor or, if for example this input is occupied by CO2, by another supplementary selected in the factory menu.

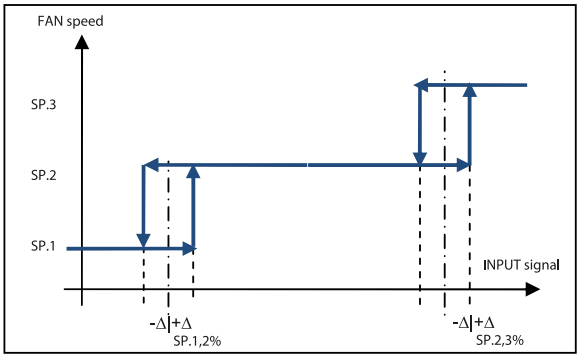
CO_2 VOC

The speed of the fans will be regulated by a CO2 sensor (or CO2-VOC) with 0-10V output and linear characteristic between 0 and 2000 ppm (0V correspond to 0 ppm and 10V correspond to 2000 ppm); if the external signal of the CO2 sensor takes a value equal to 0V the control will signal an alarm. For units equipped with variable speed fans:



AutoMin ppm corresponds to the concentration of CO2 (CO2-VOC) for which air quality is considered optimal, AutoMax ppm corresponds to the concentration of CO2 (CO2-VOC) for which air quality is considered poor.

For units equipped with three-speed fans:



The values of SP.1.2% SP.2.3% and A depend on the values of the two parameters AutoMin% and AutoMax% according to the following:

$$SP.\,1,2\% = \frac{\text{Automax ppm - AutoMin ppm}}{5} + \text{AutoMin ppm}$$

$$SP.\,2,3\% = \frac{7}{10} \times (\text{AutoMax ppm - AutoMin ppm}) + \text{AutoMin ppm}$$

$$\Delta = \frac{\text{Automax ppm - AutoMin ppm}}{12}$$

None (default value) is not provided for the use of any device for the automatic management of fan speed.

AutoMin %

This parameter is available only if the auto parameter is set to ext. or HR sensor. It can take values between 0 and 99% (steps 1%) with the limitation that AutoMin% <AutoMax% For units equipped with variable speed fans:

If auto signal ext.

corresponds to the percentage value of the input signal by which the fans rotate at the minimum speed, below this value the fans remain adjusted to the minimum speed. For example, the AutoMin% 030 value corresponds to a 3V input signal (30% of 10V).

If auto sensor HR

corresponds to the relative humidity value (in percentage) by which the fans rotate at the minimum speed, below this value the fans remain adjusted to the minimum speed. For units equipped with three-speed fans, taking into account the second image of the external auto-signal parameter, the values of SP.1.2% and SP.2.3% are set (nominal values in which they occur).
the steps of speed 1 to 2 and speed 2 to 3) you can obtain the appropriate value to assign to the parameter:

$$\text{AutoMin\%} = \frac{7 \times SP.1{,}2\% - 2 \times SP.2{,}3\%}{5}$$

AutoMax %

This parameter is available only if the auto parameter is set to ext. or HR sensor. It can take values between 1 and 100% (steps 1%) with the limitation that AutoMin% <AutoMax%. For units equipped with variable speed fans:

If auto signal ext.

corresponds to the percentage value of the input signal by which the fans rotate at the maximum speed, above this value the fans remain adjusted to the maximum speed. For example, the AutoMax value% 080 corresponds to an 8V input signal (80% of 10V).

If auto sensor HR

corresponds to the relative humidity value (in percentage) by which the fans rotate at the maximum speed, below this value the fans remain adjusted to the maximum speed. For units equipped with three-speed fans, taking into account the second image of the external auto-signal parameter, the values of SP.1.2% and SP.2.3% are set (nominal values in which the steps of the speed 1 to 2 and speed 2 to 3) you can obtain the appropriate value to assign to the parameter:

$$\text{AutoMax\%} = \frac{8 \times SP.2{,}3\% - 3 \times SP.1{,}2\%}{5}$$

AutoMin ppm

This parameter is available only if the auto parameter is set to CO2 VOC. It can take values between 0 ppm and 1980 ppm (steps of 20ppm) with the limitation that AutoMin ppm <AutoMax ppm.
For units equipped with variable speed fans, corresponds to the concentration of CO2 (CO2-VOC), expressed in ppm, by which the fans turn at the minimum speed; below this value the fans remain adjusted to the minimum speed. For units equipped with three-speed fans, taking into account the second image of the auto CO2 VOC parameter, the values of SP.1.2% and SP.2.3% are set (nominal values in which the speed steps are produced) 1 to 2 and speed 2 to 3) you can obtain the appropriate value to assign to the parameter:

