Manuale d’uso e manutenzione
Use and maintenance manual

EVERLASTING

ARMADIO REFRIGERATO
REFRIGERATED CABINET

MULTILAB

Rev.8-21 **Matricola / Serial number**

Thank you for choosing this product.

Please read the warnings contained in this manual carefully, as they provide important information regarding safe operation and maintenance.
Make sure to keep this manual for any future reference by the various operators.

In some parts of the manual, the ⚠ symbol appears, indicating an important warning that must be observed for safety purposes.

CHAPTER 1 BOUNDARY CHARACTERISTICS OF OPERATION

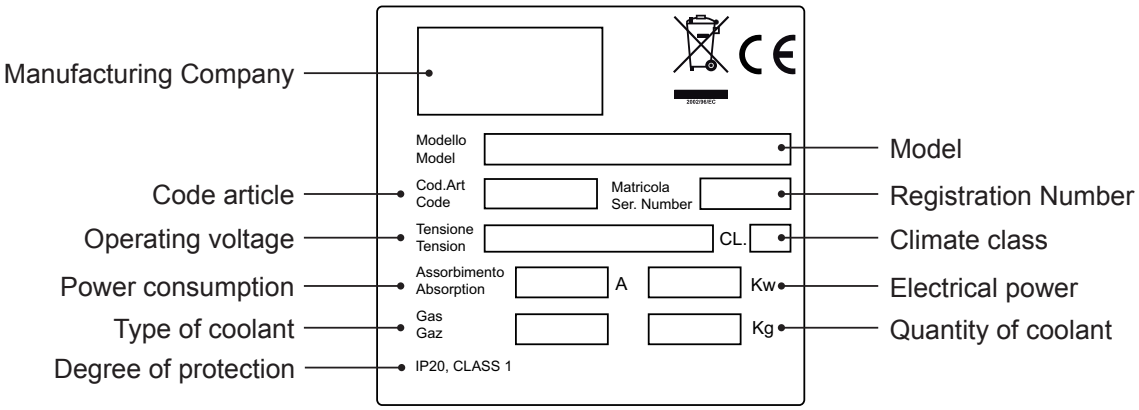
“The refrigerating cabinet is designed and assembled for working in ideal conditions in spaces having temperatures from +10° to +43° (+32° for models equipped with glass door), with a suitable air circulation. When working in spaces having different characteristics, the declared performances will not be guaranteed.”
The supply voltage must be 230V +/- 10% 50Hz as standard, or as indicated on the EC label.

The refrigerated cabinet may only be used within the temperature limits specified by the manufacturer; to identify the correct operating range, read the letters after the last digit of the model shown on the EC label and compare it with the table below:

Serie	Temperature
MULTILAB	+18°C / -25°C

The refrigerated cabinet complies with the European directives as described in detail in the Annex **“EC Declaration of Conformity”**

The technical specifications of the refrigerated cabinet are listed on the CE label inside the motor compartment, on the body wall



⚠ **ATTENTION:** any request for intervention, technical support and spare part must refer to the **SERIAL NUMBER** on the CE label, on the manual cover or on the compressor motor. The producer declines any responsibility for any improper or not reasonably foreseen usage of the refrigerated cabinet and for any operation carried out by neglecting the indications listed on the manual.

The main general safety standards are listed below:

- Do not use or place electrical devices inside the refrigerated compartments if they are not of the type recommended by the manufacturer
- Do not touch the refrigerated cabinet with damp or wet hands or feet
- Do not use the refrigerated cabinet barefoot
- Do not insert screwdrivers or other objects between the guards or moving parts
- Do not pull the power cord to unplug the refrigerated cabinet from the electricity network
- The refrigerated cabinet is not intended to be used by persons (including children) with physical or mental problems, or lack of experience and knowledge, unless they are controlled or instructed in using the unit by a person responsible for their safety. Children must be supervised to ensure that they do not play with the appliance.
- Before carrying out any cleaning or maintenance, disconnect the refrigerated cabinet from the mains power supply by turning off the main switch and pulling the plug
- In the event of failure and/or malfunction of the refrigerated cabinet, turn it off and to refrain from any attempt to repair or intervene directly. It is necessary to exclusively contact a qualified technician.

The refrigerated cabinet is composed of a modular single body insulated with expanded polyurethane with 42 kg/m3 density, internally covered in Stainless Steel AISI 304 and externally by different materials.

In the design and construction, all measures have been adopted to ensure a refrigerated cabinet that complies with safety and hygiene requirements, such as: rounded interior corners, deep drawing with drain on the outside for the condensate liquids, no rough surfaces, fixed guards on moving or dangerous parts.

The products must be stored in observance of the load limits given in the table, in order to ensure an efficient circulation of air inside the refrigerated cabinet.

Load limit expressed in Kg.	
Sheet Metal Baking Trays 800x600	10
Sheet Metal Baking Trays 400x600	8
Grille 400x600	20

⚠ The installation must be performed exclusively by a qualified technician

1.1 It is prohibited to remove the guards and safety devices
It is absolutely forbidden to remove safety guards.

The manufacturer disclaims any liability for accidents due to failure to comply with this obligation.

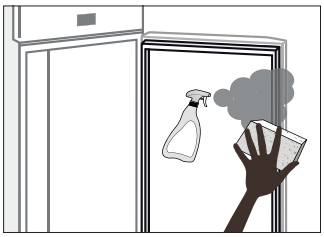
1.2 Information on emergency operations in the event of fire
- disconnect the refrigerated cabinet from the power source or cut off the power supply
- do not use water jets
- use dry chemical or CO2 extinguishers

CHAPTER 2 CLEANING THE REFRIGERATOR

Since the refrigerated cabinet will be used to store food, cleaning is necessary for hygiene and health protection purposes. The cleaning of the refrigerated cabinet has already been carried out at the factory. It is suggested, however, to carry out an additional cleaning of the internal parts before use, making sure that the power cord is unplugged.

2.1 Cleaning the interior and exterior cabinet

For this purpose the following are indicated
- the cleaning products: water and mild, non-abrasive detergents. DO NOT USE SOLVENTS AND THINNERS
- methods for cleaning: wash the interior and exterior parts with warm water and mild soap or with a cloth or sponge with suitable products
- disinfection: avoid substances that can alter the organoleptic characteristics of the food
- rinsing: cloth or sponge soaked in warm water. DO NOT USE WATER JETS
- frequency: weekly is recommended, the user can set different frequencies depending on the type of food being stored.



⚠ **REMARK:** Clean frequently the door seals.
Some preserved products could release some enzymes that could damage the seals causing its quick deterioration.
For the cleaning, use only specific products for this purposes, available also on request on our sales network.

2.2 Cleaning the condenser

The efficiency of the refrigerated cabinet is compromised by the clogging of the condenser, therefore it is necessary to clean it on a monthly basis. Before carrying out this operation, switch off the refrigerated cabinet, unplug the power cord and proceed as follows:

Motor on top - for models with non-folding front panel, climb up on a safe ladder and go directly to the condenser placed on top of the refrigerated cabinet.

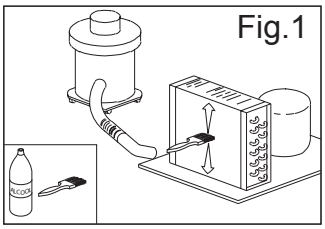


Fig.1

With the aid of a jet of air or dry brush, eliminate, in a vertical movement (Fig. 1), the dust and lint deposited on the fins. In the case of greasy deposits, we recommend using a brush moistened with special cleaning agents. For models with hinged front, loosen the locking screw and rotate the front panel on the hinges located at the top. At this point, proceed to clean as done with the models with fixed front panel. When the operation is completed, restart the refrigerated cabinet. Evaporators installed above the appliances are cartaphoresis-treated to reduce corrosion problems.

