

# VISION TOUCH AB



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User and maintenance manual

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ENGLISH

**READ AND KEEP**

Rel. Software: VT\_AB\_9\_0\_4\_2

Thank you for choosing VISION TOUCH AB by PEGO s.r.l.

Reading this manual thoroughly will guide you through proper installation and better use of the various features. We therefore recommend keeping this manual near the controller to make use of it during the device installation, configuration and use.

### **Waste disposal guidelines:**

The Vision Touch controller consists of glass parts, plastic parts and metal parts. With reference to the Directive 2012/19/UE of the European Parliament and of the Council of 4 July 2012 and related national legislation, please note that:

- A. There is the obligation not to dispose of WEEE as urban waste and to perform separate collection of this waste.
- B. Public or private waste collection facilities foreseen by local laws must be used to dispose of the materials. It is also possible to give the device back to the distributor at the end of its life when purchasing a new one.
- C. This equipment can contain dangerous substances: improper use or incorrect waste disposal could have negative effects on human health and on the environment.
- D. The symbol  (crossed-out waste bin on wheels) applied to the pack, product and instructions indicates that the appliance was placed on the market after August 13, 2005 and must be disposed of separately.
- E. In case of abusive disposal of electrical and electronic waste, there are sanctions established by local standards in force concerning waste disposal.

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# CHAPTER 1: INTRODUCTION

## GENERAL INFORMATION

1.1

### DESCRIPTION:

The **VISION TOUCH AB** electronic panel allows the user to control all the components on a refrigeration unit. The panel allows the user to control the essential components of a refrigeration system such as the compressor, the evaporator fans, the defrost heaters and the cold room light.

It allows the quick refrigeration of the product, with end due to time or piercing probe temperature. The system consists of the 100N MASTER3 unit, on which all the electrical connections are made, and the VISION TOUCH AB control console, equipped with 7" TFT display with capacitive touch screen combined with a highly advanced software and a highly user-friendly interface that allows easy use.

### APPLICATIONS:

- Cabinets and quick-refrigeration rooms (positive / negative temperature).
- Product deep-freezing.

### TECHNICAL CHARACTERISTICS:

- High resolution 7 " TFT display (800x480 WVGA), LED backlight and capacitive touch screen.
- 1.1mm chemically treated glass front.
- Possibility of inverting the viewing angle of the display to ensure the possibility of mounting at any height.
- Peripherals: USB 2.0, microSD, RS485.
- Acoustic signals.
- IP65 frontal protection.
- High quality design and icons.
- Touch screen interface with gestures, for a more intuitive control.
- Clock and calendar (RTC).
- Different password for user and installer function.
- Multilingual.
- Customizable user parameters menu (allows you to mask unused items by simplifying the menus).
- Contextual help in parameters configuration menu.
- Software updating from microSD or USB.
- Alarm history combined with popup warning messages.
- Advanced HACCP function with detailed temperature alarms memorization.
- Ability to export and import parameters and programs on USB or microSD media.

- Temperature range -45°C/+45°C.
- 20 fully customizable programs that can be stored on the instrument, 8 of which are already preloaded:
  - cycle by time +3° hard;
  - cycle by time +3° soft;
  - cycle by temperature +3° hard;
  - cycle by temperature +3° soft;
  - cycle by time -18° hard;
  - cycle by time -18° soft;
  - cycle by temperature -18° hard;
  - cycle by temperature -18° soft;
- Automatic management of 3 phases for each program.
- Manual or automatic operation with execution of the selected program.
- Diagram of the program in progress with visualization of the progress (phases already performed, phase in progress and phases to be performed) and representation of all the set values and the remaining times.
- Functions managed: adjustment of room temperature, cyclical or real-time defrosting (electric or hot gas), dripping, evaporator fan speed management (slow / fast digital outputs or with 0-10V signal), possibility to activate internal air recirculation for destratification.
- Test center" mood for verifying in simple and intuitive way all the digital and analogical inputs/outputs.
- RS485 serial connection with TeleNET or Modbus protocol which can be selected in the parameters.
- Datalogger (recording of room temperature, product temperature and related setpoints); graph and export of data recorded in CSV format.
- Web server (if present): control the Vision Touch from web browsers (controlled access).
- Automatic sending of e-mails in the event of an alarm.

## 1.2

## PRODUCT IDENTIFICATION CODES

### 200VT100AB1



- TOUCH electronic control designed for the management of quick-refrigeration systems and deep freezers. It has a stylish 7" TFT display with capacitive touch screen combined with a highly advanced software and a highly user-friendly interface that allows for easy use.
- 5m telephone cord included.
- 2 NTC probes (1x1.5 m + 1x3 m) included.
- Piercing probe **not included**.

OVERALL DIMENSIONS

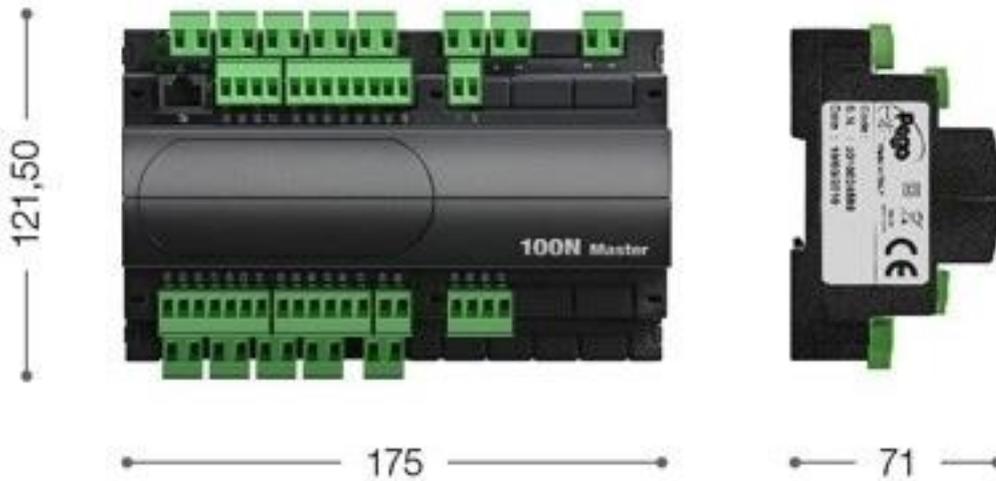
1.3

Dimensions in mm

VISION TOUCH AB



100N MASTER3



IDENTIFICATION DATA

1.4

The device described in this manual has on the side of 100N MASTER3 and on the back of the VISION TOUCH AB console, a plate bearing its identification data:

- Name of Manufacturer
- Description and code
- Serial number
- Date of production
- Power supply

	Console		
MADE IN ITALY	Description: KIT VISION TOUCH AB		
RoHS compliant	Code: 200VT100AB1		
	S.N. : 23000000001		
	MFG Date: 05/04/2023		

	100N MASTER3		
MADE IN ITALY	Description: KIT VISION TOUCH AB		
RoHS compliant	Code: 200VT100AB1		
	S.N. : 23000000001		
	MFG Date: 05/04/2023		
	P. Supply: 110-230Vac +/-10% 50-60Hz		

<b>Power supply</b>			
Voltage	110 - 230 V~ ± 10% 50Hz / 60Hz		
Max power consumption (electronic controller only)	~ 15 VA		
<b>Climatic conditions</b>			
Operating temperature	-5T50°C <90% R.H. non-condensing		
Storage temperature	-10T70°C <90% R.H. non-condensing		
<b>General features</b>			
Type of connectable probes (temperature)	NTC 10K 1%		
Resolution (ambient temperature)	0,1 °C		
Precision of probe detection (ambient temperature)	± 0,5 °C		
Reading range	-45 ÷ +99 °C		
<b>Output features</b>			
Relay installed	Relay installed	Relay installed	Relay installed
output 3-4	(30A AC1 relay)	30A 240V~ (AC1) 10A 240V~ (AC3) (2HP) (100000 cycles)	All the outputs are voltage-free contacts
n°11 outputs from 5 to 26 (see connections diagram)	(16A AC1 relay)	16A 240V~ (AC1) 3A 240V~ (AC3)	
<b>Dimensional features</b>			
Dimensions 100N MASTER	121,50mm x 71mm x 175mm (HxDxL)		
Dimensions VISION TOUCH AB	151mm x 44mm x 191mm (HxDxL)		
<b>Insulation and mechanical properties</b>			
Degree of protection of display	IP65		
Material of box	Self-extinguishing ABS		

## CHAPTER 2: INSTALLATION

### GENERAL RULES FOR THE INSTALLER

2.1

1. If the device is used in applications with risk of damage to people, machines or materials, it is essential to combine it with auxiliary alarm devices.
2. The appliance must NOT be installed in environments with a dangerous atmosphere (flammable or explosive); it can be connected to elements that operate in this atmosphere only by means of appropriate and suitable types of interfaces, in compliance with the safety standards in force.
3. Install the appliance in places which respect the degree of protection.
4. Avoid using multi-pole cables with conductors connected to inductive and power conductors and signal conductors like probes and digital inputs.
5. Avoid housing power cables in the same conduits as signal cables (probes, digital or analogue inputs, communication cables).
6. Minimize the length of the connecting cables to prevent these from coiling up and adversely affecting the electronics through induction.
7. All the conductors of the cables must be of an appropriate size to withstand the required load.
8. Place a general protection fuse upstream the electronic controller.
9. Provide a two-phase disconnecting switch compliant with foreseen safety requirements (CE marked) to shut off the power supply upstream the controller. The switch must be placed in the immediate vicinity of the regulator and must be easily reachable by the operator.
10. Should the length of the probes need to be extended, it is necessary to use conductors with an appropriate cross-section and however no less than 1 mm<sup>2</sup>. Extension or shortening of the probes may alter the factory settings; use an external thermometer, therefore, for testing and calibration.
11. At low temperatures of use, a decrease in the response speed of the display may be visible on the console; this is to be considered normal.

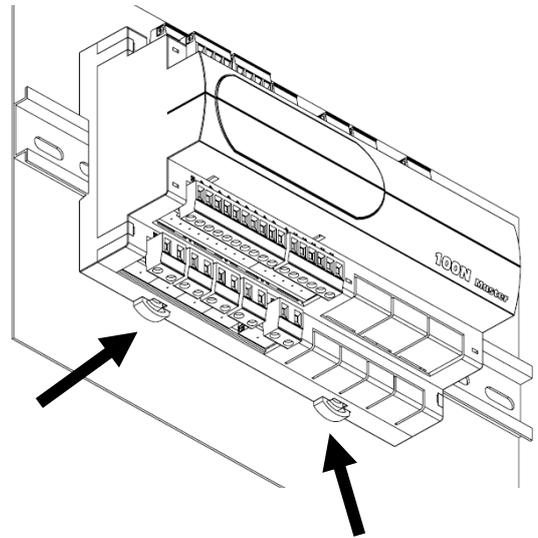
### STANDARD EQUIPMENT FOR ASSEMBLY AND USE

2.2

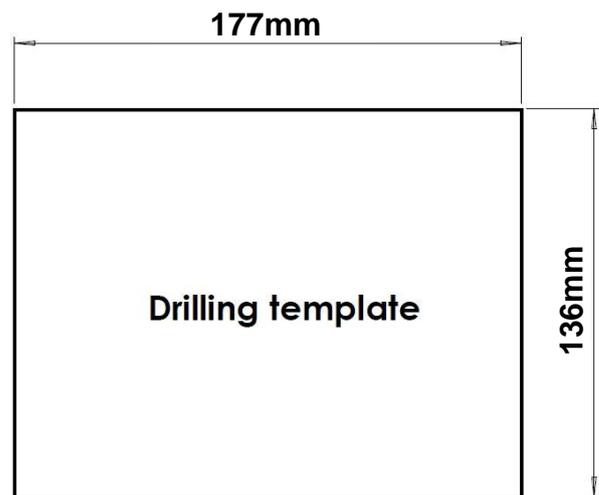
The **VISION TOUCH AB** electronic controller, for assembly and use, is equipped with:

- Nr 2 temperature probes.
- Nr 1 plug telephone cable (5m).
- Nr 1 Quick guide to electrical connections.
- Nr 1 Vision Touch AB console (200VTOUCHAB).
- Nr 4 supports for Vision Touch console.
- Nr 1 100N MASTER3 (200100NMSTH3).

**Fig. 1:** Install the 100N MASTER3 module on the DIN guide and close the bottom clamps to hold it in place.

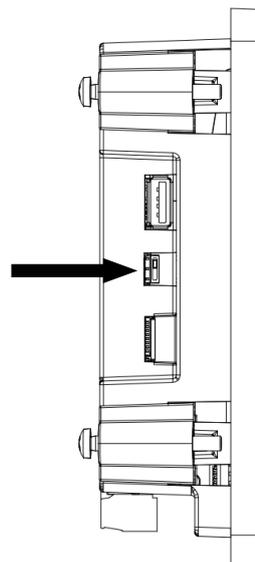


**Fig. 2:** VISION TOUCH AB console drilling template.

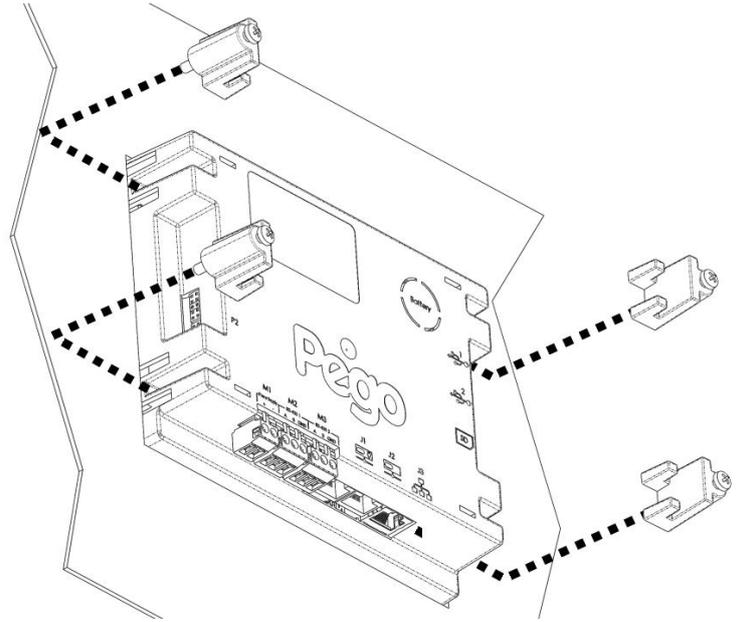


**Fig. 3:** In case of assembly in a low position, we suggest rotating the display by 180° to have the signal LEDs in the upper part.

It's possible to invert the viewing angle of the display by 180° by acting on the side selector. This allows you to mount the **VISION TOUCH** at any height.



**Fig. 4:** Fasten the **VISION TOUCH AB** console by means of the four media to be inserted in their specific seats. Tighten each screw until the entire border front of the console rests on the panel.

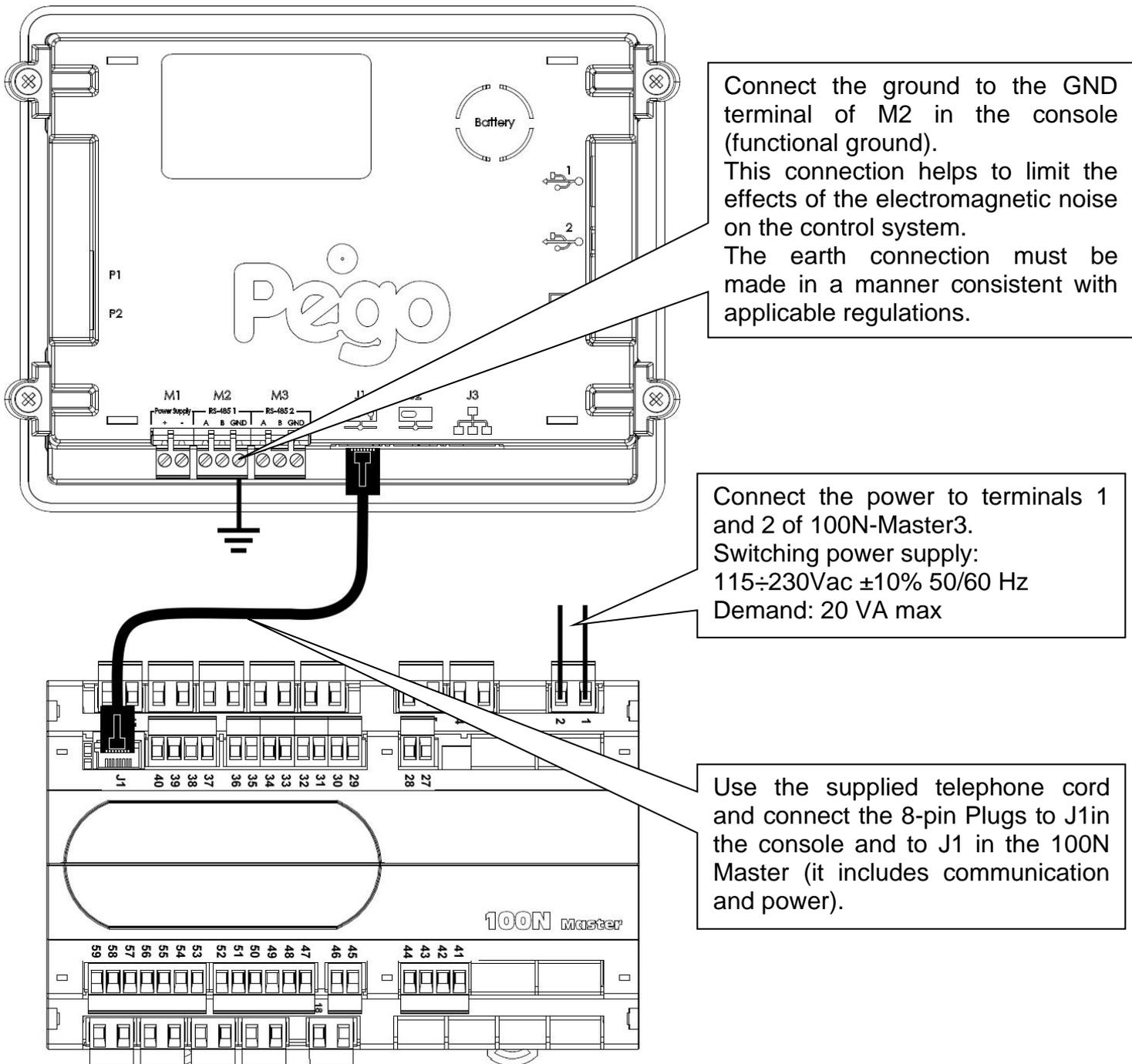


## CHAPTER 3: ELECTRICAL CONNECTIONS

Following are the electrical connections of the controller divided by type. The configurations of the inputs and outputs shown below are set by default but can be changed to suit your needs. The connection between the console and 100N MASTER3 has two possible variants based on the distance between the two components.

### 3.1 POWER SUPPLY AND CONNECTION CONSOLE/100N MASTER3

#### 1) Connection between the console and 100N Master3 with distance within 10m:



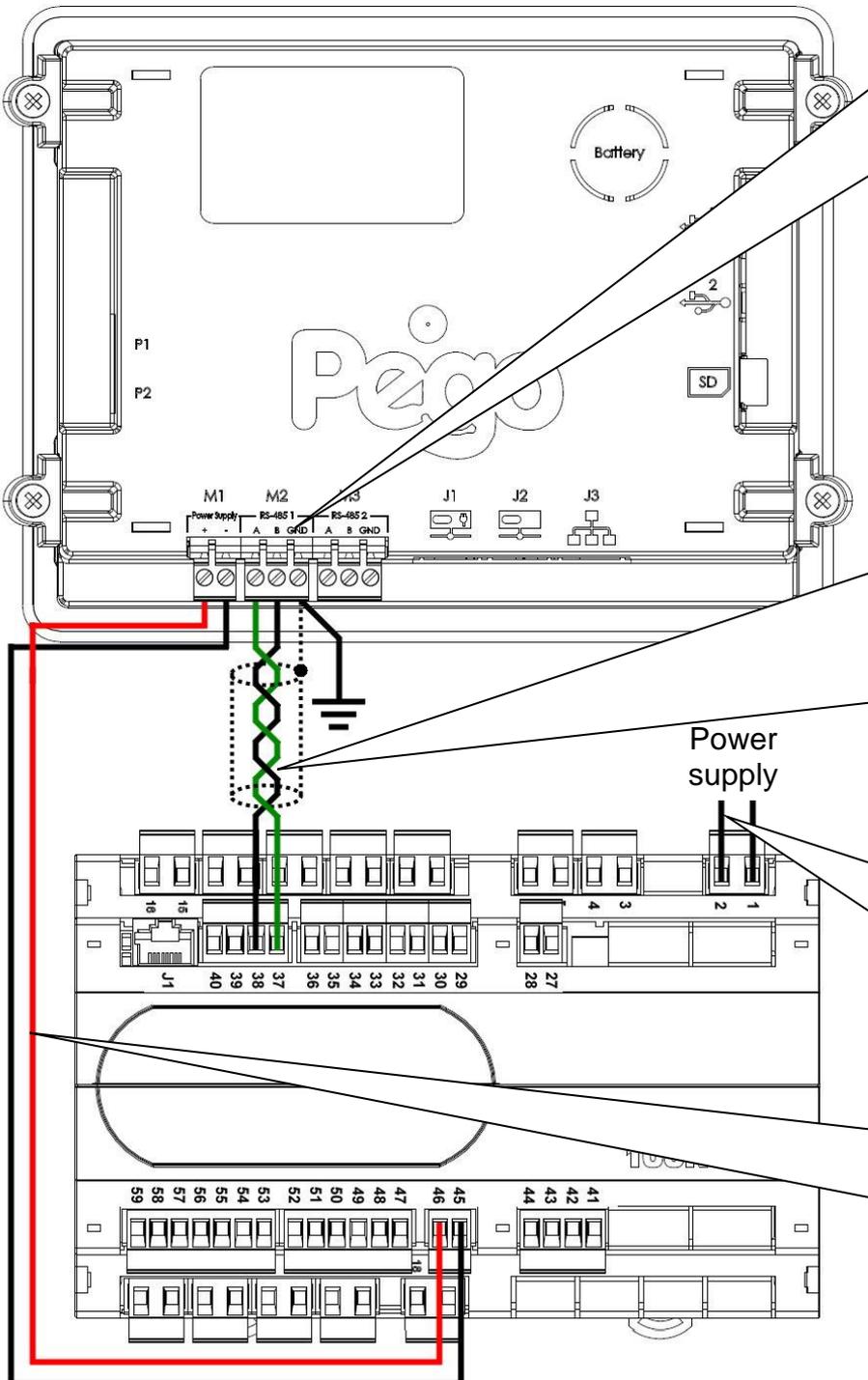
2) Connection between the console and 100N Master3 with distance within 500m:

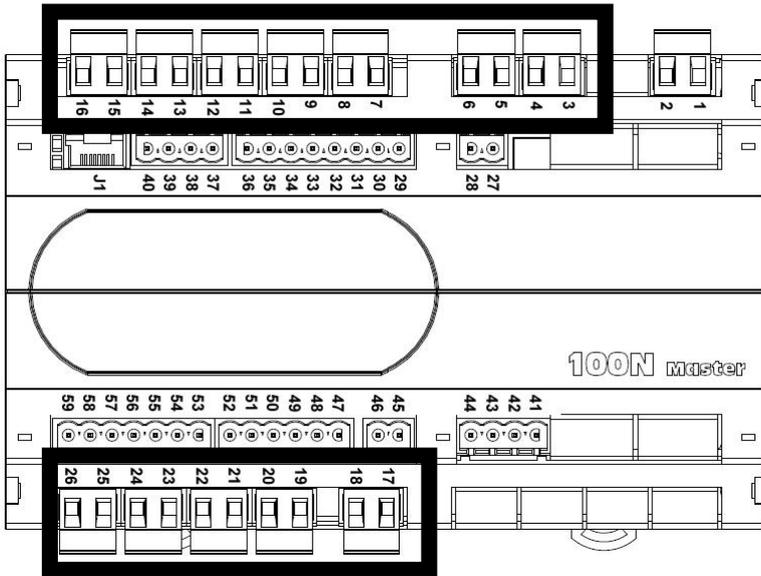
Connect the ground to the GND terminal of M2 in the console (functional ground). This connection helps to limit the effects of the electromagnetic noise on the control system. The ground connection must be made in a manner consistent with applicable regulations.

Connect terminal (1) of M2 in the console to terminal 37 of 100N MASTER3 and term (B) of M2 in the console to terminal 38 of 100N MASTER3. Connect the braid of the shielded cable to the (GND) terminal of M2 in the console. Use twisted cable suitable for the transmission of RS485 signals with minimum section of 0.5mm<sup>2</sup> (e.g. Belden 8762 cable). Avoid placing the signal cables together with power cables.

Connect the power to terminals 1 and 2 of 100N MASTER3. Switching power supply: 115÷230Vac ±10% 50/60Hz Demand: 20 VA.

Connect terminal (-) of M1 in the console to terminal 45 of 100N MASTER3 and terminal (+) of M1 in the console to terminal 46 of 100N MASTER3. Avoid placing the signal cables together with power cables.





