



**MITSUBISHI
ELECTRIC**

**MITSUBISHI ELECTRIC
HYDRONICS & IT COOLING SYSTEMS S.p.A.**

MANUAL CODE:

UM_TouchRoomHMI_VB02_00_02_24_EN

TOUCH ROOM HMI Version 02

USER MANUAL

EN

The original language is Italian. All other languages are translations of the original.

For safe and correct use, carefully read the installation, use and maintenance manual of the unit.

**Before carrying out any operation on the machine,
read this manual carefully
and make sure you understand
all the instructions and information given**

**Keep this document in a known
and easily accessible place
throughout the operational life of the machinery.**

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**WARNING:**

The Touch Screen interface software is protected by a digital signature. This means that it can only work on boards supplied by Mitsubishi Electric Hydronics & IT Cooling Systems S.p.A. and not on boards purchased from other dealers.

SYMBOLS

A number of symbols are used to highlight some parts of the text that are of particular importance. These are described below.

**WARNING:**

Information on the occurrence of situations/operations which, if ignored or not duly acted upon, could put not only the Unit but also the functions of the Software and the various electronic parts at risk.

**OBLIGATION:**

Indicates that it is necessary to behave appropriately/follow specific operations so as not to compromise the protection of access points reserved solely to operators who are authorised and/or guarantee normal operation of the Unit itself.

**INFORMATION:**

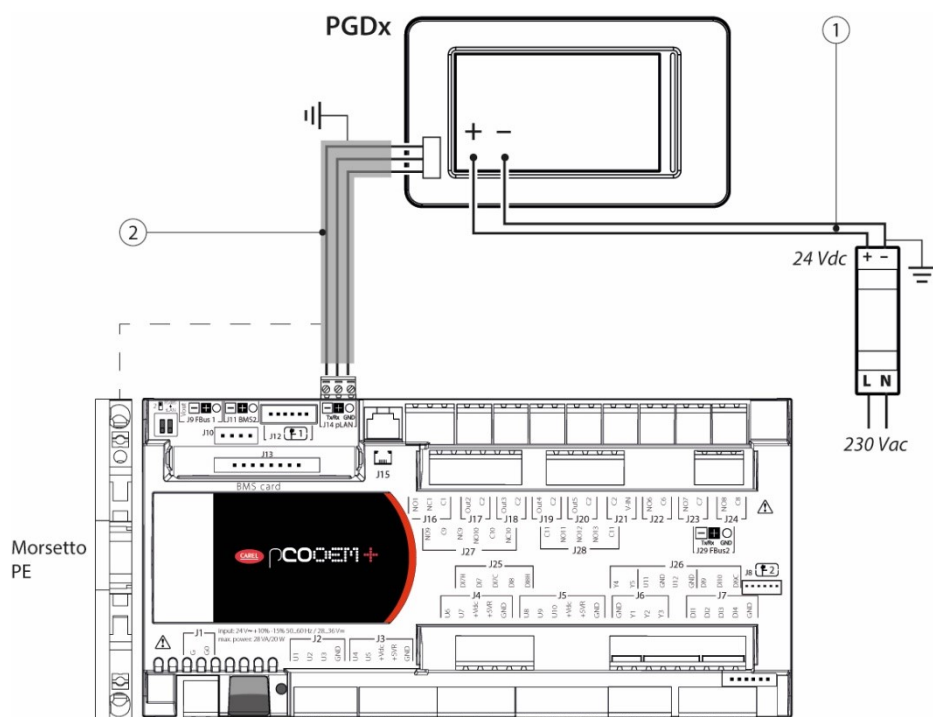
Indicates technical/functional information of particular importance which should not be overlooked.

1 FRONT PANEL



Figure 1-1: front panel image.

The figure below shows the connection of the pCOOEM+ to the Touch Room HMI:



NOTICE:

The cables (1 and 2) shown in the figure above are the responsibility of the customer.

The following table shows the technical specifications of the two cables:

Serial port with screw terminal	RS485 max 115.2 Kb/s Detachable screw connector 3.81 pitch AWG 20-22 shielded cable with twisted pairs for $\pm L_{max} = 500m$ - tightening torque 0.25Nm (2.2lbf x in)
Power cable	$L_{max} = 50 m$ - AWG 12-20 cable cross-section tightening torque 0.8 Nm (7 lbf x in).

2 DESCRIPTION OF THE HARDWARE



(Replace screen)

Figure 2-1: panel characteristics.

1. **Micro-USB 2.0 port**
2. **24 Vdc power supply** using accessory C511111867
3. **RS485 serial connector**
4. **Temperature and humidity probes**

3 GENERAL WARNINGS

**WARNING:**

The touch screen terminal must only be powered with 24VDC current.

**WARNING:**

Different input voltage and current values may damage the device.

**WARNING:**

Use appropriate cable lugs for the terminals in use.
Loosen each screw, insert the cable lugs and then tighten the screws.
Afterwards, pull the cables slightly to check that they are correctly tightened.

**WARNING:**

If used at particularly low temperatures, the response time of the display may decrease noticeably.
This is normal and does not indicate a malfunction.

4 LOADING PAGE

After connecting the power to the terminal, the loading page will show a red progress bar.

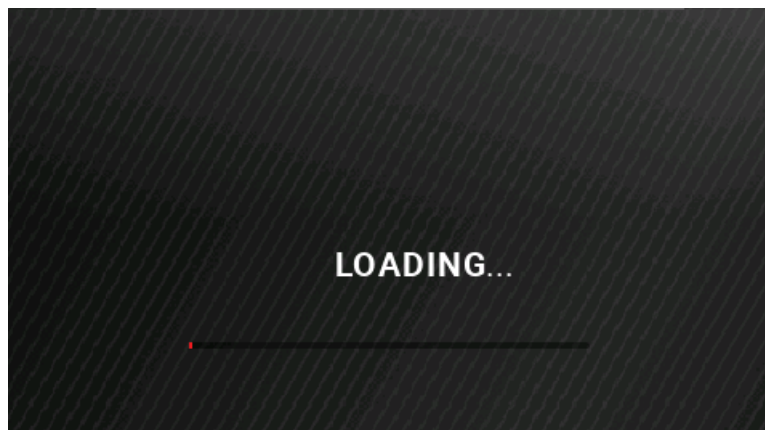


Figure 4-1: loading started Touch Room HMI screen.

Almost all the screens of the touch screen have two sections: top (**header**) and **body**. In this case there isn't a header, but the following can be seen in the body:

- A *red bar* to indicate the loading progress.

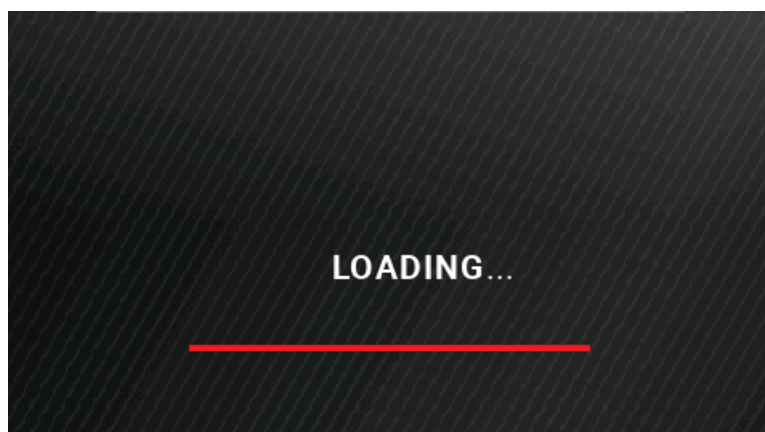


Figure 4-2: loading completed screen.



INFORMATION:

The page will take approximately four seconds to load.

5 DESTINATION PAGE

After the loading of the previous page has been completed, the screen opens on the destination page (the screensaver) (**fig.5-1**), which shows a set of information and details:

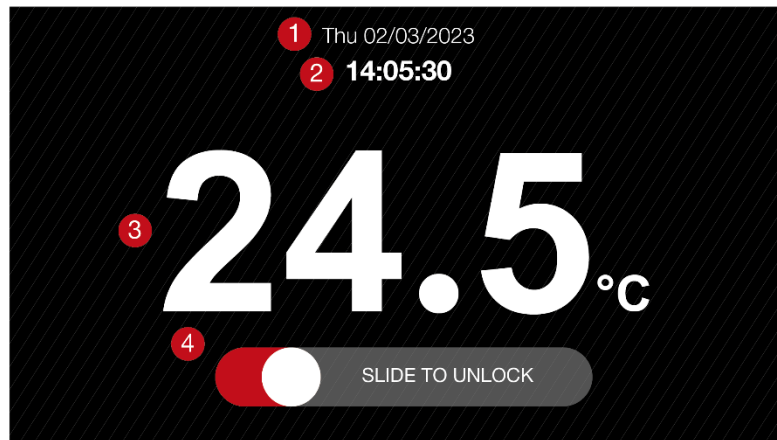


Figure 5-1: description of the destination page.

The screen body shows, starting from the top:

1. Calendar (day/month/year - dd/mm/yy).
2. Time (hours/minutes/seconds - hh:mm:ss).
3. The *air temperature value* which has the following configuration:
 - air temperature read by the *touch probe*.
4. The scroll bar which can be used to unlock the screen.

5.1 Device unlock

To correctly unlock the screen, slide the scroll bar completely to the end (**fig.5-4**). If the scroll bar is not moved completely to the left, it will return back to the beginning and the operation will have to be repeated in order to unlock the screen.

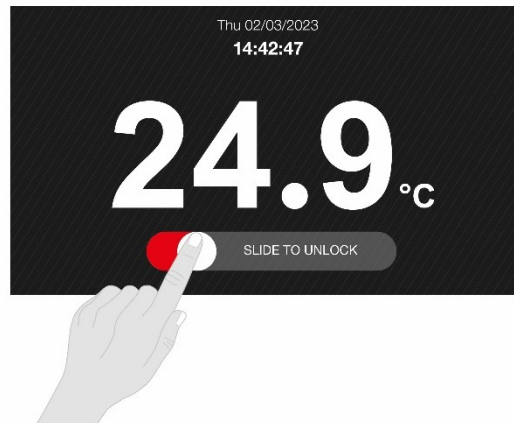


Figure 5-2: scroll start.

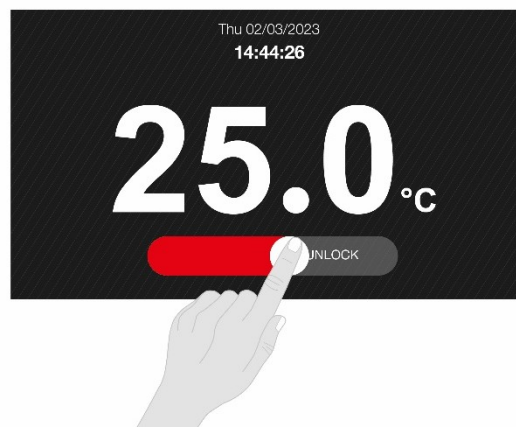


Figure 5-3: scroll half-way.

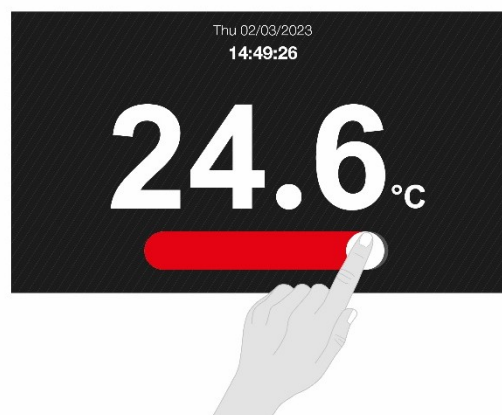


Figure 5-4: scroll end.

6 PASSWORD PAGE

After successfully unlocking the destination page, if the device is being started for the first time, the user will be prompted to enter the default password:

- Default password: **1971**

The new screen that appears will be as follows (**fig.6-1**). It is important to note that the password entry page is initially active. The user can deactivate it in the settings menu – display – enable password (OFF) (refer to sub-section **16.4** for more details).

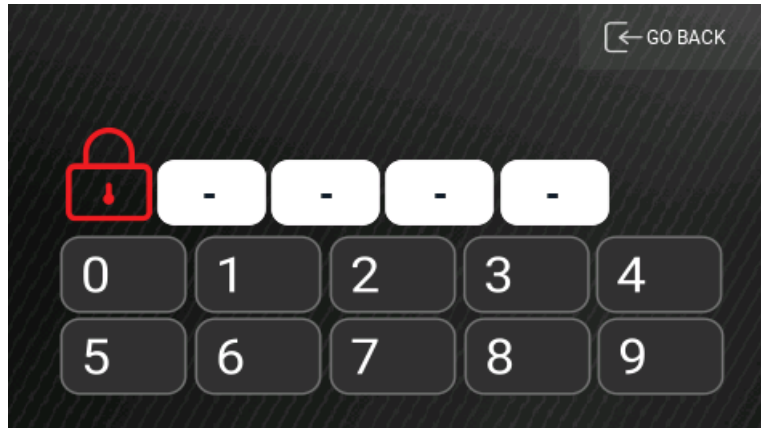


Figure 6-1: password page.

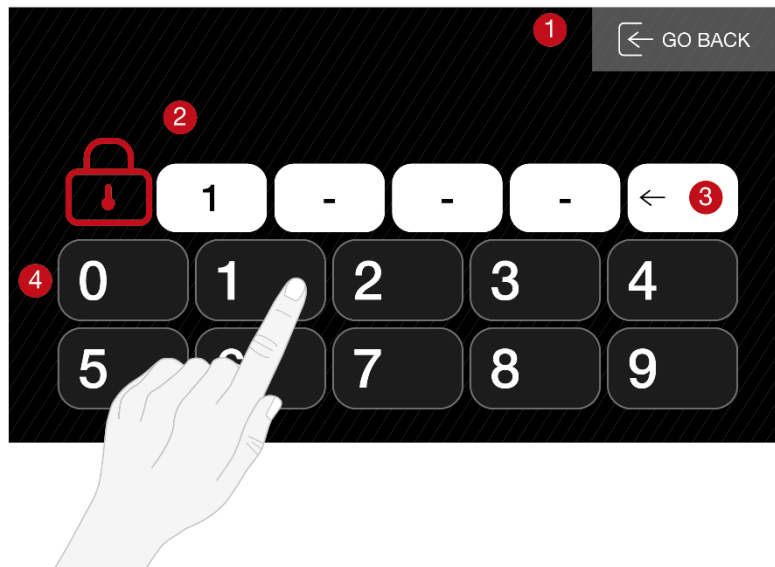


Figure 6-2: entering the password.

The password page is as follows, starting from the top:

1. Key to return to the previous page.
2. Code entering field.
3. Backspace button to delete the value entered.
4. Numerical keypad.

To enter the password, simply enter the code by touching the buttons on the numerical keypad as shown in the image above (**fig. 6-2**).

Approximately one second after the password has been entered correctly, the following screen appears (*fig. 6-3*) and the user is redirected to the Homepage.



Figure 6-3: correct password.

6.1 Wrong password

If the wrong password is entered, the following screen appears:



Figure 6-4: wrong password.

If the wrong password is entered three times in a row, the following screen appears:

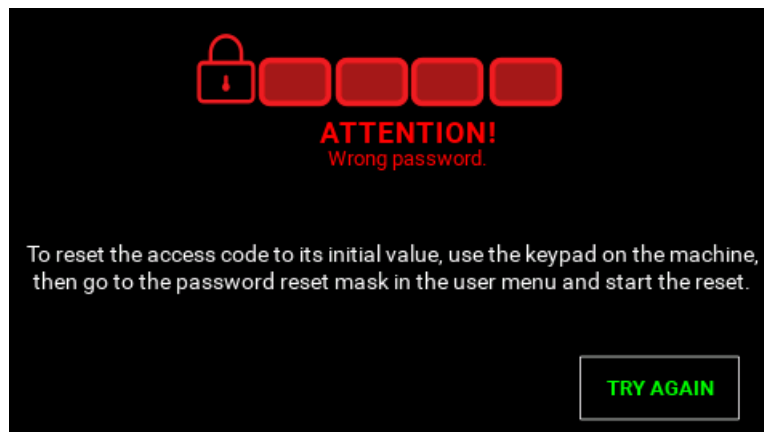


Figure 6-5: wrong password entered three times in a row.

Select “try again” at the bottom right to try to enter the password again and unlock the device.



INFORMATION:

If the password has been lost, as indicated in the box to the left of the “try again” button, go to the machine keypad, access the password reset screen in the user menu and follow the reset procedure. This will reset the password to the default value: 1971

7 HOMEPAGE

Once the password has been entered correctly, the user is taken to the homepage screen (*fig.7-1*). This screen is divided into three sub-sections: top part (**header**), body and bottom part (**footer**).



Figure 7-1: homepage screen.

7.1 Header

There are the following icons in the header of the homepage:



Figure 7-2: header of the homepage.

It shows, starting from the left:

1. The key for accessing the settings section.
2. The text indicating the status of the zone (which can be "in operation").
3. Calendar (day/month/year - dd/mm/yy).
4. Time (hours/minutes/seconds - hh:mm:ss).
5. The key for viewing the number of active alarms and to access the alarms section.

In the header there may be a little house icon  which takes you back to the homepage.

7.2 Body

The body of the homepage has six different elements, as shown in the image below (**fig.7-3**):

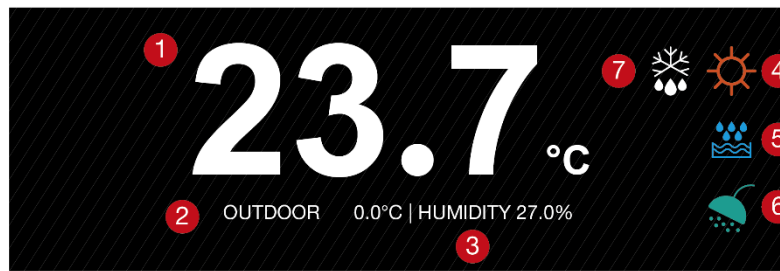


Figure 7-3: body of the homepage.

It shows, starting from the left:

1. The air temperature value which has the following configuration:
 - *Air temperature read by the touch probe* (if installed on board).
2. The outdoor air temperature value read by the probe of the machine.
3. The air humidity value read by the touch probe.
4. The operating mode (the operating mode of the unit):
 - The  icon indicates that the unit is working in cooling mode (**COLD**).
 - The  icon indicates that the unit is working in heating mode (**HOT**).
5. The  icon indicates the current status of the dehumidifier.
6. The  icon indicates the current status of the heating function for domestic hot water.
7. The  icon indicates the current status of the defrost function.

7.3 Footer

The footer (bottom) of the homepage contains two sections as shown in the figure (**fig. 7-4**):



Figure 7-4: footer.

On the left side is the **operation section (1)**:

There is a button for accessing the operation page.

The operating modes are:

- Manual.
- Manual timed.
- Time bands.
- OFF.

On the right side of the Footer (2), depending on the operating mode, the following can be found:

- in “Manual” mode, the setpoint value that can be set with the relevant icon.
- in “Manual timed” mode, the “Set time programming” button is shown during the first step for selecting a setpoint value and the duration for the mode. Once these actions have been done, the set duration (which changes according to the time elapsed) and selected setpoint value can be seen.
- in “time bands” mode, the scenario on the current date and the setpoint for the current time band.
- in “OFF” mode, the right part of the footer is empty.

8 FLASHING ICONS

As indicated in sub-section 7.2, flashing icons appear in the body of the homepage when one or more functions are active on the control. Available functions are:

	Icon	Function	Description
1		Heating	Heating active
2		Cooling	Cooling active
3		Dehumidification	Dehumidification active
4		Domestic hot water	Domestic hot water (DHW) active
5		Defrosting	Defrosting active

Table 1: list of flashing icons.

9 UNIT SWITCHING ON AND OFF

To access the unit ON/OFF page, go to the homepage and access the settings menu – zone management – machine status and select the unit ON/OFF button as shown in the figure (**fig.9-1**):

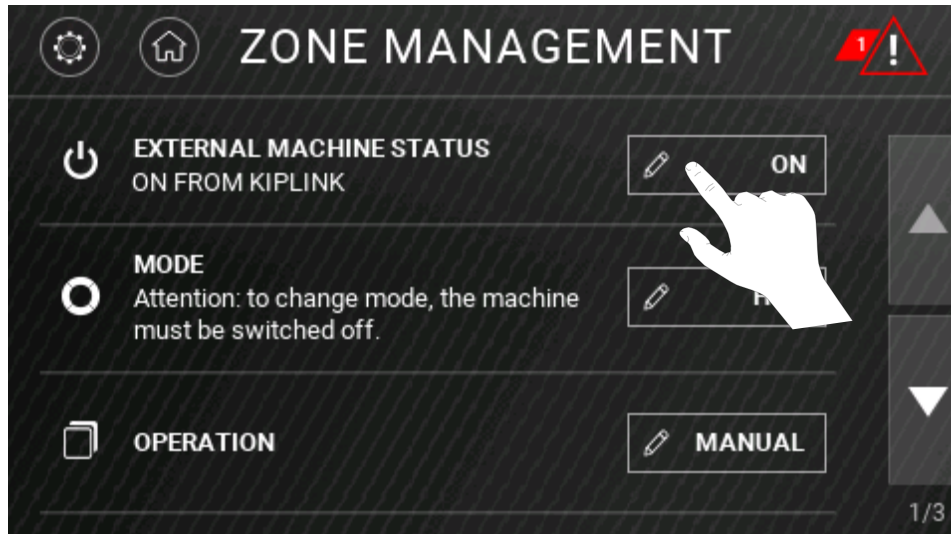


Figure 9-1: selection of the unit ON/OFF button.

The machine status is indicated in the text string under the “**EXTERNAL MACHINE STATUS**” section. The status can be any of the following:

Unit turned on (ON) from keyboard.
Unit turned off (OFF) from keyboard.
Unit turned on (ON) from the time bands.
Unit turned off (OFF) from the time bands.
Unit turned off (OFF) due to alarm.
Unit turned on (ON) from the digital input.
Unit turned off (OFF) from the digital input.
Unit turned on (ON) from the supervisor.
Unit turned off (OFF) from the supervisor.
The unit is turning off.
Unit turned off (OFF) from de-selection of compressors.

Select the ON/OFF button to open the next page and you are prompted to confirm whether to turn the unit on or off. To switch off the unit, simply press the “TURN OFF” button. A screen is then loaded that shows the progress of the requested operation.

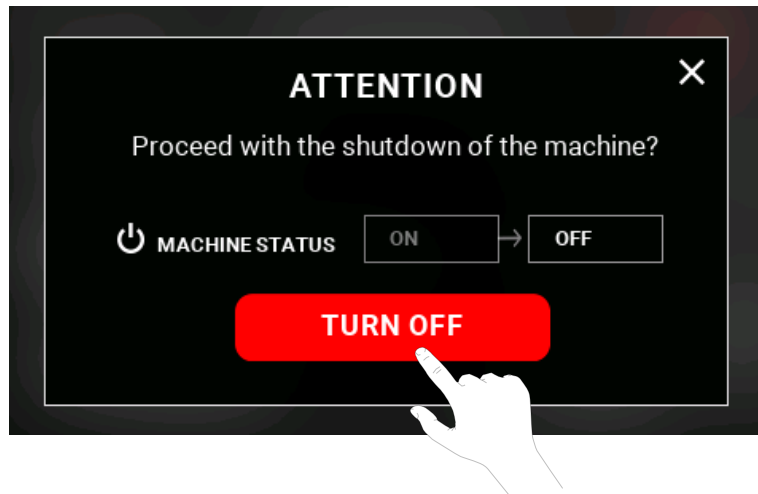


Figure 9-2: selection of the “turn off” button.

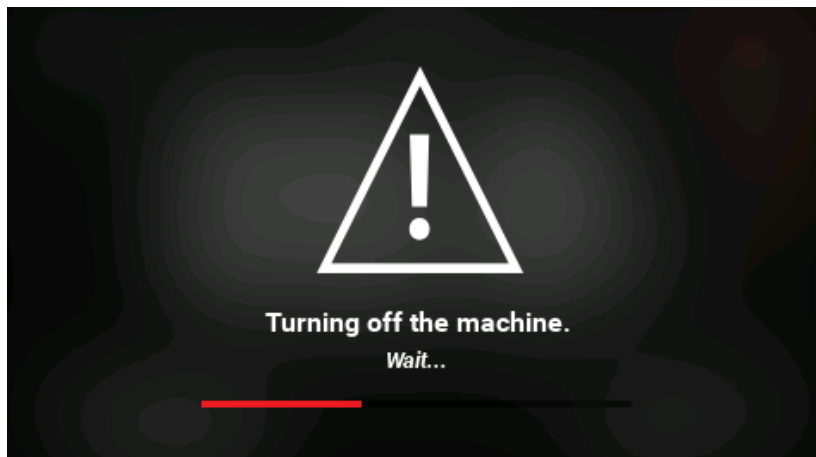


Figure 9-3: shutdown of the unit.

The unit switching on screen, instead, is as follows (simply press “TURN ON” to switch on the unit):

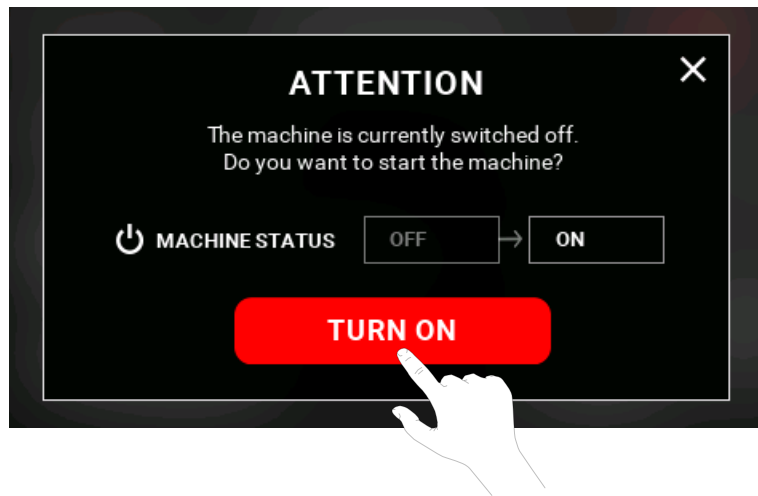


Figure 9-4: selection of the “turn on” button.

A screen is then loaded that shows the progress of turning on the machine.

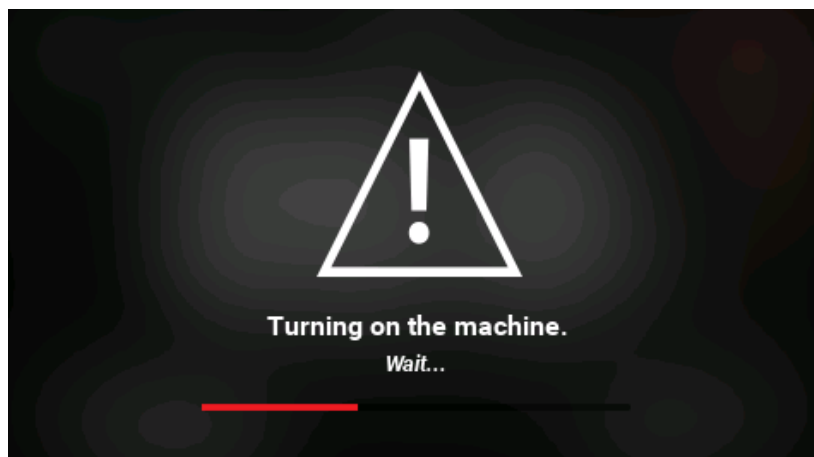


Figure 9-5: switching on the unit.

10 SOFTWARE INFORMATION AND PANEL SETUP

Using the button in the settings screen, it is possible to display the main details regarding the touch and the controller to which it is connected:

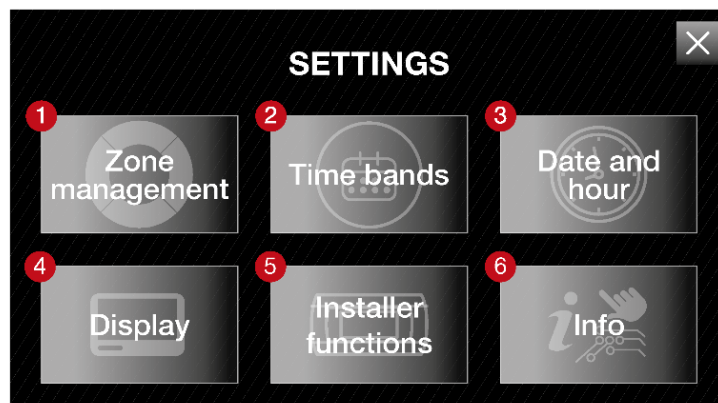


Figure 10-1: access to the software information page.