$$\text{AutoMin ppm} = \frac{7 \times SP.1{,}2\% - 2 \times SP.2{,}3\%}{5}$$

AutoMax ppm

This parameter is available only if the auto parameter is set to CO2 VOC. It can take values between 20 ppm and 2000 ppm (steps of 20 ppm) with the limitation that AutoMin ppm <AutoMax ppm For unit equipped with variable speed fans, corresponds to the concentration of CO 2 (CO2 -VOC), expressed in ppm , by which the fans rotate at maximum speed; above this value the fans remain adjusted to the maximum speed. For unit equipped with three-speed fans, taking into account the second image of the auto CO2 VOC parameter, the values of SP.1.2% and SP.2.3% are set (nominal values in which the speed steps occur 1 to 2 and speed 2 to 3) you can obtain the appropriate value to assign to the parameter:

$$\text{AutoMax ppm} = \frac{8 \times SP.2{,}3\% - 3 \times SP.1{,}2\%}{5}$$

AutoMinutes

000 -> 240

This parameter is available only if the auto parameter is set to a value other than none. No (default value) there is no effect on the operation of the system. It is a value expressed in minutes, it represents the interval of time elapsed since the signal of the external device for the auto mode has reached, or exceeded, the value AutoMax% or Auto Max ppm, without descending below said value, above which indicates an anomaly in the external device (CO2 probe, HR or external signal).

AutoOn %

000 ->100

This parameter is available only if the auto parameter is set to ext. or HR sensor and the digital output is set to auto cmp. Default value 050, is expressed in%; for values of HR% measured by the relative humidity sensor (or for values of the external signal 0-10V in percentage) lower than the set, the digital output changes state.

AutoOff%

000 ->100

This parameter is available only if the auto parameter is set to ext. or HR sensor and the digital output is set to auto cmp. Default value 050, expressed in%; for values of HR% measured by the relative humidity sensor (or for values of the external signal 0-10V expressed in percentage) higher than the adjusted one, the digital output returns to the normal state.

AutoOn ppm

0000 -> 2000

This parameter is available only if the auto parameter is set to CO2 VOC and the digital output is set to auto cmp. Default value 0500, expressed in ppm; for ppm values measured by the CO2 probe lower than adjusted, the digital output changes state.

AutoOff ppm

0000 -> 2000

This parameter is only available if the auto parameter is set to CO2 VOC and the digital output is set to auto cmp. Default value 0500, expressed in ppm; for ppm values measured by the CO2 probe above the adjusted one, the digital output returns to the normal state.

Bypass Tmin

12->18

This parameter is active only if the bypass management is set to Universal (Factory menu). Default value 15, expressed in degrees centigrade. It is the minimum temperature value (Tmin) that the system will attend to bypass management in the case that Automatic Bypass is set in the Parameters menu.

Bypass Tmax

20->30

This parameter is active only if the bypass management is set to Universal (Factory menu) .- Default value 22, in degrees centigrade. It is the maximum temperature value (Tmax) that the system will attend to bypass management in case Parameter is set to Automatic bypass.

Hours filters

00000 -> 99999

This parameter is active when the jammed filters alarm is based on the hours of operation of the unit (Factory menu) Default value 02000, in hours. Represents the number of hours of operation of the unit after which the dirty filter alarm will be triggered. To reset the alarm, the installer must set the new limit at which the signaling of the alarm is desired (check current operating hours in the status menu, parameter Vent hours):

Hours filters = Hours vent. + hours for new alarm

Regulation

Tr on-off

This parameter allows to modify, when there is air after treatment, the reference for the set point. Normally based on the return temperature (on), changing the value to off becomes the intake temperature.

Vel.max

055% ->100%

This parameter is available if the control is set to manage variable speed fans (Factory menu) Default value 100%, is the maximum speed of the fans expressed as a percentage of the nominal value (reduction of the maximum speed). The maximum speed adjustable in the main window will always be 100% even for Vel values. max. less than 100%, which changes is the minimum speed value adjustable by the end user:

$$\text{minimum speed} = \text{INT}_{\text{EXCESS}} \left(\frac{\text{VMIN} \times 100}{\text{VMAX} \times \text{step}} \right) \times \text{step}$$

$$\begin{cases} V_{MAX} = \dfrac{\text{Vel.max} \times \text{VE}}{100} & \text{if VE} \leq 100 \\ V_{MAX} = \dfrac{\text{Vel.max} \times 100}{\text{VE}} & \text{if VE} \geq 100 \end{cases}$$

VE = speed in percentage of the extraction fan with respect to the intake fan (see following parameter).
INT EXCESS= rounds to the next integer VMIN = minimum speed set in the Factory menu.
Step = discrete values of the adjustable speed values (5% adjustable to 1% by specific demand, Factory menu).

Press. Max

This parameter is available only for constant pressure units t (Factory menu). 1000Pa.

DpEstr. =XXX%

DpIng

067%->150% .

This parameter is available only for constant pressure units with control over the two flows. Default value 100%, expresses, in percentage, the desired ratio between the pressure of the extraction fan and the impulsion fan, allowing an imbalance between the pressures of the two flows to be made.

Kp DpI

This parameter is only available for constant pressure units with control over the two flows (Factory menu). It is the value of the proportional coefficient relative to the admission flow (default 0.40).

Tau DpI sec.