**POSSIBLE CONFIGURATIONS  
DIGITAL OUTPUTS DO1÷DO12**

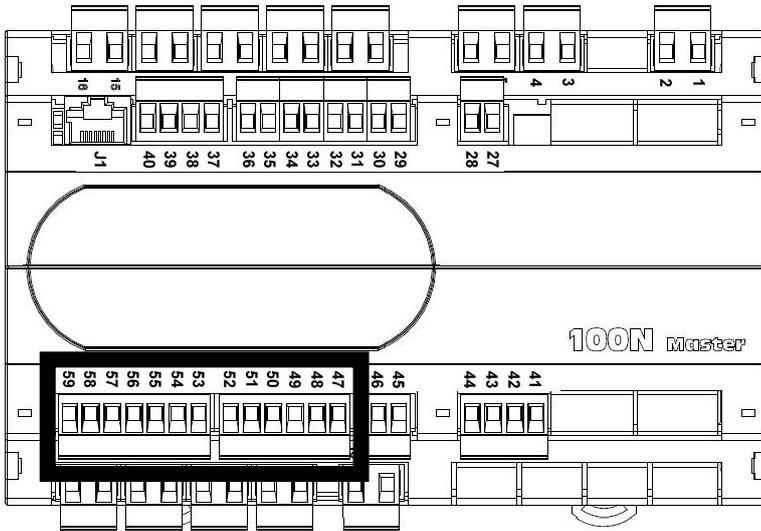
**Access menu:**

*Parameters > Configure I/O > Digital outputs*

- 0 = Disabled
- 1 = Cold
- 2 = Fan high speed
- 3 = Fan low speed
- 4 = Light
- 5 = Defrosting
- 6 = End recipe
- 7 = UV light
- 8 = Alarm (only DO12)

Positive values = Contact N.O.  
Negative values = Contact N.C.

PIN TERMINALS	DIGITAL OUTPUT	DEFAULT SETTINGS DIGITAL OUTPUTS	RELAY OUTPUTS CHARACTERISTICS (Voltage-free contacts)
3-4	DO1	 1 = Cold (contact N.O)	Relay 30A 240V~ (AC1) 10A 240V~ (AC3) (2HP)
5-6	DO2	 2 = Fan high speed (contact N.O)	Relay 16A 240V~ (AC1) 3A 240V~ (AC3)
7-8	DO3	 3 = Fan low speed (contact N.O)	Relay 16A 240V~ (AC1) 3A 240V~ (AC3)
9-10	DO4	 4 = Light (contact N.O)	Relay 16A 240V~ (AC1) 3A 240V~ (AC3)
11-12	DO5	 5 = Defrosting (contact N.O)	Relay 16A 240V~ (AC1) 3A 240V~ (AC3)
13-14	DO6	 6 = End recipe (contact N.O)	Relay 16A 240V~ (AC1) 3A 240V~ (AC3)
15-16	DO7	 7 = UV light (contact N.O)	Relay 16A 240V~ (AC1) 3A 240V~ (AC3)
25-26	DO8	0 = Disabled	Relay 16A 240V~ (AC1) 3A 240V~ (AC3)
23-24	DO9	0 = Disabled	Relay 16A 240V~ (AC1) 3A 240V~ (AC3)
21-22	DO10	0 = Disabled	Relay 16A 240V~ (AC1) 3A 240V~ (AC3)
19-20	DO11	0 = Disabled	Relay 16A 240V~ (AC1) 3A 240V~ (AC3)
17-18	DO12	 8 = Alarm (contact N.O)	Relay 16A 240V~ (AC1) 3A 240V~ (AC3)



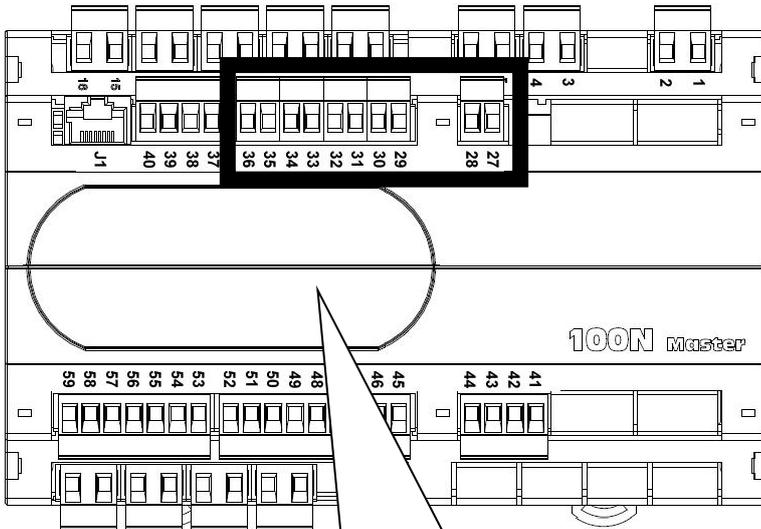
**POSSIBLE CONFIGURATIONS  
DIGITAL INPUTS DI1÷DI12**

**Access menu:**  
*Parameters > Configure I/O > Digital inputs*

- 0 = Disabled
- 1 = Door switch
- 2 = Alarm
- 3 = Stand-by
- 4 = Compressor protection
- 5 = Fans protection
- 6 = Generic Warning 1
- 7 = Generic Warning 2
- 8 = Generic Warning 3
- 9 = High pressure
- 10 = Low pressure
- 11 = End of remote defrosting
- 12 = Start of remote defrosting
- 13 = Person in room alarm

Positive values = Contact N.O.  
Negative values = Contact N.C.

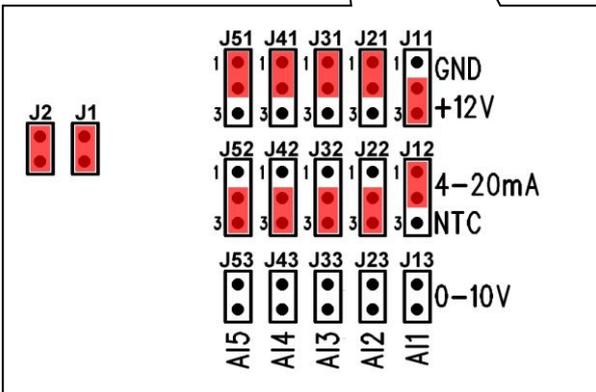
PIN TERMINALS	DIGITAL INPUT	DEFAULT SETTINGS DIGITAL INPUTS (Use voltage-free contacts)	
		Icon	Description
47-59	DI1		1 = Door switch (function Not active with contact N.O.)
48-59	DI2		2 = Alarm (function Not active with contact N.O.)
49-59	DI3		3 = Stand-by from remote (function Not active with contact N.O.)
50-59	DI4		4 = Compressor protection (function Not active with contact N.O.)
51-59	DI5		5 = Fans protection (function Not active with contact N.O.)
52-59	DI6		6 = Generic Warning 1 (function Not active with contact N.O.)
53-59	DI7		7 = Generic Warning 2 (function Not active with contact N.O.)
54-59	DI8		9 = High pressure (function Not active with contact N.O.)
55-59	DI9		10 = Low pressure (function Not active with contact N.O.)
56-59	DI10		12 = Start of remote defrosting (function Not active with contact N.O.)
57-59	DI11		11 = End of remote defrosting (function Not active with contact N.O.)
58-59	DI12		13 = Person in room alarm (function Not active with contact N.O.)



**POSSIBLE CONFIGURATIONS  
ANALOGUE INPUTS AI1 ÷ AI5**

**Access menu:**  
*Parameters > Configure I/O > Analogue inputs*

0 = Disabled  
 1 = Ambient temperature (NTC)  
 2 = Evaporator temperature (NTC)  
 3 = Piercing probe 1 (NTC)  
 4 = Piercing probe 2 (NTC)  
 5 = Piercing probe 3 (NTC)



The selection of the desired function for each analogue input is done by the configuration of the dedicated parameter in the “Parameters > Configure I/O > analogue inputs” menu combined with the correct setting of the Hardware configuration jumpers on the 100N MASTER3 under the removable front cover (see the side image).

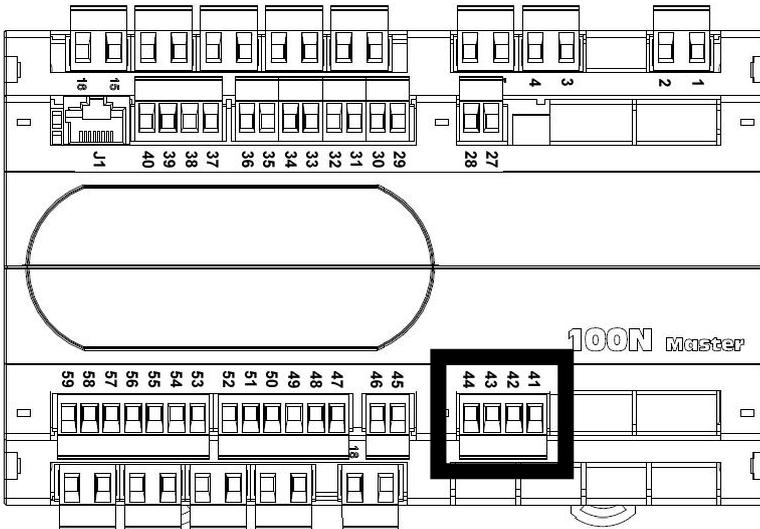
In particular, the configuration is as follows:

- For NTC probes: J\*1=1-2, J\*2=2-3, J\*3=open
  - For 4-20mA probes: J\*1=2-3, J\*2=1-2, J\*3=open
- \*= analog input number.

PIN TERMINALS	DESCRIPT. TERMINALS	TYPE OF SIGNAL	ANALOGUE INPUT	DEFAULT SETTINGS ANALOGUE INPUTS	DEFAULT SETTINGS BRIDGES ON 100N MASTER3
27	RH	4-20mA	AI1	0 = Disabled	J11=2-3
28	V+				J12=1-2
29		NTC	AI2		J13= open
30					J21=1-2
31		NTC	AI3		J22=2-3
32				J13= open	
33		NTC	AI4	3 = Piercing probe 1	J31=1-2
34					J32=2-3
35		-	AI5		J43= open
36					J51=1-2
					J53= open

**ANALOGUE OUTPUT CONNECTION ON 100N MASTER3**

**3.5**



**POSSIBLE CONFIGURATIONS  
ANALOGUE OUTPUTS AO1 ÷ AO3**

**Access menu:**

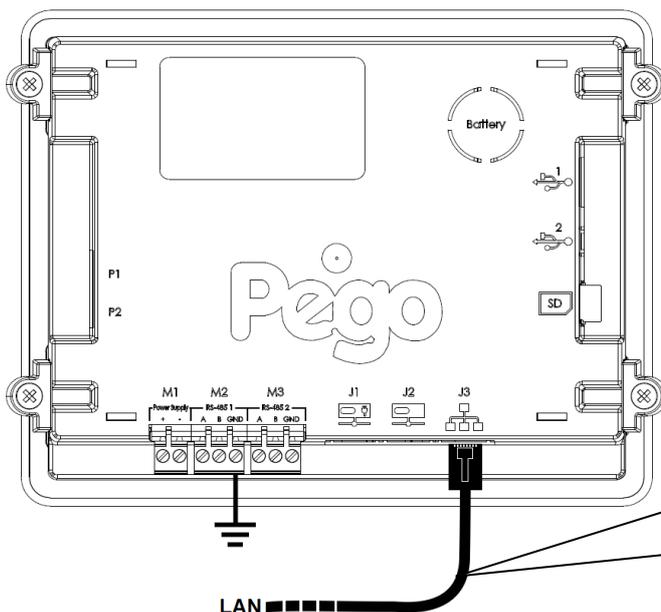
*Parameters > Configure I/O > analogue outputs*

- 0 = Disabled
- 1 = Speed of the evaporator fans

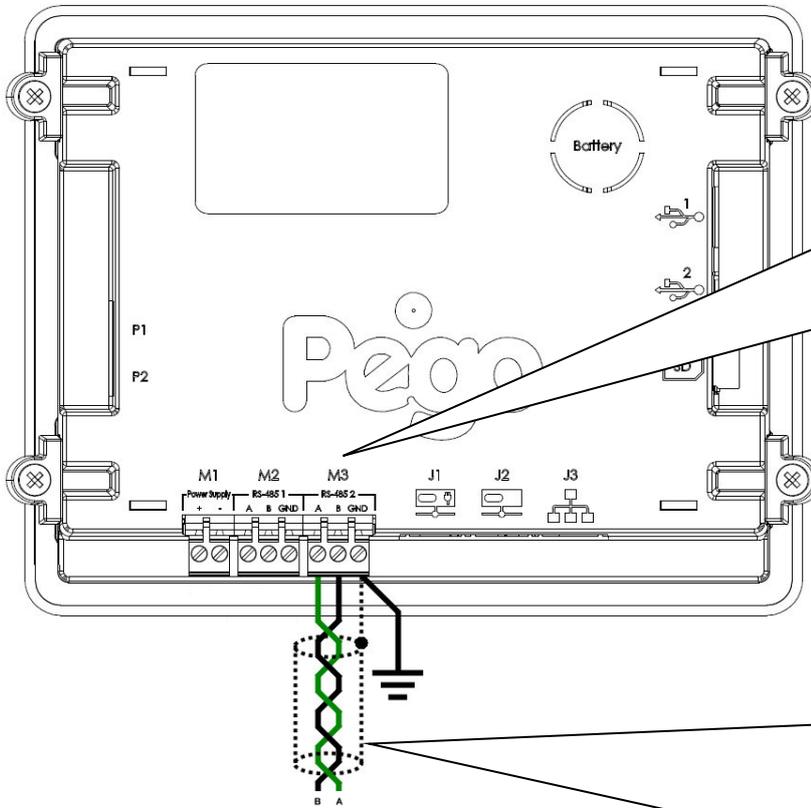
PIN TERMINALS	DESCRIPT. TERMINALS	TYPE OF SIGNAL	ANALOGUE OUTPUT	DEFAULT SETTINGS ANALOGUE OUTPUTS
41	Ref.	0-10V	<b>AO1</b>	1 = Speed of the evaporator fans
44	Gnd			
42	Ref.	0-10V	<b>AO2</b>	0 = Disabled
44	Gnd			
43	Ref.	0-10V	<b>AO3</b>	0 = Disabled
44	Gnd			

**ETHERNET CONNECTION ON VISION TOUCH**

**3.6**



Connect the Ethernet cable with RJ45 connector to the J3 input of the Vision Touch console. Connect the other end of the cable to the existing LAN or to the PC.

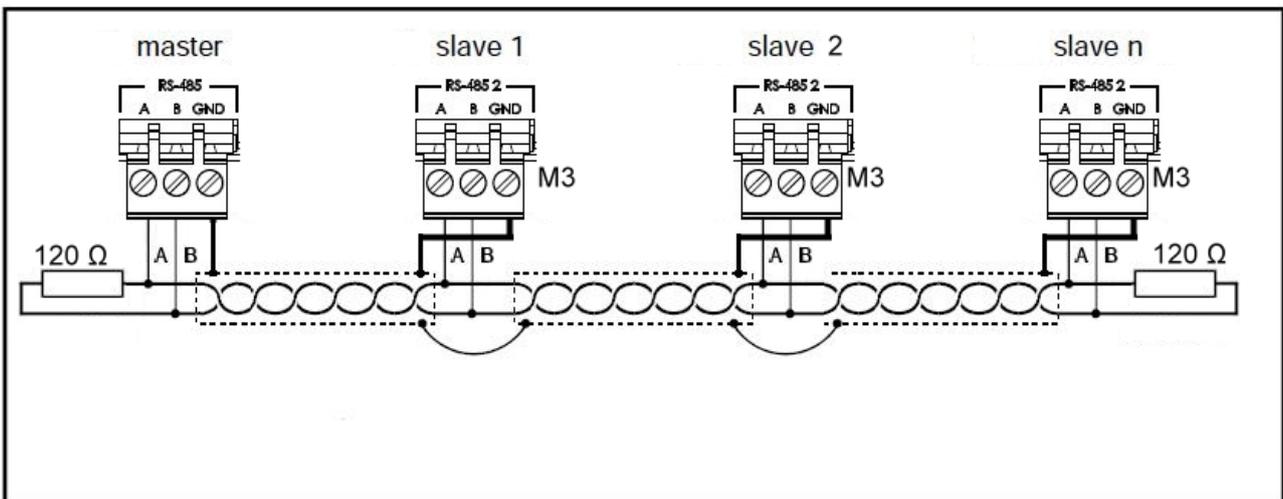


Connect the earth to the GND terminal of M3 in the console (functional earth). This connection helps to limit the effects of the electromagnetic noise on the control system. The ground connection must be made in a manner consistent with applicable regulations.

Connect the terminal (A) of M3 in the console to signal A of the Modbus line and the terminal (B) of M3 in the console to signal B of the Modbus line. Connect the braid of the shielded cable to the terminal (GND) of M3 in the console. Use twisted cable suitable for the transmission of RS485 signals with minimum section of 0.5 mm<sup>2</sup> (e.g. Belden 8762 cable). Avoid placing the signal cables together with power cables.

**1) Example of connection between the console and the Modbus line:**

For a correct functioning the Master has to have a RS485 polarized. In case of communication problems, it's recommended to connect a resistance equal to 120Ω between A and B at the beginning and end of the line.



## CHAPTER 4: SWITCHING ON

### FIRST SWITCHING ON

4.1

When the controller is switched on for the first time, the "Language Selection" and "time and date setting" pages of the system are displayed to facilitate the user in starting up the controller. These settings can even be modified further on by means of the "Language" and "Date and time" items within the "Parameters" menu.

Set the language by pressing these buttons.

Confirm the settings by pressing the confirmation button.

Set the date and time by scrolling your finger over the digits from the top downwards.

Confirm the settings by pressing the confirmation button.

Automatic date and time synchronization via Web (ethernet connection required)

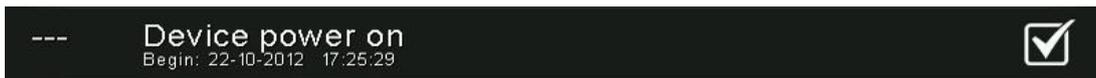
Every time the controller is switched on, an information pop-up is displayed with the starting date and time, requesting the user to acquire the information by pressing "OK". This allows to verify the return from an electrical blackout.



Controller starting date and time

Information acquisition button

The start-up event is also memorized inside the "alarms" menu to make it possible to verify this information over time.



## CHAPTER 5: USER INTERFACE

This section illustrates the features and instructions for using the display, the light indicators and the buttons making up the user interface of the VISION TOUCH AB, and therefore represent an essential requirement to correctly program and configure the controller.

### CONSOLE FUNCTIONAL ZONES

5.1

The display is divided into 3 main parts:

- **Main display:** interactively displays the various home pages and menu items.
- **Status bar:** it is divided into 3 parts and displays the following data:
  - on the left: running status and name of program in progress.
  - in the middle: description of current visualization of main display.
  - on the right: current date/time, presence of USB key, or access as installer
- **Button bar:** views the main operating buttons and their status.

At the bottom in the middle there are two LEDs:

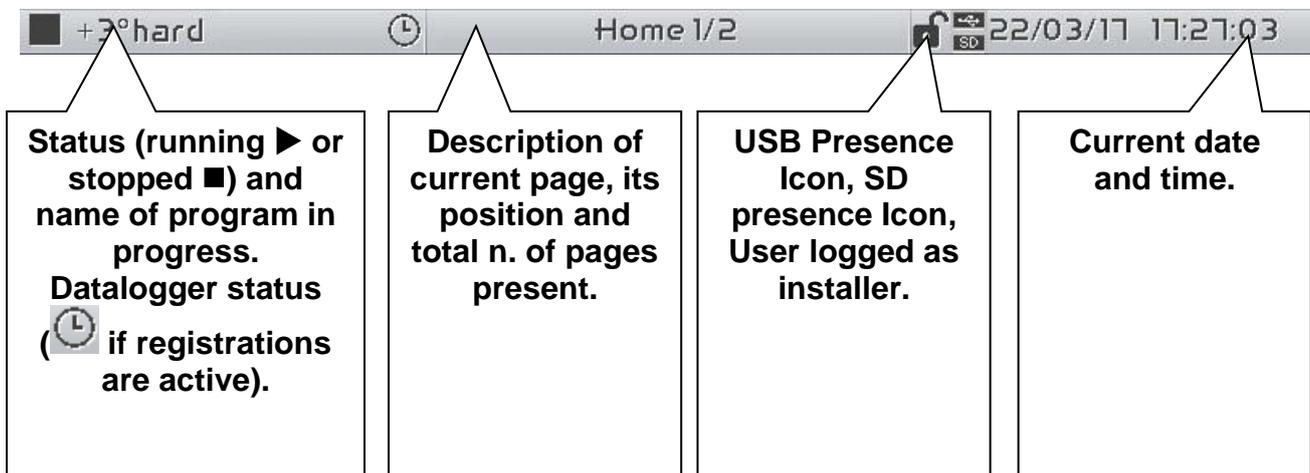
**Green LED:** Flashing = controller in stand-by / On fixed = Controller powered

**Red LED:** Flashing = controller in Alarm



The section of the main display views the work and setting pages based on the position (for example Home, Configuration, phase). A detailed description of the various pages will be made further on in this manual.

The Status Bar is in the lower part of the display (above the Button Bar, if applicable) and displays some important information relating to the status of the device, such as the name of the program in progress and the description of the currently displayed page. It is always present except when, in some rare cases, it is temporarily hidden to fully exploit the display.



The Button Bar is at the bottom of the display and views the main operating buttons and their status. It is always present except when, in some rare cases, it is temporarily hidden to fully exploit the display.



The buttons can have different shapes but always include an icon, a description and a colour that identifies the status.

In particular, the colour code of the buttons is the following:



**BLU:**  
Button which can be enabled



**GREY:**  
Button not active (Disabled)



**GREEN:**  
Button function activated or Confirmation button



**YELLOW:**  
Cancel button



**RED:**  
Alarm signal in progress or File delete button



**ORANGE:**  
Alarm signal no longer present but still to be acquired

Some buttons have delayed activation to avoid unintentional commands (see standby for example). When pressed the progressive colour change is viewed until the function is activated.

## Description of buttons in Button Bar:



Back

### **BACK:**

Inside a menu or level: Go back to previous level or menu.

In a HOME page: Go back to the previous Home page.

If pressed and held for more than 3 seconds: Go back to HOME1 page



Parameters

**PARAMETERS:** Enter the parameter setting menu



Alarms

**ALARMS:** Enter the alarm log menu

Red: Alarm triggered

Orange: Alarm over but to be acquired

Blue: No Alarm triggered or to be acquired

If the alarm log menu contains only items already acquired (shown in black) a waste bin will appear inside this button indicating the possibility of cancelling the entire log.



Help

**HELP:** Enter the Help page which contains all the information about the controller manufacturer / installer. The data contained in this page can be modified by a user logged in as an installer.



Datalog

**REGISTRATIONS HISTORY:**

(Present in the Extended Button bar)

Accessed the registrations history page.



Defr.

**MANUAL DEFROST:** Activates a manual defrost or deactivates an automatic or manual one in progress (delayed start).

Green: Defrost output active

Blue: Defrost output not active

Grey: Defrost output disabled



UV  
UV

**MANUAL UV LIGHT:** Activates/deactivates manually the UV light.

Green: UV light active

Blue: UV light not active

Grey: UV disabled



Standby

**STANDBY BUTTON:** Activates/deactivates the standby status (delayed start)

Green: Standby active (System OFF)

Blue: Standby not active (System ON)

During standby, the program in progress keeps the count of the remaining time.



Manager

**PROGRAM MANAGER:**

(Present in the Extended Button bar)

When pressed, the program management screen opens, allowing to import or export programs to a USB or SD card.



CSV

**DATA EXPORT IN CSV FORMAT:**

(Present in the Extended Button bar)

Exports datalogger registered data in a CSV file on USB or SD support.



**MANUAL COLD ROOM LIGHT BUTTON:** Manually activates/deactivates the cell light.

Green: Light active

Blue: Light not active

Flashing light icon: Indicates the forced activation of the light from the digital input of the micro gate open. With the open gate digital input, the manual cell light, defrost, pause and air cycle buttons are deactivated.

---



**EXTENDED BUTTON BAR OPENING BUTTON:**

Opens or closes the EXTENDED BUTTON BAR that allows access to additional buttons.

---

The Vision Touch, aside from normal pressing of keys, on some pages supports gestures which allow the user a more natural and therefore simpler interaction.

**Change Home Page:** On one Home page, move your finger to the left or to the right to pass from one Home page to the next one or to the previous one.

Note: it is also possible to move inside the Home pages by pressing the Back button.

