SINGLE-DECK MERCHANDISER

INSTALLATION & OPERATIONS MANUAL

WARNING / FOR YOUR SAFETY
Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WARNING
R290 flammable refrigerant in use. Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

MIDA

3'x3', 4'x4', 4'x8'

Table of Contents

To ensure proper functionality and optimum performance, it is STRONGLY recommended that Hillphoenix cases be installed/serviced by qualified technicians who have experience working with commercial refrigerated display merchandisers and storage cabinets. For a list of Hillphoenix-authorized installation/service contractors, please visit our website at www.hillphoenix.com.

Intertek Intertek

Hillphoenix®
A DOVER™ COMPANY

P114309K
R.3 V.0
08/2021

Important

At Hillphoenix®, the safety of our customers and employees, as well as the ongoing performance of our products, are top priorities. To that end, we include important warning messages in all Hillphoenix installation and operations handbooks, accompanied by an alert symbol paired with the word "DANGER", "WARNING", or "CAUTION".

All warning messages will inform you of the potential hazard; how to reduce the risk of case damage, personal injury or death; and what may happen if the instructions are not properly followed.

This manual must be stored near the display case where it can be easily consulted. If this manual does not provide the information you require please contact Hillphoenix for more information.

DANGER

Indicates a potential safety risk for refrigerated case users and/or the refrigerated case itself, the possible consequences being damage to the case and/or serious injury to workers.

NOTE

Draws attention to important details that personnel must be aware of and always keep in mind to ensure proper use and operation of the refrigerated case.

FORBIDDEN

Draws attention to tasks that are absolutely forbidden; failure to observe this warning can cause damage to the refrigerated case and/or injury to workers. Hillphoenix will not be held liable per damage to things and/or injury to persons caused by failure to observe such warnings.

Revision History

- compressor compartment diagram, parts list, electrical diagrams and troubleshooting_04/21

MIDA

Mobile Single-Deck Self-Contained Merchandiser
(3'X3'),(4'X4') & (4'X8')

SYSTEM REQUIREMENTS

Case Size	Volts	Phase	Electrical Circuits Per Case	Total Amps	MCA	MOP
3' x 3'	120	1	1	3.6	4.37	15A
4' x 4'	120	1	1	8.6	10.96	15A
4' x 8'	120	1	1	17.9	20.4	25A
4' x 8'	120	1	(2 (1 OF 2)*	9.7	12.1	15A
4' x 8'	120	1	(2 (2 OF 2)*	8.2	10.3	15A

ELECTRICAL DATA

Case Size	Fans Per Case	High Efficiency Fans 120 Volts		Anti-Condensate Heat 120 Volts	
		Amps	Watts	Amps	Watts
3' x 3'	1	0.02	3.0	0.40	48.0
4' x 4'	2	0.05	7.0	1.03	123.0
4' x 8'	4	0.10	14.0	2.05	246.0

GUIDELINES AND CONTROL SETTINGS

Case Size	Case Application	24hr Energy Usage (kWh)	Discharge Air (°F)	Discharge Air Velocity (FPM)
3' x 3'	Deli	284	21	120
4' x 4'	Fresh Meat	14.61	7	120
4' x 8'	Fresh Meat	28.54	7	120

CONDENSING UNIT DATA

Case Size	Volts	Phase	RLA (amps)	LRA (amps)	Refrigerant	Refrigerant Charge (lbs)
3' x 3'	120	1	4	23	R290	0.33
4' x 4'	120	1	10	44	R290	0.24
4' x 8'	120	1	20	88	R290	0.24

DEFROST CONTROLS

Case Application	Case Size	Defrosts per Day	Run Off Time (Min)	Timed Off Defrost (Min)	Timed Off Defrost Termination Temp (°F)
Deli	3' x 3'	3	0	51	47
Fresh Meat	4' x 4'	4	0	23	68
Fresh Meat	4' x 8'	4	0	23	68

NOTES:

- "---" indicates that the feature is not an option on this case model and/or the data is not yet available.
- Notes added are specific to case as pertains to data.
- " * " Indicates the MIDA 8 is supplied with 2 electrical plugs and may be connected to separate circuits with a 15A breaker, or a common circuit with a 25A breaker.

Case Model	Set Point (°F)	Hysteresis (°F)	Application
3x3	26	9.5	Deli
4x4	6	2	Meat
4x8	6	2	Meat

2017 DOE COMPLIANT

Intertek Intertek

ENGINEERED FOR STORES WITH AMBIENT CONDITIONS NOT TO EXCEED 75° AND 55% RELATIVE HUMIDITY. DUE TO ENGINEERING IMPROVEMENTS SPECIFICATIONS MAY CHANGE WITHOUT NOTICE.ALL MEASUREMENTS ARE TAKEN PER ASHRAE-72-2005 SPECIFICATIONS.HILLPHOENIX REFRIGERATED DISPLAY CASES FOR SALE IN THE UNITED STATES MEET OR EXCEED DEPARTMENT OF ENERGY 2017 REQUIREMENTS. NUMBERS ARE BASED ON STANDARD CASE SIZES. CONSULT ENGINEERING.

MIDA

Rev. Date	Rev. #	Rev. Title
3-9-20	0	NEW RELEASE

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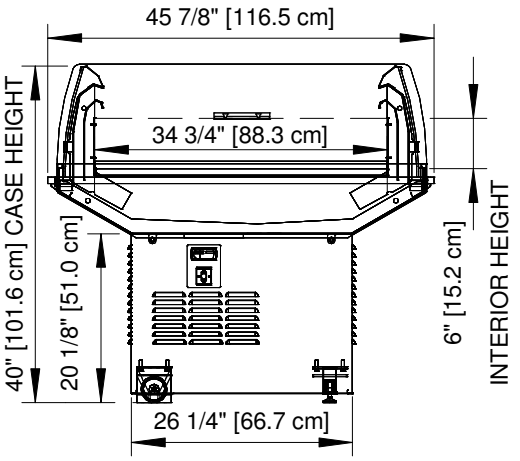
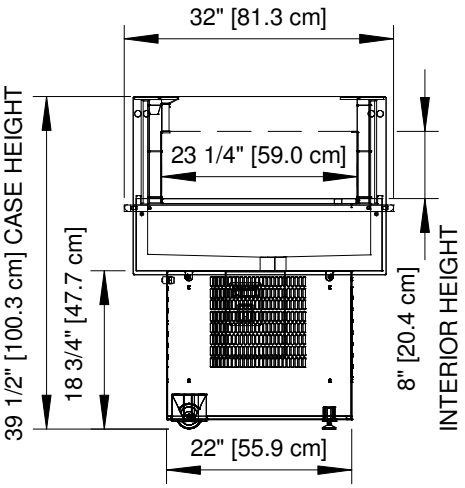
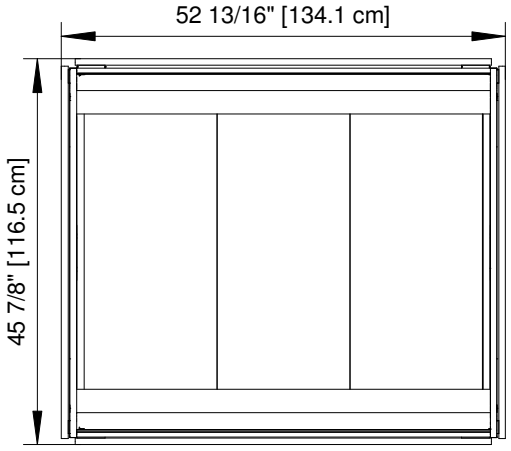


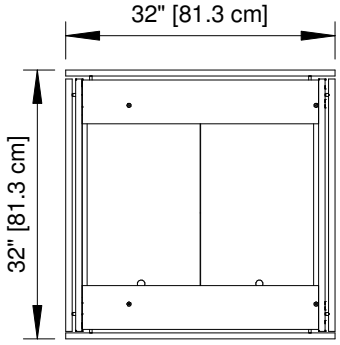
(4'x4') & (4'x8') SECTION



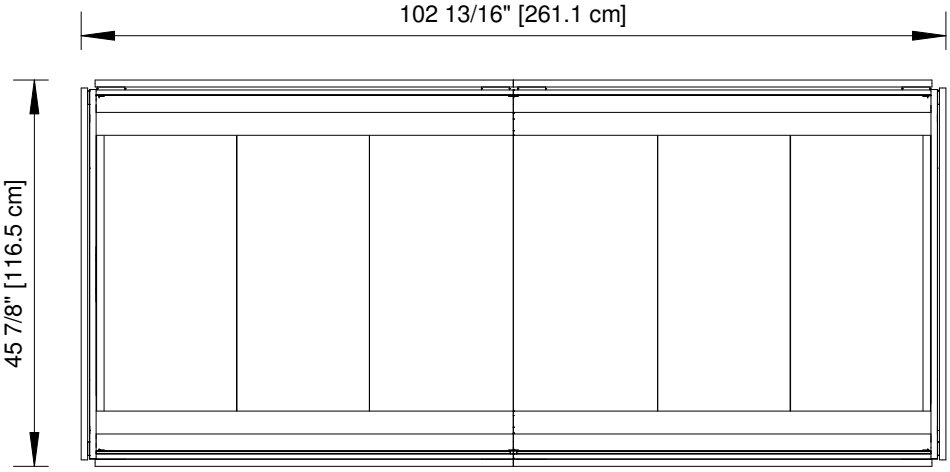
(3'x3') SECTION



(4'x4') TOP VIEW



(3'x3') TOP VIEW



(4'x8') TOP VIEW

GENERAL INFORMATION

Thank you for choosing Hillphoenix for your food merchandising needs. This handbook contains important technical information and will assist you with the installation and operation of your new Hillphoenix display case. By closely following the instructions, you can expect peak performance; attractive fit and finish; and long case life.

We are always interested in your suggestions for improvements (e.g. case design, technical documents, etc.). Please feel free to contact our Marketing Services group at the number listed below. Thank you for choosing Hillphoenix, and we wish you the very best in outstanding food merchandising.

CASE DESCRIPTION

This manual specifically covers the MIDA-4' & 8' meat, deli, dairy, cheese, produce, bakery and meal kits applications and the MIDA-3' for deli, dairy, cheese, produce and bakery applications. This is a self-service open single-deck merchandise refrigerated display case with R-290 refrigerant.

STORE CONDITIONS

Hillphoenix cases are designed to operate in an air-conditioned store that maintains a 75°F (24°C) store temperature and 55% (max) relative humidity (ASHRAE conditions). Case operation will be adversely affected by exposure to excessively high ambient temperatures and/or humidity.

REFRIGERATION SYSTEM OPERATION

Air-cooled condensing units require adequate ventilation for efficient performance.

THIS UNIT CONTAINS R-290 FLAMMABLE REFRIGERANT. USE CAUTION WHEN HANDLING, MOVING OR SERVICING THE DISPLAY CASE. AVOID DAMAGING THE REFRIGERANT TUBING WHICH COULD INCREASE THE RISK OF A LEAK.

SHIPPING CASES

Transportation companies assume all liability from the time a shipment is received by them until the time it is delivered to the consumer. Our liability ceases at the time of shipment.

RECEIVING CASES

Examine fixtures carefully and in the event of shipping damage and/or shortages, please contact the Service Parts Department at the number listed below.

CASE DAMAGE

Claims for obvious damage must be 1) noted on either the freight bill or the express receipt and 2) signed by the carrier's agent; otherwise, the carrier may refuse the claim. If damage becomes apparent after the equipment is unpacked, retain all packing materials and submit a written request to the carrier for inspection within 14 days of receipt of the equipment. **Failure to follow this procedure will result in refusal by the carrier to honor any claims with a consequent loss to the consumer.**

If a UPS shipment has been damaged, retain the damaged material, the carton and notify us at once. We will file a claim.

Hillphoenix
1925 Ruffin Mill Rd
Colonial Heights, VA 23834
Mon.-Fri. (8 a.m. to 5 p.m.)
Tel: 1-833-280-5714/Fax: 804-526-7450
Website: www.hillphoenix.com

LOST/MISSING ITEMS

Equipment has been carefully inspected to insure the highest level of quality. Any claim for lost/missing items must be made to Hillphoenix within 48 hours of receipt of the equipment. When making a claim please use the number listed below.

SERVICE & TECHNICAL SUPPORT

For service or technical questions regarding this case, please contact our Service Department at 1-800-283-1109 For questions regarding our refrigeration systems or electrical distribution centers, please contact our Systems Division Customer Service Department at 1-770-388-0706.

CONTACTING THE FACTORY

If you need to contact Hillphoenix regarding a specific fixture, be certain that you have both the case model number and serial number (this information can be found on the data tag, located on the top-left interior of the case). When you have this information, refer to pages 20 and 24 of this manual or contact **833-280-5714**.

ID PLATE

The display case has an ID plate as illustrated below:

LOCATION

This refrigerated display case has been designed for displaying and storing perishable food product. It is engineered for air-conditioned stores with a maximum ambient of 75°F and 55% relative humidity.

When selecting the location for placement of this case, avoid the following conditions:

Excessive Air Movement

1. Doors
2. Air-conditioned vents
3. Other air sources

Excessive Heat

4. Windows
5. Sun
6. Flood lamps 8 feet or less from the product
7. Other heat sources

TRANSPORT AND HANDLING

The display case is shipped wrapped in plastic sheeting and secured to a pallet or in a wooden crate (OPTIONAL). To avoid damage during the various stages of shipping and handling it is good practice to keep the display case fully packaged until it is positioned for final installation.

Handling should be carried out with the aid of a fork-lift truck or appropriate equipment that can lift the display case at the load point indicated by the relevant label on the packaging (see fig. 1).

Fig. 1

NOTE

Remove the plastic packaging and all plastic wrap off the panels of the case including the deck pans. Pay careful attention to the accessories packaged together in the shipped loose parts inside the display case bearing in mind that electrical equipment and drainage points are located on the bottom of the display case.

STORE CONDITIONS

The temperature where the display case is stored must not exceed 131°F. The display case must be shielded from sunlight and weather. Leave the display case inside its original packaging, which will provide it with excellent protection up to the moment of installation.

POSITIONING AND INSTALLATION

Removing the plastic packaging

Removing the shipping pallet

Remove the display case from the shipping pallet as follows:

1. Remove the panels to gain access to the fixing brackets (Fig. 2).
2. Undo all the screws (a) that fix the bracket (b) to the pallet and the legs of the display case itself.
3. Lift the display case and remove the pallet (c).

⚠ WARNING

Be certain that your hands and feet are out of the way before lowering the case. Failure to do so may result in serious injury.

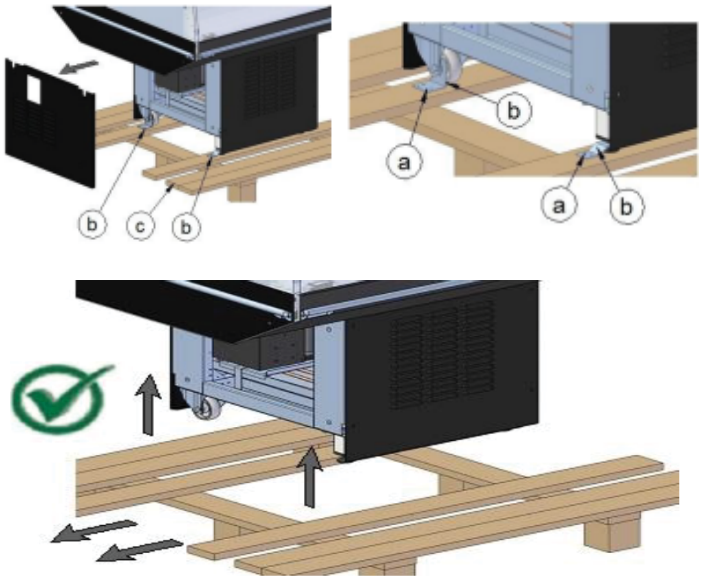


Fig. 2

⚠ DANGER

Electrical equipment and water drainage points are located underneath the display case. **Do not use front panels and uprights as lift points!**

CASE INSTALLATION

Positioning the cabinet

Respect the conditions shown in the figures below and the indications in "**TECHNICAL DATA**".

Fig. 3

DANGER

These cases are not designed for excessive external weight. Do not walk on top or inside of cases. Doing so may result in case damage and/or personal injury.

NOTE

Do not obstruct ventilation around the base of the display case condensing unit. Obstructing could cause the case to not operate correctly and failure to maintain product temperatures.

Horizontal positioning and adjustment

Position the display case horizontally using a spirit level, placing it, for example, in the lower areas illustrated in Fig. 4. Adjust using the adjustable feet supplied with the cabinet.

The height of the cabinet above the ground can be adjusted as shown in Fig. 4 below.

Fig. 4

NOTE

Failure to properly level the case could result in lack of proper condensation drainage leading to failure of the unit.

COMPRESSOR COMPARTMENT DIAGRAM

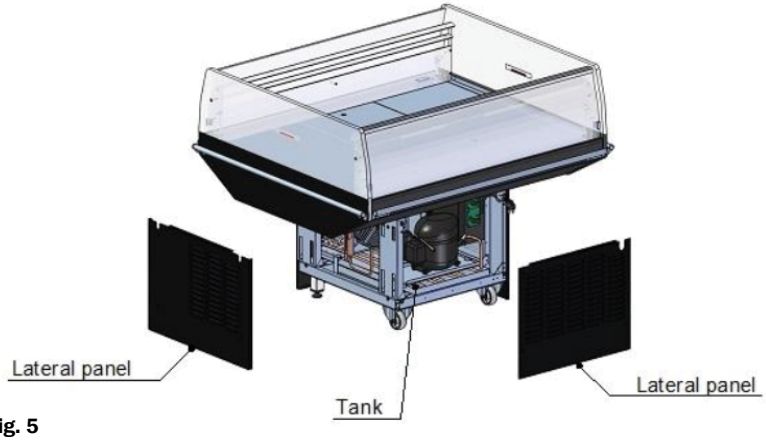
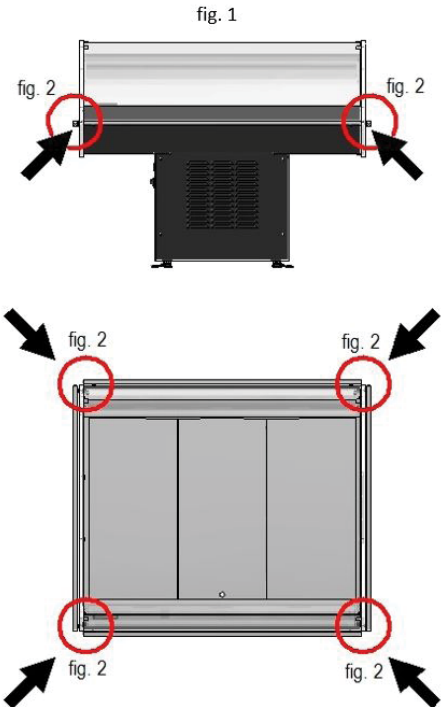


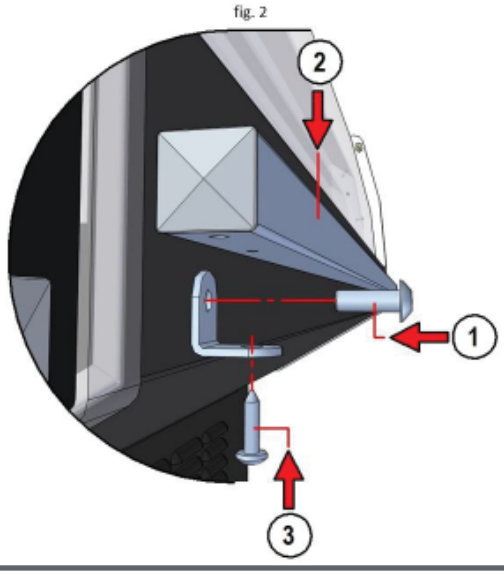
Fig. 5

NOTE

Remove all plastic wrap from all items in the case including the deck pans before operating.

Bumper Installation:





CASE CONNECTION

ELECTRICAL

Electrical hookups are made through the electrical raceway that can be accessed by removing the front lower panels of the display case.

When connecting to the power supply on the case, field wiring should exit box from the side furthest away from case wiring to allow more room inside for wiring connections. The case must be grounded. For more detailed electrical wiring information (see Appendix A1).

Prior to plugging in and starting up the case always check the data tag located on the left end exterior lower panel. This case utilizes a NEMA 5-15 plug that comes wired to the display case (Fig. 6) which can be found at the rear base panel. **Note: Check that the voltage of the receptacle you are going to use for power and the voltage required for the case match.**

Fig. 6 Main power cord plug type

⚠ DANGER

Prior to plugging in and starting up the case. Be certain that the voltage of the receptacle you are going to use and the voltage required for the case match. Failure to do so may result in case/system damage.

⚠ DANGER

Be certain that all electrical connections are compliant with local codes.

⚠ DANGER

CAUTION, RISK OF ELECTRIC SHOCK. If the cord or plug becomes damaged, replace only with a cord and plug of the same type.

The display case must be connected to a main power source that complies with electrical safety standards and is equipped with a high-sensitivity magneto-thermal cut-out.

Before plugging the display case in to the main power check the following:

- The power to the display case will be connected to has a ground connection in compliance with current safety standards and the display case is properly grounded.
- The voltage corresponds to the data tag as indicated on the various electrical components and power supply.
- There are no excessive power voltage drops (as verified at the case power supply terminals) or wires of unsuitable cross-section or in any case non-compliant with standards in force: these could cause malfunctions and/or create serious damage to the case electrical components and also render the warranty null and void.
- The refrigerated display case power supply is independent of other power supplies and can be disconnected separately;
- Before inserting the plug in the main power source, check that the switch is *OFF*. Insert the plug and then switch *ON*. The value of the line protection fuse or magneto-thermal cut-out must correspond to that indicated in the test report.

REFRIGERATION & COMPRESSOR COMPARTMENT

The bottom mounted compressor compartment can be accessed by removing the front, rear or side panels.

Power Supply

1. Ensure the case power switch is in the off position.
2. Plug the main power cord (Fig. 6) located at the rear base panel of the case into the power source.
3. Turn the power switch to the ON position (Fig. 7). The case should begin normal operations.

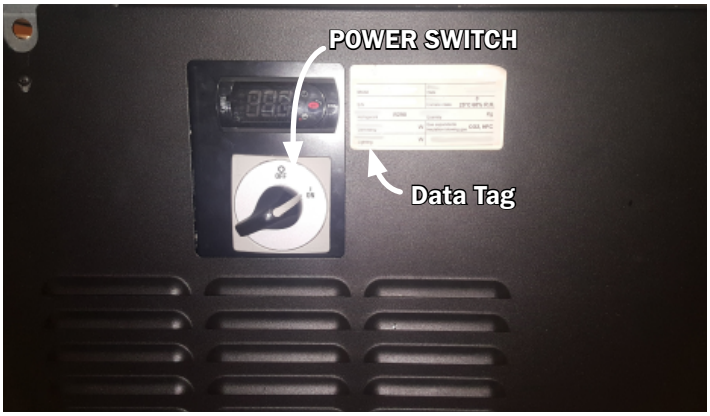


Fig. 7 Lower panel switch locations

COMPRESSOR COMPARTMENT DIAGRAM

A Condenser Fan
B Compressor
C Fan Control Board
D Electrical Junction Box
E Drain
F Dissipater Pan
G Suction Line
H Discharge Line

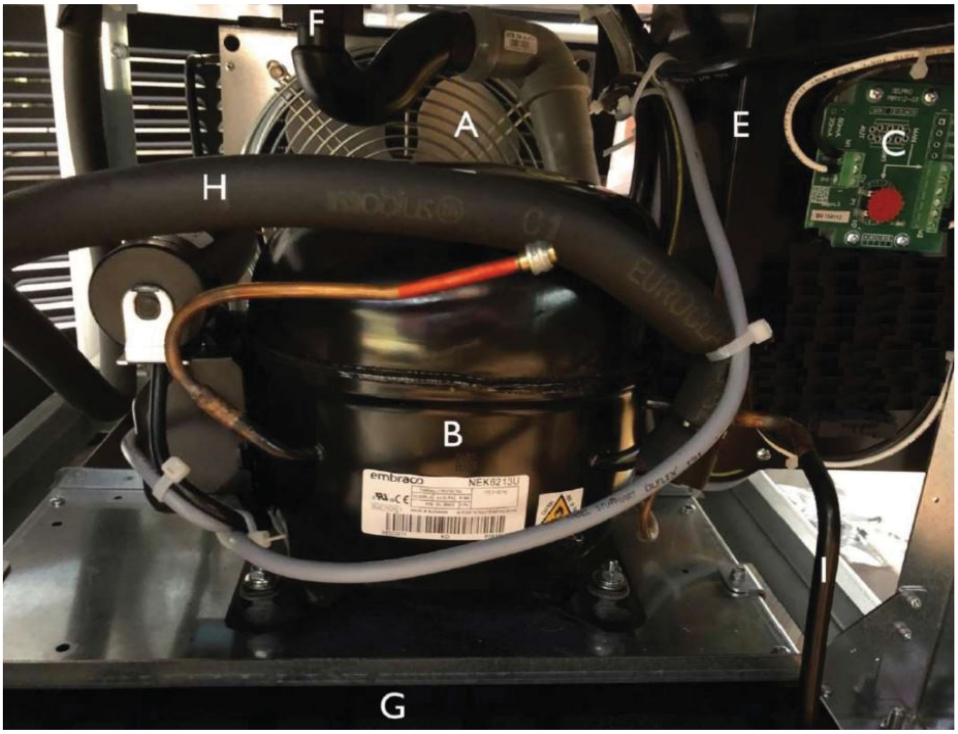


Fig. 8

Note: Access locations and/or compartment configurations will vary based on case design.

CONTROLS ON THE CONDENSING UNIT

The control panel is in the lower section of the cabinet. See Appendix for full instructions on how to program the Carel electronic controller.

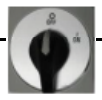
Picture	Function	Operates on	Adjusts
	Switch on/ off	Power supply to control panel. Thermostat	//
	Switch on/ off	Condensing unit motor	//
	Adjustment	//	Case tempera- ture Defrost cycle

Fig. 9

NOTE

See Appendix for full instructions on how to program the Carel electronic controller.

DANGER

ALWAYS CHECK THE THERMOSTAT CURRENT RATING because it may have a limited current, as low as 2A. If necessary protect digital thermostat contacts with a contactor.

DANGER

When carrying out maintenance tasks inside the refrigerated case or compressor compartment, it is essential to disconnect the power source to the case from the main power.

The set point and hysteresis values

Case Model	Set Point (°F)	Hysteresis (°F)	Application
3x3	26	9.5	Deli
4x4	6	2	Meat
4x8	6	2	Meat

SAFETY LABELS

Inspect the refrigerated display case and ensure all safety warnings/information applied on the refrigerated case are not removed. Any labels removed must be replaced. The following signs are applied:

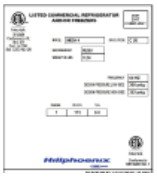
Warning #.	Description of Warning	Symbol/Information	Application
1.	ID Plate		Close to Field Wiring Box
2.	Danger: connect to an electrical system with a magneto-thermal cut-out		On Field Wiring Box
3.	Danger: connect to an electrical system with a magneto-thermal cut-out		On electrical panel. Power lead
4.	Danger: Do not lift. Disconnect electrical power first; do not use water jets directly; moving parts; disconnect electrical power.		On all fan holders
5.	Ground connection point.		On the electrical switch box.
6.	Type label	ANSI/NSF-7 Type 1 Display Refrigerator intended for 75°F/55%RH	Close to Field Wiring Box
7.	Intended use label	This equipment is intended for the storage of packaged products only	Close to Field Wiring Box
8.	Load limit		On side glass/fixed and/or mobile
9.	Danger: Risk of fire or explosion. Flammable refrigerant used. Do not use mechanical devices to defrost refrigerator. Do not puncture refrigerant tubing.		Flammable locations

Fig. 10

Before powering-up the case, be certain that all of the steps listed below have been completed to ensure proper case functionality, safety and compliance with warranty terms.