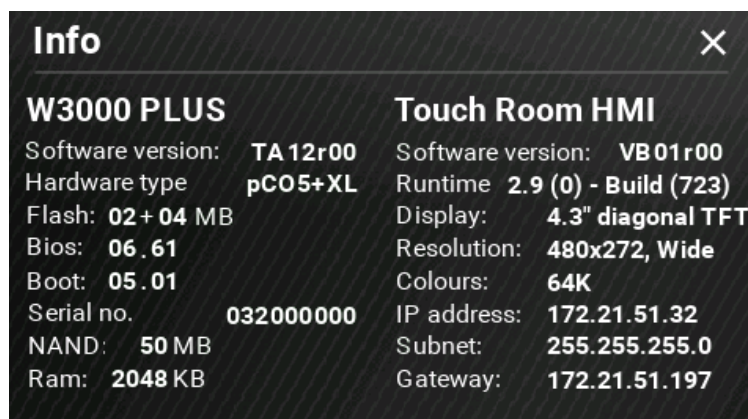


Figure 10-2: software information.

The Touch Room HMI device is compatible with all MEHITS units fitted with an W3000 PLUS electronic controller. The Touch Room HMI retrieves the information to be made available to the user directly from the controller. To ensure correct operation, the following software requirements must be met:

Touch Device	Unit controller	Controller software
Touch Room HMI	W3000 PLUS	TA12 or higher

11 SETPOINT

11.1 Setpoint introduction



Figure 11-1: representation of sensitive areas.

The information in the body and footer of the homepage on operation in Manual and Manual timed mode are in a touch-sensitive area.

Touch the sensitive area to enter the setpoint screen.

11.2 Modifying the Setpoint or Hot/Cold mode

To modify the setpoint for Hot/Cold mode:

1. Select "Manual" or "Manual timed" mode from the available configurations;
2. Select the sensitive area shown below at the centre or at the bottom right of the screen to modify the setpoint:

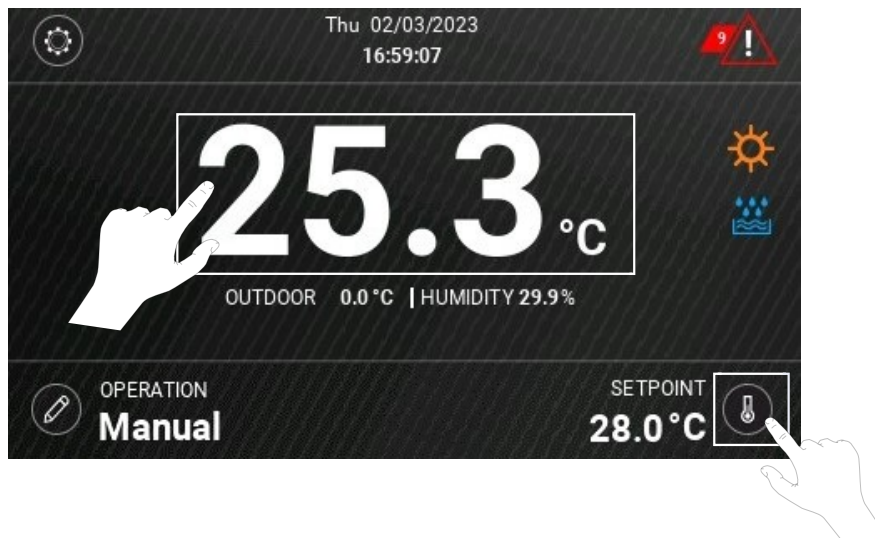


Figure 11-2: sensitive area for modifying the setpoint.

The screen for modifying the setpoint for Hot/Cold mode is shown below:

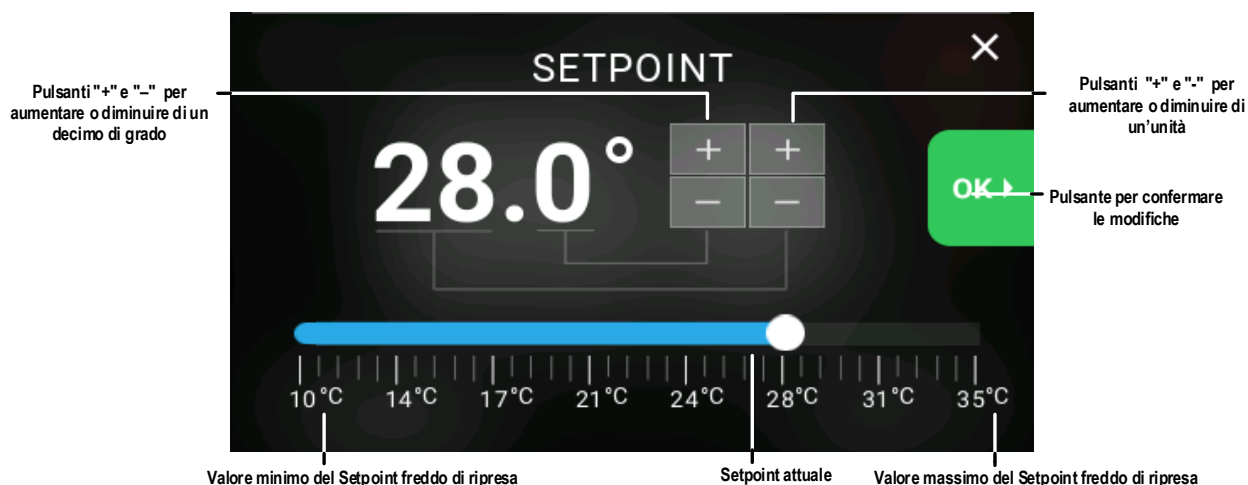


Figure 11-3: screen for modifying the setpoint values.

The setpoint value can be modified as shown in the following images:

Scrolling the blue bar right or left to the desired value.

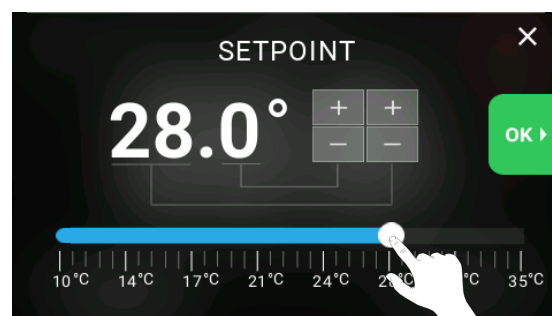


Figure 11-4: modification with scroll bar.

Touching the "+" buttons to increase the value by one tenth of a degree or one unit.

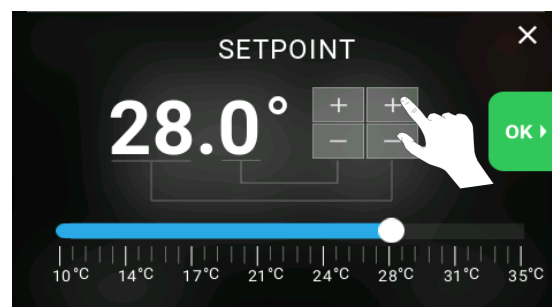


Figure 11-5: modification with "+" button.

Touching the “-” buttons to decrease the value by one tenth of a degree or one unit.

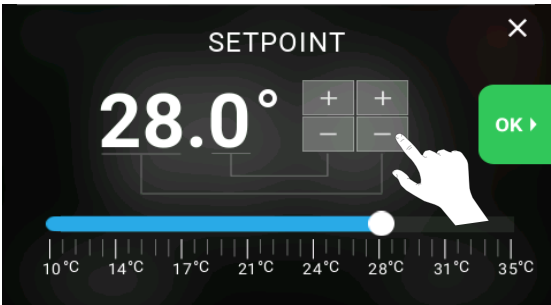


Figure 11-6: modification with “-” button.

To confirm the changes, simply touch “OK” on the right of the screen. To cancel the changes, touch the “X” at the top right.

12 OPERATING MODE

To access the “operating mode” page from the homepage, touch the settings button  which opens the relevant screen (fig.12-1). From this screen go to *zone management - plant mode* to change the operating mode. The current operating mode is shown on the right side of the screen.

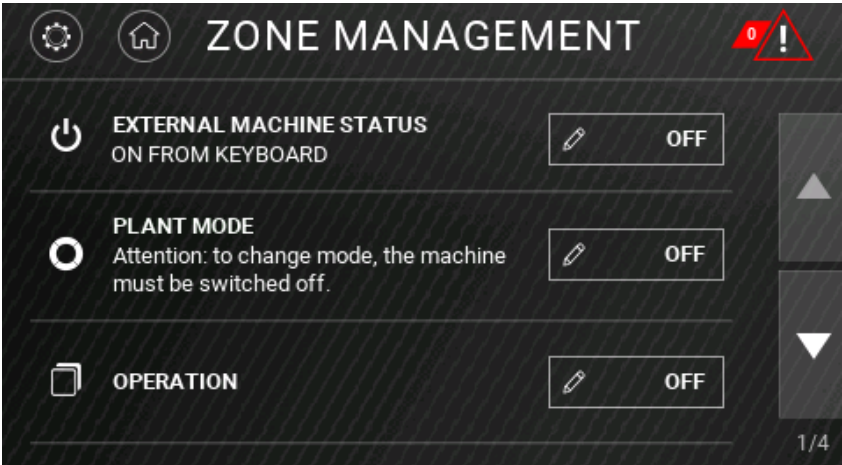


Figure 12-1: operating mode button.

After selecting the mode menu, you are prompted to turn off the machine (if it has not already been turned off) in order for the operating mode to be changed. To do so, simply touch the *switch off* button shown in the figure (**fig.12-2**).

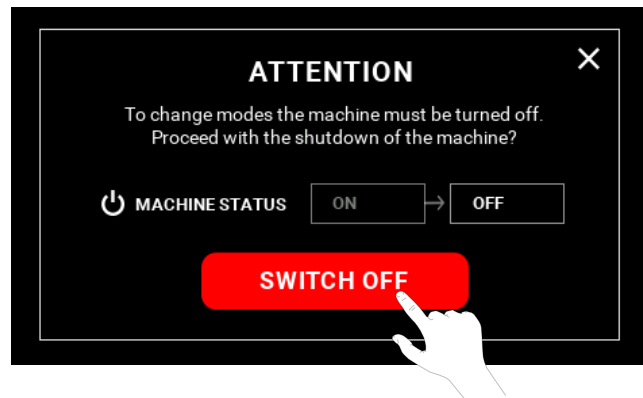


Figure 12-2: button for switching off the machine.

12.1 Operating mode screen

The screen that appears next is as follows (**fig.12-3**). The current operating mode is the one in blue.

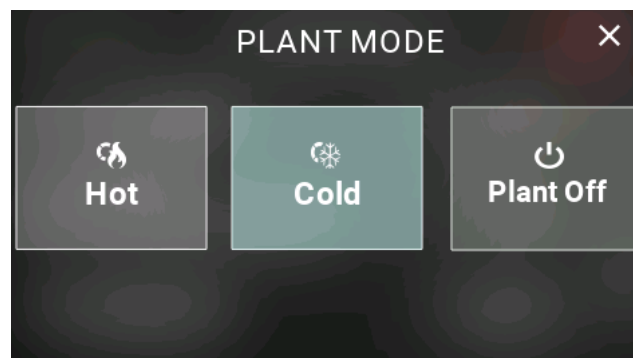


Figure 12-3: operating mode screen.

There are three modes (if the Domestic hot water function is active) which are, from left to right:

- Hot.
- Cold.
- Plant Off.

If instead the Domestic hot water function is disabled, the “Plant Off” button is not shown and can no longer be selected.

The user can set the modes as follows:

Touch the “*hot*” button: the machine will switch to hot operating mode.

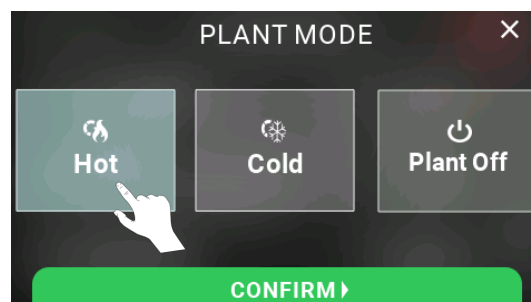


Figure 12-4: hot mode.

Touch the “*cold*” button: the machine will switch to cold operating mode.

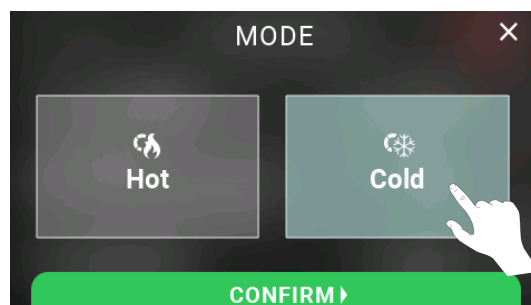


Figure 12-5: cold mode.

Touch the “*plant off*” button: the machine runs only to meet the demand for domestic hot water, turning off the plant.

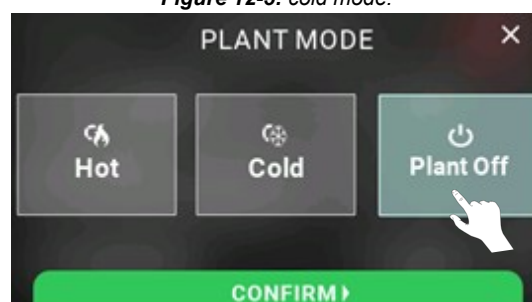


Figure 12-6: plant off mode.

Touch the “confirm” button to set the new selected mode.

13 TIME BANDS

To access the *time bands* page, simply touch the button  at the right end of the footer at the bottom of the homepage (if “Time bands” mode is enabled) or access it from the “settings” menu (**fig.13-1**):

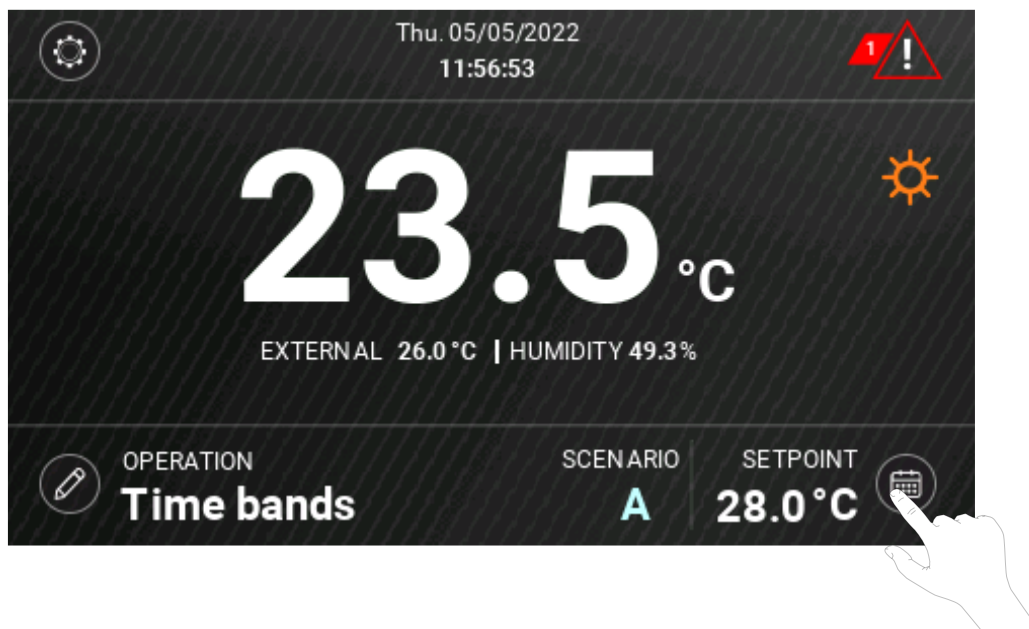


Figure 13-1: time bands button.

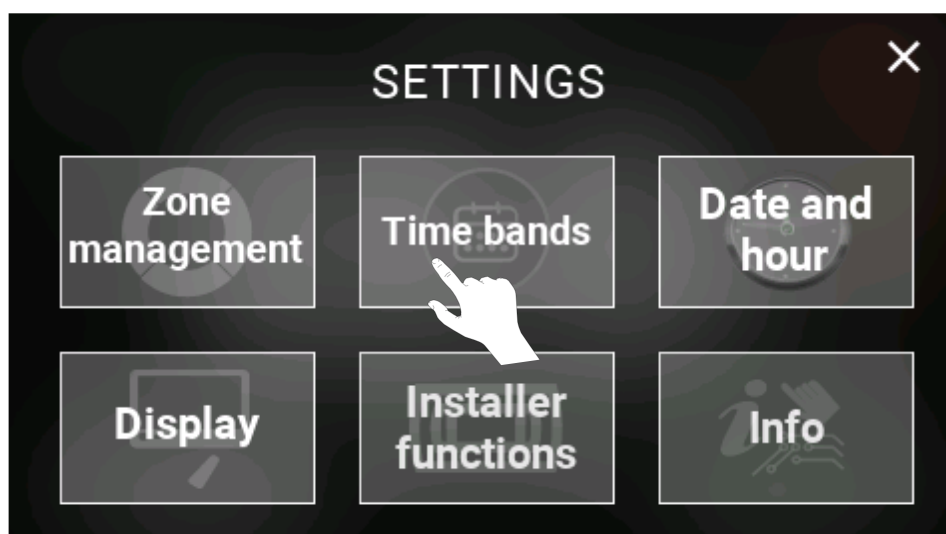


Figure 13-2: time bands button on the settings page.

The following page opens (*fig.13-3*), showing the following:

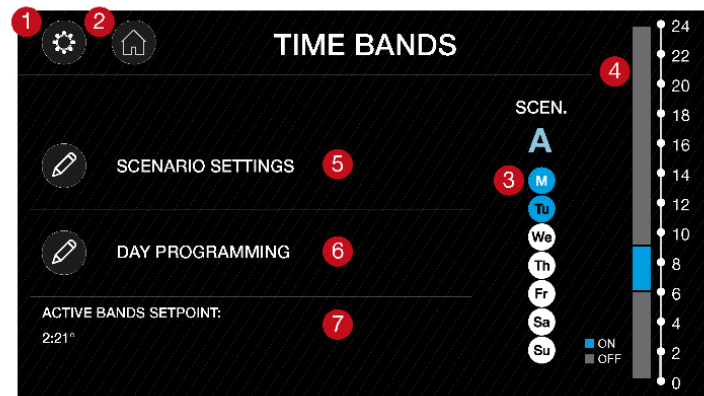


Figure 13-3: time bands page.

1. “Settings” button, to open the settings page.
2. “Home” button, to return to the homepage.
3. Days of the week on which time band A is set.
4. Hourly histogram, showing the operating status of the machine during each hour of the day.
5. “Scenario setting” button, to enter the modification page.
6. “Day programming” button, to enter the programming page.
7. Summary of the setpoints of the active time bands for the current scenario.

To disable the time bands, simply change the type of operation from the homepage.

In the hourly histogram on the right of the screen, it is possible to view the settings of the ten sub-intervals. Using the “Scenario setting” button, it is possible to set or change the time sub-intervals (*fig.13-4*):

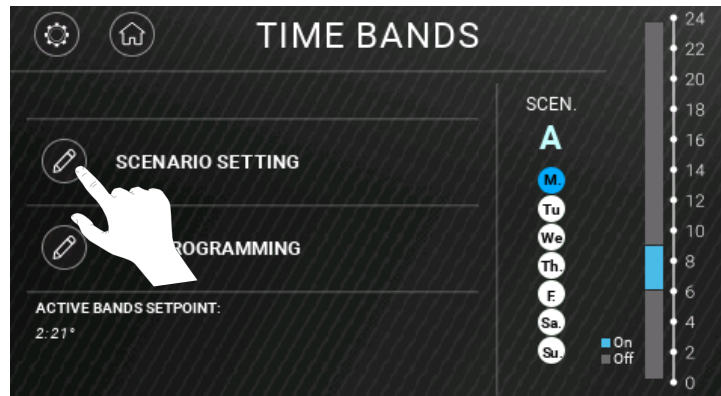


Figure 13-4: selection of the “scenario setting” button.



INFORMATION:

Intervals of less than seven minutes cannot be displayed in the hourly histogram on the right.

On the “scenario setting” page are four histograms which, from left to right, relate to the scenarios A, B, C and D that summarise the various set intervals. The enabled ones are *blue* while the disabled ones are *dark grey*. Touch the diagrams of the scenarios to access setting of the sub-intervals.

Touch the “go back” button in the bottom left corner to go back to the time bands page.

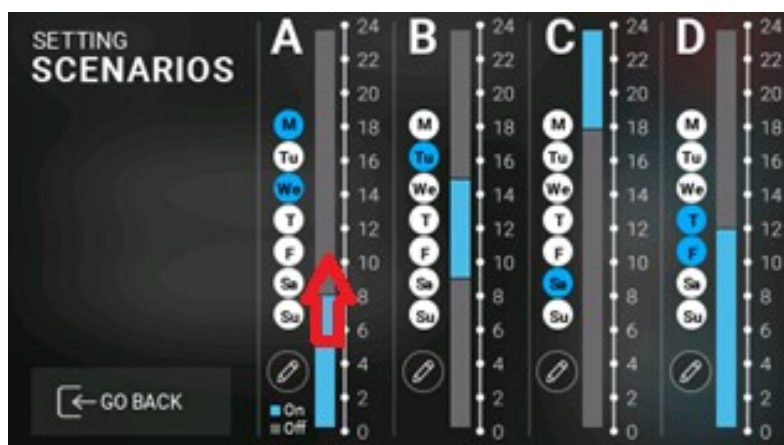


Figure 13-5: selection of the “sub-interval setting” button.

Touching the button will give access to the page for the modification of the type A (or B, C or D) scenario sub-intervals (**fig.13-5**) , which shows:



Figure 13-6: screen for modifying the (type A) scenarios.

1. Band type name (in this case type A).
2. Ten editable sub-intervals.
3. The hour/minutes parameters can be modified in the figures with the pencil-shaped icon.
4. The time band can be modified in the figures with the pencil-shaped icon.
5. ON/OFF button, to turn on/off the selected unit.

- To switch the unit on or off during a specific sub-interval simply touch the button (fig.13-7)



Figure 13-7: switching OFF the unit for the second sub-interval.

- Once a selected interval has been switched off (in this case, the second), it is no longer possible to modify its setpoint. The box of the selected interval turns light grey and the set value is no longer shown.



Figure 13-8: second sub-interval turned off.

To change the hour/minutes parameters, touch the desired sub-interval in the box with the pencil-shaped icon (the first half to change the hour and the second half to change the minutes) (fig.13-9):



Figure 13-9: selection of a sub-interval to modify the parameters.

Use the numerical keypad that appears to enter the new values which will overwrite the previous ones.

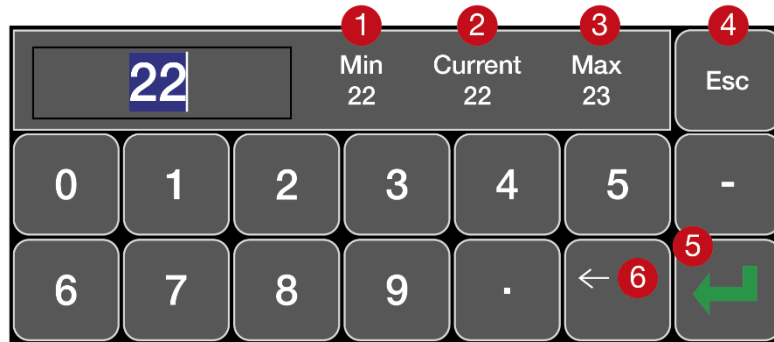


Figure 13-10: numerical keypad used to change the hour.

1. Minimum permitted value.
2. Currently entered value.
3. Maximum permitted value.
4. “Esc” button, to close the keypad.
5. “Enter” button to confirm changes.
6. “Backspace” button to delete the value entered.

After setting the desired hour and minutes, touch “enter” on the right of the keypad to confirm and save the changes made.

Once entry of the new values is confirmed, a loading progress bar is shown and the screen is updated. It should be taken into account that there cannot be *undefined* or *non-consecutive* intervals during a day; the software therefore manages the values of all the intervals according to the new ones selected.

On the page used for changing the ten sub-intervals, the first and the tenth sub-intervals have two fixed values:



Figure 13-11: fixed values of the first and tenth sub-intervals.

1. Start time of the *first* sub-interval: 00:00 (cannot be changed).
2. End time of the *tenth* sub-interval: 23:59 (cannot be changed).

The start time of each sub-interval (with the exception of the first and the tenth) corresponds to the end time of the previous sub-interval. This is why only the end time can be modified for each sub-interval.

Setpoint and modification

The setpoint can be changed following the same procedure as before (see chapter 11 – Setpoint):



Figure 13-12: selection of the “setpoint” button.

Selecting the “Setpoint” button opens the following modification screen (*fig.13-13*):

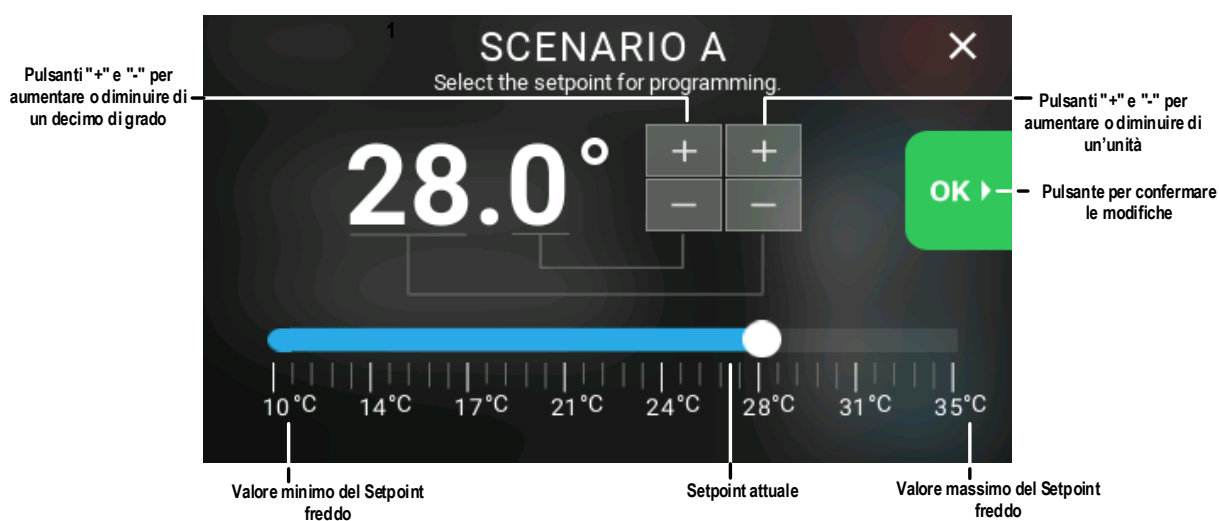


Figure 13-13: interval 1A “cold setpoint” screen.

It is possible to modify the setpoint:

Scrolling the bar right or left to the desired value.

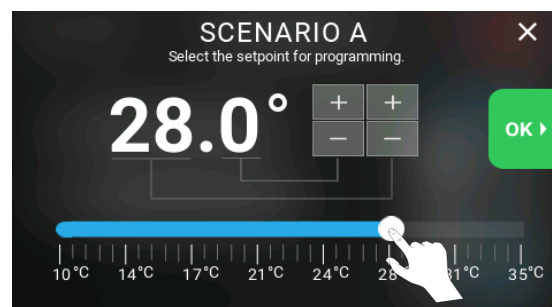


Figure 13-14: modification with scroll bar.

Touching the “+” buttons to increase the value by one tenth of a degree or one unit.

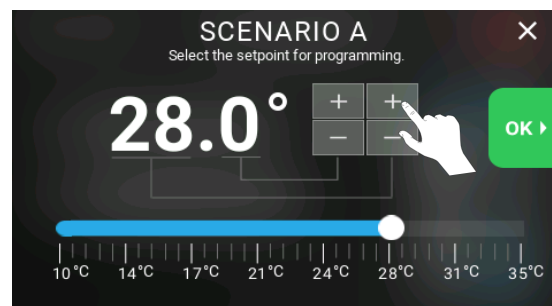


Figure 13-15: modification with “+” button.

Touching the “-” buttons to decrease the value by one tenth of a degree or one unit.

