OPERATING INSTRUCTIONS

ULTF 80 / 220 / 320 / 420

ARCTIKO

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IMPORTANT

Before using the appliance

For safety reasons, the instructions should be read before the freezer is commissioned.
The operating instructions should always be available to and accessible for the personnel!
The appliance concerned complies with the below Directives and standards except as refrigerant amount.
Low Voltage Directive 2006/95/E.E.C.
Electromagnetic Compatibility Directive 2004/108/E.E.C.

Only use the freezer for its specific purpose.

Safeguarding the environment

1. Packing.
   The packing material is entirely recyclable, and marked with recycling symbol.
   Please follow the local regulations for scrapping.

2. Appliance.
   The freezer is made of recyclable material. Dispose of the appliance should be according with the local environmental regulations
   Make the appliance unusable by cutting of the power supply cord and please the appliance must be delivered to an authorised centre for recovery of refrigerant.

Information

This appliance contain a mixture of different refrigerant. For more information, please refer to the rating plate affixed on the freezer.

Precautions and general recommendations:

WARNING: Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction
WARNING: Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.
WARNING: Do not damage the refrigerant system.
WARNING: Do not use electrical appliances inside the appliance storage compartment, unless they are of the type recommended by the manufacturer.

- Always keep the keys in separate place and out of reach of children.
- Before servicing or cleaning the appliance, unplug it from the mains or disconnect the electrical power supply.
- The power supply cable may only be replaced by an authorised person.
- Frost formation on the interior wall and upper parts is a natural phenomenon, and therefor the freezer should be defrosted during normal cleaning or maintenance.

Appliance with flammable refrigerant:

As the appliance contain a mixture of refrigerant, which are flammable, it is essential to ensure that the refrigerant pipes are not damaged.

Operating Instructions

Ultra Low Temperature Freezing Box

For safety reasons, these operating instructions should be read before the freezer is commissioned.
The operating instructions should always be available to the personnel!

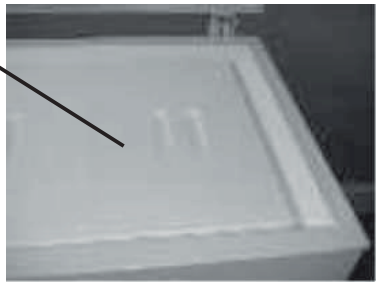
The drawings and symbols in these operating instructions are for safety purposes when commissioning and using the freezer.

Instruct the personnel in the use of the freezer (Can be down to -86°C). There is a risk of frost-bite if the contents or the sides of the inner container are touched!
In the event of breakdown or irregularities contact professional instructors or repair technicians immediately.

Installing the freezer

1. Connect the plug from the unit to power. If the electrical connection (the plug) has to be changed, always let an authorised electrician install the freezer (read the operation instructions).
2. The freezer should be located in a dry, cool place without direct sunlight. The freezer gives off a great deal of heat when in operation. If the ambient temperature is too high, there is a risk that the freezer will not operate correctly. It is recommended that the room is ventilated, so that the room temperature does not exceed 25°C at most. Class N.
3. Place the freezer on a solid and flat substrate. This will eliminate any vibration and irritating noise. The freezer should be placed with at least 10 cm. free to the sides, at least 15 cm. free at the back, and at least 10 cm. free to the ceiling.
4. The unit is equipped with battery backup for display and contact for remote monitoring only. Backup time is min. 48 hours, the freezer must be connected voltage in min. 72 hours before max. battery is available. Please note the lifetime of the battery is estimated to be 3 years. But should be checked by authorize personnel every 6. month.

The installation should be fused with a 10 A fuse.



SUB LIDS:

The sub lids should be used at all times.
The Manufacturer is not responsible for damages to the freezer caused by a failure to do so.

Electrical connection:

The machine meets current EU directives. Low voltage 2006/95/E.E.C.
Electromagnetic compatibility 2004/1008/E.E.C.
The machine should be given extra protection in accordance with the Electricity Supply Regulations in order to protect the user against dangerous electric shock in the event of faults.