- ☐ **Have you thoroughly examined the case for shipping damage? (see pg. 4)**
- ☐ **Have you checked to ensure the case is horizontally level? (see pg. 5-7)**
- ☐ **Have you checked all exposed refrigeration lines to ensure that they are not kinked, dented or rubbing together and have installed the compressor compartment access panel? (see pg. 8)**
- ☐ **Have you checked and verified the voltage of the receptacle you are going to use for power and the voltage required for the case match? (see pg. 8)**
- ☐ **Have you verified the display case switch is in the OFF position prior to plugging in to the main power source? (see pg. 8)**
- ☐ **Have you reviewed safety warning labels and verified all are present and in good condition? (see pg. 10)**

After powering-up the case, be certain that all of the steps listed below have been completed to ensure proper case functionality, safety and compliance with warranty terms.

- ☐ **Check case temperature and adjust controller as needed. All display case connections comply with the information/instructions? (see pg. 9)**
- ☐ **Store the installation manual in the vicinity of the display case itself to where it can be accessed and consulted by all members of staff involved in the use of the refrigerator display case.**
- ☐ **Before placing food in the display case, allow the case to operate for approximately two (2) hours and ensure the case is at the proper temp before loading.**

AIRFLOW & PRODUCT LOAD

Hillphoenix cases provide maximum product capacity within the refrigerated air envelope. Please keep products within the appropriate load limit.

It is important that you do not overload the food product display so that it impinges on the airflow pattern (Fig. 11). Overloading will cause malfunction and the loss of proper temperature levels.

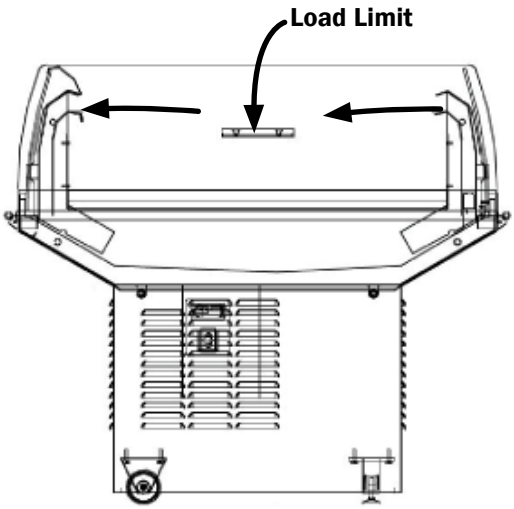


Fig. 11

The refrigerated case is marked with a line to indicate the load limit (see Fig. 12).

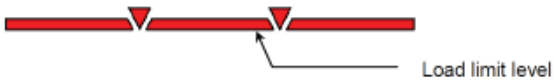


Fig. 12

Adequate refrigeration is only guaranteed for products that is displayed below this line. Arranging the goods in a uniform manner ensures the best possible working efficiency of the display case.

It is good practice to carry out rotation of stock when refilling the cabinet with new products. Older products must be sold first. Products must not obstruct air vents.

NOTE

Proceed to the loading only once the display case has reached the proper temperature setting.

FORBIDDEN

DO NOT OVERLOAD THE CASE: this is the most common error and can cause secondary faults and malfunctions (e.g. blocking the evaporator by obstructing cold air outflow). Note also that products lying above the load limit line will not be properly refrigerated and this will inevitably cause their rapid deterioration.

FORBIDDEN

1. Do not load products above the load limit line.
2. Do not tamper with safety devices. Any tampering shall render the warranty null and void and shall exonerate Hillphoenix from any liability with regard to users of the refrigerated display case.
3. Do not stand on any part of the refrigerated display case.
4. Do not enter any condensing unit compartment of the refrigerated case unless an authorized service technician.
5. Do not use water jets directly to clean the cabinet.
6. Do not remove the electrical panel front cover.
7. Do not attempt to remove build-ups of ice with sharp objects.
8. Do not clean with acid products or products with a strong degreaser or corrosive action; do not use abrasive sponges.

Defrosting

The defrost cycle is very important in that it ensures correct operation of the cabinet. It is activated and controlled by the thermostat which temporarily stops the condensing unit, allowing the evaporator to shed the build-up of ice. Fan speeds during defrost and refrigeration are independently adjustable using the Rheostat boards shown in Figure 7 on Page 9 (Items C & D). The default settings utilize a higher fan speed during defrost to minimize off time and ensure a clear coil. For factory settings see page 2 of this manual 'TECHNICAL DATA'.

DANGER

Flammable

DANGER – Risk Of Fire or Explosion. Flammable Refrigerant Used. Do Not Use Mechanical Devices To Defrost Refrigerator. Do Not Puncture Refrigerant Tubing.

CASE CLEANING

A periodic cleaning schedule should be established to maintain proper sanitation, insure maximum operating efficiency, and avoid the corrosive action of food fluids on metal parts that are left on for long periods of time. Further suggestions for case cleaning include the following:

- Remove all food from the refrigerated display case prior to cleaning.
- To avoid shock hazard, be sure all electrical power is turned off before cleaning. In some installations, more than one disconnect switch may have to be turned off to completely de-energize the case.
- Remove the interior deck pans and any removable internal panels as shown in Fig. 13 for cleaning.
- The bottom of the inside tank and the area underneath the evaporator should also be cleaned with the same frequency where the display case is exposed to fluid spillage or liquid drainage from merchandised products.
- All surfaces pitch downward to a deep-drawn drain trough, funneling liquids to the center of the case where the waste outlet is located for easy access. Check the waste outlet to insure it is not clogged before starting the cleaning process and avoid introducing water faster than the case drain can carry it away. It is recommended that this case be wiped down rather than hosed to avoid overflowing the condensate pan.
- Clean from top to bottom when cleaning the display case to avoid cross contamination.
- Avoid spraying any cleaning liquids directly on the electrical connections.
- Allow cases to be turned off long enough to clean any frost or ice from coil and pans.

DANGER

SHOCK HAZARD

Always disconnect power to case when servicing or cleaning. Failure to do so may result in serious injury or death.

NOTE

Use specific products for disinfection and cleaning: use soft, non-abrasive sponges or rags!

FORBIDDEN

Do not use alcohol, solvents or derivatives for cleaning surfaces on plexiglass. It's use makes it fragile at the treated surface and causes the formation of cracks and thus inevitably the break.

Fig. 13 Removable parts for cleaning.

NOTE

All washed parts must be rinsed and air dried prior to the case being reconnected to the power source.

Fans and Fan Plenum

1. Disconnect power to the case and wait for fans to come to a complete stand-still.
2. To access the underside of the fans, the coil or the tank (Fig. 14). Lift the fan plenum and clean as necessary. Use a spray bottle filled with an approved mild detergent and warm water.
3. Be sure to move the fan plenum back to its original position after cleaning and/or inspection is complete.

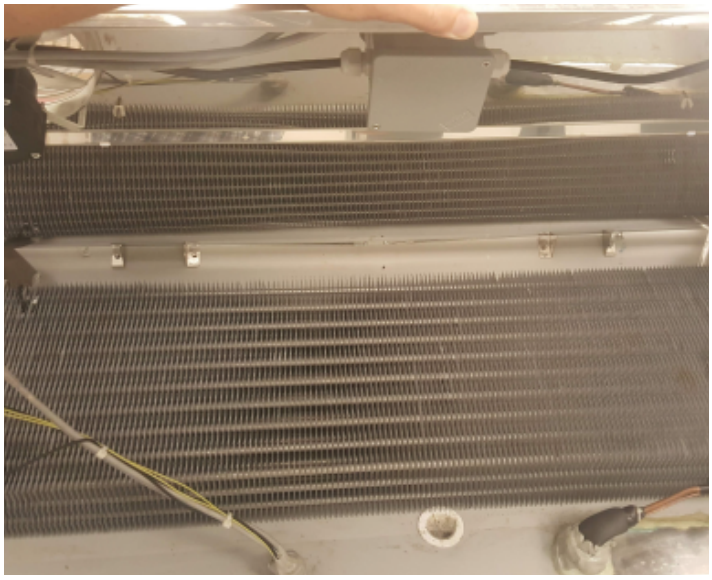


Fig. 14 Fan and Fan Plenum

DANGER

When carrying out cleaning work or maintenance on the condensate collection tank it is essential to disconnect the machine and all its accessories from the mains power!
WARNING!!! DANGER OF BURNS
Be careful of the elements inside the condensate evaporation tank: they operate at high temperature!!

NOTE

Maintenance workers are advised to use gloves to protect themselves against cuts and abrasion in that, while all the corners of the sheet metal have been folded back, there may still be some sharp edges. Do not wear accessories (necklaces, bracelets etc.) or loose, flapping or hanging clothing as it could get caught up in the structure.

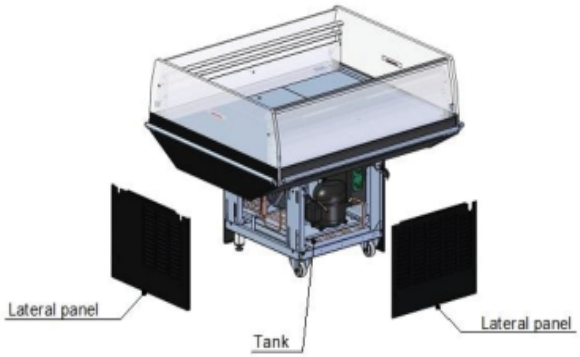


Fig. 15 Removing condensing unit panels

CHECKING AND CLEANING THE CONDENSATE COLLECTION TANK

Inspect the condensate collection tank at least once every 6 months. Remove the lateral panels and clean the tank (see Fig. 15). Ensure you disconnect the electrical power supply and make sure you DO NOT touch the elements as they reach high temperatures (necessary for evaporation inside the tank).

Cleaning the condenser of the condensing unit

The condensers used on the condensing units gather dust and dirt and must be cleaned regularly. Under normal working conditions this task must be executed at least once a month using a soft-bristled brush and a vacuum cleaner. A dirty condenser will reduce the display case performance: it will also result in increased energy consumption. (See Fig. 17)

CAUTION

Be sure to clean the condenser air intake filter monthly. Failure to do so may result in loss of normal compressor functions and case damage.

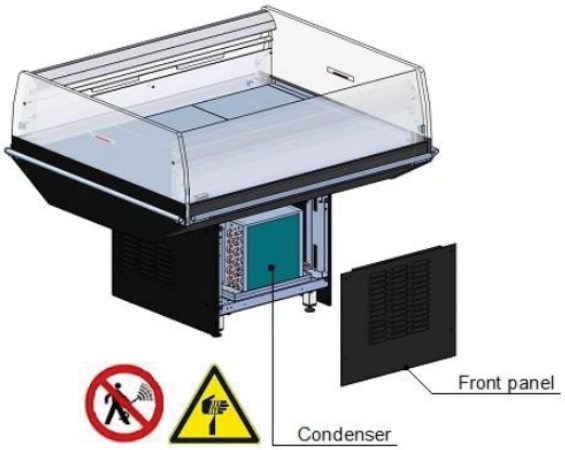


Fig. 16 Cleaning the condensing unit

UNSCHEDULED CASE MAINTENANCE

Unscheduled maintenance concerns all those tasks that cannot normally be carried out by the routine user as specified on pages 13-14. Such tasks require qualified personnel with specific technical skills (e.g. refrigeration system specialists, electricians etc.) and must be carried out at least once a year. See the scheduled maintenance table for a list of the main tasks. (Fig. 16).

If inspection reveals any rust, cracks and etc...it will be necessary to carry out repairs and/or replacement of parts so that the case meets code and the display case is in prime operating condition. To enhance safety, it is recommended that you always seek the advice of a specialized technician before carrying out any repair work.

PARTS SUBJECT TO WEAR AND SPARE PARTS

Most spare parts carry clear, complete ID information. It is important that the refrigerated case parts be replaced by analogous parts of equivalent safety and quality: to order spare parts please contact Hillphoenix, stating the case model and serial number, found in this manual or on the case ID plate, and provide a description of the component and the desired quantity. Refer to the Parts section in the back of the manual for parts ordering and to identify parts that may need to be replaced.

CAUTION

Do not pressure wash equipment as damage to electrical components may result.

SCHEDULED MAINTENANCE TABLE

Maintenance	Weekly	Monthly	Half Yearly	Yearly
Cleaning case	✓			
Cleaning gas condenser		✓		
Case visual check	✓			
Safety labels visual check	✓			
Check electric system				✓
Check water drainage system.			✓	
Check refrigeration system				✓
General inspection				✓

Fig. 17 Recommended cleaning schedule

INSTRUCTIONS FOR PERSONNEL

In the event of General Emergency

Immediately inform those in the vicinity of the perceived danger, gesticulating if necessary; cut the electrical power to the cabinet.

In the event of Fire

In the event that the refrigerated case catches fire or is involved in a fire it is possible to use an extinguisher with a powder-type or CO2 extinguishing agent.

Resetting the Case

To restore normal operation it is necessary to eliminate all the causes of the emergency situation; if necessary repair or replace damaged parts.

NOTE

If safety devices are tripped it will be necessary to identify the cause before continuing work.

CAUTION

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

CAUTION

R-290 flammable refrigerant in use. Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation operating and maintenance instructions thoroughly before installing or servicing this equipment.

DANGER

Flammable

DANGER – Risk Of Fire or Explosion. Flammable Refrigerant Used. Do Not Use Mechanical Devices To Defrost Refrigerator. Do Not Puncture Refrigerant Tubing.

FAILURES AND TROUBLESHOOTING

Failures

In the event of a failure of mechanical/electrical/refrigeration parts the initial safety conditions must be restored immediately by replacing or repairing such faulty parts.

Table of Failures and Troubleshooting

PROBLEM	POSSIBLE CAUSE	SOLUTION
The condenser fan motor not operating.	1) the parameters on controller incorrectly adjusted to higher temperature set point.	1) readjust set point on controller to the correct setting, per guidelines on the next page.
The refrigerated cabinet does not work.	1) the mains circuit breaker is set to OFF; 2) the power line between refrigerated cabinet and power socket is faulty; 3) the switch on the refrigerated cabinet control panel is not switched on.	1) turn the mains power on; 2) make sure the plug is inserted properly in the socket; 3) turn the power switch on the refrigerated cabinet panel to ON.
The refrigerated cabinet does not cool enough.	1) the temperature thermostat is adjusted incorrectly; 2) the refrigerated cabinet has been filled too much 3) the condensing unit is clogged with dust 4) the evaporator is covered in ice	1) reprogram the temperature thermostat; 2) remove goods and observe the maximum load level; 3) clean the condensing unit with a soft-bristled brush and vacuum cleaner 4) carry out a defrost cycle.
The refrigerated cabinet cools too much.	1) the temperature thermostat is adjusted incorrectly.	1) reprogram the temperature thermostat;
The refrigerated cabinet runs continuously.	1) the temperature thermostat is adjusted incorrectly; 2) the refrigerated cabinet has been filled too much and is preventing correct air circulation.	1) reprogram the temperature thermostat; 2) remove goods and observe the maximum load level.

PLEASE READ INSTRUCTIONS <u>BEFORE</u> CHANGING SET POINTS

- UNIT IS SET TO FRESH MEAT TEMPERATURE
- THERMOSTAT **CORRECTLY READS 6°F** IF USING AT THIS APPLICATION
- SCAN **QR CODE** FOR INSTRUCTIONS ON SETTING PARAMETERS FOR NON-MEAT APPLICATIONS
- CHANGING SET POINTS OUTSIDE GUIDELINES WILL IMPACT UNIT OPERATION

MIDA R-290 Self-Contained Case – Set Point Summary Details

Set points for various product applications are listed below:

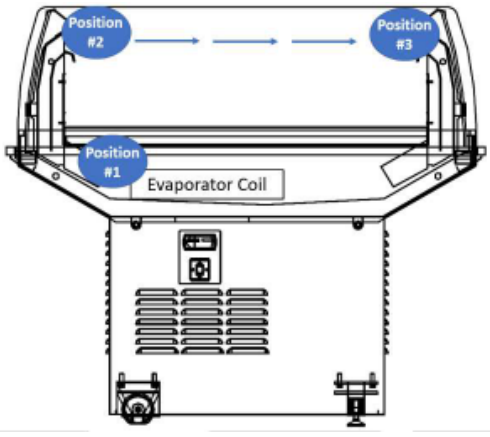
Case Model	Application	Set Point St (°F)	Differential rd (°F)	Defrost			
				Frequency dI (hr)	Term Temp dt (°F)	Term Time dP (min)	Drip Time dd (min)
MIDA 4	Dairy	11	14	6	68	32	0
	Deli	10					
	Fresh Meat	6	2				
MIDA 8	Dairy	13	14				
	Deli	11					
	Fresh Meat	6	2				

Denotes Default Set Points

Set Point Comments:

- For the MIDA4 and MIDA8, the controllers are set to Fresh Meat temperatures by default.
- The MIDA4 and MIDA8 are designed to hold exceptionally low product temperatures, and are supplied at those settings by default. If warmer product temperatures are desired, the user must change both the setpoint (parameter "St"), and the differential (parameter "rd").
- The differential parameter must be changed for the compressor to remain below its maximum allowable cycle rate of 6 starts per hour.
- The set points listed for the MIDA4 and MIDA8 in the table above may seem lower than what is common for a typical medium temperature self-contained case. This difference is due to the following reasons:
  - **Probe Location:** Due to the transparent nature of the rear glass on this case, the temperature control probe is not located near the discharge air baffles (Position #2 in cross section below) as is common for display cases with solid rear walls. On this case the probe is located directly off the back of the evaporator coil (Position #1). The temperature reading on the controller represents the air temperature off the back of the coil.
  - **Anti-Condensate Heat:** Anti-condensate heat is used on the rear glass in order to keep the glass free of condensation providing shoppers with a clear, unobstructed view of the product. This heat has an impact on the discharge air temperature, so the coil must run colder than would be typical of a case without this additional heat.

As stated, the air temperature at the rear discharge baffle (Position #2) is greater than the air temperature at the back of the coil (Position #1). A correlation between these temperatures and the air temperature at the front return air baffle (Position #3) is provided in the table below.



Location	Deli	Dairy	Packaged Meat
Coil Discharge Air	15.0	16.2	7.5
Rear Baffle Discharge Air	22.2	23.4	15.0
Front Baffle Return Air	30.3	31.4	24.0

TROUBLESHOOTING

Step by Step Moethod to Modify the Case Set Point (Parameter “St”)

1. Hold the SET button for 1 second, the set value will begin flashing.


2. Adjust the parameter to the desired value using the UP and DOWN arrows.

3. Press SET again to confirm the new value.

Step by Step Method to Modify the Differential Setting (Parameter “rd”)

1. Hold the SET button for 3 seconds. If there are active alarms, first mute the buzzer by pressing the SET/MUTE button.

2. The display will show the parameter code “PS” (password).

3. Press the SET button to access the password setting and use the UP and DOWN buttons to enter the number “22” and press SET to confirm the password.
4. Use the UP and DOWN buttons to scroll the names of the parameters until reaching the parameter”rd”.

5. Press SET to display the value associated with this parameter.

6. Adjust the parameter to the desired value using the UP and DOWN arrows.

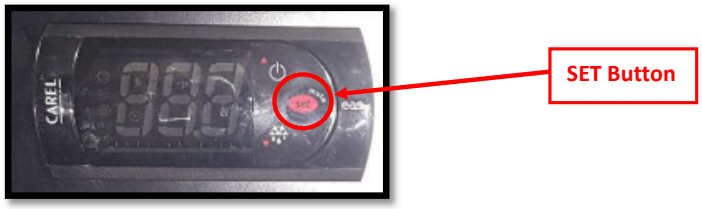
7. Press SET to temporarily save the new value.
8. Press the SET button for more than 3 seconds to permanently save the selected values and exit.

Correcting Unit of Measure from Celsius to Fahrenheit

The controllers are programmed with the default temperature set points in Fahrenheit. If a controller is incorrectly set to Celsius units, all temperature parameters must be manually converted frem Celsius to Fahrenheit. Please follow the below precedure to correct this issue:

1. Hold the SET button for 3 seconds. If there are active alarms, first mute the buzzer by pressing the SET/MUTE button.
2. The display will show the parameter code “PS” (password).
3. Press the SET button to access the password setting and use the UP and DOWN buttons to enter the number “22” and press SET to confirm the password.
4. Use the UP and DOWN buttons to scroll the names of the parameters until reaching the parameter “/5”.
5. Press SET to display the value associated with this parameter.
6. Adjust the parameter value from “0” (for Celsius) to “1” (for Fahrenheit) using the UP arrow.
7. Press SET to temporarily save the new value.
8. Use the UP and DOWN buttons to scroll the names of the parameters until reaching the parameter “/C1”.
9. Press SET to display the value associated with this parameter.
10. Adjust the value of the parameter using the Celsius to Fahrenheit conversion formula;
    T(°F) = (T(°C) x 9/5) + 32
11. Repeat dteps 8 - 10 for parameters /C2, /C3, St, rd, r1, r2, r3, r4, dt, dt, d/, AO, AL, AH, Ac, AE, & F1.

12. Press SET to temporarily save the new values.
13. Press the SET button for more than 3 seconds to permanently save the selected values and exit.



SAFETY DEVICES

FORBIDDEN

It is absolutely forbidden for the user to tamper with safety devices. Before using the refrigerated case check that mechanical safety covers are properly in place. Any tampering shall render the warranty null and void and exonerate Hillphoenix from any liability with regard to users of the refrigerated case.

Only maintenance personnel may carry out maintenance tasks involving safety devices. These tasks are listed below.

SAFETY DEVICE	SCOPE OF INTERVENTION	ACTION
Incorporated over-pressure cut-out	On incorporated condenser unit compressor	Cuts the electrical power of the compressor if the pressure of the refrig-erant rises above the safety limits.
Fixed cover on elec-trical control panel. Remove only with aid of tools	Electrical control panel	Prevents access to live parts. Electrical danger warning sign applied (see “DESCRIPTION OF DANGERS AND RISKS RESIDUAL)
Fixed safety gratings. Remove only with aid of tools	On evaporator fans.	Prevents access to fans when they are running or slowing down to a stop.

DESCRIPTION OF DANGERS AND RISKS RESIDUAL

Residual Dangers

Dangers that have not been reduced/eliminated with the safety measures adopted on the refrigerated case can never-theless be reduced/eliminated as long as users apply proper managerial practices. Users must:

☐ Ensure that all safety warning and labels are always in good condition; inspect them periodically and have them replaced whenever necessary.

☐ Do not install any spare parts that are not identical to the originals or of equivalent performance.

☐ Do not carry out any modifications or structural work without approval from Hillphoenix or a qualified field service technician.

☐ Should the refrigerated case be dented, inspect the struc-ture visually or have qualified personnel carry out an inspec-tion.

After a long period of disuse have a qualified field service tech-nician carry out an inspection of the case to check that it is in good condition and working properly.

Residual Risks

While the refrigerated case has been designed to ensure maximum safety, there nevertheless remain some residual risks. Hillphoenix has identified the main **dangers and resid-ual risks for users and maintenance personnel** as follows in chart below:

DESCRIPTION OF RESIDUAL RISK	CAUSE	SAFETY MEASURES
Danger of falls in area surrounding the cabinet	Presence of: stairs, columns etc. and/or slippery floors and objects and/or work tools	Mark out the relevant zones and highlight them with warning signs and symbols (e.g. yellow/black striped marker tape on stairs etc.) that are visible during both routine use and maintenance.
Danger of objects accidentally falling	Haphazard storage of tools/objects.	Use tool boxes in work areas. Ensure personnel are trained.
Danger of injury to hands, arms, legs and head	During cleaning and maintenance there may be objects or parts of the cabinet protruding from the case itself (e.g. glass covers open during cleaning)	Mark out the work area with appropriate barriers. Always use the recommended personal safety devices.
Risk of refrigerating gas leaks	Accidental damage to pipes	Immediate shutdown of case operation. Disconnect electrical power supply. Contact a service technician.

REFRIGERANT

This piece of equipment uses a R-290 Refrigeration system. This equipment has been clearly marked on the serial tag the type of refrigerant that is being used. There is also a warning labels stating that the unit contains R-290 refrigerant.

No smoking or open flames when servicing this equipment. If needed, use a CO2 or dry=power type fire extinguisher

Only authorized service technician, certified in R-290 system should service this equipment.

MANIFOLD SET

A R-134A manifold set can be used for servicing this equipment.

REFRIGERANT RECOVERY

Follow all national and local regulations for R-290 refrigerant recovery.

LEAKING CHECKING AND REPAIR

Leak check an R-290 system the same way you would an R-134a or R-404A system with the following exceptions.

1. Do not use a Halid leak detector on a R-290 system.

2. Electronic leak detector must be designated specifically for combustible gas.

Use of a bubble solution or an ultrasonic leak detector are acceptable.

When repairing a leak, it is recommended using oxygen free dry nitrogen with a trace gas not exceeding 200PSI.

When accessing an R-290 system, piercing valves are not to remain on the equipment in a permanent manner. After charge is recovered, Schrader valves are to be installed on the process stubs. Proper charge is to be weighed into the system and the system is to be leak checked afterwards.

The R-290 equipment must have red process tubes and other devices through which the refrigerant is serviced, such as any service port. This color marking must remain on the equipment. If marking is removed, it must be replace and extend at least 2.5 centimeters (1") from the compressor.

⚠ CAUTION

Component parts shall be replaced with like components. Service work shall be done by factory authorized service personnel, so as to minimize the risk of possible ignition due to incorrect parts or improper service.

CHARGING

Follow the charge amount specified on the data tag. It is recommended to use the shortest hoses possible to prevent undercharging.

- Ensure the system is sealed and leak checked
- Evacuate system to a minimum 500 micron
- Weigh in correct charge
- Leak check the system again
- Bleed the refrigerant from the high side hose to the low side hose
- Disconnect the hoses
- Remove line taps

⚠ DANGER

Flammable

DANGER – Risk Of Fire or Explosion. Flammable Refrigerant Used. Do Not Use Mechanical Devices To Defrost Refrigerator. Do Not Puncture Refrigerant Tubing.

⚠ CAUTION

It is highly recommended that a technician servicing a case with HC refrigerant is aware of safety considerations and maintenance procedures on how to safely handle flammable refrigerants.

Hillphoenix
A DOVER COMPANY

Contact the Service Parts Department at:

Shop Online: www.partsonestore.com
Email: orderparts@doverfoodretail.com
Phone: 833-3PARTS1 (1-833-372-7871)
For MIDA parts: choose (Case)

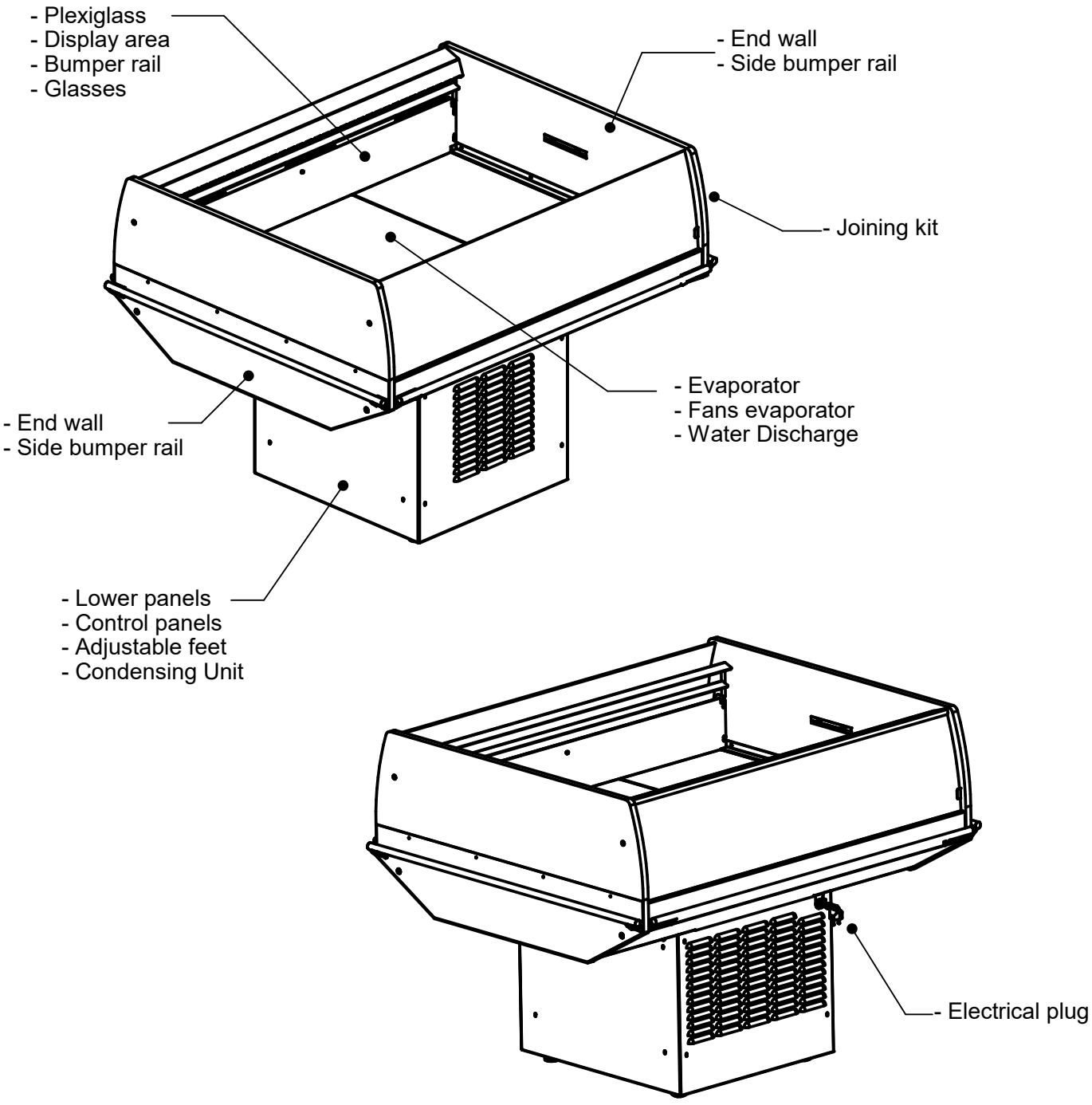
Provide the following information about the part you are ordering:

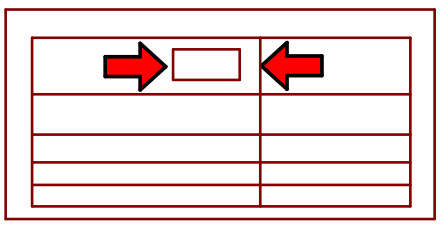
- **Model number and serial number* of the case for which the part is intended.**
- **Length of the part (if applicable).**
- **Color of part (if painted) or color of polymer part.**
- **Whether part is for left or right-hand application.**
- **Quantity**

***Data tag is located on the base of the display case.**

If the parts are to be returned for credit, contact the Parts Department. Do not send parts without authorization.

