



Instruction manual

Cooling counter GN 1/1 3 door pizza
230 V
SP 903

OBSAH

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1. DECLARATION OF CONFORMITY

Decree of the Ministry of Health of the Czech Republic no. 38/2001 Coll. of 19 January 2001 Regulation (EC) No 1907/2006 - Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulation of the European Parliament and Council Regulation (EC) no. 1935/2004 of 27 October 2004

The products meet the requirements of §26 of Act No.258/2000 as amended. The products meet the requirements of RoHS Directive 2015/863/EU, 10/2011, 517/2014, 2015/1094, 2015/1095.

Attention, the manufacturer gives up any responsibility in case of direct and indirect damage that is related to poor installation, incorrect intervention or adjustments, insufficient maintenance, incorrect use and which are eventually caused by other causes than the points referred to in the conditions of sale. This appliance is intended only for professional use and must be operated by qualified persons. Parts that have been secured by the manufacturer or authorized worker after the setting rebuild.

2. TECHNICAL DATA

The label with technical data is located on the side or back panel of the device. Please read the wiring diagram and all the following information in the attached manual before installation.

Net Width [mm]	Net Depth [mm]	Net Height [mm]	Net Weight [kg]	Power electric [kW]	Loading
1365	1100	1100	130.00	0.300	230 V / 1N - 50 Hz

3. LOCATION ELECTRIC

For the correct operation and placement of the appliance, it is necessary to observe the following all prescribed standards for the given market. Unpack the device and check that the device has not been damaged during transport. Place the device on a horizontal surface (maximum unevenness up to 2°). Small unevenness can be leveled with adjustable feet. If the device will be placed in such a way that it will be in contact with the walls of the furniture, these must withstand a temperature of up to 60°C. Installation, adjustment, commissioning must be performed by a qualified person who is authorized to perform such operations, according to applicable standards. The device can be installed separately or in series with devices of our production. A minimum distance of 10 cm from flammable materials must be observed. In this case, it is necessary to secure the appropriate modifications to ensure the thermal insulation of the combustible parts. The appliance must only be installed on a non-flammable surface or against a non-flammable wall. **Parts of the appliance provided by the manufacturer. or his representative, the worker performing the installation may not rebuild the product.**

4. SAFETY MEASURES FOR FIRE PROTECTION

- the appliance may only be operated by adults
- the appliance may be used safely in accordance with applicable market standards:

Fire protection in spaces with special risk or danger

Protection against the effects of heat

- the appliance must be placed so that it stands or hangs firmly on a non-combustible surface

Objects of flammable substances must not be placed on the appliance at a distance less than a safe distance from it (the smallest distance between the appliance and flammable substances is 10 cm).

Table: degree of flammability of building materials included in st. flammability of substances and products

Degree of flammability	Building materials
A - non-flammable	granite, sandstone, concrete, brick, ceramic tiles, plaster
B - Not easily flammable	Acumin, Heraclitus, Lihnos, Itaver
C1 - highly flammable	wood, hardwood, plywood, hard paper, umakart
C2 - moderately flammable	chipboards, solodur, cork boards, rubber, flooring
C3 - Highly flammable	wood fiber boards, polystyrene, polyurethane, PVC

- information on the degree of flammability of common building materials is given in the table above. Appliances must be installed in a safe manner. During installation, the relevant design, safety and hygiene regulations must also be respected:
- fire safety of local appliances and heat sources
- fire protection in areas with special risk or danger
- protection against the effects of heat

5. INSTALLATION

Important: The manufacturer does not provide any warranty for defects arising as a result of incorrect use, failure to follow the instructions contained in the attached user manual and mishandling of appliances. Installation, modification and repair of appliances for large kitchens, as well as their dismantling due to possible damage to the gas supply, can only be carried out on the basis of a maintenance contract, this contract can be concluded with an authorized dealer, while technical regulations and standards and regulations must be observed regarding installation, electrical supply, gas connection and work safety. Technical instructions for installation and adjustment, for use by specialized technicians ONLY. The instructions that follow refer to a technician qualified for installation to carry out all operations in the most correct manner and according to the applicable standards. Any activity related to regulation etc. must only be performed with the device disconnected from the network. If it is necessary to keep the appliance under voltage, the utmost care must be taken. The type of appliance for extraction is declared on the nameplate, it is an A1 appliance.

