

SERVICE MANUAL

LR170 / 390 / 600

LF140 / 340 / 600

PR170 / 390

ARCTIKO

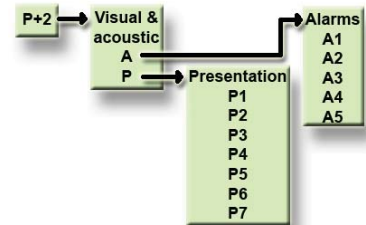
The introduction.....	3
MPC 46 and the new menus.....	3
Service.....	3
Software version and program variant in start-up sequence.....	3
Defrosting.....	4
Temperature control and regulation:	4
Temperature up:.....	4
Temperature down:	4
Key lock	4
Changing the password	4
Temperature surveillance and displaying	5
Introduction of the temperature surveillance and temperature displaying.....	5
Temperature surveillance system and alarm output:	5
Optional sensors for the surveillance system:	5
Presentation of the cabinet temperature:	5
Changing parameters for the surveillance system and presentation in the display.....	6
Calibration of sensors:	6
The alarm historic explained with several examples.	7
Example 1 – Max and min temperatures and later an exceeded alarm limit	7
Operation of the temperature memory in situation 1.....	8
Resetting the maximum and minimum temperatures in controller memory.....	8
Operation of the alarm historic in situation 2.....	9
Example 2 – The alarm limit exceeds several times.	9
Operation of the alarm historic in example 2.	11
Log menu for low alarms.....	11
Resetting the log memory.	11
Other details in the alarm log	11
Displaying alarm duration	11
Switching the alarm log on and off	12
Extensions of the alarm log	12
Error codes in the display	12
User menu.....	13
Visual and acoustic settings.....	14
Settings for running cycle.....	15
Service program for relays and electrical components.....	16
Value indication of sensor inputs	17
Earlier Software versions.....	17
Reset the controller to factory setting	17
Changing from right-hinged door to left-hinged door	18
Plug connections onboard the controller.....	19

The introduction.

Since the introduction of our own standard controller I year 2001, the controller has gone through several software updates. More program variants is developed, new functions is added to existing variants and others is been improved.

There was a directly access to the menus on the front of our cabinet, which was a great help for the service men and also for the workers in the factory.

All different settings are categorize and placed in submenus.
The access comes through main menus.

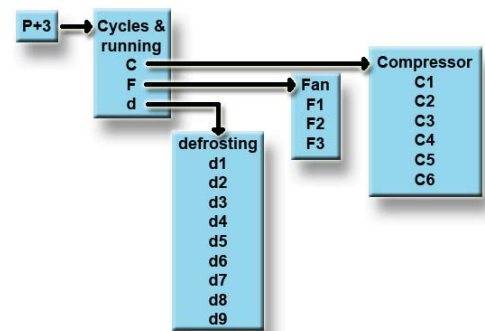


MPC 46 and the new menus.

The menus are divided up in two main menus.

A menu for presentations of values in the display and settings for alarms parameters, and another menu for technical, practical or physical settings to a normal refrigerator or freezer.

In each main menu there exist smaller submenus.
These submenus are divided up in specific menu for kind of cycles as defrosting or the settings for running the evaporator fan.



Service.

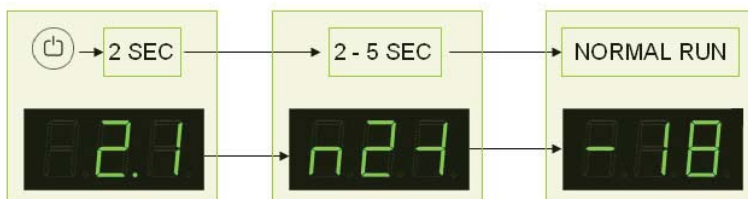
Make sure the appliance is switched off at the main socket or the cable is pulled out from the wall before service is performed on electrical parts. **It's not** sufficient to switch off the cabinet by the ⏻ key as there will still be voltage to some electrical parts of the cabinet.



Software version and program variant in start-up sequence

When the cabinet switches ON, the controller shows the software version and program variant.

The version number glows in 2 sec. followed by name on the program variant until the controller is finished with the start-up sequence. The program variant is like the example here below.



In the example above software version 2.1 and program variant M2+ is presented.

Cabinets with compressor (HAV) is given by the symbol "➤". The symbol should look like a "+" which means including compressor.

Cabinets without compressor (FAV) is given by the symbol "➤". The "-" symbol means "Compressor not included".

Because program variants like K and M is difficult to present in a 7-segment display, the symbols below is used instead:

- H (Refrigerator).
- n (Extended temperature range).

Other program variants name:

- F (freeze).
- B (Counter).
- V (Warm/hot/swallow cabinets)*.
- P (Process cabinets).
- E (Extreme low temperature).

* Complete new variant

Defrosting

The defrosting cycle runs 4 times each day. The lamp  glows to indicate that a defrosting cycle is running.

If the cabinet is operating under severe load (frequent door opening and frequent replenishment) manual defrosting can become necessary. The manually defrosting can be carried through by pushing **P** and **+** key in more than 3 sec. The cabinet starts a defrosting cycle.

With the same two keys, a defrosting cycle can be stopped before end time.

The next defrost will occur 6 hours later.

The defrosting cycle can be set between 0 to 8 times each 24 hours. See section **"User menu"**.

The cabinet isn't equipped with an evaporator sensor. The defrosting cycle is therefore controlled by the room sensor. Like other standard cabinets, the defrosting cycle is also controlled by a timer function. If the temperature hasn't reached the stop temperature yet, the timer function will then stop the defrosting cycle.

The temperature which stops the defrosting cycle is setting parameter d2 (degrees Kelvin added to set-point).

Temperature control and regulation:

Press **P** to see the cabinet temperature setting; the display will show the set temperature.

Temperature up:

Keep **P** pressed. At the same time, press **+**. Each time **+** is pressed the temperature will change one degree. When the display shows the desired temperature let go of the two keys and the setting has been made. By keeping **+** pressed, the digits change fast.

Temperature down:

Keep **P** pressed. At the same time, press **-**. Each time **-** is pressed the temperature will change one degree. When the display shows the desired temperature let go of the two keys and the setting has been made. By keeping **-** pressed, the digits change fast.

Key lock

The keypad can be locked by entering the code: **1 2 3** and finish with **P** (default setting).

The lamp  begins to glow to indicate that the keys are locked, and a short beep sounds. Now it is not possible to use the keys for temperature setting etc.

The same code is to be used for unlocking the keypad again.

Changing the password

Push **P** + **1** + **2** for more than 3 seconds – [**oLd**] is displayed.

Enter the current password e.g. **1 2 3** and finish with **P** and displayed shows [**PAS**].

Enter the new password e.g. **2 3 1 4** and finish with **P**, the display shows now [**rE**].