This parameter is only available for constant pressure units with control over the two flows (Factory menu). It is the integral time value relative to the admission flow (default 0.30).

Kp Dp

This parameter is only available for constant pressure units with control over the two flows (Factory menu). It is the value of the proportional coefficient relative to the return flow (default 0.40).

Tau Dp sec.

This parameter is only available for constant pressure units with control over the two flows (Factory menu). It is the integral time value relative to the return flow (default 0.30).

Caud.Extr.=XXX%
Caud.Ingr.
067%->150%
This parameter is available only for units adjusted to constant pressure with control over the two flows. Default value 100%, expresses, in percentage, the desired ratio between the flow rate of the extraction fan and the supply fan, allowing an imbalance to be made between the flow rates of the two flows.

Kp Port. In
This parameter is available only for constant flow units with control over the two flows (Factory menu). It is the value of the proportional coefficient relative to the admission flow (default 0.40).

Tau Caud. I sec
This parameter is available only for constant flow units with control over the two flows (Factory menu). It is the integral time value relative to the admission flow (default 0.30).

Kp Caud. E s
This parameter is available only for constant flow units with control over the two flows (Factory menu). It is the value of the proportional coefficient relative to the return flow (default 0.40).

Tau Caud. E s
This parameter is available only for constant flow units with control over the two flows (Factory menu). It is the integral time value relative to the return flow (default 0.30).

Kp Caudal
This parameter is only available for constant flow units with control over a flow (Factory menu). It is the value of the proportional coefficient relative to the flow measured (default 0.40).

Tau Caud. s.
This parameter is only available for constant flow units with control over a flow (Factory menu). It is the integral time value relative to the measured flow (default 0.30).

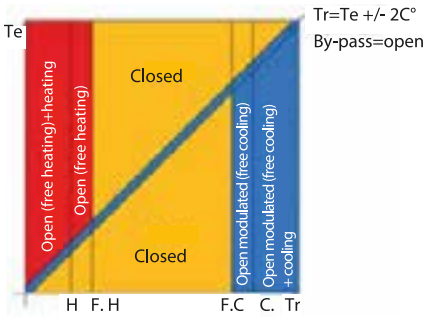
ImpostaZero Port
With this parameter, the pressure sensor can be reset. The operation must be carried out with the unit turned off; It is advisable to carry out it periodically to correct possible reading errors.

Vent.estr.= XXX%
Vent.entrada
067%->150%
This parameter is available if the control is configured to manage variable speed fans. Default value 100%, expresses, in percentage, the desired ratio between the speed of the extraction fan and the drive fan, allowing an imbalance between the two air flows to be made.

WINTER TEMPERATURE / SUMMER TEMPERATURE

Through these parameters you can access the menus below to adjust the effective return temperature threshold values (Tr) for bypass or base management for bypass management with air after-treatment. The summer / winter values coincide in order to have an optimal setting for all seasons. In this way, if the post-cooling is not installed, the transition operation is also avoided by inhibiting the parameter menu (it is shown only when necessary). The control automatically proceeds to inhibit inappropriate selections. With the function Temperat. Predef. the default values are adjusted (if modified).

Diagram regulation by-pass



Ti (Entr.) Min
16->20INV.
16->24 EST.

This parameter is available in all cases (although air after-treatment is not foreseen). Default values 18 (winter) - 22 (summer), expressed in degrees centigrade; it is the lower end of the interval in which the control maintains the temperature of the flow of driving air. If the bypass is set at the factory as on-off below this value it will be closed, if it is modulating (only free cooling or free cooling) it will be regulated in it. It is also used as a minimum reference for aftercare.

Ti (Entr.) Max
28->40

This parameter is available if the control is configured to manage an electric post-heating system or heating / cooling by modulating water. Default value 30, is expressed in degrees centigrade; it is the upper end of the interval in which the control maintains the temperature of the flow of driving air in heating or cooling mode.

DVenti 000%->100%
000 Pa
0000m3\h
0-1-2-3

Default value 0. Represents the value in percentage of fan speed to add to the set to obtain the desired increase during dehumidification. For example, if the fan speed is 20% and this parameter is set to 30%, in
the moment when dehumidification is enabled, the speed goes to 50% (20 + 30). If the machine is configured to operate at constant pressure or flow, this value is expressed in Pascals or in cubic meters per hour. The value to which to pass depends on the established full scale. For 3-speed units, it is expressed in a simple numerical form (0-1-2-3) corresponding to the subsequent increase in speed to be established.

COMMUNICATION (ONLY CTRL-MAX² IP TOUCH PANEL WITH MODBUS)

A version of the touch screen control that supports the Modbus TCP-IP protocol is available through an ethernet connector mounted directly inside the panel or Modbus RTU via an RS485 additional interface card upon request. For wiring, see the section "Wiring the control panel".
In this submenu, the installer menu, the communication parameters of the modbus protocol in use can be established.

Default

Restore factory settings.

Modbus

It allows to choose between the TCP-IP or RS485 protocol.

Address

It can be configured only for the RS485 protocol. Represents the address that you want to assign to the unit (default = 1).