6. CONNECTING THE ELECTRICAL CABLE TO THE NETWORK

Installation of the electrical supply - this supply must be separately secured. Ato with the corresponding circuit breaker of rated current depending on the power input of the installed device. Check the power consumption of the device on the production label on the back panel (or side) of the device. The connected ground wire must be longer than the other wires. Connect the device directly to the network, it is necessary to insert a switch between the device and the device with a minimum distance of 3 mm between the individual contacts, which corresponds to the applicable standards and load. The earth supply (yellow-green) must not be interrupted by this switch. Connect the device to the mains if the socket has adequate protection. In any case, the supply cable must be located so that it does not reach a temperature of 50 degrees higher than the environment at any point. Before the appliance is connected to the network, it is necessary to first make sure that:

- the supply circuit breaker and the internal distribution can withstand the current load of the appliance (see matrix label)
- the distribution board is equipped with effective grounding according to the standards of the relevant market and the conditions given by law
- the socket or switch in the supply is easily accessible from the appliance
- the electrical supply to the device must be made of oil-resistant material

We disclaim any responsibility in the event that these standards are not respected and in the event of a violation of the above principles. Before first use, you must clean the device, see chapter "cleaning and maintenance". The appliance must be grounded using a screw with a grounding mark.

- Do not insert the plug of the power supply into the electrical outlet. sockets and do not pull out the zel. sockets with wet hands and pulling on the power cord!
- Do not use extension cords or multiple sockets.
- **The mains connection point must have a maximum of the following impedance: $Z_{MAX} = 0.042 + j 0.026 \Omega$ for the phase conductors and $0.028 + j 0.017 \Omega$ for the neutral conductor.**

Product type	Outer dimension (cm)	Temperature of the cooled space(°C)	Forward (V/Hz)	Power input (W)
S - 900	90 x 70 x 85 h	+ 2 / + 8	230 / 50	250

SP - 902	90 x 70 x 85 h	+ 2 / + 8	230 / 50	250
SP - 903	136.5 x 70 x 85 in	+ 2 / + 8	230 / 50	300 + 200
ST - 902	90 x 70 x 85 h	+ 2 / + 8	230 / 50	250
ST - 903	136.5 x 70 x 85 in	+ 2 / + 8	230 / 50	350
SZ - 902	90 x 70 x 85 h	+ 2 / + 8	230 / 50	240
VSCH - 120	120 x 38 x 40 in	- 2 / + 8	230 / 50	340
VSCH - 150	150 x 38 x 40 in	- 2 / + 8	230 / 50	340

Connecting the power cable to the mains

Installation of the electrical supply - this supply must be separately protected. This is by an appropriate circuit breaker of the rated current depending on the power input of the installed appliance. Check the wattage of the appliance on the rating plate on the side of the appliance.

The connected ground wire must be longer than the other conductors. Connect the appliance directly to the mains, it is essential to insert a switch with a minimum of 3 mm distance between the contacts, which corresponds to the applicable standards and loads. The earth lead (yellow-green) must not be interrupted by this switch. Connect the appliance intended for connection to a mains socket if the socket has adequate protection.

In any case, the supply cable must be positioned so that at no point does it reach a temperature of 50 degrees higher than the environment. Before the appliance is connected to the mains, it is first necessary to make sure that:

- the supply circuit breaker and the internal wiring can withstand the current load of the appliance (see matrix label)
- the distribution is equipped with an effective grounding according to the standards (CSN) and conditions given by law - the distribution is equipped with an effective grounding according to the standards (CSN) and conditions given by law
- the socket or switch in the supply is easily accessible from the appliance

We disclaim any liability in the event that these standards are not adhered to and in the event of a breach of the above policies.

Before first use, you must clean the device, see chapter "cleaning and maintenance". The appliance must be earthed

using a screw with a grounding mark.

7. INSTRUCTIONS FOR USE

Attention! Before using the appliance, you must remove the protective film from the entire surface and then wash it well with water and dish detergent and then wipe it with a damp cloth.

The refrigerated display case must be assembled from the parts supplied. Gastro containers are not included, but must be ordered!

Connect the cooling table or display cabinet to the mains and turn on the main switch. Read the instructions in the manual carefully to set the parameters.

ELIWELL control panel - temperature setting

Press the Set button and release it immediately. The Set message will appear on the screen. Press the Set button again. To change the set value, press the UP and DOWN buttons within 15 seconds and confirm the

corresponding value with the fnc button.

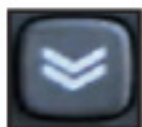
The user has a display and 4 buttons for controlling the device mode and programming the device. When switched on, the device performs a test of the indicator lights: the display and the indicator lights flash for a few seconds to check their correct operation. The device has two main menus. Device operation faults and the "Programming" menu.