Do now repeat the new password again and finish with **P** and the new password are now saved.

Sometimes the costumers have forgotten the access code for the key lock. If the keypad is locked and you want to re-open it, you have to use the following access code:

2 3 1 4 1 4 and confirm with **P**.

Notice! - This code can only open the key lock. That means you still need the forgotten code to lock the keypad again.

When the key lock code is lost for once and all, the only way to enter a new code, is to reset the controller software by the handheld programmer (Equinox FS2000A).

Temperature surveillance and displaying

Introduction of the temperature surveillance and temperature displaying

The products temperature surveillance system and presentation of temperatures is especially developed to achieve an individual and flexibility surveillance of the cabinet and storage goods. Each single system can be used separately or they can be set in an interaction together and brings the complete surveillance system to a higher level.

Temperature surveillance system and alarm output:

The products surveillance system is managing the potential free alarm output. At the same time an acoustic sound appears by alarms from the cabinet.

It's an optional to choose between two different sensors to activate the alarm. Each sensor has its own setting parameters like limits and delay time.

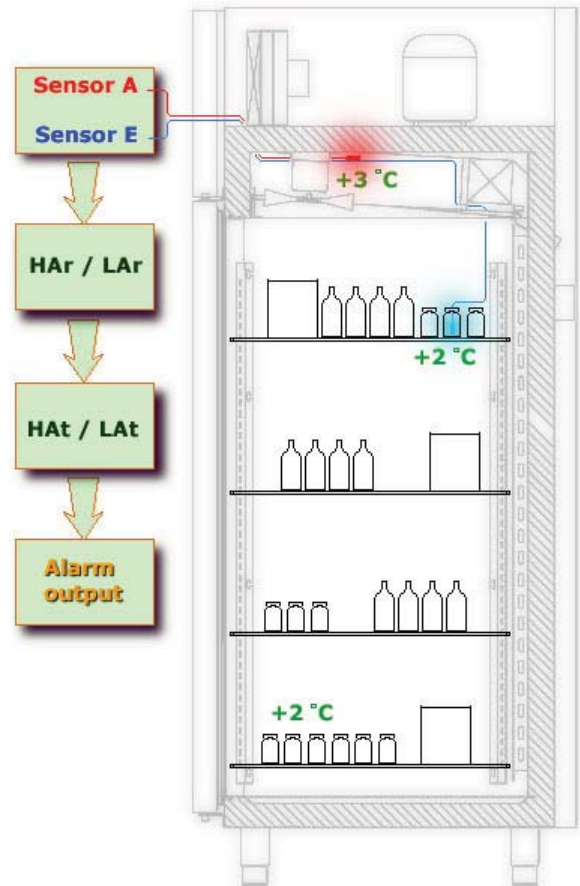
Optional sensors for the surveillance system:

The two sensors are placed in different places inside the cabinet and each sensor has there own advantages.

The first sensor controls always the cooling system and has the name "room sensor".

The second sensor can be placed directly between the stored goods or e.g. it could be placed inside a small can or box like on the illustration to the right.

To make use of the extra sensor for the surveillance system, it's necessary to change the controllers setting in the controllers setting menu.



Notice: Default setting for the surveillance system is the room sensor.

Presentation of the cabinet temperature:

The temperature in the display is presenting the cabinet temperature. In all products the room sensor is always placed at the warmest spot. This results in the best condition for cooling.

If the extra sensor is installed in the product the sensor can be presented in the display instead of the original room sensor.

When the display is presenting the temperature from the extra sensor, a little green lamp is glowing in the right corner. In that case it's also common to experience temperature fluctuations, which comes from the cooling system when it's running or not.

Notice: The change has only effect on the presentation of the temperature in the display. The controller is still using the room sensor for controlling the cooling system.

Here below are two examples. Both examples are taken from the picture above...

Room sensor:

The temperature is made by the **room sensor** and results in...



The +3 °C is measured at top of the cabinet.

Extra sensor:

The temperature is made by the **extra sensor** and as an indication of using the extra sensor. The little green lamp is also glowing ...



The +2 °C is measured inside a can on the shelves.

Changing parameters for the surveillance system and presentation in the display

To make use of the extra sensor for the surveillance system, it's necessary to change the controllers setting in the menu **"Visual and acoustic settings"**. The change is carry out in menu item [**A5**]. See more on page 14.

To choose the presentation from the extra sensor in the display, the controller has to be change in the **"User menu"** in menu item [**dPS**]. In this menu choose sensor input [**E**]. See more on page 13.

Calibration of sensors:

The two sensors can each be calibrated. The reason for calibrating them or to make a offset depends on the job. To calibrate a sensor exist two methods.

The first method is to use a reliable and calibrated thermometer, while the other method is to use no instruments at all.

To calibrate the sensors it's necessary to alternate between two menus.

In the first menu the temperature is given ("Value indication and sensor input" **P** and **5**, se more on page 17).

In the second menu the actual adjustment is made. ("Visual and acoustic settings" **P** and **2**, see more on page 14).

With a calibrated thermometer:

The instrument sensor has to be taped together with the sensor for adjusting with metal tape.

Wait for the temperature gets stabile in the instrument and in the cabinet display. Read the difference and then change the offset.

Without instruments:

Pour about 200 ml. cold water into a thermo bottle. Here after pour some ice cubes into the water until the filled up to. $\frac{3}{4}$. Shake the mix well and wait in few minutes. Shake it again and wait few more minutes.

Place now the thermo bottle on the upper shelve and place the cabinet sensor into the icy mix.

Let now the cold water cool down the sensor. Once in a while shake the bottle well again to obtain a homogeneous temperature in the icy water.

After few minutes the temperature should present 0 °C in the display.

If one or both methods deviate from the measured, the sensors have to be adjusted in menu item P6 and P7.

If the display shows warmer temperatures than exists or is measured, the offset has to be made in a negative direction. Make this adjustment in P6 or P7. Use the "-" key for adjustment and it results in a minus symbol in front of the offset value.