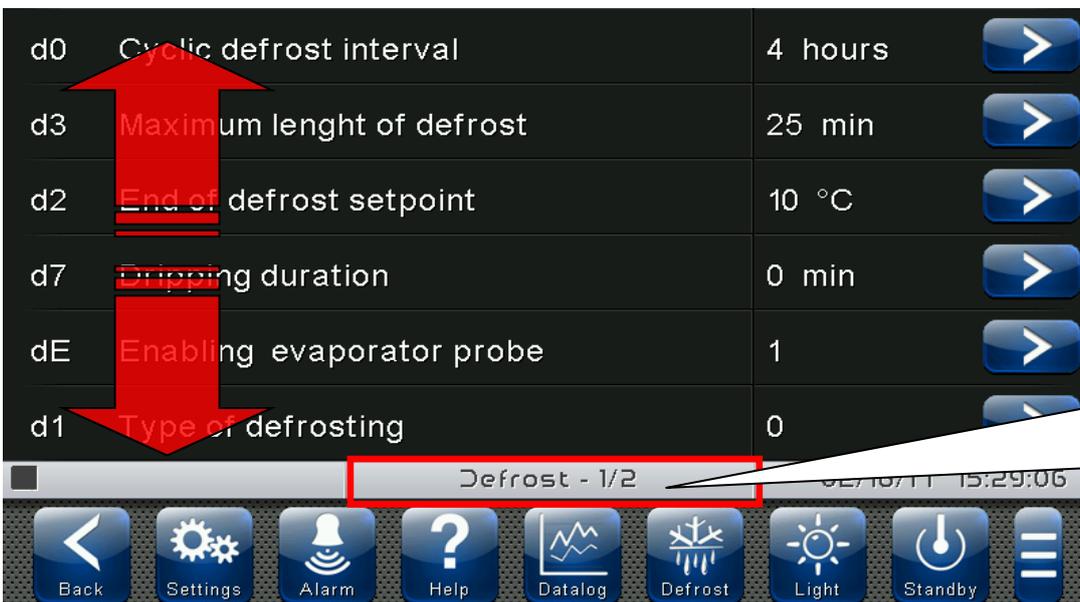
The middle of the status bar has the description of the page currently displayed, its position and the total number of pages displayable (for example 1/2 means you are viewing page 1 of a total number of 2 displayable pages).



Description of current page, its position and total n. of pages present.

**Change Page of a table or parameter list:** Move your finger up or down to pass to the next or previous data page.

The middle of the status bar has the description of the page currently displayed, its position and the total number of pages displayable.



Description of current page, its position and total n. of pages present.

**Change parameters with roll selection:** Move your finger up or down by one roll to change its value. (Suggestion: move your finger starting from the outside of the roll and pass through it completely).

If the value you are trying to set is not allowed and is not included in the range of the parameters, the background of the roll will turn red for an instant indicating that the action is not allowed.



**Changing parameters with a switch:** Move your finger to the right or to the left to activate or deactivate a switch.

**Selection of parameters with Flags:** press the flag to change the status or to select one of the possible options.



**"Edit" mode in Home 1 and 2 pages:** When you are on one of the Home pages, touch the screen at a point which is not a button for more than three straight seconds to enter edit mode of the page itself. To exit this mode, press the "Back" button or wait for the automatic exit after one minute of inactivity.



**Edit Home 1 Page, Change Set Point with Wheel:** Once you have entered edit mode on Home 1, it is possible to change the temperature Set Points currently in use. The changes are temporary and do not alter the preset program. Turn clockwise to increase or anti-clockwise to decrease the value of the Wheel of the Set Point to be modified or else act on the plus or minus buttons. Then confirm the new values by pressing the green confirmation button.



## CHAPTER 6: HOME PAGES

The "Home" pages are the main interface of the controller from whence it is possible to access the mostly used features. They are divided as follows:

### PRESERVATION

Display/modify the ambient temperature setpoint, display piercing probe temperature value, display of I/O status and secondary or information parameters.



### PROGRAMS

Complete management of programs (Recipes): Display, create, edit, delete and load.



### CURRENT PROGRAM (GRAPH)

Display program progress, modify the temperature setpoint and view the complete configuration of the current program.



### CURRENT PROGRAM (SETPOINT)

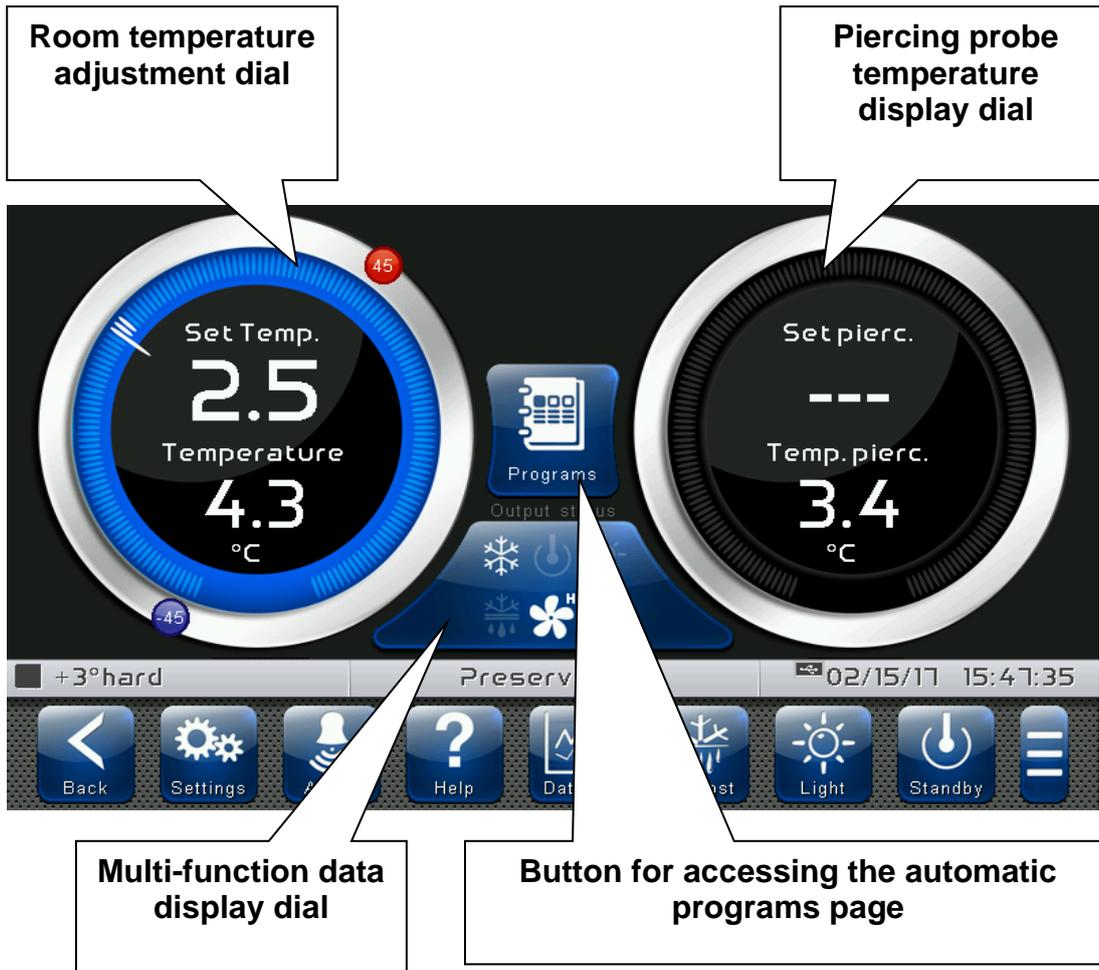
Display/modify the ambient and product temperature setpoint and modify the fan speed of the current phase.



The "PRESERVATION" page allows selection, display and modification of the room temperature control and access to the recipes page using the 'Select program' button.

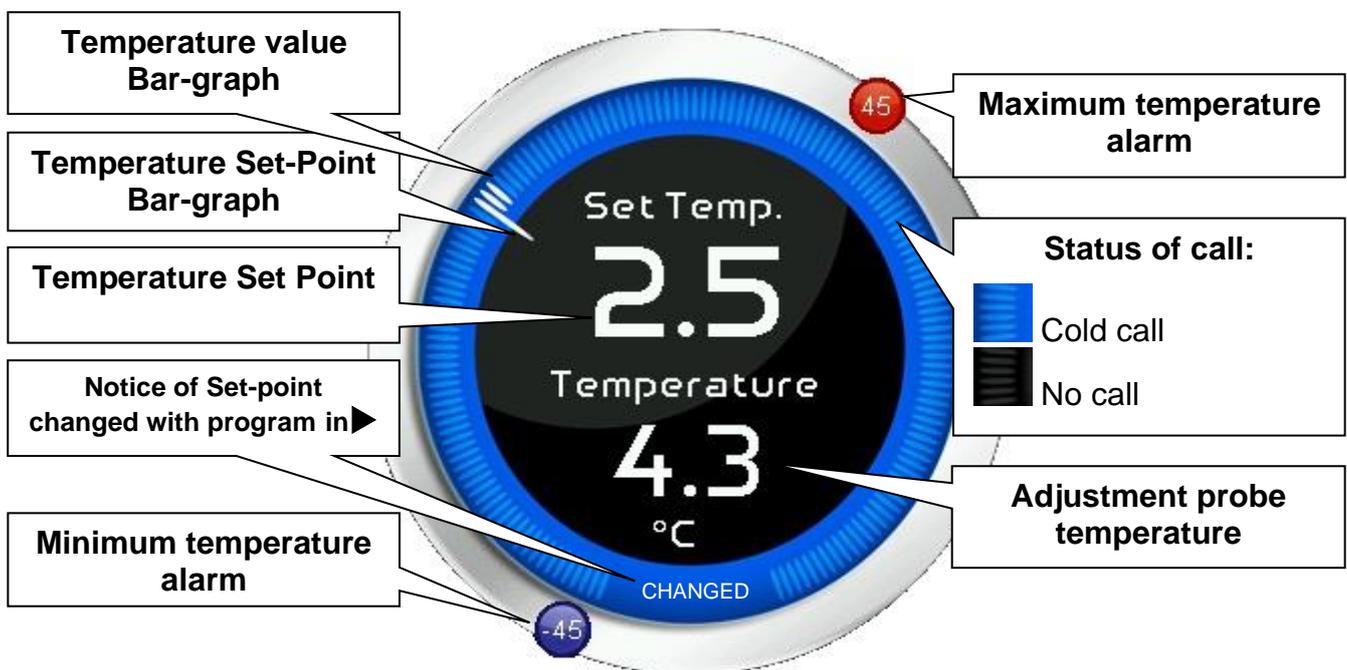
When in visualization, it is divided into 4 main sections:

- **Ambient temperature probe control dial.**
- **Piercing probe temperature visualization dial.**
- **Button to access the automatic programs page.**
- **Multifunction data visualization dial.**



**Temperature adjustment dial:** Displays all that regards temperature adjustment, in particular:

- The temperature set point (can be modified by pressing the dial for 3 sec)
- Adjustment probe temperature measurement
- The status of the call (Cold /No call)
- The Minimum Temperature alarm set on A1 which can be reached on "Parameters > Alarm adjustments > A1 Minimum temperature alarm" and indicated with the icon 
- The Maximum Temperature alarm set on A2 which can be reached on "Parameters > Alarm adjustments > A2 Maximum temperature alarm" and indicated with the icon 



**Multifunction data visualization dial:** it consists of two parts which, when touched, cyclically alternate the data displayed. The following are the various screens and their related meanings. Note: Some data is only viewed if the relative function is enabled in the configuration parameters.

**DIGITAL OUTPUT STATUS**

(Always visible)



- Cold  
Flashing= Standby
- Defrost  
Flashing= Dripping
- Stand-by
- UV light

- Fans  
low speed  
Flashing= Standby
- Fans  
high speed  
Flashing= Standby
- Fans  
with 0-10V output  
0-10V  
Flashing= Standby
- Light  
Flashing= micro gate

**DIGITAL INPUT STATUS**

(Always visible)



- Micro gate
- Man in room
- Stand-by remotely
- Generic alarm remotely
- Compressor protection
- Fans protection

- Generic Warning 1
- Generic Warning 2
- Generic Warning 3
- End defrost remotely
- Start defrost remotely
- High pressure
- Low pressure

**STAGE IN PROGRESS COUNTDOWN**

(visible while the program is running)



This dial is only displayed while the program is running. It indicates the name and the time remaining to the end of the stage in progress.

**EVAPORATOR TEMP. PROBE MEASUREMENT**

(visible if enabled)



This dial is only viewed if the parameter "Parameters > Defrosts > dE Evaporator probe enabled = 1" and if the related analogue input is set.

**PIERCING PROBE 1-2-3 TEMP. MEASUR.**

(visible if enabled)



This quadrant is displayed only if the parameter "Parameters> Piercing probe> EnS Piercing probe enable" is different from 0 and if the relative analogue input is set.

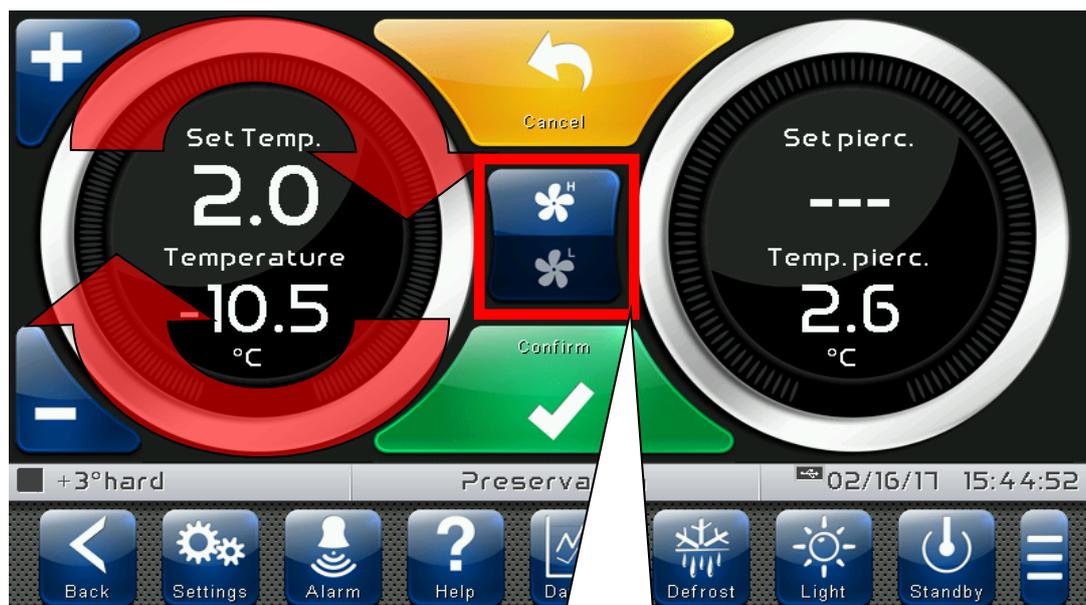
**“Modify setpoint” mode on the PRESERVATION page:**

Touch one of the adjustment dials on the screen for more than three consecutive seconds.



Once you have entered the edit mode, it is possible to change the temperature set point currently in use by rotating the wheel clockwise to increase or anti-clockwise to decrease the value of the set point to be modified. Otherwise, you can press the plus and minus buttons. Then confirm the new values by pressing the green "Confirm" button or by pressing "Cancel" to go back to the display screen.

To exit this mode, you can also press the "Back" button or wait for the automatic exit after one minute of inactivity.



**Evaporator fan speed  
selection buttons**

**Evaporator fan speed selection buttons:**

**Evaporator fans high speed.**



**Evaporator fans low speed.**



**Evaporator fans with 0-10V output.**

This button is only displayed if the EFa parameter = 1.

Press + or - to increase or decrease the evaporator fan speed.

Button to access the automatic programs display page:



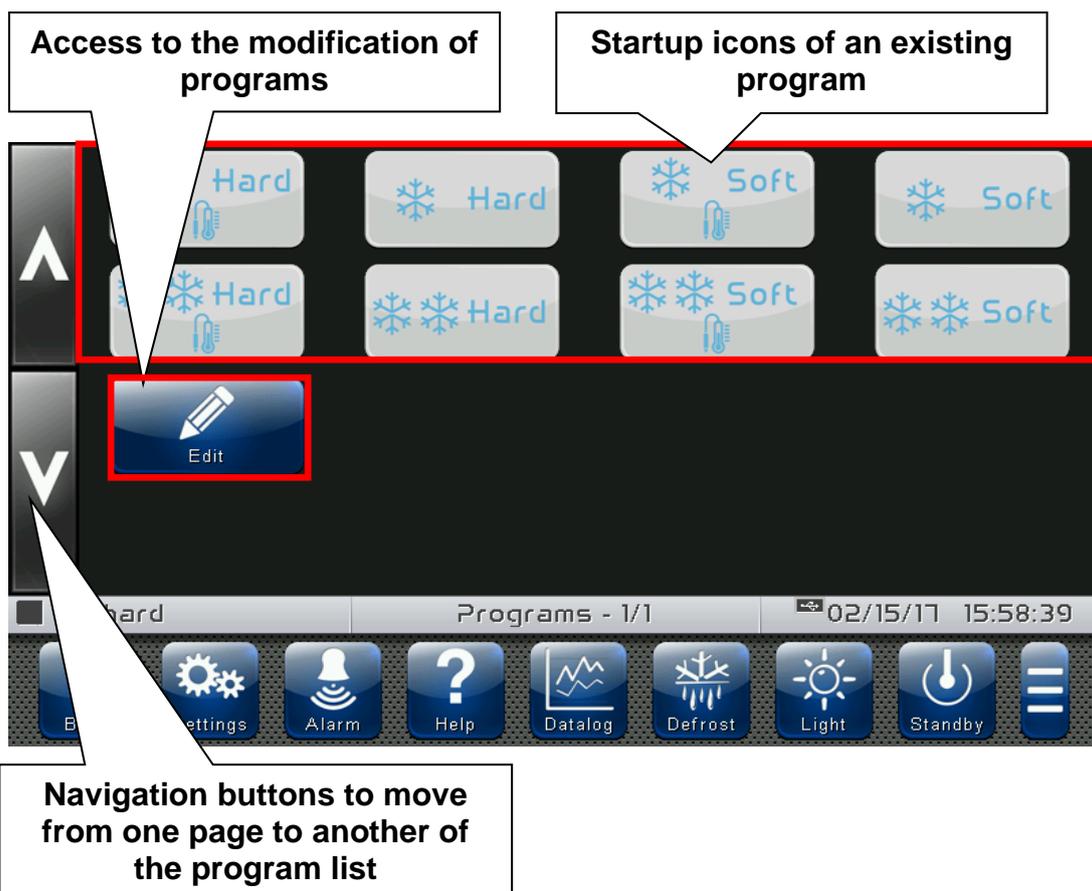
**Program selection:**

Press this button to enter the automatic program management and display page.

The "Program list" allows complete management of the programs (Recipes): view the list, create, edit, delete and start the program.

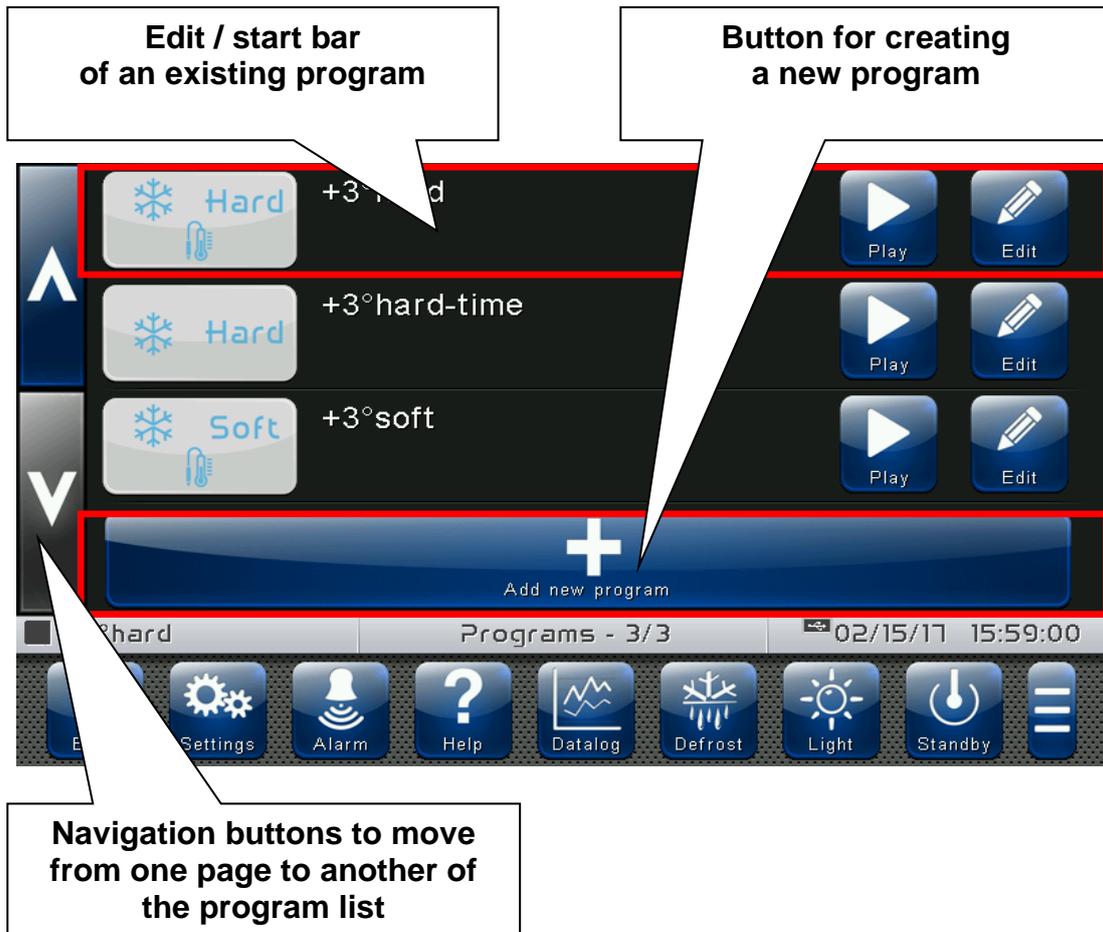
The page is split into 2 main sections:

- **Start-up icons of an existing program.**
- **Button for access to the creation, modification or cancellation of a new program.**



The controller will display the "Preservation" page when the "Back" button is pressed.

**Editing programs:** Press the 'Edit' button to access the program editing page.



By pressing the "Back" button or after one minute of inactivity, the control automatically displays the "Preservation" page.

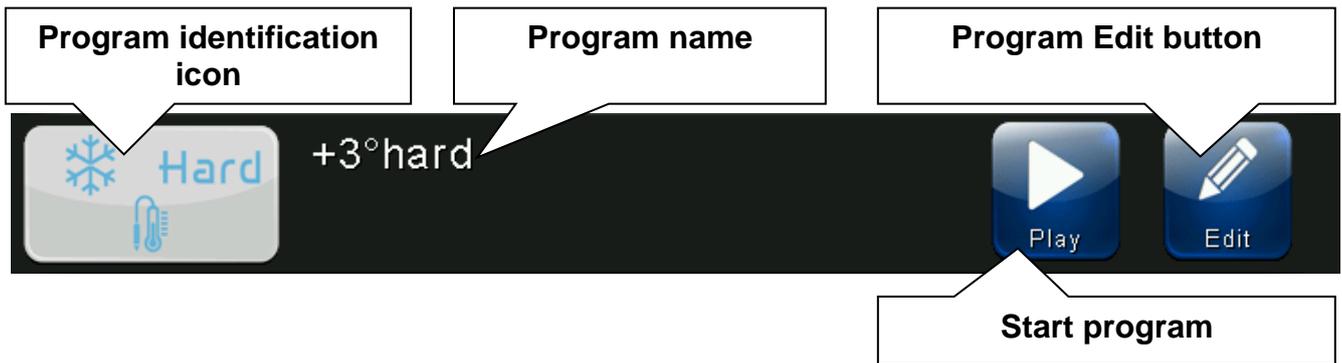
**Bar to create a new program:** it allows the creation of a new program; once pressed, you are asked to enter the name using the keyboard and then to configure the phases and general settings.

The phase setting pages of a new program are the same as those used to Modify a program. The internal memory can store up to 20 programs.



**Edit/start bar of a program:** Displays the name and the icon that identifies the program and the preset time of the prepared product. There are also 2 buttons to:

- Start the program.
- Edit the program.



**AUTOMATIC PROGRAMS - description of the Program Phases**

6.4

There can be up to 4 phases in a program, split as follows:

- **Quick-refrigeration:**  
In this phase the temperature is brought to a very low value to quickly cool the freshly cooked food.
- **Refrigeration:**  
In this phase a temperature close to 0 is maintained to prevent the creation of a layer of ice on the products.
- **Deep Freezing:**  
In this phase the temperature is lowered to a level that allows fast freezing of the products.
- **Preservation:**  
The conservation phase is distinguished from the others because it cannot be excluded and allows to set the maintenance temperature at the end of the cycle.

Following is the default proposed during the creation of a new program:

Enable	<input checked="" type="checkbox"/> Phase	<input type="checkbox"/> Phase	<input type="checkbox"/> Phase	<input checked="" type="checkbox"/> Phase
Ambient Set	-20.0 °C	0.0 °C	-35.0 °C	+2.0 °C
Piercing Set	10.0 °C	3.0 °C	-18.0 °C	/
Phase duration	1 hour	30 min	2 ore	/
	Quick-refrigeration	Refrigeration	Freezing	Preservation
	START			END

It's possible to customize the programs created, in particular for each phase it is possible to:

- Enable its operation (with the exception of the Preservation phase always present);
- Set the duration of the phase, the Ambient temperature Setpoint and the product temperature Setpoint;
- Select the speed of the evaporator fans and force the running constantly.