If the switch is for a 3-pin plug, a 3-pin plug should be used, and the conductor with yellow/green insulation should be connected to the Earth terminal.
Data regarding voltage and absorbed power/current are given on the rating plate on the rear side of the freezer.
Electrical connection must be made in accordance with the local regulations.

WARNING

Regulations require that this appliance must be earthed:
The manufacturer declines all liability for injury to persons or animals and for damage to property resulting from failure to observe the above procedures and reminders.

If the socket and plug are not of the same type, please have the plug or socket replaced by a qualified electrician.

Do under no circumstances use extension leads or adaptors.

1. The freezer should be connected by an authorised electrician or by the company, which sold the freezer! Incorrect installation may damage the freezer.

2. Place the freezer on a flat floor, which can take the weight of the freezer.

3. The electrical installation should be earthed.

4. Do not use extension cables, but connect the freezer directly to a fixed installation.

5. The freezer should be placed in a dry location, and should not be subjected to water on the cabinet. If water gets into the electrical parts it may cause short-circuiting.

6. In the event of functional or electrical irregularities, please contact an authorised servicing engineer.

Before Commissioning

Clean the freezer both inside and out using a damp, wrung out cloth. Dry with a dry cloth.
The smell from the plastic parts in the freezer will disappear once the freezer has been cooled down.

Start procedure

Put the plug in the socket.
If the battery voltage is low it will take about 2h before the compressor starts.
The thermostat was pre-set by the producer. The freezer should run for at least 6 hours before the thermostat is changed (Stabilisation of the cooling system).