⚠ During this operation, use the following personal protective equipment: goggles, respiratory protection mask, chemically resistant gloves (gasoline-alcohol).

CHAPTER 3 PERIODIC CHECKS TO BE CARRIED OUT

The following are the points or units of the refrigerated cabinet that require periodic checks:
- integrity and efficiency of door seals
- integrity of the grilles in contact with food
- integrity of the fixing hinges of the doors
- integrity of the power cord

3.1 PRECAUTIONS IN CASE OF LONG PERIODS OF INACTIVITY

A long period of inactivity is defined as a stoppage of more than 15 days.
It is necessary to proceed as follows:
- switch off the refrigerated cabinet and disconnect it from the power supply
- carry out a thorough cleaning of the interior cabinet, shelves, trays, guides and supports, paying special attention to critical points such as the joints and magnetic gaskets, as indicated in Chapter 2.
- leave the door partly open to prevent air stagnation and residual humidity

CHAPTER 4 PREVENTIVE MAINTENANCE

4.1 Restarting after a long period of inactivity

Restarting after long inactivity is an event that requires preventive maintenance.
It is necessary to perform a thorough cleaning as described in chapter 2.

4.2 Control of the warning and control devices

We recommend that you contact your dealer for a service or maintenance contract that includes:
- cleaning of the condenser
- verification of the coolant load
- verification of the full cycle operation
- electrical safety

⚠ CHAPTER 5 EXTRAORDINARY MAINTENANCE AND REPAIR

All maintenance activities that have not been described in previous chapters are considered “Extraordinary Maintenance.” Extraordinary maintenance and repair are tasks reserved exclusively to the specialist personnel authorized by the manufacturer.
No liability is accepted for actions carried out by the user, by unauthorized personnel, or with the use of non-original replacement parts.

CHAPTER 6 TROUBLESHOOTING

Problems may occur, in the refrigerated cabinet, identified as shown in the table:

TROUBLE DESCRIPTION	POSSIBLE CAUSES	HOW TO REPAIR IT
the refrigerated cabinet does not turn on	no power supply	check the plug, socket, fuses, line
	other	contact technical support
the refrigeration unit does not start	the set temperature has been reached	set new temperature
	defrosting in progress	wait until the end of cycle / turn power off and on again
	command panel failed	contact technical support
	other	contact technical support
the refrigeration unit runs continuously but does not reach the set temperature	location is too hot	aerate more
	condenser is dirty	clean the condenser
	insufficient coolant	contact technical support
	stop the condenser fan	contact technical support
	insufficient sealing of doors	check the seals / provision of goods
	evaporator completely frosted	manual defrosting
	other	contact technical support
the refrigeration unit does not stop at the set temperature	command panel failed	contact technical support
	temperature sensor failed	contact technical support
block of ice on the evaporator	misuse	see chapter 1.
	defrost heater fault	contact technical support
	defrost probe damaged	contact technical support
accumulation of water or ice in the drip tray	drain clogged	clean the pipette and the drain
	refrigerated cabinet is not level	check levelling

CHAPTER 7 INSTRUCTIONS FOR REQUESTING ASSISTANCE

For any technical problem and for intervention, assistance and spare-part requests it is necessary to exclusively revert to one's dealer, providing the code and the serial number indicated on the specification label attached to the appliance.

CHAPTER 8 SAFETY AND ACCIDENT PREVENTION

The refrigerated cabinet has been built with suitable measures to ensure the safety and health of the user.
The following are the measures taken to protect against mechanical risks:

- stability: The refrigerated cabinet, even with the grilles removed, has been designed and built in such a way that under the intended operating conditions, its stability is suitable for use without risk of overturning, falling or unexpected movement

- surfaces, edges, corners: the accessible parts of the refrigerated cabinet are, within the limits allowed by their functions, free of sharp angles and sharp edges, as well as rough surfaces likely to cause injury

- moving parts: were designed, constructed and arranged to avoid risks. Certain parts are equipped with fixed guards so as to prevent risks of contact which may result in injury

The following are the measures taken to protect against other risks:

- electricity: The refrigerated cabinet has been designed, built and equipped so as to prevent risks from electricity, in accordance with the specific legislation in force

- noise: The refrigerated cabinet has been designed and built in such a way that risks resulting from the emission of airborne noise are reduced to the minimum level

8.1 safety devices adopted
It is absolutely forbidden (Fig. 2):
- to tamper with or remove the evaporator housing casing that protects the user against the risk of being cut by the evaporator fins and the movement of the fan motor
- remove the labels applied at the inner edge of the engine compartment, showing the technical specifications (1) and the instructions for grounding (2)
- remove the label applied on the evaporator guard and near the electrical wiring inside the engine compartment, which warns the user to turn off the power supply before working on the unit (3)
- to remove the labels applied inside the engine compartment, indicating grounding (4)
- to remove the label applied on the power cord, indicating the type of power supply (5)
The manufacturer declines any responsibility for the safety of the refrigerated cabinet if this were to happen.

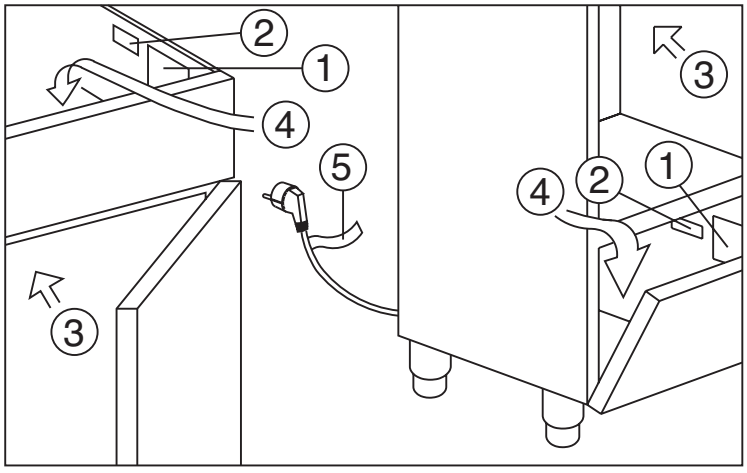


Fig.2

8.2 Indications for optimal operation
- do not obstruct the motor-compartment air intakes (place at minimum 50 cm from ceiling)
- do not insert foods or liquids that are still hot
- place the foodstuffs on the appropriate shelves or containers. Do not place them directly on the bottom, or leaning against the walls, doors or fixed guards
- close the doors carefully
- always keep the defrost water drain hole clear of obstructions
- limit, to the extent possible, the frequency and duration of door opening. Each opening causes a change in the internal temperature
- load the goods on the shelves in a phased manner
- perform periodically current maintenance (see chapter 3)
In case of interruption or failure of the power supply circuit, prevent the opening of the doors in order to maintain a uniform temperature inside the refrigerated cabinet.
If the problem persists longer than a few hours it is recommended to move the material to a suitable place.