WARNING ! IT IS FORBIDDEN TO PLACE OBJECTS WITH A TEMPERATURE HIGHER THAN 100°C ON THE UPPER SURFACE OF THE CHILLED TABLES. THERE IS A RISK OF BULGING OF THE TOP PLATE !



A) UP button

Browsing menu items
Increases values
Activates manual defrost



B) DOWN button

Browse menu items
Reduces values
Programmable with parameter



C) fnc button

ESC function
(abandonment or cancellation)
Programmable with parameter



D) Button set

Access to the desired value
Access to individual menus
Confirmation of assignment
Alarm signalling (if any)
available)

Programming

The programming of the device is organized by individual menus. These can be accessed by pressing and immediately releasing the "set" button (menu "Operating faults formachine") or by pressing the "set" button for more than 5 seconds (menu "Programming").

To access the individual registry tabs, which are represented by the corresponding label, the "set" button must be pressed once. At this point it is possible to view the contents of one of the registry tabs, to change these contents or to use the functions contained therein.

If you do not use the control panel keypad for more than 15 seconds (Timeout) or if you press the "fnc" button once, the value last displayed by the display will be confirmed and the previous display will return.

ELLIWELL control panel (fig.



E) Compressor

Illuminated indicates the compressor is on, blinking indicates delay, protection or activation blocked

F) Defrosting

Illuminated indicates defrosting in operation, flashing indicates activation, via manual or digital input

G) Alarm

Illuminated indicates an active alarm, flashing indicates the alarm sound is switched off

Instrument operation fault menu

To call up the "Instrument malfunctions" menu, press the "set" button briefly and release it again. If there are no alarms, the message "Set" appears. Use the "UP" and "DOWN" buttons to scroll through the other register tabs contained in the menu: these are -Pb1: the probe 1 value register tab and -Set: the set desired value register tab.

Setting the desired value

Call up the menu "Instrument malfunctions" by pressing and immediately releasing the "set" button. The "Set" register card label will appear. Press the "set" button again to display the desired value. The desired value appears on the display. To change the desired value, press the "UP" or "DOWN" button within the next 15 seconds. If the parameter LOC = y, the desired value cannot be changed

Probe depicted

Press the "set" button until the corresponding message appears on the display. The value assigned to this message will appear.

Programming menu

To call up the "Programming" menu, press the "set" button for more than 5 seconds. If this is entered, the PASSWORD password for access is requested (parameter "PA1") and then the designation of the first register card appears. Use the "UP" and "DOWN" buttons to scroll through the other registry tabs, press and release the "set" button to change the parameter, then use the "UP" and "DOWN" buttons to enter the desired value, use the "set" button to confirm and then move on to the next parameter.

PASSWORD (Password)

The password "PA1" allows access to the programming parameters. No password is entered during standard configuration. To activate and assign a value on the register card marked "diS", call up the "Programming" menu. If the password is activated, it appears when the "Programming" menu is called up.

Manual activation of the defrost cycle

To manually activate the defrost cycle, hold down the "UP" button for more than 5 seconds. the display of the appliance with the message E1.

Using the COPY CARD

The Copy Card is an accessory that connects to the TTL serial port and allows quick programming of device parameters. Proceed as follows:

Format

This instruction can be used to format the COPY CARD, this process should be done the first time it is used. Note: if the COPY CARD is programmed, all data entered will be deleted when using the "Fr" parameter. This process is irreversible.

Upload by

This process is used to load the programming parameters from the instrument.

Download

This process is used to load programming parameters into the instrument. To do this, call up the register tab labeled "FPr" and select "UL" "dL" or "Fr" depending on the individual case. Confirm by pressing the "set" button. If the process is executed, the message "y" appears, if an error occurs, "n" appears.

Blocking the TASTATURE

The device also has the possibility to deactivate the keypad by programming the "Loc" parameter accordingly (see the register card marked "diS"). If the keypad is disabled, it is still possible to access the "Programming" menu by pressing the "set" button. In addition, it is possible to display the desired value.

Diagnosis

Alarms are always signalled by an acoustic signal (if included in the instrument) and also by an LED light whose symbol corresponds to the alarm.

A faulty thermostat probe alarm (probe 1) is indicated directly on the instrument display by the E1 message.