**Note:** Defrosting and Ambient temperature alarms (EtH and EtL) are inhibited during the quick-refrigeration, refrigeration and freezing phases.

6.5

**AUTOMATIC PROGRAMS – Preloaded programs**

	<b>+3°C SOFT TEMPERATURE</b>			
		Phase 1	Phase 2	Preservation
	Ambient set	0.0 °C	/	+2.0 °C
	Piercing set	3.0 °C	/	/
	Duration	90 min	/	/

	<b>+3°C HARD TEMPERATURE</b>			
		Phase 1	Phase 2	Preservation
	Ambient set	-20.0 °C	0.0 °C	+2.0 °C
	Piercing set	10.0 °C	3.0 °C	/
	Duration	60 min	30 min	/

	<b>+3°C SOFT TIME</b>			
		Phase 1	Phase 2	Preservation
	Ambient set	0.0 °C	/	+2.0 °C
	Piercing set	/	/	/
	Duration	90 min	/	/

	<b>+3°C HARD TIME</b>			
		Phase 1	Phase 2	Preservation
	Ambient set	-20.0 °C	0.0 °C	+2.0 °C
	Piercing set	/	/	/
	Duration	60 min	30 min	/

	<b>-18°C SOFT TEMPERATURE</b>			
		Phase 1	Phase 2	Preservation
	Ambient set	0.0 °C	-35.0 °C	-20.0 °C
	Piercing set	3.0 °C	-18.0 °C	/
	Duration	120 min	120 min	/

	<b>-18°C HARD TEMPERATURE</b>			
		Phase 1	Phase 2	Preservation
	Ambient set	-35.0 °C	/	-20.0 °C
	Piercing set	-18.0 °C	/	/
	Duration	240 min	/	/

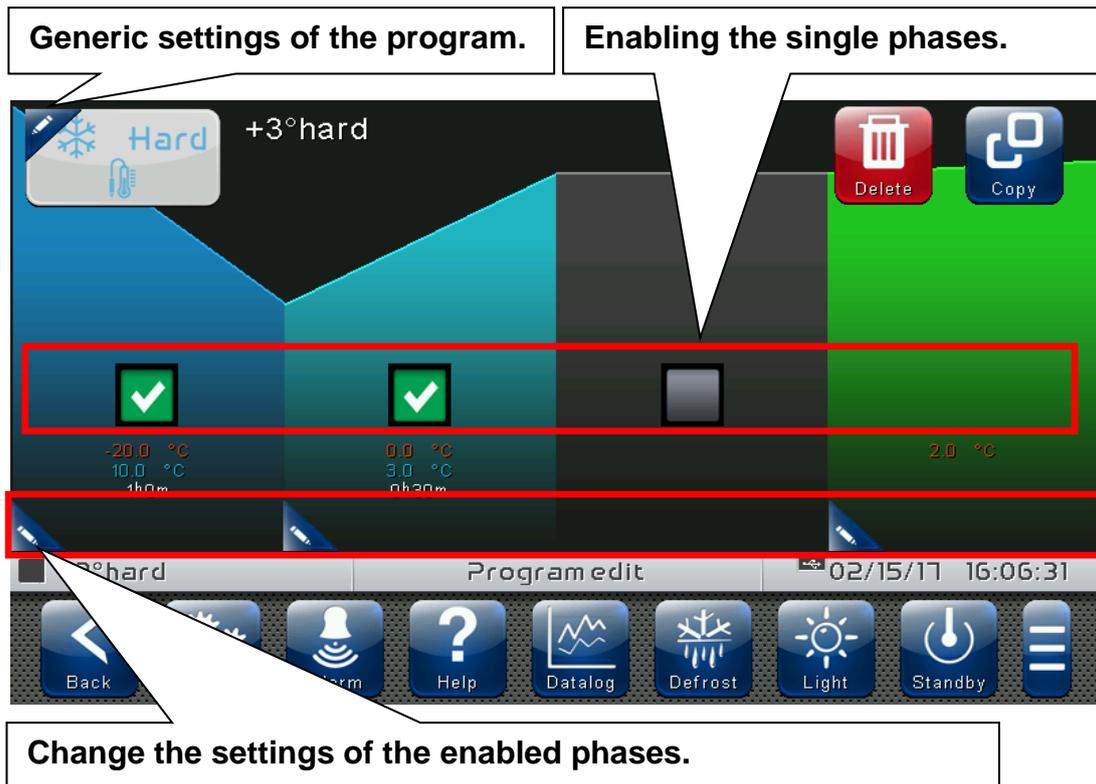
	<b>-18°C SOFT TIME</b>			
		Phase 1	Phase 2	Preservation
	Ambient set	0.0 °C	-35.0 °C	-20.0 °C
	Piercing set	/	/	/
	Duration	120 min	120 min	/

	<b>-18°C HARD TIME</b>			
		Phase 1	Phase 2	Preservation
	Ambient set	-35.0 °C	/	-20.0 °C
	Piercing set	/	/	/
	Duration	240 min	/	/

The button appears when the program is stopped and the PROGRAM LIST is accessed.



**Edit program:**  
Enters the program edit page.



The buttons appear when the edit page of a recipe is accessed. These are overlapped with the CONFIRM and CANCEL buttons if at least one configuration of the program is edited.



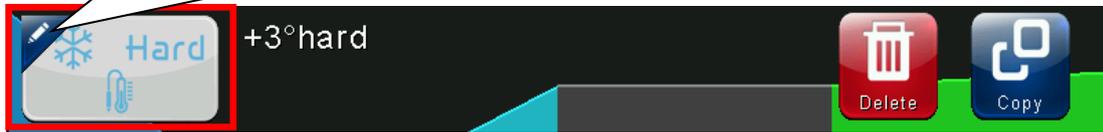
**Delete program.**  
Deletes the program from the memory of the device.



**Copy program.**  
After having entered a new name, it saves a copy of the selected program.

By pressing the button  on the left of the program icon at the top of the summary bar, you enter the following program options configuration page.

**Program generic settings.**



**General option configuration page of program:**

**Select icon:**

This button accesses the database of icons that can be used to identify a program.

**Notice (popup) at program end:**

The user is informed of the end of a program by means of a notice Pop-up.  
(Press OK to acquire the message)



**Defrosts:**

It's possible to force the start of a defrost at the beginning of the program and/or before the conservation phase.

**Piercing probe:**

It's possible to enable the piercing probe to terminate the phases by temperature. If deactivated, the phases will end for the maximum time set.

**Switch on relay at program end:**

A specific relay is activated when the Pop-up notifying the end of the program is present. By pressing OK in the Pop-up, the relay de-energizes, and the Pop-up closes.

**Note:**

The automatic program is concluded at the end of the execution of all the phases of quick-refrigeration, refrigeration and freezing, except for the preservation phase.

By pressing the button  at the bottom left corner of each phase you enter the phase configuration page.

**Phase configuration page 1/2:**



The screenshot shows the 'Phase configuration page 1/2' for a phase named 'Hard chill'. The interface includes a title bar with the phase name, a 'Confirm' button (green checkmark) and a 'Cancel' button (yellow arrow) in the top right. The main area contains two rows of numeric input fields: 'Phase period (hh:mm)' set to 01:00 and 'Temperature setpoint (°C)' set to 20.0. To the right, there is a 'Set piercing probe (°C)' field set to +10.0. A bottom navigation bar contains icons for Settings, Alarm, Help, Datalog, and other functions. A status bar at the bottom shows '+3°h', 'Hard chill', and the date/time '02/15/17 16:07:'. Callout boxes provide the following descriptions:

- Name of the selected phase:** Points to the 'Hard chill' title.
- Confirm and cancel modifications buttons:** Points to the 'Confirm' and 'Cancel' buttons.
- Phase period (hh:mm):** Points to the '01:00' input field.
- Ambient Temperature Set point (°C):** Points to the '20.0' input field.
- Product temperature Set point (°C):** Points to the '+10.0' input field.
- Buttons for moving between configuration pages:** Points to the navigation arrows on the right side of the screen.

Phase configuration page 2/2:

**Fans:**  
Management of fan switching modes.

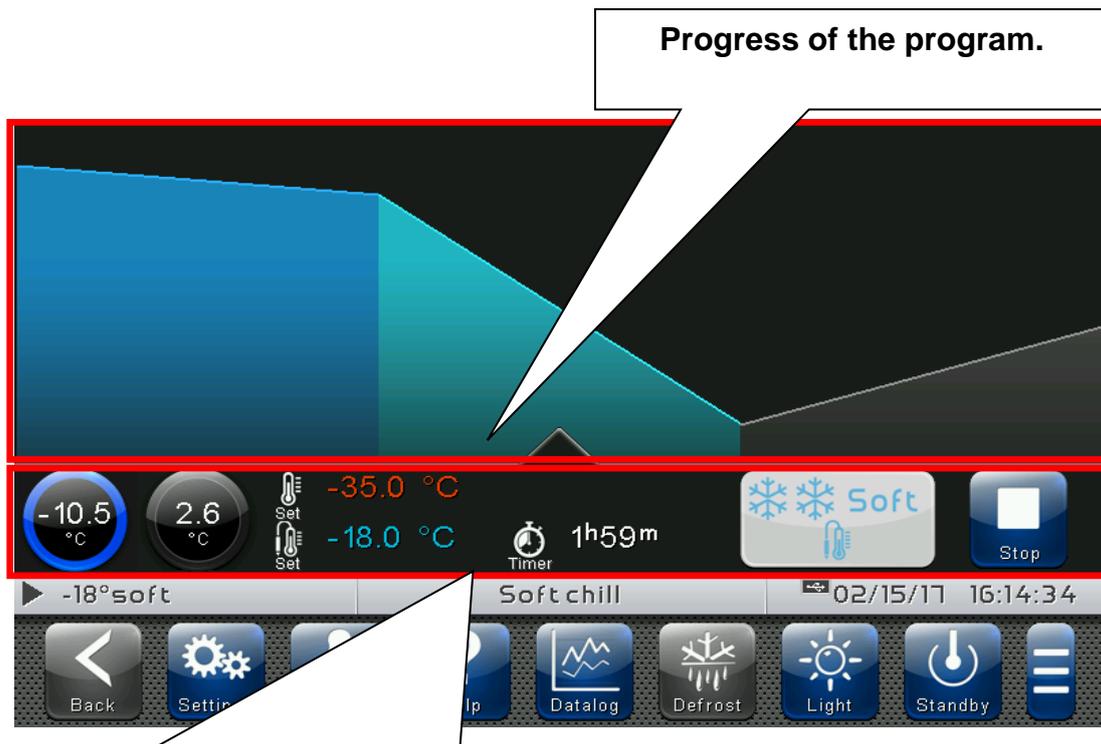
**Evaporator fan speed selection in selected phase.**  
If the 0-10V output is selected for fan speed regulation (parameter EFa=1 in the Ventilation menu present in the parameters) there is a speed selection roll instead of these two flags (20-100%).

Fans speed (%)		
1	0	0

The "automatic cycle" is displayed automatically after a program is started. At the end of the program or when the STOP button is pressed, the "Preservation" screen is automatically displayed.

The page is split into 2 main sections:

- **Progress of the program:** this section contains the progress graph of the temperature setpoints; the phases that have already been performed and the current one, are coloured, whereas the ones left are in grey.
- **Summary bar of the current phase:** the current phase is indicated by an arrow.



#### Summary bar of the current phase:

contains the measured temperature values, the setpoints, the remaining time for the current phase to end and the STOP button to stop the program. "CHANGED" appears if the current values of the setpoints are different from those set in the program. The program icon is also present.



#### Stop program:

Ends the current program and returns to the "Preservation" page.

#### Summary bar of the current phase:

Tap the summary bar of the current phase to access the temperature ambient and product setpoint page.



**"Edit setpoints" mode on the CURRENT PROGRAM (SETPOINT) page:**

Touch one of the adjustment dials on the screen (ambient or product temperature) for more than three consecutive seconds. "CHANGED" appears in the dials if the current values of the setpoints are different from those set in the program.

Press the "Graph" or "Back" button to return to the graph of the current program.

**"Program configuration" mode on the CURRENT PROGRAM page:**

Tap on the progress of the current program for more than three consecutive seconds.



At this point a graph with the trends of the ambient temperature setpoint (red line) and product temperature setpoint (blue line) set in each phase of the program will be displayed. The complete configuration of a phase can be viewed (but not edited) by

pressing the  button.



To exit this mode, you can press the "Back" button or wait for the automatic exit after one minute of inactivity.

## CHAPTER 7: ACCESS LEVELS

### 7.1

#### ACCESS LEVELS TO PARAMETERS (USER/ INSTALLER)

The controller has two access levels to the parameters and to the functions: “**User**” and “**Installer**”. The default setting is User that has a parameter menu that can be customised by the installer. Installer access is by logging in from the « Parameters > Password > installer login » menu and inserting the assigned password.

#### PASSWORD SET BY DEFAULT:

Installer Password : 0100

Screen for entering access password



The user logged in as installer is indicated on the Status bar with an open lock. Logout is performed automatically after one minute of inactivity or manually from the « Parameters > Password > Installer Logout » menu.



Open lock icon: User logged in as installer.

### 7.2

#### LOCK SCREEN AND USER / INSTALLER LOGIN

If the « Lock screen with password » function is activated, access as an installer or as a user is based on the entered password while the screen unlocks.

#### PASSWORDS SET BY DEFAULT:

User Password : 0200

Installer Password : 0100

Locked screen display positioned in the Button bar.



By pressing the Unlock button, you reach the Password entry display to unlock the screen.



# CHAPTER 8: PARAMETERS

## ACCESS TO PARAMETERS MENU

8.1

Press the "Parameters" button in the Button Bar to access the control parameters setting menu.



**PARAMETERS:**  
Enters the parameter setting menu



Each item of the parameters menu gathers a list of parameters specific for the function described in the menu and in some cases a further submenu.

The items present in the main branch are all displayed if you are logged in as "Installer", while the items displayed under "User" depends on the configuration set in "parameters > configure user level menu" visible only if logged in as Installer.

8.2

DESCRIPTION OF PARAMETER SETTING PAGE

Press the "Settings" button in the Button Bar to access the controller parameters setting menu. Each sub-menu contains the name of the parameters that can be set, a brief description in the selected language and the currently set value.

Parameter name	Parameter description	Current value
d	Cyclic defrost interval	4 hours
d3	Maximum length of defrost	25 min
d2	End of defrost setpoint	10 °C
d7	Dripping duration	0 min
dE	Enabling evaporator probe	1
d1	Type of defrosting	0

Press the name of the parameter to be set to access the relative modification page.

**Parameter name**

**Detailed description, indicating the range of values that the parameter can take on.**

**Parameter value, editable. In the event of an incorrect setting, the error is reported.**

## List of parameter menu items

8.3

Listed below is the complete list of items displayed in the “Parameters” menu.

Name	Symbol	General description	Chapter
Process regulation		General process parameters	8.3.1
Defrosts		Defrost, dripping and evaporator probe presence settings	8.3.2
Fans		Fan activation and relative speed settings, 0-10V output setting	8.3.3
Piercing probe		Piercing probe enabling and management	8.3.4
Machine protection		System protection parameters: compressor management, limits for set-points	8.3.5
Alarm regulation		Temperature / humidity alarms adjustment	8.3.6
Probe calibration		Correction of the value of the room temperature probe, product temperature probe, humidity probe, etc.	8.3.7
Datalogger		Datalogger Configuration	8.3.8
RS485 communication		Configuration of RS485 serial communication	8.3.9
Web server		Configuration of Web server	8.3.10
Mail		E-mail configuration	8.3.11
Language		Device language setting	8.3.12
Date and time		Date and time settings (not accessible while a program is running)	8.3.13
General settings		Contrast, brightness and sound alarms setting	8.3.14
Software		Management of updates and software recovery of the control, export / import of device parameters from USB / SD	8.3.15

<b>Info</b>		VISION TOUCH AB device information (software version, memory occupation)	8.3.16
<b>Password</b>		Protection level management: user / installer access, menu configuration.	8.3.17
<b>Test center</b>		Test of digital and analog inputs / outputs, operation test of the touchscreen interface	8.3.18
<b>Configure I/O</b>		Configuration of functions associated to digital/analogue inputs/outputs	8.3.19
<b>I/O Status</b>		Verify the status of the digital and analogue inputs/outputs	8.3.20

## Process regulation

8.3.1

“Process adjustment” allows setting the differentials of the AB.

The “Process adjustment” menu can be accessed from the main Configuration page (“Parameters” Button). The display of this item can be set in the “Password” sub-menu => “Configure user level menu” and by selecting the “Process adjustment” item (installer login required).

## Process regulation



PARAMETERS	MEANING	VALUES	DEFAULT
r0	<b>Temperature differential</b> with reference to main SET-POINT. It is expressed in absolute value and it defines the temperature hysteresis referred to the temperature SET-POINT.	0,2 ÷ 10,0 °C	2,0 °C

## Defrosts

8.3.2

Defrosts are managed with the parameters d0, d3, d2, d7, F5 which define their intervals, the maximum duration, the defrost end temperature, dripping and fan stopping. To switch defrost on manually, just press the “Defrost” button. Defrosting will not be activated if the defrost end temperature (d2) is set lower than the temperature detected by the evaporator probe. Defrosting will end when the defrost end temperature (d2) or the maximum defrost period (d3) is reached.

The “Defrost cycles” menu can be accessed from the main Configuration page (“Parameters” Button). The display of this item can be set in the “Password” sub-menu => “Configure user level menu” and by selecting the “Defrosting cycles” item (installer login required).

## Defrost



PARAMETERS	MEANING	VALUES	DEFAULT
d0	<b>Defrost interval</b> (hours).	0 ÷ 24 hours	4
d3	<b>Maximum defrost period</b> (minutes)	1 ÷ 240 min	25 min
d2	<b>Defrost end Set-point.</b> Defrosting is not carried out if the temperature detected by the defrost probe is higher than the value d2 (If the probe is faulty, the frosting is timed)	-35 ÷ 45 °C	10°C
d7	<b>Dripping period</b> (minutes) At the end of defrosting, the compressor and fans remain stopped for the set time d7, the defrost icon flashes.	0 ÷ 30 min	0 min

<b>dE</b>	<b>Evaporator probe exclusion</b>	0 = probe absent 1 = probe present	1
<b>d1</b>	<b>Type of defrost</b> Cycle inversion (hot gas) or resistance. With hot gas the compressor output is also activated.	0 = electrical defrost. 1 = hot gas (defrosting outlet off during dripping). 2 = hot gas (defrosting outlet on during dripping, to manage bowl resistances).	0
<b>dF1...dF6</b>	<b>Defrost times programming</b> It is possible to set up to 6 times for defrost.	OFF / 00:00 ÷ 23:59	OFF

Hot gas defrost

Set parameter d1 = 1 or 2 for managing cycle inversion defrosting. The compressor relay and the defrosting relay are activated for the entire defrosting phase.

If d1 = 2, the defrosting outlet stays active during the dripping stage to manage the bowl resistances.

For the correct management of the plant, it will be the responsibility of the installer to use the defrost output, that must allow the opening of the cycle inversion electrovalve and the closing of the liquid electrovalve.

For the capillary plants (without thermostatic valve) it is sufficient to control the cycle inversion electrovalve using the defrosting relay control.

**8.3.3**

**Ventilation**

The parameters of the Ventilation menu allow to set the management of the fans in the various operating modes. The "Ventilation" menu can be accessed from the main Configuration page ("Parameters" Button). The display of this item can be set in the "Password" sub-menu => "Configure user level menu" and by selecting the "Ventilation" item (installer login required).

Fans



PARAMETERS	MEANING	VALUES	DEFAULT
<b>F5</b>	<b>Fan pause</b> after defrost (minutes) Allows to keep the fans stopped for a time F5 after dripping. This time starts counting from the end of dripping. If dripping is not set, at the end of defrost the fans pause immediately.	0 ÷ 10 min	0 min
<b>F3</b>	<b>Fan status when cold, hot are stopped</b>	0 = Fans running constantly 1 = Fans off if cold is off 2 = off with cold active	0
<b>F4</b>	<b>Fan pause during defrost</b>	0 = Fans running during defrost 1 = Fans not running during defrost	1

<b>F6</b>	<b>Evaporator fans activation for air circulation.</b> The fans are activated for a time defined by F7 if they were not switched on for the time F6. If the time of activation coincides with the defrost phase, it waits for the end of defrost. The fan speed (high/low) is the same as that selected for the phase in progress.	0 ÷ 240 min	0
<b>F7</b>	<b>Evaporator fans activation period for air circulation.</b> Time fans running for air circulation (F6).	0 ÷ 240 sec	10 sec
<b>F8</b>	<b>Fan speed.</b> The value of this parameter changes based on the setting made in the last phase of a program carried out.	0 = High speed 1 = Low speed	0
<b>EFa</b>	<b>Enables 0-10V output for fan speed control</b> The digital outputs high and low fan speed becomes the enable. (Them Turned on if the 0-10V output higher than 0V)	0 = disabled 1 = enabled	0
<b>Fs</b>	<b>Fan speed (percentage) when EFa=1.</b> The value of this parameter changes based on the setting made in the last phase of a program carried out.	20 ÷ 100 %	100%
<b>Fst</b>	<b>Fan block temperature</b> The fans will remain off if the temperature value read by the evaporator probe is higher than the value of this parameter. The block is deactivated with the evaporator probe disabled or in error.	-45.0 ÷ +45.0 °C	+45.0°C
<b>Fd</b>	<b>Differential for Fst</b>	1.0 ÷ 10.0°C	2.0°C

Piercing probe

8.3.4

The “Piercing probe” allows to manage the outputs and the moment in which the recipe in progress ends according to the temperature measured by this probe. This function can only be activated if the piercing probe is connected.

The “Piercing probe” menu can be accessed from the main Configuration page (“Parameters” Button). The display of this item can be set in the “Password” sub-menu => “Configure user level menu” and by selecting the “Piercing probe” item (installer login required).

Piercing probe



PARAMETERS	MEANING	VALUES	DEFAULT
<b>EnS</b>	<b>Enabling the piercing probe</b>	0 = disabled 1 = Piercing probes average value 2 = Maximum piercing probes value 3 = Minimum piercing probes value	1
<b>drS</b>	<b>Delay time for out-of-range piercing probe alarm (Efo)</b> when a program that uses the piercing probe is in progress.	0 ÷ 240 min	5 min
<b>diS</b>	<b>Temperature differential</b> to evaluate (when starting a program) if the piercing probe is not inserted correctly. If the <b>piercing probe temperature &lt;= ambient temperature + diS</b> during a program the probe insertion alarm (Efi) is signaled.	0.0 ÷ 99.0 °C 0 = disabled	5,0 °C

## 8.3.5

## Machine protection

“Machine protection” contains the safety parameters to manage the system. One can set the minimum interval between compressor activations and the maximum and minimum values of the ambient temperature setpoint.

The “Machine protection” menu can be accessed from the main Configuration page (“Parameters” Button). The display of this item can be set in the “Password” sub-menu => “Configure user level menu” and by selecting the “Machine protection” item (installer login required).

## Machine protection



PARAMETERS	MEANING	VALUES	DEFAULT
Lic	Minimum value that can be attributed to temperature setpoint	-45.0 ÷ LSc °C	-45.0°C
LSc	Maximum value that can be attributed to temperature setpoint	Lic ÷ +45.0 °C	+99.0°C
C1	Minimum time between shutdown and subsequent switch-on of compressor. It also stops the fans if they are not active for other functions.	0 ÷ 15 min	0
Bot	Maximum blackout duration during a program. If the duration is longer, the program is stopped.	0 ÷ 600 min 0 = disabled	0 min
CE1	Duration of compressor ON time in the case of faulty ambient probe (emergency mode). If CE1=0 the emergency mode in the presence of error E0 remains disabled, the compressor remains off and defrosting is prevented to conserve the remaining cold.	0 ÷ 240 min 0 = disabled	0 min
CE2	Duration of compressor OFF time in the case of faulty ambient probe (emergency mode).	5 ÷ 240 min	5 min
doC	Compressor safety time for door switch: when the door is opened the evaporator fans shut down and the compressor will continue working for time doC, after which it will shut down.	0 ÷ 5 min 0 = disabled	0 min
tdo	Compressor restart time after door opening. when the door is opened and after tdo time, it's setted back the normal functioning giving door open alarm (Ed). Delay time of cold room light alarm signalling and visualization. On switching on of the light with key and passed the Tdo time, the E9 alarm starts. If it has silenced and the light has not switched off on new Tdo time limit, the alarm starts again.	0 ÷ 240 min 0 = disabled	0 min
tuv	Timeout UV light.	0 ÷ 240 min 0 = UV disabled	0 min

## Alarm regulation

## 8.3.6

“Alarms adjustment” allows to set the minimum and maximum temperature and the delay between the alarms signal and display (disabled if automatic program running).

The “Alarms adjustment” menu can be accessed from the main Configuration page (“Parameters” Button).

The display of this item can be set in the “Password” sub-menu => “Configure user level menu” and by selecting the “Alarms adjustment” item (installer login required).