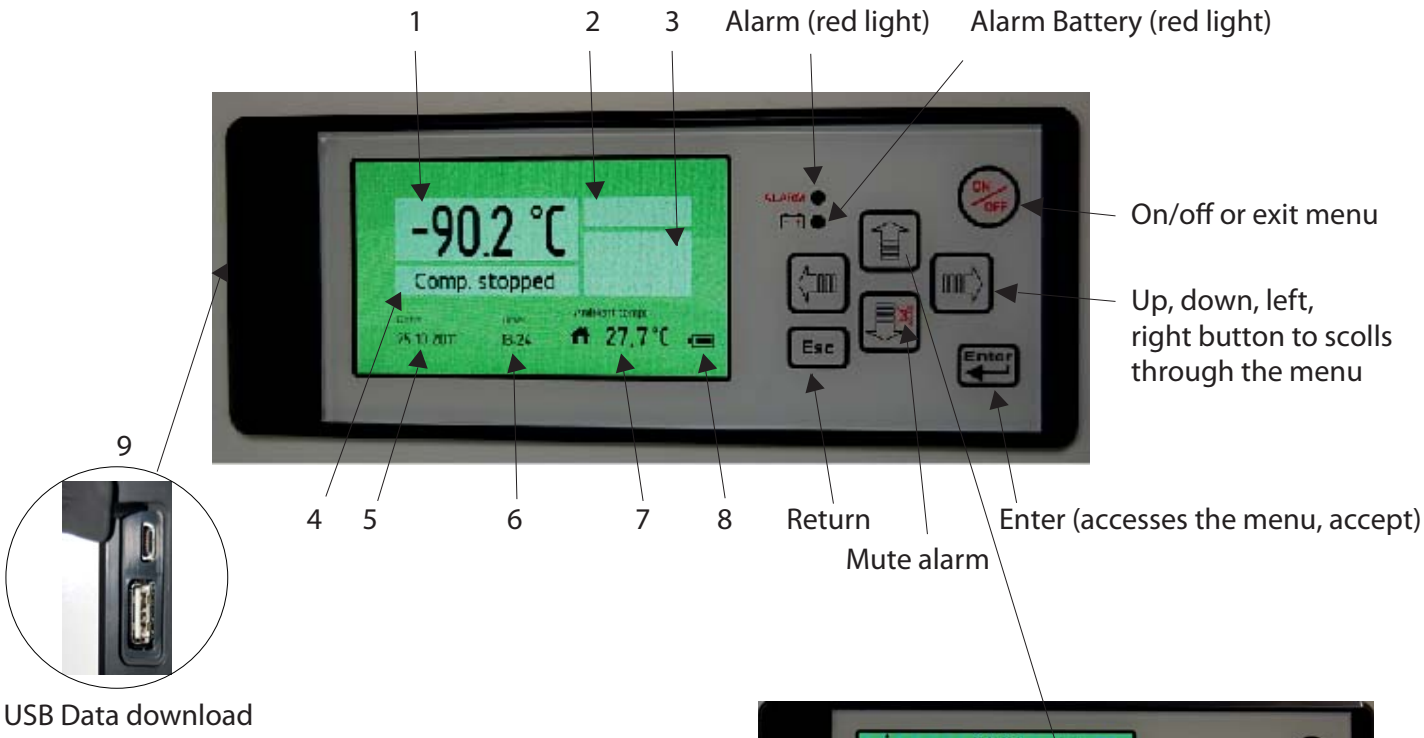
Starting up the freezer

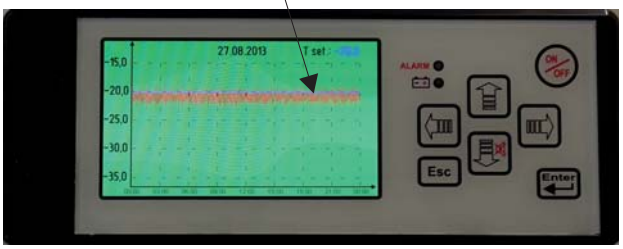
Start the freezer. Set the digital thermometer at the temperature required. It will now take about 6-10 hours before the set temperature is reached. The freezer should be cooled down without anything in it.

Disconnecting the appliance

Electrical disconnecting must be possible either by unplugging the appliance or by means of a double pole switch located up-line from the socket.

Control Panel (G-214 Controller)





Control Panel Description

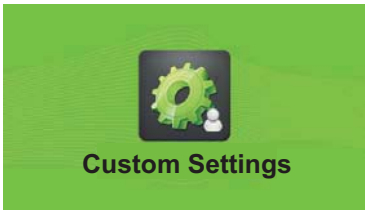
1. Temperature indicator
2. Alarm indivator
3. Alarm-icons
4. Compressor indication
5. Date indication
6. Hour indication
7. Ambient temperature indicator
8. Battery level
9. USB-Connection

Push the **UP** button in order to generate a graph.

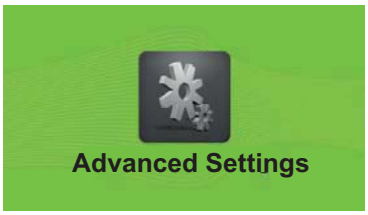
Push the **LEFT** button in order to return up to 10 days back.

Push the **Esc** button in order to exit the menu.

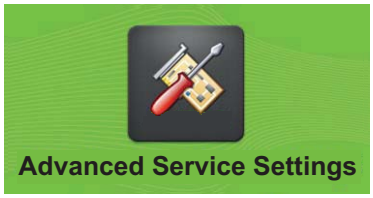
Setting icons



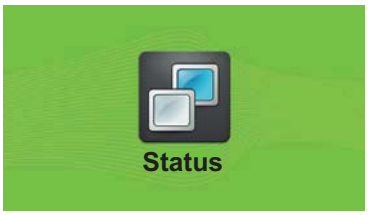
Custom Settings



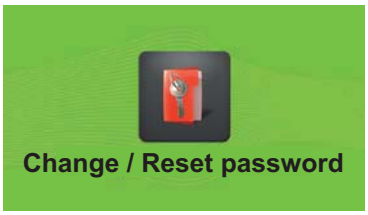
Advanced Settings



Advanced Service Settings



Status



Change / Reset password

Custom Settings

Enter password
The menu **Custom setting** is protected with a password, wich is “0000” to access the menu.

Under the menu **Setpoint** the temperature for the unit will be set.

Under the menu **Alarm Settings** the below menu will be avaible.

The menu **Alarm delay** is the settings of the time from an alarm will occur on the unit and until it will be shown on the display.
(Only temperature alarms)

Under the menu **Select language** you can select the desired language.