Mechanical assembly

The device is designed for panel mounting. Create a 29 x 71 mm hole, insert the device into the hole and secure it with the included clamps. Do not install the device in environments where the level of moisture and/or dirt is too high - the device is only suitable for normally dirty environments. Provide ventilation near the cooling vents of the equipment.

Connection of electric current conductors

Attention! Only connect to the power lines after the device has been switched off. The device has a rail with screw terminals for connecting electrical cables with a maximum diameter of 2.5 mm² (there is always only one wire per terminal for electrical connections). Please refer to the device label for the power consumption of the terminals.

The relay outputs are de-energized. Do not exceed the maximum permissible current, add a suitable adapter for higher power. Make sure that the mains voltage corresponds to the device parameters.

the supply rail. Press the  button for 3 seconds to start the device. After 10 seconds, the display shows the temperature of the cooled space. The cable connection must be made with particular care, with a temperature probe of the cooled space.



The probe cables, power supply cables and TTL serial port cable should be routed separately from the piping of the individual LED

icons	F u n c - t i o n s	If the light is on	If it doesn't light up
	Compressor	The compressor is running	Compressor not running
	Control - CAREL panel	The fan is running	Fan not running
	Defro - sting	The defrosting is taking place	Defrosting is not taking place
AUX		The output is available	Output is unavailable
		Alarm signalling	Trouble-free operation

Description of buttons



Switch the device on or off for more than 3 seconds. For less than 3 seconds, move in the menu or increase the value.



Defrost on/off for more than 3 seconds. For less than 3 seconds, move in menu or decrease value.



It will display the set temperature for less than 3 seconds. For more than 3 seconds, it serves as menu entry.

Changing the temperature setting

Press the SET button, the set temperature will flash. use the arrow keys to change the temperature to the desired temperature. Press the SET button again to confirm.

Manual defrost



Press the button for more than 3 seconds to start defrosting.

Do not use buttons and button combinations not described in this manual. You may accidentally reprogram the control unit or change an important parameter necessary for the correct operation of the device. All other functions that are not described in this manual are for the exclusive use of a specialized technician.

Device control - DIXELL panel



Meaning of the individual LED icons



	Shining	Compressor in operation
	Flashing	Delayed start mode
	Shining	The defrosting process takes place
	Flashing	Delayed defrost mode

	Switching on the lights. Pressing this button for more than 6 seconds will start defrosting. If press this button again for more than 6 seconds during the defrosting process, the defrosting will be interrupted. Please note that this only applies to the SF -102 model.
	Display of the set temperature.
	Temperature change up.
	Temperature change down.

When the device is connected to power, the display automatically starts and displays the current temperature sensed by the temperature probe.

Changing the temperature setting

Press the SET button. The currently set temperature will be displayed. The set value can be changed by pressing the up/down button. To save the newly set temperature, press the SET button again. If you do not confirm the new temperature by pressing the SET button for 6 seconds, the display will automatically switch to the current temperature display mode.

Manual defrost - applies to SF-102 only



Pressing this button for more than 6 seconds will start defrosting. If you press this button again for more than 6 seconds during the defrosting process, the defrosting process will be interrupted.

Display of current evaporator temperature



Press the button for more than 6 seconds, the current evaporator temperature will be displayed. After 6 seconds, the display will automatically return to display the current chilled space temperature.

Do not use buttons and button combinations not described in this manual. You may accidentally reprogram the control unit or change an important parameter necessary for the correct operation of the device. All other functions that are not described in this manual are for the exclusive use of a specialized technician.

	Shining	Compressor in operation
	Flashing	Programming mode
	Shining	The defrosting process takes place
	Flashing	Programming mode
	Shining	Temperature alarm

Description of buttons

	Switch on lighting - only if system activated and connected.
	Start manual defrost.
	Display of the set temperature.
	Temperature change up.
	Temperature change down.
	Display on/off - applies to the setting if it does not start automatically after connection.

When the device is connected to power, the display automatically starts and displays the current temperature sensed by the temperature probe. If not, this is due to a different parameter setting and this is not a fault. To switch on the display, press the button . With this setting, the display can be switched off by pressing this button repeatedly - the message "OFF" will appear on the display.

WARNING: loads connected to the unit's quiescent contacts always remain energized even when the display is in OFF mode.

Changing the temperature setting

Hold down the SET button for more than 2 seconds. The currently set temperature will be displayed and the oC light will flash. The set value can be changed by pressing the up/down button for 10 seconds. The newly set temperature is saved by pressing the SET button again or automatically saved if the SET button is not pressed within 10 seconds.