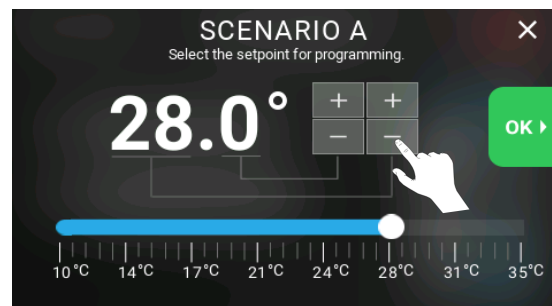


Figure 13-16: modification with “-” button.

To access the “day programming” setup screen, on the main “time bands” screen select the button shown in the figure (**fig.13-17**):

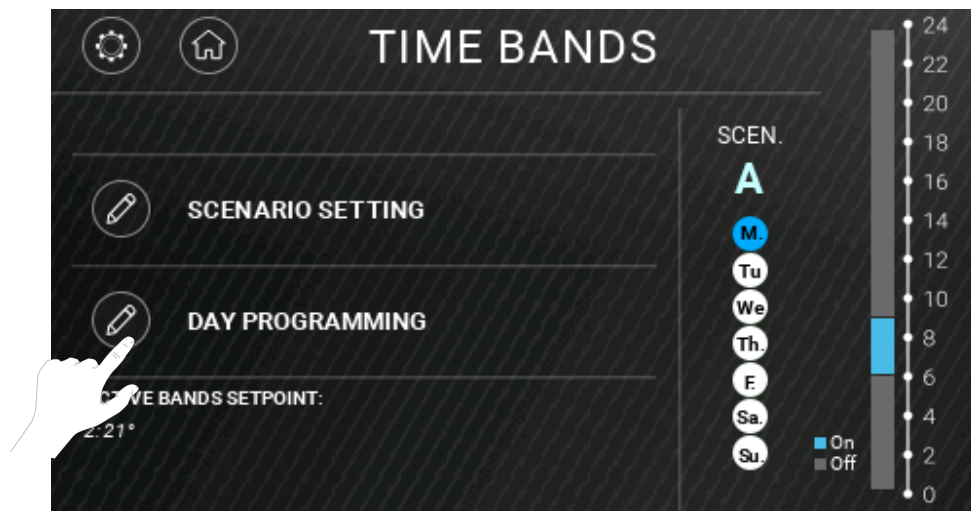


Figure 13-17: selection of the “day programming” button.

The “day programming” screen offers the option to enable the type A to D time bands (only one type at a time) for the days of the week (**fig.13-18**):

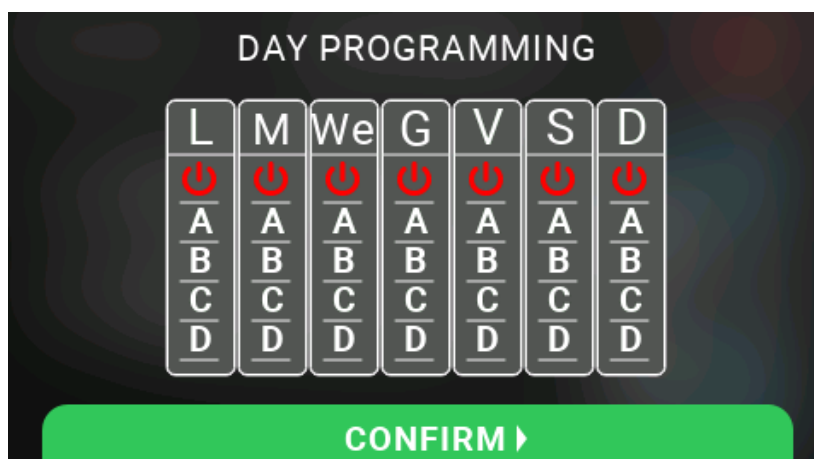


Figure 13-18: “day programming” screen.

To disable a time band, touch the  icon that will turn red.
To enable a time band that was previously disabled, simply touch it to enable it.

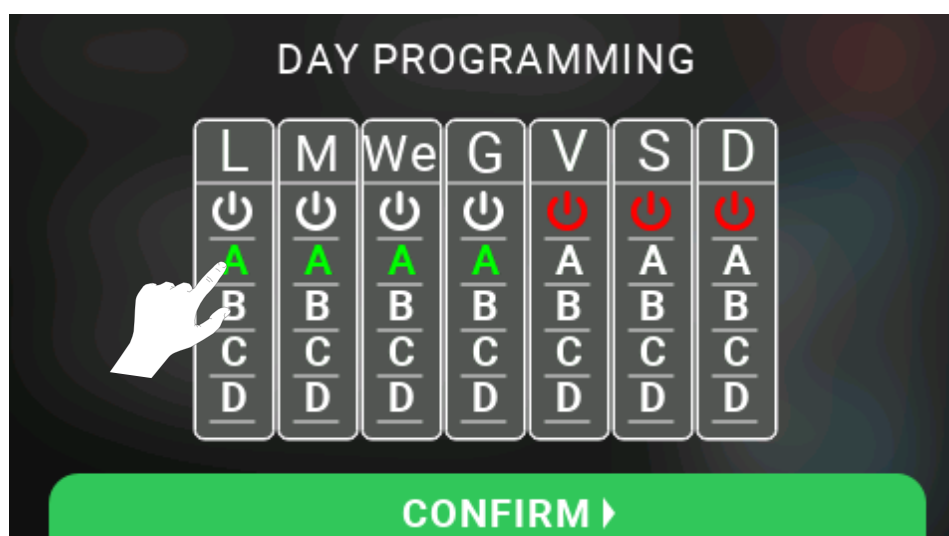


Figure 13-19: “weekly programming” screen, activation of type A band.

To confirm the changes made, select the green “confirm” button at the bottom of the screen.

14 ALARMS

As indicated in paragraph 7.1 - **Header**, the alarms button in the header shows the total number of alarms that are currently active. By selecting the button, the user will be able to access the alarm screen and the active alarm and alarm log management sections (**fig.14-1**):

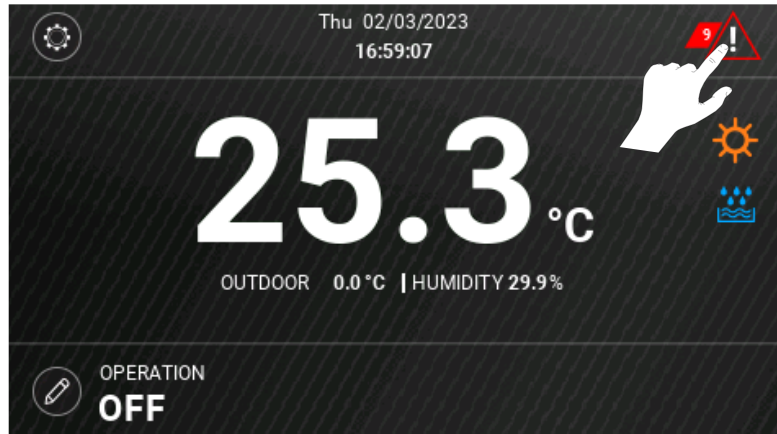


Figure 14-1: selection of the alarms button.

This will open a screen with two buttons:

- Active alarms.
- Alarms log.

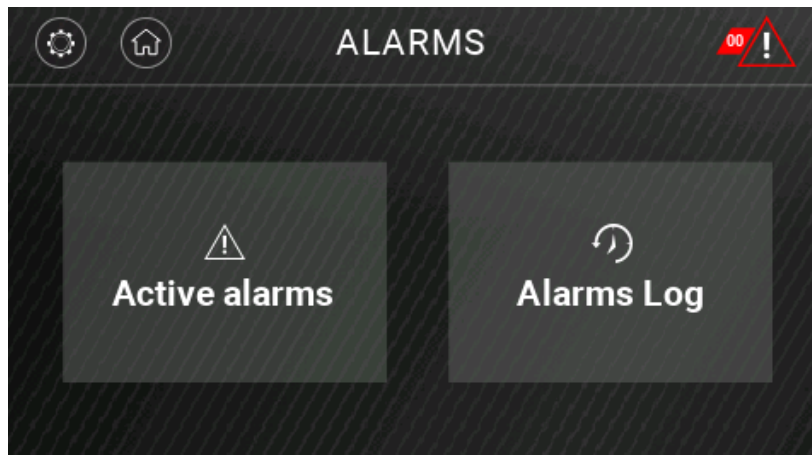


Figure 14-2: active alarms and alarm log screen.

14.1 Active alarms

To access the “active alarms” page, select the appropriate button on the left of the screen:

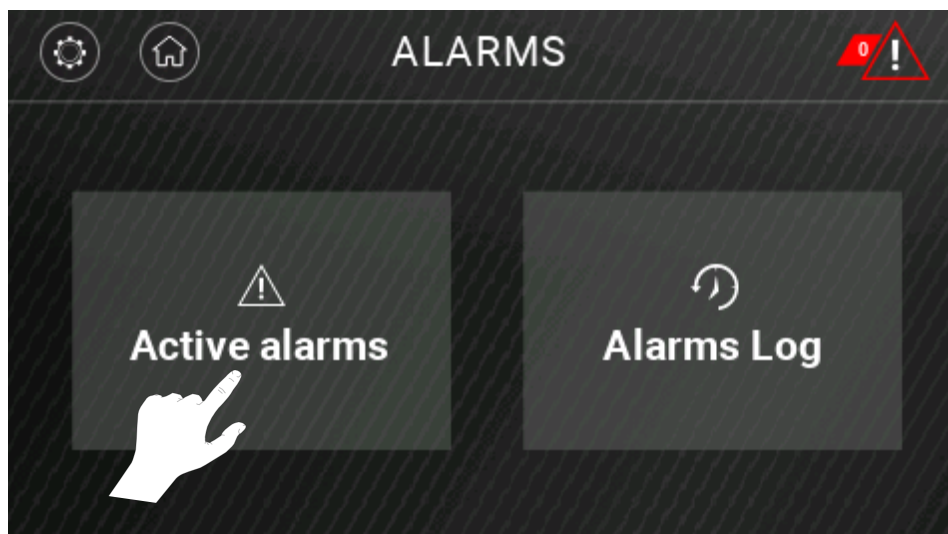


Figure 14-3: selection of the “active alarms” button.

Touching the “active alarms” button opens the following screen:

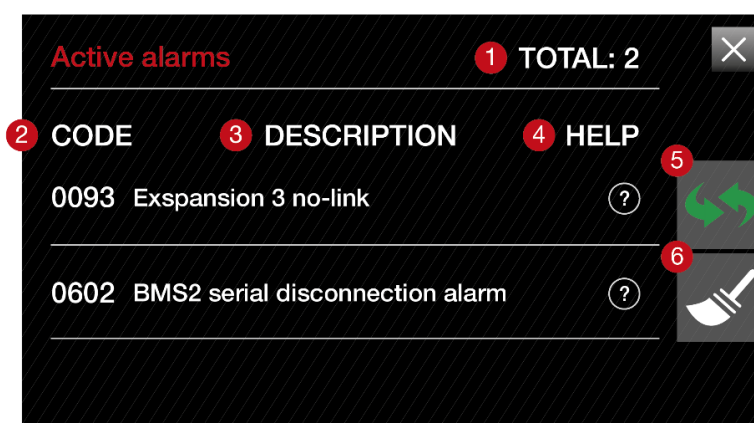


Figure 14-4: active alarms screen.

The screen shows the following:

1. Total number of active alarms.
2. Alarm code.
3. Alarm description.
4. “Help” button , which takes to a help section containing more information about the active alarm.
5. Synchronization button , showing the last two alarms currently active.
6. Reset button , to reset the active alarms.

To display more details about the active alarm, simply touch the  button shown in the image (*fig.14-5*):



Figure 14-5: selection of the "help" button.

The alarm detail page is shown below:

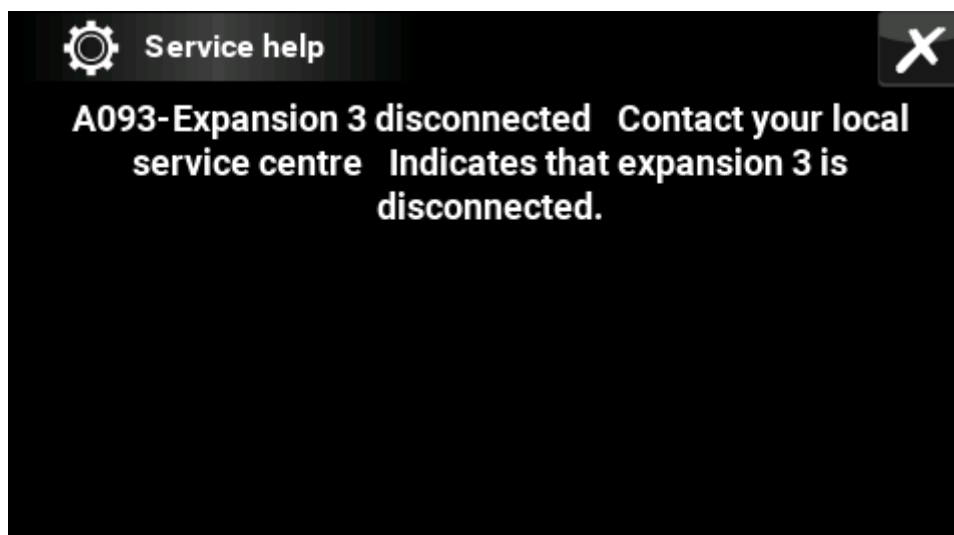


Figure 14-6: page with detailed explanation of active alarm.

In this case, the reason for the alarm is that Expansion 3 is disconnected and contacting the nearest customer service centre is required. To close the screen touch X at the top right.

The user can also access the help page by pressing this button:

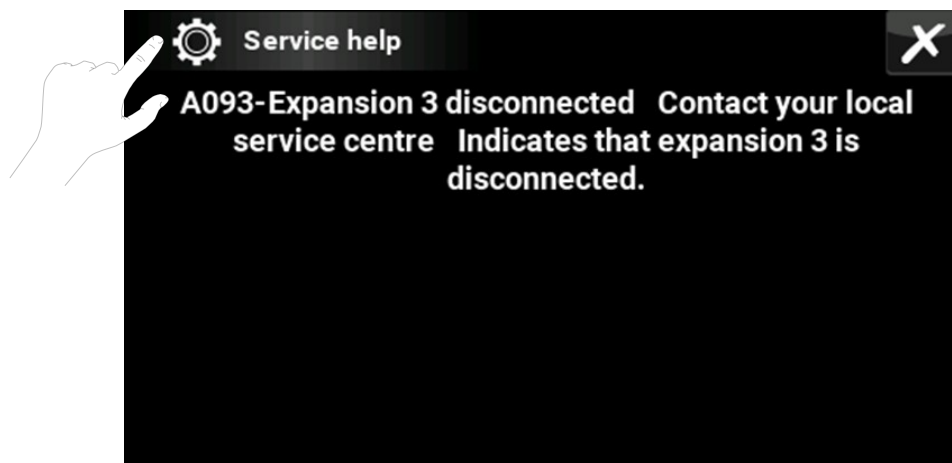


Figure 14-7: selection of the “service help” button.

The following page then appears, to help the user ascertain the causes and type of event relating to the alarm:

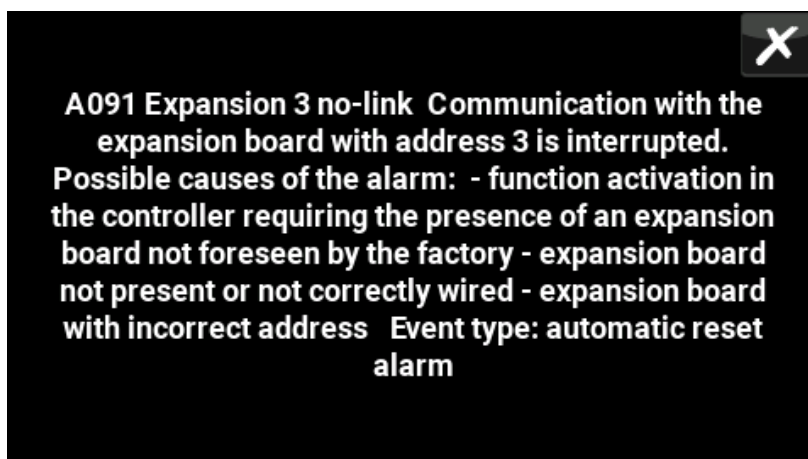


Figure 14-8: “service help” button.

If there are more than three active alarms, the two arrows by the synchronisation and reset buttons give the possibility to scroll through the other active alarms.

To reset or synchronize the page, simply touch the respective buttons:

- “Synchronization” button selection.



Figure 14-9: synchronisation button.

- “Reset” button selection

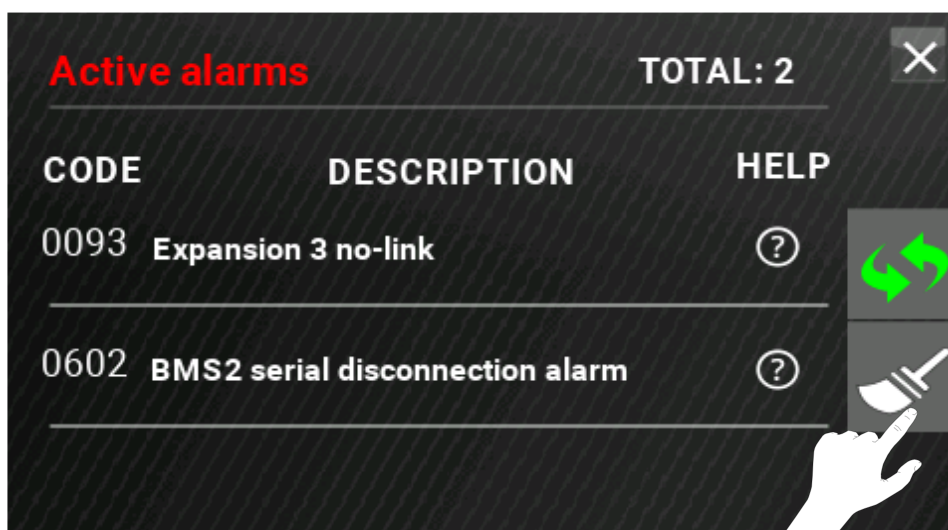


Figure 14-10: reset button.

If there are one or more active alarms, the LED at the side of the touch will flash red:



Figure 14-11: red touch screen LED.

14.2 Alarm log

To access the alarm log page, from the main “alarms” page select “alarm log”:

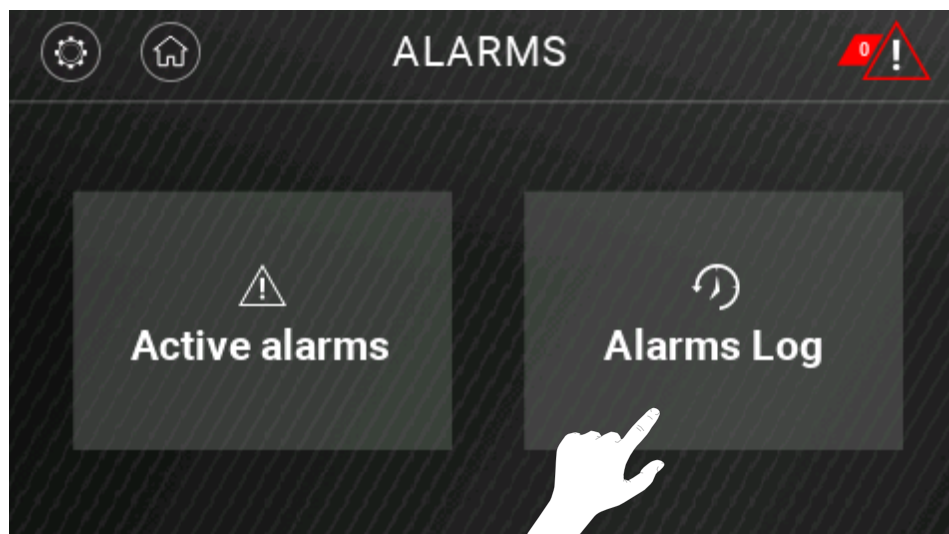


Figure 14-11: selection of the “alarm log” button.

This page can list up to a maximum of two hundred alarms, which can be scrolled using the appropriate button. The screen that opens is as shown below, and gives the user access to further information:

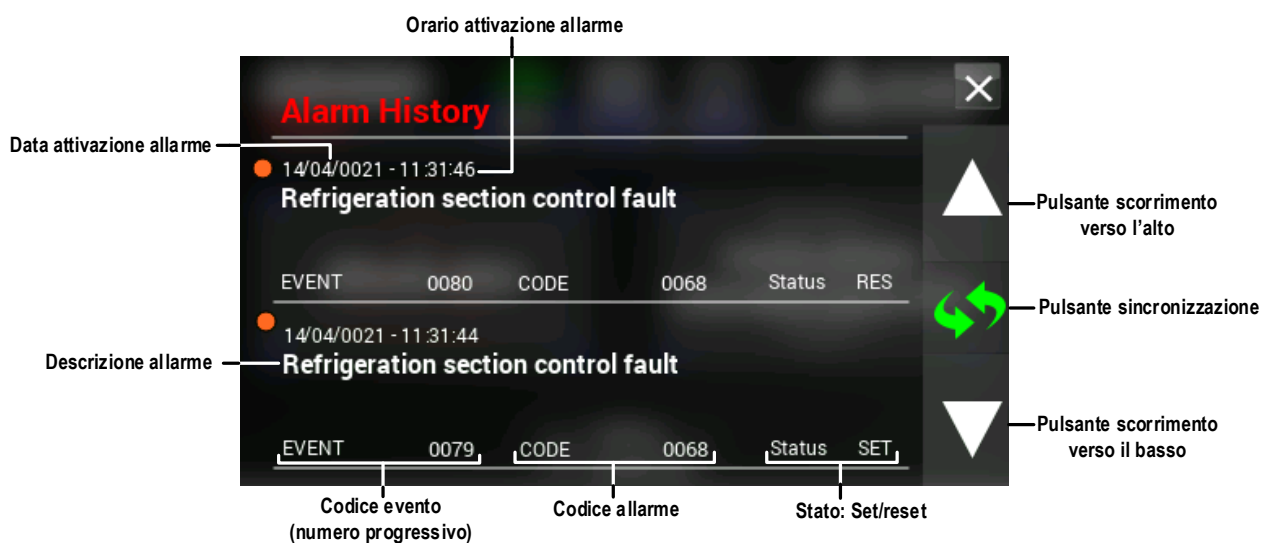


Figure 14-12: description of the alarm log page.

Touching an alarm row will take the user to the detail page for that alarm.

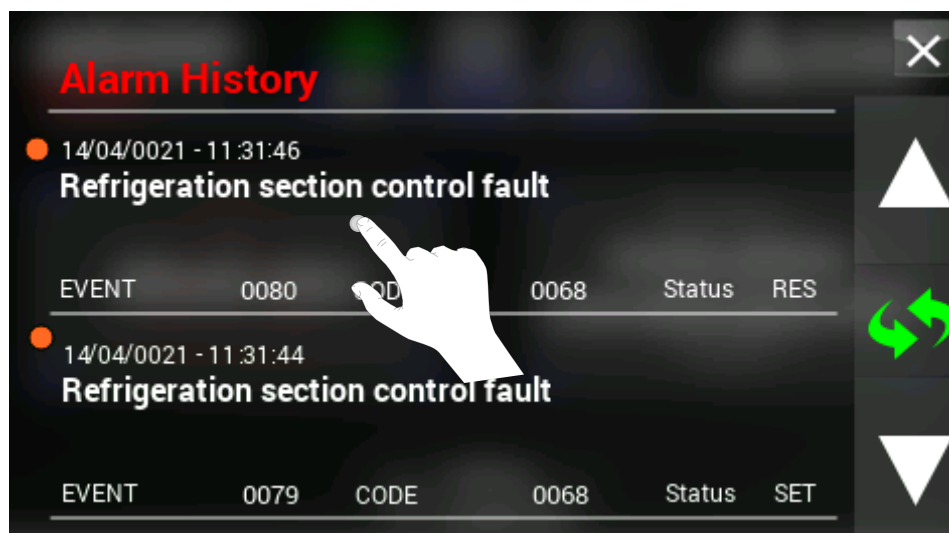


Figure 14-13: selection of an alarm log row.

After touching the desired section, the following page appears (**fig.14-14**), with the description and additional information:

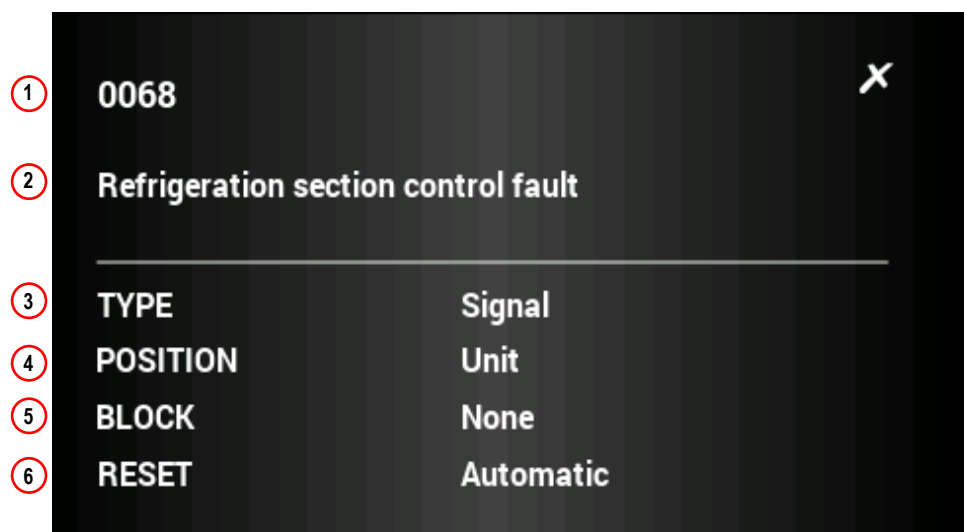


Figure 14-14: alarm detail page.

The page shows the following alarm details:

1. Code
2. Description
3. Type
4. Location (where the problem is). The possibilities are:
 - Compressor
 - Circuit
 - Unit/plant
5. Block (if any), i.e. what caused the unit to stop. The possibilities are:
 - Compressor
 - Circuit
 - Unit
 - Chilled water
 - Humidifier
 - Heaters
 - Generic function
6. Reset:
 - Automatic
 - Manual

Tap the scroll buttons to scroll through the list of alarms:

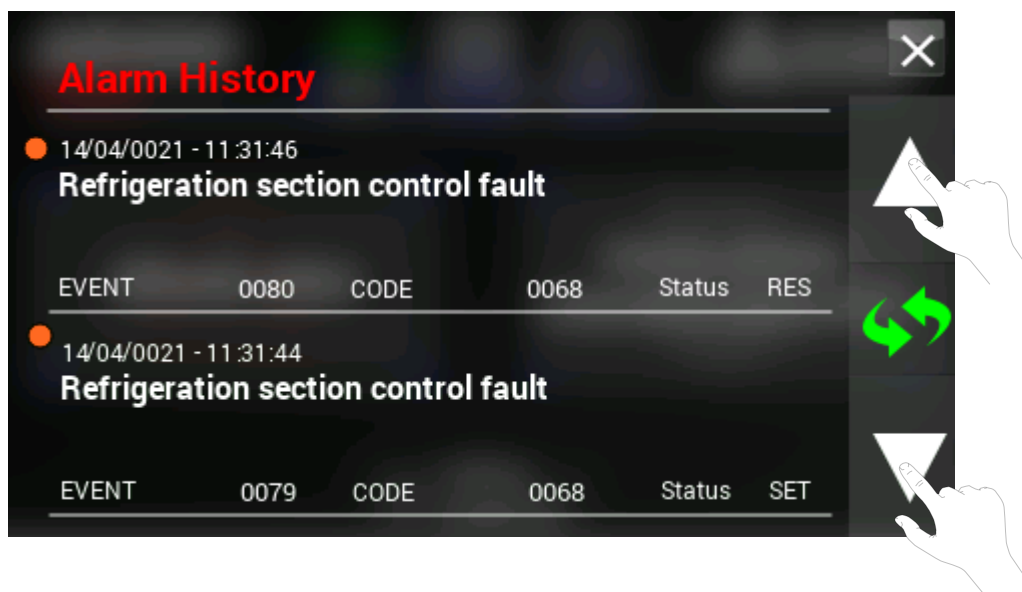


Figure 14-15: scrolling through the screens.