Alarm regulation



PARAMETERS	MEANING	VALUES	DEFAULT
A1	<b>Minimum temperature alarm (absolute, disabled with automatic program in progress).</b> Allows to define the minimum ambient temperature value. Below the value A1 the alarm status EtL will be signalled and an internal buzzer indicates the existence of the fault. The alarm is signalled after the time Ald.	$-45 \div (A2-1)$ °C	-45°C
A2	<b>Maximum temperature alarm (absolute, disabled with automatic program in progress).</b> Allows to define the maximum ambient temperature value. Above the value A2 the alarm status EtH will be signalled and an internal buzzer indicates the existence of the fault. The alarm is signalled after the time Ald.	$(A1+1) \div 45$ °C	+45°C
Ald	<b>Minimum or maximum temperature alarm signalling and display delay time.</b>	1 ÷ 240 min	120 min

Probes Calibration

8.3.7

The “Probes calibration” menu allows to correct the value measured by the room/piercing/evaporator temperature probes. The menu can be accessed from the main Configuration page (“Parameters” Button). The display of this item can be set in the “Password” sub-menu => “Configure user level menu” and by selecting the “Probes calibration” item (installer login required).

Probes calibration



PARAMETERS	MEANING	VALUES	DEFAULT
Cal	<b>Ambient probe calibration</b>	-10,0 ÷ +10,0 °C	0,0
CaE	<b>Evaporator probe calibration</b>	-10,0 ÷ +10,0 °C	0,0
CS1	<b>Calibrating the Piercing probe 1</b>	-10,0 ÷ +10,0 °C	0,0
CS2	<b>Calibrating the Piercing probe 2</b>	-10,0 ÷ +10,0 °C	0,0
CS3	<b>Calibrating the Piercing probe 3</b>	-10,0 ÷ +10,0 °C	0,0

Datalogger

8.3.8

The “Datalogger” menu allows the setting of the datalogger function. The menu can be accessed from the main Configuration page (“Parameters” Button). The display of this item can be set in the “Password” sub-menu => “Configure user level menu” and by selecting the “Datalogger” item (installer login required).

Datalogger



PARAMETERS	MEANING	VALUES	DEFAULT
int	<b>Time interval between one registration and the next one</b> (0 = datalogger disabled). To ensure one year data recording set int > 10 min.	0 ÷ 60 min	0 min
ASr	<b>Asynchronous registration.</b> In case of activation/deactivation of a temperature alarm a data recording is forced.	0 ÷ 1	0
Mem	<b>Deletes the history of the registered data</b> (1 = starts deleting).	0 ÷ 1	0

8.3.9

RS485 communication

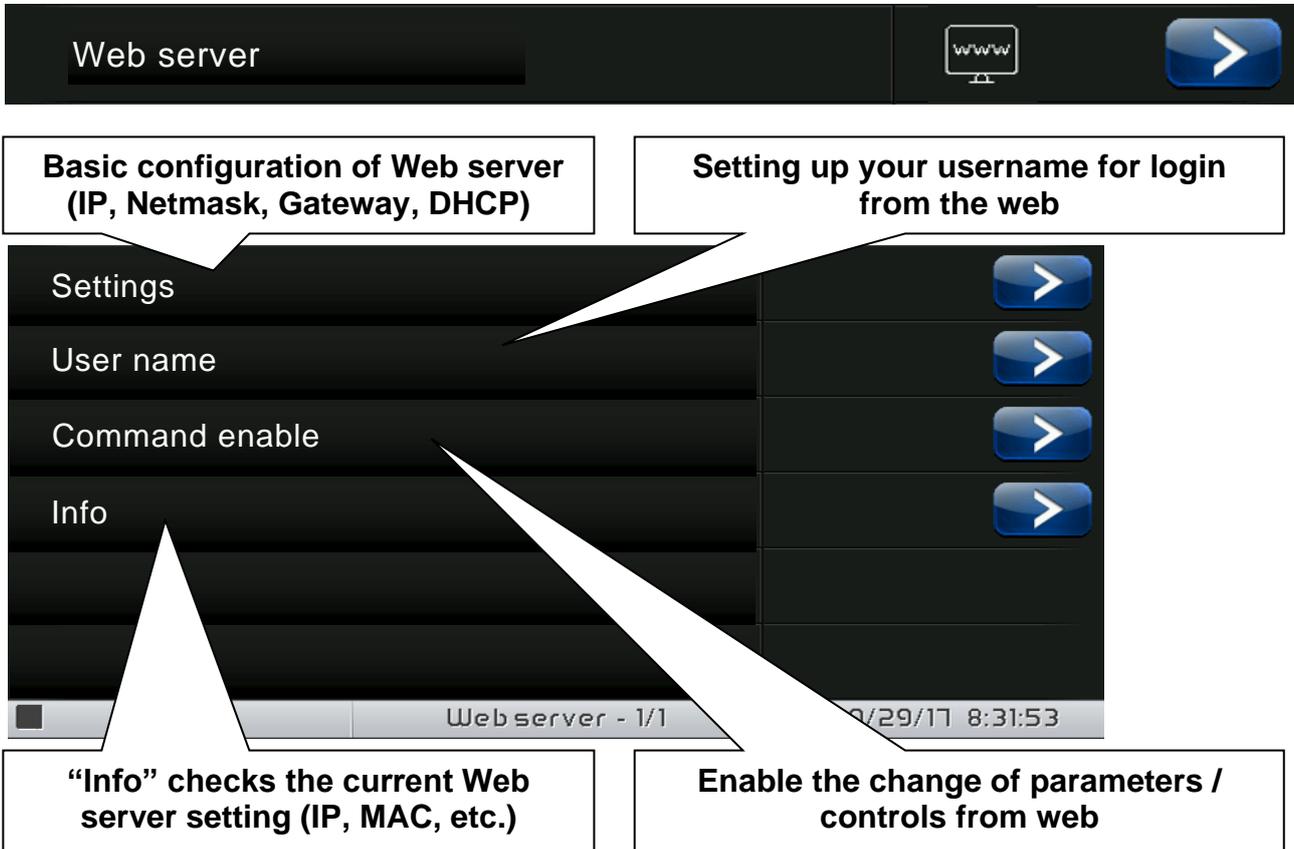
The "RS485 communication" menu allows to set the serial communication configuration. The menu can be accessed from the main Configuration page ("Parameters" Button). The display of this item can be set in the "Password" sub-menu => "Configure user level menu" and by selecting the "RS485 communication" item (installer login required). In the event of **Ser=0** (Telenet), the Vision Touch responds as a "PLUS 100 AB Instrument" or as TWMT instrument (**room temperature probe measurement**) to address Ad.

RS485 communication



PARAMETERS	MEANING	VALUES	DEFAULT
Ad	<b>Network address</b> for connection to TeleNET or Modbus supervision system.	0 ÷ 31 (Ser=0) 1 ÷ 247 (Ser=1)	0
Ser	<b>RS-485 communication protocol</b> 0 = TeleNET protocol 1 = Modbus-RTU protocol	0 ÷ 1	0
Bdr	<b>Modbus baudrate</b> 0 = 300 baud                      5 = 9600 baud 1 = 600 baud                      6 = 14400 baud 2 = 1200 baud                     7 = 19200 baud 3 = 2400 baud                     8 = 38400 baud 4 = 4800 baud	0 ÷ 10	5
Prt	<b>Modbus parity control configuration</b> 0 = none parity 1 = even parity 2 = odd parity	0 ÷ 2	0
tRM	<b>Termination resistance (120 ohm)</b> 0 = disabled	0 ÷ 1	0

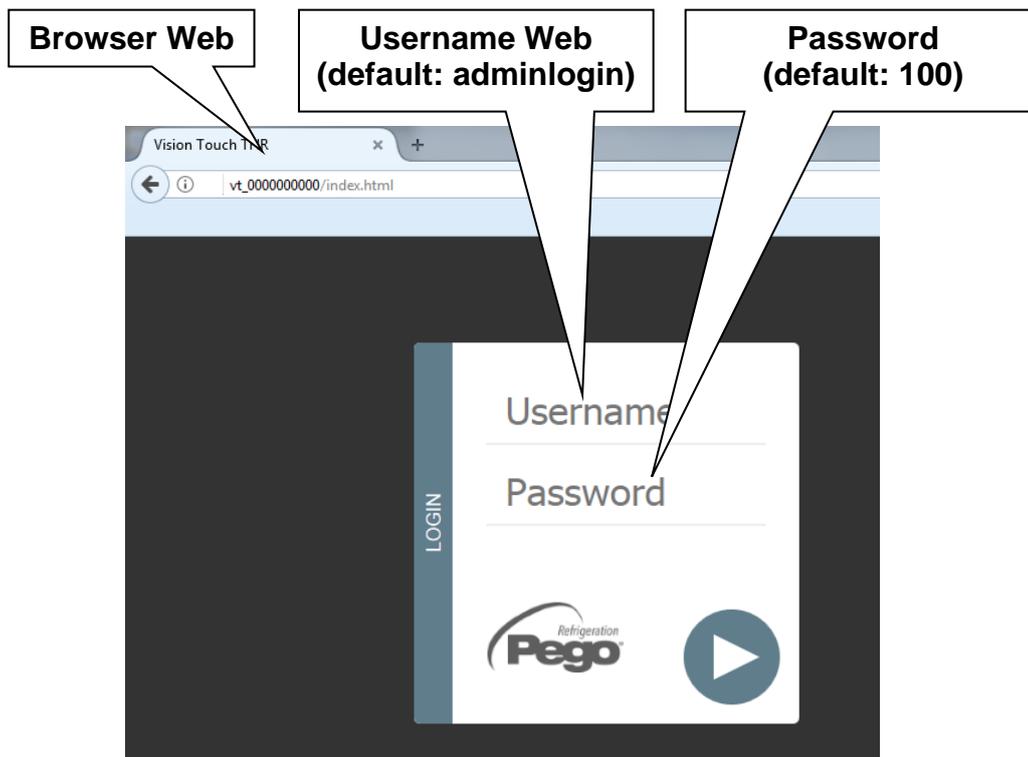
The "Web server" menu allows setting the Web server configuration. This menu is accessible from the Main Configuration page ("Parameters" Button). The visibility of this item can be set in the submenu "Password" => "Configure user level menu" and by selecting the "Web server" item (installer login required).





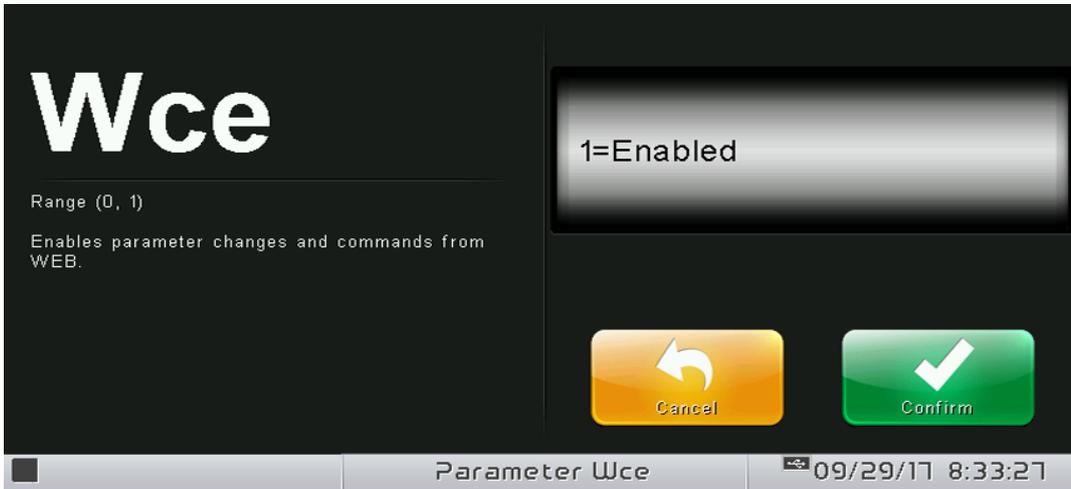
- “User name” page

The page “User name” allows configuring the Username to be used during login on the Vision touch Web page (the password coincides with the Vision Touch Installer password).



- Command enable page

The Wce parameter allows enabling or disabling commands and edits parameters from the Web page, regardless of the type of user (user or admin) that accesses the Web page.



- Info page

The "Info Page" allows checking the current Web configuration of the Vision Touch AB.



DHCP: DHCP assignment status.

Host: name used in the web browser address bar (linked to the serial number).

IP / Netmask / Gateway: current configuration (set either locally or by DHCP).

MAC: unique physical address associated with Vision Touch.

User name: Web user name.

The "Mail" menu allows setting the alarm mail configuration. The menu can be accessed from the main Configuration page ("Parameters" Button). The display of this item can be set in the "Password" sub-menu => "Configure user level menu" and by selecting the "Mail" item (installer login required).



PARAMETERS	MEANING	VALUES	DEFAULT
<b>Enable</b>	Enable sending of mails in case of alarm. If configured as "Test Mail" it sends a test mail to all recipients.	0 = Disabled 1 = Enabled 2 = Test mail	0
<b>Sender</b>	Sender e-mail configuration (e.g. xxxxx@yyy.zz). Maximum length: 32 characters.	Text	
<b>Password</b>	Sender e-mail password configuration	Text	
<b>SSL</b>	Enable secure communication with the mail server	0 = Disabled 1 = Enabled	1
<b>Port</b>	Mail port number (e.g. port 465 for SSL connection, port 25 for non-SSL connection.)	0 ... 999	465
<b>Server mail</b>	Outgoing mail server (e.g. smtp.xxx.zz)	Text	
<b>Subject mail</b>	Subject of mails (e.g. Cold room 1)	Text	
<b>Receiver 1</b> <b>Receiver 2</b> <b>Receiver 3</b>	E-mail receivers (xxxxx@yyy.zz). Maximum length: 32 characters. The alarm e-mail will be sent to all receivers.	Text	

The Vision Touch sends an e-mail when an alarm occurs and when the alarm returns. The email contains the following information:

- Alarm code and description
- date and time when the alarm started
- duration of the alarm (in case of alarm end email).

8.3.12

Language

The “Language” menu allows to change the control unit language. The menu can be accessed from the main Configuration page (“Parameters” Button). The display of this item can be set in the “Password” sub-menu => “Configure user level menu” and by selecting the “Language” item (installer login required).



8.3.13

Date and time

The “Date and time” menu allows to change the clock settings. **It’s not possible to access this page while a program is running.** The “Date and time” menu can be accessed from the main Configuration page (“Parameters” Button). The display of this item can be set in the “Password” sub-menu => “Configure user level menu” and by selecting the “Date and time” item (installer login required).



**Date/time setup**

Time settings (hour : minute)

Date settings

Confirm date and time settings

Automatic date and time synchronization via the web (ethernet connection is required)

AUTO  
Last update:  
07/05/2018 15:34:30

salami medium      Date and time      12/11/12      8:29:21

If automatic synchronization via the Web is active, the control connects to an external service that automatically determines the correct time zone and sets the date and time considering any summer / winter time. The status of the last synchronization attempt (referred to as "Last update") can be:

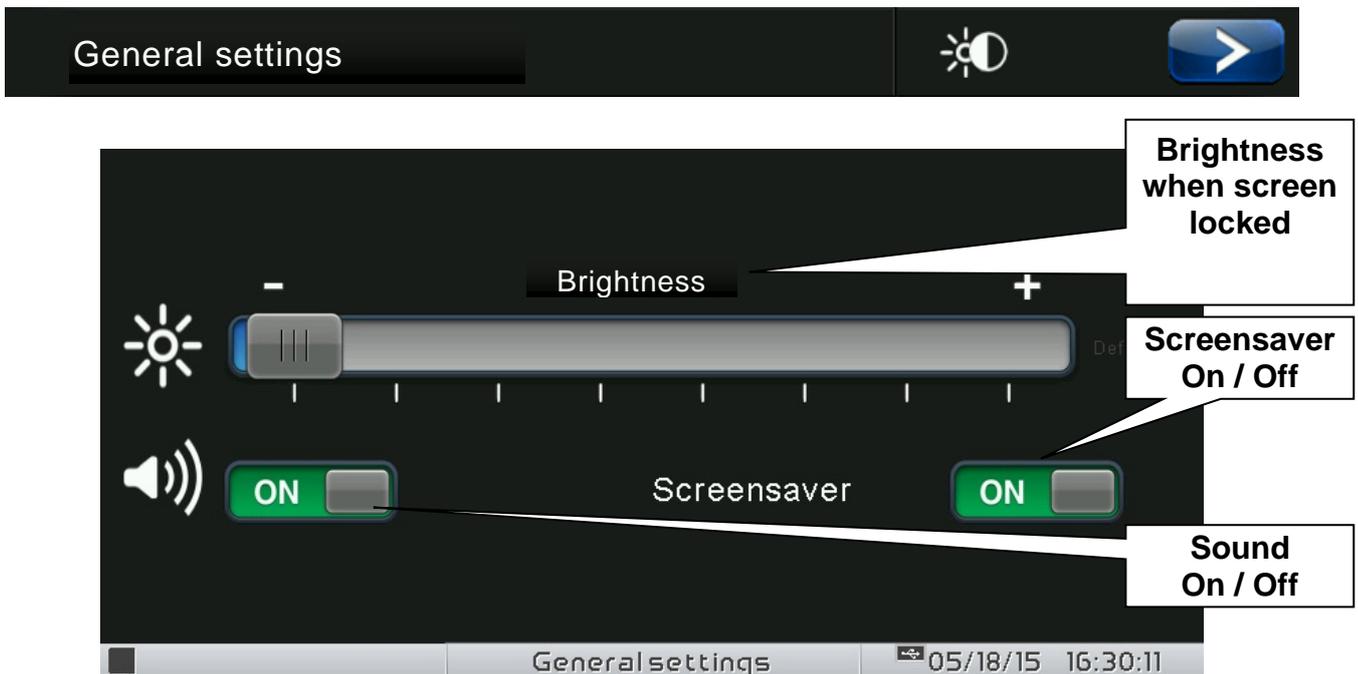
- **None**: no attempt to synchronize (for example at first power up);
- **Error**: the last synchronization attempt was not successful and therefore the control keeps the date and time settings previously set;
- **dd/mm/yyyy hh:mm:ss**: date and time of the last synchronization correctly performed.

## General settings

8.3.14

The "General settings" menu allows to change the screen brightness when the screen is locked, the activation of the sound alarms and the activation of the screensaver. "General settings" can be accessed from the main Configuration page ("Parameters" Button). The display of this item can be set in the "Password" sub-menu => "Configure user level menu" and by selecting the "General settings" item (installer login required).

We recommend setting the brightness to the minimum to maximize the display's lifetime.



The "Software" menu allows to perform maintenance on the device software. The menu can be accessed from the main Configuration page ("Parameters" Button). The display of this item can be set in the "Password" sub-menu => "Configure user level menu" and by selecting the "Software" item (installer login required).

The screenshot shows the "Software" menu with the following options: Software update, Reload factory values, Clone machine configuration, and Repair EEPROM. Each option has a right-pointing arrow button. A callout box points to the "Reload factory values" option with the text: "Restore all default settings. The execution of the program in progress is interrupted but the stored programs are not deleted." Another callout box points to the "Repair EEPROM" option with the text: "Repairing errors in the internal memory of the control unit". A third callout box points to the "Clone machine configuration" option with the text: "Exporting/importing the parameters configuration from USB / SD". The status bar at the bottom of the screen shows "Software - 1/1", "12/11/12", and "8:31:31".

**Software update causes the loss of data registered by the datalogger. It is advised to export the data history before proceeding with the update.**

#### Software updating procedure:

- Copy the update file "VT\_AB\_#\_#\_#\_#.pego" (the symbols # represent the progress of the version) to an empty USB pen drive. Only the update file must be present in the pen drive.
- Insert the USB pen drive in the USB1 port of the controller (the symbol  of USB inserted and acknowledged appears on the status bar).
- press the "Update software" button.
- The device proceeds to update autonomously, performing the following steps (the operation requires a few minutes): it exports the programs and configurations (if applicable) > it deletes the internal memory and installs new software > it restores the programs and configurations (if applicable) > it restarts the VISION TOUCH AB.

**ATTENTION:** during the entire installation phase the controller **must be kept powered and the USB key must be left inserted**. Failure to comply with this requirement could entail PEGO S.r.l. having to restore the software.

The update finishes as soon as the controller goes back to the "Preservation" screen; at this point you can remove the USB key and resume normal use.

The new Software version can be checked in the "Parameters" > "Info" menu under "Application Version".

## Info

8.3.16

The "Info" menu contains information relating to the software version installed and other information about the device. The menu can be accessed from the main Configuration page ("Parameters" Button).



## Password

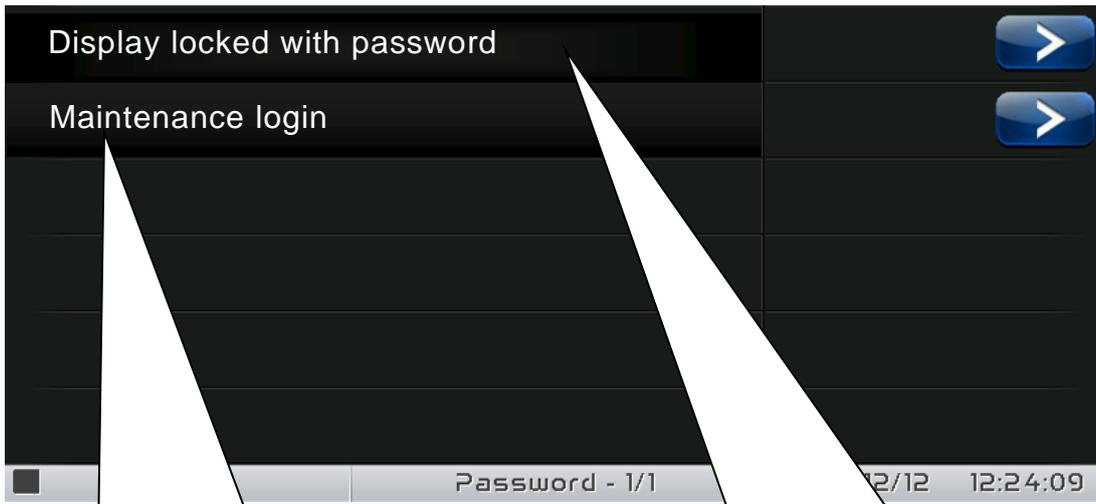
8.3.17

The "Password" menu allows to manage the device protection level, giving the user permission to access only certain functions and parameters. The menu can be accessed from the main Configuration page ("Parameters" Button).



The "Password" menu has a different appearance for the user and for the installer: the installer can select which items of the parameters menu are displayed to the user and which actions can be performed by the latter.

- User Password Page



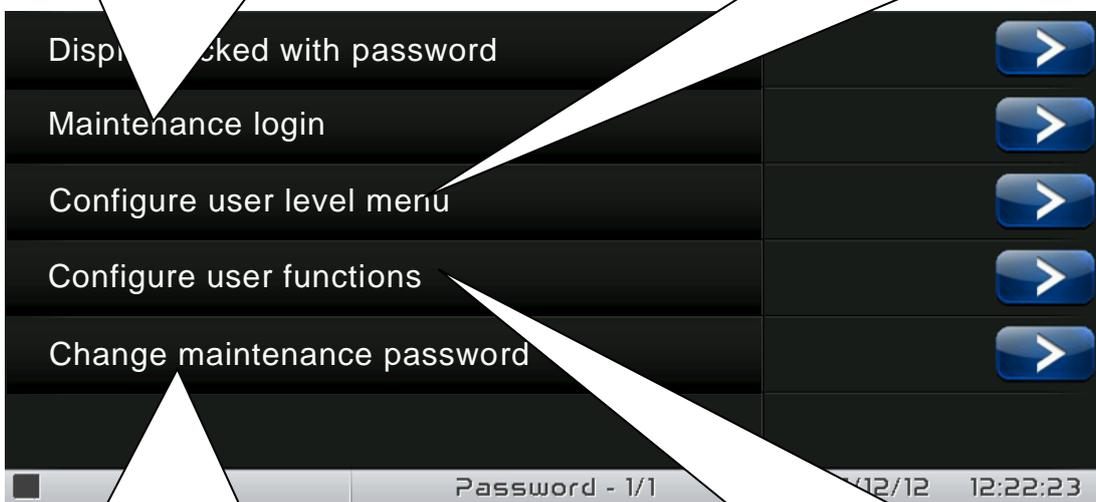
**Password entry to access the installer level**  
(Default password: 0100)

**User screen lock password setting**

- Installer Password Page

**Exit from installer mode**

**Selection of configuration menu elements visible by the user**



**Installer password setting**

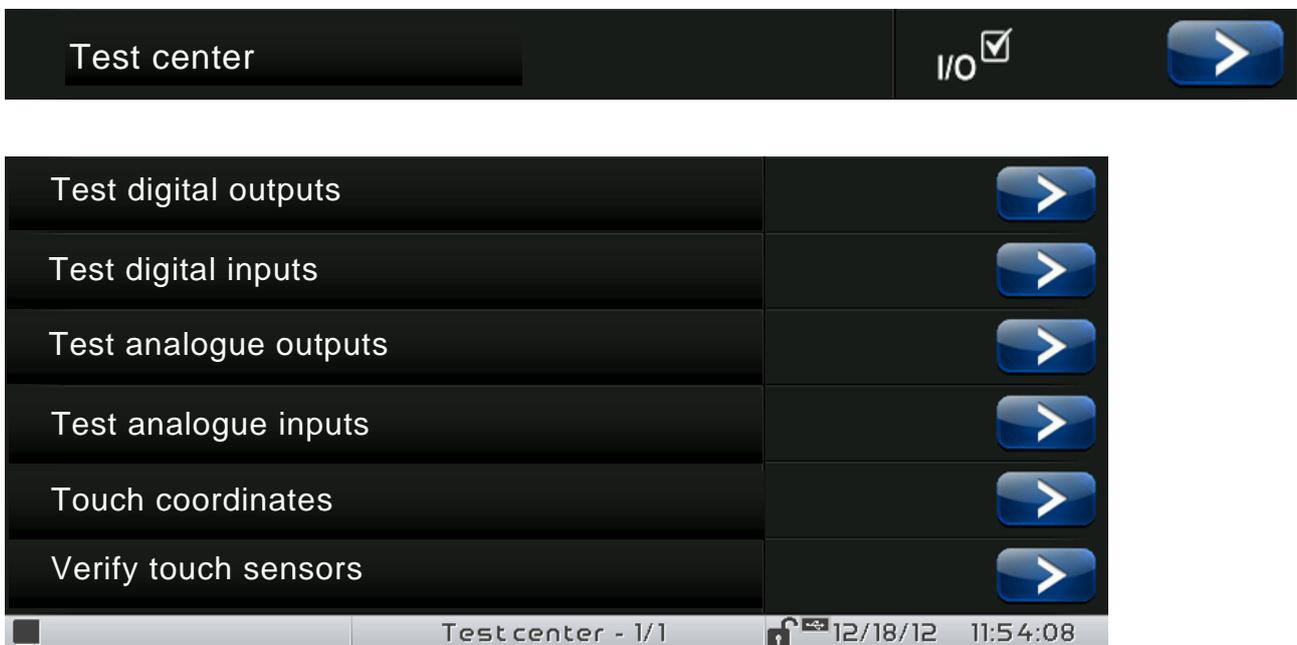
**Selection of actions that can be performed by the user**

- Setpoint edit
- Programs edit
- Programs manager
- Defrost function (from key)
- Alarm acquisition

The “Test center” allows to verify the proper operation of the inputs/outputs of the 100N Master3 connected to the VISION TOUCH AB. One can also verify the operation of the touchscreen sensors.