Manual defrost



Press and hold the  button for more than 2 seconds to start defrosting.

To lock and unlock the keyboard



Press the  and  buttons simultaneously for at least 3 seconds, Press the  and  buttons simultaneously for at least 3 seconds

button, POF will appear and the keypad will lock. In this mode, you can only view the current

temperature. To unlock the keypad, press the  and  buttons simultaneously for at least 3 seconds, the

POF will disappear and the keypad will unlock.

Do not use buttons and button combinations not described in this manual. You may accidentally reprogram

control unit or change an important parameter necessary for the correct operation of the device. All other functions not described in this manual are intended exclusively for the specialist technician.

Device control - SF-101 and SF-102 panel

Meaning of the individual LED icons

To maintain safety, the equipment must be installed and used in accordance with the regulations. Particular care must be taken to ensure that the energized parts of the device are inaccessible under normal conditions.

The device must be protected against water and dust in a suitable manner depending on its use and must only be accessible after the use of tools, except for the front panel.

The appliance is suitable for incorporation into a household appliance and/or similar cooling applications and has been tested for safety aspects on the basis of European standards.

It has been classified:

(a) in terms of design type, as an automatic electronic control device for incorporation with independent

mounting

(b) in terms of automatic functional characteristics as a control device with controls corresponding to Type 1 B

(c) as a Class A device in terms of software structure class

Prohibited use

All uses that deviate from the specified uses are prohibited. We point out that relay contacts are susceptible in terms of functionality and malfunctions: any safety devices that are installed in connection with the regulations of the standards relating to the device or that are prescribed by common sense regarding safety requirements must be implemented outside the device.

Dixell control panel

The 32×74 mm Dixell model is a microprocessor-based controller, particularly suitable for normal temperature applications. It is equipped with a relay output for compressor control and an input for a PTC or NTC temperature sensor. The device also has a digital input for alarm signalling or defrost triggering. The unit can be fully configured with special parameters that can be easily programmed via the keypad.

Compressor

The regulation is carried out according to the temperature measured by the thermostat sensor with a positive difference from the desired value.

The compressor starts when the temperature rises above the sum of the setpoint and the hysteresis. When the temperature drops to the setpoint, the compressor switches off again. In the event of a thermostat sensor failure, the compressor start and stop time is determined by the "COn" and "COF" parameters.

Defrost

Defrosting is done by simply stopping the compressor. The "IdF" parameter controls the interval between defrost cycles and the "MdF" parameter controls the defrost duration.

Front panel control

SET	Switch on lighting - only if system activated and connected.
 (DEF)	Start manual defrosting.
 (UP)	Display the last alarm status. In programming mode, it is used to move through the parameter list and to increase the displayed value.
 (DOWN)	Display the last alarm status. Hold to switch on the additional output. In programming mode, it is used to move through the parameter list and to decrease the displayed value.

Key combinations

-  +  Lock and unlock the keyboard.
- SET +  Enter programming mode.
- SET +  Return to display the room temperature value.

The function of the controls is described in the table below		
	Shining	Compressor running

	Flashing	Programming mode (if flashing  Release delay for minimum cycle
	Shining	Defrosting in progress
	Flashing	Programming mode (if flashing  Release delay for minimum cycle
	Shining	Temperature alarm

TEMPERATURE ALARM RECORDING (HACCP FUNCTION)

The XR20C controller signals and records temperature alarms, their duration and the maximum temperature reached.



Display of alarm, length and max/min temperature reached

If the  alarm light is on, the alarm is logged. To display the alarm type, max. and min. temperature reached and the alarm duration, proceed as follows:

1. Press the or button
2. The display shows the message "HAL" for the upper temperature alarm or "LAL" for the lower temperature alarm, followed by the Max (Min) temperature reached. The message "tiM" (tiMe) is then displayed followed by the Duration in hours and minutes.

3. The instrument then displays the measured temperature

Note : If the alarm still persists, the "tiM" parameter displays the partial length.

Note : An alarm is recorded if the temperature returns to normal.

To clear a recorded alarm or a still active alarm

1. In alarm viewing mode, press the SET button for more than 3 seconds before the recorded alarm is displayed (the message rSt is displayed).
2. Confirm the operation and the rSt message will flash. The measured temperature is displayed.

MAIN FUNCTIONS

Display the desired value

1. Press the SET button briefly and the display will show the desired value.
2. To return to the current temperature, press SET again briefly or wait 5 seconds.