This loading window appears when scrolling upwards or downwards through the screens:

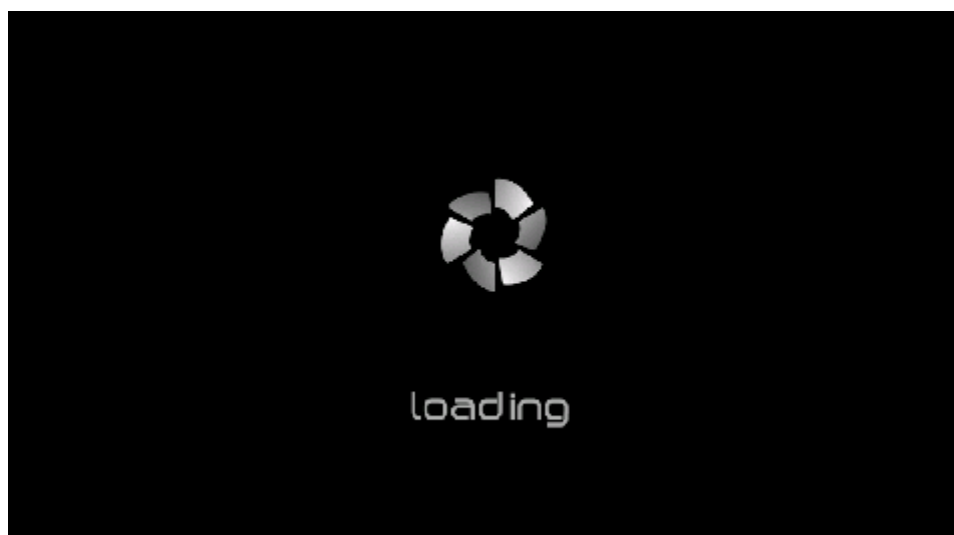


Figure 14-16: loading screen.

Touch the synchronisation button on the right of the user screen to return to the list of the ten most recent alarms:

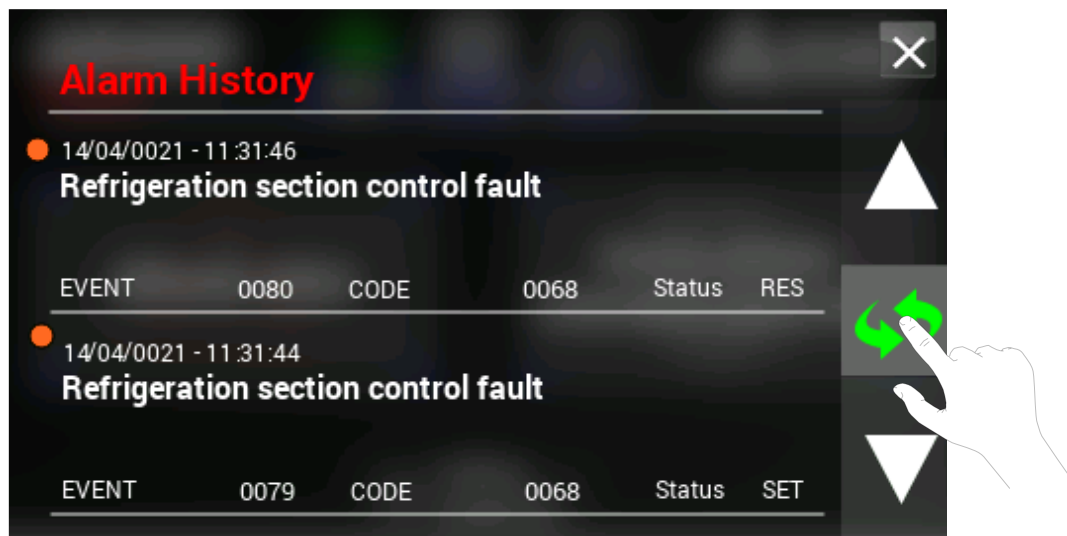


Figure 14-17: selection of the synchronisation button.

15 DATE AND TIME

To change the date and time of the Touch Room HMI, select the “*Date and time*” button on the top right as shown in the picture:

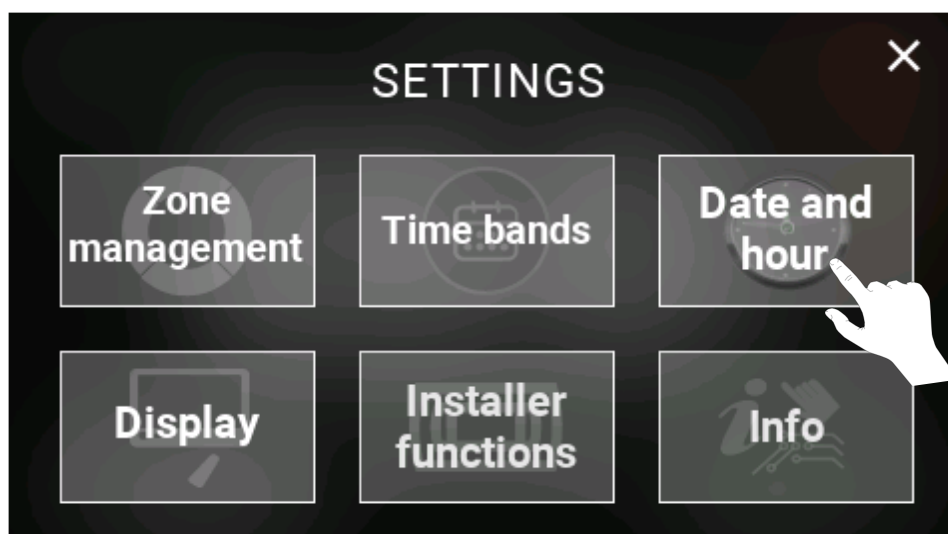


Figure 15-1: Selection of the “date and time” button.

This will open the following page, with the possibility of viewing and modifying the date (in the format dd:mm:yy):

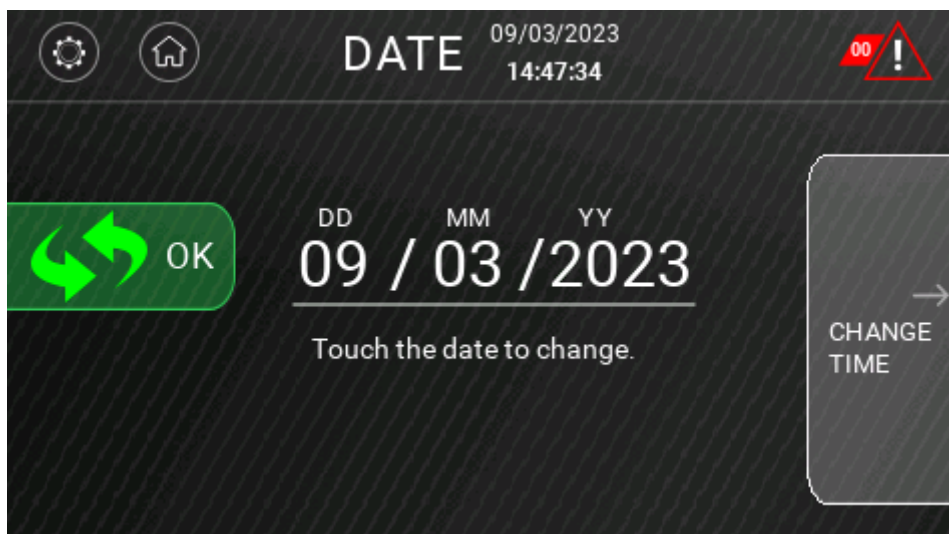


Figure 15-2: page for changing the date.

Touch the "CHANGE TIME" button at the side to access the page to change the time of the touch screen and controller:

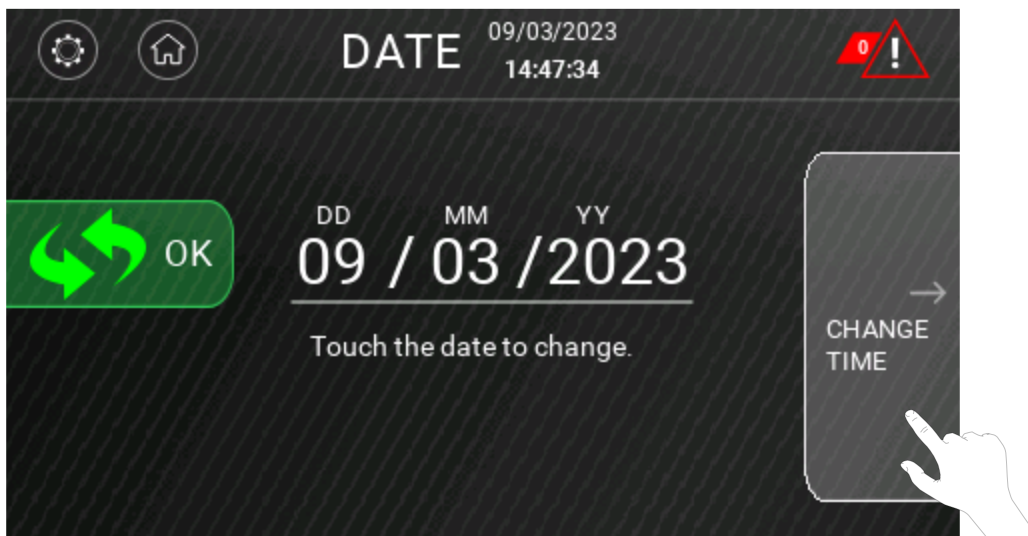


Figure 15-3: selection of the "change time" button.

This will open the following page, with the possibility of viewing and modifying the time (in the format hh:mm):

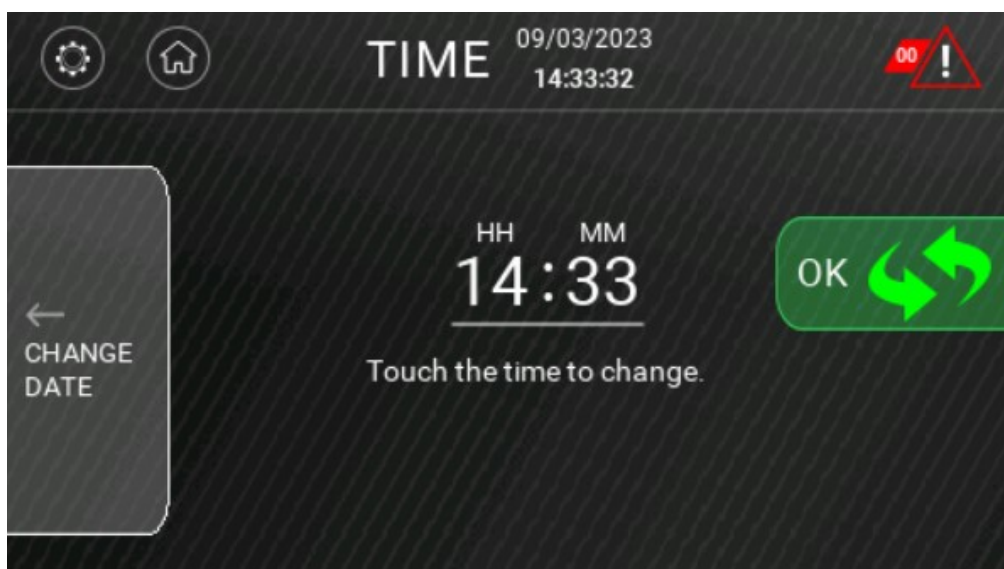


Figure 15-4: page for changing the time.

Touch the "CHANGE DATE" at the side to access the page to change the date of the touch screen and controller:

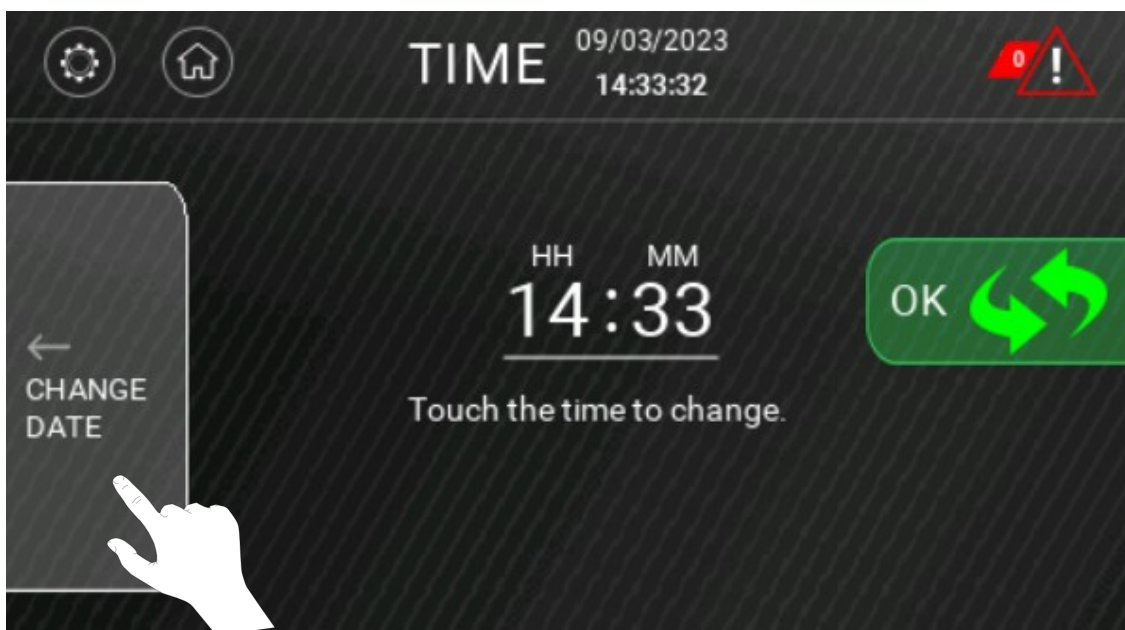


Figure 15-5: selection of the “change date” button.

To change the date and time, simply touch the entry that you wish to change (hours or minutes/day, month or year) (**fig.16-6**):

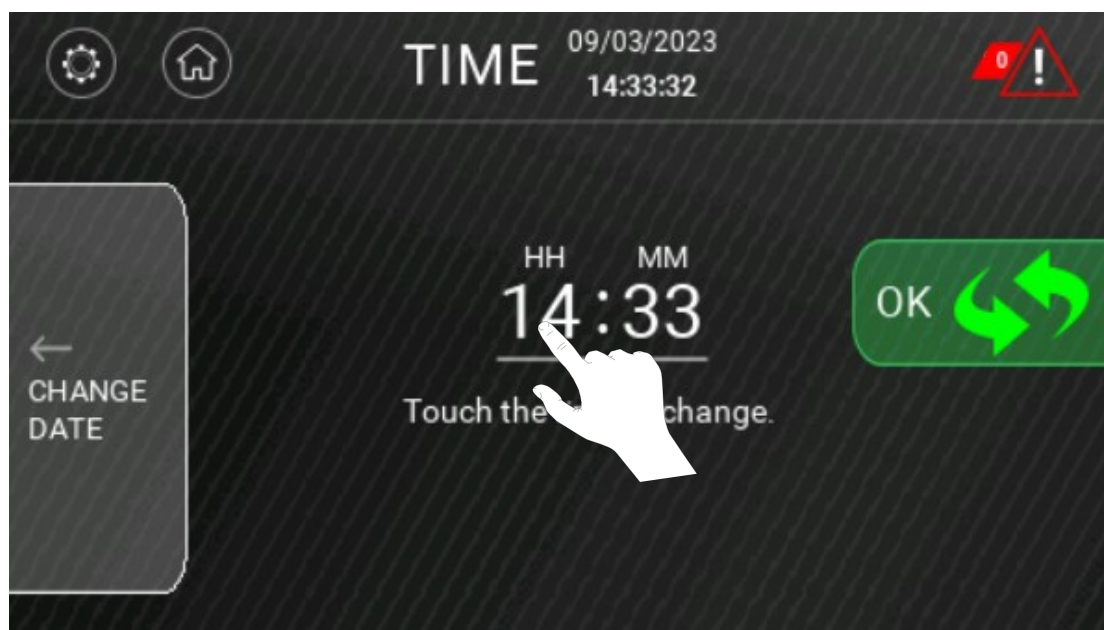


Figure 15-6: example of changing the time.

Touching the desired entry opens the virtual keypad, which can be used to change the value:

- Example of numerical keypad for changing the time. This shows the minimum and the maximum permitted values, as well as the currently set time.

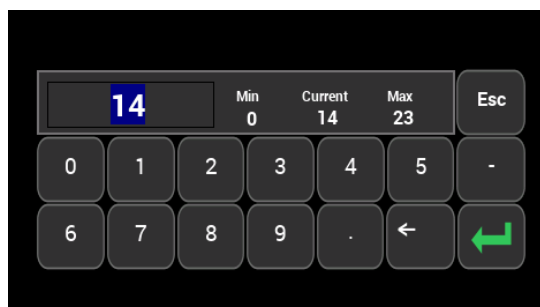


Figure 15-7: numerical keypad used to change the time.

After entering the new date or time values (and touching the enter key on the keypad to confirm them), press this button to synchronise the values with the controller:



Figure 15-8: button for synchronising the date/time between the touch screen and controller.

16 USER SETTINGS

To access the “settings” page, touch the button in the header of the homepage, as shown below (**fig.16-1**):

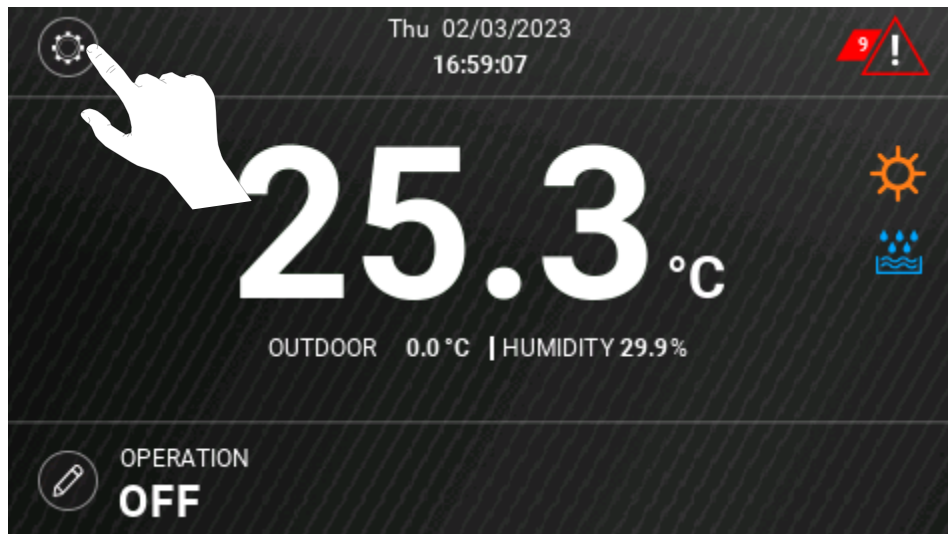


Figure 16-1: selection of the “settings” tab.

The following page appears (**fig.16-2**), with six buttons for navigation to the various setting pages:

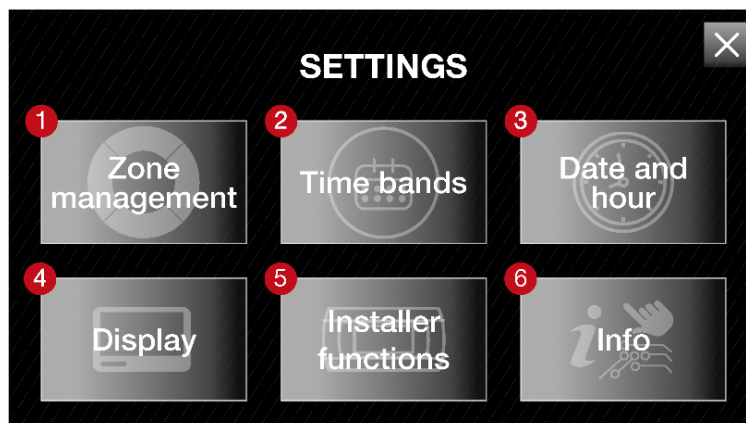


Figure 16-2: main “settings” screen.

1. Zone management.
2. Time bands.
3. Date and Time.
4. Display.
5. Installer functions.
6. Info.

16.1 Language change

To change the language of the touch screen, touch the arrows on the right side of the display settings screen to access the second page (down to scroll forward or up to scroll back through the pages):

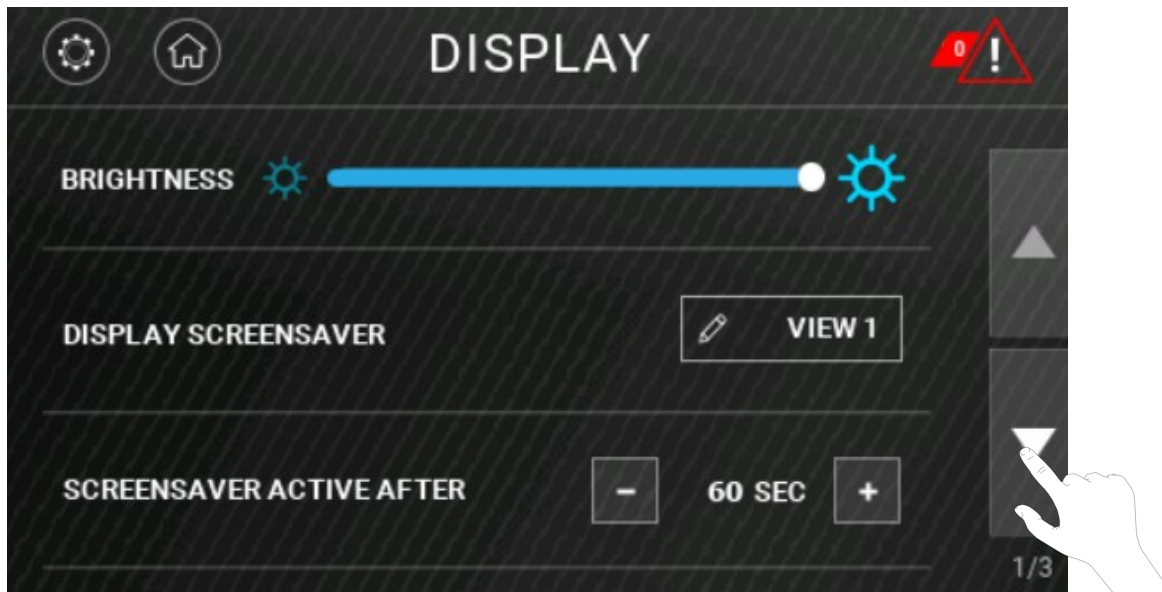


Figure 16-3: selection of the side arrows.

On the second page, touch the second button with the pencil-shaped icon next to “change language” (fig. 16-4):

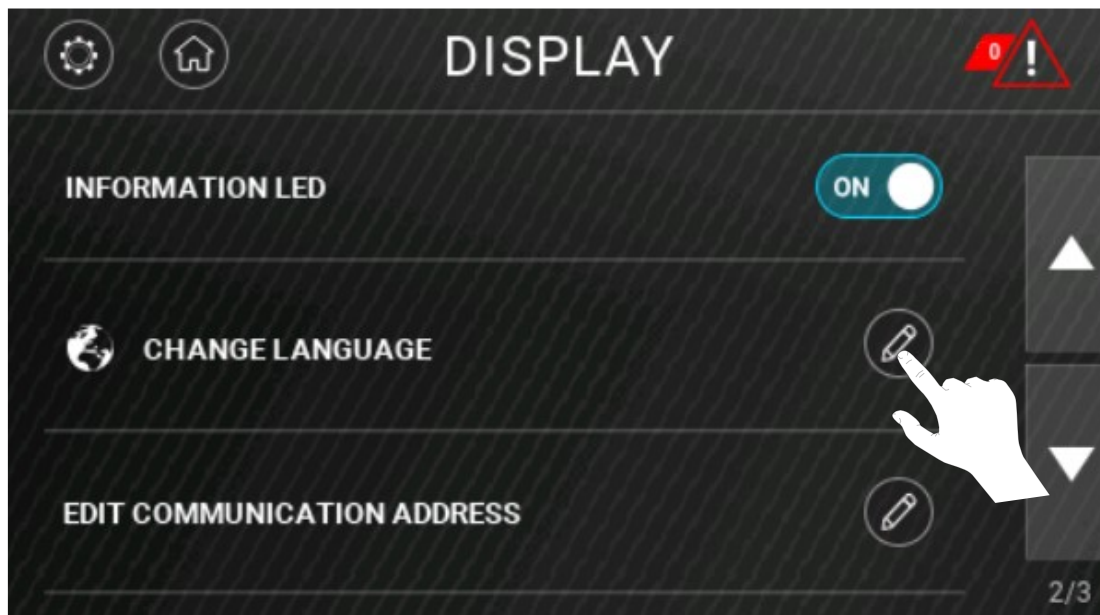


Figure 16-4: selection of the “change language” button.

In the “Language” screen select the desired language:



Figure 16-5: change language screen.

The currently set language has a yellow border (in this case English).

To change the language, simply select the flag of the desired language (**fig.16-6**):



Figure 16-6: example of language change.

After making the change, the touch screen will immediately be set to the new language selected. To return to the main setting screen, simply touch “Go back” at the top right.

16.2 Display settings

To access the “display” page, just select the appropriate button as shown in the image below (**fig.16-7**):

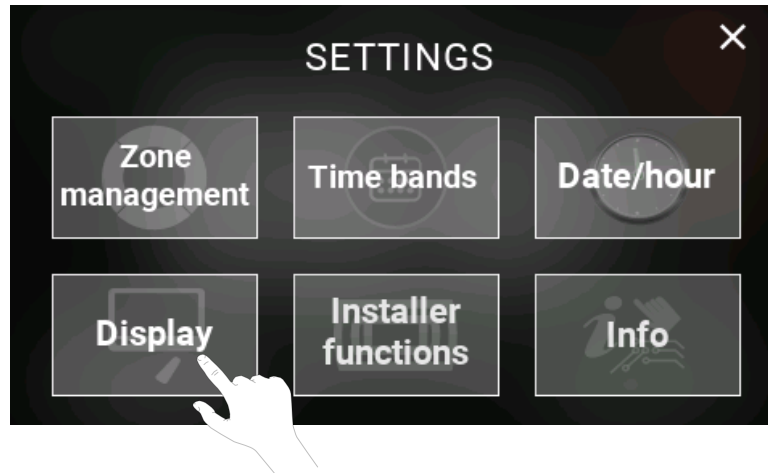


Figure 16-7: selection of the “display settings” button.

This will give access to the display settings page, showing the following:

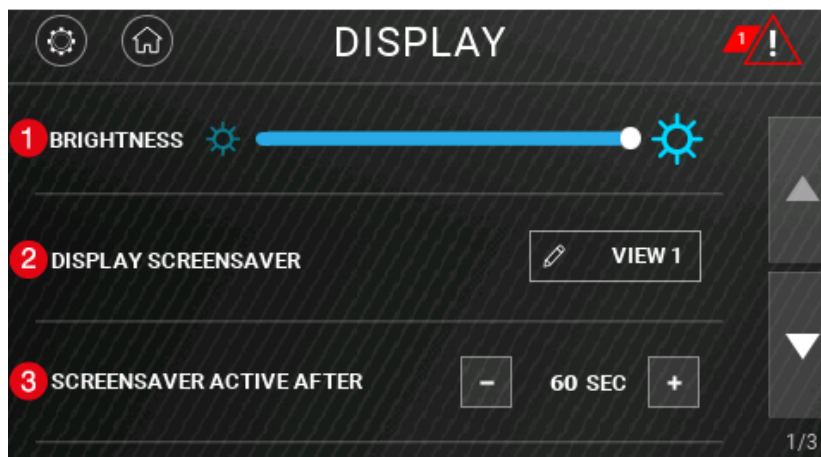


Figure 16-8: “display settings” page.

The following can be changed on the page:

1. Brightness of the display.
2. The display screensaver.
3. The time for activation of the screensaver (between 60 and 300 seconds).

To change the seconds of inactivity before the screensaver activates, or the brightness, proceed as follows:

- To adjust the **brightness**, move the blue bar to the right to increase the brightness level and to the left to decrease it.

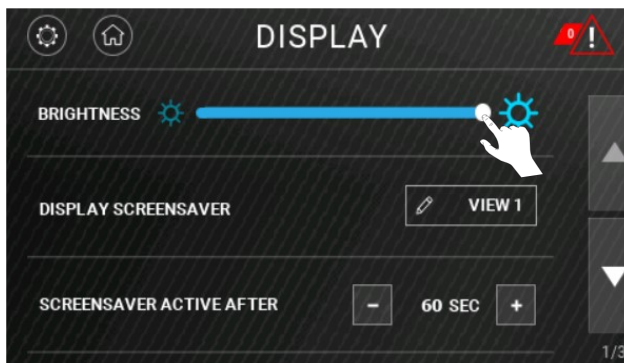


Figure 16-9: brightness adjustment using the bar.