PARTS INDEX MIDA - 4x4



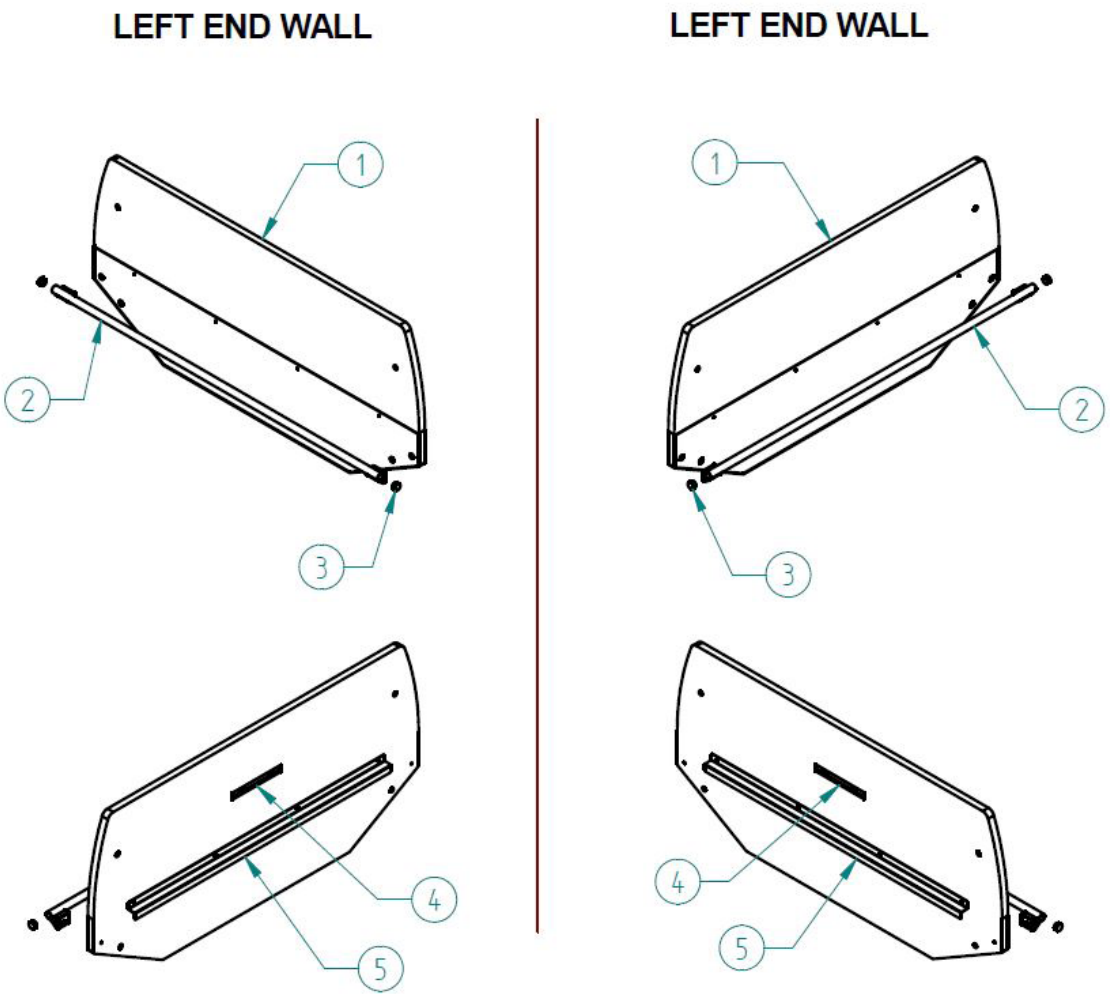


Provide the following information about the part you are ordering:

- Model number and serial number* of the case for which the part is intended.
- Length of the part (if applicable).
- Color of part (if painted) or color of polymer part.
- Whether part is for left or right-hand application.
- Quantity

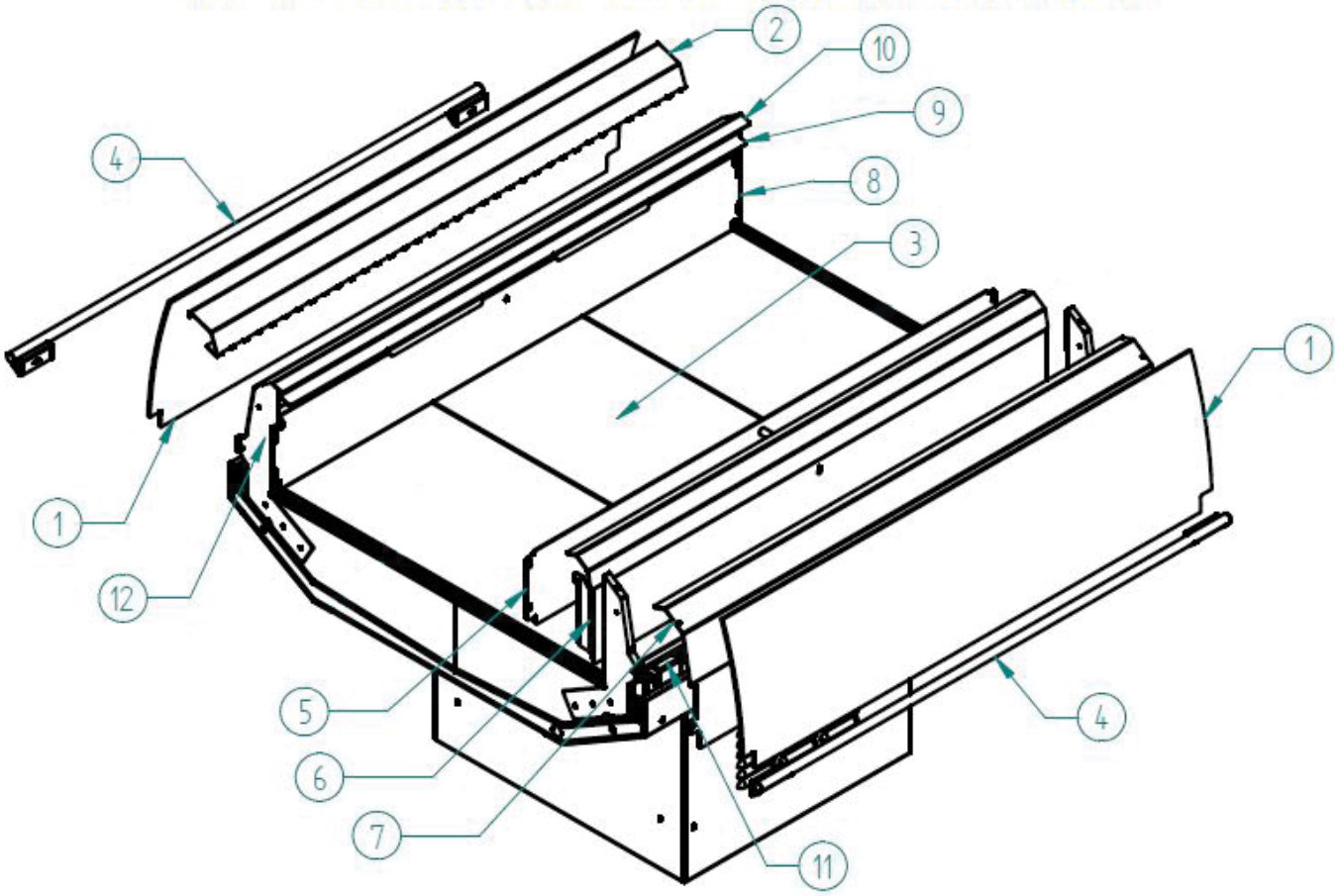
PARTS LIST

END WALLS / SIDE BUMPER



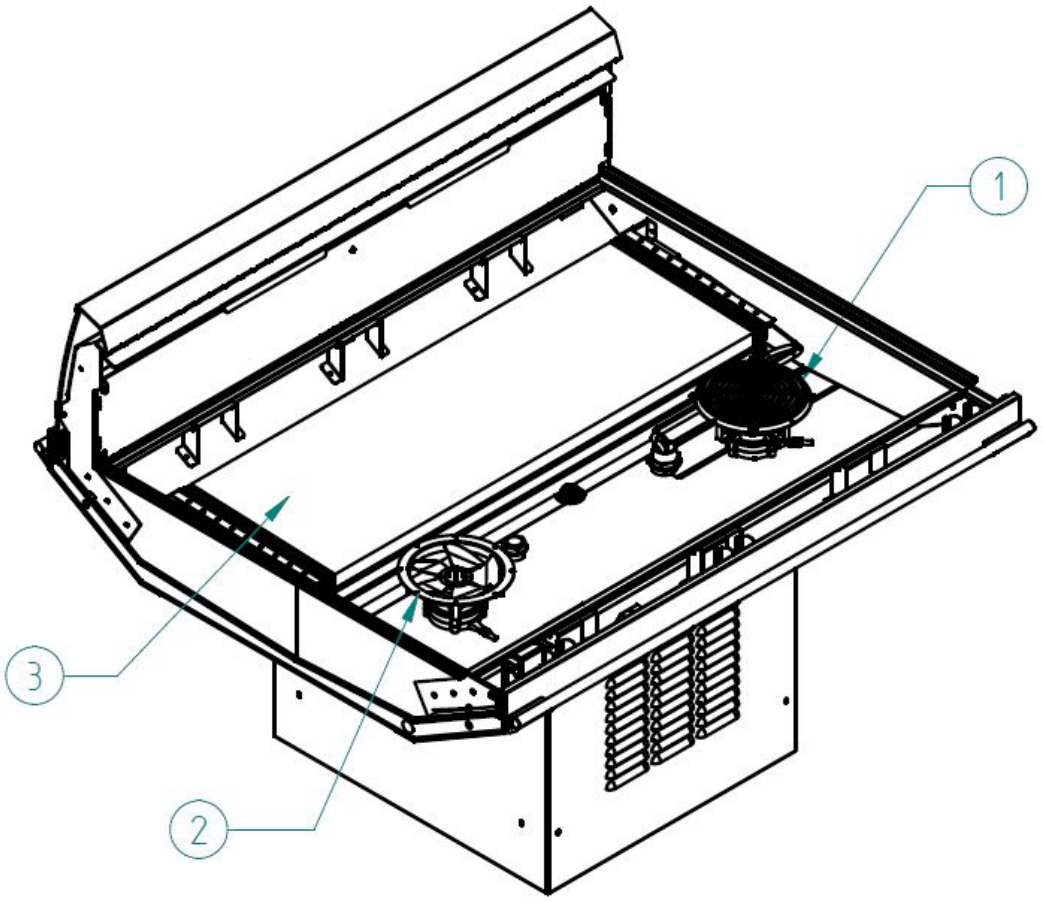
#	DESCRIPTION	LEFT	PCS	RIGHT	PCS
1	Plexiglass end wall	P113544B	1	P113544B	1
2	End wall bumper rail kit	P116638M	1	P116638M	1
3	Cap for bumper rail	P113547F	2	P113547F	2
4	Label “Load limit line”	P113549B	1	P113549B	1
5	Support for Plexiglass end wall	P113548D	1	P113548D	1

PLEXIGLASS/BUMPER RAIL / DISPLAY AREA



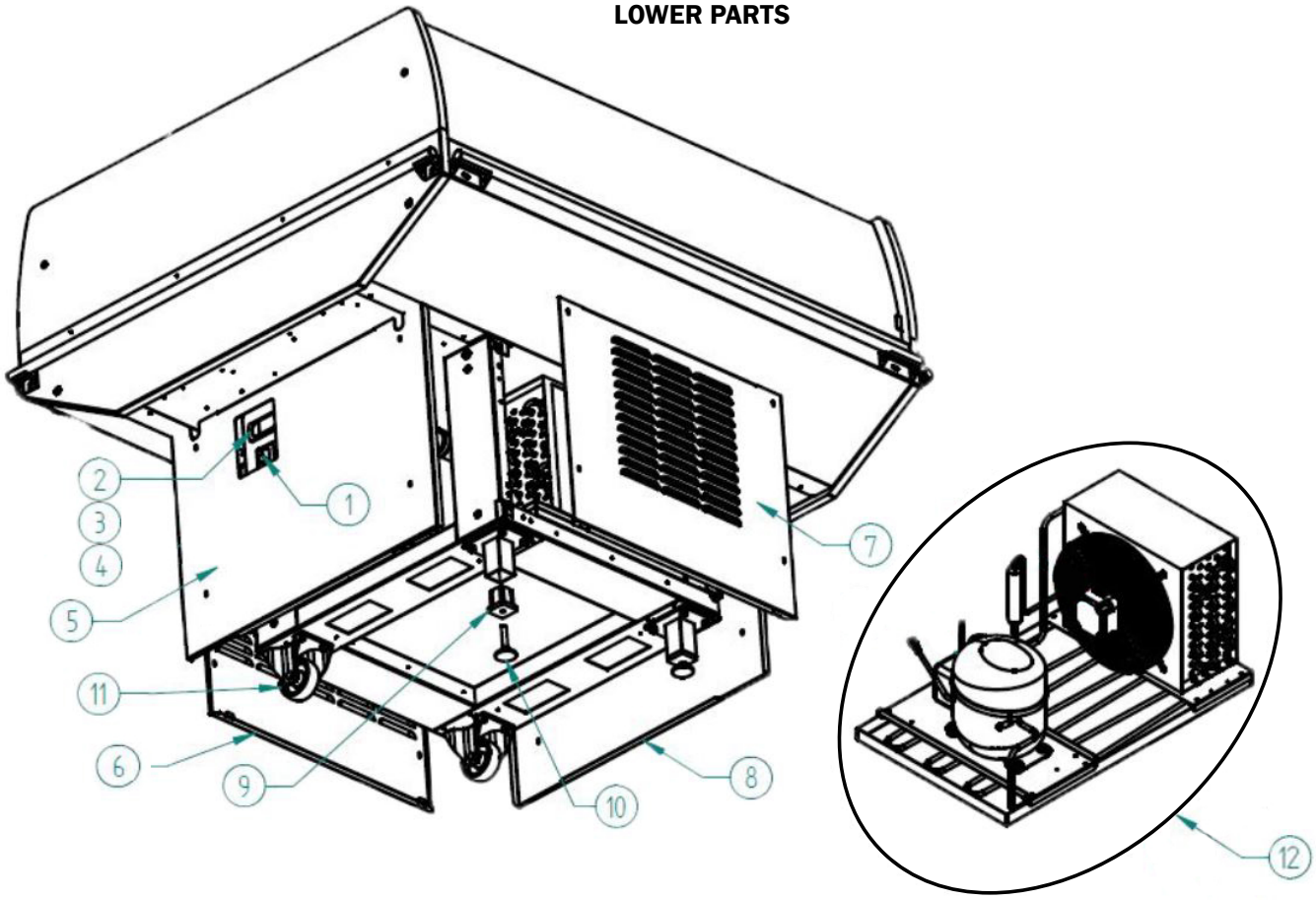
#	DESCRIPTION	Part Number	PCS
1	Tempered Front and Rear curved glass	P113550K	2
2	Anti-condensation Front	P113551G	1
3	Display deck with hole	P113553C	3
4	End wall bumper rail kit	See prior page	2
5	Product holder	P113554A	1
6	Rear Air inlet	P113555K	1
7	Rear closed air inlet	P113556G	1
8	Product holder	P113557E	1
9	Rear Air inlet	P113558C	1
10	Rear closed air inlet	P113559A	1
11	Solar Thermometer	P113560H	1
12	Air inlet end wall dx/sx	P113561F	4

EVAPORATOR / EVAPORATOR FANS



#	DESCRIPTION	Part Number	PCS
1	Protective metal grid Ø200 for evaporator fan	P113562D	2
2	Evaporator fan complete with impeller and metal ring	P113563B	2
3	Evaporator R290	P113564M	1

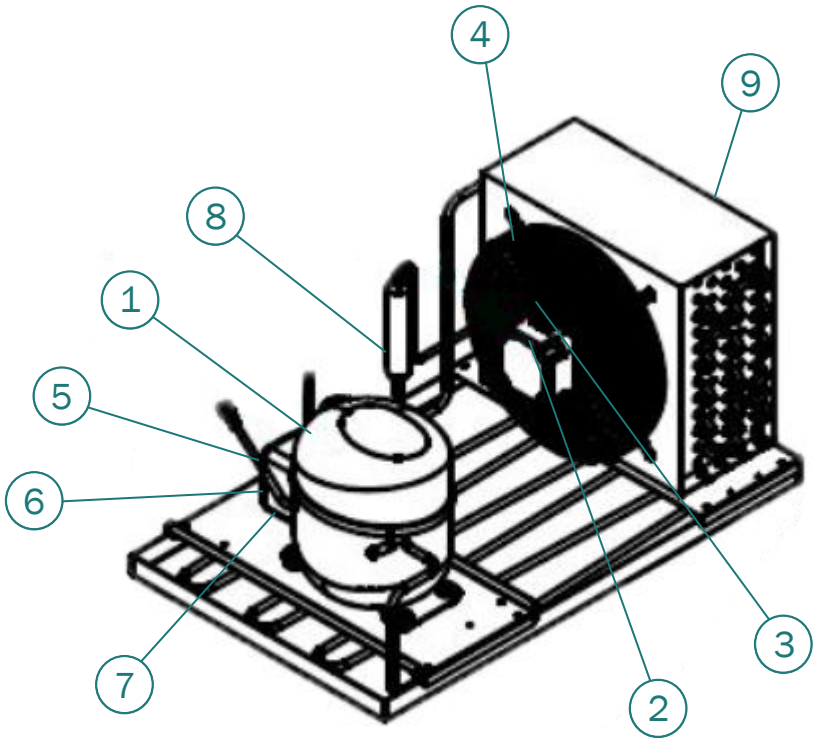
LOWER PARTS



#	DESCRIPTION	Part Number	PCS
1	ON-OFF switch 16A	P113565H	1
2	Carel Thermostat PJEZC0H100 115V 3 RELE 2HP 2NTC	P113566F	1
3	Temp Sensor MIDA 4	P116632B	1
4	Condensing Unit Relay MIDA 4	P116636D	1
5	Left side base panel INOX	P113567D	1
6	Rear base panel INOX	P113568B	1
7	Front base panel INOX	P113569M	1
8	Right side base panel INOX	P113570G	1
9	Adjustable feet support 40X40 SP.1,5 M10	P113571E	2
10	Adjustable feet TH40 M10X65	P113572C	2
11	Support Whell Ø80 fixed	P113573A	2
12	Compressor Unit Assembly	P116621E	1

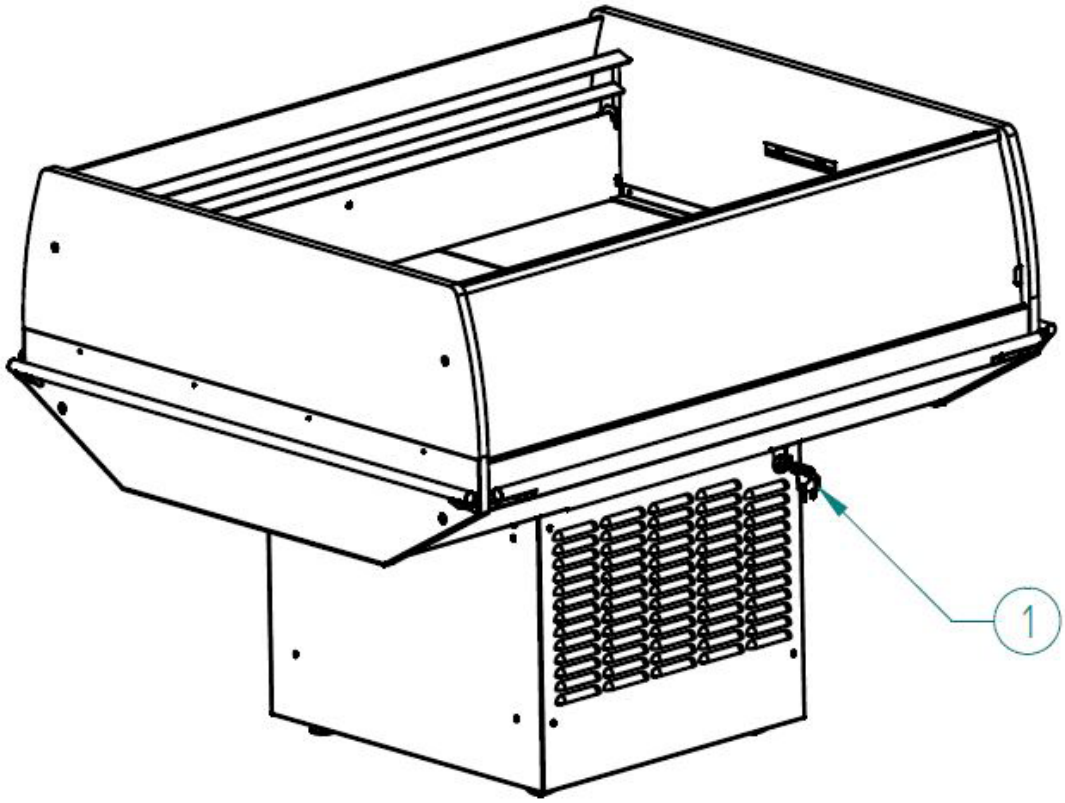
PARTS LIST

CONDENSOR UNIT PARTS - MIDA 4



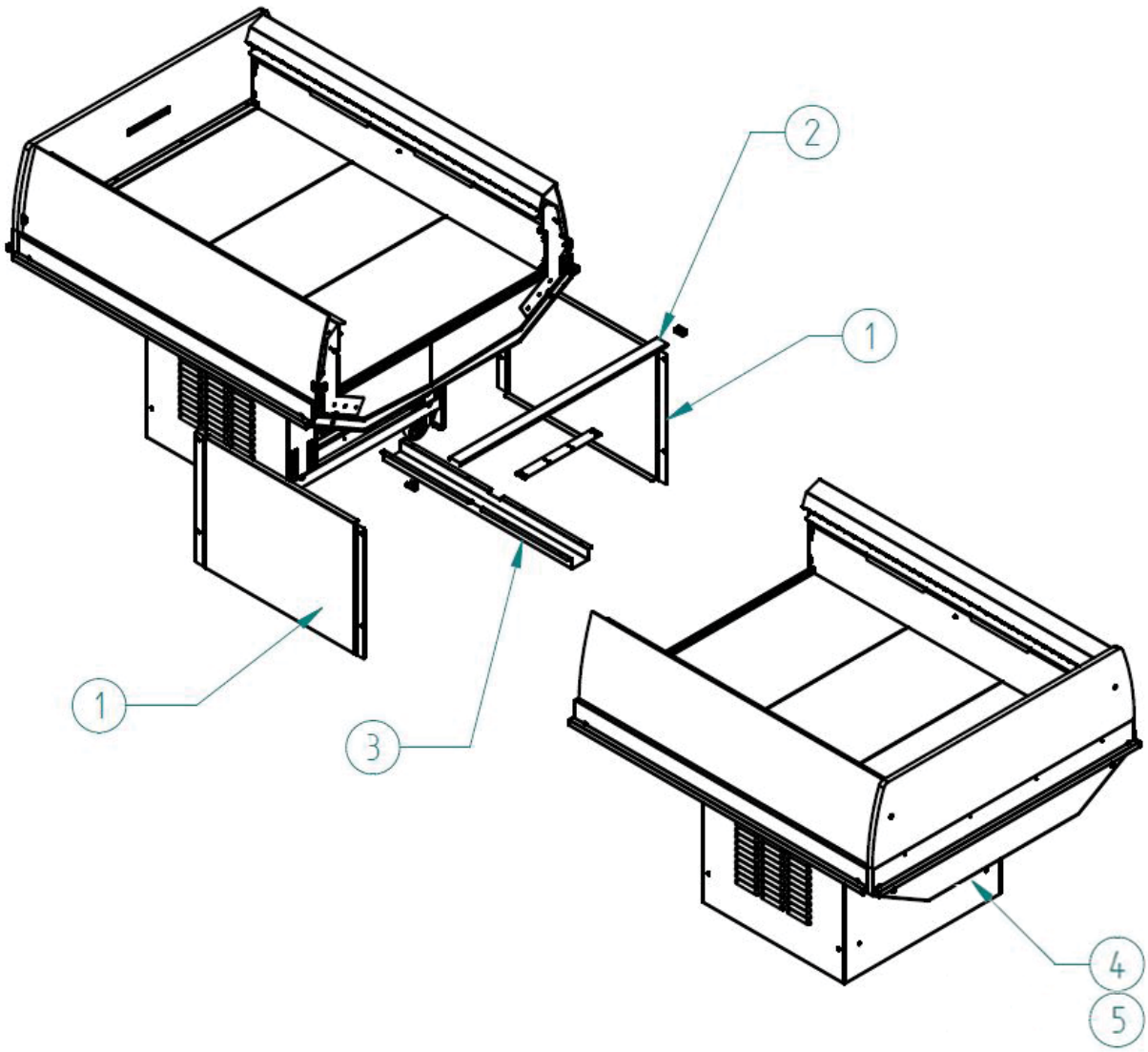
#	DESCRIPTION	Part Number	PCS
1	Compressor MIDA 4	P113574K	1
2	Condensing Fan Motor MIDA 4	P113575G	1
3	Condensing Fan Blade MIDA 4	P116622C	1
4	Condensor Fan Guard MIDA 4	P116623A	1
5	Compressor Start Capacitor MIDA 4	P116624K	1
6	Compressor Start Relay (ePTC) MIDA 4	P116625G	1
7	Clikson MIDA 4	P116627C	1
8	Filter Dryer MIDA 4	P116629K	1
9	Condensor Coil MIDA 4	P116631D	1