Baud rate

It can be configured only for the RS485 protocol. It is the transmission speed that you want to assign to serial communication (default = 9600).

Stop bits

It can be configured only for the RS485 protocol. Represents the value of the stop bit that you want to assign to serial communication (default = 1).

Conn. to (s) 10sec

The read time of the modbus registers can be modified using this parameter. This value indicates the maximum time after which, if there is no access to the accesses from the master device, the modifications made by modbus are restarted. It can be deactivated but for security reasons, once the machine is turned off, the restart will be carried out as well.

IP0.IP1.IP2.IP3

Represents the IP address of the machine (default = 192.168.1.243 modifiable).

NM0.NM1.NM2.NM3

Represents the address of the subnet mask of the machine (default = 255.255.255.0 modifiable).

GW0.GW1.GW2.GW3

Represents the gateway address of the machine (default = 192.168.1.1 modifiable).

Reset

Each change is made effective by means of the reset or reset function, which prevents the machine from being switched on again.

Parameters

Subnet mask-Gateway (máscara de subred-puerta de enlace)

Specifications Modbus protocol

- MODBUS TCP-IP:

Transmission speed: 10/100 Mbit / s.

Automatic negotiation of transmission speed.

Auto -MDIX (automatic swap for crossed cables), disconnection after 10 sec without access to the registers (modifiable via MODBUS).

Maximum number of simultaneous connections: 8 Default address:

IP: 192.168.1.243 MASK: 255.255.255.0 LINK DOOR: 192.168.1.1

- MODBUS-RTU:

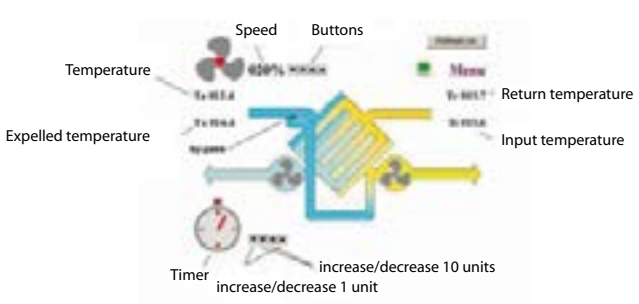
Transmission speed: 9600 bit / s.

1 stop bit, even parity, disconnection after 10 without access to the registers (modifiable via MODBUS) closing bridge of the rs485 card, to be entered if the unit is the last device in the line.

Web server

Installed directly on the touch panel we have a web server that allows us to monitor the status of the machine and modify its parameters through PC. Modifications made with web services are permanent and remain stored even if the unit is turned off. For the connection to the web server to be correct, the first three fields of the IP address of the panel and that of the computer to which it is connected must match. For example, if our address is 192.168.1.243, the address of the PC should be 192.168.1.xxx. To start the web server after connecting the network machine, open your browser and type in the address bar: http \\ 192.168.1.243.

The main screen will appear as in the figure:



Main screen web server

On the screen we find a reproduction of the typical touch panel screen, the differences are the variations that are made with the arrow buttons. You can increase or decrease the values of a unit by clicking on the button of an arrow; with the button of two arrows it can be increased or decreased in several units. By means of the central button you can carry out the direct shutdown of the after-heating, fans and timer. The modifications made are saved automatically after 5 seconds. The writing of the retention records via Modbus is disabled for 60 sec after each modification made with the web server. To have a continuous update of the website, click on the "refresh on" button, it will go to "refresh off" and the page will be updated every 5 sec. If the machine is equipped with a post-heating system we will also have the desired set point temperature. Clicking on the Menu icon displays a list of available options, which are selected with the arrow keys. For the description of the different menus, see the previous sections.

Interaction table

The configuration parameters, set points, input signals, states and alarms are accessible as "retention registers" (word access 16 bits). BXX is the XXth bit of a word (XX is a value of 00 to 15). R indicates that the word is only readable, R / W in turn indicates that the word is both readable and writable. The R / W values are reset to the values set by the web server if the access time to the registers is exceeded or the unit is switched off. The most significant bit is represented by the highest value, for example, between B00 and B15, the latter represents the most significant.