- Touch “+” to **increase** the time to the activation of the **screensaver**.

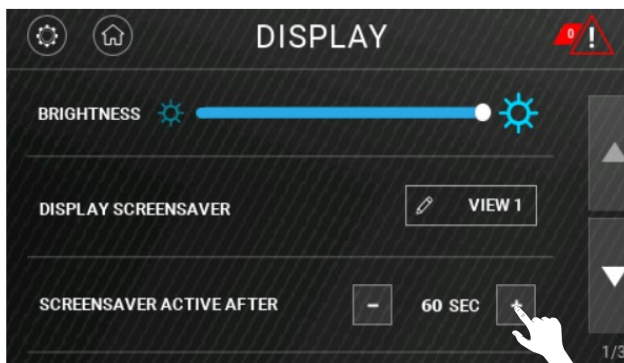


Figure 16-10: selection of the “+” screensaver button.

- Touch “-” to **decrease** the time to the activation of the **screensaver**.

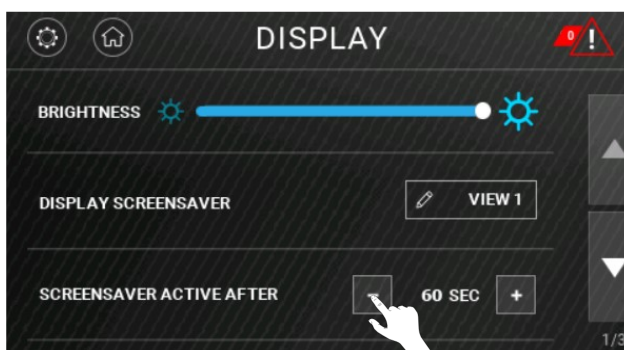


Figure 16-11: selection of the “-” screensaver button.

16.3 Enabling and disabling the password

As mentioned in section 6 - **Password page**, the user can enable or disable password protection of the Touch Room HMI. This sub-section gives a detailed explanation of how this is done.

On the main screen of the “settings” menu, select the “display” button and scroll to the third page (**fig.16-12**):

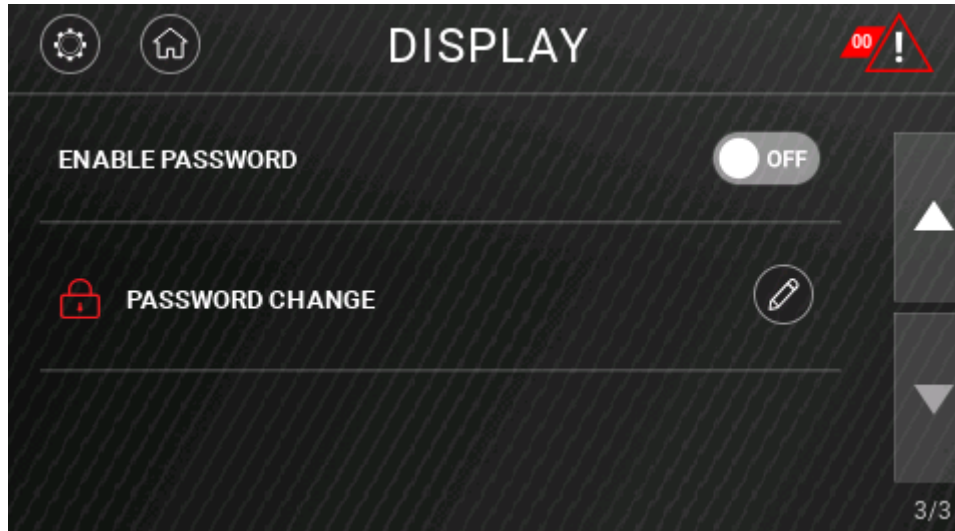


Figure 16-12: password management page.

The following can be done on this page:

- Move the switch to the right to enable password protection

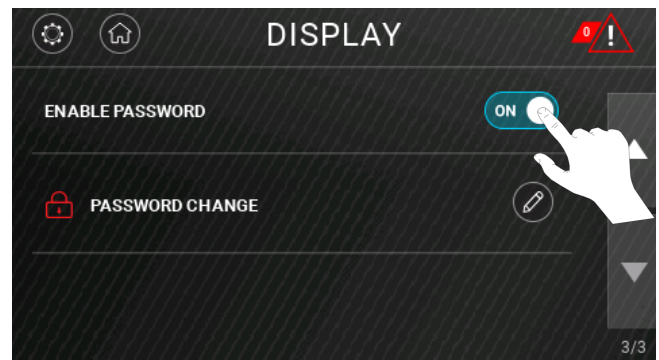


Figure 16-13: switch on, password enabled.

- Move the switch to the left to disable password protection.

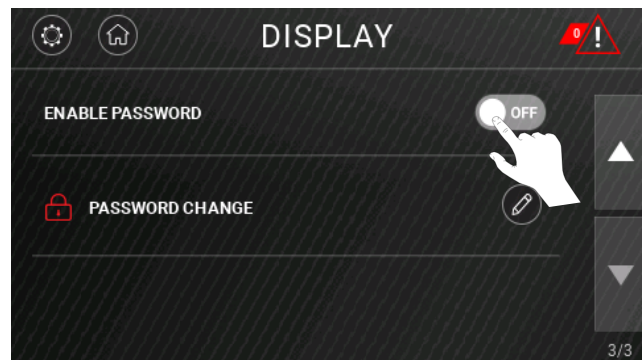


Figure 16-14: switch off, password disabled.

The appearance of the screen will depend on whether password protection is disabled or enabled:

- *Password disabled*: from the lock screen, after the device is unlocked the user will be taken directly to the homepage.
- *Password Enabled*: in order to unlock the device, in the lock screen the user must enter the password.

16.4 Password change

As mentioned in the previous sub-section, the password can be changed.

To access the password page, on the main screen of the “*settings*” menu select the “*display*” button and scroll to the third page:

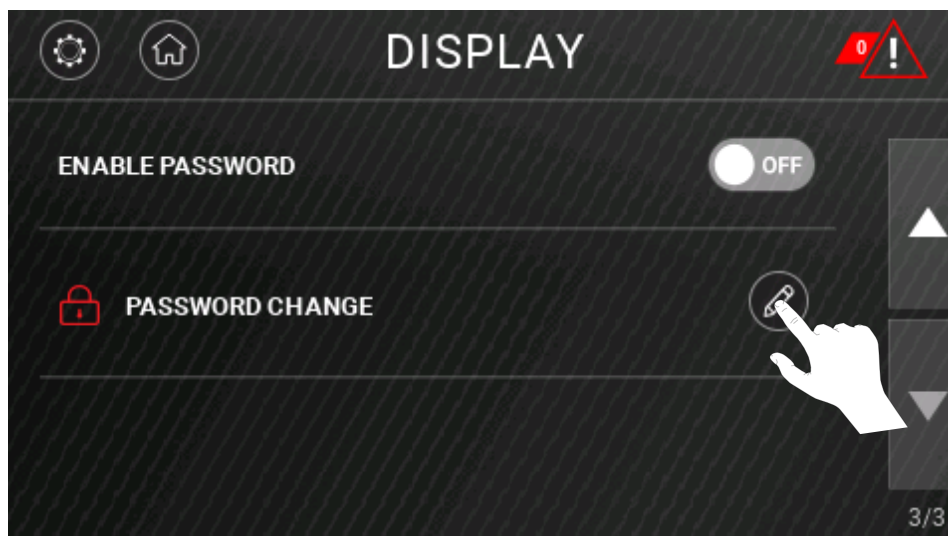


Figure 16-15: selection of the “change password” button.

Below are the various screens used to change the password and an explanation of the process.

The process for changing the password consists of three steps. At the end of each step a green screen confirms that the password has been entered correctly.

Step one

- In the first screen the user is asked to enter the old password (**fig.16-16**).

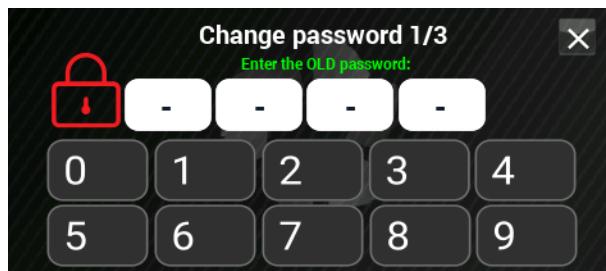


Figure 16-16: entry of the old password.

- The screen confirming that the old password has been entered correctly appears (**fig.16-17**).

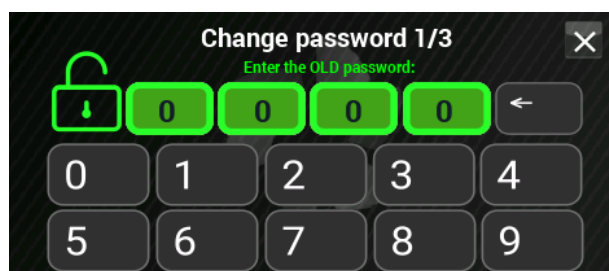


Figure 16-17: Old password entered correctly.

Step two

- The next screen will prompt to enter the new password.

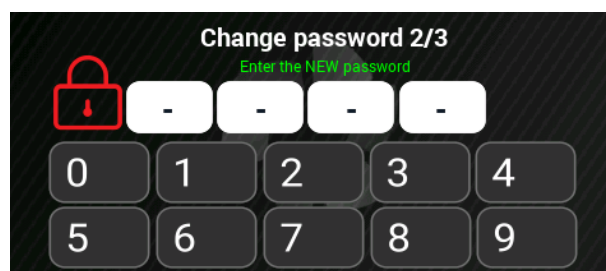


Figure 16-18: screen used to enter the new password.

- The screen confirming that the password has been entered correctly appears (**fig.16-19**).

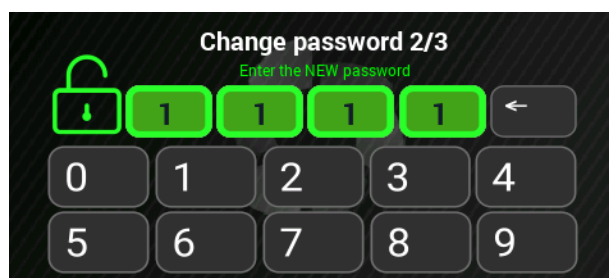


Figure 16-19: new password entered correctly.

Step three

- The final step asks the user to confirm the password entered in the previous screen.

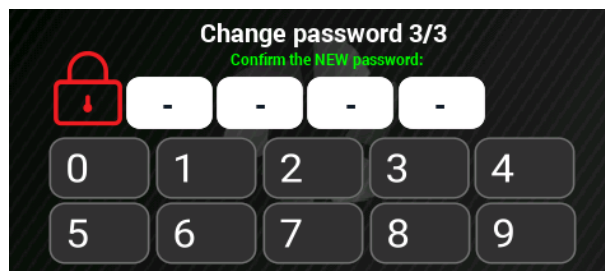


Figure 16-20: password change confirmation.

- The last screen is the confirmation that the new password has been entered correctly (**fig.16-21**).

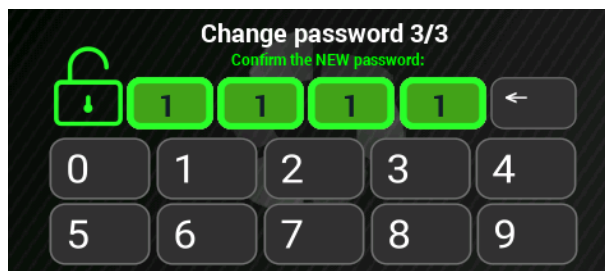


Figure 16-21: password change confirmed.

After the password has been changed, a password changed confirmation message will appear (**fig.16-27**). Touch "OK" to exit the screen. This takes you back to page three of the display settings.

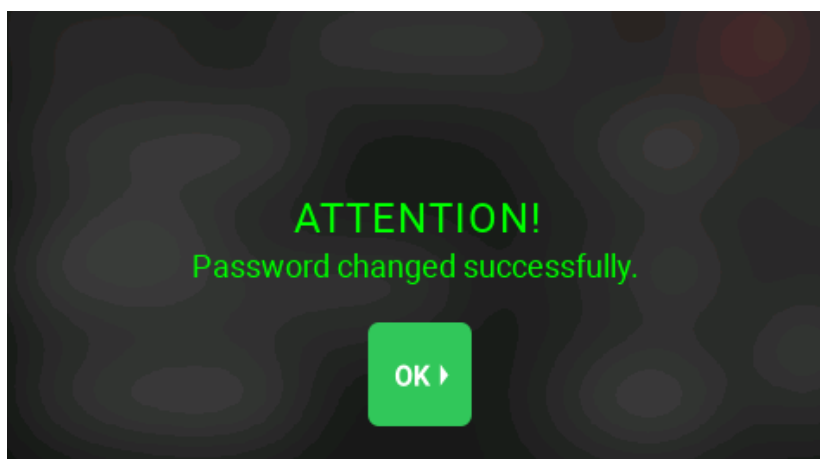


Figure 16-22: password changed successfully.

If a different password from the one before is entered in the confirmation screen in the third step, a warning will indicate that the two passwords don't match (**fig.16-28**):

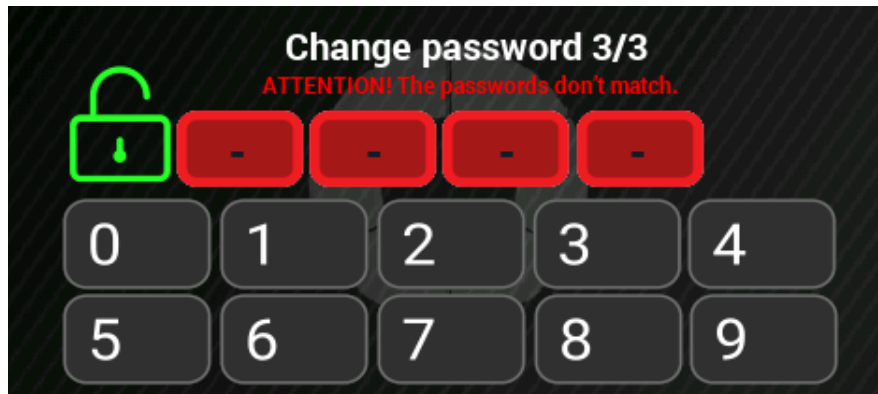


Figure 16-23: the passwords don't match.

The user will be redirected back to the beginning of the process and will be asked to repeat the process.

16.5 Display screensaver

The screensaver can be changed in the display settings (first page).

Touch the button shown below to access the page for changing the screensaver:

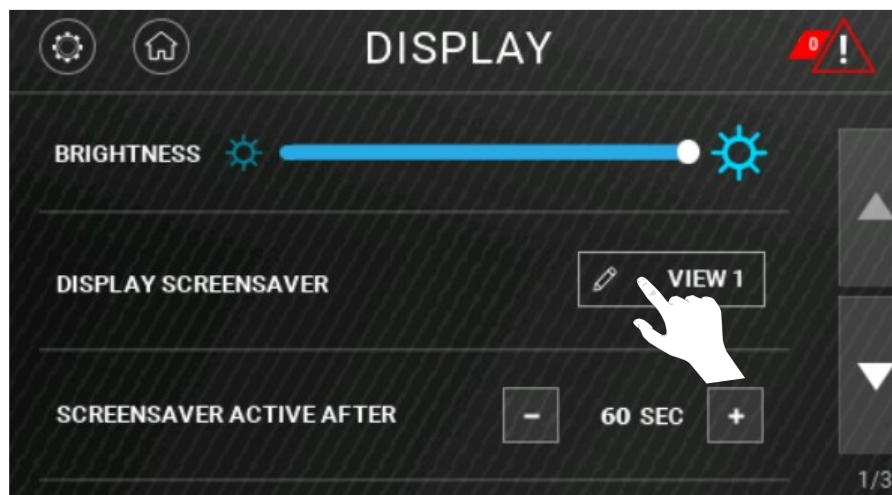


Figure 16-24: selection of the "display screensaver" button.

There is a choice of two different views:

- View 1 shows the date and time at the centre and the temperature at the forefront.

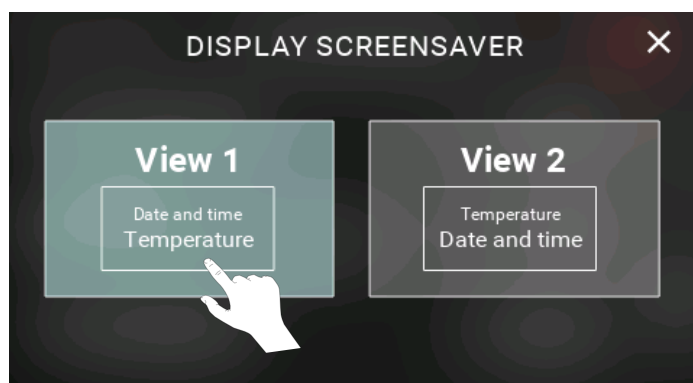


Figure 16-25: selection of "View 1".

- View 2 shows the temperature at the centre and the date and time at the forefront.

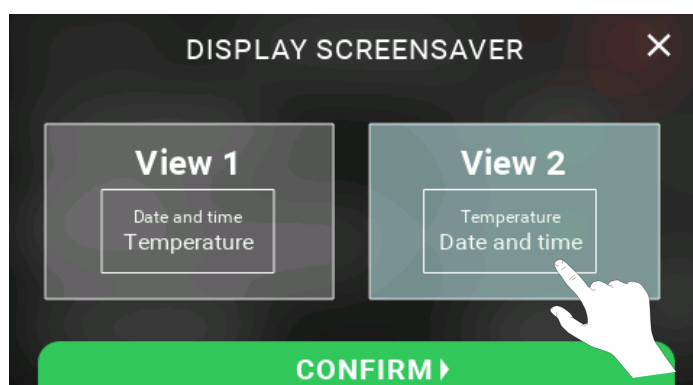


Figure 16-26: selection of "View 2".

After selecting a view, touch "CONFIRM" at the bottom of the page to save the change.
Otherwise touch the "X" in the top right to cancel the changes and return to page one of the display settings.

16.6 Information LED

The information LED at the side of the touch screen can be enabled or disabled on the second page of the display settings:

- Press “switch OFF” to enable the information LED.

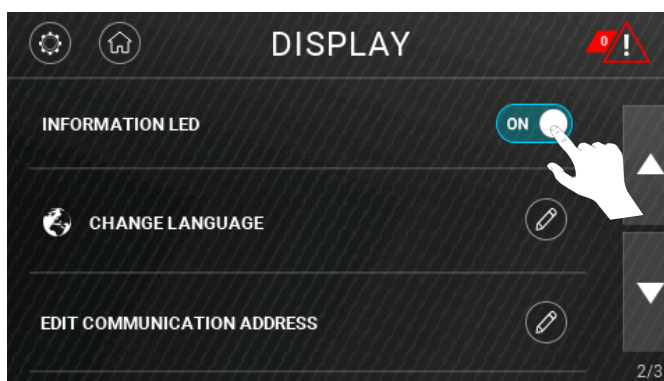


Figure 16-27: “switch ON” information LED enabled.

- Press “switch ON” to disable the information LED.

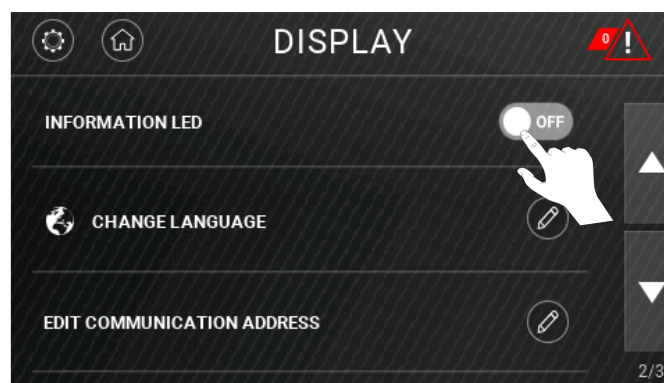


Figure 16-28: “switch OFF” information LED disabled.

16.7 Edit communication address

To access the “*edit communication address*” settings page, on the homepage go to display settings (page two) and select the pencil-shaped button shown in the figure (**fig.16-29**):

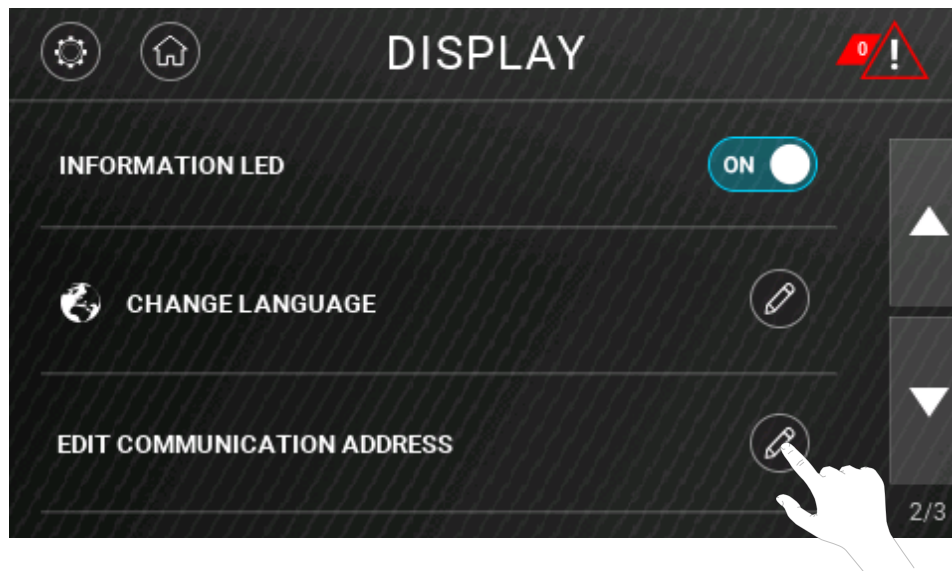


Figure 16-29: selection of the “edit communication address” button.

The following screen opens (**fig.16-30**). The screen contains further details regarding the address of the touch screen, the controller to which it is connected.

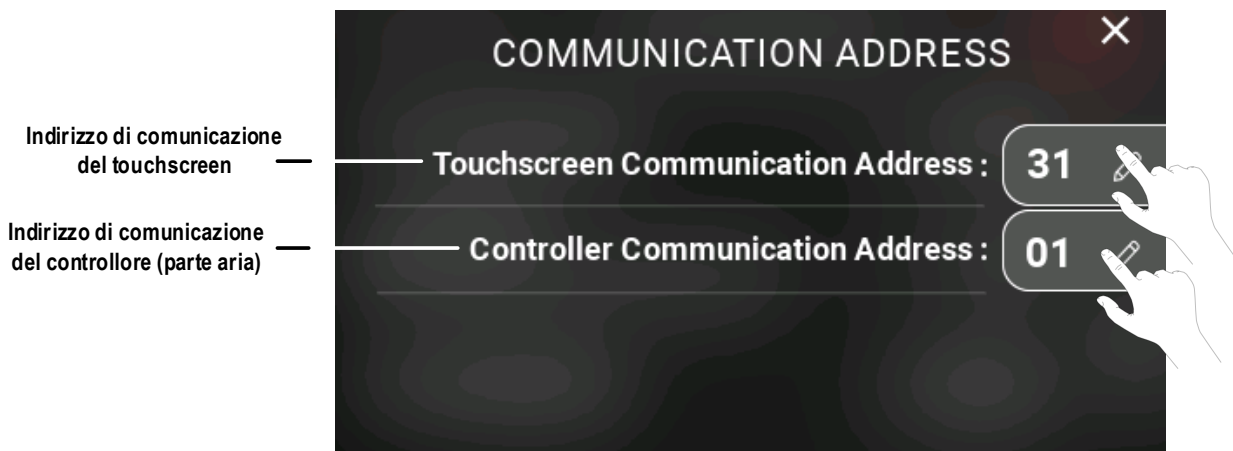


Figure 16-30: description of the “communication address” screen.

The user can change the communication address of the touch screen and the communication address of the controller by touching the pencil icons on the right of the screen. This will open the numerical keypad, which can be used to enter the desired addresses.

The procedure for this modification (in this case the communication address) is the same as described in other sections. The keypad always shows the minimum and maximum possible values and the value currently set.



Figure 16-31: numerical keypad display.

16.8 Emulator

Select the penultimate button in the settings menu (as shown in the image) to access the “*Installer functions*” page:

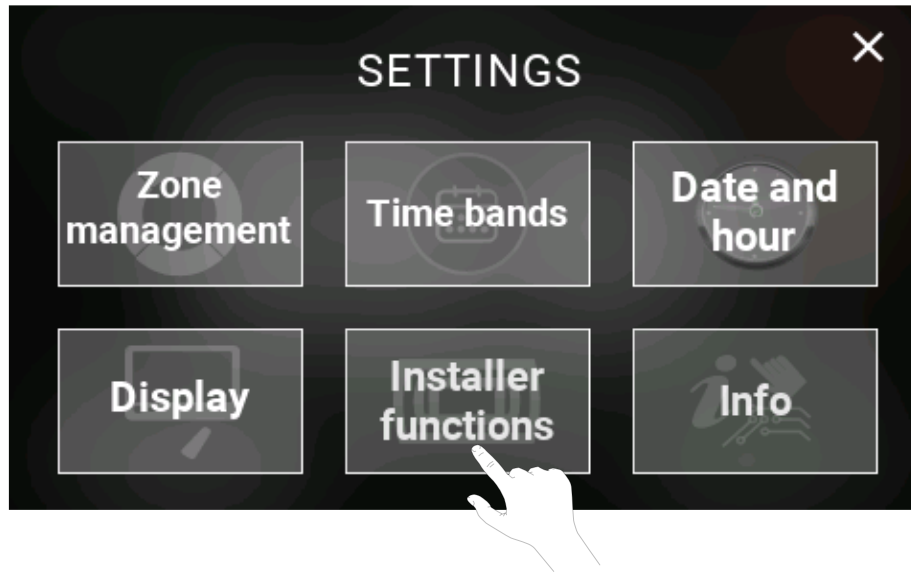


Figure 16-32: selection of the “emulator” button.

After touching the button, you are prompted to enter the password (unless changed by the user, the default password is 1971) and the loading window appears.



INFORMATION:

Loading will take approximately ten seconds.

After loading, a message informs that, during emulation, *the controller will no longer be updated with temperature and humidity data from the probes installed in the touchscreen*:

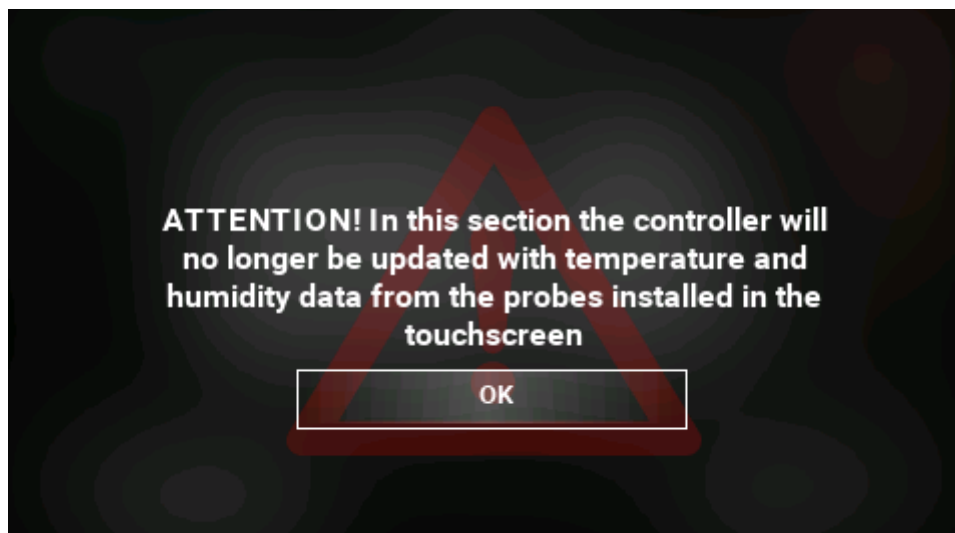


Figure 16-33: display of message that the temperature and humidity data will no longer be updated.