ELECTRICAL CORD



#	DESCRIPTION	Part Number	PCS
1	Electrical plug	P113576E	1

MIDA-8 JOINING KIT

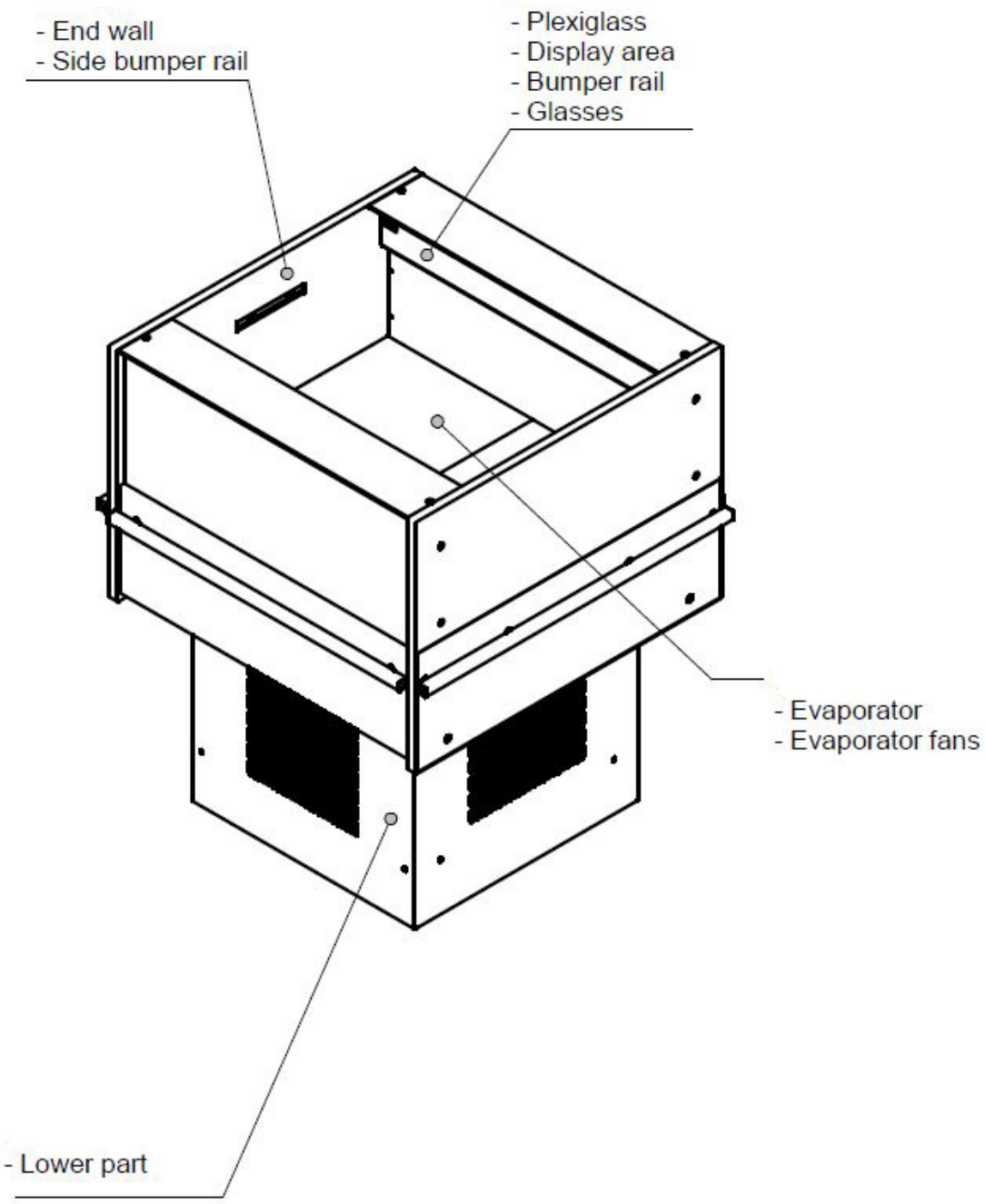


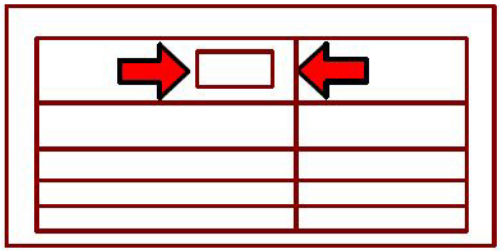
#	DESCRIPTION	Part Number	PCS
1	Front-Rear close panel INOX	P113577C	2
2	Joining kit	P113578A	1
3	Cables profile	P113579K	1
4	Case Controller MIDA-8	P116633M	1
5	Temp Sensor MIDA-8	P116634H	1

NOTE: All parts on MIDA-8 same as MIDA-4 parts unless shown on this page.

MIDA-4x4 & MIDA-4x8 PARTS ORDERING NOTES

PARTS INDEX MIDA-3x3

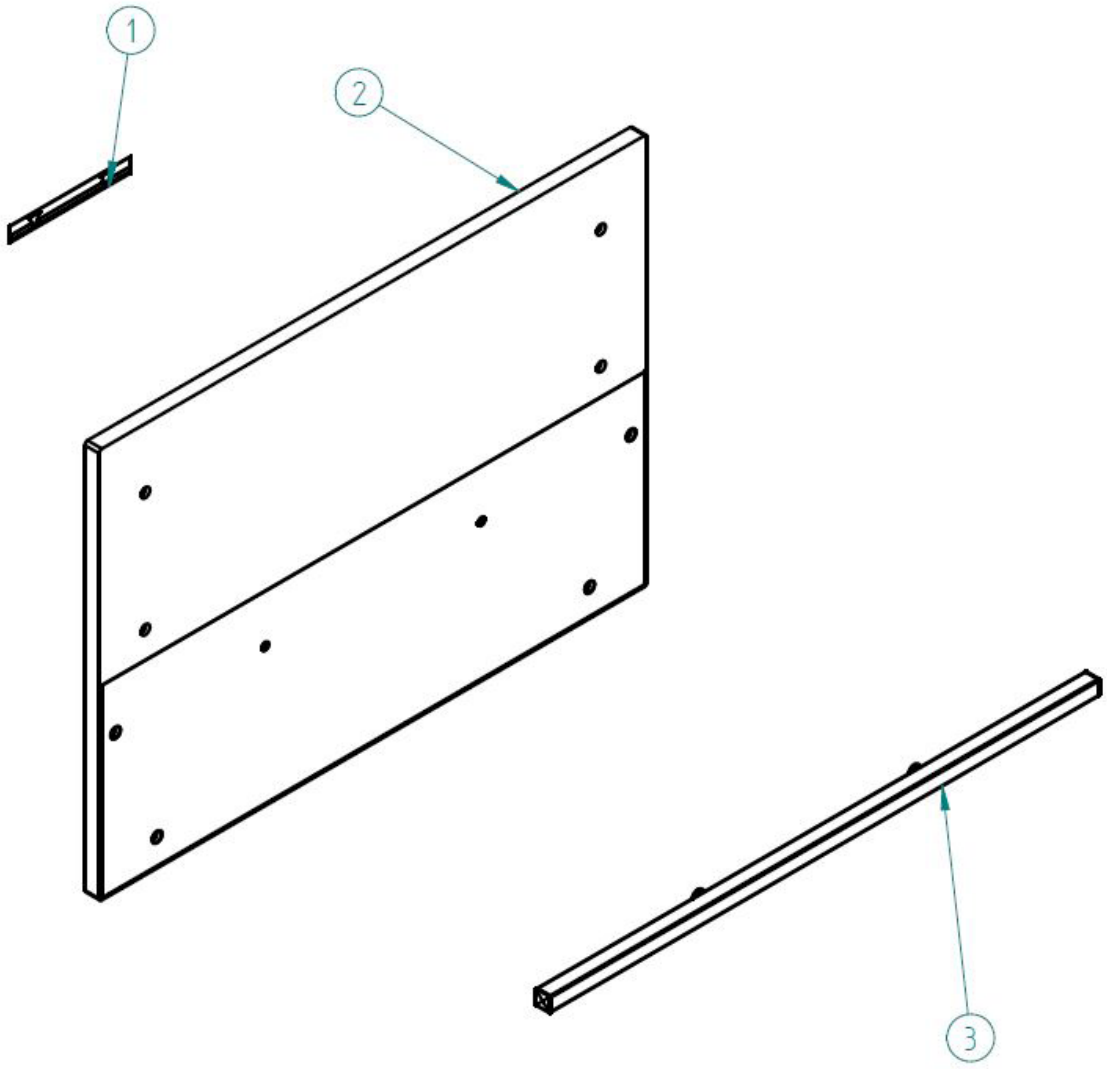




Provide the following information about the part you are ordering:

- Model number and serial number* of the case for which the part is intended.
- Length of the part (if applicable).
- Color of part (if painted) or color of polymer part.
- Whether part is for left or right-hand application.
- Quantity

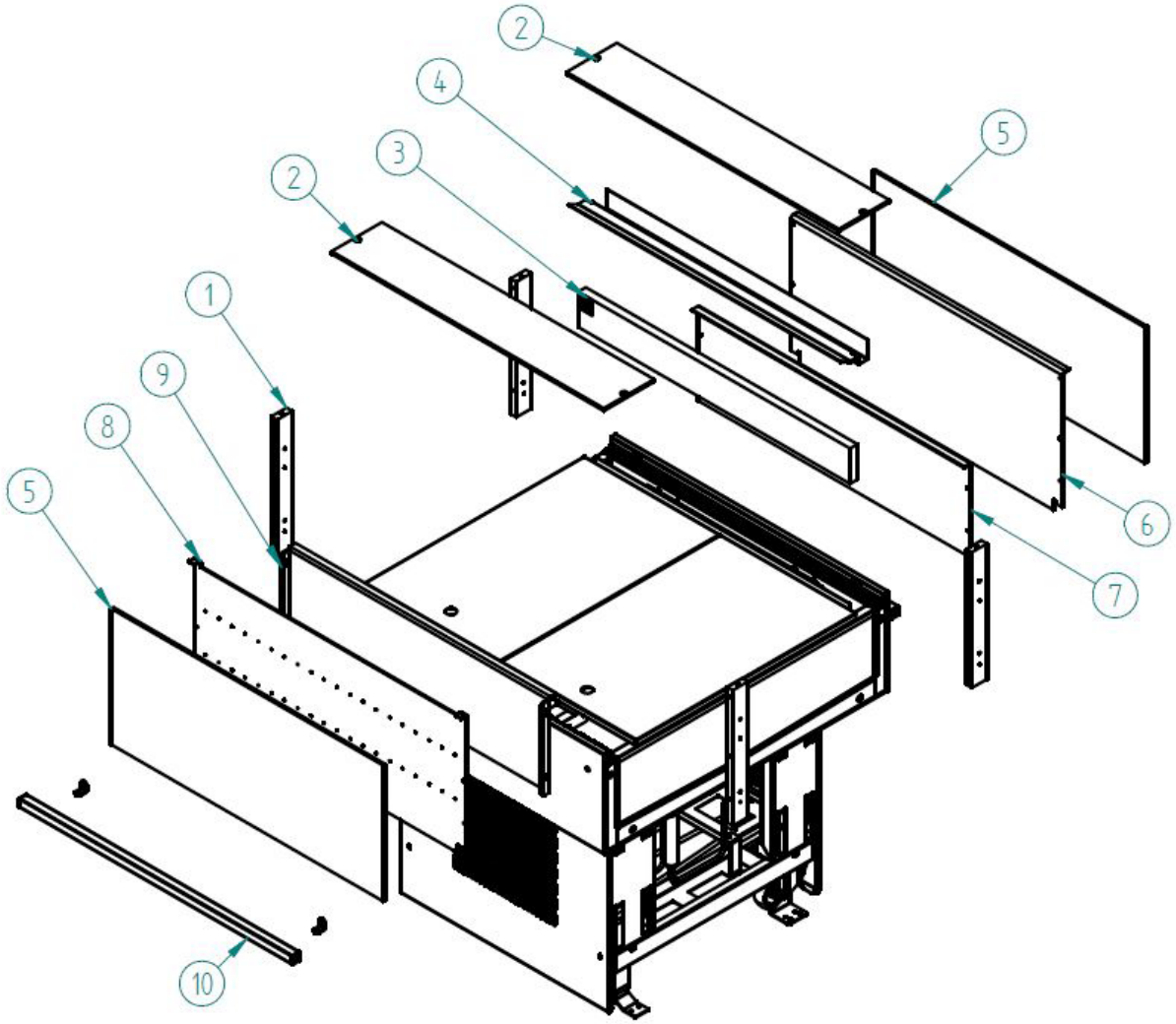
END WALLS / SIDE BUMPER



#	DESCRIPTION	Part #	PCS
1	Label “Load limit line”	P114171B	1
2	Plexiglass end wall	P114172M	1
3	End wall bumper rail kit	P114173H	1

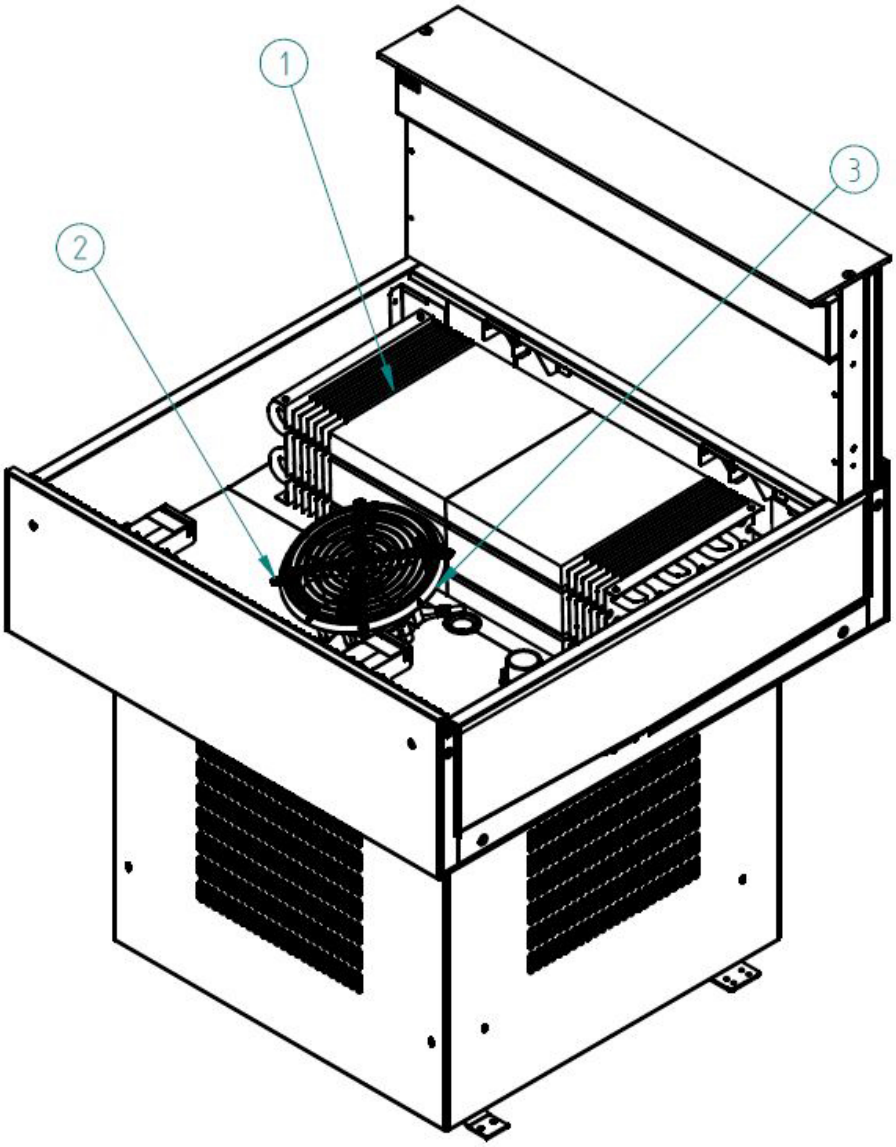
PARTS LIST

PLEXIGLASS/BUMPER RAIL / DISPLAY AREA



#	DESCRIPTION	Part Number	PCS
1	Air Inlet End Wall DX/SX	P114146E	4
2	Plexi Worktop	P114147C	2
3	Honeycomb	P114148A	1
4	Honeycomb Holder	P114149K	1
5	Front/ Rear Glass	P114150F	2
6	Rear Closed Air Inlet	P114151D	1
7	Product Holder	P114152B	1
8	Front Holed Air Inlet	P114153M	1
9	Front Air Inlet	P114154H	1
10	Front and Back Bumper Rail Kit	P114155F	2

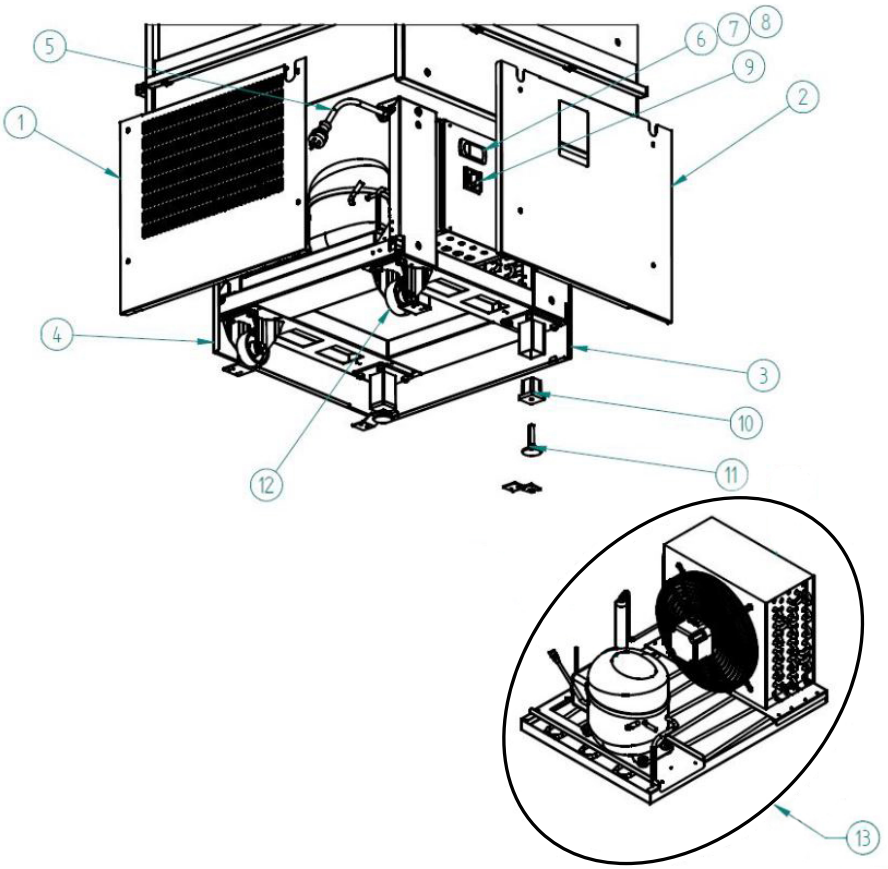
EVAPORATOR / EVAPORATOR FANS



#	DESCRIPTION	Part Number	PCS
1	Evaporator R290	P114156D	1
2	Protective Metal Grid For Evaporator Fan	P113562D	1
3	Evaporator Fan Complete with Impeller and Metal Ring	P113563B	1

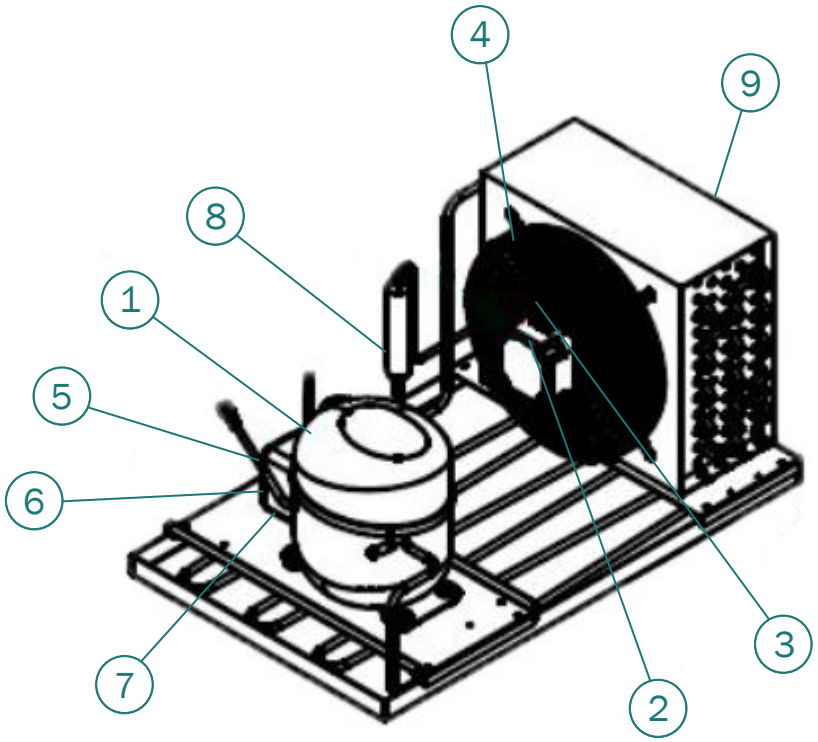
PARTS LIST

LOWER PARTS



#	DESCRIPTION	Part Number	PCS
1	Rear Base Panel	P114159H	1
2	Left Side Base Panel	P114160E	1
3	Front Base Panel	P114161C	1
4	Right Side Base Panel	P114162A	1
5	Electrical Plug	P113576E	1
6	Carel Thermostat PJEXC0H100	P113566F	1
7	Temp Sensor MIDA 3	P116632B	1
8	Condensing Unit Relay MIDA 3	P116637B	1
9	On/Off Switch	P113565H	1
10	Adjustable Feet TH40	P114167A	1
11	Adjustable Feet Support	P114166C	1
12	Support Wheel	P114168K	1
13	Condensing Unit SP 0905.083A	P115686M	1

CONDENSOR UNIT PARTS - MIDA 3



#	DESCRIPTION	Part Number	PCS
1	Compressor MIDA 3	P114170D	1
2	Condensing Fan Motor MIDA 3	P114169G	1
3	Condensing Fan Blade MIDA 3	P116622G	1
4	Condensor Fan Guard MIDA 3	P116623A	1
5	Compressor Start Capacitor MIDA 3	P116624K	1
6	Compressor Start Relay (ePTC) MIDA 3	P116626E	1
7	Clikson MIDA 3	P116628A	1
8	Filter Dryer MIDA 3	P116630F	1
9	Condensor Coil MIDA 3	P116631D	1

MIDA-3X3 PARTS ORDERING NOTES

+050004140 - rel. 1.5 - 03.06.2009

PJEZ* easy - controlli elettronici per unità statiche/ventilate a normale/bassa temperatura / *electronic controller for static/ventilated normal/low temperature units*

CAREL

Dimensioni (mm) / *Dimensions (mm)*

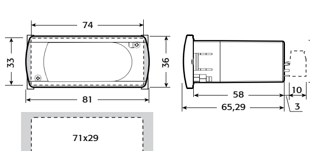


Fig. 1

Montaggio a pannello / *Panel mounting*

Frontale (con 2 viti ø 2,5x12 mm) / *Front (with 2 screws ø 2,5x12 mm)*

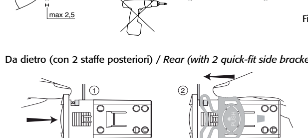


Fig. 2

Da dietro (con 2 staffe posteriori) / *Rear (with 2 quick-fit side brackets)*

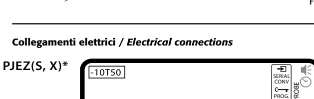


Fig. 3

Collegamenti elettrici / *Electrical connections*

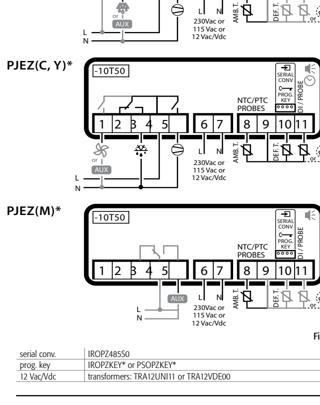


Fig. 4

serial conv.	IROPZ485S0
prog. key	IROPZKEY* or PSOPZKEY*
12 Vac/Vdc	transformers: TRA12UNI11 or TRA12VDE00

Tabella allarmi

Codice allarme	buzzer e relè allarme	LED	Descrizione allarme	Parametri coinvolti
E0	attivi	ON	errore sonda 1= regolazione	-
E1	non attivi	ON	errore sonda 2= defrost	[d0 = 0 / 1]
E2	non attivi	ON	errore sonda 3= condensatore	[A4=10]
IA	attivi	ON	allarme esterno	[A4 = 1] [+A7]
dOr	attivi	ON	allarme porta aperta	[A4 = 7/8][+A7]
LO	attivi	ON	allarme bassa temperatura	[AL] [Ad]
HI	attivi	ON	allarme alta temperatura	[AH] [Ad]
EE	non attivi	ON	errore parametri macchina	-
EF	non attivi	ON	errore parametri funzionamento	-
Ed	non attivi	ON	defrost finito per timeout	[dP] [dt] [d4] [A8]
dF	non attivi	OFF	defrost in esecuzione	[d6=0]
cht	non attivi	ON	pre-allarme condensatore sporco	[A4=10]
CHt	attivi	ON	allarme condensatore sporco	[A4=10]
EtC	non attivi	ON	allarme orologio	se fasce attive

Table of alarms

Alarm code	buzzer and alarm relay	LED	Description	Parameters involved
E0	active	ON	probe 1 error= control	-
E1	inactive	ON	probe 2 error= defrost	[d0 = 0 / 1]
E2	inactive	ON	probe 3 error= condenser	[A4=10]
IA	active	ON	external alarm	[A4 = 1] [+A7]
dOr	active	ON	open door alarm	[A4 = 7/8][+A7]
LO	active	ON	low temperature alarm	[AL] [Ad]
HI	active	ON	high temperature alarm	[AH] [Ad]
EE	inactive	ON	unit parameter error	-
EF	inactive	ON	operating parameter error	-
Ed	inactive	ON	defrost ended by timeout	[dP] [dt] [d4] [A8]
dF	inactive	OFF	defrost running	[d6=0]
cht	inactive	ON	condenser dirty pre-alarm	[A4=10]
CHt	active	ON	condenser dirty alarm	[A4=10]
EtC	inactive	ON	clock alarm	if bands active

Smaltimento del prodotto
L'apparecchiatura (o il prodotto) deve essere oggetto di raccolta separata in conformità alle vigenti normative locali in materia di smaltimento

Disposal of the product
The appliance (or the product) must be disposed of separately in accordance with the local waste disposal legislation in force.

ITA Descrizione

PJEZ* (mod. S, C, M, Y, X) rappresenta una gamma di regolatori elettronici a microprocessore con visualizzazione a LED realizzati per la gestione di unità frigorifere, vetrine e banchi frigo.
Modelli disponibili:
- PJEZS*, indicati per la gestione di unità frigorifere statiche, prive di ventilatore sull'evaporatore, funzionanti con temperature sopra lo 0°C;
- PJEZC*, indicati per la gestione di unità frigorifere ventilate in bassa temperatura.
- PJEZ(Y, X)*, indicati per la gestione di unità frigorifere statiche, prive di ventilatore, funzionanti a bassa temperatura;
- PJEZM*, soluzione per la semplice misurazione della temperatura.

Nota: mod. Y= relè collegati elettronicamente all'interno tra loro; mod. X= relè indipendenti.