CHAPTER 9 CONTROLS

9.1 Controls and keys (picture 3)

The control panel is a digital thermoregulator controlling temperature and humidity. It is provided with 6 keys with specific functions:

Fig.3

The keys which the refrigerated cabinet is provided with are:

Display	visore di temperatura e dello stato dell'armadio frigorifero.
Menu key ①	Push for 5 seconds with turned-on thermoregulator to access Languages and Service menu
On/off key ②	Push for 5 seconds to turn on the thermoregulator; when on a submenu, push and release to return to the previous screen
Down key ③	Push to allow decreasing values (lower temperature or lower values during programming)
Up/aux key ④	Push to allow increasing values (higher temperature or higher values during programming). Push for 2 seconds to access manual Defrosting, Overcooling, Extra Rh, Energy Saving menu.
Light key ⑤	Push to activate internal light. (glass-door models)
Set key ⑥	Push to allow temperature and humidity setpoint adjustment or to confirm the value of a list or parameter

If pushed, all keys also unlock the keyboard. Push any key for 3 seconds to visualize "UNLOCK", and keys will be active. After 60 seconds without operating on any key, the keyboard will automatically lock and "LOCK", will be visualized.
The only active key will be the Light key.

If pushed, all keys also silence the thermoregulator alarm buzzer and store the current alarm.

LED signals and indications legend:

	ON	OFF	FLASHING
	Working compressor	Idle compressor	- activated compressor protection, idle or on-hold compressor - ongoing setpoint setting
	Turned-on evaporator fan	Turned-off evaporator fan	Fan waiting for start
	turned-on internal light	Turned-off light	Turned-on internal light by microswitch digital input
AUX	INACTIVE	INACTIVE	INACTIVE
	Ongoing defrosting	-	Active dripping at defrosting end
	Humidification demand	INACTIVE	INACTIVE
	Dehumidification demand	-	- waiting for dehumidification
	Turned-on heater	-	-
	- Ongoing Energy saving - Ongoing low consumption	-	-
	Temperature visualization	-	Overcooling function activated
	Ongoing alarm	-	-

HACCP	Stored HACCP alarm	-	new stored or ongoing HACCP alarm
	Lock-Unlock door	-	-
	Open door	-	-

9.2 INSTRUCTIONS FOR USE

9.2.1 Start-up

Before starting up the refrigerated cabinet, make sure that electrical connections have been carried out as indicated on chapter 15.

☞ **Start-up sequence (picture 3).**

▸ Push the on-off key ② for 2 seconds	the display will turn on and the cabinet will be operative

Chamber temperature and internal relative humidity degree will be displayed; after 60 seconds without operating on keys, the “Lock” label will be displayed and the keyboard will automatically lock. To unlock it, push any key for 3 seconds. Unlock will be displayed. See chapter ALARMS in case an alarm code is displayed.

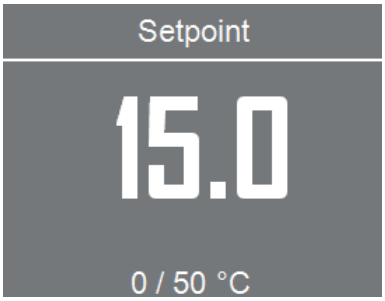
☞ 9.2.2 Stop modes (picture 3)

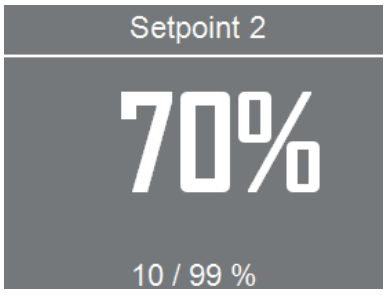
With unlocked keyboard (chapter 9.2.6)

▸ push the on-off key ② for 5 seconds	display will turn off

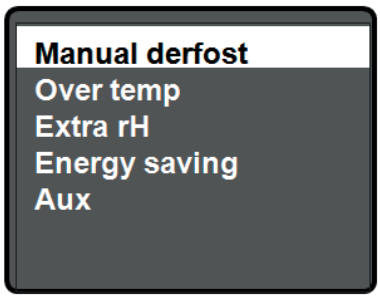
☞ 9.2.3 Temperature and humidity setting (Picture 3)

With unlocked keyboard (Chapter 9.2.6), proceed as follows to set the desired temperature within reference parameters:

▸Push and release MENU ① to visualize temperature	
▸ Push the UP ④ or DOWN ③ keys within 15 seconds to set the desired temperature	

▸ Push and release MENU ① to visualize humidity	
▸ Push the UP ④ or DOWN ③ keys within 15 seconds and set the desired humidity	
▸ Push and release MENU ① to confirm and return to the main screen.	

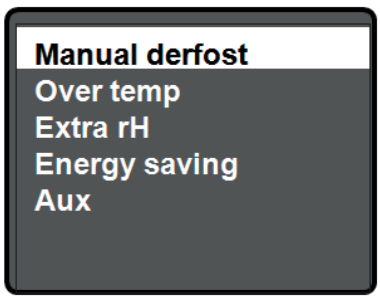
☞9.2.4 Funzioni AUX menu Auxiliary Functions

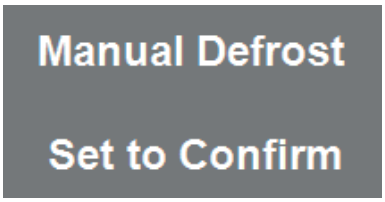
▸ By pushing the UP/AUX ④ key for 2 seconds, the following additional functions are available:	

☞ 9.2.5 Manual and automatic defrosting

The refrigerated cabinet is set from the factory to carry out automatic defrosting at pre-set intervals, as follows:

• **MULTILAB Range** one 30-minute-long defrosting “by activation of electrical heaters”, maximum evaporator temperature 8°, every 8 operating hours.
Users can carry out manual defrosting according to their needs, operating as follows:
With unlocked keyboard (chapter 9.2.6)

▸ Push the UP/AUX key ④ for 2 seconds then release it to visualize the auxiliary menu	
▸ Touch the UP ④ or DOWN ③ keys to move the cursor on “Manual defrosting” Push and release SET ① to confirm manual defrosting	

► Push and release SET ① to start manual defrosting	
The device will carry out a defrosting only if necessary and the evaporator temperature will be lower than the defrosting end temperature	
► Push and release the ON/OFF ② key to return to the main screen.	

NB. During automatic and manual defrosting cycles, icon will remain on; at the end of the defrosting cycle, the icon will turn off and the refrigerated cabinet will resume the normal operating cycle.

Other functions of UP/AUX ④ menu

- Overcooling (deactivated)
- Extra RH (deactivated)
- Energy Saving (deactivated)
- Auxiliary relay (deactivated)

9.2.6 Keyboard unlocking (picture 3)

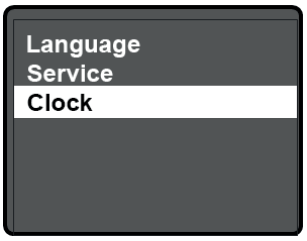
► Touch any key for 1 second: label “LOCK” will be visualized (locked keyboard). Keep any key pushed for 3 seconds to unlock: “UNLOCK” will be displayed. After 60 seconds without operating on any key, the keyboard will automatically lock and “LOCK” will be visualized. The only active key will be the Light key.

☞ 9.2.7 Glass-door cabinet light switch

► Touch the LIGHT key ⑤

☞ 9.2.8 Date and time setting (Picture 3)

With unlocked keyboard (chapter 9.2.6), push the Menu ① key for 5 seconds to enter Configuration menu

► Touch the DOWN ③ key to move the cursor on "CLOCK" (available only with the WiFi module installed - Optional)	
► Push and release MENU ① to pass from date to visualized time; push the UP ④ or DOWN ③ key to adjust the values, then the MENU ① key to confirm them.	