Change the desired value

1. Change the value of any parameter
1. Hold down the SET button for more than 2 seconds
1. Pressing the SET and  buttons simultaneously for 3 seconds will switch the instrument into program-
2. The setpoint will be displayed and the  light will flash.

Exit: Press the SET and  buttons at the same time or wait 15 seconds.

NOTE: The new value will be saved in both cases.

The hidden menu contains all the instrument parameters

Enter the hidden menu

1. Enter the programming mode by pressing the SET and  buttons for 3 seconds (the  and  lights will flash).
2. When the parameter appears on the display, hold down the SET and  buttons for another 7 seconds. The Pr 2 message is displayed and immediately the Hy parameter.

You are now in the hidden menu

3. Select the desired parameter.
 4. Press the SET button to display its value. (Only  is flashing now.)
 5. Use the  or  button to change this value.
 6. Press the SET button to store the new value in memory and move on to the next parameter.
- Exit: Press the SET +  buttons or wait for 15 seconds.

How to move a parameter from the hidden menu to the first level list and vice versa

Any parameter placed in the HIDDEN MENU can be removed or placed in the "FIRST LEVEL" list (user list) by pressing the SET and  buttons.

If a parameter from the HIDDEN MENU is in the first level list, the decimal point is enabled.

Keypad lock

1. Hold down the  and  buttons simultaneously for at least 3 seconds.
2. A POF message is displayed and the keyboard is locked. It is now possible to monitor only the settings requested values or min/max recorded temperature.
3. If any key is pressed for more than 3 seconds, a POF message will be displayed.

Unlocking the keyboard again

Hold down the  and  buttons simultaneously for at least 3 seconds.

Continuous cycle

If defrosting is not in operation, a continuous cycle can be started by pressing the  button for more than 3 seconds.

The compressor will operate in a continuous cycle according to par. "CCT". It can be stopped again before the set time has elapsed by pressing the button.

PARAMETERS

Note: Parameters in italics are only in the hidden menu.

REGULATION

Hy

Hysteresis: (0.1 to 25.5 °C / 1 to 255 °F) Hysteresis of the control intervention for the desired value. The compressor starts when the temperature rises to the desired value plus Hy hysteresis. Compressor shutdown occurs when the temperature drops to the desired value.

N

Minimum setpoint: (-50°C to SET; -58°F to SET): sets the minimum acceptable setpoint.

US

Maximum setpoint: (SET to 110 °C, SET to 120 °F): sets the maximum acceptable setpoint.

Ot

Thermostat room sensor calibration: (-12 to 12 °C, -120 to 120 °F) Allows you to compensate for any thermostat sensor offset.

OdS

Delay of control outputs after switching on the device: (0 to 255 min) This function is activated when the device is switched on and prevents the activation of the outputs for the time set by this parameter.

AC

CCt

Minimum compressor cycle: (0 to 50 min) Minimum interval between stopping and restarting the compressor.

CO_n

Compressor on time - continuous cycle (fast freeze cycle): (0.0 - 24.0 hours, in 10 min increments) Allows you to set the length of the continuous cycle : the compressor runs uninterrupted for CCt. It is used e.g. when filling the space with new products.

COF

Compressor start-up on probe fault: (0 to 255 min) Time during which the compressor runs on a space sensor fault. When Con=0 the compressor is always running.

CF

Compressor shutdown on faulty probe: (0 to 255 min) The time during which the compressor is shut down when the space sensor fails. When COF=0 the compressor is always running.

CH

rES

Resolution (°C): (in = 1°C; de = 0.1°C) decimal display.

DRAINING

IdF

Defrost Interval: (1 to 120 hours) Specifies the time interval between the start of two defrost cycles.

MdF

Maximum defrost duration: (0 to 255 min) sets the maximum defrost duration.

dFd

Temperature displayed at defrost: (rt = measured temperature; it = temperature at start of defrost; SET = setpoint; dEF = "dEF" message).

dAd

Max. display delay after defrosting: (0 to 255 min). Sets the maximum time between the end of defrost and the start of the actual temperature display.

ALARMS

ALC

Alarm type setting: (Ab; rE) Ab= absolute temperature: the alarm temperature is given by the ALL or ALU values. rE = the alarm temperature is related to the desired value. The alarm is activated when the temperature exceeds the "SET+ALU" or "SET-ALL" values.

ALU

Upper temperature limit for alarm: (SET up to 110 °C, SET up to 230 °F) When this temperature is reached, the alarm is activated after a delay "ALd".