**The “Test centre” function is reserved to expert users. Pego S.r.l. disclaims any liability for damage to the system due to improper use of this function.**

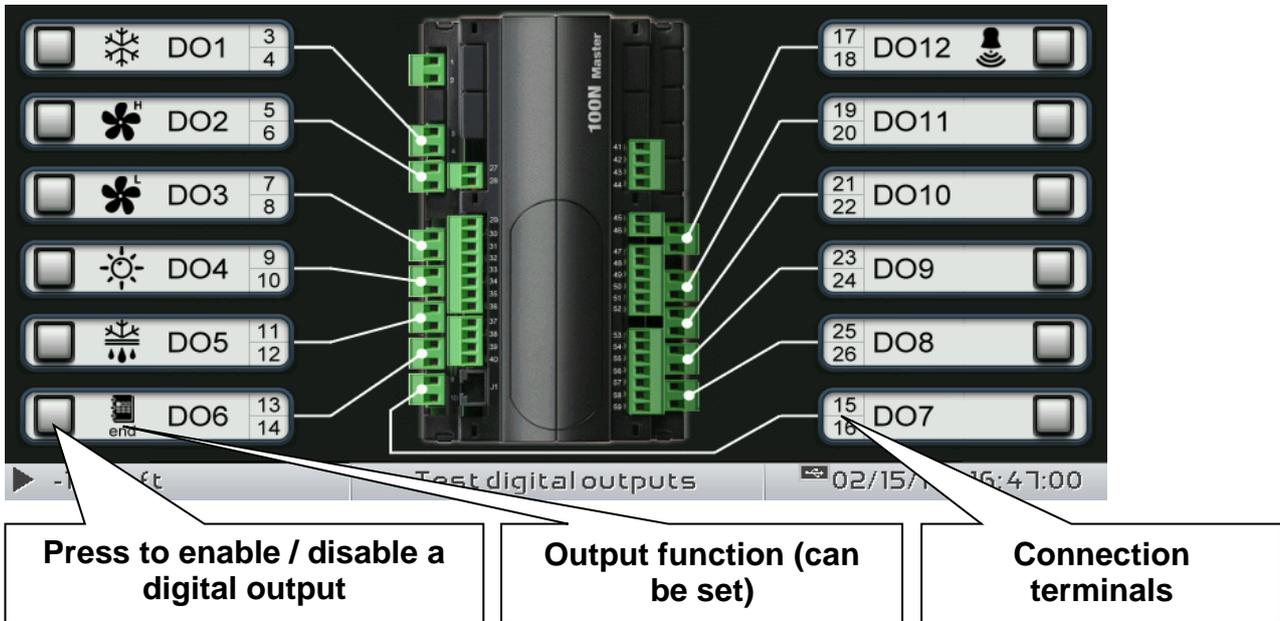
The “Test centre” menu can be accessed from the main Configuration page (“Parameters” Button). The display of this item can be set in the “Password” sub-menu => “Configure user level menu” and by selecting the “Test centre” item (installer login required).



- Digital outputs test

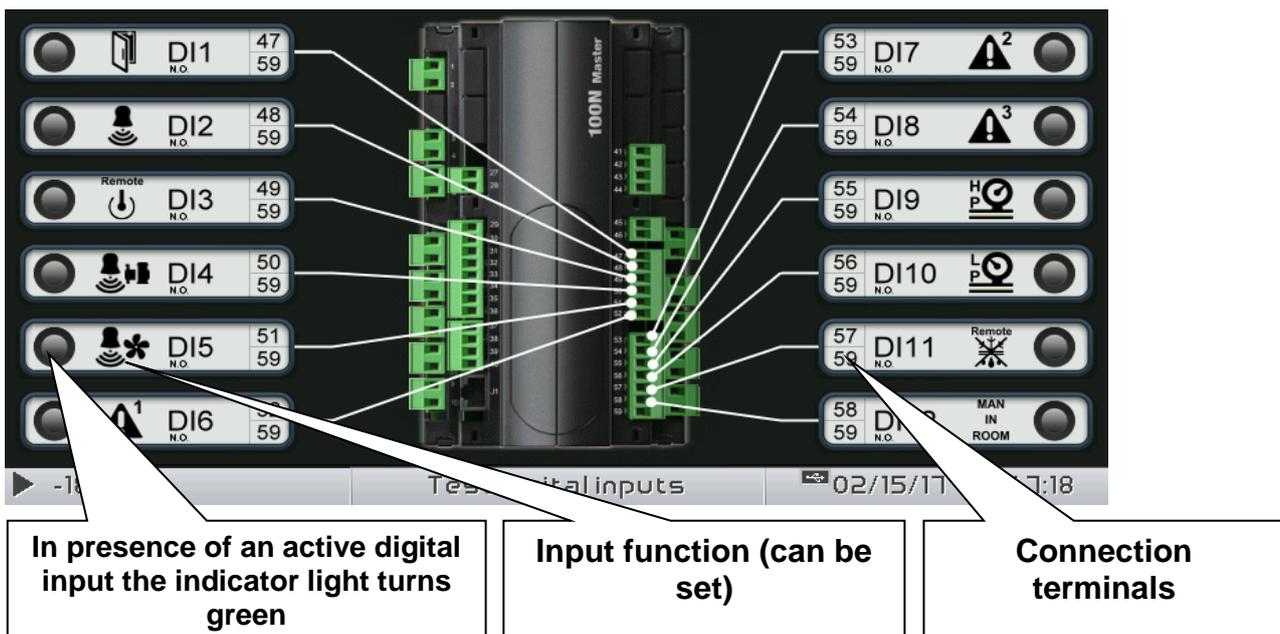
The “Digital outputs test” allows to manually force the digital outputs of the connected 100N Master3. Access to this menu put the control unit in “Stand by”: the time progress of an ongoing program is not altered but all output functions are disabled.

The function associated to each digital output can be set in “Parameters” => “Configure I/O” => “Digital outputs”.



- Digital inputs test

The “Digital inputs test” allows to verify the correct acquisition of the digital inputs of the connected 100N Master3. The function associated to each digital input can be set in “Parameters” => “Configure I/O” => “Digital inputs”.



- Analogue outputs test

The “Analogue outputs test” allows to manually force the analogue outputs of the connected 100N Master3, by setting the values manually between 0 and 10V. Access to this menu put the control unit in “Stand by”: the time progress of an ongoing program is not altered but all output functions are disabled.

The function associated to each digital output can be set in “Parameters” => “Configure I/O” => “Analogue outputs”.

The screenshot shows the 'Test analogue outputs' menu with three channels:

- AO1:** Fan speed regulation. Reference terminals: 41 (Ref.), 44 (Gnd).
- AO2:** Reference terminals: 42 (Ref.), 44 (Gnd).
- AO3:** Reference terminals: 43 (Ref.), 44 (Gnd).

Each channel has a '+' button to increase and a '-' button to decrease the value, with '0V' displayed in the center. Callouts identify the physical connection terminals on the left, the output description, and the control buttons.

- Analogue inputs test

The “Analogue inputs test” allows to verify the correct acquisition of the analogue inputs (probes) of the connected 100N Master3. The function associated to each digital output can be set in “Parameters” => “Configure I/O” => “Analogue inputs”.

The screenshot shows the 'Test analogue inputs' menu with five channels:

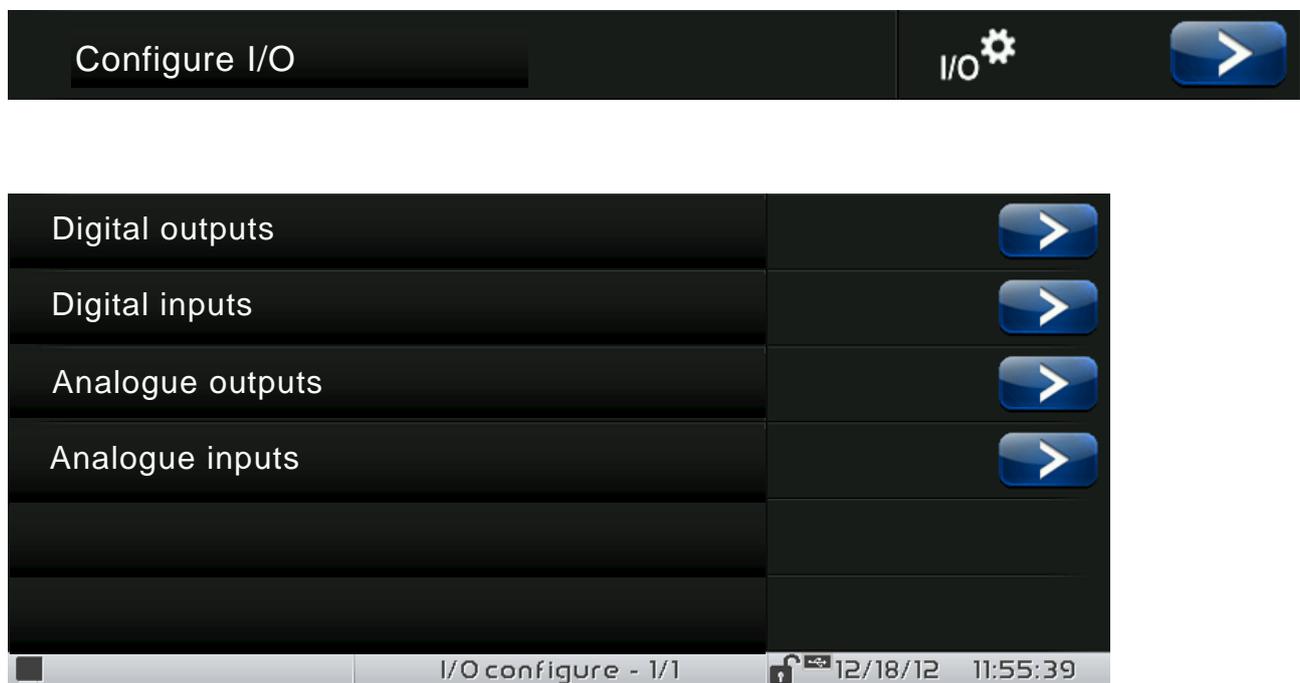
- AI1:** Value: -18.5 °C. Description: Ambient temperature probe. Reference terminals: 27, 28.
- AI2:** Value: -20.3 °C. Description: Evaporator temperature probe. Reference terminals: 29, 30.
- AI3:** Value: 2.6 °C. Description: Piercing probe. Reference terminals: 31, 32.
- AI4:** Reference terminals: 33, 34.
- AI5:** Reference terminals: 35.

Callouts identify the acquired value, the input description, the input name and probe type, and the connection terminals on the right.

“Configure I/O” allows to set the function associated to each input/output of the connected 100N Master3.

**The “Configure I/O” function is reserved to expert users. Pego S.r.l. disclaims any liability for damage to the system due to improper use of this function.**

The “Configure I/O” menu can be accessed from the main Configuration page (“Parameters” Button). The display of this item can be set in the “Password” sub-menu => “Configure user level menu” and by selecting the “Configure I/O” item (installer login required).



- Digital outputs

“Digital outputs” allows to change the function associated to each digital output of the connected 100N Master3. The modification of an output puts the control unit in “Stand by”. In the event a function is not associated to at least one output, the eventual call from the control unit will not activate any digital output (only the status icon will be activated to indicate a call).

**Digital output identification**

**Connection terminals**

**Modification of the function associated to the digital output**

**Associated function icon**

- Digital inputs

“Digital inputs” allows to modify the function associated to each digital input of the connected 100N Master3. The modification of an input puts the control unit in “Stand by”.

**Digital input identification**

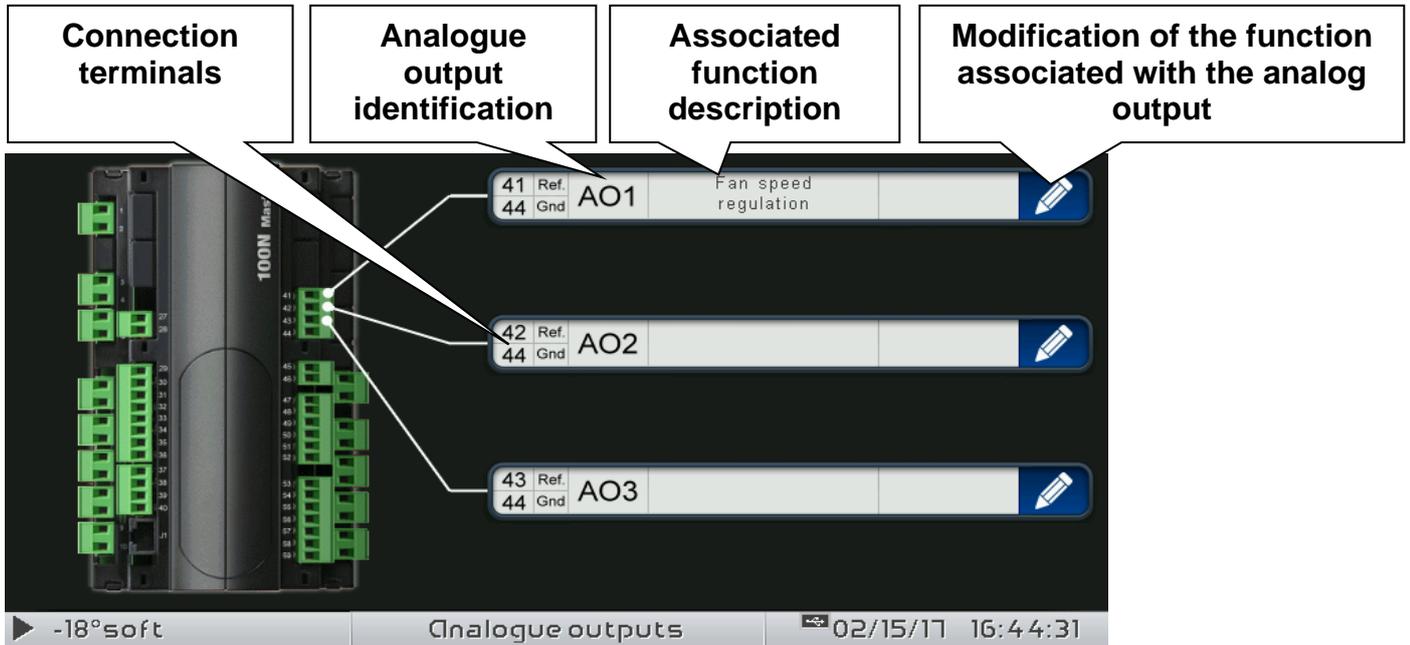
**Connection terminals**

**Modification of the function associated to the digital input**

**Associated function icon**

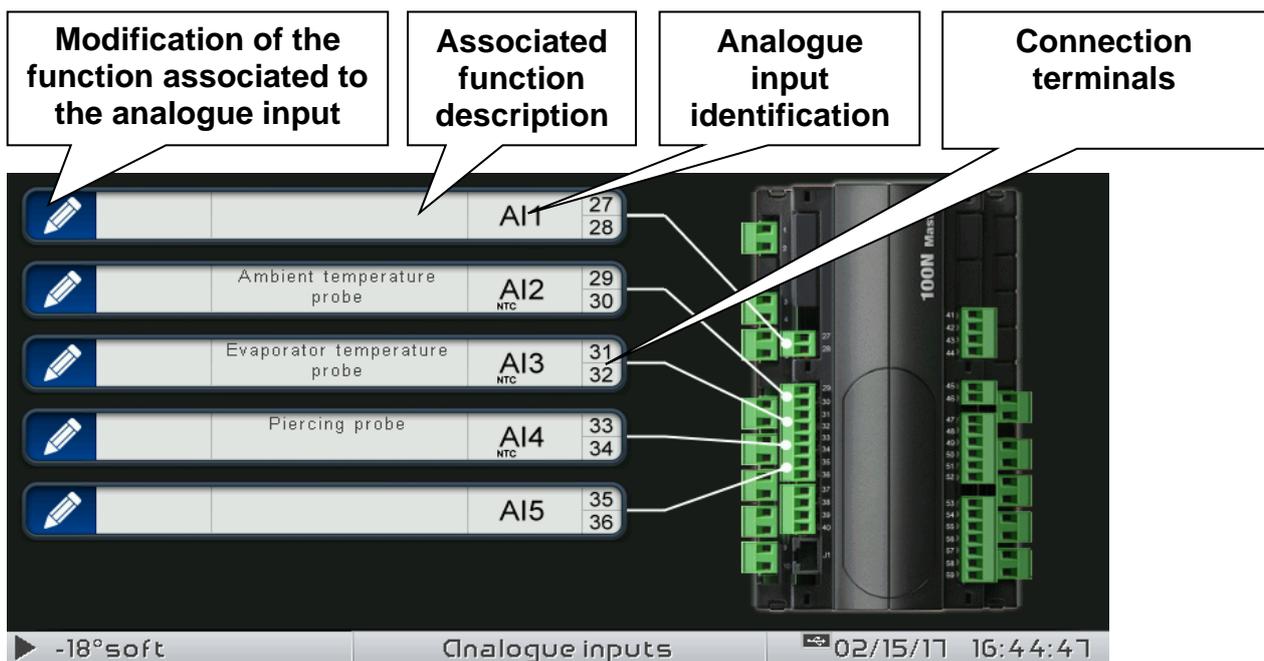
- Analogue outputs

“Analogue outputs” allows to change the function associated to each analogue output of the connected 100N Master3. The modification of an output puts the control unit in “Stand by”. In the event a function is not associated to at least one output, the eventual call from the control unit will not activate any analogue output (only the status icon will be activated to indicate a call).



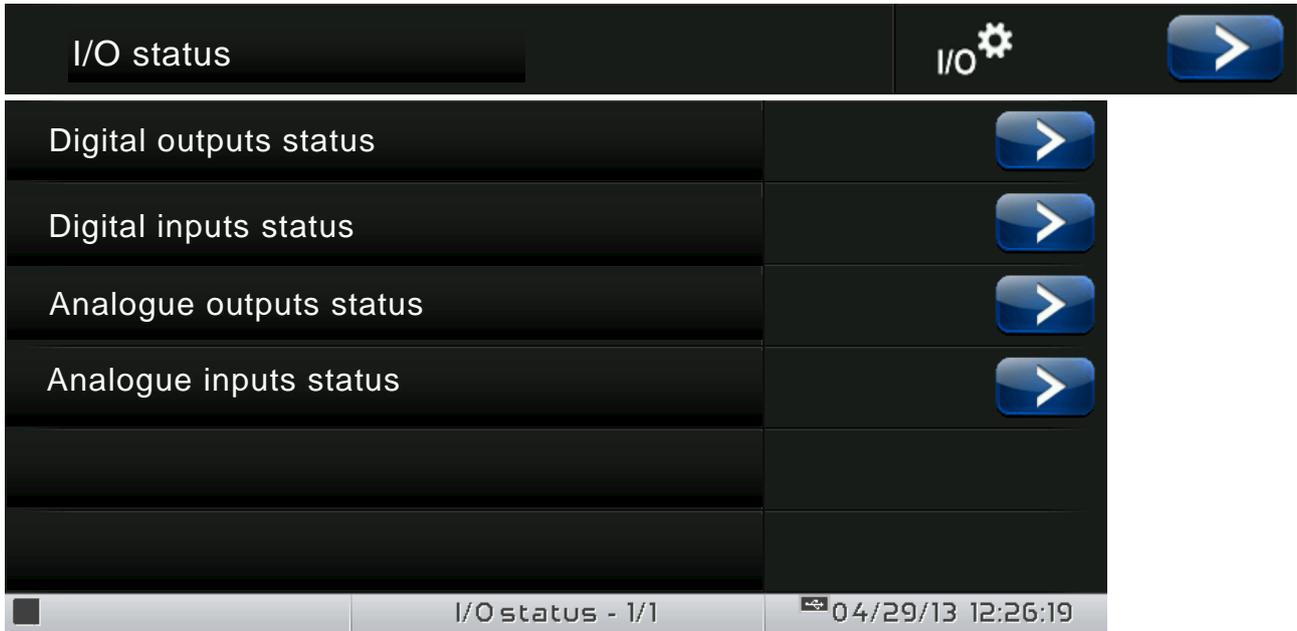
- Analogue inputs

“Analogue inputs” allows to modify the function associated to each analogue input of the connected 100N Master3. The modification of an input puts the control unit in “Stand by”. In the event of an incorrect association between a probe and a function, the alarm is signalled (Ec1 ÷ Ec8).

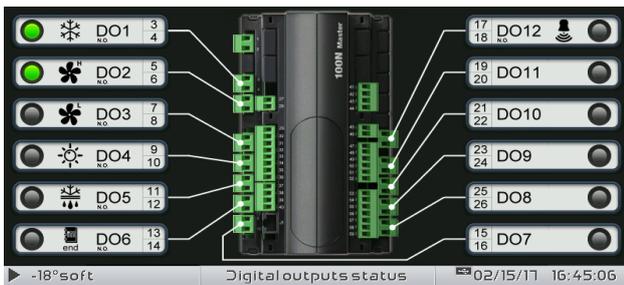


“I/O Status” allows the status of each input/output of the connected 100N MASTER3 to be displayed.

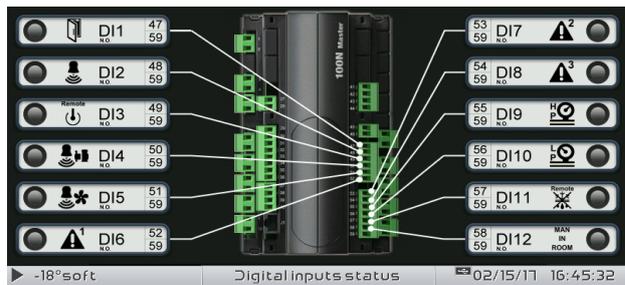
The “I/O Status” menu can be accessed from the main Configuration page (“Parameters” Button). The display of this item can be set in the “Password” sub-menu => “Configure user level menu” and by selecting the “I/O Status” item (installer login required).