Push and release the ON/OFF ② key to return to the main screen.

☞ 9.2.9 Language setting (Picture 3)

With unlocked keyboard (chapter 9.2.6) push on the Menu ① key for 5 seconds to enter Configuration menu

►Push the UP ④ or DOWN ③ key to move the cursor on "Language" Push and release MENU ① to adjust the language; push the UP ④ or DOWN ③ key to choose the new language, then the MENU ① key to confirm it. ►Push and release the ON/OFF ② key to return to the main screen.	

CHAPTER 10 HACCP ALARMS

Possible alarms are visualized on the first line on the lower part of the Display with symbol ⚠ next to them

10.1 Active HACCP alarm list

Recorded alarms are listed in the ALARM_SERVICE_CONFIGURATION MENU. Their presence is signalled on the main screen by icon ⚠.

With unlocked keyboard (chapter 9.2.6)

Push the MENU ① key for 5 seconds to access configuration menu; select SERVICE, then ALARMS (see SERVICE section)

10.2 Alarms and signals

In addition to the alarm buzzer and the ALARM symbol, all alarms generate signals indicating the alarm type, displayed as follows:

VISUALIZED ALARM	POSSIBLE CAUSES	CAUSES/SOLUTIONS
Damaged probe1	Internal temperature/humidity probe failure	Replace probe
Damaged probe2	Internal temperature/humidity probe failure	Replace probe
Damaged probe3	Evaporator probe failure	Replace probe
Minimum temp. alarm	Temperature is below set minimum	- Too cold premises - Too wet product
Maximum temp. alarm	Temperature is above set maximum	- Too hot premises - Refrigerating unit failure
Low humidity alarm	Humidity is below set minimum	- Humidity probe failure - Heating unit failure
High humidity alarm	Humidity is above set maximum	- Humidity probe failure - Refrigerating unit failure
Power failure alarm	Power has been interrupted for more than 15 minutes	Check electrical connections
Open door alarm	Door has remained open for more than 15 minutes	Close the door
Overheated condenser alarm	Condenser temperature has exceeded the set maximum	- Dirty condenser - Condenser fan failure - Condenser probe failure
Blocked compressor alarm	Condenser temperature has exceeded safety temperature	-Check condenser fan -Reset: turn off the device, then turn it on again

10.5 Remote management and remote control (Opt.)

A TTL Modbus port for connection to the module and a link to use EVconnect, EPoCA or BMS apps are available on the thermoregulator (see remote management and remote control manual)

CHAPTER 11 NOISE LEVEL

The refrigerated cabinet is designed and constructed so that risks resulting from the emission of airborne noise are reduced to the minimum level (see technical information).

CHAPTER 12 MATERIALS AND FLUID USED

The materials in contact or which may come into contact with foodstuffs comply with the relevant directives.
The refrigerated cabinet has been designed and built in such a way that these materials can be cleaned before each use.
The refrigerant fluids used R452A conform with the new EU regulation 517/2014 F-Gas
R452A is a fluorinated gas, it has a GWP potential of 2141

The symbol  indicates that this product must not be treated as household waste.

To prevent potential negative consequences for the environment and human health, make sure that this product is properly disposed of and recycled.

For more information regarding the disposal and recycling of this product, please contact your Distributor, after sale Service, or waste treatment Service.

CHAPTER 13 TRANSPORT AND HANDLING

The transport and handling of the refrigerated cabinet must only be done while maintaining the vertical position, observing the markings on the packaging.

The manufacturer disclaims any liability for problems resulting from transport performed under conditions other than those specified above.

The accessories of the refrigerated cabinet (guides, grilles, trays, remote condensing unit with pipes) are packaged separately and placed inside the unit.

The refrigerated cabinet is mounted on a wooden base with screws and packaged with polyethylene, carton, crate or boxes.

Regarding the disposal of the packaging it is necessary to refer to current regulations in your country.

⚠ The movement of the refrigerated cabinet shall be performed using a fork lift or pallet trucks equipped with suitable forks (length of at least 2/3 of the unit).

The limits of stackability and the centre of gravity are indicated on the label of the package.

14.1 Positioning operations

Since the incorrect positioning of the refrigerated cabinet can cause damage to the same, jeopardizing its proper functioning and cause risks to the personnel, the installer must comply with the following general rules:

- place the refrigerated cabinet at a minimum distance of 3 cm from any wall and of 50 cm from the ceiling
- the environment must be sufficiently ventilated
- position the refrigerated cabinet away from heat sources
- avoid exposure to direct sunlight
- remove the polyethylene, cardboard or wood packaging

⚠ Polyethylene is dangerous for children

- remove any accessories with external connections

Removing the wooden base (fig. 4): tilt the refrigerated cabinet sideways and unscrew the two self-tapping screws, lift the refrigerated cabinet and remove the base.

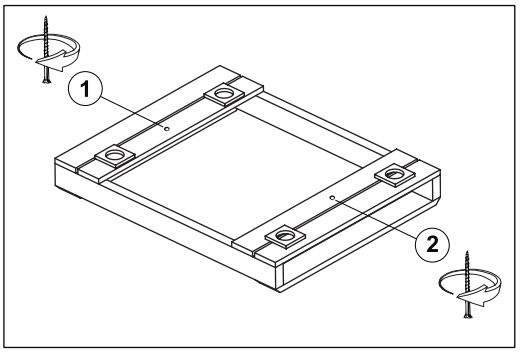


Fig.4

⚠ use protective gloves when handling the wooden packaging and the wooden base.

The presence of splinters may cause damage to your hands

- remove the PVC film applied as a protection to the outer surfaces of the refrigerated cabinet
- position the refrigerated cabinet using a level with possible adjustment of the feet of the metal base (Fig. 5)

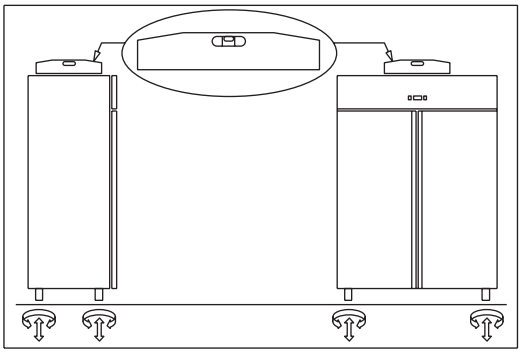


Fig.5

- position the grille holding guide fails in the holes of the racks (Fig. 6)

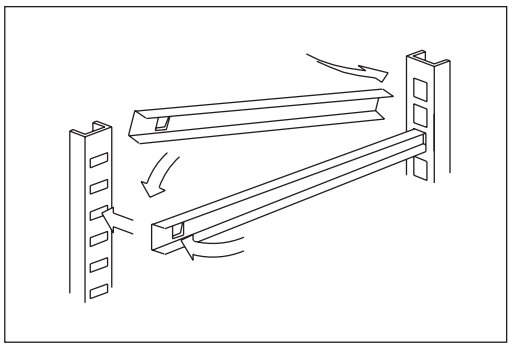


Fig.6

- insert the grilles for food in the special guides
- insert the condensate water drain pan into the special guide rails already fixed under the refrigerated cabinet if provided.