ALL

Lower temperature limit for alarm: (-50 °C to SET, -58 °F to SET) When this temperature is reached, the alarm is activated after a delay of ALd.

ALd

Temperature alarm delay: (0 to 255 min) Interval between alarm detection and alarm signaling.

dAO

Alarm delay (exclusion) after power-up: (0 to 23.5 hours) The time after power-up when all temperature alarms are excluded.

DIGITAL INPUT

i1P

Digital input polarity: oP: digital input is activated by disconnecting the contact; CL: digital input is activated by switching the contact.

i1F

Digital input configuration: EAL = external alarm: "EA" message is displayed; bAL = door contact: "the message "CA" is displayed"; PAL = pressure switch: "CA" message is displayed; dEF = defrost cycle activation; LHt = no function; Htr = mode switching (cooling - heating).

AUS = not in operation

did

Digital input alarm delay: (0 to 255 min) delay between detection of an external alarm condition (i1F = EAL or i1F = bAL) and its signaling, delay of door opening signaling (i1F = dor) and the time interval for counting pressure switch activations (i1F = PAL).

nPS

Number of times the pressure switch is turned on: (0 to 15) Number of times the pressure switch is turned on, at intervals up to before the alarm is raised (i1F = PAL)

DIGITAL INPUTS

The digital contact can be programmed for five functions using the "i1F" parameter. _C = compressor from shuts down.

DOOR SWITCH INPUT (i1F=DOR)

Read more

When the door position signal is input to the device and according to the set value of the "odc" parameter, the relay outputs can be changed as follows:

PbC

Sensor type: Allows you to set the sensor type: PtC = PTC; ntC = NTC

no, Fan = no compressor is affected

rEL

CPr, F_ C = compressor switches off

PtB

Parameter table code, read-only

GENERAL ALARM (i1F=EAL)

After the time interval has elapsed (set by the "did" parameter), the alarm is activated when the door is opened, the display shows the message "dA" and the control restarts. The alarm is deactivated if the digital input is deactivated. Waits for a "did" interval before reporting the "EA" alarm. The

SERIOUS ALARM (I1F=BAL)

If the digital input is activated, the unit waits for a "did" interval before reporting the "CA" alarm. The output relay will disconnect and the alarm will be terminated when the digital input is no longer activated.

PRESSURE SWITCH (I1F=PAL)

If the number of activations of the pressure switch reaches "nPS" during the "did" time interval, then the message "CA" is displayed. The compressor will be switched off and the control process will stop.

When the digital input is active the compressor is always switched off. If the number of activations in the interval is reached, switch the unit off and on and the control will restart.

START DEFROSTING (I1F=DFR)

When the conditions for start-up are established, defrosting starts. After defrosting is complete, normal control will only restart if the digital input is blocked. Otherwise, the unit waits for the "Mdf" safe interval time to expire.

CHANGE HEATING - COOLING ACTION (I1F=HTR)

This function allows changing the controller action from cooling to heating and vice versa.

POLARITY OF DIGITAL INPUTS

The polarity of the digital inputs depends on the "I1P" parameters:

CL = digital input is activated when the contact is switched

OP = digital input is activated when the contact is opened

INSTALLATION AND ASSEMBLY

The control panel is mounted in the panel in a cut-out hole with dimensions 29x71 mm and fixed with a special clamp, which is included in the delivery. To achieve IP65 protection, use RG-C gaskets under the front panel. The permissible operating ambient temperature range for trouble-free operation is 0 to 60 °C. Do not place the device in areas subject to severe vibration, corrosive gases, excessive dirt or moisture. The same recommendations apply to the sensors used. Ensure free air flow around the cooling vents.

ELECTRICAL WIRING

The units are equipped with a screw terminal block allowing connection of wires with a cross section of up to 2.5 mm².

Before connecting the wires, make sure that the supply voltage used matches the unit's settings. Route the leads from the sensors separately from the power leads, from the leads to the controlled appliances and from the power leads. Take care not to exceed the maximum allowable load of the relay. If more powerful switching is required, use a suitable external relay.

SENSOR CONNECTION

The sensor should be mounted with the tip up to prevent damage due to accidental fluid ingress.

To achieve a correct measurement of the average room temperature, it is recommended to place the sensor away from the stronger airflow. Place the defrost termination temperature sensor between the evapo-

rator fins in the coldest point where the greatest amount of ice, away from the heater or the warmest point during defrost to prevent premature termination of defrost.