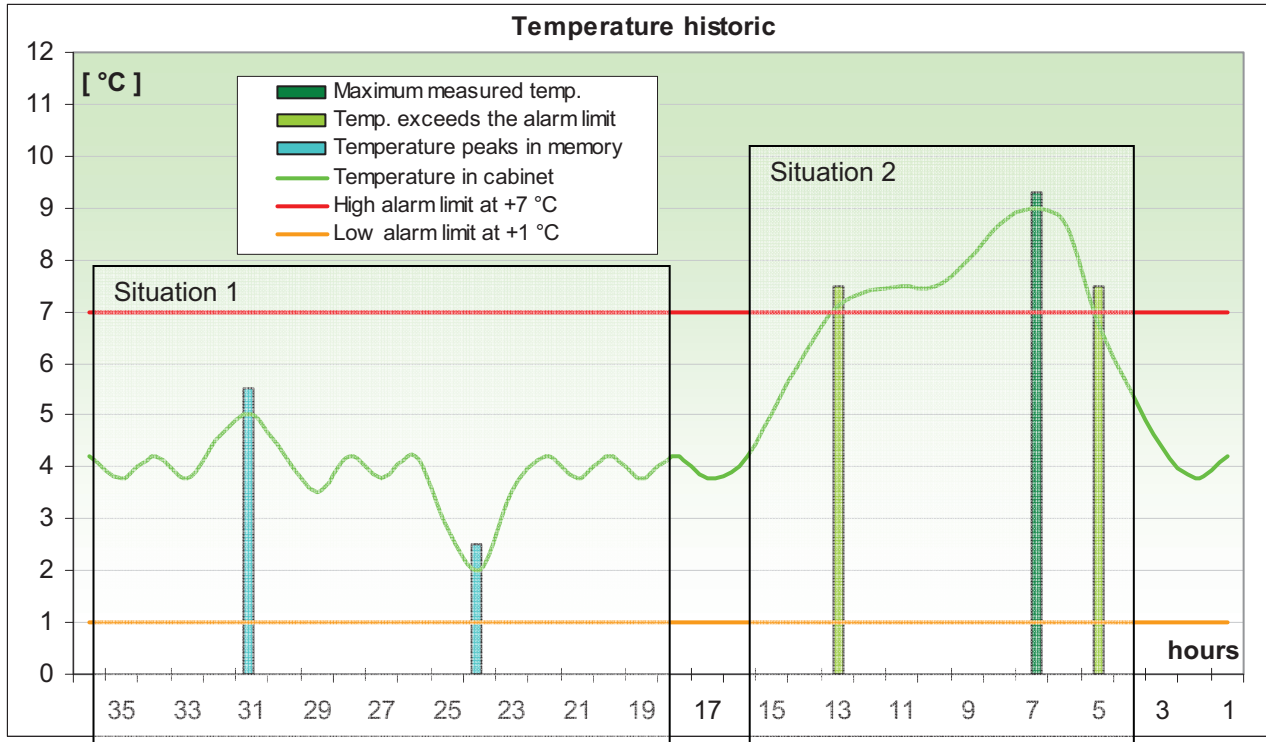
If the display shows colder temperatures than exists or is measured, the offset has to be made in a positive direction. Make this adjustment in P6 or P7 with the "+" key.



The alarm historic explained with several examples.

In the following examples it's explained how the controller memory and alarm historic is saving data like temperatures and the time where the temperature has exceeded an alarm limit. One example is made under normal conditions, while another is with a fault.

Example 1 – Max and min temperatures and later an exceeded alarm limit



Here above is given a graph which is an example how the temperature had been the last 36 hours. (Could be made over a weekend, and we are studying the graph Monday morning).

The cabinet set point is set to +4 °C. The upper alarm limit is set to +7 °C and the lower limit is set to +1 °C.

Situation 1 – under normal conditions.

For 31 hours ago, the warmest temperature was found to +5 °C and for 24 hours ago the coldest temperature was found to +2 °C. Both temperatures is now stored in the controller memory. To study them it's easy by using the key pad on the cabinet.

When studying the stored data for 19 hours ago, the controller would present the respectively two temperatures of +5 °C and +2 °C. At this moment the display is not flashing.

Situation 2 – a fault appears.

Unfortunately the situation become more badly. For 13 hours ago the temperature exceeded the upper alarm limit. The acoustic alarm sounds, but the user wasn't there to interrupt the fault.

Later the temperature even rises to +9 °C.

4 hours later or for 5 hours ago the temperature again exceeded the upper alarm limit and then became stabile and acceptable. The display is still flashing.

The complete log picture will now be converted to two values or information.

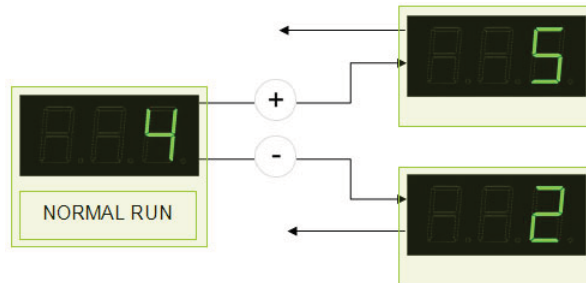
The first information is the coldest temperature of +2 °C which were found for 24 hours ago. The controller remembers also the warmest temperature, but not in the first moment the +5 °C, but the new temperature of +9 °C from the faulty period which appears for 7 hours ago.

Together with the warmest temperature of +9 °C, the alarm historic remembers also the total time the temperature had exceeded the upper alarm limit. In this case it was 8 hours.

Operation of the temperature memory in situation 1.

To read the stored maximum and minimum temperatures under normal conditions, please do as below:

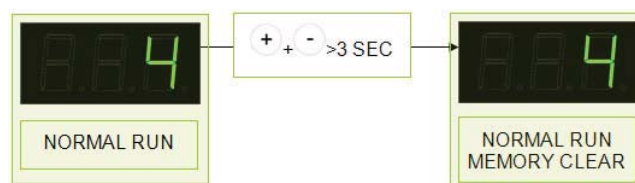
When pushing the $\oplus$ button and keeping it pushed, the warmest temperature is presented. The display is now showing the $+5\text{ }^{\circ}\text{C}$. When releasing the button again, the display returns back to normal run. To read the coldest temperature, use the $\ominus$ button. The display presents $+2\text{ }^{\circ}\text{C}$.



Resetting the maximum and minimum temperatures in controller memory.

To erase the two temperatures, it's necessary to clear or reset the controller memory.

The resetting procedure is carried through when pressing the $\oplus$ and $\ominus$ button at the same time in 3 seconds. After 3 seconds a prolonged beep sounds and the memory is clear. The memory is now cleared to start again with storing the warmest and coldest temperatures.



Notice: The operation and resetting of maximum and minimum temperatures is always possible, even when the key pad is locked.

Operation of the alarm historic in situation 2.

Monday morning we are standing in the front of the cabinet and the display is flashing.

The display is flashing because there had once been a fault. But the display is not showing which kind of fault!

When pressing the $\oplus$ and/or $\ominus$ buttons its giving access to the surveillance systems menu items and memory. So that's what we do....

When pressing the $\ominus$ button and nothing happens in the display, then there hasn't been any alarm attached to the lower alarm limit. But when pressing the $\oplus$ button, the text **Htt** appears in the display. (Htt = **H**igh **t**emperature **t**ime).