ADDRESS	WORD ID	FORMAT	R/W	DESCRIPTION VALUES AT IGNITION OR TO DISCONNECT
		CONFIGURATION		
1	SW_PN_0	SW TYPE 0	R	MODEL SW
2	SW_PN_1	SW TYPE 1	R	MODEL SW
3	SW_PN_2	SW VER 0 (AAMM)	R	VERSION SW
4	SW_PN_3	SW VER 1 (DDPP)	R	VERSION SW
5	REMOTE_CONTROL	B00: R/W DEVICE_RESET (1=RESET)		BIT NOTICE RESET CARD: BY DEFAULT = 1, IF IT IS ADJUSTED TO 0 AND AFTER IT IS IN 1 IT MEANS THAT THERE HAS BEEN A RESET OF THE CARD.
		B01: R TERMINAL_ACTIVE (1=ACTIVE)		TERMINAL CONNECTION.
		B02: R TERM_RS485_ACTIVE (1=ACTIVE)		TERMINAL CONNECTION. RS485.
		B04: R/W CONNECTION_LOST 1=LOST)		BIT NOTICE DISCONNECT: DEFAULT = 0, IF BELOW IT IS IN 1 IT MEANS THAT THERE HAS BEEN A DISCONNECT
		B13: R/W CMD DEVICE RESET (1=RESET)		DEFAULT = 0; IF IT IS ADJUSTED TO 1 THE CARD RESTS
		B14: R/W WR_APP_CONF (1=WRITE PENDING)		BIT TO MEMORIZE THE CONFIGURATION IN NOVRAM (YES = 1)
		B15: R/W WR_SP (1=WRITE PENDING)		BIT TO MEMORIZE IN NOVRAM THE ADJUSTMENT POINTS (YES = 1)
20	PARAMETER_FLAGS	B00- 01: R/W SEASON 0: SEASON_ND 1: SEASON_WINTER 2: SEASON_SUMMER B02- 03: R/W BYPASS 0: BYPASS_AUTO 1: BYPASS_OFF 2: BYPASS_ON	R/W	ADJUSTMENT BYPASS STATION (B00 B01) 0=NON DEF.\AUTO 1=WINTER W 2=SUMMER UNIVERSAL(B02 B03) 0=NON DEF.\AUTO 1=OFF 2=ON
24	UNIT_1_MAX_FILT_HOURS	0- 199 (500h)	R/W	THRESHOLD ALARM FILTERS HOURS UNIT 1
25	UNIT_2_MAX_FILT_HOURS	0- 199 (500h)	R/W	THRESHOLD ALARM FILTERS HOURS UNIT 2
26	UNIT_3_MAX_FILT_HOURS	0- 199 (500h)	R/W	THRESHOLD ALARM FILTERS HOURS UNIT 3
27	UNIT_4_MAX_FILT_HOURS	0- 199 (500h)	R/W	THRESHOLD ALARM FILTERS HOURS UNIT 4

CONTROLS				
51	SPEED_SET_POINT	FOR VARIABLE SPEED VERSION: 0- 100 % ; 101=TIMER ; 102=AUTO. FOR THREE SPEED VERSION: 1-2-3 ; 4=TIMER ; 5=AUTO FOR CAV\COP UNITS : PASCAL-M3\H TIMER(65534) AUTO(65535).	R/W	SPEED ADJUSTMENT POINT FANS. FOR VAV UNIT: 0-100%; 101 = SCHEDULE PROGRAM; 102 = AUTO. FOR 3 SPEED UNITS: 1-2-3 4 = SCHEDULE PROGRAM; 5 = AUTO. FOR CAV UNIT \ CP: PASCAL-M3 \ H TIMER (65534)
52	TEMPERATURE_SET_ POINT	OFF(<=48) or 50- 300 (0,1 °C)	R/W	TEMPERATURE ADJUSTMENT POINT (ONLY IF THERE IS POSTPARTING OF AIR)
53	TIMER	0- 14400 (sec.)	R/W	MAXIMUM SPEED TIMER FANS
54	SPEEDS REMOTE CONTROL	B00- 06: REMOTE_SUPPLY_SPEED 0- 100% B07: SUPPLY_SPEED_REMOTE_CONTROL 0: OFF 1: ON B08- 14: REMOTE_ EXHAUST_SPEED 0- 100% B15: EXHAUST_SPEED_REMOTE_CONTROL 0: OFF 1: ON	R/W	PARAMETERS TO UNLINK THE SPEED OF CONTROL FANS AND CONTROLLED THEM INDEPENDENTLY. IT IS ENABLED BY MEANS OF THE BITS 07 (IMPULSION) AND 15 (RETURN). THROUGH 00-06 AND 08-14 ADJUST THE SPEED OF EACH
55	RHUMIDITY_SET_ POINT	S0-100%	R	HUMIDITY ADJUSTMENT POINT WHEN THE FUNCTION OF DEHUMIDIFICATION
81	TEMP_E	(0,1 °C)	R	TEMP. EXTERNAL
82	TEMP_R	(0,1 °C)	R	TEMP. RETURN
83	TEMP_X	(0,1 °C)	R	TEMP. EXPELLED
84	TEMP_I	(0,1 °C)	R	TEMP. ADMISSION
85	TEMP_W	(0,1 °C)	R	TEMP. WATER BATTERY