Caratteristiche tecniche

alimentazione (*)	230 Vac +10 /-15% 50/60 Hz; 115 Vac +10 /-15% 50/60 Hz 12 Vac +10/-15% 50/60 Hz classe 2; 12 Vdc +10/-20% classe 2	
potenza nominale	3,5 VA	
ingressi (*)	sonda NTC o PTC 1 o 3 ingressi. Ingresso digitale in alternativa a terza sonda	
uscite relè (*)	relè 2 Hp	UL: 12 A Res. 12 FLA 72 LRA - 240 Vac (***), UL: 12 A Res. 10 FLA 60 LRA - 240 Vac (****) EN60730-1: 10(10) A 250 Vac (**)
	relè 16 A	UL: 12 A Res. 5 FLA 30 LRA - 240 Vac C300, EN60730-1: 12(2) A NO/NC, 10(4) A fino 60 °C NO, 2(2) A CO - 250 Vac
	relè 8 A	UL: 8 A Res. 2 FLA 12 LRA - 240 Vac C300, EN60730-1: 8(4) A NO, 6(4) A NC, 2(2) A CO - 250 Vac
tipo di sonda (*)	NTC Std CAREL 10 KΩa 25 °C, PTC Std CAREL 985 Ω a 25 °C	
connessioni (*)	morsetti fissi a vite per cavi con sez. da 0,5 mm² a 1,5 mm². Morsetti estraibili per blocchetti a vite o con contatto a crimpare (sez. cavo fino a 2,5 mm²). Corrente nominale massima per morsetto 12 A.	
montaggio (*)	per terminale: mediante viti dal frontale o con staffe posteriori	
visualizzazione	display LED 3 cifre con segno (-199…999) e punto decimale; sei LED di stato	

condizioni di funzionamento	-10T50 °C - umidità <90% U.R. non condensante
condizioni di immagazzinamento	-20T70 °C - umidità <90% U.R. non condensante
intervallo di rilevazione	-50T90 °C (-58T194 °F) - risoluzione 0,1 °C/°F
grado di protezione frontale	montaggio a quadro con guarnizione: IP65 tipo 1
contenitore	terminale plastico, 81x36x65 mm
classificazione secondo la protezione contro le scosse elettriche	Classe II per incorporamento adeguato
inquinamento ambientale	normale
PTI dei materiali di isolamento	250 V
periodo delle sollecitazioni elettriche delle parti isolanti	lungo
categoria di resistenza al calore e al fuoco	categoria D (UL94 - V0)
immunità contro le sovratensioni	categoria 1
tipo di azione e disconnessione	contatti relè 1C
n.ro di cicli di manovra delle operazioni automatiche relè (*)	EN60730-1: 100.000 operazioni UL: 30.000 operazioni (250 Vac)
classe e struttura del software	Classe A
pulizia dello strumento	utilizzare esclusivamente detergenti neutri ed acqua.
lunghezza max. cavi	seriale: 1 km sonde: 30 m relè: 10 m

AVVERTENZA:
Non passare cavi di potenza a meno di 3 cm dalla parte inferiore del dispositivo o dalle sonde; **per le connessioni usare solo cavi di rame**.
(*) Le caratteristiche indicate si differenziano a seconda del modello.
(**) T OFF minimo tra due start motore deve essere maggiore di 60 s.
(***) solo per i modelli PJEZ(M,S,X)*
(****) solo per i modelli PJEZ(C, Y)*

AVVERTENZE IMPORTANTI

Il prodotto CAREL è un prodotto avanzato, il cui funzionamento è specificato nella documentazione tecnica fornita col prodotto o scaricabile, anche anteriormente all'acquisto, dal sito internet www.carel.com.
Il cliente (costruttore, progettista o installatore dell'equipaggiamento finale) si assume ogni responsabilità e rischio in relazione alla fase di configurazione del prodotto per il raggiungimento dei risultati previsti in relazione all'installazione e/o equipaggiamento finale specifico.
La mancanza di tale fase di studio, la quale è richiesta/indicata nel manuale d'uso, può generare malfunzionamenti nei prodotti finali di cui CAREL non potrà essere ritenuta responsabile.
Il cliente finale deve usare il prodotto solo nelle modalità descritte nella documentazione relativa al prodotto stesso.
La responsabilità di CAREL in relazione al proprio prodotto è regolata dalle condizioni generali di contratto CAREL editate nel sito www.carel.com e/o da specifici accordi con i clienti.

Attenzione: separare quanto più possibile i cavi delle sonde e degli ingressi digitali dai cavi dei carichi induttivi e di potenza per evitare possibili disturbi elettromagnetici. Non inserire mai nelle stesse canaline (comprese quelle dei quadri elettrici) cavi di potenza e cavi di segnale.

ENG Description

PJEZ* (models S, C, Y and X) represent a range of electronic microprocessor controllers with LED display developed for the management of refrigerating units, display cabinets and showcases.
Models available:
- PJEZS*, designed for the management of static refrigerating units, no fan on the evaporator, operating at temperatures above 0°C;
- PJEZC*, designed for the management of low temperature ventilated refrigerating units.
- PJEZ(Y, X)*, designed for the management of static refrigerating units, no fan, operating at low temperatures;
- PJEZM*, simple solution for measuring the temperature.

Note: model Y= relays connected electronically internally; model X= independent relays.

Technical specifications

power supply (*)	230 Vac +10 /-15% 50/60 Hz; 115 Vac +10 /-15% 50/60 Hz 12 Vac +10/-15% 50/60 Hz class 2; 12 Vdc +10/-20% class 2;	
rated power	3,5 VA	
inputs (*)	NTC or PTC probes 1 or 3 inputs. Digital input as alternative to third probe	
relay outputs (*)	2 HP relay	UL: 12 A Res. 12 FLA 72 LRA - 240 Vac (***), UL: 12 A Res. 10 FLA 60 LRA - 240 Vac (****) EN60730-1: 10(10) A 250 Vac (**)
	16 A relay	UL: 12 A Res. 5 FLA 30 LRA - 240 Vac C300, EN60730-1: 12(2) A NO/NC, 10(4) A up to 60 °C NO, 2(2) A CO - 250 Vac
	8 A relay	UL: 8 A Res. 2 FLA 12 LRA - 240 Vac C300, EN60730-1: 8(4) A NO, 6(4) A NC, 2(2) A CO - 250 Vac
type of probe (*)	Std CAREL NTC 10 KΩ at 25 °C, Std CAREL PTC 985 Ω at 25 °C	
connections (*)	screw terminals for cables with cross-sect. from 0.5 mm² to 1.5 mm². Plug-in terminals for screw blocks or with crimped contact (cable cross-sect. up to 2.5 mm²). Rated maximum current per terminal 12 A.	
assembly (*)	terminal: using screws from the front panel or with rear brackets. Interface: wall mounting, 4 screws, spacing 101x151 mm	
display	3 digit LED display with sign (-199 to 999) and decimal point; six status LEDs	

operating conditions	-10T50 °C - humidity <90% rH non-condensing
storage conditions	-20T70 °C - humidity <90% rH non-condensing
range of measurement	-50T90 °C (-58T194 °F) - resolution 0.1 °C/°F
front panel index of protection	panel installation with IP65 type 1 gasket
case	plastic terminal, 81x36x65 mm
classification according to protection against electric shock	Class II when suitably integrated
environmental pollution	normal
PTI of the insulating material	250 V
period of stress across the insulating parts	long
category of resistance to heat and fire	category D (UL94 - V0)
immunity against voltage surges	category 1
type of action and disconnection	1C relay contacts
no. of relay automatic operating cycles (*)	EN60730-1: 100,000 operations UL: 30,000 operations (250 Vac)
software class and structure	Class A
cleaning the instrument	Only use neutral detergents and water.
cable max. lenght	serial: 1 km probes: 30 m relay: 10 m

WARNING:
do not run the power cable less than 3 cm from the bottom part of the device or from the probes; **for the connections only use copper wires**.
(*) The features indicated differ according to the model.
(**) T OFF minimum time between two starts of the motor must be greater than 60 s.
(***) only for PJEZ(M,S,X)*
(****) only for PJEZ(C, Y)*

IMPORTANT WARNINGS

The CAREL product is a state-of-the-art device, whose operation is specified in the technical documentation supplied with the product or can be downloaded, even prior to purchase, from the website www.carel.com.
The customer (manufacturer, developer or installer of the final equipment) accepts all liability and risk relating to the configuration of the product in order to reach the expected results in relation to the specific final installation and/or equipment. The failure to complete such phase, which is required/indicated in the user manual, may cause the final product to malfunction; CAREL accepts no liability in such cases. The customer must use the product only in the manner described in the documentation relating to the product. The liability of CAREL in relation to its products is specified in the CAREL general contract conditions, available on the website www.carel.com and/or by specific agreements with customers.

WARNING: separate as much as possible the probe and digital input signal cables from the cables carrying inductive loads and power cables to avoid possible electromagnetic disturbance. Never run power cables (including the electrical panel wiring) and signal cables in the same conduits.

Tabella parametri

	Parametro		Min.	Max.	Def.	U.M.	M[1]
PS	PASSWORD	F	0	200	22	-	◷
/	PARAMETRI SONDA						
/2	Stabilità misura	C	1	15	4	-	◷
/4	Selezione sonda/ingresso visualizzata/o (*)	F	1	3	1	-	◷
/5	Selezione °C / °F (0 = °C; 1 = °F)	C	0	1	0	-	◷
/6	Disabilitazione punto decimale	C	0	1	0	-	◷
/7	Abilitazione allarme sonda 2 (solo PJEZM)	C	0	1	0	-	◷
/C1	Calibrazione sonda	F	-50,0	50,0	0,0	°C/°F	◷
/C2	Calibrazione sonda 2 (*)	F	-50,0	50,0	0,0	°C/°F	◷
/C3	Calibrazione sonda 3 (*)	F	-50,0	50,0	0,0	°C/°F	◷
r	PARAMETRI REGOLATORE						
St	Temperatura di regolazione	F	r1	r2	4.0	°C/°F	◷
r1	SET minimo consentito all'utente	C	-50,0	r2	-50,0	°C/°F	◷
r2	SET massimo consentito all'utente	C	r1	200,0	90,0	°C/°F	◷
r3	Modalità di funzionamento 0= direct+defrost; 1= direct; 2= reverse	C	0	2	0	-	-
r4	Variazione automatica set point notturno (*)	C	-50,0	50,0	3.0	°C/°F	◷
rd	Differenziale di regolazione (isteresi)	F	0,0	19,0	2,0	°C/°F	◷
c	PARAMETRI COMPRESSORE						
c0	Rit. partenza comp. e ventola dopo accensione	C	0	100	0	min	-
c1	Tempo min. tra accensioni successive comp.	C	0	100	0	min	-
c2	Tempo min. di spegnimento del compres.	C	0	100	0	min	-
c3	Tempo min. di funzionamento del compres.	C	0	100	0	min	-
c4	Sicurezza compressore (duty setting)	C	0	100	0	min	-
cc	Durata ciclo continuo	C	0	15	4	h	-
c6	Tempo esclusione allarme dopo ciclo cont.	C	0	15	2	h	-
d	PARAMETRI SBRINAMENTO						
d0	Tipo di sbrinamento (0= resistenza; 1= gas caldo; 2= resist. a tempo; 3= gas caldo a tempo; 4= resist. termostatato a tempo)	C	0	4	0	-	-
dI	Intervallo tra due sbrinamenti	F	0	199	8	h/min	-
dt	Temperatura di fine sbrinamento (*)	F	-50,0	130,0	4,0	°C/°F	-
dP	Durata max. o durata effettiva sbrinamento	F	1	199	30	min/s	-
d4	Sbrin. all'accensione dello strum. (1= attivato)	C	0	1	0	-	-
d5	Ritardo sbrinam. all'accensione o da ing. dig.	C	0	199	0	min	-
d6	Blocco visualizzazione temperatura durante lo sbrinamento (1= bloccata visualizzazione)	C	0	1	1	-	-
dd	Tempo di gocciolamento dopo lo sbrinam.	F	0	15	2	min	-
d8	Tempo di esclusione allarmi dopo lo sbrinam.	F	0	15	1	h	-
d9	Priorità sbrinam. sulle protezioni compres. (0= tempi protezione rispettati; 1= tempi protezione non rispettati)	C	0	1	0	-	-
d/	Visualiz. temp. sonda di sbrinamento (*)	F	-	-	-	-	-
dc	Base dei tempi (solo per lo sbrinamento; 0= h/min ; 1= min/s)	C	0	1	0	-	-
A	PARAMETRI DI ALLARME						
A0	Differenziale allarmi e ventole	C	-20,0	20,0	2,0	°C/°F	◷
AL	Soglia/Scostamento allarme di bassa temperatura (AL= 0; allarme escluso)	F	-50,0	250,0	0	°C/°F	◷
AH	Soglia/Scostamento allarme di alta temperatura (AH= 0; allarme escluso)	F	-50,0	250,0	0	°C/°F	◷
Ad	Ritardo allarme bassa e alta temperatura	C	0	199	0	min	◷
A4	Configurazione ingresso digitale (*) 0= ingresso non attivo; 1= allarme esterno istant. o ritardato (A7); 2= abilitazione defrost (aperto=disabilit.); 3= inizio defrost su fronte di chiusura; 4= switch tenda o funz. notturno (aperto= set normale); 5= ON/OFF remoto (aperto= OFF); 6= comando uscita AUX [H1=3] (aperto = AUX disecc.); 7= comando uscita AUX [H1=3] + FAN OFF (chiuso) (aperto = AUX eccitato); 8= comando uscita AUX [H1=3] + FAN-OFF (chiuso) + COMP-OFF (chiuso); (aperto= AUX eccitato); 9= selezione funzionam. direct/reverse: r3=0 => aperto= direct + defrost; chiuso= reverse r3=1/2 => aperto= direct; chiuso= reverse 10= sonda condensatore; 11= sonda prodotto	C	0	11	0	-	◷
A7	Ritardo rilevazione allarme esterno (*)	C	0	199	0	min	◷
A8	Abilitazione allarme 'Ed': fine sbrinamento per timeout (1= abilitato) (*)	C	0	1	0	-	-
Ac	Allarme alta temperatura condensatore (*)	C	-50,0	250,0	70,0	°C/°F	◷
AE	Differenziale allarme alta temp. condens. (*)	C	0,1	20,0	5,0	°C/°F	◷
Acd	Ritardo allarme alta temp. condensatore (*)	C	0	250	0	min	◷
F	PARAMETRI VENTOLE (**)						
F0	Gestione ventole: 0= ventole accese escluso fasi specifiche; 1= ventole attivate in funzione del parametro F1 escluso fasi specifiche (**)	C	0	1	0	-	-
F1	Temperatura spegnimento ventole (**)	F	-50,0	130,0	5,0	°C/°F	-
F2	Ventole ferme con compressore fermo (**)	C	0	1	1	-	-
F3	Stato ventole durante sbrinamento (**) 0= ventole accese; 1= ventole ferme	C	0	1	1	-	-
Fd	Fermo post gocciolamento. Attivo per ogni val. di F0 (**)	F	0	15	1	min	-
H	ALTRE PREDISPOSIZIONI						
H0	Indirizzo seriale	C	0	207	1	-	◷
H1	Configurazione uscita AUX 0= nessuna funzione associata all'uscita 1= uscita allarme: norm. eccitato 2= uscita allarme: norm. diseccitato 3= uscita aux legata a ID [A4=6/7/8] ID aperto= aux eccitato IDchiuso= aux eccitato	C	0	3	0	-	◷
H2	Abilitazione tastiera 0= tastiera disabilitata 1= tastiera abilitata 2= tastiera abilitata tranne ON/OFF	C	0	2	1	-	◷
H4	Disabilitazione buzzer 0= buzzer abilitato (ON); 1= buzzer disabilitato (OFF)	C	0	1	0	-	◷
H5	Codice identificativo chiave da supevisore	F	0	199	1	-	◷
EZY	Selezione del banco Easy Set a seconda del modello, vedi manuale. (vedi nota)	C	0	4	0	-	-
	PARAMETRI RTC						
tEn	Abilitazione RTC (***)	C	0	1	1	-	-
d1d	Fascia oraria sbrinamento 1 giorno (***)	C	0	11	0	giorni	-
d1h	Fascia oraria sbrinamento 1 ora (***)	C	0	23	0	h	-
d1m	Fascia oraria sbrinamento 1 minuto (***)	C	0	59	0	min	-
d2d	Fascia oraria sbrinamento 2 giorni (***)	C	0	11	0	giorni	-
d2h	Fascia oraria sbrinamento 2 ore (***)	C	0	23	0	h	-
d2m	Fascia oraria sbrinamento 2 minuti (***)	C	0	59	0	min	-
d3d	Fascia oraria sbrinamento 3 giorni (***)	C	0	11	0	giorni	-
d3h	Fascia oraria sbrinamento 3 ore (***)	C	0	23	0	h	-
d3h	Fascia oraria sbrinamento 3 minuti (***)	C	0	59	0	min	-
d4d	Fascia oraria sbrinamento 4 giorni (***)	C	0	11	0	giorni	-
d4h	Fascia oraria sbrinamento 4 ore (***)	C	0	23	0	h	-
d4m	Fascia oraria sbrinamento 4 minute (***)	C	0	59	0	min	-
nOd	Fascia oraria "night on" giorno (***)	C	0	11	0	giorni	-
nOh	Fascia oraria "night on" ora (***)	C	0	23	0	h	-
nOm	Fascia oraria "night on" minuti (***)	C	0	59	0	min	-
nFd	Fascia oraria "night off" giorno (***)	C	0	11	0	giorni	-
nFh	Fascia oraria "night off" minuti (***)	C	0	23	0	h	-
nFm	Fascia oraria "night off" minuti (***)	C	0	59	0	min	-
AOd	Fascia oraria "aux on" giorno (***)	C	0	11	0	giorni	-
AOh	Fascia oraria "aux on" ora (***)	C	0	23	0	h	-
AOm	Fascia oraria "aux on" minuti (***)	C	0	59	0	min	-
AFd	Fascia oraria "aux off" giorno (***)	C	0	11	0	giorni	-
AFh	Fascia oraria "aux off" ora (***)	C	0	23	0	h	-
AFm	Fascia oraria "aux off" minuti (***)	C	0	59	0	min	-
dAY	RTC giorno della settimana (***)	C	1	7	1	giorni	-
hr	RTC ora (***)	C	0	23	0	h	-
MIn	RTC minuto (***)	C	0	59	0	min	-

[1] presenza parametro del mod. PJEZM*: sì= ◷; no= -
(*) parametri non presenti nei modelli con una sonda.
(**) parametri non presenti nei modelli PJEZS, PJEZX e PJEZY
(***) parametri non presenti nei modelli privi di RTC

nota: tramite il parametro "Easy Set" è possibile selezionare uno dei 4 set di configurazione rapida memorizzati nello strumento, contenenti al massimo 25 parametri ciascuno.

PJEZ(S, X)*: EZY=1: temperatura normale no defrost
EZY=2: temperatura normale con defrost a tempo
EZY=3: temperatura normale uscita in heating
EZY=4: temperatura normale defrost termostatato (d0=4)

PJEZ(C, Y)* EZY=1: bassa temperatura con defrost a gas caldo
EZY=2: bassa temperatura variazione automatica set notturno da ingresso digitale
EZY=3: bassa temperatura con gestione allarme ingresso digitale
EZY=4: bassa temperatura sbrinamento termostatato (d0=4).

Table of parameters

	Parameter		Min.	Max.	Def.	UOM	M[1]
PS	PASSWORD	F	0	200	22	-	◷
/	PROBE PARAMETERS						
/2	Measurement stability	C	1	15	4	-	◷
/4	Select probe/input displayed (*)	F	1	3	1	-	◷
/5	Select °C / °F (0 = °C; 1 = °F)	C	0	1	0	-	◷
/6	Disable decimal point	C	0	1	0	-	◷
/7	Enable probe 2 alarm (PJEZM only)	C	0	1	0	-	◷
/C1	Probe calibration	F	-50.0	50.0	0.0	°C/°F	◷
/C2	Probe 2 calibration (*)	F	-50.0	50.0	0.0	°C/°F	◷
/C3	Probe 3 calibration	F	-50.0	50.0	0.0	°C/°F	◷
r	CONTROL PARAMETERS						
St	Control temperature	F	r1	r2	4.0	°C/°F	◷
r1	Minimum set point allowed to the user	C	-50.0	r2	-50.0	°C/°F	◷
r2	Maximum set point allowed to the user	C	r1	200.0	90.0	°C/°F	◷
r3	Operating mode 0= direct+defrost; 1= direct; 2= reverse	C	0	2	0	-	-
r4	Automatic night-time set point variation	C	-50.0	50.0	3.0	°C/°F	◷
rd	Control differential (hysteresis)	F	0.0	19.0	2.0	°C/°F	◷
c	COMPRESSOR PARAMETERS						
c0	Comp. and fan start delay after start-up	C	0	100	0	min	-
c1	Min. time between successive comp. starts	C	0	100	0	min	-
c2	Min. compressor off time	C	0	100	0	min	-
c3	Min. compressor on time	C	0	100	0	min	-
c4	Compressor safety (duty setting)	C	0	100	0	min	-
cc	Continuous cycle duration	C	0	15	4	h	-
c6	Alarm bypass time after cont. cycle	C	0	15	2	h	-
d	DEFROST PARAMETERS						
d0	Type of defrost (0= heater; 1= hot gas; 2= heater by time; 3= hot gas by time; 4= heater by time with temp. cont.)	C	0	4	0	-	-
dI	Interval between two defrosts	F	0	199	8	h/min	-
dt	End defrost temperature	F	50.0	130.0	4.0	°C/°F	-
dP	Max. or effective defrost duration	F	1	199	30	min/s	-
d4	Defrost when the instrument is switched on (1= activated)	C	0	1	0	-	-
d5	Defrost delay on start-up or from digital input	C	0	199	0	min	-
d6	Disable temperature display during defrost (1= display disabled)	C	0	1	1	-	-
dd	Dripping time after defrost	F	0	15	2	min	-
d8	Alarm bypass time after defrost	F	0	15	1	h	-
d9	Defrost priority over comp. protectors (0= protection time respected; 1= protection time not respected)	C	0	1	0	-	-
d/	Display defrost probe temp.	F	-	-	-	-	-
dc	Time base (for defrost only; 0= h/min; 1= min/s)	C	0	1	0	-	-
A	ALARM PARAMETERS						
A0	Alarm and fan differential	C	-20.0	20.0	2.0	°C/°F	◷
AL	Low temperature alarm threshold/deviation (AL= 0; alarm disabled)	F	-50.0	250.0	0	°C/°F	◷
AH	High temperature alarm threshold/deviation (AH= 0; alarm disabled)	F	50.0	250.0	0	°C/°F	◷
Ad	Low and high temperature alarm delay	C	0	199	0	min	◷
A4	Digital input configuration 0= input not active; 1= exter. alarm, instant (A7= 0) or delayed (A7>0); 2= enable defrost (open=disabled); 3= start defrost on closing; 4= curtain switch or night-time operation (open= normal setpoint); 5= remote ON/OFF (open= OFF); 6= AUX output control [H1=3] (open = AUX de-energ.); 7= AUX output [H1=3] + FAN OFF control (closed) (open = AUX energised); 8= AUX output [H1=3] + FAN-OFF (closed) + COMP-OFF control (closed); (open= AUX energised); 9= select direct/reverse operation: r3=0 => open= direct + defrost; closed= reverse r3=1/2 => open= direct; closed= reverse 10= condenser probe; 11= product probe	C	0	11	0	-	◷
A7	External alarm detection delay	C	0	199	0	min	◷
A8	Enable alarm 'Ed': end defrost by timeout (1= enabled)	C	0	1	0	-	-
Ac	High condenser temperature alarm	C	-50.0	250.0	70.0	°C/°F	◷
AE	High condenser temperature alarm differential	C	0.1	20.0	5.0	°C/°F	◷
Acd	High condenser temperature alarm delay	C	0	250	0	min	◷
F	FAN PARAMETERS (**)						
F0	Fan management: 0= fans on excluding specific phases; 1= fans on according to parameter F1 excluding specific phases (**)	C	0	1	0	-	-
F1	Fans shutdown temperature (**)	F	50.0	130.0	5.0	°C/°F	-
F2	Fans off when compressor off (**)	C	0	1	1	-	-
F3	Fans status during defrost (**) 0= fan ON; 1= fan OFF	C	0	1	1	-	-
Fd	Off for post-dripping. Active for each val. of F0 (**)	F	0	15	1	min	-
H	OTHER SETTINGS						
H0	Serial address	C	0	207	1	-	◷
H1	AUX output configuration 0= no function associated with the output 1= alarm output usually energised 2= alarm output usually de-energised 3= auxiliary output driven by dig. input [A4=6/7/8] dig. input OPEN= AUX de-energised dig. input CLOSED= AUX energised	C	0	3	0	-	◷
H2	Enable keypad 0= keypad disabled 1= keypad enabled 2= keypad enabled except for ON/OFF function	C	0	2	1	-	◷
H4	Disable buzzer 0= buzzer enabled 1= buzzer disabled	C	0	1	0	-	◷
H5	Key ID code from supervisor	F		199	1	-	◷
EZY	Select Easy Set according to the model, see manual (see notes)	C	0	4	0	-	-
	RTC PARAMETERS						
tEn	Disable RTC	C	0	1	1	-	-
d1d	Defrost time band 1 day	C	0	11	0	days	-
d1h	Defrost time band 1 hours	C	0	23	0	h	-
d1m	Defrost time band 1 minutes	C	0	59	0	min	-
d2d	Defrost time band 2 day	C	0	11	0	days	-
d2h	Defrost time band 2 hours	C	0	23	0	h	-
d2m	Defrost time band 2 minutes	C	0	59	0	min	-
d3d	Defrost time band 3 day	C	0	11	0	days	-
d3h	Defrost time band 3 hours	C	0	23	0	h	-
d3h	Defrost time band 3 minutes	C	0	59	0	min	-
d4d	Defrost time band 4 day	C	0	11	0	days	-
d4h	Defrost time band 4 hours	C	0	23	0	h	-
d4m	Defrost time band 4 minute	C	0	59	0	min	-
nOd	"Night on" time band day	C	0	11	0	days	-
nOh	"Night on" time band hours	C	0	23	0	h	-
nOm	"Night on" time band minutes	C	0	59	0	min	-
nFd	"Night off" time band day	C	0	11	0	days	-
nFh	"Night off" time band hours	C	0	23	0	h	-
nFm	"Night off" time band minutes	C	0	59	0	min	-
AOd	"Aux on" time band day	C	0	11	0	days	-
AOh	"Aux on" time band hours	C	0	23	0	h	-
AOm	"Aux on" time band minutes	C	0	59	0	min	-
AFd	"Aux off" time band day	C	0	11	0	days	-
AFh	"Aux off" time band hours	C	0	23	0	h	-
AFm	"Aux off" time band minutes	C	0	59	0	min	-
dAY	RTC day of the week	C	1	7	1	days	-
hr	RTC hours	C	0	23	0	h	-
MIn	RTC minutes	C	0	59	0	min	-

[1] parameter available on model PJEZM*: yes= ◷; no= -
(*) parameters not available in PJEZS models with one probe.
(**) parameters not available in PJEZS models
(***) parameters not available on models without RTC

note: the "Easy Set" parameter is used to select one of 4 sets of quick configurations stored in the instrument, each containing a maximum of 25 parameters.

PJEZ(S, X)*: EZY=1: normal temperature, no defrost
EZY=2: normal temperature with timed defrost
EZY=3: normal temperature, heating output
EZY=4: normal temperature, defrost controlled by temperature (d0=4)

PJEZ(C, Y)*: EZY=1: low temperature with hot gas defrost
EZY=2: low temp. with automatic night-time set point variation via digital input
EZY=3: low temperature with management of alarm via digital input
EZY=4: low temperature, defrost controlled by temperature (d0=4).

(ITA) Visualizzazione e funzioni

Durante il normale funzionamento il controllo visualizza a display il valore della sonda impostata con il parametro /4 (=1 sonda ambiente di default, =2 seconda sonda, 3= terza sonda). Inoltre sul display appaiono i LED che indicano l'attivazione delle funzioni del controllo (vedi Tab. 1), mentre i 3 tasti permettono di attivare/disattivare alcune funzioni (vedi Tab. 2).

LED e funzioni associate

icona	funzione	normale funzionamento			start up
		ON	OFF	blink	
	compressore	acceso	spento	richiesto	ON
	ventola	acceso	spento	richiesto	ON
	defrost	acceso	spento	richiesto	ON
AUX	aux	uscita accesa	uscita spenta	-	ON
	allarme	tutti	nessun allarme	-	ON
	orologio	RTC presente e abilitato, ed è stata impostata almeno 1 fascia oraria	RTC assente o disabilitato, o non è stata impostata nemmeno 1 fascia oraria	-	ON se RTC presente

Tab. 1

Tabella attivazione funzioni tramite i tasti - mod. S, X, Y, C

tasto	normale funzionamento		start up	
	pressione del singolo tasto	pressione conbinata		
	più di 3 s: alterna stati ON/OFF	Premuti insieme attivano/disattivano ciclo continuo	-	
	più di 3 s: attiva/disattiva defrost		Premuti insieme attivano procedura RESET parametri.	per 1 s visualizza cod. vers. firmware
	- 1 s.: visualizza/permette di impostare set point - più di 3 s: accesso menù impostazione parametri (inserire password '22') - Tacita allarme acustico (buzzer)	-		per 1 s RESET banco EZY corrente

Tab. 2

Tabella funzioni tasti - variante mod. M

tasto	normale funzionamento	start up	
	selezione rapida sonda visualizzata	Premuto insieme a "set" attiva procedura RESET parametri.	per 1 s visualizza cod. vers. firmware

Tab. 3

Impostazioni del set point (valore di temperatura desiderato)

- premere per 1 s SET, dopo alcuni istanti il valore impostato lampeggia;
- aumentare o diminuire tale valore con UP o DOWN;
- premere SET per confermare il nuovo valore.