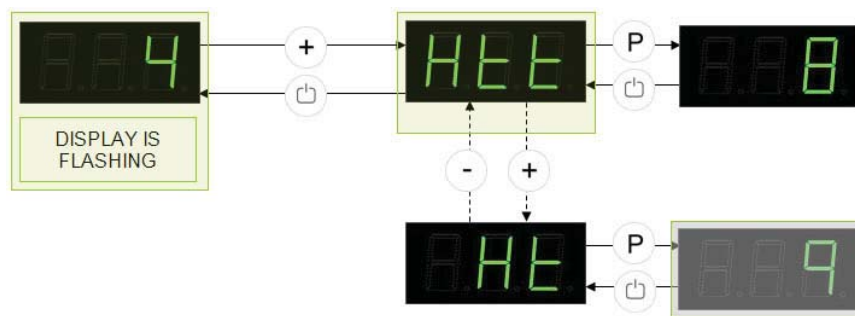
Press now the **P** button and the display will now show the total time where the temperature has exceeded the alarm limit. In this case the total time of **8 hours** appears in the display.

Press now the $\ominus$ button to exit the indication of value and the display is now showing **Htt** again.

Press the $\oplus$ button and **Ht** appears in the display. (Ht=**H**ighest **t**emperature).

Press now the **P** button and the display will now show the peak temperature of **+9 °C**.

Press now the $\ominus$ button to exit the indication of value and the display is now showing **Ht**.



To leave the alarm historic for the high alarm again, then press the $\ominus$ button.

The display begins to flash again and is showing the actual temperature inside the cabinet again. The controller and display returns to normal run again.

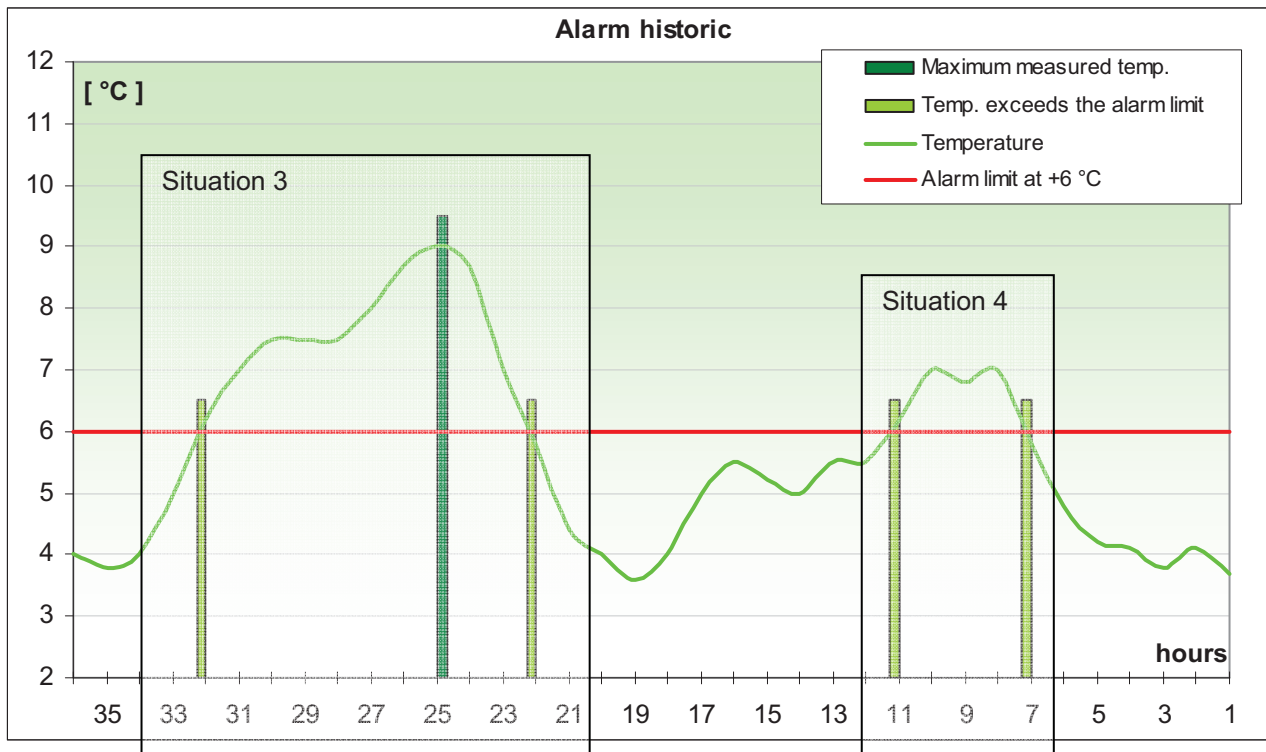
The flashing display tells that data from a faulty period still exist in the controller memory.

The controller also leaves the alarm menu automatically after 120 sec.

Example 2 – The alarm limit exceeds several times.

In this example the upper alarm limit is exceeded with two separate periods.

The example shows how the alarm historic stores the total time where the temperature has exceed the alarm limit. It's also showing the warmest temperature stored from both periods.



Here above is given a graph which is an example how the temperature had been the last 36 hours. The cabinet set point is set to +4 °C. The upper alarm limit is set to +6 °C.

Situation 3 – Large faulty period.

For about 32 hours ago the room temperature exceeds suddenly the upper alarm limit. The acoustic alarm sounds, but the user isn't there to interrupt the fault. The display is flashing.

7 hours later or for 25 hours ago, the temperature has reached to it's maximum with a peak temperature on +9 °C. First after 3 hour the temperature again become normal or accepted.

The graph shows clearly that the room temperature has exceeded for at least 10 hours in the first period.

Situation 4 – Smaller faulty period.

Later a new faulty period occurs. This time the faulty period is 4 hours total and it started for about 11 hours ago. The peak temperature is here only found to +7 °C.

The complete log picture will now be converted to two values or information.

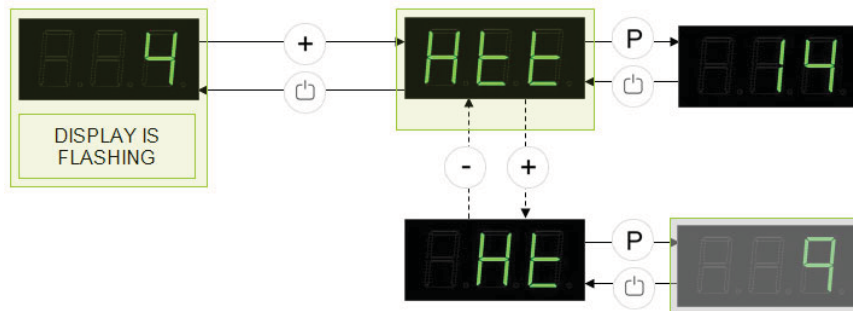
The first information is the total time for the faulty periods. The total time is the sum of 1st and 2nd faulty period, which are 10 + 4 hours = 14 hours total.

The second information is the peak temperature found in one of the two faulty periods. In this case the highest temperature peak is found to +9 °C.