14.2 REM cabinets (Fig. 7)

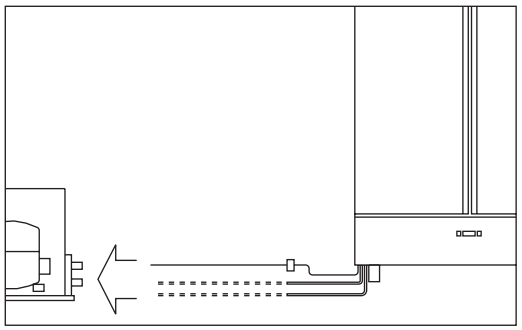


Fig.7

- position the refrigerated cabinet as described above (Fig. 5)
- arrange the two pipes coming out of the refrigerated cabinet (liquid line ø 6 mm, suction ø 10 mm TNBV - ø 12 mm BTV) to connect them to the respective pipes
- connect the pipes of the condensing unit to the pipes of the refrigerated cabinet
- create a vacuum and then carry out the loading of the coolant
- make the electrical connection of the refrigerated cabinet to the condensing unit
- perform a functional test to verify the correct gas charge.

CHAPTER 14 ELECTRICAL WIRING AND CONNECTIONS

The electrical system and connection must be carried out by qualified personnel. Before installation, measure the impedance of the network, the impedance value for the connection to the network must not exceed 0.075 ohm.

For safety reasons you must follow these guidelines:
- verify that the sizing of the electrical system is suitable for the power consumption of the refrigerated cabinet and that it provides for a differential switch (circuit breaker)
- in case of incompatibility between the outlet and the plug of the refrigerated cabinet, replace the outlet with another of a suitable type provided that it is in accordance with regulations
- do not insert adapters and/or reductions (Fig. 8)

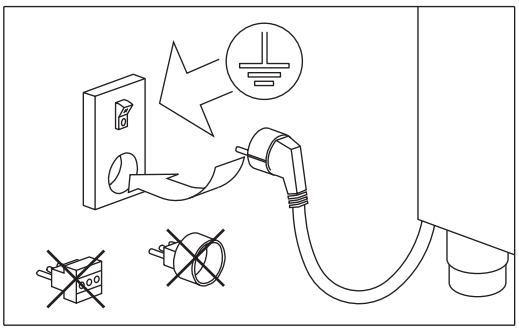


Fig.8

⚠ The power cord has the connection type “Y” and it can be replaced exclusively by the manufacturer or authorized technical service.

⚠ It is essential to correctly connect the refrigerated cabinet to an efficient earthing system carried out as specified by the applicable provisions of law.

CHAPTER 15 INSTALLATION OPERATIONS

It is important, in order to prevent errors and accidents, to perform a series of checks before starting up the refrigerated cabinet in order to identify any damage incurred during transport, handling and connection. Checks to be performed:
- check the integrity of the power cord (it must not have suffered abrasions or cuts)
- check the solidity of the legs, door hinges, shelf supports
- check the integrity of the internal and external parts (pipes, heating elements, fans, electrical components, etc.) and their fixing
- check that the seals of the doors and drawers have not been damaged (cuts or abrasions) and close with an airtight seal
- check the integrity of the pipes and fittings (REM)

CHAPTER 16 REINSTALLATION

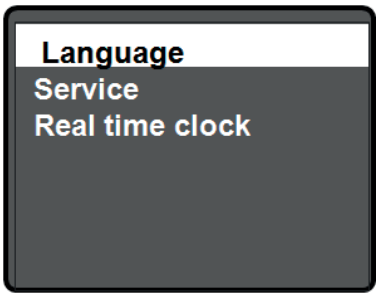
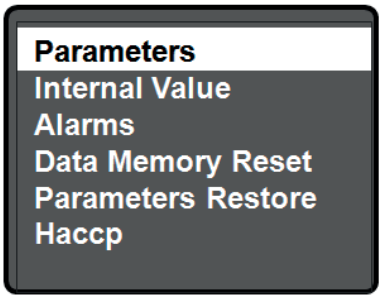
It is necessary to comply with the following procedure:
- disconnect the power cord from the power outlet
- the handling should be carried out as described in chapter 13
- for a new placement and connection, please refer to par. 13.1
- proceed to the possible recovery of the coolant gas in accordance with the regulations in force in your country (REM)

WARNING!

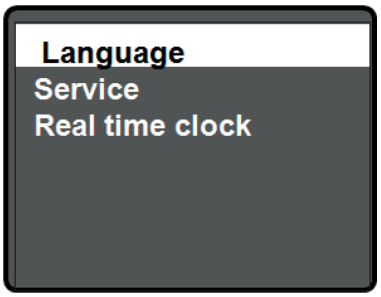
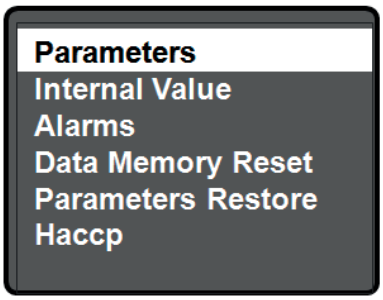
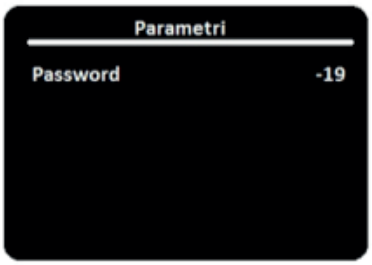
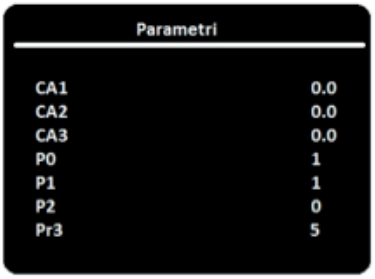
INSTRUCTIONS STRICTLY RESERVED TO AUTHORIZED TECHNICAL PERSONNEL

Every intervention executed by a non authorized technical personnel implies a warranty decay.

SERVICE

LANGUAGE MODIFICATION	
▸With unlocked keyboard (chapter 9.2.6) ▸Push on the Menu key ① for 5 seconds to access Configuration menu	
▸Touch the UP ④ or DOWN ③ keys to move the cursor on “Language” Push and release SE ① to modify the language; push the UP ④ or DOWN ③ keys to choose the new language, then push the SET key ① to confirm it. ▸ Push and release the ON/OFF key ② to return to the main screen.	
SERVICE menu	
▸ With unlocked keyboard (chapter 9.2.6) ▸ Push on the Menu key ① for 5 seconds to access Configuration menu	
▸ Touch the UP ④ or DOWN ③ keys to move the cursor on “Service” Push and release SE ① to enter Service menu.	

SERVICE menu description	
Internal values	Probe value and active relay status visualization
Alarms	Active alarm list visualization
Data storage reset	Resets all stored alarms
Default setting reset	Resets parameters to default values **ATTENTION default values are NOT the ones that are stored for device operation, but those set by the thermoregulator producer. If reset to default, parameters must be adjusted as per user manual chart.**
HACCP	Shows possible recorded alarms with their date and time.

PARAMETER visualization and adjustment	
▸ With unlocked keyboard (chapter 9.2.6) ▸ Push on the Menu key ① for 5 seconds to access Configuration menu	
▸ Touch the UP ④ or DOWN ③ keys to move the cursor on “Service” ▸ Push and release SET ① to enter Service menu	
▸ Touch the UP ④ or DOWN ③ keys to move the cursor on “Parameters” ▸ Push and release SET ① to enter Parameters menu	
▸ Set the password value -19 with the DOWN ③ key, and then push the SET key ① to visualize the Parameters	
▸ Adjust parameter values with the UP ④ or DOWN ③, keys, move the cursor on the desired parameter, then push the SET key ① The value will be highlighted in green; modify its value with the UP ④ or DOWN ③ keys, then confirm the new value with the SET key ①. Push and release the ON/OFF key ② to exit programming and return to the main screen; alternatively, do not operate on any key for 30 seconds.	