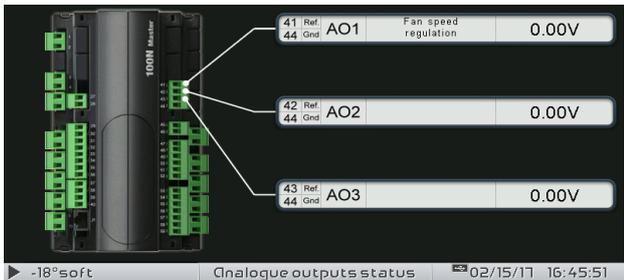
**DIGITAL OUTPUTS**



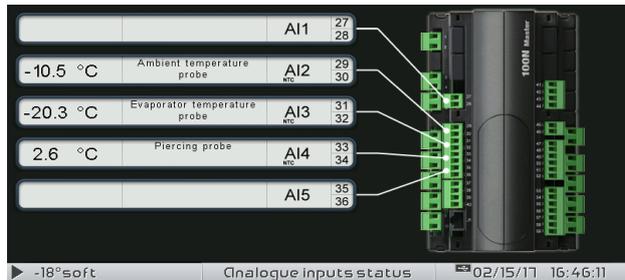
**DIGITAL INPUTS**



**ANALOGUE OUTPUTS**



**ANALOGUE INPUTS**



## CHAPTER 9: DIAGNOSTICS

### 9.1

### DIAGNOSTICS

The **VISION TOUCH AB** controller in case of any anomalies warns the operator through the alarm codes shown on the display (via popup or on the 'Alarms' page) and an acoustic signal emitted by a buzzer inside the Operations Console (if enabled). If an alarm condition occurs, one of the following messages will appear on the display:

ALARM CODE	POSSIBLE CAUSE	SOLUTION
E0	EEPROM Vision Touch alarm	<ul style="list-style-type: none"> <li>• Switch the appliance off and back on.</li> <li>• Select 'Repair EEPROM' in the 'Software' menu.</li> <li>• If the problem persists, contact the technical assistance service.</li> </ul>
E0m	EEPROM 100N MASTER alarm	<ul style="list-style-type: none"> <li>• Switch the appliance off and back on.</li> <li>• If the problem persists, contact the technical assistance service.</li> </ul>
E1	Probe connected to channel 1 functional fault	<ul style="list-style-type: none"> <li>• Check the probe status.</li> <li>• If the problem persists, replace the probe.</li> </ul>
E2	Probe connected to channel 2 functional fault	<ul style="list-style-type: none"> <li>• Check the probe status.</li> <li>• If the problem persists, replace the probe.</li> </ul>
E3	Probe connected to channel 3 functional fault	<ul style="list-style-type: none"> <li>• Check the probe status.</li> <li>• If the problem persists, replace the probe.</li> </ul>
E4	Probe connected to channel 4 functional fault	<ul style="list-style-type: none"> <li>• Check the probe status.</li> <li>• If the problem persists, replace the probe.</li> </ul>
E5	Probe connected to channel 5 functional fault	<ul style="list-style-type: none"> <li>• Check the probe status.</li> <li>• If the problem persists, replace the probe.</li> </ul>
Eg	<b>General alarm</b> (e.g. Thermal protection or max pressure switch) (The outputs are all disabled apart from the alarm output, if present)	<ul style="list-style-type: none"> <li>• Check compressor absorption.</li> <li>• If the problem persists, contact the technical assistance service.</li> </ul>
Ec	<b>Compressor protection alarm</b> The compressor output is disabled.	<ul style="list-style-type: none"> <li>• Check compressor absorption.</li> <li>• If the problem persists, contact the technical assistance service.</li> </ul>
EF	<b>Fans protection</b> The fans output is disabled.	<ul style="list-style-type: none"> <li>• Check the fans status.</li> <li>• If the problem persists, contact the technical assistance service.</li> </ul>
E8	<b>Person in cold room alarm</b> The outputs are all disabled apart from the alarm output, if present and light.	<ul style="list-style-type: none"> <li>• Reset the push button inside the cold room</li> </ul>
En	<b>No connection between Console and MASTER board.</b>	<ul style="list-style-type: none"> <li>• Check the connection between the two units.</li> <li>• If the problem persists, contact the technical assistance service.</li> </ul>

ALARM CODE	POSSIBLE CAUSE	SOLUTION
EnI	<b>MASTER board initialisation error.</b>	<ul style="list-style-type: none"> <li>• Check the connection between the two units.</li> <li>• Switch the Vision Touch off and on again.</li> <li>• If the problem persists, contact the technical assistance service.</li> </ul>
EtH	<b>Maximum temperature alarm.</b> The environment has reached a temperature level higher than that set for the maximum temperature alarm (See parameters A2, 'Alarms regulation' menu). Inhibited during the execution of a program.	<ul style="list-style-type: none"> <li>• Check the compressor status.</li> <li>• The probe does not detect the temperature correctly or the compressor on/off control does not work.</li> </ul>
EtL	<b>Minimum temperature alarm.</b> The environment has reached a temperature level lower than that set for the minimum temperature alarm (See parameters A1, 'Alarms regulation' menu). Inhibited during the execution of a program.	<ul style="list-style-type: none"> <li>• Check the compressor status.</li> <li>• The probe does not detect the temperature correctly or the compressor on/off control does not work.</li> </ul>
Efo	<b>Piercing probe temperature out of range</b> (timeout drS)	<ul style="list-style-type: none"> <li>• Check the probe status.</li> <li>• If the problem persists, replace the probe.</li> </ul>
Efp	<b>Piercing probe disconnected</b>	<ul style="list-style-type: none"> <li>• Check the probe status.</li> <li>• If the problem persists, replace the probe.</li> </ul>
Efi	<b>Piercing probe inserted test failed</b>	<ul style="list-style-type: none"> <li>• Check the probe status and its correct insertion into the product.</li> <li>• If the problem persists, replace the probe.</li> </ul>
Ec1	<b>Room temperature probe configuration error.</b>	<ul style="list-style-type: none"> <li>• Check the configuration of the analogue inputs</li> </ul>
Ec2	<b>Evaporator temperature probe configuration error.</b>	<ul style="list-style-type: none"> <li>• Check the configuration of the analogue inputs</li> <li>• Check enabling of the evaporator probe</li> </ul>
Ec3	<b>Piercing probe configuration error.</b>	<ul style="list-style-type: none"> <li>• Check the configuration of the analogue inputs</li> <li>• Check enabling of the piercing probe</li> </ul>
EPH	<b>High pressure general alarm</b> The compressor output is disabled.	<ul style="list-style-type: none"> <li>• Check the refrigerant circuit</li> <li>• If the problem persists, contact the technical assistance service</li> </ul>
EPL	<b>Low pressure general alarm</b> The compressor output is disabled.	<ul style="list-style-type: none"> <li>• Check the refrigerant circuit</li> <li>• If the problem persists, contact the technical assistance service</li> </ul>
Ag1	<b>General alarm 1 from digital input</b>	<ul style="list-style-type: none"> <li>• Verify the digital input configured as 'Generic warning 1'</li> </ul>
Ag2	<b>General alarm 2 from digital input</b>	<ul style="list-style-type: none"> <li>• Verify the digital input configured as 'Generic warning 2'</li> </ul>
Ag3	<b>General alarm 3 from digital input</b>	<ul style="list-style-type: none"> <li>• Verify the digital input configured as 'Generic warning 3'</li> </ul>
EFm	<b>Error saving / reading programs</b>	<ul style="list-style-type: none"> <li>• If the problem persists, contact the technical assistance service.</li> </ul>

ALARM CODE	POSSIBLE CAUSE	SOLUTION
<b>EFd</b>	<b>Read / Write Error on Data logger Memory.</b> The alarm stops the Data logger recording and sets the parameter int = 0.	<ul style="list-style-type: none"> <li>• Delete the memory of the Data logger by setting the parameter <b>Mem</b> = 1.</li> <li>• Turn off and on again the Vision Touch.</li> <li>• When the alarm is called off, reset the Data logger records by resetting the <b>int</b> parameter to the desired value.</li> <li>• If the problem persists, contact the technical assistance service.</li> </ul>
<b>Edi</b>	<b>Digital input configuration error during an import or update configuration.</b>	<ul style="list-style-type: none"> <li>• Check the configuration of the digital input</li> <li>• Reconfigure the input disabled</li> </ul>
<b>Edo</b>	<b>Digital output configuration error during an import or update configuration.</b>	<ul style="list-style-type: none"> <li>• Check the configuration of the digital output</li> <li>• Reconfigure the output disabled</li> </ul>
<b>Eai</b>	<b>Analogue input configuration error during an import or update configuration.</b>	<ul style="list-style-type: none"> <li>• Check the configuration of the analogue input</li> <li>• Reconfigure the input disabled</li> </ul>
<b>Eao</b>	<b>Analogue output configuration error during an import or update configuration.</b>	<ul style="list-style-type: none"> <li>• Check the configuration of the analogue output</li> <li>• Reconfigure the output disabled</li> </ul>

By pressing the “Alarms” button one accesses the relative management page that contains the log relating to the last 30 alarms detected. The alarms can take on different colours:

- RED ALARM: indicates an alarm in progress, not solved.
- ORANGE ALARM: when a red alarm is cleared because the cause is solved, it turns orange and becomes an alarm to be acquired. If all alarms are cleared the “Alarm” button turns orange.
- SOLVED ALARM: the acquired alarm loses all color and remains memorized in the alarm management.

The screenshot shows a list of alarms with the following details:

Alarm Code	Description	Begin Time	Period	Status
E1	Sensor 1 fault Ambient relative humidity probe	11-12-2012 08:57:35	1 min. 52 sec.	Red Alarm (in progress)
EtH	Maximum temperature alarm	11-12-2012 08:55:23	1 min. 52 sec.	Orange Alarm (cleared)
E2	Sensor 2 fault Ambient temperature probe	11-12-2012 08:51:25	1 min. 55 sec.	Orange Alarm (cleared)
E3	Sensor 3 fault Evaporator temperature probe	11-12-2012 08:50:45	2 min. 35 sec.	Orange Alarm (cleared)
E1	Sensor 1 fault Ambient relative humidity probe	11-12-2012 08:48:34	1 min. 35 sec.	Solved Alarm
---	Device power on	11-12-2012 08:48:11		Solved Alarm

Callouts from the image:

- RED ALARM**: Solve the cause.
- ORANGE ALARM**: Alarm cleared. Press the alarm to acquire it.
- ALARM SOLVED**: Alarm cleared and acquired by the user.

The screenshot shows the same alarm list with callouts explaining the columns:

- Alarm code (see Diagnostics)**: Points to the 'E1', 'EtH', 'E2', 'E3', 'E1' codes.
- Alarm description**: Points to the text descriptions of the alarms.
- Alarm situation duration**: Points to the 'Period' column.
- Alarm status (in progress-cleared-solved)**: Points to the status icons (envelope, checkmark).

Additional callouts:

- E-MAIL SENT**: If emails are enabled, it indicates the attempt to send an email related to the alarm. (Points to the envelope icon).
- Alarms list deletion**: (button present only if all alarms have been solved) (Points to the trash can icon in the bottom bar).
- Date and time of start of the alarm situation**: (Points to the 'Begin' time column).

Pop-ups are elements that appear on the screen in order to draw the user's attention to particular situations that may occur during normal use of the VISION TOUCH AB control.



**RED POP-UP**

It may indicate:  
 - activated alarm warning  
 - the action that one is about to perform is critical and irreversible. Pay particular care when confirming the operation.



**YELLOW POP-UP**

The operation one is about to perform is critical. A confirmation is required.



**GREEN POP-UP**

Device warnings. It may indicate the completion of a program in progress.



**BLUE POP-UP**

Device start-up  
 (date and time are stored in alarms management)

# CHAPTER 10: DATALOGGER

## DATALOGGER

10.1

Datalogger function activates by setting the value of parameter "int" ("Datalogger" menu) greater than 0; if registrations are active, the symbol  appears on the status bar.



### DATA EXPORT IN CSV FORMAT:

(Included in Extended Button bar)

Exports registered data in a CSV file on USB or SD support.

CSV file sample:

	A	B	C	D	E	F	G	H	I	J	K	L
1	ADDRESS	DATE	TIME	TEMP (0.1°C)	SET TEMP (0.1°C)	EL	EH	FOOD (0.1°C)	SET FOOD (0.1°C)	STANDBY	POWER ON	RECIPE RUN
2												
3	13	06/03/2017	17:20:17	-115	20	0	0	990	990	0	0	0
4	12	06/03/2017	17:20:00	-125	0	0	0	56	30	0	0	1
5	11	06/03/2017	17:19:00	-124	0	0	0	56	30	0	0	1
6	10	06/03/2017	17:18:00	-166	0	0	0	67	30	0	0	1
7	9	06/03/2017	17:17:00	-194	0	0	0	87	30	0	0	1
8	8	06/03/2017	17:16:00	-206	-200	0	0	108	100	0	0	1
9	7	06/03/2017	17:15:00	-183	-200	0	0	124	100	0	0	1
10	6	06/03/2017	17:14:00	-133	-200	0	0	140	100	0	0	1
11	5	06/03/2017	17:13:00	-35	-200	0	0	161	100	0	0	1
12	4	06/03/2017	17:12:00	31	-200	0	0	192	100	0	0	1
13	3	06/03/2017	17:11:17	57	-200	0	0	220	100	0	0	1
14	2	06/03/2017	17:11:00	57	20	0	0	990	990	0	0	0
15	1	06/03/2017	17:10:00	57	20	0	0	990	990	0	0	0
16												

Each registration contains the following information:

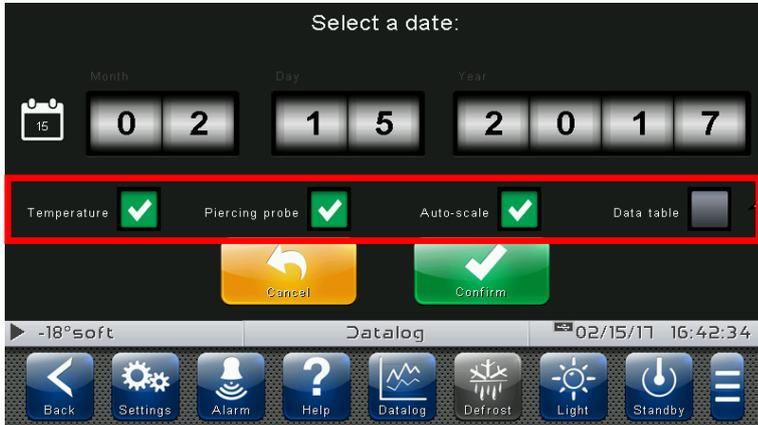
- Date and time.
- Measured Ambient temperature.
- Ambient Temperature setpoint.
- Minimum or maximum temperature alarm presence.
- Measured Product temperature.
- Product Temperature setpoint.
- Standby status.
- Registration carried out based on instrument start-up.
- Cycle status in progress.



**REGISTRATIONS HISTORY:**

(Included in Extended Button bar)

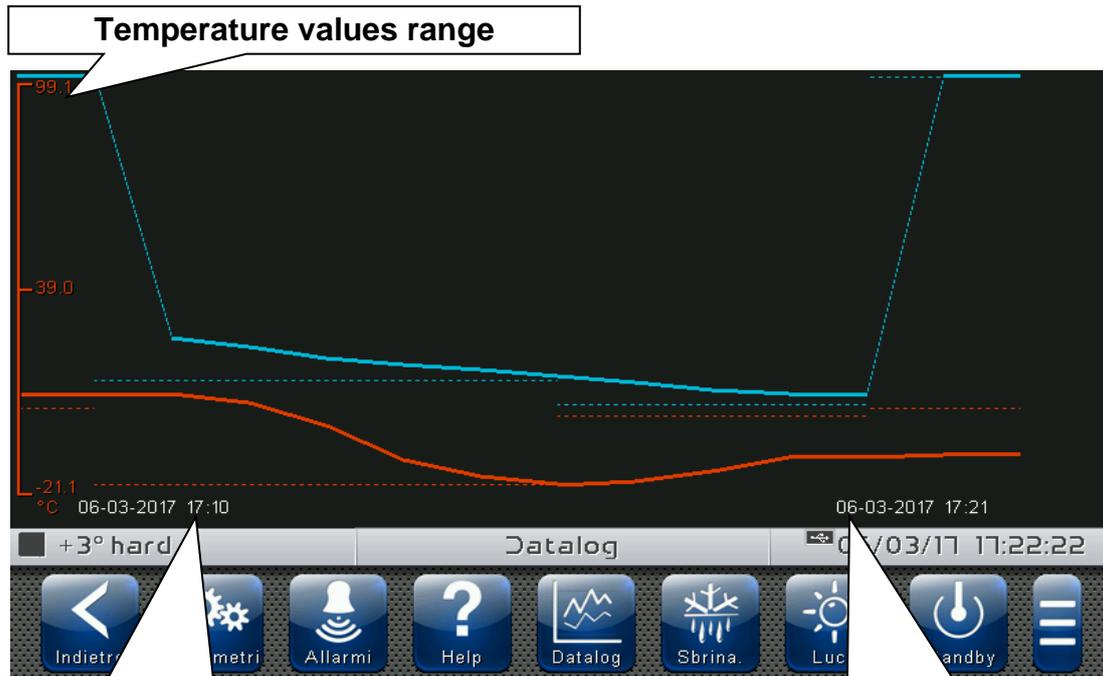
Once pressed, the day selection screen opens for which the registered data are shown.



**Chart options.**

- Show ambient temperature;
- Show product temperature;
- Auto scale;
- Data table;

Upon confirming the date, the registration graph appears:



**Temperature values range**

**Date and time of first registration represented in the graph**

**Date and time of last registration represented in the graph**

	Measured Ambient temperature		Measured Product temperature
	Ambient Setpoint		Product Setpoint
	Minimum or maximum temperature alarm presence		

Slide a finger towards left or right to go to next or previous data.

If 'Data table' option is selected, the registration list appears:

Data e ora	Temperatura	Set Temp.	Temp. spill.	Set spill.	Info
06-03-2017 17:10:00	5.7	2.0	99.0	99.0	P
06-03-2017 17:11:00	5.7	2.0	99.0	99.0	S
06-03-2017 17:11:17	5.7	-20.0	22.0	10.0	C
06-03-2017 17:12:00	3.1	-20.0	19.2	10.0	C
06-03-2017 17:13:00	-3.5	-20.0	16.1	10.0	C
06-03-2017 17:14:00	-13.3	-20.0	14.0	10.0	C
06-03-2017 17:15:00	-18.3	-20.0	12.4	10.0	C
06-03-2017 17:16:00	-20.6	-20.0	10.8	10.0	C
06-03-2017 17:17:00	-19.4	0.0	8.7	3.0	C
06-03-2017 17:18:00	-16.6	0.0	6.7	3.0	C
06-03-2017 17:19:00	-12.4	0.0	5.6	3.0	C

Power on  
Standby  
Active cycle

+3° hard      Datalog      06/03/17 17:22:59

Indietro   Parametri   Allarmi   Help   Datalog   Sbrina.   Luce   Standby

Move your finger up or down to pass to the next or previous data page.

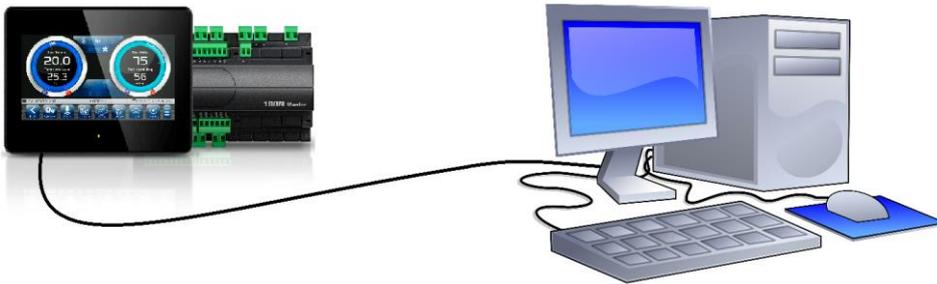
# CHAPTER 11: WEB SERVER

## 11.1

### INSTALLATION

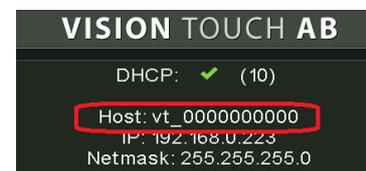
The Web configuration of the Vision Touch AB depends on the type of connection.

#### - Direct connection to the PC



The network card of the computer must be configured to have the assignment of the DHCP address activated. In this case, the Vision Touch AB and the computer, finding no DHCP server, will take the default IP addresses previewed for the class of addressing 169.254.xxx.xxx. To connect to the device, it will be necessary to open a browser and type the following command in the address bar:

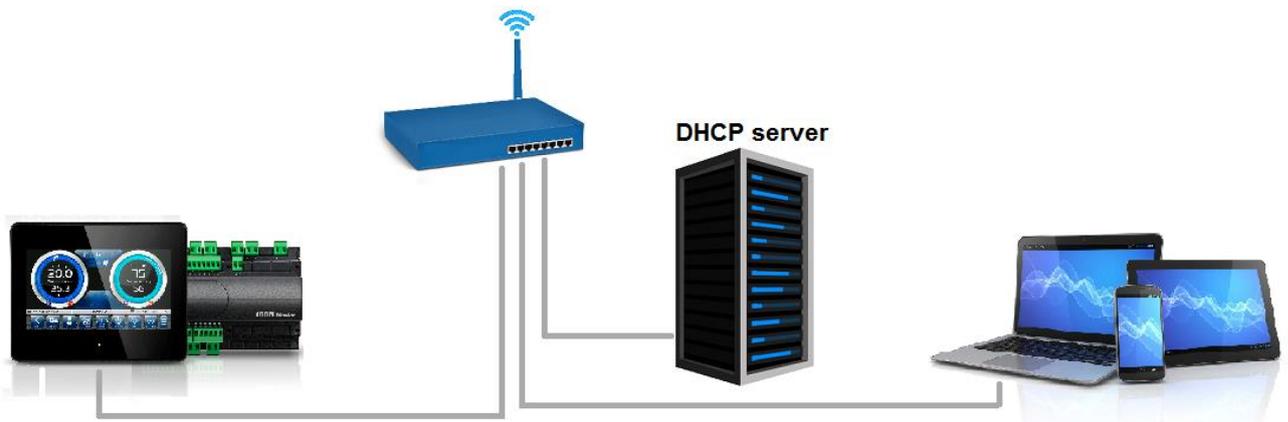
**http://hostname/** where hostname = unique identifier linked to the serial number present in the info page (Take look at "Info Page", chap. 8.3.10).



or

**http://169.254.254.1/** (IP default address of the Vision Touch)

- LAN Connection



If connected to a LAN where a DHCP server is present (and the DHCP solicitude is enabled on the Vision Touch, look at chap. 8.3.10), the Vision Touch will acquire a free IP address. In this case it is possible to consult the IP address acquired through the “Info Page” that you find in the “Web server” menu of the Vision Touch.

If the DHCP is not present, Vision Touch maintains the IP address set in the configuration of the parameters.

Pay attention: in this case, IP conflicts with other devices connected to the LAN could be possible.

To connect to the Vision Touch, it will be necessary to connect your own device to the same net, in DHCP mode, or with compatible static IP, open a browser and digit in the address bar the following order:

**http://hostname/** where hostname = unique identifier linked to the serial number present in the info page (look at “Info Page”, chap. 8.3.10).

or

**http://XXX.XXX.XXX.XXX/** (Vision Touch IP address, look at “Info Page”, chap. 8.3.10)



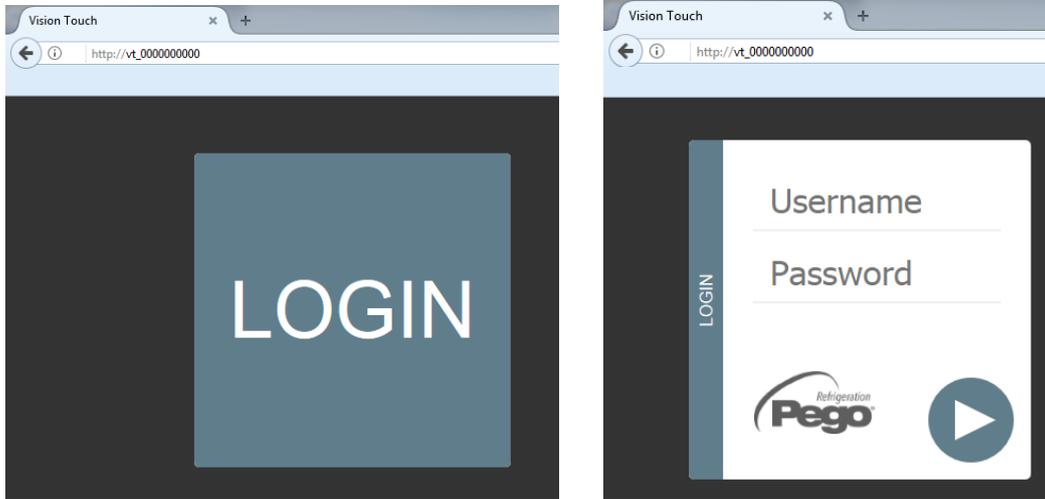
**NOTE:** The Host name of the Vision Touch is a unique reference linked to the serial number. So that it is possible to connect different Vision Touch devices using the same LAN net, setting distinct IP addresses in case that a DHCP server is not available.

For if you desire to join the Vision Touch from the web browser, it is sufficient to write in the address bar:

**http://vt\_XXXXXXXXXX/**

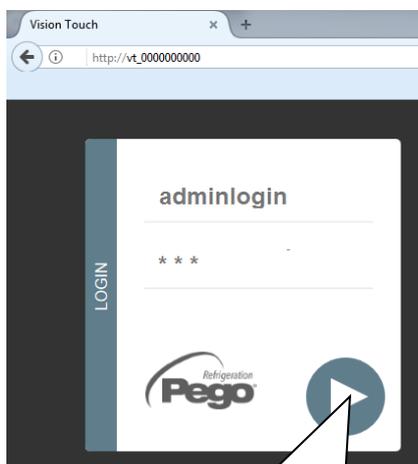
Where XXXXXXXXXXXX = serial number of the device

The access to the Web page of the Vision Touch is subject to the access control through Username and Password.