		DIGITAL INPUT:		ESTADO ENTRADA DIGITAL (1=ACTIVO):
		B00: BYPASS		BYPASS STATUS: 1 = OPEN; 0 = CLOSED
		B01: SUPPLY_SPEED_REM_CONT_ACTIVE		ENABLING CONTROL INDEPENDENT IMPULSION FAN ACTIVE
		B02: EXHAUST_SPEED_REM_CONT_ ACTIVE		ENABLING CONTROL INDEPENDENT FAN RETURN ACTIVE
		B03: DEHUM_ON		ACTIVE DEHUMIDIFICATION
86	STATUS_FLAGS	B04: NOFROST_ACTIVE	R	ANTIFREEZE STATE
		B05: EXT_DI_HUMIDITY		STATE DIGITAL ENTRY: HUMIDITY
		B06: EXT_DI_PIR_MIN		STATE DIGITAL ENTRY: PIR
		B07: EXT_DI_REMOTE_OFF		STATE DIGITAL ENTRY: REMOTE
		B08: HEAT\COOL_1		STATE 1 POSCALENT / REFRIG.
		B09: HEAT_2		STAGE 2 POSCALENT.
		B10: TEMP_WATER_LOW		ANTIFREEZE STATE WATER BATTERY
		B11: EXT_DI_SUMMER		STATE DIGITAL ENTRY: STATION
		B12: EXT_DI_FIRE		STATE DIGITAL ENTRY: FIRE
		B13: EXT_DI_WATER_NOFROST		ANTIFREEZE WATER BATTERY
		B14: EXT_DO_AUTO_COMPARE		DIGITAL OUT STATUS: AUTO COMPARE
87	SPEED_C_VALUE	IF FANS_FAIL_TACH (REG 7 –B08) IS SET TO 1 RPM, OTHERWISE %	R	SPEED FAN IN RETURNS OR PERCENTAGE (SEE REGISTER 7- B08)
88	SPEED_D_VALUE	IF FANS_FAIL_TACH (REG 7 –B08) IS SET TO 1 RPM, OTHERWISE %	R	SPEED FAN RETURN RETURNS OR PERCENTAGE (SEE REGISTER 7- B08)
89	AUTO_INPUT_VALUE	%	R	PERCENTAGE READING VALUE: PROBE AIR QUALITY (=% 2000 PPM) HUMIDITY EXTERNAL SIGN
		B00: COMM_X540_FAIL		COMMUNICATION ERROR CARD X540.
		B01: TE_FAIL		FAULT LINE EXTERNAL PROBE.
		B02: TR_FAIL		FAULT LINE RETURN PROBE.
		B03: TX_FAIL		FAULT LINE EXPULSION PROBE.
		B04: FILTERS_FAIL		ALARM FILTERS STAMPED.
		B05: FANS_FAIL		FAN FAILURE.
		B06: AUTO_FAIL		FAILURE PROBE AIR / HUMIDITY.
		B07: TI_FAIL		FAULT LINE ADMISSION PROBE.
90	ALARMS 1	B08: COMM_X531_FAIL	R	COMMUNICATION ERROR CARD X531.
		B09: TW_FAIL		ICE ALARM WATER BATTERY.
		B10: TW_LOW		ALARM TIME WAITING PROBE QUALITY AIR / MOISTURE.
		B11: AUTO_TO_FAIL		COMMUNICATION ERROR CARD X570 IMPULSION.
		B12: COMM_X570_DPS_FAIL		COMMUNICATION ERROR CARD X570 RETURN.
		B13: COMM_X570_DPE_FAIL		PRESSURE SENSOR FAILURE IMPULSION.
		B14: DPSUPPLY_FAIL		PRESSURE SENSOR FAILURE RETURN.

91	DP _SUPPLY	B15: DPEXHAUST_FAIL		FOR UNITS COP = VALUE OF PRESSURE SIDE IMPULSION FAN
92	DP _EXHAUST	(Pa)		FOR UNITS COP = VALUE OF PRESSURE SIDE FAN RETURN
93	FLOW_SUPPLY	(m3/h)		FOR CAV UNITS = FLOW VALUE FLOW VALUE. IMPULSION
94	FLOW_EXHAUST	(m3/h)		FOR CAV UNITS WITH DOUBLE PROBE = FLOW VALUE SIDE VALUE. RETURN
95	FAN_HOURS_H	(65536 h)		OPERATING TIME FANS (FAN_HOURS_H * 65536+ FAN_HOURS_L)
96	FAN_HOURS_L	(h)		
97	ALARMS 2	B00: CONFIGURATION_FAIL B01: ANTI ICE_FAIL		CONFIGURATION ERROR ANTIFREEZE ALARM
98	PRE_HEAT	(%)		PERCENTAGE MODULATING PRE-HEATING REGULATION.
99	POST_HEAT	(%)		PERCENTAGE REGULATION POST-HEATING MODUL.
		UNIT_2_DATA		
101	TEMP_E		R	
		UNIT_4_DATA		
141	TEMP_E		R	
1001 1002 1003	TIME_TABLE_SPEED_0 TIME_TABLE_SPEED_1 TIME_TABLE_SPEED_2	IF CONFIG_FLAGS_1.MODULE_FLAG = 0 : 0-1-2-3) OR AUTO(5) IF CONFIG_FLAGS_1.MODULE_FLAG = 1 and PRESS_FLOW_REG_PRESENT = 0 : 0-100% OR AUTO(102) IF CONFIG_FLAGS_1.MODULE_FLAG = 1 AND PRESS_FLOW_REG_PRESENT = 1 : 0 - SPEED_RANGE OR AUTO(65535)	RW	SELECTION OF SPEED A ASSOCIATE TO THE TIME FRAME
1017 1024	MONDAY-CHANGE-0 / 7	B00-10: TIME - MINUTES B11-13: SPEED SELECTION : 000: TIME_TABLE_SPEED_0 001: TIME_TABLE_SPEED_1 002: TIME_TABLE_SPEED_2 B14-15: TEMPERATURE REG. ENABLE 00: OFF 01: ON	RW	ADJUST TIME IN MINUTES FROM 00.00 (EJ.:60=1.00) SELECTION OF SPEEDS TEMPERATURE SELECTION
1025 1032	TUESDAY-CHANGE-0 / 7		RW	AS THE PREVIOUS
1033 1040	WEDNESDAY-CHAN-GE-0 / 7		RW	AS THE PREVIOUS
1041 1048	THURSDAY-CHANGE-0 / 7		RW	AS THE PREVIOUS
1049 1056	FRIDAY-CHANGE-0 / 7		RW	AS THE PREVIOUS
1057 1064	SATURDAY-CHANGE-0 / 7		RW	AS THE PREVIOUS
1065 1072	SUNDAY-CHANGE-0 / 7		RW	AS THE PREVIOUS