MULTILAB PARAMETER LIST

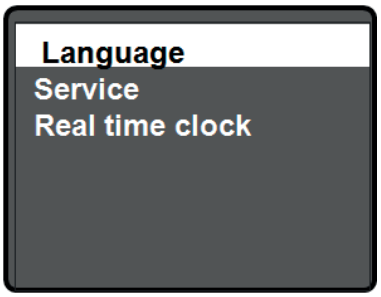
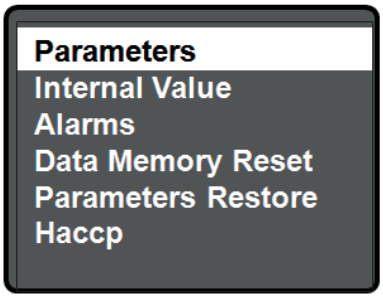
NB only the highlighted parameters can be modified by maintenance service. The other parameters can be modified only after reference/authorization by our technical department.

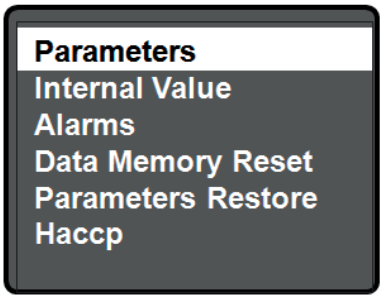
N.	PAR.	DEF.	SETPOINT	MIN... MAX. (°c)
SET	in tastiera	12	r1..r2	MIN... MAX. (C°)
SET2	in tastiera	45%	h1..h2	MIN... MAX. (%)
N.	PAR.	DEF.	ANALOG INPUTS	MIN... MAX.
1	CA1	0	Ambient temperature offset	-25..+25 ° C/F
2	CA2	0	Humidity probe offset	-25..+25 %rH
3	CA3	0	Auxiliary probe offset	-25..+25 °C/F
4	P0	1	Probe type	0=ptc; 1=ntc
5	P1	1	Decimal ability in °C	0=no; 1=yes
6	P2	0	Temperature unit of measure (value change entails manually resetting temperature parameter limits)	0 = Celsius; 1 = Fahrenheit
7	Pr3	5	Probe 3 configuration	0= Ingresso digitale; ic3 1= Sonda condensazione; 2= Sonda cuore (solo display); 3= Sonda aria esterna; 4= Sonda ausiliaria 2
8	P5	1	Large display value 1.	0 = nessuna (spento); 1 = Ingresso 1; 2 = Ingresso 2; 3 = Ingresso 3; 4 = Setpoint 1 (T); 5 = P6 2 Valore display piccolo 2. = Setpoint 2 (rH)
10	P8	120	Display 1 refresh time. Increases or decreases of 1 digit per selected interval	0..2551/10 sec s
11	P9	120	Display 2 refresh time. Increases or decreases of 1 digit per selected interval	0..255 1/10 sec s
N.	**PAR.**	**DEF.**	**TEMPERATURE**	**MIN... MAX.**
12	r0	3	Setpoint cold differential (SET+r0) (SET+r11+r0 in neutral zone)	0, 1..25 °C/F
13	r1	-25	Minimum Setpoint	-30.. r2 °C/F
14	r2	20	Maximum Setpoint	r1.. +99 °C/F
15	r4	0	Offset setpoint in energy saving added to SET value	0..99 °C/F
16	r5	0	Deactivates humidity adjustment in Over Temp function	0=no; 1 =Si
17	r6	0	SET temperature threshold in Over Temp function	-40..+99 °C/F
18	r7	0	OverTemp function duration	0..240 min
19	r11	0	Neutral zone value to be added to the differential. With r11>0 value is active for heat (r11) and cold (r0) adjustment; with r11<0 only for heat adjustment (r12)	-10..+10 ° C/F
20	r12	-1	Heat differential (SET-r12) (SET-r11-r12 in neutral zone)	-25..-0,1 ° C/F
21	r13	60	Chokes Heat Output. Pay attention to heating elements and to exchange number. 60= always on.	0..60" s
22	r14	2	Temperature priority. if r14>0 regulator stops dehumidifying with compressor to fix temperature first.	0 = no; 1 = Caldo (se T° sale); 2 = Caldo e freddo; 3 = Freddo (se T° scende)
N.	**PAR.**	**DEF.**	**HUMIDITY**	**MIN... MAX.**
23	h1	10	Minimum humidity setpoint 2	0..h2 %rH
24	h2	95	Maximum humidity setpoint 2	h1..100 %rH
25	h4	0	Extra humidity Setpoint by AUX key activation. "h4" value replaces SET2 for h5 time	0..100 %rH
26	h5	0	Extra Humidity "h4" Setpoint duration	0= funzione disabilitata 0..240 min
N.	PAR.	DEF.	DEHUMIDIFICATION ADJUSTMENT	MIN... MAX.
27	rd0	7	Dehumidification differential (SET2+rd0) (SET2+rd1+rd0 in neutral zone)	1..25 %rH
28	rd1	1	Dehumidification neutral zone	0..10 %rH
29	rd2	60	Turned-on fan duration in Dehumidification with F0=0. rd2=0 stopped fans	0..240 " s
30	rd3	30	Turned-off fan duration in Dehumidification with F0=0. rd3=0 and rd2>0 always turned-on fans	0..240 " s