USING THE HOT KEY

How to program the "hot key" from the device (reading)

1. Program the device with the buttons.
2. When the unit is switched on, insert the programming key "Hot key" and press the button , the message "uPL" will be displayed and "End" will flash.
3. Press the "SET" button and the "End" message will stop flashing.
4. Turn the unit off, remove the "Hot Key" programming key and turn the unit back on.

Note: The message "Err" will be displayed if the programming and data transfer is incorrect. In this case, press the key again to restart reading, or remove the "Hot key" and repeat the operation.

How to program the device using the "hot key" (write)

1. Switch off the device.
2. Insert the programmed "Hot Key" into the 5 PIN connector and switch on the device.
3. The parameters from the "Hot Key" are automatically entered into the instrument memory; the message "doL" is displayed and "End" flashes.
4. After 10 seconds, the device restarts and starts working with the new parameters.
5. Remove the programming key "Hot Key"..

Note: The message "Err" will be displayed if the programming and data transfer is incorrect. In this case, the instrument

switch off and on if you want to restart writing, or remove the "Hot key" and repeat the operation.

ALARM SIGNALLING

Reporting	Cause	Outputs
P1	Thermostat sensor failure	According to the settings of the Con and COF parameters
HA	Upper temperature alarm	Output unchanged
LA	Lower temperature alarm	Output unchanged
dA	Doors open	Compressor and fan restart
"EA"	External alarm	Output unchanged
"CA"	Serious external alarm (i1F=bAL)	All outputs off
"CA"	Serious external alarm (i1F=PAL)	All outputs off

CORRECTING THE ALARM STATUS

The sensor alarm "P1" is activated a few seconds after occurrence. Deactivation occurs after a short time when normal sensor activity is restored. Before replacing the sensor, first check the wiring. Temperature alarms "HA" and "LA" are automatically deactivated when temperatures return to normal or defrosting starts. The "EA" and "CA" alarms (i1F=bAL) will immediately deactivate when the digital input is deactivated and the "CA" alarm (i1F=PAL) when the unit is switched off and on.

Cleaning and maintenance

Keep the equipment clean. Unplug the appliance before cleaning (do not use a strong stream of water or try to remove frost from the shelves with various tools. Use a cloth soaked in a solution of warm water and

detergent. Wipe dry.

If you store unwrapped food in the appliance, we recommend a complete cleaning and defrosting every week to prevent bacterial growth.

When storing packaged food, complete cleaning and defrosting must be carried out at least once a month. Daily cleaning of the exterior and interior door seals is recommended.

Cleaning the condenser

Clean the condenser monthly with a vacuum cleaner or brush. Always clean with the unit switched off. Wear gloves when cleaning to prevent possible injury.

Warning:

A dirty capacitor negatively affects the function of the device (reduces its performance and increases energy losses).

Maintaining the cooling chamber

Have the cooling table checked once a year by qualified personnel. Any repairs or replacement of parts must be carried out by a qualified person.

Do not set lower temperatures than those specified by the manufacturer, damage to the evaporator could occur!

Before you start filling the device make sure it has reached operating temperature!

ALL ADJUSTMENTS TO THE CONTROLS MUST BE CARRIED OUT WHEN THE EQUIPMENT IS DISCONNECTED FROM THE MAINS. IF THIS CONDITION CANNOT BE MET, WORK WITH THE UTMOST CARE.

8. CLEANING AND MAINTENANCE

It is recommended to have the device checked with a specialist service at least once a year. All the interventions in the device can only be carried out by a qualified person who has the authorization to do so. **CAUTION!** The device must not be cleaned with direct or pressure water. Clean the equipment daily. Daily maintenance extends the life and efficiency of the equipment. Always turn off the main inlet to the device. Wash the stainless steel parts with a damp cloth with a detergent without coarse particles and wipe dry. Do not use abrasive or corrosive cleaning agents. Attention! Before using the device, it is necessary to remove the protective foil from the entire surface, and then wash it well with water with detergent, and then wipe it with a damp cloth. **ALERT!** The warranty does not apply to all consumables subject to normal wear (rubber seals, bulbs, glass and plastic parts, etc.). The warranty also does not apply to the device if the installation is not carried out in accordance with the instructions - an authorized worker according to the corresponding standards and if the equipment was unprofessionally manipulated (interventions in the internal equipment, etc.) or were operated by unhappy staff and contrary to the instructions for use, further The warranty does not apply to damage by natural effects or other external intervention. **Required service organization 2 times a year. After the lifetime, the shipping packaging and equipment are submitted to the collection, according to the regulations on waste management and hazardous waste.**