Operation of the alarm historic in example 2.

Like in example 1 situation 2, the display is flashing, which means a temperature has exceeded the alarm limit. The operation is here the same.

But in this example the menu item **Htt** (**Htt=High temperature time**) shows the total time on **14 hours** and **Ht** (**Ht=Highest temperature**) shows the temperature **+9 °C**, which were found in one of the two periods.



Log menu for low alarms

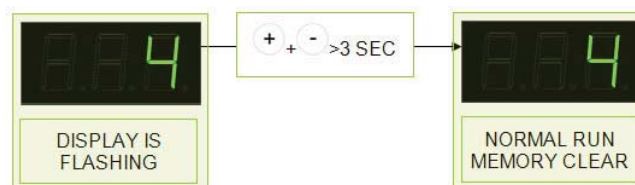
The procedure for the low alarm limit menu is exactly the same as the high alarm log. The menu for the time is **Ltt** and **Lt** for the peak temperature. To access this menu, then press **-** button instead.

Resetting the log memory.

To stop the flashing display, the controller memory has to be reset.

NOTICE: When resetting the memory the high and low alarm data is vanished.

The resetting procedure is carried through when pressing the **+** and **-** button at the same time in 3 seconds. After 3 seconds a prolonged beep sounds and the memory is clear. The display stops now flashing.



Notice: It's always possible to read the alarm historic, even when the key pad is locked. If the alarm historic has to be reset, it's only possible when the key pad is unlocked.

Other details in the alarm log

Displaying alarm duration

The alarm log displays the total length of time (in whole minutes) during which the temperature has exceeded the alarm limits for one or more periods.

After 9 hours and 59 minutes, **9.59** is shown in the display, but if the number of hours rises into double figures, the decimal point is moved to the right and the number displayed with only a single decimal place.

10 hours and 38 minutes will for example be displayed as **10.3**. The number shown will not change to **10.4** until 10 hours and 40 minutes has been reached.

If the alarm persists until the number of hours reaches triple figures, the decimal point is again shifted to the right and the time is displayed in whole hours. 100 hours and 59 minutes will thus be shown on the display as **100**.

Switching the alarm log on and off

Not all users wish to make use of the alarm historic and flashing display indication. It is therefore possible to switch the function ON or OFF.

To switch the function on or off, open the alarm menu (P + 2) and then - Alarms) and select the parameter A4.

NOTICE: Even when the alarm function is switched off, the potential-free relay continues to operate with the alarm limit settings.

Either of two sensor inputs can be selected for alarm system surveillance.

Open the alarm menu (P + 2) and then - Alarms) and select the parameter A5 to select either sensor input A (room sensor) or sensor input E (extra sensor).

As it is possible to use sensor input E for the surveillance system, this input can also be calibrated.

To do so, open the presentation menu on the display (P + 2) and then - Presentation) and calibrate the sensor with 0.5 K accuracy in the parameter P7.

Error codes in the display

- F1** If code [F 1] is displayed it means that the cabinet temperature sensor is defective and service assistance should be requested. In the meantime the cabinet itself will maintain the set temperature by the memory of the controller.
- F2** If the display alternates between temperature and error code [F 2] there cabinet has the wrong installed software. The cabinet has no evaporator sensor installed. This has no effect on the operation of the cabinet, but please request service assistance.
- F3** If the display alternates between temperature and error code [F 3] there are problems with the temperature sensor on the condenser. This has no effect on the operation of the cabinet, but the sensor should be replaced as soon as possible. Request service assistance.
NOTE! Applies only to cabinets with built-in compressor.
- F5** If the display alternates between temperature and error code [F 5] there are problems with the extra temperature sensor installed in the cabinet. This has no effect on the operation of the cabinet, but the sensor should be replaced as soon as possible. Request service assistance.
- ..** If the dots in the display flash, it indicates that the condenser temperature is too high. Switch off the cabinet at the mains and see whether the condenser has been covered. The error could also be caused by a defective condenser fan. If this is not the case, the high temperature might be the result of dirt on the condenser. The condenser can be cleaned with a brush or vacuum cleaner. Switch on the cabinet again. After an hour, the cabinet should run normally. If the dots begin to flash again, request service assistance.
NOTE! Applies only to cabinets with built-in compressor.

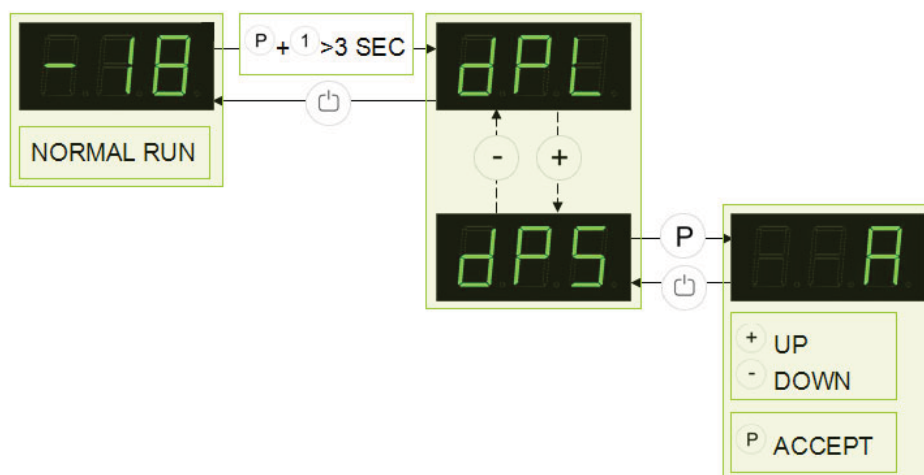
User menu

Push on **P** and **1** buttons at the same time in more than 3 sec. and the first Setup menu appears in the display.

With **+** and **-** buttons its possible to look through each menu items in the “User menu”. Push on **P** button to activate the desired item and adjust the setting with **+** and **-** buttons.

To confirm the new setting, push **P** button. Leave the menu item and user menu with the **⏏** button.

Parameter	Description	Setting range	Default setting
dPL	Display temperature alarm	+25 to -35 °C	+25 °C
dPt	Display alarm delay	0 to 120 min / In steps of 5 minutes	60 min.
HAr	Potential free alarm – upper alarm limit	+25 to -35 °C	+25 °C
LAr	Potential free alarm – lower alarm limit	+25 to -35 °C	-35 °C
HAt	Potential free alarm – Timed delay for HAr	1 to 120 min / In steps of 5 minutes	60 min.
LAt	Potential free alarm – Timed delay for LAr	1 to 120 min / In steps of 5 minutes	60 min.
dAt	Door alarm timed delay	0 to 15 min	0 min.
ALL	Escorting or fixed alarm limits	ESC = Escorting / FAS = Fixed limits	FAS
dEF	Number of defrosting cycles/24h	1 to 8.	4 each day.
dPS	Displaying sensor in the display	A = input A (1) / E = input E (5)	A



Visual and acoustic settings

Push on **(P)** and **(2)** buttons at the same time in more than 6 sec. and the menu item [**A**] appears in the display.