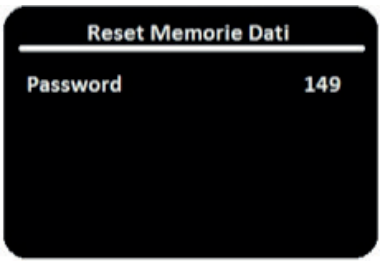
31	rd4	1	Dehumidification with compressor or with compressor and heat	0 = Disabilitato; 1 = Compressore; 2 = Compressore e caldo
32	rd5	0	Heats and Dehumidifies with defrost Output	0=no; 1=si
N.	PAR.	DEF.	HUMIDIFICATION ADJUSTMENT	MIN... MAX.
33	rh0	-3	Humidification Differential (SET2-rh0) (SET2-rh1-rh0 in neutral zone)	-25..-1 %rH
34	rh1	1	Humidification neutral zone	0..10 %rH
35	rh2	60	Turned-on Humidification Output duration (or fans if rH relay is not configured) with rh2=0 stopped fans	0..240 " s
36	rh3	0	Turned-off Humidification Output duration (or fans if rH relay is not configured) With rh3 = 0 e rh2>0 always turned-on fans.	0..240 " s
N.	**PAR.**	**DEF.**	**COMPRESSOR**	**MIN... MAX.**
37	C0	0	Compressor ON delay since Power-on	0..240 min
38	C2	2	Minimum Compressor OFF time	0..240 min
39	C3	0	Minimum Compressor time	ON 0..240 " s
40	C4	10	Compressor OFF time with Chamber Probe Alarm	0..240 min
41	C5	10	Compressor ON time with Chamber Probe Alarm	0..240 min
42	C6	60	Condensation temperature above which overheated condenser alarm activates	0..199 ° C/F
43	C7	65	Condenser Temperature above which compressor block alarm activates after C8 time has elapsed.	0..199 ° C/F
44	C8	0	Compressor block alarm activation delay since C7 threshold has been exceeded	0..15 min
45	C10	0	Compressor days for maintenance	gg
46	C11	10	Compressor 2 ON delay since Compressor 1 ON	0..240 " s
N.	**PAR.**	**DEF.**	**DEFROSTING**	**MIN... MAX.**
47	d0	6	Defrosting interval	0..99 h
48	d1	0	Defrosting type	0 = Elettrico; 1 = Inversione; 2 = Fermata
49	d2	8	Evaporation temperature above which defrosting with evaporator probe ends (Pr3=5)	-99..+99 ° C/F
50	d3	30	Defrosting duration	0..99 min
51	d4	0	Defrosting activation when appliance starts.	0=no; 1=accensione; 2= post overcooling; 3= accensione e post overcooling
52	d5	0	Time between appliance start and defrosting start	0..99 min
53	d6	1	Displayed value during defrosting	0 = Regolazione; 1 = Display bloccato; 2 = riservato
55	d7	3	Evaporator dripping time after defrosting	0..15 min
56	d11	0	Defrosting end warning activation for maximum duration (code dFd)	0=no 1=si
57	d15	0	Compressor ON consecutive time before Hot Gas Defrosting	0..99 min
N.	**PAR.**	**DEF.**	**ALARMS**	**MIN... MAX.**
58	A1	-5	Low Temperature Alarm Threshold	-99..+99 ° ° C/F
59	A2	1	Low Temperature Alarm Type	0 = Disabilitato; 1 = relativo SET; 2 = Assoluto
60	A4	10	High Temperature Alarm Threshold	-99..+99 ° C/F
61	A5	1	High Temperature Alarm Type	0 = Disabilitato; 1 = relativo SET; 2 = Assoluto
62	A6	120	T and rH alarm activation delay since threshold passing when appliance is started	0..240 min
63	A7	60	Minimum and maximum temperature alarm delay	0..240 min
64	A8	60	Alarm activation delay since threshold passing after defrosting	0..240 min
65	A9	15	Alarm activation delay since threshold passing after door closing	0..240 min
66	A10	15	Power Failure duration for Alarm Recording	0..240 min
67	A11	1	Hysteresis referred to A1 and A4 to determine alarm subsiding threshold	0 1..15 ° C/F
68	AH1	50	SET2 Low Humidity relative alarm	0..100 %rH
69	AH4	50	SET2 High Humidity relative alarm	0..100 %rH
70	AH7	30	Humidity Alarm delay and probe saturation.	0..240 min
N.	PAR.	DEF.	FANS	MIN... MAX.

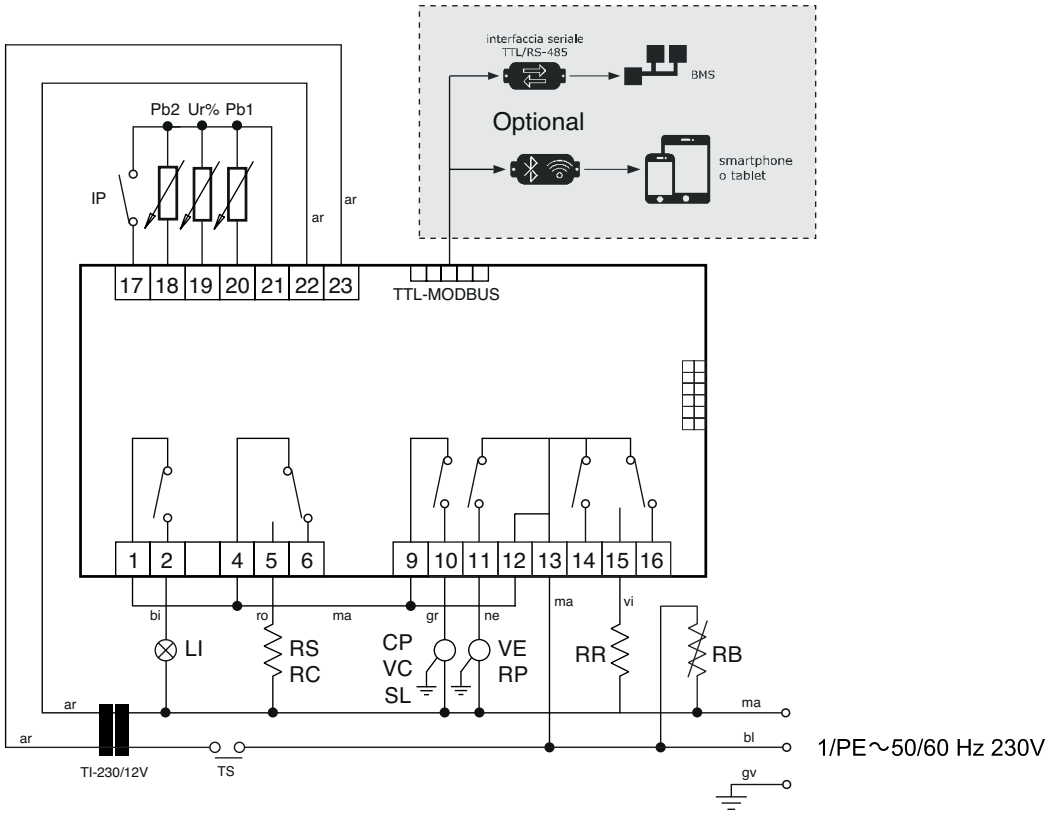
71	F0	4	Evaporator Fan Mode during Normal Operation. With F0=0 it is possible to manage cycles with F11-F12 rd2-rd3 rh2-rh3.	0 = Con cicli; 1 = Accese; 2 = ON per carichi on; 3 = Termoregolate (F1 relativo alla regolazione temperatura); 4 = Termoregolate se carico ON (F1 relativo alla regolazione temperatura)
72	F1	5	Evaporator Fan Adjustment Threshold with F0=3 or 4	-99..+99 °C/F
73	F2	0	Evaporator Fan Mode during Defrosting	0 = OFF; 1 = ON; 2 = secondo F0
74	F3	0	Evaporator Fan maximum Downtime after Dripping	0..15 min
75	F7	5	Setpoint-referred threshold for fan restart after defrosting	-99..+99 ° C/F
76	F8	2	Evaporator Setpoint differential	0 1..15 ° C/F
77	F9	5	Evaporator fan turning-off delay since compressor has turned off	0..240 s
78	F11	60	Fan ON Time without adjustment with F0=0. F11=0 fans remain idle	0..240 s
79	F12	60	Fan OFF Time without adjustment with F0=0. F12=0 and F11>0 fans always turned on	0..240 s
N.	PAR.	DEF.	CONDENSER FAN	MIN... MAX.
80	Fc1	25	Condenser Fan OFF Threshold	0..99 ° C/F
81	Fc2	5	Condenser Fan ON Differential SET+Fc2	0 1..15 ° C/F
82	Fc3	5	Condenser Fan Turning-off Delay	0..240 " s
N.	PAR.	DEF.	DIGITAL INPUTS	MIN... MAX.
83	i1	0	Display Lock with Open Door and after closing it.	0..240 min
84	i2	15	Alarm warning delay since opened door	-1..120 min
85	i3	15	Inhibition Adjustment Maximum Time with Open Door according to ic1=7/8/9 configuration	-1..120 min
86	i5	0	Multifunction Input Alarm Delay	0..120 min
87	i6	60	Pr3=0 and ic3=1 pressure. Consider i8 events since first occurrence for manual reset	0..120 min
88	i7	60	ic1=5 Thermal Event Count Interval. Consider i8 events since first occurrence for manual reset	0..120 min
89	i8	1	Digital Input Event Count for pressure switch a/o Thermal Alarm. 0= always automatic 1 = always manual .	0..15
N.	PAR.	DEF.	AUXILIARY RELAY	MIN... MAX.
90	u6	0	Auxiliary Output Configuration. Manual control by AUX key.	0 = caldo; 1 = freddo; 2 = manuale
91	u7	0.0	Auxiliary setpoint if "u6= 0 or 1".	-99..+99 ° C/F
92	u8	1.0	u7 auxiliary set differential.	0 1..15 ° C/F
N.	PAR.	DEF.	DIG IN CONFIGURATION	MIN... MAX.
93	iC1	8	Digital input 1 functions. Functions 7 8 and 9 refer to microswitch.	0 = disabilitato; 1 = allarme multifunzione; 2 = reservato; 3 = riservato; 4 = stand-by; 5 = termica 1; 6 = termica 2; 7 = compressore e ventole spente luce accese; 8 = ventole spente luce accesa; 9 = luce accesa
94	iP1	0	Microswitch Input Activation	0=chiuso o 1=aperto
95	iC3	0	Digital input 3 function	0= disabilitato; 1= pressostato alta
96	iP3	0	Multifunction input 3 Activation	0=chiuso o 1=aperto
N.	PAR.	DEF.	DIGITAL OUTPUTS	MIN... MAX.
97	uc1	4	Configures K1 relay (Comp)	0 = disabilitato; 1 = umidità rH; 2 = deumidifica drH; 3 = allarme; 4 = compressore1; 5 = caldo; 6 = ventola condensatore; 7 = on/stand-by; 8 = cambio aria; 9 = luce; 10 = compressore 2; 11 = ventole evaporatore; 12 = sbrinamento; 13 = riservato; 14 = riservato; 15 = ausiliario
98	uc2	5	Configures K2 relay (heat)	0..15
99	uc3	9	Configures K3 relay (light)	0..15
100	uc4	1	Configures K4 relay (dehumid)	0..15
101	uc5	11	Configures K5 relay (Evap_Fan)	0..15
102	uc6	12	Configures K6 relay (defrost.)	0..15
N.	PAR.	DEF.	KEYBOARD	MIN... MAX.
103	POF	1	Enables ON/Stand-by key	0=no 1=si
104	Pli	1	Enables Light and Load by Key in Stand-by	0=no 1=si
105	PSr	1	Deactivates Alarm Output by silencing the Buzzer	0=no 1=si