The menu **Door open alarm** is the settings of the time from an alarm will occur on the unit and until it will be shown on the display.

The menu **High temp. alarm i**s the settings of the highest temperature the device must be inside before it comes with an alarm.

The menu **Low temp. alarm** is the settings of the lowest temperature the device must be inside before it comes with an alarm.

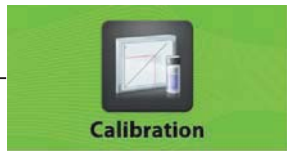
The **Probe eprom failure** alarm indicate, that the probe is not working.

The **Power failure** alarm indicate, that there is no power to the unit.

The menu **Alarm log time interval** is the settings of time for the controller to log data from the unit.

Advanced Settings

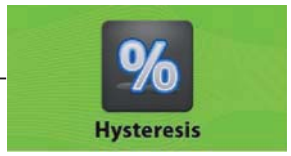
Enter password
The menu **Advanced Settings** is protected with a password wich is “0000” to access the menu.



The menu **Calibration** is the settings for offset of the temperature in the display.

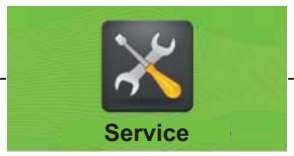
The menu **Automatic defrost** is the setting of the time where a defrost automatic will be performed on the unit.

Under the menu **Manual defrost** the deftrost can be started immediately.



The menu **Hysteresis** is the setting of the different from the setpoint whwere the compressor will start and stop.

The menu T**emp. range limits** is the settings of the maximum and minimum temperature the unit can be used for.

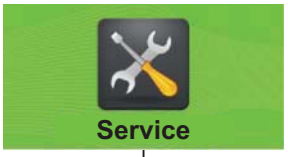


Service
See Page 10

The menu **Password protection** is the setting of the protection for the unit not to be turn off and is protected with a password.

The menu **Set date / time** is the setting of date and time.

The menu **Ambient temp. settings** is the adjustment of the ambient temperature.



Service Settings

Under the menu **Service**, there is information about the unit, which is important for service on the unit.

The menu **Compressor hours** shows, how many hours the compressor has run.

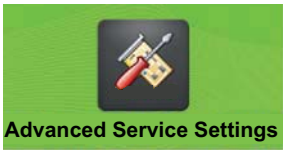
The menu **Fan hours** shows, how many hours the fan has run.

Under the menu **Probe** the temperature for the sensor mounted in the unit is displayed.

Under the menu **Probe inside unit** the temperature of the sensor mounted inside the unit is displayed. There is mounted a sensor as standard in the unit, but it is possible to mount 3 sensors inside the device. (Controller version)

Under the item **Probe Compressor** the temperature of the sensor mounted on the compressor is displayed.
(Not all models)

Under the point **Probe evaporator** the temperature of the sensor, that is located on the condenser, is displayed.



Advanced Service Settings

This menu is only used by the service department at the manufacturer.

Status

The **Current alarms** shows the alarm, which have been on the unit with data and time.

The T**emp. last 24 hours** shows the temperature of the unit the last 24 hours.

Change / Reset password

Under **Change password** it is possible to change the password for **Customer Settings**, **Advanced Settings** and **Advanced Service Settings**.

Under **Reset password** it is possible to reset the password for the **Customer Settings**, **Advanced Settings** and **Advanced Service Settings**.
Contact the manufactorer to get the password for reset password.

Download Data

Place the USB pen drive in the connection on the display and press the button right for **read data** from the unit to the USB pen.

The **Read data** will be shown in the display when the data is loading to the USB pen drive.

The **Transfer complete** will be shown on the display when the loading is finished and the USB pen can be removed from the display.

Open the 2 files:
data00 and **param00**
on a computer in Excel or similar.

Upload Data (Only for new settings from the manufactury)

Turn-off the display before start.
Place the USB pen drive in the connection on the display and press the button left for upload parameters from the USB pen to the unit.

The **Data upload** will be shown in the display when the data is loading to the unit.