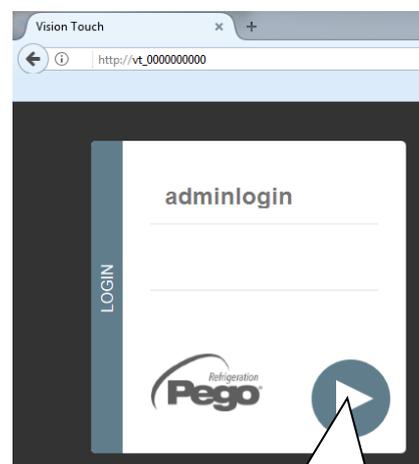


It's possible to access to the Web pages of the Vision Touch in other two modes:

- basic user: inserting in the "Username" field the user Name set in the "Web server" menu of the Vision Touch (page "Username"), you log in with the same permits that the basic user has on the Vision Touch. The installer, inhibiting the functions or the access to the parameters to the local user, also blocks the access to such features to the basic user who logs in through the Web page.
- admin user: inserting in the "Username" field the user Name set in the "Web server" menu of the Vision Touch (page "Username"), and in the "Password" field, the installer password of the Vision Touch (the one used in the Password menu to access as installer) you log in with the same permits that the installer has on the Vision Touch. So, it is possible to edit the parameters and access to all the functions (if the Wce parameter supports the remote command, look at chap. 8.3.10).



Installer login (admin)



User login (basic user)

The web interface counts with some fixed sections:

- On the left: browsing menu of the pages.
- At the top: name of the page, serial number and kind of connected user.
- On the right: content of the page.

### - Homepage

The screenshot shows the homepage of the Vision Touch AB web interface. It features a dark blue sidebar menu on the left, a main content area with two large temperature displays, and a bottom section with control buttons. Callouts provide detailed information about each element.

**Callouts and their descriptions:**

- Browsing menu of the pages:** Points to the sidebar menu containing: Live, I/O, Alarms, History, Command, Info, and Logout.
- Current page:** Points to the 'Live' label in the top header.
- Current temperature (and temperature set point):** Points to the blue temperature display showing 11.2 °C and a set point of 6.0 °C.
- Piercing probe temperature (and set point):** Points to the grey temperature display showing 23.7 °C and a set point of --- °C.
- Kind of access (admin or basic user):** Points to the user information 's/n: 0000000000 - admin' in the top right.
- Logout:** Points to the 'Logout' button in the sidebar. Description: Logs the user out and brings him back to the login page.
- Warning signal:** Points to the 'Alarms' section. Description: - red: alarm in progress. - grey: no alarm.
- Buttons:** Points to the control buttons (Stop, Defrost, Light, UV). Description: - green background: active function. - blue background: inactive function. - grey background: function not active and not activatable (basic user).
- Loaded program:** Points to the 'Program:' section. Description: - grey square: stopped program - grey triangle: running program

**- I/O (Inputs / Outputs)**

The screenshot shows the 'I/O' configuration page for a Pego Refrigeration unit. The page is divided into two main sections: 'Analogue inputs' and 'Digital outputs'. A sidebar on the left contains navigation options: Live, I/O, Alarms, History, Command, Info, and Logout. The top right corner displays the serial number 's/n: 0000000000 - admin'.

**Analogue inputs**

27-28	Disabled	
29-30	Ambient temperature [°C]	11.2
31-32	Evaporator temperature [°C]	24.3
33-34	Piercing probe [%RH]	23.7
35-36	Disabled	

**Digital outputs**

3-4	Cold (N.O.)	●
5-6	Fans high speed (N.O.)	●
7-8	Fans low speed (N.O.)	●
9-10	Light (N.O.)	●
11-12	Defrost (N.O.)	●
13-14	Recipe end notice (N.O.)	●
15-16	UV (N.O.)	●
25-26	Disabled	●
23-24	Disabled	●
21-22	Disabled	●
19-20	Disal	●
17-18	A	●

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**Input / Output Clamp PIN on the 100N MASTER**

**Input / Output description (digital or analogical)**

**Input / Output status**  
 If digital:  
 - green: active input / output  
 - grey: inactive input / output  
 If analog, the analog input or output value is displayed.

## - Alarms

The "Alarms" page displays all the alarms in progress and those intervened, as they are stored in the Alarms page of the Vision Touch (look at chap. 10.2, Alarm Gesture). The background color is indicative for the type of alarm:

- Red background: red flag alarm (the starting instant is indicated).
- Yellow background: annulled alarm (the starting instant and the duration are indicated).
- White background: alarm annulled and acquired on the Vision Touch.

**NOTE:** one cannot proceed to the acquisition of the alarms using the Web page.

The screenshot shows the 'Alarms in progress' page of the Vision Touch AB interface. The page title is 'Vision Touch AB' and the serial number is 's/n: 0000000000'. The table below shows the following data:

Code	Alarm
E2	Sensor 2 fault Ambient temperature probe Begin: 10-4-2018 15:52:53
E8	Man in cold room alarm Begin: 10-4-2018 15:52:36 Period: 0 min. 2 sec.
---	Device power on Begin: 10-4-2018 15:51:44

Callout boxes identify the columns: 'Alarm code' points to the 'Code' column, and 'Description and duration of the alarm' points to the 'Alarm' column.

## - History => Table

In the “History => Table” page you can visualize and print memorized daily data, recollected in the memory of the Vision Touch. To view the records, select a date from the calendar (click on the “Select a date” field) and press the “Load” button.

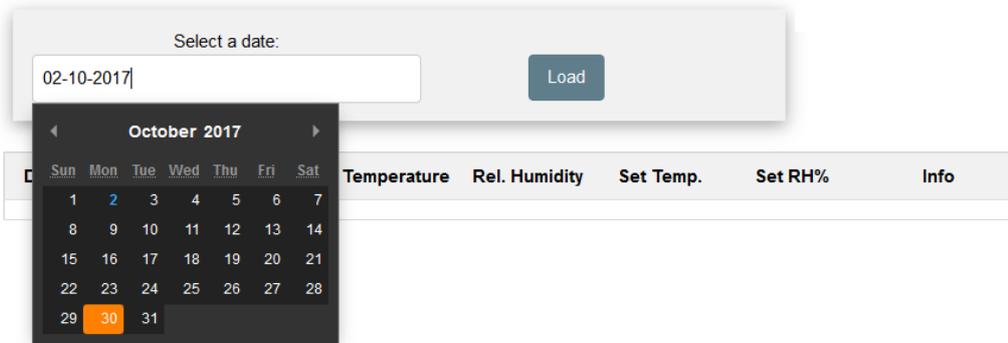


Table s/n: 0000000000

Select a date:  Load Print

Date and time	Temperature	Temp. pierc.	Set Temp.	Set pierc.	Info
10-04-2018 17:17:00	7.9	23.7	-20.0	10.0	
10-04-2018 17:18:00	2.3	99.0	-20.0	99.0	S
10-04-2018 17:19:00	2.3	99.0	-20.0	99.0	S
10-04-2018 17:20:00	2.3	99.0	-20.0	99.0	S
10-04-2018 17:21:00	2.3	99.0	-20.0	99.0	S
10-04-2018 17:21:41	2.3	99.0	-20.0	99.0	
10-04-2018 17:21:52	2.3	99.0	-20.0	99.0	
10-04-2018 17:22:00	2.3	99.0	-20.0	99.0	
10-04-2018 17:22:13	2.3	99.0	-20.0	99.0	
10-04-2018 17:23:00	2.3	99.0	-20.0	99.0	
10-04-2018 17:23:24	2.3	99.0	-20.0	99.0	
10-04-2018 17:23:48	2	99.0	-20.0	99.0	
10-04-2018 17:24:00	2	99.0	-20.0	99.0	
10-04-2018 17:25:00	2	99.0	-20.0	99.0	
10-04-2018 17:26:19	2	99.0	-20.0	99.0	P

**Alarm of high**  
Temperature or humidity value highlighted in red

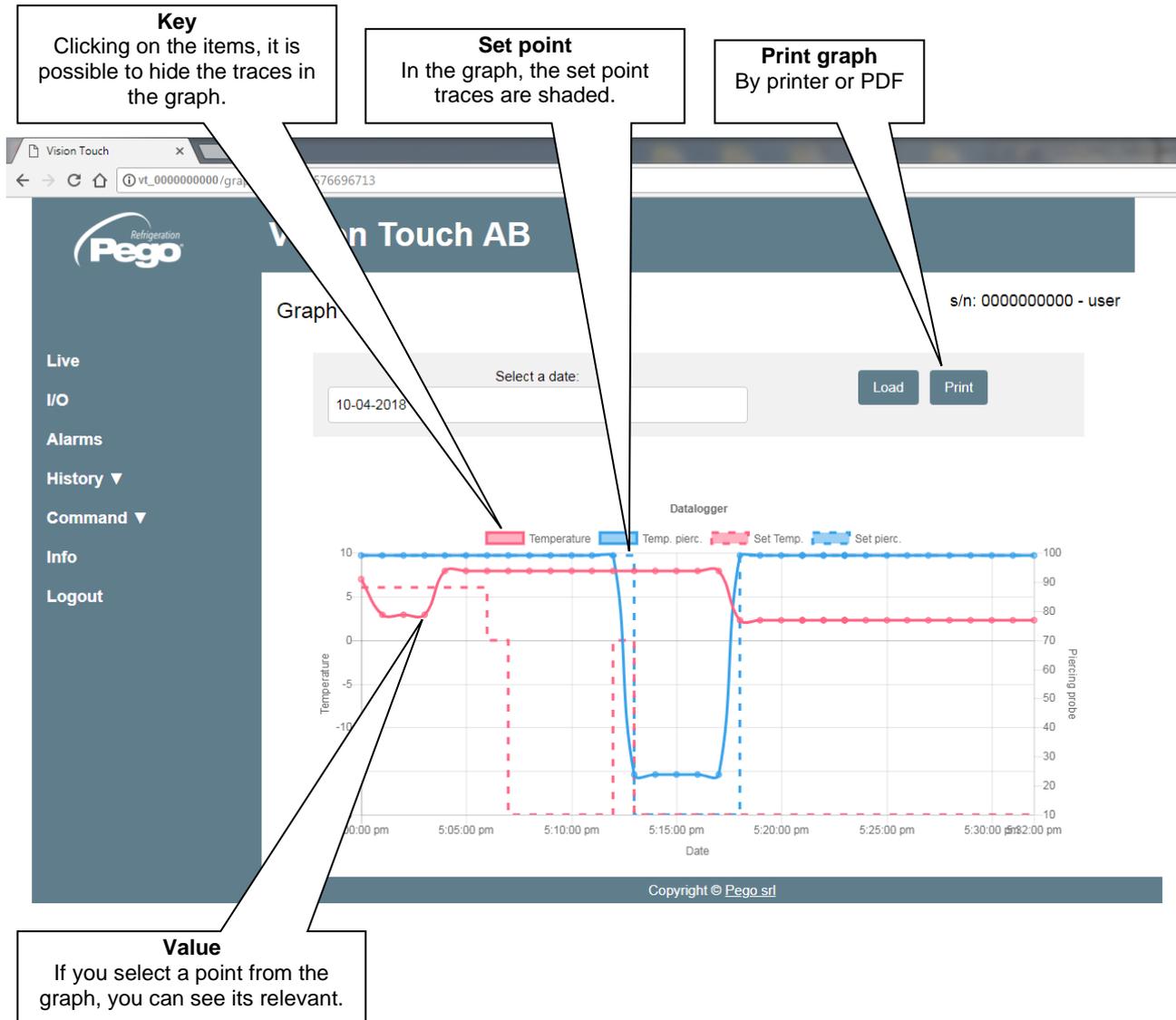
**Alarm of low**  
Temperature or humidity value highlighted in blue

**Stand-by active status**  
“S”

**Switching on of the Vision Touch**  
“P”

- History => Graph

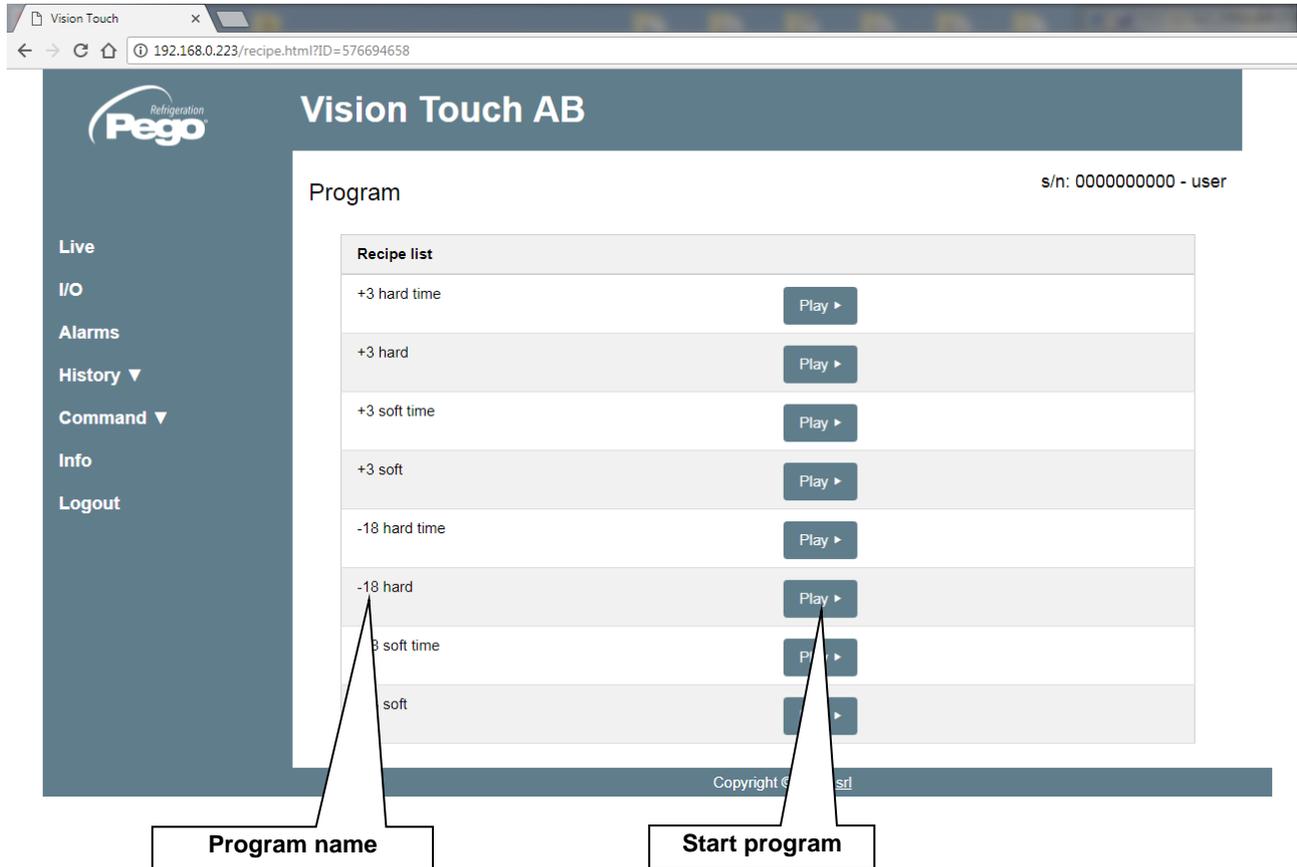
In the “History => Graph” page you can visualize and print the graph of daily data recollected in the memory of the Vision Touch. To view the graph, select a date from the calendar (click on the “Select a date” field) and press the “Load” button.



## - Controls => Program

In the "Program" page, it is possible to select, start and stop the execution of the programs saved in the memory of the Vision Touch. The "Play" and "Stop" buttons can be disabled with Wce parameter.

When manual mode is active, the "Program" page shows the programs list.



Pressing "Start" the program is started and you access the current program page.

When a program is running, the following page is showed:

The screenshot displays the Vision Touch AB interface. At the top, there are three callout boxes: 'Info about product ready time and current time', 'Program name', and 'Stop the program'. The main content area shows the program name '-18 hard', the product ready time '10/04/2018 - 23:12', and the current time '10/04/2018 - 17:14'. A 'Stop' button is visible. Below this is a temperature graph with a legend: real time (black), Quick chill (blue), Chill (light blue), Quick freeze (green), and Preservation (light green). The graph shows a temperature curve starting at 7.9°C, dropping to -20.0°C, then to -35.0°C, and finally to -20.0°C. Callout boxes point to 'Steps performed or in progress (full color)', 'Current temperature (black triangle)', and 'Next steps (Transparent)'.

Note: it is possible to deactivate the phase display by clicking on the phases name in the legend.

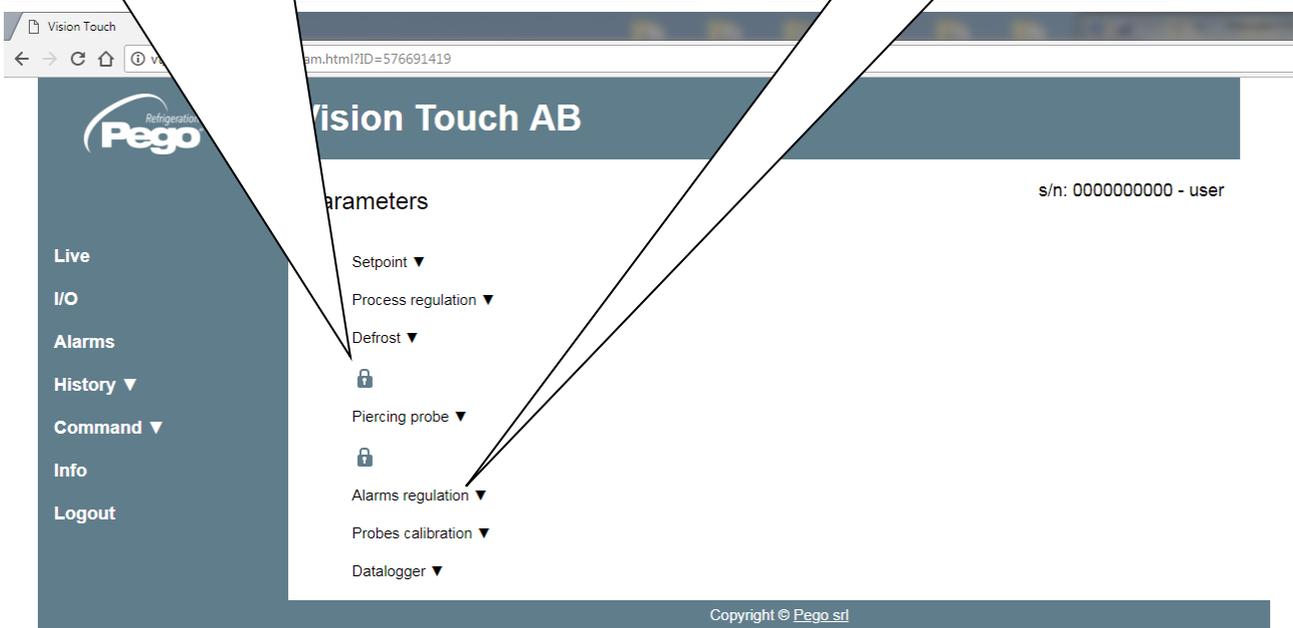
This section shows the temperature and phase details. At the top, there are two callout boxes: 'Current temperature' pointing to '7.9 °C' and 'Piercing probe temperature' pointing to '23.7 °C'. Below this is a table with columns: 'Set Temp.', 'Set pierc.', and 'Phase end'. The table lists four phases: Quick chill, Chill, Quick freeze, and Preservation. Callout boxes point to 'Phases list', 'Temperature / piercing probe setpoint', and 'Phase deadline'.

	Set Temp.	Set pierc.	Phase end
Quick chill	-20.0	10.0	10-04-2018 19:12:50
Chill	0.0	3.0	10-04-2018 21:12:50
Quick freeze	-35.0	-18.0	10-04-2018 23:12:50
Preservation	-20.0	-1.0	10-04-2018 23:13:50

## - Controls => Parameters

**Parameters menu hidden to the basic user** (configuration in the Password menu on the Vision Touch)  
*Note: the admin user always has access to the complete list of the menu.*

**Parameters menu**  
 Click on the indicator to visualize the list of the parameters.



Parameter code	Parameter description	Current value	Increase or decrease the value
d0	Cyclic defrost interval	4 hours	+ -
d3	Maximum lenght of defrost	25 min	+ -
d2	End of defrost setpoint	10 °C	+ -

**- Info**

VISION TOUCH AB

Info s/n: 0000000000 - user

**Pego** Refrigeration

Live  
I/O  
Alarms  
History ▼  
Command ▼  
Info  
Logout

**Pego** Refrigeration

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Phone: +39 0425 762906  
Fax: +39 0425 762905

Hardware version:  
0.0.0.3

Bootloader version:  
187.0.0.3

Application version:  
9.0.0.1

Touch version:  
1

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**CHAPTER 12: OPERATIONS****UV LIGHT****12.1**

Switching on the UV light allows sterilization of the inside of the quick-refrigeration room. It can be activated using the special key only when the instrument is in standby; the UV light is switched off automatically when the standby is removed, a cycle is activated, the door is opened or the time set in the 'tuv' parameter expires.

**NEW SOFTWARE FEATURES****12.2**

<b>Rel. 9.0.0.0</b>	First version.
<b>Rel. 9.0.1.0</b>	Added UV light management.
<b>Rel. 9.0.0.1</b>	Web server function.
<b>Rel. 9.0.1.1</b>	Added automatic time synchronization via the Web.
<b>Rel. 9.0.0.2</b>	Automatic sending of e-mail in case of alarm.
<b>Rel. 9.0.4.2</b>	Triple piercing probe management added.

**APPENDICES****A.1****EC DECLARATION OF CONFORMITY**

**LA PRESENTE DICHIARAZIONE DI CONFORMITA' E' RILASCIATA SOTTO LA RESPONSABILITA' ESCLUSIVA DEL FABBRICANTE:  
THIS DECLARATION OF CONFORMITY IS ISSUED UNDER THE EXCLUSIVE RESPONSIBILITY OF THE MANUFACTURER:**



PEGO S.r.l. Via Piacentina 6/b, 45030 Occhiobello (RO) – Italy –  
Società soggetta all'attività di direzione e coordinamento di Castel S.r.l.

**DENOMINAZIONE DEL PRODOTTO IN OGGETTO / DENOMINATION OF THE PRODUCT IN OBJECT**

MOD.: **VISION TOUCH AB (cod. 200VT100AB1)**

**IL PRODOTTO DI CUI SOPRA E' CONFORME ALLA PERTINENTE NORMATIVA DI ARMONIZZAZIONE DELL'UNIONE EUROPEA:  
THE PRODUCT IS IN CONFORMITY WITH THE RELEVANT EUROPEAN HARMONIZATION LEGISLATION:**

Direttiva Bassa Tensione (LVD): **2014/35/UE**  
*Low voltage directive (LVD):* **2014/35/EU**

Direttiva EMC: **2014/30/UE**  
*Electromagnetic compatibility (EMC):* **2014/30/EU**

**LA CONFORMITA' PRESCRITTA DALLA DIRETTIVA E' GARANTITA DALL'ADEMPIMENTO A TUTTI GLI EFFETTI DELLE SEGUENTI NORME:  
THE CONFORMITY REQUIRED BY THE DIRECTIVE IS GUARANTEED BY THE FULFILLMENT TO THE FOLLOWING STANDARDS:**

Norme armonizzate: **EN 61010-1:2010, EN 61326-1:2013**  
*European standards:* **EN 61010-1:2010, EN 61326-1:2013**

Firmato per nome e per conto di:  
*Signed for and on behalf of:*

Luogo e Data del rilascio:  
*Place and Date of Release:*

**Pego S.r.l.**  
**Martino Villa**  
**Presidente**

Occhiobello (RO), 01/01/2022

The **VISION TOUCH 100 AB** electronic controllers are covered by a 24-months warranty against all manufacturing defects as from the date indicated on the product ID code.

In case of defect the product must be appropriately packaged and sent to our production plant or to any authorized Service Center with the prior request of the Return Authorization Number.

Customers are entitled to have defective products repaired, spare parts and labour included. The costs and the risks of transport are at the total charge of the Customer. Any warranty action does not extend or renew its expiration.

The Warranty does not cover:

- Damages resulting from tampering, impact or improper installation of the product and its accessories.
- Installation, use or maintenance that does not comply with the instructions provided with the product.
- Repair work carried out by unauthorized personnel.
- Damage due to natural phenomena such as lightning, natural disasters, etc.

In all these cases the costs for repair will be charged to the customer.

The intervention service in warranty can be refused when the equipment is modified or transformed.

Under no circumstances **Pego S.r.l.** will be liable for any loss of data and information, costs of goods or substitute services, damage to property, people or animals, loss of sales or earnings, business interruption, any direct, indirect, incidental, consequential, damaging, punitive, special or consequential damages, in any way whatsoever caused, whether they are contractual, extra contractual or due to negligence or other liability arising from the use of the product or its installation.

Malfunction caused by tampering, bumps, inadequate installation automatically declines the warranty. It is compulsory to observe all the instructions in this manual and the operating conditions of the product.

**Pego S.r.l.** disclaims any liability for possible inaccuracies contained in this manual if due to errors in printing or transcription.

**Pego S.r.l.** reserves the right to make changes to its products which it deems necessary or useful without affecting its essential characteristics.

Each new release of the Pego product user manual replaces all the previous ones.

As far as not expressly indicated, is applicable the Law and in particular the art. 1512 C.C. (Italian Civil Code).

For any controversy is elected and recognized by the parties the jurisdiction of the Court of Rovigo.



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