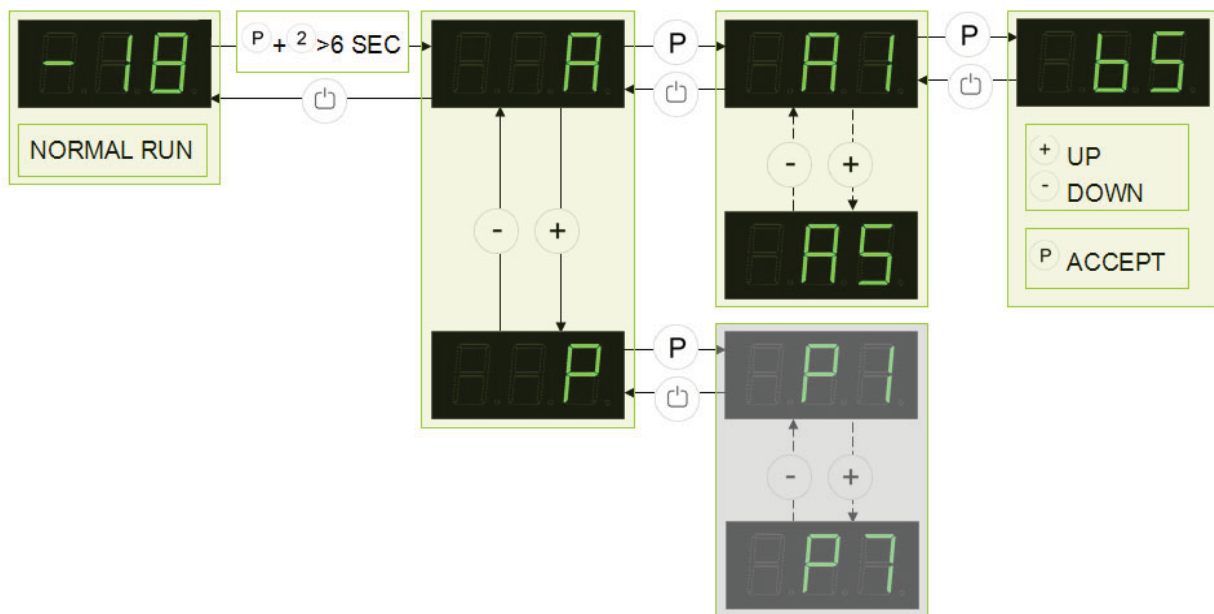
With **+** and **-** buttons it's possible to look through the main menu item [**A**] and [**P**]. Push on **P** button to enter the submenu from the main menu items.

With **+** and **-** buttons it's possible to look through the submenus menu items. Push on **P** button to enter the desired menu item and adjust the setting with **+** and **-** buttons.

To confirm the new setting, push **P** button. Leave the menu item and submenu with the **⏮** button.

Parameter	Description	Setting range	Default setting
A3	Alarm re-appearing time	5 to 30 min	5 min.
A4	Alarm historic	I = on / 0 = off	I
A5	Optional sensor input to surveillance system	A = input A (1) / E = input E (5)	A
P2	Temperature fluctuation filter *	00 = +0/-0 / 01 = +1/-1 / 02 = +2/-2 03 = +3/-3 / 04 = +4/-4 / 05 = +5/-5	03
P4	Displaying	0 = shows set-point temperature 1 = follows the room temperature	0
P5	Temperature scale	Celsius = C / Fahrenheit = F	C
P6	Temperature offset on sensor input A Forced moving of sensor measuring	-5 to +5 K / In steps of 0,5 K	0,0 K
P7	Temperature offset on sensor input E Forced moving of sensor measuring	-5 to +5 K / In steps of 0,5 K	0,0 K

* When the temperature is within the limits, the set-point is displayed – when the temperature is outside the limits, the current temperature is displayed.



Settings for running cycle

Push on **P** and **3** buttons at the same time in more than 6 sec. and the menu item **[C]** appears in the display.

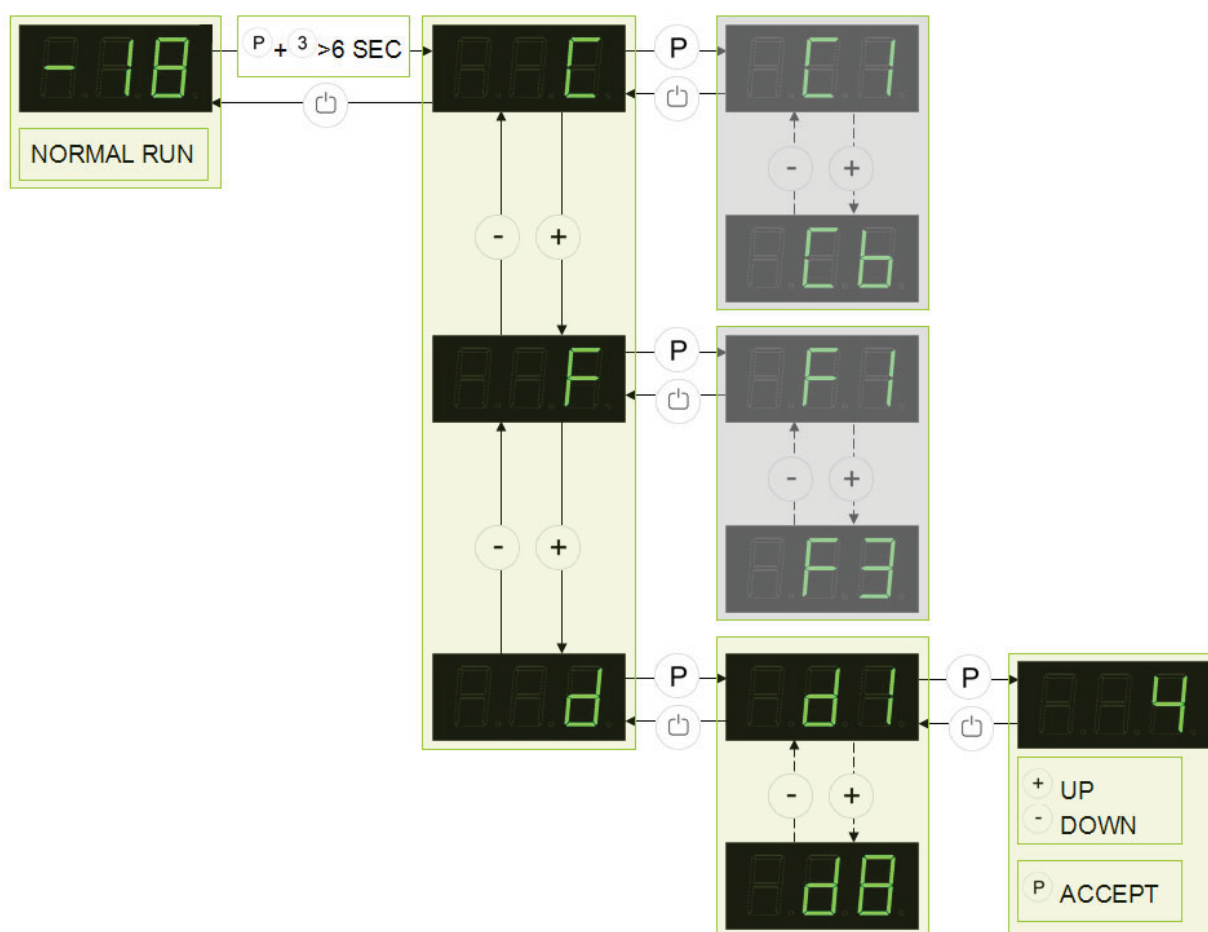
With **+** and **-** buttons it's possible to look through the main menu item **[C]**, **[F]** and **[d]**. Push on **P** button to enter the submenu from the main menu items.