The **Transfer complete** will be shown on the display when the loading is finished and the USB pen can be removed from the display.

Alarms on display

Alarm icons

The **Door open alarm** indicate, that the door is not correct closed

The **High temperature alarm** indicate, that the temperature inside the unit is higher than permitted from setting of the unit.

The **Low temperature alarm** indicate, that the temperature inside the unit is lower than permitted from setting of the unit.

The **Probe eprom failure** alarm indicate, that the probe is not working.

The **Power failure** alarm indicate, that there is no power to the unit.

The **Low battery** alarm indicate, that the power on the battery is to low.

Default settings

Description	Arctiko default settings	Customer settings
Custom Settings (Password)	0000	
Set point		
Freezer	-80,0	
Alarm Settings:		
Alarm delay		
Freezer	15 min	
Door open alarm		
Freezer	Enable	
High temp. alarm		
Freezer	-70	
Low temp. alarm		
Freezer	-90	
Probe/eprom failure		
Freezer	Enable	
Power failure		
Freezer	Enable	
Alarm log time interval		
Freezer	1	

Description	Arctiko default settings	Customer settings
Advanced Settings (Password)	0000	
Calibration		
Freezer	0,0	
Automatic defrost		
Freezer	0	
Manual defrost		
Freezer	OK	
Hysteresis		
Freezer	2,0	
Temp. range limits		
Freezer Max.	-40,0	
Freezer Min.	-86,0	

Relocating or moving the freezer

Never leave the freezer to others without instructing these people in its use and the safety regulations described in the operating instructions. Always let an authorised electrician install the freezer. (Remember to wait for one hour before restarting it).

- If the freezer and its electrical parts are reconstructed, the guarantee and safety regulations shall cease to apply.
- If the freezer does not work: call an authorised servicing engineer!
- Contact the distributor or an authorised service repair shop!

Cleaning and maintenance of the freezer

1. Ice will form on the sub lids in the freezer. This ice should be removed with a scraper at regular intervals. (Remember safety gloves).
2. Ice on the inside of the box should be removed as required, as it reduces the cooling capacity! Take the contents out of the freezer. Pull out the plug and leave the lid open until the ice can be removed. (Remember safety gloves).
3. Dry the inner container with a cloth until it is not damp any longer!
4. Clean the outside of the freezer with a damp cloth. Be careful not to get damp (water) on the Electrical parts or water into the vent holes, as water and damp may damage the electrical parts and cause the freezer to short-circuit!
5. The ice formed on the inside of the lid should be removed with a wooden/plastic scraper. This ice will build up because of the low temperatures inside the box, and if it is not removed it will cause the lid to open.
6. Use authorised cleaning products. The use of alcohol, dissolvents and alkaline cleaning agents is prohibited.
7. Clean the vent holes on the rear condenser with a vacuum cleaner at least once a year (See the sketches).

Do not put bottles containing carbonic acid or inflammable products in the freezer.

WARNING:

Before carrying out maintenance, unplug the appliance.
Do not use abrasive products; stain removers (e.g. acetone, trichloroethylene) to clean the appliance.