SERVICE DATA

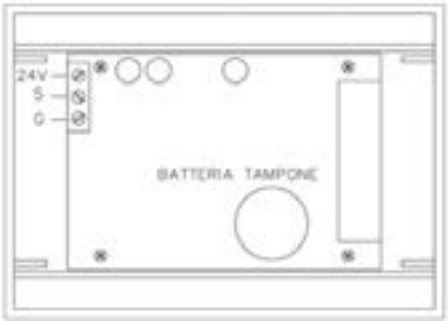
8502	BAUD RATE	(100 bit/s)	RW	DEFAULT=96
8503	TIMEOUT	(sec.)	RW	TIME OF DISCONNECTION BY DEFECT = 10 SEG. 65535 DISABLED THE CONNECTION IN CASE OF ABSENCE OF READING THE REGISTERS
8559	PASSWORD		RW	INSTALLER: 5678 ENTER FOR MODIFICATIONS MENU INSTALLER

INSTALLATION

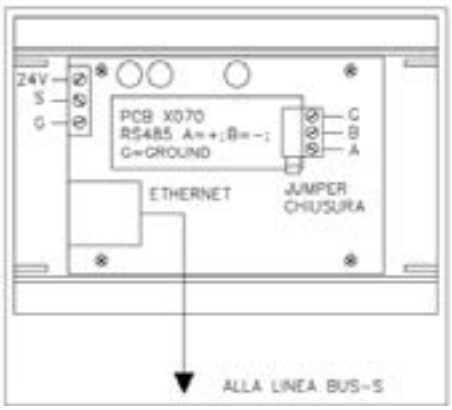
The installation must be carried out by specialized personnel. For optimal operation, the remote panel should be fixed to an internal wall at an approximate height of 1.5 m from the ground, away from heat sources (radiators, stoves, etc.) and should not be exposed to sunlight direct It should not be installed near doors that could damage the electronics when they closed.

WIRING CONTROL PANEL

Connect the power to the terminals indicated with 24V and G respecting the correct polarity. Connect the BUS to the terminal indicated with S. The use of a shielded cable with sections of at least 0.3 mm is recommended. In case of communication errors, check the connections between the remote panel and the electronic card. Always use a shielded at least 3x0.3mm cable for a possible RS485 card.



Remote panel: rear view



Tcp-ip connection / additional card

CONTROL FEATURES

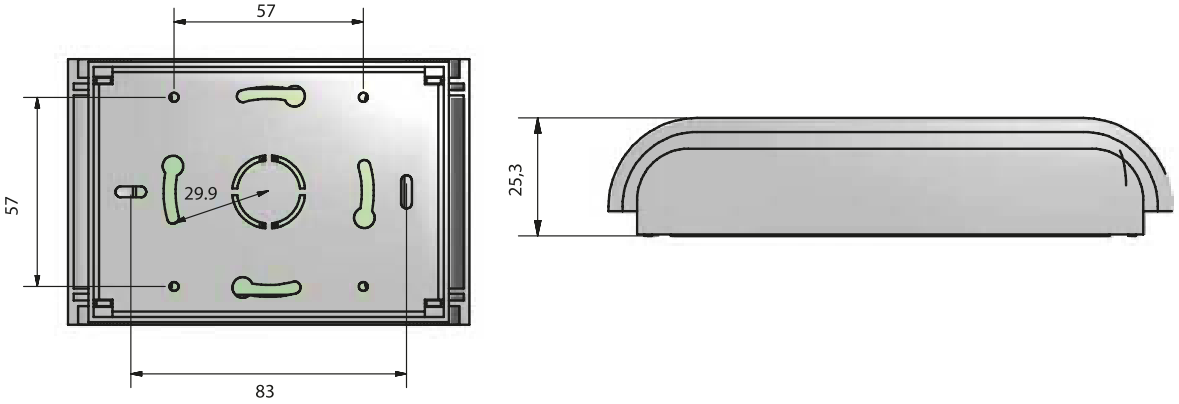
Power supply: 9/30 VDC 250mW, working temperature between 0 and 50 ° C; storage temperature between -20 ° C and 70 ° C.