ON/OFF dello strumento

Premere per più di 3 s UP. In questa condizione gli algoritmi di regolazione e defrost sono disabilitati e lo strumento alterna la visualizzazione a display del messaggio "OFF" a quella della temperatura della sonda impostata.

Sbrinamento manuale (solo per mod. S, X, Y e C)

Premere per più di 3 s DOWN (si attiva solo se sussistono le condizioni di temperatura).

Ciclo continuo (solo per mod. S, X, Y e C)

Premere contemporaneamente per più di 3 s UP e DOWN.

Selezione rapida sonda visualizzata (solo per mod. M)

Premere rapidamente DOWN per selezionare la sonda da visualizzare temporaneamente.

Accesso e modifica parametri tipo F (frequenti) e tipo C (configurazione)

1. premere SET per 3 s (sul display comparirà "PS");
2. • per accedere al menù parametri di tipo F e C digitare la password "22" con UP/DOWN;
   • per accedere solo al menù parametri F premere SET (senza digitare la password);
3. navigare all'interno del menù parametri con UP/DOWN;
4. • per visualizzare/modificare i valori del parametro visualizzato premere SET, quindi UP/DOWN ed infine SET per confermare la modifica (si ritorna così al menù dei parametri).

Per salvare definitivamente tutti i valori modificati ed uscire dal menù parametri premere SET per 3 s;
Per uscire dal menù senza salvare i valori modificati (uscita per time out) non premere alcun tasto per almeno 60 s.

Normative di sicurezza

conforme alle Normative europee in materia. Precauzioni d'installazione:

- i cavi di collegamento devono garantire l'isolamento fino a 90 °C;
- per le versioni 12 Vac utilizzare trasformatori Classe II. Per il rispetto delle normative EN 61000-4-4, EN 61000-4-5, EN 61000-4-11, EN 61000-4-6, EN 60730-1, il trasformatore deve essere uno dei modelli indicati (vedi Listino Prezzi CAREL). Per le versioni 12 Vac/dc, non essendo possibile garantire il doppio isolamento tra i connettori di alimentazione e le uscite relè, si raccomanda di utilizzare carichi alimentati solamente in bassissima tensione di sicurezza (fino a 42 V nominali di valore efficace);
- prevedere almeno 10 mm di distanza tra il contenitore e parti conduttive vicine;
- collegamenti degli ingressi digitali e analogici inferiori a 30 m di distanza; adottare le adeguate misure di separazione dei cavi per il rispetto delle normative suddette.

Bloccare bene i cavi di connessione delle uscite per evitare contatti con parti in bassissima tensione di sicurezza.

(ENG) Display and functions

During normal operation, the controller displays the value of the probe set using parameter /4 (=1 ambient probe, default, =2 second probe, 3= third probe). In addition, the display has LEDs that indicate the activation of the control functions (see Table 1), while the 3 buttons can be used to activate/deactivate some of the functions (see Table 2).

LEDs and associated functions

icon	function	normal operation			start up
		ON	OFF	blink	
	compressor	on	off	request	ON
	fan	on	off	request	ON
	defrost	on	off	request	ON
AUX	aux	output on	output off	-	ON
	alarm	all	no alarm	-	ON
	clock	RTC fitted and enabled, at least 1 time band set	RTC not fitted or disabled, not even 1 time band set	-	ON if RTC fitted

Tab. 1

Table of functions activated by the buttons - models S, X, Y, C

button		normal operation		start up	
		pressing the button alone	pressed together		
	up ON/OFF	more than 3 s: toggle ON/OFF	Pressed together start/stop continuous cycle	-	
	down defrost	more than 3 s: start/stop defrost			
	set mute	- 1 s.: display/set the set point - more than 3 s: access parameter setting menu (enter password '22') - mute audible alarm (buzzer)	-	Pressed together start parameter reset procedure	for 1 s display firmware vers. code for 1 s RESET current EZY set

Tab. 2

Table of button functions - variant model M

button	normal operation	start up	
	rapid selection of probe displayed	Pressed together "set" start parameter reset procedure	for 1 s display firmware vers. code

Tab. 3

Setting the set point (desired temperature)

- press SET for 1 s, the set value will start flashing after a few moments;
- increase or decrease the value using UP or DOWN;
- press SET to confirm the new value.

Switching the device ON/OFF

Press UP for more than 3 s. The control and defrost algorithms are now disabled and the instrument displays the message "OFF" alternating with the temperature read by the set probe.

Manual defrost (models S, X, Y and C only)

Press for DOWN more than 3 s (the defrost starts only the temperature conditions are valid).

Continuous cycle (models S, X, Y and C only)

Press UP and DOWN together for more than 3 s.

Rapid selection of probe displayed (model M only)

Press DOWN briefly to select the probe to be temporarily displayed.

Access and setting type F (frequent) and type C (configuration) parameters

1. press SET for 3 s (the display will show "PS");
2. • to access the type F and C parameter menu, enter the password "22" using UP/DOWN;
   • to access the F parameter menu only, press SET (without entering the password);

scroll inside the parameter menu using UP/DOWN;

4. • to display/set the values of the parameter displayed, press SET, then UP/DOWN and finally SET to confirm the changes (returning to the parameter menu).

To save all the new values and exit the parameter menu, press SET for 3 s;
To exit the menu without saving the changed values (exit by timeout) do not press any button for at least 60 s.

Safety standards

compliant with the relevant European standards. Installation precautions:

- the connection cables must guarantee insulation up to 90 °C;
- for 12 Vac versions use Class II transformers. To ensure compliance with the immunity standards (surge), the transformer must be one of the models specified (see the CAREL price list). For the 12 Vac/dc versions, as double insulation cannot be guaranteed between the power supply and the relay outputs, only use safety low voltage loads (up to 42 V effective rated value);
- ensure a space of at least 10 mm between the case and the nearby conductive parts;
- digital and analogue input connections less than 30 m away; adopt suitable measures for separating the cables so as to ensure compliance with the immunity standards;

Secure the connection cables of the outputs so as to avoid contact with very low voltage parts.

(FRE) Description

PJEZ*(mod. S, C, Y EX) constitue une gamme entière de régulateurs électronique à microprocesseurs avec affichage LED realisée pour la gestion d' unité frigorifique, vitrines et présentoir frigorifique.

Modèles disponibles:

- PJEZS*, indiqués pour la gestion d'unités frigorifiques statiques, sans ventilateur sur l'évaporateur, fonctionnant à des températures supérieures à 0°C;
- PJEZC*, indiqués pour la gestion d'unités frigorifiques ventilées à basse température.
- PJEZ(Y, X)*, indiqués pour la gestion d'unités frigorifiques statiques, sans ventilateur, fonctionnant à basse température;
- PJEZM*, solution pour mesurer simplement la température

Note: mod. Y= relais reliée électroniquement à l' intérieur entre eux; mod. X= relais indépendants.

Affichage et fonctions

Pendant le fonctionnement normal le contrôle affiche sur l' écran la valeur de la sonde réglée au paramètre/4 (=1sonde air ambiant par défaut, =2 deuxième sonde, 3= troisième sonde). De plus sur l' écran apparaissent les LED qui indiquent l' activation des fonctions de contrôles (voir Tab. 1), alors que les trois touches permettent d' activer/désactiver certaines fonctions (voir Tab. 2).

LED et fonctions associées

icone	fonction	fonctionnement normale			start up
		ON	OFF	blink	
	compresseur	accès	éteint	requis	ON
	ventilateur	accès	éteint	requis	ON
	defrost	accès	éteint	requis	ON
AUX	aux	sortie accès	sortie éteinte	-	ON
	alarme	tous	aucune alarme	-	ON
	horloge	RTC présent et activé, et une tranche horaire au moins a été réglée	RTC absent ou désactivé, ou une tranche horaire au moins n'a pas été réglée	-	ON si RTC présent

Tab. 1

Tableau activation fonctions à l'aide des touches - mod. S, X, Y, C

touche		fonctionnement normale		start up	
		simple pression de la touche	pression combinée		
	up ON/OFF	plus de 3 s: alterne phases ON/OFF	Appuyées ensemble activent/désactivent cycle continu	-	
	down defrost	plus de 3 s: active/désactive defrost		Appuyées ensemble activent procédure REINITIALISATION param.	pendant 1 s affiche cod. vers. firmware pour 1 s RESET banc EZY courant
	set mute	- 1 s.: affiche/ permet de régler set point - plus de 3 s: accès au menu réglages paramètres (entrer mot de passe '22') - Eteint l' alarme accoustique (buzzer)	-		

Tab. 2

Tableau fonctions touches - variante mod. M

touche	fonctionnement normale	start up	
	sélection rapide sonde affichée	Enfoncée en même temps que "set" active la procédure RESET paramètres.	pendant 1 s affiche cod. vers. firmware

Tab. 3

Réglages du set point (valeur de la température désirée)

- appuyer pendant 1 s sur SET, quelques instants après la valeur réglée clignote;
- augmenter ou diminuer cette valeur au moyen de UP ou DOWN;
- appuyer sur SET pour confirmer la nouvelle valeur.

ON/OFF de l'instrument

Appuyer pendant plus de 3s sur UP. Dans cette situation les algorithmes de régulation et defrost sont désactivés et l'instrument alterne l' affichage sur l' écran du message "OFF" et l' affichage de la température pré-réglée de la sonde.

Dégivrage manuel (seulement pour mod. S, X, Y e C)

Appuyer pendant plus de 3 s sur DOWN (il s'active seulement si subsistent les conditions de température).

Cycle continu (seulement pour mod. S, X, Y e C)

Appuyer en meme temps pendant plus de 3 s sur UP et DOWN.

Sélection rapide sonde affichée (seulement pour mod. M)

Appuyer rapidement DOWN pour sélectionner la sonde à afficher temporairement.

Accès et modification paramètres type F (fréquents) et type C (configuration)

1. Appuyer sur SET pendant 3 s (sur l' écran apparaitra "PS");
2. • pour accéder au menu paramètres de type F et C entrer le mot de passe "22" en utilisant UP/DOWN;
   • pour accéder seulement au menu parametres F appuyer sur SET (sans devoir entrer le mot de passe);
3. naviguer à l' intérieur du menu paramètresen utilisant UP/DOWN;
4. • pour afficher/modifier les valeurs du paramètre affiché appuyer sur SET, ensuite sur UP/DOWN et enfin sur SET pour cconfirmer la modification (on retourne ainsi au menu des paramètres).

Pour sauver définitivamente toutes les valeurs modifiées et sortir du menu parametres appuyer sur SET pendant 3 s;
Pour sortir du menu sans sauver les valeurs modifiées (sortie timeout) n' appuyer sur aucun bouton pendant au moins 60s.

Normes de sécurité

conformes aux Normes européennes pertinentes. Precautions d' usage:

- les câbles de connexion doivent garantir l' isolation jusqu' à 90 °C;
- pour les versions12 utiliser transformateurs Classell. Pour respecter les normes de sûreté (surge), le transformateur doit etre un des modèles indiqués (voir catalogue CAREL). Pour les versions 12Vac/dc, une double isolation ne peut être garantie entre l'alimentation et les relais de sortie, utiliser uniquement avec des charges basse tension (jusqu'à 42 V nominal efficace);
- laisser au moins 10 mm de distance entre le boitier et les parties conductibles voisines;
- Connexions des entrées digitales analogiques inférieures à une distance de 30m; adopter les mesures de séparation appropriées des câbles pour le respect des normes de sûreté.

Bloquer avec soin les câbles de connexion des sorties pour éviter les contacts avec les éléments sous Très Basse tension de sécurité.

(GER) Beschreibung

Die PJEZ*-Serie (Mod. S, C, Y E X) umfasst einer Bandbreite elektronischer Mikroprozessorsteuerungen mit LED-Anzeige für die Ansteuerung von Kältegeräten, Kühlvitrinen und Kühlmöbeln.

Verfügbare Modelle:

- Die Mod. PJEZS* steuern Kältegeräte mit statischem Verdichter ohne Verdampferventilator bei Betriebstemperat. über 0°C an;
- Die Modelle PJEZC* steuern Kältegeräte mit Luftkühler im Tiefkühlbereich an;
- Die Modelle PJEZ(Y, X)* steuern Kältegeräte mit statischem Verdichter ohne Verdampferventilator im Tiefkühlbereich an;
- Die Modelle PJEZM* sind die Lösung für eine einfache Temperaturmessung

N.B.: Mod. Y= elektronisch zusammengeschaltete Relais; Mod. X= unabhängige Relais.

Anzeige und Funktionen

Bei Normalbetrieb zeigt das Display den Wert des im Parameter /4 eingestellten Fühlers an (=1 Default-Raumfühler, =2 zweiter Fühler, 3= dritter Fühler). Die Display-LEDs zeigen außerdem den Aktivierungszustand der Funktionen an (siehe Tab. 1), während über die 3 Tasten einige Funktionen aktiviert/deaktiviert werden können (siehe Tab. 2).

LEDs und Funktionen

Pikto-gramm	Funktion	Normalbetrieb			Start
		EIN	AUS	Blinkt	
	Verdichter	Eingeschaltet	Ausgeschaltet	Angefordert	EIN
	Ventilator	Eingeschaltet	Ausgeschaltet	Angefordert	EIN
	Abtauung	Eingeschaltet	Ausgeschaltet	Angefordert	EIN
AUX	Aux	Gerät eingeschaltet	Gerät ausgeschaltet	-	EIN
	Alarm	Alle	Kein Alarm	-	EIN
	Uhr	RTC vorhanden und aktiviert, und es wurde mindestens 1 Zeitzyklus eingestellt	RTC nicht vorhanden oder deaktiviert, oder es wurde kein Zeitzyklus eingestellt	-	EIN, falls RTC vorhanden

Tab. 1

Tabelle der Funktionsaktivierung über die Tasten - Modelle S, X, Y, C

Taste		Normalbetrieb		Start	
		Einzelner Tastendruck	Kombinierter Tastendruck		
	UP ON/OFF	Für länger als 3 Sek.: abwechselnde Anzeige des EIN/AUS-Zustandes	Zusammen gedrückt wird der Dauerbetrieb aktiviert/ deaktiviert	-	
	Down Defrost	Für länger als 3 Sek.: aktiviert/deaktiviert die Abtauung		Zusammen gedrückt wird das Parameter-RESET aktiviert	Für 1 Sek. wird der Code der Firmware-Version eingeblendet für 1 Sek., die active EZY Kabine RESET
	Set mute	- 1 Sek.: Anzeige/Einstellung des Sollwertes - Für länger als 3 Sek.: Zugriff auf das Menü der Parameterkonfiguration (Passwort '22' eingeben) - Stellt akustischen Alarm (Summer) ab	-		

Tab. 2

Tabelle der Tastenfunktionen - Variante Modell M

Taste	Normalbetrieb	Start	
	Schnellwahl des anzuzeigenden Fühlers	Zusammen mit "set" gedrückt wird das Parameter-RESET-Verfahren aktiviert	Für 1 Sek. wird der Code der Firmware-Version eingeblendet

Tab. 3

Einstellung des Sollwertes (gewünschte Temperatur)

- Für 1 Sekunde SET drücken, der eingestellte Wert beginnt kurz darauf zu blinken;
- Den Wert mit UP oder DOWN erhöhen oder vermindern;
- SET drücken, um den neuen Wert zu bestätigen.

EIN/AUS des Gerätes

UP für länger als 3 Sekunden drücken. Unter dieser Bedingung sind die Regelungsalgorithmen und Abtauung deaktiviert, und das Gerät zeigt abwechselnd die Meldung "OFF" und den Fühlertemperaturmesswert an.

Manuelle Abtauung (nur für Modelle S, X, Y und C)

Für länger als 3 Sekunden DOWN drücken (wird nur bei korrekten Temperaturbedingungen aktiviert).

Dauerbetrieb (nur für Modelle S, X, Y und C)

Gleichzeitig UP und DOWN für 3 Sekunden drücken.

Schnellwahl des anzuzeigenden Fühlers (nur für Modell M)

DOWN kurz drücken, um den vorübergehend anzuzeigenden Fühler zu wählen.

Zugriff und Änderung der Parameter F (häufige Param.) und C (Konfigurationsparam.)

1. SET für 3 Sekunden drücken (auf dem Display erscheint "PS").
2. • Für den Zugriff auf das Menü der Parameter F und C das Passwort "22" mit UP/DOWN eingeben.
   • Für den Zugriff nur auf das Menü der Parameter F SET drücken (ohne Passworteingabe).
3. Das Parametermenü kann mit UP/DOWN abgelaufen werden.
4. • Zur Anzeige/Änderung der Parameterwerte SET, dann UP/DOWN und schließlich SET zur Bestätigung der Änderung drücken (es erfolgt die Rückkehr zum Parametermenü).

Zur endgültigen Speicherung aller geänderten Werte und zum Verlassen des Parametermenüs SET für 3 Sek. drücken. Zum Verlassen des Menüs ohne Speicherung der geänderten Werte (Verlassen wegen Time-out) für mindestens 60 Sek. keine Taste drücken.

Sicherheitsvorschrifften

Übereinstimmung mit den einschlägigen europäischen Vorschriften. Vorsichtsmaßnahmen bei der Installation:

- Die Anschlusskabel müssen bis zu 90 °C isolierung garantieren.
- Für die 12 Vac-Versionen Trafos der Klasse II verwenden. Zur Einhaltung der Vorschriften EN 61000-4-4, EN 61000-4-5, EN 61000-4-11, EN 61000-4-6, EN 60730-1 muss der Trafo einem der angegebenen Modelle entsprechen (siehe CAREL-Preisliste). Da für die 12-Vac/dc-Versionen nicht die doppelte Isolierung zwischen den Versorgungssteckern und den Relaisausgängen garantiert werden kann, sollten nur mit SELV versorgte Lasten verwendet werden (bis 42 V effektive Nennspannung).
- Mindestens 10 mm Abstand zwischen dem Gehäuse und den leitenden Teilen vorsehen.
- Die Anschlüsse der digitalen und analogen Eingänge müssen weniger als 30 m Abstand aufweisen; die Kabel sind zur Einhaltung der obgenannten Vorschriften angemessen zu trennen.

Die Anschlusskabel der Ausgänge gut befestigen, um Kontakte mit Niedrigstspannungsteilen zu vermeiden.

(SPA) Descripción

Los PJEZ* (mod. S, C, Y E X) representan una gama de reguladores electrónicos a microprocesador con visualización por LED realizados para la gestión de unidades frigoríficas, vitrinas y mostradores frigoríficos.

Modelos disponibles:

- PJEZS*, indicados para la gestión de unidades frigoríficas estáticas, carentes de ventilador en el evaporador, que funcionan con temperaturas por encima de 0°C;
- PJEZC*, indicados para la gestión de unidades frigoríficas ventiladas a baja temperatura.
- PJEZ(Y, X)*, indicados para la gestión de unidades frigoríficas estáticas, carentes de ventilador, que funcionan a baja temp.;
- PJEZM*, solución para la medida simple de la temperatura.

Nota: mod. Y= relés conectados electrónicamente en el interior entre sí; mod. X= relés independientes.

Visualizaciones y funciones

Durante el funcionam. normal, el control muestra en el display el valor de la sonda ajustada con el parám. /4 (=1 sonda ambiente predeterminada, =2 segunda sonda, 3= tercera sonda). Además, en el display aparecen los LED que indican la activación de las funciones del control (ver Tab. 1), mientras que las 3 teclas permiten activar desactivar algunas funciones (ver Tab. 2).

LED y funciones asociadas

icono	función	funcionamiento normal			arranque
		ON	OFF	parpadeo	
	compresor	encendido	apagado	demanda	ON
	ventilador	encendido	apagado	demanda	ON
	desescarche	encendido	apagado	demanda	ON
AUX	aux	salida encendida	salida apagada	-	ON
	alarma	todas	ninguna alarma	-	ON
	reloj	RTC presente y habilitado, y se ha ajustado al menos una franja horaria	RTC ausente o deshabilitado, o no se ha ajustado al menos una franja horaria	-	ON si RTC presente

Tab. 1

Tabla de activación de funciones por medio de las teclas - mod. S, X, Y, C

tecla		funcionamiento normal		arranque	
		presión de la tecla sola	presión combinada		
	arriba ON/OFF	más de 3 s: alterna estados ON/OFF	Pulsados juntos activan/desactivan	-	
	abajo desesc.	más de 3 s: activa/desactiva desescarche	ciclo continuo	Pulsados juntos activan el procedimiento RESET de los parámetros	durante 1 s muestra cód. vers. firmware por 1 s RESET banco EZY corriente
	set mute	- 1 s.: muestra/permite ajustar el punto de consigna - más de 3 s: acceso al menú de ajuste de parámetros (insertar contraseña '22') - Apaga alarma acústica (zumbador)	-		

Tab. 2

Tabla de funciones de teclas - variante mod. M

tecla	funcionamiento normal	arranque	
	selección rápida de sonda visualizada	Pulsando a la vez que "set" activa el procedimiento de RESETEO de parámetros.	durante 1 s muestra cód. vers. firmware

Tab. 3

Ajustes del punto de consigna (valor de temperatura deseado)

pulsar durante 1 s SET, después de unos instantes el valor ajustado parpadea;

- aumentar o disminuir dicho valor con las flechas ARRIBA o ABAJO;
- pulsar SET para confirmar el nuevo valor.

ON/OFF del instrumento

Pulsar durante más de 3 s ARRIBA. En esta condición los algoritmos de regulación y desescarche son deshabilitados y el instrumento alterna la visualización en el display del mensaje "OFF" y la de la temperatura de la sonda ajustada.

Desescarche manual (sólo para mod. S, X, Y y C)

Pulsar durante más de 3 s ABAJO (se activa sólo si subsisten las condiciones de temperatura).

Ciclo continuo (sólo para mod. S, X, Y y C)

Pulsar simultáneamente durante más de 3 s ARRIBA y ABAJO.

Selección rápida de sonda visualizada (sólo para mod. M)

Pulsar repetidamente la tecla ABAJO para seleccionar la sonda a visualizar temporalmente.

Acceso y modificación de parámetros tipo F (frecuentes) y tipo C (configuración)

1. Pulsar SET durante 3 s (en el display aparecerá "PS");
2. • Para acceder al menú de los parámetros de tipo F e C dteclear la contraseña "22" con ARRIBA/ABAJO;
   • Para acceder sólo al menú de los parámetros F pulsar SET (sin teclear contraseña);
3. navegar al interior del menú de parámetros con ARRIBA/ABAJO;
4. • Para visualizar/modificar los valores del parámetro visualizado pulsar SET, y luego ARRIBA/ABAJO y finalmente SET para confirmar la modificación (así se vuelve al menú de los parámetros).

Para guardar definitivamente todos los valores modificados y salir del menú de los parám. pulsar SET durante 3 s. Para salir del menú sin guardar los valores modificados (salida por agotamiento de tiempo) no pulsar ninguna teclа durante al menos 60 s.

Normativas de seguridad

Conforme a las Normativas Europeas de la materia. Precauciones de instalación:

- Los cables de conexión deben garantizar el aislamiento hasta a 90 °C;
- Para las versiones de 12 Vca utilizar transformadores de Classe II. Para respetar las normativas EN 61000-4-4, EN 61000-4-5, EN 61000-4-11, EN 61000-4-6, EN 60730-1, el transformador debe ser de uno de los modelos indicados (ver Lista de Precios de CAREL). Para las versiones 12 vac/dc, no siendo posible garantizar el aislamiento doble, entre el conector de alimentación y las salidas relés, se aconseja utilizar cargas alimentadas solamente con muy baja tensión de seguridad (hasta 42V nominales de valor eficaz);
- Prever al menos 10 mm de distancia entre el contenedor y las partes conductoras próximas;
- Conexiones de las entradas digitales y analógicas inferiores a 30 m de distancia; adoptar las medidas adecuadas de separación de cables para respetar la normativa de inmunidad.

Bloquear bien los cables de conexión de las salidas para evitar contactos con las partes en Bajísima Tensión de seguridad.

(POR) Descrição

PJEZ*(mod. S, C, Y EX) representam uma gama de reguladores electrónicos com microprocessador e com visualização por LEDs concebidos para a gestão de unidades frigoríficas, vitrines e bancadas refrigeradas.

Modelos disponíveis:

- PJEZS*, indicado para a gestão de unidades estáticas de refriger., sem ventilador no evaporad., funcionante com temp. acima de 0°C;
- PJEZC*, indicado para a gestão de unidades de refrigeração ventiladas em baixa temperatura;
- PJEZ(Y, X)*, indicado para a gestão de unidades estáticas de refrigeração, sem ventilador, funcionante em baixa temp.;
- PJEZM*, solução para simples mensuração da temperatura

Nota: mod. Y= relés electrónicamente ligados entre eles no interior; mod. X= relés independentes.

Visualização e funções

Durante o normal funcionamento, o controle indica no visor o valor da sonda programada com o parâmetro/4 (=1 sonda ambiente por defeito,=2 segunda sonda, 3= terceira sonda). No visor aparecem também os LEDs que indicam a activação das funções de controle (ver Tab. 1), enquanto que as 3 teclas permitem activar/desactivar algumas funções (ver Tab. 2).

LEDs e funções associadas

ícone	função	normal funcionamento			start up
		ON	OFF	blink	
	compressor	ligado	desligado	solicitado	ON
	ventilador	ligado	desligado	solicitado	ON
	defrost	ligado	desligado	solicitado	ON
AUX	aux	saída ligada	saída desligada	-	ON
	alarme	todos	nenhum alarme	-	ON
	relógio	RTC presente e activado, e foi programada pelo menos uma faixa horária	RTC ausente ou desactivado, ou não foi programada nenhuma faixa horária	-	ON se RTC presente

Tab. 1

Tabela de ativação das funções através de botões - mod. S, X, Y, C

tecla		normal funcionamento		start up	
		pressão de uma única tecla	pressão combinada		
	up ON/OFF	mais de 3 s: alterna entre os estados ON e OFF	Premidas simultâneamente activam/ desactivam o ciclo continuo	-	
	down defrost	mais de 3 s: activa/desactiva defrost		Premidas ultâneamente activam/o procedimento RESET parâmetros	durante 1 s visualiza cód. vers. firmware por 1 seg. RESET bancadas EZY activadas
	set mute	- 1 s: visualiza/permite programar set point - mais de 3 s: acesso ao menu de programação de parâmetros (inserir password '22') - silencia o alarme acústico (buzzer)	-		

Tab. 2

Tabela de função dos botões - variante mod. M

tecla	normal funcionamento	start up	
	seleção rápida da sonda visualizada	Manter apertado junto com "set" para ativar o procedimento de RESET dos parâmetros.	durante 1 s visualiza cód. vers. firmware

Tab. 3

Programações do set point (valor de temperatura desejado)

- prema durante 1 s SET, pouco depois o valor programado surge intermitente;
- aumente ou diminua esse valor com UP ou DOWN;
- prema SET para confirmar o novo valor.

ON/OFF do instrumento

Prema durante mais de 3 s UP. Nesta condição, os algoritmos de regulação e defrost estão activados e o instrumento alterna no visor a visualização da mensagem "OFF" com a da temperatura programada.

Descongelamento manual (somente para modelos S, X, Y e C)

Prema durante mais de 3 s DOWN (só é activado se persistirem as condições de temperatura).

Ciclo contínuo (somente para modelos S, X, Y e C)

Prema simultâneamente durante mais de 3 s UP e DOWN.

Seleção rápida da sonda visualizada (somente para modelos M)

Aperte DOWN rapidamente para selecionar a sonda a ser visualizada temporariamente.