106	Pbu	2	Enables functions or keyboard and buzzer configuration.	0 = no; 1 = solo allarme no tasti; 2 = allarme e tasti
N.	PAR.	DEF.	SAFETIES	MIN... MAX.
107	SEN	60	Reserved	60... 120
108	PL0	60	Reserved	60... 240
109	PAS	-19	Parameter password	-99... 999
110	PS1	1	Service level 1 password	-99... 999
111	PA1	426	Evlink/Evconnect user password	-99... 999
112	PS2	824	Evlink/Evconnect service password	-99... 999
N.	PAR.	DEF.	CLOCK	MIN... MAX.
111	Hr0	0/1	Enables clock for models without integrated rtc.	0 = no 1 = si
N.	PAR.	DEF.	DATA LOGGER	MIN... MAX.
112	BLE	1	1= EVLINK presence. Leave LA Lb and LP at default. Set to 0 to enable Modbus communication with EVIF22/23TSX modules.	0 = no (Modbus) 1 = si (EVLINK)
113	rE0	15	Recording interval	0..240 min
114	rE1	4	Value to be recorded	0=nessuna; 1=sonda 1; 2=sonda 2; 3= Sonda 3; 4=sonda 1 e sonda 2; 5= tutte le sonde
N.	PAR	DEF	REAL-TIME DEFROSTING	MIN… MAX
115	Hd1	- - -	1° Defrosting Time	0..24 h
116	Hd2	- - -	2° Defrosting Time	0..24 h
117	Hd3	- - -	3° Defrosting Time	0..24 h
118	Hd4	- - -	4° Defrosting Time	0..24 h
119	Hd5	- - -	5° Defrosting Time	0..24 h
120	Hd6	- - -	6° Defrosting Time	0..24 h
N.	PAR.	DEF.	MODBUS RS485	MIN... MAX.
121	LA	247	MODBUS address. Set BLE=0 for monitoring (deactivates datalogger and BLE)	1... 247
122	Lb	3	MODBUS Baud Rate	0 = 2400; 1 = 4800 2 = 9600; 3 = 19200
123	LP	2	Modbus Parity	0= None 1= Odd 2= Even
N.	PAR.	DEF.	ENERGY SAVING (if r5 = 0)	MIN... MAX.
124	HE2	0	Manual Energy Saving duration	0..990 min
125	H01	0	Daily Start time for Temperature Energy saving	0..23h
126	H02	0	Daily Temperature Energy Saving duration	0..24h

Internal Value Visualization	
▸ With unlocked keyboard (chapter 9.2.6) ▸ Push on the Menu key ① for 5 seconds to access Configuration menu	
▸Touch the UP ④ or DOWN ③ keys to move the cursor on “Internal Values” ▸Push and release SET ① to enter the Internal Value visualization menu.	
Instantaneous values detected by probes, compressor working hours and door opening counters will be displayed.	
▸ Push the ON/OFF key ② twice or dot not operate on any key for 30 seconds to return to the main screen.	

Data Storage Reset	
▸With unlocked keyboard (chapter 9.2.6) ▸Push on the Menu key ① for 5 seconds to access Configuration menu	
▸Touch the UP ④ or DOWN ③ keys to move the cursor on “Data Storage Reset” ▸Push and release SET ① to enter Data Storage Reset menu.	

►Set the password to value 149 with the DOWN key ③ then ►Push the SET key ① to reset stored recorded data.	
►Push the ON/OFF key ② twice or dot not operate on any key for 30 seconds to return to the main screen.	



MULTILAB

Legenda componenti
CP - Moto-compressore
K1 - Relè compressore
LI - Luce interna
RC - Resistenza scarico
RB - Resistenza bacinella
RS - Resistenza sbrinamento
IP - Interruttore porta
RP - Resistenza anticondensa
SL - Solenoide liquido
Pb1 - Sonda termostato
Pb2 - Sonda evaporatore
Pb3 - Sonda condensatore
VC - Ventilatore condensatore
VE - Ventilatore evaporatore
Ur% - Sonda umidità
T1 - Trasformatore 230/12V
RR - Resistenza riscaldante
TS - Termostato sicurezza

Components key
CP - Moto-compressor
K1 - Compressor relè
LI - Internal light
RC - Drain heater
RB - Basin Heater
RS - Defrost heater
IP - Door switch
RP - Anti-condensate heater
SL - Liquid solenoid
Pb1 - Thermostat Probe
Pb2 - Evaporator Probe
Pb3 - Condenser Probe
VC - Condensator fan
VE - Evaporator fan
Ur% - Humidity Probe
T1 - Transformer 230/12V
RR - Heating resistance
TS - Safety thermostat

Legenda colori
ne - nero
gr - grigio
ro - rosso
ma - marrone
bl - blu
bi - bianco
ar - arancio
gv - giallo verde

Colour Key
ne - black
gr - grey
ro - red
ma - brown
bl - blue
bi - white
ar - orange
gv - yellow green

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