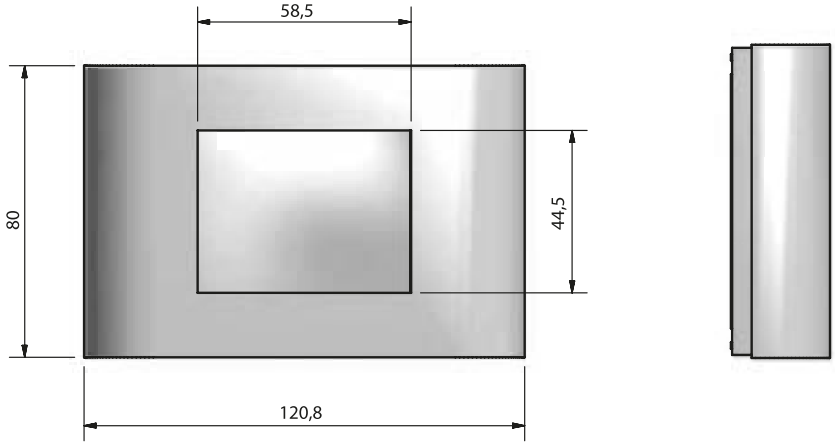
WARRANTY CONDITIONS

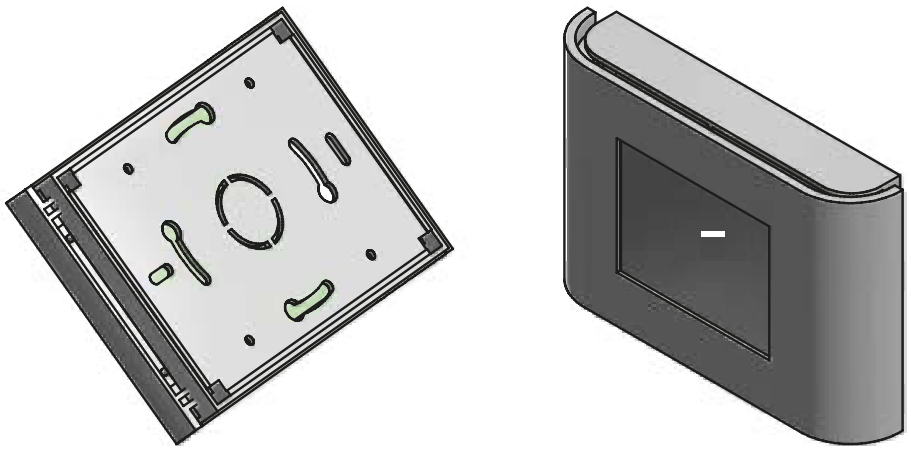
The warranty period of 2 years (24 months) begins with the receipt of the device, the date of receipt must be checked on the purchase invoice. In the period covered by the warranty, the manufacturer repairs all defects arising from manufacturing errors or material defects free of charge. At its discretion it will replace defective parts or entire appliances. Any other request for guarantee services is excluded. The manufacturer also declines all responsibility for subsequent damages.

The material claimed as defective must be sent to the manufacturer through the distributor, accompanied by the detailed description of the defect completed by the distributor. The customer is responsible for shipping the goods. The repair is sent by the manufacturer. In no case does the manufacturer respond for defects caused by improper use not in accordance with the manual of use provided and by natural events such as lightning, floods, earthquakes, fires, etc. It also declines any responsibility for repairs or modifications made to the devices by people outside the manufacturing company.

DIMENSIONS (mm)



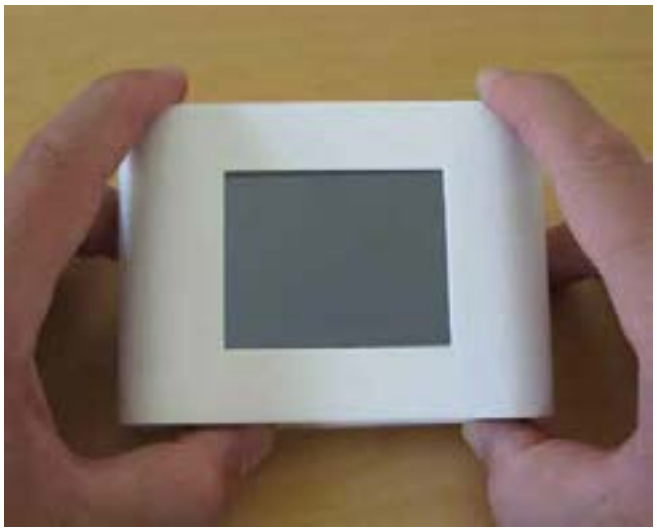




ASSEMBLY (mm)

Insert two supports to the right and left of the panel

Place the panel on the stand



Push the support upwards and the panel down until the panel is completely fixed in the support