Acesso e modificação dos parâmetros tipo F (freqüentes) e tipo C (configuração)

1. prema SET durante 3 s (no visor aparecerá "PS");
2. • para acedar ao menu de parâmetros do tipo F e C digite a password "22" com UP/DOWN;
   • para aceder só ao menu de parâmetros F prema SET (sem digitar a password);
3. navegue no menu de parâmetros com UP/DOWN;
4. • para visualizar/modificar os valores do parâmetro visualizado prema SET, e depois UP/DOWN e de novo SET para confirmar a modificação (regressa então ao menu dos parâmetros).

Para guardar definitivamente todos os valores modificados e sair do menu de parâmetros prema SET durante 3 s;
Para sair do menu sem guardar os valores modificados (saída por "time out") não prema nenhuma teclа durante pelo menos 60s.

Normas de segurança

conformes às Normativas europeias na matéria. Precauções de instalação:

- os cabos de ligação devem garantir o isolamento até aos 90°C;
- para as versões 12 Vac utilize transformadores Classe II. Para respeitar as normativas de imunidade (Surge), o transformador deve ser escolhido entre os modelos indicados (ver Lista de Preços CAREL). Para as versões 12 Vac/dc, como a dupla isolação não pode ser garantida entre a fonte de tensão e os relés, somente utilize cargas de baixa voltagem (até 42V médios efetivos);
- preveja pelo menos 10mm de distância entre o contentor e as partes condutoras vizinhas;
- ligações das entradas digitais e analógicas inferiores a 30m de distância; adopte as medidas de separação adequadas para os cabos de modo a respeitar as normativas de imunidade.

Bloqueie bem os cabos de conexão das saídas para evitar contactos com partes em Baixíssima Tensão de segurança.

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GB TECHNICAL SPECIFICATIONS

	Model	Voltage	Power
Power supply	IRxxxxHxxxx	115 to 230 V~, 50/60 Hz	6 VA, 50 mA~ max.
	IRxxxxLxxxx	12 to 24 V≈, 50/60 Hz, 12 to 30 Vdc	3 VA, 300 mA≈ /mAdc max.
	IRxxxx0xxxx	12 V≈, 50/60 Hz, 12 to 18 Vdc	Use only SELV power supply
Insulation guaranteed by the power supply	IRxxxxHxxxx	insulation in reference to very low voltage parts	reinforced 6 mm clearance, 8 mm creepage 3750 V insulation
		insulation from relay outputs	basic 3 mm clearance, 4 mm creepage 1250 V insulation
	IRxxxxLxxxx IRxxxx0xxxx	insulation in reference to very low voltage parts	externally guaranteed by safety transformer (SELV power supply)
		insulation from relay outputs	reinforced 6 mm clearance, 8 mm creepage 3750 V insulation
Inputs	S1 (probe 1)	NTC (IRxxx0xxxxx) o NTC e PTC (IRxxx7xxxxx)	
	S2 (probe 2)	NTC (IRxxx0xxxxx) o NTC e PTC (IRxxx7xxxxx)	
	DI1	free contact, contact resistance < 10 Ω, closing current 6 mA	
	S3 (probe 3)	NTC (IRxxx0xxxxx) o NTC e PTC (IRxxx7xxxxx)	
	DI2	free contact, contact resistance < 10 Ω, closing current 6 mA	
	S4 (probe 4)	NTC (IRxxx0xxxxx) o NTC e PTC (IRxxx7xxxxx)	
	Maximum ditance of probes and digital inputs less than 10 m. **Note:** during installation keep the power and loads connection separate from probe cables, digital inputs, repeater display and supervisory system.		

Probe type			
	Std. CAREL NTC	10 kΩ at 25 °C, –50T90 °C range	
		measurement error:	1 °C in the –50T50 °C range
			3 °C in the –50T90 °C range
	NTC high temperature	50 kΩ at 25 °C, –40T150 °C range	
		measurement error:	1,5 °C in the –20T115 °C range
			4 °C in the –20T115 °C range
	PTC std. CAREL (specific model)	985 Ω a 25 °C, range da -50T150 °C	
		measurement error:	2 °C in the –50T50 °C range
			4 °C in the –50T150 °C range

Relay outputs: Relay rating for the models IRxx(S,Y,F,C)x(0,L,H)(H,I,E,G,K,O,W)xxx

EN 60730-1			UL 873	
relè	250 Vac	operating cycles	250 Vac	operating cycles
R1(**)	10 (10)A	100000	12A resistivi 12 FLA 72 LR, Toff minimum 60 seconds(*), pilot duty C 300	30000
R2(**)	8 (4)A	100000	8A resistivi 2 FLA 12 LRA, pilot duty C300	30000
R3(**)	8 (4)A	100000	8A resistivi 2 FLA 12 LRA, pilot duty C300	30000
R4(**)	8 (4)A	100000	8A resistivi 2 FLA 12 LRA, pilot duty C300	30000

insulation from very low voltage parts	reinforced 6 mm clearance, 8 mm creepage 3750 V insulation
insulation between the relay outputs indipendent	basic 3 mm clearance, 4 mm creepage 1250 V insulation

(*): between the OFF status and the following ON status of the relay at least 1 minute have to elapse.
(**): relay not suitable for fluorescent loads (neon lights,...) that use starters (ballasts) with phase-shift capacitors. Fluorescent lamps with electronic control devices or without phase-shift capacitors can be used, within the operating limits specified for each type of relay.

Connections	Type of connection				Cross-section Max. current
	Model	Relay	P. Supply	Probes	for wires from 12 A 0.5 a 2.5 mm²
	IRxxxxxx0xx	screw/faston	screw	screw	
	IRxxxxxx2xx	removable	removable	removable	

the installer has to provide the correct dimensioning of the power supply and cable connection between the instruments and the loads. Depending on the model, the maximum current in the common terminals 1 and 3 or 5 is 12 A. When using the controller at maximum operating temperature and full load, use cables featuring a maximum operating temperature of 105 °C at least.

Case	plastic	IRxxxx(0,L,H)xxxx	dimensions	34.4 x 76.2 x 79 mm
			depth	70.5 mm
Mounting	smooth and stiff panel	using side fastening brackets, pressed until stop		
	drilling template	dimensions 28.8 ± 0.2 x 70.8 ± 0.2 mm		
Display	digits	3 digit LED		
	display range	from –99 to 999		
	operating status	indicated by graphic icons on the display		
Keypad	4 rubber silicon buttons			
No options	IRxxxxx(H)xxx			
Infrared receiver	IRxxxxx(I,F,K,W)xxx			
Clock with backup battery	IRxxxxx(E,F,O,W)xxx			
Alarm or auxiliary relay	IRxxxxx(E,F,O,W)xxx			
Custom param. or firmware	IRccxxxxxnx; cc customer; n custom made parameters list			
Package	IRxxxxxxxxi: blank singol; 1 or 5 multiple; K kit with probes			
Buzzer	available on all the models			
Clock	error at 25 °C	±10 ppm (±5.3 min/year)		
	error in the temperature range -10T60 °C	-50 ppm (-27 min/year)		
	ageing	< ±5 ppm (±2.7 min/year)		
	discharge time	typical 6 months (max. 8 months)		
	recharge time	typical 5 hours (< max. 8 hours)		

Operating temperature	-10T60 °C for versions IRxxxx (0,L)(H,I,E,F,G, K,O,W) -10T50 °C for versions IRxxxx (0,L)(H,I,E,F,G, K,O,W)
Operating humidity	<90% r.H. non-condensing
Storage temperature	-20T70 °C
Storage humidity	<90% r.H. non-condensing
Front panel degree of protection	smooth and stiff panel installation with gasket IP65
Control pollution status	2 (normal situation)
PTI of the insulating material	printed circuit board 250, insulation 175
Period of electric stress across insulating parts	long
Heat and fire resistance category	category D and category B (UL 94-V0)
Class of protection against voltage surges	category II
Rated impulse voltage	2500V
Type of disconnection or interruption	1.B relay contacts (micro-disconnection)
Construction of control	incorporated control, electronically
Classification according to protection against electric shock	Class II, by appropriate incorporation
The control is either to be hand-held or is intented for a hand-held equipment	no
Software class and structure	Class A
Front panel cleaning	use only neutral detergents and water
Serial interface for CAREL network	external, available on all models
Interface for repeater display	external, available on IRxxxx(0,L,H)xxxx
Maximum distance between interface and display	10 m
Programming key	available on all models

The IR33 range fitted with the standard CAREL NTC probe is compliant with standard EN 13485 on thermometers for measuring the air temperature in applications on units for the conservation and sale of refrigerated, frozen and deep-frozen food and ice cream. Designation of the instrument: EN13485, air, S, A, 1, - 50T90 °C. The standard CAREL NTC probe is identifiable by the printed laser code on "WP" models, or the code "103AT-11" on "HP" models, both visible on the sensor part.

Table of alarms and signals: display, buzzer and relay

Code	Icon on the display	Alarm relay	Buzzer	Reset	Description
'rE'	flashing	active	active	automatic	virtual control probe fault
'E0'	flashing	OFF	OFF	automatic	room probe S1 fault
'E1'	flashing	OFF	OFF	automatic	defrost probe S2 fault
'E2'	flashing	OFF	OFF	automatic	probe S3 fault
'E3'	flashing	OFF	OFF	automatic	probe S4 fault
'E4'	flashing	OFF	OFF	automatic	probe S5 fault
'___'	no	OFF	OFF	automatic	probe not enabled
'LO'	flashing	active	active	automatic	low temperature alarm
'HI'	flashing	active	active	automatic	high temperature alarm
'AFr'	flashing	active	active	manual	antifreeze alarm
'IA'	flashing	active	active	automatic	immediate alarm from external contact
'dA'	flashing	active	active	automatic	delayed alarm from external contact
'dEF'	ON	OFF	OFF	automatic	defrost running
'Ed1'	no		OFF	OFF	automatic/ manual defrost on evaporator 1 ended by timeout
'Ed2'	no	OFF	OFF	automatic/ manual	defrost on evaporator 2 ended by timeout
'Pd'	flashing	active	active	automatic/ manual	maximum time pump-down alarm
'LP'	flashing	active	active	automatic/ manual	low pressure alarm
'AtS'	flashing	active	active	automatic/ manual	autostart in pump-down
'cht'	no	OFF	OFF	automatic/ manual	high condenser temperature pre-alarm
'CHT'	flashing	active	active	manual	high condenser temperature alarm
'dor'	flashing	active	active	automatic	door open for too long alarm
'Etc'	flashing	OFF	OFF	automatic/ manual	real time clock fault
'EE'	flashing	OFF	OFF	automatic	EEPROM error, unit parameters
'EF'	flashing	OFF	OFF	automatic parameters	EEPROM error, operating
'HA'	HACCP flashing	OFF	OFF	manual	HACCP alarm, type 'HA'
'HF'	HACCP flashing	OFF	OFF	manual	HACCP alarm, type 'HF'
'rCt'	Signal				instrument enabled for programming from the remote control
'Add'Signal					automatic address assignment procedure in progress
'Prt'	Signal				printing report
'LrH'Signal					activation of the of low relative humidity procedure
'HrH'Signal					activation of the of high relative humidity procedure
'ccb'Signal					request to start continuous cycle
'ccE'Signal					request to end continuous cycle
'dFb'Signal					request to start defrost
'dFE'Signal					request to end defrost
'On'	Signal				switch ON
'OFF'	Signal				switch OFF
'rES'Signal					reset alarms with manual reset reset HACCP alarms reset temperature monitoring
'n1'... 'n6'	flashing	active	active	automatic	indicates an alarm on unit 1 to 6 present in the network
'dnL'	signal				signals download in progress
'd1'... 'd6'	flashing	OFF	OFF	automatic	signals download with errors on unit 1 to 6

Tab. 3

The buzzer is enabled if enabled by the parameter 'H4'.
The alarm relay is enabled if one of the AUX auxiliary outputs, 1 or 2 ('H1' or 'H5') has been assigned the alarm relay function (normally energized or normally de-energized). **Note:** the buzzer can be disabled by the CAREL Supervision System.

Summary of operating parameters (UOM = Unit of measure; Def. = Default value).

Symbol	Code	Parameter	Model	UOM	Type	Min	Max	Def.
	Pw	Password	MSYF	-	C	0	200	22
	/2	Measurement stability	MSYF	-	C	1	15	4
	/3	Probe display response	MSYF	-	C	0	15	0
	/4	Virtual probe	MSYF	-	C	0	100	0
	/5	Select °C or °F 0: °C 1: °F	MSYF	flag	C	0	1	0
	/6	Decimal point 0 display with tenths of a degree 1 display without tenths of a degree	MSYF	flag	C	0	1	0
	/tI	Display on internal terminal 1: virtual probe 2: probe 1 3: probe 2 4: probe 3 5: probe 4 6: probe 5 7: set point	MSYF	-	C	1	7	1
	/tE	Display on external terminal 0: remote terminal not present 1: virtual probe 2: probe 1 3: probe 2 4: probe 3 5: probe 4 6: probe 5	MSYF	-	C	0	6	0
	/P	Select type of probe 0: NTC standard with range -50T90 °C 1: NTC enhanced with range -40T150 °C 2: PTC standard with range -50T150 °C	MSYF	-	C	0	2	0
	/A2	Configuration of probe 2 (S2) 0: Probe absent 1: Product probe (display only) 2: Defrost probe 3: Condenser probe 4: Antifreeze probe	YF MS	- -	C C	0 0	4 4	2 0
	/A3	Configuration of probe 3 (S3/DI1) As for /A2	MSYF	-	C	0	4	0
	/A4	Configuration of probe 4 (S4/DI2) As for /A2	MSYF	-	C	0	4	0
	/c1	Calibration of probe 1	MSYF	°C/°F	C	-20	20	0.0

Symbol	Code	Parameter	Model	UOM	Type	Min	Max	Def.
	A0	Alarm and fan differential	MSYF	°C/°F	C	0.1	20	2.0
	A1	Type of threshold 'AL' and 'AH' 0: AL and AH are relative thresholds to the set point 1: AL and AH are absolute thresholds	MSYF	flag	C	0	1	0
	AL	Low temperature alarm threshold	MSYF	°C/°F	F	-50	200	0.0
	AH	High temperature alarm threshold	MSYF	°C/°F	F	-50	200	0.0
	Ad	Low and high temperature signal delay	MSYF	min	F	0	250	120
	A4	Digital input 1 configuration (DI1) 0: Input not active 1: Immediate external alarm 2: Delayed external alarm 3: If model M, probe selection 3: Other models enable defrost 4: Start defrost 5: Door switch with compressor and fan stop 6: Remote on/off 7: Curtain switch 8: Low pressure switch 9: Door switch with fan stop only 10: Direct/reverse 11: Light sensor 12: Activation of the AUX output 13: Door switch with compressor and fans off and light not managed 14: Door switch with fans only off and light not managed	SYF M	- -	C C	0 0	14 14	0 3
	A5	Digital input 2 configuration (DI2) As for A4	MSYF	-	C	0	14	0
	A6	Stop compressor from external alarm	SYF	min	C	0	100	0
	A7	External alarm detection delay	SYF	min	C	0	250	0
	A8	Enable alarms 'Ed1' and 'Ed2' 0: Alarm signals Ed1 and Ed2 enabled 1: Alarm signals Ed1 and Ed2 disabled	SYF	flag	C	0	1	0
	Ado	Light management mode with door switch	MSYF	flag	C	0	1	0
	Ac	High condenser temperature alarm	SYF	°C/°F	C	0.0	200	70.0
	AE	High condenser temperature alarm differential	SYF	°C/°F	C	0.1	20	10
	Acd	High condenser temperature alarm delay	SYF	min	C	0	250	0
	AF	Light sensor OFF time	SYF	s	C	0	250	0
	ALF	Antifreeze alarm threshold	MSYF	°C/°F	C	-50	200	-5.0
	AdF	Antifreeze alarm delay	MSYF	min	C	0	15	1

Symbol	Code	Parameter	Model	UOM	Type	Min	Max	Def.
	F0	Fan management 0: Fans always on 1: Fans controlled according to the temperature difference between the virtual control probe and the evaporator temperature Fans controlled according to the evaporator 2: temperature	F	flag	C	0	2	0
	F1	Fan start temperature	F	°C/°F	F	-50	200	5.0
	F2	Fan OFF with compressor OFF 0: Fans always on 1: Fans off with compressor off	F	flag	C	0	1	1
	F3	Fans in defrost 0: Fans operate during defrosts 1: Fans do not operate during defrosts	F	flag	C	0	1	1
	Fd	Fan OFF after dripping	F	min	F	0	15	1
	F4	Condenser fan stop temperature	MSYF	°C/°F	C	-50	200	40
	F5	Condenser fan start differential	MSYF	°C/°F	C	0.1	20	5.0

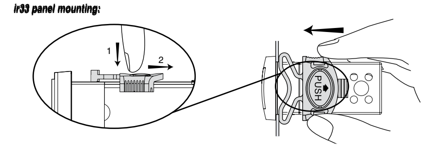
Symbol	Code	Parameter	Model	UOM	Type	Min	Max	Def.
	H0	Serial address	MSYF	-	C	0	207	1
	H1	Function of relay AUX 0: Alarm output usually energised 1: Alarm output usually de-energised 2: Auxiliary output 3: Light output 4: Auxiliary evaporator defrost output 5: Pump down valve output 6: Condenser fan output 7: Delayed compressor output 8: Auxiliary output with deactivation when OFF 9: Light output with deactivation when OFF 10: No function associated with the output 11: Reverse output in control with dead band 12: Second compressor step output 13: Second compressor step output with rotation	MSYF	flag	C	0	13	1
AUX	H2	Disable keypad/IR (see keypad function table below)	MSYF	flag	C	0	6	1
	H3	Remote control enabling code	MSYF	-	C	0	255	0
	H4	Disable buzzer 0: Buzzer enabled 1: Buzzer disabled	MSYF	flag	C	0	1	0
	H6	Lock keypad	MSYF	-	C	0	255	0
	H8	Select activation of output with time band 0: Time band linked to output configured for light 1: Time band linked to output configured for aux	MSYF	flag	C	0	1	0

Keypad function (H2):

Parameter "H2"	LIGHT	ON/OFF	AUX	HACCP	PRG/MUTE (mute)	UP/CC	DOWN/DEF	SET	Parameter F modification	Set point modification	Remote control modification
0									•	•	
1											
2									•	•	•
3											•
4		•				•	•		•		
5		•				•	•		•	•	
6						•	•		•	•	

"•" = Disabled

ir33 panel mounting:



Panel mounting by two lateral sliding plastic brackets

Fig. 1

Optional connections:

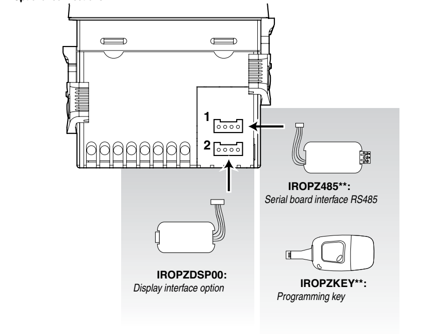


Fig. 2

Dimensions (mm)

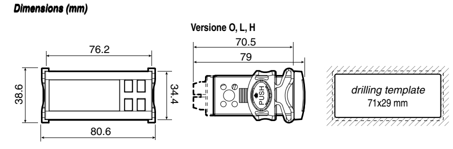


Fig. 3

Electrical wiring:

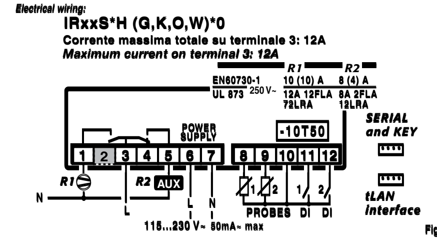

IRxxS*H (G,K,O,W)*0
Corrente massima totale su terminale 3: 12A
Maximum current on terminal 3: 12A
R1
R2
EN60730-1 10 (10) A 8 (4) A
UL 873 250 V~ 12A 12FLA 72LRA 8A 2FLA 12LRA
POWER SUPPLY
-10T50
SERIAL and KEY
1 2 3 4 5 6 7 8 9 10 11 12
R1
R2
AUX
N
L
N
PROBES DI DI
tLAN interface
115...230 V~ 50mA~ max

Fig. 4

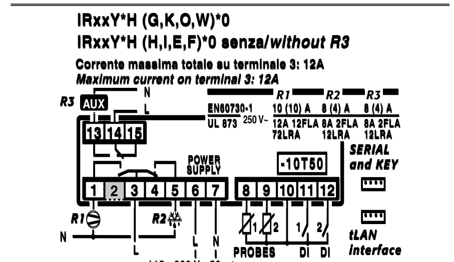
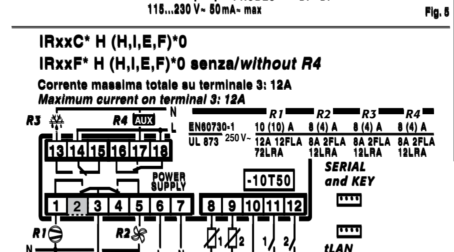

IRxxY*H (G,K,O,W)*0
IRxxY*H (H,I,E,F)*0 senza/without R3
Corrente massima totale su terminale 3: 12A
Maximum current on terminal 3: 12A
R3
AUX
N
L
R1
R2
R3
EN60730-1 10 (10) A 8 (4) A 8 (4) A
UL 873 250 V~ 12A 12FLA 72LRA 8A 2FLA 12LRA 8A 2FLA 12LRA
13 14 15
POWER SUPPLY
-10T50
SERIAL and KEY
1 2 3 4 5 6 7 8 9 10 11 12
R1
R2
PROBES DI DI
tLAN interface
115...230 V~ 50mA~ max

Fig. 5


IRxxC* H (H,I,E,F)*0
IRxxF* H (H,I,E,F)*0 senza/without R4
Corrente massima totale su terminale 3: 12A
Maximum current on terminal 3: 12A
R3
R4
AUX
N
L
R1
R2
R3
R4
EN60730-1 10 (10) A 8 (4) A 8 (4) A 8 (4) A
UL 873 250 V~ 12A 12FLA 72LRA 8A 2FLA 12LRA 8A 2FLA 12LRA 8A 2FLA 12LRA
13 14 15 16 17 18
POWER SUPPLY
-10T50
SERIAL and KEY
1 2 3 4 5 6 7 8 9 10 11 12
R1
R2
N
L
N
tLAN

Safety standards: compliant with the European reference standards.

Precautions for installation:

- the connection cables must guarantee insulation at up to 90 °C; and, if necessary, up to 105 °C
- adequately secure the connection cables to the outputs so as to avoid contact with very low voltage components.

Signals on the display

The blinking status indicates a request for activation that cannot be implemented until the end of the corresponding delay times.

Icon	Function	Normal Operation			Startup
		ON	OFF	blink	
	COMPRESS.	compressor ON	comp. OFF	compressor request	
	FAN	fan ON	fan OFF	fan request	
	DEFROST	defrost in progress	defrost not required	defrost request	
AUX	**AUX**	auxiliary output AUX active	auxiliary output AUX not active	anti-sweat heater function active	
	ALARM	delayed external alarm (before the expiry of the time 'A7')	no alarm present	alarms in normal operation (eg. high/low temp.) or alarm from ext. digital input immediate or delayed	
	CLOCK	at least one timed defrost has been set	no timed defrost is present	clock alarm	ON if Real-Time Clock present
	LIGHT	auxiliary output LIGHT ACTIVE	auxiliary output LIGHT NOT ACTIVE	anti-sweat heater function active	
	SERVICE		no malfunction	malfunction (eg. EEPROM error or probe fault)	
HACCP	**HACCP**	HACCP function	HACCP function enabled	HACCP alarm (HA and/or HF) not enabled	
	CONTINUOUS CYCLE	enabled	not enabled	request	

Tab. 1

Buttons on the keypad

Button	Press. the button alone	Pressing together with other buttons	Start-up: if pressed for more than 5 s at startup, starts the default parameters setting is enabled	Automatic address assignment: if pressed for 1 s enters the automatic serial address assignin procedure
Prg / mute	• if pressed for more than 5 s accesses the menu for setting type "F" (frequent) parameters • **in the event of alarm:** silences the audible alarm (buzzer) and disables the alarm relay	• if pressed for more than 5 s together with the **SET** button, accesses the menu for setting the type "C" (configuration) or downloading the parameters • if pressed for more than 5 s together with the **UP/AUX** button resets any alarm with manual reset		
▲ / aux	if pressed for more than 1 s, enables/disables the auxiliary output	• if pressed for more than 5 s together with **DOWN/DEF** button, enables/disables the continuous cycle operation • if pressed for more than 5 s with **SET** button, starts the procedure for printing the reports (function available, with management to be implemented) • if pressed for more than 5 s together with **PRG/MUTE** button, resets any active alarm with manual reset		
def / ▼	if pressed for more than 5 s, enables/disables a manual defrost	• if pressed for more than 5 s together with **UP/AUX** button, enables/disables the continuous cycle operation • if pressed for more than1 s together with SET button, displays a submenu with the HACCP alarm parameters (HA, HAn, HF, HFn)		
Set	if pressed for more than 1 s, displays and/or set the set point	• if pressed for more than 5 s together with **PRG/MUTE** button, accesses the menu for setting the type "C" parameters "C" (configuration) or downloading the parameters • if pressed for more than 1 s together with **DOWN/DEF** button, displays a submenu with the **HACCP** alarm parameters (HA, HAn, HF, HFn) • if pressed for more than 5 s together with UP/AUX, starts the procedure for printing the report (function available, with management to be implemented)		

Tab. 2

Symbol	Code	Parameter	Model	UOM	Type	Min	Max	Def.
	/c1	Calibration of probe 1	MSYF	°C/°F	C	-20	20	0.0
	/c2	Calibration of probe 2	MSYF	°C/°F	C	-20	20	0.0
	/c3	Calibration of probe 3	MSYF	°C/°F	C	-20	20	0.0
	/c4	Calibration of probe 4	MSYF	°C/°F	C	-20	20	0.0
	St	Temperature set point	MSYF	°C/°F	F	r1	r2	0.0
	rd	Control delta	SYF	°C/°F	F	0.1	20	2.0
	rn	Dead band	SYF	°C/°F	C	0.0	60	4.0
	rr	Reverse differential for control with dead band	SYF	°C/°F	C	0.1	20	2.0
	r1	Minimum set point allowed	MSYF	°C/°F	C	-50	r2	-50
	r2	Maximum set point allowed	MSYF	°C/°F	C	r1	200	60
❄	r3	Operating mode 0: Direct with defrost control (cooling) 1: Direct (cooling) 2: Reverse-cycle (heating)	SYF	flag	C	0	2	0
	r4	Automatic night-time set point variation	MSYF	°C/°F	C	-30	30	3.0
	r5	Enable temperature monitoring 0: Disabled 1: Enabled	MSYF	flag	C	0	1	0
	rt	Temperature monitoring interval	MSYF	hours	F	0	999	-
	rH	Maximum temperature read	MSYF	°C/°F	F	-	-	-
	rL	Minimum temperature read	MSYF	°C/°F	F	-	-	-
	c0	Comp., fan and AUX delay on start-up in dead band	SYF	min	C	0	15	0
	c1	Minimum time between successive starts	SYF	min	C	0	15	0
	c2	Minimum compressor OFF time	SYF	min	C	0	15	0
	c3	Minimum compressor ON time	SYF	min	C	0	15	0
	c4	Duty setting	SYF	min	C	0	100	0
	cc	Continuous cycle duration	SYF	hours	C	0	15	0
	c6	Alarm bypass after continuous cycle	SYF	hours	C	0	15	2
	c7	Maximum pump down time	SYF	s	C	0	900	0
	c8	Comp. start delay after open PD valve (default setting: 0)	SYF	s	C	0	60	5
	c9	Enable autostart function in PD	SYF	flag	C	0	1	0
	c10	Select Pump down by time or pressure 0: Pump down by pressure 1: Pump down by time	SYF	flag	C	0	1	0
	c11	Second compressor delay	SYF	sec	C	0	250	4
	d0	Type of defrost 0: Electric heater defrost by temperature 1: Hot gas defrost by temperature 2: Electric heater defrost by time 3: Hot gas defrost by time 4: Electric heater defrost thermostat by time	SYF	flag	C	0	4	0
	dI	Interval between defrosts	SYF	hours	F	0	250	8
	dt1	End defrost temperature, evaporator	SYF	°C/°F	F	-50	200	4.0
	dt2	End defrost temperature, aux evap.	SYF	°C/°F	F	-50	200	4.0
	dP1	Maximum defrost duration, evaporator	SYF	min	F	1	250	30
	dP2	Maximum defrost duration, aux evap.	SYF	min	F	1	250	30
	d3	Defrost start delay	SYF	min	C	0	250	0
	d4	Enable defrost on start-up 0: No defrost is performed when the instrument is switched on 1: A defrost is performed when the instrument is switched on	SYF	flag	C	0	1	0
	d5	Defrost delay on start-up	SYF	min	C	0	250	0
❄	d6	Display on hold during defrost 0: Alternating display of dEF and probe value 1: Display of the last temp. shown 2: Display of dEF steady	SYF	-	C	0	2	1
	dd	Dripping time after defrost	SYF	min	F	0	15	2
	d8	Alarm bypass after defrost	SYF	hours	F	0	250	1
	d8d	Alarm bypass after door open	SYF	min	C	0	250	0
	d9	Defrost priority over compressor protectors 0: The protection times c1, c2 and c3 are observed 1: The protection times c1, c2 and c3 are not observed	SYF	flag	C	0	1	0
	d1	Display of defrost probe 1	MSYF	°C/°F	F	-	-	-
	d2	Display of defrost probe 2	MSYF	°C/°F	F	-	-	-
	dC	Time base for defrost 0: dI in hours, dP1 and dP2 in minutes 1: dI in minutes, dP1 and dP2 in seconds	SYF	flag	C	0	1	0
	d10	Compressor running time	SYF	hours	C	0	250	0
	d11	Running time temperature threshold	SYF	°C/°F	C	-99	99	1.0
	d12	Advanced defrost	SYF	-	C	0	3	0
	dn	Nominal defrost duration	SYF	-	C	1	100	65
	dH	Proportional factor, variation in dI	SYF	-	C	0	100	50