Spare parts

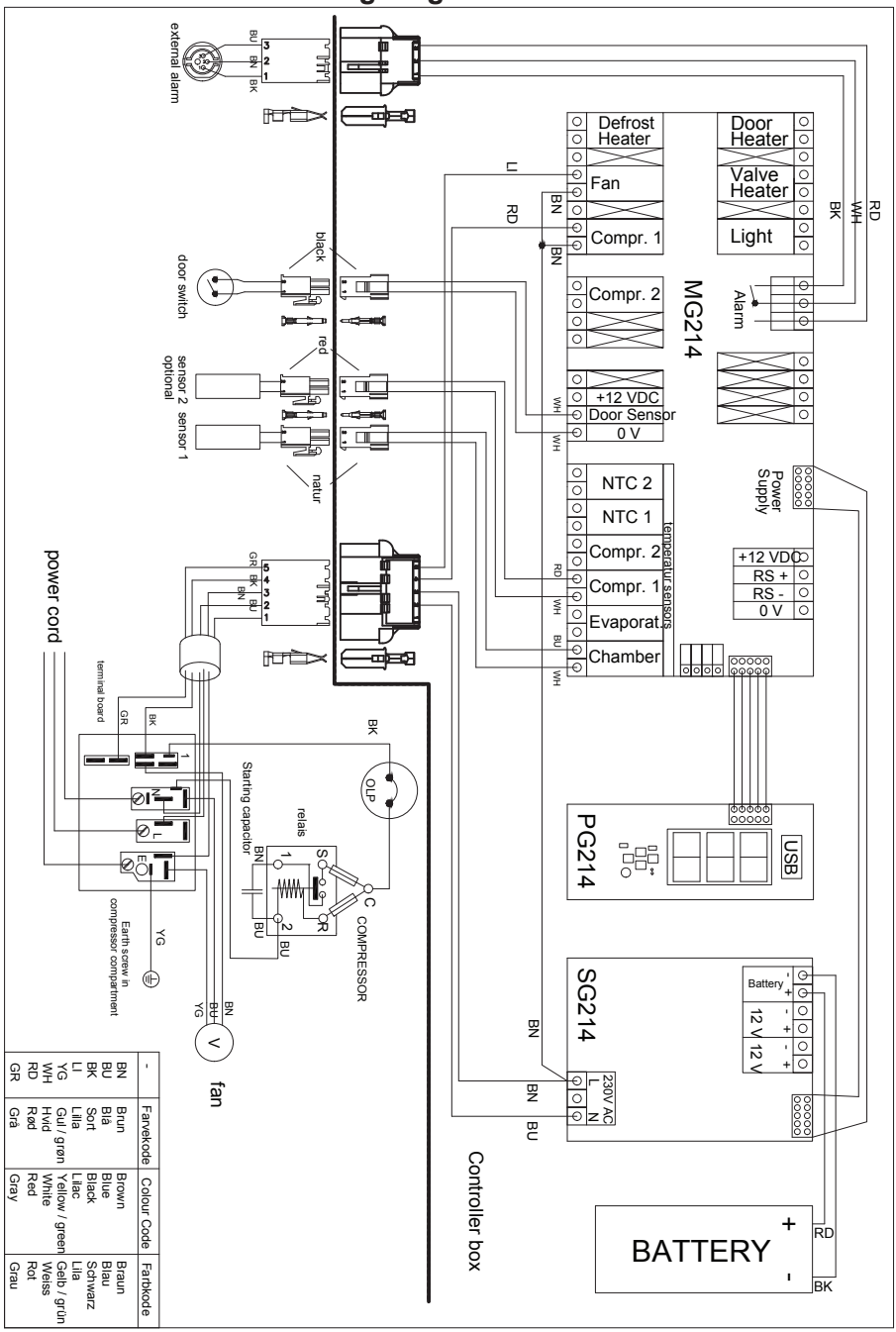
When ordering spare parts that you can easily fit yourself, please give unit type number and the function of the part(s) concerned.

Disposal of the freezer

To prevent harmful environmental effects, contact the distributor and ask where the freezer should be delivered.
Remove the locking function so that children cannot be locked in the freezer whilst playing.
You can obtain information on the disposal of refrigeration appliances from:

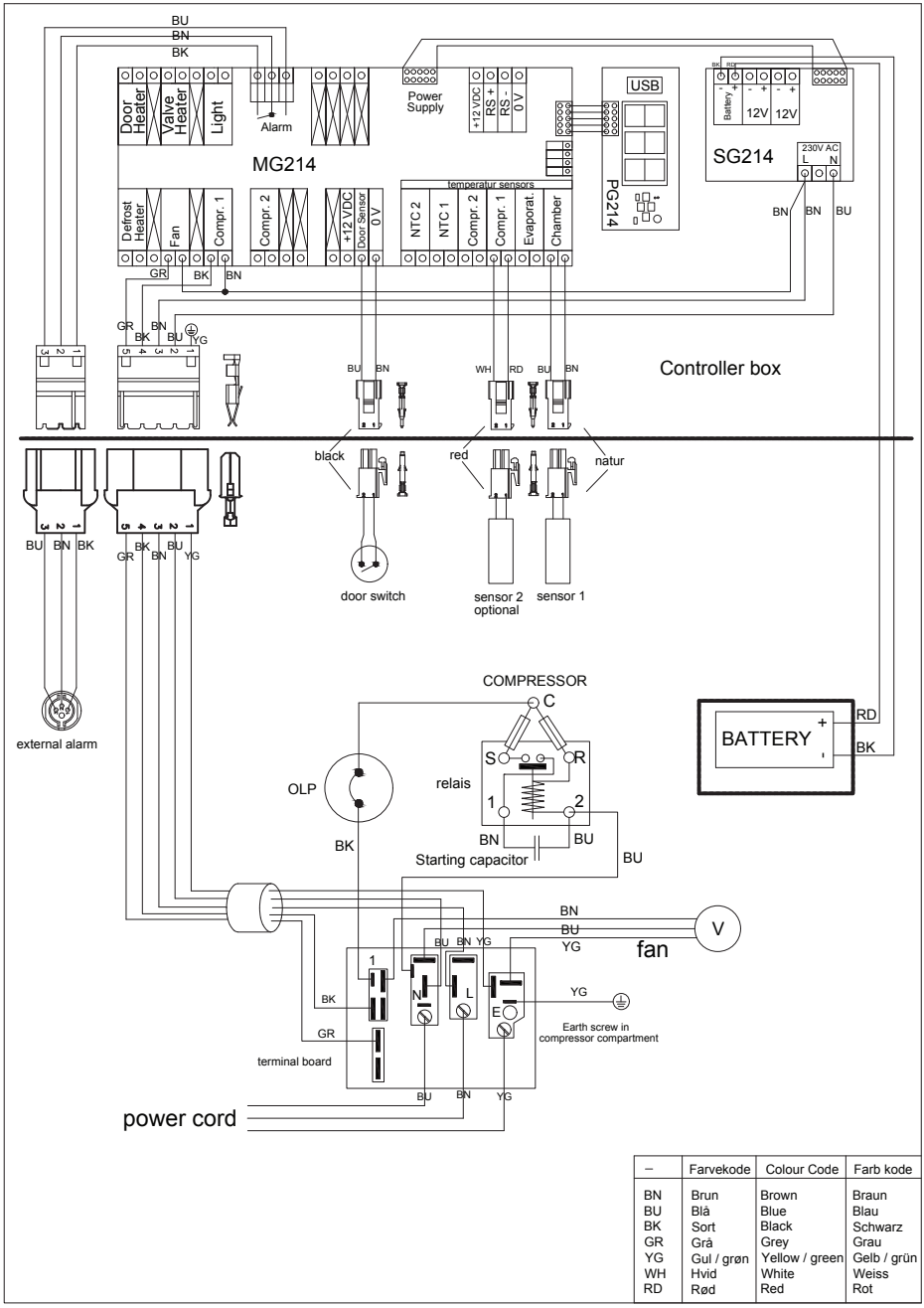
- Your supplier
- Authorities (The Local council, Ministry of the Environment, etc.)