With **+** and **-** buttons it's possible to look through the submenus menu items. Push on **P** button to enter the desired menu item and adjust the setting with **+** and **-** buttons.

To confirm the new setting, push **P** button. Leave the submenu and main menu item with the **⏏** button.

Parameter	Description	Setting range	Default setting
C1	Hysteresis	1= +1/ 0, 2= +1/-1, 3= +2/-1, 4= +2/-2, 5= +3/-2, 6= +3/-3	4
C5	Activation of condenser sensors	0 = FAV / 1 = One sensor (C) / 2 = Two sensors (C & D)	1
C6	Compressor stop by open door	0 to 15 min.	5 min
d1	Number of defrosting cycles/24h	1,2,3,4,5,6,7 or 8	4 each day.
d3	Defrosting by start-up sequence	0 = Start-up defrosting / 1 = no defrosting	0
d4	Defrosting time	10 to 60 min.	30 min.
d5	Defrosting method	1 = auto / 2 = air / 3 = electrical	2 (K)
d6	Dripping time	0 to 10 min.	0 min.

Values presented in light grey are values which can be different from model to model.



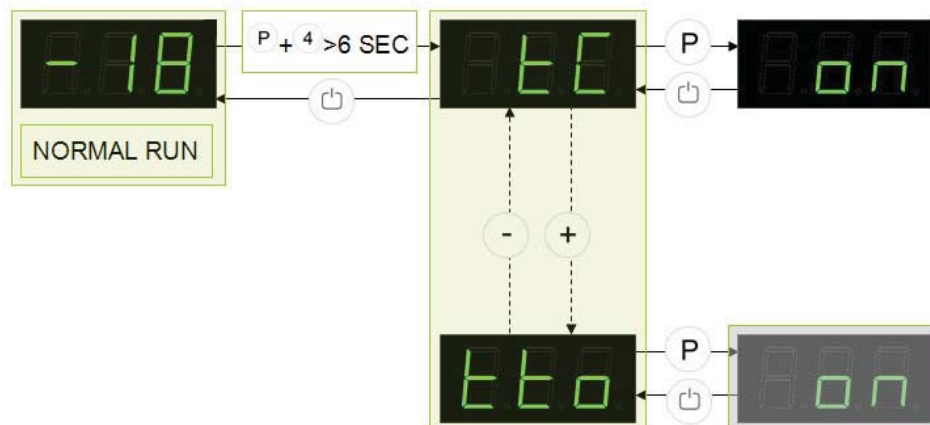
Service program for relays and electrical components

Push on **P** and **4** buttons at the same time in more than 6 sec. and the menu item [**tC**] appears in the display.

With **+** and **-** buttons its possible to look through each menu items in the “Service program”. Push on **P** button to activate the desired relay and the display glows with [**on**]. The desired relay conducts now power to the electrical component.

Push the **⏻** button to switch off the power from the electrical component. Leave the service program with the **⏻** button.

Parameter	Description
tC	Test of compressor and condenser fan
tF	Test of evaporator fan
td	Test of defrosting heating element
tL	Test of light
tA	Test of potential free alarm relay
t01	Value indication of sensor input A (room sensor)
t02	Value indication of sensor input B (evaporator sensor)
t03	Value indication of sensor input C (condenser sensor 1)
t04	Value indication of sensor input D (condenser sensor 2)
t05	Value indication of sensor input E (extra sensor e.g. sensor to GDL)
tdP	Test of display
tHy	Value indication of the hysteresis
tnd	Value indication of amount of defrosts/24 h
tto	Indication of offset value

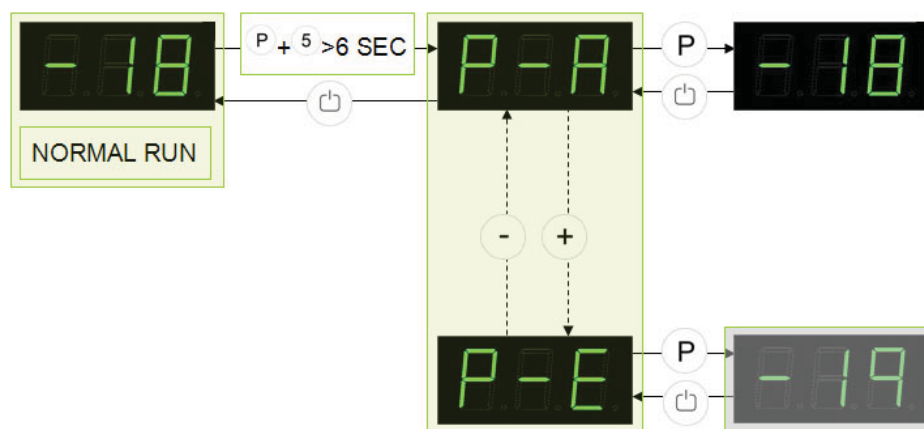


Value indication of sensor inputs

Push on **P** and **5** buttons at the same time in more than 6 sec. and the menu item [**P-A**] appears in the display.

With **+** and **-** buttons its possible to look through each menu items to check each sensor in the cabinet. Push on **P** button to activate the actual sensor and the display shows the actual temperature. Leave the program with the **⏏** button.