Symbol	Code	Parameter	Model	UOM	Type	Min	Max	Def.
	H9	Enable set point variation with time band 0: Set point variation with time band disabled 1: Set point variation with time band enabled	MSYF	flag	C	0	1	0
	Hdh	Anti-sweat heater offset	MSYF	°C/°F	C	-50	200	0.0
HACCP	HAn	Number of HA events recorded	MSYF	-	C	0	15	0
	HA	Date/time of last HA event	MSYF	-	C		-	-
	y__	Year		years		0	99	0
	M__	Month		months		1	12	1
	d__	Day		days		1	7	1
	h__	Hour		hours		0	23	0
	n__	Minute		min		0	59	0
	t__	Duration		hours		0	99	0
	HA1	Date/time of penultimate HA event	MSYF	-	C	-	-	-
	HA2	Date/time of third-to-last HA event	MSYF	-	C	-	-	-
	HFn	Number of HF events recorded	MSYF	-	C	0	15	0
	HF	Date/time of last HF event	MSYF	-	C	-	-	-
	y__	Year		years		0	99	0
	M__	Month		months		1	12	1
	d__	Day		days		1	7	1
	h__	Hour		hours		0	23	0
	n__	Minute		min		0	59	0
	t__	Duration		hours		0	99	0
	HF1	Date/time of penultimate HF event	MSYF	-	C	-	-	-
	HF2	Date/time of third-to-last HF event	MSYF	-	C	-	-	-
	Htd	HACCP alarm delay	MSYF	min	C	0	250	0

Symbol	Code	Parameter	Model	UOM	Type	Min	Max	Def.
	td1	Defrost time band 1	SYF	-	C	-	-	-
	d__	Day		days		0	11	0
	h__	Hour		hours		0	23	0
	n__	Minute		min.		0	59	0
	td2	Defrost time band 2	SYF	-	C	-	-	-
	td3	Defrost time band 3	SYF	-	C	-	-	-
	td4	Defrost time band 4	SYF	-	C	-	-	-
	td5	Defrost time band 5	SYF	-	C	-	-	-
	td6	Defrost time band 6	SYF	-	C	-	-	-
	td7	Defrost time band 7	SYF	-	C	-	-	-
	td8	Defrost time band 8	SYF	-	C	-	-	-
	ton	Light/aux on time band, variation set point	SYF	-	C	-	-	-
	d__	Day		days		0	11	0
	h__	Hour		hours		0	23	0
	n__	Minute		min		0	59	0
	toF	Light/aux off time band, variation set point	SYF	-	C	-	-	-
	d__	Day		days		0	11	0
	h__	Hour		hours		0	23	0
	n__	Minute		min		0	59	0
	tc	RTC date/time setting	MSYF	-	C	-	-	-
	y__	Year		years		00	99	0
	M__	Month		months		1	12	1
	d__	Day of the month		days		1	31	1
	u__	Day of the week		days		6	7	1
	h__	Hour		hours		0	23	0
	n__	Minute		min		0	59	0

Tab. 4

***Important:** for the set times to become immediately operational, the instrument must be turned off and on again, otherwise the timers will become operational when the instrument is next started, during the setting of the internal timers.*

Disposal of the product

The appliance (or the product) must be disposed of separately in accordance with the local waste disposal legislation in force.

IRxxM*(L,0) (G,K,O,W)*0

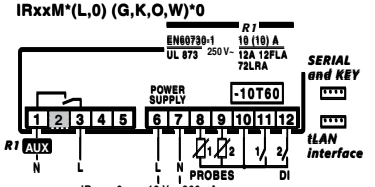


Fig. 7

IRxxS* (L,0) (G,K,O,W) *0

IRxxS* (L,0) (H,I,E,F)*0 senza/*without R2*

Corrente massima totale su terminale 3: 12A

Maximum current on terminal 3: 12A

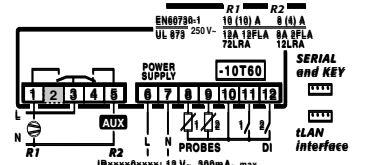


Fig. 8

IRxxY* (L,0) (G,K,O,W) *0

IRxxY* (L,0) (H,I,E,F) *0 senza/*without R3*

Corrente massima totale su terminale 3: 12A

Maximum current on terminal 3: 12A

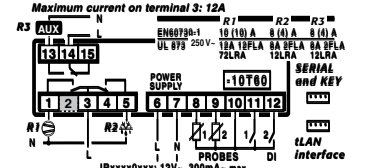


Fig. 9

IRxxC* (L,0) (H,I,E,F)*0

IRxxF* (L,0) (H,I,E,F)*0 senza/*without R4*

Corrente massima totale su terminale 3: 12A

Maximum current on terminal 3: 12A

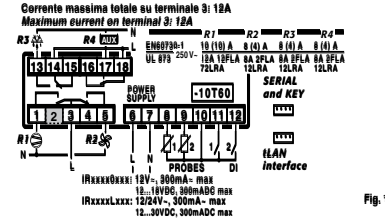


Fig. 10

CAREL

CAREL INDUSTRIES - HQs
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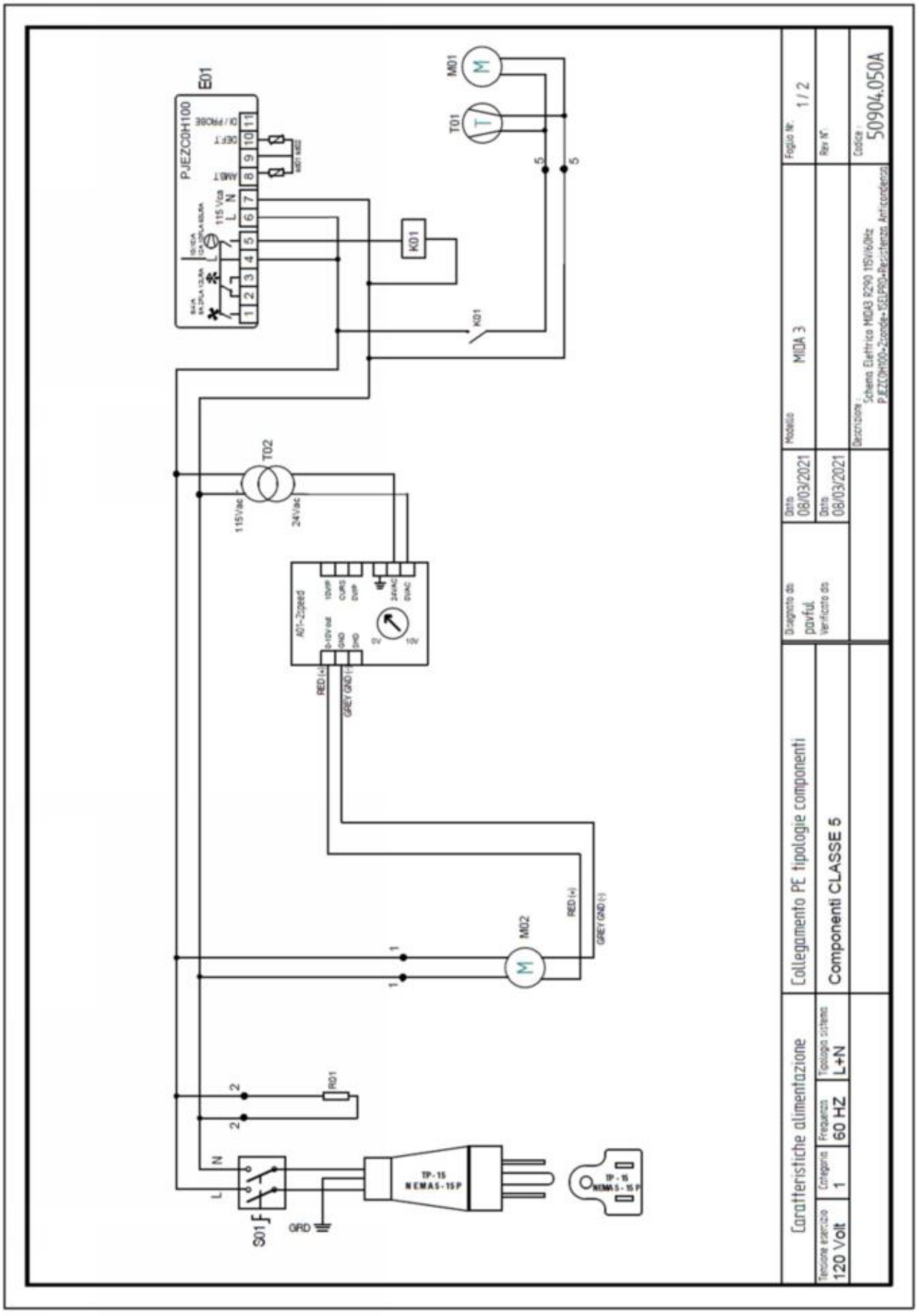
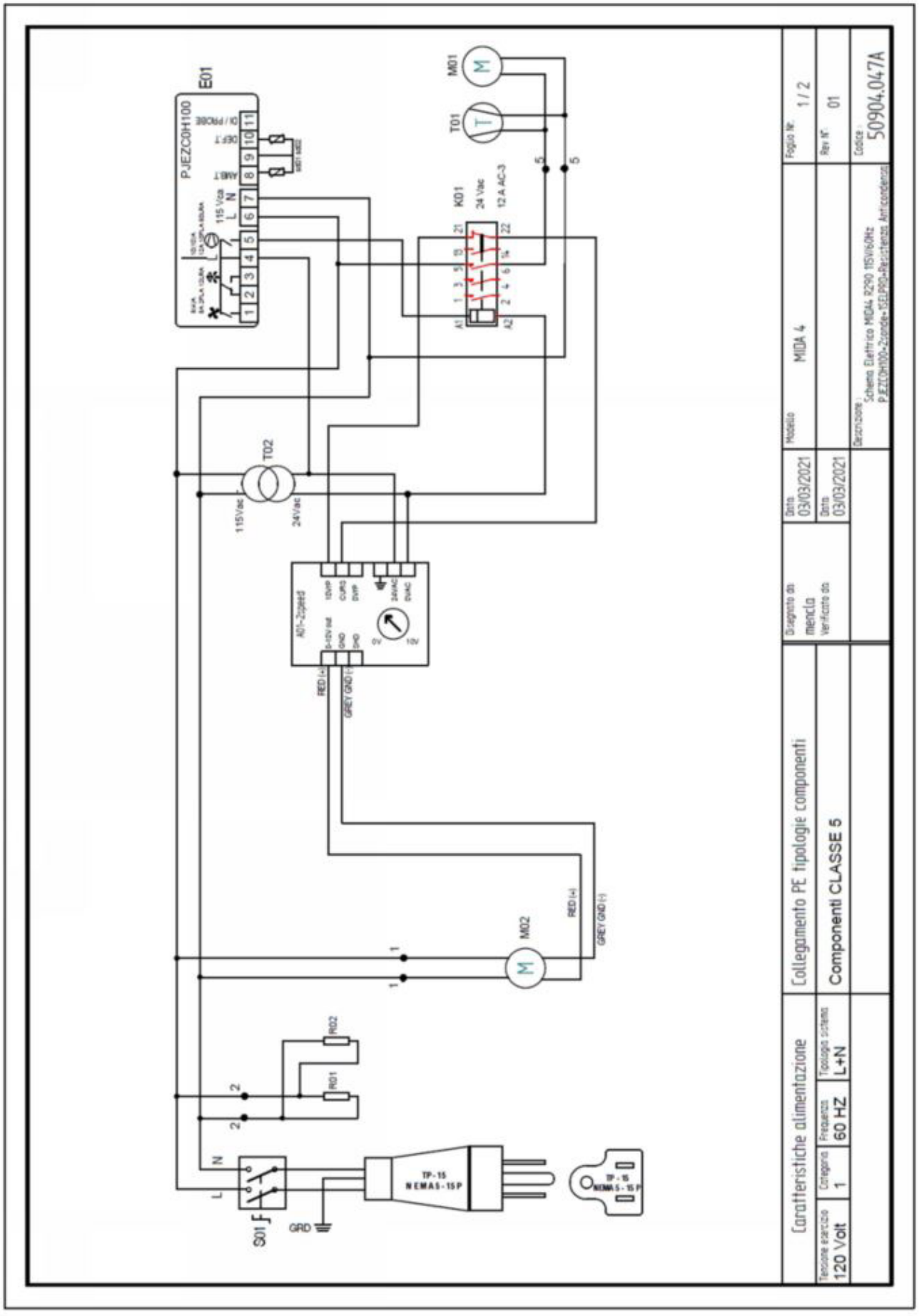
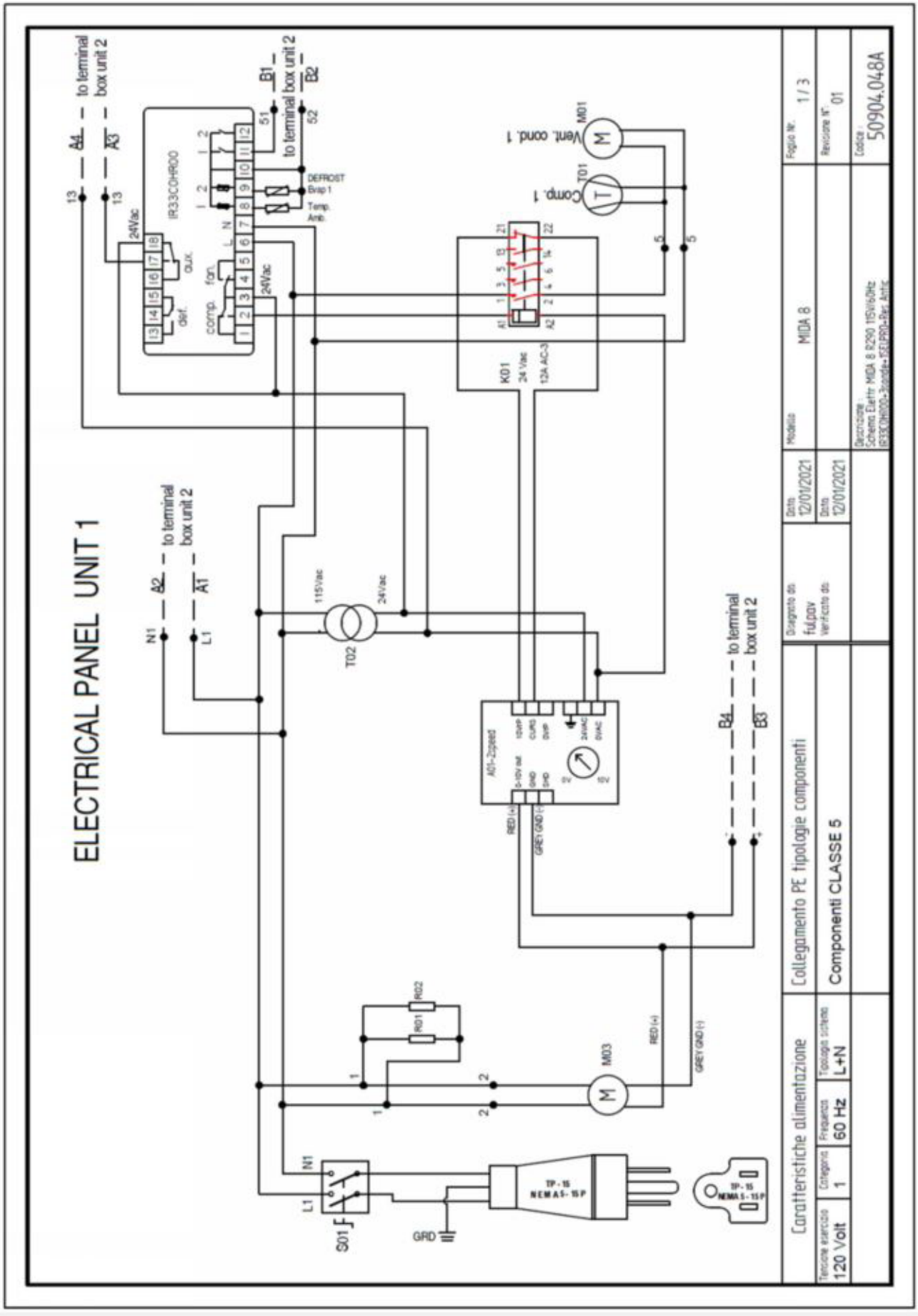
cod. +050003065 - rel. 1.2 - 31.01.2020

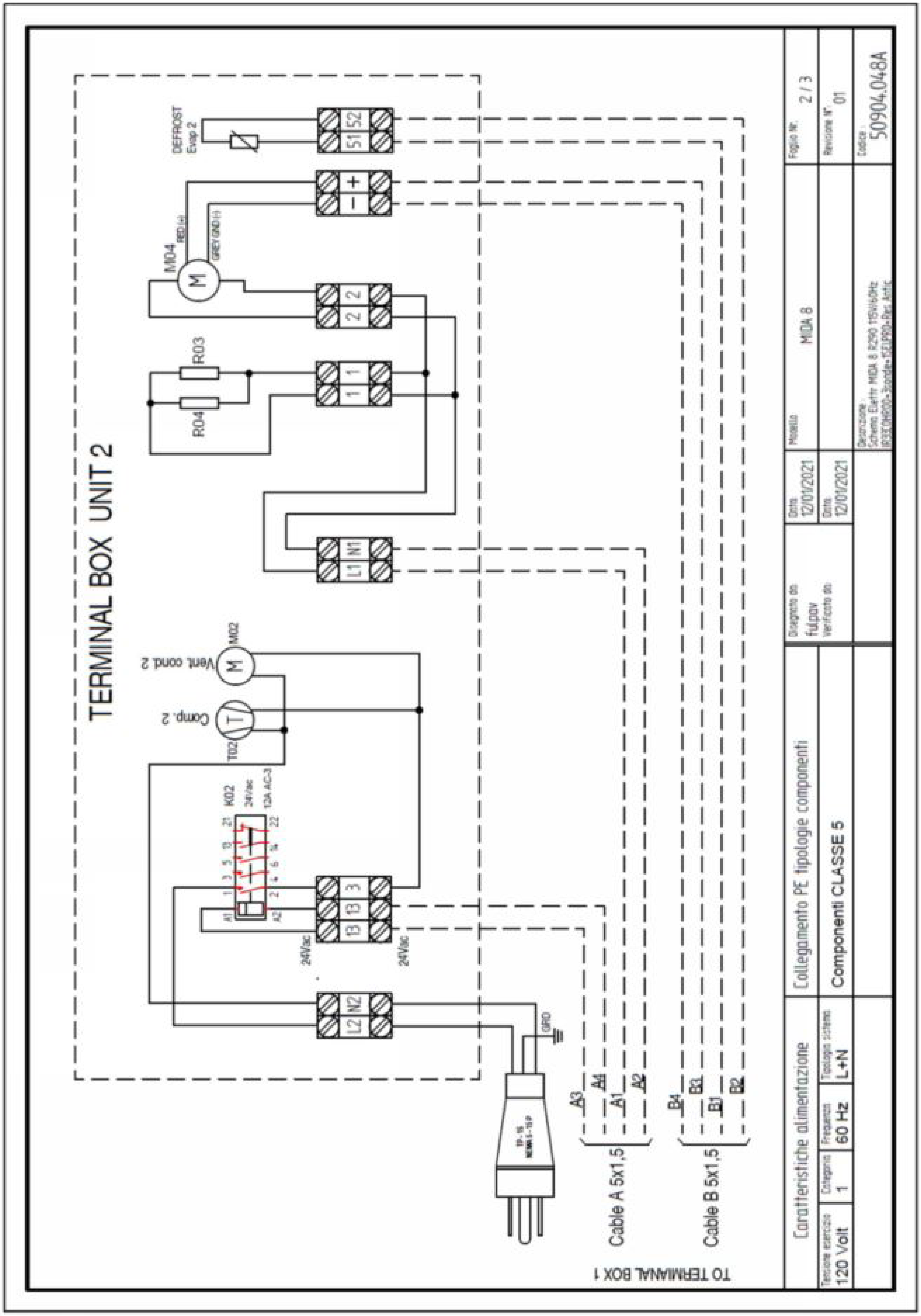
MIDA-3X3 WIRING DIAGRAM




E01
PJEZC0H100
M01
T01
K01
24 Vac
12 A AC-3
T02
115Vac
24Vac
A01-2speed
RED (+)
GREY GND (-)
M02
RG2
RG1
S01
GRD
TP-15
NEMA 5-15 P
Caratteristiche alimentazione
Tensione esercizio
120 Volt
Collegam.
1
Frequenza
60 HZ
Tipologia schema
L+N
Collegamento PE tipologie componenti
Componenti CLASSE 5
Disegnato da
mencia
Verificato da
Data
03/03/2021
Data
03/03/2021
Modello
MIDA 4
Pagina Nr.
1 / 2
Rev N°
01
Descrizione
Schema Elettrico MIDA4 R290 115Vi60Hz
PJEZC0H100+2conde+1SELP80+Resistenza Anticondensa
Codice
50904.047A

MIDA-4X8 WIRING DIAGRAM




TERMINAL BOX UNIT 2
DEFROST Evap 2
M04
R03
R04
Vent. cond. 2
Comp. 2
T02
M02
K02
24Vac
L2 N2
13 13 3
L1 N1
1 1
2 2
51 52
GRD
Cable A 5x1,5
Cable B 5x1,5
A3 A4 A1 A2
B4 B3 B1 B2
TO TERMINAL BOX 1
Caratteristiche alimentazione
120 Volt
1
60 Hz
L+N
Collegamento PE tipologie componenti
Componenti CLASSE 5
fulpav
12/01/2021
12/01/2021
MIDA 8
2 / 3
01
50904.048A

CONTROLLER SET POINT FACTORY SETTINGS (°F)

PROBE PARAMETERS		Default	Actual
/5	Select °C/°F	0	1
/C	Probe Calibration	0	0
CONTROL PARAMETERS		**Default**	**Actual**
St	Control Temperature	4	6
r1	Minimum Setpoint Allowed to the User	-50	-50
r2	Maximum Setpoint Allowed to the User	90	194
r4	Automatic Night-Time Set Point Variation	3	1.5
rd	Control Differential (Hysteresis)	2	2
DEFROST PARAMETERS		**Default**	**Actual**
d0	Type of Defrost	0	0
dI	Interval Between Two Defrosts	8	6
dt	End Defrost Temperature	4	68
dP	Max or Effective Defrost Duration	30	32
dd	Dripping Time After Defrost	2	0
ALARM PARAMETERS		**Default**	**Actual**
A0	Alarm and Fan Differential	2	1
AL	Low Temperature Alarm Threshold/Deviation	0	0
AH	High Temperature Alarm Threshold/Deviation	0	0
Ac	High Condenser Temperature Alarm	70	158
AE	High Condenser Temperature Alarm Differential	5	9
FAN PARAMETERS		**Default**	**Actual**
F0	Fan Management	0	0
F1	Fan Shutdown Temperature	5	41
F2	Fans Off When Compressor Off	1	0
F3	Fans Status During Defrost	1	0
Fd	Off for Post-Dripping Active for Each val. of F0	1	0

Warning
Maintenance & Case Care

When cleaning cases the following must be performed PRIOR to cleaning:

To avoid electrical shock, be sure all electric power is turned off before cleaning. In some installations, more than one switch may have to be turned off to completely de-energize the case.

Do not spray cleaning solution or water directly on fan motors or any electrical connections.

All lighting receptacles must be dried off prior to insertion and re-energizing the lighting circuit.

Please refer to the Use and Maintenance section of this installation manual.

Hillphoenix®
A DOVER™ COMPANY

Tel: 1-800-283-1109

1925 Ruffin Mill Rd, Colonial Heights, VA 23834

Hillphoenix

A DOVER COMPANY

Hill PHOENIX, Inc.
Hereinafter Referred To As Manufacturer

LIMITED WARRANTY

GENERAL WARRANTY

Manufacturer's products are warranted to be free from defects in materials and workmanship under normal use and maintenance for fourteen months from date of shipment from manufacturer (the "Base Warranty Period"). In the event of a qualifying warranty claim, a new or rebuilt part to replace any defective part will be provided without charge. The replacement part is covered under this warranty for the remainder of the applicable Base Warranty Period. In order to be eligible for warranty coverage, customer must: (i) notify Manufacturer promptly upon discovery of a warrant defect, and (ii) comply with the warranty claim procedures provided by Manufacturer from time to time.

This equipment warranty does not include labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing, or handling of either defective parts or replacement parts.

The warranty shall not apply:

1. To any unit or any part thereof which has been subject to accident, alteration, negligence, misuse or abuse, or which has not been operated in accordance with the manufacturer's recommendations, or in conditions outside of Manufacturer's specifications, or if the serial number of the unit has been altered, defaced, or removed.
2. When the unit, or any part thereof, is damaged by fire, flood, or other act of God.
3. To products that are impaired or damaged due to improper installation.
4. When installation and startup forms are not properly completed or returned within two weeks after startup.
5. If the defective part is not returned to the Manufacturer.
6. To service, maintenance or wear and tear parts (such as lights, starters and ballasts)

MODIFICATIONS TO GENERAL WARRANTY

The following sets forth certain modifications to the General Warranty for specific products of Manufacturer:

DISPLAY CASE AND SPECIALTY PRODUCTS CLEARVOYANT® LED LIGHTING
The warranty period for Clearvoyant LED lighting components within the Clearvoyant lighting system is five years from date of shipment.

REMEDY LIMITATION/DAMAGES EXCLUSION
THE REMEDY OF REPAIR OR PROVISION OF A REPLACEMENT PART WITHOUT CHARGE SHALL BE THE EXCLUSIVE REMEDY FOR ANY WARRANTY CLAIM HEREUNDER. WITHOUT LIMITING THE FOREGOING, MANUFACTURER SHALL NOT BE LIABLE UNDER ANY CIRCUMSTANCES FOR INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING LOSS OF PROFIT, LABOR COST, LOSS OF REFRIGERANT OR FOOD PRODUCTS.

EXCLUSIVE WARRANTY
THE FOREGOING WARRANTY IS THE EXCLUSIVE WARRANTY WITH RESPECT TO THE PRODUCTS. ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED AND EXCLUDED. NO IMPLIED WARRANTY SHALL BE DEEMED CREATED BY COURSE OF DEALING OR USAGE OF TRADE. NO OTHER PERSON IS AUTHORIZED TO EXPAND OR CREATE ANY OBLIGATION GREATER THAN OR MORE EXPANSIVE THAN THE WARRANTY PROVIDED HEREIN.

Submit warranty claims to:

833-280-5714

Choose option for Warranty or Tech Support
Select Division Per Menu list

https://www.hillphoenix.com/warrantyauthorization-procedure/

Select Warranty Request Form (5th image)