Wiring diagram ULTF 80



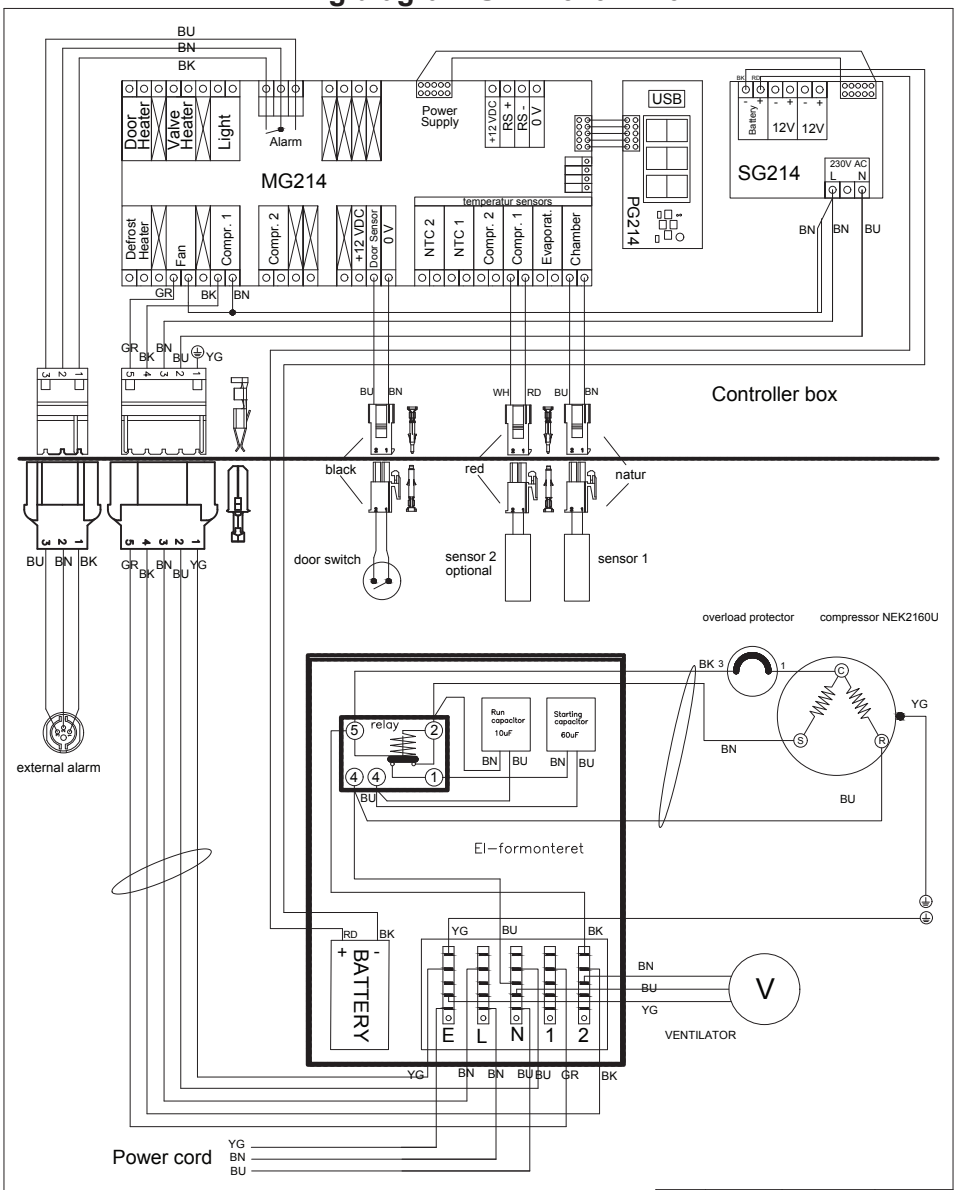
-	Farvekode	Colour Code	Farbkode
BN	Brun	Brown	Braun
BU	Blå	Blue	Blau
BK	Sort	Black	Schwarz
LI	Lilla	Lilac	Lila
YG	Gul / grøn	Yellow / green	Gelb / grün
WH	Hvid	White	Weiss
RD	Rød	Red	Rot
GR	Grå	Gray	Grau

Wiring diagram ULTF 220



–	Farvekode	Colour Code	Farb kode
BN	Brun	Brown	Braun
BU	Blå	Blue	Blau
BK	Sort	Black	Schwarz
GR	Grå	Grey	Grau
YG	Gul / grøn	Yellow / green	Gelb / grün
WH	Hvid	White	Weiss
RD	Rød	Red	Rot

Wiring diagram ULTF 320 / 420



–	Farvekode	Colour Code	Farb kode
BN	Brun	Brown	Braun
BU	Blå	Blue	Blau
BK	Sort	Black	Schwarz
GR	Grå	Grey	Grau
YG	Gul / grøn	Yellow / green	Gelb / grün
WH	Hvid	White	Weiss
RD	Rød	Red	Rot

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