After pressing OK, the user will be taken to the compact keypad emulation screen:

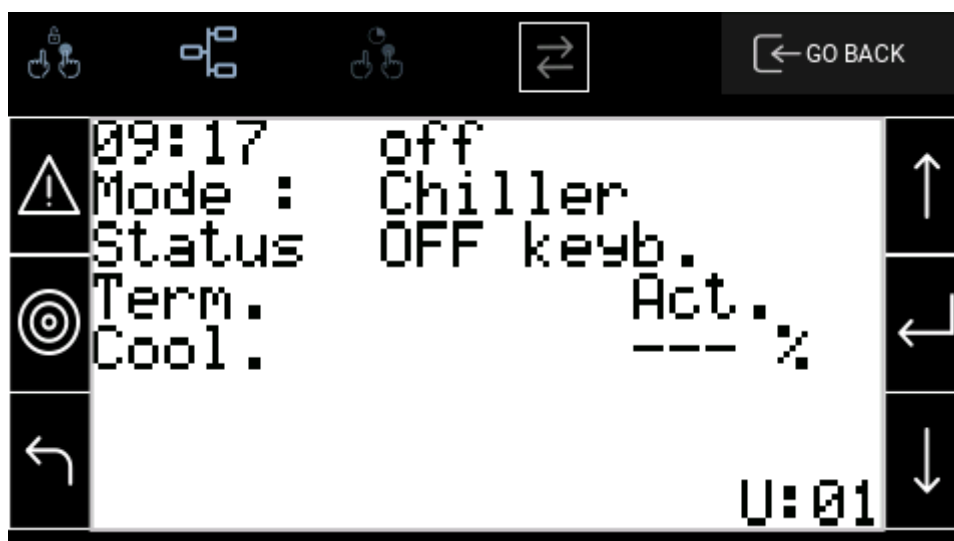


Figure 16-34: display of compact keypad emulation screen.

16.8.1 Emulator function

To know the operation of the compact keypad emulation technical masks, refer to the W3000+ controller manual. The emulator navigation rules are the same as for the compact keypad, i.e.:



Figure 16-35: details of the emulator screen buttons.



INFORMATION:

Returning from emulation to normal mode may cause alarms indicating a disconnection of the pLAN network running between controllers and pLAN communication issues for approximately 30 seconds.

The following procedure can be followed to press several buttons at the same time:

1. Left button 
2. Pressing two or more buttons at the same time
3. Right button 
4. Touch the left button again to end the simultaneous pressure action

16.8.2 Changing the emulated controller

To change the emulated controller, simply touch the button for this function shown in the image below:

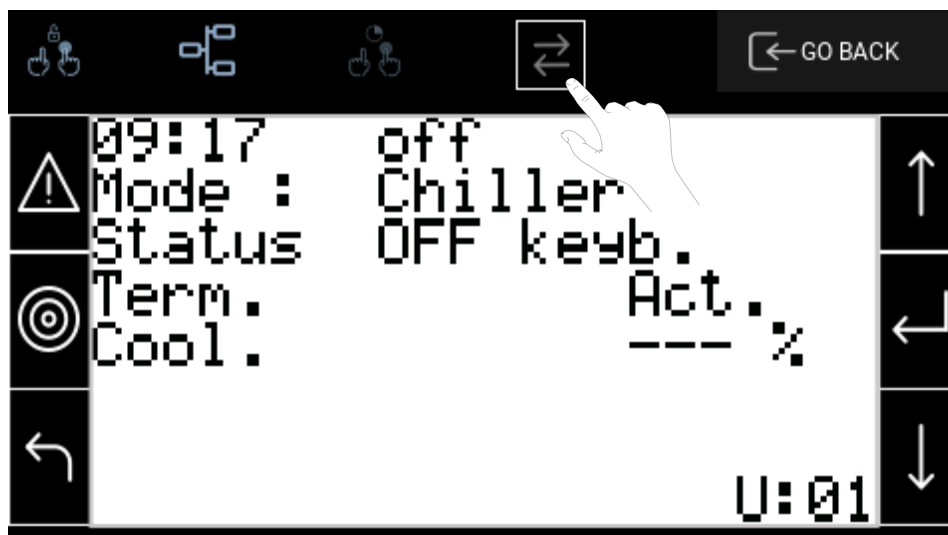


Figure 16-36: selection of the change emulated controller button.

Touch the “go back” button in the top right of the screen to go back to the settings page.

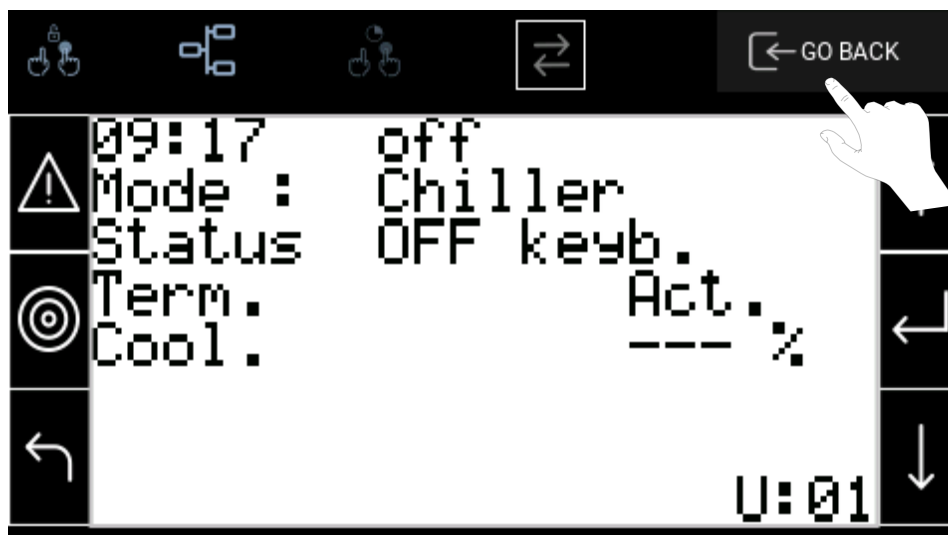


Figure 16-37: selection of the “go back” button.

16.9 Zone management

In addition to the functions described earlier on for switching the unit on and off (see chapter 9 – **Switching the unit on and off**) and changing the mode (see chapter 12 – **Operating mode**), it is possible on page 1 of the zone management menu to change operation of the zone (see next chapter), choosing between manual, manual timed, time bands and OFF (indicating that the zone is switched off).

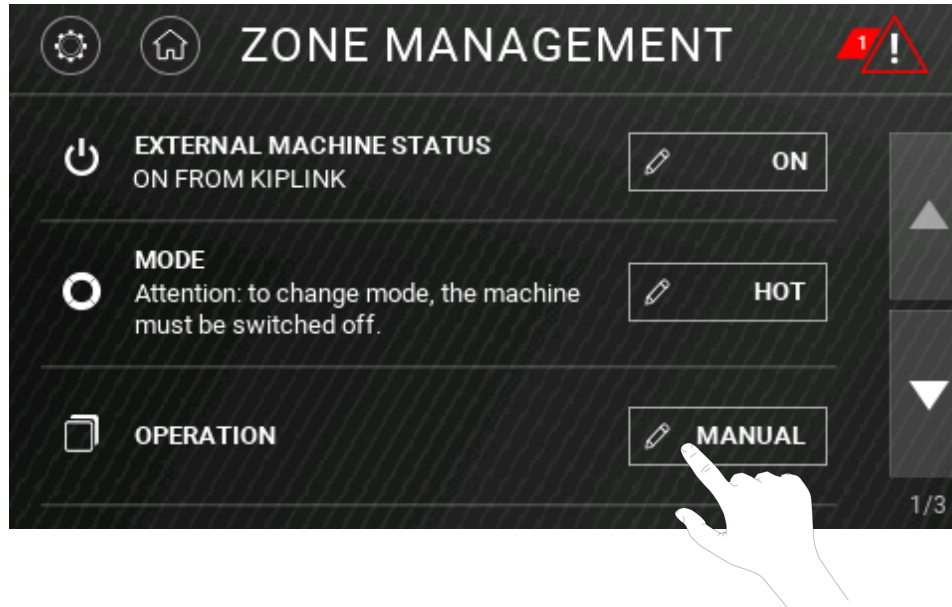


Figure 16-38: selection of the “operation” button.

Use the arrow buttons at the side to access the second page of zone management:

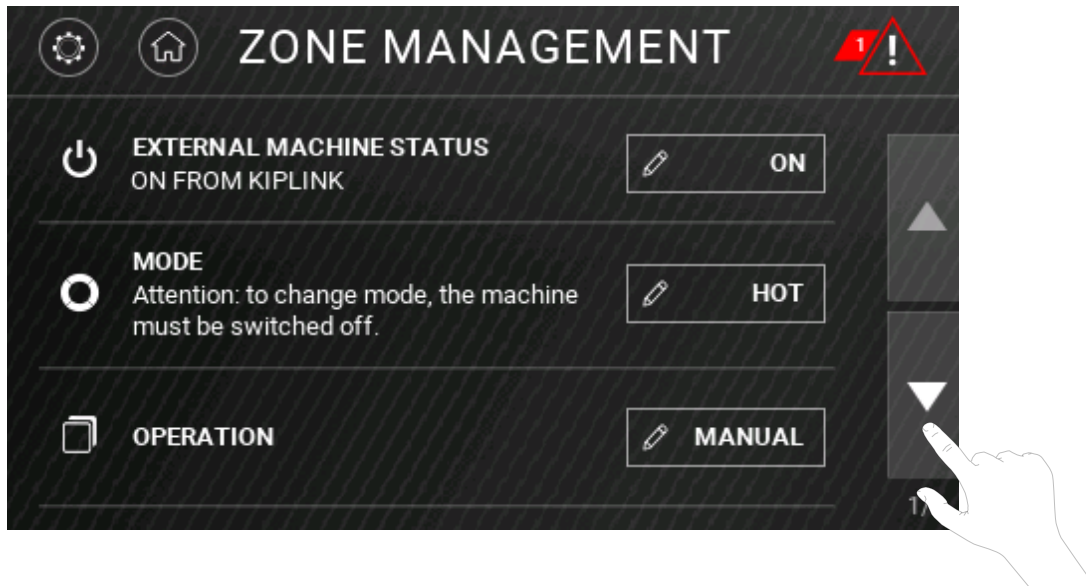


Figure 16-39: selection of the arrow for scrolling through the pages.

It is possible to:

1. Change the setpoint if manual or manual timed operation is set:

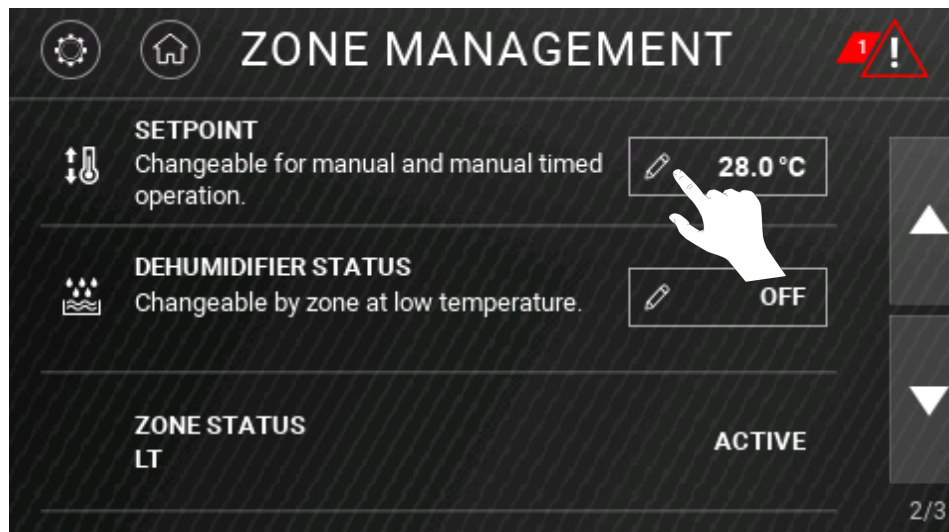


Figure 16-40: selection of the "setpoint" button.

2. Switch the dehumidifier on or off in the LT (Low Temperature) zone:

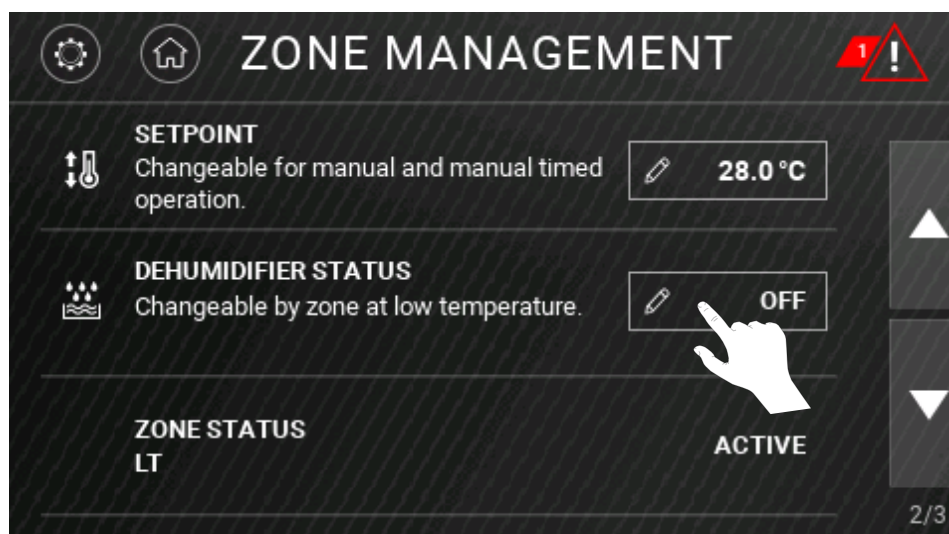


Figure 16-41: selection of the "dehumidifier status" button.

- If the dehumidifier is off, this screen appears for switching it on (*fig.16-42*)



Figure 16-42: Dehumidifier switching on screen.

- If the dehumidifier is on, this screen appears for switching it off (*fig.16-43*)



Figure 16-43: dehumidifier switching off screen.

- If the switching off command is given, in the case when the dehumidifier is still on and the user attempts to switch it off again, and it is active because it is required by the digital input or the anti-condensation function, this screen appears (*fig.16-44*)

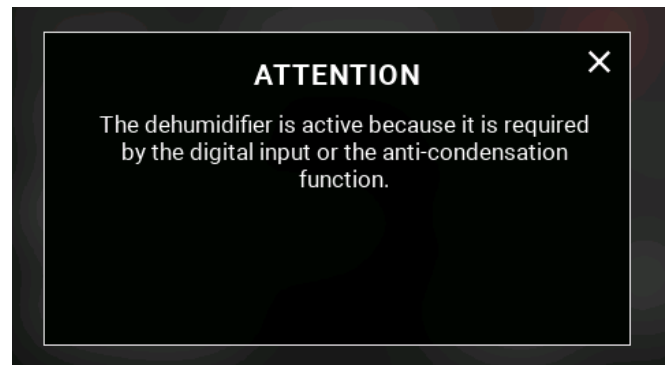


Figure 16-44: warning screen.

3. view the status of the HT/LT zone that can be **ACTIVE** or **OFF**:

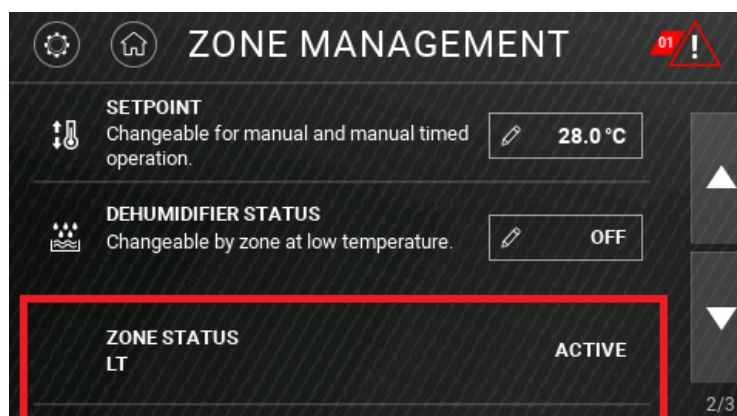


Figure 16-45: zone status.

On the third page of the zone management menu there is information about the water temperature of the mixed circuit in the case of a low-temperature (LT) zone, otherwise the outlet temperature of the heat exchanger or the temperature of the inertial storage tank (if any) is displayed.

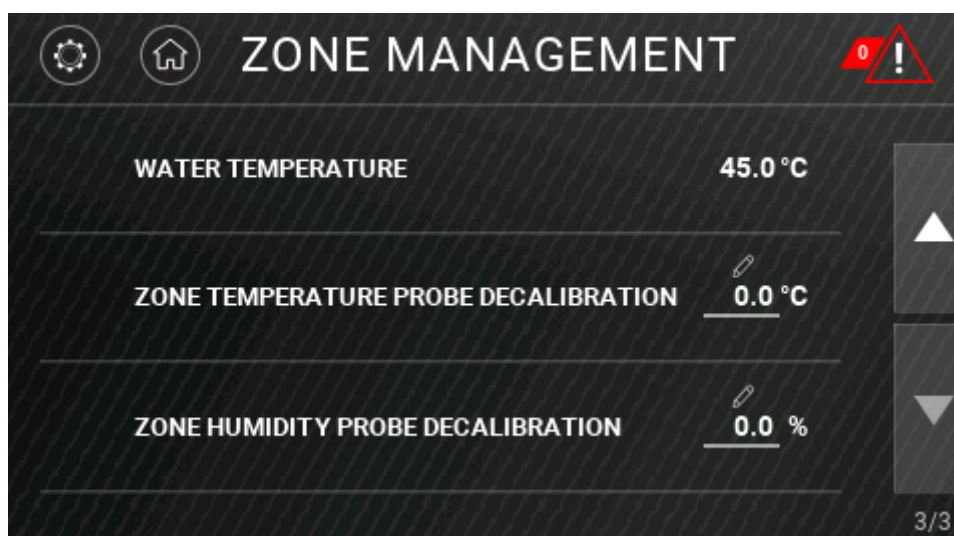


Figure 16-46: water temperature.

On this page, it is also possible to change the zone probe's decalibration value relative to the temperature and humidity values (using the numerical keypad) by touching the following sensitive zones:

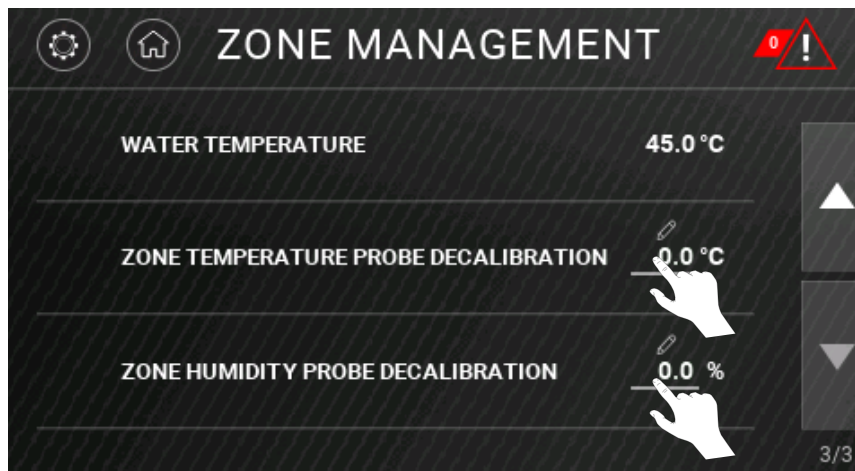


Figure 16-47: sensitive areas for modifying the decalibration.

On the fourth and last page of the zone management menu, you can view the domestic hot water temperature and activate/deactivate the “domestic hot water” function (if enabled) on the relevant page.



Figure 16-48: temperature and management of the domestic hot water function.

16.10 MasterClient

Open the second page of the settings to access the Master-Client menu (if enabled).

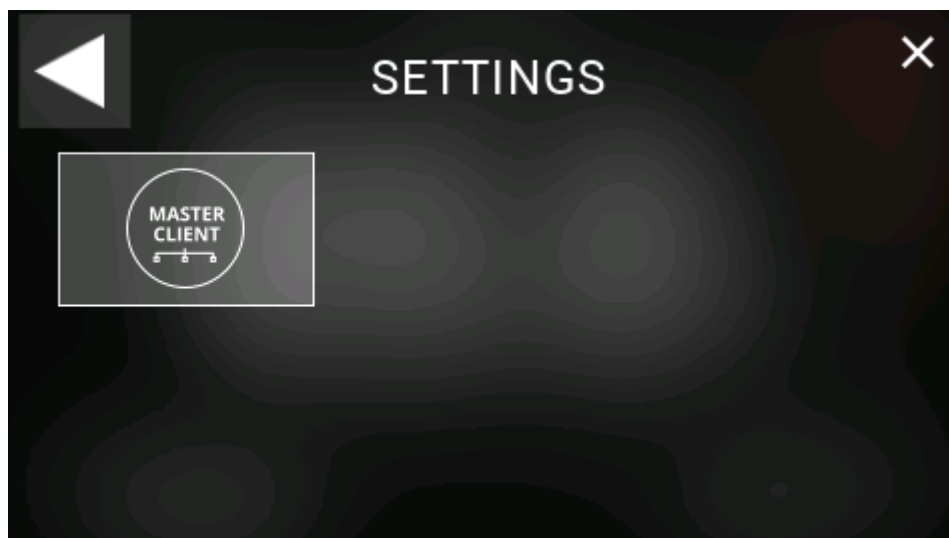


Figure 16-49: Master-Client button.

The first page of the Master-Client menu shows the following:

- The Master-Client status (the system can be switched on or off).
- The system operating percentage.
- The plant operating mode.



Figure 16-50: Master-Client page 1.

The second page of the Master-Client menu shows the following:

- The plant storage tank temperature.
- The DHW operating percentage (if enabled).
- The DHW operating mode (if enabled).

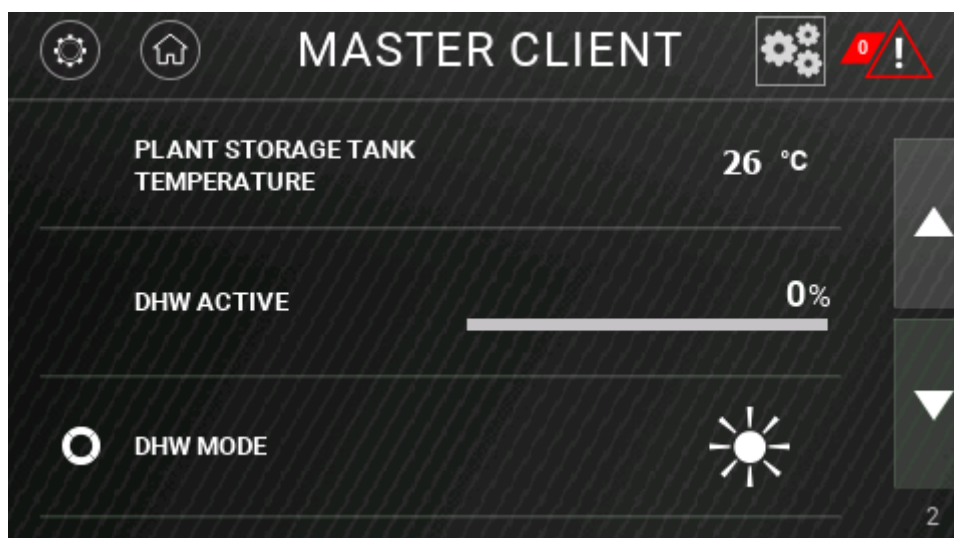


Figure 16-51: Master-Client page 2.

The third page of the Master-Client menu shows the following:

- The DHW storage tank temperature (if enabled).



Figure 16-52: Master-Client page 3.

Touch the  button at the top right to access the status page of the individual units.
The following information is shown on the Master-Client menu status page of the individual units:

- The number of configured units.
- The status of single units (ON, OFF, alarm, offline: white icon with radio waves).
- The operative mode of single units.
- The activity percentage of single units.
- The type of operation of single units (DHW utility or plant utility).

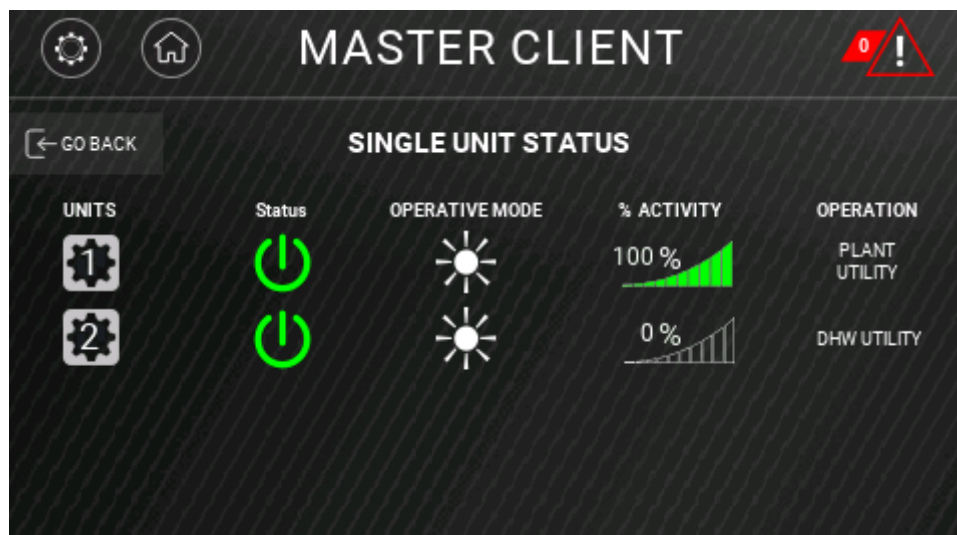


Figure 16-53: Master-Client single units page.

17 OPERATION

To access the operation screen from the homepage, simply press the relevant button  located in the lower left corner. It can also be accessed (see Section **16.9 - Zone management**) by following the path settings – zone management (page 1).



Figure 17-1: selection of the “operation” button.

As mentioned earlier, the Touch Room HMI allows the selection of one of four different types of operation: *manual*, *manual timed*, *time bands* and *OFF*. The rectangle of the current operating mode is coloured blue:

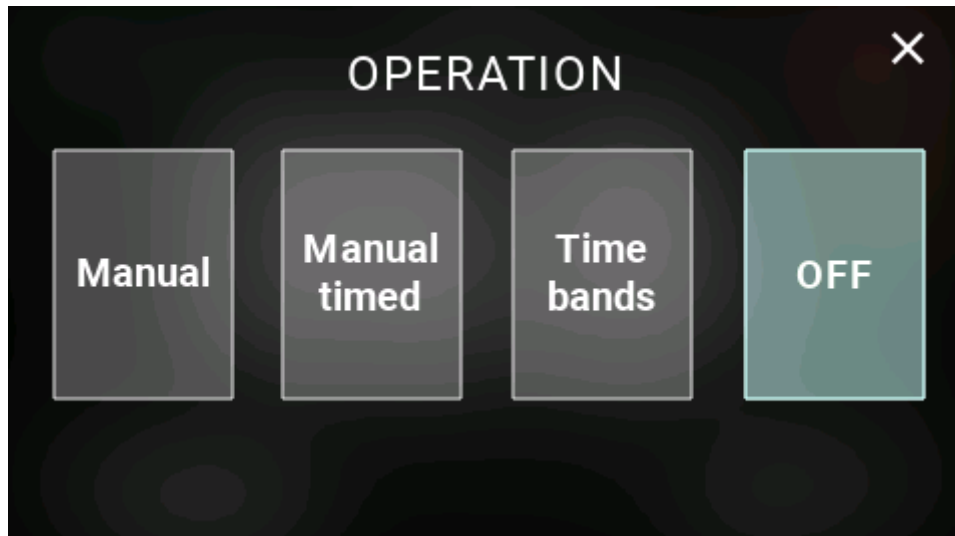


Figure 17-2: operation screen.