Parameter	Description
P-A	Value indication of sensor input A (room sensor)
P-b	Value indication of sensor input B (evaporator sensor)
P-c	Value indication of sensor input C (condenser sensor 1)
P-d	Value indication of sensor input D (condenser sensor 2)
P-E	Value indication of sensor input E (extra sensor e.g. sensor to GDL)



Earlier Software versions

From 016 to 127: version **1.8**

From 127 to 138: version **2.0**

From 138 version **2.1**

Reset the controller to factory setting

To reset the controller to factory settings:

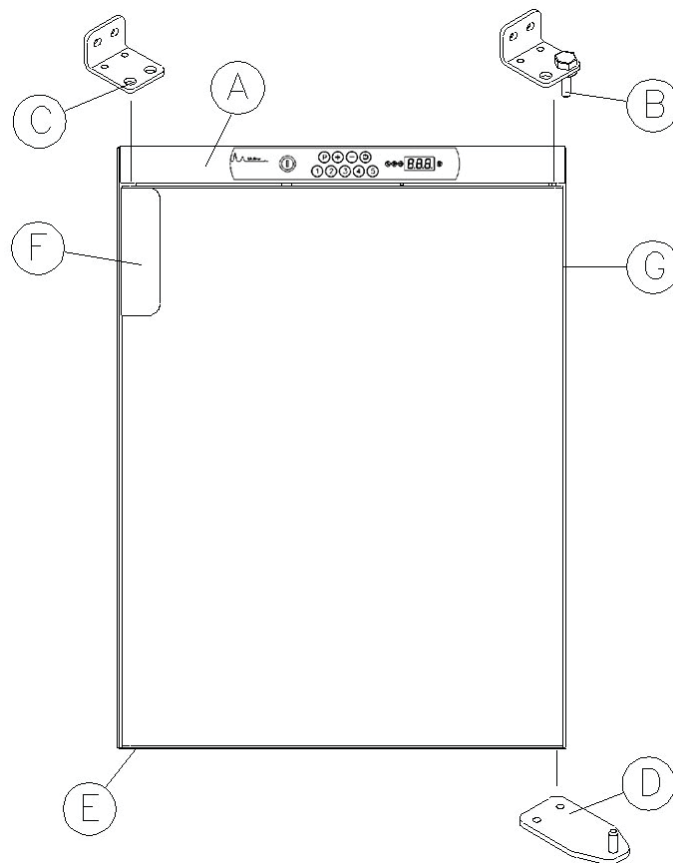
Push **P + 1 + 3** for more than 6 seconds. The display shows **"I"**, if any parameters have been changed.

Push **+** or **-** until **"0"** is displayed, and the controller is reset to factory setting.

To confirm the setting, push **P**, and then twice **⏏** to return to normal operation mode.

Changing from right-hinged door to left-hinged door

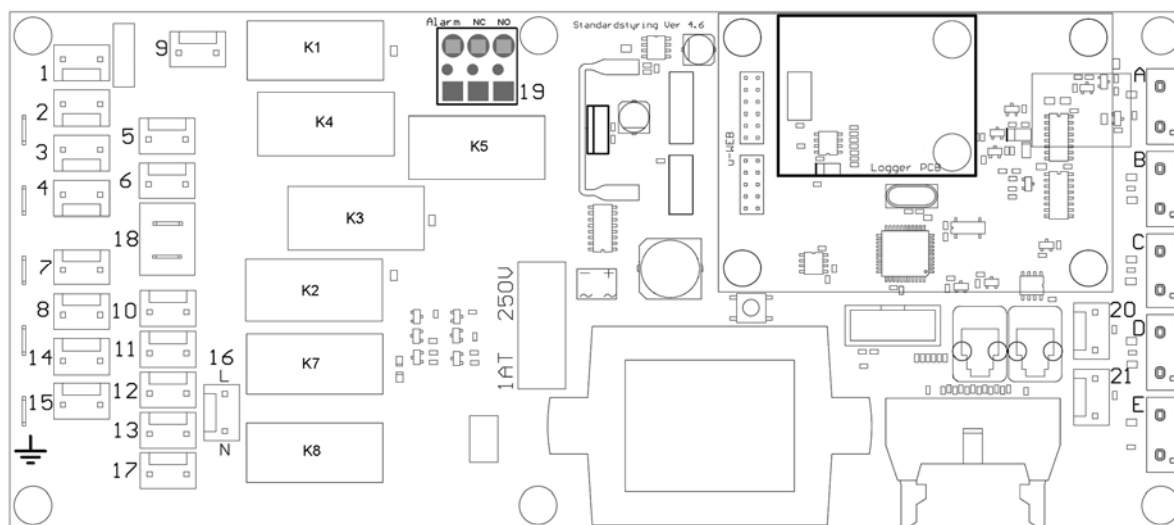
The door can be changed from right hand-hinged to left hand-hinged, or vice versa. To do so, proceed as follows:



1. Switch off power at the mains socket. Dismount the top panel pos. A and disconnect the multi plug inside.
2. Remove the hinge pin pos. B, and lift off the door.
3. Move hinge pos. D to pos. E.
4. Move the handle from pos. F, to pos. G.
5. Place the door at the hinge in pos. E. Mount the hinge pin pos. B in hinge pos. C and in the door hinge bush. Fasten the hinge.
6. Connect the multi plug inside the panel pos. A, and fasten the panel. Apply power to the cabinet again.

Plug connections onboard the controller

The description here below explains the plugs or terminals to each special function and relay.



Plug	Electrical component	Description
1	230 Volt relay – K1	The relay supplies the compressor and the condenser fan with power.
2		
3		
4		
5	230 Volt relay – K3	The relay supplies the evaporator fan with power.
6		
7	230 Volt relay – K2	The relay supplies the defrosting heating element and the drip water heating element with power
8		
14		
15		
9	230 Volt relay – K4	The relay supplies the halogen light transformer with power (230V/12V).
10	230 Volt relay – K7 and K8	The relay supplies the front frame heater, re-evaporating heating element, and the condensing pump with power. When the cabinet is switched on, the power is constantly viable.
11		
12		
13		
17		
18	Plug connection for the safety thermostat	The plug is connected in series with the defrosting heating element.
19	230 Volt relay – K5	The potential free alarm relay. The relay changes position when the cabinet switches the power on. By alarms and by power failure the relay switches back to normal position.
16	230 Volt input	These terminals are the power input connection with 230 V to the controller.
20	Digital input from the door contact	When these terminals are not in use, the controller lets the evaporator fans keep running. By shortcutting the terminals, the fan stops.
21		
A	Room sensor input	NTC sensor
B	Evaporator sensor input	NTC sensor
C	Condensor sensor input 1	NTC sensor
D	Condensor sensor input 2	NTC sensor
E	Sensor input for a extra sensor	NTC sensor



WWW.ARCTIKO.COM



5081100-02-GB

LAMMEFJORDSVEJ 5
DK-6715 ESBJERG N
DENMARK
TEL. +45 70 20 03 28
FAX. +45 70 20 03 29
INFO@ARCTIKO.COM
WWW.ARCTIKO.COM