Once the type of operation is selected, the chosen box will be coloured blue, and you can confirm your choice by pressing the “confirm” button:

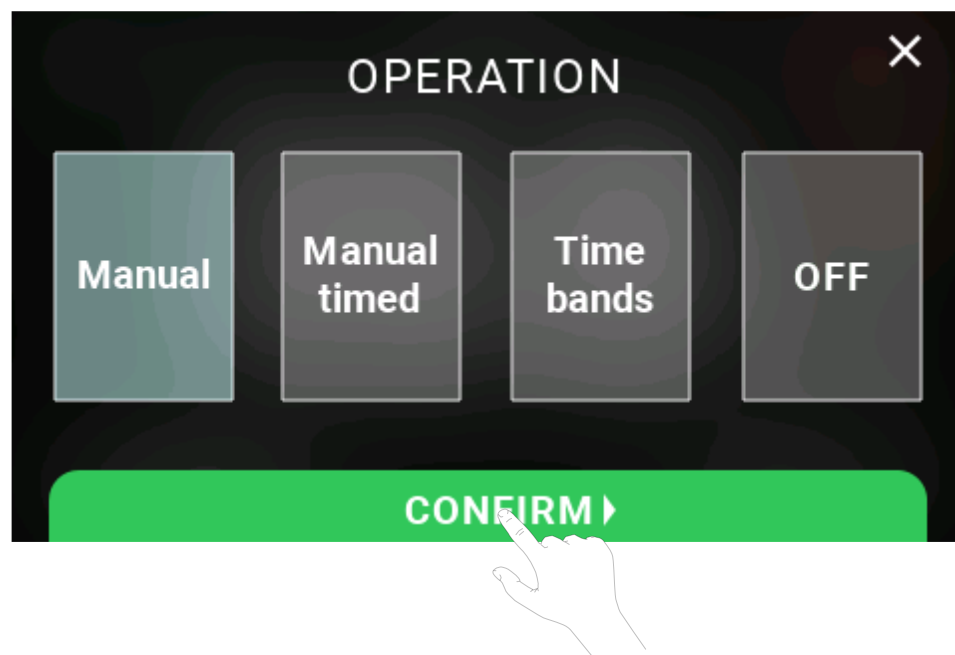


Figure 17-3: selection of the “confirm” button.

Once the choice is confirmed, there can be four different scenarios depending on the type of operation.

17.1 Manual operation

If manual operation is selected, the currently set setpoint value will appear in the footer on the homepage, which can be changed using the relevant button:



Figure 17-4: selection of the “setpoint” button.

You will then access the setpoint screen already described in Chapter 11 - **Setpoint**.

17.2 Manual timed operation

If manual timed operation is selected, it will be possible to set a new schedule by touching the relevant button on the homepage:

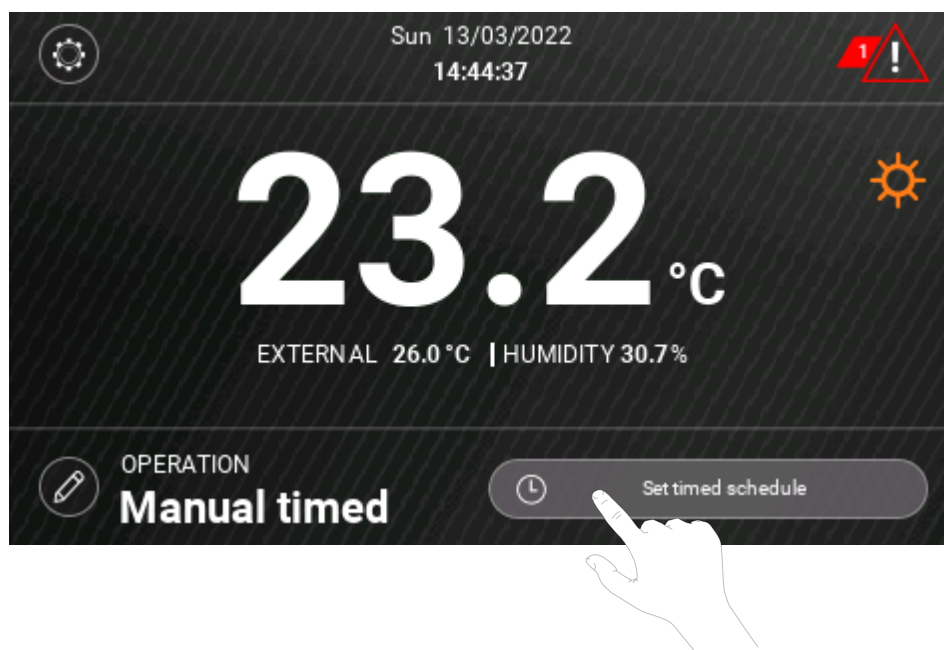


Figure 17-5: selection of the “set timed schedule” button.

On the next screen, you can set the desired degree value and then press the “OK” key to confirm (see 11 - **Setpoint**):

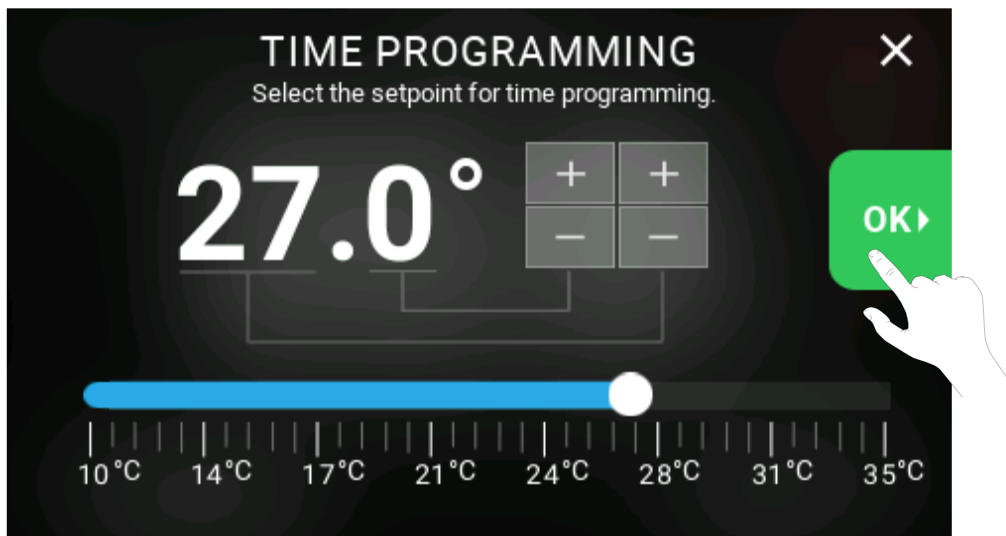


Figure 17-6: selection of the "OK" button.

Once the setpoint value has been selected, you will be prompted to enter the desired duration for the time schedule (the current time will be visible at the top left of the screen). To do so, simply touch the editable time in the centre of the screen, enter with the numerical keypad a value in hours and minutes, then touch "OK" to confirm.

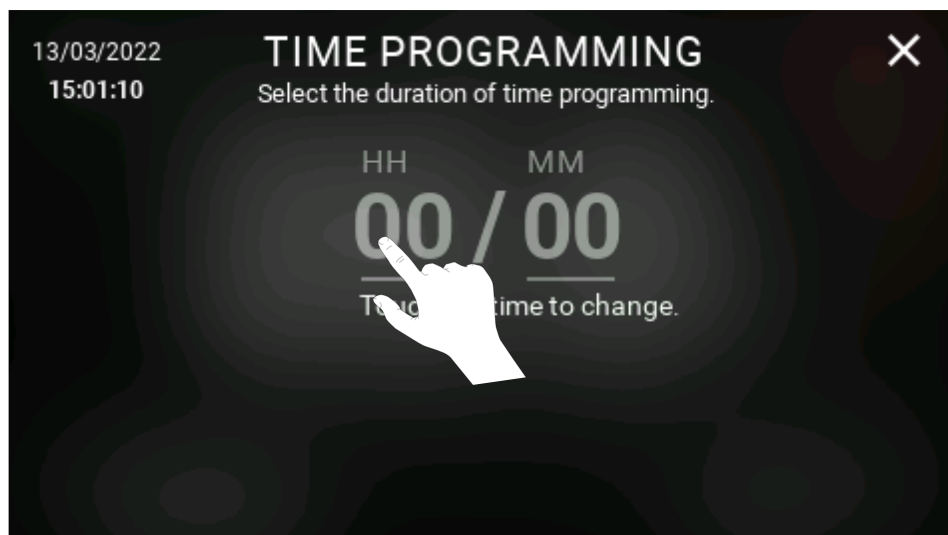


Figure 17-7: selection of time programming.



Figure 17-8: selection of the “OK” button.

Once the above has been done, the duration value (which will be updated as each minute passes) and the setpoint will appear in the footer on the homepage:



Figure 17-9: manual timed operation.



INFORMATION:

If the touch screen is turned off, the set duration value of manual timed operation will not be updated. The time will resume once the touch screen is powered back on.

17.3 Time bands operation

Time bands operation was previously covered in Chapter 13 – Time bands.

Once time bands operation is selected, the scenario and the currently active setpoint value according to the defined settings will appear in the footer on the homepage.

The “scenario” value can vary between *A*, *B*, *C*, *D* and *OFF*. The setpoint value can take a numerical value or alternatively the string “F. OFF”, which indicates that at the current time an off band is active.

The time bands menu can be accessed by touching the button with the following icon:



Figure 17-10: time bands operation.

17.4 OFF operation

If OFF operation is selected, the zone is switched off.



Figure 17-11: OFF operation.

18 SOFTWARE INSTALLATION

18.1 Scope and field of application

The **SCOPE** of the document is to describe the procedure to be followed for installing the software of a Touch Screen device and setting its communication parameters.

The **FIELD OF APPLICATION** of this document is related to the presence of the Touch Screen device installed in air handling units.

The type of Touch Screen device (**Touch Room HMI**) is related to the type of controller found on the unit as shown in the following table:

Touch Screen			Unit Controller	
Name	Format	Software Version	Name	Software Version
Touch Room HMI	4.3"	VB01r00 or higher	W3000 PLUS	TA12 or higher

18.2 Introduction

This procedure describes how to update the software of the Touch Screen device that can be installed on MEHITS units, and how to set the parameters for communication with the controller.



Figure 18-1: front panel image.

18.3 Software application update

18.3.1 Initial actions

Supply power to the Touch Screen device (**attention: it requires 24V VDC, NOT 24 VAC. If the Touch Screen is powered by 24 VAC, it flashes intermittently without starting**) and wait for the completion of the initialisation process, which will take about 50 seconds:

- If the screen shows the User Interface Homepage (Figure 1), there already is a project.
- If a different screen appears, the Touch Screen might have no project, or a project that must be deleted, or an "Unload" procedure has already been performed.

18.3.2 Deleting and Unloading

Be sure to delete any already installed software versions. These can be of two types:

- a. Emulator project
- b. VBXXrYY project

18.3.2.1 Emulator Project deletion

In case the pre-loaded project is the emulator, the following is the first screen that appears after the Touch Screen has been powered:

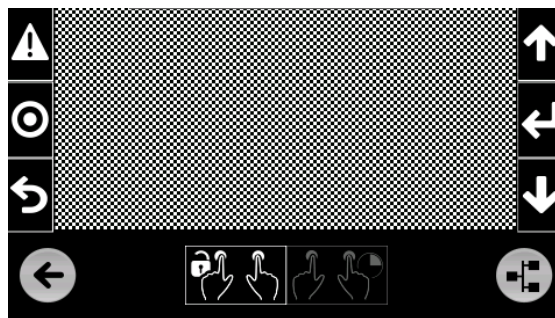


Figure 18-2: emulator project: Landing Page.

- 1) Touch (a black point of the screen) for approximately **10 seconds** until the following screen appears:

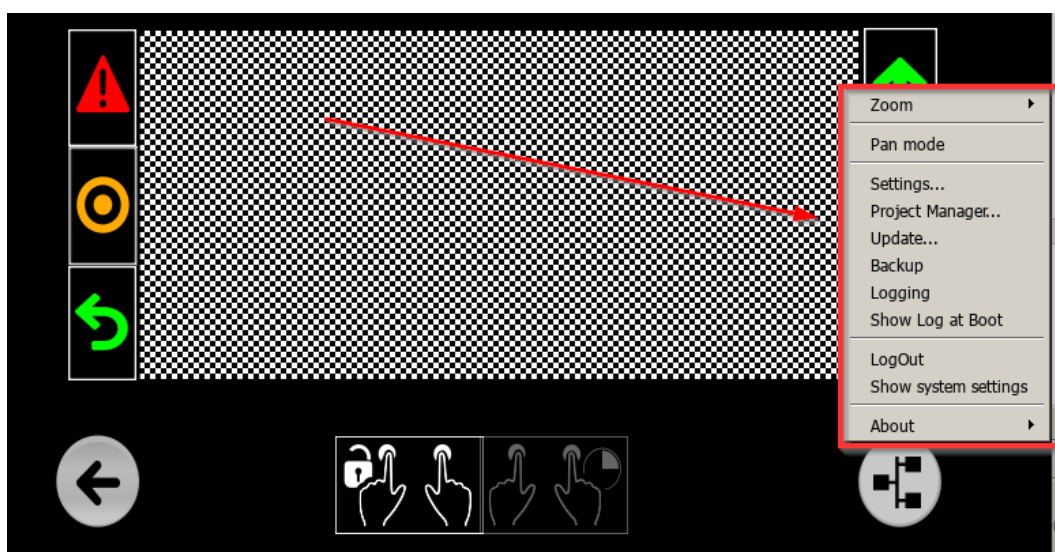


Figure 18-3: emulator project: Project manager.

2) Select the "Project Manager" item until this window appears:

2a. to clean the Touch Screen memory, continue the deletion process as follows:

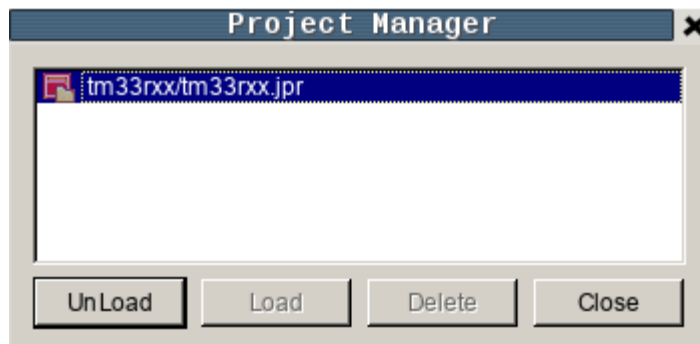
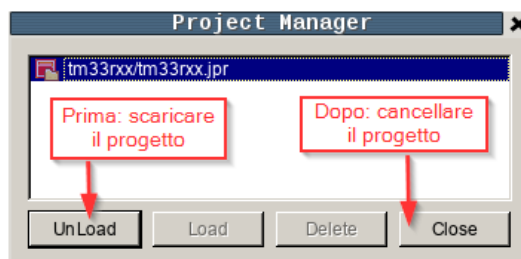


Figure 18-4: Project Manager: project display.

2b. To delete any loaded projects, press "Unload project" followed by "Delete project".
In some cases, it may be possible to just delete the project without the need to first download it using the "Unload project" function: continue with the deletion, this is not a bug.



Or

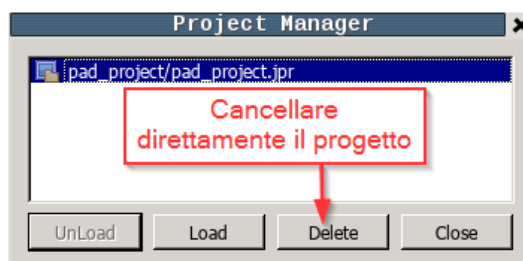


Figure 18-5: project Manager: project management.

NOTES:

- The action must be repeated for each project, until the memory of the touch screen is completely clean.
- The deletion process of the previous project takes approximately 2 minutes. It might however take a few extra seconds, depending on the size of the previously installed project.

18.3.2.2 VBXXrYY Project deletion

If the preloaded project is a VBXXrYY software version, the Homepage screen appears after the initialisation of the Touch Screen:

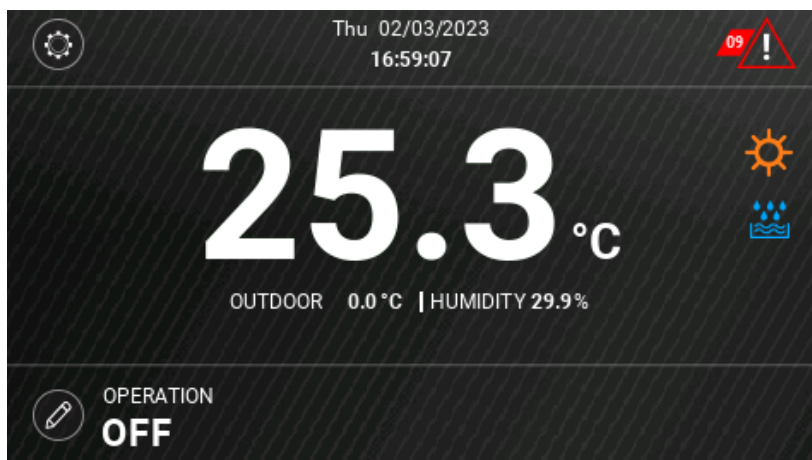


Figure 18-6: Touch Room HMI, Homepage.

- 1) In the Homepage, touch the settings menu button:

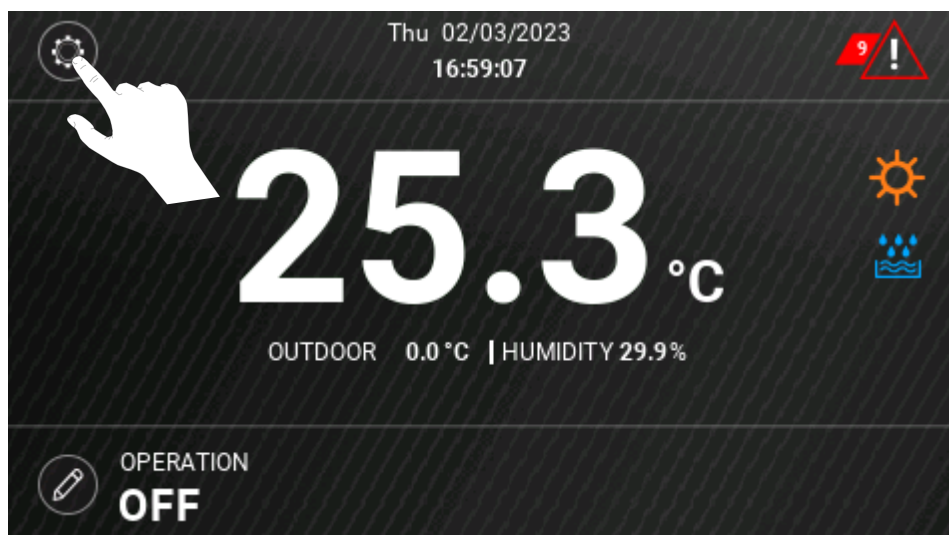


Figure 18-7: Touch Room HMI, access to settings.

- 2) Access the “Info” page from the settings menu:

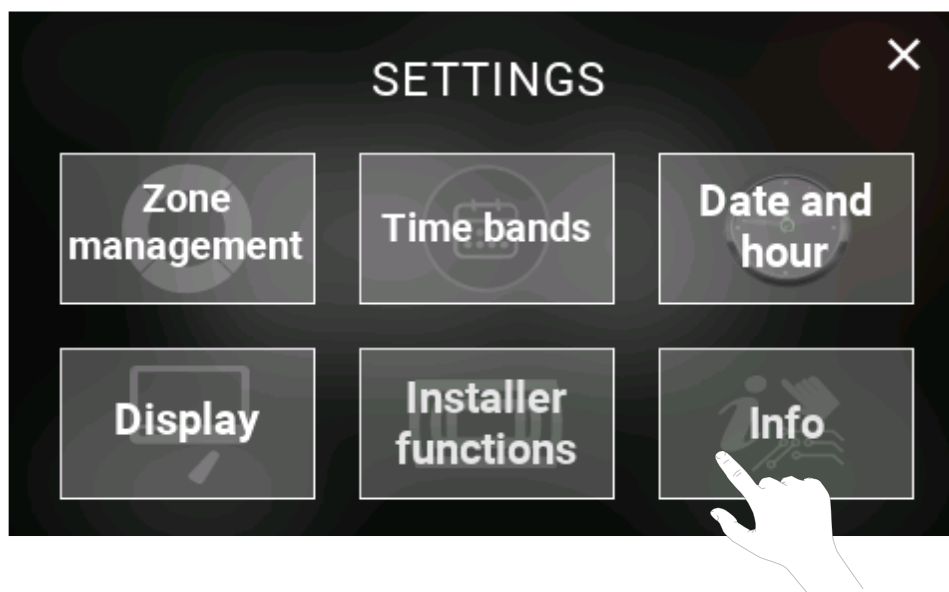


Figure 18-9: Touch Room HMI, info page.

- 3) This page will open. Touch and hold your finger on the highlighted area until the context menu appears:

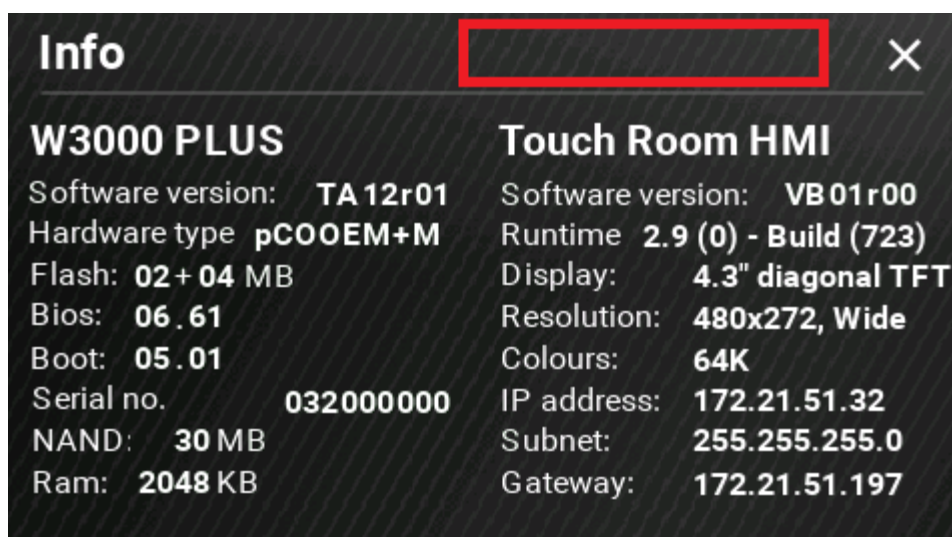


Figure 18-10: Touch Room HMI, hidden hotspot.

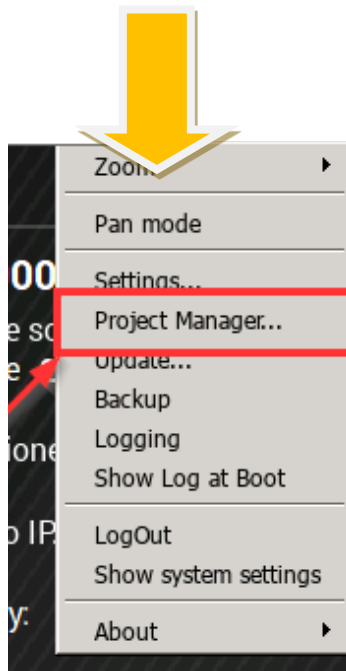


Figure 18-11: Touch Room HMI, context menu.

- 4) Touch "Project Manager" as indicated.
- 5) To delete any loaded projects, press "Unload project" followed by "Delete project":
- 6)

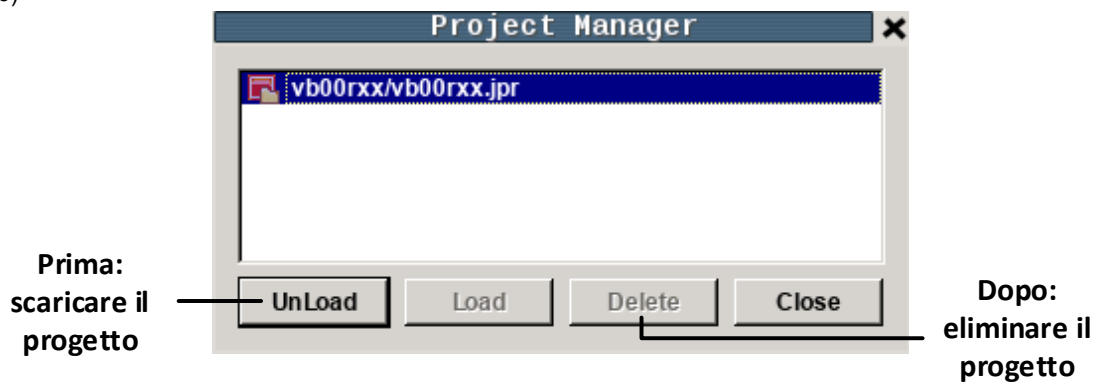


Figure 18-12: Touch Room HMI, Project manager.

NOTES:

- a. The action must be repeated for each project, until the memory of the touch screen is completely clean.
- b. The deletion process of the previous project takes approximately 2 minutes. It might however take a few extra seconds, depending on the size of the previously installed project.

18.3.3 Update new project

Get a formatted FAT-32 USB stick.

Insert the USB stick into the pc port and save the “UpdatePackage.zip” application on the stick.



Figure 18-13: saving of software version on USB key.

NOTES:

- a. The “UpdatePackage.zip” file must be saved directly in the USB stick root folder and NOT in any sub-folders.

It is now possible to insert the USB stick with the “UpdatePackage.zip” file into the Touch Screen device port:



Figure 18-14: Touch Room HMI [4.3"] front USB port detail.

NOTE:

A micro-USB adapter is required, as shown in Figure 18-14.

- Press the Touch Screen for approximately 10 seconds until the Context Menu is displayed:

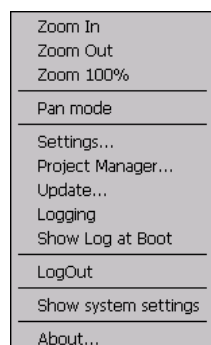


Figure 18-15: context menu.

- Then select “Update...” and wait a few seconds:

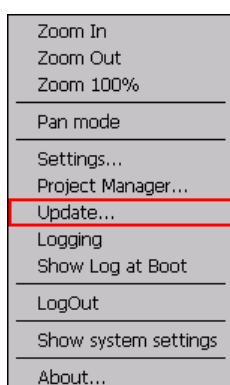


Figure 18-16: context menu: “Update” button selection.

- When the following window appears, tick “Auto select best match” and press “Next”:



Figure 18-17: context menu: Update Wizard.

- After approximately 10 seconds, the screen will show a feedback window (Figure 18) with information on the installation of the files in the Touch Screen.
This process will take approximately **10 minutes**, with various messages appearing on the Touch Screen device, together with the blue progress bar.



Figure 18-18: Touch Screen device: software update page.

- After the installation process is finished, the touch screen will reboot itself. Wait until the loading window for the newly installed application appears.

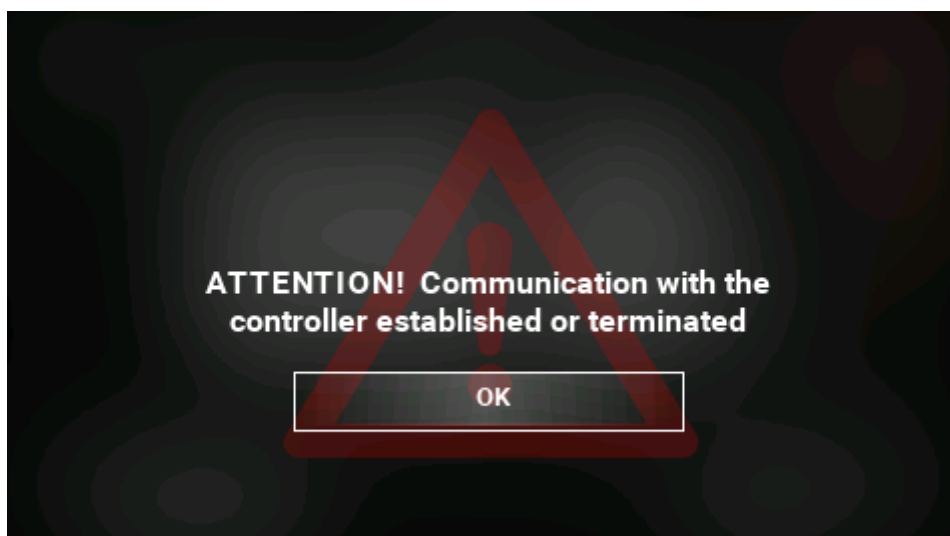


Figure 18-19: Touch Room HMI [4.3"]: Warning message (no communication with the pCOOEM+ W3000+ controller).

NOTE:

- After the software has been updated, if there is no communication between the Touch Screen device and the controller, the screen shows
 - This alert:
 - Message indicating that the communication with the controller has been interrupted

In this case, it will be necessary to reset the communication parameters as described in section 16.7 of this procedure.
- Check that the version installed on the Touch Screen is the desired version by visiting the appropriate **"Info"** section containing the **"SOFTWARE AND PANEL SETUP INFO"** details:

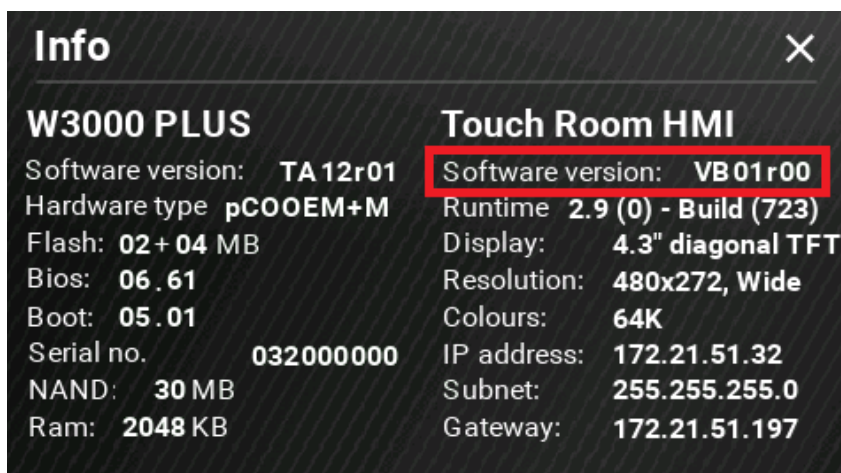


Figure 18-20: Touch Room HMI [4.3"]: Touch Software version.

If the firmware upload procedure has been completed correctly, the stick can be removed and handed back to the test Master. If not, contact the Service.

18.4 Setting the Touch Screen-Controller communication parameters

NOTE:

Before setting the communication parameters, check that:

- The cable is connected properly between the back of the Touch Screen device and the associated controller in the electrical panel of the unit: two-wire cable between Touch Screen and controller.

To check this, go to the Touch Screen page “**INFO**” section “**Touch Screen**” – parameter “**IP Address**” (accessible from the Homepage by pressing “**SETTINGS**” → “**INFO**”).
In the event of a mismatch, refer to the IP change procedure.

1. In the Touch Screen User Interface Homepage, press the “**SETTINGS**” button:

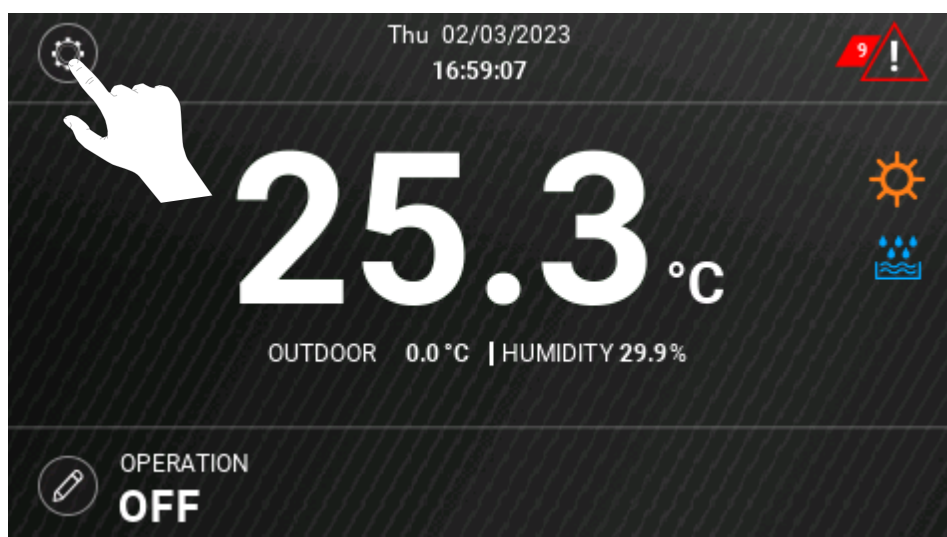


Figure 18-21: Touch Room HMI: Homepage.

NOTE: in the absence of communication, interactivity with the Touch Screen may be slower.

2. From the settings menu, go to the second page of the display menu and press the “EDIT COMMUNICATION ADDRESS” button:

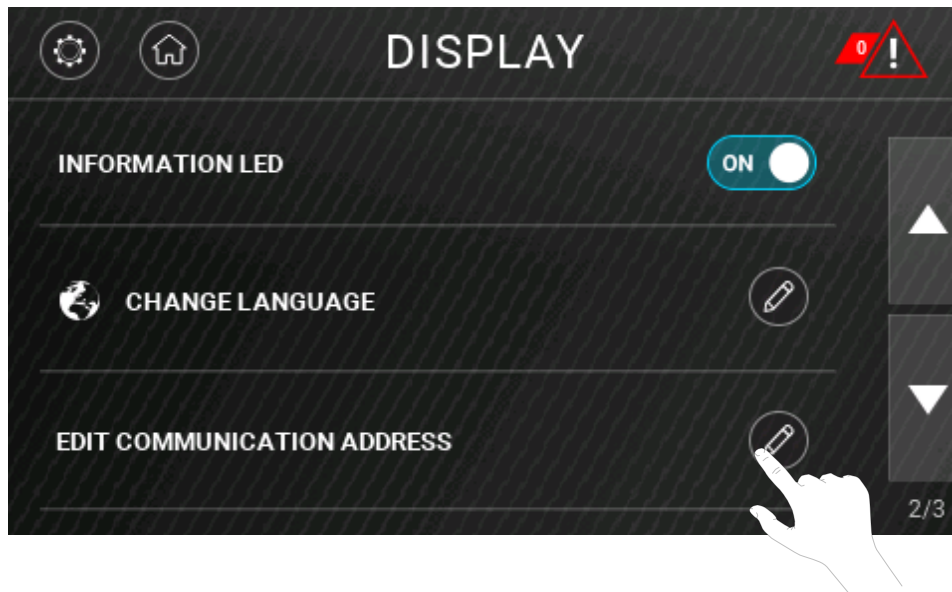


Figure 18-22: Touch Room HMI: edit communication address.

3. This opens the “**COMMUNICATION ADDRESS**” page.
In this page:
 - “Controller Communication Address” is the communication address of the pCOOEM+ W3000 PLUS controller
 - “Touchscreen Communication Address” is the communication address of the Touchscreen Touch Room HMI

Both addresses are pre-configured with default values (31 Touch Screen, 1 Controller), so no action is required.

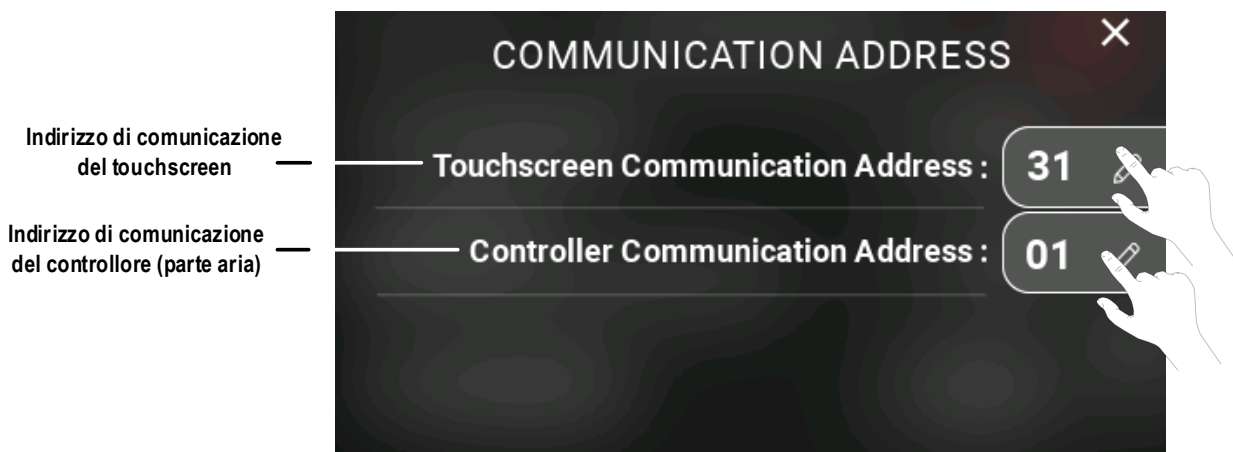


Figure 18-23: Touch Room HMI: advanced.

NOTE:

Using the relevant numbers, it is possible to set the communication addresses of the Controller and the Touch Screen. The default values are 1 for the controller and 31 for the Touch Screen.

18.5 pLAN addressing

To ensure the correct operation of the emulation, make sure that the Touch Screen pLAN address is set correctly. Use the *pGD1* to do the following:

1. Disconnect the Touch Screen pLAN communication cable.
2. Press the 3 side keys of the keypad at the same time for approximately 3 seconds:



Figure 18-24: W3000 Compact.

3. The following screen appears, where it will be necessary to set:
 - "Display address setting" to value 32, "I/O Board address" to value 1.



Figure 18-25: W3000 Compact.

4. Then press the central right button to display the following screen:



Figure 18-26: W3000 Compact.

5. Press the central right button again.
In this screen, set the following addresses:

-	Term1	32	Sh
-	Term2	31	Sh
-	Term3	None	-

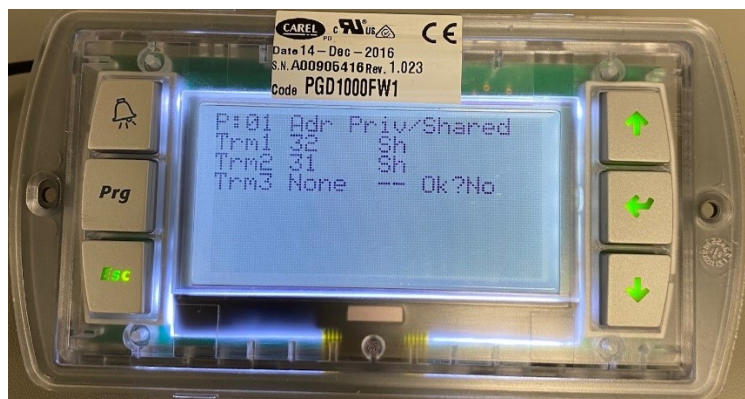


Figure 18-27: W3000 Compact.

After completing the addressing procedure, switch from “No” to “Yes” and press send.

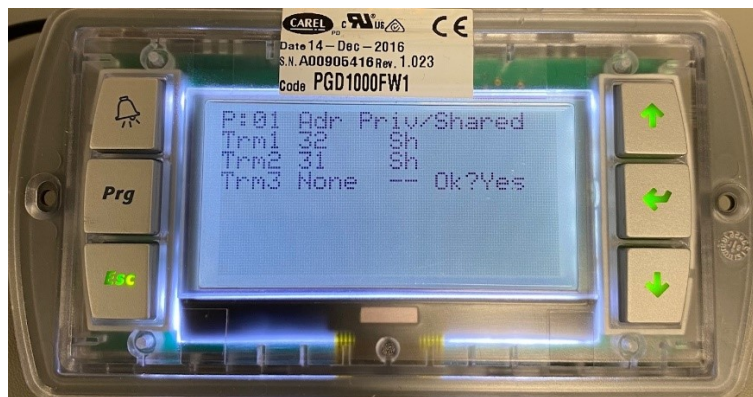


Figure 18-28: W3000 Compact.

After a few seconds the address setup is complete and the keypad returns to the initial page.

6. Reconnect the Touch Screen communication terminal to the pLAN port of the controller
7. **IMPORTANT: switch the power of the Touch Screen off and then on again without disconnecting it from the controller.**
8. Wait approximately 1 minute.
9. Now check that it is possible to use the Touch Screen to enter emulation mode using the relevant button on the settings page:

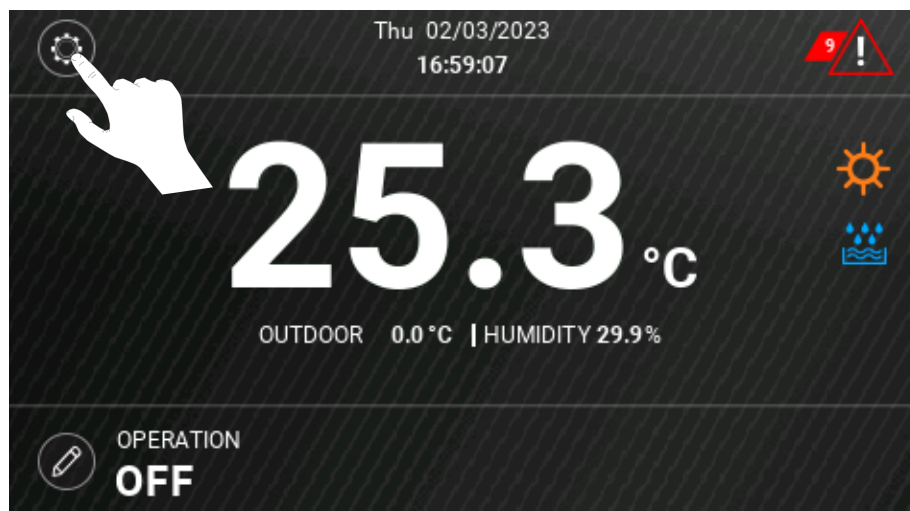


Figure 18-29: accessing the emulation page.

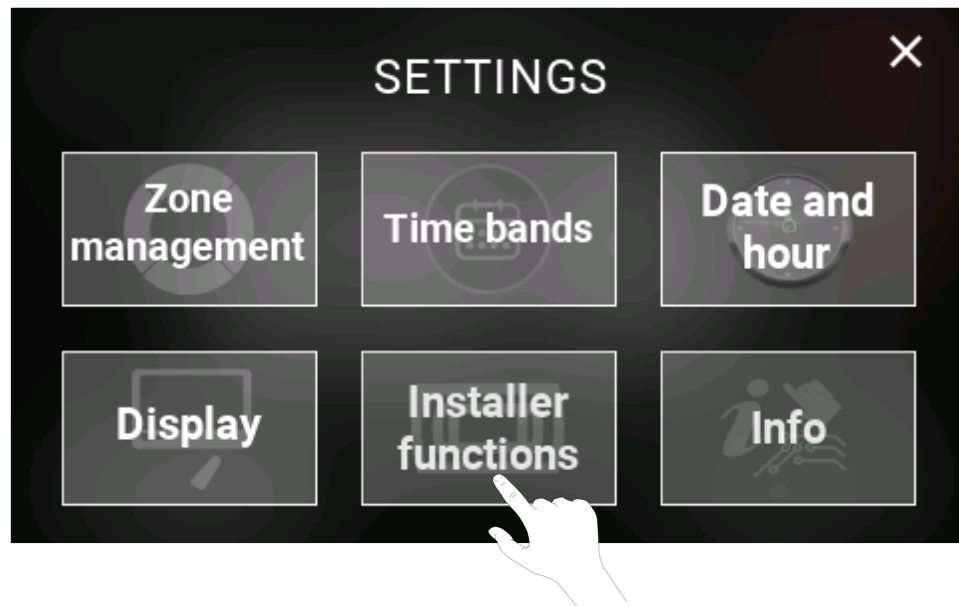


Figure 18-30: accessing the emulation page.

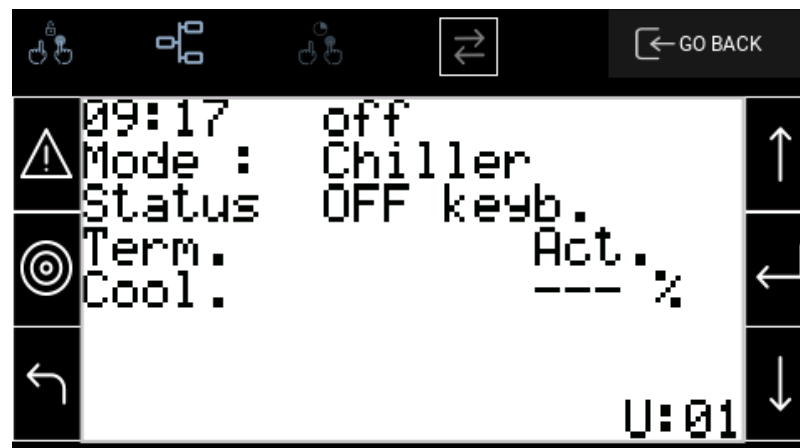


Figure 18-31: accessing the emulation page.

10. In case of problems, contact the Service.
11. After programming, perform these routine steps to check that the device is working correctly:
 - a. Use the Touch Screen to change the SETPOINT, use the keypad to check that the change has been successful and then reset it to the default value.
 - b. Use the Touch Screen to switch the unit on (only if safe to do, after asking the test Master for permission). After checking that the unit has switched on correctly, switch it back off using the Touch Screen (**IMPORTANT**).

19 ASSEMBLY PROCEDURES

The Touch Room HMI 4.3" allows two types of assembly according to user requirements:

- **Flush-mounted in the wall.**
- **Cantilevered from the wall.**

19.1 Assembly flush-mounted in the wall

The image below shows the housing dimensions in the wall for flush-mounted assembly:

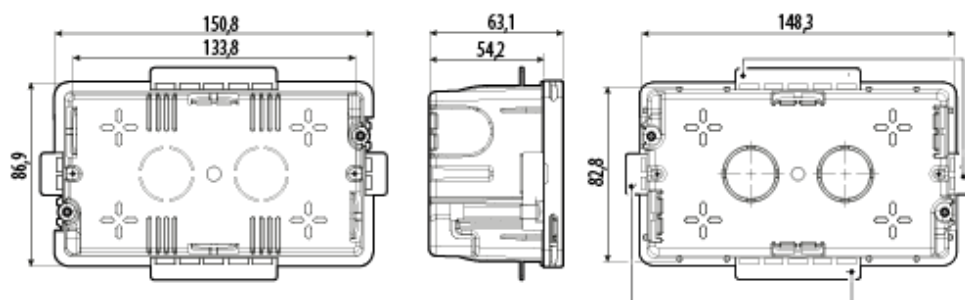


Figure 19-1: dimensions for flush-mounted assembly.

Dimensions	
Width	148.3 mm
Depth	54.2 mm
Height	86.9 mm

Table 2: dimensions for flush-mounted assembly.

The procedure for correct assembly is as follows:

- Insert the flush-mounting box into the hole previously made in the wall.
- Insert the Touch Room HMI into the flush-mounting box and screw it to the box.
- Attach the plate to the front of the Touch Room HMI.

The installation kit supplied by the manufacturer includes: screws, front plate and flush-mounting box.

The figure below shows the steps for correct assembly:

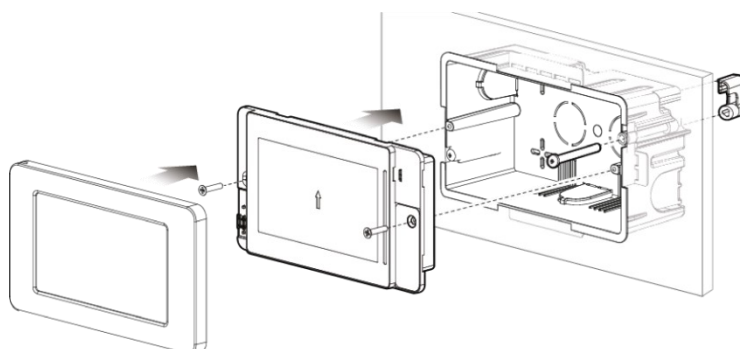


Figure 19-2: representation of correct assembly.

19.2 Cantilevered assembly

The image below shows the dimensions of the accessory for cantilevered assembly:

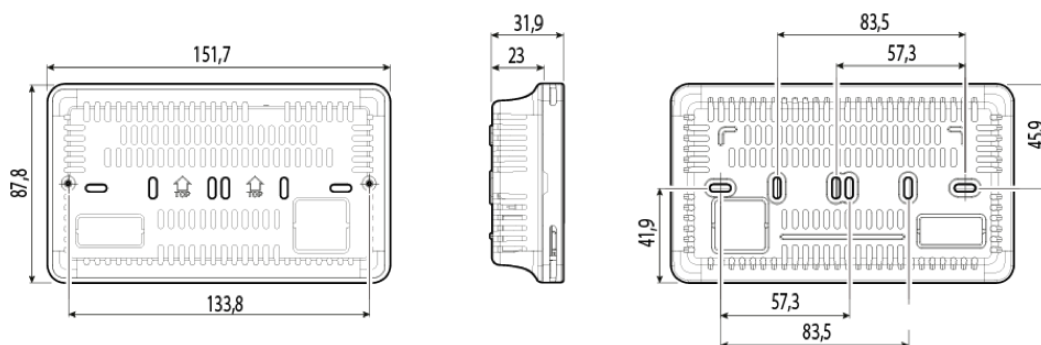


Figure 19-3: representation of correct assembly.

Dimensions	
Width	151.7 mm
Depth	23 mm
Height	87.8 mm
Fixing hole spacing	133.8 mm

Table 3: dimensions for cantilevered assembly.

The procedure for correct assembly is as follows:

- Drill a small hole in the wall to insert the box.
- Insert the Touch Room HMI inside the wall box and secure it with screws respecting the distance indicated in table 3.
- After fixing it to the wall, attach the snap-on plate.

The installation kit supplied by the manufacturer includes: screws, plate and the box for cantilevered assembly. The figure below shows the steps for correct assembly:

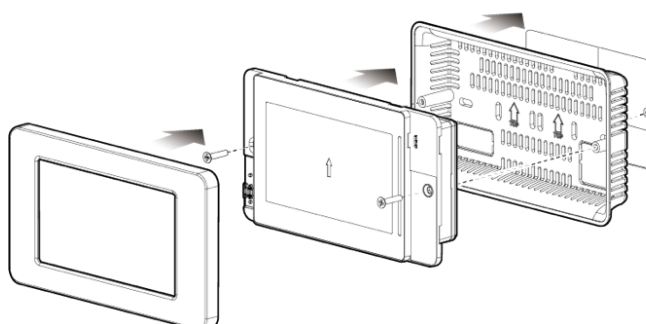
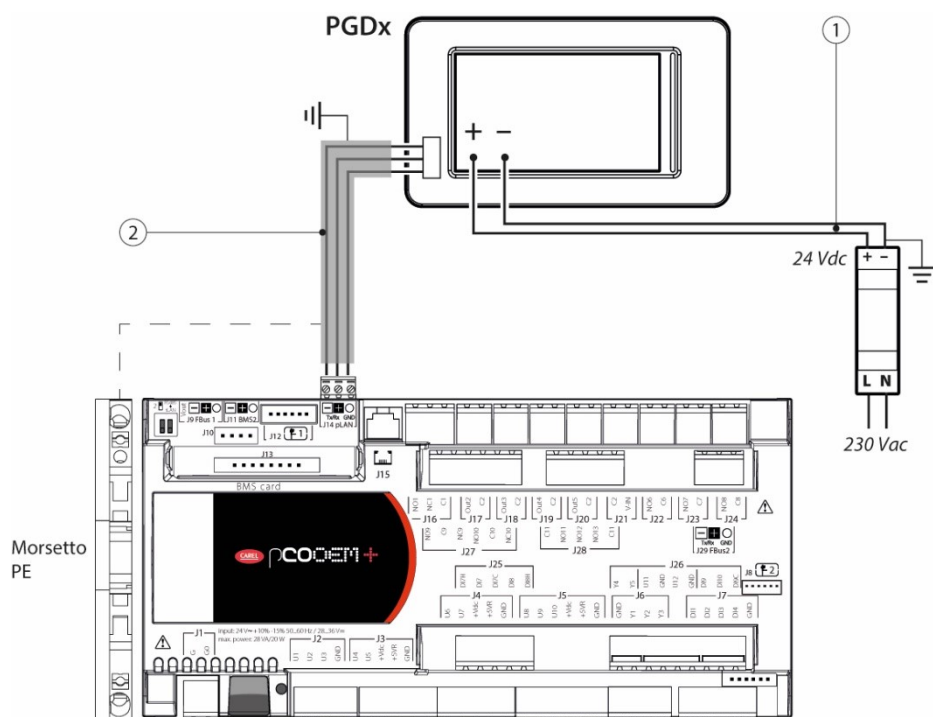


Figure 19-4: representation of correct assembly.

The figure below shows the connection of the pCOOEM+ to the Touch Room HMI:

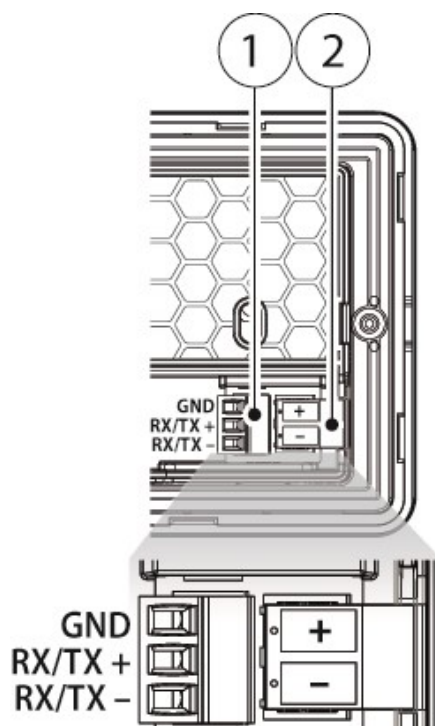


NOTICE:

The cables (1 and 2) shown in the figure above are the responsibility of the customer.

The following table shows the technical specifications of the two cables:

Serial port with screw terminal	RS485 max 115.2 Kb/s Detachable screw connector 3.81 pitch AWG 20-22 shielded cable with twisted pairs for $\pm L_{max} = 500m$ - tightening torque 0.25Nm (2.2lbf x in)
Power cable	$L_{max} = 50 m$ - AWG 12-20 cable cross-section tightening torque 0.8 Nm (7 lbf x in).



1. RS485 port
2. Power supply port

Technical characteristics

MODEL	pGDx 4.3" touch screen
Operating temperature	0 to 50°C
Storage temperature	30 to 70°C
Maximum relative operating and storage humidity	85% @ 40°C non-condensing
Protection rating	Front IP65 (when paired with the frame accessory).
Pollution level	3
Power supply	24 Vdc

20 TECHNICAL CHARACTERISTICS

Model	4.3" Touch Screen
Display	
Type	LCD TFT
Resolution	480x272 Wide
Active display area	4.3" diagonal
Colours	65 K
Backlighting	LED - Lifetime 20 khrs @ 25 °C
Brightness adjustment	Yes - default auto power off after 1 min
Screensaver	Yes
Password	Yes
Operator interface	
Touchscreen	Resistive
System LED indicators	8-colour notification bar
USB port	Host interface 2.0 - micro USB -B - 150 mA max (do not use to charge devices) Lmax = 1m
Serial Port, COM1	RS485 max 115.2 Kb/s Detachable screw connector 3.81 pitch AWG 20-22 shielded cable with twisted pairs for ± Lmax = 500m - tightening torque 0.25Nm (2.2lbf x in)
Temperature/humidity probe	0...50 °C / 20...80% rH 0...50 °C ± 1 °C (in static air) 20...80% ± 5% (in static air)
Vectorial graphics	Yes, including SVG 1.0 support
Dynamic objects	Yes. Visibility, position, rotation
Historical and trend	Yes. Limited to Flash memory
Multi-language	Yes, with runtime language setup, and only limited by the available memory
Recipes	Yes. Limited to Flash memory
Alarms	Yes
Events log	Yes
Real Time Clock	Yes, with buffer battery
Power supply	24Vdc
Maximum power input	7W
Fuse	Automatic
Weight	Approx 250 g
Battery	Non-rechargeable lithium mod BR1225
Operating temperature	0 to 50°C
Storage temperature	-30 to 70°C
Maximum relative operating and storage humidity	85% @ 40 °C non-condensing
Protection rating	Front IP20
Front panel LxH	151.5x87.7
Holes AxB **	127x69 mm
Depth D+T	23+8.9 mm

21 DISPOSAL



PACKAGING DISPOSAL

Packaging materials (cardboard, plastic, etc.) can be treated as standard solid city waste. Therefore, compliance with the sorting requirements for city waste is all that is required.

Before disposing of the packaging material, always refer to the specific regulations in the country of installation.

DO NOT DISPOSE OF THE PRODUCT IN THE ENVIRONMENT!



PRODUCT DISPOSAL

The apparatus (or product) must be disposed of as sorted waste, in accordance with the current local legislation on the disposal of waste.



Other components (electronic boards) may contain pollutants.

Therefore, they must be removed and handed over to authorised companies for their recovery and disposal.

Before proceeding, always refer to the specific regulations in the country of disposal.

DO NOT DISPOSE OF THE PRODUCT IN THE ENVIRONMENT!

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